



North Dakota

Airport Managers' Manual

1995 - 1996

North Dakota Airport Managers' Manual

Prepared for:

North Dakota Aeronautics Commission

Prepared by.

The Airport Technology and Planning Group, Inc.

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TO Airport Sponsor

FROM Gary R. Ness, Director
North Dakota Aeronautics Commission

REF **Airport Manager's Manual**

DATE February 23, 1996

Enclosed find a copy of the *Airport Manager's Manual* for your informational use. This manual was developed by our agency under a FAA planning grant. Several items for you to note:

- 1) Your airport has only **one** copy. Please try to keep it in a place where it would best be utilized and accessible.
- 2) Future updates to sections may be mailed to you.
- 3) If you do pass the manual on to someone else in the future, we ask that you inform us so that they may be mailed the updates.
- 4) The front introduction section is a "must to read". At the end of the introduction are special inserts for your airport such as the zoning map.

I hope you find the manual useful in the management of your airport. If you have any questions, please contact Mark J. Holzer, Aviation Planner.

GRN mw

Office

NORTH DAKOTA AIRPORT AUTHORITIES AND AIRPORT MANAGERS

November 1995

Prepared by: North Dakota Aeronautics Commission
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Apt. Mgr.
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Jerome Nipstad, Horace, 58047	
Bruce Glawso, Davenport, ND 58021	347-4119
Bob Odegard, Rt., Box 1, Kindred, ND 58051	428-3159 /428-3344
Randy Lahren, Sec./Treas. & Manager, P.O. Box 41, Kindred	428-3159 /428-3197

KULM MUNICIPAL AIRPORT AUTHORITY - 58456 Kulm, ND - (3)

Gerald Johnson, 229 3rd Avenue SE	647-2300 /647-2426
Anthony P. Buerkly, Sec./Treas., P.O. Box 139	647-2448 /647-2280
Lawrence Holmgren, Chairman, R.R. 1, Box 7	647-2835
Bob Vandenberg, 302 2nd Street SE	647-2718
Bruce Kosanke, 102 3rd Ave. SE	647-2806
Paul Jans, 209 1st Avenue NW	647-2789
Mike Holmgren, R.R. 1, Box 4A	647-2207

LAKOTA MUNICIPAL AIRPORT AUTHORITY - 58344 Lakota, ND - (18)

Darrell Matejcek, Chrm. & Mgr., Box 392	247-2967
Jeanne Johnston, Treas., Box 373	247-2454 /247-2709
Mike Ritterman, Box 603	247-2561 /247-2890
Richard Hamel, Box 461	247-2301
Larry Hulstrand, Box 257-B	247-2621 /247-2951
Aron Anderson, Box 468	247-2413 /247-2480

LAMOURE MUNICIPAL AIRPORT AUTHORITY - 58458 Lamoure, ND - (8)

Les Nesvig, Acting Chairman, Box 6	883-5321
Robert Isakson, V. Chairman, 212 NE 1	883-5238 /883-5953
Brian Robert, Apt. Mgr., Sec./Treas., Box 706	883-5127
Terry Westgard, 319 3rd Ave. N.E.	883-5785
Earl Benson, 222 4th Ave. S.E.	883-5924

LANGDON MUNICIPAL AIRPORT AUTHORITY - 58249 Langdon, ND - (20)

John A. Boe, V.Chrmn., 1310 12th Street	256-3776 /256-3639
Doug Romfo, Chairman, 1204 12th Ave.	256-5337
Ken Forest, Box 104	256-2337 /256-3936
Bernie Goodman, Milton, ND 58260	496-3407 /496-3245
Richard Ring, Mgr. (non-member), Box 346	256-5900 /256-3259

LANSFORD MUNICIPAL AIRPORT AUTHORITY - 58270 Lansford, ND - (17)

Curtis Undlin, President, R.R. 2, Box 4	784-5888
Brian Adams, R.R. 1, Box 68	784-5473
Ivar Johnston, Box 66	784-5836
Harold Sauer, R.R. 1, Box 24, Glenburn 58740	362-7483
Fred Taylor, R. R. 2, Box 11A	784-5926

LARIMORE MUNICIPAL AIRPORT AUTHORITY - 58251 Larimore, ND - (24)

Roger Thompson, Chairman, 917 Westwood	343-2321 /343-2227
Wilbur O. Fisher, Sec./Treas., Box 446	343-2861 /343-2658
Sam Roemmich, Box 194	343-2220
Bonnie Swanson, 400 Walcott Ave.	343-2569
Jessee Morten, Mgr., Box 153	343-2065 /343-2790

LEEDS MUNICIPAL AIRPORT AUTHORITY - 58346 Leeds, ND - (5)

G. D. Larson, Chrm. & Mgr. Box 129	466-2253 /466-2219
DeWayne Streyle, Sec./Treas., P.O. Box L	466-2232 /466-2939
John Holmes, V. Chairman, Box 302	466-2491
Rio Himle, P.O. Box 129	466-2253 /466-2872
Dennis Paulson, P.O. Box 331	466-2930

LEONARD REGIONAL AIRPORT AUTHORITY - 58052 Leonard, ND - (14)

Lloyd Heller, Sec./Treas., Rt. 1	645-2219
Joe Hahn, Chrmn., 607 Railroad Avenue North	645-2468
Francis Saunders, R.R. 1, Box 27	645-2213
Larry Pietsch, R.R. 1, Box 75	347-4932
Russell Nesemeier, Durbin, N.D. 58023	347-4317
Jim Plath, Mgr., 4875 158th Avenue SE, Davenport, ND 58021	645-2244

LIDGERWOOD MUNICIPAL AIRPORT AUTHORITY - 58053 Lidgerwood, ND - (10)

Paul Kadoun, P.O. Box 153	538-4622 /538-7406
Duane Kadoun, Chairman, Box 267	538-4622 /538-4912
Gerald Baker, V. Chairman, 608 SE 2nd Street	538-4536
Allan Nelson, 320 NE 1st Street	538-7449
Arnold Oland, 512 SE 3rd Street	538-4556
Robert Haas, 310 E. Park Street	538-4194 /538-4995
DAVE OHM, 38 5th Avenue NE	538-4571 /538-4495

LINTON MUNICIPAL AIRPORT AUTHORITY - 58552 Linton, ND - (3)

Eddie Wagner, Chairman., 420 NE 2nd	254-5376
James Schwartz, V, Chrmn., 120 NE 1st	254-4155
Mike Gunia, Mgr., R.R. 2, Box 10	254-5449 /782-4236
Michael Lawler, 717 Hickory	254-4958
Ken Wickenheiser, 306 West Oak	254-4380
Matt Schneider, 517 Wes Schley	254-5393
Terri Gunia, Clerk, P.O. Box 301	254-5449

LISBON MUNICIPAL AIRPORT - 58054 Lisbon, ND - (20)

Marlin Haberstroh, Mgr., R.R. 1, Box 664 6685 129th Ave SE	683-5501 /683-5006
Oscar Ness, Asst. Mgr., Box 581	683-5084 /683-5501
Wayne Hoff, City Council, 606 Lincoln Street	683-5634

MADDOCK MUNICIPAL AIRPORT AUTHORITY - 58348 Maddock, ND - (10)

Jason Lee, Chairman, RR 2, Box 126	438-2793
Kenneth Hellerud, R. R. 2	438-2655
John Wood, R. R. 2, Box 36	438-2528
Richard Slater, Mgr., Box 64	438-2444
Jean Moser, Clerk, Box 276	438-2252
David Kenner, RR 2, Box 110	438-2694
Roxeanne Georgeson	

MANDAN MUNICIPAL AIRPORT AUTHORITY - 58554 Mandan, ND - (74)

Don Helbling, Chairman, 634 6th Avenue SE	663-9821 /663-2092
Howard E. Howe, V. Chairman, 3001 Old Red Trail	663-7478 /663-8364
Corliss Mushik, 608 NW 3rd	663-3115
Robert Christiansen, 1706 East Main A-3	663-1778
Jim Lawler, Mgr. & Sec., P.O. Box 250	663-0669 /663-3690

MAYVILLE, CITY OF MAYVILLE - 58257 Mayville, ND - (17)

Gordon Koppeng, Chrm., Apt. Committee, 133 3rd Ave. SE	786-3451 /786-3604
Neil Dornacker, Apt. Committee, Box 524	786-2015 /786-3106
Mayor John Freiye, P.O. Box 220	786-2166
Gary Winger, City Auditor, P.O. Box 220	786-2166
Arvid Michaelis, Mgr., P.O. Box 543	786-2065
Rick Forsgren, Member, Apt. Committee, 27 Westwood Drive	786-2121 /786-2402
Mark Lipsiea, Member, Apt. Committee, 220 4th Ave. N.E.	786-3542 /786-4045

MCCLUSKY MUNICIPAL AIRPORT AUTHORITY - 58463 McClusky, ND - (2)

Glen Lelm, Chairman & Mgr., P.O. Box 276	363-2214 /363-2236
Orrin Holen, V. Chairman, Box 126	363-2244 /363-2221
Steve Laib, Sec./Treas., P.O. Box 712	363-2265 /363-2708
Terrance Grenz, P.O. Box 187	363-2224 /363-2714
Darwin Engel, P.O. Box 336	363-2265 /363-2722

MCVILLE MUNICIPAL AIRPORT AUTHORITY - 58254 McVillage, ND - (6)

Clayton Ward, Chairman, R.R. 1, Box 27	322-5585
Darrell Moen, Sec./Treas.	322-4324
Donald Stein, R.R.	322-4372
Ralpheal Brua	322-4389

MEDORA - BUDDY RANCH APT. - 58645 Medora, ND - (2)

Jim Arthaud, Mayor, Box 458, Belfield, ND 58622 623-4854 (h)/575-8242(w)/ 623-4828
(Fax @ Work - 575-4160)

Peggy Braunberger, City of Medora, P.O. Box 418A FAX 623-4931 623-4312 (w)/ 623-4828

Milo Thompson, Maintenance Man

MERCER COUNTY REGIONAL AIRPORT AUTHORITY - 58545 Hazen, ND - (18)

(HAZEN LOCATION)

Les Gellett, Chairman, P.O. Box 258, Hazen 58545	748-2211 /748-6204
Marvin Sutheimer	948-2805
Carl Cooper, Sec./Treas., Box 227, Golden Valley 58541	983-4488 /983-4572
Ken Garrett, R. 2, Pick City, 58545	487-3480
Rick Mitchell, V. Chrmn., 1025 Main Street, Stanton	745-3799
Steve Frovarp, Clerk, Box 507, Hazen 58545 (non-member)	748-2550 /748-6501
Larry Adler,	
Joe VanInwagen, Mgr., R.R. 1, Box 127-A	748-5592

MILNOR MUNICIPAL AIRPORT AUTHORITY - 58060 Milnor, ND - (2)

Harris Lunneborg, Chairman & Mgr., R.R. 1, Box 122	678-6201 /427-5578
Marlyn Bogart, V. Chairman, 620 5th Ave.	427-9249
Kenneth Mund	427-9360
Dick Ruby	427-5263
Royce Granlund	
Christine Lunneborg, Treas., P.O. Box 70 (non-member)	492-9388

MINOT INT'L AIRPORT - 58701 Minot, ND

Mike Ryan, Director, 25 Airport Road, Suite 10	857-4724
Bob Schempp, City Admin., Civic Center	857-4784
Jim Hatelid, Chairman, Aviation Committee, 1944 Skyline Drive 58703	857-1155
Ken Ness, Operations Supervisor, 25 Airport Road, Suite 10	857-4725

MINTO MUNICIPAL AIRPORT AUTHORITY - 58261 Minto, ND - (5)

Walter Tibert, Box 6, RR 1	248-3608 /248-3256
Brad Guadry, Chairman & Mgr., P.O. Box 383	772-9199 /248-3224
Jim Schanilec, 313 Gillespie Ave., Sec./Treas.	248-3359 /248-3231
Jerry Misialek, Sec./Treas.	248-3220 /248-3210
Andy Tibert, RR1, Box 5A	248-3737 /248-3713

MOHALL MUNICIPAL AIRPORT AUTHORITY - 58761 Mohall, ND - (11)

Steven Hett, Chairman & Mgr., Box 426	756-7177 /756-6640
Larry Nehring, Box 742	756-6364 /756-7108
Marvin Thom, Sec., Box 445	756-6318
Gary Albright, Box 583	756-6351 /756-6095
Barb Armstrong, Clerk, P.O. Box 476	756-6464
Vance Undlin, Treas., P.O. Box 281	756-6364 /756-6867

MOTT MUNICIPAL AIRPORT AUTHORITY - 58646 Mott, ND - (11)

Rex Kelsch, Chairman & Mgr., Box 236	824-2030
Myron Larson, V. Chairman, R.R. 1	824-2676
Paul Schwartz	824-2552
Lawrence Gjerstad, 110 Millionaire Street	824-2991 / 824-2220
Leo Drackel	
Mary Jo Rebel, Clerk	

NAPOLEON MUNICIPAL AIRPORT AUTHORITY - 58561 Napoleon, ND - (7)

Rodney Wentz, Sec./Treas., Box 25	754-2256 / 754-2606
Jim Hilzendeger, Box 38	754-2239 / 754-2911
Dave Sorgatz, Mgr. and Acting Chairman, Box 146	754-2226 / 754-2958
John Glatt, Box 374	754-2443
Randy T. Piatz, P.O. Box 145	754-2256 / 754-2815

NEW ROCKFORD MUNICIPAL AIRPORT AUTHORITY - 58356 New Rockford, ND - (13)

Erling Rolfson, Jr., Chairman & Mgr., Box 792	947-5047 / 947-5251
Dennis Rimmereid, V. Chairman, R.R. #1	947-5917
Rodney Settlemeyer, Rt. 1	947-2903
Rod Lindstrom, 123 North 6th Street	947-2446 / 947-5396
Ken Fuhrman, City Comm., 302 1st Ave. NE	652-3156 / 947-5896

NEW TOWN MUNICIPAL AIRPORT AUTHORITY - 58763 New Town, ND - (6)

Jay M. Sandstrom, Manager, R.R. 1, Box 32	627-4922
Lonny Hagen, Treas.	627-4685
Ardell Horob, Sec., P.O. Box 429	627-3425 / 627-3390
Warren Bratvold, Box 364	627-4812 / 627-4834
Harley Johnson, Chairman, Box 303	627-4799 / 627-4607
Snow Removal Contact - Neil Roggenbuck - 627-4138 (w) / 627-4900 (h) - City Auditor 627-4812	

NORTHWOOD MUNICIPAL AIRPORT AUTHORITY - 58267 Northwood, ND - (22)

Don Berge, Chairman, #4 County Road, B12	543-3513 / 587-5132
Waldo Rosset, V. Chairman, 112 N. Lincoln	587-5803
Jordon Kordahl, 303 Washington Avenue	587-5370 / 587-5712
Rick Meland, 514 Hougén St.	587-6331 / 587-5229
Anton Ostmo, 516 South Doheny	587-5385
Vincent Buraas, Asst. Mgr., Box 176	587-5171 / 587-5176
Marvin Tufte, Mgr., Box 440	587-5171

OAKES MUNICIPAL AIRPORT AUTHORITY - 58474 Oakes, ND - (40)

Mark Dahlstrom, 603 Hickory Ave.	742-2715 / 742-3449
Bill Ptacek, V. Chrm., Box 146	742-3188 / 742-2658
Gary Schnell, 210 South 11th Street	742-2231 / 742-2095
Lee Ruhn, Chairman, 502 Main Avenue	742/4481 / 742-3281
Ethel Day, Clerk, 115 South 5th	742-2137
Jeff Forward, 436 10th Street North	742-2369
Arnie Widmer, R.R. 1, Box 95 (FBO)	742-3145 / 742-2293

PAGE REGIONAL AIRPORT AUTHORITY - 58064

John Dows, Chairman, 14725 18th Street SW, Eric, ND 58029	668-2375
Keith Burley, Sec./Treas., Box 2	668-2774
Terry Langdahl, 13585 16th Street SW	668-2463
Jurgen Sulte, 13303 20th Street SE	668-2764
John Miller, 13560 26th Street SE, Buffalo, ND 58011	668-2311
Sherwood Johnson, 610 6th Street	668-2790
Ollie Erickson, P.O. Box 85 (City Mayor)	668-2537
Tim McPherson, Manager, 14269 17th Street SE	668-2302

PARK RIVER MUNICIPAL AIRPORT AUTHORITY - 58270 Park River, ND - (17)

Glenn Wharam, Chairman, P.O. Box 175	284-7303 /284-7804
W. R. Hunter, Box 67	284-7773
David A. Ford, Sec./Treas., Box 266	284-6877
Glen Porter, V. Chairman, Box 68	284-7837 /284-7398
Marlin Lothspeich, Mgr., 205 Park Ave.	284-6755 / 284-6386
William Skjerven, Box 180	

PARSHALL MUNICIPAL AIRPORT AUTHORITY - 58770 Parshall, ND - (12)

Jon Kuehn, Pres., Box 159 (1600 13th Street SW, Minot 58701)	862-3265 /838-6653
Loren Hoffman, Sec./Treas.,	862-3459 /862-3446
James Wahner	862-3316
Bob Jacobson	
Sandy Folden	862-3735
Robert Batterwick	

PEMBINA MUNICIPAL AIRPORT AUTHORITY - 58271 Pembina, ND - (8)

Virgil Tronset, , Chairman, Box 188	825-6874
Ed Hammer, 132 Stutsman Street East	825-6824
Lee Becker, Treas., HC3, Box 11, Drayton, ND 58225	454-6320
Wayne Robillard, 623 Stutsman Street West	825-6773
Tom Nord, Manager, 10597 Old Highway 81	825-6421

PLAZA MUNICIPAL AIRPORT AUTHORITY - 58771 Plaza, ND - (4)

Bradley Reese, Box 44	497-3791
Jay Harstad, Chairman, Box 54	453-3387
Richard Osness, Rt. 2, Box 19	497-3753
Darcy Lynne, Box 3	497-3714
Pat Sailor, Box 64	497-3394

REGENT MUNICIPAL AIRPORT AUTHORITY - 58650 Regent, ND - (4)

Larry Willnow, Chairman & Mgr., Box 296	563-4338
David Schauer, Asst. Mgr.	563-4329
Robert Larson, Treas.	563-4587
Gerri Kouba, City Auditor, P.O. Box 86	563-4454

RICHARDTON MUNICIPAL AIRPORT AUTHORITY- 58652 Richardton, ND - (7)

Dan Haag, Chairman, Box 109A	974-2199
David J. Wolf, Mgr., Box A	974-3315
Carol Bartz, City Auditor, Treas., Box 343	974-3399
John Ridley, Box 107	974-3502 /974-3356
James Bernhardt, HCR2, Box 35, Taylor, ND 58656	225-6902

RIVERDALE - GARRISON DAM RECREATIONAL AIRPARK - (19)

Gary R. Ness, Director, NDAC, Box 5020, Bismarck, ND 58502	328-2748
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ROLETTE MUNICIPAL AIRPORT AUTHORITY - 58366 Rolette, ND - (13)

Harlow Hageness, Chrm. & Mgr., Box 399 (1-800-437-2072)	246-3700 /246-3425
Robert Ekerdt, Sec./Treas. , 601 John Street	246-3395 /246-3697
Mark Myhre, Box 367, Sec./Treas.	246-3395 /246-3317
Alden Ronning, 604 6th Ave.	246-3360
Robin Martinson	

ROLLA MUNICIPAL AIRPORT AUTHORITY - 58367 Rolla, ND - (14)

William Juntunen, Chairman, Box 295	477-3782 /477-5463
Clarence Eller, Box 4	477-5415
Trenton Disrud, Box 164	477-5771
Francis Gapp, Box 336	477-5329
Leonard Krech, Mgr. & Sec./Treas, R.R. 1, Box 104	477-5145 /477-3975

RUGBY MUNICIPAL AIRPORT AUTHORITY - 58368 Rugby, ND - (34)

Hartley Hageness, Chairman, Route 1, Box 2	776-5746 /776-6715
Phil Martin, 313 2nd Ave. S.W.	776-5541
Charles Crawford, 110 SW 14th Street	776-6197
Orville Reichert, 822 SW 3rd Street	776-6775
Steve Schneider, Mgr., 516 SE 6th	776-5171 /776-5176
Neil Lotvedt, 514 3rd Street SE	776-5870

ST. THOMAS MUNICIPAL AIRPORT AUTHORITY - 58276 St. Thomas, ND - (7)

Ernest Blair, Chrm. & Mgr., Box 322	257-6629
John Lunde, Jr., R.R. 2, Box 26	257-6603
William Baldwin, Jr., Treas., R.R. 1, Box 26	257-6681
Darrell Bjornson, Sec., Box 170	257-6446 /257-6804
Jerry Lysengen	257-6638

STANLEY MUNICIPAL AIRPORT AUTHORITY - 58784 Stanley, ND - (32)

Conrad Fritel, Chairman, Box 328	628-2588
Gary Larson, Box 266	628-2110 /628-3304
Don Will, V. Chairman, Box 250	628-2525 /628-2512
Gary Nelson, Sec./Treas., Box 9	628-3131 /628-2496
Judy Johnson	628-2630
Arlo Borud	628-3287
Jay Mackey, Manager, Box 892	628-2110 /628-2113

TIOGA MUNICIPAL AIRPORT AUTHORITY - 58852 Tioga, ND - (21)

Mike Davidson, Chrm. & Mgr., R.R., Box 277	664-2228
Ken Lawson, Vice Chairman, Box 724	664-3619 /664-3825
Gene Knutson, Box 333	664-2220
Harold Sundhagen, R. 3, Box 3B	664-3886 /664-2216
Gary Shafer, Box 571	664-3427

TOWNER MUNICIPAL AIRPORT AUTHORITY - 58788 Towner, ND - (3)

Richard Gunter, Chairman & Mgr., Box 330	537-5137
Winston Pattenger, Sec./Treas., P.O. Box 58	537-5944 /537-5651
Lyder Ring, V. Chairman, Box 214	537-5649
Monte Hermanson, P.O. Box 235	537-5849
Jackie Fullman	

TURTLE LAKE MUNICIPAL AIRPORT AUTHORITY - 58575 Turtle Lake, ND - (11)

Ray Herr, Mgr. & Chairman, R.R. 1, Box 59	448-2253 /448-2252
Adolph Herring, V. Chairman, P.O. Box 88	448-2865
Carol Sundby, P.O. Box 531	448-9293 /448-2434
Don Coy, Box 129	448-2260
Mick Goven, Sec./Treas., Box 356	448-2414

UNDERWOOD MUNICIPAL AIRPORT AUTHORITY - 58576 Underwood, ND - (10)

(NO AIRPORT)

Robert L. Benson, Box 42	442-3511 /873-2281
Louis Stengel, Box 326	442-5252
Steve Hammels, Box 365	442-3117
Paul Sigurdson, Chrmn., Box 344	442-5416
Gene Hummel, Box 206	442-5682
Diane Schell, Clerk, Box 168	442-5481

WAHPETON MUNICIPAL AIRPORT AUTHORITY - 58075 Wahpeton, ND - (45)

Gregg Jaehning, 834 Richland Street	642-2322
Al Krimball, V. Chairman, 1533 14th Avenue North	642-8711 /642-9430
Allen Yaggie, Sec./Treas., Box 154, Route 1, Breckenridge, MN 56250 (218)	643-2043
A. W. Stokes, P.O. Box 1266	642-6616
Gerald Beck, Manager, Box 843, Wahpeton, 58074	642-5777 /642-3232
Kathi Muehler, Clerk, P.O. Box 775	671-2301 /642-1830
Dennis Lindemann, Chairman, 1306 Loy Ave.	642-5979

WALHALLA MUNICIPAL AIRPORT AUTHORITY - 58282 Walhalla, ND - (20)

Jack C. Soeby, Sec., Box 7	549-3711 /549-2391
Jack Karel, Treas., Box 23C, R.R. 1	549-3720 /549-2591
Richard Hardy, V. Chair. & Apt. Mgr., Box 346	549-3400 /549-3220
Dennis Gratton, Box 2	549-3500 /549-3766
Leon Dubourt, Chairman, Box 468	549-3761 /549-3621

WASHBURN MUNICIPAL AIRPORT AUTHORITY - 58577 Washburn, ND - (19)

Frank Manderfeld, (City Comm.), P.O. Box 467	462-8558 /462-3312
Oliver Borlaug, Box 471	462-3638
Donald Nordquist, Chairman, Box 431	462-3545 /462-3584
Debbie Wilson, R.R. 1, Box 79D	462-8196 /462-3370
Bill Beeks, Treas. & Mgr., Box 398	462-3593 /462-3796

WATFORD CITY MUNICIPAL AIRPORT AUTHORITY - 58854 Watford City, ND - (32)

John Heggen, Chairman, Box 729	842-3636 /828-3329
Leonard Hoffman, V. Chairman, HCO2, Box 83	842-2013
Lloyd Brown, Secretary, Box 787	842-3350 /842-3718
Richard Johnson, Rt. 1, Box 63, Arnegard, ND 58835	586-3768 /586-3703
Wallace O. Johnson, Treas. & Mgr., Box 562	842-2523

WEST FARGO AIRPORT AUTHORITY - 58078 West Fargo, ND

Loran Paczkowski, Treas., Box 565	282-2057
Keith Murray, V. Chrm., 214 12th Ave. East	281-1402 /241-7186
Don Solberg, Sec., 630 7th St. West	282-5072 /282-3180
Gene Johnson, Manager, 7420 40th Avenue North, Fargo 58102	282-0638
Ralph Braaten, Chairman, 913 7th Street West	237-0128 /282-6709
Mark Sloan, 832 Oak Street	281-8254 /232-3242

WESTHOPE MUNICIPAL AIRPORT AUTHORITY - 58793 Westhope, ND - (12)

Leonard Nygaard, Box 247	245-6326
Ronald Engg, Box 171, Chairman	245-6215
Dwight Tolstad, Sec./Treas., Box 215	245-6140 /245-6180
Chet Houmann, Mgr., R.R. 1, Box 10	245-6178 /245-6279
Jerine E. Berentson, R.R.	245-6284

WILLISTON - SLOULIN INTERNATIONAL - 58802 Williston, ND

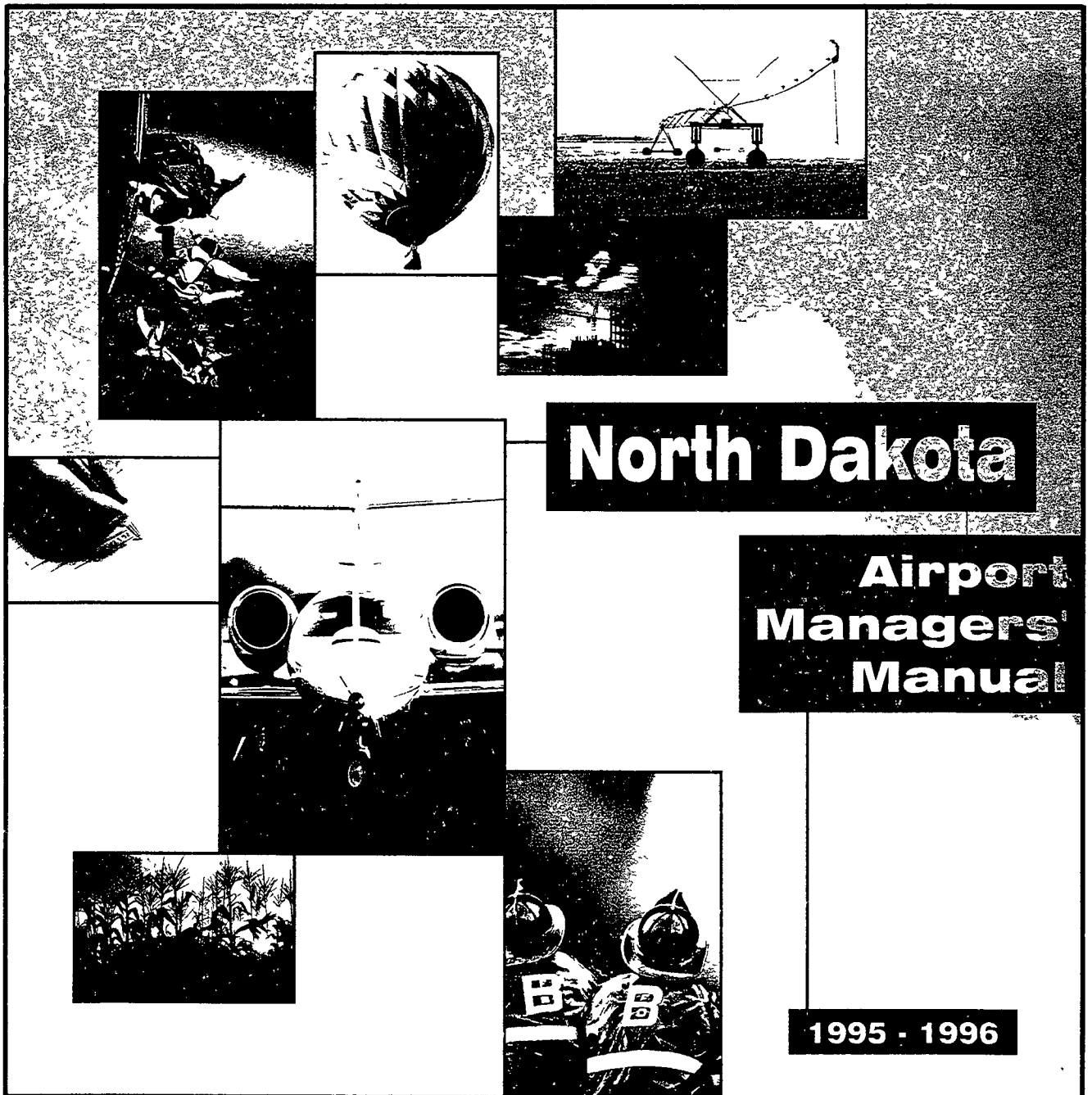
Richard Marburger, Airport Manager, P.O. Box 1306	774-8594 /774-1052
Jack Daniels, Box 507	826-4761 (Lake) / 572-2062 (h)
Bill Keyser - Servair Taxi	572-3773

WISHEK MUNICIPAL AIRPORT AUTHORITY - 58495 Wishek, ND - (5)

Steve Nickisch, Sec./Treas., Box 215	452-2489
Don Kosiak, 1015 4th Avenue South	452-2364
Ms. Schubert, Clerk, P.O. Box 38	452-4307
Victor Vilhauer, Box 580	452-2342
Walter Mueller, Box 407	452-2775
Lorren Henke, Chairman, Box 905	452-2314 /452-4291

WYNDMERE MUNICIPAL AIRPORT AUTHORITY - 58081 Wyndmere, ND - (12)

James Dotzenrod, Chairman & Mgr., Box 69	439-2893 /439-2427
Ed Anderson, V. Chairman	439-2261 /439-2761
Allen Goerger, Sec./Treas., R.R. 1, Barney, ND 58008	439-2754
Tom Tamlym	439-2238 /439-2560
Don Hager	439-2321



North Dakota

**Airport
Managers'
Manual**

1995 - 1996

Black BINDER



Prepared for: North Dakota Aeronautics Commission
Prepared by: The Airport Technology & Planning Group, Inc.

Introduction

Airport Operation

The airport is the airway's entrance to the community it serves. To function properly it should be attractively maintained and should offer prompt and efficient services to those who use it. The longest and safest runway in the world will not consistently attract trade and commerce unless adequate arrangements have been made to provide.

- Essential supporting services to visiting aircraft (fuel, loading facilities, storage, and minor flight line repair)
- Basic conveniences to those who fly (waiting rooms, rest rooms, ground transportation, snack or dining facilities, telephones, auto parking)
- Flight services to meet local demand (air taxi, charter flights, aircraft and part sales, aircraft and engine repair, flight training, etc)

These are proprietary functions and can often best be performed by private enterprise

At a publicly owned airport, the responsibility for maintaining and operating the landing area and other common use facilities is a public rather than a proprietary function. The relationships established between the owning public agency and those private enterprises which may be authorized to offer commodities and services are very important and should be carefully considered. Where Federal funds have been provided for airport development, the public agency is obligated by contract with the Federal Government to continuously observe certain terms and conditions in its administration of the airport. The public owner should retain sufficient control of the airport to insure that it can continue to meet its operating responsibilities.

Where the level of activity and associated revenues justify it, the employment of a full-time professional airport manager is highly desirable. Such a manager should be a salaried employee of the public agency, should not have any personal interest in any of the proprietary activities conducted at the airport, and should have the authority as well as the responsibility to direct the efficient operation and maintenance of all airport facilities.

At most of the smaller publicly owned utility airports, it may not be feasible or practical to retain the full-time services of an airport manager. In such instances, it is highly important to assign responsibility for policy and administrative direction to a designated official of the public agency. Routine day-to-day supervision of airport operations may be delegated to one of the tenants doing business at the airport. However, extreme care should be exercised to distinguish between the functions performed by the tenant in his capacity as an agent of the airport owner and those in the conduct of his own business. Failure to make this distinction is the cause of many problems in the administration of smaller airports. In any such arrangement, the responsibility for day-to-day maintenance and the enforcement of local airport regulations should be the subject of a separate contract for a separate monetary consideration and completely divorced from any lease or rental

arrangement by which the tenant obtains the use of airport premises and operating privileges for his business.

In some instances, a community may find itself handicapped by limitations in its municipal charter insofar as efficient business management of a public airport is concerned. For example, the charter may require placing all revenues and expenditures into the general fund, making it impossible to clearly identify the cumulative record of airport transactions, or the charter may not permit or recognize such items as depreciation or accrued charges, or the organizational structure of the community may impose salary limitations on the hiring of a competent professional airport manager. For these and other reasons, many communities have found it advantageous to establish an autonomous airport "Authority" fully empowered to administer the airport with a separate fund, to hire its own employees, and to contract with business enterprises to provide the needed proprietary services.

Airport Revenues

A publicly owned utility airport can ultimately be self-supporting. Like any other enterprise, a new airport may take several years to develop the level of activity necessary to meet expenses. The direct dollar return is not always a true measure of the value of the airport to the community.

A public agency operating a public airport is entitled to seek some recovery of expense incurred in providing the basic public facilities such as the landing area, taxiways, parking areas, terminal building, etc. At larger airports, it is fairly common practice to impose a direct "toll" or landing fee for use of the landing area, particularly by scheduled air carriers. At most utility airports, however, the administration and collection of such a direct user charge is not practical. Recovery of some part of the costs of the public landing area is sought through an indirect form of revenue based on a sliding scale formula which will yield a return that varies in approximate proportion to the amount of use derived from the public landing area. A good example of this type of revenue would be a fuel flowage charge on all gasoline delivered at that airport or a payment expressed as a percentage of the gross volume of business done by tenant firms which provide supporting services. The level of such a flowage charge or the amount of the percentage is a matter for negotiation. Since such a revenue is intended to recover a user charge for public facilities, it is in addition to any rental payment that might be negotiated for the use of specific premises to be exclusively occupied at the airport for the conduct of a proprietary business.

Airport Leases

The arrangements between a public agency/airport owner and those private agencies seeking to offer commodities and services at the airport are usually expressed in a contract. Since most of these contracts involve the right to occupy and use designated premises, they will generally be in the form of a lease. As in any such agreement the rental payments, terms of occupancy, privileges granted, obligations assumed, and other considerations are a matter of bargaining and negotiation between

the parties. There are, however, some general principles peculiar to the airport environment which should be given careful consideration.

If the prospective tenant contemplates a substantial capital investment in hangars, fuel storage equipment, machinery, and store fixtures, etc., he will seek a relatively long term lease in order to be able to amortize his investment. It is to the advantage of the airport owner to encourage such private development and to offer sufficient tenure to induce it. On the other hand, aviation is dynamic and most airports evolve and expand much faster than anticipated. If within the first few years following the acquisition or construction of an airport the needs of commercial tenants require the occupancy of all available building areas, the planning for land use must be considered deficient. Therefore, in leasing airport property to commercial tenants, it would be well to avoid leasing more area than is reasonably required. Similarly the granting of options (to lease land not yet needed) may well turn out to be the most regretted concession made during the initial negotiations.

A commercial tenant when contemplating a substantial investment at an airport will naturally seek some form of protection from competition. The airport owner in fact may be under considerable pressure during the negotiations to lease airport premises under terms which guarantee an exclusive monopoly. If the airport is owned by a public agency, it should realize that any exclusive right to conduct an "aeronautical activity" will make the public agency ineligible for various forms of potential Federal assistance. Federal law prohibits the grant of an exclusive right to conduct an aeronautical activity at any airport on which Federal funds have been expended. However, there are alternate legal means of giving adequate protection to a commercial aeronautical enterprise at a public airport. The Federal Aviation Administration's (FAA) Advisory Circular 150/5190-1, Minimum Standards for Commercial Aeronautical Activities on Public Airports, describes in detail how an airport owner may, and should, enforce standards of quality and levels of service, including capital equipment. Such standards are very effective in excluding marginal or irresponsible competitive operations, and there should be no compelling reason to lease airport facilities on an exclusive basis. The legal prohibition against airport monopolies does not apply to nonaeronautical activities such as restaurants, taxicabs, limousines, etc.

In negotiating a lease of airport premises, it is desirable to keep in mind the nature of the rights and privileges to be conferred for the rentals or other consideration to be paid. Usually an aeronautical enterprise seeks:

- The lease of specified premises for as long a term as it can hope to get
- The right to conduct at those premises a wide range of activities with as little restriction thereon as possible.
- The rights, for itself and its customers, to use in common with others the runways, taxiways, and other public facilities of the airport.

A good lease will reflect thoughtful consideration of each of these objectives. For example:

- The lease of land or specific premises will be for a term long enough to amortize the investment to which the tenant will be committed. It will be for a firm rental rate. It will clearly spell out the respective housekeeping and insurance responsibilities of each party. If renewal options are contemplated, there may be provision for the airport owner to terminate the lease upon reimbursing the tenant for the unamortized value of installed improvements. Above all, it will be consistent with the master plan for phased airport development and land use.
- The agreement or lease will clearly identify what the tenant is permitted to do. This represents a franchise right to conduct a business of offering commodities and services to those attracted to the airport. It will cite the applicable standards, codes, or ordinances covering the exercise of the franchise. If the airport owner believes, for instance, that the patronage at the airport may some day justify a restaurant concession, he will be careful not to grant to the aeronautical tenants a permanent right to operate a snack bar in each hangar.
- The right to use the landing area should be for a separate consideration or payment since the use made of the landing area will vary with traffic. If a landing fee or toll charge is contemplated for others, the lease should clearly indicate who may use the landing area by virtue of the tenant's payments. The payment by the tenant for use of the landing area by his aircraft and those of his customers should not be "frozen" for the duration of a long term lease to real property. Even a utility airport may someday be expanded to accept jet aircraft, and the airport owner should be free to adjust the user charge commensurate with the increased operating costs involved.

Airport Regulations

The owner of a public airport should promulgate its policies and rules regarding the use of airport facilities. This may be done by local ordinance or through the publication of airport regulations. Such regulations are needed for the safety and protection of the public and to insure efficient use of airport facilities.

Each airport should develop regulations to cover the safety of aircraft operations while maneuvering on and in the vicinity of the airport (taxiing, takeoff, traffic patterns, parking, starting engines, etc.) It is well to discuss these rules with the local FAA Flight Standards representative.

Other matters to be covered by regulations include fire safety precautions; limitations on storage and handling of fuels; and restriction on paint spraying, arc welding, or other potentially hazardous operations. Some rules or restrictions may be needed to protect paved areas from overloads. Other rules will be needed to insure sanitary conditions and to control trash disposal. The airport should also establish adequate regulations for vehicular traffic and automobile parking. In addition, regulations to control the public and prevent people from venturing upon the aircraft operating areas may be necessary.

The manual is intended to provide airport managers and sponsors throughout North Dakota with information which is essential to running and maintaining a safe and efficient airport. Data in this manual is intended to provide airports with specific examples and information that is useful in the day-to-day operation. A brief description of the information contained in each section of this manual follows.

- **Chapter 1: *Airport Safety Inspections.*** To help promote a safe airport and a safe operating environment, routine safety inspections are important. This chapter provides guidance on how to conduct such inspections, what areas of the airport should be inspected, and the recommended frequency for such inspections. Sample lists that can be used by the airport to conduct safety inspections are also provided. Specific example checklists are provided for various operational areas at the airport.
- **Chapter 2: *Aircraft Accidents.*** In the event that an accident occurs, this chapter provides specific steps that each airport can take to be adequately prepared to deal with such an incident. Guidelines on how to conduct a mock disaster drill are also included. A list for maintaining emergency phone numbers is also provided.
- **Chapter 3: *Safety During Construction.*** All airports go through various phases of development. Chapter 3 provides information on how a safe airport operation can be maintained while construction is on-going. Obligations of the airport related to maintaining safety in construction areas are provided.
- **Chapter 4: *Notice to Airmen.*** When construction, weather or other conditions restrict airport operations or even force airport closure, the airport must file a NOTAM. Guidance on the conditions that initiate the filing of a NOTAM are provided in Chapter 4, along with specific instructions for filing a NOTAM. Data that must be submitted as part of the NOTAM are specified. A sample NOTAM and common abbreviations used in filing a NOTAM are also provided.
- **Chapter 5: *Snow and Ice Control.*** For North Dakota airports, the winter operating months present a special challenge. Chapter 5 provides specific information on recommended procedures for dealing with ice and snow in the airport environment. Exhibits on snow removal techniques are provided.
- **Chapter 6: *Storm Water Compliance.*** With an increased emphasis on the environment, increasing regulations have been developed to control storm water runoff from airports. Chapter 6 provides guidance on the specific steps that are necessary to develop a Storm Water Pollution Prevention Plan (SWPP). Example forms and exhibits for developing, maintaining, and enforcing an SWPP are provided.
- **Chapter 7: *Fueling Systems.*** Almost all airports provide some type of fueling, maintaining a safe airport operation requires that each airport take steps to control its fueling operations.

Chapter 7 provides information on how to accomplish this goal. Exhibits on typical fuel system layouts are provided, as is information on how to protect fuel quality. Steps that should be performed to determine fuel contamination are outlined. Procedures to perform routine checks and to maintain appropriate fueling records are provided.

- **Chapter 8: *Lighting and NAVAIDs.*** Almost all airports provide some type of lighting and/or Navigational Aids (NAVAIDs). These are provided to help improve airport safety during periods of reduced visibility. Chapter 8 provides information on standard airport lighting and diagrams on standard lighting fixtures, layouts, and NAVAIDs.
- **Chapter 9: *Federal Grant Assurances.*** Both the FAA and North Aeronautics provide funding to airports. These funds are provided primarily for each airport's development and maintenance. When an airport accepts these funds, they make certain commitments (assurances) related to the operation of their airport. These grant assurances, particularly as they relate to airports that accept funds from the FAA, are described in Chapter 9. These grant assurances detail restrictions that are placed on assets acquired by the airport with federal funds. Further, the chapter lists the various FAA Advisory Circulars that federally funded airports should adhere to in their operation. Chapter 9 further describes financial practices that should be followed by airports accepting federal funds. Chapter 9 also provides information to sponsors on how to apply for federal funds. Unit cost data that can be used in the development of a grant application is provided, as is a work sheet that can be used by the airport to develop a capital improvement program (CIP). Forms to request federal assistance are also provided.
- **Chapter 10: *State Grants.*** Chapter 10 provides information on funds available from the North Dakota Aeronautics Commission to both general aviation and commercial service airports. The Aeronautics Commission uses a priority rating system to distribute funds to airports requesting state grants. A copy of the criteria used to prioritize State funding requests is contained in Chapter 10. A copy of a State grant request form is also provided.
- **Chapter 11: *Rate Setting.*** Many airports require input for establishing equitable rates and charges. On a regular basis, the North Dakota Aeronautics Commission surveys the State's commercial service airport to obtain data on their rates and charges. While most general aviation airports in North Dakota would not be capable of commanding a comparable rate structure, the data provided in Chapter 11 is informative for comparative purposes.
- **Chapter 12: *Minimum Standards.*** All airports are best maintained if their tenants are subject to minimum operating and development standards. Chapter 12 presents information to airports that is useful in establishing minimum standards. Considerations for a number of on airport activities are provided. An example of minimum standards for an FBO is provided as part of Chapter 12.

- **Chapter 13: *Airport Leases.*** Airports are often in need of assistance with lease preparation. This is especially true of smaller airports that have limited resources. Chapter 13 provides example leases that can be used by North Dakota airport managers as a basis for formulating their own individual leases. It is important to note that the example leases provided in Chapter 13 are intended for reference only; all leases should be reviewed by the Airport's legal advisor prior to using the example as for actual lease negotiation. The following sample agreements are provided in Chapter 13:
 - Fixed Base Operator Lease
 - Airport use Agreement (commercial airline)
 - Concession Agreement
 - Tenant Lease (Non-FBO)
 - Hangar/Tie-Down Lease
 - Land Lease for Farming
 - Off-Airport Site Lease
 - Weather Bureau Lease
 - Air Traffic Control Tower Lease
 - FAA Field Office Lease
 - Vending Service Agreements
 - Taxicab or Limo Agreement
 - Airspace Easement
 - Aerial Application Operating Permit
 - Fuel Handling Permit
 - Airport Rules and Regulations for Operating
 - Resolution Regulating Aircraft Agricultural Operations
- **Chapter 14: *Air Show Operations.*** Chapter 14 provides information that is valuable to those airports planning on sponsoring air shows. These guidelines provide information that is important to running a safe and efficient air show.
- **Chapter 15: *Developing Community Support.*** For airports to maintain their operating viability, it is important for them to maintain a positive relationship with the community. Chapter 15 provides guidelines on how to develop and maintain a possible community support program. The first part of the chapter provides guidance on steps that can be taken to develop a public relations plan. This includes steps that can be taken to bolster public opinion, the framework for an effective public outreach program; and ways to effectively involve the press, the public and local politicians. The second part of Chapter 15 provides guidelines that each airport can use to establish an airport support group. Ways that such groups can be used to help the airport are also identified.
- **Chapter 16: *North Dakota Century Codes.*** Chapter 16 provides a reprint of Chapter 2-02 by the North Dakota Century Code which contains State law that is applicable to the operation of airports and operating fields.

- **Chapter 17: *Land Use Compatibility Guidelines*.** The long term viability of many North Dakota Airports is endangered by incompatible land use in the airport environs. Airports need to be protected from objects that can penetrate their height restricted Part 77 surfaces. Further, activities which are noise sensitive should be discouraged in close proximity to active airports. Chapter 17 provides specific guidance on those areas that should be protected in the airport environs. Further, this chapter discusses corrective actions and preventive measures that can be taken related to incompatible land use in the airport environs. The airport should use the information presented in Chapter 17 to work with communities that surround the airport to identify and to adopt appropriate land use controls that are matched to each airport's individual situation.
- **Chapter 18: *Pavement Report*.** This chapter contains information on the results of the airport's most recent pavement inspection.

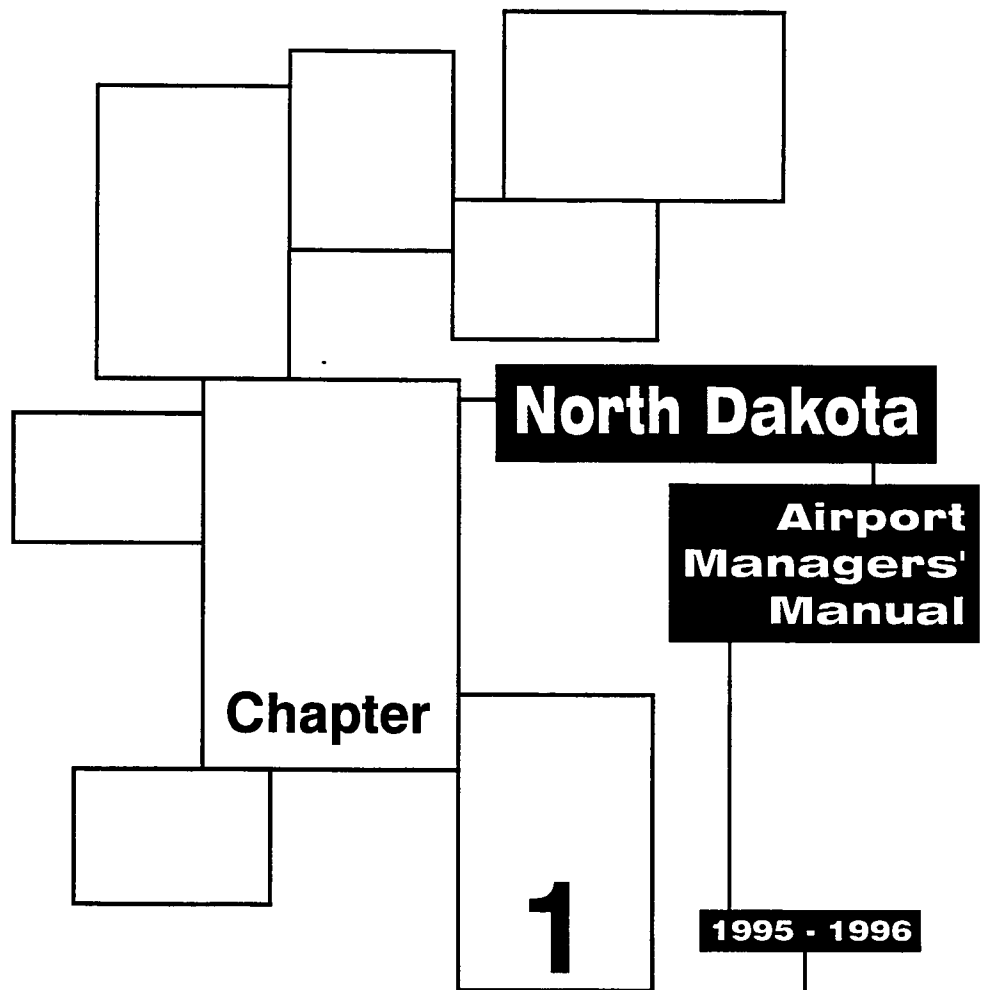
Additional guidance or clarification on data prevented in this matter can be obtained from

The North Dakota Aeronautics Commission
2301 University Drive
Building 1652-22
Box 5020
Bismarck, ND 58502
(701) 328-4747

or

The Federal Aviation Administration
Airports District Office
2000 University Drive
Bismarck, ND 58504
(701) 250-4385

Information specific to each individual airport follows this introduction



Airport Safety Inspections

Introduction

While some hazardous airport conditions develop virtually spontaneously, others are gradual. It is important to have an airport safety self-inspection program that monitors specific areas so that small problems do not have the chance to grow into safety hazards. One of the requirements of a Part 139 certificate is that the operator of each certificated Airport regularly conduct a daily self inspection to ensure that prompt corrective action is taken to eliminate unsafe conditions on the airport.

Operators Responsibility

Self-inspection is a primary responsibility of the airport owner, operator, or a duly authorized representative. It is customary to assign the job of assuring overall airport ground safety to the Airport Manager or operations supervisor. Primary attention should be given to such operational items as pavement areas, safety areas, markings and signs, lighting, aircraft rescue and fire fighting, fueling operations, navigational aids, ground vehicles, obstructions, public protection, wildlife hazard management, construction, and snow and ice control.

Recommended Inspection Frequency

Inspections to be broken down into the following frequencies.

Regularly scheduled inspection- The airport should be inspected at least daily when activities are at a relatively low operational level in order to create the least impact on airport operations.

Continuous surveillance- Those activities and facilities that have been identified to require continuous surveillance should be inspected any time personnel are in the air operations area.

Periodic condition evaluation- Periodic condition evaluation of activities and facilities can be conducted on a regularly scheduled basis, but less frequently than daily. The time interval could be weekly, monthly, or quarterly depending on the activity or facility.

Special inspection- Special inspection of activities and facilities should be conducted after receipt of a complaint or when an unusual condition or unusual event occurs on the airport, such as an accident or incident.

Inspection Recording

An effective safety inspection establishes procedures for reporting deficiencies so that they can be corrected. The operator should issue a Notice to Airmen (NOTAM) through the appropriate Flight Service Station (FSS) reporting deficient conditions which could have an immediate and critical impact on the safety of aircraft operations. When corrective actions have been taken, the NOTAM should be cancelled. For even the smallest airport, it is desirable to use a safety self-inspection

checklist which constitutes a written record of conditions noted, and acts as a check on follow up actions taken. The checklist can be an important administrative tool for airport management. Retain the checklist until indicated actions are completed. Airports certificated under FAR Part 139 must retain the regularly scheduled inspection checklist for six months.

Follow Up

Follow up on complaints or requests for corrective action and on all deficient items or problem areas noted during the daily inspection. Determine which problems require immediate attention and treat those with highest priority, including developing appropriate NOTAM notification.

Components of a Safety Self-Inspection

A successful safety self-inspection program has four components:

- A regularly scheduled inspection of physical facilities (which must be conducted daily at FAR Part 139 airports with an operating certificate)
- Continuous surveillance of certain airport activities, such as fueling operations, construction, airfield maintenance
- A periodic condition evaluation program for such things as surveying approach slopes, obstructions, etc.
- Special inspections during unusual conditions or situations, such as changing weather or days of unusually high flight activity

Located at the end of this chapter are the following check lists addressing these four components:

- Regularly Scheduled Inspection
- Continuous Surveillance
- Periodic Condition Evaluation
- Special Inspections

It is suggested that these checklists be photocopied and employed. Use a separate three ring binder to organize and retain completed checklists.

Regularly Scheduled Inspection

The regularly scheduled inspection consists of specific observations of airport physical facilities on at least a daily basis. This inspection should concentrate on the areas described in this section. If necessary, provide dimensions and depths. Take photographs, if appropriate, to document the condition.

Pavement Areas

Pavement inspection should be conducted before beginning flight operations to ensure pavement surfaces are clear. As a minimum, a daily inspection should be performed on all paved areas which are the responsibility of the operator or included in its Airport Operating Certificate. Components of the pavement inspections are as follows:

- Check the pavement lips (the area between full-strength pavement and shoulders or paved shoulders and safety areas) to assure that they are no greater than necessary to allow water to drain off the pavement. A lip height no greater than 1-1/2 inches is usually sufficient to allow proper drainage. At airports subject to FAR Part 139, any lip exceeding 3 inches is a violation.
- Determine if there are any cracks wide enough to cause directional control problems for an aircraft. Report and monitor these cracks.
- Determine if there are any holes that could cause directional control problems for an aircraft. At airports subject to FAR Part 139, any hole that cannot be covered by a 5-inch circle, and the side slope at any point in the hole that exceeds 3 inches in depth is less than 45 degrees, it may be a violation if it is determined to be a surface variation that could impair directional control of an air carrier aircraft.
- Check the condition of pavement areas for scaling, spalling, bumps, low spots, and for debris that could cause foreign object damage to aircraft.
- Check for vegetation growth along runway and taxiway edges that may impede drainage from the pavement surface.
- Check for vegetation growth in cracks.

Safety Areas

The inspector should know the dimensions of the runway and taxiway safety areas at the airport.

- Determine if there are any hazardous ruts, depressions, humps or variations from the normal smooth surface.
- Check to ensure no object is located in a safety area, except objects that must be in the safety areas because of their functions (such as runway lights, signs, or navigational aids).
- Determine if the base for any equipment in safety areas is at grade level (especially during the winter thaw) and mounted on frangible couplings.

- Check to ensure that manhole and hand hold covers are at grade level and mounts for light fixtures are at grade level. At airports subject to FAR Part 139, the frangible point must be no higher than 3 inches above grade.
- Check for damage caused by rodents or other animals.

Markings and Signs

- Check markings for correct color coding, peeling, blistering, chipping, fading, and obscurity due to rubber buildup.
- Check signs to ensure they are correct color coding, easy to read, and that all lights are working and not obscured by vegetation, dirt, snow, etc.
- Check to see if all taxiway hold position markings and runway designation signs are in good condition from a visibility standpoint and the sign lights are working.
- Check signs to ensure they are frangibly mounted.
- Check to see that signs are not missing, that they have the correct legend and orientation and that they have no broken panels.

Lighting

At night and during periods of low visibility, lighting is important for safe airport operations.

- Check to ensure that the following are operable, if installed, and that the optical systems are not obscured by vegetation or deposits of foreign material:
 - Runway and taxiway edge lights
 - Apron edge lights
 - Runway centerline and touchdown zone lights
 - Taxiway centerline lights
 - Taxiway edge or centerline reflectors
 - Guidance signs
- Check that the following are operable, if installed:
 - Floodlights
 - Obstruction lights
 - Lighting in fuel storage area
- Report all fixtures missing and lights that are not working.
- Report any missing or broken light fixture lenses.

- Ensure that runway and taxiway lights are the proper color and are oriented correctly.
- Check that lights function properly through the manual or radio control features and that photocell controls function properly.

Navigational Aids

The inspection should concentrate on the visual navigational aids owned by the airport

- Determine if the segmented circle is clear of vegetation and that it can be seen easily from the air
- Determine if the airport rotating beacon is visible and working properly.
- Check the wind cone to ensure that it swings freely and, if lighted, that all lights are operating
- Determine if the Runway End Identifier Lights (REIL's) are flashing and are mounted on frangible couplings.
- Check Visual Glide Slope Indicators (VASI's, PLASI's, or PAPI's) to ensure that their lights are working and mounted on frangible couplings

Obstructions

The inspection should concentrate on a visual check of construction underway on or near the airport that could affect aircraft operations. Check to ensure that construction equipment, especially tall cranes being used at construction sites, are not an obstruction. If construction is found and thought to create an obstruction, the airport should determine if proper notification to FAA, such as is required through FAR Part 77, Objects Affecting Navigable Airspace, should be directed to the Air Traffic Division or Airports District Office immediately if their construction has not been reported to the FAA.

Fueling Operations

The inspection should concentrate on the fuel farm and include security, fire protection, general housekeeping, and fuel dispensing facilities and procedures

- Check grounding clips and cables to ensure they are available and in good condition.
- Determine if the operator is permitting any unsafe fueling practices
- Check to ensure that the appropriate signs for the fuel farm are installed and that all gates are capable of being closed and locked

- Determine if the fuel farm is clean, not littered with debris, vegetation is not growing in or around the area, and any flammable material is removed
- Report any leaks and fuel spills in the fuel farm.

Snow & Ice

The inspection of snow and ice at the airport should concentrate on recognizing dangerous conditions so that they can be corrected

- Determine if any lights and signs are obscured by snow or damaged by snow removal operations.
- Check to ensure that snow banks and drifts next to the runway and taxiway provide clearance for aircraft wing tips, engines, and propellers.
- Check to ensure that snow is not piled across the runway threshold
- Check to be sure that no foreign objects are left on the pavement from snow removal operations
- Check to ensure that snow removal operations have not blocked any taxiway or access routes dedicated for aircraft rescue and fire fighting equipment
- Check to ensure that snow is not accumulated or piled in the critical areas for electronic NAVAIDs
- Check for any slippery pavement conditions

Construction

The inspection should focus on construction activities on the airport to ensure that a high level of safety is maintained:

- Determine if stockpiled material and construction materials are properly stored to keep them from being moved by wind, jet blast, or propeller wash.
- Check all construction adjacent to movement areas to ensure areas are identified with conspicuous marking and lighting.
- Determine if obstructions are properly marked and lighted.

Aircraft Rescue and Fire fighting

At applicable airports, check aircraft rescue and fire fighting equipment availability

- Determine that all required fire fighting trucks are in operable condition and adequate crews are available.
- Insure communications systems are operable.
- Determine the adequacy of the fire fighting agents on hand

Public Protection

Check gates, fencing, locks, etc., for security.

Wildlife Hazards Management

Check for dead birds or animals on the runways, taxiway, aprons, and ramps or other signs that wildlife problems may have developed (such as large flocks of birds on or adjacent to the airport)

Continuous Surveillance

Continuous surveillance consists of general observation of activities for compliance with regulations, procedures, etc., as well as abnormalities with physical facilities that are readily apparent. This is performed any time personnel are on the air operations area

- Ground Vehicles - Determine if procedures and arrangements for the orderly operations of ground vehicles are being followed. Report any deficiencies, if appropriate.
- Fueling Operations - Continuous surveillance of fueling operations should emphasize fire and explosion hazard. Ensure proper grounding is being used, deadman controls are not blocked, and no smoking is being observed
- Snow & Ice - Check to ensure that snow or ice on pavement surfaces do not affect aircraft operations.
- Construction - Check for unauthorized use of runways, taxiway, and aprons by construction personnel and equipment. Keep a sharp eye out for possible opportunities of runway incursions and other irregularities. Check all construction projects to ensure that the safety plan is being followed by the contractor. Ensure that construction equipment is not operated in navigational aid critical areas unless coordination with FAA has been accomplished.

- Public Protection - Control of pedestrian access to the movement areas, loading and off-loading of passenger areas, other movement areas frequented by the general public, and debris in movement areas

Periodic Condition Evaluation

Periodic condition evaluations consist of specific checks of physical facilities on a regularly scheduled basis (but less frequently than daily). Checks may require use of equipment (e.g., Walker Bar to measure VASI glide slope angles or transit to survey approach slopes) or checking specific features of physical facilities.

- Pavement Areas - Check pavement surfaces for rubber buildup, polishing or other items affecting friction
- Markings and Signs - Check pavement markings to ensure they are correct and clearly visible. Determine if markings are visible at night, especially examine for rubber buildup in the touchdown zone areas
- Lighting - Determine that power generator and circuit resistance tests are being conducted; lights with adjustable optical systems should be checked for proper aiming.
- Navigational Aids - Periodically check the aiming of REIL's and Visual Glide Slope Indicators owned by the airport
- Obstructions - Check to ensure there are no overhead power lines in the aircraft parking areas. Annually survey trees and other structures near the airport which could affect glide path angles, approach light lanes, or be an obstruction to FAR Part 77 surfaces
- Fueling Operations - Quarterly inspect all fuel trucks to ensure they meet fire safety standards. Check fire extinguishers to ensure they are B-C rated, their seals are not broken, and the gauges read the proper pressure, if installed. Check the labelling on pipes in the fuel farm, especially at the loading platform, to ensure they are legible and properly marked. Check grounding facilities to ensure they are adequate. Check fuel storage tank overfill warning devices. Quarterly inspect all physical facilities for safety against fire and explosion. Airports certificated under FAR Part 139 are required to maintain a record of this inspection.
- Air Rescue and Fire Fighting - Periodically determine if the aircraft rescue and fire fighting equipment is capable of meeting response times, if it is required under FAR Part 139. Hold hot-fire drills as required by FAR Part 139. Check to ensure the availability of adequate entry tools.

Special Inspections

Special inspections occur after receipt of a complaint or as triggered by an unusual condition or event. A special inspection should be conducted after an accident or incident.

- **Pavement Areas** - After a rain, check the pavement areas. After a rain, check the pavement areas for ponding and edge damming.
- **Safety Areas** - Check storm sewer system to verify that inlets are not clogged and drainage channels are free of debris. Note any standing water. Ensure all inlet covers are in place and sewer covers are at grade level. Conduct a special inspection before reopening a runway or taxiway following any construction or maintenance that has been performed in or around that safety area. Any time an aircraft has left the pavement and entered a safety area, check to ensure that no ruts or holes have been made by the aircraft tires or by personnel and equipment during the recovery operation. Check for construction and maintenance activities to ensure that no hazardous conditions have been created.
- **Markings and Signs** - Determine if markings are visible at night especially when the pavement is wet following a rain. After construction or maintenance operations, ensure that pavement markings are correct.
- **Snow & Ice** - Several special inspections may be needed during a winter storm until the airport is back to a normal operation. Check to ensure that all foreign objects have been picked up after snow and ice removal operations. Issue braking action reports.
- **Construction** - Conduct night inspections to ensure that obstruction and similar warning lighting is adequate to keep aircraft away from the construction area. Check construction equipment to ensure that they are parked within the pre-arranged areas.

Notices to Airmen (NOTAMs)

Ensure that if unsafe conditions are uncovered as a result of safety self inspections and corrective action that can not be completed immediately, appropriate NOTAMs are issued through the Flight Service Station and that local airport users are aware of the situation. After reporting NOTAMs to the Flight Service Station, follow-up to ensure that the NOTAMs were issued.

Source: FAA Advisory Circular- 150/5200-18B Airport Safety Self Inspection

Small General Aviation Airport - Check List

To further promote safety at general aviation airports, especially the smaller ones which have minimum equipment and a limited number of personnel, a few suggestions are provided. This list represents some of the more important items which are often overlooked that can result in damage to aircraft and even injury to people. This list is by no means all inclusive but provides a basis for a good safety check of your airport.

You may never know how many accidents you will prevent; however you will be able to say that you took precautions to make your airport as safe as possible and that you eliminated known hazards which were brought to your attention. This information also goes a long way to protect your facility in the event of any litigation after an accident has occurred

The attached form is broken down into major hazard areas and provides a column for noting whether an item is satisfactory (S), or unsatisfactory(U), or not applicable (N/A). Also, a remarks column is provided in which you can check any item to be commented on. Comments may be noted on the bottom of the form or on the reverse side. Any comments should be referred to by number, such as A(2), B(4), etc. When corrective action is initiated and/or completed, an entry should be made on the form which pointed out the unsatisfactory (U) condition. The date of the action should be inserted and the entry should be signed. This will provide the airport with a complete facility record and will be a valuable tool to keep you aware of existing airport/base conditions. It is suggested that the forms be punched and filed in a separate three-ring binder.

The form has been broken down into major items on individual sheets. You may wish, for example, to attach Sheet 3 (Item Runways) to a clip board, when touring the landing area so you need not be concerned with carrying, and possibly losing, other sheets. Another reason for separate sheets is that you may wish to run Sheet 3 daily, whereas Sheet 5 may only be done weekly, etc. It is advisable, to date and sign each sheet separately.

You can help prevent accidents by inspecting your facility daily, weekly, or as often as conditions require. Safe airports go a long way toward prevention of aircraft accidents. And as previously noted, when an accident occurs the evidence you accumulate in the above manner is invaluable in protecting your airport from unwarranted law suits.

Source. North Dakota Aeronautics Commission

SAFETY GUIDE FOR GENERAL AVIATION AIRPORT RAMP/APRON - PARKING AREAS

Name of Airport _____ Date _____

Person conducting safety check _____
(Signature)

GRADE LEGEND Satisfactory (S) Unsatisfactory (U) Not Applicable (N/A) Remarks (X)

		GRADE	SEE REMARKS
1	Unsealed pavement cracks, weak or failing pavement, buildup of shoulders causing entrapment of water, poor drainage, and growth of vegetation	_____	_____
2.	Free of obstructions such as blocks, chocks, loose gravel baggage carts, etc.	_____	_____
3.	Adequate parking and tie-down areas are provided and are well clear of taxiways and are prominently marked.	_____	_____
4	Deadlines are provided for spectator areas, passenger loading and unloading, cargo handling, etc	_____	_____
5	Fuel trucks and other airport vehicles are parked in specified area away from aircraft.	_____	_____
6	No unauthorized vehicles permitted on ramp or apron	_____	_____
7	"No Smoking" signs are prominently displayed in all areas where aircraft are being fueled	_____	_____
8	Fire bottles are provided at Apron and/or Ramp and are in good working condition.	_____	_____
9	Directional signs are provided to direct aircraft	_____	_____
10.	Yellow center lines are provided.	_____	_____
11	Flood lights, power outlets and grounding rods in good condition	_____	_____

**SAFETY GUIDE FOR GENERAL AVIATION AIRPORT
TAXIWAY**

Name of Airport _____ Date: _____

Person conducting safety check _____
(Signature)

GRADE LEGEND: Satisfactory (S) Unsatisfactory (U) Not Applicable (N/A) Remarks (X)

		GRADE	SEE REMARKS
1.	Unsealed pavement cracks, weak or failing pavement, build-up or erosion of shoulders, poor drainage, etc	_____	_____
2.	Free of weeds, or other obstructions.	_____	_____
3.	Shoulders are firm, marked as necessary for easy reference, no washouts, etc.	_____	_____
4	Center (Yellow) line is provided and is in good condition.	_____	_____
5	Hold line is provided and is clearly visible. No unauthorized vehicles and no livestock permitted on taxiway.	_____	_____
6	Necessary directional signs are provided and are so located as to be well clear of taxi areas.	_____	_____
7	Delineators and/or lights are provided and are in good order	_____	_____
8	Is there a reminder sign at run up area, "USE YOUR CHECKLIST?"	_____	_____

SAFETY GUIDE FOR GENERAL AVIATION AIRPORT RUNWAYS

Name of Airport _____ Date _____

Person conducting safety check _____
(Signature)

GRADE LEGEND Satisfactory (S) Unsatisfactory (U) Not Applicable (N/A) Remarks (X)

		GRADE	SEE REMARKS
1.	Runway lights and markers are clearly visible, are operated at correct brilliance, properly leveled and oriented, equipped with useable lamps of correct wattage, clear, clean lenses in runway lights, clean green lenses in threshold lights, unobstructed by vegetation.	_____	_____
2	Threshold properly marked and lighted.	_____	_____
3.	Runway numbers in good condition (Hard Surface)	_____	_____
4 *	End of runways flush with surrounding area (no lip).	_____	_____
5 *	Over-run areas in good condition.	_____	_____
6 *	Shoulders firm, no washouts, no holes or ditches and are clearly marked	_____	_____
7	Center line (White) in good condition.	_____	_____
8.	Approach areas clear of obstructions. It should be noted whether views of ends of other runways are obstructed by vegetation, trees, terrain or other obstructions, and whether unauthorized vehicles or livestock have access to the runways or air field	_____	_____
9.	Procedures for removal of disabled aircraft from runways available at office.	_____	_____

*NOTE Items 4., 5 , and 6 Unsealed pavement cracks, weak or failing pavement, poor drainage, bird baths, build-up or erosion of shoulders, obstructing shoulders, etc , should be noted.

SAFETY GUIDE FOR GENERAL AVIATION AIRPORT FUELING FACILITIES

Name of Airport _____ Date. _____

Person conducting safety check _____
(Signature)

GRADE LEGEND Satisfactory (S) Unsatisfactory (U) Not Applicable (N/A) Remarks (X)

		GRADE	SEE REMARKS
1	Area is clearly defined and is located away from aircraft parking area.	_____	_____
2	Pumps are placarded as to octane and/or fuel grade	_____	_____
3.	Grounding means is provided for all refueling operations	_____	_____
4	Fire bottles are provided and are in good condition.	_____	_____
5	Fuel hose and nozzle units are stored in clean area for protection from weather and contamination.	_____	_____
6	Filters are checked regularly and recorded	_____	_____
7.	Tanks are checked for water/contamination and recorded.	_____	_____
8.	Locks are provided and used on fuel tank filler caps to avoid possibility of sabotage.	_____	_____
9.	Fuel tank vents are checked.	_____	_____
10.	Fueling area is kept clean, free of debris, etc.	_____	_____
11	Rags are stored in closed containers	_____	_____
12	Oil is kept in storage bin or closet.	_____	_____
13	Oil cans are kept in drum or container.	_____	_____
14	"NO SMOKING" signs posed in area.	_____	_____
15	Step ladder is provided, properly stored, clean, and in good repair.	_____	_____

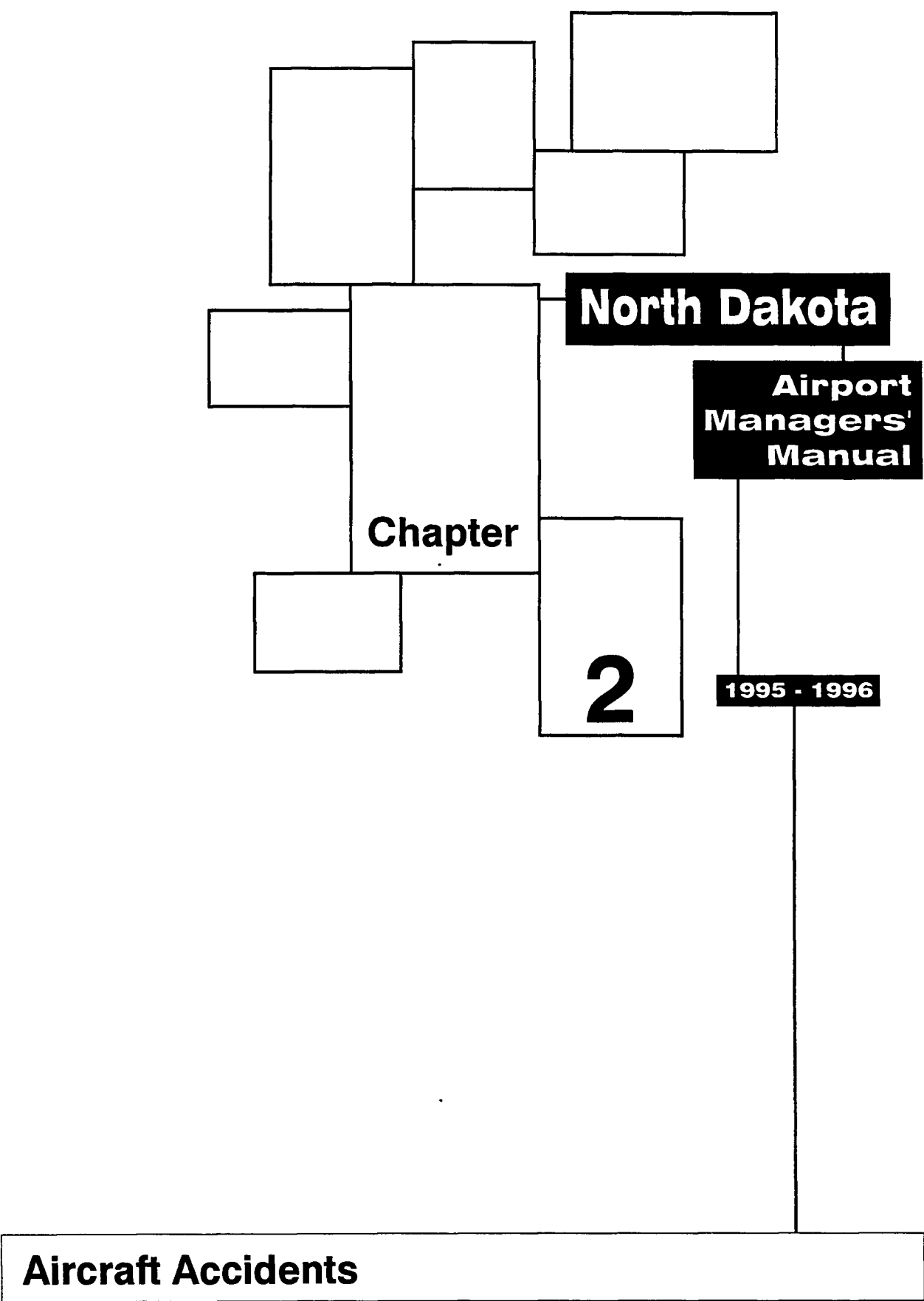
**SAFETY GUIDE FOR GENERAL AVIATION AIRPORT
BUILDING AREA/S: HANGARS, SHOPS, ETC.**

Name of Airport _____ Date: _____

Person conducting safety check _____
(Signature)

GRADE LEGEND: Satisfactory (S) Unsatisfactory (U) Not Applicable (N/A) Remarks (X)

		GRADE	SEE REMARKS
1	Clean - Free of debris, junk, oil cans, used aircraft parts of no value, old batteries, tires, etc.	_____	_____
2.	Fire protection Adequate number of fire bottles in good operational condition and with dates of service record available. Fire and rescue equipment and first aid and emergency services.	_____	_____
3.	All tools, equipment, etc properly stored	_____	_____
4.	Paints, oils, dopes, etc kept in separate area, preferably fire proof	_____	_____
5.	"NO SMOKING" signs properly posted	_____	_____
6.	Restricted Area signs posted	_____	_____
7.	Exit signs posted.	_____	_____
8	Buildings numbered - legible	_____	_____
9	All rags, etc in metal containers with lids	_____	_____
10	Building provided with locks for security	_____	_____
11	Area around buildings clean, free of weeds, junk, etc.	_____	_____
12.	Signs properly posted to identify occupants of building	_____	_____



Accident Plans

Introduction

One never knows when an emergency situation is going to occur. To facilitate the handling of emergency situations, a detailed plan containing the procedures to be followed in the event of an emergency should be formulated. This plan must be known by all airport employees, any outside officials or agencies involved, and the Aeronautics Commission. Not only should the plan of action be known by the appropriate outside agencies, but their involvement in formulating the plan may be necessary or essential. In the following chapter there is a broad overview of what an accident plan should include. Every airport is different and therefore should have their own airport emergency plan specially tailored to their needs. For guidance on how to create a detailed plan for your airport, write the FAA and request Advisory Circular 150/5200-31 (Airport Emergency Plan).

Accident Plan Considerations

There are two important points to consider when creating a plan to deal with airplane accidents:

- The accident is going to be thoroughly investigated by the FAA and the NTSB (National Transportation Safety Board) to determine causes of the accident
- North Dakota State Police is the overall authority in the immediate handling of such accidents. The FAA's and NTSB's involvement, of course, is in the interests of air safety. By determining the causes of accidents, it is hoped that similar accidents will not be a reoccurrence. The North Dakota State Police are trained in dealing with this type of emergency situation. crowd control, isolating wreckage from the crowd, caring for the injured until medical help arrives, etc.

Aircraft Accident Situations

There are two different situations which must be planned for: off-airport accidents and on-airport accidents.

Some procedures will be the same for both, but there will necessarily be some different considerations involved in the on-airport plan since the airport personnel will probably be the first to arrive at the scene of the accident. Both plans should include the following steps:

Step One - Establish a Chain of Command for Handling the Emergency

The state police representative at the accident scene is the ultimate authority. They must be notified promptly of any aircraft accident. Also, the local police authority and the Civil Defense should be notified. In some cases it may be preferable to notify one of

these agencies first if they are located closer to the scene of the accident. Whenever a member of the North Dakota State Police arrives at the accident scene, that individual becomes the governing authority

After notifying those agencies which actually are involved in dealing with the accident at the scene, the FAA and the Airport Commission should then be notified of the emergency

At the scene of the accident there must be one person in total command at all times; this will be the state police representative. That person must remain at the scene until all injured parties have been removed, fires extinguished, the crowd (that usually appears at accidents) dispersed, etc. Sometimes the FAA requests that the scene be kept under surveillance until their people arrive to prevent unauthorized tampering with wreckage debris. Again, this detail needs to be worked out between the airport manager and these parties when the plan is being created.

Step Two - The Roles and Duties of Individuals and Agencies Must be Spelled Out in This Plan

This is related to the establishment of a chain of command. However, in the event that the accident occurs on the airport and, thus, is more quickly reached by airport personnel, or in the event that the local police or civil defense can not reach an accident site before the State Police, certain procedures or guidelines should be listed and followed. These procedures are:

- Do not disturb the accident scene except to aid the surviving victims
- Crowd control is mandatory; methods of dealing with crowds should be worked out and included in the plan
- Keep track of all details involved. This general rule applies from the moment the airport receives notice of the accident until the FAA appears. Note the exact times that notification is given, the location of any part of the wreckage that has to be moved, and who was first to arrive at the scene. The details will aid in the investigation and may also prove to be of value to the airport in case of litigation resulting from the accident.
- When the State police arrive, all authority must be transferred to them. All pertinent information should be relayed to authority and assistance offered to them. This requires that all people and agencies who might be involved know the chain of command. Communications across or between agencies should be encouraged so that the effort is well coordinated and effective.

Step 3- Informal Impacted Parties of the Plan

Another major focus is being sure that all concerned are aware of the plans. Representatives from the state police, local police, civil defense, local fire departments, local hospital, and local ambulance service should be involved in the formulation of emergency procedures to be followed. Written copies of the final plan should be distributed to each of these agencies. The Airport Manager must be sure that all airport personnel are aware of the plan and know their individual roles and responsibilities.

Phone numbers of the State police, local police, local hospital, etc., should be readily available. The appropriate authorities should be identified. There are at least two ways of accomplishing this. A list of names and phone numbers should be made available as well as the steps that need to be taken. This information should be posted where all employees can easily and quickly obtain it. However, it may not be wise to post it where the general public can view it as references to airplane accidents can generate negative attitudes toward flying.

If there is an operational handbook for the airport's employees, the plan for handling airplane accidents should be included in it. Of course, phone numbers must be kept up-to-date. An example of an emergency plan phone numbers check list is provided at the end of this chapter.

Ideally, both of these approaches should be used. The important thing is that the proper authorities be notified as quickly as possible, and the parties involved (and this includes the airport's personnel) know the procedures for handling the emergency. The entire emergency plan should be revised in a meeting of all airport personnel at least once each calendar year.

Media Relations

Airport operators and managers will invariably have to deal with the media during an emergency. Here are a few good tips on how to deal with the media.

- Be prepared- Operators or managers prior to arriving at the scene should spend a couple of moments preparing a short statement. A little forethought can go a long way; managers should be able to predict many of the questions the media will ask.
- Select a Suitable Site- The site should be where background scenes do not show death or destruction, which exacerbate journalistic tendencies towards sensationalism.
- Arrange to have press identification checked- Anyone failing to have proper identification should not be permitted to hear the briefing.
- Control the questioning- Call on questioners individually.

- Project a professional image- Managers should remain calm, show neither fear or frustration, be serious, stick to proven facts and admitting they don't know when appropriate
- Refrain from accepting responsibility for the accident- Such an admission could affect claims or future litigation.

Source: FAA- Advisory Circular 5200-31 Airport Emergency Plan

Aircraft Disaster Drills

Introduction

Any actual or simulated disaster have the commonality of requiring the response of numerous community resources. The establishment of this sole fact may well be the most difficult to accomplish, contingent on the separate and varying priorities of the community that is served. For the sake of this guide, acceptance of the general philosophy of support by the community must be assumed.

Overview

The community resources (participating organizations) that must be brought to bear in the event of a disaster are equally in need of exercising their intended plans, each in concert with others. The magnitude of a drill should be commensurate with local resources, resources commensurate with size. In some locations, several areas of responsibility may be combined, effort must be made to develop each drill to the extent possible. The following guidelines should be followed.

- Determine practical scope of local disaster planning organizational structure
- Establish communications network, linking all segments, eliminate redundancy where possible
- Designate all identifiable command authority (an individual) for exercises on airport and off airport; designate an alternate and establish a succession of authority
- Develop police and/or other law enforcement coordination access to airport, drill scene, and hospital
- Establish security at scene and procedure for escort of vehicles on airport
- Coordinate - fire fighters, rescue workers, medical technicians

- The designation of a local physician (paid or volunteer and one that is aviation oriented) would prove a valuable asset. Local medical societies and governmental health organizations may also be helpful in carrying out the drill. Medical considerations are.
 - Determine hospital capabilities
 - Designate registrar and recorders to advise hospitals
 - Designate command post medical director
 - Establish triage area (on airport only)
 - Establish procedure for stabilizing and classifying casualties
 - Organize medical supplies
 - Familiarize those participating in the drill with the local hospital disaster plan
 - Coordinate so that ambulance and EMTs are familiar with airport
- Familiarize those participating in the drill with local laws regarding the coroner's role and procedure for evacuating casualties and fatalities.
- Others with whom advanced coordination is desirable include:
 - Control tower
 - Airline personnel
 - News media
- For the drill to minimize public concern, prepare a news release several days prior to exercise and designate a sole media spokesman for the entire exercise
- There are some items necessary to cope with an aircraft disaster (or simulation) that are not normally stocked in a community, or at least in the quantities necessary. This includes, but is not limited to
 - Triage kits - dated drugs are a problem. Professional guidance in assembling these kits is considered an absolute necessity.
 - Backboards - must have restraining straps, and handles
 - Litters
 - Body bags - nearby military bases may have an adequate inventory
 - Identification - ID cards for direct participants; Vests, helmets or arm bands to designate participants.

- Casualty tags - they should be waterproof
- Cordoning materials - these materials are secondary only to personnel

Triage is critical to any drill or disaster. This item is addressed because of its overwhelming impact on the success or failure of the life-saving effort. Triage by definition is "the sorting and first aid treatment of casualties in collecting stations before their evacuation to hospitals." Obviously a person performing triage must have a high degree of medical competence. In performance of this task, it must be decided who is:

- Dead and, consequently in no immediate need of transportation
- Critical, and in immediate need of transportation
- Slightly injured and able to await later transfer
- Too severely injured to possibly survive for long
- Not experiencing any medical problems

A triage area should be divided and marked for appropriate categories. Properly tagged mass casualties can then be addressed and moved to hospitals in an orderly manner.

At present, a standard for casualty tags does not exist. It must be simple yet adequate for medical personnel to categorize, the registrar to control evacuation, and the receiving facility to know care administered. There are commercially produced tags, however, these appear unduly complex and have no weather resistance whatsoever.

A simulated aircraft disaster drill should be conducted with all the realism possible. The following suggestions are offered:

- Attempt to have a realistic number of crash victims. A local amateur theater group would be ideal participants to be used totally or interspersed with high school or college students. In the case of the latter, through briefing to ensure realism is vital. The degree of simulated wound and injuries depends on local talent and imagination.
- The requirements of National Safety Board Part 430, Subpart C should be considered as an adjunct to the exercise. Evidence should be preserved.
- Determine and safeguard for radioactive material on board the downed aircraft.
- Evacuate victims away from aircraft to prevent further injuries by an explosion.
- An actual Aircraft lends significant realism to the "crash" scene, however, few carriers will permit their identity to be shown in these exercises. The Air Transport Association is opposed to the negative publicity associated with simulated disaster drills.

- Common shortcomings, pitfalls and errors have been noted in past exercises.
- Communications are the weakest segment in the alerting phase as well as during the rescue and life-saving operations. Portable public address systems and hand held radios are recommended.
- Insufficient litter bearers, this effort can be arduous, hence provision for relief should be made.
- Inadequate perimeter security at the scene.
- Doctors using terminology that recording personnel cannot comprehend. Medical personnel must be aware that lay persons are making records and/or casualty tags.
- Command post not conspicuously marked.
- Lack of realism, related to both the crash scene and victim.
- Lack of alternative planning for adverse weather conditions.
- Inadequate vehicle control and escort capability.
- Lack of specific duty assignments, particularly medical personnel.
- Inadequate information concerning the availability of hospital beds.

Source: American Association of Airport Executives (AAAE)

EMERGENCY TELEPHONE NUMBERS

Airport Manager _____

Hospitals _____

Ambulance _____

Fire Department _____

State Police _____ Local Police _____

Fixed Base Operators _____

Flight Service Station _____

Coroner _____

FAA Electronic Maintenance Unit _____

FAA Accident Prevention Specialist _____

NTSB _____

Safety Committee, Chairman _____

Power Company _____

Telephone Company _____

NOTE Crash site should not be disturbed until authorized by FAA or NTSB

AIRPORT SUPPLIERS AND CONTRACTORS

Lighting _____

Asphalt Plant _____

Wrecker Service _____

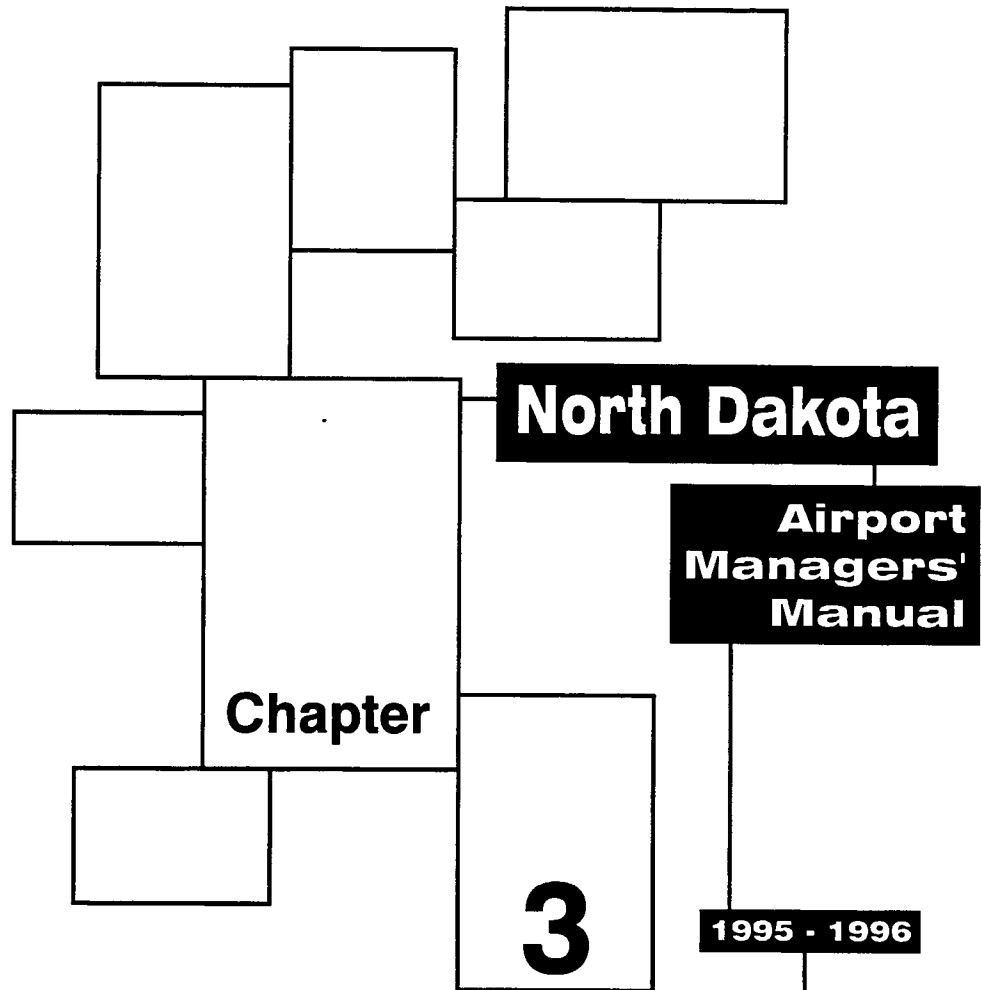
Equipment Rental _____

Grading Contractors _____

Electrical Contractor _____

Paving Contractor _____

Date phone numbers last verified _____



Safety During Construction

Introduction

Operational safety on airports may be degraded by construction hazards or marginal conditions that develop after an airport has been opened or approved for operation. This chapter addresses that problem. NOTE. Airports which have received Federal assistance (grants, real or personal property) and airports certificated under FAR Part 139 have mandatory requirements related to this subject.

Overview

The airport operator is responsible for full compliance with the requirements of FAR Part 139 for certificated airports and with the provisions of Federal grant agreements when applicable. Adherence to the following provisions will assist the airport operator in providing the level of safety required. Local FAA Airports offices have technical expertise to assist airport operators in all safety matters on airports. Following summarize some of the major concerns related airport safety during construction:

- Each bidding document (construction plans and/or specifications) for airport development work or air navigation facility (NAVAID) installation involving aircraft operational areas should incorporate a section about safety on airports during the construction activity.
- The airport operator should pay particular attention to the pullback distances and clearances for any maintenance activities and emergencies that occur on airports. These include activities which involve maintenance equipment--such as mowing machines, snowplows, lighting equipment--as well as emergency standbys for fire fighting and rescue equipment.
- Where feasible and where operational safety is not affected, the airport operator may choose to keep open operational areas adjacent to construction activity during construction rather than close them to aircraft activity.
- At airports that are undergoing a multi-year major redevelopment, a comprehensive construction safety plan should be developed. This safety plan may contain deviations from the criteria so long as they are based upon a commitment by the airport operator and the users to provide the maximum clearances possible between construction activities and aircraft within the limits imposed by local conditions.

Coordination of Airport Construction Activities

Construction activities on an airports affecting aircraft operational areas or navigable airspace, should be coordinated with the FAA and airport users (NOTAMs) prior to initiating such activities. In addition, basic responsibilities and procedures should be developed and distributed to instruct

construction personnel in airport procedures. These and other safety considerations should be addressed in the earliest stages of project formulation and incorporated in the contract specifications. Construction located within safety areas requiring special attention by the contractor should be clearly depicted on the project plans. The airport operator should closely monitor construction activity throughout its duration to ensure compliance with safety requirements.

Formal Notification

Formal notification to the FAA is required by regulation for certain airport projects. For instance, FAR Part 157, Notice of Construction, Alteration, Activation, and Deactivation of Airports, requires that FAA be notified in writing whenever a non-Federally funded project involves the construction of a new airport; the construction, realigning, altering, activating, or abandoning of a runway, landing strip, or associated taxiway; and the deactivating or abandoning of an entire airport. Formal notification is made by submitting FAA Form 7480-1, Notice of Landing Area Proposal, to the nearest FAA district office or FAA regional office. Also, any person proposing any kind of construction or alteration of objects that affect navigable airspace, as defined in FAR Part 77, Objects Affecting Navigable Airspace, is required to notify the FAA. FAA Form 7460-1, Notice of Proposed Construction or Alteration, should be used for this purpose.

Work Scheduling and Accomplishment

Pre-design, preconstruction, and pre-bid conferences provide excellent opportunities to introduce the subject of airport operational safety during construction. All parties involved, including the sponsor's engineer and contractors, should integrate operational safety requirements into their planning and work schedules as early as practical. Also, responsibilities should be clearly established for continuous monitoring and compliance with the requirements assigned and for vigilance to detect areas needing attention due to oversight or altered construction activity. When construction is being planned on FAR Part 139 certificated airports, the responsible airport safety (certification) inspector should be directly involved at all stages, from pre-design through final inspection.

Safety Considerations

The following is a partial list of safety considerations which experience indicates will need attention during airport construction.

- Minimum disruption of standard operating procedures for aeronautical activity
- Clear routes from fire fighting and rescue stations to active airport operations areas and safety areas
- Chain of notification and authority to change safety-oriented aspects of the construction plan
- Initiation, currency, and cancellation of NOTAMs (see chapter on NOTAMs)
- Suspension or restriction of aircraft activity on airport operations areas

- Threshold displacement and appropriate temporary lighting and marking
- Installation and maintenance of temporary lighting and marking for closed or diverted aircraft routes on airport operations areas
- Revised vehicular control procedures or additional equipment and manpower
- Marking and lighting of construction equipment
- Storage of construction equipment and materials when not in use
- Designation of representatives of involved parties and their availability
- Location of construction personnel parking, and transportation to and from the work site
- Marking and lighting of construction areas
- Location of construction offices
- Location of contractor's plants
- Designation of waste areas and disposal
- Debris cleanup responsibilities and schedule
- Identification of construction personnel and equipment
- Location of access roads to and from the construction site
- Security control on temporary gates and relocated fencing
- Noise pollution
- Blasting regulation and control
- Dust control
- Location of utilities
- Provision for temporary utilities and immediate repairs in the event of disruption
- Location of power and control lines for navigational aids
- Additional security measures required if FAR Part 107, Airport Security, is involved
- Marking and lighting of closed airfield pavement areas
- Coordination of construction activities during the winter with airport snow removal plan
- Phasing of work
- Shutdown or protection of airport navigational aids
- Smoke, steam, and vapor control
- Notify air rescue fire fighting personnel when working on water lines
- Provide traffic directors, wing walkers, etc., as needed to assure clearance in construction areas

Examples of Hazardous and Marginal Conditions

Analyses of past accidents and incidents have identified many contributory hazards and conditions. A representative list of these factors and conditions follows:

- Excavation adjacent to runways, taxiways, and aprons
- Mounds of stockpiles of earth, construction material, temporary structures, and other obstacles in proximity to airport operations areas and approach zones

- Runway surfacing projects resulting in excessive lips greater than 1 inch (2.54 cm) for runways and 3 inches (7.62 cm) for edges between old and new surfaces at runway edges and ends.
- Heavy equipment, stationary or mobile, operating or idle near airport operations areas or in safety areas
- Proximity of equipment or material which may degrade radiated signals or impair monitoring of navigational aids
- Tall but relatively low visibility units such as cranes, drills, and the like in critical areas such as safety areas and approach zones
- Improper or malfunctioning lights or unlighted airport hazards
- Holes, obstacles, loose pavement, trash, and other debris on or near airport operations areas
- Failure to maintain fencing during construction to deter human and animal intrusions into the airport operation areas
- Open trenches along side pavement
- Improper marking or lighting of runways, taxiway, and displaced thresholds
- Attractions for birds such as trash, grass seeding, or ponded water on or near airports
- Inadequate or improper methods of marking temporarily closed airport operations areas including improper and unsecured barricades
- Obliterated markings on active operational areas

Safety area encroachments, improper ground vehicle operations, and unmarked or uncovered holes and trenches in the vicinity of aircraft operating surfaces are the three most recurring threats to safety during construction.

Assuring Operational Safety

The airport operator is responsible for establishing and using procedures for the immediate notification of airport users and the FAA of any conditions adversely affecting operational safety at the airport. If construction operations require shutdown of a navigational aid from service for more than 24 hours or in excess of 4 hours daily on consecutive days, a 45-day minimum notice is desirable prior to the facility shutdown. Notification of construction, rough pavement, weather-caused effects, bird hazards, and other conditions affecting the use of the airport is usually made by a NOTAM issued by Flight Service Stations. FAA Air Traffic facilities and Airports district/field offices will assist in the notification process. Airmen or other persons engaged in aviation activities are encouraged to report safety-related airport conditions to airport management, the FAA or through the use of the National Aeronautics and Space Administration's Aviation Safety Reporting System (NASA forms).

Vehicles on Airport

Vehicular activity on airport movement areas should be kept to a minimum. Where vehicular traffic on airport operation areas cannot be avoided, it should be carefully controlled. A basic guiding

principle is that the aircraft always has the right-of-way. Some aspects of vehicle control and identification are discussed below. It should be recognized, however, that every airport presents different vehicle requirements and problems and therefore needs individualized solutions so that vehicle traffic does not endanger aircraft operations.

Visibility

Vehicles which routinely operate on airport operations areas should be marked/flagged for high daytime visibility and, if appropriate, lighted for nighttime operations. Vehicles which are not marked and lighted should be escorted by a vehicle that is equipped with temporary marking and lighting devices.

Identification

It is usually desirable to be able to identify visually specific vehicles from a distance. It is recommended that radio equipped vehicles which routinely operate on airport operations areas be permanently marked with identifying characters on the sides and roof. Vehicles needing intermittent identification could be marked with tape or with magnetically attached markers which are commercially available. Whenever possible, vehicles should be purchased with the recommended markings and lighting.

Noticeability

Construction vehicles/equipment should have automatic signaling devices to sound an alarm when moving in reverse.

Movement

The control of vehicular activity on airport operations areas is of the highest importance. Airport management is responsible for developing procedures, procuring equipment, and providing training regarding vehicle operations to ensure aircraft safety during construction. This requires coordination with airport users and air traffic control. Consideration should be given to the use of two-way radio, signal lights, traffic signs, flagmen, escorts, or other means suitable for the particular airport. The selection of a frequency for two-way radio communications between construction contractor vehicles and the air traffic control (ATC) tower must be coordinated with the ATC tower chief. At non-tower airports, two-way radio control between contractor vehicles and fixed-base operators or other airport users should avoid frequencies used by aircraft. It should be remembered that even with the most sophisticated procedures and equipment, systematic training of vehicle operators is necessary to achieve safety. Special consideration should be given to training intermittent operators, such as construction workers, even if escort service is being provided.

Inspection

Frequent inspections should be made by the airport operator or a representative during critical phases of the work to ensure that the contractor is following the prescribed safety procedures and that there is an effective litter control program

FAA Safety Responsibilities

FAA Airports engineers and certification inspectors have specific responsibilities regarding operational safety on certificated airports before and during periods of construction activity. Their particular area of concern will be directed towards construction within safety areas, and they will be involved in the following functions.

- Review plans to determine limits of work and possible safety problem areas.
- Give special attention to the development of the safety plan which is a part of the plans and specifications
- Advise FAA elements such as regional Flight Standards, Air Traffic, and Airway Facilities of the construction activities and the safety plan.
- Ensure that users of the facilities have ample warning of the proposed construction so that they may make advanced plans to change their operations.
- FAA Airports engineers and certification inspectors should participate in the pre-design and preconstruction conferences if the project involves a complex safety plan. Also, they should participate in construction inspections and in the inspection of the finished work to determine that there are no safety violations to FAR Part 139

Special: Safety Requirements During Construction

The following items should be considered during the airports construction process:

- **Runway Ends-** Construction equipment normally should not penetrate the 20:1 approach surface
- **Runway Edges-** Construction activities normally should not be permitted within 200 feet of the runway centerline. However, construction may be permitted within 200 feet of the runway centerline on a case-by-case basis with approval of the airport operator, the FAA and the users.
- **Taxiway and Aprons-** Normally, construction activity set-back lines should be located at a distance of 25 feet plus one-half the wingspan of the largest predominant aircraft from the centerline of an active taxiway or apron. However, construction activity may be permitted up to the taxiway and aprons in use provided that the activity is first coordinated with the airport operator, the FAA and the users, NOTAM's are issued, marking and lighting provisions are implemented; and it is

determined the height of equipment and materials is safely below any part of the aircraft using the airport operations areas which might overhang those areas. An occasional passage of an aircraft with wingspan greater than 165 feet should be dealt with on a case-by-case basis.

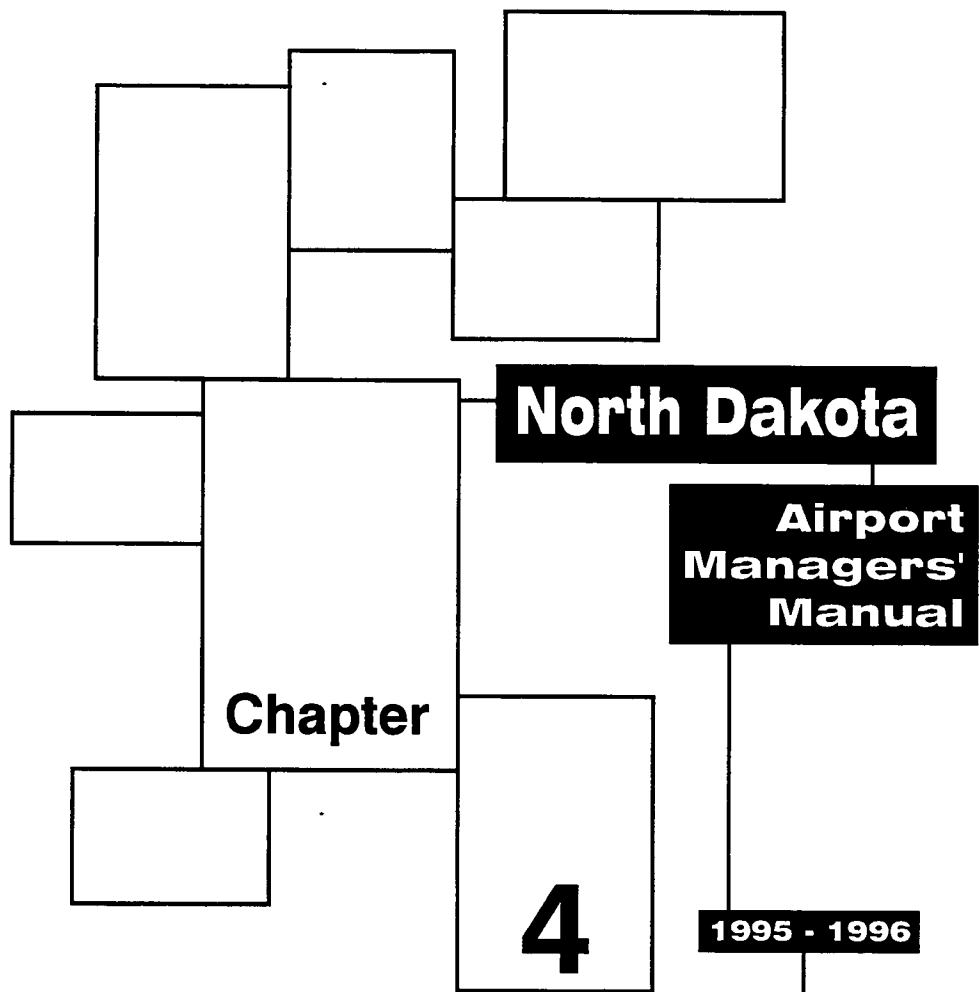
- **Excavation and Trenches-** Excavations and open trenches may be permitted up to 200 feet from the centerline of an active runway, provided they are adequately signed, lighted and marked. In addition, excavation and open trenches may be permitted within 200 feet of the runway centerline on a case-by-case basis, i.e., cable trenches, pavement tie-ins, etc., with the approval of the airport operator, the FAA and the users. Excavation and open trenches may be permitted up to the edge of structural taxiway and apron pavements provided the drop-off is adequately signed, lighted and marked.
- **Stockpiled Material-** Extensive stockpiled materials should not be permitted within the construction activity areas defined in the preceding four sections.
- **Maximum Equipment Height-** Notice of proposed construction shall be submitted to the appropriate Airports district office for review prior to the placement of construction equipment on airports. The guiding criteria involving FAR Part 139 certificated airports and grant agreement airports is that all construction plans and specifications require direct coordination with the appropriate Airports district, field, or regional office. In addition, airports should file FAA Form 7460-1 when equipment is expected to penetrate any of the surfaces defined above in the first three paragraphs. Airport operators are reminded that FAR Part 157 requires prior notice to construct, realign, alter, or activate any runway/landing area or associated taxiway for any project which is non-Federally funded.
- **Construction Near Navigational Aides-** Construction activity in the vicinity of navigational aids requires special consideration. The effect of the activity and its permissible distance and direction from the aid must be evaluated in each instance. A coordinated evaluation by the airport operator and the FAA is necessary. Technical involvement by FAA Regional Airports, Air Traffic, Flight Standards, and Airway Facilities Specialists is needed as well as construction engineering and management input. Particular attention needs to be given to stockpiling materials as well as to the movement and parking of equipment which may interfere with line-of-sight from the tower or interfere with electronic emissions.
- **Construction Vehicle Traffic-** With respect to vehicular traffic, aircraft safety during construction is likely to be endangered by four principle causes: increased traffic volume, nonstandard traffic patterns, vehicles without radio communication and marking, and operators untrained in the airport's procedures. Because each construction situation differs, airport management must develop and coordinate a

construction vehicle traffic plan with airport users, air traffic control and the appropriate construction engineers and contractors. This plan, when signed by all participants, becomes a part of the contract. The airport operator is responsible for coordinating and enforcing the plan.

- **Limitation on Construction-** Open-flame welding or torch-cutting operations should be prohibited unless adequate fire and safety precautions are provided and have been approved by the airport operator. All vehicles are to be parked and serviced behind the construction restriction line and/or in an area designated by the airport operator. Open trenches, excavations, and stockpiled material at the construction site should be prominently marked with orange flags and lighted with flashing yellow light units during hours of restricted visibility and/or darkness. Under no circumstances are flare pots to be near aircraft turning areas. Stockpiled material should be constrained in a manner to prevent movement result of aircraft blast or wind. Material should not be stored near aircraft turning areas or movement areas.
- **Marking and Lighting of Closed or Hazardous Areas on Airports-** The construction specifications should include a provision requiring the contractor to have a man on call 24 hours per day for emergency maintenance of airport hazard lighting and barricades.
 - Permanently Closed Runways and Taxiways- For runways and taxiways which have been permanently closed, the lighting circuits should be disconnected. With runways, the threshold markings, runway designation marking, and touchdown zone markings should be obliterated, and crosses should be placed at each end at 1,000 foot (300 m) intervals. With taxiways, a cross is placed at each entrance of the closed taxiway.
 - Temporarily Closed Runways and Taxiways- Temporarily closed runways are treated in the same manner as above except runway markings are not obliterated. Rather, crosses are usually of the temporary type (constructed of material such as fabric or plywood), and they are required only at runway ends. The crosses should be located on top of the runway numerals. For temporary marking, the dimensions of the crosses may be reduced to permit use of standard sheets of 4-by-8-foot (1.22 by 2.44 m) plywood. Temporarily closed taxiways are usually treated as hazardous areas (see below).
 - Closed Airports- When all runways are closed temporarily, the runways are marked as temporarily closed runways, and the airport beacon is turned off. When all runways are closed permanently, the runways are marked as permanently closed runways, the airport beacon is disconnected, and a cross is placed in the segmented circle or at central location if no segmented circle exists.

- **Hazardous Areas**- Area in which no part of an aircraft may enter are indicated by use of barricades with alternate orange and white markings. The barricades are supplemented with orange flags at least 20 by 20 inches (50 by 50 cm) square and made and installed so that they are always in the extended position and properly oriented. For nighttime use, the barricades are supplemented with flashing yellow lights. The intensity of the lights and spacing for barricades, flags, and lights must be such to delineate adequately the hazardous area.
- **NOTAMs**- The airport operator should provide information on closed or hazardous conditions to the local air traffic control facility (control tower, approach control, center, flight service station) so that a NOTAM can be issued.
- **Stabilized Area**- Holding bays, aprons, and taxiways are sometimes provided with shoulder stabilization to prevent blast and water erosion. This stabilization may have the appearance of a full strength pavement but is not intended for aircraft use. Usually the taxiway edge marking will define this area, but conditions may exist as to which side of the edge stripe is the full strength pavement. Where such a condition exists, the stabilized area should be marked with 3-foot (1 m) stripes perpendicular to the edge stripes. On straight sections, the marks should be placed at a maximum of 100-foot (30 m) spacing. On curves, the marks should be placed a maximum of 50 feet (15 m) apart between the curve tangents. The stripes should be extended to 5 feet (1.5 m) from the edge of stabilized area or to 25 feet (7.5 m) in length, whichever is less.
- **Runway Shoulder Markings**- Usually the runway side stripes will indicate the edges of the full strength pavement. However, conditions may exist, such as exceptionally wide runways, where there is a need to indicate the area not intended for use by aircraft. In such cases, chevrons should be used.
- **Temporary Runway Threshold Displacements**- Identification of temporary runway threshold displacements should be located outboard of the runway surface. These could include outboard lights, Runway End Identification Lights (REIL), and markings. The extent of the marking and lighting should be directly related to the duration of the displacement as well as the type and level of aircraft activity.

Source: FAA AC 150/5370-2C Operational Safety on Airports During Construction



Notice to Airmen

Introduction

The NOTAM (Notice to Airmen) system disperses information on unanticipated or temporary changes to components of, or hazards in, the National Airspace System (NAS). NOTAMs extend until the associated aeronautical charts and related publications have been amended. The NOTAM system is not intended to be used to advertise data already published or charted. FAA Flight Service Stations (FSS) and Automated Flight Service Stations (AFSS) receive and manage most NOTAM information for processing and dissemination on the NOTAM system. The National Flight Data Center in Washington, DC, has national program management responsibilities for the system and has exclusive operational control of certain NOTAM elements.

Management Responsibility

The management of a civil airport which is open for public use is expected to make known as soon as practical, but normally not more than 3 days before the expected condition to occur, of any condition on or in the vicinity of the airport, existing or anticipated, which would prevent, restrict, or present a hazard to arriving or departing aircraft. Public notification is normally accomplished by the NOTAM system. This same notification coverage should be made when the condition has been corrected or otherwise changed. Some facilities, such as pavements, runway lights, and airport guidance sign systems are virtually always the responsibility of the airport operator. Others, such as NAVAIDs and approach lights, are usually the responsibility of the FAA. To avoid confusion and extra workload, airport operators should initiate a NOTAM on a facility only when its operation and maintenance are clearly within their sphere of responsibility.

Authority to Initiate a NOTAM

Airport operators are responsible for providing the appropriate Air Traffic Control (ATC) facility, normally the associated FSS listed in the Airport Facility Directory, with a list of employees authorized to furnish NOTAM data. This will help expedite the NOTAM because information obtained by personnel not on this list may have to be confirmed by the FSS before issuance. In some cases it may be desirable to execute letters with servicing ATC facilities outlining NOTAM procedures. For example, at some controlled airports the ATC tower wishes to be the originator of the loop with airport management concerning NOTAM procedures.

Part 139 Certified Airports

In the case of airports certificated under FAR Part 139, airport operators have certain requirements set by regulation for dispersing information concerning conditions on and in the vicinity of their airports that may affect the safe operation of aircraft. For detailed information, see FAR Part 139 and the individual Airport Certification Manual/Specifications.

Air Traffic Control Responsibility

FAA air traffic personnel will accept aeronautical information, regardless of source or subject matter, provided the occurrence is no more than 3 days in the future. They are required to document the source of the information and, if not located at the appropriate FSS for NOTAM processing, to forward the information to that location. All information submitted is, of course, subject to verification prior to distribution as a NOTAM. The FSS specialists are responsible for the classification, accuracy, format, dissemination, and cancellation of NOTAM information. Flight data center (FDC) NOTAM's will be accepted at local ATC facilities and transmitted to the National Flight Data Center (NFDC) for their approval and circulation.

Extended Period NOTAMs

To reduce data circuit congestion, the FAA publishes NOTAM information that is expected to remain in effect for extended periods (more than 7 calendar days) in the Notices to Airmen, Class II, a publication which is issued every other week.

Distribution of NOTAMs

While airport operators are not responsible for determining how a NOTAM is distributed, they should be aware of the criteria which the FSS must apply in making that determination. As a general rule, the actual circulation that an airport condition report receives results from the nature of the reported item and the NOTAM service qualification of the airport.

Class (D) Notam

NOTAM (D) dissemination is provided for all airports listed in the Airport Facilities Directory when the airport condition being reported is one of the following.

- Commissioning or decommissioning of landing areas or portions thereof
- Airport closure - total or for certain types of aircraft
- Conditions that restrict or preclude the use of any portion of a runway or waterway
- Braking action when poor or nil
- Snow, ice, slush, or standing water conditions
- Runway Friction Measuring Equipment is out of service
- Change of runway identification

- Rubber accumulation on the runways
- Aircraft Rescue Fire fighting (ARFF) response restrictions or non-availability on a certificated airport when the condition does not permanently alter the ARFF index of the airport
- Commissioning, decommissioning, or outages of the following lighting aids:

ALS	RCLS
SFL/RAIL	TDZL
RWY LGTS	LDIN

- Commissioning, decommissioning, or outages of the following NAVAID's:

DME	MLS/ISMLS -AZM
ILS -GS	-ELEV
-LOC	-GP
-MARKERS	NDB
LDA	SDF
MARKERS -IM	TACAN AZM
-LOM	
-MM	VOR -DME
-OM	-VOICE
-FM	VORTAC
RVR	

How to Initiate a NOTAM

Compose the NOTAM

Wherever possible, use official contractions and abbreviations. They will be inserted somewhere in the process anyway, and it is better if you know and use them yourself. To assist the Airport Manager in understanding and following the NOTAMs procedure, **Table 4-1** provides a list of abbreviations which are common to the NOTAMs process. Following Table 4-1 is an example of a Letter of Agreement between AFSS and Minot International for faxing a NOTAM.

To develop a NOTAM, the following steps should be followed.

- Identify the affected facility (airport, ILS, etc.) and component (runway, taxiway, glide slope, outer marker, etc.). Example: ### 12-30 or ### NDB/ILS LOM. If a facility component has not been given a specific identifying designation, such as an unnumbered or unlettered parking apron, associate it with a component that does have a positive

- Describe the condition of the affected facility which prompted the NOTAM
Example: #### 12-30 CLSD or #### NDB/ILS LOM OTS See Table 4-1 for listings of facilities conditions and their contractions which are eligible for NOTAM dissemination
- Define the effective period of the condition. In addition to outage time, NOTAM's should contain an expected time of return to service or previous condition. Absence of a return to service time will mean that the condition will continue until further notice Example: #### 12-30 CLSD Furnish the month, day, and the time for the beginning and end of the condition and the time zone you are using. If a continental zone is given (such as EDT for Eastern Daylight Time), the FSS will convert to Coordinated Universal Time (UTC) for transmission.

Submitting the NOTAM

There are two principal avenues available to the airport operator for the submission of NOTAM material. The most commonly known (and used) method is through a local FAA Air Traffic facility. This method is appropriate for material not known sufficiently in advance to send as correspondence to NFDC. It is generally the most convenient method and permits immediate resolution of any questions on the adequacy or applicability of the submission. However, if the occasion for the NOTAM is known early enough for regular correspondence to serve as the filing medium, you are encouraged to mail the submission to NFDC. They will process the NOTAM and provide appropriate dissemination. The advantage of this method is a reduction of onrush workload in the FSS, thereby allowing more attention to urgent, time-critical workload.

Filing with Local the ATC Facility

Enter the message into the ATC system in accordance with a local letter of agreement, if there is one in effect. Otherwise, contact the appropriate Air Traffic facility for your airport. This is normally the associated FSS identified in the Airport Facilities Directory. FSS facility managers are required to ensure that lists of airport employees authorized to issue NOTAMs are available and kept current. To avoid delays in NOTAM dissemination, you should assist the FSS in keeping your airport's list up to date.

Filing with NFDC

Your submission will be accepted, subject to verification, on your letterhead or you may use your own form if you prefer. Be sure that your name, position, address, and telephone number are on, or attached to, the message. Mail first class to:

Federal Aviation Administration
National Flight Data Center, ATM-600
800 Independence Avenue, SW
Washington, DC 20591

or FAX to (202) 267-5322

Assuring Verification

Regardless of the filing method you use, be sure that the FAA facility receiving your NOTAM submission is furnished a name, title, address, and telephone number of a responsible airport official so that the FSS can confirm the NOTAM information when required. If you phone in your message, you should ask for the operating initials of the FSS specialist who receives your call. Each specialist is officially identified in the facility by those initials on paper or recordings. Knowing the initials will make follow-up or other reference easier.

Recording NOTAMs

You should keep a log of NOTAM's that you originate and maintain its status so that at all times you are aware of how your airport is represented to the aviation public. You should make the NOTAM status of your airport a regular checklist item in the daily routine. Also, it is wise to arrange to obtain a copy of the NOTAM as transmitted for future reference and to demonstrate regulatory compliance where this is a factor.

Conditions that Require Special Reporting Requirements

The following conditions require special care when composing and reporting to achieve the maximum benefit for the NOTAM system user and avoid misleading statements.

Braking Action

The quality of braking action reported by airport management is described as "good", "fair", "poor", and "nil", or a combination of these terms. When reporting Braking Action, the type of vehicle making the report is not given. FSS should process a braking action report from a landing aircraft as a Pilot Report (PIREP). Combining airport management and PIREP information is appropriate only with airport management authorization.

Non-Functioning Friction Reporting Equipment

During winter safety operations if friction measuring readings have been issued on a regular basis and equipment used to obtain these readings becomes unserviceable, a NOTAM should be issued until the equipment is restored to service.

Winter Conditions- Runways

When reporting winter conditions, use the following sequence to assist the FSS in formatting the NOTAM runway effected, coverage, depth, and condition

Depth of Snow, Slush, etc

When reporting the depth of snow, frozen slush, etc., express it in terms of thin (less than 1/2 inch), 1/2 IN, and 1 IN. After 1 inch, report in multiples of 1 full inch and discontinue the use of fractions. If a variable depth is encountered, such as 3 to 5 inches, report the greater depth. After a snow depth of 35 inches is reached, report additional amounts in whole feet only.

Plowed Runways

When reporting a portion of a runway plowed (PLW), give the width plowed and its condition if not entirely cleared. For example, a 150-foot wide runway which has been plowed for the center 100 feet along its entire length, and which inside that 100 foot strip is covered with 1/2 inch of packed snow and ice, would be reported as: ####6-24 1/2 IN SIR PLW 100 WIDE. Describing the plowed portion in terms of percentages or fractions of the surface is likely to be misleading and should be avoided. A Plowed report is used only if a portion of the surface is plowed. If the whole surface has been plowed, PLW is not used, although the surface condition SIR (or other) might still be appropriate

Runways Treated by Salt, Sand, etc

When reporting a runway treated by sanding or deicing, the entire published dimensions of the surface are assumed to be treated unless qualifying length/width information is also given. When deicing is reported, also report the material used as either solid or liquid, as this may have operational significance to the pilot. An example of an icy runway sanded for a portion of its surface is: ### 6-24 1/2 IN IR SND NE 5500/75. This would be interpreted to mean 1/2 inch of ice on the runway with the northeast 5,500 feet sanded 75-feet wide. An example of a full runway deicing is: ### 18-36 DEICED LIQUID

Snow Bank Reporting

When reporting snow banks, indicate when the depth is greater than 12 inches. Remember that unless specified otherwise, it is assumed that snow banks are at the edge of the movement area or, when PLW is used, at the edge of the plowed area.

Obscured Runway Lights

When reporting runway lights obscuration due to snow and ice, report only those lights that are completely obscured. Be specific as to which lights are affected, such as the last 2000 feet of Runway 9. Example: #### 9-27 RY LGT E 2000 OBSC. Do not report the reason for the obscuration, it is assumed from the context of the report. Do not report lights that are partially obscured.

Sample NOTAMs

Following are a few samples assembled by following the instructions in the body of this Chapter and using the material in Table 4-1. It is suggested that for the general readability of your airport records you express the dates conventionally as shown in these examples, unless an arrangement with the FSS specifies otherwise. The FSS will recast the date into the format for transmission, and the month will not be shown.

Example. Snow and Plowing

Scenario: an airport's 8,000-foot east-west runway has been plowed its entire length, but for only part of its width. The runway has been reopened for traffic, but until it can be closed for further work, the plowed portion has patches of snow and the edge lights on the eastern fourth of the runway are obscured by snow.

NOTAM: #### 9-27 PTCHY 1/2 IN IR PLW 75 WIDE + E 2000 RY LGT OBSC

Example. Airport Closed for Airshow

Scenario: an airport will host an airshow and will be closed to all nonair show traffic while the show is in progress on the 30th day of the month from 9:00 am to 6:30 pm. Note that in the sequence of items in this example, the condition of the facility that prompted the NOTAM is closure of the airport. The mention of "air show" is in the nature of an amplifying comment and follows the main message of the NOTAM.

NOTAM: #### ARPT CLSD AIRSHOW EFF 300900-1830

Source. FAA - Advisory Circular 150/5200-28A Notices to Airmen

Table 4-1

1. COMMON FACILITIES AND THEIR CONTRACTIONS

Braking Action Fair	BRAF
Braking Action Good	BRAG
Braking Action Nil	BRAN
Braking Action Poor	BRAP
Closed	CLSD
Commission	CMSN
Decommission	DCMSN
Displaced	DSPLC
Except	EXCP
Frozen	FRZN
Ice on Runway	IR
Inches	IN
Lighted	LGT
Loose Snow On Runway	LSR
Obscured	OBSC
Packed Snow On Runway	PSR
Packed or Compacted Snow/Ice On Runway	SIR
Patchy	PTCHY
Personnel and Equipment Working	PAEW
Plowed	PLW
Rough	RUF
Rubber Accumulation	RUBBER ACCUM
Sand or Sanded	SND
Snow	SNW
Snow banks, Drifted Wind	DRFT
Snow banks, Plowed	SNBNK
Takeoff	TKOF
Thin	THN
Unlighted	UNLGT
Water on Runway	WTR
Wet Snow on Runway	WSR
Unavailable	UNAVBL
Avoid	AVOID
Hazard	HAZ
Unavailable	UNAVBL
Unreliable	UNRELBL

2. LANDING AREA

a. Airport Surfaces

Airport	ARPT
Apron	APRON
Safety Area	SAFETY AREA
Runway	RY
Taxiway	TWY

b. Surface Composition

Asphalt	ASPH
Concrete	CONC
Gravel	GRVL
Turf	TURF

3. LIGHTING AIDS

Approach Light System	ALS
Approach Light System, Medium Intensity	MALS
Approach Light System, Medium Intensity with Sequence Flashers	MALSF
Approach Light System, Medium Intensity with Runway Alignment Indicator Lights	MALSR
Light	LGT
Obstruction Light	OBSTN LGT
Omnidirectional Approach Lighting Systems	ODALS
Precision Approach Path Indicator	PAPI
Rotating Beacon	ROTG BCN
Runway Alignment Indicator Lights	RAIL
Runway Centerline Light System	RCLS
Runway End Identifier Lights	REIL
Runway Edge Lights, High Intensity	HIRL
Runway Edge Lights, Low Intensity	LIRL
Runway Edge Lights, Medium Intensity	MIRL
Sequenced Flashing Lights	SFL
Short Approach Light System	SALS
Simplified Short Approach Light System	SSALS
Simplified Short Approach Light System with Sequenced Flashers	SSALSF
Touchdown Zone Light System	TDZL
Visual Approach Slope Indicator	VASI

4. AIR NAVIGATION AIDS

Azimuth	AZM
Compass Locator at ILS Outer Marker	LOM
Direction Finder	DF
Distance Measuring Equipment	DME
Elevation	ELEV
Glide Path	GP
Glide Slope	GS
Inner Marker	IM
Instrument Landing System	ILS
Localizer	LOC
Localizer Type Directional Aid	LDA
Marker Beacon	MB
Middle Marker	MM
Nondirectional Radio Beacon	NDB
Outer Marker	OM
Runway Visual Range	RVR
Simplified Direction Finder	SDF
Tactical Air Navigational Aid	TACAN
VHF Omnidirectional Radio Range	VOR

5. COMMUNICATIONS AND SERVICES

Aeronautical Advisory Station	UNICOM
Aircraft Rescue Fire fighting/Equipment	ARFF
Airport Traffic Control Tower	ATCT
Automatic Terminal Information Service	ATIS
Common Traffic Advisory Frequency	CTAF
Flight Service Station	FSS
Low Level Windshear Alert Systems	LLWAS

MINOT INTERNATIONAL AIRPORT AND GRAND FORKS AUTOMATED FLIGHT
SERVICE STATION

LETTER OF AGREEMENT

Effective: _____

SUBJ: Transmission of Notices to Airmen by Facsimile Machine

1. PURPOSE This agreement establishes responsibilities and describes procedures for transmission of Notices to Airmen (NOTAM's) between the Minot International Airport (MOT ARPT) and the Grand Forks Automated Flight Service Station (GFK AFSS) through the use of a facsimile machine (FAX)
2. SCOPE: The procedures outlined herein are applicable to:
 - a The MOT ARPT,
 - b The GFK AFSS.
3. RESPONSIBILITIES AND PROCEDURES:
 - a Minot International Airport shall:
 - (1) Procure and maintain FAA Order 7930.2, Notices to Airmen and FAA Order 7340.1, Contractions,
 - (2) Format NOTAM's in accordance with (IAW) FAA Order 7930 2 using plain language or appropriate contractions IAW FAA Order 7340.1,
 - (3) Complete GFK AFSS Form 7930-3 (Appendix 1) boxes 1, 4, and 5 using BLOCK printing when initially transmitting NOTAM's to the GFK AFSS, and box 8 when cancelling a NOTAM (see Appendix 2 for an example of a completed GFK AFSS Form 7930-3),
 - (4) Ensure that NOTAM's which are of a TIME CRITICAL nature are called to the GFK AFSS by telephone; and
 - (5) Verify receipt of routine NOTAM's by telephone with the GFK AFSS when no acknowledgement is received by return FAX within 20 minutes

b Grand Forks AFSS shall:

- (1) Complete GFK AFSS Form 7930-3 (Appendix 1) boxes 2, 3, 6, and 7 when acknowledging receipt of NOTAM information and faxing the NOTAM text as issued by the GFK AFSS. Ensure that the assigned NOTAM number is included. Upon receipt of cancellation of information complete box 9 immediately. Complete box 10 after transmission of NOTAM cancellation.
- (2) Ensure accuracy by making a follow-up phone call to the MOT ARPT to resolve any questions concerning the NOTAM information received by FAX.

4 HOLD HARMLESS
CLAUSE:

The airport owner/operator covenants and expressly agrees that with regard to any liability which may arise from the exercise of any procedure set forth in this letter of agreement, that each party shall be solely and exclusively liable for the negligence of its own agents, servants, and/or employees, in accordance with applicable law, and that neither party looks to the other to save or hold it harmless for the consequences of any negligence on the part of one of its own agents, servants, and/or employees

5. CANCELLATION: Either party may cancel this letter, at any time, by notifying the other party

Air Traffic Manager, GFK AFSS

Manager, Minot International Airport

Snow & Ice Removal

1995 - 1996

**Airport
Managers'
Manual**

North Dakota

5

Chapter

Introduction

Snow, ice, drifting snow, and reduced visibility at airports in areas subject to below freezing temperatures can severely affect wintertime operational safety. The presence of snow, ice, or slush on airport movement surfaces frequently causes hazardous conditions which contribute to aircraft accidents, incidents, and reduced traffic volumes, resulting in delays, diversions, and flight cancellations. Airport management's approach to snow and ice control procedures will largely determine the extent to which these effects can be minimized. Timely assessment of runway braking conditions during winter weather and providing accurate and real-time information to pilots will further enhance operations.

Definitions

For the purpose of this chapter, the following terms are defined

Ice- The solid form of water consisting of a characteristic hexagonal symmetry of water molecules. Density of pure ice is 57 lb/ft (913 kg/m), which is 9 percent less dense than water. Compacted snow becomes ice when the air passages discontinue at a density of about 50 lb/ft (800 kg/m).

Slush- Snow which has a water content exceeding its freely drained condition such that it takes on fluid properties (e.g., flowing and splashing). Water will drain from slush when a handful is picked up.

Snow- A porous, permeable aggregate of ice grains which can be predominately single crystals or close groupings of several crystals.

Dry Snow- Snow which has insufficient free water to cause cohesion between individual particles; generally occurs at temperatures well below 32 F (0 C). An operational test is to make a snowball, if this is futile because it falls apart, the snow is dry.

Wet Snow- Snow which has grains coated with liquid water which bonds the mass together but has no excess water in the pore spaces. A well-compacted solid snowball can be made, but water will not squeeze out.

Patchy Conditions- Areas of bare pavement showing through snow and/or ice covered pavements. Patches normally show up first along the centerline in the central portion of the runway in the touchdown areas.

Deiced- Runway ice that has been treated with chemicals.

Priority 1 Area- Those areas that are most important to airport operations (i.e., primary runway, primary taxiway, essential ramp areas, airport access roads, snow equipment area, etc.).

Snow Control Procedures

Close coordination should be maintained between the snow control center, air traffic control facility, FSS or UNICOM, and airport management to ensure a prompt response to snow and ice control urgencies. Alternate access to the runway by snow and ice control equipment, friction measuring equipment, and aircraft is necessary to keep movement areas operational to the best extent practical.

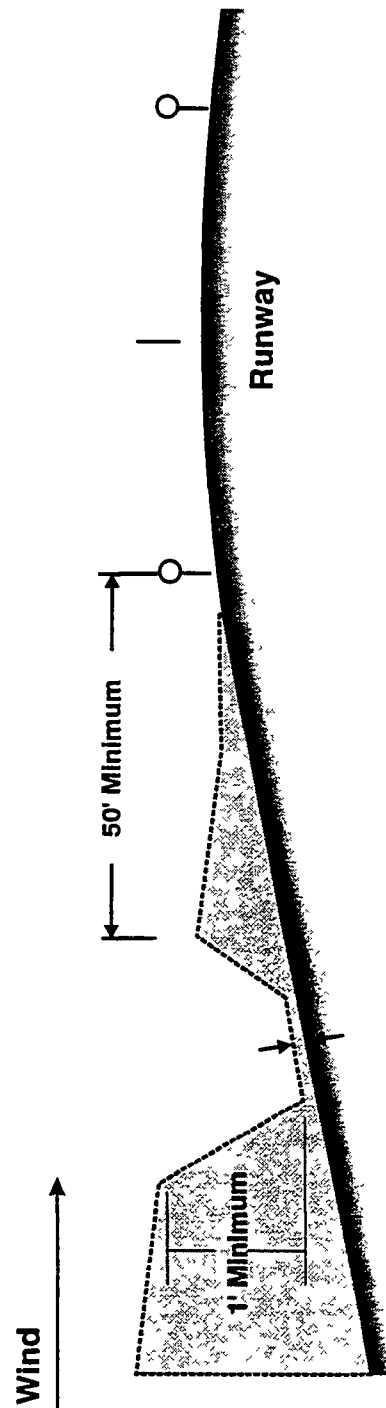
Controlling Snow Drifts

Preventing drifting snow from reaching operational areas reduces the clearance effort. The following techniques can be considered to control/prevent snow drifts

- Operational Procedures- If possible, move the snow to the prevailing downwind side of the runway to reduce drifting. Plan on the prevailing winds and the likelihood that they will change with frontal passage. Another aid to help reduce drifting snow early in the season is to have all vegetation on the pavement edges mowed as short as possible
- Snow Fences- Snow fences, if properly designed and located, can reduce the drifting of windblown snow. Snow fences should not be placed so that they penetrate any critical surfaces, and they should be outside of the runway safety area. Studies with snow fences have shown that optimum retention is obtained with a fence having 50 percent porosity. The fence should be located upwind of the area to be protected, at a distance of at least thirty times the height of the fence. Studies by the United States Department of Agriculture, Forest Service aided in the development of the "Wyoming" snow fence which has proven very effective. It has horizontal slats with 50 percent porosity, a gap of 12-18 inches (30-46 cm) at the bottom, an angle of 15 degrees toward the leeward side, and is set perpendicular to the prevailing wind. A 12-foot (3.7 m) height was generally most effective in their studies, though a shorter height can be used and is usually necessary on airports.
- Snow Trenches- This procedure involves cutting a trench in the snow which has been cleared off the edges of the runway to act as a trap (**Exhibit 5-1**). Care must be taken in digging the trenches to ensure that the surface of the safety area is not damaged (i.e., ruts, humps, or bumps are created). Multiple trenches spaced about 10 feet (3 m) apart can store more snow. The closest to the runway that a trench should be excavated is 50 feet (15 m).

Snow Removal Principles

While conditions at individual airports vary widely and may require special removal methods or techniques, there is general criteria that should be followed as closely as possible. In general, airport users should be promptly notified, and a NOTAM should be issued immediately, advising of unusual airport conditions. The following should be considered in your snow removal plans:



Natural ground line must not be disturbed when plowing snow trench
Replowing may be required to sustain trench effectiveness.

Exhibit 5-1 Typical Snow Trench

Initiating Snow & Ice Control Operations- Start snow and ice control operations on Priority 1 areas beginning with the primary instrument runway or active runway, as soon as snow or frozen precipitation begins to fall. Sweepers, if available, should be used to keep the center bare. As soon as snow has accumulated to a depth that cannot efficiently be handled by the sweepers, displacement plows and rotary plows should be dispatched to remove the build up. If the pavement is warm enough for snow to compact and bond, or if freezing rain is forecast, anti-icing chemicals should be applied prior to the start of precipitation or as soon after its start as possible. When snow has melted or begins to accumulate, or any ice that has formed has been disbonded from the pavement by the chemical, sweepers should remove this residue.

Storm Severity- The intensity of a snowstorm will determine the extent of the area to be cleared initially. The objective should be to clear the entire Priority 1 area; but should snowfall be too heavy to accomplish this, operations should be reduced to keeping the center of the Priority 1 runway and its taxiway open. If the full width of the runway cannot be cleared, this situation should be reported in a NOTAM giving details of the cleared width to allow each operator to judge the suitability of conducting operations, since aircraft requirements differ. If this width will not meet minimum operational requirements, operations should be reduced further or curtailed, and efforts should be concentrated on satisfying those requirements.

Clearing the Runway- Clearance of snow from the runway is accomplished most effectively by operating a plow team in echelon (**Exhibit 5-2 and 5-3**), using a number of displacement plows to move the snow with a minimum of rehandling into a windrow which can then be cast beyond the edge lights by a rotary plow. The number of displacement plows to be used should be based on the volume of snow handled and the capacity of the rotary plow. Blades should not be dropped onto the pavement until the equipment is in order to avoid damage to pavement and equipment. A safe distance should be maintained between vehicles operating in a team to avoid accidents resulting from loss of visibility. If visibility suddenly drops to near zero, while plowing operations are in progress, equipment should stop immediately and radio its position to the supervisor or snow desk. No further movement should be attempted until visibility improves.

No-Wind Condition- If no wind is blowing, snow can be cleared to either side of the runway. Selection of casting direction can then be based on storage capacity of the field adjacent to the runway, visibility considerations, avoidance of structures, NAVAID's or other devices; and least effort clearance. If a wind is blowing, however, free choice of clearance direction may not be possible because movement of snow into the wind will result in considerable drifting back onto the cleared areas and will reduce the operator's visibility. In the case of a cross wind, clearance is best accomplished by plowing and casting with the wind (**Exhibit 5-4**) regardless of the situation on the side of the runway where the snow will be deposited.

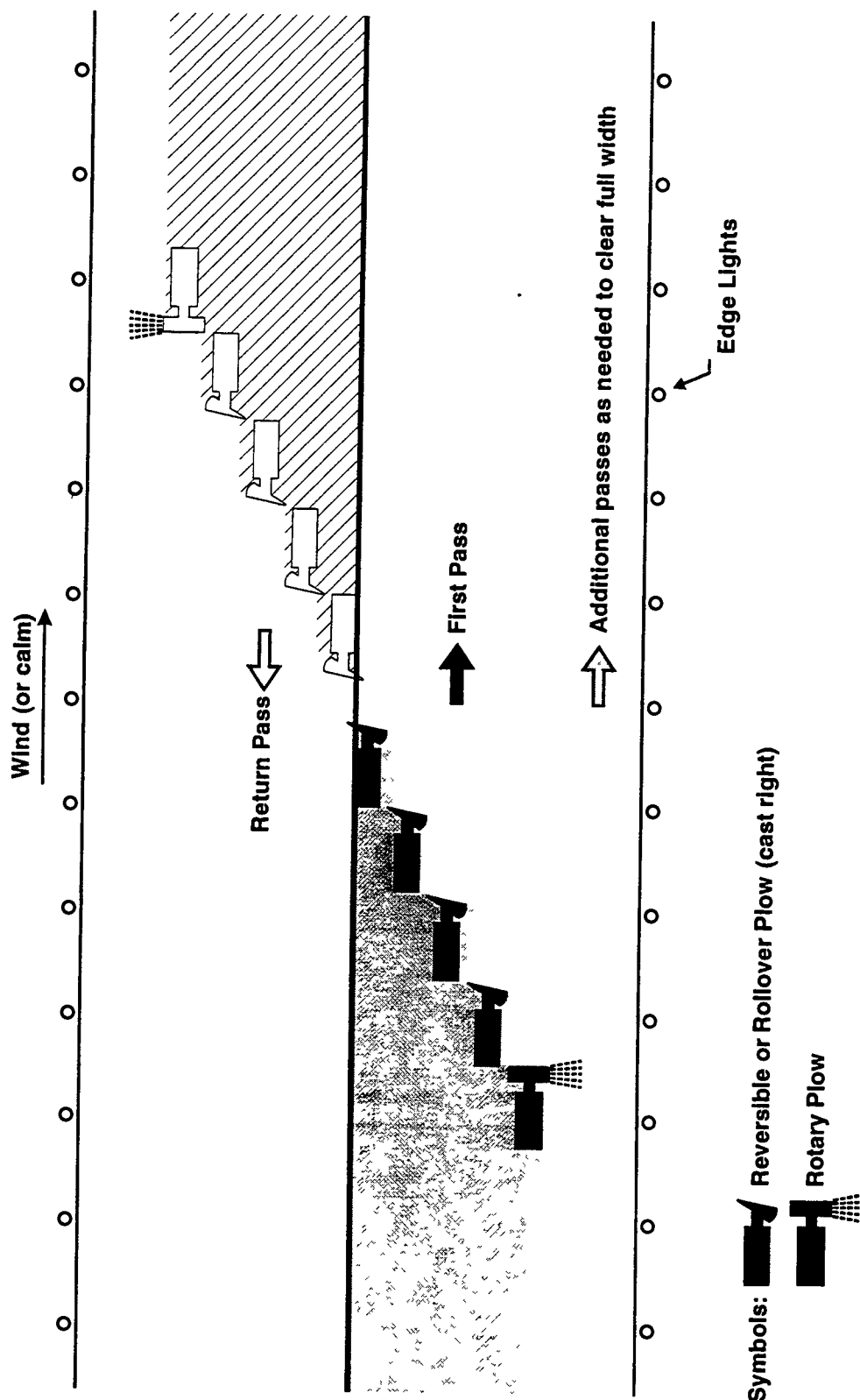


Exhibit 5-2 Possible team configuration during light snowfall with parallel or calm wind situations

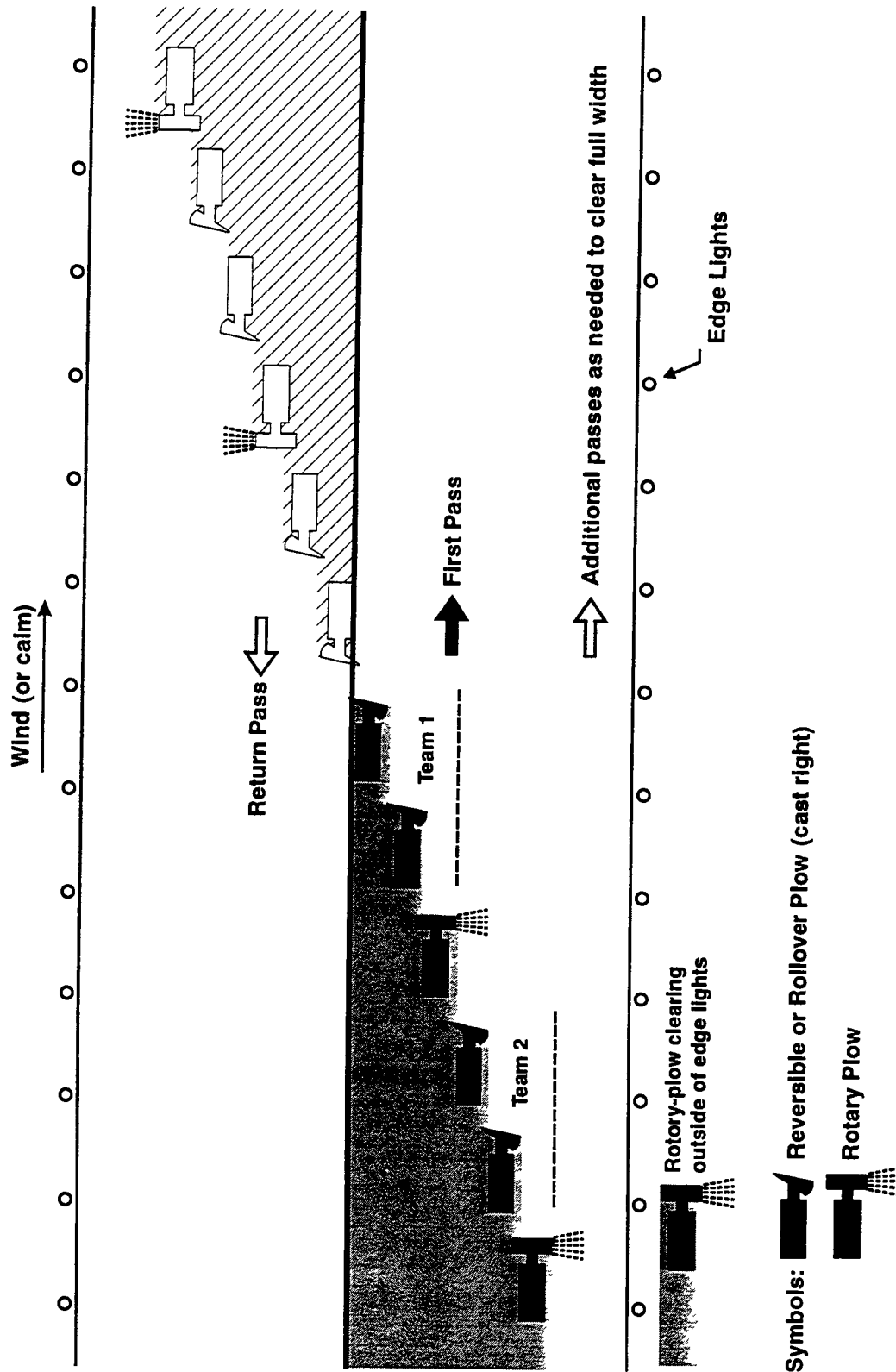


Exhibit 5-3 Possible team configurations in parallel or light wind Rotary plow may be outside of edge lights if suitable paved shoulder is available

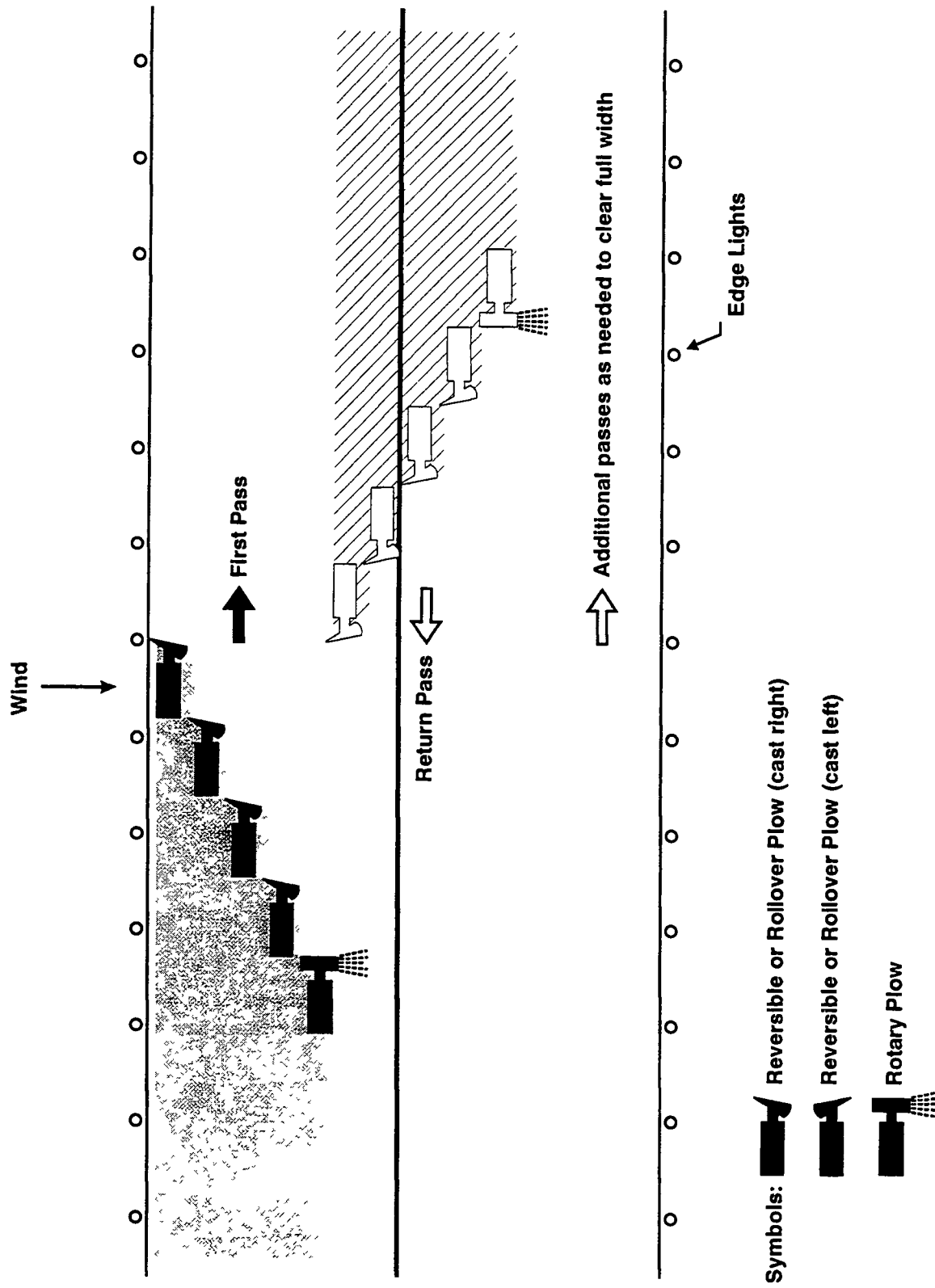


Exhibit 5-4 Possible team configuration with perpendicular wind

Coordination of Equipment- Equipment movements must be carefully timed and coordinated to ensure an orderly turnaround and safe reentry at the start of the return pass. Close liaison must be maintained between the control tower, snow control center, and supervisory personnel. The control tower should be in contact with the snow control monitoring network whenever equipment is operating on movement areas.

Snow Bank Height- The height of a snow bank on an area adjacent to a runway, taxiway, or apron should be reduced to provide wing overhang clearance and preclude operational problems caused by ingestion of ice into turbine engines or propellers striking the banks prior to the area being reopened to aircraft operations. **Exhibit 5-5** shows the desired maximum snow height profile which generally should be obtained. This profile should be checked for the most demanding airplanes used at the airport to ensure that props, wing tips, etc., do not touch the snow with a wheel at the edge of the full-strength pavement. When conditions permit, the profile height should be reduced to facilitate future removal operations and to reduce the possibility of snow ingestion into jet engines. **Exhibits 5-6 and 5-7** provide a graphic presentation of the glide slope (ground plane) area to be kept clear. Snow banks should not be allowed between this area and the runway.

Areas of Attention- Movement areas where aircraft will operate at high speeds such as turnoffs should receive the same snow and ice control attention as runways. Areas of low speed operation such as taxiways and ramps can also be critical under some conditions. Directional control and braking action should be maintained under all conditions.

Military Operations- Airports with joint military operations may have arresting barriers located near the end of the active runway or the beginning of the overrun area. Great care should be taken in clearing snow from these barriers. Barriers located on the runway should be deactivated and pendants removed prior to snow removal operations. Snow should be removed to the distance required for effective run out of the arresting system. Snow removal involving arresting barriers should be coordinated with the military tenant prior to the snow removal season.

Runway Lights- In heavy snow areas, it is helpful to place flags on flexible stakes extending 1 or 2 feet above the edge lights. Visibility is enhanced by using international orange flags. Time and effort in clearing snow from around the lights is minimized by plowing as close as possible to them. The remaining snow can be blown away using a truck-mounted air blast unit, the air blast from a broom, or by spraying with liquid deicing chemical. In some cases, edge lights may be raised. As a last resort, hand shoveling may be necessary.

Airport Signs- The face of all signs and all lights should be kept clear of snow and in good repair at all times, with priority given to lights and signs associated with holdlines and ILS functions.

NOTE: Snowbank heights as shown in figure 3-6a and 3-6b must also be met

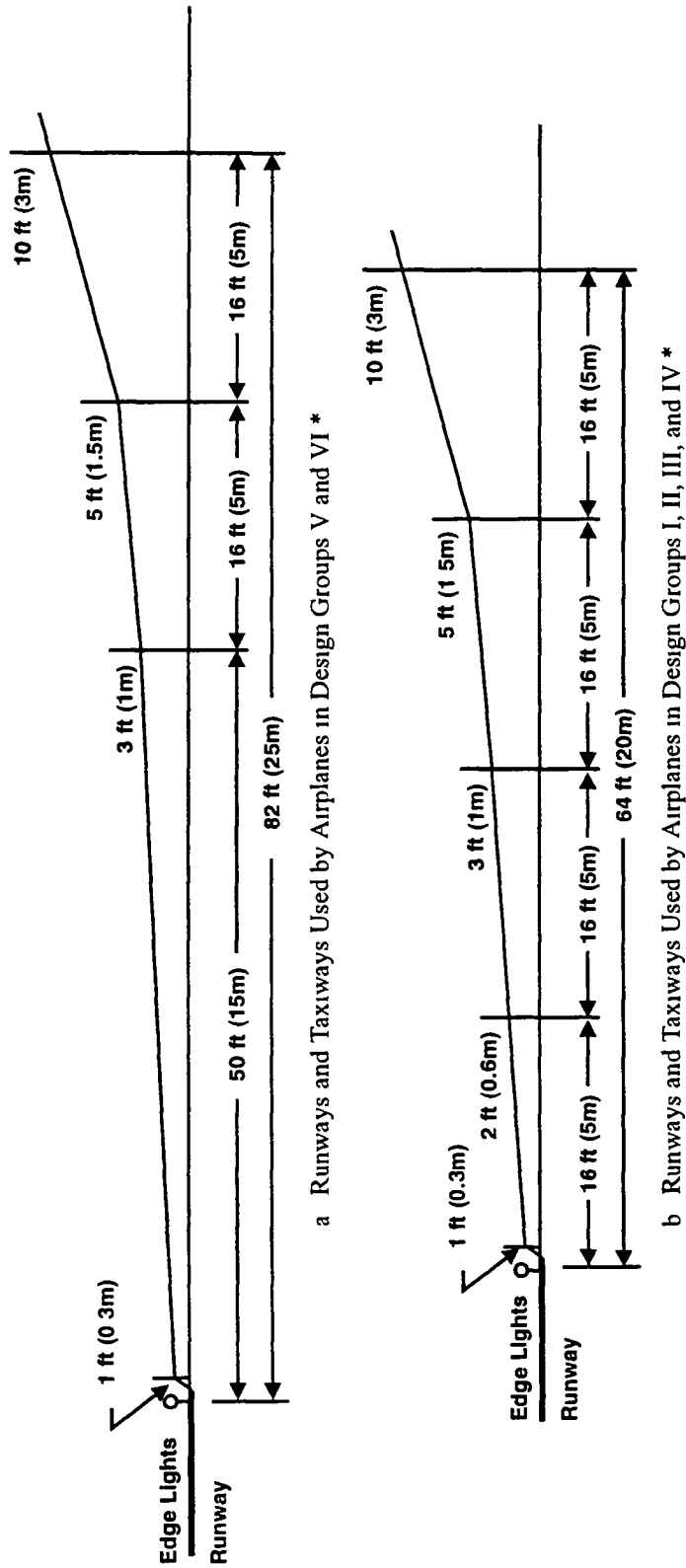
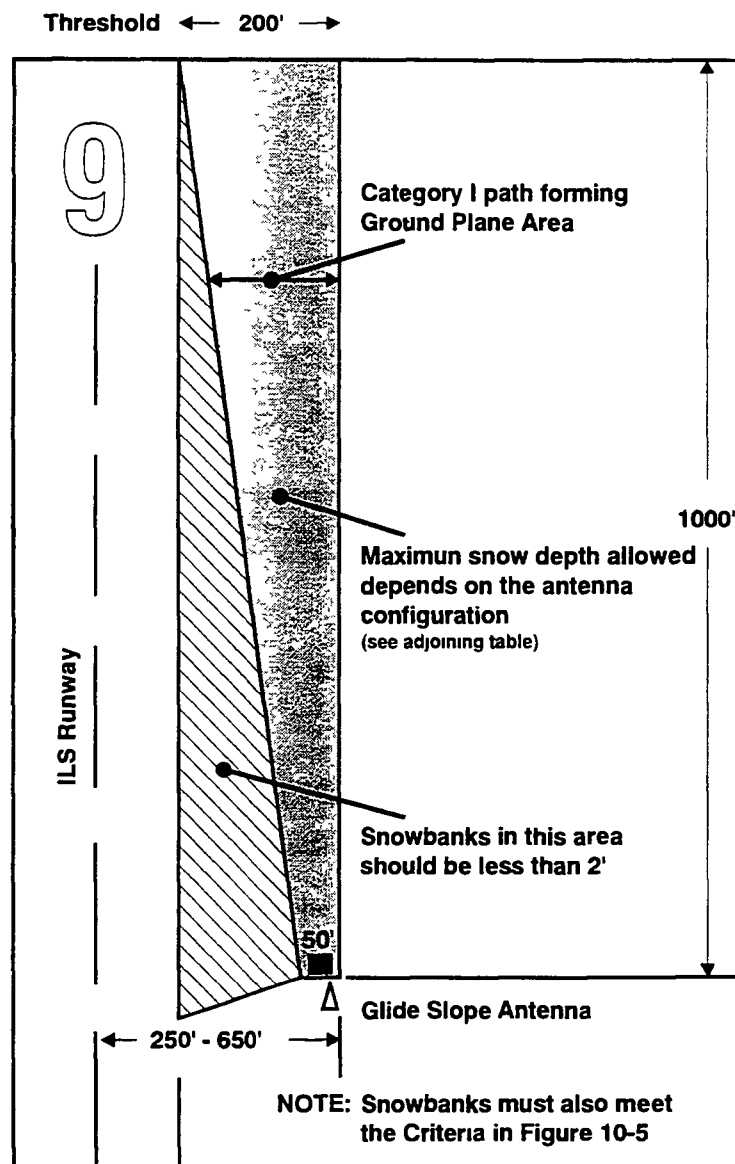


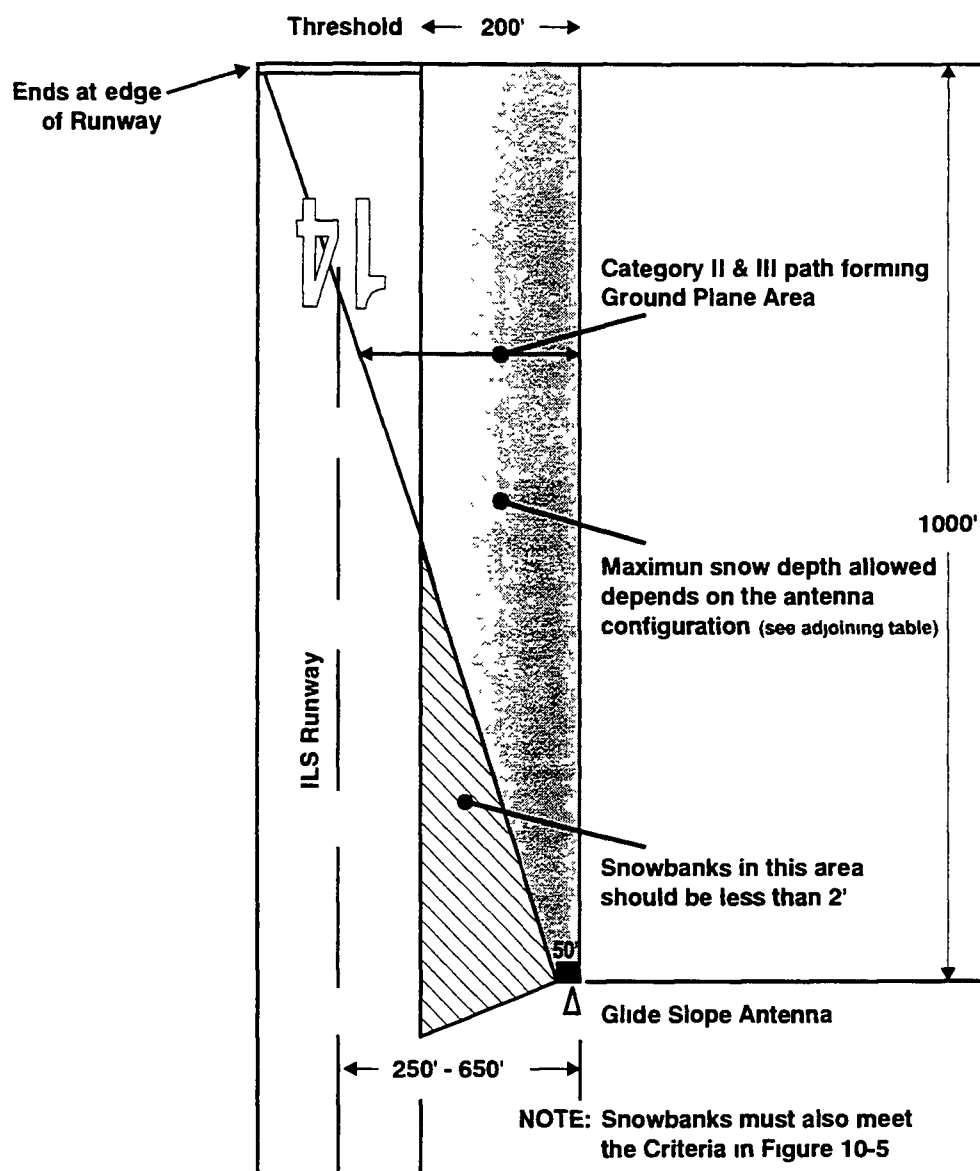
Exhibit 5-5 Maximum desired snow height profile



SNOW DEPTH			
ACTION TAKEN	SBR < 6 in NR CEGS < 18 in	SBR 6 in - 8 in NR CEGS 18 in - 24 in	SBR > 8 in NR CEGS > 24 in
SNOW IS REMOVED	Removal not required Full CAT I service	Remove snow 50 ft wide at mast widening to 200 ft wide at 1000 ft towards middle marker	
SNOW IS NOT REMOVED	Full CAT I service	Category D aircraft minimums raised to localizer only	CAT I approach restricted to localizer only minimums

Antenna Configurations SBR - sideband reference
NR - null reference
CEGS - capture-effect glide slope

Exhibit 5-6 Cat I Snow Critical Areas to be Kept Clear of Snow Accumulation



SNOW DEPTH			
ACTION TAKEN	SBR < 6 in NR CEGS < 18 in	SBR 6 in - 8 in NR CEGS 18 in - 24 in	SBR > 8 in NR CEGS > 24 in
SNOW IS REMOVED	Removal not required Full CAT II and III service	Remove snow 50 ft wide at mast widening to 200 ft wide at 1000 ft towards middle marker plus widen the area to include the line from the mast to the far edge of the runway threshold	
SNOW IS NOT REMOVED	Full CAT II and III service	Both CAT II and III restore to CAT I service Category D aircraft minimums raised to localizer only	Landing minimums raised to localizer only minimums

Antenna Configurations: SBR - sideband reference
NR - null reference
CEGS - capture-effect glide slope

Exhibit 5-7 Cat II & III Snow Critical Areas to be Kept Clear of Snow Accumulation

Inset Lighting- Centerline and touchdown zone (TDZ) lights inset in the pavement will tend to form "igloos" of ice or compacted snow surrounding them. Heat from the lamps will melt even cold dry snow which will refreeze and adhere to the pavement and then accumulate around the lights. To prevent damage to these lights, use rubber or plastic cutting edges or shoes and casters on plow moldboards and the front of rotary plows.

Pavement Markings- Striated pavement markings are useful in reducing ice buildup.

Snow Disposal

Some means of disposing of snow must be provided when there is insufficient space for storage adjacent to cleared areas. This will entail loading trucks and hauling to a disposal site, pushing the snow into melting pit sites near the areas being cleared, or portable melting pits set up over catch basins.

Methods For Controlling Ice

Scraping

Ice near the freezing point is soft and may be scraped off the pavement. Cold, hard ice bonds much more tenaciously and is difficult to remove by mechanical means. Scraping is not very effective, and attempts to lift the ice from the pavement by penetration with a wedge parallel to the pavement. Cutting edges attached to plow moldboards can be operated in contact with the pavement in the attempt to remove ice. At plowing speeds above about 10 mph, front-mounted plows tend to bounce and leave ice on the pavement.

Plow Techniques

Slower speeds, heavier plows, or plows which can be downloaded can reduce this "porpoising" or bouncing. Application of downward force also helps to penetrate and scrape the ice. Although down pressure can be applied by hydraulic cylinders on front-mounted plows, underbody blades can apply greater pressure without reducing steering control.

Selecting the Correct Plow Blade

All blades or cutting edges or the moldboards to which they are attached should have trip mechanisms to release the blade upon striking an obstacle in order to prevent damage to the blade, truck, pavement insert, or pavement. Carbon steel cutting edges run in contact with the pavement wear rapidly and require frequent replacement. Tungsten carbide cutting edges are extremely tough and can last for thousands of miles. They are brittle, however, and can chip upon striking metal or other very hard projections. Serrated cutting edges which cut grooves in hard ice are sometimes used and will facilitate retention of chemicals and abrasives which might otherwise be blown off. Centerline or flush lights should not be plowed with metal cutting edges contacting the pavement;

rubber or polymer cutting edges will help prevent damage to the lights. Slush or very soft ice can also be removed effectively by rubber cutting edges which squeegee the pavement.

Anti-Icing vs. Deicing

Ice removal after formation is called deicing, preventing the bond from forming is called anti-icing or bond prevention. Anti-icing, which is recommended over deicing whenever possible, is accomplished by concentrating either thermal or chemical energy at the pavement surface. Because of the high cost of installing pavement heating systems and the large amounts of energy required to maintain the surface above freezing prior to the onset of precipitation, anti-icing/deicing with approved airside chemicals is generally more economical. Chemical application is in either solid (includes pre-wetted) or liquid form. Chemicals in liquid form are most effective for uniform anti-icing treatment of pavements. All deicing/anti-icing chemicals should be applied based on pavement temperature rather than air temperature.

Deicing Chemicals

Deicing chemicals should be applied on ice 1/16 inch (1.5 mm) or less in thickness. Thicker layers of ice require an extended period of time to obtain ice-free pavement. However, solar radiation from even a cloudy sky enhances melting action to such an extent that elimination of ice thicknesses greater than 1/16 inch (1.5 mm) are possible.

Anti-Icing Chemicals

The recommended chemical form for anti-icing is liquid, although solid chemicals can also be effective in this application. A dry solid chemical has the disadvantage that if applied to a cold dry surface it may not adhere and therefore, may be windblown or scattered by aircraft movements. However, certain physical properties of a solid, such as its bulk density, particle shape, etc., may reduce these tendencies. Regardless, wetting a dry anti-icing chemical, either during or before distribution, or after loading into the application vehicle, improves the ability to achieve uniform distribution and improved adhesion.

Runway Friction Improvement

Since snow and ice degrade the coefficient of friction between rubber tires and pavement which could pose an unsafe condition for aircraft, it is important to clear to bare pavement whenever possible. There are situations where complete removal is difficult or impossible to achieve within a required span of time. At temperatures approaching the eutectic temperature of a deicing chemical, for instance, it may require an hour or more for the chemical to go into solution and melt the ice. There are two techniques for modifying the frictional coefficient of a pavement covered with ice or compacted snow, one by the building in a texture on the surface and the other by surface treatment of the ice or snow. It should be emphasized, however, that an abrasive is not a deicing chemical and

will not remove ice or compacted snow--in fact, heavy applications of abrasives can insulate the ice and prolong its presence.

Pavement Surface Modification

Surface texture and surface treatment modifications by themselves will not increase the coefficient of friction of ice formed on the surface but both will enhance the response of chemical treatment

Pavement Grooving- Grooves cut into the pavement will trap deicing chemical, reduce loss, and prolong its action. Grooves also assist in draining melt water and avoiding its refreezing. There is practical evidence that grooves and porous friction courses modify the thermal characteristics of a pavement surface, probably by reducing the radiant heat loss, and delaying the formation of ice. There do not appear to be any negative effects from grooved pavements.

Porous Friction Course (PFC)- PFC has generally the same benefits as grooving. Open graded asphalt concrete is less effective in improving coefficient of friction under icing conditions because the open spaces will fill with compacted snow, and to a lesser extent with ice in the case of freezing rain. Most maintenance personnel have found that chemical treatment rates may need to be increased on this type of pavement compared to dense graded asphalt concrete because of drainage of the chemical. The drainage characteristics also change as abrasives accumulate in the voids and plug them.

Surface Treatment

This is the approach to rapidly increase the frictional coefficient of an ice surface. Two methods are available: application of coarse granular materials ("abrasives") and scarifying the ice surface with a serrated blade.

Abrasives- Granular material provides a roughened surface on ice and thereby improves aircraft directional control and braking performance. Use of abrasives should be controlled carefully on turbojet movement areas to reduce engine erosion. If the granules do not embed or adhere to the ice, not only are they likely to be ingested in engines, but they can be blown away by wind or scattered by traffic action and serve no useful function. This is particularly the case when ice or compacted snow is at temperatures below about 20 F (-6.7 C) since no water film exists on the surface to act as an adhesive. There are three approaches to reducing loss of abrasives:

- They can be heated to enhance embedding into the cold surface
- The granules can be coated with an approved deicing chemical in the stockpile or in the distributing truck hopper

- Diluted deicing chemical can be sprayed on the granules or the pavement at the time of spreading.

Ice Scarifying- Directional control of vehicles on an ice or compacted snow surface can be improved dramatically by cutting longitudinal grooves in the ice. However, no improvement in braking effectiveness results from grooving, so this approach is only an expedient to be employed when very low temperatures prevent rapid chemical action or mechanical removal. The grooves trap abrasives or chemicals and hence contribute to improving the surface friction characteristics and melting action.

Abrasives

Materials

The airlines should be consulted about the material used on the runways. Friction improving materials applied to airport movement surfaces shall consist of washed granular particles free of stones, clay, debris, and chloride salts or other corrosive substances.

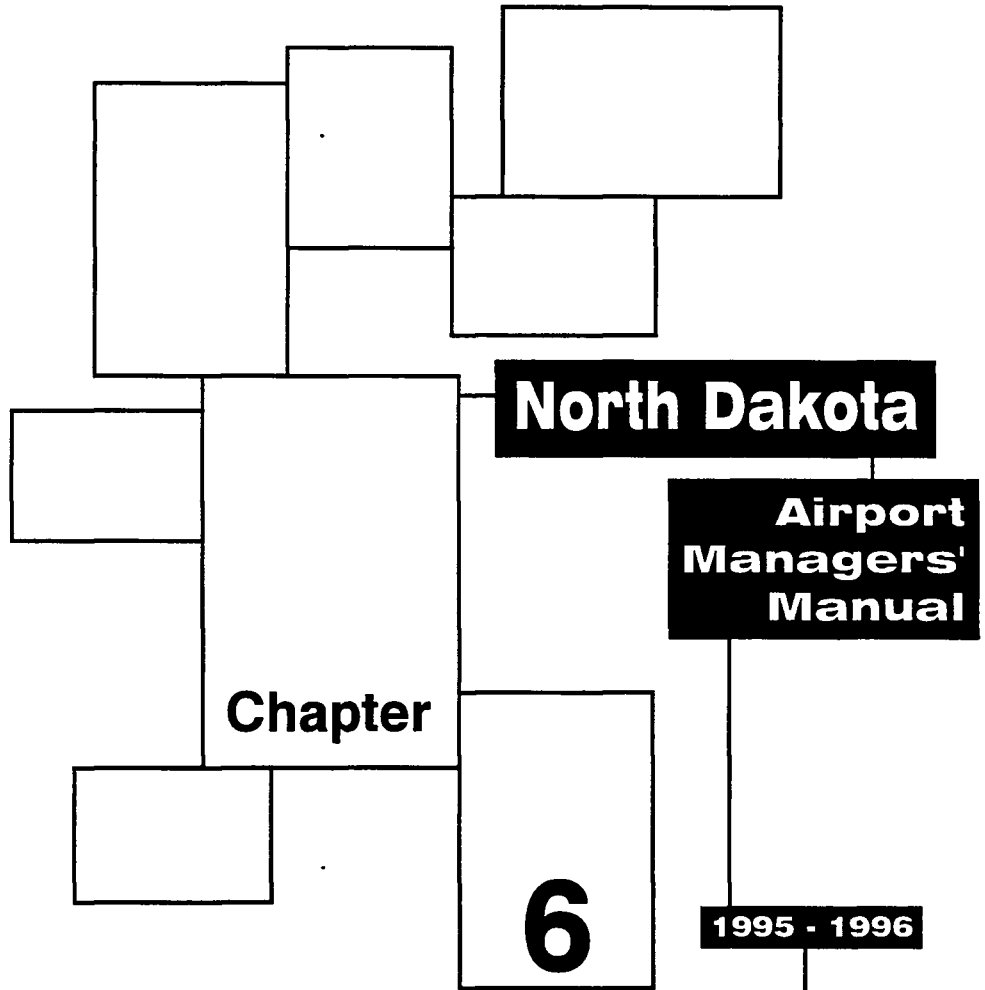
Application

Sharp, hard silica sand provides the greatest increase in traction and remains effective the longest when compared to softer materials because of its resistance to fracturing and rounding. It is also very abrasive. Limestone is softer and may be used where available if abrasion needs to be reduced. The greater amount is required at temperatures approaching 32 °F (0 °C), the amount decreasing as the temperature drops.

Chemically Treated Abrasives

Granular particles are treated with approved chemicals or heated to make them adhere to ice thereby preventing loss of material. At temperatures above 15 °F (-9.4 °C) a solution of airside urea may be used, below this temperature glycol or potassium acetate will be more effective.

Source: FAA AC 150/5200-30A Airport Winter Safety And Operation



Storm Water Compliance

Introduction

The purpose of this chapter is to guide the Airport Manager in preparing the optimum Storm Water Pollution Prevention Plan (SWPP Plan). The SWPP Plan is required for the issuance of a Storm Water Discharge permit from the State of North Dakota. There are three general permits that the State of North Dakota issues for storm water discharge. These permits are.

- Mining, Oil & Gas Extraction, and Sand & Gravel
Effective September 1, 1992 to June 30, 1994
- General Industry
Effective September 22, 1992 to March 31, 1995
- Construction Activity
Effective September 22, 1992 to September 30, 1994

This chapter will discuss only the requirements and steps needed to actively prepare and obtain the General Industry Permit.

Storm Water Pollution Prevention Plan (SWPP Plan)

The SWPP Plan is used to accurately prepare for, control the impact of, and minimize the effect of spills associated with airport activities. The subjects addressed in the plan are:

- Pollution Prevention Committee
- Site Map Development
- Significant Materials Inventory
- Potential Pollutant Assessment
- BMP Identification
- Site Inspection Record
- Signatory Certification
- Record Keeping Procedures

The SWPP Plan is due 90 days from permit coverage. The plan should be implemented at the time of submittal, but in no case later than 180 days after the coverage from the permit begins

To make the SWPP Plan development process easier to follow, it can be broken down into five separate phases. These five phases include:

- Phase I- Planning and Organization
- Phase II- Assessment
- Phase III- Best Management Practice Identification (BMP)
- Phase IV- Implementation

- Phase V- Evaluation & Monitoring

Phase 1- Planning and Organization

The Airport Manager should select a Pollution Prevention Team. This team should be composed of the Airport Manager, Airport Authority President, and other individuals whose various areas of expertise would be beneficial to the preparation of the SWPP Plan. The Pollution Prevention Team members are to be listed with their phone numbers, titles and assigned SWPP Plan duties (**Exhibit 6-1**). Upon completion, this form (**Exhibit 6-1**) should be entered into the SWPP plan.

Once assembled, the Pollution Prevention Team should review other plans that might influence the preparation of the SWPP Plan. Some plans that may be reviewed include:

- OSHA Emergency Action Plan
- North Dakota Pollutant Discharge Elimination System Toxic Organic Management Plan (NDPDES)
- Other plans that the Pollution Prevention Team feels should be reviewed

Phase II- Assessment

Phase II consists of assessing the facility, and how its affected by potential pollutants, the storage of "significant materials", and how spills and leaks have affected the airport in the past.

The first step in this phase is the development of a Site Map (**Exhibit 6-2**). The Site Map should be suitably scaled and drawn to show the required information. Include the following map features:

- Drainage patterns for each storm water outfall
- Runways, hangers, maintenance facilities, wash bays, fueling areas, etc
- Areas for storage or disposal of materials
- Existing storm water controls
- Property boundaries
- Natural drainage areas that receive discharge
- Section, township, range, or lines of latitude and longitude

The second step of Phase II is to locate, label, and inventory all significant materials. For the purpose of this chapter "significant materials" includes, but is not limited to raw materials, fuels; materials such as solvents, detergents, and plastic pellets, finished materials such as metallic products, raw materials used in food processing or production, hazardous substances designated under Section 101(14) of CERCLA, any chemical the facility is required to report pursuant to

Pollution Prevention Committee Members

Name: Jim Collins Jr. Title: Manager

Duties: Oversee operation of airport.
Phone: (701) 555-1717

Name: John Doe Title: Airport Board President

Duties: Oversees board and manager.
Phone: (701) 555-3689

Name: _____ Title: _____

Duties: _____
Phone: _____

Name: _____ Title: _____

Duties: _____
Phone: _____

Name: _____ Title: _____

Duties: _____
Phone: _____

Exhibit 6-1 Pollution Prevention Committee Members

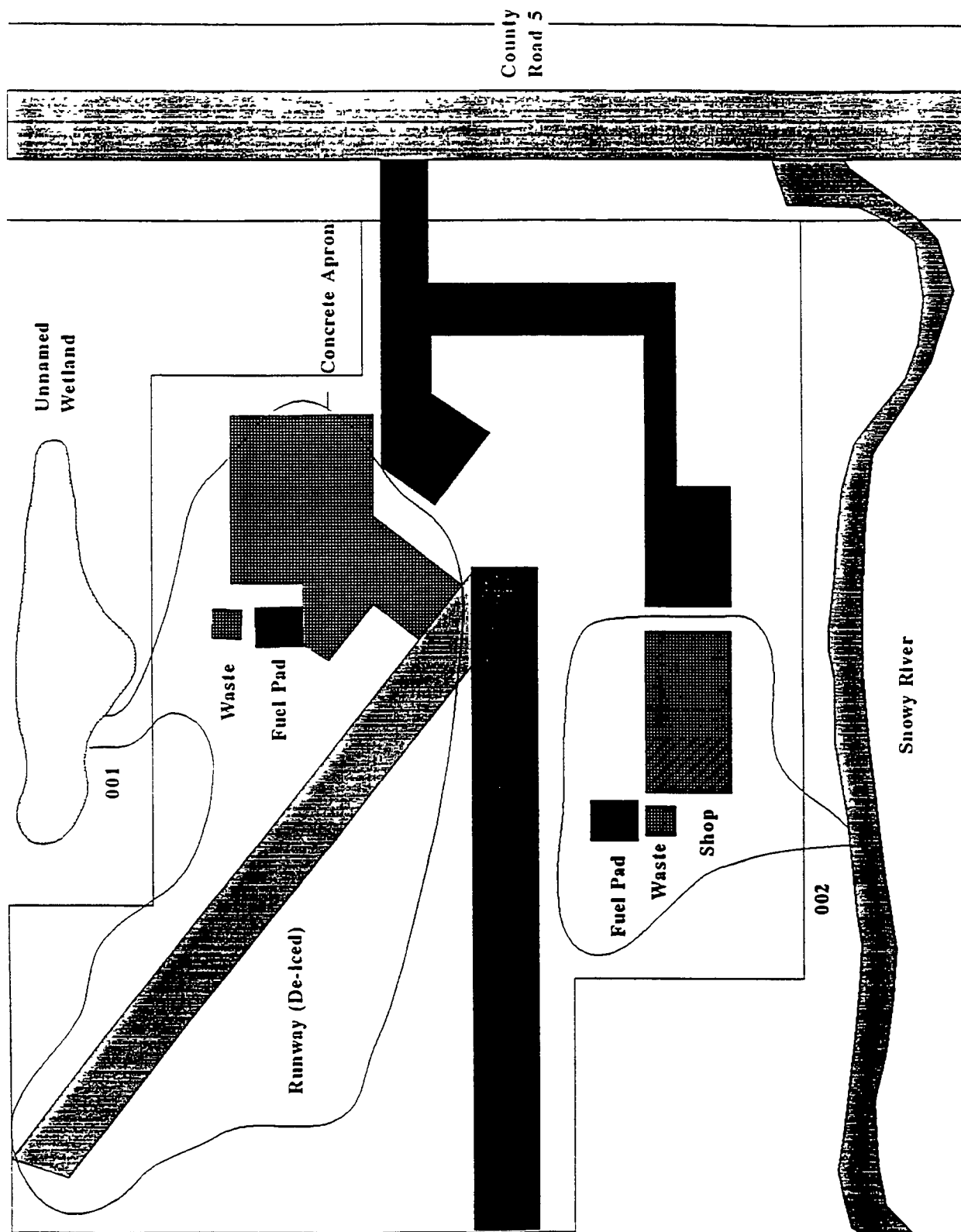


Exhibit 6-2 Site Map

Section 313 of Title III of SARA, fertilizers; pesticides, and waste products such as ashes, slag, and sludge that have the potential to be released with storm water discharges.

Some examples of "significant materials" include

- Used oil
- Used hydraulic fluid
- Bulk lubricants
- Ethylene Glycol (Deicer)
- Salt - Sand mix for road and parking areas
- Bulk fuel storage
- Agricultural chemical storage

Form SF 19133 (**Exhibit 6-3**) is designed to help organize the location and identity of "significant materials" and to summarize the disposal methods employed. This form should be included in each airport's SWPP Plan, upon its completion.

The third step of Phase II is to identify potential pollutants that may arise from poor operating principles. This can be achieved by assessing various operational areas on the airport and identifying potential pollutants associated with the areas activities. The following operations should be addressed and form SF-14134 (**Exhibit 6-4**) completed

- Loading and unloading operations- Ag chemicals and fuel loading
- Maintenance operations- location of maintenance hanger and aircraft washing bays
- Outdoor storage operations- bulk fuel, Ag chemicals, salt and sand mixes
- Outdoor disposal operations- oil, lubricants, etc.
- Nature of materials on site- flammables, Ag chemicals, salt, etc
- History of spills and leaks
- Outdoor processing operations- mixing of Ag chemicals on aprons, etc
- Existing storm water control

The fourth step of Phase II is to inspect the facility and take notice of any existing pollutants. The best way to do this is to set up a site inspection checklist. Following are some of the questions you as the Airport Manager ask when creating the site inspection checklist

- Does the facility show signs of poor housekeeping (unswept floor, uncovered materials)?
- Are there spots, pools, puddles, or other traces of grease, oil, or other chemicals on the ground?
- Is there discoloration around roof vents or pipes that ventilate or drain the work area?

Significant Materials Inventory

Instructions: Based on your facility's material inventory, provide the following information. For the definition of "significant materials" see Part VI of the permit.

[illegible]

Exhibit 6-3 Significant Materials Inventory (Form SF 19133)

Potential Pollutant Assessment

Loading/Unloading Operations Loading of ag sprayer by north hangar. Fuel loading beside each hangar.	Nature of Materials On-Site Some flammables, ag chemicals and salt.
Maintenance Operations Plane maintenance done in south hangar, occasional wash outside.	History Spills or Leaks One fuel hose leak from faulty hose nozzle. One ag chemical spill from tank overflow.
Outdoor Storage Operations Bulk fuel, ag chemical, salt-sand mix	Outdoor Processing Operations Mixing of ag chemicals on north hangar apron.
Outdoor Disposal Operations	Existing Storm Water Controls

Exhibit 6-4 Potential Pollution Assessment (Form SF 14134)

- Are there leaks in equipment, pipes or containers?
- Are there areas where absorbent materials are used?
- Are there signs of smoke, dirt, or fumes that would indicate material loss?
- Are there strange odors?
- Do workers experience any irritation to their eyes, nose, or throat that would indicate equipment leaks?
- Do storage containers show signs of corrosion or leaks?
- Are there open containers, stacked drums, undersized shelving, or other signs of poor storage?
- Are containers properly labeled?

The site inspection must be documented on SF 19136 (**Exhibit 6-5**); this completed form is included in the SWPP Plan. Site inspections should be performed no less than once per year. If significant deficiencies are noted during the inspection, the SWPP Plan must be updated.

At this stage of Phase II, you, as the Airport Manager, should have the following completed and included in the SWPP Plan

- SF 19132 - Pollution Prevention Committee Members
- SF 19133 - Significant Materials Inventory
- SF 19134 - Potential Pollutant Assessment
- SF 19138 - NSWD Certification
- SF 19136 - Site Inspection Record
- Site Drainage Map

Phase III- Best Management Practice Identification (BMP)

BMP is accomplished by adopting basic management principles. These principles, if adhered to, enable an airport facility to run smoother, cleaner and safer.

The first issue of Best Management Practice (BMP) is facility cleanliness. It is essential to keep each airport facility in a clean, safe and organized manner. The easiest way to accomplish this goal is to adopt the following "good housekeeping practices"

Site Inspection Record

[illegible]

Exhibit 6-6 Site Inspection Record (SF 19136)

- Maintain clean, dry floors
- Provide regular pick up and disposal of garbage
- Provide adequate aisle space for transfer of materials
- Allow for proper storage and stacking of containers
- Adhere to proper labeling of chemicals
- Provide information to employees through meeting, posters, and/or handouts

Once these good housekeeping practices are installed, airport employees should make every effort to adopt them as a part of every day life

The second step of BMP is the adoption of preventive maintenance practices. These preventive maintenance practices are usually easily executed, in many cases they can save the airport money by initiating minor repairs before they evolve into costly projects. Preventive maintenance practices include, but are not limited to:

- Timely inspection and maintenance of storm water management devices (i.e., catch basins, oil/water separators, etc.)
- Inspection and testing of facility equipment and systems to uncover conditions that could cause failures or breakdowns resulting in discharges of pollutants to storm water.
- Proper maintenance of facility equipment and systems (i.e., valves, pipes)

In addition to preventative maintenance practices, each Airport Manager should incorporate the following spill prevention and response practices into the airport's BMP:

- Identify areas where spills may occur and their drainage patterns
- Identify specific handling requirements and storage procedures
- Identify proper procedures for cleaning up spills
- Inform employees when a spill occurs
- Provide proper spill clean-up equipment and proper operating instruction

The airport manager should include sediment and erosion control as part of the airport's BMP. When investigating sediment and erosion control practices, the following areas should be addressed

- Identify structural, vegetative, and stabilization measures to limit erosion
- Identify areas where there is high potential for erosion

High risk areas include areas with steep slopes, sandy soils, construction activities, and gravel parking lots.

Storm water management run-on and runoff issues should also be included in the airport's BMP. These practices include

- Vegetative swales
- Reuse of collected storm water
- Oil-water separators
- Snow management
- Filtration devices
- Detention/Retention devices

The most important area of BMP is employee training. Initial and recurrent training programs should be incorporated to help employees carry out the topics discussed in all phases of the SWPP Plan.

Upon completion of Phase III, the Airport Manager should complete Best Management Practice Identification Form SF 19135 (**Exhibit 6-6**) and include it in the SWPP Plan.

Phase IV- Implementation

Successful implementation requires a well-planned schedule. The best way to accomplish this is to start gradually and assign responsibilities to individuals who are most apt to accomplish their assigned task. Once the assignment has been accomplished, the Airport Manager should review and, if necessary, amend the assignment to fit the airport's needs.

Phase V- Evaluation and Monitoring

Qualified personnel must inspect areas of storm water discharge for deterioration, ineffectiveness of structural controls, and overall adherence to the management practices identified in the SWPP Plan. The SWPP Plan must be signed by a responsible corporate officer. For the purposes of this airport related plan, a responsible corporate officer may be one of the following:

- President, Vice President, Secretary, Treasurer of the Airport's authority
- Airport Manager/Director
- Ranking Elected Official

Any of the above persons may, in writing, designate a duly authorized representative to sign for them (**Exhibit 6-7**).

Additional Requirements

In addition to the SWPP Plan, there are additional requirements that need to be fulfilled in order to obtain a storm water discharge permit. The first requirement being SARA Title, Section 313. In

BMP Identification

Instructions: Describe Best Management Practices (BMPs) that you have selected for your facility
Attach additional sheets if necessary.

BMPs	Brief Description of Practices
Good Housekeeping	
Preventive Maintenance	
Spill Prevention & Response	
Sediment & Erosion Control	
Storm Water Management - Runon	
Storm Water Management - Runoff	
Employee Training	
Additional BMPs (Activity Specific & Site Specific)	

Exhibit 6-6 BMP Identification (SF 19135)

Signatory Certification

INSTRUCTIONS: The following statement shall be signed by a responsible corporate officer, general partner, principle executive officer or ranking elected official. The statement may be signed by a duly authorized representative of the person above in accordance with Part IV-E of the permit.

CERTIFICATION

"I, Tim Collins, certify under penalty of law that I have personally examined and am familiar with the information submitted herein. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

Printed Name of Applicant

Tim Collins

Signature of Applicant

Tim Collins

Title

Manager

Date

17-11-93

ADDITIONAL SIGNATURES

INSTRUCTIONS: If more than one signature is required on the Storm Water Pollution Prevention Plan use the space provided.

Date	Printed Name	Signature	Title	Company Name
11-10-93	John Wingless	<u>John Wingless</u>	OWNER / MANAGER	Club A.R.

Exhibit 6-7 Signatory Certification

order to obtain this, a detailed SWPP Plan must be submitted and a professional engineer's certification must be completed.

The second requirement focuses on salt storage piles. This requirement states that, if storm water runoff can reach the waters of North Dakota, the salt storage piles must be covered or enclosed, except when being accessed, and they must be in compliance by October 1, 1995

Record Keeping Procedures

The Airport Manager should keep track of record keeping procedures. Simple techniques used to accurately document and report inspection of SWPP Plan controls include field notebooks; timed and dated photographs; and video tapes. All records concerning the airport's storm water general permit should be kept on-site and readily available for inspection. Items that should be documented should include but are not limited to:

- The correct name and address of the facility
- Correct name and location of receiving waters
- Number and location of discharge points
- On-site materials
- Results from sampling discharges
- Discharges, spills, and site inspections
- Maintenance of pollution prevention controls

In addition to the above mentioned items, the Airport Manager must document any and all changes made the SWPP Plan.

Discharge Monitoring Report

The North Dakota State Department of Health and Consolidated Laboratories, Division of Water Quality, requires a discharge monitoring report to be completed (**Exhibit 6-8**). Pollutant parameters that should be covered on this report include

- Total suspended solids
- Total Phosphorous
- Total Kjeldahl Nitrogen
- pH
- Oil and Grease
- 5-Day Biological Oxygen demand
- Chemical Oxygen demand

The discharge monitoring report should be filed quarterly with the State of North Dakota, Department of Health.



DISCHARGE MONITORING REPORT
 NORTH DAKOTA STATE DEPARTMENT OF HEALTH AND CONSOLIDATED LABORATORIES
 DIVISION OF WATER QUALITY
 SFN 19148 (12-92)

North Dakota Pollutant Discharge Elimination System

Name of Facility		
Permit Number	Discharge Number	Monitoring Period From To

Pollutant Parameter	Quality or Concentration				Sample Type
	Event 1	Event 2	Event 3	Units	
Total Suspended Solids					
Total Phosphorus					
Total Kjeldahl Nitrogen					
Total Nitrates as Nitrogen					
pH					
Oil and Grease					
5-Day Biological Oxygen Demand					
Chemical Oxygen Demand					

Date of Storm Event Sampled	Duration of Storm Event (hours)	Precip. Amount (inches)	Time Since Last 0.1 in. or Greater Precip Event	Estimated Size of Drainage Area (acres)	Estimated Quantity of Runoff Discharged (Gallons)
1					
2					
3					

Comments

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Typed or Printed Name/Title of Principal Executive Officer	Telephone Number
Signature of Principal Executive Officer or Authorized Agent	Signature Date

Exhibit 6-8 Discharge Monitoring Report

Things to Remember About The SWPP Plan

The SWPP Plan must be amended whenever there is a change in design, construction, operation, or maintenance which may impact the potential for pollutants to be discharged into storm water

The SWPP Plan must be maintained on-site at the airport facility and a copy sent to the State of North Dakota, Division of Water Quality. Plans must be kept for a period of three years or longer if requested. Plans are open to public access unless determined to be confidential under 40 CFR Part 2.

Non-Storm Water Discharge Certification (NSWD)

In addition to the SWPP Plan, a NSWD is required within 60 days from notification of permit coverage. Items to be included on the NSWD form (**Exhibit 6-9**) are.

- Date of assessment
- Identify outfalls on site map
- How outfalls were assessed
- What the results of the assessment uncovered
- The potential for significant sources
- Individuals who conducted the assessment

Source North Dakota Aeronautics Commission

Non-Storm Water Discharge Certification

INSTRUCTIONS: Based on your observations of the storm water outfalls at your facility, complete the following table. If you could not assess an outfall, please state the reason(s) why and identify any potential pollutant sources. Please identify each outfall in accordance with the site map

IMPORTANT: This certification is due 60 days from date of permit coverage.

Date of Assessment	Outfall Directly Observed (Identify as on site map)	Method of Assessment	Results from Assessment or Reason(s) for Non-Assessment of Discharge	Identify Potential Significant Sources	Name of Person Who Conducted the Assessment
1/15/93	No 001	Visual	No mixing of waters, observed	None	Jim Collins Jr
1/15/93	No 002	Visual	No mixing of waters, observed	Washout pit	Jim Collins Jr
1/15/93	No 003	Visual	No mixing of waters observed	None	Jim Collins Jr

CERTIFICATION

"I, _____, certify under penalty of law that I have personally examined and am familiar with the information submitted herein. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

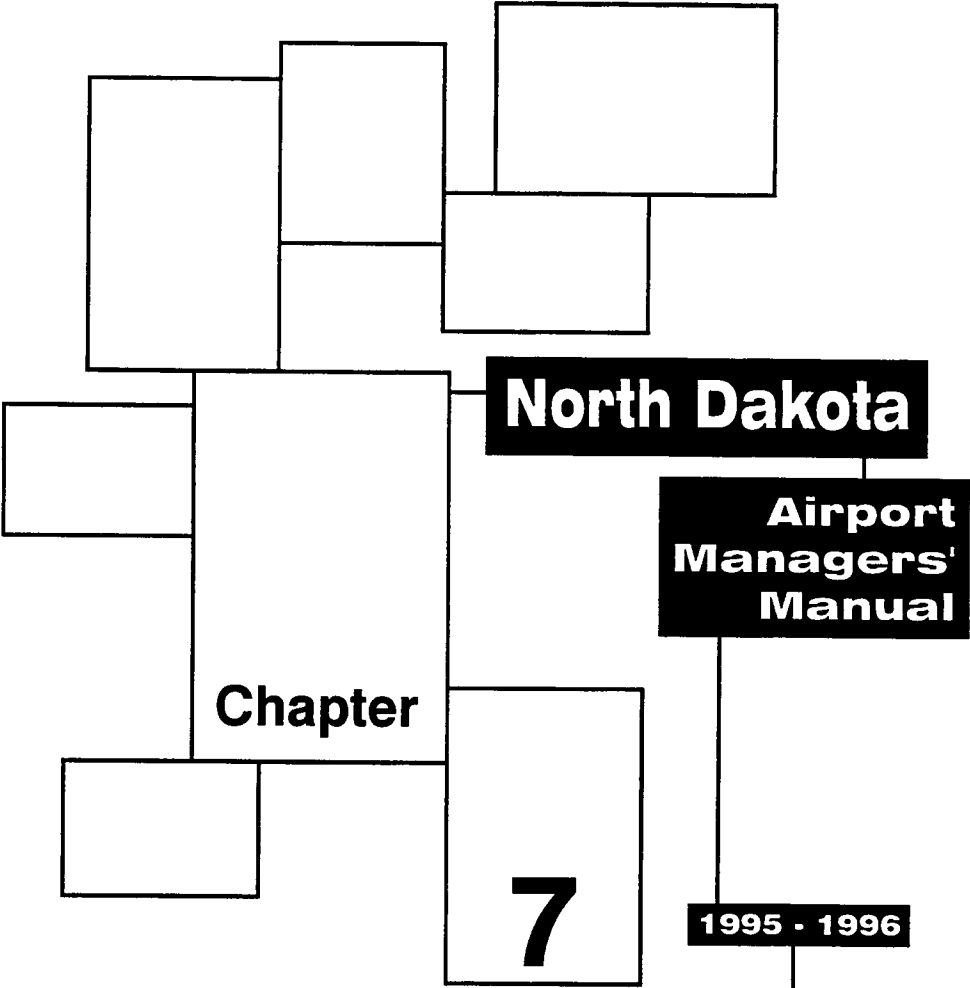
Printed Name of Applicant

Title

Signature of Applicant

Date

Exhibit 6-9 Non-Storm Water Discharge Certification



Introduction

This chapter is intended for Airport Managers, and for that reason, its scope has been limited to general principles and guidelines. It is recommended that detailed operating procedures for first-line personnel be prepared by those having direct responsibility over such operations.

Aviation Fuel Identification

Jet Fuels

Jet A: A relatively high flash point distillate of the kerosine type having a -40 C (-40 F) freezing point (max.).

Jet A-1: A kerosine type fuel, similar to Jet A, but having a -50 C (-58 F) freezing point (max.).

Jet B: A relatively wide boiling range distillate having a -50 C (-58 F) freezing point (max.).

These fuels contain no color dyes. For the purposes of this chapter, whenever the term Jet A is used, the same information applies to Jet A-1, as they are identical except for the freezing points as referred to above.

Aviation Gasoline (AvGas)

The four grades of AvGas considered here are identified by their lean mixture octane numbers or performance numbers as recognized in all military and commercial specifications.

<u>Product</u>	<u>Product Color</u>
AvGas 115	Purple
AvGas 100	Green
AvGas 100LL	Blue
AvGas 80	Red

Product Identification and Security

Colors used to identify fuel types should be used to identify every line, valve, pump, tank, filter, filter/separator, loading/unloading connection, or any piece of equipment where a choice of product is offered. Airport fixed-storage facilities should be properly protected to prevent intrusion by unauthorized personnel.

Fuel Properties

Flammability

For a flammable liquid to burn, it must be vaporized and mixed with air in the proper proportions and the mixture raised to its ignition temperature. If fuel is spilled in the open, a flammable vapor-air mixture may exist at temperatures depicted as follows:

<u>Fuel</u>	<u>Pool Temperature At Sea Level</u>
Jet A	38 C (100 F)
Jet B	-18 C (0 F)
AvGas	-34 C (-30 F)

The table below indicates the approximate temperature ranges in which the vapor space of a storage tank may be within the flammable range. Jet B will contain an ignitable vapor-air mixture through a range of temperatures normally encountered at airports.

<u>Fuel</u>	<u>Flammable Range (Sea Level)</u>
AvGas	+30 to -45
Jet A	+100 to -10
Jet B	+180 to +80

The fuel vapor-air mixture above the surface of Jet B in a storage tank is usually in the flammable range. Therefore, care must be taken to prevent the ignition of this mixture. This can be achieved by using static electricity discharge cables.

Thermal Stability

Stability to oxidation and polymerization at the operating temperatures encountered in certain jet aircraft is an important performance requirement. The "thermal stability" measurements are related to the amount of deposits formed in the engine fuel system upon heating the fuel in a jet aircraft. Copper and copper-bearing alloys can cause a reduction in the thermal stability of jet fuels, so contact with these metals should be minimized in any fuel distribution or handling system.

Cleanliness and Water Separation Characteristics

Fuels must be free from water and suspended solids to avoid clogging filtration units in the aircraft fuel systems. Contact with "free water" should be avoided. The time required for particles or rust,

dirt, or water to settle and the maximum size of particles held in suspension are both a function of fuel viscosity and fuel gravity. For example, solid particles take approximately four times as long to settle in jet fuel as they do in aviation gasoline.

Basic Principles of Aviation Fuel Handling

Aviation fuels are handled in various ways (pipelines, ships, barges, and vehicles) between the refinery and the aircraft. There are basic principles of aviation fuel handling that apply to all systems no matter how varied they may be. The goal is to safely supply clean, dry (without free water) fuel to aircraft. **Exhibit 7-1** shows the proper fueling system layout.

Contamination Exclusion

It is important to prevent water and solid contamination from entering the fuel. Contamination can enter from external sources or can be generated within the system. Internal contamination can be caused by water forming into minute drops that originate from dissolved water that is present in the fuel. Internal contamination may also be in the form of rust, lint, scale, internal coating, fibrous matter, and elastomers found in storage tanks, pipelines, transports, fuel trucks, hydrant vehicles, and hoses.

The presence of internally generated contaminants can be reduced by the use of good housekeeping practices such as the continuous removal of entrained water and solids. These practices are further enhanced by the use of non-ferrous materials in contact with the fuel.

Continuous Clean-up

Besides efforts to exclude the entrance of contaminants into fuel, a continuous clean-up operation is necessary to insure product cleanliness. This ongoing and redundant operation should take place in many steps between the refinery and the aircraft. Generally, the clean-up is accomplished by mechanical devices, such as filter/separators, which remove entrained water and solid contaminants at various steps in the fuel handling operations. Mechanical clean-up devices are usually installed so that if a malfunction occurs, product cleanliness is adequately protected by other steps in the operation.

Modern filtering and water separating equipment are capable of producing a much higher degree of cleanliness than can be economically achieved by settling. When jet fuel passes through filter/separators into a storage tank, the size of any contaminants remaining in the effluent is so fine that it will not settle in a reasonable period of time. Therefore, it is not necessary to provide additional storage solely for settling purposes.

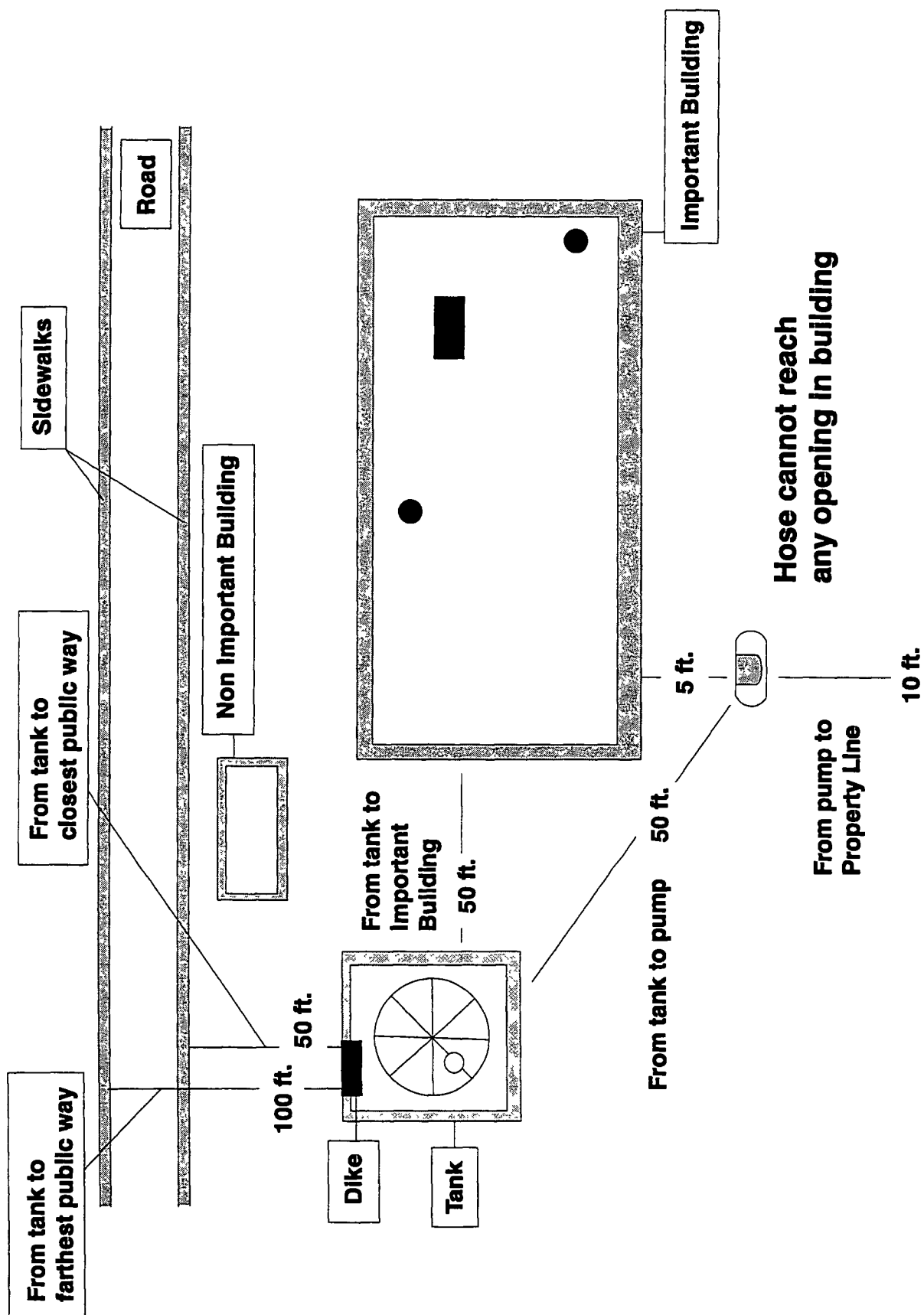


Exhibit 7-1 Fueling System Layout

Employing Safeguards

It is necessary to employ certain safeguards for the safe handling of aviation fuel at airports. These may be in the form of shutdown features, mechanical couplings which prevent fuel mixing, and techniques for reducing static electricity generation

In handling aviation fuel, it is important that the different types and grades of fuel are not mixed. Selective couplings should be employed where practical, to reduce this possibility. Handling equipment should be conspicuously marked to indicate the type and grade of fuel being handled. Jet fuels and AvGas facilities should be completely independent systems. There should be a complete mechanical separation between fuel types. Block valves can leak or can be opened inadvertently.

Personnel

To further insure the safe delivery of clean fuel to aircraft, it is essential to have well-trained personnel who are kept informed of the latest procedures and methods required to handle the product. Supervisors must pass information and instructions along to operating personnel. Failure to do so will result in poor fuel handling, even if the best equipment is available.

Aviation Fuel Quality Protection

The physical properties of aviation fuel must conform to the applicable specifications for the different products. This is as true for the fuel when it is delivered to the customer as when it is first manufactured.

Quality control of aviation fuels has always been of particular concern. Effective equipment and techniques for handling aviation gasoline in the past have been relatively simple. The introduction of turbine-powered aircraft made the need for fuel cleanliness much more critical. This requirement, in turn, necessitates complicated precision fuel control systems which are much more sensitive to fuel quality and cleanliness, than what is required by piston engines. The maintenance of fuel quality and cleanliness requires vigilance on the part of everyone concerned with the production, transportation, storage, and delivery of aviation fuels.

Contaminants

The common forms of aviation fuel contaminants are solids, surfactants, micro-organisms, and others, including the intermixing of grades or types of fuel. The human element can never be eliminated, but it can be minimized through careful design of fueling facilities, good operating procedures, and adequate training of personnel. It is only realistic to demand the highest levels of cleanliness that can be practically maintained with currently available equipment and careful handling practices.

Solids

Solid contaminants are generally those which are insoluble in fuel. Most common are iron, rust, scale, sand, and dirt. The best method of controlling solids is to eliminate, or at least limit, their introduction into the fuel. Internal coatings or non-ferrous materials, such as aluminum, should be used when economies justify, particularly between the filter and/or filter/separator and the loading point. However, alloys containing cadmium, copper, or zinc (galvanized) are to be avoided.

Pipelines, hydrant systems, and related dispensing equipment should be thoroughly flushed at the maximum obtainable flow before being placed in service (both initially and after any long period of inactivity). The most common method of removing solids from fuel is the passage of the fuel through a filter and/or filter/separator.

Water Contamination

Water occurs in aviation fuel in two forms, dissolved and free. All aviation fuels will dissolve water in varying amounts, depending upon the fuel composition and temperature. Any water in excess of that which will dissolve is called free water. Dissolved water is not detrimental to aircraft operation as long as it remains held in solution. Dissolved water can become free water with temperature change and, thus, can cause operating problems. Free water can appear as "water slugs" or as entrained water. Water slugs are as the name implies, a relatively large amount of water appearing as a body or a layer. Entrained water is suspended in tiny droplets in the fuel. It may not be visible to the naked eye, but may give the fuel a cloudy or hazy appearance.

Aircraft engines will tolerate a small amount of free water (30 ppm, is usually considered to be the maximum by most authorities) if it is in a fine, uniformly dispersed state. Measuring devices to detect free water are readily available from various oil companies or equipment supply houses. Water can enter fuel distribution systems through leaks in the seals of such items as dome covers, floating roofs and hatches, through equipment washing, through condensation on walls of tanks, and by precipitation of dissolved water.

Water is best removed from jet fuel by passing the fuel through an approved filter/separator. Filter/separators coalesce the fine, entrained water droplets into larger ones which readily settle to the vessel sumps. Tank bottoms and separator sumps should be checked for water on a routine basis and any accumulations removed. Water will readily settle out of aviation gasoline, therefore, filter/separators are not required.

Surfactants

The term "surfactants" is a contraction of the words surface-active agents. These soaps or detergent-like materials, often sulfonates that may occur naturally in the fuel, may be introduced into the fuel by one or more of the following means

- Refining processes
- Additives
- Washing of internal surfaces during passage through distribution system
- Storage in a contaminated tank or vessel

Surfactants are usually water soluble and tend to reduce the interfacial tension between water and fuel, thereby stabilizing suspended water droplets and contaminants in the fuel. Surfactants, due to their ability to disperse and stabilize water and dirt in fuel, and their ability to disarm the filter/separator action, can allow contaminants to get into the aircraft. There are laboratory techniques currently available that can indirectly measure to some degree the relative levels of surfactants in a fuel. They are the Water Separometer Test Modified (WSIM), the Haze Light Transmission Test (HLT), the Constant Volume Drop Time Test (CVDt), the Minisomic Separometer Test, and the Water Reaction Test.

The common signals of a surfactant-contaminated system are:

- Excess quantities of dirt and/or free water going through the system as measured by the Millipore and water detector tests
- Discovery of slime in distribution system tanks and filter separators
- Rapid plugging or malfunctioning of filter/separators
- Slow settling rates in storage tanks

Micro-organisms

Microbial growths can occur where water is present in the fuel. To minimize this risk, free water should be removed from storage tanks, filter and/or filter/separator sumps, and fuelers whenever it is discovered during checks for water.

Other Contaminants

Miscellaneous contaminants may include soluble materials, insoluble materials, or both. Fuel can be contaminated by the inadvertent mixing of fuels; by picking up lead or other compounds from rust and sludge deposits; by zinc from galvanized metals, coatings, or corrosion protection anodes, by additives; or by any other of a number of soluble materials

Filtration

Filtration of AvGas should be provided at the final dispensing facility before the fuel is placed aboard an aircraft. A filter/separator is usually installed to provide filtration of jet fuel going into storage at airport installations. Filtration/separation must be provided out of storage through two units located so that the product is not exposed to contamination between the first filter/separator and the aircraft. Circumstances may permit the use of a monitoring device in place of the second filter/separator. Surfactants may be present where product is received into storage directly from a multi-product pipeline, and the installation of a clay filter should be considered.

Approved Filter/Separators

Filter/separators should meet standards established by recognized authorities (API, military, etc.) for use with the particular product and for the flow rates involved.

Tests For Contaminants

Tests for contaminants can be conducted and interpreted in the field and should be used as standard procedures in the fuel cleanliness program.

Visual Test

The visual test consists of placing a sample of fuel into a clean and dry clear-glass container of at least one quart capacity. After allowing the air cloud to rise, the sample is visually examined for a "clear and bright" appearance. These terms have no relation to the natural color of the fuel or any dye coloring which may have been added. Clear means the absence of any sediment or emulsion, such as rust or concentrated surfactant. Bright refers to the fluorescent appearance of fuel which has no cloud or haze such as that caused by fine water droplets. Free water can also be detected as a separate layer on the bottom of the container. It is helpful to swirl the container so that a vortex is created. The free water and dirt, if present, will tend to collect at the bottom beneath the vortex. A similar method using the visual technique, restricted to jet fuels only, employs an ordinary white plastic or porcelain bucket. Fuel samples are visually examined for a clear and bright appearance.

Water Indicator Pastes and Detectors

An effective check for the presence of free water bottoms in storage tanks is made by applying water indicator paste to the lower portion of the gauge stick or tape bob. When lowered to the bottom of the storage tank, the paste will change color in the presence of water. Thirty (30) seconds contact time with the water should be allowed, as surfactants can increase the reaction time. The height of the color change indicates the quantity of water present. Water detectors, especially made for determining free or entrained water in jet fuels, are available.

Operational Checks and Records

Every possible precaution must be taken to prevent contamination of the tanks and piping by solids, water, or other products. Daily handling procedures should be designed to reveal any malfunctions of equipment or other conditions which would indicate corrective action is necessary. The following subsections cover major items of an operational nature which the operator of an airport fueling facility should check on a minimum daily, weekly, monthly, and demand basis. These inspections should include not only quality control items, but also safety and inventory control items and the like. Complete and accurate operating logs, of all phases of the fuel handling system should be developed to fit the needs of each particular operation. **Exhibit 7-2** is an example of a typical inspection log that should be incorporated into the daily operating procedures of the airport.

Daily Inspections

The following items should be checked on a daily basis, and corrective action or maintenance be performed as necessary:

- Check the storage tank floating suction test cables for freedom of operation
- Check the bottoms of all storage tanks for water using a visual test, water finding paste on a gauge stick or tape bob, or by use of a water draw off connection.
- Check filter manual water drains for water and other contaminants after each receipt of product; draw off any accumulation of water.
- Check and record filter, filter/separator, and contaminant monitor (if installation is so equipped) differential pressure while under operating flow conditions.
- Check and record the fuel quantity in each storage tank

Weekly Inspections

The following items should be checked on a weekly basis and corrective action or maintenance performed as necessary:

- Check and clean all strainer baskets; if breaks are found in a basket, it should be replaced.
- Check and clean the screens in all bottom loading and other hose nozzles; if breaks are found, the screen should be replaced.

- Visually inspect all bottom loading and other hoses for abrasions, separations, or soft spots. Weak hoses should be replaced
- Inspect all fire extinguishers for broken seals, proper pressure, and recharge date. Recharge as necessary

Monthly Inspections

The following items should be checked on a monthly basis and corrective action or maintenance performed as necessary:

- Check the lubrication and the oil level (in pumps equipped with a gear box) of the pumps, motors, hose reels, and other machinery requiring lubrication. For hose reels and lubricated valves, use lubricants that will not clog fuel screens in aircraft systems at all aircraft operating temperatures. Make sure the correct seasonal grade of lubricant is used
- Check the action of all valves.
- Check the condition and electrical continuity of the static grounding clips, wires, and bonds at the loading racks, pits, and other points of fuel transfer
- Check the emergency shutdown system for proper functioning

Demand Inspections

The following items should be checked on a demand basis and corrective action or maintenance performed as necessary.

- Check the entire fueling facility for the clarity and correctness of the product identification system.
- Conduct a Millipore check of the cleanliness level of the jet fuels discharged at the downstream side of filter/separator. Conduct a check of monitoring devices as required by manufacturer

Filter/Separator and Clay Element Replacement

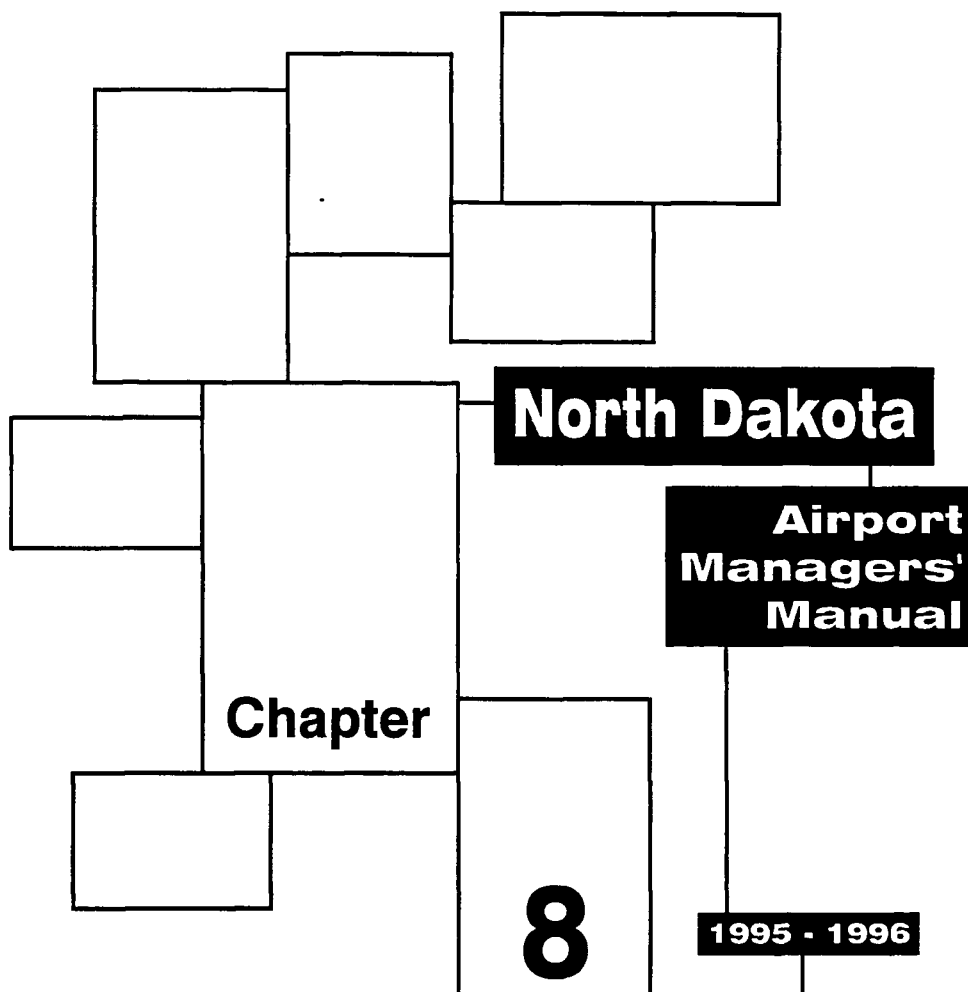
Filter/separator elements used for jet fuels should be tested or inspected when any one of the following occurs and the appropriate corrective action taken

- When the pressure differential at full-flow exceeds that recommended by the manufacturer. At rates lower than full-flow, the allowable pressure differential should be taken from a chart furnished by the manufacturer.
- When a sudden drop in pressure differential occurs under identical operating conditions.
- When it is known that elements have been subjected to the "disarming action" of surfactants.
- When there is an indication of free water in the fuel downstream of the filter/separator. This is reason for changing both coalescer and separator elements.

Clay elements used for jet fuels should be changed when any one of the following occurs:

- When the pressure differential at full-flow exceeds that recommended by the manufacturer. At rates lower than full-flow, the allowable pressure differential should be taken from a chart furnished by the manufacturer.
- When a visual examination of an element reveals discoloration to have progressed to the inner core of that element. This is accomplished by cutting an element open and observing the color migration.
- When a comparison of influent and effluent reveals the unit is disarmed or spent.

Source. American Petroleum Institute. Storage and Handling of Aviation Fuels at Airports



Lighting & NAVAIDs

Runway Edge Lighting Systems

A runway edge lighting system is a configuration of lights which define the lateral and longitudinal limits of the usable landing area. Two straight lines of lights which are parallel to and equidistant from the runway centerline define the lateral limits. The longitudinal limits of the usable landing area are defined at each end of the area by straight lines of lights installed perpendicular to the lines of runway edge lights; these are called threshold/runway end lights.

Selection Considerations

The selection of a particular edge light should be based on operational needs in accordance with the following guidelines:

- | | |
|--------|--|
| LIRL - | Low intensity runway lights- For use on runways at visual flight rule (VFR) airports having no planned approach procedures |
| MIRL - | Medium intensity runway lights-For use on runways having a nonprecision instrument approach |
| HIRL - | High intensity runway lights- For use on runways having precision instrument approaches. |
| LITL - | Low intensity taxiway lights-For use on taxiways and aprons where LIRL is used on the runways |
| MITL - | Medium intensity taxiway lights- For use on taxiways and aprons on airports using either MIRL or HIRL on the runway |

Color of Lights

The runway edge lights emit white (clear) light except that yellow light is substituted for white light on the last 2,000 feet (610 m) of an instrument runway, or one-half the runway length (whichever is less) to indicate the "caution zone." The yellow lights are intended for roll out information after landing, and are installed on the runway end opposite the landing threshold. Yellow lights are installed on both ends of a runway only when there is an instrument approach to both ends. The lights in the caution zone emit yellow light in the direction facing the instrument approach threshold and white light in the opposite direction. The threshold lights emit green light toward the approach area, while the runway and lights emit red light toward the runway. These lights are usually combined into one fixture and special lens or filters are used to give the desired light coverage.

Location and Spacing

The runway edge lights are located on a line not more than 10 feet (3 m) from the edge of the full strength pavement which is designated for runway use. For runways used by jet aircraft, it is usually advisable to install the lights at the maximum distance to avoid possible damage by jet blasts. For smaller airports, a distance of approximately 2 feet (0.6 m) is recommended. The longitudinal spacing of the lights should not exceed 200 feet (61 m) and be located such that a line between light units on opposite sides of the runway is perpendicular to the runway centerline. The lights should be spaced as uniformly as possible with the threshold/runway end lights used as the starting reference points. Where a runway is intersected by other runways or taxiways, a single elevated edge light should be installed on the runway side opposite the intersection to avoid gaps in excess of 400 feet (122 m) where the matching of lights on opposite sides of the runway cannot be maintained.

Threshold and Runway End Lights

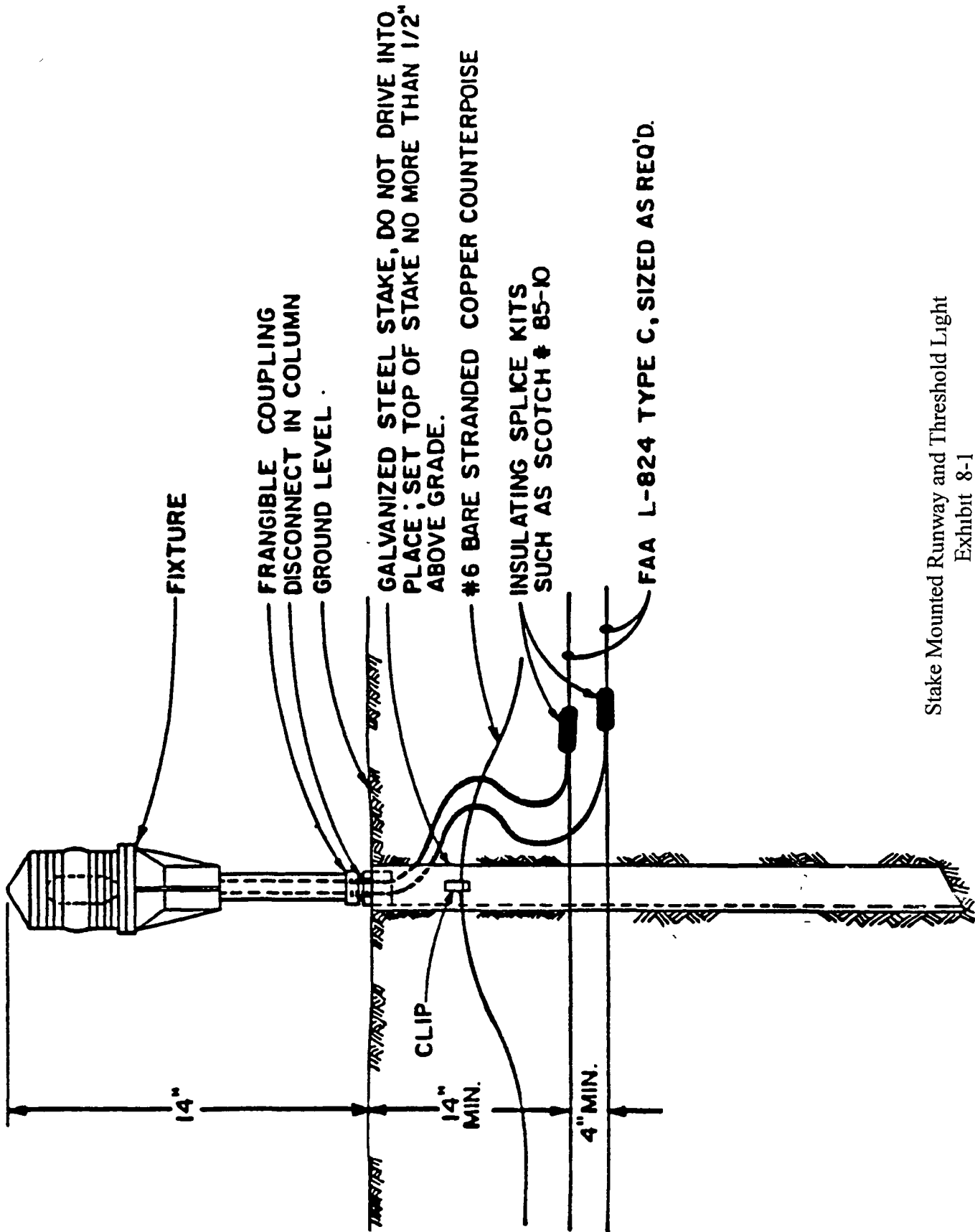
The combination threshold and runway end lights are located on a line perpendicular to the extended runway centerline not less than 2 (0.6 m) nor more than 10 feet (3 m) outboard from the designated threshold of the runway. The designated threshold is the end of the pavement (surface) useful for aircraft operations. The lights are installed in two groups, located symmetrically about the extended runway centerline. For instrument runways, each group of lights contains not less than 4 lights; for other runways, not less than 3 lights. In either case, the outermost light in each group is located in line with the runway edge lights. The other lights in each group are located on 10 foot (3 m) centers toward the extended runway centerline.

Displaced Threshold

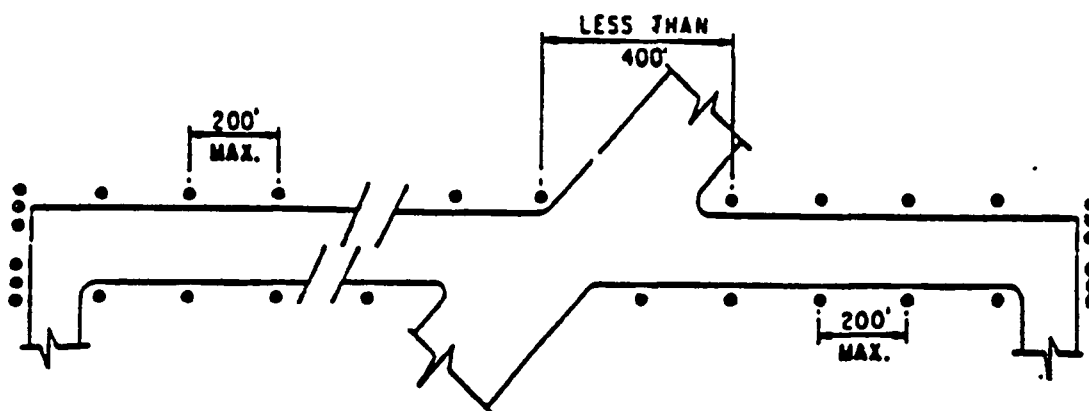
When the threshold is displaced from the extremity of the runway, the threshold and runway end lights are located outboard from the runway. The innermost light of each group is located in line with the line of runway edge lights, and the remaining lights are located outward, away from the runway, on 10 foot (3m) centers on a line perpendicular to the runway centerline. As the displaced runway area is usable for specific operations (takeoff, roll out, taxiing), runway edge lights are installed to delineate the outline of this area as shown in **Exhibit 8-1**.

Relocated Threshold

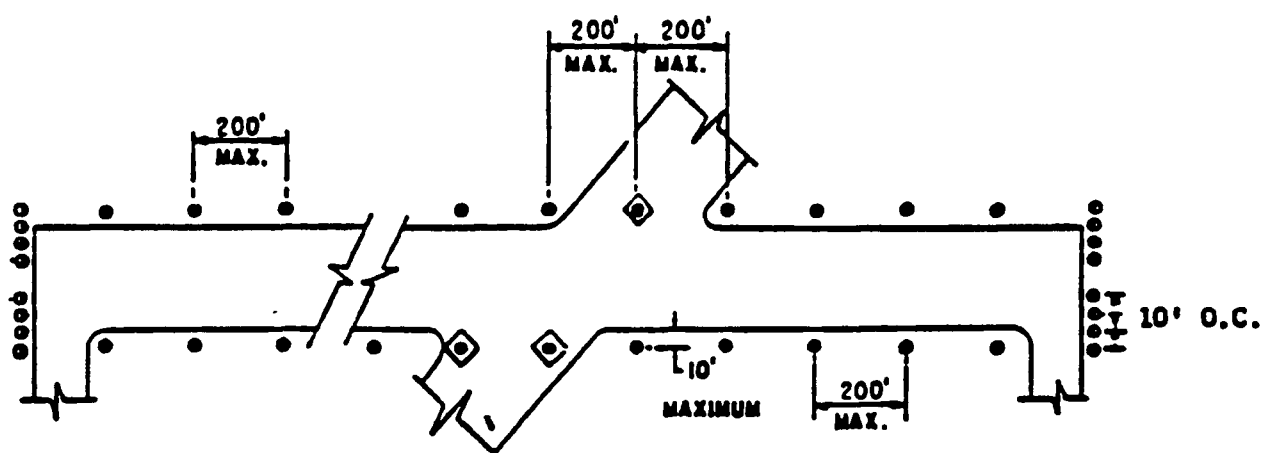
When the threshold is relocated from the extremity of the runway, the threshold and runway end lights may be installed either outboard from the runway, or across the abandoned runway area. See **Exhibit 8-2**.



Stake Mounted Runway and Threshold Light
Exhibit 8-1



APPLICATION OF SINGLE ELEVATED LIGHTS



APPLICATION OF SINGLE ELEVATED LIGHTS AND SEMIFLUSH LIGHTS

LEGEND:

- 360° WHITE, EXCEPT FOR THE LAST 2,000' OF THE INSTRUMENT RUNWAY
- R◉G--RED 180° AND GREEN 180°
- ◉-- SEMIFLUSH FIXTURE BIDIRECTIONAL

NOTE: SIX THRESHOLD LIGHTS USED ON NON-INSTRUMENT RUNWAYS
EIGHT THRESHOLD LIGHTS USED ON INSTRUMENT RUNWAYS

Runway and Threshold Lighting Configuration
Exhibit 8-2

Taxiway Edge Light Configurations

The basic configuration requirements for taxiway edge lighting are shown in **Exhibit 8-3**. All taxiway edge light fixtures emit blue light. The light fixtures are located not more than 10 feet (3m) from the edge of the full strength pavement on each side of the taxiway and are spaced longitudinally not more than 200 feet (61 m) apart to define the lateral limits of the taxiing paths. On a straight section the lights on opposite sides of the taxiways are located on a line perpendicular to the taxiway centerline. The longitudinal spacing of the lights is influenced by the physical layout of the taxiways. Closer spacing of the lights should be provided on short taxiway sections, curves, and entrance to taxiways from runways or aprons. In lieu of shorter spacing of the lights, the lights may be supplemented by elevated reflectors. For low activity airports, elevated reflectors may be used in lieu of edge lights for outlining taxiing areas. Where used, the reflectors should be spaced the same as taxiway edge lights.

General Design Considerations

It is obviously best to be able to do some planning for a lighting system before pavement is laid on a runway. When this is possible, crossing conduits can be put in place prior to the paving operation. Where this is not possible, such as lighting an existing paved runway, other methods of accomplishing runway crossings with conduits are required, and, are more expensive. Location of primary power, routing of the lighting cable, location of the beacon and wind cone, and control systems are other factors to consider, because their locations have a direct effect on total system cost. Since this chapter is centered around economy lighting systems, only stake mounted runway lights will be considered since they are the lowest cost elevated edge lights (**Exhibit 8-4**). At the end of this chapter there are two tables that will help when figuring calculations. These tables contain resistances of copper and the Ohms Law relationships.

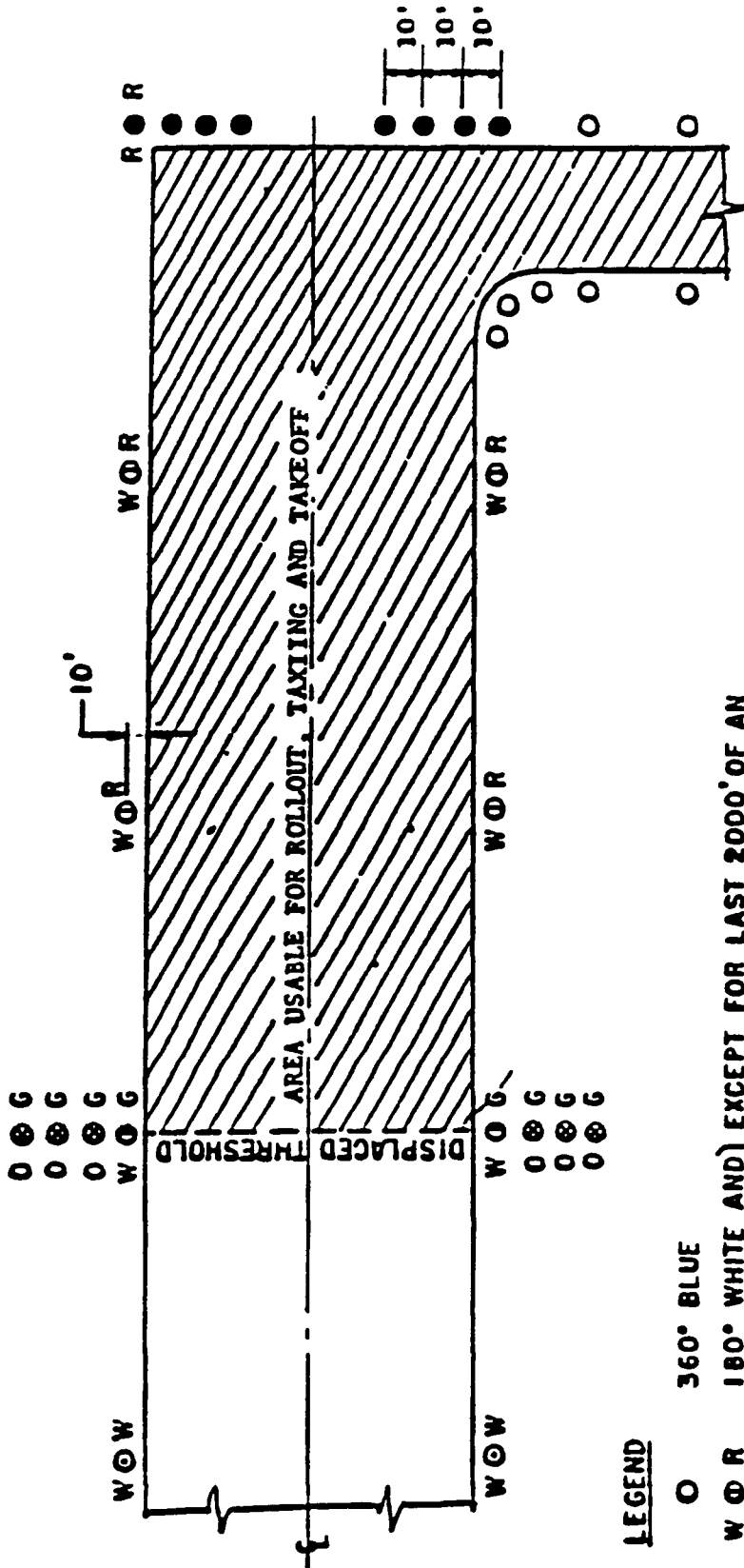
Design Specifics, Runway Lighting

Lighting Layout

Layout the runway edge lights and threshold lights along the runway. Remember, for an instrument runway you need four (4) threshold lights on each side of centerline on each end of the runway. Space the runway edge lights 200 feet (61 m) apart, making up any irregular intervals between the threshold and the first runway light. Divide this irregularity equally on each end. As an option, if the irregularity is minor, runway light spacing may be changed slightly to make spacing equal over the full length of the runway. See **Exhibit 8-5**.

Example: A 2,550 foot (77.24 m) runway could be arranged with:

- 11 lights spaced at 200 feet (61 m) each with 2 spaced at 175 feet (53.34 m) each, or

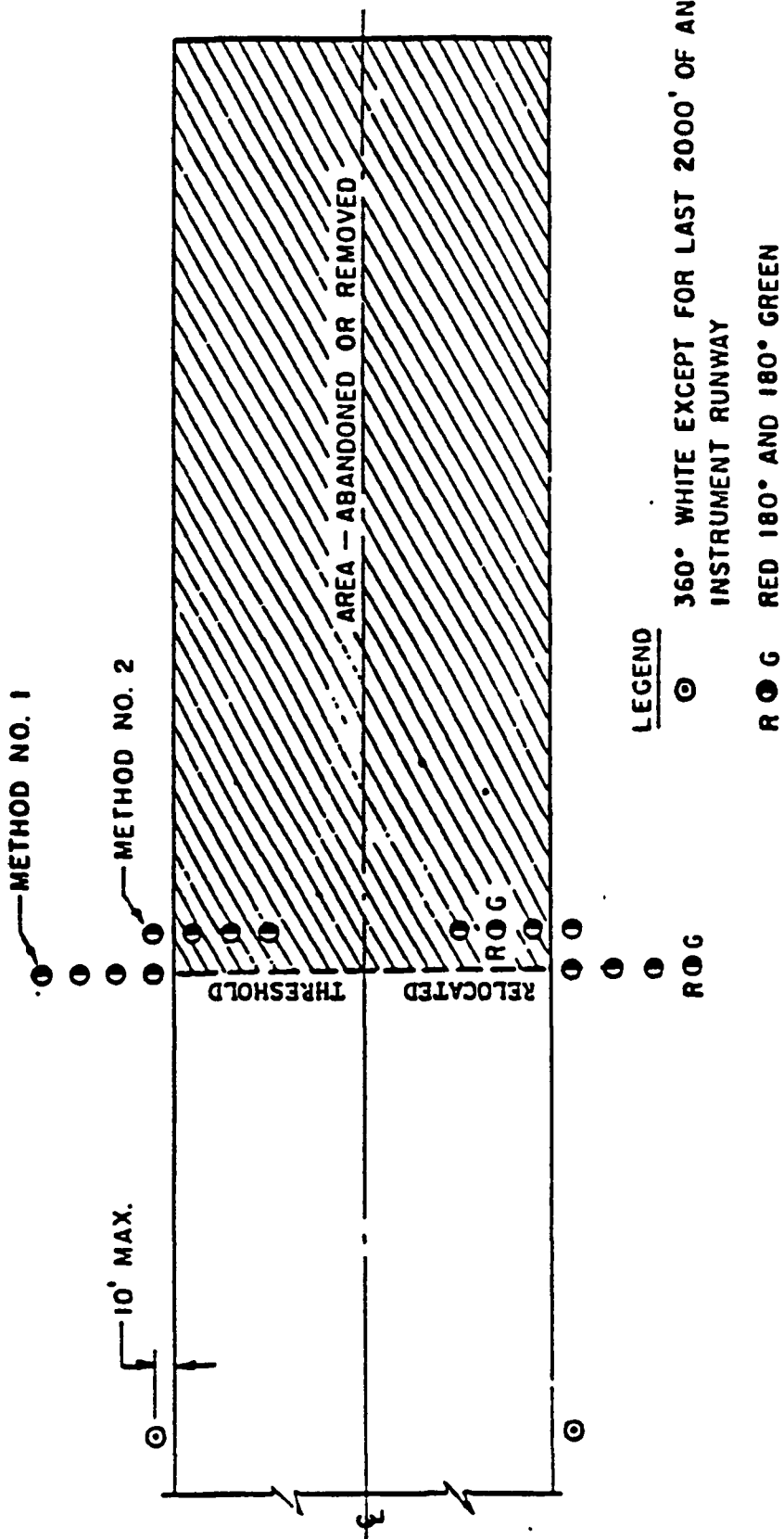
NOTES:

- I. SPACING OF RUNWAY LIGHTS SHALL BE IN ACCORDANCE WITH FIGURE 1.

LEGEND

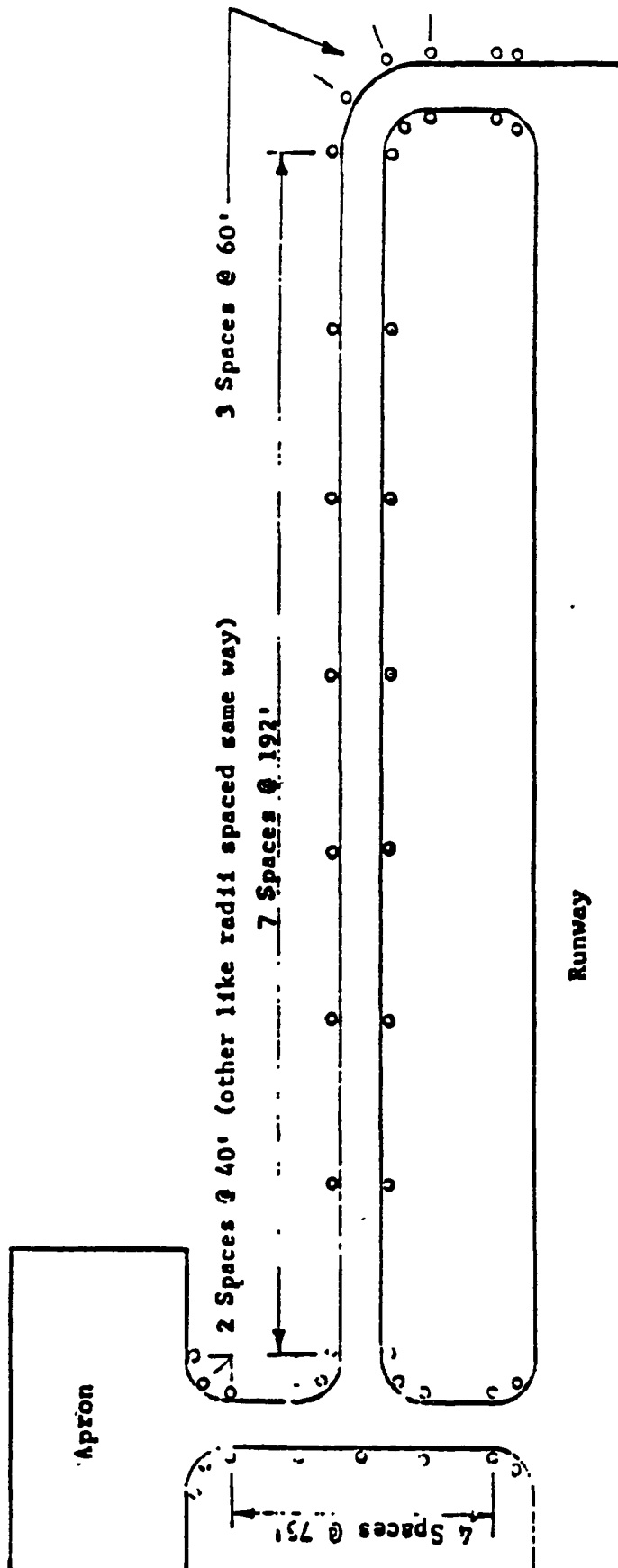
- | | |
|-------|--|
| ○ | 360° BLUE |
| W ○ R | 180° WHITE AND } EXCEPT FOR LAST 2000' OF AN
180° RED } INSTRUMENT RUNWAY |
| ⊙ | 360° WHITE EXCEPT FOR LAST 2000' OF AN INSTRUMENT RUNWAY |
| ● | 360° RED |
| ○ ⊙ G | 180° OBSCURED AND
180° GREEN |
| W ○ G | 180° WHITE AND } EXCEPT FOR LAST 2000' OF AN
180° GREEN } INSTRUMENT RUNWAY |

Displaced Threshold
Exhibit 8-3

**NOTES:**

1. METHOD NO. 1 FOR ABANDONED AREA WHERE PAVED AREA IS LEFT IN PLACE.
2. METHOD NO. 2 FOR ABANDONED AREA WHERE PAVED AREA IS REMOVED.
3. SPACING OF RUNWAY LIGHTS SHALL BE IN ACCORDANCE WITH PARA. 3.
4. ALL THRESHOLD LIGHTS ARE SPACED ON 10' CENTERS.

Relocated Threshold - Unusable Area Abandoned or Removed
Exhibit 8-4



Typical Taxiway Lighting at General Aviation Airport
Exhibit 8-5

- 13 lights spaced of 196 15 feet (59 79 m) each.

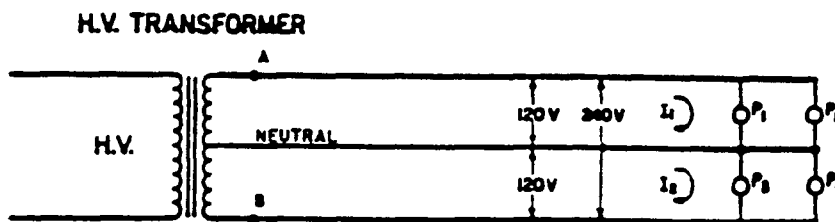
Arrange the threshold lights across each end of the runway. If the runway is VFR only, three (3) lights on each side at each end is adequate. If the runway will serve IF traffic, install four (4) lights on each side at each end. The outermost threshold light on each side should be in line with the runway lights. Runway lights should be installed 10 feet (3 m) off the load bearing surface of the runway, and the threshold lights should be 2 feet (61 m) to 10 feet (3 m) off the end of the load bearing surface. Layout the taxiway lights in similar fashion, consulting Exhibit 8-3 for typical situations.

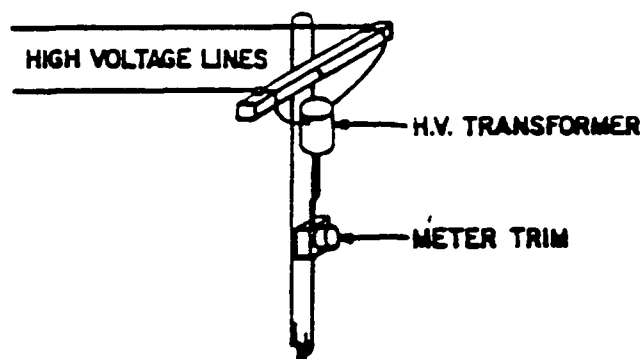
Cabling

Lay two (2) parallel wires down each side of the runway and extend them across the ends adjacent to the threshold lights. Connect one of these wires on each end so as to make one continuous conductor all the way around the runway. Do not connect the other conductor at the ends of the runway. The continuous conductor will serve as the neutral wire, while the unconnected conductors will serve as the phase or hot wires.

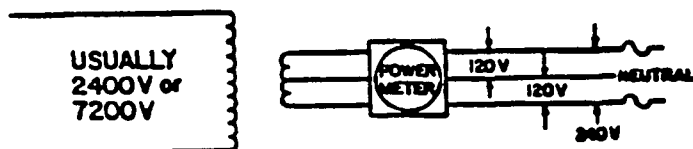
Connect six (6) or eight (8) threshold lights (3 or 4 on each end) and all the lights on one side of the runway to one hot circuit, and one neutral circuit. Repeat the same for the other side of the runway. The runway and threshold is now wired. The next problem is to provide power to these two circuits.

To understand the runway wiring and feed, one must understand a little bit about the power that is delivered to the airport by the power company. Below is the equivalent circuit for this purchased power.



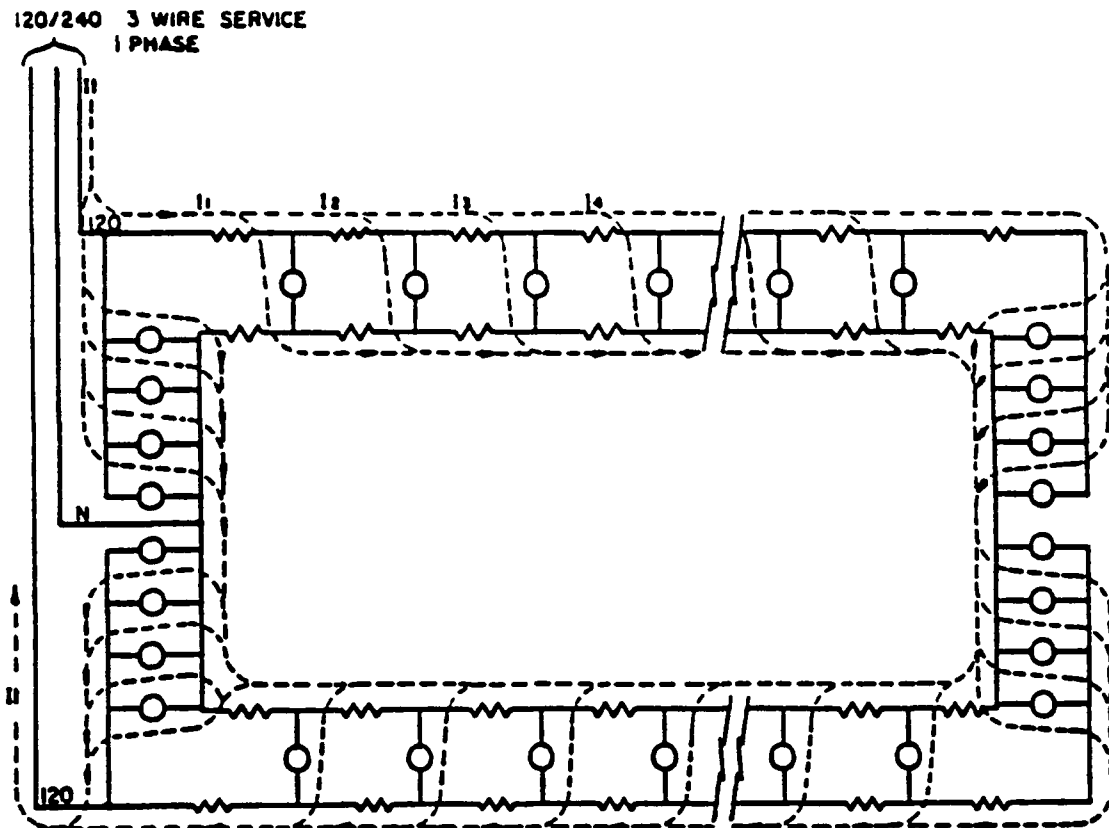


The power is transmitted to the airport or local area at very high voltages, because less power is lost at the higher voltages. Near the airport, the voltage will be reduced by a step-down transformer to the common distribution voltage, which is 120/240 3 wire single phase. This simply means that the power is delivered to you on 3 wires (one of which is neutral) and the voltage between either hot wire and neutral is 120V. Further, when current is flowing out of one of the hot wires, it will be flowing into the other hot wire. This has some distinct advantages.



If P1, P2, and P4 are 120 Volt lamps and are rated at the same power (wattage), then current will flow out of A thru P1 and P2, and back into neutral. However, current will also flow out of neutral, thru P3 and P4 and back into Point B. If the current thru P1 and P2 is equal to the current thru P3 and P4, then $I_1 = I_2$. This being case, then I_1 will cancel I_2 in the neutral wire, therefore, there will be no current flow in the neutral wire. By taking advantage of this cancellation, you can eliminate the line loss which would be present in the neutral wire in feeding the runway. Wire offers resistance to current flow, and this resistance is the cause of voltage drop along the wire. The voltage drop is the product of the resistance times the current flow. $V(\text{voltage}) = R(\text{resistance}) \times I(\text{current})$

If you feed the runway from the center point, you can minimize voltage losses, and produce best uniformity of lamp brightness along the runway. If you have to end feed the runway, then the lamps at the far end of the runway will experience the line loss caused by their current, plus the line losses caused by all other lamps between the far end and the feed point. To solve this problem, you must make the assumption that all lamps receive 120 Volts, therefore, all lamps draw the same amount of current. This assumption is not true, but is close enough to work with. Set up the problem by drawing the circuit as follows:



NOTE: CURRENT PATHS SHOWN ARE "WORST CASE" OR EXTREMES. THEY DO NOT REPRESENT ACTUAL CURRENT PATHS, BUT REPRESENT THE EXTREMES, THEREFORE CALCULATIONS WILL REFLECT A HIGHER THAN ACTUAL DROP IN VOLTAGE.

By inspection, we see that it will be the sum of all current through all the lamps (except for the four threshold lamps on the feed end). If you make the simple assumption that the current that flows into the R/W circuit as it progresses down the circuit, portions crossing to neutral at each lamp, then continuing to the far end in the neutral, crossing to the other side of the runway in the same manner, then the voltage drop will be the resistance of one run of wire for the full length of the runway times the total current. Therefore

$$E = I \times R, \text{ and}$$

$$E = (23 \text{ lamps} \times 40 \text{ W}/120 \text{ Volts}) \times (4000 \times 4 \text{ ohm}/1000)$$

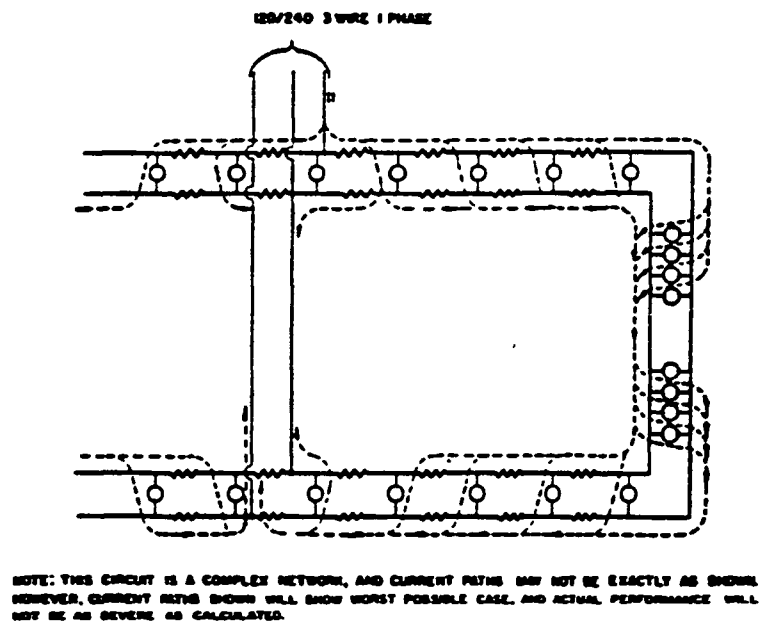
$$= 7.66 \text{ amps} \times 16 \text{ ohm}$$

$$= 12.266 \text{ volts drop}$$

$$E_{\text{lamp}} = 120 - 12.266 = 107.73 \text{ Volts}$$

From the chart for lamp voltages vs brightness, you find that a lamp operating at 107.73 volts is only 70 percent as bright as it would be if it were operating at 120V

The circuit is different from the previous case. The circuit is drawn as follows



By inspection, you can see that the worst case would be if all current I_o flowed into the R/W circuit, went through the lamps, flowed across the end, through the lamps on the other side of the runway, and then back to the sources as I_i . The total drop would be equal to the total current I_o x the resistance of the length of cable. hence,

$$14 \text{ lamps} \times 40 \text{ watts} = 560 \text{ watts}$$

$$I = \frac{P}{E} = \frac{560}{120} = 4.66 \text{ A}$$

$$R = \text{Wire length} \times \text{resistance per ft}$$

$$= 2000 \times .004 \text{ ohm/ft.} = 8 \text{ ohm total}$$

$$E = I \times R = 4.666 \times .8 \text{ ohm} = 3.73 \text{ Volts}$$

The Voltage across the threshold lights would be $120V - 3.73 \text{ Volts} = 116.26 \text{ Volts}$. Consulting the Brightness vs. Lamp Voltage Chart, the brightness would be 90 percent of maximum at the threshold.

The last item for runway design involves calculating the line losses in the "home runs" The home runs are the cable that interconnect the runway lighting system with the control panel. It can be assumed for this case (and most practical cases) that no current flows in the neutral wire in the home run. In the actual case, unbalanced current flows in the neutral wire, but this is usually negligible.

To calculate line losses in the home runs, determine their length (total round trip) Calculate the resistance of the wire (round trip) Next, add up the number of lights in the system and multiply this by the lamp wattage. Divide the total power (watts) by 240V to obtain current Multiply current x resistance of home runs This gives voltage drop with respect to 240 Volts. One half of this drop will be on one side of the line, and the other half will be on the other side of the line This process may be summarized as follows.

- Total the home runs distance round trip
- Multiply the total distance by the resistance of the wire size for the home run. (Wire resistance is in ohms per 1000')
- Total the power required for the lights

$$P_t = N \times WL$$

Where N = Number of lamps

WL = Lamp wattage.

- $I = P/V$
- Drop = $I \times R \text{ line.}$
- Feed point Voltage = Line Drop/2

Wind Cones, and Wind Tees

Introduction

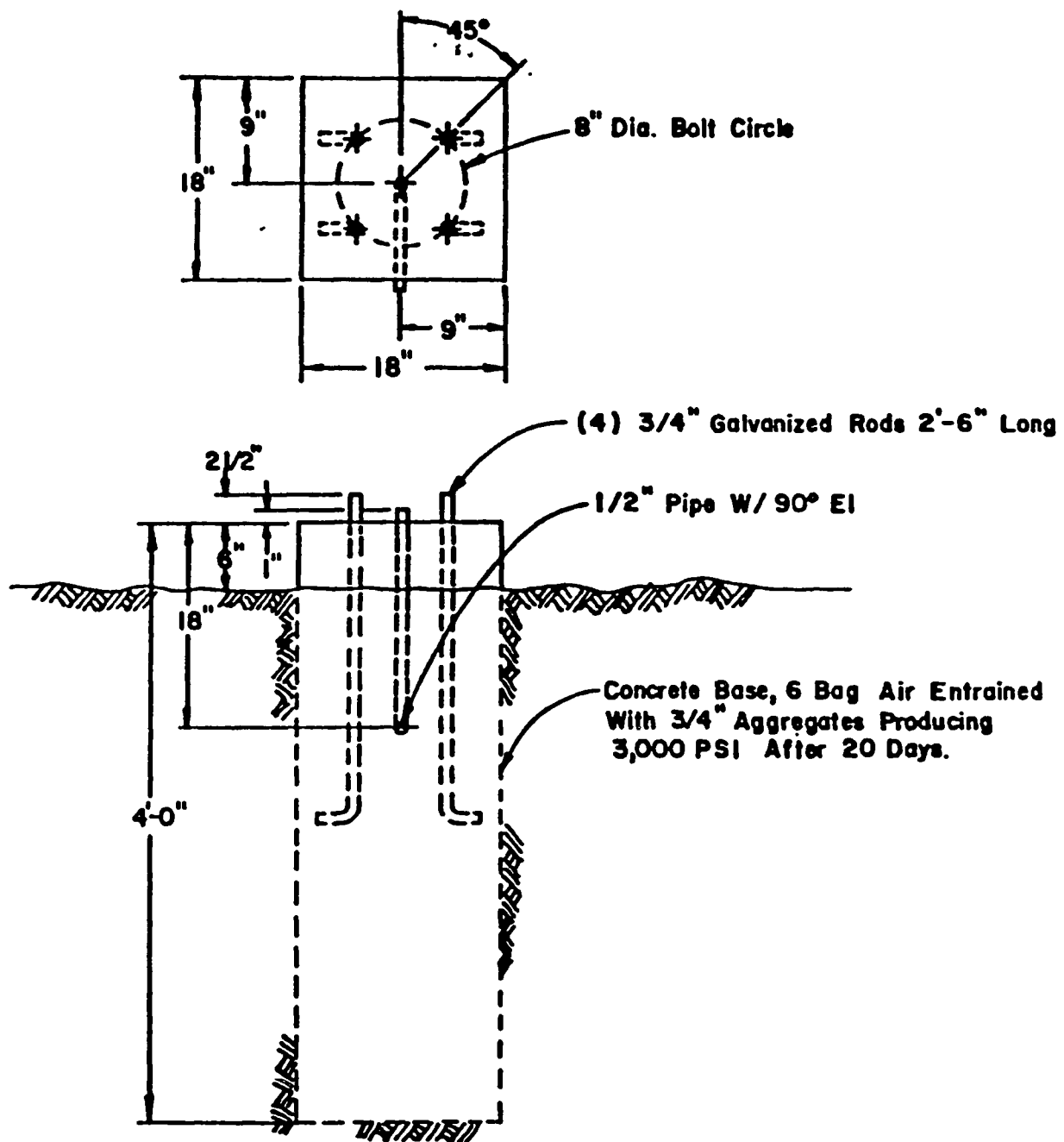
The wind cone and wind tee are wind direction indicating devices to assist pilots in determining the most favorable runway on which to land or take off. At uncontrolled airports heavy dependence is placed upon the wind cone or wind tee for regulation of traffic direction. For this reason, the wind indicator must be located such that it is visible, not only from the air, but also by aircraft departing the terminal area or ramp area. For airborne aircraft, the most conspicuous location is at the center point of the runway and 200 feet (61 m) to 500 feet (152.4 m) off the runway centerline. However, this may not be a good location as far as taxiing aircraft are concerned. Therefore, begin the location selection by starting at the center point of runway location, and then compromising that location only as much as is necessary to satisfy the visibility for taxiing aircraft. Make note of several points concerning the wind indicators.

Installation Considerations

There should never be more than one primary indicating device on an uncontrolled airport. This is because over a distance of 3,000 feet (914.4 m) to 4,000 feet (1219.2 m), the wind can be blowing in two different directions. This can lead to aircraft simultaneously landing or taking off on opposite ends of the same runway. The following should be considered related to wind cone and wind tee installation.

- Install the wind cone in the most conspicuous location possible (**Exhibit 8-6**)
- A wind cone is a very light, rapid responding indicator that indicates instantaneous wind direction, and to some degree gives a indication of wind velocity.
- A wind tee is a very heavy, slow responding indicator that averages wind direction. It provides no information with regard to the wind velocity.
- A wind tee is the most conspicuous or easily spotted wind indicator from the air. It is followed by the 36 inch (12 foot) wind cone, and lastly, the least visible indicator, is the 18 inch (8 foot) wind cone.
- Wind tees have lost their popularity, and are being used less frequently today.

Frequently the visibility or conspicuousness of a wind indicator is enhanced by placing a segmented circle around the indicator. The segments take many forms, from poured concrete slabs (usually 3' by 10') to triangular shaped "pig huts" to 55 gallon barrels. The diameter of the circle should be 50 feet (15.24 m) to 100 feet (30.48 m) and the segments should be alternately painted white and international orange.



Typical Wind Cone Anchor Assembly
Exhibit 8-6

Electrical considerations

The electrical power required for wind indicators is as follows:

Wind Tee	-	120VAC	750 Watts
Wind Cone	36" x 12'	120VAC	916 Watts
Wind Cone	18" x 8'	120VAC	735 Watts

There are two or three situations to appraise when designing the power system for a wind indicator. These are:

- You are going to replace an existing wind cone, and you wish to use the existing cable for powering the new wind indicator,
- You have a certain size wire available and you want to use it to power the wind indicator, or
- Everything is new, and you wish to design a power system to operate the lights

In the first two situations above, you will simply be calculating the line losses with a given wire size and load. In the last situation above, you will be designing to deliver a particular voltage to the lighting system. In the first two situations, suppose a 36" wind cone is to be installed in a location that is 500 feet (152.4 m) from the power source, and that 2 - 1/c #8 - 600 Volt power cables already exist between the proposed location and the power source. To determine what the voltage will be at the wind cone, if the supply is 120 VAC, follow the procedure outlined below.

- From above, the load will be 910 Watts.

$$I \text{ (current)} = \frac{P \text{ (power)}}{E \text{ (voltage)}} = \frac{910}{120} = 7.58 \text{ Amps}$$

- Total cable distance is $2 \times 500' = 1000'$; Wire resistance = 63 Ohms/1000'. Therefore, the total cable resistance is 63 Ohms.
- Voltage at the wind cone equals the source voltage, less the cable losses. Cable Voltage loss = Cable resistance x cable current

$$E = I \times R$$

$$E = 7.58 \text{ Amps} \times 63 \text{ Ohms}$$

$$E = 4.77 \text{ Volts.}$$

- Therefore, $120 \text{ V} - 4.77 \text{ Volts} = 115.2 \text{ Volts}$

For the third situation, suppose you wish to install an 18" x 8' wind cone, and that the wind cone is located 750' from the power source. You want to maintain the voltage within 3 Volts of the power source voltage. To determine what size wire you must use, follow the procedure shown below.

- Calculate line current

$$I = \frac{P}{E} = \frac{735 \text{ W}}{120 \text{ V}} = 6.125 \text{ Amps.}$$

- Calculate the allowable cable resistance

$$E = 120 - 117 = 3 \text{ Volts.}$$

$$R = \frac{E}{I} = \frac{3}{6.125} = 49 \text{ ohm}$$

- Calculate the cable resistance per 1000'.

$$\begin{aligned} R/1000' &= \frac{\text{Allowable Resistance}}{\text{Distance (in 1000')}} = \frac{49 \text{ Ohms}}{150} \\ &= .326 \text{ Ohms} \end{aligned}$$

- Go to wire table, and look up the wire resistance of copper wire.
You find that #6 is .3951 Ohm/1000.
You find that #4 is .2485 Ohm/1000.

Therefore, you would have to use #4 cable in order to keep the voltage drop in the line to less than 3 volts.

Rotating Beacons

The FAA currently specifies two (2) types of airport identification beacons. These are the (1) L-801A medium intensity and (2) L-802A high intensity beacons. Required light output of the L-802A is only 50 percent greater than the light output of the L-801A. Airport beacons should be located in a central location on the airport and within one mile of the runway. They should be located away from, and above, all structures and terrain that would impede their beams. This is sometimes impossible or impractical, therefore, compromises may be required. When location must be compromised, locate the beacon such that the beams are visible for the maximum azimuth coverage possible.

Common supporting structures

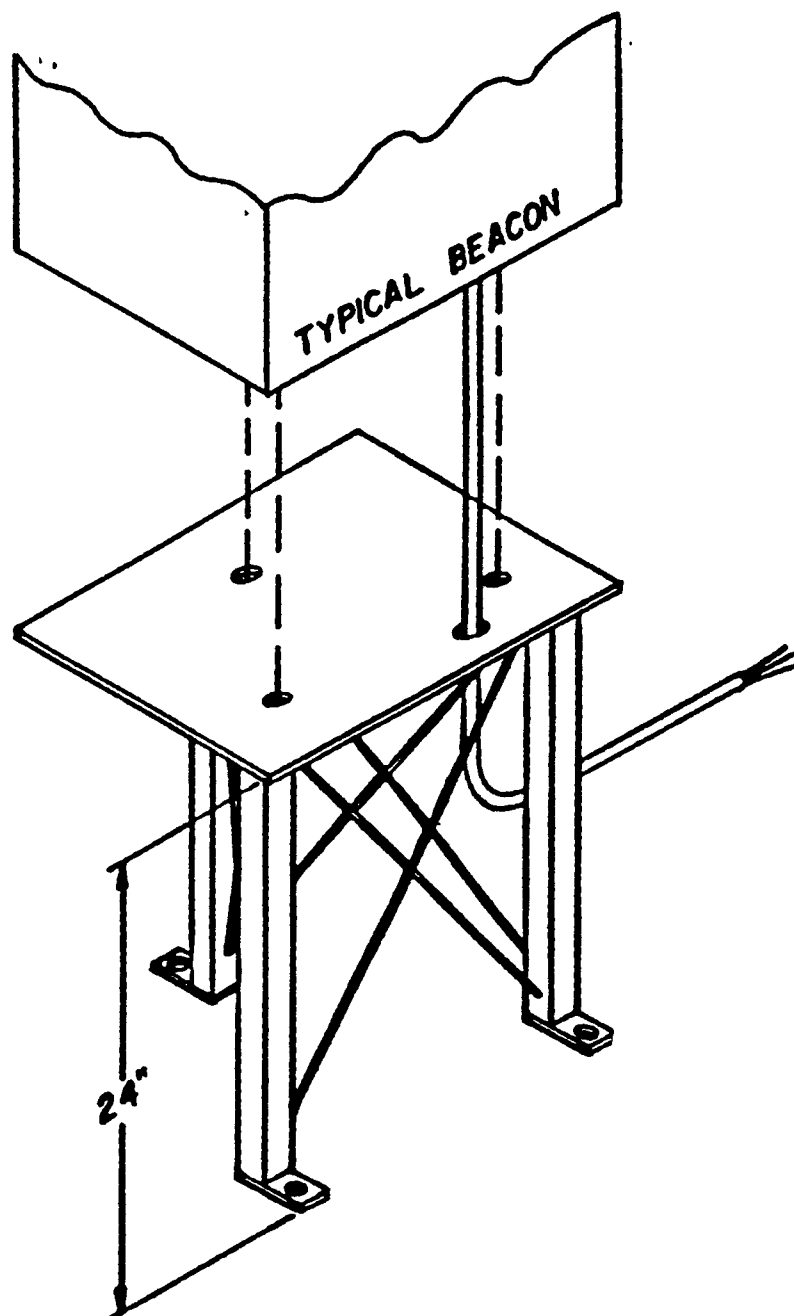
The common supporting structures for rotating beacons are as follows:

- Roof of a hangar, roof of a control tower, or other structure. **Exhibit 8-7** shows a typical adaptor plate for mounting a beacon on a roof. This mounting is made from angle iron and 1/4" steel plate. Such an adaptor can be fabricated to interface to most any surface. When such a mounting is fabricated, it should be phosphatized galvanized to prevent rusting.
- 35' to 50' utility pole. **Exhibit 8-8** shows a typical pole mounting adaptor for mounting a beacon on top of a utility pole. These adaptors have adjustments so that the beacon can be leveled after it is installed. The adjustment is necessary because it is highly unlikely that the side of the pole will be exactly vertical.
- Beacon tower. Several commercial towers are available for holding a beacon. One is manufactured by Rohn Towers, in Peoria, Illinois. The Rohn Tower is a free-standing tower, is fabricated in 10 ft and 20 ft sections, and includes an anchor base for casting in the concrete foundation. The top plate of this tower is pre-drilled to receive most beacons. A partial drawing of this tower is shown in **Exhibit 8-9**.

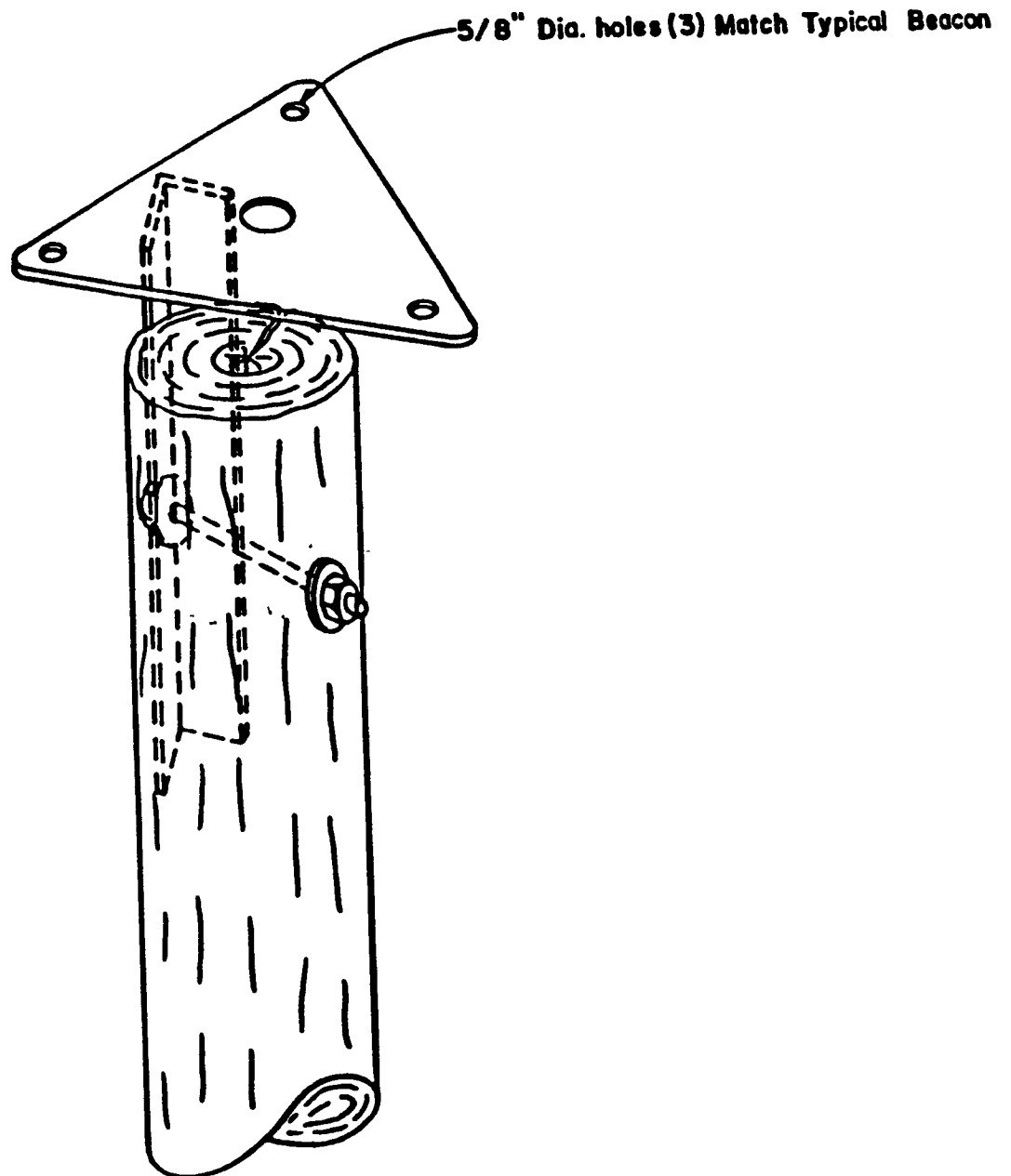
Power Requirements and Wire Size

The performance of the rotating beacon is highly dependent upon proper power being supplied to it. For instance, if the power is only 4 percent low, the light output is only 85 percent of its available light. If the power 10 percent lower, its light output is only 70 percent of the available light. Therefore, proper power to the beacon is very important.

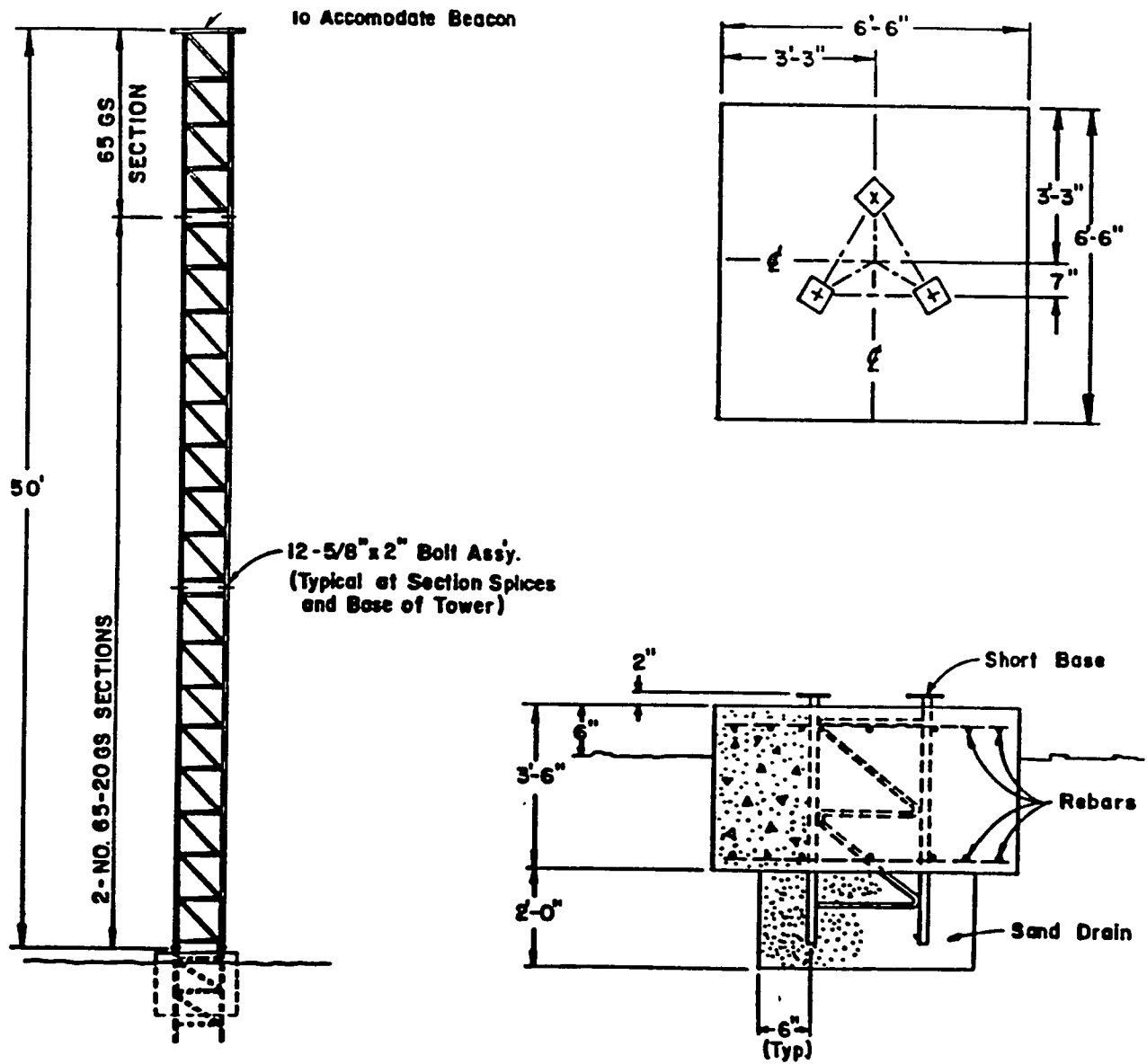
To calculate the wire size required, proceed as follows:



Roof Mount for Typical Beacon
Exhibit 8-7



Pole Mounting Adapter
Exhibit 8-8



Free Standing Airport Beacon Tower

Fountain Detail

Exhibit 8-9

- $\text{Current} = \frac{\text{Beacon Power}}{\text{voltage}} = \frac{P_t(\text{Beacon})}{E_{\text{line}}}$
- Try to hold line losses to 2 percent or less, therefore,

$$\text{Line loss} = .02 E_{\text{line}}$$
- $R_{\text{line max.}} = \frac{.02 E_{\text{line}}}{\text{Current}}$
- Wire Resistance (1000')

$$= \frac{R_{\text{line max}} - \text{Distance (round trip)}}{1000'}$$
- Enter Wire Table with wire resistance (1000') to determine minimum size wire necessary to power the beacon.

An example for determining power requirements and wire size for a beacon is provided. We have a beacon pole 100 ft. from the circuit breaker panel, and the beacon is mounted on top of a 50 foot pole. The beacon requires 2,250 watts at 120 VAC. To determine the wire size required to properly power this beacon, follow this process:

- $\text{Current} = \frac{P_{\text{beacon}}}{E_{\text{line}}} = \frac{2250}{120} = 18.75 \text{ Amps.}$
- Allowable Line Loss = $.02 E_{\text{line}} = .02 \times 120$
 $= 2.4 \text{ volts}$
- $R_{\text{line max}} = \frac{.02 E_{\text{line}}}{\text{Current}} = \frac{2.4V}{18.75 A} = 128 \text{ Ohms}$
- Wire Resistance (1000')

$$= \frac{.128 \text{ Ohms}}{\text{Distance (round trip)/1000}}$$

$$= \frac{.128 \text{ Ohms}}{300/1000} = \frac{.128 \text{ Ohms}}{.3} = .426 \text{ Ohms.}$$

From Wire Table, #6 = 3961 Ohms/1000', therefore, #6 wire would be suitable.

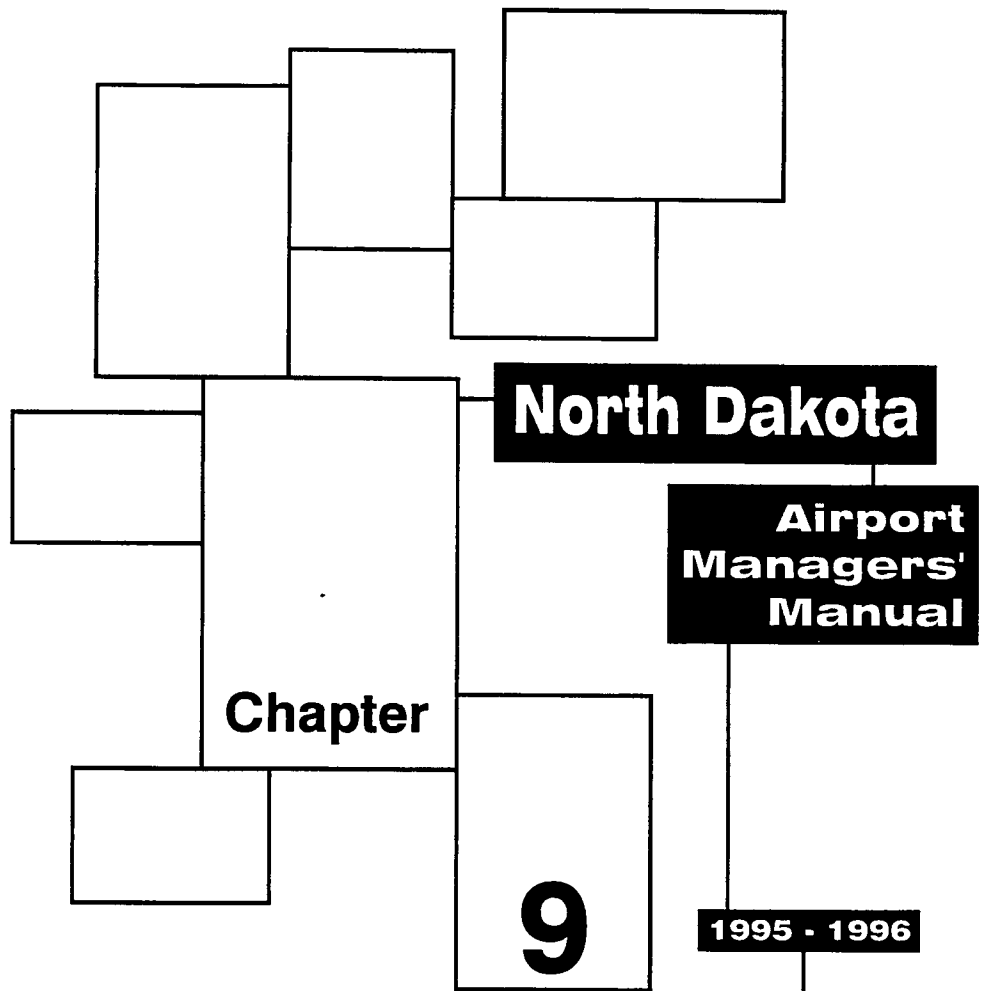
Source: North Dakota Aeronautics Commission

Resistance of Copper Wire

<u>Wire Size</u>	<u>Res/1000 ft</u>
2	1563 ohm/1000'
4	2485 ohm/1000'
6	.3951 ohm/1000'
8	6282 ohm/1000'
10	9989 ohm/1000'
12	1 588 ohm/1000'

Ohms Law Relationships

Voltage = Current x Resistance	$E = I \times R$
Current = Voltage/Resistance	$I = E/R$
Resistance = Voltage/Current	$R = E/I$
Power = Voltage x Current	$P = E \times I$
Power = (Voltage) ² /Resistance	$P = E^2/R$
Power = (Current) ² x Resistance	$P = I^2 \times R$
Current = Power/Voltage	$I = P/E$



Grant Assurances

SECTION 1: SPONSOR ASSURANCES

Introduction

These assurances shall be complied with in the performance of grant agreements for airport development, airport planning, and noise compatibility program grants to airport sponsors

These assurances are required to be submitted as part of the project application by sponsors requesting funds under the provisions of the Airport and Airway Improvement Act of 1982, as amended by the Airport and Airway Safety and Capacity Expansion Act of 1987, or the Aviation Safety and Noise Abatement Act of 1979. As used herein, the term "public agency sponsor" means a public agency with control of a public use airport, the term "private sponsor" means a private owner of a public use airport, and the term "sponsor" includes public agency sponsors and private sponsors.

Upon acceptance of the grant offer by the sponsor, these assurances are incorporated in and become part of the grant agreement.

Duration and Applicability

Airport Development or Noise Compatibility Program Projects Undertaken by a Public Agency Sponsor The terms, conditions and assurances of the grant agreement shall remain in full force and effect throughout the useful life of the facilities developed or equipment acquired for an airport development or noise compatibility program project, or throughout the useful life of the project items installed within a facility under a noise compatibility program project, but in any event not to exceed twenty (20) years from the date of acceptance of a grant offer of Federal funds for the project. However, there shall be no limit on the duration of the assurance against exclusive rights or the terms, conditions, and assurances with respect to real property acquired with Federal funds. Furthermore, the duration of the Civil Rights assurance shall be as specified in the assurance.

Airport Development or Noise Compatibility Program Projects Undertaken by a Private Sponsor The preceding paragraph 1 also applies to a private sponsor except that the useful life of project items installed within a facility or the useful life of facilities developed or equipment acquired under an airport development or noise compatibility program project shall be no less than 10 years from the date of the acceptance of Federal aid for the project.

Airport Planning Undertaken by a Sponsor Unless otherwise specified in the grant agreement, only Assurances 1, 2, 3, 5, 6, 13, 18, 30, 32, 33, and 34 in Section C apply to planning projects. The terms, conditions, and assurances of the grant agreement shall remain in full force and effect during the life of the project.

General Federal Requirements

It will comply with all applicable Federal laws, regulations, executive orders, policies, guidelines and requirements as they relate to the application, acceptance and use of Federal funds for this project including but not limited to the following.

Federal Legislation

- a. Federal Aviation Act of 1958 - 49 U.S.C. 1301, et seq.
- b. Davis-Bacon Act - 40 U.S.C. 276(a), et seq. ¹
- c. Federal Fair Labor Standards Act - 29 U.S.C. 201, et seq.
- d. Hatch Act - 5 U.S.C. 1501, et seq. ²
- e. Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 - 42 U.S.C. 4601, et seq. ^{1 2}
- f. National Historic Preservation Act of 1966 - Section 106 - 16 U.S.C. 470(f). ¹
- g. Archeological and Historic Preservation Act of 1974 - 16 U.S.C. 469 through 469c. ¹
- h. Flood Disaster Protection Act of 1973 - Section 102(a) - 42 U.S.C. 4012a ¹
- i. Rehabilitation Act of 1973 - 29 U.S.C. 794
- j. Civil Rights Act of 1964 - Title VI - 42 U.S.C. 2000d through d-4
- k. Aviation Safety and Noise Abatement Act of 1979, 49 U.S.C. 2101, et seq.
- l. Age Discrimination Act of 1975 - 42 U.S.C. 6101, et seq.
- m. Architectural Barriers Act of 1968 - 42 U.S.C. 4151, et seq. ¹
- n. Airport and Airway Improvement Act of 1982, as amended 49 U.S.C. 2201, et seq.
- o. Powerplant and Industrial Fuel Use Act of 1978 - Section 403 - 2 U.S.C. 8373. ¹
- p. Contract Work Hours and Safety Standards Act - 40 U.S.C. 327, et seq. ¹
- q. Copeland Anti-Kickback Act - 18 U.S.C. 874 ¹
- r. National Environmental Policy Act of 1969 - 42 U.S.C. 4321, et seq. ¹
- s. Endangered Species Act - 16 U.S.C. 668(a), et seq. ¹
- t. Single Audit Act of 1984 - 31 U.S.C. 7501, et seq. ²

Executive Orders

Executive Order 12372 - Intergovernmental Review of Federal Programs

Executive Order 11246 - Equal Employment Opportunity ¹

Federal Regulations

- a. 49 CFR Part 18 - Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments. ³
- b. 49 CFR Part 21 - Nondiscrimination in Federally assisted Programs of the Department of Transportation - Effectuation of Title VI of the Civil Rights Act of 1964
- c. 49 CFR Part 23 - Participation by Minority Business Enterprise in Department of Transportation Programs.

- d. 49 CFR Part 24 - Uniform Relocation Assistance and Real Property Acquisition Regulation for Federal and Federally Assisted Programs ^{1 2}
- e. 49 CFR Part 27 - Nondiscrimination on the Basis of Handicap in Programs and Activities Receiving or Benefiting from Federal Financial Assistance ¹
- f. 49 CFR Part 29 - Debarments, Suspensions, and Voluntary Exclusions.
- g. 49 CFR Part 30 - Denial of Public Works Contracts to Suppliers of Goods and Services of Countries That Deny Procurement Market Access to U S Contractors
- h. 29 CFR Part 1 - Procedures for Predetermination of Wage Rates ¹
- i. 29 CFR Part 3 - Contractors or Subcontractors on Public Buildings or Public Works Financed in Whole or Part by Loans or Grants from U S ¹
- j. 29 CFR Part 5 - Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction ¹
- k. 41 CFR Part 60 - Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor (Federal and Federally assisted Contracting Requirements). ¹
- l. 14 CFR Part 150 - Airport Noise Compatibility Planning.

Office of Management and Budget Circulars

- a. A-87 - Cost Principles Applicable to Grants and Contracts with State and Local Governments ³
- b. A-128 - Audits of State and Local Governments ²

¹ - These laws do not apply to airport planning sponsors

² - These laws do not apply to private sponsors

³ - 49 CFR Part 18 and OMB Circular A-87 contain requirements for State and local governments receiving Federal assistance. Any requirement levied upon State and local governments by this Regulation and Circular shall also be applicable to private sponsors receiving Federal assistance under the Airport and Airway Improvement Act of 1982, as amended

Specific assurances required to be included in grant agreements by any of the above laws, regulations or circulars are incorporated by reference in the grant agreement.

Responsibility and Authority of the Sponsor

Public Agency Sponsor

It has legal authority to apply for the grant, and to finance and carry out the proposed project, that a resolution, motion or similar action has been duly adopted or passed as an official act of the applicant's governing body authorizing the filing of the application, including all understandings and assurances contained therein, and directing and authorizing the person identified as the official representative of the applicant to act in connection with the application and to provide such additional information as may be required

Private Sponsor

It has legal authority to apply for the grant and to finance and carry out the proposed project and comply with all terms, conditions, and assurances of this grant agreement. It shall designate an official representative and shall in writing direct and authorize that person to file this application, including all understandings and assurances contained therein, to act in connection with the application; and to provide such additional information as may be required.

Sponsor Fund Availability

It has sufficient funds available for that portion of the project costs which are not to be paid by the United States. It has sufficient funds available to assure operation and maintenance of items funded under the grant agreement which it will own or control.

Good Title

It holds good title, satisfactory to the Secretary, to the landing area of the airport or site thereof, or will give assurance satisfactory to the Secretary that good title will be acquired

For noise compatibility program projects to be carried out on the property of the sponsor, it holds good title satisfactory to the Secretary to that portion of the property upon which Federal funds will be expended or will give assurance to the Secretary that good title will be obtained.

Preserving Rights and Powers

It will not take or permit any action which would operate to deprive it of any of the rights and powers necessary to perform any or all of the terms, conditions, and assurances in the grant agreement without the written approval of the Secretary, and will act promptly to acquire, extinguish or modify any outstanding rights or claims of right of others which would interfere with such performance by the sponsor. This shall be done in a manner acceptable to the Secretary.

It will not sell, lease, encumber or otherwise transfer or dispose of any part of its title or other interests in the property shown on Exhibit A to this application or, for a noise compatibility program project, that portion of the property upon which Federal funds have been expended, for the duration of the terms, conditions, and assurances in the grant agreement without approval by the Secretary. If the transferee is found by the Secretary to be eligible under the Airport and Airway Improvement Act of 1982 to assume the obligations of the grant agreement and to have the power, authority, and financial resources to carry out all such obligations, the sponsor shall insert in the contract or document transferring or disposing of the sponsor's interest, and make binding upon the transferee, all of the terms, conditions and assurances contained in this grant agreement.

For all noise compatibility program projects which are to be carried out by another unit of local government or are on property owned by a unit of local government other than the sponsor, it will enter into an agreement with that government. Except as otherwise specified by the Secretary, that agreement shall obligate that government to the same terms, conditions, and assurances that would

be applicable to it if it applied directly to the FAA for a grant to undertake the noise compatibility program project. That agreement and changes thereto must be satisfactory to the Secretary. It will take steps to enforce this agreement against the local government if there is substantial noncompliance with the terms of the agreement,

For noise compatibility program projects to be carried out on privately owned property, it will enter into an agreement with the owner of that property which includes provisions specified by the Secretary. It will take steps to enforce this agreement against the property owner whenever there is substantial noncompliance with the terms of the agreement.

If the sponsor is a private sponsor, it will take steps satisfactory to the Secretary to ensure that the airport will continue to function as a public use airport in accordance with these assurances for the duration of these assurances.

If an arrangement is made for management and operation of the airport by any agency or person other than the sponsor or an employee of the sponsor, the sponsor will reserve sufficient rights and authority to insure that the airport will be operated and maintained in accordance with the Airport and Airway Improvement Act of 1982, the regulations and the terms, conditions and assurances in the grant agreement and shall insure that such arrangement also requires compliance therewith.

Consistency with Local Plans

The project is reasonably consistent with plans (existing at the time of submission of this application) of public agencies that are authorized by the State in which the project is located to plan for the development of the area surrounding the airport. For noise compatibility program projects, other than land acquisition, to be carried out on property not owned by the airport and over which property another public agency has land use control or authority, the sponsor shall obtain from each such agency a written declaration that such agency supports that project and the project is reasonably consistent with the agency's plans regarding the property.

Consideration of Local Interest

It has given fair consideration to the interest of communities in or near which the project may be located.

Consultation with Users

In making a decision to undertake any airport development project under the Airport and Airway Improvement Act of 1982, it has undertaken reasonable consultations with affected parties using the airport at which project is proposed.

Public Hearings

In projects involving the location of an airport, an airport runway, or a major runway extension, it has afforded the opportunity for public hearings for the purpose of considering the economic, social,

and environmental effects of the airport or runway location and its consistency with goals and objectives of such planning as has been carried out by the community. It shall, when requested by the Secretary, submit a copy of the transcript of such hearings to the Secretary.

Air and Water Quality Standards

In projects involving airport location, a major runway extension, or runway location it will provide for the Governor of the state in which the project is located to certify in writing to the Secretary that the project will be located, designed, constructed, and operated so as to comply with applicable air and water quality standards. In any case where such standards have not been approved and where applicable air and water quality standards have been promulgated by the Administrator of the Environmental Protection Agency, certification shall be obtained from such Administrator. Notice of certification or refusal to certify shall be provided within sixty days after the project application has been received by the Secretary.

Local Approval

In projects involving the construction or extension of any runway at any general aviation airport located astride a line separating two counties within a single state, it has received approval for the project from the governing body of all villages incorporated under the laws of that state which are located entirely within five miles of the nearest boundary of the airport.

Terminal Development Prerequisites

For projects which include terminal development at a public airport, it has, on the date of submittal of the project grant application, all the safety equipment required for certification of such airport under section 612 of the Federal Aviation Act of 1958 and all the security equipment required by rule or regulation, and has provided for access to the passenger enplaning and deplaning area of such airport to passengers enplaning or deplaning area of such airport to passengers enplaning or deplaning from aircraft other than air carrier aircraft.

Accounting System, Audit, and Record Keeping Requirements

It shall keep all project accounts and records which fully disclose the amount and disposition by the recipient of the proceeds of the grant, the total cost of the project in connection with which the grant is given or used, and the amount and nature of that portion of the cost of the project supplied by other sources, and such other financial records pertinent to the project. The accounts and records shall be kept in accordance with an accounting system that will facilitate an effective audit in accordance with the Single Audit Act of 1984.

It shall make available to the Secretary and the Comptroller General of the United States, or any of their duly authorized representatives, for the purpose of audit and examination, any books, documents, papers, and records of the recipient that are pertinent to the grant. The Secretary may require that an appropriate audit be conducted by a recipient. In any case in which an independent audit is made of the accounts of a sponsor relating to the disposition of the proceeds of a grant or

relating to the project in connection with which the grant was given or used, it shall file a certified copy of such audit with the Comptroller General of the United States not later than 6 months following the close of the fiscal year for which the audit was made

Minimum Wage Rates

It shall include, in all contracts in excess of \$2,000 for work on any projects funded under the grant agreement which involve labor, provisions establishing minimum rates of wages, to be predetermined by the Secretary of Labor, in accordance with the Davis-Bacon Act, as amended (40 U.S.C. 276a - 276a-5), which contractors shall pay to skilled and unskilled labor, and such minimum rates shall be stated in the invitation for bids and shall be included in proposals or bids for the work

Veteran's Preference

It shall include, in all contracts for work on any projects funded under the grant agreement which involve labor, such provisions as are necessary to insure that, in the employment of labor (except in executive, administrative, and supervisory positions), preference shall be given to veterans of the Vietnam era and disabled veterans as defined in Section 515(c)(1) and (2) of the Airport and Airway Improvement Act of 1982. However, this preference shall apply only where the individuals are available and qualified to perform the work to which the employment relates.

Conformity to Plans and Specifications

It will execute the project subject to plans, specifications, and schedules approved by the Secretary. Such plans, specifications, and schedules shall be submitted to the Secretary prior to commencement of site preparation, construction, or other performance under this grant agreement, and, upon approval by the Secretary, shall be incorporated into this grant agreement. Any modifications to the approved plans, specifications, and schedules shall also be subject to approval by the Secretary and incorporation into the grant agreement.

Construction Inspection and Approval

It will provide and maintain competent technical supervision at the construction site throughout the project to assure that the work conforms with the plans, specifications, and schedules approved by the Secretary for the project. It shall subject the construction work on any project contained in an approved project application to inspection and approval by the Secretary and such work shall be in accordance with regulations and procedures prescribed by the Secretary. Such regulations and procedures shall require such cost and progress reporting by the sponsor or sponsors of such project as the Secretary shall deem necessary.

Planning Projects

In carrying out planning projects:

It will execute the project in accordance with the approved program narrative contained in the project application or with modifications similarly approved.

It will furnish the Secretary with such periodic reports as required pertaining to the planning project and planning work activities

It will include in all published material prepared in connection with the planning project a notice that the material was prepared under a grant provided by the United States

It will make such material available for examination by the public, and agrees that no material prepared with funds under this project shall be subject to copyright in the United States or any other country.

It will give the Secretary unrestricted authority to publish, disclose, distribute, and otherwise use any of the material prepared in connection with this grant.

It will grant the Secretary the right to disapprove the Sponsor's employment of specific consultants and their subcontractors to do all or any part of this project as well as the right to disapprove the proposed scope and cost of professional services.

It will grant the Secretary the right to disapprove the use of the sponsor's employees to do all or any part of the project.

It understands and agrees that the Secretary's approval of this project grant or the Secretary's approval of any planning material developed as part of this grant does not constitute or imply any assurance or commitment on the part of the Secretary to approve any pending or future application for a Federal airport grant

Operation and Maintenance

It will suitably operate and maintain the airport and all facilities thereon or connected therewith, with due regard to climatic and flood conditions. Any proposal to temporarily close the airport for nonaeronautical purposes must first be approved by the Secretary. The airport and all facilities which are necessary to serve the aeronautical users of the airport, other than facilities owned or controlled by the United States, shall be operated at all times in a safe and serviceable condition and in accordance with the minimum standards as may be required or prescribed by applicable Federal, state and local agencies for maintenance and operation. It will not cause or permit any activity or action thereon which would interfere with its use for airport purposes

In furtherance of this assurance, the sponsor will have in effect at all times arrangements for -

- Operating the airport's aeronautical facilities whenever required;
- Promptly marking and lighting hazards resulting from airport conditions, including temporary conditions; and

- Promptly notifying airmen of any condition affecting aeronautical use of the airport

Nothing contained herein shall be construed to require that the airport be operated for aeronautical use during temporary periods when snow, flood or other climatic conditions interfere with such operation and maintenance. Further, nothing herein shall be construed as requiring the maintenance, repair, restoration, or replacement of any structure or facility which is substantially damaged or destroyed due to an act of God or other condition or circumstance beyond the control of the sponsor.

It will suitably operate and maintain noise compatibility program items that it owns or controls upon which Federal funds have been expended

Hazard Removal and Mitigation

It will take appropriate action to assure that such terminal airspace as is required to protect instrument and visual operations to the airport (including established minimum flight altitudes) will be adequately cleared and protected by removing, lowering, relocating, marking, or lighting or otherwise mitigating existing airport hazards and by preventing the establishment or creation of future airport hazards.

Compatible Land Use

It will take appropriate action, including the adoption of zoning laws, to the extent reasonable, to restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations, including landing and takeoff of aircraft. In addition, if the project is for noise compatibility program implementation, it will not cause or permit any change in land use, within its jurisdiction, that will reduce the compatibility, with respect to the airport, of the noise compatibility program measures upon which Federal funds have been expended

Economic Nondiscrimination

It will make its airport available as an airport for public use on fair and reasonable terms and without unjust discrimination, to all types, kinds, and classes of aeronautical uses

In any agreement, contract, lease or other arrangement under which a right or privilege at the airport is granted to any person, firm, or corporation to conduct or engage in any aeronautical activity for furnishing services to the public at the airport, the sponsor will insert and enforce provisions requiring the contractor to

- furnish said services on a fair, equal, and not unjustly discriminatory basis to all users thereof, and
- charge fair, reasonable, and not unjustly discriminatory prices for each unit or service, provided, that the contractor may be allowed to make reasonable and nondiscriminatory discounts, rebates, or other similar types of price reductions to volume purchasers.

Each fixed based operator at any airport owned by the sponsor shall be subject to the same rates, fees, rentals, and other charges as are uniformly applicable to all other fixed based operators making the same or similar uses of such airport and utilizing the same or similar facilities.

Each air carrier using such airport shall have the right to service itself or to use any fixed based operator that is authorized or permitted by the airport to serve any air carrier at such airport

Each air carrier using such airport (whether as a tenant, nontenant, or subtenant of another air carrier tenant) shall be subject to such nondiscriminatory and substantially comparable rules, regulations, conditions, rates, fees, rentals, and other charges with respect to facilities directly and substantially related to providing air transportation as are applicable to all such air carriers which make similar use of such airport and which utilize similar facilities, subject to reasonable classifications such as tenants or non-tenants and signatory carriers and non-signatory carriers. Classification or status as tenant or signatory shall not be unreasonably withheld by any airport provided an air carrier assumes obligations substantially similar to those already imposed on air carriers in such classifications or status

It will not exercise or grant any right or privilege which operates to prevent any person, firm, or corporation operating aircraft on the airport from performing any services on its own aircraft with its own employees (including, but not limited to maintenance, repair, and fueling) that it may choose to perform

In the event the sponsor itself exercises any of the rights and privileges referred to in this assurance, the services involved will be provided on the same conditions as would apply to the furnishing of such services by contractors or concessionaires of the sponsor under these provisions

The sponsor may establish such fair, equal and not unjustly discriminatory conditions to be met by all users of the airport as may be necessary for the safe and efficient operation of the airport.

The sponsor may prohibit or limit any given type, kind, or class of aeronautical use of the airport if such action is necessary for the safe operation of the airport or necessary to serve the civil aviation needs of the public.

Exclusive Rights

It will permit no exclusive right for the use of the airport by any persons providing, or intending to provide, aeronautical services to the public. For purposes of this paragraph, the providing of services at an airport by a single fixed based operator shall not be construed as an exclusive right if both of the following apply

It would be unreasonably costly, burdensome, or impractical for more than one fixed based operator to provide such services, and

If allowing more than one fixed based operator to provide such services would require the reduction of space leased pursuant to an existing agreement between such single fixed based operator and such airport

It further agrees that it will not, either directly or indirectly, grant or permit any person, firm or corporation the exclusive right at the airport, or at any other airport now owned or controlled by it, to conduct any aeronautical activities, including, but not limited to charter flights, pilot training, aircraft rental and sightseeing, aerial photography, crop dusting, aerial advertising and surveying, air carrier operations, aircraft sales and services, sale of aviation petroleum products whether or not conducted in conjunction with other aeronautical activity, repair and maintenance of aircraft, sale of aircraft parts, and any other activities which because of their direct relationship to the operation of aircraft can be regarded as an aeronautical activity, and that it will terminate any exclusive right to conduct an aeronautical activity now existing at such an airport before the grant of any assistance under the Airport and Airway Improvement Act of 1982

Fee and Rental Structure

It will maintain a fee and rental structure consistent with Assurance 22 and 23, for the facilities and services being provided the airport users which will make the airport as self-sustaining as possible under the circumstances existing at the particular airport, taking into account such factors as the volume of traffic and economy of collection. No part of the Federal share of an airport development, airport planning or noise compatibility project for which a grant is made under the Airport and Airway Improvement Act of 1982, the Federal Airport Act or the Airport and Airway Development Act of 1970 shall be included in the rate base in establishing fees, rates, and charges for users of that airport

Airport Revenue

If the airport is under the control of a public agency, all revenues generated by the airport and any local taxes on aviation fuel established after December 30, 1987, will be expended by it for the capital or operating costs of the airport; the local airport system, or other local facilities which are owned or operated by the owner or operator of the airport and directly and substantially related to the actual air transportation of passengers or property, or for noise mitigation purposes on or off the airport. Provided, however, that if covenants or assurances in debt obligations issued before September 3, 1982, by the owner or operator of the airport, or provisions enacted before September 3, 1982, in governing statutes controlling the owner or operator's financing, provide for the use of the revenues from any of the airport owner or operator's facilities, including the airport, to support not only the airport but also the airport owner or operator's general debt obligations or other facilities, then this limitation on the use of all revenues generated by the airport (and, in the case of a public airport, local taxes on aviation fuel) shall not apply

Reports and Inspections

It will submit to the Secretary such annual or special financial and operations reports as the Secretary may reasonably request. For airport development projects, it will also make the airport and all airport

records and documents affecting the airport, including deeds, leases, operation and use agreements, regulations and other instruments, available for inspection by any duly authorized agent of the Secretary upon reasonable request. For noise compatibility program projects, it will also make records and documents relating to the project and continued compliance with the terms, conditions, and assurances of the grant agreement including deeds, leases, agreements, regulations, and other instruments, available for inspection by any duly authorized agent of the Secretary upon reasonable request.

Use of Government Aircraft

It will make available all of the facilities of the airport developed with Federal financial assistance and all those usable for landing and takeoff of aircraft to the United States for use by Government aircraft in common with other aircraft at all times without charge, except, if the use by Government aircraft is substantial, charge may be made for a reasonable share, proportional to such use, for the cost of operating and maintaining the facilities used. Unless otherwise determined by the Secretary, or otherwise agreed to by the sponsor and the using agency, substantial use of an airport by Government aircraft will be considered to exist when operations of such aircraft are in excess of those which, in the opinion of the Secretary, would unduly interfere with use of the landing areas by other authorized aircraft, or during any calendar month that

- Five (5) or more Government aircraft are regularly based at the airport or on land adjacent thereto; or
- The total number of movements (counting each landing as a movement) of Government aircraft is 300 or more, or the gross accumulative weight of Government aircraft using the airport (the total movements of Government aircraft multiplied by gross weights of such aircraft) is in excess of five million pounds

Land for Federal Facilities

It will furnish without cost to the Federal Government for use in connection with any air traffic control or air navigation activities, or weather reporting and communication activities related to air traffic control, any areas of land or water, or estate therein, or rights in buildings of the sponsor as the Secretary considers necessary or desirable for construction, operation, and maintenance at Federal expense of space or facilities for such purposes. Such areas or any portion thereof will be made available as provided herein within four months after receipt of a written request from the Secretary.

Airport Layout Plan

It will keep up to date at all times an airport layout plan of the airport showing (1) boundaries of the airport and all proposed additions thereto, together with the boundaries of all off site areas owned or controlled by the sponsor for airport purposes and proposed additions thereto, (2) the location and nature of all existing and proposed airport facilities and structures (such as runways, taxiways, aprons, terminal buildings, hangars and roads), including all proposed extensions and reductions of

existing airport facilities, and (3) the location of all existing and proposed non-aviation areas and of all existing improvements thereon. Such airport layout plan and each amendment, revision, or modification thereof, shall be subject to the approval of the Secretary which approval shall be evidenced by the signature of a duly authorized representative of the Secretary on the face of the airport layout plan. The sponsor will not make or permit any changes or alterations in the airport or in any of its facilities which are not in conformity with the airport layout plan as approved by the Secretary and which might, in the opinion of the Secretary, adversely affect the safety, utility, or efficiency of the airport.

If a change or alteration in the airport or its facilities is made which the Secretary determines adversely affects the safety, utility, or efficiency of any federally owned, leased, or funded property on or off the airport and which is not in conformity with the airport layout plan as approved by the Secretary, the owner or operator will, if requested by the Secretary (1) eliminate such adverse effect in a manner approved by the Secretary, or (2) bear all costs of relocating such property (or replacement thereof) to a site acceptable to the Secretary and all costs of restoring such property (or replacement thereof) to the level of safety, utility, efficiency, and cost of operation existing before the unapproved change in the airport or its facilities.

Civil Rights

It will comply with such rules as are promulgated to assure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or handicap be excluded from participating in any activity conducted with or benefiting from funds received from this grant. This assurance obligates the sponsor for the period during which Federal financial assistance is extended to the program, except where Federal financial assistance is to provide, or is in the form of personal property or real property or interest therein or structures or improvements thereon, in which case the assurance obligates the sponsor or party transferee for the longer of the following periods: (a) the period during which the property is used for a purpose for which Federal financial assistance is extended, or for another purpose involving the provision of similar services or benefits or (b) the period during which the sponsor retains ownership or possession of the property.

Disposal of Land

For land purchased under a grant before, on, or after December 30, 1987, for airport noise compatibility purposes, it will dispose of the land, when the land is no longer needed for such purposes, at fair market value at the earliest practicable time. That portion of the proceeds of such disposition which is proportionate to the United States share of acquisition of such land will, at the discretion of the Secretary, 1) be paid to the Secretary for deposit in the Trust Fund or 2) be reinvested in an approved noise compatibility project as prescribed by the Secretary.

For land purchased for airport purposes (other than noise compatibility) under a grant before, on, or after December 30, 1987, it will, when the land is no longer needed for airport purposes, dispose of such land at fair market value. That portion of the proceeds of such disposition, which is proportionate to the United States share of the cost of acquisition of such land will be paid to the Secretary for deposit in the Trust Fund.

Disposition of such land under the above will be subject to the retention or reservation on any interest or right therein necessary to ensure that such land will only be used for purposes which are compatible with noise levels associated with the operation of the airport.

Engineering and Design Services

It will award each contract, or subcontract for program management, construction management, planning studies, feasibility studies, architectural services, preliminary engineering, design, engineering, surveying, mapping, or related services with respect to the project in the same manner as a Contract for architectural and engineering services is negotiated under title IX of the Federal Property and Administrative Services Act of 1949 or an equivalent qualifications based requirement prescribed for or by the sponsor of the airport

Foreign Market Restrictions

It will not allow funds provided under this grant to be used to fund any project which uses any product or service of a foreign country during the period in which such foreign country is listed by the United States Trade Representative as denying fair and equitable market opportunities for products and suppliers of the United States in procurement and construction.

Policies, Standards, and Specifications

It will carry out the project in accordance with policies, standards, and specifications approved by the Secretary including but not limited to the advisory circulars listed below, and in accordance with applicable state policies, standards, and specifications approved by the Secretary

NUMBER: 70/7460-1G

SUBJECT: Obstruction Marking and Lighting

NUMBER. 150/5100-14A

SUBJECT. Architectural, Engineering and Planning Consultant Services for Airport Grant Projects

NUMBER 150/5200-30

SUBJECT. Airport Winter Safety and Operations

NUMBER. 150/5210-5B

SUBJECT: Painting, Marking, and Lighting of Vehicles Used on an Airport

NUMBER. 150/5210-7B

SUBJECT: Aircraft Fire and Rescue Communications

NUMBER 150/5210-14

SUBJECT: Airport Fire and Rescue Personnel Protective Clothing

NUMBER. 150/5210-15
SUBJECT Airport Rescue and Fire Fighting Station Building Design

NUMBER 150/5220-4A
SUBJECT. Water Supply Systems for Aircraft Fire and Rescue Protection

NUMBER. 150/5220-10
SUBJECT Guide Specification for Water/Foam Type Aircraft Fire and Rescue Trucks

NUMBER. 150/5220-11
SUBJECT. Airport Snowblower Specification Guide

NUMBER 150/5220-12
SUBJECT: Airport Snowsweeper Specification Guide

NUMBER. 150/5220-13A
SUBJECT Runway Surface Condition Sensor - Specification Guide

NUMBER: 150/5220-14A
SUBJECT: Airport Fire and Rescue Vehicle Specification Guide

NUMBER: 150/5220-15
SUBJECT: Buildings For Storage and Maintenance of Airport Snow Removal and Ice Control Equipment A Guide

NUMBER. 150/5220-16
SUBJECT Automated Weather Observing Systems (AWOS) for Non-Federal Applications

NUMBER: 150/5220-17
SUBJECT Design Standards for an Aircraft Rescue and Fire Fighting Facility

NUMBER 150/5300-4B
SUBJECT Utility Airports - Air Access to National Transportation

NUMBER. 150/5300-12
SUBJECT Airport Design Standards - Transport Airports

NUMBER 150/5320-5B
SUBJECT Airport Drainage

NUMBER: 150/5320-6C
SUBJECT. Airport Pavement Design and Evaluation

NUMBER: 150/5320-12A

SUBJECT. Methods for the Design, Construction, and Maintenance of Skid Resistant Airport Pavement Surfaces

NUMBER. 150/5320-14
SUBJECT Airport Landscaping for Noise Control Purposes

NUMBER: 150/5325-4
SUBJECT: Runway Length Requirements for Airport Design

NUMBER 150/5340-1F
SUBJECT Marking of Paved Areas on Airports

NUMBER: 150/5340-4C
SUBJECT: Installation Details for Runway Centerline Touchdown Zone Lighting Systems

NUMBER: 150/5340-5B
SUBJECT: Segmented Circle Airport Marker System

NUMBER: 150/5340-14B
SUBJECT Economy Approach Lighting Aids

NUMBER 150/5340-17B
SUBJECT Standby Power for Non-FAA Airport Lighting Systems

NUMBER 150/5340-18B
SUBJECT Standards for Airport Sign Systems

NUMBER 150/5340-19
SUBJECT. Taxiway Centerline Lighting Systems

NUMBER 150/5340-21
SUBJECT: Airport Miscellaneous Lighting Visual Aids

NUMBER: 150/5340-23A
SUBJECT. Supplemental Wind Cones

NUMBER. 150/5340-24
SUBJECT. Runway and Taxiway Edge Lighting System

NUMBER: 150/5340-27A
SUBJECT. Air to Ground Radio Control of Airport Lighting Systems

NUMBER: 150/5345-3D
SUBJECT. Specification for L-821 Panels for Remote Control of Airport Lighting

NUMBER	150/5345-5A
SUBJECT	Circuit Selector Switch
NUMBER	150/5345-7D
SUBJECT	Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits
NUMBER	150/5345-10E
SUBJECT:	Specification for Constant Current Regulators and Regulator Monitors
NUMBER	150/5345-12C
SUBJECT:	Specification for Airport and Heliport Beacon
NUMBER	150/5345-13A
SUBJECT:	Specification for L-841 Auxiliary Relay Cabinet Assembly for Pilot Control of Airport lighting Circuits
NUMBER	150/5345-26B
SUBJECT:	Specification for L-823 Plug and Receptacle, Cable Connectors
NUMBER:	150/5345-27C
SUBJECT	Specification for Wind Cone Assemblies
NUMBER:	150/5345-28D
SUBJECT	Precision Approach Path Indicator (PAPI) Systems
NUMBER:	150/5345-39B
SUBJECT.	FAA Specification L-853, Runway and Taxiway Centerline Retroreflective Markers
NUMBER	150/5345-42B
SUBJECT	FAA Specification L-857, Airport Light Bases, Transformer Houses, and Junction Boxes
NUMBER:	150/5345-43C
SUBJECT:	Specification for Obstruction Lighting Equipment
NUMBER:	150/5345-44D
SUBJECT:	Specification for Taxiway and Runway Signs
NUMBER	150/5345-45A
SUBJECT:	Lightweight Approach Light Structure
NUMBER	150/5345-46A
SUBJECT.	Specification for Runway and Taxiway Light Fixtures
NUMBER	150/5345-47A

SUBJECT: Isolation Transformers for Airport Lighting Systems

NUMBER: 150/5345-49A
SUBJECT: Specification L-854, Radio Control Equipment

NUMBER: 150/5345-50
SUBJECT: Specification for Portable Runway Lights

NUMBER: 150/5345-51
SUBJECT: Specification for Discharge-Type Flasher Equipment

NUMBER: 150/5345-52
SUBJECT: Generic Visual Glideslope Indicators (GVGI)

NUMBER: 150/5360-13
SUBJECT: Planning and Design Guidelines for Airport Terminal Facilities

NUMBER: 150/5370-6A
SUBJECT: Construction Progress and Inspection Report - Federal Aid Airport Program

NUMBER: 150/5370-10
SUBJECT: Standards for Specifying Construction of Airports

NUMBER: 150/5370-11
SUBJECT: Use of Nondestructive Testing Devices in the Evaluation of Airport Pavements

NUMBER: 150/5370-12
SUBJECT: Quality Control of Construction for Airport Grant Projects

NUMBER: 150/5390-2
SUBJECT: Heliport Design

SECTION 2: COMPLIANCE REQUIREMENTS

Introduction

The owner of any airport developed with Federal grant assistance is required to operate it for the use and benefit of the public and to make it available to all types, kinds and classes of aeronautical activity on fair and reasonable terms and without unjust discrimination. A parallel obligation is implicit in the terms of conveyance of Federal property for airport purposes under the Surplus Property Act. Land transfers under Section 16, Section 23, or Section 516 are authorized by the same statutes and for the same purposes as grants under FAAP, ADAP, and AIP and the same obligations will apply.

Grant obligations involve several distinct requirements. First, the airport and its facilities must be available for public use. The terms imposed on those who use the airport and its services, including rates and charges, must be fair, reasonable, and applied without unjust discrimination, whether by the owner or by a licensee or tenant who has been granted rights to offer services or commodities normally required at the airport. The terms and conditions which the owner imposes on those offering services and commodities to the public which are related to aeronautical activity must be fair and reasonable and applied without unjust discrimination.

Terms Applied to Airport Users

Rentals Fees and Charges

The obligation of airport management to make an airport available for public use does not preclude the owner from recovering the cost of providing the facility through fair and reasonable fees, rentals or other user charges ". which will make the airport as self-sustaining as possible under the circumstances existing at the particular airport ..."

- Each air carrier using such airport (whether as a tenant, nontenant, or subtenant of another air carrier tenant) shall be subject to such nondiscriminatory and substantially comparable rates, fees, rentals, and charges with respect to facilities directly and substantially related to providing air transportation and other such nondiscriminatory and substantially comparable rules, regulations, and conditions as are applicable to all such air carriers which make similar use of such airport and which utilize similar facilities, subject to reasonable classifications such as tenant or nontenant, and signatory and nonsignatory carriers. Such classification or status as tenant or signatory shall not be unreasonably withheld by any airport provided an air carrier assumes obligations substantially similar to those already imposed on air carriers in such classification or status.
- Each FBO at any airport shall be subject to the same rates, fees, rentals, and other charges as are uniformly applicable to all other FBO's making the same or similar uses of such airport utilizing the same or similar facilities.

- Each air carrier using such airport shall have the right to service itself or to use any FBO that is authorized by the airport or permitted by the airport to serve any air carrier at such airport.
- Normally, the FAA will not question the fairness of rates and charges established by the owner or the comparability of the rates, fees, rentals and other charges as applied to and among air carriers, FBO's and other tenants for the same or similar space and/or services unless complaints have been made alleging that specific practices are unfair or unreasonable. Before an investigation is initiated by the FAA, the charge should be supported by factual evidence produced by the complainant.
- The basis for rates and charges is usually related to costs incurred by the airport owner. Rarely can it be established that an actual or proposed rate is so high that it would recover to the owner an amount unreasonable and in excess of costs. More often the FAA will be required to determine whether the rate structure, as applied, will result in discrimination.
- In evaluating established fees, rates, and charges for users of an airport, no part of the Federal share of an airport development project for which a grant is made shall be included in the rate base.

Methods of Assessing User Charges

The collection of a fee or charge for public use of a runway, tiedown area, or other facility may be accomplished through a direct toll or landing fee imposed on individual users or through indirect means. The airport owner may find it practical to grant use privileges simultaneously by contract, permit, or the direct assessment of fees. In most instances, an indirect recovery of fair use charges in the form of fuel flowage, hangar rentals, percentages of gross volume of business, or through other arrangements may be the most practical method for many collections. A locally based aviation enterprise may have a lease, or contract, under which it will pay an agreed rental for the hangars and other premises it occupies plus a variable payment (related to fuel gallonage, volume of business, flight operations, etc.) for the use of the landing area by its own aircraft and those of its customers. Other visiting aircraft, such as scheduled or unscheduled air taxis, which are not covered by such a contract may be required to pay a fee or charge to cover their use of public facilities.

Charges Made by Airport Tenants and Concessionaires

At most airports the provision of fuel, storage, aircraft service, etc., is best accomplished by profit motivated private enterprise. It is the responsibility of the airport owner, in negotiating the privilege to offer these services and commodities at the airport, to retain sufficient control over the operation to guarantee that the patrons will be treated fairly. The owner may not have this control if, by contract or otherwise, he/she surrenders the right to approve rates, fees, and charges imposed for essential aeronautical services. In this connection, note the discussion of leasing principles in Section 1, Chapter 6. It should be understood that the obligation of the airport owner to ensure availability of services to the public on fair and reasonable terms is limited to aeronautical activities. There is no commitment in a grant agreement or deed with the United States that the prices charged

by taxis, limousines, restaurants, motels, and other terminal area nonaeronautical concessions will be controlled.

Terms and Conditions Applied to Tenants Offering Aeronautical Services

Apart from the Civil Rights Assurances and the assurances relating to the offering of aeronautical services to the public, the FAA is not normally involved with the establishment of rates and fees to be paid by a tenant or concessionaire to an airport owner. However, in overseeing the airport owner's implementation of the assurance in the above, the FAA shall ensure that:

1. At air carrier airports.

- As a tenant, the air carrier shall enjoy the same classification and status as any other tenant air carrier serving that airport as to rates, fees, charges, rules, regulations, and conditions covering all aeronautical activities at that airport provided the air carrier assumes obligations similar to those already imposed on the other tenant air carriers.
- An air carrier who is willing to sign a contract (signatory carrier) with the airport and assume appropriate financial obligations may be granted a lower fee schedule. If an air carrier is unwilling or if it is infeasible because of infrequent operations or other reasons to sign such a contract, the air carrier may then be charged the higher noncontract rates.
- In respect to a contractual commitment, a sponsor may charge different rates to similar users of the airport if the differences can be justified as nondiscriminatory and such charges are substantially comparable. These conclusions must be based upon the facts and circumstances involved in every case.
- Differences in values of properties involved and the extent of use made of the common use facilities are factors to be considered. Seldom will each user have properties of the same value nor will their use of the common facilities be the same. However, the airport in order to justify noncomparable rates must show that the differences are substantial.
- All leases with a term of 5 years or more should contain an escalation provision for periodic adjustments based on a recognized economic index. Future lessees may expect like treatment in that their leases will have a built-in escalation provision. This is in accordance with the sponsor assurance "...to make the airport as self-sustaining as possible under the circumstances..."
- Each carrier using the airport shall have the right to service itself or to use any FBO that is authorized by the airport or permitted by the airport or permitted by the airport to serve any air carrier at the airport.

2 At general aviation airports

- If one operator rents office and/or hangar space and another builds its own facilities, this would provide justification for different rental fee structures. These two operators would not be considered essentially similar as to rates and charges even though they offer the same services to the public.
- If one FBO is in what is considered a prime location and another FBO is in a less advantageous area, there could logically be a differential in the fees and charges to reflect this advantage of location. This factor would also influence the rental value of the property.
- If one FBO is providing primary commercial services (sale of aviation fuel and oil, providing tiedown and aircraft parking facilities, ramp services and some capability for minor aircraft repairs) and another FBO is conducting a flight training program, or aircraft sales, or a specialty such as avionics repair and service, these FBO's may not be considered essentially similar. They may have dissimilar requirements, i.e., space requirements, building construction, or location. Therefore, different rates may be acceptable although the rates must be equitable.
- If the FAA determines that the FBOs at an airport are making the same or similar uses of such airport facilities, then such FBO leases or contracts entered into by an airport owner (subsequent to July 1, 1975) shall be subject to the same rates, fees, rentals, and other charges.
- As an aid to uniformity in rates and charges applicable to aeronautical activities on the airport, management should establish minimum standards to be met as a condition for the right to conduct an aeronautical activity on the airport (Chapter 3, Section 3).
- All leases with a term exceeding 5 years shall provide for periodic review of the rates and charges for the purpose of any adjustments to reflect the then current values, based on an acceptable index. This periodic lease review procedure will facilitate parity of rates and charges between new FBO services coming on the airport and long-standing operators. It will also assist in making the airport as self-sustaining as possible under the circumstances existing at that particular airport.
- In the case of a new general aviation airport, it is frequently necessary for the airport owner to offer reduced rental rates and other inducements to obtain an FBO, recognizing that it may well be a nonprofit venture during the pioneering period. To avoid a depressed rate scale for the future, the airport owner should be encouraged to provide the "incentive rate" only during the pioneer period. The pioneer period should be established for a specific period of time and ending on a specified date. Future operators coming on the airport following the pioneer period may be expected to pay the comparable standard rates and charges based on then current value.

- Except for exercise of the proprietary rights by the airport owner, any terms or conditions in an agreement between an airport owner and an aeronautical activity requiring the activity to procure fuel or other supplies and services from a specific source would be an unreasonable restraint on the use of the airport and, in certain cases, could be viewed as a grant of an exclusive right. Where an airport owner retains for itself the proprietary right to operate the fuel farm, all FBOs may be required to obtain fuel from the airport owner, another FBO cannot be required to obtain fuel from the airport owner's agent. In neither of these cases is the airport operator or the FBO obligated to sell fuel to an individual, corporate or other type operator performing self-fueling.

Availability of Leased Space

The prime obligation of the owner of a federally-assisted airport is to operate it for the use and benefit of the public. The public benefit is not assured merely by keeping the runways open to all classes of users. While the owner is not required to construct hangars and terminal facilities, it has the obligation to make available suitable areas or space on reasonable terms to those who are willing and otherwise qualified to offer flight services to the public (i.e., air carrier, air taxi, charter, flight training, crop dusting, etc.) or support services (i.e., fuel, storage, tie down, flight line maintenance, etc.) to aircraft operators. This means that unless it undertakes to provide these services itself, the airport owner has a duty to negotiate in good faith for the lease of such premises as may be available for the conduct of aeronautical activities. Since the scope of this obligation is frequently misunderstood the following guidance is offered.

Servicing of Aircraft

All grant agreements contain an assurance that the sponsor will not exercise or grant any right or privilege which would have the effect of preventing the operator of an aircraft from performing any services on its own aircraft with its own employees. This is not to be interpreted as a positive obligation on the sponsor to lease space to every aircraft operator using the airport. It means simply that an aircraft operator, otherwise entitled to use the landing area, may tie down, adjust, repair, refuel, clean and otherwise service its own aircraft, provided it does so with its own employees in accordance with reasonable rules or standards of the sponsor relating to such work. The assurance establishes a privilege (to service one's own aircraft) but does not, by itself, compel the sponsor to lease such facilities which may be necessary to exercise that right. (See paragraph 3-9e for additional details regarding restrictions on self-service.)

Facilities Not Providing Service to the Public

Most airport owners are anxious to lease available property to those willing to construct their own hangars and aircraft support facilities. However, the airport owner is not obligated by agreements with the Government to provide space unless the activity offers services to the public or support services actually needed by those aircraft operators otherwise entitled to use the public landing areas. Thus, a local company operating its own aircraft for business purposes, a private flying club, or an

aircraft manufacturing company seeking a site for a production plant may be a desirable and compatible tenant. However, the airport owner is not obligated to lease airport premises for these purposes if adequate facilities are otherwise available. This problem is rare and usually arises when an aircraft operator, unable to arrange satisfactory terms for hangar space and service with an existing fixed base operator, seeks to construct its own facilities. The obligation to operate an airport for the use and benefit of the public requires that reasonable provision be made for essential support services for those who use it. Therefore, when neither the airport owner nor the tenant FBOs can provide adequate storage, fueling and other basic services to an airport user the user may not be denied the right to lease space, if available on reasonable terms to install such facilities at its own expense.

Activities Offering Services to the Public

If adequate space is available on the airport, and if the airport owner is not providing the service, it is obligated to negotiate on reasonable terms for the lease of space needed by those activities offering flight services to the public, or support services to other flight operators, to the extent that there may be a public need for such services. A willingness by the tenant to lease the space and invest in the facilities required by reasonable standards shall be construed as establishing the need of the public for the services proposed to be offered.

Air Carrier Airport Access

Since the passage of the Airline Deregulation Act of 1978, there has been an influx of air carriers into airports. Many of these airports were operating at a capacity prior to passage of the Act insofar as counter gate, and ramp space were concerned. New carriers wishing to serve the airport were faced with the prospect of no facilities being available. In some instances, space was made available from carriers established on the airport. However, in other cases, no space was made available and the carrier was denied access to the airport.

It was determined by the Office of Chief Counsel that a carrier may not be denied access to an airport solely based on the nonavailability of currently existing facilities and that some arrangements for accommodation must be made if reasonably possible. This can result in a complex situation which may not be easily resolved.

If an airport refuses to apply for a FAR Part 139 Airport Operating Certificate when there is clear evidence that an air carrier desires to serve the location, this fact alone does not indicate a violation of the grant agreement assurances. The regional Airports and Legal offices should determine the basis and justification for exclusion of the air carrier in the same manner as they would in other potential violation issues.

In some cases, a recommendation to the airport operator to provide temporary facilities, such as a mobile ticket office and gate facilities might relieve the situation. If it appears that the airport operator cannot possibly provide space, then the FAA in concert with the airport operator must develop a solution to the problem.

Civil Rights

The regional and headquarters Offices of Civil Rights are responsible for matters pertaining to the enforcement of the Civil Rights assurances and provisions included in the all grant agreements. For additional information see AC 150/5100-15, Civil Rights Requirements for the Airport Improvement Program (AIP).

USE OF AIRPORT PROPERTY

Aherence to Airport Layout Plan and Airport Property Map

Airport Layout Plan (ALP)

An ALP, which is required by statute (previously required by assurance) depicts the entire property and identifies the present facility and the plans for future development. The FAA requires an approved ALP as a prerequisite to the grant of AIP funds for airport development or the modification of the terms and conditions of a surplus property instrument transfer. The approval must be by the FAA and represents the concurrence of the FAA in the conformity of the plan to all applicable design standards and criteria. It also reflects the agreement between FAA and the airport owner as to the proposed allocation of areas of the airport to specific operational and support functional usage. The approved ALP thus becomes an important instrument for controlling the subsequent development of airport facilities. Any construction, modification, or improvement that is inconsistent with such a plan requires FAA approval of a revision to the ALP.

Airport Property Map (Exhibit A)

The airport property map, also called the Exhibit A to the grant agreement, is a required document to be submitted with the application for a grant and delineates all the property owned or to be acquired by the airport owner. Whether or not the Federal Government participates in the cost of acquiring any or all such land, it relies on this map in any subsequent grant of funds. Any land identified on the Exhibit A may not thereafter be disposed of or used for other than those purposes without FAA consent.

Land Inventory Map

There is a need to track land acquired with Federal funds for accountability purposes for compliance matters. If any grant acquired land is found to be excess to airport needs, present and future, the sponsor is required to dispose of the excess land and return the Federal share of the FMV to the Trust Fund. This land identification should show how and under what Federal grant or other Federal assistance program the land was acquired. The inventory will satisfy the FAA's requirement to maintain an inventory of land acquired with Federal assistance (Appendix 7 is a suggested procedure for maintaining such inventory.) In disposing of such land the requirements of paragraph 7-19b apply. If the Exhibit A discussed above satisfies the land accountability requirement, there is no need for a separate land inventory map. Airport noise compatibility land acquisitions should be identified separately (see paragraph 4-17e).

Grant Land No Longer Needed for Airport Purposes

With the passage of The Airport and Airway Safety and Capacity Expansion Act of 1987, P L. 100-223, Section 511a(14) provides. If the airport operator or owner receives a grant before, on, or after December 30, 1987, for the purchase of land for airport purposes (other than noise compatibility purposes).

- The owner or operator will, when the land is no longer needed for airport purposes, dispose of such land at FMV;
- The owner or operator may trade land no longer needed for airport purposes for land to be used for airport purposes. If the difference in FMV in the two parcels results in a cash difference paid to the airport owner or operator, then that portion of the proceeds of such trade which is proportionate to the United States share of the cost of acquisition of such land will be paid to the Secretary for deposit in the Trust Fund. If additional cost results from the trade it may be eligible under AIP;
- Such disposition will be subject to the retention or reservation of any interest or right therein necessary to ensure that such land will only be used for purposes which are compatible with noise levels associated with the operation of the airport,
- That portion of the proceeds of such disposition which is proportionate to the United States share of the cost of acquisition of such land will be paid to the Secretary for deposit in the Trust Fund; and
- If the old airport is being disposed of as a result the construction of a new airport, the sale of land of the old airport will be treated as a 'trade-in' on the cost of the new airport.

Once an airport sponsor accepts any grant containing this assurance, it becomes obligated to this requirement for all grant acquired land, regardless of when it was acquired.

When reviewing the sponsor's request for Federal assistance, or when conducting periodic compliance oversight reviews, the FAA must review the current ALP and the Land Inventory Map (paragraph c above) to determine whether any land acquired with Federal assistance is no longer needed for airport purposes. Airport purposes could include land that, with documentation, can be justified for noise compatibility purposes. The land need not be required for the same aeronautical purpose for which it was originally acquired.

Additionally, land that was acquired for airport development in conjunction with a larger purchase may now be serving related airport support uses (such as a hotel or aviation related commercial uses which have a direct need to be located on the airport) and therefore need not be disposed of. If the land continues to provide aeronautical benefit through noise compatibility (such as within a projected 75 Ldn) or where the land is contained within a larger property boundary that clearly is justified for airport purposes, disposition of such land will not be required. Judgment may determine

that it is inappropriate to carve small specific parcels out of an airport property that for all reasonable purposes is already functioning as an airport unit

In all cases the long-term future aeronautical need always must be considered. If the ALP does not reflect a future airport need for the grant acquired land, the airport sponsor should be advised in writing by FAA that the current ALP does not establish an airport purpose (existing or future) for the land acquired by Federal grant funds and reminded of the subject assurance. Before giving notice to dispose of the land the airport owner will be given 90 days to provide sufficient documentation to FAA to justify retention of the land for airport purposes. If such justification (including a revised ALP) is not provided to the FAA within the prescribed 90-day period, the airport owner should be notified in writing of the necessity to dispose of such land at FMV (subject to the provisions contained in the language stated above) There may be compelling reasons such as a depressed real estate market that would justify FAA's concurrence in a delayed disposal. In these cases FAA should obtain a marketing analysis and plan from the sponsor. Subsequent review may be required (See paragraph 7-19 for disposal procedures.) In complex situations, the airport owner may be given a reasonable extension (up to an additional 90 days) to provide the required justification.

Airport Noise Compatibility Land

With the passage of The Airport and Airway Safety and Capacity Expansion Act of 1987, P L 100-223, Section 511a(13) provides If the airport operator or owner receives a grant before, on, or after December 30, 1987, for the purchase of land for airport noise compatibility purposes

- The owner or operator will, when the land is no longer needed for such purposes, dispose of such land at FMV at the earliest practicable time;
- Such disposition will be subject to the retention or reservation of any interest or right therein necessary to ensure that such land will only be used for purposes which are compatible with noise levels associated with the operation of the airport and any height restrictions that are necessary to protect the airport, and
- That portion of the proceeds of such disposition which is proportionate to the United States share of the cost of acquisition of such land will, at the discretion of the Secretary.
 - Be paid to the Secretary for deposit in the Trust Fund; or
 - Be reinvested in an approved noise compatibility project as prescribed by the Secretary. Any airport accepting a grant containing this assurance obligates the airport to this requirement for all grant land acquired for noise compatibility regardless of when it was acquired

When reviewing the airport sponsor's request for Federal assistance, or when conducting periodic compliance oversight reviews, the FAA must review the current ALP, the Land Inventory Map, and

any Part 150 study or supporting noise compatibility information to determine whether any grant acquired noise land is no longer needed for such purposes. Land within an existing or projected 75 Ldn noise contour that has been acquired for noise compatibility purposes need not be required for disposal. Generally, because of the high level of noise associated with the contour, there is justification for it to remain under control of the airport as noise land. Land within a 65 Ldn can be retained only if it can be justified as land need for airport development.

Before giving notice to dispose of the land in accordance with the provisions of the Act (cited above), the airport owner will be advised in writing that the justification is insufficient to support the noise compatible use for the land and be given 90 days to provide sufficient documentation to FAA to justify retention of the land for noise compatibility and sufficient time to complete any Part 150 noise study that is in progress. There may be cases where the land is no longer needed for noise compatibility purposes but is needed for other airport purposes consistent with Order 5100.38 or the guidance provided in paragraph d. above. The FAA may allow retention for these purposes.

Where FAA has determined the land should be disposed of because there is no continuing need to retain fee title ownership, the airport owner should be notified in writing of the necessity to dispose of such land at FMV at the earliest practicable time. See Chapter 7, Section 5 for disposal procedures.

There may be compelling reasons, such as a depressed real estate market, that would justify FAA's concurrence in a delayed disposal. In these cases FAA should obtain a marketing analysis and plan from the sponsor. Subsequent review may be required.

Compliance Requirements

Continued adherence to an ALP is a compliance obligation of the airport owner. The erection of any structure or any alteration in conflict with the plan as approved by the FAA may constitute a violation of these obligations. With the passage of the Airport and Airway Safety and Capacity Expansion Act of 1987 (December 30, 1987), the ALP assurance language was strengthened. If the airport owner makes a change in the airport or its facilities which FAA has determined will adversely affect safety, utility or efficiency of any federally owned or leased or funded property on or off the airport, and which is not in conformity with the FAA approved ALP, FAA may require:

- The airport eliminate the adverse effect, or
- Bear the cost of rectifying the situation

- The airport owner may not abandon or suspend maintenance on any operational facility currently reflected on an approved plan as being available for operational use. The conversion of any area of airport land to a substantially different use than that shown in an approved layout plan could adversely affect the safety, utility, or efficiency of the airport and constitute a violation of the obligation assumed. For example, the construction of a corporate hangar on a site identified on the ALP for future apron and taxiway would be considered as a departure from the controlling ALP which impairs the utility of the airport and a violation of sponsor obligations. When making a

periodic compliance review of an ALP, consider whether grant-acquired land is still needed for airport purposes, particularly when it is separated from the airport property by a highway or railway

Authorization for Interim Use

The FAA may approve the interim use of aeronautical property for nonaviation purposes until such time as it is needed for its primary purpose. Such approval shall not have the effect of releasing the property from any term, condition, reservation, restriction or covenant of the applicable compliance agreement. To avoid any misunderstanding, the document issued by the FAA approving interim use must so indicate

FAA approval for an interim use should be granted only if it is determined that such property will not be needed for any aviation use during the short-term period contemplated. Any option to renew an interim-use lease/agreement should be conditioned on obtaining a new FAA determination that the property will not be needed for any aviation use during the proposed renewal period. Investment by the interim user is at its risk and shall not be a factor in considering any renewal of a lease or use agreement

FAA shall condition its consent to an interim use on an agreement from the airport owner to apply the income from such use to the development operation, and maintenance of airport facilities.

Concurrent Use

Aeronautical property may be used for a compatible nonaviation purpose for which it was acquired, such as the concurrent use of runway clear zone land for low growing crops. Care must be taken when considering recreational use so as not to create a future 4(f) environmental problem. This is clearly beneficial to the airport. The primary purpose is served and the concurrent use should generate FMV revenue to be used for airport purposes.

Excess Odd Parcels

Section 16/23/516 deeds as well as grant funded land acquisition may include land in excess of that requested by the airport owner or recommended by the FAA for airport purposes. This usually happens because of property descriptions and title requirements of the controlling agency to avoid severance of odd parcels or areas that would have limited value or use by themselves. Use of such excess areas for nonaviation purposes may be approved as specified previously.

Conformance to FAA Criteria and Standards

Any facilities developed with grant funds must be constructed to the then current applicable FAA design standards and must conform to the approved ALP in effect at the time of the grant. Improvements, alterations or additions to an airport which are accomplished without Federal aid should be designed to FAA standards, but this is not mandatory. However, any improvement or modification, regardless of how it is financed, must conform to the ALP unless the FAA can determine that it does not adversely affect the safety, utility or efficiency of an airport.

Leasing General Aviation Apron Constructed with Federal Assistance

The airport owner has the responsibility for the management and operation of the airport and ultimately must assure that it is operated in accordance with all aspects of the grant assurances. The airport owner can not abrogate these responsibilities. Therefore, the airport owner should not enter into unconditional leasing of apron areas constructed with Federal airport grant assistance because this could result in reducing the airport owner's ability to carry out their obligations under their agreements with the Federal Government

Management Agreements

The airport owner may in reality only want an FBO to manage tie-down spaces, maintain the apron area, remove snow, and similar functions. Since the relationship between the airport owner and anyone conducting management agreement rather than a lease is the appropriate means of accomplishing what the airport owner wants accomplished. Such an agreement should clearly specify the responsibilities and provide for acceptable practices such as nondiscriminatory waiting lists for tie-down spaces and a designated itinerant tie-down area to protect public availability. The tie-down fee schedule should be established by or approved by the airport owner.

Lease Agreements

Tie-downs or spaces on the apron can be leased by the airport owner to individual aircraft owners and/or to the FBO for space necessary to serve the needs of their aircraft in their business. Also, the apron area in the immediate vicinity of an FBO can be leased to the FBO to permit the exercise of a proprietorship over the public-use ramp area. Apron areas can be leased provided the terms of the lease will not restrict the airport owner from carrying out their grant obligations. In general the lease should contain provisions which will ensure that the public will be served by the lessee in a manner equal to that which the airport owner is required to provide under the grant agreement. A demonstrated immediate need for the space to be leased shall be documented by the FBO to preclude attempts to limit competition or to create an exclusive right. Any area to be placed under lease shall not result in an activity or use contrary to the approved airport layout plan (ALP).

- Public-use areas such as airport taxiways and self-fueling areas must not be included in the lease area. However, apron taxiways used only for maneuvering on the leased apron may be included within the area to be leased; provisions must be made for the right of public access to both.
- The lease shall provide conditions to assure that the area will be suitably maintained in a safe and serviceable condition; that snow or ice will be promptly removed, that services will be provided on a fair, equal and not unjustly discriminatory basis; and that charges for services will be fair, reasonable, and not unjustly discriminatory.
- Any lease arrangement shall protect availability for the public use, including nondiscriminatory practices for assignment of tie-down space and provide for the accommodation of itinerant users.

- The lease shall preclude the lessee from requiring that users of the leased area must secure goods and services only from that FBO. However, the lease need not require that a competitor must be allowed to enter the leased area to perform a service, including fueling, provided that there is adequate capability for the user to freely secure that service at another location the airport. The competitor, however, must be allowed to assist the user of a disabled aircraft in placing the aircraft in a condition so as it can be taxied or towed away from the leased area.
- In no case shall an FBO be leased more apron space than that for which an immediate demonstrated need been shown. Where there is only one FBO on an airport and there is more apron space than required for that operation, just that space actually required should be leased to the existing fixed base operator. This will ensure that apron space will be available for a future tenant, if requested.
- The person leasing the apron will not prohibit or restrict those using the area for tie-down from servicing their own aircraft. (Assurance 22f reference only)

Installation of Portable Hangars and Sun Shades of Federally-Funded Aprons

At some locations around the country, airport sponsors have permitted the installation of portable hangars (i.e., hangars which can be readily removed and which do not require a foundation or footings) and sun shades on aprons constructed with airport grant-in-aid funds. Accordingly, FAA policy is as follows.

The installation of portable hangars and sun shades on an existing federally-funded apron is not permissible except in the instances where, in the judgment of the Airports field office, change in airport use patterns since construction of the apron are such that the apron or that portion of it proposed for the portable hangar and sun shade location is no longer needed for its original purpose. The approved ALP must show the apron area as being appropriately converted to portable hangar and/or sun shade use without having an adverse impact on the safety and efficiency of the airport.

The FAA determination to permit installation of portable hangars and sun shades in exceptional instances will be conditioned on the requirement that any hangar or sun shade installed be removed within 30 days written notice from the FAA and will be based on the following considerations:

- The sponsor's proposal should be supported by a use plan for the installation of the portable hangars and/or sun shades.
- The proposed portable hangar and/or sun shade area must be in accordance with the approved ALP.
- Hangars and/or sun shades will be located so as to constrain the flow of aircraft traffic any more than would exist in an aircraft tie-down area.

- Prior notice on FAA Form 7460-1, Notice of Proposed Construction, or through other similar notice procedure, must be given to the appropriate Airports field office of the intent to erect each structure or group of structures being installed concurrently and FAA concurrence must be received.
- Hangars and/or sun shades must be specifically designed for ready removal (no foundation or footings required)
- Hangars and/or sun shades will not cause damage to the apron. Any damage beyond normal wear and tear must be repaired by the sponsor at its expense.
- Hangar is designed to accommodate one aircraft.
- Hangar and/or sun shade design must meet local building codes.

Where portable hangars and/or sun shades have been installed on federally-funded aprons without prior FAA concurrence, Airports field offices, at their discretion, may either make an after-the-fact determination on the present utility of the affected apron as in paragraph (2) above, or may seek a remedy including:

- Requiring the sponsor to have portable hangars and/or sun shades removed from the apron;
- Seeking reimbursement for the Federal share of apron construction costs; (i.e. / cost of apron replacement); or
- Recovering the Federal share of apron construction costs in a future project.

SECTION 3: WHAT YOU SHOULD KNOW BEFORE YOU APPLY

Coordination With Airports District Office

Prior to submitting a preapplication for federal funding, there should be coordination with the Airports District Office (ADO) (Appendix 1) to assure that the work you intend to accomplish is (1) eligible for funding, (2) shown on an approved airport layout plan (ALP), and (3) consistent with the work identified in the National Plan of Integrated Airport Systems (NPIAS). Coordination does not necessarily mean a meeting although that is desirable, however, a telephone call will usually start you in the right direction.

Once you have confirmed the above with the ADO, you will be in a position to review the activities required for submitting a preapplication. It is strongly recommended that prior to submitting a preapplication, a preapplication conference be scheduled with the ADO.

State Share

If the state is to provide a share of the local funding, you should make early contact with the state representative to confirm the availability of state funds.

State/Local Coordination

Executive Order 12372 allows states to establish their own coordination procedures for reviewing and commenting on federal programs and activities in consultation with local elected officials. Regulations implementing Executive Order 12372 are contained in 49 CFR Part 17. The appropriate state "single point of contact", which is responsible for administering this process, should be contacted for information regarding compliance with the state requirements prior to submittal of a preapplication. The FAA cannot process a preapplication until this coordination is complete. Appendix 3 gives the name and address of each state single point of contact in the Southern Region.

Environmental Issues

The FAA Airports Program is responsible for analyzing the environmental impacts of proposed projects. For environmental assessments the sponsor is responsible for supplying analysis. However, if the FAA determines that an environmental impact statement is required, then the FAA must prepare or select the consultant/contractor which will prepare the environmental impact statement. Further details on the process and procedures for the consultant/contractor selection process can be obtained from the appropriate Airports District Office. Obviously, not all projects will require an in-depth analysis and many projects will be categorically excluded. A preapplication will not be acted upon without an environmental determination.

FAA Order 5050.4A, Airport Environmental Handbook; and Handbook 1050.1D, Policies and Procedures for Considering Environmental Impacts, provide guidance in analyzing environmental impact statements and findings of no significant impact.

Consultation With Users

Sponsors are responsible for consultation with the principal users of the airport concerning the proposed project. Therefore, you should submit a certification with your preapplication that such consultation has taken place with the fixed base operators and/or air carrier operators using the airport. Primary airport sponsors are encouraged to coordinate the proposed project with the Air Transport Association (ATA).

Local Public Hearing Requirements

If a project involves development of a new airport location, a new runway, or a major runway extension, an opportunity for public hearing is required for consideration of the economic, social and environmental effects of the airport or runway location and its consistency with the local planning goals and objectives. If the project requires a Disadvantage Business Enterprise (DBE) Program (see page 6, Civil Rights Requirements for the AIP), the program is normally prepared at this time. DBE contract goals for FAA-assisted contracts must be included in the contract specifications. The DBE program must be approved by the FAA (Civil Rights Staff) prior to grant offer. Further details on the contents and preparation of a DBE program can be obtained from the Civil Rights Staff, Great Lakes Region, Federal Aviation Administration, 2300 East Devon Avenue, Des Plaines, Illinois 60018, (708) 294-7182.

Procurement Procedure (49 CFR Part 18)

49 CFR Part 18, Section 18.36, describes the procedures which must be followed on procurement actions for those contracts to be eligible for federal assistance. Procurement under AIP typically includes professional services such as engineering, legal, appraisal and audit services, and contracts for construction or equipment purchases. There are four basic procurement methods:

1. Competitive Sealed Bids (construction and equipment purchases)
2. Competitive Proposals (normally professional services)
3. Small Purchases (less than \$25,000)
4. Noncompetitive Proposals (sole source, emergency, or professional services under \$10,000)

Appendix 5 provides a more detailed description of the acceptable procurement procedures under 49 CFR Part 18.

Selection of Consultant Engineering Services

Selection of consultant engineering services including related services such as testing, surveying, etc., must be accomplished in accordance with the open and free competition method described under 49 CFR Part 18. Additional guidance and assistance can be found in Advisory Circular 150/5100-14, Architectural, Engineering, and Planning Consultant Services for Airport Grant Projects. The pertinent requirements for competitive negotiation procurement method for engineering services are:

1. Establishment of a Selection Board consisting of at least three persons, one of whom should be an engineer, airport planner, or other professional who is knowledgeable of the service required
2. Establishment of selection criteria; cost cannot be a factor
3. Assignment of numerical rating factors to each criterion
4. Public solicitation (normally advertised in local newspapers, trade journals, and magazines) for consultant services.
5. Public announcement which should include a minimum:
 - a. Description of the proposed project and its location
 - b. Description of the services to be provided
 - c. Estimated construction costs
 - d. Selection criteria, including numerical rating factors
 - e. Indication that proposals should include consultant's experience and other qualification data relative to the proposed project
6. Board must select at least three firms and rank them in order of preference before starting negotiations. Initiate negotiation with the consultant given first preference by the selection board
7. Prepare and Execute Engineering Service Contract.

Independent Estimate In order to properly evaluate the consultant's cost proposal, an independent estimate of cost shall be developed for all basic service fees over \$25,000, and it is recommended for those qualified, or by another A/E consultant, city/county engineer, or a state aviation official. The cost to prepare this estimate is an AIP eligible cost.

Consultant Engineering Contract

Advisory Circular 150/5100-14, Chapter 3, contains guidance for the preparation of an acceptable engineering services contract. The relations of the consultant with the sponsor should be clearly defined by a written agreement before commencement of actual work. All of the terms should be clearly defined in the agreement. It should identify the parties to the contract and define the complete extent and character of the work to be performed. The terms and payment for various services should also be included. The scope of the consultant's services should be described in sufficient detail to determine explicitly the responsibilities of the engineer as well as the responsibilities of the sponsor.

The "Sponsor Certification for Selection of Consultants" shown in Appendix 16 has been developed to alert the sponsor to items that need special note in executing the contract and to provide FAA assurance that these items have been considered

The certification should be completed and attached to a copy of the engineering contract when the contract is submitted to the ADO. The completed certification must be signed by an authorized representative of the sponsor.

Selection of Testing and Surveying Services

If the cost of each contract for these services is less than \$25,000, the small purchases procedures under 49 CFR Part 18 may be used. The sponsor's engineer should develop a scope of work (i.e., number and type of tests) needed. Proposals can then be requested from a reasonable number (at least 3) of suppliers and selection made.

Land Acquisition/Relocation Assistance

All land acquisition necessary as a result of a federally funded project must be accomplished in accordance with 49 CFR Part 24, Uniform Relocation Assistance and Real Property Acquisition for Federal and Federally Assisted Programs. This regulation implements Public Law 91-646. Basically, this regulation requires sponsors that acquire property as a result of a federally funded project to make an offer of just compensation of not less than the fair market value based on an appraisal. Also, owners and renters which qualify must be paid relocation payments and moving expenses.

Civil Rights Requirements for the Airport Improvement Program (AIP)

Advisory Circular 150/5100-15, Civil Rights Requirements for the Airport Improvement Program (AIP), dated March 31, 1989, is available from your Airports District Office. The Civil Rights programs covered in that Advisory Circular are:

1. Nondiscrimination in Benefits for and Services to the Public (DOT Regulation, Part 21).
2. Nondiscrimination in Employment in Federally-Assisted Construction Contracts (DOT Regulation, Part 60/E.O. 11246)
3. Nondiscrimination in Airport Employment Opportunities (Section 520, Airport and Improvement Act of 1982).
4. Nondiscrimination in Benefits for Services to, Employment, and Accessibility of Handicapped (DOT Regulations, Part 27).
5. Disadvantaged Business Enterprise Program (DOT Regulation, Part 23). Certain airport sponsors are required by regulation to develop, implement, and monitor a Disadvantaged Business Enterprise program. This program requires specific project goals for utilization of

disadvantaged business entities. The amount of the federal grant and the type of airport being developed are the factors in determining sponsor responsibility. Following are the types of airports and amounts of federal grant funds which would require such a plan:

Planning.

All applicants for planning funds	Over \$75,000 00
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Development Assistance

General Aviation Airports	Over \$250,000 00
Non-hub airports	Over \$400,000 00
Small, Medium, and Large Hub Airports	Over \$500,000.00

Audit Responsibilities

The Single Audit Act of 1984, Public Law 98-502, requires that any state or local government that receives \$100,000 or more a year in federal funds shall have an audit made in accordance with OMB Circular A-128. The audit shall be made by an independent auditor and cover the entire financial and compliance operation of the government body. Audits are conducted annually unless state or local law requires biennial audits. Since most sponsors receive grants from more than one federal agency, OMB assigns a cognizant agency at the department level for all states and some localities. A sponsor which has not been assigned a cognizant agency must obtain one by contacting the Office of Acquisition and Grant Management, M-60. In addition, the sponsor is responsible for:

- a. Selecting the auditor. This can be a private firm elected in accordance with the provisions of 49 CFR 18.36 or an in-house auditor approved by the OIG.
- b. Responding to audit findings and cooperating with the FAA in resolving any problems.
- c. Keeping audit reports on file for three years from the date of their issuance.
- d. Sending a copy of the audit to each federal department or agency that provided federal assistance funds to the sponsor.
- e. Submitting one copy of the audit report within 30 days to Bureau of the Census, Data Preparation Division, 1201 E 10th Street, Jeffersonville, Indiana 47132, Attn: Single Audit Clearinghouse.
- f. Submitting a cost allocation plan and an indirect cost rate proposal if required.

Appendix 6 lists audit publications.

Airport Layout Plan (ALP) Requirements for AIP Projects

A major factor leading to a favorable action on a preapplication is timely airport planning on which supportable airport development can be based. An approved ALP is a prerequisite to the issuance of a grant offer.

Justification for Development Requested

Another major factor in evaluating the funding prospects of a requested project is the justification for the proposed development. The justification required for the different types of airport development is discussed under this section and justification for your proposed project should be included under Part IV-Program Narrative Statement of the Preapplication for Federal Assistance.

Recordkeeping Responsibilities

The sponsor is required to maintain all records for at least 3 years after final payment. In addition, the sponsor is required to allow access to its books, documents, papers, and records by the Secretary of Transportation, Comptroller General of the United States or any of their authorized agents. A clause allowing this same access is required to be included in any cost reimbursable contract executed in conjunction with a federal grant.

Advisory Circular 150/5100-10A, Accounting Records Guide for Airport Aid Program Sponsors, covers the project records which are to be maintained. Appendix 8 shows a typical format for maintaining a record of project cost information throughout the life of the project.

Importance of Various Conferences Throughout Project Accomplishment

One of the key elements to the successful accomplishment of an AIP project is adequate coordination and communication between all parties concerned with the project. There are several conferences that are identified throughout this document as necessary for efficient project administration. The importance of these conferences cannot be over emphasized. The sponsor's representative should prepare an agenda for the conference, chair the meeting, make and distribute minutes of the meeting and make sure all affected parties receive adequate notification and invitation to attend.

Justification for Development Requested

Even though an item of development may be eligible for Federal assistance under the airport grant program, it may not be funded unless the work is justified. The program Narrative Statement should, therefore, include justification for items of development.

1 FAA Mandated Development

Certain development items are frequently determined by the FAA as necessary for safety, security or operational purposes. When such items are specifically prescribed by the FAA, the sponsor should cite the specific FAA requirement that is being met by the requested development. Letters

of support from Civil Aviation Security Field Office, Airport Division, Certification Staff, Airway Facilities and Flight Standards Office should be attached. Typical of these items are:

- Runway protection zone land requirements based on a proposed instrument landing system (ILS)
- Obstruction lighting or removal
- Airport Rescue and Fire Fighting (ARFF) vehicles
- Controlled access security system to meet FAR Part 107.14 requirements
- Approach light system (ALS) land
- Runway centerline lighting
- High intensity runway lighting (HIRL)
- Runway grooving

2 Fundamental Airport Development

Certain other items considered to be fundamental airport development usually require only a brief narrative description to justify their need. Such items include:

- Land for runway protection zones and justified airport development
- Runway and taxiway lighting
- Runway and taxiway marking
- Full or partial parallel taxiway
- Access and service roads
- Generic visual glide slope indicators (GVGI)
- Runway end identifier lights (REIL)
- Rotating beacon
- Lighted wind cone and segmented circle stub and connecting taxiways stub and connecting taxiways

3 New Runway and Runway Extensions

A runway extension is justified by providing documented evidence that the longer runway is needed and would be used, if available, by a significant number of airport users. A common method of providing such documentation is to obtain letters from current and potential users of the airport which itemize types of aircraft and frequency of use by specific aircraft types. This is tabulated by numbers of operations. (Each landing is an operation and each takeoff is an operation.)

These documentary letters should contain the aircraft make, model, and preferably the "N" number. Only operations by the specific aircraft requiring the longer runway are pertinent.

Extension of a runway to serve small aircraft or large aircraft within 75 percent fleet and 60 percent useful load will be eligible by 500 annual itinerant operations by aircraft requiring the additional length. Runway length curves are in Chapter 2 of Advisory Circular 150/5325-4A.

Runway extensions for large aircraft greater than 75% fleet and 60% load will be justified by 700 annual itinerant business jet operations, at least 500 of which must be by aircraft requiring the

additional length. In this case, additional documentation is needed from users indicating haul distance and off-loading penalties presently imposed on aircraft which need the additional length.

The above described documentation will also be satisfactory to make a new runway eligible if the extension of an existing runway is not feasible from an economic, environmental or operations standpoint.

The above operational levels are minimum for eligibility purposes. The more operations by the critical aircraft, the better justified the project will be and the better the possibility of discretionary funding.

4 New Airport

A proposed new airport must be in the National Plan of Integrated Airport Systems (NPIAS) and the site approved by the FAA in order for the project to be considered. Because the development of a new airport is so important and the investment of resources is so great, the FAA evaluates such proposals on a case-by-case basis. To justify a project for development of a new airport, a sponsor must obtain letters from potential users, each furnishing an estimate of the number of operations they will conduct annually at the airport when it is completed, and stating whether or not their aircraft will be based at the airport. Each letter should contain the owner's name and address, the aircraft make, model, and preferably the "N" number. As a general rule, under present guidelines a proposed new airport will not successfully compete for Federal funds unless the justification indicates the airport will have at least fifty (50) based aircraft.

5 Runway, Taxiway, and Apron Strengthening

The sponsor should furnish a narrative description of the need for strengthening based on annual operations by the critical aircraft of the heaviest class of aircraft using the airport. Approval by the FAA will be based more on engineering judgment than on specific numbers of aircraft operations. The strength of the existing pavement should be specified, as well as the strength of pavement that is being requested.

6 Apron Expansion

The sponsor should provide a narrative description of a demonstrated need for more apron space to accommodate based and itinerant aircraft and a drawing that depicts the current and proposed expansion utilization. As a rule, single and light twin engine aircraft require an average of 300 square yards per airplane, and itinerant aircraft usually require an average of 400 square yards per airplane, and air carriers are evaluated on a case-by-case basis. Other considerations include adjustments for hangared aircraft, space for taxi lanes and refueling areas. After the total apron area needs have been determined, a minimum increase of 10 percent in total apron area should be added to accommodate future needs.

7 Other Development

The Program Narrative Statement should provide a discussion of need to justify other types of development as follows

Additional Runways Justified if needed for crosswind coverage, to provide relief where capacity is exceeded, or to provide relief for a combination of traffic volume and noise problems. Include detailed information that support such development (i.e., wind coverage, delays, cancelled or over flights, cost/benefit analysis, etc.).

Electronic Navigational Aids Distance measuring equipment (DME), terminal very high frequency omnidirectional radio range (TVOR), and nondirectional beacon (NDB) are eligible if the airport will meet the establishment criteria in FAA Order 7031.2 within five years. Assistance from the FAA will probably be necessary in establishing this justification.

Automatic Weather Reporting Equipment. Contact the FAA Airports District Office to determine the locations where this equipment is eligible and justified.

Terminal Buildings. The sponsor of a commercial service airport must furnish an analysis demonstrating the need for additional terminal space, and identifying the forecast period for which the proposed area to be remodeled or expanded. Identify specific use of each room. Provide a table identifying the area associated with public versus private access/use and the cost associated thereto.

Snow and Ice Control Equipment This equipment as well as runway surface condition sensors are justified when required due to local conditions. Provide a Snow Removal Equipment analysis form for additional equipment per AC 150/5220-20. Provide a list of existing equipment, age and condition including the reason for any replacement and plans for salvage of existing equipment. Analysis must indicate whether existing equipment was purchased with federal assistance. The Airports District Office will determine on a case-by-case basis the validity of the justification.

Reconstruction This type of work includes overlay and reconstruction of pavements, refurbishing of runway lighting systems, and repair or replacement of all types of eligible airport facilities and equipment. Such work is eligible provided the sponsor has exercised prudent care in maintenance of these resources. Provide type, age and condition of the pavement. Describe its deficiencies. Provide a summary of completed pavement condition surveys, where available.

Land Acquisition. State the purpose for the land acquisition, the type of interest to be acquired, status of acquisition, and show the location of the land on a project sketch.

COST ASSUMPTIONS (1988 Dollars)

Capital Improvement Program

Land Acquisition

The following are the general land requirements for airport establishment or expansion.

500 to 1,000 foot runway extension	40 acres
New landing strip airport	200 acres
New intermediate airport	250 acres
New key system airport	570 acres
New crosswind runway	80-120 acres

The following land costs are dependent upon airport location and land holdings.

Prime agricultural land	\$900/acre
Fair agricultural land	700/acre
Moderate agricultural land	500/acre
Scrub or non-agricultural land	300/acre

Grading and Paving

The following tables can be used to estimate construction costs for runways, taxiways and aprons. Costs vary widely. The primary factor affecting cost is type of soil. Generally: good soils are granular, fair soils are loam mixtures, and poor soils are clays, peat, marl, or muck.

New Construction	75' wide GA Runway (per 1000 feet)	100' wide Transport Runway (per 1000 feet)	150' wide Comm Service Runway (per 1000 feet)
Grade	\$35,000-50,000	\$35,000-50,000	\$45,000-60,000
Grade & Pave	\$140,000-320,000	\$160,000-350,000	\$185,000-375,000

Rehabilitation			
Rout/Seal Cracks	\$1500-2500	\$1500-3500	\$1500-4500
Surface Treatment	\$8,000-16,000	\$11,000-22,000	\$16,000-32,000
Resurfacing	\$12,000-24,000	\$16,000-32,000	\$24,000-48,000
Structural Overlay	\$36,000-48,000	\$48,000-64,000	\$72,000-96,000
Reconstruction	\$90,000-150,000	\$120,000-200,000	\$180,000-300,000

Capital Improvement Program

Airport _____

Fiscal years begin July 1 and
end the following June 30

Land Acquisition	Size or Dimension	FY 97	FY 98	FY 99	FY 00	FY 01	Estimated Costs
Fee simple land purchase							
Easement to the ground							
Aviation easement							
Relocation assistance							

Grading and Paving and Related

Turf runway construction extension							
Paved runway reconstruction							
Paved runway overlay							
Turf taxiway construction or extension							
Paved taxiway construction or extension							
Paved taxiway reconstruction							
Paved taxiway overlay							
Turf apron construction or expansion							
Paved apron construction or expansion							
Paved apron reconstruction							
Paved apron overlay							
Aggregate parking lot							
Paved parking lot							
Aggregate entrance road							
Paved entrance road							
Crack repair and sealing							
Surface treatment							
Runway grooving							
Establish turf							
Drainage system improvements							
Cleaning and grubbing							
Obstruction removal							

Airport Name _____

Navigational Aids

	FY 97	FY 98	FY 99	FY 00	FY 01	Estimated Costs
Beacon installation or repair						
Lighted windsock						
Taxiway reflectors						
Temporary Airport Lighting System (TALS)						
Medium Intensity Runway Lighting System (MIRLS)						
High Intensity Runway Lighting System (HIRLS)						
Runway End Identifier Lighting System (REILS)						
Precision Approach Path Indicator (PAPI)						
Omni-Directional Approach Lighting System (ODALS)						
Medium Approach Lighting System/Runway						
Alignment Indicator Lighting System						
3-function radio controller						
Radio unicom equipment						
Non-Directional Beacon (NDB)						
Very high frequency Omni-directional Range (VOR)						
Distance Measuring Equipment (DME)						
Precision instrument landing system (ILS or MLS)						
Electrical services building						

Building Area Development

Hangar site preparation						
Arrival/departure building						
Passenger terminal building						
ARFF/maintenance equipment building						
Building remodeling or expansion						
Aerial applicator spray wash facility						
Automated weather station						
Avgas fuel facility						
Jet fuel facility						
Security items (fencing/security lights)						
Airport signing						

Airport Equipment	FY 97	FY 98	FY 99	FY 00	FY 01	Airport Name _____
Maintenance utility truck						
Tractor/loader/mower						
ARFF vehicle						
Truck and snowplow						
Snowblower						
Other snow equipment (Describe _____)						
Other maint. equipment (Describe _____)						

Airport Equipment	FY 97	FY 98	FY 99	FY 00	FY 01	Airport Name _____
Maintenance utility truck						
Tractor/loader/mower						
ARFF vehicle						
Truck and snowplow						
Snowblower						
Other snow equipment (Describe _____)						
Other maint. equipment (Describe _____)						

Airport Equipment	FY 97	FY 98	FY 99	FY 00	FY 01	Airport Name _____
Maintenance utility truck						
Tractor/loader/mower						
ARFF vehicle						
Truck and snowplow						
Snowblower						
Other snow equipment (Describe _____)						
Other maint. equipment (Describe _____)						

Airport Equipment	FY 97	FY 98	FY 99	FY 00	FY 01	Airport Name _____
Maintenance utility truck						
Tractor/loader/mower						
ARFF vehicle						
Truck and snowplow						
Snowblower						
Other snow equipment (Describe _____)						
Other maint. equipment (Describe _____)						

Airport Equipment	FY 97	FY 98	FY 99	FY 00	FY 01	Airport Name _____
Maintenance utility truck						
Tractor/loader/mower						
ARFF vehicle						
Truck and snowplow						
Snowblower						
Other snow equipment (Describe _____)						
Other maint. equipment (Describe _____)						

Airport Equipment	FY 97	FY 98	FY 99	FY 00	FY 01	Airport Name _____
Maintenance utility truck						
Tractor/loader/mower						
ARFF vehicle						
Truck and snowplow						
Snowblower						
Other snow equipment (Describe _____)						
Other maint. equipment (Describe _____)						

Airport Equipment	FY 97	FY 98	FY 99	FY 00	FY 01	Airport Name _____
Maintenance utility truck						
Tractor/loader/mower						
ARFF vehicle						
Truck and snowplow						
Snowblower						
Other snow equipment (Describe _____)						
Other maint. equipment (Describe _____)						

Airport Equipment	FY 97	FY 98	FY 99	FY 00	FY 01	Airport Name _____
Maintenance utility truck						
Tractor/loader/mower						
ARFF vehicle						
Truck and snowplow						
Snowblower						
Other snow equipment (Describe _____)						
Other maint. equipment (Describe _____)						

Airport Equipment	FY 97	FY 98	FY 99	FY 00	FY 01	Airport Name _____
Maintenance utility truck						
Tractor/loader/mower						
ARFF vehicle						
Truck and snowplow						
Snowblower						
Other snow equipment (Describe _____)						
Other maint. equipment (Describe _____)						

Airport Equipment	FY 97	FY 98	FY 99	FY 00	FY 01	Airport Name _____
Maintenance utility truck						
Tractor/loader/mower						
ARFF vehicle						
Truck and snowplow						
Snowblower						
Other snow equipment (Describe _____)						
Other maint. equipment (Describe _____)						

Separate Consultant Services						
Master plan study						
Master plan update						
Update ALP and Exhibit A property map						
Special consultant service (Describe _____)						

Separate Consultant Services						
Master plan study						
Master plan update						
Update ALP and Exhibit A property map						
Special consultant service (Describe _____)						

Separate Consultant Services						
Master plan study						
Master plan update						
Update ALP and Exhibit A property map						
Special consultant service (Describe _____)						

Separate Consultant Services						
Master plan study						
Master plan update						
Update ALP and Exhibit A property map						
Special consultant service (Describe _____)						

Separate Consultant Services						
Master plan study						
Master plan update						
Update ALP and Exhibit A property map						
Special consultant service (Describe _____)						

Hangar Construction Revolving Account							
T-hangar construction							
Multiple plane storage hangar							

Hangar Construction Revolving Account							
T-hangar construction							
Multiple plane storage hangar							

Hangar Construction Revolving Account							
T-hangar construction							
Multiple plane storage hangar							

[illegible][illegible]

Bituminous overlays can be calculated long hand by determining the thickness in inches and the area to be overlaid in square yards. Then.

Cost = inches × square yards × \$1 375/sq. yd in

Other Grading/Paving Related Items

Construct entrance road	11,000/site
Construct parking lot	11,000/site
Pave entrance road	17,000/site
Pave parking lot	17,000/site
Groove runway	\$2,000/100 lin ft
Establish turf	1,000/acre
Drainage system	72,000/site
Frost heave correction	67,000/each
Obstruction removal (trees, brush, etc.)	2,000/acre
T-hangar site preparation	40,000/site

Navigational Aids

Beacon	30,000 unit cost
Lighted wind sock	5,000 unit cost
Taxiway reflectors	600/1,000 lin.ft.
Temporary Airport Lighting System (TALS)	9,000 unit cost
Medium Intensity Runway Lighting System (MIRLS)	\$112,000 unit cost
High Intensity Runway Lighting System (HIRLS)	134,000 unit cost
Extension of MIRLS and HIRLS	
500 ± 200 feet	11,000
1,000 ± 200 feet	22,000
1,500 ± 200 feet	33,000
Runway End Identifier Lighting System (REILS)	5,000/end
Precision Approach Path Indicator (PAPI)	20,000/end
Omni-Directional Approach Lighting System (ODALS)	50,000 unit cost
Medium Approach Lighting System/Runway Alignment	
Indicator Lighting System (MALSR/RAILS)	140,000 unit cost
3-function radio controller	3,000 unit cost
Radio unicom equipment	3,000 unit cost
Non-Directional Beacon (NDB)	48,000 unit cost
Very high frequency Omni-directional Range (VOR)	200,000 unit cost
Distance Measuring Equipment (DME)	70,000 unit cost
Instrument Landing System (ILS)	400,000 unit cost
Microwave Landing System (MLS)	800,000 unit cost
Electrical services building	10,000 unit cost

Building Area Development

Arrival/departure building	
landing strip	30,000 unit cost
intermediate airport	60,000 unit cost
key system airport	120,000 unit cost
ARFF/Maintenance building	250,000 unit cost
Maintenance building addition	100,000 unit cost
Install utilities	13,000/site
Construct spray wash facility	25,000 unit cost
Automated weather station	57,000 unit cost
Avgas fuel facility	16,000 unit cost
Jet fuel facility	34,000 unit cost
Airport signing	2,000/site
Security items	
landing strip	2,000/site
intermediate or key airport	6,000/site

Airport Equipment

Maintenance utility truck	15,000 unit cost
Tractor/loader/mower	25,000 unit cost
ARFF vehicle	250,000 unit cost
Large truck and snowplow	80,000 unit cost
Large snowblower	170,000 unit cost

Consultant Services

Master plan study	30,000-100,000
Master plan update	10,000-30,000
Update ALP and Exhibit A property map	5,000-15,000

Hangar Construction

T-hangar	13,000/unit
Multiple plane storage hangar	\$20-\$25/sq. ft.

Previous Editions Not Usable

INSTRUCTIONS FOR THE SF 424

This is a standard form used by applicants as a required facesheet for preapplications and applications submitted for Federal assistance. It will be used by Federal agencies to obtain applicant certification that States which have established a review and comment procedure in response to Executive Order 12372 and have selected the program to be included in their process, have been given an opportunity to review the applicant's submission.

- | Item: | Entry: | Item: | Entry: |
|-------|--|-------|--|
| 1. | Self-explanatory. | 12. | List only the largest political entities affected (e.g., State, counties, cities) |
| 2. | Date application submitted to Federal agency (or State if applicable) & applicant's control number (if applicable). | 13. | Self-explanatory |
| 3. | State use only (if applicable). | 14. | List the applicant's Congressional District and any District(s) affected by the program or project |
| 4. | If this application is to continue or revise an existing award, enter present Federal identifier number. If for a new project, leave blank. | 15. | Amount requested or to be contributed during the first funding/budget period by each contributor. Value of in-kind contributions should be included on appropriate lines as applicable. If the action will result in a dollar change to an existing award, indicate <u>only</u> the amount of the change. For decreases, enclose the amounts in parentheses. If both basic and supplemental amounts are included, show breakdown on an attached sheet. For multiple program funding, use totals and show breakdown using same categories as item 15. |
| 5. | Legal name of applicant, name of primary organizational unit which will undertake the assistance activity, complete address of the applicant, and name and telephone number of the person to contact on matters related to this application | 16. | Applicants should contact the State Single Point of Contact (SPOC) for Federal Executive Order 12372 to determine whether the application is subject to the State intergovernmental review process. |
| 6. | Enter Employer Identification Number (EIN) as assigned by the Internal Revenue Service. | 17. | This question applies to the applicant organization, not the person who signs as the authorized representative. Categories of debt include delinquent audit disallowances, loans and taxes. |
| 7. | Enter the appropriate letter in the space provided | 18. | To be signed by the authorized representative of the applicant. A copy of the governing body's authorization for you to sign this application as official representative must be on file in the applicant's office (Certain Federal agencies may require that this authorization be submitted as part of the application.) |
| 8. | Check appropriate box and enter appropriate letter(s) in the space(s) provided.
— "New" means a new assistance award.
— "Continuation" means an extension for an additional funding/budget period for a project with a projected completion date.
— "Revision" means any change in the Federal Government's financial obligation or contingent liability from an existing obligation. | | |
| 9. | Name of Federal agency from which assistance is being requested with this application. | | |
| 10. | Use the Catalog of Federal Domestic Assistance number and title of the program under which assistance is requested. | | |
| 11. | Enter a brief descriptive title of the project. If more than one program is involved, you should append an explanation on a separate sheet. If appropriate (e.g., construction or real property projects), attach a map showing project location. For preapplications, use a separate sheet to provide a summary description of this project | | |

NPIAS/CIP**AIRPORT NAME**

ASSOCIATED CITY

COUNTY NAME

COUNTY CODE

NPIAS NO .

SITE NO : _____

LOCAL IDENT.

SMSA NO : _____

[illegible][illegible]

* For FAA use

State Grants

1995 - 1996

**Airport
Managers'
Manual**

North Dakota

10

Chapter

Aeronautics Commission Funding

The following are the sections from the North Dakota Century Code Relating to Aeronautics which pertains to the distribution of proceeds earmarking the type of projects these funds may be granted based on Commission approval

Commercial Air Service Grants

AIRCRAFT EXCISE TAX - 57-40 5-09 ALLOCATION OF REVENUE All moneys collected and received under this chapter shall be transmitted monthly by the director to the aeronautics commission special fund These funds may be used for airport construction or improvement projects as approved by the aeronautics commission in an amount as allowed by the commission.

GENERAL FUND GRANTS - 2 05-06.5. STATE ASSISTANCE FOR AIRPORTS: Each public airport owned or operated by a public entity and each airport operated by an airport authority in this state which is served by at least one airline which is certified by the federal aviation administration or was at one time served by an airline certified by the federal aviation administration, but is served by a scheduled commuter airline certified by the North Dakota aeronautics commission may be provided assistance according to guidelines established by the commission by rule, within the limits of legislative appropriations The governing body or airport authority which operates an airport that receives assistance under this section shall deposit the moneys received in the same account or accounts as other airport funds are deposited and may expend the moneys as provided by law for other airport funds, including matching any funds made available by the United States

General Aviation Grants

AVIATION FUEL TAX - 53-43 3-06 DISTRIBUTION OF REVENUE The tax collected by the Commissioner pursuant to section 57-43 3-04 shall be deposited by the commissioner in the office of the state treasurer, who shall deposit such moneys in a special fund known as the state aeronautics commission special fund. These funds are hereby appropriated to the commission and shall be disbursed by warrant-check prepared by the office of management and budget upon vouchers submitted by the commission and approved by the office of management and budget, for commission administration and the purpose of matching of any funds made available by political subdivisions or airport authorities in this state, the state, or the United States, only if the political subdivision or airport authority is not qualified for or does not receive any funds under section 2-05-06.5 These funds shall be used for airport construction or improvement projects including airport administration and terminal buildings, hangars, landing strips for aircraft, and purchase of sites for airports or landing fields and easements; and for maintenance, clearing of sites, marking, lighting,

and engineering and navigational aids, all related to aeronautics in amounts as the commission may determine and upon projects as the commission may approve

Policy of Aeronautics Commission Funding

1. To be eligible, grant application must exceed \$1,000 state share for General Aviation Requests.
2. Federal Aviation Administration (Airport Improvement Program) projects will be given preference in determining state funding. Attach copy of federal application (page 1), cost estimate or accepted bids and project map.
3. All grant applications shall have a current airport financial statement and the manner of supportive funding to match the local share.
4. The state participation will not exceed 50% of local funding.
5. Land/easement acquisition requests are considered only if fee simple title is obtained and title opinion attached to application documentation.
6. Grant application should be submitted by June 1st of each calendar year.
7. State payments will be made by certification process. Commission shall supply certification documentation.
8. Grants shall be issued prior to July 1st of each calendar year.
9. Supplemental requests or contingency items of a previous grant requires the sponsor to supply supportive documents to justify these requests on cost overrun applications.
10. The Commission may consider a set aside amount for discretionary (emergency grants).

NORTH DAKOTA AERONAUTICS COMMISSION PRIORITY RATING OF AIRPORT PROJECTS

Prepared: 05-01-84
Revised: 04-01-92

	HIGH	10	20	30	40	50	LOW
IMPROVEMENT CATEGORIES							
A CONSTRUCTION	Reconstruction Drainage & Culverts Earthwork & Grading	Realign Overlays New Constructions Taxiway Extensions	Aprons Seeding Extensions	Hellport Area	X-wind runway/taxiway Runway grooving		
B OBSTRUCTIONS	Tree Removal Marking and Lighting Obstructions	Displaced Threshold Relocate roads, P-lines, Bldgs					
C MAINTENANCE	Crack Filling Seal/Fog Coats	Recede & Fertilize Turfs Regrade & Smoothen Turfs	Mower Snow Removal Equipment	Tractors Trucks Turf Rollers/Sweepers	Garden Tractors Soil Sterilization around lights		
D MARKINGS	Windsock or wind tee		Paint Runway & numbers Repair of Markings	Segmented Circle Runway Signage			
E LAND	Clear Zone Land Avigation Easements	Purchase land for new arpt Purchase land for extensions	Access Road	Auto Parking			
F LIGHTS / NAVAIDS	Electrical Service Runway Lights	Beacon Replacement of Beacons, fixtures and wiring	VASI Reflector Markings	NDB REIL	Runway Surface Sensor		
G RADIO			AWOS/ASOS	Unicom Radio control runway lights	Computerized wind indicator		
H MISCELLANEOUS	Special Programs Emergency Grants Federal Grants Zoning Implementations	Engineering Design EIS Legal Fees	Master Plan Studies Fencing Security System Air Service/Cargo Studies	Terminals Multi-terminals (trailers) Electrical Sewer, water	Hangars Airport Signs Fuel Facilities Storage Buildings		

NOTE The Lower the Number, the Higher the Priority

(Add second digit below to each ten digit above for project priority rating *

- | | | | |
|--------------|------------|---------------------|---------------------------------------|
| 1 Approaches | 3 Taxiways | 5 Access | 7 Other (Service Roads, Fencing, Etc) |
| 2 Runways | 4 Aprons | 6 Equipment/Storage | |

* Any minor work associated with an improvement item receives the same ranking as the major item. Examples are:
land for a runway extension ranks a "22", lighting the apron ranks a "14", reconstruct taxiway ranks a "13",
overlay runway ranks a "22", tree removal on approach ranks an "11", etc

NOTE Add 100 points to the priority of any project needed one year in the future, 200 if two years, etc For example, reconstruction of a runway next year would have a priority rating of 112, or land for a runway extension would have a priority rating, if the extension was planned for two years, a 222, etc The lower the number, the higher the priority If construction will be in the current year, no hundreds digit is added, so earthwork on a runway this year would rank a "12"

SPECIAL NOTES:

1. Projects above are reference primarily to be main runway first taxiway, apron, x-wind, etc
2. Aeronautics Commission staff will help sponsor establish priority points
3. Interest Payments are not eligible
4. Airport Liability Insurance Premiums are not eligible



REQUEST FOR STATE AIRPORT AID
NORTH DAKOTA AERONAUTICS COMMISSION
 SFN 11639 (3-87)

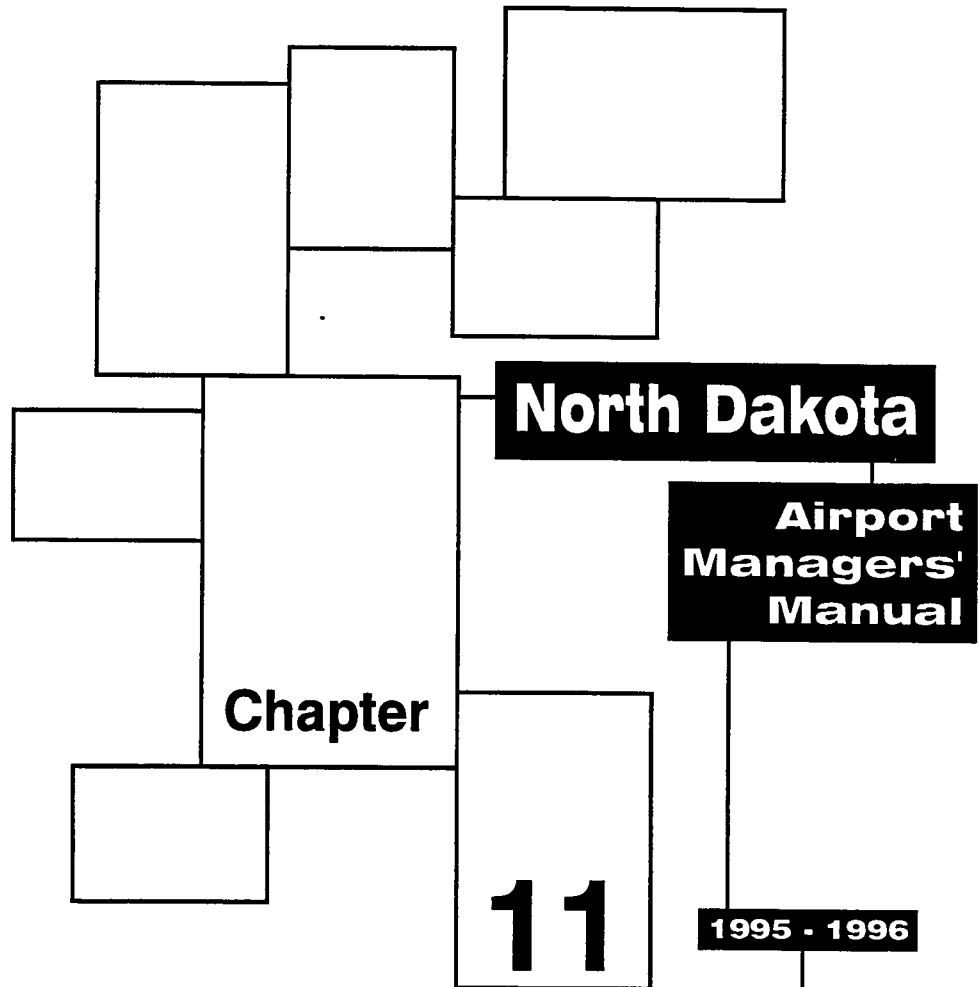
NO: _____

☐ AIR CARRIER☐ GENERAL AVIATION

Name of Airport		Airport is <input type="checkbox"/> Existing <input type="checkbox"/> Proposed		County		
Project Sponsor		Application Date		Project Completion Date (Est.)		
Mailing Address		City	State	Zip Code		
Sponsor's Authorized Representative		Title		Telephone No		
Mailing Address		City	State	Zip Code		
Does sponsor own airport land? <input type="checkbox"/> Yes <input type="checkbox"/> No	Acres	Does sponsor lease airport land? <input type="checkbox"/> Yes <input type="checkbox"/> No	Terms / Years of any Lease - may attach copy			
Will sponsor buy land for airport? <input type="checkbox"/> Yes <input type="checkbox"/> No	Acres	Legal Description				
NUMBER OF AIRCRAFT BASED AT AIRPORT	NUMBER OF AIRCRAFT BASED IN COUNTY	NUMBER OF AGRICULTURAL AIRCRAFT BASED IN COUNTY	NUMBER OF PILOTS IN LOCAL AREA (ESTIMATED)	ANNUAL AIRPORT OPERATIONS	POPULATION CITY	
					<input type="checkbox"/> Yes <input type="checkbox"/> No	
Base of Economy in Community		<input type="checkbox"/> Agriculture <input type="checkbox"/> Manufacturing <input type="checkbox"/> Processing Agricultural Products		Kind		
<input type="checkbox"/> Trade Center <input type="checkbox"/> Oil/Gas Develop/Refine		<input type="checkbox"/> Tourism <input type="checkbox"/> Light Industry		Kind		
TAXABLE VALUATION OF PROPERTY IN AIRPORT TAXING AREA		City	Twsp	County		
AIRPORT TAX LEVY - MILLS		City	Twsp	County		
AIRPORT TAX LEVY - REVENUE PRODUCED (\$)		City	Twsp	County		
OTHER REVENUE (Source)		Funding explanation (if needed)				
OTHER REVENUE (Source)						
TOTAL AIRPORT REVENUE						
FEDERAL FUNDING PERCENT OF PROJECT COSTS						%
FEDERAL FUNDS APPLIED FOR OR RECEIVED Attach copy of current application						
TOTAL COST OF PROJECT		Date Sponsor's Funds Available		Date Funds Expire		
SPONSOR'S FUNDS (Source						
SPONSOR'S FUNDS (Source						
SPONSOR'S FUNDS (Source						
STATE FUNDS REQUESTED						

FUNDING REQUEST ☐ First Time for this Project ☐ Supplemental for this Project
☐ Estimated Cost ☐ Actual Bid Price

INSTRUCTIONS Review the first page of this Request for Airport Aid and make any needed corrections and/or additions to the data. There are two identical second pages to the form - use one as your worksheet, leave the other blank. Sign both second pages and send the complete set to Aeronautics Commission, Box 5020 Bismark ND 58502 Telephone (701) 224-2748



Introduction

Many airport owners and operators experience difficulty in determining what the level of rates and charges should be at their facilities. The need to generate acceptable revenue levels at the airport must be balanced against what are fair and comparable rates in the region at similar airports.

The purpose of this chapter is to present the rates charged for hangars, tie-downs, fuel flowage fees, FBO facilities, landing fees, terminal, and other charges at selected North Dakota airports. This information can be used to provide an overview of charges at comparable airports when airport owners are setting new fees. Lease rates for land and buildings on property found to be surplus to airport operational needs are not included here. These rates and the availability of such land and buildings vary widely among the airports. The specific nature and complexity of these leases made summarization too difficult.

The information contained in each table will be explained and discussed. Only airports with the specific rates and charges shown in a table are included in that table. Therefore, only eight airports are represented

Rate Determinations

The objective setting rates is to provide a means of balancing costs and revenues fairly. In theory, applicable revenue rates must merely be adjusted to match the corresponding costs in order to achieve a "break even" financial position. In reality, however, some airfields are unlikely to ever achieve this goal. Rates for on-site users can be established from the rate comparisons of other airports.

TABLE 11-1

North Dakota Airport Managers' Manual

AIRPORT OPERATIONS, BASED AIRCRAFT, AND PAYROLL

		Bismarck	Devils Lake	Fargo	Grand Forks	Jamestown	Minot	Williston	Dickinson
Airport Classification		N	N	S	N	N	N	N	G
Airport Operated By		C	A	A	A	A	C	C	A
Total Annual Aircraft Operations in (000)		59.5	28.9	87.6	242.5	30	35	19.8	14.5
Percent of Operations	General Aviation	59.5	62.3	68.1	93.4	40	80	70	70
	Air Taxi	16	10.4	11.1	2.9	10	10	5	9
	Commuter	6.7	24.4	-	-	48	-	19.5	-
	Air Carrier	8.1	-	7.7	1.5	-	7	-	-
	Military	9.7	3.4	13	0.3	1	3	0.5	1
	Air Cargo Carrier	-	1	-	1.9	1	-	5	20
Number of Based Aircraft		78	48	104	134	46	75	65	24
Number Of Airlines		2	1	3	3	-	2	-	-
Number of Commuters		2	1	1	1	1	-	1	0
People Employed On Airport	On Airport Payroll	13.2	0.7	22.4	16.3	3.8	4.3	0.8	1.5
	Total Employment on Airport	778	75	1295	881	78	271	67	28
Annual Airport Operating Budget (000)		1,797	114	1,562	1,556	185	1,192	113	110

Airport Classification

L=Large Hub (3,153,378 or more Enplaned Passengers)
M=Medium Hub (788,344 to 3,153,377 Enplaned Passengers)
S=Small Hub (157,669 to 788,344 Enplaned Passengers)
N=Non Hub/Comm (2,500 to 157,669 Enplaned Passengers)
R=Reliever
G=General Aviation

Air Taxi

Because FAA Air Traffic reports combine air taxi and commuter operations some airports were not able to differentiate between these two figures

Commuter

Because FAA Air Traffic reports combine air taxi and commuter operations some airports were not able to differentiate between these two figures

Military

Some airports included other federal agency aircraft operations in this category, i.e., U.S. Forest Service National Guard operations are also included

Number of Airlines

Cargo carriers are included

Airport Operated By

C=City
U=County
S=State
A=Authority
N=Contract
O=Other

Total Employment on Airport

Includes all employees of airport tenants and companies located at the airport

Annual Airport Operating Budget

Figure should be multiplied by 1000

Number of People on Payroll

Includes part-time employees

TABLE 11-2

North Dakota Airport Managers' Manual

LANDING FEES AND FBO CHARGES

		Bismarck	Devils Lake	Fargo	Grand Forks	Jamestown	Minot	Williston	Dickinson
Landing Fees	General Aviation FRT Revenue/1000 lbs	0 59	0 9	-	-	21 7	39*	0 25	-
	General Aviation FRT Revenue/Landing	7 38	4	-	8 min	1 min	4 88 min	150 min/mo	100 min/mo
	General Aviation Revenue/1000 lbs	-	-	-	-	-	39*	-	-
	General Aviation Revenue/Landing	-	-	-	-	-	-	-	-
	Commuter/1000 lbs	0 59	275 mo	0 31	8 min	0 21	-	0 25	-
	Commuter/Landing	-	275 mo	-	-	2 7	-	-	-
	Aircarrier/1000 lbs	0 59	-	0 31	0 815	-	0 39	-	-
	Aircarrier/Landing	-	-	-	-	-	-	-	-
	Non-Contract Air Carrier/1000 lbs	0 69	-	0 5	1 02	-	-	-	-
	Non-Contract Air Carrier/Landing	-	-	-	-	-	-	-	-
	Military Annual Rent	8	-	15	-	-	-	-	-
Fix Based Operations	Number of Full Service FBOs	3	5	1	1	1	1	1	1
	Number of Specialty Ops	1	-	2	-	-	-	-	1
	Average Ground Rent								
	'Cents/Sq Foot	0 1	2 5	0 06	0 16	-	0 12	0 05	0 04
	'Dollars/Acre	-	350 min	-	-	75-100	-	-	-
	Average Hanger Rent								
	'Cents/Foot	0 1	3 5	-	-	\$75 mo	-	-	-
	Percent of Gross	-	-	1 5	3	-	-	-	-
	Fuel Flowage Fee	03- 05	-	0 02	0 075	-	0 05	0 01	-

* Over 12,000 lbs , gross weight

Air Carrier Landing per 1000 lbs.

Air Carriers With Airport Leases

Air Carrier/CFR - cost if not included in landing fees

Military Annual Rent

Figure should be multiplied 1000 in most cases Some airports have a \$1 00 a year agreements

Number of Full Service FBOs

FBOs that fuel and repair aircraft, give flying lessons, and provide air taxi, etc

Number of Specialty Operators

Such as radio shops, aircraft brokers, or other single service operations

Percent of Gross

The figure in this column represents the percentage an airport receives from an FBOs total gross receipts

Percentages of individual items i e , aircraft sales are not included

Average Ground Rent

Figures in this row are expressed as

Cents per square feet

\$ Per Acre

Fee per Year, i e , 4 8 means the airport receives

\$4,800 from the FBO per year All figures in this category should be multiplied by 1000

% of value, i e 10% means the airport receives 10% of the land's appraised value per year

Average Hanger Rent

Figures in this column are expressed as

Cents Per Square Foot

Fee Per Year- See Above Explanation

Fuel Flowage Fee

Figures in this column are expressed in cents per U S gallon or a percentage per gallon

TABLE 11-3

North Dakota Airport Managers' Manual

CONCESSION FEES AND ANNUAL REVENUE

		Bismarck	Devils Lake	Fargo	Grand Forks	Jamestown	Minot	Williston	Dickinson
Advertising	Concession Fee	40%	-	50%	100%	-	-	-	-
	Annual Revenue (000)	9 8	-	12 8	13	-	9 5	-	-
Auto Service Station	Concession Fee	-	-	-	-	-	-	-	-
	Annual Revenue (000)	-	-	-	-	-	-	-	-
Bar/Cocktail Lounge	Concession Fee	300/mo	-	12%	15%	-	15%	-	-
	Annual Revenue (000)	3 6	-	12 3	5 6	-	8	-	-
Barber Shop	Concession Fee	-	-	-	-	-	-	-	-
	Annual Revenue (000)	-	-	-	-	-	-	-	-
Bank	Concession Fee	-	-	-	-	-	-	-	-
	Annual Revenue (000)	-	-	-	-	-	-	-	-
Duty Free Shop	Concession Fee	-	-	-	-	-	-	-	-
	Annual Revenue (000)	-	-	-	-	-	-	-	-
Game Room	Concession Fee	50%	25%	50%	50%	-	-	25%	-
	Annual Revenue (000)	4 7	0 4	6 4	5	-	-	0 4	-
Gift Shop	Concession Fee	7%	-	10%	7%	-	-	-	-
	Annual Revenue (000)	4 7	-	18 9	1	-	4 1	-	-
Limousine Service	Concession Fee	-	-	-	-	-	-	-	-
	Annual Revenue (000)	-	-	-	-	-	-	-	-
Motel or Hotel	Concession Fee	-	-	-	-	-	-	-	-
	Annual Revenue (000)	-	-	-	-	-	-	-	-
News Stand	Concession Fee	-	-	-	-	-	-	-	-
	Annual Revenue (000)	-	-	-	-	-	-	-	-
Restaurant	Concession Fee	-	-	7%	7%	-	7%	-	-
	Annual Revenue (000)	-	-	48 4	9 9	-	15	-	-
Taxi	Concession Fee	-	-	-	-	-	-	-	-
	Annual Revenue (000)	-	-	-	-	-	-	-	-
Travel Agency	Concession Fee	-	-	-	-	-	-	-	-
	Annual Revenue (000)	-	-	-	-	-	-	-	-

Bar/Cocktail Lounge

Some airports combined this revenue with the restaurant or vice-versa

Bank

Most annual revenue was strictly from square footage rent

Gift Shop

Some airports combined the news stand revenue with this category or vice-versa

Motel or Hotel

Many airports listed the various percentages they receive from the hotel or motel i e , rooms, food, and beverages, the percentage listed is for rooms

News Stand

Some airports combined with gift shop revenue with this category or vice-versa

Restaurant

See bar/cocktail lounge

TABLE 11-4

North Dakota Airport Managers' Manual
PARKING AND RENTAL CAR CONCESSIONS

		Bismarck	Devils Lake	Fargo	Grand Forks	Jamestown	Minot	Williston	Dickinson
Auto Parking	Operated By	C	-	C	C	A	A	A	A
	Number of Public Spaces	500	60	984	320	150	444	50	50
	Number of Employee Spaces	136	6	92	-	30	40	20	10
	Employee Parking Fee (Monthly)	-	-	1 69	-	-	\$15	-	-
	Concessions Fee % / Minimum Guarantee (000)	170	-	275	90%	-	35%/90	-	-
	Annual Revenue	170	-	372 4	220	-	166 9	-	-
	Free Parking for FAA	Y	Y	Y	Y	Y	Y	Y	Y
Rental Cars	Number of Companies	4	3	-	3	1	3	3	0
	Number of Off Airport Companies	2	3	-	3	4	-	2	3
	On Airport Concessions Fee/ Minimum Guarantee (000)	9%/14 4	-	10%/10	10%/15 6	-	10%/12	-	0%
	Fee for "Ready Car Parking & Service Areas"	N	N	N	N	N	N	N	N
	Off-Airport Concession Fee or Access Fee %	-	-	-	8%	-	-	-	-
	Annual Revenue (000)	177 5	-	259 1	112 8	-	107 7	-	-

Auto Parking Operated By

A= Airport C= Concession of Management

Number of Public Spaces

Long and short term parking

Concession Fee and Minimum Guarantee

The percentage of gross is the first figure and only the top percentage, if a sliding scale is in effect, is listed The second figure is the minimum guarantee per year
Multiply this figure by 1,000

Annual Revenue From Auto Parking

Multiply by 1,000

Free Parking For FAA

Y= Yes N=No

Number of Rental Car Companies

In terminal

Number of Off-Airport Rental Car Companies

Serving the airport

On Airport Concession Fee and Minimum Guarantee

Rental car concession fee is a percentage of gross and the minimum guarantee per year should be multiplied by 1,000

Fee for Ready Car Parking & Service Areas

Y=Yes N=No

Off Airport Concession Fee or Access Fee

An annual fee is a dollar amount or a percentage of gross for airport generated business is listed

Annual Revenue From Rental Cars

Multiply by 1,000

TABLE 11-5

North Dakota Airport Managers' Manual

HANGAR AND TIE-DOWNS

	Bismarck	Devils Lake	Fargo	Grand Forks	Jamestown	Minot	Williston	Dickinson
Number of Tie-Down Spaces	79	42	62	197	30	50	50	35
Tie-Down Fee Collected By (or percent to airport)	-	-	1 5	A	-	A	-	-
Single Engine Fee (Daily)	-	-	3	3 54	-	2	-	-
Twin Engine Fee (Daily)	-	-	3	5 95	-	7 5	-	-
Large-"Storage in Common" Hangers								
Number on Airport	9	7	6	5	5	10	3	3
Ownership of Hangar(s)	A,F,P,O	F,P	A,F	A,F	F,P	F,P	A,F	A
Single Engine Fee (Monthly)	150	85	175	68 34	100	-	-	75
Twin Engine Fee (Monthly)	220	105	250	133	120	-	120	150
T-Hangers								
Number of Individual Units	18	-	26	22	8	16	21	5
Ownership of T-Hangers	P	-	P	A,P	F	A	A,P	A
Single Engine Fee (Monthly)	-	-	175	86 7	60	60	45	75
Twin Engine Fee (Monthly)	-	-	250	115 7	60	60	80	75
Annual Revenue from Tie-Down And Hangers	27	5 9	-	96 9	-	15 7	18 9	14 5
Flying Clubs Allowed And Fee	Y	Y	Y	Y/Y	Y	Y	N	Y

Number of Tie-Down Spaces

Includes pavement and grass

Tie-Down Fee Collected By

F = FBO

A = Airport

A number indicates that the fee is collected by the FBO and the airport receives a percentage of the fee

Single Engine Fee (Daily)

This figure is the highest daily single engine fee charged

Twin Engine Fee (Daily)

This figure is the highest daily twin engine fee charged

Number of Individual Units

Individual T-hangers at the airport

Ownership of T-hangers

Same codes as ownership of hangars

Annual Revenue From Tie-Down and Hangar

Multiply figure by 1,000

Ownership of Hangars

A = Airport

F = FBO

P = Private

O = Other

Number On Airport

Large "storage in common" hangers

Single Engine Fee (Monthly)

In the hangar this is the highest monthly single engine fee charged

Twin Engine Fee (Monthly)

In the hangar this is the highest monthly twin engine fee charged

Flying Club Allowed and Fee

Y = Flying club pays no fee

N = No flying clubs

Y/Y = Flying club pays a fee

TABLE 11-6

North Dakota Airport Managers' Manual

TERMINAL BUILDING AND AIR FREIGHT

		Bismarck	Devils Lake	Fargo	Grand Forks	Jamestown	Minot	Williston	Dickinson
Terminal Building	Total Floor Space	79,339	2,880	76,000	35,034	4,000	29,000	4,730	2,448
	Rentable Floor Space	30,250	1,329	38,392	21,677	2,000	15,000	1,149	1,200
	Counter Space Rent (\$/Sq Ft)	14 96	-	31	15 49	7 5	9 24	6 05	-
	Office Space Rent (\$/Sq Ft)	15 47	6 02	17	15 49	7 5	9 24	6 05	6
	Rent for Other Areas (\$/Sq Ft)	13-16	-	16	15 49	-	9 24	-	-
	Fed Gov't Rent-Free Space (\$/Sq Ft)	-	-	-	-	2,000	1,569	340	-
	Janitorial Service Performed By	A, C	A	A	C	A	C	C	C
	General Aviation Terminal	Y	N	N	N	N	Y	N	N
	Telephones								
	Pay Telephones	25%	9 5/mo	20%	5%	3/mo	15%	14%	-
Air Freight Building	Credit Card Calls	25%	-	20%	5%	-	-	-	-
	Owned By (-O, Other)	A	A	-	A	-	A	-	-
	Rental Rate (\$/Sq Ft/Yr)	-	-	-	5 8	-	5 63	-	-

Counter Space Rent

Per square foot per year

Office Space Rent

Per square foot per year

Rent For Other Areas

Figure usually associated with baggage claim space

Federal Government Rent Free Space

Terminal only

Janitorial Service Provided By

A = Airport employees

C = Contract employees

General Aviation Terminal

Other than FBO lounge or airline terminal

Y = Yes

N = No

Pay Telephone

Telephone commissions per phone per year

Credit Card Calls

Telephone commissions per phone per year

Air Freight Building Owned By

A = Airport

L = Airline

F = Freight Forwarder

Rental Rate

Per square foot per year

TABLE 11-7
North Dakota Airport Managers' Manual
LAND RENTAL

		Bismarck	Devils Lake	Fargo	Grand Forks	Jamestown	Minot	Williston	Dickinson
Improved Land	With Runway Access	10+	-	-	0 16	-	-	0 05	0 025
	Without Runway Access	-	-	-	0 16	-	-	-	-
Unimproved Land	With Runway Access	10+	-	0 06	0 16	-	6	-	-
	Without Runway Access	-	-	-	0 1	-	6	-	-
Rates Determined by		N	-	N	A	N	-	A/N	N
Industrial Park Size		N	-	150	N	Y	-	40	N
Industrial Park Rates	Undeveloped Land (cts /sq ft , \$/acre)	-	-	N	-	150/acre	-	N	-
	To Occupy a Building (cts /sq ft)	-	-	N	-	-	-	N	-
	Is Land Sold or Leased	-	-	L	-	L	-	L,S	-
	On Airport	Y	Y	Y	Y	Y	Y	Y	Y
Farming Operations	Acreage	417 5	406 9	1200	578	1400	712	400	500
	Fee (\$) Paid Per Acre (or % of crop)	23 96	20	40	45	46	24 56 5 06/ton	33	10
Are Adjacent Off-Airport Businesses Allowed Aircraft Access		N	N	N	N	N	N	N	N

Improved Land With Runway Access

Numbers expressed in cents are based upon square footage, numbers expressed in dollars are based upon acres

Improved Land Without Runway Access

Same as above

Unimproved Land With Runway Access

Same as above

Unimproved Land Without Runway Access

Same as above

Rates Determined By

A= Appreciated value

N= Negotiation

R= Ordinance

O= Other method

Industrial Park Size

Y= Industrial park is on the airport

N= Industrial park is off the airport

Number= Acres of industrial park

Undeveloped Land

Industrial park rates are expressed in cents per square foot and dollars per acre

To Occupy a Building

Numbers are listed on a per square foot basis

Is Land Sold or Leased

S= Airport sells industrial park land

L= Airport leases industrial park land

Farming Operations on Airport

Y= Farming allowed on airport

N= No farming on airport

Acreage

Number of acres farmed on the airport

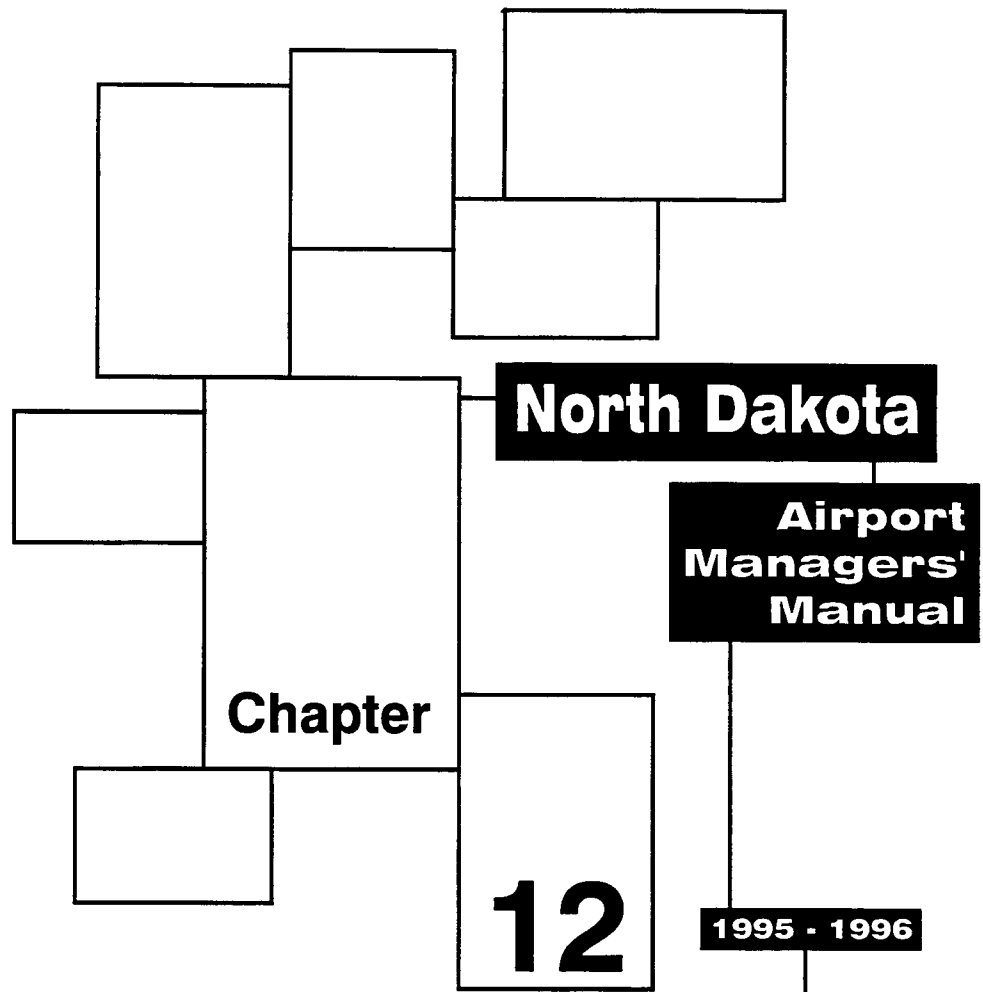
Fee Paid per Acre

A dollar amount per acre or a percentage of the crop revenue received by the airport is listed

Are Adjacent Airport Businesses Allowed Aircraft Access

Y= Yes

N= No



Minimum Standards

Introduction

This chapter provides basic information and broad guidance material to assist the owners of public airports in developing and applying minimum standards for commercial aeronautical activities on public airports. This chapter discusses minimum standards in general, explains how they are developed, and illustrates how, through proper application, they can operate to the advantage of the airport owner, the operator of a commercial aeronautical activity, and the general public. Some examples of standards are offered to suggest how their various elements may be related to aeronautical activities commonly conducted at a public airport.

Definitions

For the purposes of this chapter, the following terms are defined:

- *Minimum Standards* - The qualifications which may be established by an airport owner as the minimum requirements to be met as a condition for the right to conduct an aeronautical activity on the airport
- *Aeronautical Activity* - Any activity which involves, makes possible, or is required for the operation of aircraft, or which contributes to or is required for the safety of such operations. The following activities, commonly conducted on airports, are "aeronautical activities" within this definition: charter operations, pilot training, aircraft rental and sightseeing, aerial photography, crop dusting, aerial advertising and surveying, air carrier operations, aircraft sales and services, sale of aviation petroleum products whether or not conducted in conjunction with other included activities, repair and maintenance of aircraft, sale of aircraft parts, and any other activities which because of their direct relationship to the operation of aircraft can appropriately be regarded as an "aeronautical activity." The following are examples of what are not considered aeronautical activities: ground transportation (taxis, car rentals, limousines); restaurants; barber shops; and auto parking lots.
- *Land Use Identification Plan* - A scaled, dimensional layout of the entire airport property, indicating current and proposed usage for each identifiable segment.

Background

The owner of a public airport developed or improved with the assistance of funds administered by the FAA assumes certain responsibilities; among them are the obligations to make the airport's facilities and services available on fair and reasonable terms without unjust discrimination. The grant of an exclusive right to conduct an aeronautical activity on one of these obligated airports is specifically forbidden by law. On an airport which is not so obligated, the grant of an exclusive right should also be avoided since it limits the usefulness of the airport and deprives the using public of the benefits of competitive enterprise. Where Federal funds have been expended on an airport, the

opportunity to engage in an aeronautical activity not provided by the airport owner should be made available to any person, firm or corporation meeting standards established by the owner which are relevant to the proposed activity, reasonable, and in the public interest. The owner of a public airport can restrict the commercial use of the airport, or the solicitation of business thereon, based on nondiscriminatory standards. He may insist, in return for the privilege of conducting an aeronautical activity on the airport, that the person, firm or corporation selected must meet the standards established by the airport owner governing the quality and level of services that are offered to the public in connection with the conduct of a particular aeronautical activity on the airport. These standards must, however, be reasonable, relevant to the proposed activity, and applied objectively and uniformly.

Use of Standards

The requirements of standards imposed on those proposing to conduct an aeronautical activity on a public airport should relate primarily to the public interest. As building and sanitary codes are enacted for the protection of the local community, airport standards should be designed to protect airport patrons from irresponsible, unsafe or inadequate service. Because the cost of meeting reasonable standards must be accepted as a normal business expense, no prudent operator will undertake the investment involved unless he foresees a volume of business that has not been fully developed. Thus, the use of reasonable standards, while safeguarding the public interest, has the additional effect of preserving the stability of an established business. Proper standards discourage the unqualified for the protection of both the established operator and the public.

Need To Be Reasonable and Relevant

If an airport owner adopts qualifications and standards which are capricious, irrelevant, or unreasonable, they could have the effect of perpetuating a monopoly. Since the situation is different at each airport, it is not possible to provide rigid criteria to measure the reasonableness of standards. Each case must be evaluated on its own merits in the light of circumstances existing at that specific airport. The fairness and reasonableness of standards normally is judged against the background of general practices which have found acceptance at airports of comparable size and situation.

Combinations of Activities

A basic need at every airport is the provision of essential primary line services. Essential services include the sale of aviation fuel and oil, facilities for the tie-down or other storage of aircraft, ramp services and some capability for minor flight line repairs. It would not be unreasonable for an airport owner to insist that, as a condition for the right to engage in any of these primary services, the standards relevant to all of them be met. Except for these primary services, however, if standards for one type activity incorporate requirements which obviously relate to another, the possibility of an implied monopoly is raised. A "package" of standards which is reasonable when applied to the operator conducting a variety of activities could be unfair and discriminatory if imposed on an

operator proposing to engage in only one activity. For example, to require radio repair service to provide shop facilities for engine repair would be unreasonable, particularly so, if adequate shop facilities were already available on the airport. A distinction should be made between a "standard" imposed as a prerequisite for all operators and contractual commitments made by the individual. However, the willingness of a commercial operator to provide a variety of aeronautical activities should benefit both the airport and its patrons.

Elements

A review of standards adopted by many communities reveals a frequent reliance on the financial commitment. This is usually expressed as a requirement to lease and develop minimum acreage or building space, or as an outright minimum dollar investment. Such a requirement, to be meaningful, should be clearly connected to other specific requirements which relate directly to the aeronautical activities proposed. Some of the elements that should be incorporated into standards at most airports would require the service operator to.

- Arrange for suitable spaces, structures or facilities
- Provide adequate fixtures and equipment.
- Maintain an adequate staff of employees with skills, licenses and certificates appropriate to the activities proposed.
- Operate during specified minimum hours
- Conform to safety, health and sanitary codes.
- Show evidence of financial stability and good credit rating.
- Meet stated indemnity and insurance minimums.

Land Use Identification Plans

Land use identification plans are closely related to minimum standards. They offer a convenient and effective device for outlining the airport owner's program for development of balanced land usage. Such a plan indicates the airport owner's intention and capability to provide essential support services by allocating space for commercial aeronautical activities. To the prospective service operator the plan is evidence of the expected economic potential of the airport and it alerts him to other operations, existing or planned, which might be competitive. The plan should identify areas dedicated to aeronautical services, fuel storage, general aviation, passenger loading, air freight and cargo handling, common use aircraft parking, public automobile parking, etc; plus parcels held for future expansion. It is an advantage to have the aeronautical services area platted, for it is often useful to make reference to the plat in the grant of leasehold rights. Indeed, land use plans quite properly can be made a part of the minimum standards themselves.

Examples

The examples below illustrate how the elements of a standard may be related to some of the aeronautical activities commonly found at a public airport. These should not, however, be considered as criteria for judging the reasonableness of standards. The level of qualifications to be imposed under each standard will vary, depending on the circumstances at each individual airport. The right to offer services and commodities to the users of a public airport might reasonably be conditioned on the ability to meet any combination of the following, adjusted to suit local circumstances. But care must be taken to make the standards realistic, especially to insure that they are not so demanding that they compel the service operator to extend his investment beyond the economic potential of the airport. The following sections prepare a list of factors that should be considered related to developing minimum standards for various types of aeronautical activity.

Fuel and Oil Sales

- Suitable space in a convenient location to service the types of aircraft using the airport.
- Tank storage capacity, either above or below ground as mutually agreed upon, for a stated minimum capacity of both jet fuel and gasoline in specified grades
- Mobile and fixed pumping equipment with reliable metering devices, and of sufficient capacity to refuel the largest aircraft likely to be serviced within a specified maximum time.
- Uniformed personnel on full time duty during the stated hours, which may range up to 24 hours, seven days a week, depending on local requirements
- Demonstrated capability to perform minor repairs coupled with a requirement for tools, jacks, towing equipment, tire repair equipment, etc
- Suitable aircraft parking and tie-down areas and the demonstrated capability to efficiently and safely move aircraft to such areas and store them in compliance with local regulations.
- A requirement that the operator install adequate grounding rods at all fueling locations to eliminate the hazards of static electricity.
- Provision of energizers, starters, passenger loading steps, oxygen, compressed air and such other equipment and supplies as may be required to serve the types of aircraft using the airport.

- Availability of conveniently located, comfortably heated waiting rooms for passengers and crew members of itinerant aircraft, including sanitary rest rooms and public telephone.
- A commitment to remove snow and otherwise clean up the fueling areas, coupled with the provisions of the equipment necessary for this purpose.
- Provision of special fire detection or fire fighting equipment where justified, coupled with a commitment to have employees participate for a minimum number of hours in fire, rescue or other emergency training when provided for tenants by the airport owner.

Flight Training Activities

- The availability, on a full time basis, of personnel and equipment appropriate to the types of training planned
- The availability of a number of aircraft of specific types, compatible with the training proposed
- The provision of a minimum amount of classroom space and related rest rooms, cloak rooms and arrangements for food service
- The availability of specified minimum training equipment such as mock-ups, engine cut-aways, instrument flight trainers
- The continuing ability to meet certification requirements of the FAA (and any pertinent state or local authorities) to conduct the training proposed.

Aircraft Charter and Taxi

- Suitable arrangements for passenger shelter, rest rooms, public telephones, etc. However, where these and other convenience facilities are provided by the airport owner for public use, it would be unreasonable to require that they be duplicated by air carrier, air charter, or air taxi operators
- Satisfactory arrangements for checking in passengers, handling luggage, ticketing and ground transportation.
- An assurance of the continued availability of suitable aircraft, with qualified operating crews, located at the airport (under acceptable separate arrangements ready to depart within a specified maximum notice period.

Aircraft, Engine and Accessory Maintenance

- Specific minimum hangar, shop and storage space
- Availability of full time repairmen and mechanics in such fields as airframe and engine maintenance, electronics instruments, and others as required.
- Specified minimum equipment such as machine tools, jacks, lifts, and test centers.
- Arrangements for access to, or the provisions of, specified minimum capacity for the storage of aircraft, coupled with a requirement to remove any non-airworthy aircraft from the airport premises within a reasonable time
- Suitable facilities for washing and cleaning aircraft
- A commitment to promptly remove from the public landing area (as soon as committed by cognizant FAA authorities) any disabled aircraft; coupled with the availability of suitable tractors, tow bars, jacks, dollies and other equipment as might be needed to remove the largest type aircraft that normally could be expected.
- Provision of spaces and equipment meeting all applicable safety requirements for painting aircraft.

Crop Dusting and Spraying

- Suitable arrangements for the safe storage and containment of noxious chemical materials.
- Availability of aircraft suitably equipped for agricultural operations with adequate safeguards against spillage on runways and taxiways or dispersal by wind force to other operational areas of the airport.

Aircraft Rental and Sales

- Availability during specified hours of aircraft commensurate with the scope of the planned activity
- Sales or distributorship franchise from an aircraft manufacturer for new aircraft, or adequate sources of used aircraft.
- Suitable sales and office facilities, leased, rented or constructed on the airport property

- Satisfactory arrangements at the airport for repair and servicing of sales aircraft during the sales guarantee
- Minimum stocks of spare parts peculiar to the aircraft types for which sales privileges are granted.

Conclusion

Many communities choose to state their standards only in actual use agreements at the time they are executed. While standards can be effective in this form, it makes them vulnerable to challenge by prospective operators of aeronautical activities on the grounds that they are not objective. An airport owner can most closely approach complete objectivity by developing and publishing minimum standards before negotiating with any specific tenants. However, this is not always practicable. On occasion, a community finds it difficult to attract competent service agencies and, as an inducement, may elect to waive standards which, if applied at a later stage of airport development, might be perfectly reasonable. The owner of a public airport may quite properly increase the standards from time to time for the purpose of improving the quality of service to the public. But juggling of standards solely to protect the interest of an existing tenant would clearly be incompatible with this objective. In any event, any standard which a tenant operator is required to meet must be uniformly applicable to all operators seeking the same franchise privileges. A community may find it especially helpful to ask an FAA Airports program representative to comment on the relevance and reasonableness for standards it proposes to adopt.

A sample for an FBO at the Breckenridge-Wahpeton Interstate Airport follows.

Source. North Dakota Aeronautics Commission

APPENDIX 12-1

Minimum Standards Governing Fixed Based Operators

Sample

Breckenridge-Wahpeton Interstate Airport

SPECIAL NOTE This is a revised version of "Minimum Standards" for the consideration of the B-W Interstate Airport Authority. It was prepared to show how the problem of 'Standards' can be simplified and still attain the results that are desired.

MINIMUM STANDARDS GOVERNING FIXED BASE OPERATORS BRECKENRIDGE-WAHPETON INTERSTATE AIRPORT

PURPOSE OF MINIMUM STANDARDS

Most airports are public property. The government unit that owns the airport will usually place the management of that property in the hands of a person or a board with authority to operate the airport facility in behalf of the owner. The 'Management' -- whether it be a person or a board -- must have an understanding with those who use the airport facilities to use said facilities in a manner that is acceptable to management and the owners.

In order that all of those who use this public facility operate under the same rules and procedures, management has found it desirable and necessary to prescribe the conditions under which persons or firms can use the facilities. These are the 'Minimum Standards' that the user must be willing to observe when using the airport as what is commonly called a Fixed Base Operator.

DEFINITIONS

Fixed Base Operator: This is a person or firm that has an agreement with the airport management to use the airport facilities for the purpose of securing income for profit. The management of the B-W Interstate Airport Authority classifies the 'Fixed Base Operations' into three categories which are defined as follows:

Single Operation - A person or firm that is engaged in only one phase of the aircraft business,

Multiple Operation - A person or firm that is engaged in more than one phase of the aircraft business;

Transient Operation - A person or firm that is engaged in the aircraft business, but is a temporary user of the airport facilities for profit. Temporary in this case is not to exceed 90 days.

Categories of Aircraft Activities. The B-W Interstate Airport Authority finds that the following aircraft activities are most likely to be used on its airport

1. Aircraft Sales
2. Aircraft Rental
3. Airframe and/or Power Plant Repair and Manufacturing of Aviation Parts & Equipment
4. Specialized Commercial Flight Service
5. Flight Training
6. Fuel & Oil Dispensing Services

- 7. Air Taxi Services
- 8. Aerial Applications
- 9. Multiple

STANDARDS

Described herein are the 'Minimum Standards' that have been proposed and adopted by the B-W Interstate Airport Authority for the airport over which it has supervision. Any person or firm that seeks authority to operate a business for profit on the B-W Interstate Airport must agree in writing to observe the regulations that have been written into this document. The signature of the proper official or person on a 'B-W Interstate Airport Authority Application For Approval To Use Airport Land and/or Facilities and/or Equipment' will indicate to the Airport Authority that the applicant is willing to conform to the 'Minimum Standards' that are described herein.

Details that are not covered herein will require special consideration and action by the B-W Interstate Airport Authority. The following 'Minimum Standards' must be observed by Fixed Base Operators that wish to operate a business for profit on the B--W Interstate Airport.

SINGLE OPERATION

1. Land
 - A. 6,000 square feet
2. Building
 - A. Hangar - 2,000 square feet
 - B. Office & Classroom-300 square feet
 - C. Comply with 'Building Codes' required by the City of Wahpeton
 - D. 'Notice of Proposed Construction' must be filed with the FAA 30 days prior to the start of construction. (Forms for this purpose may be obtained from the Airport Manager)
3. Personnel
 - A. A person or persons who have required training, licenses, certificates, and ratings prescribed by the FAA, state or local governmental agency for the type of activity or activities in which the operator is engaged.

MULTIPLE OPERATION

1. Land
 - A. 20,000 square feet
2. Building
 - A. same
 - B. 500 square feet
 - C. same
 - D. same
3. Personnel
 - A. same

4. Aircraft

A. Own or have under lease in the name of the operator one airworthy and properly certificated aircraft for use in the specific activity which the person or firm is engaged in if that activity requires the use of an aircraft. If the only activity of the operation is 'Aerial Application' the aircraft must also be equipped with a 2-way VHF transceiver.

SINGLE OPERATION

5 Hours of Operation

A. The operating hours will be at the discretion of the operator, unless the activity or activities of the operation are such that regularly scheduled hours are desirable from the standpoint of providing proper service to users of the airport. This detail will then be determined by agreement between the Airport Authority and the operator.

6. Insurance Coverage

A. The lessee is required to present a letter from the FAA which states specifically the type and amount of insurance that is required for the activity or activities in which the operator will participate. Said letter is to be presented to the Chairperson of the B-W Interstate Airport Authority for filing with the operator's airport lease.

4. Aircraft

A. same
B. Multiple use can be made all aircraft except activity in "Aerial Applicator Aircraft"

MULTIPLE OPERATIONS

5. Hours of Operation

A. same

6. Insurance Coverage

A. same
B. same

B. The lessee will be required to provide evidence of proper coverage when the operation begins functioning

- 7 Miscellaneous Requirements
- A Operators whose activity or activities includes 'Aerial Applications' must provide the Airport Manager and thru him, the Airport Authority, with an acceptable explanation of how the operator expects to accomplish the following functions which are related to 'Aerial Applications' activity if the operator engages in this activity:

- (1) Chemical Storage
- (2) Loading, unloading, handling, mixing liquid spray and dusting materials
- (3) Washing, servicing, dumping of equipment.
- (4) How required governmental 'Safety Regulations' will be accomplished.

SINGLE OPERATION

B. Operators whose activity or activities include 'Aircraft Fuels and Oil Dispensing Service' must comply with the following related requirements:

- (1) Buildings, storage facilities, and equipment must meet or exceed the minimum state and/or local codes that relate to flammable materials.

- 7 Miscellaneous Requirements
- A same
- B. same

MULTIPLE OPERATIONS

(2) Fueling and servicing the aircraft must be done by a person who knows the proper procedure for such work.

(3) At least one 10,000 gallon gasoline storage tank must be provided which is new or nearly new.

(4) All gasoline shall be dispensed from electric pumps plainly marked as to cost per gallon and capable of displacing the number of gallons dispensed. All pumps shall be approved by the United Laboratories or some other agency approved by the Airport Authority.

TRANSIENT OPERATION

The most common form of 'Transient Operation' is the person or firm that uses the airport for the purpose of conducting an Aerial Application Business for a few days, weeks, or months. For this reason, the Minimum Standards that appear in this document for the Transient Operation are written especially for that type of transient activities; however, it is felt that the same standards will apply to any other type of activity that any transient might wish to operate off the facilities of the B-W Interstate Airport.

Because of the health, safety and welfare of the communities of Breckenridge and Wahpeton, and the lack of control by the Airport Authority over said operators, transient operators shall only be allowed to operate and conduct business from the B-W Interstate Airport Authority when the following conditions are met:

- 1 Present and have approved by the B-W Interstate Airport Authority the BRECKENRIDGE WAHPETON INTERSTATE AIRPORT AUTHORITY APPLICATION FOR APPROVAL TO USE AIRPORT LAND, AND/OR FACILITIES AND/OR EQUIPMENT. The Board must be given at least ten days to consider and approve the application.
2. A 'Certified Check' in the amount of \$3,000.00 shall accompany the application. This is to assure the B-W Interstate Airport Authority that the applicant is financially capable of paying

for any damages that may be caused to land, facilities, or equipment that are made available to the applicant by the B-W Airport. When the 'Transient Operation' is discontinued, the deposit will be returned to the operator less any damage or rental claim that the B-W Airport may have against the operator.

3. A rental payment of \$25.00 per day for the use of airport land, facilities, and equipment designated by the Airport Authority with minimum rental period of 10 days rent -- \$250.00 deposited in advance.
4. When the 'Transient Operator', like all other operators on the B-W Interstate Airport, signs the application to use the airport, that person or firm automatically agrees to observe all the rules and regulations that are contained in the 'Minimum Standards' document that has been adopted by the B-W Interstate Airport Authority with default provisions made applicable.
5. The standards and regulations by which the Single and Multiple Operation operate also apply to the Transient Operations have to do with the serial application of chemicals, attention is called in particular to Items 4, 6A and B, and 7A.

ENFORCEMENT

The Airport Manager shall have the power and duty to enforce these regulations, subject, however, to the requirement that he report any action taken under this provision to the Breckenridge-Wahpeton Interstate Airport Authority Chairperson and Secretary as soon as possible and to the entire authority at its next scheduled meeting. His duties include the authority to collect fees from operators as prescribed by these standards and to designate appropriate areas for the conducting of transient operations on the airport.

EFFECTIVE DATE

These revised standards shall become effective the day following their final adoption.

Adopted this 17th day of May, 1976

BRECKENRIDGE-WAHPETON INTERSTATE AIRPORT AUTHORITY

Airport Leases

13

Chapter

North Dakota

**Airport
Managers'
Manual**

1995 - 1996

The arrangements between a public agency/airport owner and those private agencies seeking to offer commodities and services at the airport are usually expressed in a contract. Since most of these contracts involve the right to occupy and use designated premises, they will generally be in the form of a lease. As in any such agreement the rental payments, terms of occupancy, privileges granted, obligations assumed, and other considerations are a matter of bargaining and negotiation between the parties. There are, however, some general principles peculiar to the airport environment which should be given careful consideration.

If the prospective tenant contemplates a substantial capital investment in hangars, fuel storage equipment, machinery, and store fixtures, etc., he will seek a relatively long term lease in order to be able to amortize his investment. It is to the advantage of the airport owner to encourage such private development and to offer sufficient tenure to induce it. On the other hand, aviation is dynamic and airports evolve and expand faster than anticipated. In leasing airport property to commercial tenants, it would be well to avoid leasing more area than is reasonably required. Similarly the granting of options (to lease land not yet needed) may well turn out to be the most regretted concession made during initial negotiations.

A commercial tenant when contemplating a substantial investment at an airport will naturally seek some form of protection from competition. The airport owner in fact may be under considerable pressure during the negotiations to lease airport premises under terms which guarantee an exclusive monopoly. If the airport is owned by a public agency, it should realize that any exclusive right to conduct an "aeronautical activity" could make the public agency ineligible for various forms of Federal assistance. Federal law prohibits the granting of an exclusive right to conduct an aeronautical activity at any airport on which Federal funds have been expended. However, there are alternate legal means of giving adequate protection to a commercial aeronautical enterprise at a public airport. Advisory Circular 150/5190-1, Minimum Standards for Commercial Aeronautical Activities on Public Airports, describes in detail how an airport owner may, and should, enforce standards of quality and levels of service, including capital equipment. Such standards are very effective in excluding marginal or irresponsible competitive operations so there should be no compelling reason to lease airport facilities on an exclusive basis. The legal prohibition against airport monopolies does not apply to non-aeronautical activities such as restaurants, taxicabs, limousines, etc.

In negotiating a lease on airport premises, it is desirable to keep in mind the nature of the rights and privileges to be conferred for the rentals or other consideration to be paid. The following describe conditions which aeronautical tenants usually seek when developing and negotiating a lease.

- The lease of specified premises for as long a term as it can
- The right to conduct at those premises a wide range of activities with as little restriction as possible.
- The rights, for itself and its customers, to use in common with others the runways, taxiway, and other public facilities of the airport

A good lease will reflect thoughtful consideration of each of these objectives

- The lease of land or specific premises should be for a term long enough to amortize the investment to which the tenant will be committed. It should be for a firm rental rate. It should clearly spell out the respective housekeeping and insurance responsibilities of each party. If renewal options are contemplated there may be provision for the airport owner to terminate the lease upon reimbursing the tenant for the unamortized value of installed improvements. Above all, the lease should be consistent with the master plan for phased airport development and land use.
- The agreement or lease should clearly identify what the tenant is permitted to do. This represents a franchise right to conduct a business of offering commodities and services to those attracted to the airport. It should cite the applicable standards, codes, or ordinances covering the exercise of the patronage at the airport. The right to use the landing area should be for a separate consideration or payment since the use made of the landing area will vary with traffic. If a landing fee or toll charge is contemplated for others, the lease should clearly indicate who may use the landing area by virtue of the tenant's payments. The payment by the tenant for use of the landing area by his aircraft and those of his customers should not be "frozen" for the duration of a long term lease to real property. Even a utility airport may someday be expanded to accept jet aircraft, and the airport owner should be free to adjust the user charge commensurate with the increased operating costs involved.

Permit required to Conduct Dusting or Spraying Business

No person, other than a fixed, established permittee shall conduct the business or spraying or dusting crops from aircraft or for pest or weed control without first having secured written permission from the Authority to do so. Said permission to be subject to the reasonable rules and regulations contained in this paragraph. For such privilege, the permittee agrees to pay the Authority a yearly fee at the time the permission is issued. This permission will expire on the last day of the last month of the year of issue.

In addition to the above minimum standards and requirements, anyone commencing or carrying the aeronautical activity of aerial crop dusting or aerial spraying shall:

1. Provide suitable and safe storage and containment of noxious chemical materials, including a suitable and safe area for the loading and unloading of such noxious chemical materials. Such suitable and safe areas shall not be in any public landing or other area at the airport.
2. Provide aircraft suitably equipped for agricultural operations with adequate safeguards against spillage on runways and taxiway, and protect against the dispersal of any noxious chemical materials to other operational areas of the airport by wind force and provide indemnification from any damages resulting from any chemical spillage or runoff created by the ag-operator or any violations of EPA or ND State Health Department regulations.

- 3 Provide the continuing ability to meet certification requirements of the Federal Aviation Administration and any pertinent state or local authorities to conduct the aerial crop dusting and aerial spraying proposed or to be carried on

* * * * *

Agreements 1 through 14 are excerpted from Negotiating Aviation Agreements, published by the National Air Transportation Association (NATA).

They are designed to provide accurate and authoritative information and are distributed with the understanding that NATA is not engaged in rendering legal, accounting, or other professional service. These sample agreements represent one approach to the situations covered and are offered for guidance only; they should not be used verbatim. Competent legal and other expert assistance should be sought by persons considering use of these sample agreements. Readers are encouraged to obtain additional Negotiating Aviation Agreements, 1981, from the National Air Transportation Association, 1010 Wisconsin Ave., N.W., Suite 405, Washington, D.C. 20007.

Agreement 1

Fixed Base Operator Lease Example

This lease and Operating Agreement (the "Agreement") entered into as of the ____ day of ____, 19__, by and between the (airport authority), a body politic and corporate created by the (public sponsor) ("Lessor"), and ____, a (state) corporation with authority to do business in the State of ____ ("Lessee")

Witnesseth

WHEREAS, Lessor now owns, controls, and operates the (Airport Name) (the "Airport") in (City) and (County), State of _____,

WHEREAS, fixed base operation services are essential to the proper accommodation of general and commercial aviation at the Airport, and

WHEREAS, Lessor desires to make such services available at the Airport and Lessee is qualified, ready, willing and able to provide such services;

NOW, THEREFORE, in consideration of the premises and the mutual covenants contained in this Agreement, the parties hereby agree as follows:

ARTICLE I**TERM**

The term of this Agreement shall be for a period of twenty-five (25) years, commencing on the ____ day of ____, 19__, and continuing through the ____ day of ____, 20__ (the "Termination Date"), unless earlier terminated under the provisions of this Agreement. Lessee shall have the option, exercisable upon at least one hundred eighty (180), but not more than three hundred sixty-five (365), days' notice to Lessor prior to the Termination Date, to extend the term of the Agreement for an additional period of ____ (____) years from and after the Termination Date, upon the same terms and conditions as are contained in this Agreement.

ARTICLE II**LEASED PREMISES**

Lessor hereby leases to Lessee, and Lessee hereby leases from Lessor, the following premises, identified and shown on Exhibit A hereto (the "Premises"), together with the right of ingress and egress for both vehicles and aircraft

A. Real Property as follows

[Legal description of real property]

B. Improvements on said real property, as follows

1 **Hangar Number 1:** An area comprising approximately ____ (____) square feet of usable space under roof

2 **Ramp and Apron Area:** An area adjacent to Hangar Number 1, comprising approximately ____ (____) square feet.

3 General Aviation Terminal:

a. An area comprising approximately ____ (____) square feet of space within the General Aviation Terminal

b. An area comprising approximately ____ (____) square feet on the ramp side of the General Aviation Terminal

c. An area comprising approximately ____ (____) square feet of space north of the General Aviation Terminal

C **Fuel Storage Area** Above and below-ground fuel storage area comprising approximately ____ (____) square feet of land containing ____ (____) ____ (____) gallon fuel tanks

For purposes of this Agreement, the term "Premises" shall include leasehold improvements constructed by Lessee pursuant to Article V of this Agreement

ARTICLE III

RIGHTS AND OBLIGATIONS OF LESSEE

A. Required Services. Lessee is hereby granted the non-exclusive privilege to engage in, and Lessee agrees to engage in, the business of providing full and complete fixed base operation services at the Airport, _____ (_____) hours per day, three hundred sixty-five (365) days per year, as follows

- 1 Aircraft ground guidance within the uncontrolled areas adjacent to the Premises, and ramp service, including sale and into-plane delivery of aviation fuels, lubricants and other related aviation products
- 2 Apron servicing of, and assistance to, aircraft, including itinerant parking, storage and tie-down service, for both based and itinerant aircraft upon or within facilities leased to Lessee or aircraft parking areas designated by Lessor
- 3 Repair and maintenance of based and transient aircraft. Lessee agrees to maintain and operate a repair station approved by the Federal Aviation Administration (the "FAA"), with ratings as follows
 - a. Engine, airframe and accessories—Classes I, II, and III
 - b. Avionics—Classes I and II

Lessee acknowledges that no right or privilege has been granted which would operate to prevent any person, firm or corporation operating aircraft on the Airport from performing service on its own aircraft, with its own regular employees, including maintenance and repair services

4 Customary accommodations for the convenience of users, including pilot lounge area, informational services, direct telephone service connections to the Flight Service Station and the United States Weather Bureau, and courtesy vehicle ground transportation to and from the Main Terminal

5 Equipment and trained personnel to remove disabled aircraft with a gross landing weight of twelve thousand five hundred (12,500) pounds or less from the Air Operations Area, and Lessee shall perform such removal service on request. As used in this Agreement, "Air Operations Area" shall mean those portions of the Airport provided and made available by Lessor for aircraft and related operations, and shall include aircraft runways, taxiways, ramps, aprons and parking spaces, and areas directly associated therewith, which are not leased by Lessee or any other tenant on the Airport

6 Sales of avionic and engine parts and instruments and accessories

B Authorized Services. In addition to the services required to be provided by Lessee pursuant to Paragraph A, above, Lessee is authorized, but not required, to provide the following services and to engage in the following activities

- 1 Ramp service at the Main Terminal or other Airport locations, including into-plane delivery of aircraft fuel, lubricants and other related aviation products, loading and unloading of passengers, baggage, mail and freight, and providing of ramp equipment, aircraft cleaning and other services for air carriers and other persons or firms
- 2 Special flight services, including aerial sight-seeing, aerial advertising and aerial photography
- 3 The sale of new and used aircraft
- 4 Flight training, including ground school
- 5 Aircraft rental
- 6 Aircraft charter operations, conducted by Lessee or a subcontractor of Lessee

C Operating Standards. In providing any of the required and/or authorized services or activities specified in this Agreement, Lessee shall operate for the use and benefit of the public and shall meet or exceed the following standards

1 Lessee shall furnish service on a fair, reasonable and non-discriminatory basis to all users of the Airport. Lessee shall furnish good, prompt and efficient service adequate to meet all reasonable demands for its services at the Airport. Lessee shall charge fair, reasonable, and non-discriminatory prices for each unit of sale of service, provided, however, that Lessee may be allowed to make reasonable and non-discriminatory discounts, rebates or other similar types of price reductions to volume purchasers

2 Lessee shall select and appoint a full-time manager of its operations at the Airport. The manager shall be qualified and experienced, and vested with full power and authority to act in the name of Lessee with respect to the method, manner and conduct of the operation of the fixed base services to be provided under this Agreement. The manager shall be available at the Airport during regular business hours and during the manager's absence a duly authorized subordinate shall be in charge and available at the Airport.

3 Lessee shall provide, at its sole expense, a sufficient number of employees to provide effectively and efficiently the services required or authorized in this Agreement

4 Lessee shall control the conduct, demeanor and appearance of its employees, who shall be trained by Lessee and who shall possess such technical qualifications and hold such certificates of qualification as may be required in carrying out assigned duties. It shall be the responsibility of Lessee to maintain close supervision over its employees to assure a high standard of service to customers of Lessee.

5 Lessee shall meet all expenses and payments in connection with the use of the Premises and the rights and privileges herein granted, including taxes, permit fees, license fees and assessments lawfully levied or assessed upon the Premises or property at any time situated therein and thereon. Lessee may, however, at its sole expense and cost, contest any tax, fee, or assessment.

6 Lessee shall comply with all federal, state, and local laws, rules and regulations which may apply to the conduct of the business contemplated, including rules and regulations promulgated by Lessor, and Lessee shall keep in effect and post in a prominent place all necessary and/or required licenses or permits.

7 Lessee shall be responsible for the maintenance and repair of the Premises and shall keep and maintain the Premises in good condition, order and repair, and shall surrender the same upon the expiration of this Agreement, in the condition in which they are required to be kept, reasonable wear and tear and damage by the elements not caused by Lessee's negligence excepted.

It is expressly understood and agreed that, in providing required and authorized services pursuant to this Agreement, Lessee shall have the right to choose, in its sole discretion, its vendors and suppliers.

D Sign. During the term of this Agreement, Lessee shall have the right, at its expense, to place in or on the Premises a sign or signs identifying Lessee. Said sign or signs shall be of a size, shape and design, and at a location or locations, approved by Lessor and in conformance with any over-all directional graphics or sign program established by Lessor. Lessor's approval shall not be withheld unreasonably. Notwithstanding any other provision of this Agreement, said sign(s) shall remain the property of Lessee. Lessee shall remove, at its expense, all lettering, signs and placards so erected on the Premises at the expiration of the term of this Agreement.

E Non-Exclusive Right. It is not the intent of this Agreement to grant to Lessee the exclusive right to provide any or all of the services described in this article at any time during the term of this Agreement. Lessor reserves the right, at its sole discretion, to grant others certain rights and privileges upon the Airport which are identical in part or in whole to those granted to Lessee. However, Lessor does covenant and agree that

1 It shall enforce all minimum operating standards or requirements for all aeronautical endeavors and activities conducted at the Airport.

2 Any other operator of aeronautical endeavors or activities will not be permitted to operate on the Airport under rates, terms of conditions which are more favorable than those set forth in this Agreement, and

3 It will not permit the conduct of any aeronautical endeavor or activity at the Airport except under an approved lease and operating agreement.

ARTICLE IV

APPURTENANT PRIVILEGES

A. Use of Airport Facilities. Lessee shall be entitled, in common with others so authorized, to the use of all facilities and improvements of a public nature which now are or may hereafter be connected with or appurtenant to the Airport, including the use of landing areas, runways, taxiways, navigational aids, terminal facilities and aircraft parking areas designated by Lessor.

B Maintenance of Airport Facilities. Lessor shall maintain all public and common or joint use areas of the Airport, including the Air Operations Area, in good repair, and shall make such repairs, replacements or additions thereto as, in its opinion, are required and necessary for the safe and efficient operation of the Airport.

C Aerial Approaches. Lessor reserves the right to take any action it considers necessary to protect the aerial approaches of the Airport against obstruction, together with the right to prevent Lessee from erecting, or permitting to be erected, any building or other structure on or adjacent to the Airport, which, in the opinion of Lessor, would limit the usefulness of the Airport or constitute a hazard to aircraft.

D Non-Competition. Lessor shall not engage directly or indirectly in any of the activities described in Paragraphs A and B of Article III of this Agreement.

ARTICLE V

LEASEHOLD IMPROVEMENTS

A Required Improvements.

1 As part of the consideration for the privileges herein granted, Lessee agrees to construct or otherwise make improvements to the Premises in an amount not less than \$_____, including all fees and costs associated therewith, but excluding the cost of tools, equipment, inventory or accessories installed or stocked on the Premises. The leasehold improvements are to include not less than _____ (_____) square feet of additional hangar space, major renovation and modification of existing office space, pilots lounge, customer service, shop and maintenance areas. Lessee agrees that it shall, within ninety (90) calendar days from the date of this Agreement, submit to Lessor, for approval, detailed plans and specifications for all of the proposed leasehold improvements. Lessor agrees that it shall either approve the plans and specifications as submitted, or transmit proposed revisions to Lessee, within thirty (30) calendar days of receipt of the plans and specifications from Lessee.

In the event that Lessor requires revisions of the original plans and specifications, Lessee shall have thirty (30) calendar days from the date of receipt of the proposed revisions to resubmit the plans and specifications for Lessor's approval. Lessor's approval of plans and specifications shall not be withheld unreasonably.

2 Upon receiving final Lessor approval of the plans and specifications, Lessee shall engage one or more qualified contractors to construct said improvements. Construction shall commence within sixty (60) calendar days of Lessee's receipt of Lessor's final approval of the plans and specifications and shall be scheduled for completion not later than one hundred eighty (180) calendar days after commencement of construction. It is agreed and understood that leasehold improvements undertaken pursuant to this provision shall become the property of Lessor upon final completion of construction.

ARTICLE VI

PAYMENTS

A. Rent and Fees. In consideration of the rights and privileges granted by this Agreement, Lessee agrees to pay to Lessor during the term of this Agreement the following:

1 **Rent.** A rental of \$_____ per annum for the Premises.

2 **Fees.**

- a. A sum of \$_____ per gallon on all aviation fuel sold by Lessee at retail, excepting federal (including military), state and municipal government contract and retail fuel and fuel used by Lessee in the operation of its business.
- b. A sum equal to _____% of the adjusted gross receipts from all businesses conducted and carried on by Lessee at the Airport. The term "adjusted gross receipts" as used in this Agreement shall mean the aggregate amount of all sales made, and services performed, for cash, on credit or otherwise, of every kind, name and nature. Adjusted gross receipts shall also include the aggregate value of all goods, wares and merchandise received for property or services, at the selling price thereof, as if the same had been sold for cash. There shall be excluded from adjusted gross receipts (i) all fuel sales, (ii) all sales of new and used aircraft, (iii) all sales to federal (including military), state and municipal government entities, (iv) federal, state and municipal sales taxes, or other similar taxes, separately stated and collected from customers, and (v) bad debts.

B Payments.

1 The rental payment specified in Paragraph A 1, above, shall be paid monthly in advance in the sum of \$_____ per month, the first payment to be made on or before the first day of thereafter during the term of this Agreement. It is understood and agreed that the rental payments specified in Paragraph A 1, above, and in the preceding sentence, may be adjusted pursuant to Paragraph G, below, and that each such adjustment shall result in a change in the annual and monthly rental payments.

2 The fees specified in Paragraph A.2, above, shall be paid to Lessor on or before the twentieth (20th) day following the end of each month throughout the term of this Agreement, together with a report of Lessee's retail fuel sales and adjusted

gross receipts during the preceding month. It is understood and agreed that the fees specified in Paragraph A 2, above, may be adjusted pursuant to Paragraph G, below, and that each such adjustment shall result in a change in the calculation of the monthly payments of fees

C Landing Fees. Lessee shall collect landing fees from aircraft using Lessee's facility in accordance with a schedule of landing fees established by Lessor. Fees so collected shall be reported and paid monthly to Lessor, less a _____% handling charge to be retained by Lessee, at the same time as the fees paid to Lessor pursuant to Paragraphs A 2 and B 2 above

D Parking Fees. Lessee shall collect aircraft parking fees, in accordance with a schedule of parking fees established by Lessor, for all aircraft parked in public parking areas adjacent to the Premises, elsewhere on the ramp or apron area adjacent to the Premises or on such areas as may be designated by Lessor from time to time. Fees so collected shall be reported and paid monthly to Lessor, less a _____% handling charge to be retained by Lessee, at the same time as the fees paid to Lessor pursuant to Paragraph A 2 and B 2, above

E Delinquency Charge. A delinquency charge of _____% per month shall be added to payments required by Paragraphs A, B, C and D, above, which are rendered more than ten (10) days delinquent.

F Place of Payment. All payments due Lessor from Lessee shall be delivered to the place designated in writing by Lessor

G Renegotiation of Rent and Fees. The rent and fees specified in Paragraphs A 1 and A 2, above, shall be renegotiated during the last six (6) months of each five (5) year period of this Agreement, the increases or decreases in the rent and fees resulting from such renegotiation to be effective as of _____, 19____, and, in the case of an extension of the term of this Agreement, as of _____, 20____.

It is understood and agreed that (1) no increase in such rental or fees shall exceed _____% of the rental or fees then being paid by Lessee hereunder, and (2) no such increases shall be required if Lessee is prohibited by law or regulation from passing such increase on to its customers

H Records. Lessee shall provide and maintain accurate records of retail fuel sales and adjusted gross receipts derived under this Agreement, and landing and parking fees collected, for a period of three (3) years from the date the record is made. Such records shall be maintained according to generally accepted accounting principles. Lessor or its duly authorized representatives shall have the right at all reasonable times during business hours to inspect the books, records and receipts of Lessee, and to verify Lessee's fuel sales and adjusted gross receipts, and landing and parking fees collected

I Annual Statement. Within sixty (60) days after the end of each calendar year, Lessee shall furnish to Lessor a statement of fuel sales and adjusted gross receipts generated, and landing and parking fees collected, during the preceding calendar year certified by an officer of Lessee as to its correctness. Lessor reserves the right to audit said statement and Lessee's books and records, including examination of the general ledger and all other supporting material, at any reasonable time during business hours, for the purpose of verifying the reported fuel sales and adjusted gross receipts, and landing and parking fees collected

If the audit establishes that Lessee has understated or overstated fuel sales or adjusted gross receipts, or landing or parking fees collected, by _____% or more, the entire expense of said audit shall be borne by Lessee. Any additional payment due from Lessee shall forthwith be paid to Lessor, with interest thereon at _____% per month from the date such amount originally became payable to Lessor. Either party may refer the results of the audit for resolution in accordance with Paragraph J, below

J Disputes. In the event that any dispute may arise as to fuel sales or adjusted gross receipts, or landing or parking fees collected, the amount claimed due by Lessor shall be paid forthwith and the dispute shall be submitted to a certified public accountant, agreeable to both parties, who shall determine the rights for the parties hereunder in conformity with generally accepted accounting principles. The fees due said accountant for such services shall be paid by the unsuccessful party, or in the event the determination is partially in favor of each party, the fee shall be borne equally by the parties

ARTICLE VII

UTILITIES

Lessee shall have the right to use the utility service facilities located on the Premises at the commencement of the term of this Agreement. In addition, should Lessee's operations require additional utility service facilities, Lessor shall, at its expense, extend such facilities to the Premises. Lessor's obligation under this provision shall be limited to utilities extended by a public utility company to Lessor's property line, and nothing herein shall obligate Lessor to provide any utility to Lessee that is not otherwise available to Lessor at its property line. Such limitation shall also include the inability of Lessor to

provide utility facilities or service due to the imposition of any limit on consumption or on the construction of additional utility facilities, or the allocation or curtailment of utility facilities or service by law or regulation.

Lessee agrees to pay the cost of all utilities. In the event Lessee fails to pay any utility bills when due, Lessor may, at its option, pay the same and collect from Lessee the amounts so disbursed, plus interest at the rate of ____% per month or fraction thereof.

ARTICLE VIII

INSURANCE

A Required Insurance. Lessee shall obtain and maintain continuously in effect at all times during the term of this Agreement, at Lessee's sole expense, the following insurance:

1 **Comprehensive general liability insurance** protecting Lessor against any and all liability by reason of Lessee's conduct incident to the use of the Premises or resulting from any accident occurring on or about the roads, driveways, or other public places, including runways and taxiways, used by Lessee at the Airport, caused by or arising out of any wrongful act or omission of Lessee, in the minimum amount of \$ _____,

2 **Passenger liability insurance** in the minimum amount of \$ _____ per seat, and \$ _____ per occurrence.

3 **Hangar keeper's liability insurance** in the minimum amount of \$ _____,

4 **Product liability insurance** in the minimum amount of \$ _____,

5 **Professional liability insurance** in the minimum amount of \$ _____, and

6 **Fire and extended coverage insurance** on all fixed improvements erected by Lessee on or in the Premises to the full insurable value thereof.

The insurance specified in Paragraphs A 2 through A 5, above, shall name Lessor as an additional insured.

B Notice. Lessor agrees to notify Lessee in writing as soon as practicable of any claim, demand or action arising out of an occurrence covered hereunder of which Lessor has knowledge, and to cooperate with Lessee in the investigation and defense thereof.

ARTICLE IX

INDEMNIFICATION

To the extent not covered by insurance carried in favor of Lessor, Lessee shall keep and hold harmless Lessor from and against any and all claims, demands, suits, judgments, costs, and expenses asserted by any person or persons, including agents or employees of Lessor or Lessee, by reason of death or injury to persons or loss or damage to property, resulting from Lessee's operations, or anything done or omitted by Lessee, under this Agreement except to the extent that such claims, demands, suits, judgments, costs and expenses may be attributed to the acts or omissions of Lessor or its agents or employees.

ARTICLE X

LESSEE AS INDEPENDENT CONTRACTOR

In conducting its business hereunder, Lessee acts as an independent contractor and not as an agent of Lessor. The selection, retention, assignment, direction and payment of Lessee's employees shall be the sole responsibility of Lessee and Lessor shall not attempt to exercise any control over the daily performance of duties by Lessee's employees.

ARTICLE XI**ASSIGNMENT**

This agreement, or any part thereof, may not be assigned, transferred or subleased by Lessee, by process or operation of law or in any other manner whatsoever, without the prior written consent of Lessor, which consent shall not be withheld unreasonably

ARTICLE XII**NON-DISCRIMINATION**

Notwithstanding any other or inconsistent provision of this Agreement, during the performance of this Agreement, Lessee, for itself, its heirs, personal representatives, successors in interest and assigns, as part of the consideration for this Agreement, does hereby covenant and agree, as a covenant running with the land, that

A. No person on the grounds of race, color, religion, sex, or national origin shall be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination in, the use of the Premises

B. In the construction of any improvement on, over or under the Premises, and the furnishing of services therein or thereon, no person on the grounds of race, color, religion, sex or national origin shall be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination,

C. Lessee shall use the Premises in compliance with all other requirements imposed by or pursuant to Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally Assisted Programs of the Department of Transportation-Effectuation of Title VI of the Civil Rights Act of 1964, and as said regulations may be amended.

D. In the even of breach of any of the above non-discrimination covenants, Lessor shall have the right to terminate this Agreement and to reenter and repossess the Premises and hold the same as if said Agreement had never been made or issued. This provision does not become effective until the procedures of 49 CFR Part 21 have been followed and completed, including expiration of appeal rights

ARTICLE XIII**REQUIREMENTS OF THE UNITED STATES**

This Agreement shall be subject and subordinate to the provisions of any existing or future agreement between Lessor and the United States, or any agency thereof, relative to the operation or maintenance of the Airport, the execution of which has been or may be required as a condition precedent to the expenditure of federal funds for the development or operation of the Airport, provided, however, that Lessor shall, to the extent permitted by law, use its best efforts to cause any such agreements to include provisions protecting and preserving the rights of Lessee in and to the Premises, and to compensation for the taking thereof, interference therewith and damage thereto, caused by such agreement or by actions of Lessor or the United States pursuant thereto

ARTICLE XIV**DEFAULT AND TERMINATION**

A. Termination by Lessee. This Agreement shall be subject to termination by Lessee in the event of any one or more of the following events

- 1 The abandonment of the Airport as an airport or airfield for any type, class or category of aircraft
- 2 The default by Lessor in the performance of any of the terms, covenants or conditions of this Agreement, and the failure of Lessor to remedy, or undertake to remedy, to Lessee's satisfaction, such default for a period of thirty (30) days after receipt of notice from Lessee to remedy the same

3 Damage to or destruction of all or a material part of the Premises or Airport facilities necessary to the operation of Lessee's business

4 The lawful assumption by the United States, or any authorized agency thereof, of the operation, control or use of the Airport, or any substantial part or parts thereof, in such a manner as to restrict substantially Lessee from conducting business operations for a period in excess of ninety (90) days

B Termination by Lessor. This Agreement shall be subject to termination by Lessor in the event of any one or more of the following events

1 The default by Lessee in the performance of any of the terms, covenants or conditions of this Agreement, and the failure of Lessee to remedy, or undertake to remedy, to Lessor's satisfaction, such default for a period of thirty (30) days after receipt of notice from Lessor to remedy the same

2 Lessee files a voluntary petition in bankruptcy, including a reorganization plan, makes a general or other assignment for the benefit of creditors, is adjudicated as bankrupt or a receiver is appointed for the property or affairs of Lessee and such receivership is not vacated within thirty (30) days after the appointment of such receiver

C Exercise. Exercise of the rights of termination set forth in Paragraphs A and B, above, shall be by notice to the other party within thirty (30) days following the event giving rise to the termination.

D Removal of Property. Upon termination of this Agreement for any reason, Lessee, at its sole expense, shall remove from the Premises all signs, trade fixtures, furnishings, personal property equipment and materials which Lessee was permitted to install or maintain under the rights granted herein. If Lessee shall fail to do so within thirty (30) days, then Lessor may effect such removal or restoration at Lessee's expense, and Lessee agrees to pay Lessor such expense promptly upon receipt of a proper invoice therefor

E Causes of Breach; Waiver

1 Neither party shall be held to be in breach of this Agreement because of any failure to perform any of its obligations hereunder if said failure is due to any cause for which it is not responsible and over which it has no control, provided, however, that the foregoing provision shall not apply to failures by Lessee to pay fees, rents or other charges to Lessor

2 The waiver of any breach, violation or default in or with respect to the performance or observance of the covenants and conditions contained herein shall not be taken to constitute a waiver of any such subsequent breach, violation or default in or with respect to the same or any other covenant or condition hereof

F Payment for Leasehold Improvements. In the event of any cancellation or termination of this Agreement, for any cause other than a breach or default by Lessee, Lessor shall, within thirty (30) days of the date of such termination or cancellation, pay Lessee, for all of the leasehold improvements installed or constructed by Lessee pursuant to Paragraph A of Article V of this Agreement, a cash price equal to Lessee's unamortized costs for said improvements. Lessee agrees that, for purposes of this provision, it shall amortize the actual direct cost of such improvements on a straight-line basis, commencing with the effective date of this Agreement and extending for the twenty (20) year term hereof

ARTICLE XV

ARBITRATION

Except as provided in Paragraph J of Article VI of this Agreement, all claims or disputes arising out of or relating to this Agreement shall be settled by arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association then obtaining. Notice of the demand for arbitration shall be filed in writing with the other party to the Agreement and with the American Arbitration Association and shall be made within a reasonable time after the claim or dispute has arisen. The award rendered by the arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof

Except by written consent of the person or entity sought to be joined, no arbitration arising out of or relating to the Agreement shall include, by consolidation, joinder or in any other manner, any person or entity not a party to the Agreement, unless it is shown at the time the demand for arbitration is filed that (1) such person or entity is substantially involved in a common question of fact or law, (2) the presence of such person or entity is required if complete relief is to be accorded in the arbitration, and (3) the interest or responsibility of such person or entity in the matter is not insubstantial

The agreement of the parties to arbitrate claims and disputes shall be specifically enforceable under the prevailing arbitration law

Pending final decision of the arbitrator or arbitrators, the parties shall proceed diligently with the performance of their obligation under this Agreement

ARTICLE XVI

MISCELLANEOUS PROVISIONS

A. Entire Agreement. This Agreement constitutes the entire understanding between the parties, and as of its effective date supersedes all prior or independent agreements between the parties covering the subject matter hereof. Any change or modification hereof must be in writing signed by both parties.

B. Severability. If a provision hereof shall be finally declared void or illegal by any court or administrative agency having jurisdiction, the entire Agreement shall not be void, but the remaining provisions shall continue in effect as nearly as possible in accordance with the original intent of the parties.

C. Notice. Any notice given by one party to the other in connection with this Agreement shall be in writing and shall be sent by registered mail, return receipt requested, with postage and registration fees prepaid.

1. If to Lessor, addressed to _____

2. If to Lessee, addressed to _____

Notices shall be deemed to have been received on the date of receipt as shown on the return receipt.

D. Headings. The headings used in this Agreement are intended for convenience of reference only and do not define or limit the scope or meaning of any provision of this Agreement.

E. Governing Law. This Agreement is to be constructed in accordance with the laws of the State of _____

IN WITNESS WHEREOF, the parties have executed this Agreement as of the day and year first above written.

LESSOR _____

By _____

Title _____

LESSEE _____

By _____

Title _____

Agreement 2

Airport Use Agreement Example (Scheduled or Commuter Airlines)

- 1 Name of the Parties
- 2 Effective Date
- 3 Term of the Lease
- 4 Leased Premises

The Lessor hereby leases to the Tenant the following described property which is a part of the (airport name) Airport, located in (city), (county) County, State of (state)

Terminal building (including office space, baggage handling area, and public lounge)

Building [No 4] (maintenance and storage)

Aircraft parking spaces

The plat map in Attachment A includes a more complete description of the property

5 Purpose

a. The tenant shall use the leased premises for the purpose of conducting its business as a(n) (scheduled, unscheduled) commercial airline and for no other purpose. The tenant shall have quiet enjoyment of the premises during the term of this lease subject only to the conditions of this lease

b. The tenant is authorized to engage in the following activities related to its operation as a commercial carrier

1 Transport, load, and unload persons, cargo, property, and mail to, from, and at the airport at convenient gate positions adjacent to the terminal building. The exact location is to be assigned by the (airport manager, OR designated fixed-base operator)

2 Install, maintain, and operate radio, communications, meteorological, and aerial navigation equipment and facilities appropriate to the Tenant's operation. The equipment and facilities must be located within the area leased by the Tenant and at locations approved by the Lessor

3 Repair, maintain, condition, service, park, and store aircraft or other aeronautical equipment in spaces allocated to the Tenant.

4 Install and maintain adequate storage facilities for gasoline, oil, and other fuel supplies at convenient locations on the leased premises. Pipes, pumps, filters, motors, and other fixtures necessary to the operation of these facilities may also be installed and maintained. These facilities and their location shall be subject to the prior written approval of the Lessor and shall meet or exceed appropriate insurance underwriter standards. These facilities shall be considered removable fixtures of the Tenant, which the Tenant may remove prior to the termination of this lease

5 Other activities reasonably necessary to the proper conduct and operation of the Tenant's principal business authorized by this lease. The tenant shall not conduct a separate business of any kind on the leased premises, including an automobile parking lot or the use of its space for the sale of air travel insurance, public restaurants, or merchandising operations

6 Access to Airport Facilities

a. The Tenant may use, in common with others, existing and future aeronautical facilities at the airport. This shall include, but not be restricted to, the landing area, its extension and additions, roadways, aprons, taxiways, public air navigation facilities such as radio aids, beacons, control towers, signals, floodlights, landing lights, and all other conveniences now or hereafter provided for flying, landing, and taking off of aircraft.

b. The Tenant shall have full and unrestricted access to and egress from those areas of the airport occupied by the Tenant. This privilege shall extend to employees, business visitors, guests, and invitees of the Tenant

7 Rental Fee

The Tenant agrees to pay the Lessor the following rental fees and charges due and payable within ten (10) days after the receipt of a statement from the Lessor. The payment for the use of the leased premises, airport facilities, and other privileges granted by this lease shall be an activity fee based on the scheduled trip arrivals at the airport as follows

Alternative A Sliding Scale Method

For each scheduled trip arrival for each extra flight, charters or other trips, \$_____ per landing

The timetable of the Tenant in effect on the first day of each month shall be the sole basis for determining the number of such scheduled trip arrivals during such month and (no) account shall be taken of scheduled changes made during the month, actual number of trip arrivals during the month, flight cancellations, extra sections flown, charter or other flights [If account is to be taken of these variables, the following language is suggested: If during a calendar month any flight is added to the scheduled service of the Tenant airline, an additional fee computed in accordance with the foregoing shall be payable covering the remaining portion of the calendar month, or if the flight is discontinued, the Tenant airline in making its next regular monthly payment of landing fees may take credit for the overpayment resulting from the flight being taken off (or the Lessor at its option may refund the overpayment directly to the airline involved). Except for a flight added to the scheduled operations of an airline, landing fees shall be paid on the basis of either (a) All landings indicated in the schedule or timetable of the Tenant air carrier as of the first day of the calendar month, or (b) The total number of actual revenue landings made during the calendar month, whichever is the greater.]

Each airline shall, on or immediately prior to the first day of each calendar month, furnish the (airport manager OR fixed base operator) at the _____ Airport a true copy of its schedule of flights then in effect and shall on the last day of each month or within five (5) days thereafter, furnish him a correct statement of (a) flights added to or taken off the schedule during the month just past, and the date of such changes, and (b) flights cancelled or of planes added to any scheduled flights during each month including charter flights and/or sections. All fees and rentals adjusted in accordance with the above shall be on a pro-rata basis. The foregoing activity fee shall be applicable to all scheduled trip arrivals flown with types of aircraft, the licensed standard gross weight of which is from _____ pounds to _____ pounds, inclusive. On any scheduled trip arrival in which Tenant operates a type of aircraft having a licensed trip arrival shall be as set forth more than _____ pounds, the monthly fee for that scheduled trip arrival shall be as set forth in the following table:

For each 1,000 pounds licensed standard gross weight above _____ pounds

Between _____ and _____ inclusive

_____ each 1,000 pounds

Between _____ and _____ inclusive

_____ each 1,000 pounds, etc

The term "licensed standard gross weight" for any transport aircraft, as used herein, shall be the maximum take-off gross weight of such aircraft as determined by the Aircraft Certificate of Airworthiness.

In the event that more than one type of aircraft is operated on a scheduled trip arrival on different days during the month, the licensed standard gross weight of the type of aircraft operated the greatest number of days during the month on such scheduled trip arrival shall be the licensed standard gross weight applicable to such scheduled trip arrival for the entire month.

OR

Alternative B: Weight Frequency Method

The Tenant agrees to pay the Lessor the following rentals, fees, and charges payable monthly in advance within ten (10) days after receipt of a statement from the Lessor. The payment for the use of the premises, facilities, rights, licenses, services, and privileges granted hereunder, shall be an activity fee based on Tenant's scheduled trip arrivals at the Airport as follows:

A use fee at the rate of _____ cents per 1,000 pounds or fraction thereof of gross landing weight, said charge to be made for each scheduled trip arrival as the term is hereinafter defined. The term "scheduled trip arrival" as used herein means each landing and take-off of one airplane according to the regular schedule of the airline. The foregoing use fees shall be paid to _____ at _____ on or before the tenth (10th) day of each month in advance for the month then current.

All landings and take-offs which are contained in the timetables of the Tenant airline on the first day of the calendar month shall be considered as coming within the above definition, and all landings and take-offs either published in the same timetable or not which form part of the regular service of the Tenant airline to the public at large shall also be considered as coming within the above definition, it being the intention to exclude from the operation and scope of the foregoing provision only non-revenue flights of the Tenant. The term "landing weight" as used above in providing the basis for the computation of such landing fees shall be the maximum certificate gross landing weight of the airplane involved in accordance with its certification as related to the _____ Airport by the Federal Aviation Administrator.

If, during a calendar month, any flight is added to the scheduled service of the airline, an additional fee computed in accordance with the above shall be payable covering the remaining portion of the calendar month, or, if the flight is discontinued, the airline, in making its next monthly payment of landing fees, may take credit for the overpayment resulting from the flight being taken off (or the Lessor at its option may refund the overpayment directly to the Tenant). Except for

flights added to the scheduled operations of an airline, landing fees shall be paid on the basis of either (a) all landings indicated in the schedule or timetable of the air carrier as of the first day of the calendar month, or (b) the total number of actual revenue landings made during the calendar month, whichever is the greater

Tenant shall, on or immediately prior to the first day of each calendar month, furnish the (airport manager OR designated fixed-base operator) at the _____ Airport a true copy of their schedule of flights then in effect and shall on the last day of each month or within five (5) days thereafter, furnish a correct statement of (a) flights added to or taken off the schedule during the month just past, and the date of such change, and (b) flights cancelled or planes added to any scheduled flights during such month including charter flights and/or second sections. (Optional) Tenant shall be entitled to quantity discounts from the established landing fees in accordance with the following table of discounts:

(1) For the first _____ pounds of gross landing weight during calendar month, _____ no discount

(2) For weight between _____ pounds and _____ pounds of gross landing weight during a calendar month, _____ % discount from the established landing fees.

- 8 Delinquencies
- 9 Default
- 10 Bankruptcy
- 11 Utility Service
- 12 Maintenance and Repairs
- 13 Advertising Signs
- 14 Insurance
- 15 Damage or Destruction of Structures by Fire or Other Casualty
- 16 Alterations to the Premises
- 17 Inspections
- 18 Exclusive Use
- 19 Sublease
- 20 Agreement of Lessor with the United States
- 21 National Emergency
- 22 Rules
- 23 Personal Property Taxes
- 24 Service Standards
- 25 Condemnation
- 26 Termination of the Lease
- 27 Assignability
- 28 Conflict of Interest
- 29 Severability
- 30 Waiver
- 31 Notices

IN WITNESS WHEREOF, the parties have hereunto subscribed their names this _____ day of _____, 19____

By _____
(lessor)

Acknowledgement

By _____
(tenant)

Agreement 3

Concession Agreement

(e.g., aviation fuel, restaurant, rental cars)

- 1 Name of the parties
- 2 Effective Date
- 3 Term of the Lease and Renewal
- 4 Leased Premises

The Lessor hereby leases the Tenant the following described premises, which are a part of the _____ Airport located in _____ County, State of _____ (description of premises) _____

The plat map in Attachment A includes a more complete description of the property

5 Purpose

a. The Tenant shall use the leased premises to sell and dispense _____ at reasonable times to persons and aircraft using the facilities of the airport. The Tenant shall have quiet enjoyment of the premises during the term of this lease subject only to the conditions of this lease.

b. The Tenant may engage in activities reasonably necessary to the proper conduct and operation of the Tenant's business. The Tenant shall not conduct a separate business of any kind on the leased premises.

c. The Tenant shall fix rates and charges comparable with other airports of similar size in the State of _____. In the event of a dispute concerning the reasonableness of the rates and charges, the Lessor shall make all final determinations. Competent attendants shall be provided at the Tenant's expense.

6 Rental Fee

a. The Tenant shall pay to the Lessor a minimum annual guarantee in the sum of _____ dollars (\$_____) or _____ percent (____%) of its gross receipts, whichever is greater.

The term "gross receipts" shall be construed to mean the aggregate amount of all transactions made on, in or from the leased premises for cash, credit, or otherwise, regardless of whether or not paid. Any and all taxes as fees collected by the Tenant on behalf of any governmental body is excepted.

b. The Tenant shall on or before the 15th day of each calendar month pay for the use of the leased premises during the previous month and the attendant rights and privileges granted by the Lessor according to the terms hereinafter set forth, by submitting to the Lessor a statement showing its gross receipts for such calendar month, as such term is defined above, and by remitting the required rental with such statement. Such statement shall show such reasonable detail and break-down as may be required by the Lessor, but Lessor shall not be bound by an presumption as to the correctness of such statement.

Should the minimum annual guarantee as divided by twelve months exceed the amount which is to be paid by the Tenant during each month under the provisions set forth above, then such minimum annual guarantee as divided by twelve months shall be paid on or before the 15th day of each calendar month for the use during the previous month of the Leased Premises during the term of this Lease instead of the required percentage of gross receipts as set forth above.

At the end of each lease year a review shall be made of the payments made during the previous twelve months. Should the Tenant have paid more than the greater of the minimum annual guarantee or ten percent (10%) of the gross receipts for the entire lease year then the necessary credit shall be given to the Tenant by applying such to the next monthly payment or succeeding payments, or, if the entire term of the Lease shall be terminated, then any necessary credit shall be paid to the Tenant within sixty (60) days of the termination date of this lease. The first lease year shall begin on _____ and each lease year shall extend from _____ to _____ of the following calendar year.

Should this lease terminate or be terminated at any time other than at the end of the lease year, the minimum rental for the lease year in which such termination occurs shall be that portion of the minimum rental stated in this lease represented by a fraction of which the denominator shall be 365 and the number shall be the number of days of such lease year which shall have elapsed to the effective date of such termination.

c. At the end of each lease year the Tenant shall provide a statement of gross receipts, as defined above, certified by an officer of the firm to be correct. The statement shall be subject to audit by the Lessor. If the audit discloses a difference of more than five percent (5%) then the Tenant shall pay for the audit and the Lessor terminate the lease within the next thirty (30) days.

OR

The Tenant agrees to pay the Lessor the total sum of _____ dollars (\$_____) in equal monthly installments due and payable in advance on the first day of each month after the effective date of this lease. The annual rental is based on the following schedule of unit charges for the facilities and realty so leased:

Land Area \$_____ per square foot annually

Building Area \$_____ per square foot annually

Office or Counter Area \$_____ per square foot annually

- 7 Surety Bond
- 8 Access to Airport Facilities
- 9 Delinquencies
- 10 Default
- 11 Bankruptcy
- 12 Utility Service
- 13 Maintenance and Repairs
- 14 Advertising Signs
- 15 Insurance
- 16 Damage or Destruction of Structures by Fire or Other Casualty
- 17 Alterations to the Premises
- 18 Inspections
- 19 Exclusive Use
- 20 Sublease
- 21 Agreement of Lessor with the United States
- 22 National Emergency
- 23 Rules
- 24 Personal Property Taxes
- 25 Service Standards

The Tenant agrees

- a To furnish good, prompt, and efficient services adequate to meet all demands for its service
 - b To furnish said service on a fair, equal, and nondiscriminatory basis to all users thereof
 - c To charge fair, reasonable, and nondiscriminatory prices for each unit, sale, or service, except for reasonable and nondiscriminatory discounts, rebates, or other similar types of price reductions to volume purchasers
 - d To comply with federal or state regulations concerning nondiscrimination in employment now in existence or hereafter promulgated, to comply with rules and regulations of the airport governing body
- 26 Condemnation
 - 27 Termination of the Lease
 - 28 Assignability
 - 29 Conflict of Interest
 - 30 Severability
 - 31 Waiver
 32. Notices

IN WITNESS WHEREOF, the parties have hereunto subscribed their names this _____ day of _____, 19____

By _____
(lessor)

Acknowledgement

By _____
(tenant)

Agreement 4

Airport Facilities Lease with Tenant Who Is Not a Fixed Base Operator

1 Name of the Parties

2 Effective Date

3 Term of the Lease and Renewal

4 Leased Premises

a. The Lessor hereby leases to the Tenant the following described premises which is a part of the _____ Airport located in _____, _____ County, State of _____, _____ square feet of (office, industrial) space located in building number(s) _____ as shown in the plat map in Attachment A.

The tenant shall be entitled to use _____ parking spaces at a location near the leased premises

5 Purpose

a. The Tenant shall use the leased premises for the purpose of conducting its business of _____. The Tenant is granted the exclusive use of the leased premises for the purpose of conducting the Tenant's principal business authorized by this lease. The Tenant shall not conduct a separate business of any kind on the leased premises

6 Access to Airport Facilities

7 Rental Fee

The Tenant agrees to pay the Lessor the total annual sum of _____ (\$_____) in equal monthly installments of _____ dollars (\$_____) due and payable in advance on the first day of each and every month after the effective date of this lease. The rent is calculated at the rate of _____ dollars (\$_____) per square foot per year

8 Delinquencies

9 Default

10 Bankruptcy

11 Utility Service

12 Maintenance and Repairs

a. The Tenant shall repair damage to water pipes caused by freezing or due to neglect, keep the premises clean, repair or replace broken windows, maintain in operation, equip and supply restrooms, electrical fixtures, and outlets on the premises, and maintain all water and sewer lines on the leased premises

b. The Lessor shall maintain the runways, taxiways, aprons, grass areas, building exteriors, and heating equipment, and furnish electrical equipment and materials for field lighting

13 Advertising Signs

14 Insurance

15 Damage or Destruction of Structure by Fire or Other Casualty

16 Alterations to the Premises

17 Inspections

18 Exclusive Use

19 Sublease

20 Agreement of Lessor with the United States

21 National Emergency

22 Rules

23 Personal Property Taxes

24 Nondiscrimination

The Tenant hereby agrees and warrants that in the performance of this agreement it will not discriminate or permit discrimination against any person or group of persons on the grounds of race, color, sex, age, religion or national origin in any manner prohibited by the rules, regulations, orders or laws of the United States or the State of _____, or any agency or regulatory authority thereof

25 Condemnation

26 Termination of the Lease

- 27 Assignability
- 28 Conflict of Interest
- 29 Severability
- 30 Waiver
- 31 Notices

If this agreement is a sublease, include the following provision

Compliance with the Original Lease

The Tenant shall not cause or allow any undue waste on the premises and shall comply with all applicable laws and ordinances respecting the use and occupancy of the premises relating to matters not covered elsewhere in this sublease, provided that the Tenant shall not be required to make any alterations, additions, or improvements to the premises in order to conform with this sublease

The Tenant shall perform and observe the terms and conditions to be performed on the part of the Lessor under the provisions of the original lease between Lessor and the (City, County) of _____, attached hereto and made a part hereof as Attachment A, excepting the covenant for the payment of rent reserved thereby, and to indemnify the Lessor against all claims, damages, costs, and expenses in respect to the nonperformance or nonobservance of any such terms or conditions. The Lessor or the (City, County) shall have the right to enter the leased premises at reasonable times to make repairs, replacements or alterations to the premises

Consent to Sublease

The undersigned hereby consent to the foregoing sublease agreement.

By _____

(City, County)

Attest _____

Agreement 5

Hangar/Tie-Down Lease**1 Name of the Parties**

This agreement, made this ____ day of _____, 19__, by and between _____, hereinafter called the Lessor, and _____, hereinafter called the Tenant

The parties agree as follows

In consideration of the payment of \$____, payable on the first day of each month, the Lessee agrees to let, on a month-to-month basis, the hangar, T-hangar, or field storage lot described as follows _____

The leased premises shall be used for the following purpose(s) _____

The lease shall be subject to the verification of the following conditions and covenants _____

Description of plane(s) _____

Registered owner _____

Home telephone: _____

Name and address of Tenant's aircraft insurer _____

Telephone number _____

Type of insurance and policy number _____

The Tenant covenants with the Lessee as follows

1 To notify airport, in writing, within ____ days of any change in the information furnished above
2 To abide by all rules and regulations of the Federal Aviation Administration, State of _____, (City, County) of _____, governing body of (airport), and of all other duly constituted public authorities having jurisdiction

3 Tenant shall not sublet or furnish to any other person any office, hangar, T-hangar, storage space, field storage privilege, or any other right or privilege in or on any airport property without the written consent of airport manager

4 Tenant agrees to accept all facilities on the leased premises on an "as is" basis, further, airport hereby disclaims, and Tenant accepts such disclaimer, of any warranty, either express or implied of the condition, use, or fitness of the tie-down rings, ropes or chains used to secure airplanes, and owner assumes full responsibility to furnish any equipment necessary to properly secure its aircraft

5 Tenant accepts and recognizes that it or its agents are responsible for setting parking brakes, placing chocks and tying down and checking of their own aircraft

6 Tenant further covenants and agrees that it will not hold the (City, County) of _____ or any of its agents, employees, or airport commission members responsible for any loss occasioned by fire, theft, rain, windstorm, or hail, whether said cause be the direct, indirect, or merely a contributing factor in producing the loss to any airplane, automobile, personal property, parts or surplus that may be located or stored in the hangars, T-hangars, offices, aprons, field, or any other location at airport, and Tenant agrees that the planes, and their contents are to be stored, whether on the field or in the hangars, at Tenant's risk.

7 Tenant agrees to indemnify, defend and save airport, its agents, officers, representatives, and employees, harmless from and against any and all liability or loss resulting from claims or court action arising directly or indirectly out of the activities of the Tenant, its agents, servants, guests or business visitors under this agreement or by reason of any act or omission of such person

8 Tenant hereby gives and grants to airport a lien upon, and pledges as collateral to the airport in case of default, all fixtures, chattels and personal property of every kind and description now or hereafter to be placed, installed or stored by the Tenant at airport; and agrees that in the event of any failure on the part of the Tenant to comply with each and every one of the covenants and obligations hereof, or in the event of any default continuing for ____ days of any specified rent, airport may take possession of and sell the same in any manner provided by law and may credit the net proceeds upon any

indebtedness due, or damage sustained by airport, without prejudice to further claims thereafter to arise under the terms hereof

9 Lessor shall have the right to terminate this agreement at any time with or without cause on delivery of written notice to the Tenant at his last known address and upon refunding to the Tenant a pro rata amount of the storage charges provided for the unexpired portion of the month following the date of such termination, and upon such termination lessee shall immediately remove said airplanes from airport.

10 Lessor shall have the right to enter said premises at any time for inspection or to make repairs, additions or alterations as may be necessary for the safety, improvement, or preservation of the leased premises.

11 Flying club tenants do further agree to provide the Lessor with an up-to-date list of the names of all members of said club on the 1st day of January and July of each year in which they operate at airport.

12 Tenant agrees to pay in addition to the rent provided for herein all personal property taxes and any other taxes which tenant may be required by law to pay

13 Lessor hereby acknowledges receipt of a copy of this agreement and a copy of the rules and regulations of airport, said rules and regulations being specifically incorporated by reference as though fully set forth herein, and Tenant agrees that it shall be bound thereby.

14 Notices

Any notices desired or required to be served by either the Lessee or Tenant upon the other may be served by depositing the notice in registered United States mail in a sealed envelope, postage prepaid, addressed as follows

Tenant _____

Lessor _____

or to any other person or address as may be designated by the parties

IN WITNESS WHEREOF, the parties have hereunto subscribed their names this _____ day of _____, 19__

By _____
(lessor)

Acknowledgement

By _____
(tenant)

Agreement 6

Lease of Excess Land for Farming

1 Name of the Parties

This Agreement, made this _____ day of _____, 19____, by and between the (city/county) of _____, State of _____, hereinafter called the Lessor, and _____, hereinafter called the Tenant.

The parties agree as follows

2 Effective Date

3 Term of the Lease and Renewal

4 Leased Premises

The Lessor hereby leases to the Tenant the following described premises which are a part of the _____ Airport located in _____, County, State of _____ (description of premises) _____

The plat map in Attachment A includes a more complete description of the property

5 Purpose

The leased premises shall be used by the Tenant solely for the purpose of farming or grazing livestock and for no other purpose whatsoever. The Tenant shall not erect any structures on the leased premises without the prior written consent of the Lessor

6 Rental Fee

The Tenant agrees to pay the Lessor the total annual sum of _____ dollars (\$_____) in equal monthly installments of _____ (\$_____) and payable in advance on the first day of each and every month after the effective date of this lease

7 Delinquencies

8 Default

9 Bankruptcy

10 Sublease

11 Agreement of Lessor with the United States

12 National Emergency

13 Personal Property Taxes

14 Condemnation

15 Termination of the Lease

16 Assignability

17 Conflict of Interest

18 Severability

19 Waiver

20 Notices

IN WITNESS WHEREOF, the parties have hereunto subscribed their names this _____ day of _____, 19____

By _____
(city/county)

Acknowledgement

By _____
(tenant)

Agreement 7

Lease to the City or County for an Off-Airport Site**1 Name of the Parties**

This Agreement, made this _____ day of _____, 19____, by and between _____ hereinafter called the Lessor, and the (city/county) of _____, State of _____, hereinafter called the Tenant

The parties agree as follows

2 Effective Date**3 Term of the Lease and Renewal****4 Leased Premises**

The Lessor hereby leases to the Tenant the following described premises located in _____, _____ County, State of _____
(description of premises)

The plat map in Attachment A includes a more detailed description of the property

5 Purpose

a. The leased premises shall be used by the Tenant to construct, maintain, and operate (approach lighting, ILS, NDB, or VOR) facility(ies) (ies)

b. The Tenant shall have the right to construct, at the Tenant's expense, structure(s) to house equipment appropriate for the facility's purpose. The outside dimensions at grade level shall be no greater than _____ (length) _____ feet by _____ (width) _____ feet. The maximum height above grade level shall be _____ feet. Such structure(s) shall be considered removable fixtures, which the Tenant may remove prior to the termination of this lease

6 Rental Fee

The Tenant agrees to pay the Lessor the total annual sum of _____ dollars (\$_____) in equal monthly installments of _____ dollars (\$_____) due and payable in advance on the first day of each and every month after the effective date of this lease

7 Access to Facilities

The Tenant shall have reasonable access to and egress from those areas occupied by the Tenant in order to maintain, operate, or repair the Tenant's facility

8 Sublease**9 Personal Property Taxes**

The _____ shall pay all fees, licenses, or taxes upon the leased premises and any improvements there on

10 Assignability**11 Conflict of Interest****12 Severability****13 Waiver****14 Notices**

IN WITNESS WHEREOF, the parties have hereunto subscribed their names this _____ day of _____, 19____

By _____
(city/county)

Acknowledgement

By _____
(tenant)

Agreement 8

Weather Bureau Lease

STANDARD FORM 2
GEN SERV ADM.

U S GOVERNMENT
LEASE FOR REAL PROPERTY

Date of Lease _____

Lease No. _____

THIS LEASE, made and entered into this date by and between _____
(governing body) _____, _____ (city/county) _____, _____ (state) whose address is
_____, _____ (city, state, zip)

and whose interest in the property hereinafter described is that of _____ (Lessor),
hereinafter called the Lessor, and the UNITED STATES OF AMERICA, hereinafter called the Government
WITNESSETH: The parties hereto for the consideration hereinafter mentioned, covenant and agree as follows

1 The Lessor hereby leases to the Government the following described premises _____

[For example, see Attachment a]

2 TO HAVE AND TO HOLD the said premises with their appurtenances for the term beginning on _____
through _____, subject to termination and renewal rights as may be hereinafter set forth

3 The Government shall pay the Lessor annual rent of \$ _____ at the rate of \$ _____ per month in arrears. Rent for
a lesser period shall be prorated. Rent checks shall be made payable to (_____), Lessor. Payment is contingent upon
the passage of an appropriation by the Congress from which expenditures thereunder may be made, and the United States
shall not be obligated upon failure of Congress to so appropriate

4 The Government may terminate this lease at any time by giving at least _____ days' notice in writing to the Lessor and
no rental shall accrue after the effective date of termination. Said notice shall be computed commencing with the day after
the date of mailing

5 This lease may be renewed at the option of the Government, for the following terms and at the following rentals
_____ Dollars (\$ _____) per annum and otherwise upon the terms and conditions herein
specified, PROVIDED, that no renewal shall extend the period of occupancy of the premises beyond the _____ day of
_____, 19____, and, provided notice be given in writing to the Lessor at least _____ (____) days before the end
of the original lease term or any renewal term, all other terms and conditions of this lease shall remain the same during any
renewal term. Said notice shall be computed commencing with the day after the date of mailing

6 The Lessor shall furnish to the Government, as part of the rental consideration, the following

7 The following are attached and made a part hereof: Attachment A and Attachment B, The General Provisions,
Certification & Instructions

8 The following changes were made in this lease prior to its execution _____

[For example, see Attachment A]

9 *Interior Painting Leased Premises* The Lessor shall accomplish interior repainting of the leased premises after
five years' occupancy by the Government in the leased premises and under this lease or any renewal thereof. All painting
shall be accomplished by the Lessor using a washable paint of the Lessor's choice

10 *Restoration:* The Lessor and the Government hereby agree that, upon termination of the Government's occupancy
of leased premises, there will be no obligation on the part of the Government to restore or rehabilitate the property of the
Lessor. It is further agreed that the Government may abandon in place any or all structures or equipment installed in and
upon said leased premises by the Government during its tenure. Notice of abandonment of any of the Government's property
shall be, in writing, to the Lessor by the Procurement Officer

11 *Vehicle Parking Area.* The Lessor shall provide, free of charge, parking spaces for Government-owned vehicles. The Lessor further agrees to provide parking spaces in close proximity to the National Weather Service Building for NWS employees actually working within the leased premises.

12 *Termination Privilege.* Failure on the part of the Lessor to maintain the facility in good repair and tenantable condition shall entitle the Government to exercise the termination privilege included in this contract.

13 *Relocation or Removal of Facilities.* If at any time during the period of this lease or any renewal thereof, the Lessor desires to change the location of sites furnished the Government pursuant to this agreement, or the Lessor changes or modifies his facilities (runways and other areas) in such a manner so as to adversely affect or render useless Weather Service equipment, facilities, and/or their related power, control or signal lines, any expenses for repair, or for removal of facilities and installation of equivalent facilities at any other site agreeable to the Government shall be at the expense of the Lessor.

14 *Renegotiation.* It is agreed the Lessor shall have the privilege of renegotiating the basic rental rate of this lease at the end of seven (7) years, in order to reflect changes in the fair market value.

IN WITNESS WHEREOF, the parties hereto have hereunto subscribed their names as of the date first above written.

LESSOR (governing body) _____ city/county, _____ state _____

BY _____

(Signature)

(Signature)

IN PRESENCE OF _____

(Signature)

(Address)

UNITED STATES OF AMERICA, Dept. of Commerce,
NOAA, National Weather Service

BY _____

(Signature)

(Official Title)

Attachment A

1 Approximately 2,400 net usable sq. ft. of space in the National Weather Service Bldg, _____ (county) Municipal Airport, _____ (city, state) and roof and/or ground space as may be mutually agreed upon by both parties hereto, for installation of instrumental equipment with cable connections thereto, which space shall be readily and conveniently accessible at all times

to be used for

office quarters and uses incidental thereto

8 The words "heirs, executors, administrators" were deleted from Paragraph 16 of SF 2-A

Attachment B**GENERAL PROVISIONS, CERTIFICATION AND INSTRUCTIONS****General Provisions****1. SUBLETTING THE PREMISES**

The Government may sublet any part of the premises but shall not be relieved from any obligations under this lease by reason of any such subletting

2. MAINTENANCE OF PREMISES

The Lessor shall maintain the demised premises including the building and any and all equipment, fixtures, and appurtenances, furnished by the Lessor under this lease in good repair and tenantable condition, except in case of damage arising from the act or the negligence of the Government's agents or employees. For the purpose of so maintaining said premises and property, the Lessor may at reasonable times, and with the approval of the authorized Government representative in charge, enter and inspect the same and make any necessary repairs thereto

3. DAMAGE BY FIRE OR OTHER CASUALTY

If the said premises be destroyed by fire or other casualty this lease shall immediately terminate. In case of partial destruction or damage so as to render the premises untenable, as determined by the Government, the Government may terminate the lease by giving written notice to the Lessor within fifteen (15) days thereafter; if so terminated, no rent shall accrue to the Lessor after such partial destruction or damage, and if not so terminated the rent shall be reduced proportionately by supplemental agreement hereto effective from the date of such partial destruction or damage

4. ALTERATIONS

The Government shall have the right during the existence of this lease to make alterations, attach fixtures and erect additions, structures or signs in or upon the premises hereby leased, which fixtures, additions, or structures so placed in, upon or attached to the said premises shall be and remain the property of the Government and may be removed or otherwise disposed of by the Government.

5. CONDITION REPORT

A joint physical survey and inspection report of the demised premises shall be made as of the effective date of this lease, reflecting the then present condition, and will be signed on behalf of the parties hereto

6. COVENANT AGAINST CONTINGENT FEES

The Lessor warrants that no person or selling agency has been employed or retained to solicit or secure this lease upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the Lessor for the purpose of securing business. For breach or violation of this warranty the Government shall have the right to annul this lease without liability or in its discretion to deduct from the rental price or consideration, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee (Licensed real estate agents or brokers having listings on property for rent, in accordance with general business practice, and who have not obtained such licenses for the sole purpose of effecting this lease, may be considered as bona fide employees or agencies within the exception contained in this clause)

7 OFFICIALS NOT TO BENEFIT

No Member of or Delegate to Congress, or Resident Commissioner shall be admitted to any share or part of this lease contract, or to any benefit that may arise therefrom, but this provision shall not be construed to extend to this lease contract if made with a corporation for its general benefit.

8 ASSIGNMENT OF CLAIMS

Pursuant to the provisions of the Assignment of Claims Act of 1940, as amended (31 U.S.C. 203, 41 U.S.C. 15), if this lease provides for payments aggregating \$1,000 or more, claims for monies due or to become due the Lessor from the Government under this contract may be assigned to a bank, trust company, or other financing institution, including any Federal lending agency, and may thereafter be further assigned or reassigned to any such institution. Any such assignment or reassignment shall cover all amounts payable under this contract and not already paid, and shall not be made to more than one party, except that any such assignment or reassignment may be made to one party as agent or trustee for two or more parties participating in such financing. Notwithstanding any provisions of this contract, payments to an assignee of any monies due or to become due under this contract shall not, to the extent provided in said Act, as amended, be subject to reduction or set-off.

9 EQUAL OPPORTUNITY CLAUSE

(The following clause is applicable unless this contract is exempt under the rules, regulations, and relevant orders of the Secretary of Labor (41 CFR, ch. 60))

During the performance of this contract, the Contractor agrees as follows

(a) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to, the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation, and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Contracting Officer setting forth the provisions of this Equal Opportunity clause.

(b) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(c) The Contractor will send to each labor union or representative or workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency Contracting Officer, advising the labor union or workers' representative of the Contractor's commitments under this Equal Opportunity clause, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(d) The Contractor will comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(e) The Contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(f) In the event of the Contractor's noncompliance with the Equal Opportunity clause of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended, in whole or in part, and the Contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(g) The Contractor will include the provisions of paragraphs (a) through (f) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as

a means of enforcing such provisions, including sanctions for noncompliance *Provided, however,* That in the event the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the Contractor may request the United States to enter into such litigation to protect the interests of the United States

10 FACILITIES NONDISCRIMINATION

(a) As used in this section, the term "facility" means stores, shops, restaurants, cafeterias, restrooms, and any other facility of a public nature in the building in which the space covered by this lease is located

(b) The Lessor agrees that he will not discriminate by segregation or otherwise against any person or persons because of race, color, religion, sex, or national origin in furnishing, or by refusing to furnish, to such person or persons the use of any facility, including any and all services, privileges, accommodations, and activities provided thereby. Nothing herein shall require the furnishing to the general public of the use of any facility customarily furnished by the Lessor solely to tenants, their employees, customers, patients, clients, guests and invitees.

(c) It is agreed that the Lessor's noncompliance with the provisions of this section shall constitute a material breach of this lease. In the event of such noncompliance, the Government may take appropriate action to enforce compliance, may terminate this lease, or may pursue such other remedies as may be provided by law. In the event of termination, the Lessor shall be liable for all excess costs of the Government in acquiring substitute space, including but not limited to the cost of moving such space. Substitute space shall be obtained in as close proximity to the Lessor's building as is feasible and moving costs will be limited to the actual expenses thereof as incurred.

(d) It is further agreed that from and after the date hereof the Lessor will, at such time as any agreement is to be entered into or a concession is to be permitted to operate, include or require the inclusion of the foregoing provisions of this section in every such agreement or concession pursuant to which any person other than the Lessor operates or has the right to operate any facility. Nothing herein contained, however, shall be deemed to require the Lessor to include or require the inclusion of the foregoing provisions of this section in any existing agreement or concession arrangement or one in which the contracting party other than the Lessor has the unilateral right to renew or extend the agreement or arrangement, until the expiration of the existing agreement or arrangement and the unilateral right to renew or extend. The Lessor also agrees that it will take any and all lawful actions as expeditiously as possible, with respect to any such agreement as the contracting agency may direct, as a means of enforcing the intent of this section, including, but not limited to, termination of the agreement or concession and institution of court action.

11 EXAMINATION OF RECORDS

(NOTE -This provision is applicable if this lease was negotiated without advertising)

(a) The Lessor agrees that the Comptroller-General of the United States or any of his duly authorized representatives shall, until the expiration of 3 years after final payment under this lease, have access to and the right to examine any directly pertinent books, documents, papers, and records of the Lessor involving transactions related to this lease.

(b) The Lessor further agrees to include in all his subcontracts hereunder a provision to the effect that the subcontractor agrees that the Comptroller General of the United States or his representatives shall, until the expiration of 3 years after final payment under this lease with the Government, have access to and the right to examine any directly pertinent books, documents, papers, and records of such subcontractor involving transactions related to the subcontract.

12 APPLICABLE CODES AND ORDINANCES

The Lessor, as part of the rental consideration, agrees to comply with all codes and ordinances applicable to the ownership and operation of the building in which the leased space is situated and, at his own expense, to obtain all necessary permits and related items.

13 INSPECTION

At all times after receipt of Bids, prior to or after acceptance of any Bid or during any construction, remodeling or renovation work, the premises and the building or any parts thereof, upon reasonable and proper notice, shall be accessible for inspection by the Contracting Officer, or by architects, engineers, or other technicians representing him, to determine whether the essential requirements of the solicitation or the lease requirements are met.

14 ECONOMY ACT LIMITATION

If the rental specified in this lease exceeds \$2,000 per annum, the limitation of Section 322 of the Economy Act of 1932, as amended (40 U S C 278a), shall apply

15 FAILURE IN PERFORMANCE

In the event of failure by the Lessor to provide any service, utility, maintenance or repairs required under this lease, the Government shall have the right to secure and services, utilities, maintenance or repairs and to deduct the cost thereof from rental payments

16 LESSOR'S SUCCESSORS

The terms and provisions of this lease and the conditions herein shall bind the Lessor, and the Lessor's successors and assigns

Certification

1 CERTIFICATION OF NONSEGREGATED FACILITIES

(Applicable to (1) contracts, (2) subcontracts, and (3) agreements with applicants who are themselves performing federally assisted construction contracts, exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity clause)

By the submission of this bid, the bidder, offeror, applicant, or subcontractor certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. He certifies further that he will not maintain or provide for his employees any segregated facilities at any of his establishments, and that he will not permit his employees to perform their service at any location, under his control, where segregated facilities are maintained. The bidder, offeror, applicant, or subcontractor agrees that a breach of this certification is a violation of the Equal Opportunity clause in this contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, rest rooms, and wash rooms, restaurants and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, or national origin, because of habit, local custom, or otherwise. He further agrees that (except where he has obtained identical certifications from proposed subcontractors for specific time periods) he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity clause, that he will retain such certifications in his files, and that he will forward the following notice to such proposed subcontractors (except where the proposed subcontractors have submitted identical certifications for specific time periods)

NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENT FOR CERTIFICATIONS OF NON-SEGREGATED FACILITIES

A Certification of Nonsegregated Facilities must be submitted prior to the award of a subcontract exceeding \$10,000 which is not exempt from the provisions of the Equal Opportunity clause. The certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semiannually, or annually).

NOTE -The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001

Instructions

- 1 Whenever the lease is executed by an attorney, agent, or trustee on behalf of the Lessor, two authenticated copies of his power of attorney, or other evidence to act on behalf of the Lessor, shall accompany the lease.
- 2 When the Lessor is a partnership, the names of the partners composing the firm shall be stated in the body of the lease. The lease shall be signed with the partnership name, followed by the name of the partner signing the same.
- 3 Where the Lessor is a corporation, the lease shall be signed with the corporate name, followed by the signature and title of the officer or other person signing the lease on its behalf, duly attested, and, if requested by the Government evidence of this authority so to act shall be furnished.
- 4 When deletions or other alterations are made specific notation thereof shall be entered under clause 8 of the lease before signing.
- 5 If the property leased is located in a State requiring the recording of leases, the Lessor shall comply with all such statutory requirements at Lessor's expense.

Agreement 9

FAA Air Traffic Control Tower Lease

Form FAA 413

FEDERAL AVIATION ADMINISTRATION

LEASE

between

(governing body) of (city/county), (state)

and

THE UNITED STATES OF AMERICA

1 This Lease, made and entered into this _____ day of _____ in the year one thousand nine hundred and _____
by and between _____ (governing body) of _____ city/county, whose address is _____

for themselves, or their successors, and assigns, hereinafter called the Lessor, and the UNITED STATES OF AMERICA,
hereinafter called the Government

WITNESSETH The parties hereto for the consideration hereinafter mentioned covenant and agree as follows

2 The Lessor hereby leases to the Government the following described property, hereinafter called the premises, viz
[See Attachment A]

Together with a right-of-way for ingress and egress to and from the premises, a right-of-way or rights-of-way for establishing and maintaining a pole line or pole lines for extending electric power, and telecommunications facilities to the premises; and rights-of-way for subsurface power, communication and water lines to the premises, all rights-of-way to be over the said lands and adjoining lands of the lessor and, unless herein described by metes and bounds, to be by routes reasonably determined to be the most convenient to the Government,

And the right of grading, conditioning, installing drainage facilities, and seeding the soil of the premises, and the removal of all obstructions from the premises which may constitute a hindrance to the establishment and maintenance of air navigation and telecommunications facilities

And the right to make alterations, attach fixtures, and erect additions, structures, or signs, in or upon the premises hereby leased, which fixtures, additions, or structures so placed in or upon or attached to the said premises shall be and remain the property of the Government and may be removed upon the termination of this lease or within 90 days thereafter by or on behalf of the Government, or its grantees or purchasers of said fixtures, additions, structures, or signs

3 TO HAVE AND TO HOLD the said premises with their appurtenances for the term beginning _____ and ending with _____, 19 ____

4 The Government shall pay the Lessor, for the premises, rent at the following rate for the term set forth in Article No 3 above There being no monetary consideration in the form of rental, it is mutually agreed that the rights extended to the Government herein are in consideration of the obligations assumed by the Government in its establishment, operation and maintenance of facilities upon the premises hereby leased

5 This lease may, at the option of the Government, be renewed from year to year without cost and otherwise upon the terms and conditions herein specified The Government's option shall be deemed exercised and the lease renewed each year for one year unless the Government gives 30 days' notice that it will not exercise its option, before this lease or any renewal thereof expires,

PROVIDED, that no renewal thereof shall extend the period of occupancy of the premises beyond the _____ day of _____, _____, AND PROVIDED FURTHER, that adequate appropriations are available from year to year for the payment of rentals

6 No member of Congress or Resident Commissioner shall be admitted to any share or part of this lease or to any benefit to arise therefrom Nothing, however, herein contained shall be construed to extend to any incorporated company, if the lease be for the general benefit of such corporation or company

7 This lease is subject to the additional provisions which are set forth on the attachment, and made a part hereof, identified as follows

[Attachment "A" containing the continuation of Article 2 and Articles 8,9, and 10 and Attachment "B" are added]

IN WITNESS WHEREOF, the parties hereto have hereunto subscribed their names as of the date first above written

As the holder of a mortgage, dated _____, recorded in _____ pages _____, against the above described premises, the undersigned hereby consents that if, while the lease is in force, the mortgage is foreclosed, the foreclosure shall then not void the lease.

(Mortgagee)

(Governing Body)
of _____ (City/County)
By _____
(Lessor)

TITLE _____

THE UNITED STATES OF AMERICA,
by _____
(Contracting Officer)

(If the Lessor is a corporation, appropriate certificate shall be executed by the secretary or assistant secretary in the space provided below. Also, if acknowledgement by notary is required, such may be inserted in the space provided below.)

I, _____, certify that I am the _____ of the corporation named in the attached agreement, that _____ who signed said agreement on behalf of the corporation was then _____ of said corporation, that said agreement was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers

_____ (Corporate Seal)

Attachment A

- 2 Continued from page 1
(Sample Legal Description)

Beginning at a concrete monument said point being North 29 degrees 24 minutes East 1297 3 feet from Airport Reference Point, U S Coast and Geodetic marker (latitude 33 degrees 56 minutes 56 1 seconds longitude 83 degrees 19 minutes 36 9 seconds) running thence S 84 degrees 50 minutes E for 50 0 feet to iron pin, thence S 5 degrees 10 minutes W 174 2 feet to concrete monument, thence N 84 degrees 50 minutes W 37 0 feet to concrete monument, thence N 5 degrees 10 minutes E 21 0 feet to concrete monument, thence N 84 degrees 50 minutes W 13 0 feet to concrete monument, thence N 5 degrees 10 minutes E 153 2 feet to concrete monument and beginning point.

- 8 The Lessor agrees to the following:

To permit the FAA to connect to the 3" water line which runs beneath the above described site

To permit installation of a sewage treatment unit, Crompton Model CA-610-2 or approved alternate by the FAA, and in the event the City establishes a sewer system at the airport the lessor agrees to extend a line to the plot boundary at no cost to the lessee

To relocate the rotating beacon to a more suitable site if the light obstructs the visibility of controllers in the ATCT cab

To extend field lighting power controls to the ATCT cab and install appropriate control panel at no expense to the FAA

To clear any obstructions in the line-of-sight from the ATCT Control Cab to control surfaces and refrain from construction or permitting the construction of any structures which would obstruct the visibility of any of the Air Traffic patterns, approaches, runways, taxiways, operational portions of the aprons or other operational areas necessary for the control of ground or air traffic on or at the Airport from the ATCT Cab at an eye level of 45' above ground

To reroute the overhead electric and telephone lines in the event they interfere with the construction or operation of the ATCT facility

- 9 It is hereby agreed between the parties that, upon the termination of its occupancy, the Government shall have no obligation to restore and/or rehabilitate, either wholly or partially, the property which is the subject matter of this lease. It is further agreed that the Government may abandon in place any or all of the structures and equipment installed in or located upon said property by the Government during its tenure. Notice of abandonment will be conveyed to the Lessor in writing.

- 10 *Covenant Against Contingent Fees* The Lessor warrants that no person or selling agency has been employed or retained to solicit or secure this lease upon an agreement or understanding for a commission, brokerage, percentage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the Lessor for the purpose of securing business. For breach or violation of this warranty the Government shall have the right to annul this lease without liability or in its discretion to deduct from the contract price or consideration, the full amount of such commission, brokerage, percentage, or contingent fee.

Attachment B: Operation of Airport Traffic Control Tower by the FAA

THIS AGREEMENT is attached to and made part of Government Lease, Form FAA 415, covering the quarters occupied by the Government in connection with the operation of the Airport Traffic Control Tower

THIS AGREEMENT, by and between the _____ (governing body) of _____ City/County, herein called the Lessor, and the United States of America, acting by and through the Federal Aviation Administration, hereinafter called the Government,

WITNESSETH THAT

WHEREAS, it is in the public interest that the Airport Traffic Control Tower at _____, _____ be operated by the Government in accordance with standards established by the Federal Government.

NOW THEREFORE, for and in consideration of the operation of the Airport Traffic Control Tower at _____, _____ by the Government, subject to the availability of funds therefor, the Lessor agrees to the following conditions

1 Lessor shall pay for all current for boundary, flood and obstruction lights, even though these lights may be operated by a federal controller in the Control Tower.

2 All airport lighting which is essential to safe aircraft operations and which can be controlled from the control tower and all traffic control devices which are designed to be remotely controlled, shall be under the control of federal employees in the Control Tower

3 Lessor shall retain the responsibility for the proper functioning of any light or other locally installed device which is placed at the disposal of federal airport traffic controllers

4 Lessor shall retain the responsibility for the proper functioning of apparatus necessary for traffic control, which cannot be placed in operation or controlled from the Control Tower, or which is not otherwise operated by the Government

5 Lessor shall advise the Chief Airport Traffic Controller of any portions of the field which may be unsafe for normal use by aircraft and shall properly mark such areas

6 Lessor shall assume the responsibility for any conditions on the airport which are not subject to control of a federal airport traffic controller on duty in the tower

7 The Government shall have complete control over the operation of the Control Tower at all times and shall not be subject to the direction or supervision of the Lessor in that respect.

8 The Lessor shall notify the Chief Airport Traffic Controller or his representative before any maintenance or construction personnel are sent out on the landing area unless such personnel are proceeding in accordance with a schedule which has been approved by the Chief Airport Traffic Controller

9 Insofar as the Government is concerned from a traffic standpoint, the Lessor may reserve any portion of the landing area for any reason that it may deem proper or sufficient for as long a period as the Lessor desires, provided that any such area shall be properly marked off and notice given of the change in available landing area just as might be done when a portion of the landing area is marked off for maintenance or construction. Providing that this section shall not be deemed to affect any provision contained in any contract previously entered into between the Lessor and the United States Government concerning the use of the said landing area.

Agreement 10

FAA Field Office Lease

STANDARD FORM 2
GENERAL SERVICES
ADMINISTRATION

U S GOVERNMENT
LEASE FOR REAL PROPERTY

Date of Lease _____

Lease No. _____

THIS LEASE, made and entered into this date by and between _____ (governing body)
of _____ (City/County) _____

whose address is

_____, _____, _____
(city) (state) (zip)

and whose interest in the property hereinafter described is that of

OWNER

hereinafter called the Lessor, and the UNITED STATES OF AMERICA, hereinafter called the Government

WITNESSETH The parties hereto for the considerations hereinafter mentioned, covenant and agree as follows

1 The Lessor hereby leases to the Government the following described premises

[See Attachment A for examples]

2 TO HAVE AND TO HOLD the said premises with their appurtenance for the term beginning on _____ (date) through _____ (date), subject to termination and renewal rights as may be hereinafter set forth

3 The Government shall pay the Lessor annual rent of \$ _____ at the rate of \$ _____ per _____ (month) in arrears Rent for a lesser period shall be prorated Rent checks shall be made payable to _____

4 The Government may terminate this lease at any time by giving at least _____ days' notice in writing to the Lessor and no rental shall accrue after the effective date of termination

Said notice shall be computed commencing with the day after the date of mailing

5 The Lessor shall furnish to the Government, as part of the rental consideration the following

Attachment "A" is made a part of the agreement herein

6 The following are attached and made a part hereof

The General Provisions and Instructions (Standard Form 2-A, May 1970 edition) These general provisions and in-structions are excluded from this sample lease

Attachment "A"

7 The following changes are made in this lease prior to its execution

Articles 8 and 9 are added

IN WITNESS WHEREOF, the parties hereto have hereunto subscribed their names as of the date first above written

LESSOR

_____ (governing body) _____ of _____ (City/County) _____ (State)

By _____ (Signature) _____ (Signature) _____

In presence of _____ (Signature) _____ (Address) _____

UNITED STATES OF AMERICA

By _____ (Signature) _____ Contracting Officer _____
(Official Title)

Attachment A

- 1(A) All the space located in the FAA Airway Facilities Sector Building No 19D, _____ County Municipal Airport, which contains _____ sq ft. and _____ of net rentable space.
- 1(B) Office and storage for Airway Facilities Sector Field Office
- 5(A) The lessor shall provide year-round, total air conditioning system (heating, cooling, humidity, dust, noise, and velocity controlled balanced system)
- 5(B) Heating and air conditioning shall be maintained in accordance with Emergency Building Temperature Restrictions (10 CFR Part 490) in effect as of the effective date of this lease. Temperature control devices shall be set to maintain temperatures of _____

Cooling During the cooling season, the setting on room and zone thermostats shall be held to 78 degrees-80 degrees F during working hours and permitted to go higher during nonworking hours. Necessary adjustments shall be made to cooling system controls so that the temperatures in the space shall be maintained within this range without the use of heat.

Heating During the seasonably cool months, temperature control devices shall be set to maintain temperatures of 65 degrees-68 degrees F during working hours and shall be turned off or lowered to allow temperatures of 55 degrees F or less during nonworking hours but to avoid freezing conditions. Temperatures in warehouse and similar space shall be adjusted lower than 65 degrees-68 degrees F depending on the type of occupancy and the activity in the space.

NOTE The temperature level settings set forth above are established by Federal Regulatory guidelines to conserve energy. In the event at a later date the Federal guidelines for temperature level settings are increased or decreased, the temperature level setting under this lease or any renewal thereof shall be adjusted to the Federal guideline settings, except those areas that shall be exempted by the Government/FAA under 41 CFR Part 101-20.116-4.

- 5(C) The Lessor shall provide paved parking for a minimum of ten vehicles.
- 5(D) The Government will pay for utility costs under Government Contract Nos. DOTFA71SO-6177 (Water), DOTFA71SO-6176 (Gas), DOTFA71SO-6175 (Electricity), and Janitorial Services DOTFA71SO-6054.
8. This lease may, at the option of the Government, be renewed from year to year through _____ (date), at an annual rent of \$ _____ (amount), rent from _____ (date) through _____, will be \$ _____ (amount), and otherwise upon the terms and conditions herein specified. The Government's option will be deemed exercised and the lease renewed each year for one year unless the Government gives 30 days' notice that it will not exercise its option, before this lease or any renewal thereof expires, PROVIDED, that not renewal thereof shall extend the period of _____ (date), AND PROVIDED FURTHER, that adequate appropriations are available from year to year for the payment of rentals.
9. The Lessor shall accomplish interior repainting and redecorating of the leased premises not less than once every five years of Government occupancy under this lease or any renewal thereof.

Initials _____
 Government _____
 Lessor _____

Agreement 11

Vending Services Agreement for Furnishing Food, Beverages, & Tobacco

1 Name of the Parties

This agreement, made this ____ day of _____, 19 __, by and between the (City, County) of _____, State of _____, hereinafter called the (City, County) and _____ a corporation duly organized and existing under the laws of the State of _____, having its principal place of business and office in _____, hereinafter called the Contractor

2 Effective Date

The effective date of this agreement shall be _____, 19 __, and all terms and conditions stated herein shall apply as of that date

3 Term of the Agreement and Renewal

a. The term of this agreement shall be until _____, 19 __, and shall expire on that date unless otherwise extended or renewed as provided in this agreement.

b. This agreement may be extended beyond the expiration date shown herein upon the assent of both the (City, County) and the Contractor. If both parties shall assent, this agreement shall be extended for one year, ending _____, 19 __, upon terms and conditions expressed herein and at a payment schedule to be agreed upon

4 Services to be Performed

The Contractor shall perform the following services at the _____ Airport, _____ County, State of _____, in accordance with the conditions described in this agreement

a. The Contractor shall provide efficient vending equipment of adequate capacity to serve passengers and other personnel at the _____ Airport.

b. Equipment shall be installed in locations determined by the (City, County). They shall not be removed or relocated without the prior approval of the (City, County). Equipment over six (6) years of age shall not be permitted to remain in service except by written permission of the (City, County). Other equipment shall be renovated or replaced when the (City, County) determines the need for a change.

c. The initial number and type of machines and their minimum capacity shall be shown in Attachment A. Counters which record the number of beverages sold are to be installed in all beverage equipment.

d. The cost of utilities and utility installation shall be paid by the (City, County). All other costs shall be paid by the Contractor.

e. The Contractor shall maintain, service, and keep vending equipment in good working order at all times. The Contractor shall keep all equipment clean and sanitary and shall comply with all rules and regulations of the _____ Airport and the _____ County Board of Health.

f. Categories of products to be vended shall be as specified in Attachment B. Changes in the category of products are subject to approval by the (City, County). All vended products must be top grade and shall be replenished and replaced to insure freshness on a schedule subject to the approval of the (City, County).

g. The (City, County) shall not be responsible for loss or damage to machines or products due to any cause including, but not limited to, fire, accidents, theft, vandalism, or utility failure.

5 Payment

a. The Contractor shall pay the (City, County) _____ percent (__ %) of its gross receipts. The term "gross receipts" shall be construed to mean the aggregate amount of all transactions made on, in, or from the _____ Airport for cash, credit, or otherwise, regardless of whether or not paid. Any and all taxes as fees collected by the Contractor on behalf of any governmental body are excepted.

b. The Contractor shall on or before the 15th day of each calendar month pay for the use during the previous month of the _____ Airport and the attendant rights and privileges granted by the (City, County) according to the terms set forth herein, by submitting to the (City, County) a statement showing its gross receipts for such calendar month, as such term is defined above, and by remitting the required rental with such statement. Such statement shall show such reasonable detail and breakdown as may be required by the (City/County), but the (City/County) shall not be bound by any presumption as to the correctness of such statement.

c On the anniversary date of this agreement, the Contractor shall provide a statement of gross receipts, as defined above, certified by an officer of the firm to be correct. The statement shall be subject to audit by the (City, County). If the audit discloses a difference of more than five percent (5%), the Contractor shall pay for the audit, and the (City, County) may terminate the lease within the next thirty (30) days

- 6 Surety Bond
- 7 Delinquencies
- 8 Default
- 9 Bankruptcy
- 10 Insurance

The Contractor shall carry a liability insurance policy as follows

Product Liability Insurance . (\$ _____)
Automotive Liability Insurance (\$ _____)

This shall indemnify and hold harmless the (City, County) for all claims brought against them for bodily injury and property damage due to negligent or careless operation by the Contractor. The amounts of insurance shall not be deemed a limitation on the Contractor's agreement to indemnify and hold harmless the (City, County). If the (City, County) becomes liable for an amount in excess of the insurance, the Contractor shall indemnify and hold harmless the (City, County) for the whole amount. A copy of the insurance policy shall be filed with the (City, County). The Contractor must notify the (City, County) in writing at least thirty (30) days in advance of the cancellation of the Contractor's insurance.

- 11 Personal Property Taxes
- 12 Termination of the Agreement

a. This agreement may be terminated by the (City, County) in the event the Contractor fails to comply with any of the terms hereof. The (City, County) shall first notify the Contractor in writing of said failure to comply. In the event the Contractor does not correct said failure and fully comply with the terms hereof within thirty (30) days from receipt of said notice, the (City, County) may terminate this agreement, and all rights of the Contractor hereunder shall be forfeited.

b. Upon termination or cancellation of this agreement and provided all monies due the (City, County) have been paid, the Contractor shall have the right to remove all machines and equipment which it has installed or placed in the _____ Airport. The Contractor agrees to repair any damage occasioned by reason of such removal or because of its occupancy. In the event the Contractor fails to remove its property or to repair any damage done to the _____ Airport, the (City, County) reserves the right to remove and store all such property left on such premises at the risk and expense of the Contractor and to make such repairs as the (City, County) deems necessary to restore the premises with the cost of the repairs to be paid by Contractor.

- 13 Assignability
- 14 Conflict of Interest
- 15 Severability
- 16 Waiver
- 17 Notices

IN WITNESS WHEREOF, the parties have hereunto subscribed their names this _____ day of _____, 19 ____

By _____
(City/County)

Acknowledgement

By _____
(Contractor)

Agreement 12

Vending Service Agreement for Air Travel Insurance

- A. Operator Rental Contract
- B. Airport Rental Contract
(Mechanical Machine)

A. Operator Rental Contract

This Agreement made and entered into this _____ day of _____, 19____ by and between

and _____ (company name)

(Hereinafter called "Airport Operator")

WITNESSETH

1 The Airport Operator has obtained the right and concession to install, operate and maintain, machines which will dispense air trip travel insurance policies at the _____ Airport.

2 _____ (company name) hereby appoints the Airport Operator as its agent to operate and service said machines during the period of this contract.

3 The Airport Operator agrees to supply the said machines with policies and any signs or brochures furnished to him by _____ (company name) and to collect the premiums deposited therein under such circumstances and at such times as _____ (company name) shall direct. The Airport Operator further agrees to prepare such reports as _____ (company name) may require and to remit to _____ (company name) at the above address not later than the fifth day following the month of account the net premiums due it. Net premiums shall be eighty percent (80%) of all premiums deposited in said machines, less only bona fide refunds which are made by the Airport Operator to customers requesting the same. Evidence of such refunds shall be such as is required by _____ (company name). The Airport Operator shall retain twenty percent (20%) of all monies deposited as fee for any space rental and services in operating, servicing and maintaining said machines and for preparing the reports herein provided.

This contract shall become effective on the date the first machine is installed in the Airport Premises and may be terminated by either party giving the other 30 days written notice of its or his intent to terminate.

IN WITNESS WHEREOF the parties hereto have caused such agreement to be executed as of the day and year first above written.

(CITY, COUNTY)

(COMPANY NAME)

By _____

By _____

By _____

By _____

B. Airport Rental Contract

This agreement made and entered into this ____ day of _____, 19 ____ by and between

 _____ and _____ (company name)

 (Hereinafter called "Airport Manager")

WITNESSETH

1 The Airport Manager does hereby grant unto _____ (company name) the right and concession to install, operate and maintain machines which will dispense air trip travel insurance policies at the airport.

2 _____ (company name) hereby appoints the Airport Manager as its agent to operate and service said machines during the period of this contract.

3 The Airport Manager agrees to supply the said machines with policies and any signs or brochures furnished to him by _____ (company name) and to collect the premium deposited therein under such circumstances and at such times as _____ (company name) shall direct. The Airport Manager further agrees to prepare such reports as _____ (company name) may require and to remit to _____ (company name) no later than the fifth day following the month of account the net premiums due it. Net premiums shall be eighty percent (80%) of all premiums deposited in said machines, less only bona fide refunds, and expenses. Evidence of refunds and expenses shall be such as required by _____ (company name). The Airport Manager shall retain twenty percent (20%) of all monies deposited as a fee for space rental and services in operating, servicing and maintaining said machines and for preparing the reports herein provided.

This contract shall become effective on the date the first machine is installed in the Airport Premises and may be terminated by either party giving the other 30 days written notice of this or his intent to terminate.

IN WITNESS WHEREOF the parties hereto have caused this agreement to be executed as of the day and year first above written.

 (CITY, COUNTY)

 (COMPANY NAME)

By _____

By _____

By _____

By _____

Agreement 13

Taxicab or Limousine Stands Agreement**1 Name of the Parties**

The agreement, made this _____ day of _____, 19____, by and between the (City, County) of _____, State of _____, hereinafter called the (City, County) and the _____ (Taxicab/Limousine) Corporation, a corporation duly organized and existing under the laws of the State of _____ having its principal place of business and office in _____, hereinafter called the Grantee

The parties agree as follows

2 Revocation

The privileges granted in this agreement may be revoked by the (City, County) at the discretion of the (City, County) In no event shall this agreement run for a period of more than _____ (____) years from the date of this agreement.

3 Premises

- a. The Grantee shall be entitled to use the following area of the _____ Airport located in _____, _____ County, State of _____
(Description of Premises)

which shall be designated for use as a (taxicab, limousine) stand

b. This area shall be used by the Grantee solely for the purpose of parking, soliciting, loading, and discharging passengers and for no other purpose whatsoever. The Grantee shall not construe this agreement as a privilege to operate either a charter service or as facility for carrying mail or express packages

4 Rates

(Taxicab, Limousine) rates charged by the Grantee shall be those prevailing rates which from time to time shall be lawfully established.

5 Compensation

a. (1) The Grantee shall pay to the (City, County) a minimum monthly guarantee in the sum of _____ dollars (\$ _____) or _____ percent (____ %) of its monthly gross receipts, whichever is greater and which is derived from its operations on, in, or from the leased premises. This payment shall be made on or before the 15th of each calendar month for the use of the premises during the previous month.

The term "gross receipts" shall be construed to mean the aggregate amount of all transactions made on, in, or from the _____ Airport for cash, credit, or otherwise, regardless of whether or not paid. Any and all taxes or fees collected by the Grantee on behalf of any governmental body are excepted.

(2) On or before the 15th of each month, the Grantee shall provide a statement of gross receipts, as defined above, for the previous month, certified by an officer of the firm to be correct. The statement shall be subject to audit by the (City, County). If the audit discloses a difference of more than five percent (5%), the Grantee shall pay for the audit, and the (City, County) may terminate this agreement.

OR

b. The Grantee agrees to pay the (City, County) the total annual sum of _____ dollars (\$ _____) in equal monthly installments due and payable in advance on the first day of each and every month after the effective date of this agreement.

6 Surety Bond**7 Delinquencies****8 Insurance**

The Grantee shall carry a liability insurance policy as follows

Bodily Injury _____ dollars (\$ _____)

Property Damage _____ dollars (\$ _____)

This shall indemnify and hold harmless the (City, County) for all claims brought against them for bodily injury and property damage due to negligent or careless operation by the Grantee. The amounts of insurance shall not be deemed a limitation on the Grantee's agreement to indemnify and hold harmless the (City, County). If the (City, County) becomes liable

for an amount in excess of insurance, the Grantee shall indemnify and hold harmless the (City, County) for the whole amount. A copy of the insurance policy shall be filed with the (City, County). The Grantee must notify the (City, County) in writing at least thirty (30) days in advance of the cancellation of the Grantee's insurance.

9 Exclusive Use

This lease shall not be construed to deny the (City, County) the right to grant other (taxi cab, limousine) concessions at the airport. The (City, County) reserves the right to lease to other parties any portion of the airport not included in this lease for any purpose deemed suitable for the airport by the (City, County).

10 National Emergency

11 Rules

12 Personal Property Taxes

13 Assignability

The Grantee shall not assign or transfer its rights in whole or in part, under this concession grant without the prior written approval of the (City, County).

14 Conflict of Interest

15 Severability

16 Waiver

17 Notices

IN WITNESS WHEREOF, the parties have hereunto subscribed their names this _____ day of _____, 19 ____

By _____

(City/County)
Grantor

Acknowledgement

By _____

(Corporation)
Grantee

Agreement 14

Airspace Right-of-Way and Easement (Adjacent to an Airport)

_____(State)
_____(City/County)

This agreement made this _____ day of _____, 19____ by and between _____, who is (are) the owner(s) in fee simple of a certain parcel of land in _____ County, State of _____, hereinafter called the Grantor, and the (City/County) of _____ hereinafter called the Grantee

The parcel of land owned by the Grantor is more fully described as follows _____

(description of property covered by easement)

hereinafter called the Grantor's property and outlined in the attachment plat map in Attachment A

Now, therefore, in consideration of the sum of _____ dollars (\$ _____) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the grantors, for themselves, their heirs, administrators, executors, successors, and assigns, do hereby grant, bargain, sell, convey unto the Grantee, its successors and assigns, for the use and benefit of the public an easement and right of way appurtenant to the _____ Airport, for the unrestricted passage of all aircraft by whomsoever owned and operated, in the air space above the Grantor's property rising and extending in a generally _____ direction over Grantor's property. The plane shall run from approximately _____ feet mean sea level above point A on Attachment A (attached an airspace elevation plan) and rise at the rate of one foot vertically for each _____ feet horizontally to approximately _____ feet mean sea level above point B on attachment A to an infinite height above the plane.

The easement and right-of-way shall include the right to cause in the air space above the surface of the Grantor's property such noise, vibrations, fumes, dust, fuel particles, and all other effects caused by the operation of aircraft landing at, or taking off from, or operating at or on the _____ Airport. The Grantors do hereby waive and release any right or cause of action which they now have or which they may have in the future against the Grantee, its successors and assigns, due to such noise, vibrations, fumes, dust, fuel particles, and all other effects that may be caused or may have been caused by the operation of aircraft landing at, or taking off from, or operating at or on the _____ Airport, extending into the air space above the aforesaid plane, and to remove obstructions from said air space, or at the sole option of the Grantees, as an alternative, to mark and light as obstructions to air navigation, any such building, structure, tree or other object now upon, or which in the future, may be upon Grantors' property, together with the right to ingress to, egress from, and passage over Grantor's property for the above purposes,

To have and to hold said easement and right-of-way, and all rights appertaining thereto unto the Grantee, its successors and assigns, until Airport shall be abandoned and shall cease to be used for public airport purposes

And for the consideration hereinabove set forth, the Grantors, for themselves, their heirs, administrators, executors, successors and assigns, do hereby agree that for and during the life of said easement and right-of-way, they will not hereafter erect, permit the erection or growth of, or permit or suffer to remain upon Grantor's property any building, structure, tree or other object extending into the aforesaid prohibited air space, and that they shall not hereafter use or permit or suffer the use of Grantors' property in such a manner as to create electrical interference with radio, or other communication between any installation upon said airport and aircraft, or as to make it difficult for flyers to distinguish between airport lights and others, or as to impair visibility in the vicinity of the airport or as otherwise to endanger the landing, taking off or maneuvering of aircraft, it being understood and agreed that the aforesaid covenants and agreements shall run with the land

In witness whereof, the Grantors have hereunto set their hands and seals this ____ day of _____, 19 ____

By _____
Grantor(s)

Acknowledgement

(City, County)

By _____
DATE

(SEAL)

TITLE

Agreement 15

Aerial Applicator Operating Permit
On (Airport Name) Airport, (City), N.D.

PURPOSE

In order that all aerial applicators who use the _____ Airport, a public owned airport by the community of _____, N.D., operate under the same rules and procedures, the _____ Airport Authority has found it desirable and necessary to prescribe conditions under which persons can use the facility for conducting agricultural aerial application.

PERMIT

Anyone commencing or carrying on the aeronautical activity of aerial crop dusting and aerial spraying on the _____ Airport shall receive a permit from the _____ Airport Authority. This permit specifies the airport area to be used as the agricultural loading area.

REQUIREMENTS

Aerial applicators having received a permit shall accomplish the following

- (a) Provide suitable and safe storage and containment of noxious chemical materials, including a suitable and safe area for the loading and unloading of such noxious chemical materials. Such suitable and to other operational areas of the airport by wind force
- (b) Provide aircraft suitably equipped for agricultural operations with adequate safeguards against spillage on runways and taxiway, and protect against the disbursement of any noxious chemical materials to other operational areas of the airport by wind force
- (c) Provide the continuing ability to meet certification requirements of the Federal Aviation Administration and any pertinent state or local authorities to conduct the aerial crop dusting and aerial spraying proposed or to be carried on

FEES

For such privilege of aerial application, the permittee agrees to pay to the _____ Airport Authority the sum of \$ _____ per year (Starting July 1 annually) in advance of the time the permit is issued. A "Certified Check" deposit in the amount of \$ _____ shall accompany the permit. This is to assure paying for any damages that may be caused to land, facilities or equipment that are made available to the applicant on the _____ Airport. When the annual aerial operation is discontinued, the deposit will be returned to the operator less any damage or rental claim that the _____ Airport Authority may have against the operator

ENFORCEMENT

The Airport Manager shall have the power and duty to enforce these regulations, subject, however, to the requirement that he report any action taken under this provision to the _____ Airport Authority Chairman and security as soon as possible and to the entire authority at its next scheduled meeting. His duties include the authority to collect fees from operators as prescribed by these standards and to designate appropriate areas for the conducting of aerial operations on the airport.

AUTHORIZATION OF PERMIT

IN WITNESS WHEREOF, The parties have executed this permit as of the _____ day _____ month, and
year _____

AUTHORIZATION

Airport Manager _____

Ag-Operator _____

SAMPLE

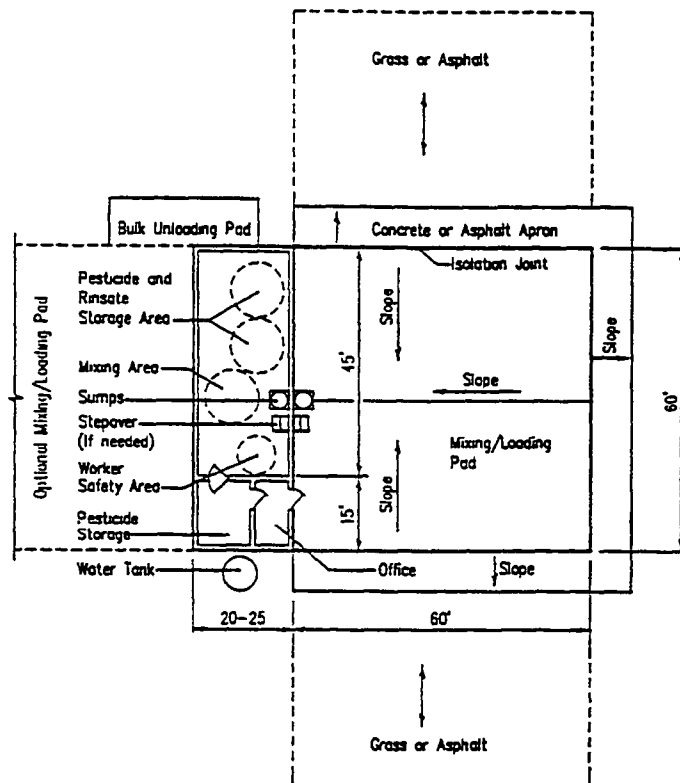
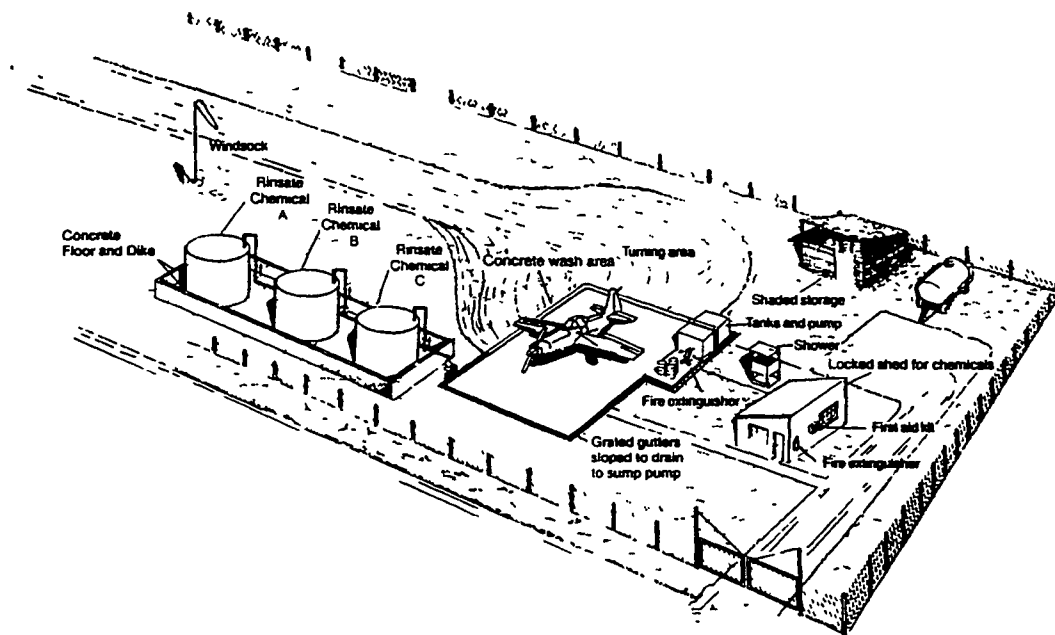


Exhibit 13-1 Typical Agricultural Spray Pad Layout

Agreement 16

**Non-Public Aircraft Fuels
Dispensing/Handling Minimum Standards Permit****I PURPOSE**

- A. Fuel trucks operating on the ramp and bulk fuel storage planes must be professionally operated, managed, supervised and controlled to minimize liability and assure optimum safety of operation. Therefore the operation of all such specialized fueling facilities and equipment on the airport, including the operation of all refueling trucks and bulk fuel storage facilities shall be provided through the airport's full-service FBOs.

However, recognizing the need to provide certain grades and types of fuel which are not currently being provided by the airport's FBOs, and to provide individual aircraft owners with the right to service their own aircraft, the following standards, rules and regulations are hereby established governing private non-commercial self-fueling of aircraft by individual private owners of aircraft at _____ Airport.

- B. These rules of procedure are established for the purpose of providing guidelines to be followed by parties conducting Non-Public Aircraft Fuels Dispensing Service at _____ Airport. Such parties shall hereinafter be referred to as a Permittee.
- C. All parties who dispense aircraft fuel on _____ Airport must hold a Fueling Dispensing Permit with the _____ Airport Authority and _____ Fire Protection District if required.

II RESTRICTION FROM PUBLIC AIRCRAFT FUELS DISPENSING SERVICE

A Permittee holding Non-Public Aircraft Fuels Dispensing Permits shall be restricted from selling and dispensing aircraft fuels to other airport users, including locally based and transient aircraft. Fueling of any aircraft not owned by Permittee shall constitute a violation of the Fueling Permit and consequently may call for immediate revocation of said Permit. Prior to permit issuance and also upon request by the Authority, Permittee shall provide evidence of ownership of any aircraft being fueled.

III PERSONNEL

Personnel engaged in dispensing aircraft fuels shall be properly trained in all fueling, handling and associated safety procedures and shall in all fueling and plane handling operations conform to all of the best practices for such operations. Observation of practice to the contrary by the Authority and/or applicable Fire District and notification thereof to the Permittee will be the cause for re-evaluation of such personnel as qualified to perform the operation. Failure on the part of Permittee to correct malpractice of fueling and related safety procedures shall constitute a violation of the Fueling Permit and consequently may call for revocation of said Permit.

IV FUEL

Permittee shall provide aircraft fuel of the types required by those aircraft which Permittee serves. The dispensing of fuels shall conform with Airport and applicable Fire Protection District codes, FAA Advisory Circulars and also to ASTM Standard D910 for AV-Gas and ASTM Standard D-1655 for Jet fuel and automobile fuels, Mogas ASTM D-439-58, shall comply with standards as set forth for AVGAS. Mogas must meet standards as identified in the applicable STC for the permitted aircraft.

V FUELING FACILITIES/METHODS

- A.
- 1 Apparatus shall be properly maintained, operated and equipped in accordance with applicable Federal Aviation Administration, Airport and National Fire Protection Association and Fire Codes of _____ Fire Protection Districts, as applicable, recommendations, requirements and regulations. Aircraft fueling apparatus shall be attended and operated only by persons instructed in methods of proper use and operations and who are qualified to use such fueling apparatus in accordance with safety requirements.
 - 2 The Permittee shall not allow unlawful use of the equipment if defective, and will operate the equipment in a safe, efficient, clean and as designed manner.
 - 3 Prior to the first use of a self-fueling apparatus on the Airport, the Permittee shall present such apparatus for inspection and approval by the applicable Fire Protection District, if required. Periodically, Permittee shall allow mechanical and dispensing system inspection of said apparatus by applicable Fire Protection District or Authority, and shall cease operation until any malfunction or discrepancy so noted is corrected to the satisfaction of applicable Fire Protection District and Authority. Operation of mobile dispensing apparatus with known mechanical or operational deficiencies shall constitute a violation of this Permit and may cause immediate revocation thereof.
Permittee shall conduct self inspection and maintenance of fueling apparatus as prescribed by the applicable Fire Protection District, if required.
 - 4 Pumps, either hand or power operated, shall be used when aircraft are fueled. Pouring or gravity flow shall not be permitted.
 - 5 To minimize the possibility of sparks from static electricity while fueling, aircraft and fueling equipment shall be electrically bonded to each other, the fueling nozzle shall be electrically bonded to the aircraft and both aircraft and fueling equipment shall be grounded before fuel flow starts.
 - 6 No flammable or combustible liquid shall be dispensed into or removed from a container, tank, vehicle or aircraft except in a location approved by the applicable Fire Marshall.
 - 7 No flammable or combustible liquid shall be dispensed into or removed from the fuel system of an aircraft within any hangar or building.
 - 8 Aircraft using mogas must meet requirements of applicable S T C.
- B. Fuel Containers
- 1 The maximum size shall not exceed 10 gallons pursuant to 1985 UFC, Article 4, Section 4 101, Par 18. Fueling from a vehicle tank into an aircraft is prohibited.
 - 2 Fueling operations shall be conducted in areas designated by the Authority and applicable Fire Protection District, which location is shown on Exhibit "A" hereto.
 - 3 Containers and transportation methods shall comply with applicable federal, state and local Uniform Building Code Standards, Fire Codes and Airport Rules/Regulations and Recommendations of the National Fire Protection Association.

4 Trash, Garbage, etc.

Permittee shall provide a complete and proper arrangement for the adequate handling and disposal, away from the Airport, of all trash, garbage and other refuse generated as a result of the operation. Permittee shall provide and use suitable covered metal receptacles for all such garbage, trash and other refuse. Piling of boxes, cartons, barrels or other similar items, in an unsightly or unsafe manner, on or about the demised premises, shall not be permitted.

5 Fuel Emergencies

- a. Permittee shall be responsible for proper clean-up and removal of all fuel leakage from any fuel facilities or cost of same if conducted by outside agency as per applicable Fire Codes and FAA Advisory Circulars and the clean-up/removal methods shall comply with applicable local, state or Federal requirements.
- b. Permittee shall submit fueling emergency plan to Authority and applicable Fire Protection District for approval prior to permit issuance per guidelines set forth in FAA AC 150/5230-4.
- c. The Authority shall be notified immediately of any fuel facility or aircraft fuel leakage or spill arising out of use of this Permit.

VI INSURANCE AND INDEMNIFICATIONA. Fire Insurance

Permittee shall promptly, in conjunction with the execution of this permit, provide public liability insurance or person injuries, including death, growing out of any one accident or other cause in a minimum sum of One Million and No/100 Dollars (\$1,000,000 00) for one person and One Million and No/100 Dollars (\$1,000,000 00) for two or more persons and shall provide property damage liability (\$1,000,000 00) for property damage growing out of any one accident or other cause. Permittee shall also maintain comprehensive motor vehicle liability insurance in the amount of \$500,000 for each occurrence.

Permittee shall maintain said insurance with insurance underwriters authorized to do business in the State of _____ satisfactory to the Authority. Permittee shall furnish the Authority with a Certificate from the insurance carrier showing such insurance to be in full force and effect during the term of this permit.

Said certificates shall contain a provision that written notice of cancellation or of any material change in said policy by the insurer shall be delivered to the Authority at least thirty days in advance of the effective date thereof. Permittee shall comply with insurance requirements as specified by the FBO on whose leased area the fueling occurs.

B Indemnification

The Airport Authority shall stand indemnified by Permittee as herein provided. Permittee is and shall be deemed to be an independent contractor and operator responsible to all parties for its acts or omissions, and the Authority shall in no way be responsible therefore. Permittee covenants and agrees to indemnify, hold harmless and defend the Authority, their officers, agents, servants, and employees from and against any and all claims for damages or injury to persons or property arising out of or incident to the use of this Permit.

VII FEES

A Permit Fee

As consideration for administration and inspection costs the Permittee shall pay the Authority an annual permit fee of \$25

B Fuel Flowage Fee

As consideration for this Permit for securing the right to dispense aircraft fuels, Permittee shall pay to the Authority (unless otherwise directed by the Authority) a fuel flowage fee in the amount of $\frac{1}{2}$ ¢ per gallon for AVGAS or other non-jet fuels and \$.06 per gallon for Jet Fuel or as shall be established by the Authority received by Permittee at its fuel facility during a calendar month.

Copies of those documents evidencing the type and amount of fuel received will be provided to the Authority when such fuel is placed in Permittee's aircraft.

The Permittee will provide the Authority, at Permittee's expense, at end of calendar year, a complete audit of fuel records for previous calendar year by a Certified Public Accountant.

C The Permittee shall pay all applicable local, state and federal taxes

D Time of Payment

Payment shall be due within fifteen days after receipt of invoice from the Authority which invoice will be computed based upon fuel received by Permittee during the preceding calendar month

VIII CANCELLATION

A Cancellation by Permittee

This Permit may be cancelled by Permittee upon thirty days' written notice to the Authority only after all payments due have been paid

B Cancellation by the Authority

- 1 This Permit shall be subject to cancellations by the Authority in the event Permittee shall
- 2 Be in arrears in the payment of the whole or any part of the amounts agreed upon for a period of ten days after the time such payments become due
3. Make general assignment of the benefit of creditors
- 4 File a voluntary petition of bankruptcy
- 5 Discontinue fueling operations
- 6 Fail to replace any improvements which have been destroyed by fire, explosions, etc , within six months from the date of such destruction, or

- 7 Default in the performance for any of the covenants and conditions required herein to be kept and performed by Permittee, and such default continues for a period of thirty days after receipt of a written notice from the Authority of said default.
- 8 Default in the performance of any of the covenants required herein to be kept and performed by Permittee and receipt of notice of such default on three occasions within any eighteen month period
- 9 Lapse of any form of required insurance
- 10 Failure to report timely and accurate report records as listed herein

In any of the aforesaid events, the Authority may take immediate action remove Permittee's effects, forcibly, if necessary, without behind deemed guilty of wrong doing. Upon said action, this Permit shall terminate

IX. TERM OF PERMIT

Unless otherwise cancelled or terminated in accordance with the provisions hereof, this Permit shall remain effective until _____, 19____, following which termination or expiration this Permit shall be void and of no further force of effect.

X. ASSIGNMENT, TRANSFER OR SUBLETTING

Without the written consent of the Authority, Permittee shall not assign, sublet or transfer this permit nor any privileges herein contained. It is specifically stipulated and agreed that Permittee will not enter into any tie-in agreements with other operators or sublet any of the rights herein whereby other operators share in the privileges or the services authorized in this Agreement.

Agreement 17

**Resolution Establishing Rules and Regulations
For the Use, Operation and Maintenance of the
_____ Airport**

WHEREAS, the _____ Airport Authority, composed of representatives of the City of _____, located in the County of _____, North Dakota, owns an airport as shown on the plat, thereof on file in the office of the County Auditor as _____ to which plat specific reference is hereby made, and

WHEREAS, it is the desire of said Airport Authority to encourage the use of the premises and facilities at said airport and to establish reasonable rules for the use of said airport, its facilities and services

NOW THEREFORE, Be it resolved by the Airport Authority as follows

1 Regulations Established for Use of Airport From and after the effective date of this resolution the rules, regulations and conditions established herein shall govern the use, operation and maintenance of the Airport and all appurtenances, facilities, equipment, improvements and services constructed or established in connection therewith

2 Use of Airport Any person engaged in aeronautical business or authorized by the laws of the State of North Dakota, or any other state, or the United States of America or any of its departments, agencies or instrumentalities thereof to operate an aircraft while in flight, is authorized to use, in common with others so authorized, the said airport and its appurtenances, together with all facilities, equipment, improvements and services which have been or may hereafter be provided

3 Permit Required Except as otherwise provided herein, no person shall use or occupy or improve or construct any structure on any part of portion of said airport without first having secured a permit from the Authority to do so. Upon written application, therefor, the Authority will lease available lots to any person authorized to use the airport as defined in Paragraph 2, for a term of years not to exceed thirty years from the date of such lease. Space available for such lease is shown on a plat of said airport available from the Authority

Exceptions The Authority may, at its option, by side letter of agreement, forgive any or all of the charges applicable under this paragraph in exchange for services provided by the lessee. Such services might include, but are not limited to, snow removal, mowing, earthwork, seeding and general site improvements

Also, it is expressly understood between the lessor and the lessee that the rate of ground rental per square foot specified shall be subject to reexamination and readjustment at the end of each five-year period of said lease. Amendments shall be reasonable and referenced to the Consumer Price Index of the Bureau of Labor Statistics, U S Dept of Labor

4 Building Permit Required No person shall construct, erect or install any building or improvements upon any of the lots at said airport without first securing a permit therefor from the Airport Authority. The permittee at his own expense may construct or install in or any lot which is or may be exclusively let to the permittee, any buildings, structures or improvements, including equipment that he shall determine to be necessary for use in connection therewith, provided, that the authority shall have the right to inspect the plans and specifications of any such buildings, structures and improvements prior to construction or maintenance thereof and to refuse to permit such construction or maintenance thereof and to refuse to permit such construction or maintenance if the external appearance thereof does not meet with reasonable requirements for substantial uniformity of appearance of all buildings and structures on the airport, or if the type of construction or installation of the location thereof does not meet reasonable requirements for safe use of the airport and appurtenances by others authorized to do so

5 Surrender of Possession Upon the expiration or termination of any permit or any renewal thereof, the right to use the premises, facilities, rights, licenses, services and the privileges authorized or extended to such permittee shall cease and he shall forthwith upon such expiration or termination surrender the same

Except as otherwise provided in any permit, all buildings, hangars, structures, fixtures, improvements, equipment and other property bought, installed, erected or placed by the permittee in, on or about the airport premises under any permit, (such fixtures, improvements, equipment and other property to include, without limitation, storage tanks, pumps, pipes, wires, poles, machinery, and other equipment) shall be deemed to remain the property of the permittee and he shall have the right at any time during the term of such permit, or any renewal or extension thereof, and for an additional period of three months after the expiration or termination of said term as the same may be renewed or extended to remove any or all of his property from the airport provided such permittee is not in default in his payments to the Authority under such permit, and subject further to the permittee's obligation to repair all damage, if any, resulting from such removal. Any and all property not removed by and permittee prior to the expiration of this aforesaid three month period, shall thereupon become a part of the land on which it is located and title thereto shall thereupon vest in Authority

6 Rules and Regulations In addition to those provided herein, from time to time the authority may adopt, amend, supplement, repeal and enforce reasonable rules and regulations which any person using said airport agrees to observe and obey with respect to the use of the airport, which shall provide for the safety of those using the same, providing that such rules and regulations shall be consistent with safety and with the rules and regulations and orders of the Federal Aviation Administration with respect to aircraft operations at the airport, and provided, further, that such rules and regulations shall not be inconsistent with the provisions of the procedures describe or approved from time to time by the Federal Aviation Administration with respect to the operation of aircraft at the airport.

7 Maintenance and Operation Any permittee, during the term of any such permit or any renewal thereof shall operate, maintain and keep all buildings and premises in a state of good repair. The permittee shall provide all facilities, buildings, and keep and maintain the same at his own expense, without any cost to the Authority

8 Indemnity Permittee agrees to indemnify and hold the Airport harmless from and against all liability for injuries to persons or damage to property caused by permittee's negligent use or occupancy of the above premises

9 Quiet Enjoyment Upon payment of the sums due hereunder and the performance of the covenants and agreements on the part of the permittee to be performed hereunder, permittee shall peaceably have and enjoy said premises and all the rights and privileges of the airport, its appurtenances and facilities and granted herein

10 Cancellation The authority may cancel this agreement by giving permittee 30 days advance written notice to be served as hereinafter provided, upon or after the happening of any one of the following events

- a. The filing by permittee of a voluntary petition in bankruptcy
- b. The institution of proceedings in bankruptcy against permittee and the adjudication of permittee as a bankrupt pursuant to such proceedings
- c. The taking by a court of jurisdiction of permittee and his assets pursuant to proceedings brought under the provisions of any federal act.
- d. The appointment of a receiver of permittee's assets
- e. The divestiture of permittee's estate herein by other operation of law
- f. The default by permittee in the performance of any covenant or agreement herein required to be performed by permittee and the failure of permittee to remedy such default for a period of 10 days after receipt of the Authority's written notice to remedy the same, provided, however, that no notice of cancellation, as above provided, shall be any force or effect if permittee shall have remedied the default prior to receipt of the Authority's notice of cancellation

11 Suspension and Abatement In the event that the operation of the airport, or permittee's operations at the airport, should be restricted substantially by action of the Federal Government, or any agency thereof, then either party hereto shall have the right, upon written notice to the other, to a suspension of this permit and an abatement of a just proportion of the

services and facilities to be afforded hereunder, or a just proportion of the payments to become due hereunder, from the time of such notice until such restriction shall have been remedied and normal operations restored

12 Permit required to Conduct Dusting or Spraying Business No person, other than a fixed, established permittee shall conduct the business or spraying or dusting crops from aircraft or for pest or weed control without first having secured written permission from the Authority to do so. Said permission to be subject to the reasonable rules and regulations contained in this paragraph. For such privilege, the permittee agrees to pay the Authority a yearly fee at the time the permission is issued. This permission will expire on the last day of the last month of the year of issue.

In addition to the above minimum standards and requirements, anyone commencing or carrying the aeronautical activity of aerial crop dusting or aerial spraying shall

- (a) Provide suitable and safe storage and containment of noxious chemical materials, including a suitable and safe area for the loading and unloading of such noxious chemical materials. Such suitable and safe areas shall not be in any public landing or other area at the airport.
- (b) Provide aircraft suitably equipped for agricultural operations with adequate safeguards against spillage on runways and taxiway, and protect against the dispersal of any noxious chemical materials to other operational areas of the airport by wind force and provide indemnification from any damages resulting from any chemical spillage or runoff created by the operator or any violations of EPA or ND State Health Department regulations.
- (c) Provide the continuing ability to meet certification requirements of the Federal Aviation Administration and any pertinent state or local authorities to conduct the aerial crop dusting and aerial spraying proposed or to be carried on.

13 Tie Down Space There is hereby established an area set apart for tie down space for aircraft which is more fully shown on the plat of said airport to which specific reference is hereby made. Individual airplanes may tie down at said location at such space as designated. Neither the Authority nor its manager shall be responsible to the owner of any aircraft for any damage sustained by such aircraft while using the tie down space designated as aforesaid. A schedule of fees for tie downs may be established by the Airport Authority if so deemed necessary.

14 Parking Space Adequate and clearly designated vehicular parking spaces have been provided for the use of the public and persons authorized to use said airport.

15 Right of Ingress and Egress The full and free right of ingress to and egress from the premises and facilities leased to any person are hereby granted to any permittee or his guests. The full, free and free right of ingress is hereby granted to the public to use the property in conformity with these rules and regulations.

16 Driving on runways Prohibited Exception No person shall drive any motor vehicle upon any of the runways, aprons, or taxiway at said airport without the permission of the authority.

17 Notice to Airmen (NOTAMS) NOTAMS should be issued to the Flight Service Station any time an unusual condition or hazard to air navigation or aircraft operations exists. Grand Forks FSS phone number is 701-772-7201 or 1-800-732-4247.

18 Fuel Sales No aviation fuels shall be bought on the airport for sale without the express permission of the Authority. This permission is to be granted in a written document providing for safety in storage and handling and payment of a flowage fee of specific exemption therefrom.

19 Enforcement Enforcement of these rules and regulations will be accomplished by the appropriate agency. Violations of Air Traffic rules will be filed with the Federal Aviation Administration. All other rules will be enforced by local and state law enforcement agencies.

IN WITNESS WHEREOF, the parties have hereunto set their hands and signatures this _____ day of _____, 19____

Chairman, Airport Authority

Member, Airport Authority

Member, Airport Authority

Member, Airport Authority

Member, Airport Authority

Member, Airport Authority

Agreement 18

Resolution Regulating Aircraft Agricultural Operations; Use of Pesticides and Related Chemicals and Aerial Application

RESOLUTION

A RESOLUTION REGULATING AIRCRAFT AGRICULTURAL OPERATIONS, USE OF PESTICIDES AND RELATED CHEMICALS AND AERIAL APPLICATION THEREOF, AND THE ADOPTION OF RULES AND REGULATIONS PERTAINING THERETO BE IT RESOLVED BY _____ AIRPORT AUTHORITY OF _____, NORTH DAKOTA, as follows:

Chapter 1

GENERAL PROVISIONS

SEC 1 01 TITLE

This resolution shall be known and cited as the "_____ Airport Authority Pesticide and Related Chemical Control Resolution". This resolution accords with an exercise of authority granted and conferred upon said Airport Authority by Chapters 2-04 and 2-06 of the North Dakota Century Code and amendments thereto.

SEC 1 02 PURPOSES

- 1 The _____ Airport Authority hereby finds that pesticides are valuable to our state's agricultural production and to the protection of man and the environment from insects, rodents, weeds, and other forms of life which may be pests, but it is essential to the public health and welfare that they be regulated to prevent adverse effects on human life and the environment. The purpose of this resolution is to regulate, in the public interest, the distribution, storage, transportation, disposal, and use and application of pesticides and other chemicals to control pests and weeds as are hereinafter defined. New pesticides are continually being discovered or synthesized which are valuable for the control of pests, and for use as defoliants, desiccants, plant regulators and for related purposes. The dissemination of accurate scientific information as to the proper use or nonuse of any pesticide is vital to the public health and welfare and the environment, both immediate and future. Therefore it is deemed necessary to provide for the regulations of their use and application.

SEC 1 03 CONFLICT WITH OTHER REGULATIONS

Whenever the provisions of this resolution are at variance with other adopted rules, regulations or resolutions, the provisions setting the greater restriction shall apply.

SEC 1 04 SEVERABILITY

The provisions of these provisions are severable. If a section, sentence, clause, or phrase of this resolution is adjudged by a Court of competent jurisdiction to be invalid, the decision shall not affect the validity of the remaining portion of the resolution.

SEC 1 05 DEFINITIONS AS USED IN THIS RESOLUTION

- 1 "Administrative Officer" - The Administrative Officer shall be the Airport Manager appointed by the _____ Airport Authority and shall act as an agent of the Authority in the administration and enforcement of this resolution and of any rules and regulations adopted by the Authority pursuant thereto.

- 2 Words not defined in this resolution shall have the same meaning given to them in Chapters 4-35 and 60-03 of the North Dakota Century Code dealing with pesticides
- 3 "Authority" shall mean the _____ Airport Authority or any derivative thereof
- 4 "FAA" shall mean the Federal Aviation Administration of the U.S. Department of Transportation

Chapter II

OPERATIONS

SEC 2 01 PROHIBITION

No person shall conduct aerial agricultural operations from the _____ Airport dealing with the aerial application of pesticides or other chemicals, without first possessing a valid state and federal license or permit to do so, and then only upon application for a permit and issuance thereof by the Airport Authority of this resolution. All operations shall meet the terms and conditions of this resolution.

SEC 2 02 COMPLIANCE

All aerial agricultural operations from the _____ Airport shall be done in compliance with all laws, rules and regulations of the United States of America, including but not limited to the rules and regulations of the Environmental Protection Agency and the Federal Aviation Administration as well as the State of North Dakota, all dealing with the storing, transporting, application and the disposing of waste and containers of pesticides and related chemicals.

SEC 2 03 DESIGNATED AREAS

The _____ Airport Authority may, from time to time, designate certain areas of said airport premises for the loading and unloading of chemical sprays in and out of aircraft, the storage thereof, the washing of aircraft used in the application of chemicals and the purging of all equipment used in the application of said chemicals. The use of said areas shall comply in all things with the rules and regulations of those governmental bodies defined in Section 2 02 of this resolution as well as any rules and regulations hereafter adopted by the _____ Authority.

Chapter III

PERMITS

SEC 3 01 REQUIREMENTS

- 1 A permit to operate an aerial agricultural operation from the _____ Airport shall be first obtained by making a written application therefor to the Airport Manager of this resolution for said permit. If all requirements of this resolution are met, said permit may be issued by said Airport Authority upon payment of the annual permit fee, established from time to time by resolution of the _____ Airport Authority, and when issued, shall be carried by the applicator at all times.

SEC 3 02 PROCEDURE

- 1 All requests for permits must be initiated by the owner of a valid state and federal license and in writing conforming to the form established by the Airport Manager of this resolution.

- 2 Requests for permits to the Airport Manager shall be presented with the completed proper application, and the appropriate fee to the Airport Manager. Each application shall be accompanied by
 - a. A copy of the Federal Aviation Administration Part 137 Certificate
 - b. A copy of the State of North Dakota License
 - c. A copy or certificate of liability insurance naming and protecting the Authority from all operations from the _____ Municipal Airport.
 - d. Any other requirements established from time to time by the Airport Manager
- 3 Criteria for review
 - a. The Airport Manager shall evaluate the application using the applicable standards contained in this resolution.
 - b. The Airport Manager shall submit a copy of each permit application to the Airport Authority for their approval.
 - c. All applicants must give the Airport Authority up to ten (10) days notice to approve the permit application.

Chapter IV

LOCAL OPERATOR AND TRANSIENT OPERATOR STANDARDS

SEC 4 01 OPERATION STANDARDS

Any person desiring to engage in aerial agricultural operations from the _____ Municipal Airport dealing with aerial application of pesticides or other chemicals must provide as a minimum

1 Local Operator Standards

- a. Land, basic requirements
As prescribed by the _____ Airport Authority Board
- b. Storage
Provide safe storage and containment of noxious chemicals as required by applicable codes
- c. Personnel, basic requirements
Any person engaged in any phase of aerial agriculture activity shall be certified or shall meet any requirements set forth by the FAA.
- d. Fueling
Fueling shall be from an approved service on the Airport
- e. Insurance Coverage
The required aircraft, property damage, and general liability insurance coverage shall be that coverage established from time to time by resolution of the _____ Airport Authority and posted in the office of the Airport Manager

- f Building Plans and Specifications, Financial Statements to Accompany Request for Approval
A set of building plans and specifications that meet the city Building Code with regard to the airport building together with proof of adequate financial resources must accompany the request for approval
A bond may be required as determined by the Authority

SEC 4 02 TRANSIENT OPERATOR

1 Transient Operator standards

- a Such operations shall fully comply with Chapters II and III of this Resolution.
- b All sources of water supply shall be designated at the time of making application for permit and approved by the Airport Manager.
- c Fueling shall be from an approved service on the Airport.
- d Such operator shall provide safe storage and containment of noxious chemicals as required by applicable codes.
- e Disposing or burning of empty chemical containers on airport property is forbidden.
- f Any person engaged in any phase of aerial agricultural activity shall be certified or shall meet any requirements set forth by the FAA.
- g The required aircraft, property damage, and general liability insurance coverage shall be that coverage established from time to time by resolution of the _____ Airport Authority and posted in the office of the Airport Manager.
- h A bond or certified check shall be required as determined by the Authority to guarantee the faithful and responsible performance of all requirements of this resolution. The Authority shall be held harmless by the operator from any liability or expense whatsoever in the handling, application, and accidental spillage of chemicals and the like.

Chapter V

EFFECTIVE DATE

SEC 7 01 EFFECTIVE DATE

This resolution shall be in full force and effect after its passage and approval as provided by law

Dated this _____ day of _____, 19 _____

Resolution made by _____

Resolution seconded by _____

Voting in favor _____

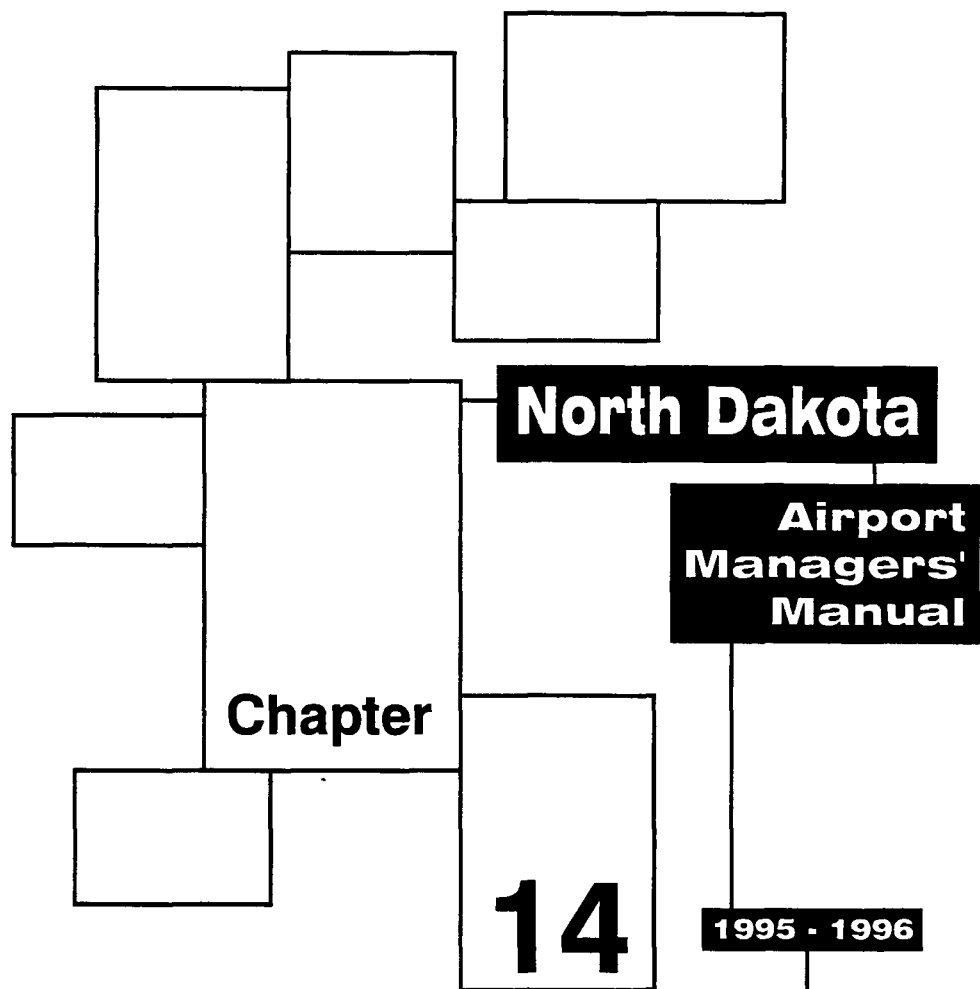
Voting opposed _____

ATTEST

APPROVED

Secretary

Chairman



Air Show Operations

Introduction

Hundreds of communities across the country promote aviation and the local airport by organizing an air show. Sponsorship of these events varies widely across the country. Many air shows have evolved into well established, annual affairs that attract tens of thousands of visitors and hundreds of volunteers. This chapter provides a framework for the Airport Manager who is involved in their first fly-in air show event at an FAR Part 139 certificated airport.

Description of Air Show Activities

The scope and concept for an air show is the foundation from which the sponsor develops a successful event. So that the Airport Manager can be supportive, he should be as familiar as possible with the sponsor's targets, goals, and intentions. Many groups will invite airport management to be an integral part of the sponsor's team to help foster this understanding.

Air shows usually include static aircraft displays, aircraft acrobatic performances, aircraft fly-by's, parachute jumping, ground events, and occasionally night pyrotechnic air performances. Most aerial performances require an FAA waiver. This waiver is generally the responsibility of the sponsor. An Airport Manager should always request an up-to-date copy of this waiver issued by FAA-Flight Standards District Office for the air show sponsor.

Landside Considerations

Landside considerations center around air show site access. Special event traffic control, planning similar to that of a sports stadium event, is necessary in conjunction with local law enforcement authorities. Planning must also be conducted for special service and emergency vehicle access routes to the site. Depending upon the physical layout of the airport and type of aerobatics performed at the show, some roads or buildings may have to be evaluated during performances.

Food, beverage, and souvenir concession plans are up to the sponsor. Airport management has a direct interest, however, to ensure that adequate trash receptacles are available to prevent foreign obstacle debris (FOOD) problems and that alcoholic beverages are prohibited from areas adjacent to airplanes. Concession contracts are a key revenue source for the sponsor and must be reviewed with care.

An air show can become more complicated for the Airport Manager if a large percentage of the spectators fly-in to the airport. Normal runway capacity may not be enough for peak period operations. Turf aircraft parking may be necessary. Some air show visitors may choose to spend the night and camp with their airplane. Each of these situations require the Airport Manager's special attention.

Special Airside Operational Considerations

Successful fly-in air show events may experience peak period airfield capacity problems. An FAA waiver may be issued to the airport to designate a parallel taxiway as a VFR runway for light aircraft. In this case a turf taxiway is designated parallel to the parallel runways, perhaps within the normal runway safety area or object free zone. Each temporary parallel runway should be marked with an appropriate threshold line and numerals, including a left or right designation.

Filing NOTAMS

FAA concurrence for such operations should be requested in writing from the appropriate FAA regional special events coordinator at least 90 days prior to the air show. Airspace and operational analyses will be coordinated by the FAA-Airports District Office and a letter of response issued. If time permits, the FAA should issue information regarding the special operations during the air show as a Class II NOTAM. All FBO's, airlines, and other regular users of the airport should be notified directly. A Class I NOTAM should be filed with flight service two days before the beginning of the event.

Airline Operations

Airline operations need not necessarily be suspended during the air show period. Air traffic control can coordinate air carrier operations with air show sponsors so that both may operate simultaneously. The normal air carrier operation can also be planned to be a brief "act" in the show. The details need to be coordinated closely with representatives of each affected airline through coordination meetings conducted weeks before the air show.

Normal obstacle free zone clearances may be waived by FAA during air show operations. Because air carrier aircraft often possess the most critical wingspan during an air show, special care must be taken to ensure adequate wing tip clearance during taxi operations. At some air shows air carriers take the precaution of using a lead ground vehicle to check for clearance ahead of the taxiing aircraft.

Aircraft Parking

Parking aircraft in turf areas does not pose any special problems, so long as the aircraft are kept out of runway and taxiway safety areas, object free zones, and runway protection zones; access to the turf areas is readily available (i.e., no culverts, hills, or other grade problems limit access); and the turf is solid and void of ruts and holes. One can not assume that the weather will cooperate and that turf parking areas will not get wet. An area's ability to drain surface water is a prime consideration in selecting a turf parking area. Unrepairable turf hazards should be marked with flags or cones.

Flagmen trained in the use of FAA-approved hand signals may be needed to assist in turf area parking areas. A general flow pattern for aircraft arrival and departure must be reviewed with flagmen in a pre-show briefing. While arrivals can be scattered throughout the day, peak aircraft departure time will be at the conclusion of the air show performance.

Camping

Camping adjacent to parked aircraft on airport property is a policy which must be evaluated very carefully. Campers require hygienic services generally not available on the airfield. Portable toilets, drinking water, and shower facilities should be provided in camping areas. If this is not feasible, regular transportation to these facilities must be available. If neither of these approaches is possible, the air show sponsor and Airport Manager will have great difficulty in successfully permitting camping for the event.

Campers often want to cook food on portable grills. Local fire department officials should be consulted regarding camp fires around aircraft. National Fire Protection Association Standard 407 entitled "Aircraft Fuel Servicing 1985" states that open flames should not be permitted within 50 feet of aircraft being fueled or any fueling equipment. A designated area for camp fires, located well away from aircraft and equipped with proper charcoal disposal barrels, is a good way to accommodate campers with grills. If you permit camping, be prepared to rigorously enforce your camp fire policy, inevitably someone will challenge you.

Camping also creates a 24-hour per day airport security problem. If fencing is not possible between the camping area and the air operations area a security patrol may be necessary to keep spectators out of the air show operations area during airport hours of operation. Some campers transport small bicycles in their aircraft, others like to go for an evening stroll. Fly-in show visitors often assume that once airfield lights are turned out at night that the airport will be inactive.

Air Traffic Control

The busiest fly-in air show events have unique air traffic control requirements. Special VFR approach routes are established and no-radio aircraft procedures created. Air traffic control personnel may be deployed at runway thresholds to direct arriving and departing aircraft for takeoff and landing.

When special VFR approach routes are used, airport management may be asked to support ATC by providing unique visual markings to aid pilots. These markings could be orange cones placed in the shape of an arrow, painted markings on a rural highway, or a brightly painted tarpaulin stretched out over a building roof. Any air traffic controllers positioned at the runway will need a source of 110 volt electric power to energize radio transceivers.

Airports may also be asked to deploy visual traffic pattern indicators for the benefit of no-radio aircraft. This can be done by placing orange cones in the shape of an arrow abeam the air traffic control tower near show center. Closed runways should always be marked with the standard "X" at each threshold, airports without full-time control towers must display an "X" in the center of the airfield when the airport is closed for air show performances.

Air show performers will generally use a runway or taxiway for position reference during their performance in front of the spectator area. This is best achieved by creating one point along the runway or taxiway, at the center of the spectator area. This area will be designated show center and require special marking.

Special Landside Operational Considerations

Automobile Parking

Automobile and motor coach parking areas should be located immediately adjacent to the main access gate to the air show site. The parking fee collection point should be located well within the parking area to reduce congestion on the access road caused by queuing. Rows and aisles should be clearly marked. Due to the very nature of an air show event spectators need not be on the airport grounds to enjoy it. No-parking zones located on off-airport streets should be coordinated with local law enforcement officials. Congestion caused by cars parked off-airport by people trying to watch the show can cause safety problems. No parking areas may also be needed to meet spectator setback requirements.

Main Gate

A spectator main gate is the most popular and visible air show site access point. Service vehicles should gain access to the site from a location other than the main gate. Emergency vehicle access routes directed away from the main gate should also be developed. The airport's normal Part 139 emergency plan may need to be modified for this reason.

Incident Command Post

In cooperation with the air show sponsor and local fire and police authorities, the Airport Manager should designate an incident command post. This command post is best situated in the center of air show activity so that all interested parties have direct access. In the event of an accident all necessary notifications and press releases can be coordinated through the combined efforts of the entire air show management team.

Operational Planning

Show Line

The Show Line is the reference line flown by air show performers. This line is always parallel to the primary and secondary spectator areas which restrain spectators from the air operations area. FAA Order 8700.1 defines the spectator area and secondary spectator areas (located on each side of the Show Line) as the closest location that the public is permitted with respect to the Show Line (**Exhibit 12-1**). Minimum distances from Show Line to spectator areas and between primary and secondary spectator areas are specified.

Spectator show lines are usually established with fencing or rope stanchions. They may be changed as the air show performer's category changes, if desired. While the width of the acrobatic area is described above, the length of this area is not specified.

Communications

Communication among all the people involved in a large air show event can be difficult. At a minimum, airport management needs direct access to:

- Air Show Chairperson
- "Air Boss" - the person charged with directing air show performances
- FAA Monitor - usually a FSDO employee or their designate
- FAA Tower Manager - if applicable
- NTSB Representative - if applicable
- Law Enforcement Commander-in-Charge
- Fire Protection Commander-in-Charge

Simultaneous communication with all these people is difficult. Antique radio network is the most common way to link these parties. Mobile cellular telephones and a list of phone numbers distributed to all of the above might also be employed. The FAA-Flight Standards District Office may be able to help with communications hardware for use by FAA personnel. Daily briefings attended by all the parties listed above is recommended. In fact two or three daily briefings may be advisable for large air show events.

Airport Security

Another operational aspect of air show operations which requires close regulatory cooperation to run smoothly is security. Preplanning with an airport's FAR Part 107 field security inspector is essential at a Part 139 airport. In general, Part 107 regulations focus upon:

- Security to prevent air carrier runway incursions

- Security to maintain sterility aboard air carrier aircraft.

The Airport Manager must develop procedures to keep air show spectators out of the air show operations area during air carrier operations and off the air carrier ramp at all times. Temporary fencing and special patrols may be necessary to provide necessary security. Because a good deal of personal judgement is applied by every FAA security inspector in interpreting the regulations, a very definitive understanding between the inspector and Airport Manager is suggested

Event Organization

Sponsorship

Airport authorities, support groups, service organizations and charitable organizations all sponsor air show events. They often do so for different reasons. The one thing that each sponsor has in common is the need for a large pool of volunteers. A well trained, reliable staff is essential to any successful air show effort.

Sponsors contract with air show announcers, acrobatic performers, an "air boss" to (design and direct the air show) and a concessions contractor. They invite military units to perform and exhibit aircraft. A wide variety of skills, talents, and personal contacts are needed to successfully assemble this diverse group of participants.

Distribution of Responsibility

Every air show is organized differently. Generalities can be summarized, however, for basic air show responsibilities.

- Sponsor- Establish air show scope and concept, hire performers and concessions; acquire acrobatic waiver from FAA; organize volunteers to take tickets and usher, promotion and public relations, provide sanitary facilities, arrange aircraft displays and support services.
- Airport Manager- Translate sponsor's proposed operation into a safe event consistent with FAR Parts 139 and 107, liaison between sponsor and tenants including airlines; coordinate emergency services; seek waivers for airport operations (if necessary); supervise airfield operations.
- FAA Tower Manager (if applicable)- Primary liaison for all parties with the FAA during the air show event.

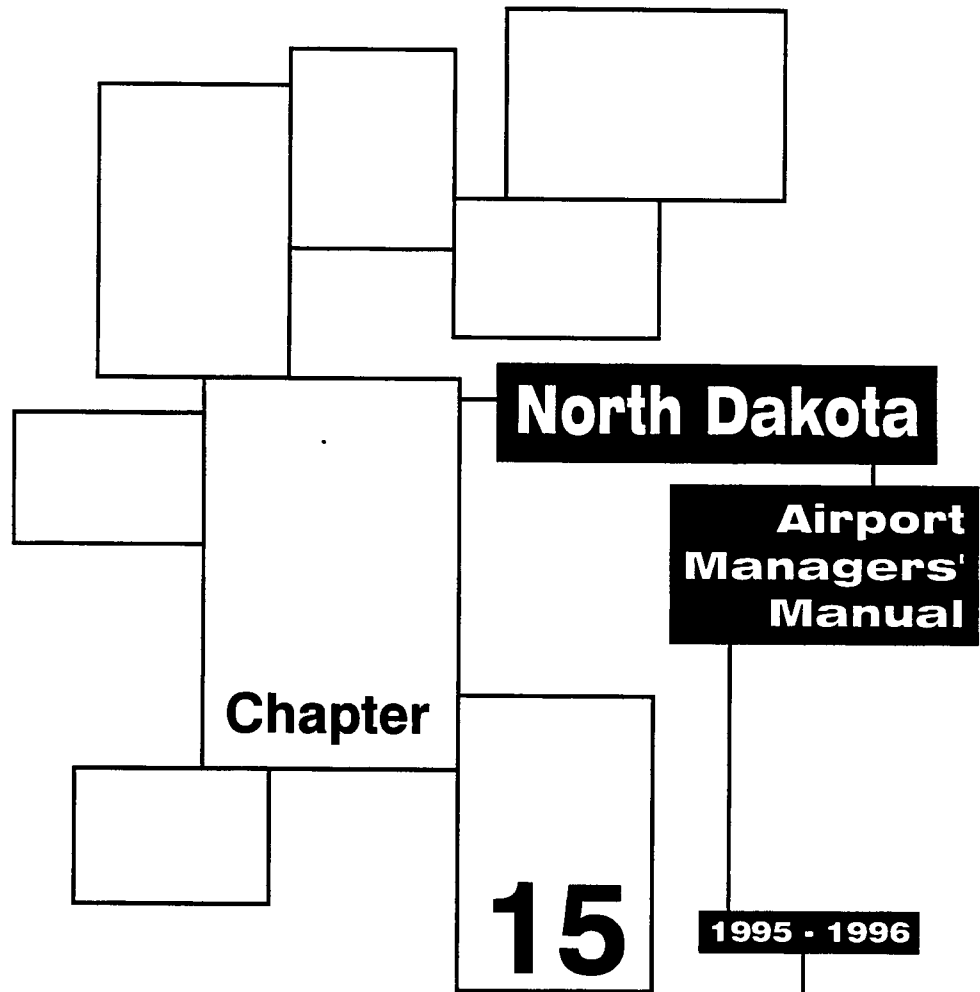
Coordination

As suggested before, the amount of coordination required for a safe and successful air show may be deceiving. At least twelve full months of planning is usually required to organize an airport's first air show. Strong leadership with the sponsor's organization and by the Airport Manager will make for easier coordination among the individual interests.

Both the sponsor and the Airport Manager host different coordination meetings before each air show. The sponsor will meet with air show performers, concessionaires, and contractors regarding each detail of the air show operation. Volunteers will be charged with coordinating each aspect of the air show. Depending upon the size of the show there could be as many as 30 coordinators involved in projects such as ground transportation for the general public, VIP accommodations, aircraft and scheduling. As liaison with non-sponsor support personnel the Airport Manager should be kept abreast of the plans developed by these coordinators.

The Airport Manager will conduct his own series of meetings with emergency service and operations personnel. The local police and fire chiefs together with the sheriff and emergency government director should be involved at a minimum. It is recommended that the Airport Manager be the primary liaison with the sponsor to maintain a single focal point for communication and keep abreast of problems as they arise. Several days before the air show the two operating groups should meet jointly to work out any final details.

Source: AAAE, Air Show Operations



Developing Community Support

Developing a Public Relations Plan

Introduction

Public opinion is a powerful force, it can elect presidents, topple dictators, and close airports. Some airport operators and aviation people believe a low profile will avoid difficulties. Actually, there is no such thing as a low profile for an active airport. The mere fact that the airport exists means people will have opinions about it. PR is not just publicity --- it involves everything the airport is and does that addresses or affects the public interest. The best time to start a planned, positive public relations program is before you need it, probably right now.

Many airport related problems arise from a lack of understanding by the community and its leaders of the airport's value. Most opponents believe an airport is just for hobbyists, and therefore frivolous, expensive and expendable. It is up to you to carefully educate these people on the value of your airport and aviation to the local community. An effective public relations program should include community involvement, political action, and media relations. Ideally, it should be launched before negative public opinion builds into action, and it should continue even when no crisis threatens. In a crisis, you can still save your airport, using a condensed and high-profile campaign. Whatever your situation, construct a custom program for your group by choosing the most applicable ideas from this chapter.

Developing a Public Relations Campaign

The ultimate purpose of public relations is to influence public opinion. The method used is persuasion, and the goal is to convince people that a viewpoint offered serves their self-interest, or that they should disregard their personal interests in favor of a greater public interest. While this may sound like a tall order, the only real talent needed is the ability to:

- Collect and compile accurate, factual information about your airport.
- Communicate through basic press releases and personal letters.
- Identify, get to know, and assist key media people.
- Create and update mailing lists for key media members and community leaders.
- Prepare and deliver speeches and presentations.
- Plan special events.
- Write letters to the editor correcting erroneous facts or opinions when reported in the press.

Know the Situation

Before you can change public attitudes, you must compare the goals of the airport with those of the community. Your job is to present them as being complementary. If the community wants growth, point out how an airport attracts business. If the community wants safety, point to the role airports

play in law enforcement or in movement of emergency supplies after a natural disaster such as a hurricane or earthquake. If the community wants quiet neighborhoods, point out that lawn mowers and highway traffic, although more familiar, are often louder than neighborhood overflights. And if the community wants no growth, point out that once the airport is closed, it probably will be developed for homes or shopping centers, which in turn, increases highway congestion and noise

To make rebuttals, you, the Airport Manager, need facts. Here are some elements you can gather that may prove helpful

- Details of the significant role the airport plays in the community (law enforcement, disaster relief, and handling dignitaries or business visitors)
- Aircraft traffic counts, both local and itinerant
- Economic impact: number of businesses at the airport, their jobs and payroll; businesses connected with or dependent on the airport and the jobs they provide; outside businesses that fly to your airport, and the use of the airport to support tourism
- Social impact Is the airport used for
 - Medical emergencies?
 - Education? Vocational training? Flight training?
 - Military or National Guard?
 - Law enforcement or airborne traffic reporting?
 - News reporting?
 - Overnight express parcel delivery?
 - Bank clearance of checks through the Federal Reserve by air?
 - Pipe or power-line patrol?
 - Agriculture?
 - High-priority freight handling for just-in-time manufacturing operations?
 - Mail?
 - Personal air transportation (which results in gas sales, tiedown fees, and maintenance services)?

Attitude Research

Make sure you understand the community's goals and why opponents think the airport interferes with those goals. Is opposition to your airport common throughout the community, or just among a vocal few? Is there positive opinion out there that needs to be strengthened and made public? Is there negative opinion that can easily be erased with a few facts? Attitude research is commonly done by advertising firms but can it be costly. You might interest an advertising class at a local school or university to examine attitudes about your airport at no cost. Local business leaders or civic organizations might also sponsor such research. Even a little data helps.

Action

The worst thing you can do is to appear insensitive to community values and concerns by being unresponsive to complaints. Look at these two very different responses to noise complaints.

Scenario 1.

One Airport Manager argues with noise-complaint callers and actually orders airplanes to fly lower in the pattern to punish neighbors for complaining. It is almost as if the manager wants to create an army of enemies in his community. Airport #1 is fighting a losing battle against community interests.

Scenario 2

Managers at Airport #2, however, raised the pattern to lower the noise. They also spoke with every pilot who buys gas, asking that newly adopted noise control procedures be followed. These Airport Managers have seen noise complaints dramatically reduced and even respond to occasional complaints by attempting to help identify the aircraft at fault. They also provide callers with FAA telephone numbers designated for noise complaints from the public. Airport #2 is taking positive action that complements community values while assuring continued airport operation.

Ways To Bolster Public Opinion

Here are four things you might try if your airport appears unpopular:

- Clean It Up- Take a fresh look at what the neighbors see. If it is junk and weeds, the neighbors may not think the airport is a professional, business-oriented, and safe environment. Involve the community in the cleanup. A lot of Boy Scout merit badges have been awarded for such efforts. And it is good to draw youth to the airport for any reason, whether for a cleanup or an airport open house.
- Change Something- Change the traffic pattern or the runup area before some government official does it for you. Make sure you publicize and communicate such changes to citizens and leaders.
- Open a Complaint Desk- Just an answering machine will do, but have a number where neighbors can call and vent their feelings. And be sure to respond to their complaints. Call them back and let them know what you did, or that you at least heard their complaint. Why protect one thoughtless pilot who can close the whole airport?
- Make the Airport a Community Center- One airport has a small park where the public can watch the airplanes. Couples with small children find it perfect for keeping the kids

entertained while they enjoy a picnic. Another has three softball fields on its property. Garden clubs are always looking for additional areas for cultivation. Invite school groups to tour. Provide summer jobs for kids if possible.

Getting the Word Out

Here are some ways you can communicate

- Personal telephone calls and letters
- Posters
- Handbills
- Paid advertising
- Speeches to civic groups
- News releases
- Media interviews
- Radio talk or call-in shows
- Store window displays
- Public hearing testimony
- Letters to the editor
- Articles in local company or neighborhood newsletters
- Bumper stickers

Use Common Sense

First of all, do not argue against the obvious. Pilots forget that airports and airport projects often conflict with the legitimate plans of others. Respect those plans. Let people know that you understand the potential conflicts and have done your best to minimize them. Convince them that your efforts are not for a select few, but for the good of the community. Hard-core or irrational opponents of your airport will probably never change their minds or listen to reason, so do not waste your time on them. NEVER enter into a name-calling contest. Treat your opponents as adversaries but not enemies. Be conciliatory and point out that the right to disagree is a shining example of democracy in action. At all costs, remain calm, cool, and collected.

Choosing a Target Market

Aim your positive and upbeat programs at a broader segment of the population who, along with airport supporters, can constitute a majority consensus that will neutralize or overcome hardened opponents. In a conceptual sense, build your plan around these proven public relations maxims:

- Appeal to the community's self-interest using trustworthy and authoritative sources of information (commercial or instrument pilot, president of your committee, local business or civic leader proponent, etc.).

- Personal contact is the most effective means of communication (so plan personal meetings and presentations).
- Suggesting some sort of action is as important as the message itself (example: "Sign this petition of support").
- Get your message to groups generally respected by the majority of the population
- Keep the message clear and simple ("Keep this airport open, and here's why").
- People tend to believe what they heard last, especially when neither side appears to be clearly in the right. If you find yourself in a debate forum, try to get the last word
- People tend to resist change, so it is important that you point out the advantages of progress to the community

Community Outreach

Start managements efforts to build public support by providing a program for local civic organizations. This is vital, because people who care enough to hold and defend an opinion on community issues are almost always involved with a civic organization. There are numerous ways to nurture aviation interest among students, ranging from flights for interested teachers to simply collecting aviation magazines and donating them to school libraries. AOPA can supply Airport Managers with information on our "Fly-A-Teacher" program. Other suggestions of interest include: "Fly A Reporter," "Fly A Leader," and AOPA's "APPLE" (America's Pilots Participating in Local Education) program.

How to Start

First, list the organizations you want to address. The local chamber of commerce or newspaper can help you with the who, what, and whys of civic groups. The number of opportunities you uncover will help you determine the amount of time and money you need to invest in a suitable community outreach program. To make it easy on yourself and the audience, build your program around audiovisual aids such as a slide show or flip charts prepared in advance. AOPA can help and, in some cases, provide some audiovisual materials on loan.

Delivering the Message

Videotape may seem just the ticket at first, but the difficulty of showing video to large groups is a major drawback. A short but interesting slide show is the perfect format for groups of more than 15 or 20. A slide presentation tailored to your local community is always more effective than a canned speech. If a picture is worth a thousand words, a 40-slide presentation can make a tremendous

impression in a short time (like 15 minutes). Try to include slides that depict the airport serving the community, e.g., Civil Air Patrol, ambulance service, bug spraying, etc.

The slide show will allow you to quickly focus audience attention and make your point graphically. Once the show is prepared, it is relatively easy to present repeatedly. Begin preparation with an outline of the points you think should be made. Take or get photos that make interesting illustrations. Try to find someone who knows enough about photography to get better than average photos. Once you have the photos, work up an outline script with cues to indicate slide changes. If funds are available, the narration and background music can be mixed and recorded on cassette tape by a professional studio or perhaps the local radio station will donate the necessary equipment, time and personnel. A soundtrack will add impact to your show at a cost less than you would expect. Although this level of sophistication is nice, it is certainly not required.

Once you have a presentation together, contact civic groups, regardless of size. If the airport is currently a hot topic, they will be glad to see you. If the airport's not a hot topic, present your program anyway. Program coordinators for these clubs are always looking for speakers, but schedule well in advance. You'll find most people are really fascinated with flying and have many questions. If appropriate, take along a petition available for signatures following the meeting. Also take along your group's handouts.

After your audiovisual presentation, reinforce its main points using the perspectives best understood by the audience. For example, bankers understand economic benefits of the airport. Conservationists can relate to the use of aircraft in environmental research. Politicians understand how an airport can attract new businesses. Very few, however, speak aviation, they will only be confused by a lot of aviation terms. Avoid insider language and any self-interested argument. Open the floor for questions. If a delicate subject is raised, the speaker's safest response is to admit that he or she is not in a position to discuss it fully. The speaker should then obtain the questioner's name and address, promise a written response, and follow through. Do not run too long. Half an hour is plenty. If you have hit the time limit and the crowd is getting fidgety, say thanks and offer to answer additional one-on-one questions at the podium.

Planning Special Events for the Community

Airport-sponsored special events are among the best ways to promote aviation in the community. These include: airport anniversary celebrations, military reserve days, air races, static displays, fly-in breakfasts, dedication of new buildings, youth group activities, career days, student art showings, antique shows, and warbird displays. Most can be launched with a minimum expenditure of money and time by using existing facilities at the airport.

Many such projects fail, however, due to lack of proper planning. Basic requirements for a special event include a planning committee, a sponsor, and a small reserve of operating funds. It is generally sound practice to appoint one person to coordinate all planning and information. Do not

forget to generate community involvement from local parent-teacher associations (PTA), Boy Scouts, etc

Addressing the Press

First, you need a media list. Include all local papers (dailies and weeklies) and magazines, get to know their style, politics, and audience focus by buying samples at the newsstand. Addresses and editor names are printed inside. Get radio and TV station listings from the Yellow Pages or radio/TV section of the newspaper. Get listings from media directories at a local public relations firm. Target major media, such as leading newspapers, the state Associated Press bureau, and television and radio stations, for special attention. Do not forget public radio and television if they cover local stories, because they are more likely than network media to cover your issue in depth.

Call media newsrooms, explain the issue you represent, and find out which reporter is most likely to cover it. Reporters are just as anxious to have sources as you are to have coverage. Once contact is made, you may find you have become a source. Try and help the reporter, even if it is only a referral to another person who is directly knowledgeable or involved in a certain question.

If you explain your position in a reasonable manner, you may get coverage. The degree of coverage depends largely on how well prepared you are to assist in the news-gathering process if your cause is currently newsworthy. Appoint one person as chief contact for your group. Avoid the confusion of multiple spokespersons. The ideal candidate is someone who has done such work before or the president of your group. Reporters like having access to the Airport Manager. Make sure your spokesperson likes the press, is articulate and informed, and can speak with authority on behalf of the group.

Preparing News Releases

News releases, photo captions, and press advisories are not as difficult to prepare as you might think. A release need not be a formidable piece of journalism, just a timely announcement of a newsworthy event, action, or statement. Samples of format and style are shown on the following pages. Some of the more advanced software packages, such as Microsoft Word for Windows, already contain templates for press releases. You simply begin typing, and a professionally formatted newsletter pops out of your laser graphics printer.

Press releases will be much more effective when mailed directly to the reporter who needs it, not to the media outlet in general. If no reporter has been identified, address it to City Editor (daily paper), Assignment Editor (TV), or News Director (radio). News releases must be concise, to the point, and, above all, contain genuine news. Management prepared news releases will seldom answer all the questions a reporter has. They are only meant to generate interest. Therefore, the name listed on the contact line of the release must be easily reachable and ready to speak on the subject.

Determining What News is Appropriate For Release

Here is the way it works. You need publicity, but the reporter needs real news. You get coverage more readily when you have news. Just having an opinion does not constitute news unless a public statement contributes meaningfully to a current, high-profile public debate. Releasing an economic study of the airport, and basing it on accepted standards, can also be news. Sending a copy to a top official is still bigger news, now the reporter can work the official into the story. The reporter will call the official for comment, and the process of "public dialogue" begins, just as you had hoped. In some cases, the public official could perhaps provide you with support by publicly agreeing with the information you have developed.

Usually contact reporters by telephone. You can try an introductory meeting with a key reporter, but reporters are usually short on time, especially if you have no news to offer that day. If you have real news, the reporter will suddenly have all the time in the world for you. A good reporter is supposed to be fair but disciplined. Do not be disappointed if you can not win the reporter over. You can, however, demand fairness and a lack of bias in reporting, if this is an issue. Some reporters, like the rest of us, have a special interest in aviation. Whenever possible, arrange to take them for a flight. Here again, education is the key.

Be specific when you talk to a reporter, offer genuine local examples, and be sure of your facts. For example, how will proposed restrictions or airport closure affect business, the community, and pilots? Have some social and economic values in mind that affect the majority of the community's non-pilot citizens.

Do not be shy to call the reporter when you have news. Ask on your first contact about the best times to call. For example, reporters for morning papers usually have time to talk in the afternoon or early evening. But reporters for afternoon papers need information early in the morning. Do not call TV stations in the last hour or two before a news show or radio stations just before the top-of-the-hour or on-the-half-hour newscasts.

Agree to keep a reporter's confidence on an exclusive, if appropriate. For instance, if he or she has a exclusive angle on the airport story, you should not share information revealed to you during an interview with another reporter. If a reporter from a competing news organization calls about the same facts, however, at least let the first reporter know the story is no longer exclusive.

Tips When Talking to Reporters

Do not guess at answers to reporters' questions. You have to be right! If you do not know a fact, say so.

Do not say, "No comment." It is not an answer. Take the question down, pass it along to possible sources of information, or get the answer yourself and communicate it back. You will earn the

respect of the media by living up to promises of obtaining and providing the answers to unanswered questions

Always assume that anything you say will be printed or broadcast. Making statements off-the-record should be left to the pros; if you do use such techniques, make sure you and the reporter agree on the meaning of "off the record" or a similar arrangement. "Not for attribution" means your quote may be used, but you will not be identified as the speaker. "Background" means the reporter can use the information for better understanding, but not for a quote, not even in a general way. Off-the-record statements are supposedly not to be reported, but then, why would a reporter bother listening to them? Should you decide to use them, you must state such interview conditions clearly before the interview starts. Don't expect to go "off-the-record" after the interview is over. Statements can be clarified later, but not taken back. In general, it is better to say what is fair, accurate, and printable and leave it at that.

Do not ask to review the story prior to publication. The reporter's audience assumes you had no influence over the finished story and that it represents the reporter's best independent reporting of fact. Be sure to offer, however, to confirm or clarify individual facts over the telephone later. The reporter may well call you for follow-up as new angles on the story develop. And you can follow up your own interview with new or explanatory information.

It is best if you do not comment on accidents; and if you must, never speculate on causes. Emphasize that early revelations and instant analysis are usually erroneous or misleading. Point out to the reporter that no one should comment or speculate on the cause of an accident except the authorized agencies, the National Transportation Safety Board (NTSB) or the FAA.

If you hear an interesting news tip or fact that benefits your cause, you can perhaps cultivate your relationship with the press by offering it to a friendly reporter. Just tell the reporter you want to give a tip "on background", and that you may not be able to vouch for its accuracy.

One last point. You might as well give your press contact all sides of the story, including the bad side. Good reporters will track it down anyway, and it is better that they get it from you, with your perspective. This establishes your credibility with the press as someone who tells it straight. Establish the best relationship possible with reporters. If you handle yourself with honesty and integrity, the press truly can be an ally. Be able to back up your statements, preferably in writing. And do not be afraid to say "I do not know, but I will get the answer immediately and call you back."

The Ultimate Media Event

An aviation day for the local news media, held at your airport, has proven to be an effective media relations opportunity. By all means, sponsor such an event. AOPA provides guidelines (How to Have a Successful Media Event) to this and other media relations activities.

Do not forget to offer a flight to those reporters expressing an interest. AOPA's "Fly a Reporter" brochure will assist you in conducting reporter flights as part of your "Ultimate Media Event."

Tips for Writing a Letter to the Editor

What can you do if the news media treats general aviation unfairly or displays careless disregard for the facts? The best solution is a letter to the editor. When writing to the editor, here are some points to follow:

- Editors crave brevity- There are too many issues and too little space. Do not exceed one typewritten page. Anything longer will be edited down to nothing. It is always the shorter letter that gets published.
- Do not "back in" to the issue- Get right to the point. Avoid mushy words like "regarding," "major," and "scenario." Your first sentence should set the tone such as, "A city council vote to restrict general aviation at the municipal airport would hurt local business, cost jobs, and cripple the regional transportation network."
- Do not overwrite- Do not exaggerate or overuse punctuation marks.
- Strong wording makes for lively reading- It also shortens your letter. Notice how the use of the word "cripple" above is more effective than if the writer had substituted " ..would be seriously damaging."
- Timing counts- News is perishable. If you wait a week before writing, the editor may be less interested in printing your letter.
- Consider hand-delivering your letter- Ask to speak to the editor in person. Establish personal contact.
- Be Constructive- No one wants to read someone else's temper tantrum. If you point out a problem, suggest a solution. You might include a short paragraph on why you are qualified to comment on the issue.
- Stick with the Facts- If the newspaper made an honest mistake or the source it quoted was wrong, don't accuse them of being cheats and scoundrels. Do not make wild charges: Your letter could result in a libel suit against you and the newspaper.
- Understand the newspaper's production problems- Do not insist that your letter run verbatim. Editing may be necessary to fit available space, improve clarity, or protect the newspaper from libel.

Political Action

Political action and public relations tie closely together in any campaign to gain support for a local airport. While a successful public relations campaign focuses primarily on the objective of influencing "public opinion" concerning an airport, political action focuses on influencing those elected officials who make decisions on important airport issues.

The American system of government was founded on the basic principle of democracy, which, by definition, is "a government in which the supreme power is vested in the people and exercised by them directly or indirectly through a system of representation." If democracy is indeed the foundation on which the American system of representative government was founded, then grass-roots legislative action or grass-roots lobbying is the vehicle that makes that system work. Certainly, the political process is the vehicle that keeps airports open. The following points are guidelines for your group to consider as it participates in the political agenda governing your airport.

Involvement in the Process

A successful political action campaign requires a commitment of your time or the time of another reliable person within your group. Another important element your group should focus on is to obtain an appointment to advisory groups or airport commissions. Success in obtaining these valuable seats on advisory committees will give you a direct line to important elected decision makers. There are several steps you will need to undertake in developing and implementing your political action involvement. The number of steps you ultimately decide to implement will be a factor of the level of influence you wish to enact.

Target Audiences for Decision and Support

Local Officials

- Mayor
- City/County Council
- Airport Commission
- Airport Manager
- County Executive
- Zoning Commission
- Revenue (tax) Commission

State Officials

- Governor
- State Representative
- Aviation Department
- Department of Transportation

Federal Officials

- Congressional Representatives
- Congressional Staff
- Federal Aviation Administration
- Department of Transportation

Personal Meetings

When seeking a personal meeting, be sure it is with someone who counts. Usually the elected official is very busy and may or may not have knowledge or an interest in your problem. In this case, seek out the person or professional staff he relies upon to advise him in his decisions. By all means, avoid getting a meeting with a "gopher" or someone with a high-sounding title but who has no authority or responsibility. Once you have set up a meeting with these persons, find out what their backgrounds are. Find out how they stand on aviation issues and what their past actions and stated opinions were.

If possible, avoid going alone. Take one or two other members with you, but do not overwhelm them with a group of people. Be sure all of you are familiar with the issues. Regardless of your feelings, remember this is a business meeting. Be cordial, get down to business quickly. Be careful not to let it turn into a meeting with no direction and no decision. Make sure your people are properly attired. Prior to your meeting, review your priorities, then stick with the problem you want to attack and concentrate on that issue. If you have enough time for advance planning, AOPA can provide valuable information that will improve your presentation.

Public Meetings and The Airport Manager's Role

Meetings where decisions are made affecting the airport must be monitored; and, whenever necessary, incorrect or false information that would have a negative effect on the airport must be countered with the facts-facts which can be documented. Never provide information that can not be substantiated. During the decision-making process and associated public hearings, avoid using terms like "I think," or "we believe." Present hard and fast facts. In most cases, undisputable facts will influence the decision in your favor. Usually, those who oppose the airport are presenting an emotional plea to their elected officials. When going before a public meeting, make sure you properly identify yourself and the support group you are representing as an opponent or proponent. Let the chairmen know whether you want to speak first or last; usually they will accommodate you.

Normally (especially if there is news media coverage), it is best to appear first. But, being last sometimes will give you an opportunity to clarify any questions or refute any points the opposition may have raised. It will also give you an opportunity to watch the committee's reaction to other people's statements and positions. Being last will help you identify any support you may have on the committee and aid you in making a more effective presentation. Which position you choose will be a judgmental decision on your part. However, beware if it looks like it's to be a long, drawn-out

meeting. Don't hold back too long or you will lose their attention. The committee may get bored and upset to the point where your presentation will be totally ineffective no matter how good it is.

Some Tips

Always address a committee or hearing in a reasonable manner, be Polite, put emotions aside, and present yourself as a professional. Be Prepared by provide a copy of your position statement for each member on the committee. Use valuable tools such as large graphs or illustrations. They will make your presentation more professional. Make sure you know your opponent's position, and be ready to have answers or rebuttals if necessary.

Try to find out in advance the attitude and position of each member. In your presentation, go after those who are opposed but may be subject to reasonable persuasion. Do not waste valuable time on those who are already convinced. When you get up to speak, state your name and the group you represent. Explain in brief terms why you are in support or opposition.

Talk about the specifics of your position. Try not to read your presentation. Have an outline on the table or podium in front of you. This type of presentation will give a better image and rapport with the committee. Eye contact and facial expressions are critical. Relax and assure them you are one reasonable person talking to another.

Concede a fair point. Do not be afraid to tell the committee you do not know the answer to a question, but be sure you let them know that you will get an answer for them, then make sure you do. In closing your statement, summarize your main points and ask that the committee favorably consider or oppose the action under construction. Many public meetings have limits placed on the time that you have to make a public presentation. At all costs, honor those time constraints.

Political Campaigns

The quickest way to win the support of an elected official is to assist him or her in becoming the successful candidate in an election. Once the airport group has made the decision to become active during an election, it is important that a personal meeting be scheduled with each of the candidates to determine their position on airport issues that are of interest to your group. This is not a time to be shy. Be straightforward and ask the candidates for their position. Only after you have interviewed each candidate can you make a decision as to whom your group should support in the election.

It is also advisable to submit a list of specific questions or issues you would like to discuss with the candidate prior to the meeting. This will enable the candidate to research the issues. Additionally, you are more likely to receive an answer to the question without the candidate telling you that he is not familiar with the issue. Embarrassment of politicians should be avoided. You should also be prepared with information supporting your views, should the candidate need additional information during the meeting.

There are a number of ways that your airport group can assist a candidate to become an elected official. Some of the more common actions taken during a political campaign might include.

- Tow a Banner - an airplane towing a banner displaying "John Doe for City Council"
- Distribute Material - Distribute campaign material door to door.
- Phone Voters- Many candidates telephone voters from a phone bank at their campaign headquarters, have pilots night-work the telephones for the candidate.

The key to winning political support for your campaign is airport involvement. Elected officials will always listen attentively to those who assisted them in becoming an elected official.

Tips for Writing Elected Officials

Limit yourself to one subject and one page. Identify by name and number the issues or legislation bills you are discussing. Make sure your name, address, and telephone number are printed clearly on the letter. Members of Congress typically receive hundreds of letters per week but will almost always answer a letter from a constituent.

Use your own words, do not sound (or look) like a mass mailing. It is important to personalize or localize your concerns. When writing national or state politicians, stress local effects of proposed legislation. Politicians are most interested in their home districts.

Request specific action- Your request needs to be focused towards a specific action. This is the whole point. Be clear in stating exactly what you want the legislator to do, and don't make threats. A positive letter is always more readily considered.

Try to get your letter out just before a key vote, hearing, or debate. Correspond no more than once every other month; legislators tend to disregard pen pals. Whenever elected officials are in your area for a public meeting or speaking engagement, take the opportunity to visit with them. AOPA sponsors a series of Pilot Town Meetings with elected officials and pilots across the country. Do not miss this important forum if one comes to your area.

Organizing Your Airport Support Group

Introduction

Single-handedly, or with a few team members, you, the Airport Manager, can begin the entire airport support group effort by gathering the individuals who will form the nucleus of the group's leadership. This early recruiting is extremely important. Experience shows that as the support group is formalized, the nucleus brought together initially as the "steering committee" will usually be elected to the group's board of directors or executive committee. This is significant because the most effective support groups have an executive committee of five or six activists who direct and manage the activities of their broad based membership, pick the best group you can find. This progression from organizer to officer is important because the Airport's bylaws will empower this leadership group to take action on behalf of the membership. A strong and committed executive committee ensures control, accuracy, flexibility, and credibility. Having this kind of leadership structure also implies a business approach and large membership.

Selecting Your Support Group

Begin recruiting this small group by listing 10 to 15 people you feel could be valuable and dedicated members. Start a list of candidates by identifying

- Fellow pilots who have an intense emotional investment in aviation and their aircraft
- Pilots whose business depends upon or is enhanced by general aviation and the utility of a nearby airport
- A pilot who is involved in local politics or local government who would be sympathetic to the cause
- A pilot with public relations, communications, or marketing background.

Be sure that this list is broad-based and that it includes a cross section of airport users and community members who support the airport. You should endeavor to identify as many of the specific constituencies involved with the airport as possible. To broaden this list, seek participation by and ask recommendations from

- Members of the airport authority.
- The managers of the FBOs on the field.
- Airline station managers or agents of commercial operators.
- The chamber of commerce executive or chairperson of the economic development corporation or committee.
- Other civic-based organizations.

Contact the individuals on the list personally. Tell them you have an idea that might interest them. Meet over a cup of coffee and find out how they perceive the airport situation.

When interviewing members from your support group, you may want to ask the following questions:

- Their opinion or thoughts on the airport's problems, as well as any other community-relations problems the airport may be experiencing.
- How important they think the problems are.
- Their suggestions about people in the community who may be a part of the problem or could contribute to the solution.
- Whether they would be willing to help. And without giving or asking for a commitment, determine if they have the time to serve on the steering committee.

After your first round of contacts, you should have five or six people who are willing to serve and support the steering committee. It is imperative to include nonpilots. Non-aviation individuals add credibility to any reports you may issue. Choose your leadership carefully. Avoid those who are all show and no go. Some people are simply joiners who hop on any bandwagon and others are on an ego trip; you can not afford either variety. The steering committee must be willing to stick with it and make personal investments of time and money.

Next, invite your choices to an informal meeting. Try to time the meeting for maximum attendance (for instance, a breakfast meeting might be better than a luncheon). State that the purpose of this meeting is to seek advice and information and to develop a plan of action in preparation for the first "formal" meeting of the new group. This first meeting will be the most critical in determining a successful plan of action. It will also serve to weed out those who do not share your interests. Be sure to send a short reminder three to five days in advance, and call the night before.

Putting the Support Group to Work

Once established, ask your small group to begin analyzing the true nature of the airport's problems. Define those problems, but bear in mind that they are not always the most obvious. While the most common are safety and noise concerns or the desire to develop real estate, there could be other reasons for the airport making a public image makeover.

To uncover underlying issues, ask the following questions:

- Does the airport have minimum standards for service and appearance?

- Does the airport return the community investment through competitive leases and rents? (If so, use that to defuse your opponents' arguments and make their position seem extreme)
- What specifically does the airport provide the community?

Identify your opposition It is easy to assume that the other side is a uniform alignment of reactionary groups, but defining the opposition is seldom that easy Follow the following process

- Define who the opponents really are. Are they neighbors, elected officials, members of the local power structure and developers?
- List opponents by name and occupation; search for a possible connection For example, John Doe could be on the board of a bank that could benefit from developing the airport property
- Get past the red herrings and glittering generalities and to the central issues Make sure you understand the real reasons behind an opponent's arguments. Does someone want to erect a radio antenna?
- Find out what your opponents intend to accomplish Do they want the whole airport closed or developed? Do they want to kill it inch by inch? On what issues are they willing to compromise?
- If your airport is not facing an immediate threat, compare the perennial arguments against airports with the potential problems the airport could face. For example
 - Prime farmland is taken out of production
 - A residential community is encroaching on airport land
 - Fear that a general aviation airport will become an air carrier airport
 - Drain on tax dollars
 - No benefit to the average citizen
 - Lack of airport land use planning
 - Noise complaints
 - Safety concerns

Your group should discuss topics like

- What do the people in the community know about general aviation? The airport?
- What are their present attitudes?
- What power structure holds the key to governing the airport?
- What group or opinion leaders effectively influence the public?
- How do community-related ideas flow? From whom? To whom?

- To what extent to authority, facts, and emotion affect attitudes?

Structuring Your Group

Determine the type of group that best fits your situation. Choosing a structure for your group is strictly a function of your specific problems, opportunities, resources, and airport size. There isn't one type that works best, however. If the possibility of litigation or other legal action exists, it may be wise to form a nonprofit corporation. Because laws regulating corporations vary from state to state, airport management is encouraged to seek the advice of a local attorney.

Select a tentative name for your support group. The name should be submitted at the first general meeting so that a consensus can be reached by those who will ultimately be your members. At all costs, avoid using names that include the words "Pilots Association." The name should not further polarize the community by directly implying you are a special interest group. Hopefully, the support group will attract nonpilot community members. Remember, one of your goals should be to seek those persons out. They can help you defuse community opposition to the airport.

Selecting Bylaws for the Support Group

Bylaws should provide for a president, vice president, secretary, treasurer, and board of directors representing various interests. The executive committee (president and vice president) should be empowered to act between board meetings. Standing and special committees, each with a chairman and vice chairman, can handle needed tasks. Successful groups include a variety of committees, including volunteers who do a variety of work to help maintain and clean up a small airport, safety committees working toward enhancing safety and reducing hazards; and community support committees working to present a positive airport image to citizens while countering opposition. All three types have proven value. At a minimum, your airport support group should have at least a political action committee, a safety committee, and a public relations committee. By breaking tasks into smaller subgroups, you accomplish more in less time while taking advantage of specific, targeted expertise necessary to achieve your goals.

A support group can be organized for a single airport or a geographical area with several airports. In the latter case, each airport should have its own local group and representation on the board of directors of the larger organization.

Activities

Narrow down the list of possible support group activities. Local airport action groups participate in a wide diversity of activities, limited only by the imagination and motivation of their membership. Anything that promotes or helps an airport or aviation is open for consideration. Some general and more frequent examples include:

Membership- Provides an avenue to obtain and retain membership for the organization. Any worthwhile effort requires financial resources. Members provide this resource.

Political Support- The review, participation, and support of airport master planning efforts, airport development projects, and environmental impact and noise abatement studies. This includes participation in meetings and opposition to proposed adverse actions. The committee monitors political events of major impact on the airport.

Safety- This topic is usually a major concern of the community. It includes all phases of accident prevention and safety such as obstruction removal, pavement repair, vehicular hazards, signs, navigaids, improved maintenance, safety areas, air traffic control (ATC) procedures, etc. From time to time, the committee should sponsor safety seminars.

Promotion- Includes public relations speakers and programs, newspaper articles, commercials, literature, etc., to publicize airport benefits. Promotion also includes supplying volunteer greeters and information desks at the airports.

Special Events- This category covers such activities as airport open houses, air shows, contests, and fly-ins.

Education- Involves the encouragement of aviation education and training and providing speakers at schools. The committee might collect aviation publications for donation to the local school libraries.

Emergency Planning- Requires participating in and supporting airport emergency plans and drills for fires, crashes, and natural disasters.

Airport Beautification- Your group could provide volunteers and financial resources for airport beautification, landscaping, grass cutting, painting, clearing approaches, etc.

Search and Rescue- This involves volunteer participation in search and rescue operations and providing resources for Civil Air Patrol (CAP) activities.

Addressing the Public

Your steering committee now has a list of concerns to announce, possible goals and activities to suggest, and a structure to recommend. It can now call a public meeting of all interested parties and individuals. This highly publicized event can present great fanfare and is a perfect opportunity to state problems and goals to the media. The first meeting is an opportunity to enlist members, and it is also a media event, a news story.

Community Participation

The pilot community is the biggest special interest group. Contact them through fliers, posters, a pilot newsletter, etc. But do not be surprised if many refuse to get involved, and the most affluent refuse to donate. Do not get discouraged. Americans help worthy causes. Many in each area have the ability and interest to aid their airports. An action group should be open to all who can play useful parts, including individuals from other groups. Members can include

- Airport officials and employees
- Persons now or formerly employed in aviation
- Airport tenants: airlines, FOBS, corporate aircraft owners, auto rental personnel, etc.
- Airport users, including companies and businessmen
- Pilots, flying clubs, and the Civil Air Patrol
- Government officials and employees.
- Chambers of commerce and civic groups.
- National and local aviation associations
- Air Force, Air Guard, and other military personnel.
- Retired persons and veterans, especially former pilots.
- Scouting programs.

The First Public Meeting

This event presents one of your best opportunities to bring attention and support to the cause. Organizing the first meeting is not as tricky as it sounds, but it is labor and time intensive. Remember, it is imperative that you have a good show of support. Get names from the airport people you originally contacted for your steering committee (the airport manager, FBOs, station agents, chamber of commerce) Lay out your plans and ask them for help in financing and publicizing the meeting. Expand your contacts to any other airport tenant, and ask for their support and attendance. Approach the operators of other businesses affected by the airport restaurants, motels, car rental agencies, etc. Ask them to send one representative to the meeting. Request that they donate refreshments or lend you working materials like a podium or slide projector. Also contact appropriate local quasi-governmental units like the tourism board and economic development corporation. Ask the leaders of the business community to attend. You will gather credibility quickly if those opinion leaders appear, especially if they agree to make a few brief remarks.

Send a formal request to the mayor and other public figures. They may not show up (for political reasons), but you win either way. When politicians show up, they provide support. When they do not, they are conspicuous by their absence. By all means, try working through political networks to gain their attendance, but don't be so overly concerned if they don't come. It is also a good idea to invite state aeronautics officials. Make sure the media is present. A personal telephone call is best. Call them several days in advance of the planned meeting, and follow up with another call the morning of the meeting.

The first meeting should have a short agenda, enabling you to get acquainted with other people who may have an interest in helping your airport. You will be able to make a realistic assessment of the potential for their assistance.

Suggested Agenda

Present the existing or potential problem and the steering committee's findings. Ask prominent attendees to make brief statements, if they wish. Ask for opinions by letting everyone speak who wishes to. Other activities that should be considered include:

- Get additional ideas and suggestions for steps that could be taken to improve community relations. Obtain volunteers for each specific committee.
- Get ideas for new activities. Don't focus on strictly social events. Plan activities that will focus attention on the airport.
- Present the proposed bylaws for group approval. Be prepared to conduct the election of officers. Written ballots may be printed ahead of time with blank lines so that the attendee can write in the candidate's name.
- Have the group establish and approve a dues structure.
- Get a sign-up list to collect names and addresses for future mailings.
- Survey the participants for personal capabilities that might be of use to the group (e.g.- desktop publishing skills, mailings, printing, etc.).
- Establish the date and time for the next meeting. The time between meetings will depend on the severity of current airport problems.
- Sometimes the membership is ready to vote their acceptance right away. However, on occasion, you may find it necessary to schedule one more meeting to hold a formal election and take care of other details.

A Few Hints

Dues assessment depends entirely on the local situation. It is a good idea to begin with a campaign for fairly large corporate donations and small membership dues. Seek advice from other local airport associations.

Send a newsletter to your group. Too many meetings take up too much time. The rule of dwindling attendance (two "getting organized" meetings is about all most people can stand) will give the

perception that your group is losing support. A regularly published newsletter is an absolute necessity if you are to keep the support group active.

Find a champion. Every good group needs a dedicated person with the time and ability to champion its cause. That individual must be able to make a personal commitment, make community presentations, and generally be available. Interestingly, many excellent "champions" are not even pilots. Retired executives make excellent champions. You might consider offering that caliber of individual a retainer or pay expenses. Your representative does not need to be flashy or dynamic, but should possess integrity and the ability to communicate.

Convene a blue-ribbon panel of nonpilot community leaders to serve as a validating committee. It will serve as a sounding board and credibility builder. It will question and later validate your statistics and arguments supporting the airport. An existing "special" or "standing" city government committee is an excellent choice. If one does not already exist, request that one be organized. The panel will quickly find holes in your logic. It will ask the questions the taxpayers will ask. The media will be interested in the panel's judgments.

Establish a committee to market the airport. The group should design a brief brochure to point out its history and benefits. An aerial photograph of the airport might also be included. Often, local civic organizations are more than happy to sponsor this type of literature as it stands to bring additional business to the local community. You can also use this promotional literature to educate the community.

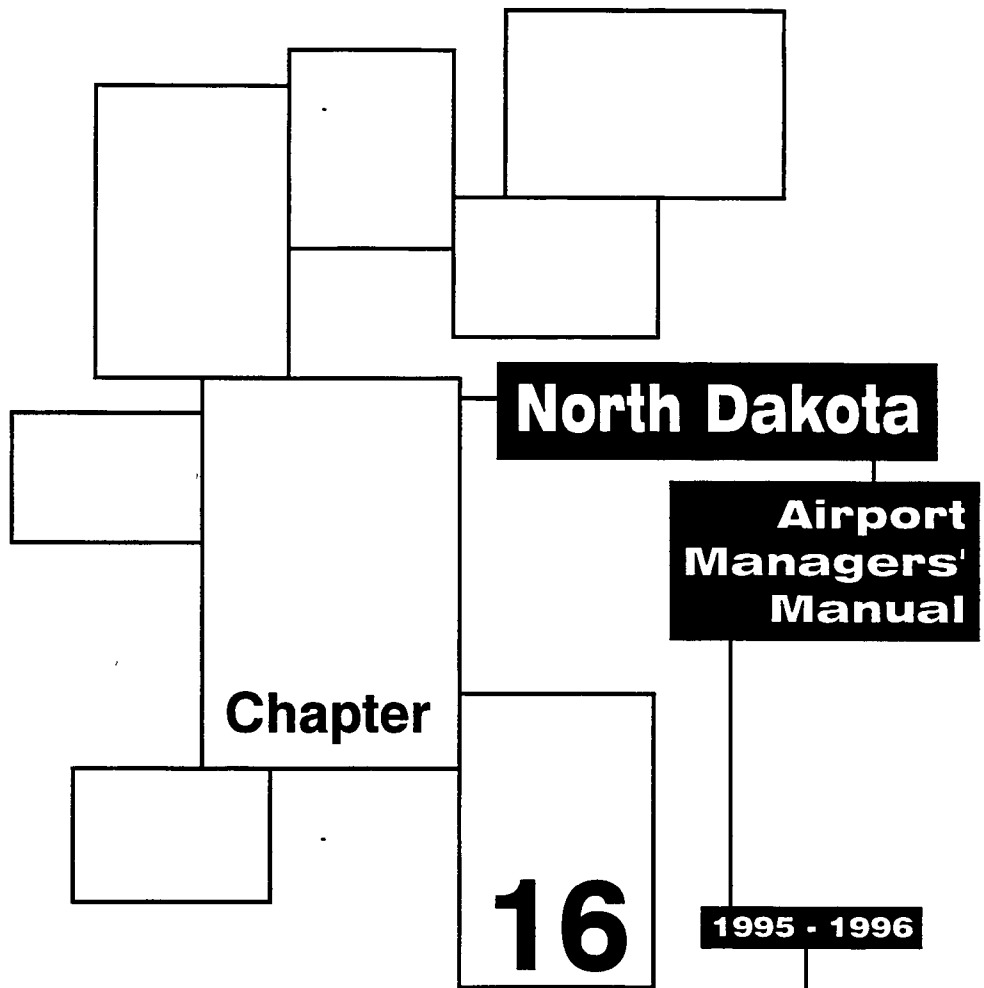
Building Coalitions

Now you are ready to begin building a coalition with groups who can help you develop clout. Other Airport Managers agree, almost without exception, that support groups are most successful when they build a strong coalition with the business and professional community. Some tips:

- Present a unified voice. Statements should always reflect the same position. It is also best to have a single voice as your designated speaker on major topics.
- Establish visibility by making presentations to and even joining organizations that provide a vehicle for information and exposure.
- Write a position paper and policy statement.
- Have a simple logo designed and a quality letterhead printed. Produce business cards for group leaders.

- If you have a large effort under way, find an extra telephone line somewhere, and get an answering machine to take messages or provide information on meetings to the members. Never go to a meeting expecting to pass the hat for collections—be confident, not cocky.
- Maintain a businesslike and professional approach at all times.
- Use discussion, not confrontation, and leave yourself a graceful way out.
- Speak from fact, not emotion.
- Never volunteer more information than necessary.
- Keep the discussion centered on the benefit the airport provides.
- Leave yourself a graceful way out if put on the spot such as, "The Board has directed me . . .," or "I will present it to the board," etc.

Source: Airline Owners and Pilots Association



North Dakota Century Codes

CHAPTER 2-02 AIRPORTS AND LANDING FIELDS

2-02-01. Authority to acquire, operate, and regulate airports. The North Dakota aeronautics commission and all counties, cities, park districts, and townships of this state, separately or jointly, may acquire, establish, construct, expand, own, lease, control, equip, improve, maintain, operate, regulate, and police airports and landing fields for the use of aircraft either within or without the geographic limits of such political subdivisions, and may use for such purpose or purposes any available property owned or controlled by the estate aeronautics commission or such political subdivisions. Any property acquired, owned, leased, controlled, or occupied for the purpose or purposes enumerated herein hereby is declared to be acquired, owned, leased, controlled, or occupied for a public purpose and as a matter of public need, and there is no liability on the part of the state aeronautics commission or any county, city, park district, or township in connection therewith, or in the operation thereof, except to its own employees.

2-02-02. Property - How acquired. Private property needed by a county, city, park district, or township for an airport or landing field, or for the expansion of an airport or landing field, may be acquired by grant, purchase, lease, or other means, if such political subdivision is able to agree with the owners of said property on the terms of such acquisition, and otherwise by right of eminent domain.

2-02-03. Purchase price - How paid - Bond issue. The purchase price or award for real property acquired in accordance with the provisions of this chapter for an airport or landing field may be paid for by appropriation of money's available therefor or wholly or partly from the proceeds of the sale of bonds of said counties, cities, park districts, and townships, as the proper officials of such political subdivisions shall determine, but any bonds for such purpose must be authorized and issued under the provisions of chapter 21-03.

2-02-04. Air rights - How acquired. Where necessary, in order to provide unobstructed air space for the landing and taking off of aircraft utilizing airports and landing fields acquired or maintained under the provisions of this chapter, the counties, cities, park districts, and townships may acquire such air rights over private property as are necessary to ensure safe approaches to the landing areas of said airports and landing fields. Such air rights may be acquired by grant, purchase, lease, or by right of eminent domain in the same manner as is provided in section 2-02-02 for the acquisition of the airport or landing field itself or the expansion thereof.

2-02-05. Rights for marking fields - How acquired. Such political subdivisions may acquire the right or easement for a term of years or perpetually to place and maintain suitable marks for the daytime, and to place, operate, and maintain suitable lights for the nighttime marking of buildings or other structures or obstructions interfering with the safe operation of aircraft utilizing airports

and landing fields acquired or maintained under the provisions of this chapter. Such rights or easements may be acquired in the manner provided in section 2-02-02.

2-02-06. Authority to construct, operate, regulate, or lease airports. Counties, cities, park districts, and townships which have established airports or landing fields acquired or maintained under the provisions of this chapter. Such rights or easements may be acquired in the manner provided in section 2-02-02.

1. Construct, equip, maintain, and operate the same, or vest authority for the construction, equipment, improvement, maintenance, and operation thereof, in an officer, board, or body of such political subdivision. The expenses of such construction, equipment, improvement, maintenance, and operation are a responsibility of said political subdivision.
2. Adopt regulations and establish charges, fees, and tolls for the use of such airports or landing fields and fix penalties for the violation of said regulations.
3. Lease such airports or landing fields to private parties for operation, or lease or assign to private parties for operation, space, area, improvements, and equipment on such airports or landing fields, if in each case the public, in so doing, is not deprived of its rightful use thereof.
4. Establish toll access roadways leading to air carrier terminal buildings. The toll access charge may not exceed one dollar per vehicle.

2-02-07. Authority to raise money by taxation and use airport income. The local public authorities having power to appropriate moneys within the political subdivisions acquiring, establishing, developing, operating, maintaining, or controlling airports or landing fields under the provisions of this chapter may appropriate and cause to be raised by taxation or otherwise in such political subdivisions, moneys sufficient to carry out therein the provisions of this chapter, and also may use for such purpose or purposes moneys derived from said airports or landing fields.

2-02-08. Police power outside geographic limits. Counties, cities, park districts, and townships acquiring, establishing, developing, operating, maintaining, or controlling airports or landing fields under the provisions of this chapter without geographic limits of such subdivisions have the same police powers over such airports or landing fields as they may exercise within the geographic limits of such subdivisions.

2-02-09. Authorization for airport liability insurance - Exceptions. After June 30, 1967, any airport authority, county, city, township, or other political subdivision which operates an airport, is hereby authorized to carry liability insurance for its own protection and the protection of any employee from claim for loss or damage for bodily injury or property damage arising out of or

by reason of its operation and maintenance of airport facilities in connection therewith or landing fields; provided, that any airport authority or political subdivision, and its agents, servants, and employees have full government immunity for any claims in excess of the limits afforded by such insurance policies or full governmental immunity in the event no insurance is carried. The existence of insurance coverage may not be conveyed to the jury in the event of suits thereon, either directly or indirectly. If a dispute exists concerning the amount or nature of the insurance coverage, the dispute must be tried separately before the main trial determining the claims and damages of the claimant to sue the insurer directly.

CHAPTER 2-03
SUBSTANTIVE AND JURISDICTIONAL PROVISIONS

2-03-01. Definitions. In this chapter, unless the context or subject matter otherwise requires:

1. "Aircraft" means any contrivance now known or hereafter invented, used, or designed for navigation of or flight in the air. Provided, a hydroplane, while at rest on water and while being operated on immediately above water, shall be governed by the rules regarding water navigation.
2. "Airman" means any individual who engages, as the person in command, or as pilot member of the crew, in the operating and navigation of an aircraft while underway.
3. "Passenger" includes any person riding in an aircraft, but having no part in its operation.

2-03-02. Sovereignty in space. Sovereignty in the space above the lands and waters of this state is declared to rest in the state, except where granted to and assumed by the United States pursuant to a constitutional grant from the people of this state.

2-03-03. Ownership of space. The ownership of the space above the lands and waters of this state is declared to be vested in the several owners of the surface beneath, subject to the right of flight described in section 2-03-04.

2-03-04. Lawfulness of flight. Flight in aircraft over the lands and waters of this state is lawful, unless at such a low altitude as to interfere with the then existing use to which the land or water, or the space over the land or water is put by the owner, or unless so conducted as to be imminently dangerous to persons or property lawfully on the land or water beneath. The landing of an aircraft on the lands or waters of another, without his consent, is unlawful except in the case of a forced landing. For damages caused by a forced landing, however, the owner or lessee of the aircraft or the airman is liable, as provided in section 2-03-05.

2-03-05. Damage to persons and property. The owner and the pilot, or either of them, of every aircraft which is operated over the lands or waters of this state are liable for injuries to persons or property on the land or water beneath caused by the ascent, descent, or flight of the aircraft, or the dropping or falling of any object therefrom, in accordance with the rules of law applicable to torts in this state, unless the injury is caused in whole or in part by the negligence of the person injured, or of the owner or bailee of the property injured. If the aircraft is leased at the time of the injury to person or property, both owner and lessee are liable and they may be sued jointly, or either or both of them may be sued separately. An airman who is not the owner or lessee is liable only for the consequences of his own negligence. The injured person, or owner,

or bailee of the injured property, has a lien on the aircraft causing the injury to the extent of the damage caused by the aircraft or objects falling from it.

As used in this section, "owner" includes a person having full title to aircraft and operating it through servants, and also includes a bona fide lessee or bailee of such aircraft, whether gratuitously or for hire; but "owner" as used in this section, does not include a bona fide bailor or lessor of such aircraft, whether gratuitously or for hire, or a mortgagee, conditional seller, trustee for the creditors of such aircraft or other person having a security title only, nor is the owner of such aircraft liable when the pilot thereof is in possession thereof as a result of theft or felonious conversion.

The person in whose name an aircraft is registered with the United States department of transportation or the aeronautics commission of this state is prima facie the owner of such aircraft within the meaning of this section.

2-03-06. Collision of aircraft. The liability of the owner of one aircraft to the owner of another aircraft, or to the airmen or passengers on either aircraft, for damage caused by collision on land or in the air, must be determined by the rules of law applicable to torts on land.

2-03-07. Aircraft - Common carriers. Aircraft carrying passengers or property for hire are deemed common carriers and are subject to all of the rules applicable thereto.

2-03-08. Jurisdiction over crimes and torts. All crimes, torts, and other wrongs committed by or against an airman or passenger while in flight over this state are governed by the laws of this state, and the question whether damage occasioned by or to an aircraft while in flight over this state constitutes a tort, crime, or other wrong by or against the owner of such aircraft, must be determined by the laws of this state.

2-03-09. Jurisdiction over contracts. All contractual and other legal relations entered into by airmen or passengers while in flight over this state have the same effect as if entered into on the land or water beneath.

2-03-10. Reckless operation - Operation while intoxicated - Tampering with aircraft - Misdemeanors - Penalties.

1. Any person who operates any aircraft within the airspace over, above and upon the lands and waters of this state, carelessly and heedlessly in willful disregard of the rights or safety of others, or without due caution and circumspection in a manner so as to endanger or be likely to endanger any person or property, is guilty of a class A misdemeanor.

2. Whoever operates any aircraft in this state on land, water, or in the air while in an intoxicated condition or while under the influence of alcoholic beverages or any controlled substance, is guilty of a class A misdemeanor.
3. No person may act as a crew member of any aircraft or start an engine of any aircraft within eight hours after the consumption of any alcoholic beverage or while using any controlled substance that affects his faculties in any way contrary to safety. Anyone violating the provisions of this subsection is guilty of a class A misdemeanor.
4. No person may, without express or implied authority of the owner, operate, climb upon, enter, manipulate the controls or accessories of, set in motion, remove parts or contents therefrom, or otherwise tamper with any civil aircraft within this state with intent to injure the same or cause inconvenience to the owner or operator thereof, or knowingly cause or permit the same to be done. Any person who violates any of the provisions of this subsection is guilty of a class B misdemeanor.

2-03-11. Notice. Whenever a person, firm, corporation, or association shall erect anywhere in this state a building, structure, or tower of any kind over two hundred feet [60.96 meters] in height above the terrain such person, firm, corporation, or association shall first file a notice with the state of North Dakota aeronautics commission.

2-03-12. Obstructions near runway approaches. It is unlawful to build or maintain any obstruction near the runway approach to any airport in the state open for public use, except pursuant to rules and regulations adopted by the aeronautics commission.

2-03-13. Penalty. Each violation of sections 2-03-11 or 2-03-12 or any regulations, orders or rulings promulgated or made pursuant to this chapter constitutes a Class A misdemeanor.

2-03-14. Civil liability for injuries to guest passenger. No person transported by the owner or operator of any aircraft as a guest without payment for such transportation has claim for relief for damages against the owner or operator for injury, death or loss in case of accident, unless the accident was caused by the gross negligence, intoxication, or willful and wanton misconduct of the owner or operator of the aircraft contributed to the injury, death, or loss. No person so transported has claim for relief if he has willfully or by want of ordinary care brought the injury upon himself. For purposed of this section, the word "guest" means any person other than an employee of the owner or registrant of any aircraft, or of a person responsible for its operation with the owner's or registrant's express or implied consent, being in or upon, entering or leaving the same, except any passenger for hire and except any passenger while the aircraft is being used in the business of demonstrating or testing. The sharing of expense does not constitute a carriage for hire within the meaning of this section.

CHAPTER 2-04 AIRPORT ZONING

2-04-01. Definitions. As used in this chapter, unless the context otherwise requires

1. "Airport" means any area of land or water designed and set aside for the landing and taking off of aircraft and utilized or to be utilized in the interests of the public for such purposes.
2. "Airport hazard" means any structure or tree or use of land which obstructs the airspace required for the flight of aircraft in landing or taking off at any airport or is otherwise hazardous to such landing or taking off of aircraft.
3. "Airport hazard area" means any structure or tree or use of land which obstructs the airspace required for the flight of aircraft in landing or taking off at any airport or is otherwise hazardous to such landing or taking off of aircraft.
4. "Person" means any individual, firm, copartnership, corporation, company, association, joint stock association, the state of North Dakota or any political subdivision thereof, and includes any trustee, receiver, assignee, or other similar representative thereof.
5. "Political subdivision" means any county, city, park district, or township.
6. "Structure" means any object constructed or installed by man, including, but without limitation, buildings, towers, smokestacks, and overhead transmission lines.
7. "Tree" means any object of natural growth.

2-04-02. Airport hazards contrary to public interest. It is hereby found that an airport hazard endangers the lives and property of users of the airport and of occupants of land in its vicinity, and also, if of the obstruction type, in effect reduces the size of the area available for the landing, taking off, and maneuvering of aircraft, thus tending to destroy or impair the utility of the airport and the public investment therein. Accordingly, it is hereby declared. (a) that the creation or establishment of an airport hazard is a public nuisance and an injury to the community served by the airport in question; (b) that it is therefore necessary in the interest of the public health, public safety, and general welfare that the creation or establishment of airport hazards be prevented; and (c) that this should be accomplished, to the extent legally possible, by exercise of the police power, without compensation. It is further declared that both the prevention of the creation or establishment of airport hazards and the elimination, removal, alteration, mitigation, or marking and lighting of existing airport hazards are public purposes for which political subdivisions may raise and expend public funds and acquire land or property interests therein.

Limitations

Development

Century Code

2-04-02

Tom Schauer

2--04-03. Power to adopt airport zoning regulations.

- 1 In order to prevent the creation or establishment of airport hazards, every political subdivision having an airport hazard area within its territorial limits may adopt, administer, and enforce, under the police power and in the manner and upon the conditions hereinafter prescribed, airport zoning regulations may divide such area into zones, and, within such zones, specify the land uses permitted and regulate and restrict the height to which structures and trees may be erected or allowed to grow
2. Where an airport is owned or controlled by a political subdivision and any airport hazard area appertaining to such airport is located outside the territorial limits of said political subdivision, the political subdivision owning or controlling the airport and the political subdivision within which the airport hazard area is located may, by ordinance or resolution duly adopted, create a joint airport zoning board, which board has the same power to adopt, administer, and force airport zoning regulations applicable to the airport hazard area in question as that vested by subsection 1 in the political subdivision within which such area is located. Each such joint board shall have as members two representatives appointed by each political subdivision participating in its creation and in addition a chairman elected by a majority of the members so appointed.
3. If in the judgement of a political subdivision owning or controlling an airport, the political subdivision within which is located an airport hazard area appertaining to that airport, has failed to adopt or enforce reasonable adequate airport zoning regulations for such area under subsection 1 and if that political subdivision has refused to join in creating a joint airport zoning board as authorized in subsection 2, the political subdivision owning or controlling the airport may itself adopt, administer, and enforce airport zoning regulations for the airport hazard area in question. In the event of conflict between such regulations and any airport zoning regulations adopted by the political subdivision owning or controlling the airport govern and prevail.

2-04-04. Relation to comprehensive zoning regulations.

1. Incorporation. In the event that a political subdivision has adopted, or hereafter adopts, a comprehensive zoning ordinance regulating, among other things, the height of buildings, any airport zoning regulations applicable to the same area or portion thereof, may be incorporated in and made a part of such comprehensive zoning regulations, and be administered and enforced in connection therewith

2. **Conflict** In the event of conflict between any airport zoning regulations adopted under this chapter and any other regulations applicable to the same area, whether the conflict be with respect to the height of structures or trees, the use of land, or any other matter, and whether such other regulations were adopted by the political subdivision which adopted the airport zoning regulations or by some other political subdivision, the more stringent limitation or requirement governs and prevails

2-04-05. Procedure for adoption of zoning regulations.

- 1 No airport zoning regulations shall be adopted, amended, or changed under this chapter except by action of the legislative body of the political subdivision in question, or the joint board provided for in subsection 2 of section 2-04-03 after a public hearing in relation thereto, at which parties in interest and citizens shall have an opportunity to be heard. At least fifteen days notice of the hearing shall be published in an official newspaper, or a newspaper of general circulation, in the political subdivision or subdivisions in which is located the airport hazard area to be zoned.
2. Prior to the initial zoning of any airport hazard area under this chapter, the political subdivision or joint airport zoning board which is to adopt the regulations shall appoint a commission, to be known as the airport zoning commission, to recommend the boundaries of the various zones to be established and the regulations to be adopted therefor. The commission shall make a preliminary report and hold public hearings thereon before submitting its final report, and the legislative body of the political subdivision or the joint airport zoning board shall not hold its public hearing or take other action until it has received the final report of such commission. Where a city planning commission or zoning commission already exists, it may be appointed as the airport zoning commission.

2-04-06. Airport zoning requirements.

1. **Reasonableness** All airport zoning regulations adopted under this chapter must be reasonable and none may impose any requirement or restriction which is not reasonably necessary to effectuate the purposes of this chapter. In determining what regulations it may adopt, each political subdivision and joint airport zoning board shall consider, among other things, the character of the flying operations expected to be conducted at the airport, the nature of the terrain within the airport hazard area, the character of the neighborhood, and the uses to which the property to be zoned is put and adaptable.
2. **Nonconforming uses** No airport zoning regulations adopted under this chapter may require the removal, lowering, or other change or alteration of any structure or tree not conforming to the regulations when adopted or amended, or otherwise interfere

with the continuance of any nonconforming use, except as provided in subsection 3 of section 2-04-07.

2-04-07. Permits and variances.

1. Permits. Any airport zoning regulations adopted under this chapter may require that a permit be obtained before any new structure or use may be constructed or established and before any existing use or structure may be substantially changed or substantially altered or repaired. In any event, however, all such regulations must provide that before any non conforming structure or tree be replaced, substantially altered or repaired, rebuilt, allowed to grow any higher, or replanted, a permit must be secured from the administrative agency authorized to administer and enforce the regulations, authorizing such replacement, change, or repair. No permit may be granted that would allow the establishment or creation of an airport hazard or permit a nonconforming structure or tree or nonconforming use to made or become higher or become a greater hazard to air navigation than it was when applicable regulation was adopted or than it is when the application for a permit is made. Except as provided herein, all applications for permits must be granted.
2. Variances. Any person desiring to erect any structure, or increase the height of any structure, or permit the growth of any tree, or otherwise use his property in violation of airport zoning regulations adopted under this chapter may apply to the board of adjustment for a variance from the zoning regulations in question. Such variances must be allowed where a literal application or enforcement of the regulations would result in practical difficulty or unnecessary hardship and the relief granted would not be contrary to the public interest but do substantial justice and be in accordance with the spirit of the regulations and this chapter, provided, that any variance may be allowed subject to any reasonable conditions that the board of adjustment may deem necessary to effectuate the purposes of this chapter
3. Hazard marking and lighting. In granting any permit or variance under this section, the administrative agency or board of adjustment may, if it deems such action advisable to effectuate the purposes of this chapter and reasonable in the circumstances, so condition such permit or variance the political subdivision, at its own expense, to install, operate, and maintain thereon such markers and lights as may be necessary to indicate to flyers the presence of an airport hazard.

2-04-08. Appeals.

1. Any person aggrieved, or taxpayer affected, by any decision of an administrative agency made in its administration of airport zoning regulations adopted under this chapter, or any governing body of a political subdivision, or any joint airport zoning board, which is of the opinion that a decision of such administrative agency is an

improper application of airport zoning regulations of concern to such governing body or board of adjustment authorized to hear and decide appeals from the decisions of such administrative agency.

- 2 All appeals taken under this section must be taken within a reasonable time, as provided by the rules of the board, a notice of appeal specifying the grounds thereof. The agency from which the appeal is taken shall forthwith transmit to the board all the papers constituting the record upon which the action appealed from was taken.
- 3 An appeal stays all proceedings in furtherance of the action appealed from, unless the agency from which the appeal is taken certifies to the board, after the notice of appeal has been filed with it, that by reason of the facts stated in the certificate as stay would, in its opinion, cause imminent peril to life or property. In such cases proceedings may not be stayed otherwise than by order of the board on notice to the agency from which the appeal is taken and on due cause shown.
4. The board shall fix a reasonable time for the hearing of appeals, give public notice and due notice to the parties in interest, and decide the same within a reasonable time. Upon the hearing any party may appear in person or by attorney.
- 5 The board may in conformity with the provisions of this chapter, reverse or affirm wholly or partly, or modify, the order, requirement, decision, or determination appealed from and may make such order, requirement, decision, or determination as ought to be made, and to that end has all the powers of the administrative agency from which the appeal is taken.

2-04-09. Administration of airport zoning regulations.

All airport zoning regulations adopted under this chapter must provide for the administration and enforcement of such regulations by an administrative agency which may be an agency created by such regulations or any official, board, or other existing agency of the political subdivision adopting the regulations or of one of the political subdivisions which participated in the creation of the joint airport zoning board adopting the regulations, if satisfactory to that political subdivision, but in no case may such administrative agency be or include any member of the board of adjustment. The duties of any administrative agency designated pursuant to this chapter include that of hearing and deciding all permits under subsection 1 of section 2-04-07, but such agency shall not have or exercise any of the powers herein delegated to the board of adjustment.

2-04-10. Board of adjustment.

1. All airport zoning regulations adopted under this chapter must provide for a board of adjustment to have and exercise the following powers:

- a To hear and decide appeals from any order, requirement, decision, or determination made by the administrative agency in the enforcement of the airport zoning regulations, as provided in section 2-04-08
 - b To hear and decide any special exceptions to the terms of the airport zoning regulations upon which such board may be required to pass under such regulations.
 - c To hear and decide specific variances under subsection 2 of section 2-04-07
2. Where a zoning board of appeals or adjustment already exists, it may be appointed as the board of adjustment. Otherwise, the board of adjustment shall consist of five members, each to be appointed for a term of three years by the authority adopting the regulations and to be removable by the appointing authority for cause, upon written charges and after public hearing.
- 3 The concurring vote of a majority of the members of the board of adjustment is sufficient to reverse any order, requirement, decision, or determination of the administrative agency, or to decide in favor of the applicant on any matter upon which it is required to pass under the airport zoning regulations, or to effect any variation in such regulations
4. The board shall adopt rules in accordance with the provisions of the ordinance or resolution by which it was created Meetings of the board shall be held at the call of the chairman and at such other times as the board may determine The chairman, or in his absence the acting chairman, may administer oaths and compel the attendance of witnesses. All hearings of the board must be public. The board shall keep minutes of its proceedings, showing the vote of each member upon each question, or, if absent, or failing to vote, indicating such fact, and shall keep records of its examinations and other official actions, all of which must immediately be filed in the office of the board and shall be a public record.

2-04-11. Judicial review.

1. Any person aggrieved, or taxpayer affected, by any decision of a board of adjustment, or any governing body of a political subdivision or any joint airport zoning board which is of the opinion that a decision of a board of adjustment is illegal, may present to the district court a verified petition setting forth that the decision is illegal, in whole or in part, and specifying the grounds of the illegality. Such petition must be presented to the court within fifteen days after the decision is filed in the office of the board.

2. Upon presentation of such petition the court may allow a writ of certiorari directed to the board of adjustment to review such a decision of the board. The allowance of the writ does not stay proceedings upon the decision appealed from, but the court may, on application, on notice to the board and on due cause shown, grant a restraining order.
3. The board of adjustment is not required to return the original papers acted upon by it, but it is sufficient to return certified or sworn copies thereof or of such portions thereof as may be called for by the writ. The return must concisely set forth such other facts as may be pertinent and material to show the grounds of the decision appealed and must be verified.
4. The court has exclusive jurisdiction to affirm, modify, or set aside the decision brought up for review, in whole or in part, and if need be, to order further proceedings by the board of adjustment. The findings of fact of the board, if supported by substantial evidence, must be accepted by the court as conclusive, and no objection to a decision of the board may be considered by the court unless such objection has been urged before the board, or, if it was not so urged, unless there were reasonable grounds for failure to do so.
5. Costs may not be allowed against the board of adjustment unless it appears to the court that it acted with gross negligence, in bad faith, or with malice, in making the decision appealed from.
6. In any case in which airport zoning regulations adopted under this chapter, although generally reasonable, are held by a court to interfere with the use or enjoyment of a particular structure or parcel of land to such an extent, or to be so onerous in their application to such a structure or parcel of land, as to constitute a taking or deprivation of that property in violation of the Constitution of North Dakota or the Constitution of the United States, such holding does not affect the application of such regulations to other structures and parcels of land.

2-04-12. Enforcement and remedies. Each violation of this chapter or of any regulations, orders, or rulings promulgated or made pursuant to this chapter constitutes a Class B misdemeanor. In addition, the political subdivision or agency adopting zoning regulations under this chapter may institute in any court of competent jurisdiction, an action to prevent, restrain, correct, or abate any violation of this chapter, or of airport zoning regulations adopted under this chapter, or of any order or ruling made in connection with their administration or enforcement, and the court shall adjudge to the plaintiff such relief, by way of injunction (which may be mandatory) or otherwise, as may be proper under all the facts and circumstances of the case, in order fully to effectuate the purposes of this chapter and of the regulations adopted and orders and rulings made pursuant thereto.

2-04-13. Acquisition of air rights In any case in which:

1. It is desired to remove, lower, or otherwise terminate a nonconforming structure or use;
2. The approach protection necessary cannot, because of constitutional limitations, be provided by airport zoning regulations under this chapter; or
3. It appears advisable that the necessary approach protection be provided by acquisition of property rights rather than by airport zoning regulations,

the political subdivision within which the property or nonconforming use is located or the political subdivision owning the airport or served by it may acquire, by purchase, grant, or condemnation in the manner provided by the law under which political subdivisions are authorized to acquire real property for public purposes, such air right, navigation easement, or other estate or interest in the property or nonconforming structure or use in question as may be necessary to effectuate the purposes of this chapter

2-04-14. Short title. This chapter must be known and may be cited as the "Airport Zoning Act"

CHAPTER 2-05 AERONAUTICS COMMISSION

2-05-01. Aeronautics commission - Creation - Membership. There is hereby created the North Dakota aeronautics commission to consist of five members, who shall be appointed by the governor for a term of five years, except that any person appointed to fill a vacancy occurring prior to the expiration of the term for which this predecessor was appointed shall be appointed only for the remainder of such term. Each member must serve until the appointment and qualification of his successor. Each member of the commission must be a qualified elector of this state and must be appointed by the governor. Any member of the commission may be removed by the governor for inefficiency, neglect of duty, or malfeasance in office. Each member of said commission shall receive the sum of twenty dollars per day for each day actually engaged in the performance of the duties of his office, and with traveling expenses as provided by section 54-06-09 of this code to be claimed as provided therein, and his board and lodging while away from his home in the performance of his official duties as provided by section 44-08-04.

2-05-02. Director of aeronautics - Appointment - Qualifications - Compensation. A director of aeronautics must be appointed by the commission to serve at the pleasure of the commission. He shall devote his entire time to the duties of his office, and he shall have no pecuniary interest in or any stock or bonds of any civil aeronautical enterprises. He shall receive such compensation as expenses incurred by him in the discharge of his official duties, at the same rates and under the same conditions for the payment of traveling expenses and board and lodging as is provided in section 2-05-01.

2-05-03. Powers and duties of director. The director shall be the executive officer of the commission. The director shall attend all meetings of the commission, but has no voting power. At the direction of the commission, the director shall, together with the chairman of the commission, execute all contracts entered into by the commission which are legally authorized. The director shall appoint, subject to the approval of the commission, such employees as may be necessary for the proper discharge of the functions of the commission. The director shall act as the agent of the tax commissioner for purposes of enforcement of chapter 57-40.5. Whenever requested by the director of the department of transportation as provided by section 24-02-01.3, the director shall report administratively concerning all activities of the aeronautics commission.

2-05-04. Commission organization - Reports - Offices. The commission shall, within thirty days after its appointment, organize, and make such rules and regulations for its administration as it may deem expedient. The commission shall submit a biennial report to the governor and office of management and budget in the manner prescribed by section 54-06-04. The commission shall maintain its office in the state capitol.

2-05-05. Duty of commission in development of aeronautics. The commission shall have general supervision over aeronautics within this state and shall:

1. Encourage the establishment of airports and air navigation facilities;
2. Cooperate with and assist the federal government, the municipalities of this state, and other persons in the development and coordination of all aeronautical activities;
3. Represent the state in aeronautical matters before state and federal agencies; and
4. Participate as party plaintiff or defendant or as intervener on behalf of the state or any municipality or citizen thereof in any controversy which involves the interest of the state in aeronautics.

2-05-06. Federal aid. The commission may act as agent of all municipalities in accepting, receiving, receipting for, and disbursing federal moneys, made available to finance, in whole or in part, the planning, acquisition, construction, improvement, maintenance, or operation of municipal airports or air navigation facilities. The commission, as principal on behalf of the state, and for any municipality, may enter into any contracts, with the United States, with any municipality, or with any person, which may be required in connection with a grant or loan of federal moneys for municipal airport or air navigation facility purposes, provided that no contract may be entered into on behalf of any municipality except pursuant to written request of such municipality. All federal moneys accepted under this section must be accepted and transferred or expended by the commission upon such terms and conditions as are prescribed by the United States. All moneys received by the commission pursuant to this section must be deposited in the state treasury, and, unless otherwise prescribed by the authority from which such moneys were received, shall be kept in separate funds designated according to the purpose for which the moneys were made available, and held by the state for such purposes. All such moneys are hereby appropriated for the purposes, for which the same were made available, to be disbursed or expended in accordance with the terms and conditions upon which they were made available.

2-05-06.1. Authorization to accept federal or other moneys. The North Dakota aeronautics commission, or any county, city, park district, or township is either public or private, for the acquisition, construction, enlargement, improvement, maintenance, equipment, or operation of airports and other air navigation facilities, and sites therefor, and to comply with the provisions of the laws of the United States and any rules and regulations made thereunder for the expenditure of federal moneys upon such airports and other air navigation facilities.

2-05-06.2. Designation of aeronautics commission as agent. The governing body of any political subdivision referred to in section 2-05-06.1, is authorized to designate the state aeronautics commission of the state as its agent to accept, receive, and receipt for federal moneys in its behalf for airport purposes and to contract for the acquisition, construction, enlargement, improvement, maintenance, equipment, or operation of such airports, or other air navigation facilities, and may enter into an agreement with such aeronautics commission prescribing the terms and conditions of such agency in accordance with federal laws, rules and regulations, and applicable laws of this state. Such moneys as are paid over by the United States government must

be paid over to said municipality under such terms and conditions as may be imposed by the United States government in making such grant.

2-05-06.3 Contracts. All contracts for the acquisition, construction, enlargement, improvement, maintenance, equipment, or operation of airports or other air navigation facilities, made by any of the political subdivisions referred to in sections 2-05-06.1 and 2-05-06.2, by itself or through the agency of the aeronautics commission of the state, must be made pursuant to the laws of this state governing the making of like contracts; provided, however, that where such acquisition, construction, improvement, enlargement, maintenance, equipment, or operation is financed wholly or partly with federal moneys the municipality, or the aeronautics commission as its agent, may let contracts in the manner prescribed by the federal authorities, acting under the laws of the United States, and any rules or regulations made thereunder, notwithstanding any other state law to the contrary.

2-05-06.4. Declaration of purpose - Financial assistance to airports. The legislative assembly declares that the people of North Dakota are placing an ever increasing reliance upon airline service for their transportation needs. The legislative assembly further declares that the existing methods of financing airports are inadequate to meet the growing needs, and that the property tax on real estate located within the boundaries of municipalities operating airports is frequently an inequitable method of financing airports, inasmuch as many persons served by airports do not live within these boundaries. It is the intent of the legislative assembly to provide a means of better serving all of the people of North Dakota, and to provide an equitable method of sharing the financial burdens of modern airline service without neglecting the needs of the general aviation airports.

2-05-06.5. State assistance for airports. Each public airport owned or operated by a public entity and each airport operated by an airport authority in this state which is served by at least one airline which is certificated by the civil aeronautics board or was at one time served by an airline certificated by the civil aeronautics board, but is served by a scheduled commuter airline certificated by the North Dakota aeronautics commission is entitled to assistance as provided in this section, within the limits of legislative appropriations. The amount of assistance to each airport enplaning twenty thousand or more passengers is in the same proportion that the number of enplaned passengers on United States certificated air carriers from that airport during the last calendar year for which information is available bears to the total number of enplaned passengers on all United States certificated air carriers at all of the airports in North Dakota enplaning twenty thousand or more passengers in that year. An airport eligible for assistance under this section which enplanes less than twenty thousand passengers in any one calendar year must be paid not less than the sum of twenty-five thousand dollars at each distribution of assistance grants. The North Dakota aeronautics commission shall certify the number of enplaned passengers for each airport based upon information published in the airport activity statistics of United States certificated air carriers prepared jointly by the civil aeronautics board and the United States department of transportation for the most recent calendar year a publication is available. The North Dakota aeronautics commission shall determine the allocation to be made to each eligible

airport on or before September first of each year and shall certify the amounts to the state treasurer. The state treasurer shall make payment on or before October first of each year. The governing body or airport authority which operates an airport entitled to assistance under this section shall deposit the moneys received in the same account or accounts as other airport funds are deposited and may expend the moneys as provided by law for other airport funds, including matching any funds made available by the United States. These moneys must be used for airport construction hangars, landing strips for aircraft, and purchase of sites for airports or landing fields and easements; and for maintenance, clearing of sites, marking, lighting, and engineering and navigational aids, all related to aeronautics.

2-05-07. State airways system. The state airways system shall consist of all air navigation facilities available for public use now existing or hereafter established, whether publicly or privately owned or except those under the jurisdiction of the federal government. Jurisdiction over the state airways system in matters of safety is vested in the aeronautics commission. The commission may expend state funds duly appropriated for such purpose in the interest of safety on any or all facilities of the system which serve a useful public purpose and satisfy a public need. The commission may make, promulgate, and amend reasonable safety rules, safety regulations, and safety procedures, and establish minimum safety standards covering the activities for each such facility.

2-05-08. Rules, regulations, standards. The commission may perform such acts, issue and amend such orders, and make, promulgate, and amend such reasonable rules, regulations, and procedures, and establish such minimum standards as it deems necessary.

2-05-09. Reckless operation of aircraft. Repealed by S.L. 1975, ch. 106s, S 673.

2-05-10. Registration of airmen. Every individual who pilots, maintains, and certifies airworthiness of an aircraft or helicopter within this state shall register with the aeronautics commission and shall renew such registration every four years thereafter in which he pilots, maintains, or certifies airworthiness of an aircraft or helicopter within this state. The commission shall charge for any one or more such registrations for each individual or company, and for each four-year renewal thereof, a fee of eight dollars, except that the commission shall charge three dollars for each two year registration or renewal thereof for student pilots. These fees must be deposited into the aeronautics commission special fund.

2-05-11. Aircraft registration - Fees. The following procedures governing fees and registration apply:

1. Except as provided in section 2-05-11.3, every aircraft or Ultralight vehicle operating within this state for more than thirty days must be registered with the aeronautics commission for each year in which the aircraft or Ultralight vehicle is

operated within this state, subject to rules adopted by the commission. The commission shall charge a fee for each such registration. The following fees apply:

Gross Weight in Pounds	Registration Fees
0 to 500	\$15.00
501 to 1,000	30.00
1,001 to 1,500	38.00
1,501 to 2,000	45.00
2,001 to 2,500	60.00
2,501 to 3,000	75.00
3,001 to 3,500	90.00
3,501 to 4,000	105.00
4,001 to 4,500	120.00
5,001 to 6,000	150.00
6,001 to 7,000	180.00
7,001 to 8,000	210.00
8,001 to 9,000	240.00
9,001 to 10,000	270.00
10,001 to 15,000	300.00
15,001 to 20,000	450.00
20,001 to 30,000	600.00
30,001 to 40,000	900.00
40,001 to 50,000	1,200.00
50,001 to 75,000	1,500.00
75,001 to 100,000	2,250.00
100,001 and over	3,000.00

The fees must be reduced ten percent each year after the initial registration, or if the aircraft is one year old or older and being registered for the first time, the fees must be reduced ten percent for each year after the year of manufacture of the aircraft, until the fee reaches a figure equal to fifty percent of the original registration fee, which is the fee each year thereafter.

2. All weights must be based upon the maximum permissible take-off weight, except that the weights must be empty weights for all Ultralight vehicles which are not certificated for maximum permissible take-off weight.
3. The aeronautics commission may charge a reasonable cost of service fee for registration of aircraft operated by state agencies, political subdivisions, or the civil air patrol in lieu of the regular registration fee.

4. All fees received under this section must be deposited in the aeronautics commission special fund.

2-05-11.1. Definitions. As used in sections 2-05-11.1 through 2-05-11.3, unless the context otherwise requires:

1. "Antique aircraft" means an aircraft built and originally federally certified by its manufacturer before January 1, 1941.
2. "Classic aircraft" means an aircraft built and originally federally certified by its manufacturer after January 2, 1941, and before January 1, 1948.
3. "Warbird aircraft" means an aircraft built before January 1, 1948, expressly for the purpose of military service.

2-05-11.2. Permanent registration of certain older aircraft. On making proper application to the commission and paying the fee required under section 2-05-11.3, the owner of an antique, classic, or Warbird aircraft may permanently register that aircraft in accordance with this section. An aircraft so registered cannot be used for conducting commercial or private aviation business. An aircraft entitled to a registration. The new owner qualifies in accordance with this section.

2-05-11.3. Fee for a permanent registration - Issuance of registration decal - Disposition of fee. The fee for a permanent registration under section 2-05-11.2 is eighty-five dollars. The commission shall prepare a distinctive decal denoting permanent registration under section 2-05-11.2. That decal must be displayed in the aircraft in the same manner required for the registration decal otherwise issued under this chapter. The fee must be deposited in the aeronautics commission special fund.

2-05-12. Licensing of air schools and aeronautics instructors. The commission may provide for the licensing of air schools, and of aeronautics instructors giving instructions in ground subjects pertaining to aeronautics. For each license it shall charge an annual fee of ten dollars. These funds must be deposited into the aeronautics commission special fund.

2-05-13. Investigations, hearings. The commission may hold investigations and hearings concerning matters covered by the provisions of this chapter which must be open to the public and must be held upon such call or notice as the commission deems advisable. Each member of the commission may administer oaths and issue subpoenas.

2-05-14. Enforcement of aeronautics laws. The commission, its members, the director, officers, and the employees of the commission, and every state patrolman and all peace officers shall enforce and assist in the enforcement of this chapter.

2-05-15. Common carrier certificate required. No person may engage in the business of a common carrier by aircraft unless there is in force a certificate issued by the commission authorizing such person to engage in such business according to rules and regulations promulgated by the commission and after public hearing. The commission shall charge and collect the following fees for common carrier certificates:

For certificate.	\$150.00
For transfer of certificate.	50.00
For duplicate certificate.	10.00

For the purposes of this section, "common carrier" means aircraft operating on a definite schedule between fixed termini.

2-05-15.1. Bond required. Before issuance or transfer of any common carrier certificate by aircraft as provided for in section 2-05-15 to any entity, the North Dakota aeronautics commission shall require such entity to post a bond issued by a licensed surety company, or in cash with the North Dakota aeronautics commission as trustee for the state treasurer, in an amount equal to the estimated annual utility taxed so be assessed upon such air transportation entity and assessed and collected pursuant to chapters 57-06, 57-07, 57-08, 57-13, and 57-32, as amended, for each calendar year that such air transportation entity holds a common carrier certificate issued or transferred to it by the state aeronautics commission, authorizing such holder to engage in the business of common carrier by aircraft operating on a definite schedule between fixed termini in North Dakota. The state aeronautics commission shall consult with the state tax commissioner and such air transportation entity to determine the estimated annual utility taxes to be assessed to each such air transportation entity and the state aeronautics commission shall set the bond amount based on reasonable estimates. The bond amount posted and required for each such air transportation entity must be secured by the state aeronautics commission, after such utility taxes become delinquent, in an amount equal to such utility taxes and penalties and the state aeronautics commission shall pay such proceeds to the state treasurer, after the state treasurer has notified the state aeronautics commission in writing that the utility taxes and penalties due. In the event such air transportation entity fails to sufficiently maintain its bond at any time, the state aeronautics commission shall take action to revoke any common carrier certificate by aircraft that such air transportation entity holds that was issued by the North Dakota aeronautics commission.

2-05-16. Filing for tariffs required. Every common carrier by aircraft shall file with the commission, and make available to the public, tariffs showing all rates, fares, and charges for air commerce between points served by it, and points by any other common carrier by aircraft when through air commerce service and rates have been established, together with all classifications, rules, and regulations applicable to such air commerce.

2-05-17. Penalty. Any person violating any of the provisions of this chapter is guilty of a class A misdemeanor.

2-05-18. License for aerial spraying - Regulations - Penalties. No person may engage in aerial spraying without first obtaining a license for each aircraft used in such activities as provided in this section. Application must be made for such license to the North Dakota aeronautics commission upon forms provided by the commission for such purpose. Upon the payment of a license fee of fifteen dollars for each aircraft to be licensed, and upon compliance with such reasonable rules and regulations as may be promulgated by the aeronautics commission for the safety and protection of persons and property, the commission shall issue a license for such aircraft to be used in aerial spraying. Persons engaged in private spraying are required to pay the same fee for the use of aircraft for this purpose, and shall comply with all rules and regulations promulgated by the commission for aerial spraying. The license or registration required by law, and the proceeds must be deposited in the aeronautics commission special fund.

Any person violating any provision of this section or rules or regulations promulgated under the authority of this section shall be guilty of a class B misdemeanor.

CHAPTER 2-06
AIRPORT AUTHORITIES ACT

2-06-01. Definitions. The following words or terms whenever used or referred to in this chapter shall have the following respective meanings unless different meanings clearly appear from the context:

1. "Air navigation facility" means any facility, other than one owned and operated by the United States, used in, available for use in, or designed for use in aids of air navigation, including any structures, mechanisms, lights, beacons, markers, communicating systems, or other instrumentalities, or devices, used or useful as an aid, or constituting an advantage or convenience, to the safe taking off, navigation, and landing of aircraft, or the safe and efficient operation or maintenance of an airport, and any combination of any or all of such facilities.
2. "Airport" means any area of land or water which is used, or intended for use, for the landing and taking off of aircraft, and any appurtenant areas which are used, or intended for use, for airport buildings or other airport or rights of way, including approaches and clear zones, together with all airport buildings and facilities located thereon.
3. "Airport authority" or "authority" means any regional airport authority or municipal airport authority created pursuant to the provisions of this chapter, and the governing body of a municipality which has determined to exercise the powers of a municipal airport authority, pursuant to section 2-06-02.
4. "Airport hazard" means any structure, object of natural growth, or use of land which obstructs the airspace required for the flight of aircraft in landing or taking off at an airport or is otherwise hazardous to such landing or taking off of aircraft.
5. "Bonds" means any bonds, notes, interim certificates, debentures, or similar obligations issued by an authority pursuant to this chapter.
6. "Clerk" means the custodian of the official records of a municipality.
7. "Governing body" means the official or officials authorized by law to exercise ordinance or other lawmaking powers of a municipality.
8. "Municipal airport authority" or "municipal authority" means a municipal airport authority created pursuant to the provisions of section 2-06-02.

9. "Municipality" means any county, city, town, park district, or public body of this state.
10. "Person" means any individual, firm, partnership, corporation, company, association, joint stock association, or body politic; and includes any trustee, receiver, assignee, or other similar representative thereof.
11. "Project" means any airport operated by the authority, including all real and personal property, structures, machinery, equipment, and appurtenances or facilities which are part of such airport or used or useful in connection therewith either as ground facilities for the convenience of handling aviation equipment, passengers, and freight or as part of aviation operation, air navigation, and air safety operation.
12. "Real property" means lands, structures, and interests in land, including lands under water and riparian rights, and any and all things and rights usually included within the term real property, including not only fee simple absolute but also any and all lesser interests, such as easements, rights of way, uses, leases, licenses, and all other incorporeal hereditaments and every estate, interest, or right, legal or equitable, pertaining to real property.
13. "Regional airport authority" or "regional authority" means a regional airport authority created pursuant to the provisions of section 2-06-03.

2-06-01.1. Aeronautics commission may exercise powers of airport authority - Exceptions. The North Dakota aeronautics commission shall have all powers of an airport authority as defined in this chapter, except powers to certify or levy taxes or issue bonds, for the purpose of constructing and operating such other public airports of landing fields near international border ports of entry, and near state or national parks or near recreational areas as the aeronautics commission may determine to be in the public interest.

2-06-01.2. Airport operation and income. The aeronautics commission shall have operational control of airports constructed under the provisions of section 2-06-01.1 and may provide for the imposition of landing fees, granting of fuel and service concessions, or the lease of portions of the premises for other related airport services or for purposes not inconsistent with the use of the premises for airport purposes. All income from the operation of such airports must be deposited in the state treasury in a special operating fund to be known as the airport operating fund. All expenditures from such fund must be within the limits of legislative appropriations and must be made upon vouchers, signed and approved by the director of the aeronautics commission. Upon approval of such vouchers by the office of the budget, warrant checks for such expenditures must be prepared by the office of management and budget.

2-06-02. Creation of municipal airport authority. Any municipality may, by resolution of its governing body, create a public body corporate and politic to be known as a municipal airport authority, which is authorized to exercise its functions upon the appointment and qualification of the first commissioners thereof; or the governing body may by resolution determine to exercise any of all powers granted to such authorities in this chapter until or unless such powers are or have been conferred upon a municipal or regional airport authority. Upon the adoption of a resolution creating a municipal airport authority, the governing body of the municipality shall, pursuant to the resolution, appoint five persons as commissioners of the authority. The commissioners who are first appointed are designated to serve for terms of one, two, three, four, and five years, respectively, but thereafter, each commissioner shall be appointed for a term of five years, except that vacancies occurring otherwise than by expiration of term must be filled for the unexpired term by the governing body.

2-06-03. Creation of regional airport authority.

1. Two or more municipalities, whether in this state or in an adjoining state, provided that at least one municipality is in North Dakota, may by joint resolution, create a public body, corporate and politic, to be known as a regional airport authority which is authorized to exercise its functions upon the issuance by the secretary of state of a certificate of incorporation. The governing bodies of the municipalities participating in the creation of a regional airport authority shall, pursuant to such joint resolution, appoint not less than five persons as commissioners of the regional airport authority. The number to be appointed and their representation must be provided for in the joint resolution. The term of office of each regional airport authority commissioner must be in accordance with subsection 5. Each such regional airport authority, once created, shall organize, elect officers for terms of office to be fixed by agreement, and adopt and amend from time to time rules for its own procedure not inconsistent with section 2-06-06.
2. A regional airport authority may be increased from time to time to serve one or more additional municipalities if each additional municipality and each of the municipalities then included in the regional authority and the commissioners of the regional authority, respectively, adopt a resolution consenting thereto; provided, that if a municipal airport authority for any municipality seeking to be included in the regional authority is then in existence, the commissioners of the municipal authority must consent to the inclusion of the municipality in the regional authority, and if the municipal authority has any bonds outstanding, one hundred per centum of the holders of the bonds must consent, in writing, to the inclusion of the municipality in the regional authority, all rights, contracts, obligations, and property, real and personal, of the municipal authority shall be in the name of and vest in the regional authority.

3. A regional airport authority may be decreased if each of the municipalities then included in the regional authority and the commissioners of the regional authority consent to the decrease and make provisions for the retention or disposition of its assets and liabilities; provided that, if the regional authority has any bonds outstanding no decrease may be effected unless one hundred per centum of the holders of the bonds consent thereto in writing.
4. A municipality may not adopt any resolution authorized by this section without a public hearing thereon. Notice thereof must be given at least ten days prior thereto in a newspaper published in the municipality, or if there is no newspaper published therein, then in a newspaper having general circulation in the municipality.
5. All commissioners of a regional airport authority must be appointed for terms of five years each, except that a vacancy occurring otherwise than by expiration of term shall be filled for the unexpired term in the same manner as the original appointments.

2-06-04. Certificate of incorporation of regional airport authority

1. Upon the appointment and qualification of the commissioners first appointed to a regional airport authority, they shall submit to the secretary of state a certified copy of each resolution adopted pursuant to subsection 1 of section 2-06-03 hereof by the municipalities included in the regional authority, and upon receipt thereof the secretary of state shall issue a certificate of incorporation to the regional airport authority.
2. When a regional airport authority is increased or decreased pursuant to section 2-06-03, it shall forward to the secretary of state a certified copy of each resolution adopted pursuant thereto and upon receipt thereof, the secretary of state shall issue an amended certificate of incorporation in accordance therewith.

2-06-05. Proof of existence of authority.

1. In any suit, action, or proceeding involving the validity or enforcement of, or relating to any contract of a municipal airport authority, created pursuant to section 2-06-02 hereof, the municipal authority shall be conclusively deemed to have become established and authorized to transact its business and exercise its powers hereunder upon proof of the adoption by the municipality of the resolution creating the municipal airport authority and of the appointment and qualification of the first commissioners thereof. Duly certified copies of the resolution creating the authority and of the certificates of appointment of the commissioners are admissible in evidence in any suit, action, or proceeding.

2. In any suit, action, or proceeding involving the validity or enforcement of, or relating to, any contract of a regional airport authority, such regional airport authority shall be conclusively deemed to have become established and authorized to transact its business and exercise its powers hereunder upon proof of the issuance by the secretary of state of a certificate of incorporation of such regional airport authority. A copy of such certificate of incorporation, duly certified by the secretary of state, is admissible in evidence in any suit, action or proceeding.

2-06-06. Commissioners - Compensation - Meetings - Officers. A commissioner of an authority may receive no compensation for his services, but is entitled to the necessary expense, including traveling expenses, incurred in the discharge of his duties. Each commissioner shall hold office until his successor has been appointed and has qualified. The certificates of the appointment and reappointment of commissioners must be filed with the authority.

The powers of each authority are vested in the commissioners thereof. A majority of the commissioners of an authority constitutes a quorum for the purpose of conducting business of the authority and exercising its powers and for all other purposes. Action may be taken by the authority upon a vote of not less than a majority of the commissioners present.

There must be elected a chairman and vice chairman from among the commissioners. An authority may employ an executive director, secretary, technical experts, and such other officers, agents, and employees, permanent and temporary, as it may require, and shall determine their qualifications, duties, and compensation. For such legal services as it may require, an authority may call upon the chief law officer of the municipality or municipalities included in the authority or may employ its own counsel and legal staff. An authority may delegate to one or more of its agents or employees such powers or duties as it may deem proper.

2-06-07. General powers of an authority. An authority has all the powers necessary or convenient to carry out the purposes of this chapter including the power to certify, annually to the governing bodies creating it, the amount of tax to be levied by said governing bodies for airport purposes including, but not limited to, the power:

1. To sue and be sued, to have a seal, and to have perpetual succession.
2. To execute such contracts and other instruments and take such other action as may be necessary or convenient to carry out the purposes of this chapter.
3. To plan, establish, acquire, develop, construct, purchase, enlarge, improve, maintain, equip, operate, regulate, and protect airports and air navigation facilities within this state and within any adjoining state, including the acquisition, construction, installation, equipment, maintenance, and operation at such airports or buildings and other facilities for the servicing of aircraft or for comfort and accommodation of air travelers, and the purchase and sale of supplies, goods, and

commodities as are incident to the operation of its airport properties. For such purposes an authority may by purchase, gift devise, lease eminent domain proceedings or otherwise, acquire property, real or personal, or any interest therein, including easements in airport hazards or land outside the boundaries of an airport or airport side, as are necessary to permit the removal, elimination, obstruction-marking or obstruction-lighting of airport hazards or to prevent the establishment of airport hazards.

4. To establish comprehensive airport zoning regulations in accordance with the laws of this state. For the purpose of this chapter, a regional airport authority has the same powers as all other political subdivisions in the adoption and enforcement of comprehensive airport zoning regulations as provided for by the laws of this state.
5. To acquire, by purchase, gift, devise, lease, eminent domain proceedings or otherwise, existing airports and air navigation facilities; provided, however, an authority may not acquire or take over any airport or air navigation facility owned or controlled by another authority, a municipality, or public agency of this or any other state without the consent of such authority, municipality, or public agency.
6. To establish or acquire and maintain airports in, over, and upon any public waters of this state, any submerged lands under such public waters; and to construct and maintain terminal buildings, landing floats, causeways, roadways, and bridges for approaches to or connecting with any such airport, and landing floats and breakwaters for the protection thereof.
7. To establish toll access roadways leading to air carrier terminal buildings. The toll access charge may not exceed one dollar per vehicle.

2-06-08. Eminent domain. In the acquisition of property by eminent domain proceedings authorized by this chapter, an airport authority shall proceed in the manner provided by chapter 32-15 of the laws of this state, and such other laws that may now or hereafter apply to the state or to political subdivisions of this state in exercising the right of eminent domain. The fact that the property to be acquired by eminent domain proceedings was acquired by its owner by eminent domain proceedings does not prevent its acquisition by such proceedings by the authority. For the purpose of making surveys and examinations relative to eminent domain proceedings, it is lawful for the authority to enter upon the land, doing no unnecessary damage. Notwithstanding the provisions of any other statute or other law of this state, an authority may take possession of any property to be acquired by eminent domain proceedings at any time prior to final order and decree of the court having jurisdiction of such proceedings, provided that the authority shall be liable to the owner of the property for any damage done to the property during possession thereof by the authority.

2-06-09. Disposal of airport property. Except as may be limited by the terms and conditions of any grant, loan or agreement, authorized by section 2-06-13, an authority may, by sale, lease, or otherwise, dispose of any airport, air navigation facility or other property, or portion thereof or interest therein, acquired pursuant to this chapter. Such disposal by sale, lease, or otherwise, must be in accordance with the laws of this state governing the disposition of other public property, except that in the case of disposal to another authority, a municipality or an agency of the state or federal government for use and operation as a public airport, the sale, lease, or other disposal may be effected in such manner and upon such terms as the commissioners of the authority may deem in the best interest of civil aviation.

2-06-10. Bonds and other obligations.

1. An authority may borrow money for any of its corporate purposes and issue its bonds therefor, including refunding bonds, in such form and upon such terms as it may determine, payable out of any revenues of the authority, including grants or contributions from the federal government or other sources, which bonds may be sold at not less than ninety-eight percent of par plus the interest accrued on the bonds to the date of the delivery thereof.
2. Bond issues sold at private sale must bear interest at a rate or rates and be sold at a price resulting in an average net interest cost not exceeding twelve percent per annum. There is no interest rate ceiling on those issues sold at public sale or to the state of North Dakota or any of its agencies or instrumentalities.
3. Any bonds issued pursuant to this chapter by an authority, or by a governing body exercising the powers thereof, are payable, as to principal and interest, solely from revenues of an airport or air navigation facility or facilities, and must so state on their face, but if any such issue of bonds constitutes an indebtedness within the meaning of any constitutional or statutory debt limitation or restriction, each bond of the issue is, subject to the requirements of subsection 9, an equally valid and binding special obligation of the authority or municipality, as the case may be, in accordance with its terms, in an amount proportionate to the total amount of the issue which is within the limitation or restriction. Neither the commissioners of an authority nor the governing body of a municipality nor any person executing such bonds is liable personally thereon by reason of the issuance thereof, except to the extent that the bonds, if constituting an indebtedness, exceed any applicable limitation or restriction.
4. In case any of the commissioners or officers of an authority or municipality whose signatures appear on any bonds or coupons cease to be such commissioners or officers after authorization but before the delivery of the bonds, the signature shall, nevertheless, be valid and sufficient for all purposes, the same as if the commissioners or officers had remained in office until delivery. Any provision of

any law to the contrary notwithstanding, any bonds issued pursuant to this chapter are fully negotiable.

5. Any bond reciting in substance that it has been issued by the authority or municipality pursuant to this chapter and for a purpose or purposes authorized by this chapter is conclusively deemed, in any suit, action, or proceeding involving the validity or enforceability of the bond or the security therefor, to have been issued pursuant to this chapter and for such purpose or purposes.
6. Bonds issued by an authority or municipality pursuant to this chapter are declared to be issued for an essential public and governmental purpose and, together with interest thereon, and income therefrom, are exempt from all taxes.
7. For the security of any such bonds the authority or municipality may by resolution make and enter into any covenant, agreement, or indenture authorized to be made as security for revenue bonds issued under chapter 40-35. The sums required from time to time to pay principal and interest and to create and maintain a reserve for the bonds may be made payable from any and all revenues referred to in this chapter, prior to the payment of current costs of operation and maintenance of the facilities.
8. Whenever bonds are issued under this chapter and made payable from revenues of an airport involving municipalities with over ten thousand population, subject to requirements of subsection 9, the governing body of the municipality, if at any time all revenues, including taxes, appropriated and therefore collected for such bonds are insufficient to pay principal or interest then due shall levy a general tax upon all of the taxable property in the municipality for the payment of the deficiency. The taxes are not subject to any limitation of rate or amount applicable to other municipal taxes.
9. For bonds issued under this section to be an obligation of a municipality or authority, the issuance of the bonds must be approved by a majority vote of the governing body of each municipality involved or, within thirty days after the authority decides it wishes to issue the bonds, the municipality or authority must put the question, specifying the amount of the bond at issue, to the people at an election. The question may be put at a general election, a primary election, a municipal election, or at an election called for the purpose. If a majority of the qualified electors voting on the issue vote in favor of issuing the bonds, the authority or municipality may, to the amount authorized in the election, pledge the general obligation of the authority or municipality to guarantee the repayment of the principal and interest on the bonds.

2-06-11. Operation and use privileges.

1. In connection with the operation of an airport or air navigation facility owned or controlled by an authority, the authority may enter into contracts, leases, and other arrangements for terms not to exceed thirty years with any persons:
 - a. Granting the privilege of using or improving the airport or air navigation facility or any portion or facility thereof or space therein for commercial purposes;
 - b. Conferring the privilege of supplying goods, commodities, things, services, or facilities at the airport or air navigation facility.
 - c. Making available services to be furnished by the authority or its agents at the airport or air navigation facility.

In each case the authority may establish the terms and conditions and fix the charges, rentals, or fees for the privileges or services, which shall be reasonable and uniform for the same class or privilege or service and must be established with due regard to the property and improvements used and the expenses of operation to the authority; provided that in no case may the public be deprived of its rightful, equal, and uniform use of the airport, air navigation facility, or portion of facility thereof.

2. Except as may be limited by the terms and conditions of any grant, loan, or agreement authorized by section 2-06-13, an authority may by contract, lease, or other arrangements, upon a consideration fixed by it, grant to any qualified person for a term not to exceed thirty years the privilege of operating, as agent of the authority or otherwise, any airport owned or controlled by the authority to operate an airport other than as a public airport or to enter into any contracts, leases, or other arrangements in connection with the operation of the airport which the authority might not have undertaken under subsection 1.

2-06-12. Regulations. An authority is authorized to adopt, amend, and repeal such reasonable resolutions, rules, regulations, and orders as it deems necessary for the management, government, and use of any airport or air navigation prescribed by the commission may be inconsistent with, or contrary to, any act of the Congress of the United States or any regulation promulgated or standard established pursuant thereto. The authority shall keep on file at the principal office of the authority for public inspection a copy of all its rules and regulations.

2-06-13. Federal and state aid.

1. An authority is authorized to accept, receive, receipt for, disburse, and expend federal and state moneys and other moneys, public or private, made available by grant or loan or both, to accomplish, in whole or in part, any of the purposes of this chapter. All federal moneys accepted under this section must be accepted and expended by the authority upon such terms and conditions as are prescribed by the United States and as are consistent with state law; and all state moneys accepted under this section must be accepted and expended by the authority upon such terms and conditions as are prescribed by the state.
2. An authority is authorized to designate the state aeronautics commission as its agent to accept, receive, receipt for, and disburse federal and state moneys, and other moneys, public or private, made available by grant or loan or both, to accomplish in whole or in part, any of the purposes of this chapter; and to designate the state aeronautics commission as its agent in contracting for and supervising the planning, acquisition, development, construction, improvement, maintenance, equipment, or operation of any airport or other air navigation facility. An authority may enter into an agreement with the said aeronautics commission prescribing the terms and conditions as are prescribed by the United States, if federal money is involved, and in accordance with the applicable laws of this state. All federal moneys accepted under this section by the state aeronautics commission upon such terms and conditions as are prescribed by the United States. All moneys received by the state aeronautics commission pursuant to this subsection shall be deposited in the state treasury, and unless otherwise prescribed by the agency from which such moneys were received, must be kept in separate funds designated according to the purposes for which the moneys were made available, and held by the state in trust for such purposes.

2-06-14. Tax levy may be certified by airport authority or municipality. The airport authority may certify annually to the governing bodies, the amount of tax to be levied by each municipality participating in the creation of the airport authority, and the municipality shall levy the amount certified, pursuant to provisions of law authorizing cities and other political subdivisions of this state to levy taxes for airport purposes. The levy made may not exceed the maximum levy permitted by the laws of this state for airport purposes. The municipality shall collect the taxes certified by an airport authority in the same manner as other taxes are levied and collected. The proceeds of such taxes must be deposited in a special account or accounts in which other revenues of the authority are deposited and may be expended by the authority as provided for in this chapter. Prior to the issuance of bonds under section 2-06-10 the airport authority or the municipality may by resolution covenant and agree that the total amount of such taxes then authorized by law, or such portion thereof as may be specified by the resolution, will be certified, levied, and deposited annually until the bonds and interest are fully paid.

2-06-15. County tax levy for airport purposes. In counties supporting airports or airport authorities a levy not exceeding the limitation in subsection 1 of section 57-15-06.7, may be made for such purposes, but this levy shall not apply to any city, township or park district that already has airport levy.

2-06-16. Joint operations.

1. For the purposes of this section, unless otherwise qualified, the term "public agency" includes municipality and authority, each as defined in this chapter, any agency of the state government and of the United States, and any municipality, political subdivision and agency of an adjoining state; and the term "governing body" includes commissioners of an authority, the governing body of a municipality, and the head of an agency of a state of the United States if the public agency of this state, and jointly with any public agency of any adjoining state or of the United States to the extent that the laws of such other state or of the United States permit such joint exercise of enjoyment. Any agency of the state government, when acting jointly with any authority, may exercise and enjoy all the powers, privileges, and authority conferred by this chapter upon an authority.
2. Any two or more public agencies may enter into agreements with each other for joint action pursuant to the provisions of this section. Each agreement must specify its duration, the proportionate interest which each public agency must have in the property, facilities, and privileges involved in the joint undertaking, the proportion of costs of operation, etc., to be borne by each public agency, and such other terms as are deemed necessary or required by law. The agreement may also provide for amendments and termination; disposal of all or any of the property, facilities, and privileges jointly owned, prior to, or at such times as said property, facilities, and privileges, or any part thereof, cease to be used for the purposes provided in this chapter, or upon termination of the agreement; the distribution of the proceeds received upon any disposal, and of any funds or other property jointly owned and undisposed of; the assumption of payment of any indebtedness arising from the joint undertaking which remains unpaid upon the disposal of all assets or upon a termination of the agreement; and such other provisions as may be necessary or convenient.
3. Public agencies acting jointly pursuant to this section shall create a joint board which shall consist of members appointed by the governing body of each participating public agency. The number to be appointed, their term and compensation, if any, must be provided for in the joint agreement. Each joint board shall organize, select officers for such terms as are fixed by the agreement, and adopt and amend from time to time rules for its own procedure. The joint board has power, as agent of the participating public agencies, to plan, acquire, establish, develop, construct, enlarge, improve, maintain, equip, operate, regulate,

protect, and police any airport or air navigation facility or airport hazard to be authorized by the participating public agencies to exercise on behalf of its constituent public agencies all the powers of each with respect to the airport, air navigation facility or airport hazard, subject to the limitations of subsection 4.

4.
 - a. The total expenditures to be made by the joint board for any purpose in any calendar year must be as determined by a budget approved by the constituent public agencies on or before the preceding December first, or as otherwise specifically authorized by the constituent public agencies
 - b. No airport, air navigation facility, airport hazard or real or personal property, the cost of which is in excess of sums fixed therefor by the joint agreement or allotted in the annual budget, may be acquired, established, or developed by the joint board without the approval of the governing bodies of its constituent public agencies.
 - c. Eminent domain proceedings under this section may be instituted by the joint board only by authority of the governing bodies of the constituent public agencies of the joint board. If so authorized, such proceedings must be instituted in the names of the constituent public agencies jointly, and the property so acquired shall be held by said public agencies as tenants in common.
 - d. The joint board may not dispose of any airport, air navigation facility, or real property under its jurisdiction except with the consent of the governing bodies of its constituent public agencies, provided that the joint board may, without such consent, enter into contracts, leases, or other arrangements contemplated by section 2-06-11 of this chapter.
 - e. Any resolutions, rules, regulations, or orders of the joint board dealing with subjects authorized by section 2-06-11 become effective only upon approval of the governing bodies of the constituent public agencies, provided that upon such approval, the resolutions, rules, regulations, or orders of the joint board have the same force and effect in the territories or jurisdictions involved as the ordinances, resolutions, rules, regulations, or orders of each public agency would have in its own territory or jurisdiction.
5. For the purpose of providing the joint board with moneys for the necessary expenditures in carrying out the provisions of this section, a joint fund shall be created and maintained, into which must be deposited the share of each of the constituent public agencies as provided by the joint agreement. Any federal, state, or other grants, contributions, or loans, and the revenues obtained from the joint ownership, control, and operation of any airport or air navigation facility under the

jurisdiction of the joint board must be paid into the joint fund. Disbursements from such fund must be made by order of the board, subject to the limitations prescribed in subsection 4.

2-06-17. Public purpose. The acquisition of any land, or interest therein, pursuant to this chapter, the planning, acquisition, establishment, development, construction, improvement, maintenance, equipment, operation, regulation, and protection of airports and air navigation facilities, including the acquisition or elimination of airport hazards, and the exercise of any other powers herein granted to authorities and other public agencies, to be severally or jointly exercised, are hereby declared to be public and governmental functions, exercised for a public purpose, and matters of public necessity. All land and other property and privileges acquired and used by or on behalf of any authority or other public agency in the manner and for the purposes enumerated in this chapter shall and are hereby declared to be acquired and used for public and governmental purposes and as a matter of public necessity.

2-06-18. Airport property and income exempt from taxation. Any property in this state acquired by an authority for airport purposes pursuant to the provisions of this chapter, and any income derived by the authority from the ownership, operation, or control thereof, is exempt from taxation to the same extent as other property used for public purpose.

2-06-19. Municipal cooperation. For the purpose of aiding and cooperating in the planning, undertaking, construction, or operation of airports and air navigation facilities pursuant to the provisions of this chapter, any municipality for which an authority has been created may, upon such terms, with or without consideration, as it may determine:

1. Lend or donate money to the authority.
2. Provide that all revenues received by the municipality for airport purposes, be transferred, paid, or credited to an airport authority fund. The city auditor or county treasurer may establish and maintain the fund to account for airport authority revenues and shall make payments from the fund for invoices that have been submitted and approved by the governing body of the airport authority shall supply its records. The records must be provided on a timely basis. The fund may not revert to the governing body of the municipality at the end of any fiscal year. The fund must be used exclusively for the establishment and maintenance of airport facilities.
3. Cause water, sewer, or drainage facilities, or any other facilities which it is empowered to provide, to be furnished adjacent to or in connection with such airports or air navigation facilities.
4. Dedicate, sell, convey, or lease any of its interest in any property, or grant easements, licenses, or any other rights or privileges therein to the authority.

5. Furnish, dedicate, close, pave, install, grade, regrade, plan or replan streets, roads, roadways, and walks from established streets or roads to such airports or air navigation facilities.
6. Do any and all things, whether or not specifically authorized in this section and not otherwise prohibited by law, that are necessary or convenient to aid and cooperate with the authority in the planning, undertaking, construction, or operation of airports and air navigation facilities.
7. Enter into agreements with the authority respecting action to be taken by the municipality pursuant to the provisions of this section.

2-06-20. Out-of-state airport jurisdiction authorized - Reciprocity with adjoining states and governmental agencies. For the purpose of this section, "governmental agency" means any municipality, city, town, county, public corporation, or other public agency.

This state or any governmental agency of this state having any powers with respect to planning, establishing, acquiring, developing, constructing, enlarging, improving, maintaining, equipping, operating, regulating, or protecting airports or air navigation facilities within this state, may exercise those powers within any state or jurisdiction adjoining this state, subject to the laws of that state or jurisdiction.

Any state adjoining this state or any governmental agency thereof may plan, establish, acquire, develop, construct, enlarge, improve, maintain, equip, operate, regulate, and protect airports and air navigation facilities within this state, subject to the laws of this state applicable to airports and air navigation facilities. The adjoining state or governmental agency has the power of eminent domain in this state, which must be exercised in the manner provided by the laws of this state governing condemnation proceedings, provided that the power of eminent domain may not be exercised unless the adjoining state authorizes the exercise of that power therein by this state or any governmental agency thereof having any of the powers mentioned in this section.

The powers granted in this section may be exercised jointly by two or more states or governmental agencies, including this state and its governmental agencies, in such combination as may be agreed upon by them.

This section may be cited as the "Extraterritorial Airports Section"

2-06-21. Supplemental authority. In addition to the general and special powers conferred by this chapter, every authority is authorized to exercise such powers as are necessary incidental to the exercise of such general and special powers.

2-06-22. Savings clause - Airport zoning. Nothing contained in this chapter shall be construed to limit any right, power, or authority of a municipality to regulate airport hazards by zoning.

2-06-23. Short title. This chapter may be cited as the Airport Authorities Act.

CHAPTER 2-08
AIRCRAFT AND ULTRALIGHT VEHICLE DEALERS

2-08-01. Definitions. The following words, terms, and phrases, when used in this chapter, have the meaning ascribed to them in this section, except where the context clearly indicates a different meaning:

1. "Aircraft" includes airplanes and helicopters.
2. "Aircraft dealer" means every person, partnership, association, or corporation engaged in the business of buying, selling, leasing, or exchanging more than three aircraft in any twelve consecutive months, except for a business liquidation of used aircraft, or who advertises or holds himself out to the public as being engaged in the business of buying, selling, leasing, or exchanging of aircraft. Any person, partnership, association, or corporation doing business in several locations or airports shall be considered a separate dealer in each location.
3. "Ultralight vehicle dealer" means every person, partnership, association, or corporation engaged in the business of buying, selling, leasing, or exchanging more than two Ultralight vehicles in any twelve consecutive months, or who advertises or holds himself out to the public as being engaged in the business of buying, selling, leasing, or exchanging of Ultralight vehicles. Any person, partnership, association, or corporation doing business in several locations shall be considered a separate dealer at each location.
4. "Ultralight vehicles" means piloted vehicles which are flown in airspace and are not required by the federal aviation administration to have a federal certificate of airworthiness. All other piloted Ultralight vehicles required to have a federal experimental airworthiness certificate are defined as aircraft.

2-08-02. Exemption. This chapter does not apply to any person who only leases aircraft to state institutions of higher education.

2-08-03. Aircraft dealer's license - Fees - Dealer's place of business. No person, partnership, association, or corporation may engage in the business of buying, selling, leasing, or exchanging aircraft, or advertise or hold out to the public as being in the business of buying, selling, leasing, or exchanging of aircraft without first being licensed as provided in this chapter.

The aeronautics commission shall prescribe and furnish license and renewal license application forms. A non-refundable fee of twenty-five dollars must accompany each application for each dealer location. A dealer's license expires on December thirty-first of each year, and application

for renewal must be made before the expiration of the current dealer's license. For each annual twenty-five dollar license fee or renewal, the dealer must be issued one dealer's registration for one demonstrator aircraft. Additional dealer's demonstrator aircraft registrations must be issued to a licensed dealer upon the payment of ten dollars for each additional demonstrator aircraft, provided such demonstrator aircraft are not used for commercial purposes to produce rental or air taxi revenue, or used for aerial spraying while awaiting sale or trade. All new or used demonstrator aircraft which are for resale but are used by a dealer to produce commercial revenue, or air taxi or rental revenue or for aerial spraying must be registered with the commission and the annual registration fees paid in accordance with the laws of this state. Fees from license applications of aircraft dealers must be deposited with the state treasurer, who shall deposit such funds in the aeronautics commission special fund.

The aeronautics commission shall issue dealer's licenses only to dealers who maintain a permanent place of business on an airport open for public use, whether publicly or privately owned in the state of North Dakota, with runway length, aprons, and safe aircraft approaches adequate for fixed wing aircraft or helicopters of the type sold by such a dealer. An established central place on an airport means that such dealer has an enclosed office, building or structure owned or leased with adequate facilities and equipment for the maintenance, service, and repair of aircraft. The dealer shall maintain business records in the dealer's place of business. The dealer's place of business must be adequate to conduct an aircraft dealer's business where selling, trading, and bartering of aircraft may be conducted and may not be a residence or temporary quarters or so-called permanent quarters occupied pursuant to temporary arrangements. An applicant for an aircraft dealer's license cannot qualify with only a privately owned aircraft hangar as a place of business, which is usually used for storage of aircraft on an airport open for public use. An aircraft dealer to qualify for a dealer's license must maintain an aircraft or helicopter service and repair shop on an airport open for public use with a minimum of five thousand dollars in tools, equipment, aircraft parts, and supplies, as determined by a representative of the director of the aeronautics commission.

The aeronautics commission shall issue a license only after inspection and approval of the aircraft dealer's facilities.

2-08--04. Ultralight vehicle dealer's license - Fees - Dealer's place of business. No person, partnership, association, or corporation may engage in the business of buying, selling, leasing, or exchanging Ultralight vehicles, or advertise or hold out to the public as being in the business of buying, selling, leasing, or exchanging of Ultralight vehicles without first being licensed as provided in this chapter.

The aeronautics commission shall prescribe and furnish license and renewal license application forms. A non-refundable fee of fifteen dollars must accompany each application for each dealer location. A dealer's license expires on December thirty-first of each year, and application for renewal must be made before the expiration of the current dealer's license. For each annual fifteen dollar license fee or renewal, the dealer must be issued one dealer's registration for one

demonstrator Ultralight vehicle. Additional dealer's demonstrator Ultralight vehicle registrations must be issued to a licensed dealer upon the payment of ten dollars for each additional demonstrator Ultralight vehicle. Fees from license applications of Ultralight vehicle dealers and any other fees received for additional demonstrator Ultralight vehicle registrations must be deposited in the aeronautics commission special fund.

An Ultralight vehicle dealer shall maintain a permanent place of business in North Dakota which may be off or on an airport; provided, if the place of the business is off an airport, such dealer shall maintain a cleared area of sufficient size and length to safely demonstrate Ultralight vehicles without undue approach hazards, or hazards to other persons or property. The dealer shall maintain business records in the dealer's place of business. An Ultralight dealer to qualify for a dealer's license shall maintain at least one flyable Ultralight vehicle for demonstration purposes and shall maintain a minimum of five hundred dollars in tools, equipment, parts, or supplies to provide service for Ultralight vehicles. The aeronautics commission has the option of inspection of each Ultralight dealer prior to issuing a dealer's license or a renewal.

2-08-05. Dealers to furnish information to director of aeronautics commission. All dealers to furnish information to director of aeronautics commission. All dealers engaged in the sale of aircraft or Ultralight vehicles in this state shall furnish the director of the aeronautics commission and purchasers with information as to model, specification, selling price, with no trade-in allowances, and names and addresses of purchasers and such other data requested by the director of the aeronautics commission as may be necessary in carrying out the provisions of this chapter. All dealers shall keep records of all aircraft and Ultralight vehicle sales for two years.

2-08-06. Examination of books and records. The director of the aeronautics commission or his duly authorized representative may inspect the pertinent books, letters, records, and contracts of any licensed aircraft or Ultralight vehicle dealer relating to specific complaints made against such dealer and which may be in violation of any provisions of this chapter or title 2 or 57.

2-08-07. Powers of the aeronautics commission. In addition to other powers provided by law, the aeronautics commission has the following powers and duties which must be exercised in conformity with this chapter:

1. To cancel, revoke, or suspend a dealer's license as provided for in this chapter.
2. To prescribe rules and regulations not inconsistent with this chapter governing the application for dealer's licenses and the cancellation or suspension or revocation of dealer's licenses.
3. To employ and pay such persons as may be necessary to inspect dealers in this state, investigate dealers for the information needed by the aeronautics commission, to procure evidence in connection with any prosecution or other action to suspend,

revoke, or cancel a dealer's license in relation to any matter in which the aeronautics commission and the director has any duty to perform.

2-08-08. Grounds for denial, suspension, cancellation, or revocation of dealer's license. The director of the aeronautics commission may deny an application for a dealer's license or suspend, revoke, or cancel such a license after it has been granted for the following reasons:

1. For any material misstatement by an applicant in the application for the license.
2. For any willful failure to comply with the provisions of this chapter or with any rule or regulation promulgated by the aeronautics commission.
3. For knowingly permitting any salesman to sell or exchange, or offer or attempt to sell or exchange, any aircraft or Ultralight vehicle except for the licensed dealer by whom he is employed, or to offer, transfer, or assign any sale or exchange that he may have negotiated to any other dealer.
4. For having violated any law relating to the sale, distribution, or financing of a aircraft or Ultralight vehicles.
5. For having ceased to have an established place of business as herein defined.

Such cancellation and revocation shall be done in the manner and according to the procedure described in chapter 28-32.

2-08-09. Dealer permitting license to be used by another dealer - License revoked. Any dealer who permits any other dealer to use his dealer's license, or permits the use of such license for the benefit of any other dealer, shall have his dealer's license revoked.

2-08-10. Officers to administer chapter. The aeronautics commission, its director and staff, is responsible for the administration of the provisions of this chapter.

2-08-11. Penalty for violation of chapter. Any person violating any of the provisions of this chapter is guilty of an infraction for which a maximum fine of five hundred dollars may be imposed. For a second and subsequent offense, such person shall be guilty of a class B misdemeanor.

CHAPTER 4-35 PESTICIDE ACT

4-35-21.1. Reports of loss through pesticide application required. No civil action may be commenced arising out of the application of any pesticide by any applicator inflicting damage on property other than property within the target area of the pesticide application, unless the claimant has filed a verified report of loss with the commissioner of agriculture, together with proof of service of the verified report of loss upon the applicator allegedly responsible and, if the claimant is not the person for whom the work was done, within a period of sixty days from the occurrence of the loss or within sixty days from the date the claimant knew the loss had occurred. If the damage is alleged to have been occasioned to growing crops, the report must be filed prior to the time when fifty percent of the crop was harvested. If, however, the applicator does not inform the claimant of the legal requirements for the claimant has one year from the date of the incident to file a verified report of loss. No verified report of loss is required when the claimant was the operator or applicator of the herbicide, insecticide, fungicide, or agricultural chemical.

4-35-21.2. Contents of verified reports of damage. Any verified report of the loss arising out of the application of any pesticide by any applicator required by this chapter, must include, so far as known to the claimant: the name and address of the claimant, the type, kind, and location of property allegedly injured or damaged, the date the alleged injury or damage occurred, the name of applicator allegedly responsible for the loss or damage, and if the claimant is not the same person for whom the work was done, the name of the owner or occupant of the property for whom the applicator was rendering labor or services.

4-35-23. Penalties.

1. Any registrant; applicator, other than a private applicator; wholesale dealer; retailer; or other distributor who knowingly violates any provision of this chapter is guilty of a class A misdemeanor.
2. Any private applicator or other person not included in subsection 1 who knowingly violated any provision of this chapter is guilty of a class B misdemeanor.
3. When construing and enforcing the provisions of this chapter, the act, omission, or failure of any officer, agent, or other person acting for or employed by any person must in every case be also deemed to be the act, omission, or failure of such person as well as that of the person employed.
4. In addition to the criminal sanctions which may be imposed pursuant to subsections 1 and 2, a person found guilty of violating this chapter or the rules adopted under this chapter is subject to a civil penalty not to exceed five thousand dollars for each violation. The civil penalty may be imposed by a court in a civil proceeding or by

the commissioner of agriculture through an administrative hearing pursuant to chapter 28-32.

4-35-24. Enforcement.

1. The commissioner is charged with the duty of enforcing the requirements of this chapter and any rules or regulations issued hereunder.
2. The commissioner may bring an action to enjoin the violation or threatened violation of any provision of this chapter, or any rule or regulation made pursuant to this chapter, in the district court of the county in which such violation occurs or is about to occur.
3. In the event any person violates any provision of this chapter, the commissioner may issue an order requiring such person to cease and desist from the unlawful activity. In the event the violator fails to obey, the commissioner will cause the appropriate criminal complaint to be filed.
4. For the purpose of carrying out the provisions of this chapter, the commissioner may enter upon any public or private premises at reasonable times, in order to:
 - a. Have access for the purpose of inspecting any equipment subject to this chapter and the premises on which such equipment is stored or used.
 - b. Inspect or sample lands actually or reported to be exposed to pesticides.
 - c. Inspect storage or disposal areas.
 - d. Inspect or investigate complaints of injury to humans or land.
 - e. Sample pesticides and tank mixes being applied or to be applied.
 - f. Observe the use and application of a pesticide.
 - g. Have access for the purpose of inspecting any premises or other place where pesticides or devices are held for distribution, sale, or for use or for the purpose of inspecting and obtaining samples of any pesticides packaged, labeled, and released for shipment and samples of any containers or labeling for such pesticides.
5. The commissioner shall, at any reasonable time, have access to the records pertaining to pesticide application and sales of any person. He may copy or make

copies of such records for the purpose of carrying out the provisions of this chapter, such information is confidential.

6. Should the commissioner be denied access to any land or records pertaining to pesticide application and sales where such access was sought for the purposes set forth in this chapter, he may apply to any court of competent jurisdiction for a search warrant authorizing access to such land or records for said purposes. The court may, upon such application and upon compliance with the provisions of chapter 29-29.1, issue the search warrant for the purposes requested.
7. If a civil penalty pursuant to section 4-35-23 is imposed by the commissioner of agriculture through an administrative hearing and the civil penalty is not paid, the commissioner may collect the civil penalty by a civil proceeding in any appropriate court. Additionally, the commissioner may suspend or revoke a license or certification issued pursuant to this chapter for failure to pay a civil penalty within thirty days after a final determination is made that the civil penalty is owed.

CHAPTER 57-15
TAX LEVIES AND LIMITATIONS

57-15-36. Tax levy for airport purposes. In cities supporting airports for which no levy has been made by a park board or other taxing district within the corporate limits of such city, a levy not exceeding the limitation in subsection 18 of section 57-15-10, may be made for such purposes.

57-15-37. Tax levy for airport purposes in park districts. In park districts supporting airports, a levy not exceeding the limitation in subsection 4 of section 57-15-12.2 may be made for such purpose provided, however, that the levy may be made by not more than one of the political subdivisions in any taxing district.

57-15-37.1. Township levy for airport purposes. The electors of each township may vote at the annual meeting to levy a tax for the purpose of supporting an airport or an airport authority in an amount not exceeding the limitation in subsection 6 of section 57-15-20.2. The tax levy provided in this section shall not apply to any city, park district, or other taxing district that already has an airport levy.

CHAPTER 57-32
TAXATION OF EXPRESS AND AIR TRANSPORTATION COMPANIES

57-32-01.1. Property assessed in lieu of registration fees and sales and use taxes. The taxes imposed by chapters 57-06, 57-07, 57-08, 57-13, and this chapter on air carrier transportation property are in lieu of the registration fees imposed by section 2-05-11 and are in lieu of sales and use taxes which would otherwise be imposed on the sale, storage, use, or consumption of air carrier transportation property except for the provisions of sections 57-39.2-04 and 57-40.2-04.

57-32-01.2. Method of valuation. All of the operative property within North Dakota of each air carrier transportation company which is defined as real property under section 57-02-04 must be valued for assessment purposes by the tax commissioner and the state board of equalization. For the purpose of determining the value of the operative property within North Dakota of each air transportation company, the tax commissioner and the state board of equalization shall take into consideration legally established evidences of value that enable the tax commissioner and the state board of equalization to make a just and equitable assessment.

57-32-04. Allocation of tax. The taxes imposed by this chapter upon express companies must be collected by the state treasurer and deposited in the state general fund.

The taxes imposed by this chapter upon air transportation companies must be deposited with the state treasurer, who shall credit the same to the air transportation fund, but within ninety days after receipt thereof, these funds must be allocated and remitted as herein provided by the state treasurer to the cities of municipal airport authorities where such transportation companies make regularly scheduled landings. The taxes collected from each company must be allocated to each city or municipal airport authority where that company makes regularly scheduled landings by multiplying the total tax collected by a fraction, the numerator of which is the value of the company's property at a given city or municipal airport and the denominator of which is the total value of the property located in North Dakota that is subject to the assessment. It shall be the duty of the tax commissioner to certify to the state treasurer the names of such air transportation companies and the amount of tax of each company that shall be allocated by the state treasurer to each city or municipal airport authority.

57-32-05. Collection of tax. If any tax required to be paid by any company under the provisions of this chapter shall not be paid on or before October first of the year following the year of delinquency, the state treasurer shall seize personal property belonging to such company found within this state, sufficient to pay the amount of such tax with penalty and interest. The state treasurer, immediately after seizing said property, shall proceed to advertise the same sale by publishing a notice at least two times in a newspaper published in Burleigh County. Such notice shall describe the property seized, the amount of the tax and when and the place where said property will be sold. If the tax and penalty, with interest due thereon, shall not be paid before the time appointed for sale, which shall not be less than ten days after time appointed for sale,

which shall not be less than ten days after the first publication of such notice, the state treasurer shall proceed to sell such property, or so much thereof as may be necessary, to pay such tax, penalty, interest, and the costs of such seizure and sale, at public auction to the highest bidder.

CHAPTER 57-40.5
AIRCRAFT EXCISE TAX

57-40.5-01. Definitions. The following words, terms, and phrases, when used in this chapter, have the meaning ascribed to them in this section, except where the context clearly indicates a different meaning:

1. "Aircraft" includes airplanes, helicopters, manned balloons, and Ultralight vehicles.
2. "Director" means the director of aeronautics.
3. "Purchase Price" means the total amount paid for the aircraft whether paid in money or otherwise, provided, however, that when an aircraft or a motor vehicle that will be subject to the motor vehicle excise tax imposed by chapter 57-40.3, is taken in trade on an aircraft taxable under this chapter, the trade-in value allowed by the person selling the aircraft must be deducted from the selling price to establish the purchase price of the aircraft being sold and the trade-in allowance allowed by the seller on an aircraft accepted as a trade-in constitutes the purchase price of an aircraft. "Purchase price" also means the fair market value when no current purchase is involved and the aircraft is moved by the owner or user from any other state into this state and on which no sales, use, or excise tax was paid by the owner or user to any other state, or on which a sales, use, or excise tax was paid by the state, and for which aircraft registration is required by section 2-05-11 or registration and licensing required is by section 2-05-18. If an aircraft is purchased by a person who has paid the excise tax and who has had an aircraft stolen or destroyed, a credit must be allowed in the amount the purchaser has paid in tax on the stolen or destroyed aircraft. The purchaser must provide the director with a notarized statement from the insurance company verifying the fact that the original aircraft was a total loss and stating the amount compensated by the insurance company for the loss. The statement from the insurance company must accompany the purchaser's application for a certificate of registration for the replacement aircraft. In instances in which a licensed aircraft dealer or established fixed-base aviation operator located at an airport open for public use and approved by the aeronautics commission, places into service a new or used aircraft for the purpose of renting, leasing, or dealership or fixed-base aviation operator utility service, the reasonable value of the new or used replacement aircraft shall be included as a trade-in value if the new or replacement aircraft is properly registered with the aeronautics commission. "Purchase price" in those instances where an aircraft is manufactured by a person who registers it under the laws of this state, means the manufactured cost of such aircraft and manufactured cost means the amount expended for materials, labor, and other properly allocable costs of

manufacture except that , in the absence of actual expenditures for the manufacture of a part or all of the aircraft, manufactured cost means the reasonable value of the completed aircraft, as determined by the director.

4. "Purchaser" means any person owning or in possession of an aircraft who makes application to the director for registration of such aircraft.
5. "Sale", "sells", "selling", "purchase", or "acquired" includes any transfer of title or ownership of an aircraft by way of gift, exchange, barter, or by any other manner for or without consideration.
6. "Use" means the exercise by any person of any right incident to ownership of an aircraft, except that it does not include the sale or holding for sale of such an aircraft in the regular course of business.

57-40.5-02. Tax imposed. There is imposed an excise tax at the rate of five percent on the purchase price of any aircraft purchased or acquired either in or outside of the state of North Dakota or on the lease or rental cost of any aircraft, less fuel, if rented dry and required to be registered under the laws of this state, except on aircraft or helicopters designed or modified for exclusive use as agricultural aircraft for aerial application of agricultural chemicals, insecticides, fungicides, growth regulators, pesticides, dusts, fertilizer, or other agricultural materials, the excise tax is imposed at the rate of three percent on the purchase price of any such aircraft purchased or acquired in or outside of this state, including the leasing or renting of such agricultural aircraft to users for agricultural purposes.

57-40.5-03. Exemptions. There are specifically exempted from the provisions of this chapter and from computation of the amount of tax imposed by it, the following:

1. Aircraft acquired by disabled veterans as defined by the provisions of Public Law No. 79-663 [38 U.S.C. 1901]. This exemption shall be allowed only with respect to one aircraft owned by any disabled veteran.
2. Any aircraft owned by or in possession of the federal or state government or any of the political subdivisions, departments, agencies, or institutions thereof.
3. Aircraft which were previously titled or registered in the names of two or more joint tenants and subsequently transferred without monetary consideration to one or more of the joint tenants; the transfer of aircraft by gift, inheritance, or device between a husband and wife, parent and child, or brothers and sisters; and the transfer of aircraft to reflect a new name caused by a business reorganization, if the ownership of the business organization remains in the same person or persons as prior to the reorganization.

4. Aircraft transferred between a lessee and lessor, if the lessee has been in continuous possession of the aircraft for a period of one year or longer, and if the lessor has paid either the tax imposed under this chapter at the time of registering the aircraft in this state or the use tax imposed by chapter 57-40.2.
5. Aircraft acquired by any parochial or private nonprofit school. To qualify, a school must normally maintain a regular faculty and curriculum and must have a regularly organized body of students in attendance. The aircraft is not to be used for commercial activities.

57-40.5-04. Purchaser to furnish aircraft purchaser's certificate to director of aeronautics. Any person acquiring an aircraft shall complete an "aircraft purchaser's certificate" in the form the director prescribes, showing a complete description of the aircraft, the seller's name and address, the buyer's name and address, the full purchase price of the aircraft, with no trade-in of aircraft or other property allowed and whether the aircraft was the subject of a gift or inheritance, and any other information that the director may require.

57-40.5-05. Presentation of aircraft purchaser's certificate to director. No registration shall be issued by the director for an aircraft until the applicant presents a properly executed aircraft purchaser's certificate with the application for registration. If a registration application is made for an aircraft that has been previously registered in this state and the applicant is the same person in whose name the registration had previously been issued, the aircraft purchaser's certificate need not be submitted to the director.

57-40.5-06. Aircraft registration not to be issued unless tax paid. No registration shall be issued by the director for the ownership or operation of any aircraft to any applicant for registration unless the tax imposed by this chapter has been paid by the applicant to the director except for those aircraft which have whose name the registration had previously been issued and for aircraft exempt from the tax imposed by this chapter.

57-40.5-07. Presumption. For the purpose of the proper administration of this chapter the following presumptions apply:

1. Evidence that an aircraft was sold for delivery in this state is prima facie evidence that it was sold for use in this state.
2. When an application for registration of an aircraft is received by the director within thirty days of the date it was purchased or acquired by the purchaser, it is presumed, until the contrary is shown by the purchaser that it was purchased or acquired for use in this state. This presumption applies whether or not such aircraft was previously titled or registered in another state.

57-40.5-08. Credit for excise tax paid in other states - Reciprocity. If any aircraft has been subjected to a sales tax, use tax, or excise tax in any other state, in an amount less than the tax imposed by this chapter, the provisions of this chapter apply at a rate measured by the difference between the rate fixed in this chapter and the rate by which the previous tax paid in the other state upon the sale or use was computed. If the tax imposed in another state equals or exceeds the tax imposed by this chapter, then no tax is due on such aircraft. The provisions of this section apply only if such other state allows a credit with respect to the excise tax imposed by this chapter which is substantially similar in effect to the credit allowed by this section.

57-40.5-08.1. Aircraft excise tax refunds - Three-year limitation. If it appears that any aircraft excise tax paid on or after July 1, 1983, was paid in error, or for any other reason the tax was not due under the provisions of this chapter, the tax shall be refunded to the person who paid the tax upon an application made and duly allowed in accordance with section 57-40.5-08.2, provided that the application is made within three years from the date of payment of the tax.

57-40.5-08.2. Procedure for refunding. Any person entitled to a refund of aircraft excise tax, may make application for refund to the tax commissioner in the manner prescribed by the commissioner. Upon the presentation of proof satisfactory to the commissioner, the commissioner shall authorize the refund to be made from moneys appropriated for that purpose. No refund shall be authorized by the commissioner until the commissioner is fully satisfied through the production of necessary purchase agreements, tax receipts, and other documents and information that the refund is warranted. Payment of the refund shall be made by warrant after approval by the office of management and budget and approval of the voucher by the office of the budget.

57-40.5-09. Allocation of revenue. All moneys collected and received under this chapter shall be transmitted monthly by the director to the aeronautics commission special fund. These funds may be used for airport construction or improvement projects as approved by the aeronautics commission in an amount as allowed by the commission.

57-40.5-10. Penalties.

1. Any person who violates any of the provisions of this chapter is guilty of a class B misdemeanor.
2. Any person who fails to submit a purchase certificate or who submits a false or fraudulent aircraft purchaser's certificate is subject to a penalty of five percent of the true amount of the tax which was due or five dollars, whichever is greater, plus one percent of such tax for each month or fraction thereof subsequent to the month in which the false or fraudulent aircraft purchaser's certificate was furnished to the director. Any penalty shall be paid to the tax commissioner or the director. The director or the tax commissioner, if satisfied that the delay in payment of the tax was excusable, may waive, and if paid, refund all or any part of such penalty and

interest. Unpaid penalties may be enforced in the same manner as the tax imposed by this chapter.

3. Whenever a person, including an aircraft dealer, has collected from a person acquiring an aircraft, an aircraft excise tax in excess of the amount prescribed or due under this chapter, and if the person does not refund the excessive tax collected to the person who remitted it, the person who collected the tax shall pay it to the tax commissioner in the quarterly period in which the excessive collection occurred. The penalty and interest provisions of this section shall apply beginning at termination of each reporting period.

57-40.5-11. Director to act as agent of tax commissioner in administration of aircraft excise tax. The state tax commissioner is charged with the administration of this chapter. The tax commissioner may prescribe all rules, not inconsistent with the provisions of this chapter, for the administration of this chapter. The collection of the aircraft excise tax shall be carried out by the director who shall act as the agent of the state tax commissioner and who shall be subject to all rules, not inconsistent with the provisions of this chapter, that may be prescribed by the tax commissioner. The provisions of this chapter shall not be construed to prevent the collection of aircraft excise taxes by the tax commissioner in the case of any audit carried on by the tax commissioner.

CHAPTER 57-43.1
MOTOR VEHICLE FUELS AND IMPORTER FOR USE TAXES

57-43.1-03. Refund of tax for fuel used for industrial purposes - Reduction for agricultural fuel tax fund. Any person who buys or uses any motor vehicle fuel as defined in section 57-43.1-01 for industrial purposes, except motor vehicle fuel as defined in section 57-43.1-01 for industrial purposes, except motor vehicle fuel used in motor vehicles operated or intended to be operated in whole or in part upon any of the public highways of this state on which the motor vehicle fuel tax has been paid, must be reimbursed or repaid within the time provided in this chapter, the amount of the tax paid upon the presentation to and the approval of the commissioner of a claim for refund. The amount of the tax refund provided for in this section must be reduced by two cents per gallon [3.79 liters] except for those fuels used in aircraft or with respect to refunds claimed by aircraft fuel users, and the two cents per gallon [3.79 liters] withheld from the refund must be deposited in the agricultural fuel tax fund. Those persons who have a valid tax assignment permit issued by the commissioner under section 57-43.1-11 must be charged two cents per gallon [3.79 liters] by the dealer and the two cents charged must be remitted to the commissioner by the dealer when the dealer submits the tax assigned invoices for credit.

57-43.1-04. Form of claim for refund. A refund claim must be on a form furnished by the commissioner and must have a written declaration by the claimant that it is made under the penalties of perjury. The refund claim must state that the motor vehicle fuel was used or is to be used by the claimant other than in motor vehicles operated or intended to be operated upon the public highways of this state, the manner in which the motor vehicle fuel was used or is to be used, the equipment in which the motor vehicle fuel was used, or in which it will be used, and such other information as the commissioner requires. The original invoice or invoices indicating the purchase of motor vehicle fuel on which the refund is claimed must be attached to the refund claim. If the original invoice or invoices are lost, the claimant may substitute duplicate invoices plus a separate affidavit on forms prescribed by the commissioner. A certified history of purchases detailing required information may be accepted by the commissioner in lieu of original sales invoices or sales tickets.

57-43.1-05. Claim for refund - Limitation on filing. A refund claim must be filed, for all motor vehicle fuel purchases during a calendar year, on or after January first and before July first of the next year following, or the claim for refund is barred unless the commissioner grants an extension of time for cause. However, any claim for refund may be filed in the calendar year of motor vehicle fuel purchase when:

1. The business is being discontinued.
2. No further purchases subject to fuel tax refund will be made in the remainder of the calendar year; or
3. The claim for refund exceeds one thousand dollars.

No claim for refund shall be made or approved unless the amount of the claim is in excess of five dollars.

57-43.1-06. Refund to prevent double taxation - Reduction for agricultural fuel tax fund.

Any person to whom special fuel or motor vehicle fuel is sold on which the tax imposed by this chapter or chapter 57-43.2 has been paid who thereafter removes the fuel from this state to a state which requires payment of a tax upon the use of the fuel in that state must be granted a refund of the tax that was paid pursuant to this chapter or chapter 57-43.2. The refund may be granted only upon application to the commissioner on forms prescribed by the commissioner, including proof of payment of the tax imposed by the other state, and is subject to the limitations provided in section 57-43.1-05. The tax provided for in section 57-43.2-03 may not be levied on sales of any such fuel for which a refund of tax is made pursuant to this section.

**CHAPTER 57-43.3
AVIATION FUEL TAX**

57-43.3-01. Definitions. As used in this chapter unless the context otherwise requires:

1. "Aviation fuel" means aviation gasoline, jet motor fuel, and other motor fuel used by aircraft.
2. "Commission" means the North Dakota aeronautics commission.
3. "Commissioner" means the North Dakota tax commissioner.
4. "Dealer" means aviation fuel dealer.
5. "User" means aviation fuel user.

57-43.3-02. Imposition and collection of tax. An excise tax of eight cents per gallon [3.79 liters] is hereby imposed on the sale or delivery of aviation fuel by a dealer to a user. The dealer shall collect the tax from the user and pay the tax to commissioner.

57-43.3-03. Refund of tax. Any user shall be reimbursed the tax levied by section 57-43.3-02 pursuant to the provisions of chapter 57-43.1.

57-43.3-04. Separate and additional tax imposed. In addition to any other tax imposed in this chapter, there is hereby imposed a special excise tax of four percent on the sale of aviation fuel on which a tax is levied by section 57-43.3-02 and which is refunded under the provisions of section 57-43.3-03.

57-43.3-05. Administration of tax. The commissioner shall administer this chapter and is empowered to adopt reasonable rules and regulations relating to administration and enforcement. The commissioner shall audit returns and make assessments pursuant to section 57-43.2-14. The commissioner shall be authorized and empowered to determine the purchase price of aviation fuel used by aircraft at the time of approving a refund of the taxes imposed by section 57-43.3-02 on such fuel, he shall deduct the tax imposed by section 57-43.3-04 from the amount of such refund. Claims for refund of taxes imposed by section 57-43.3-02 shall be in such form and subject to such conditions and requirements, including time for filing, as are provided in the refund motor fuel tax law, chapter 57-43.1.

57-43.3-06. Distribution of revenue. The tax collected by the commissioner pursuant to section 57-43.3-04 shall be deposited by the commissioner in the office of the state treasurer, who shall deposit such moneys in a special fund known as the state aeronautics commission special fund. These funds are hereby appropriated to the commission and shall be disbursed by warrant-check prepared by the office of management and budget upon vouchers submitted by the commission

and approved by the office of management and budget, for commission administration and the purpose of matching of any funds made available by political subdivisions or airport authorities of this state, the state, or the United States, only if the political subdivision or airport authority is not qualified for or does not receive any funds under section 2-05-06.5. These funds shall be used for airport construction or improvement projects including airport administration and terminal buildings, hangars, landing strips for aircraft, and purchase of sites for airports or landing fields and easements; and for maintenance, clearing of sites, marking, lighting, and engineering and navigational aids, all related to aeronautics in amounts as the commission may determine and upon projects as the commission may approve.


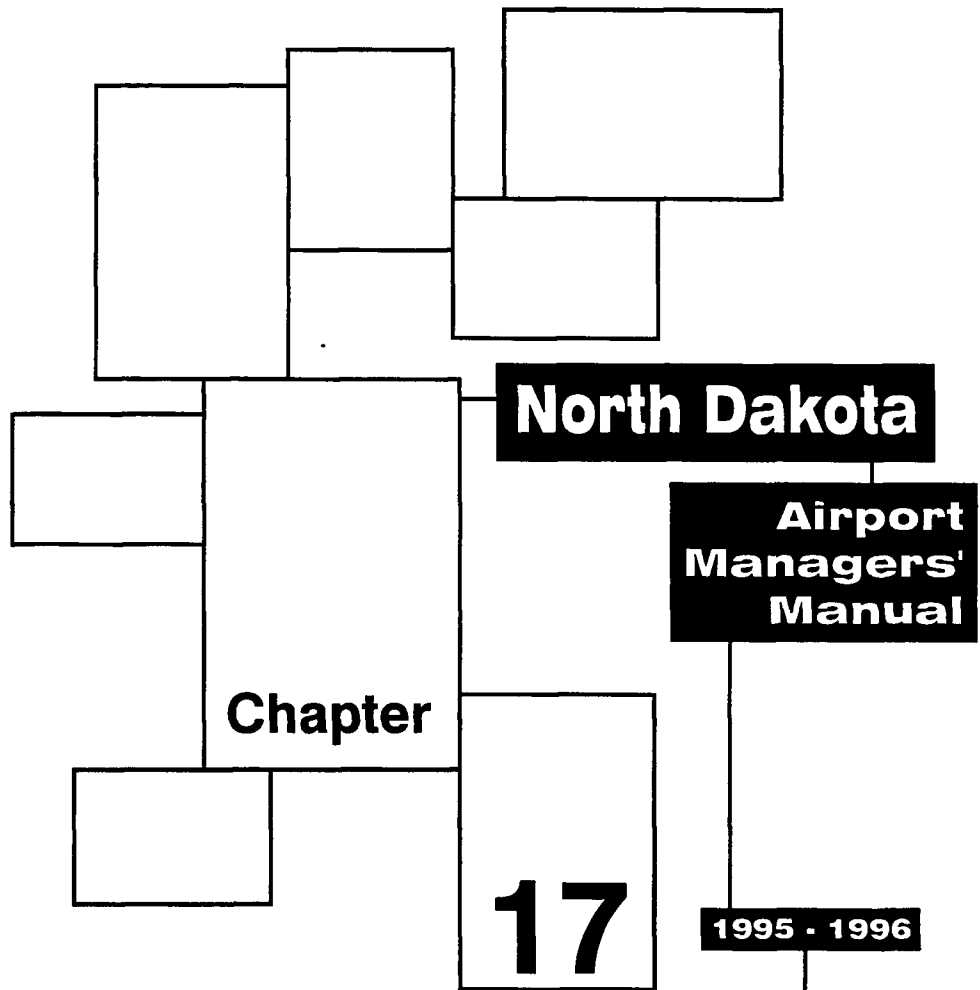
57-43.3-07. Allocation of unclaimed refund revenue - Appropriation. The tax collected by the commissioner pursuant to section 57-43.3-02, upon which no refund is claimed, and those revenues remaining as unclaimed refunds shall be deposited in the office of the state treasurer, who shall deposit such money in a special fund known as the state aeronautics commission special fund. These funds are hereby appropriated to the commission and shall be disbursed by warrant-check prepared by the office of management and budget upon vouchers submitted by the commission and approved by the office of management and budget and shall be administered and expended by the commission for administration, construction, reconstruction, repair, maintenance, and operation of airports near communities, recreational areas, or parks including the international peace garden airport and for necessary expenses and for the purchase of land and easements for such facilities.

CHAPTER 58-03
POWERS OF TOWNSHIP AND OF ELECTORS OF THE TOWNSHIP

58-03-07. Powers of electors. The electors of each township have the power at the annual township meeting:

1. To establish one or more pounds within the township, to determine the location of the pounds, to determine the number of poundmasters and to choose poundmasters, and to discontinue pounds which have been established.
2. To select the township officers required to be chosen.
3. To direct the institution or defense of actions in all controversies where the township is interested.
4. To direct the raising of such sums as they may deem necessary to prosecute or defend actions in which the township is interested.
5. To make all rules and regulations for the impounding of animals.
6. To make such bylaws, rules, and regulations as may be deemed necessary to carry into effect the powers granted to the township.
7. To impose penalties for each offense on persons offending against any rule or regulation established by the township.
8. To apply penalties when collected in such manner as they deem most conducive to the interests of the township.
9. To ratify or reject recommendations offered by the board of township supervisors for the expenditure of funds for the purpose of purchasing building sites and for the purchase, location, erection, or removal of any building or erection for township purposes. No recommendation shall be adopted except by a two-thirds vote of the electors present and voting at any annual township meeting.
10. To authorize and empower the board of township supervisors to purchase liquids, compounds, or other ingredients for the destruction of noxious weeds, and sprinklers to be used in spraying said liquids or compounds. No township shall purchase more than two such sprinklers in any one year.
11. To authorize aid to a district fair association within the limits provided in title 4.

12. To authorize the levy of township taxes for the repair and construction of roads and bridges and for other township charges and expenses within the limits prescribed in title 57.
13. To direct the expenditure of funds raised for the repair and construction of roads within the limits provided in title 24.



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Land Use Compatibility Guidelines

Why Is Compatible Land Use Planning Around North Dakota's Airports Important?

Incompatible land use around airports is a major concern facing aviation today. Off-airport land use incompatibility threatens the usefulness of many airports. There are many benefits of an airport to the community it serves. In the State of North Dakota, aviation enhances the quality of life by providing access to and from different parts of the State, the country, and the world. Proximity to airports increases business opportunities within the State by permitting efficient, cost-effective travel and by providing North Dakota's business community with access to worldwide markets. Airports also provide a gateway to North Dakota for out-of-state tourists and business travelers. Another benefit of airports in the State of North Dakota is that they serve as a means by which emergency and health services can be provided. This is an especially important benefit to isolated communities throughout the State.

Communities benefit economically whether they are served by an airport which provides regularly scheduled commercial flights or by a general aviation airport which serves private and business aircraft. Aviation's economic benefit extends far beyond planes and runways. It extends to hotels, rental cars, manufacturing, real estate, and a wide variety of other industries whose success depends on air travel as an efficient mode of transportation.

To measure the value of its airport system to State, the North Dakota Aeronautics Commission recently updated its Statewide Aviation Economic Impact Study; a similar study had been conducted by the Aeronautics Commission in 1987. The update showed that economic benefits of aviation in North Dakota are increasing. In 1987, the State's airport system contributed in some way to supporting approximately 7,082 jobs statewide. By 1994, this number of jobs had increased to 8,706. Payroll associated with these jobs in 1994 was \$166.5 million. In 1994, airport tenants, aviation users, and air travelers to North Dakota spent an estimated \$585.6 million. This figure was up from an estimated \$461.1 million in Statewide spending for 1987. Clearly, North Dakota's airport system is an important economic resource which merits preservation and protection through compatible land use planning.

The promotion of compatible land uses around an airport must be accomplished at the local level, since local governments have the authority to direct land use development. These Guidelines provide different approaches that can be taken to promote compatible land use around airports. Jurisdiction over the State airways system in matters of safety is vested in the North Dakota Aeronautics Commission and the Federal Aviation Administration (FAA). The Commission strongly recommends that each community with a public-use airport consider implementing actions described in these Guidelines to preserve their aviation facility and to protect their community. Several states already require airport compatible land and height zoning for grant allocations.

How is the Airport Sponsor Committed to Compatible Land Use Planning?

Airports are an important element in North Dakota's multimodal transportation system, and they need to be protected through the administration of effective controls on surrounding land uses. The impact of aircraft noise and land use incompatibility are a serious problem facing North Dakota airports. Recent federal transportation language requires coordination between transportation modes as airport, highways and rail intersect in their functions. Solutions to those problems must be considered part of the airport planning and development process.

Congress requires an airport sponsor requesting aid under the Airport Improvement Program (AIP), as amended, to show the actions taken to restrict the use of land adjacent to, or in the immediate vicinity of the airport, to activities and purposes compatible with normal airport operations. In addition, the sponsor must specify how this has been accomplished by providing information on any zoning or laws enacted restricting the use of land adjacent to or in the vicinity of the airport.

The role of the airport sponsor is to interpret the activities and functions of the airport to the public and to the city or local controlling government body. It is the airport sponsor's responsibility to make sure that all applicable units of government understand its commitment and the assurances the airport makes when receiving monies for Federally or State funded projects. Each time an airport sponsor accepts Federal funding for an airport project, several commitments are made to the FAA, including

- The airport will remain open to the public for 20 years from the date of the grant
- The airport sponsor will prevent the growth or establishment of obstructions in the aerial approaches
- The airport sponsor will assure that the airport's terminal airspace is adequately cleared and protected by removing, lowering, relocating, marking, or lighting or otherwise mitigating existing airport hazards
- The airport sponsor will, to the extent reasonable, restrict (including the adoption of zoning laws) the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations.

Failure to fulfill these assurances results in loss of Federal funding and possible repayment of Federal funds that have been paid to the airport in the past. Airport sponsors in conjunction with other impacted entities (cities, towns, and counties within the airport environs) should consider appropriate land use controls prior to the development or the further development of land near their airport. Adequate safe guards should be incorporated to prevent incompatible land uses from occurring in proximity to the boundaries of the airport. Land use strategies discussed in these Guidelines fall into two general categories: preventive and corrective. Preventive measures are steps that can be followed to stop incompatible land use before it develops and becomes a problem.

for the airport. Corrective measures are actions that can be considered if uses which are incompatible with airport operations have already developed in the airport environs. These Guidelines describe and define areas around the airport that should be protected from incompatible land use and both preventive measures and corrective actions that can help assure that the utility of North Dakota's airport system will not be jeopardized by land use issues.

Why Is Land Use Incompatibility A Major Problem For Many Airports?

Noise and land use problems associated with airports have emerged over many years. When most airports were first built, they were located away from developed areas. Initially, most airport sites were surrounded by agricultural or undeveloped land. For many airports, however, this luxury of being unencroached by surrounding development did not last. Various types of development, both compatible and incompatible, were attracted to the airport environs. Development around airports is a natural by-product of our mobile society. Only when development restricts an airport's growth or its ability to operate is development in the airport environs a real problem. Federal criteria utilized by the North Dakota Aeronautics Commission for guidance in airport design has been getting more restrictive. Changes in 1987 and 1994 require land acquisition farther out from runway ends.

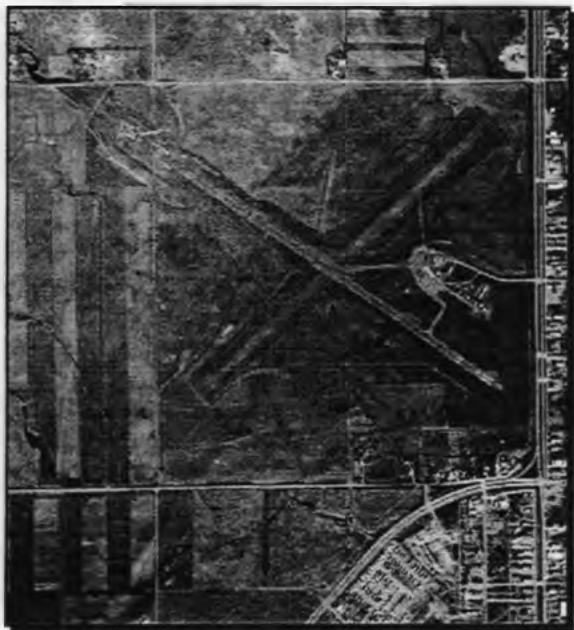
What Type Of Development Is Compatible With An Airport And Its Operations?

Development in the airport environs should not pose a safety hazard to pilots in the air or persons on the ground. Nor should development in the airport environs be noise sensitive.

Determining whether a given type of development or land use is compatible with a particular airport depends on things such as the location and size of the airport and the type and volume of aircraft using the facility. Most commercial-industrial uses are compatible. Motels, restaurants, warehouses, shipping agencies, aircraft related industries, as well as industries that benefit from access to an airport are usually compatible with an airport and its operations. Buildings and structures on and around an airport can not obstruct aerial approaches, interfere with aircraft radio communications, or affect a pilot's vision due to glare or bright lights. Motels, restaurants, and office buildings that are developed in the airport environs should be soundproofed to make them more compatible. Other uses compatible with airports are parks, conservatory areas, open spaces, forestry services, landscape services, game preserves, and golf courses.

Agriculture is another land use that is usually compatible with airport operations. While some types of animal husbandry are sensitive to aircraft noise, most agricultural uses are not adversely affected by airport operations. Agricultural land also permits the owner of property near the airport to make an efficient use of the land while providing an additional benefit to the community in terms of airport protection. Aerial spray activity based at many North Dakota airports may stretch the window of time that aviation flight occurs. Calm winds in the early morning and late evening can generate a 16 hour window for flights. The noise impact of aerial sprayers can be greater than other aviation operations since aerial sprayers operate at low altitudes.

How Land Use has Evolved as a Major Issue Facing North Dakota Airports



◀ In 1974, many areas around the Williston Airport (Sloulin Field) were relatively undeveloped.

By 1980, residential development was increasing in the airport environs. ▶



◀ By 1994, significant residential development had occurred in the areas around the Williston Airport. Further residential development is planned in proximity to the airport.



Many airports in North Dakota have municipal lagoons located on airport property. These lagoons can become bird hazards. Expansion of existing lagoons should occur away from airfield operations.

Residential housing is the use most incompatible with aircraft operations. As residential uses expand into areas around an airport, homeowners inevitably express concerns regarding safety and noise. Residential growth restricts the airport by occupying land needed for expansion and by removing the buffer between the airport and residential development. This buffer is important because it diminishes the impact of aircraft noise and lessens the possibility of an airplane crashing into the residential neighborhood. With careful planning there is no reason for encroachment on the airport by this type of incompatible land use. Residential neighborhoods, schools, churches, hospitals, and other similar noise sensitive land uses are the most susceptible to aircraft operations. It is not in the best interest of the homeowner nor the community to locate where they will be subject to noise impacts from aircraft takeoffs and landings.

The most critical locations with regard to the height of objects around an airport are beneath the airport approach surfaces. Tall objects in the approach corridors may pose risks even though they do not penetrate the defined safety surfaces. Tall objects around an airport can also adversely affect minimum instrument approach altitudes. The siting of multi-story buildings, powerlines and communications towers should be carefully considered in relation to the airport.

Following sections of these guidelines will provide more specific information on the exact areas around an airport that should be protected from incompatible types of development. Generally speaking, the following factors should be considered when development in the airport environs is proposed:

- Lights that shine upward around an airport are potentially hazardous since they can detract from a pilot's ability to identify an airport at night. A pilot may perceive such lights from adjacent land uses as part of the airport and/or runway lights.
- Reflective surfaces can also produce a blinding glare, distracting pilots. Other visual difficulties can result from smoke generated by nearby business, industry, or a field burning operations. Smoke can create severe visual difficulties when a pilot is either looking for an airport or preparing to takeoff or land. An extensive amount of smoke can drastically curtail airport operations. Reflective surfaces and smoke generating activities should be discouraged around airports.
- Land uses that generate electronic transmissions should not be permitted near airports. Such uses can interfere with aviation navigational signals and radio communications.
- Land uses such as water impoundments, garbage dumps, sanitary landfills, or sewage treatment plants often attract birds. Increased numbers of birds around airports escalate the possibility of collisions between birds and aircraft. This is especially important in central North Dakota which is located in the North American waterfowl migratory path and bird

strikes leads to seasonal consideration of airport utilization. FAA Order 5200.5, Guidance Concerning Sanitary Landfills On or Near Airports, states that sanitary landfills, because of their bird attractive qualities, are considered to be an incompatible land use if located within specified distances as cited by the FAA. As stated in FAA Order 5050.4A, Airport Environmental Handbook, the FAA advises against locating such facilities within 5,000 feet of all runways accommodating or planned to accommodate piston-type aircraft, and within 10,000 feet of all runways accommodating or planned to accommodate turbine (jet) powered aircraft.

- Land uses which promote the assembly of large groups should also be discouraged from locating in proximity to an airport.
- All land uses and activities which are generally considered to be noise sensitive (homes, schools, churches, hospitals, day-care centers, nursing homes, etc) should also be restricted from locating in the airport environs.

What Areas Should I Protect Around My Airport?

Protection of North Dakota's airports from incompatible land use encroachment is important for economic reasons. Control of land use and the height of objects around airports is also mandated by grant assurances that airport sponsor sign when they accept Federal funding from the FAA. While some types of land use and certain activities are usually compatible in the airport environs, others are not. It is important for each airport sponsor to know what areas they should protect around their airport and also why these areas should be protected.

There are two issues that affect land use planning in the airport environs: safety and noise. Both of these issues must be considered when planning for airport land use compatibility. A primary concern in achieving airport land use compatibility involves safety at and around an airport. All modes of transportation, inherently, pose some safety risk. It is important to identify those safety risks associated with air transportation in order to minimize the consequences of accident potentials. Specific areas near airports are exposed to various levels of accident potential. Identifying and protecting these specific areas around an airport through effective land use controls is essential to ensuring the safe and efficient operation of an airport and in protecting the public from the impacts of a potential aircraft accident. Areas around the airport also need to be free of development that could pose a hazard to pilots operating aircraft in the airport environs. Safe access to an airport can be achieved through municipal transportation plans that coordinate airport and community growth.

What Areas Does The FAA and the Aeronautics Commission Recommend An Airport Should Protect?

Specific areas to be secured at and around an airport are defined by two major Federal Aviation Administration criteria: Federal Aviation Regulation (FAR) Part 77 - Objects Affecting Navigable Airspace and Safety Zones, as defined by FAA airport design standards. The FAA cannot stop

construction of an airport obstacle. However, some efforts by the FAA in response to the Federal Communications Commission (FCC) licensing of towers can be helpful to deter tall tower establishment near airports. FAR Part 77 establishes standards for determining which structures pose potential obstructions from a height perspective to air navigation. It does this through defining specific airspace areas around an airport that cannot contain any protruding objects into the airspace. These airspace areas are referred to as "Imaginary Surfaces." Objects affected include existing or proposed objects of natural growth; terrain, or permanent or temporary construction, including equipment, which is permanent or temporary in character. The imaginary surfaces outlined in FAR Part 77 include:

- Primary Surface
- Transitional Surface
- Horizontal Surface
- Conical Surface
- Approach Surface

While FAR Part 77 surfaces are designed to protect specific airspace areas, Safety Zones are designed to protect specific ground areas. In general, the term "surface" refers to an airspace area; the term "zone" refers to the land underlying the airspace area. Safety Zones are required by the FAA to be free of all objects except objects whose locations are fixed by function. The Runway Protection Zone (RPZ) is the critical safety zone to protect when planning for compatible off-airport land use. Each active runway end has an RPZ, actual dimensions for these zones are described subsequently in this section. Most aircraft accidents occur during the landing or takeoff portion of flight. It is, therefore, important to protect the approach and departure ends of each runway. The RPZ is designed to protect the approach and departure ends of a runway.

Dimensions of FAR Part 77 surfaces and runway protection zones (RPZ) vary depending on the type of runway approach and type of aircraft using the runway. There are three types of runway approaches: visual, nonprecision, and precision. These approaches are defined in the following paragraphs.

A *visual* approach runway is one with either no instrument approach capabilities or where the existing or planned instrument approach is a circling, rather than a straight-in approach. A circling approach requires the pilot to have visual contact with the runway while aligning the aircraft with the runway for landing.

A *nonprecision* instrument runway has one or more devices capable of providing horizontal guidance to aircraft, aligning them with the runway for straight-in approaches.

A *precision* instrument runway has approaches using an Instrument Landing System (ILS), a Precision Approach Radar (PAR), or a Microwave Landing System (MLS). These approach systems provide both vertical and horizontal alignment of aircraft to a particular runway. Airports with

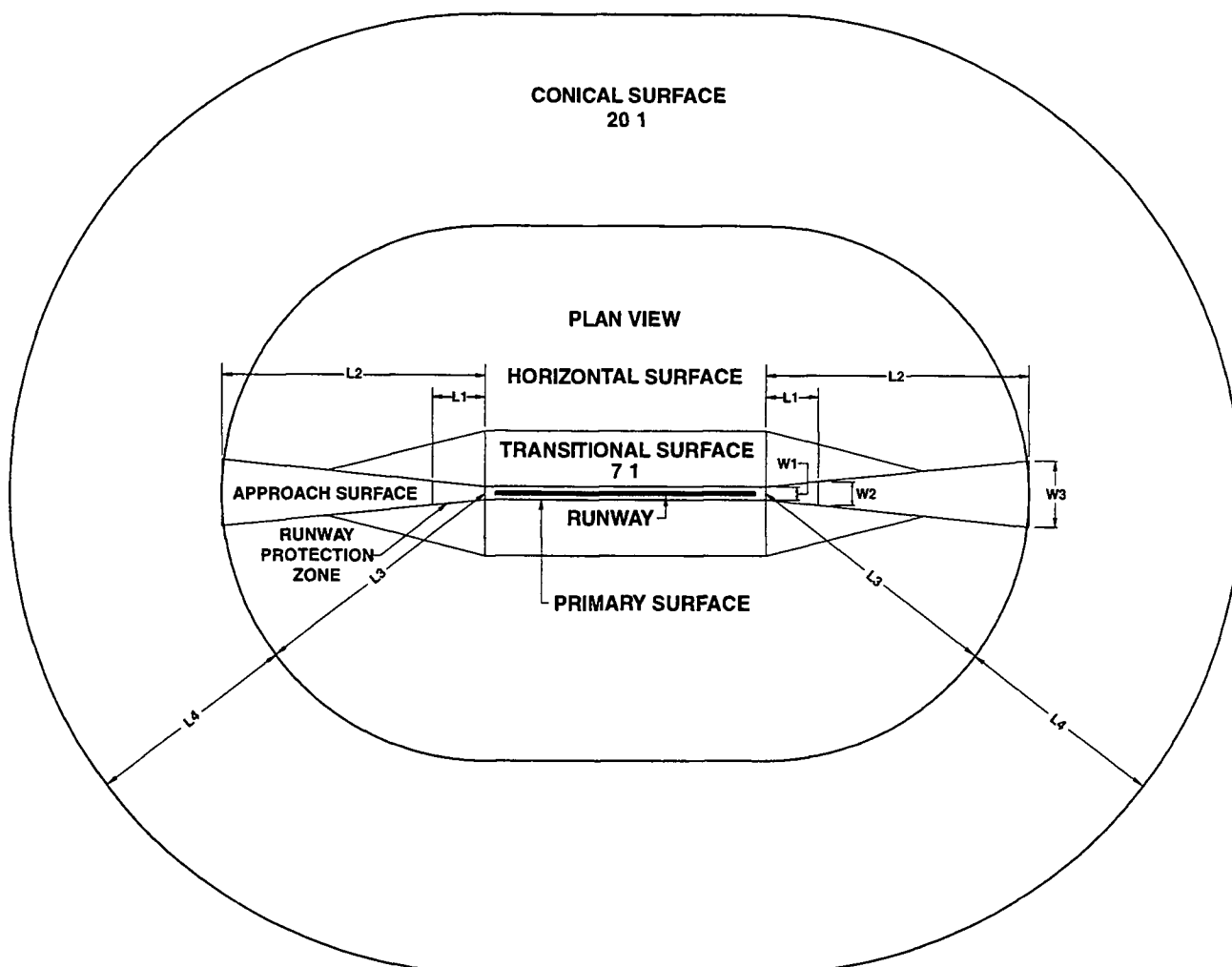
scheduled commercial passenger traffic and heavily-used general aviation airports normally have existing or planned precision approaches

Definitions for the FAR Part 77 surfaces and the FAA safety zones are as follows.

FAR PART 77 SURFACES

Primary Surface: (Exhibit 17-1-W1) The primary surface is longitudinally centered on a runway. When the runway has a specially prepared hard surface, the primary surface extends 200 feet beyond each end of that runway. When the runway has no specially prepared hard surface, or planned hard surface, the primary surface terminates at each end of the runway. The width of a primary surface ranges from 250 feet to 1,000 feet depending on the existing or planned approach and runway type (i.e., visual, nonprecision, or precision). Exhibit 17-1 depicts the dimensional requirements of the primary surface.

Transitional Surface: (see Exhibit 17-2) Transitional surfaces extend outward and upward at right angles to the runway centerline and the runway centerline extended at a slope of seven (7) feet horizontally for each foot vertically (7:1) from the sides of the primary and approach surfaces. The transitional surfaces extend to where they intercept the horizontal surface at a height of 150 feet above the runway elevation. For precision approach surfaces, which project through and beyond the limits of the conical surface, the transitional surface also extends a distance of 5,000 feet measured horizontally from the edge of the approach surface and at right angles to the runway centerline. Exhibit 17-1 depicts the dimensional requirements of the transitional surface.



FAR PART 77 "IMAGINARY SURFACES" DIMENSION ¹ REQUIREMENTS										
Runway Type	Runway End		Conical Surface (L4)	Horizontal Surface (L3)	Approach Surface			Approach Slope	Primary Surface Width	Transitional Surface
	Approach	Other			Length (L2)	Inner Width (W1)	Outer Width (W3)			
Small Airplanes ²	V	V	4 000	5 000	5 000	250	1 250	20 1	250	7 1
		NP	4 000	5 000	5 000	500	1 250	20 1	500	7 1
		NP 3/4	4 000	5 000	5 000	1 000	1 250	20 1	500	7 1
		P	4 000	10 000	5 000	1 000	1 250	20 1	1 000	7 1
	NP	V	4 000	5 000	5 000	500	2 000	20 1	500	7 1
		NP	4 000	5 000	5 000	500	2 000	20 1	500	7 1
		NP 3/4	4 000	5 000	5 000	1 000	2 000	20 1	500	7 1
		P	4 000	10 000	5 000	1 000	2 000	20 1	1 000	7 1
Large Airplanes ³	V	V	4 000	5 000	5 000	500	1 500	20 1	500	7 1
		NP	4 000	10 000	5 000	500	1 500	20 1	500	7 1
		NP 3/4	4 000	10 000	5 000	1 000	1 500	20 1	500	7 1
		P	4 000	10 000	5 000	1 000	1 500	20 1	1 000	7 1
	NP	V	4 000	10 000	10 000	500	3 500	34 1	500	7 1
		NP	4 000	10 000	10 000	500	3 500	34 1	500	7 1
		NP 3/4	4 000	10 000	10 000	1 000	3 500	34 1	500	7 1
		P	4 000	10 000	10 000	1 000	3 500	34 1	1 000	7 1
Large or Only Small Airplanes	NP 3/4	V	4 000	10 000	10 000	1 000	4 000	34 1	500	7 1
		NP	4 000	10 000	10 000	1 000	4 000	34 1	500	7 1
		NP 3/4	4 000	10 000	10 000	1 000	4 000	34 1	500	7 1
		P	4 000	10 000	10 000	1 000	4 000	34 1	1 000	7 1
	P	V	4 000	10 000	10 000/40 000	1 000	16 000	50 1/40 1	1 000	7 1
		NP	4 000	10 000	10 000/40 000	1 000	16 000	50 1/40 1	1 000	7 1
		NP 3/4	4 000	10 000	10 000/40 000	1 000	16 000	50 1/40 1	1 000	7 1
		P	4 000	10 000	10 000/40 000	1 000	16 000	50 1/40 1	1 000	7 1

1 - In Feet

2 - Less than 12 500 lbs maximum certified take-off weight

3 - Greater than 12 500 lbs maximum certified take-off weight

Note L1 is the length of the RPZ and W2 is the outer width of the RPZ as defined by approach visibility minimums

Source Federal Aviation Administration



NORTH DAKOTA
LAND USE CAPABILITY
GUIDELINES

**FAR PART 77 SURFACES
AND DIMENSION REQUIREMENTS**

**EXHIBIT
17-1**

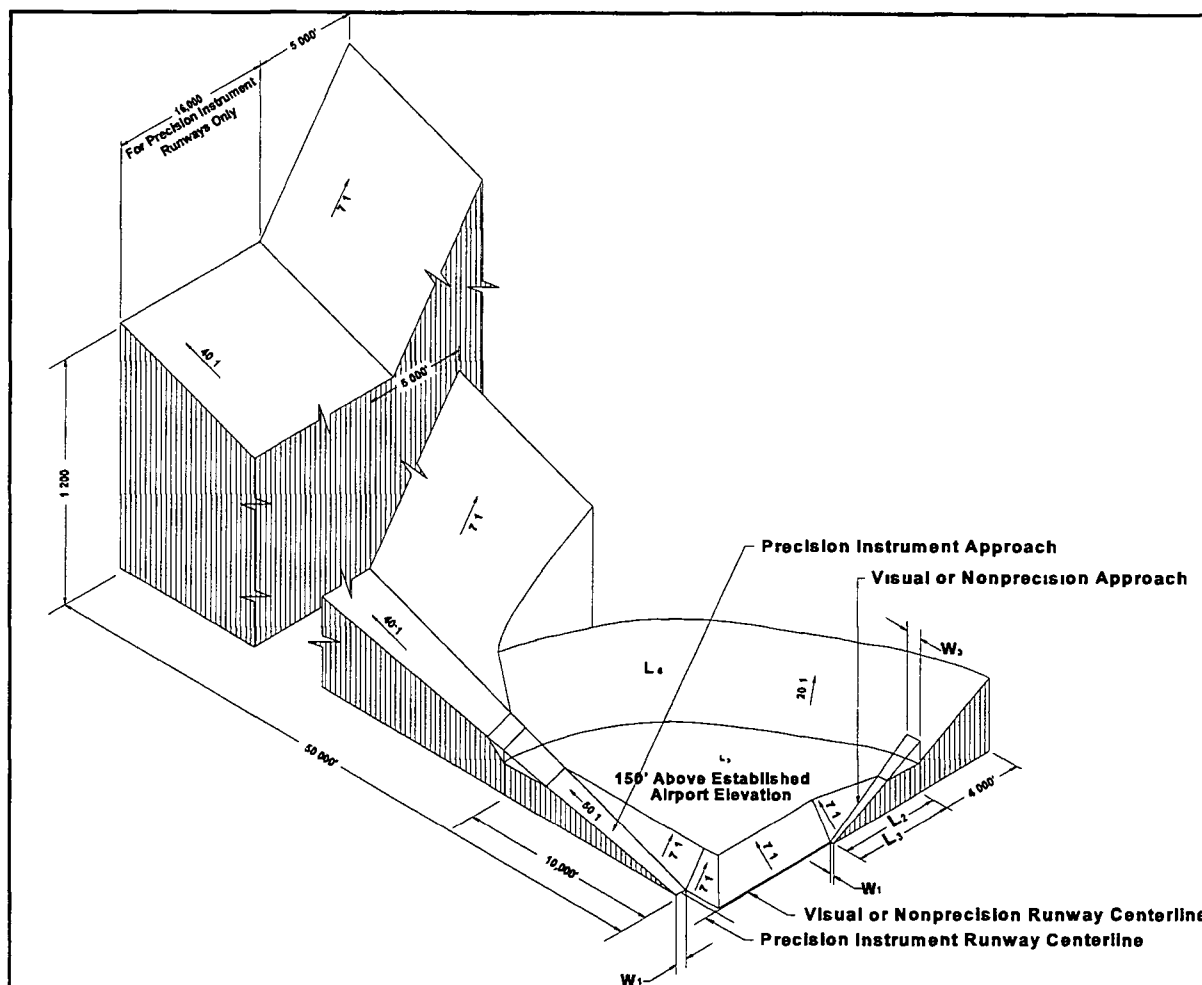


Exhibit 17-2 Part 77 Surfaces

Horizontal Surface: (Exhibit 17-1-L3) The horizontal surface is a horizontal plane located 150 feet above the established airport elevation, covering an area from the transitional surface to the conical surface. The perimeter is constructed by swinging arcs from the center of each end of the primary surface and connecting the adjacent arcs by lines tangent to those areas. The radius of each arc is either 5,000 feet for all runway ends designated as utility or visual, or 10,000 feet for all other runway ends. Exhibit 17-1 depicts the dimensional requirements of the horizontal surface.

Conical Surface: (Exhibit 17-1-L4) The conical surface is a surface extending upward and outward from the periphery of the horizontal surface at a slope of one foot for every 20 feet (20:1) for a horizontal distance of 4,000 feet.

Approach Surface: (Exhibit 17-1-L2, W1, and W3) Longitudinally centered on the extended runway centerline, the approach surface extends outward and upward from the end of the primary

surface An approach surface is applied to each end of each runway based upon the type of approach The approach slope of a runway is either 20 1, 34 1, or 50 1, depending on the sophistication of the approach The length of the approach surface varies, ranging from 5,000 feet to 50,000 feet. The inner edge of the approach surface is the same width as the primary surface and it expands uniformly to a width ranging from 1,250 feet to 16,000 feet depending on the type of runway and approach Exhibit 17-1 depicts the dimensional requirements of the approach surface

Exhibit 17-1 graphically illustrates the FAR Part 77 "Imaginary Surfaces" in both plan view and Exhibit 17-2 provides profile view representations, the dimensional requirements for each of the FAR Part 77 surfaces are also presented

Although the FAA can determine which structures are obstructions to air navigation, the FAA is not authorized to regulate tall structures The FAA can only study structures that it is notified about Airport owners need to help identify possible obstructions Under FAR Part 77, an aeronautical study can be undertaken by FAA to determine whether the structure in question would be a hazard to air navigation However, there is no specific authorization in any statute that permits FAA to limit structure heights or determine which structures should be lighted or marked In fact, in every aeronautical study determination, the FAA acknowledges that state or local authorities have control over the appropriate use of property beneath an airport's airspace

The **North Dakota Century Code** defines the sovereignty in space to rest in the State, except where granted to and assumed by the United States pursuant to constitutional grant from the people of North Dakota Flight of aircraft over the lands and waters of North Dakota is lawful, unless it interferes with the existing land use

The **North Dakota Century Code** permits jurisdictions to adopt zoning regulations for "airport hazard areas". Airport hazard areas are defined by the Century Code as, "any structure or tree or use of land which obstructs the airspace required for the flight of aircraft in landing or taking off at any airports or is otherwise hazardous to such landing or taking off of aircraft" These areas include the specific areas defined by FAR Part 77 and explained in this section.

FAA SAFETY ZONES

Safety Zones are defined by FAA airport design criteria standards to allow for the safe and efficient operation of an airport These Safety Zones include the Runway Protection Zone (RPZ), the Runway Safety Area (RSA), and the Runway Object Free Area (ROFA). Each of these zones is discussed in the following sections

Runway Protection Zone: Runway Protection Zones (RPZs), formerly clear zones, were originally established to define land areas underneath aircraft approach paths in which control by the airport operator was highly desirable to prevent the creation of airport hazards or the development of incompatible land use. The RPZ functions to protect people and property on the ground.

A Runway Protection Zone (RPZ) is an area that begins at a point 200 feet beyond the end of a paved runway or at the end of a runway for turf runways. The length of the RPZ extends 1,000, 1,700, or 2,500 feet depending on the category of runway and type of (visual, nonprecision, or precision) approach. The inner width of a RPZ is located closest to the end of the runway. Opposite this end is the outer width, which is the wider end. The inner width of a RPZ varies from 250 feet to 1,000 feet. The outer width of a RPZ varies from 450 feet to 1,750 feet. As with the length of the RPZ, the inner and outer widths of a RPZ are dependent on the runway category and approach type. **Exhibit 17-3** depicts a schematic of the RPZ and presents its required dimensions by runway category and runway approach type.

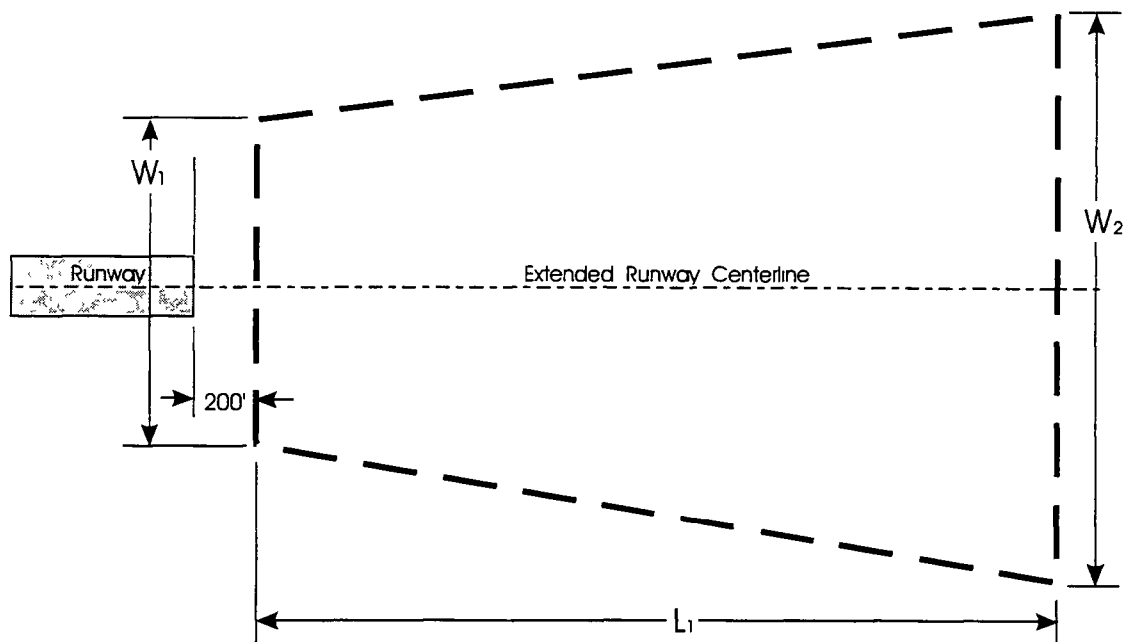
Runway Safety Area: The RSA is a critical two-dimensional safety area surrounding the runway. RSAs should be cleared and graded and free of potentially hazardous surface variations. The RSAs should be properly drained and capable of supporting snow removal, aircraft rescue and firefighting (ARFF) equipment, or an aircraft (without causing damage to the aircraft). The size of the RSA is dependent upon the runway design category and approach type (visual, nonprecision, or precision). Taxiways also have similar safety area requirements. These areas should not be cultivated since a turf surface is needed to support aircraft and emergency vehicles.

Runway Object Free Area: The runway OFA is a two-dimensional ground area surrounding the runway. FAA standards prohibit parked aircraft and objects from locating within the OFA. The runway OFA extends beyond the runway end at lengths that vary from 300 feet to 1,000 feet, depending on the runway design category and the approach type. There are also taxiway OFAs.

These safety zones (RSAs and OFAs) almost always are contained within airport property. The RPZs, however, can extend beyond airport property. Therefore, from an off-airport land use compatibility perspective, the critical safety zone for land use compatibility planning is the RPZ.

Why Is It Important To Monitor Development in the FAA Part 77 Surfaces and Safety Zones?

Complex safety issues are major factors which affect pilots, airports, and surrounding airport land uses. Part 77 surfaces and FAA safety zones provide specific standards for identifying which areas around an airport should be protected. There are several factors that determine, from a safety perspective, which areas around an airport need to be protected. These factors include the phase of operation during which aircraft accidents most often occur, the cause of these accidents, and the location of these accidents relative to the airport. Data were collected from the National Transportation Safety Board (NTSB) regarding these factors.



RUNWAY PROTECTION ZONE DIMENSION REQUIREMENTS					
Approach Visibility Minimums	Facilities Expected To serve	Dimensions			
		Length (L_1) feet	Inner Width (W_1) feet	Outer Width (W_2) feet	Area (acres)
Visual or No lower than 1-mile	Small Aircraft Exclusively	1,000	250	450	8 035
	Aircraft Approach Categories A & B	1,000	500	700	13 770
	Aircraft Approach Categories C & D	1,700	500	1,010	29 465
Between 3/4 mile and 1 mile	All Aircraft	1,700	1,000	1,510	48 978
Less Than 3/4 mile	All Aircraft	2,500	1,000	1,750	78 914

1- In Feet

Source: Advisory Circular 150/5300-13, CHG 4, "Design Standards," Safety Zones



NORTH DAKOTA
LAND USE CAPABILITY
GUIDELINES

RPZ SCHEMATIC

EXHIBIT
17-3

The NTSB maintains extensive data on air carrier and general aviation accidents and their causes. The most current data available are from 1990. **Table 17-1** shows the number of commercial and general aviation aircraft accidents that occurred during each portion of flight in 1990. From an off-airport land use planning perspective, the characteristics of accidents near airports are of the greatest concern. The statistics presented in Table 17-1 show that, in 1990, 60 percent (28.0 and 32.0) of all commercial aircraft accidents and 64.1 percent (40.0 and 24.1) of all general aviation aircraft accidents occurred during the landing or takeoff portions of flight. The conclusion that most of the risk involved with air transportation is associated with the takeoff and landing portions of flight is supported by these statistics. The critical areas at an airport that need to be secured and protected from a land use compatibility standpoint include the approach paths and departure paths to the runways. It is best to maintain obstruction-free airport airspace and a reasonable amount of vacant land at both ends of each runway.

Table 17-1				
NUMBER OF ACCIDENTS BY PHASE OF AIRCRAFT OPERATION IN 1990				
Phase of Operation	Number of Accidents in 1990			
	Commercial		General Aviation	
Approach/Descent/ Landing	7	28.0%	897	40.0%
Takeoff/Climb	8	32.0%	540	24.1%
Cruise	4	16.0%	369	16.5%
Taxi	4	16.0%	61	2.7%
Static	2	8.0%	23	1.2%
Maneuvering	0	0.0%	303	13.5%
Other/Not Reported	0	0.0%	47	2.0%
	25	100.0%	2240	100.0%
Source: National Transportation Safety Board				

In addition to knowing the phase of operation during which aircraft accidents are most likely to occur, the most frequent causes of aircraft accidents should be identified. **Table 17-2** identifies the causes of the aircraft accidents that occurred in 1990. In some cases, more than one factor contributed to an accident. Data presented in Table 17-2 indicate that commercial aviation aircraft accidents are most often attributed to pilot error. General aviation aircraft accidents, however, are often related to the terrain and obstructions surrounding an airport. In 1990, terrain ranked as the fourth leading factor associated with general aviation aircraft accidents. Conflicts with objects, such as trees and wires, ranked as the fifth leading factor associated with general aviation accidents. A pilot's preoccupation with the terrain and structures immediately surrounding an airport can contribute to accidents. Structures in the approach path of a runway also contribute to aircraft accidents. Clearly, for the safety of both air travelers and the general public, it is best to maintain obstruction-free airspace around an airport.

Table 17-2		
CAUSE OR FACTORS ASSOCIATED WITH AIRCRAFT ACCIDENTS IN 1990		
Cause/Factor	<u>Number of Related Accidents</u>	
	Commercial	General Aviation
Pilot	10	1800
Terrain	0	454
Weather	7	485
Propulsion System/Controls	2	486
Object (tree, wires, etc)	1	187
Other Person (not aboard)	7	176
Light Conditions	1	127
Landing Gear	1	68
Systems/Equipment/Instruments	2	83
Airframe	0	37
Flight Control System	0	43
Airport/Airways Facilities, NAVAIDs	2	14
Other Person (Aboard)	4	16
Source National Transportation Safety Board		

Perhaps the most critical factor in determining which areas around an airport should be protected is knowing where aircraft accidents occur. Data compiled by the NTSB indicate that the largest number of aircraft accidents occur on airport property. Specific data regarding the location of general aviation aircraft accidents, relative to the airports' location, are also available from the NTSB. With regard to general aviation aircraft accidents, data from the NTSB indicate that roughly 45 percent of all aircraft accidents occurred on airport property, while 15 percent occurred within one mile of the airport, and 40 percent occurred beyond one mile of the airport. Considering the general aviation aircraft accidents that occurred within one mile of the airport, 33 percent of these occurred within one-quarter mile of the airport, 29 percent occurred in the airport traffic pattern; the remaining 38 percent occurred within one-quarter mile and one mile of the airport. These data suggest that land use under the airport traffic pattern and within one-quarter mile of an airport should be considered, in addition to the land use off the approach ends to the runways, when addressing

compatible airport land use. A typical airport traffic pattern is depicted in **Exhibit 17-4**. All areas within an airport's traffic pattern should be considered for land use planning. If an airport plans for compatible land use in its Part 77 and FAA Safety Zones, areas that fall under a typical traffic pattern will also be protected.

Exhibit 17-5 identifies land uses which are generally compatible or incompatible within airport safety zones and Part 77 surfaces. There are specific types of development that are usually compatible with an airport. In general, these include agriculture, commercial, and industrial land uses. Other types of development, such as residential and places of public assembly are typically considered to be incompatible with an airport.

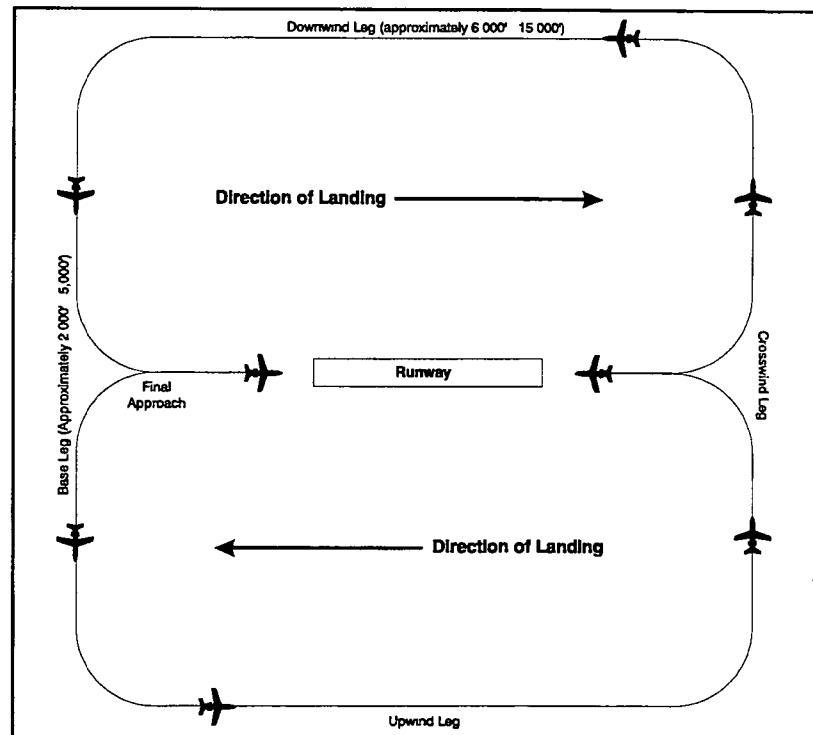


Exhibit 17-4 Typical Airport Traffic Pattern

Should I Consider Other Factors In Developing A Comprehensive Land Use Compatibility Strategy For My Airport?

To achieve airport-environs compatibility, minimizing aircraft noise impacts on areas surrounding the airport is also important. Noise, very simply, is unwanted sound. Noise is defined in Webster's dictionary as "any sound that is undesired or interferes with one's hearing of something." Aircraft sounds are perceived differently by different individuals. However, concerns about aircraft noise are often reflections of the degree to which aircraft noise intrudes on existing background noise. In general, where ambient noise is low, aircraft noise is perceived as a problem. Each community must decide whether noise-related land use zoning around their airport should be limited to substantially noise-impacted areas, or if they see a need to zone for areas impacted by moderate noise levels.

Historically, airports were constructed on the outskirts of communities. Aircraft noise was not a problem since the airport was located at a significant distance from developed areas. Through the years, development often expanded toward the airport. As communities have expanded toward an airport, land uses which are sensitive to noise have developed closer to the airport. Aircraft noise is determined by the type of aircraft operating at an airport, the volume of aircraft operations

LAND USES	FAR Part 77 "Imaginary Surfaces"					FAA Safety Zones
	Primary Surface	Transitional Surface	Horizontal Surface	Conical Surface	Approach Surface	Runway Protection Zone
RESIDENTIAL						
Residential - other than mobile homes, transient lodgings	NC	NC	C	C	NC	NC
Mobile home parks/mobile homes	NC	NC	C	C	NC	NC
Transient lodgings	NC	NC	C	C	NC	NC
PUBLIC USE						
Places of public assembly (nursing homes, schools, hospitals, churches, auditoriums)	NC	NC	C	C	NC	NC
Governmental Buildings	NC	NC	C	C	NC	NC
Transportation (parking, highways, bus and rail terminals, aviation terminals)	NC	C	C	C	C	*
COMMERCIAL						
Offices - business and professional	NC	C	C	C	NC	NC
Wholesale/retail - materials, hardware and farm equipment	NC	C	C	C	NC	NC
Retail trade - general	NC	C	C	C	NC	NC
Utilities	NC	C	C	C	C	*
Communications (telephone exchange stations, relay towers, transmission stations)	NC	*	C	C	NC	NC
MANUFACTURING						
Manufacturing-general	NC	*	C	C	NC	NC
Agriculture (except livestock)	NC	C	C	C	C	*
Livestock farming and breeding	NC	C	C	C	C	NC
Resource extraction (mining)	NC	NC	C	C	NC	NC
Forestry	NC	C	C	C	NC	NC
RECREATIONAL						
Outdoor sports arenas, amphitheaters	NC	NC	C	C	NC	NC
Nature exhibits, zoos	NC	NC	C	C	NC	NC
Amusement parks, resorts, camps	NC	NC	C	C	NC	NC
Golf courses	NC	C	C	C	NC	NC
Parks	NC	C	C	C	C	C

KEY

- C - Generally compatible land use
- NC - Incompatible land use
- * - Not clearly compatible or incompatible, requires specific study

CRITERIA FOR COMPATIBILITY

- | | | |
|---|--|---|
| 1 Does not exceed height standards | 4 Does not cause a distracting light/glare | 6 Does not cause an electrical interference |
| 2 Does not attract large concentrations of people | 5 Does not cause a source of smoke | 7 Does meet compatible DNL sound levels |
| 3 Does not create a bird attractant | | |



NORTH DAKOTA LAND USE COMPATIBILITY GUIDELINES

COMPATIBLE LAND USES PER FAR PART 77 SURFACES AND FAA SAFETY ZONES

EXHIBIT
17-5

experienced at an airport, and the time of day (or night) the operations are performed. Inappropriate development approved near airports increases the perceived impact of aircraft noise.

Noise impact areas for an airport are identified by noise contours. The basic methodology employed to define aircraft noise levels involves the use of a mathematical model the Federal Aviation Administration's (FAA) Integrated Noise Model (INM). The INM contains a database which relates slant range distance and engine thrust to noise levels to each specific type of aircraft. On an irregular grid around the airport, the Model computes the associated noise exposure level for the specific aircraft and engine thrust used at that point along the flight track. The individual noise exposure levels are summed for each grid location. Equal noise levels are then indicated by a series of contour lines superimposed on a map of the airport and its environs. Although lines on a map tend to be viewed as definitive, it should be emphasized that the Model is only a planning tool. By developing a set of noise contours for an airport, a planner can identify areas impacted by aircraft noise, and plan accordingly. Airport-specific noise contours developed by the INM can best be obtained through an airport consultant.

The Federal Aviation Administration (FAA) is the federal agency involved with providing guidance for developing local plans and zoning ordinances for areas affected by aircraft noise. Federal Aviation Regulations (FARs) pertaining to aircraft noise include FAR Part 150.

FAR Part 150 contains many regulations in the "Aviation Safety and Noise Abatement Act, 1979." Under FAR Part 150, local jurisdictions are encouraged to prepare and submit to FAA a Noise Exposure Map (NEM) for the airports environs and a Noise Compatibility Plan (NCP), if desired. This voluntary program applies to all publicly-owned, public-use airports that are included in the National Plan of Integrated Airport Systems (NPIAS). The NPIAS identifies the type and estimated costs of airport development eligible for FAA Airport Improvement Program (AIP) funds. The NPIAS is considered the planning document while the AIP is the implementing program. The FAR Part 150 regulation does not apply to privately-owned airports, heliports, or military facilities. Further, FAR Part 150 Noise Studies are generally only conducted for commercial service airports on the most active aviation airports that accommodate high volumes of activity or a substandard number of business jets.

Noise is measured in decibels (dB). Aircraft sound levels are measured using the A-weighted decibel scale (dBA). FAR Part 150 approves the decibel (dBA) unit as the universal noise measurement tool. The A-weighted decibel unit most closely approximates the manner in which the human ear responds to sound. **Exhibit 17-6** depicts common sounds and their associated noise levels; **Table 17-3** presents estimated noise levels associated with various aircraft types at maximum gross takeoff weight.

TABLE 17-3

**North Dakota Aeronautics Commission
Land Use Compatibility Guidelines**

**ESTIMATED PART 36
A-WEIGHTED SOUND LEVELS**

Manufacturer	Airplane	Estimated DBA
Boeing	B-747-200	99
Boeing	B-727-200	88
Boeing	B-737-200	87
McDonnell Douglas	DC 9-30	85
Learjet	23	84
Sabreliner	Sabre 60	84
Gulfstream	G-II	84
Boeing	B-767-300	80
Learjet	24	80
McDonnell Douglas	MD-80	78
Fokker	F-27-200	78
Dassault Brequet	Falcon 20	77
Airbus	A-300B1	76
Boeing	B-757-200	74
Cessna	207	74
Learjet	Learjet 24E	73
Fokker	Fokker 100	72
Cessna	210	71
Learjet	Learjet 35 A	71
Beech	B36TC Bonanza	71
Embraer	EMB 110-P2	71
Cessna	Citation III	70
Piper	PA-42 Cheyenne	70
Dehavilland	DHC-8	69
Fairchild	SA 226-AC Metro III	69
Beech	Super King Air 200	68
Learjet	Learjet 55	67
Gulfstream	G-IV	66
Dornier	D-228	66
Beech	65 Queen Air	65
Saab Fairchild	SF 340	65
Mooney	M 20C	65
BAe	Jetstream 31	63
Piper	PA-44-180	62
Gulfstream	GA-5A	60
Beech	A-23	58
Piper	PA-30 Twin Commache	56

Source FAA AC 36-3F, noise level estimates are provided in FAR Part 36 (estimates reflect noise levels at 6,500 meters from start of takeoff roll)

Many studies have been done to measure how much noise is generated by aircraft. Although several noise measures have been developed, the Environmental Protection Agency (EPA) and the FAA use a method called the day-night average sound level (DNL) noise contour method as the primary measure for defining noise around an airport. DNL is defined as the average A-weighted sound level, measured in decibels, for a 24-hour period. This level is obtained after a 10-decibel penalty is applied to noise events occurring between the night-time hours of 10 00 p.m. to 7 00 a.m., local time. The 10-decibel penalty applied to noise events occurring at night represents the differences in perception of sound levels between day and night. DNL is a summation metric which allows more objective analysis; it describes noise exposure comprehensively over a large area.

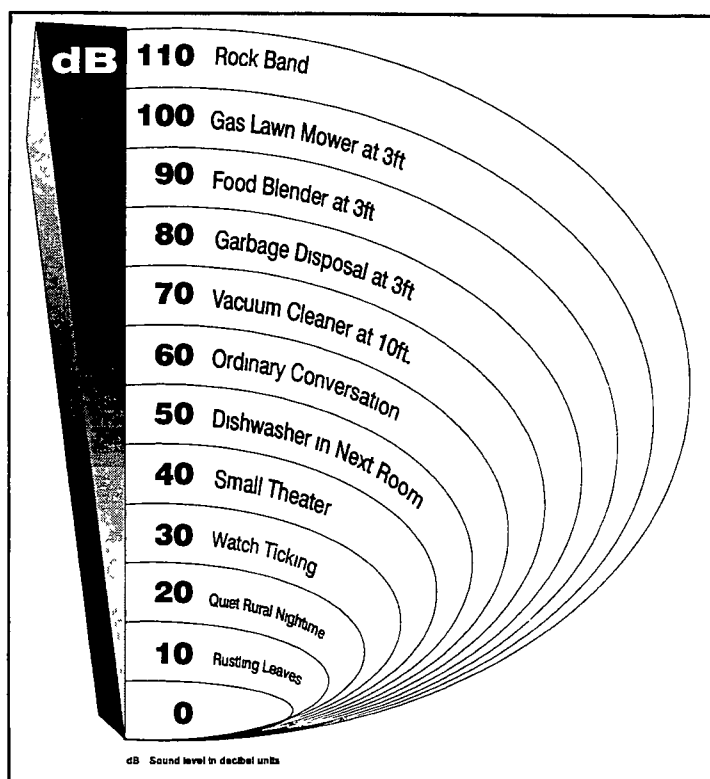


Exhibit 17-6 Common Sounds and Their Noise Levels

After DNL noise contours are developed for an airport area, three basic noise impact areas can be identified. These major impact areas, referred to as noise corridor zones, can be defined as a "severe" noise impact area, a "substantial" noise impact area, or a "moderate" noise impact area. The severe noise impact area includes "those areas contained within the 70 DNL contour and above." The substantial noise impact category is defined by the areas of land impacted by the 65 DNL to the 70 DNL contour. Areas impacted by the 55 DNL up to the 65 DNL contour are within the moderate noise impact category. Areas exposed to 55 DNL or less are not considered to be seriously impacted from a noise perspective.

FAA Part 150 describes acceptable types of land use for each DNL sound level. It is desirable that areas impacted by the 70 DNL contour or greater be acquired by the airport owner. Typically this level of noise impact beyond airport property is associated with large, high activity airports. For airports with low activity, noise contours of 70 DNL and above are usually contained within airport property. Often, the 65 DNL contour extends off airport property. Land uses that should not be located within areas exposed to 65 DNL and above include all residential development. When public institutions such as schools, hospitals, and churches are constructed within noise contours of 65 DNL or higher, measures should be taken to achieve reduced noise levels. Most land uses are compatible in areas impacted by noise levels less than 65 DNL. **Exhibit 17-7** depicts FAA accepted land uses for each DNL sound level.

LAND USES

YEARLY DAY-NIGHT AVERAGE
SOUND LEVEL (DNL) IN DECIBELS

RESIDENTIAL	< - 65	65 - 70	70 - 75	75-80	80+
Residential, other than mobile homes, transient lodgings	Y	N ¹	N ¹	N	N
Mobile home parks / Mobile homes	Y	N	N	N	N
Transient lodgings (motels, hotels)	Y	N ¹	N ¹	N	N
PUBLIC USE					
Schools	Y	N ¹	N ¹	N	N
Churches, auditoriums, concert halls, hospitals, nursing homes	Y	25	30	N	N
Governmental services	Y	Y	25	30	N
Transportation/Parking	Y	Y	Y ²	Y ³	Y ⁴
COMMERCIAL					
Offices-business and professional	Y	Y	25	30	N
Wholesale/retail-materials, hardware and farm equipment	Y	Y	Y ²	Y ³	Y ⁴
Retail trade-general	Y	Y	25	30	N
Utilities	Y	Y	Y ²	Y ³	Y ⁴
Communications	Y	Y	25	30	N
MANUFACTURING					
Manufacturing-general	Y	Y	Y ²	Y ³	Y ⁴
Photographic and optical	Y	Y	25	30	N
Agriculture (except livestock) and forestry	Y	Y ⁶	Y ⁷	Y ⁸	Y ⁸
Livestock farming and breeding	Y	Y ⁶	Y ⁷	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y
RECREATIONAL					
Outdoor sports arenas/spectator sports	Y	Y ⁵	Y ⁵	N	N
Outdoor music shells, amphitheaters	Y	N	N	N	N
Nature exhibits and zoos	Y	N	N	N	N
Amusement parks, resorts, camps	Y	Y	Y	N	N
Golf courses, riding stables, water recreation	Y	Y	25	30	N

The designations contained in this table do not constitute a Federal determination that any use of land covered by the local program is acceptable under Federal, State, or local law. The responsibility for determining the acceptable and permissible land uses and relationship between specific properties and specific noise contours rests with the local authorities. FAA determinations under Part 150 are not intended to substitute federally determined land uses for those determined to be appropriate by local authorities in response to locally determined needs and values in achieving noise compatible land uses. SEE NEXT PAGE FOR NOTES AND A KEY TO THE TABLE



NORTH DAKOTA
LAND USE COMPATIBILITY
GUIDELINES

**FAA COMPATIBLE LAND USE
PER DNL SOUND LEVELS**

**EXHIBIT
17-7**

KEY

Y (Yes)	Land use and related structures compatible without restrictions
N (No)	Land use and related structures are not compatible and should be prohibited
NLR	Noise Level Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure
DNL	Average Day-Night Sound Level
25, 30, 35	Land use and related structures generally compatible; measures to achieve NLR of 25, 30, 35 dB must be incorporated into design and construction of structure

NOTES

1. Where the community determines that residential or school uses must be allowed, measures to achieve an outdoor to indoor Noise Level Reduction (NLR) of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal residential construction can be expected to provide a NLR of 20 dB, thus, the reduction requirements are often stated as 5, 10, or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year round. The use of NLR criteria will not, however, eliminate outdoor noise problems.
2. Measures to achieve NLR of 25 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas, or where the normal noise level is low.
3. Measures to achieve NLR of 30 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas, or where the normal noise level is low.
4. Measures to achieve NLR of 35 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas, or where the normal noise level is low.
5. Land use compatible provided special sound reinforcement systems are installed.
6. Residential buildings require an NLR of 25 dB.
7. Residential buildings require an NLR of 30 dB.
8. Residential buildings not permitted.

Source: FAR Part 150, Appendix A, Table 1



Compatible off-airport land use planning that is truly comprehensive in nature should address FAA Part 77 surfaces, FAA Safety Zones, and each airport's specific noise contours. The FAA considers the 65 DNL as the level of noise exposure for defining incompatible land use. In general, areas which fall outside the 65 DNL contour are suitable for most types of development, at least from a noise perspective. Noise sensitive land uses should definitely be discouraged in areas subject to noise impacts of 65 DNL or higher. For most airports in North Dakota, the 65 DNL contour falls on property controlled by the airport. Only at the State's largest and busiest airports does the 65 DNL noise contour extend beyond airport property. From a planning perspective, if airport owners and operators take steps to establish compatible land use controls in the FAA Safe Zones, areas within the airport's noise contour will also be covered. Larger airports in the State should, however, periodically have their own noise contours generated by the most recent version of the INM. Table 17-4 depicts typical reactions to various levels of noise impact.

What Can I Do To Stop the Spread of Incompatible Land Use Around My Airport and What Alternatives Do I Have If Land Use Around My Airport Has Already Become a Problem?

For those concerned with compatible land use in the airport environs, it is best to take steps to protect an airport before incompatible land use occurs which results in either safety or noise related problems. Planners have a number of "preventative measures" which they can consider adopting or implementing to prevent encroachment of incompatible activities into areas around airports which should be protected to ensure safety and noise compatibility. If incompatible land use or activities already exist in the airport environs, "corrective actions" can be taken.

Preventative Measures

It is always best to take actions that will prevent incompatible land use, as opposed to taking action to correct such activities after the fact. Planners have at their disposal a number of approaches that can be considered to prevent the development of activities or land use in the airport environs which would be incompatible from a safety or noise standpoint. Preventative measures can generally be divided into three categories: Planning, Ordinances, and Acquisition. These preventative measures are discussed in the following sections.

Planning

1 Comprehensive Plans

The State of North Dakota does not require its political subdivisions to prepare or adopt a comprehensive plan. Such plans, however, are useful in establishing land use policies for

TABLE 4 North Dakota Aeronautics Commission Land Use Compatibility Guidelines EFFECTS OF NOISE ON PEOPLE					
Day-Night Average Sound Level in Decibels	Hearing Loss	Speech Interference		Annoyance	Average Community Reaction
	Qualitative Description	Indoor % Sentence Intelligibility	Outdoor Distance in Meters for 95% Sentence Intelligibility	% of Population Highly Annoyed	
75 and above	May begin to occur	98%	0 5	37%	Very severe
70	Not likely to occur	99%	0 9	25%	Severe
65	Will not occur	100%	1 5	15%	Significant
60	Will not occur	100%	2 0	9%	Moderate to slight
55 and below	Will not occur	100%	3 5	4%	Moderate to slight
Source U S Department of Transportation, Federal Interagency Committee on Urban Noise, Guidelines for Considering Noise in Land Use Planning and Control, 1980					

the development and improvement of a community. It is an especially useful tool to support the efficient operation of an airport and compatible land uses in the airport environs. Comprehensive plans can also be used to develop criteria for reviewing future development proposals to ensure that overall goals and policies of the plans are maintained, while allowing flexibility to respond to changing circumstances.

2 *Adoption of an Airport Land Use Plan and Map*

One strategy that can be used to assure airport land use compatibility is to adopt and implement an airport land use plan and map. Although it is usually part of an airport master plan, an airport land use plan and map may be done independently. An airport land use plan should address existing conditions, existing and future land use compatibility, actions to be taken, and the jurisdiction responsible for implementing the recommended actions.

To implement this strategy, the airport land use plan must be incorporated into the local comprehensive plan or zoning ordinances if they exist. This can be done through references

in the comprehensive plan goals or policies and by integrating the necessary considerations of airport conditions into the comprehensive land use plan

3 Coordination between jurisdictions of land uses in the vicinity of an airport

When establishing or preserving compatible land use in the vicinity of an airport, coordination is often necessary because the impacts of airports may extend across the jurisdictional boundaries of two or more jurisdictions. It is important that cooperation exists between two or more jurisdictions when coordination of planning and zoning occurs. The **North Dakota Century Code**, Chapter 2-04 Airport Zoning (Appendix A, page 17-42) establishes procedures for zoning regulations between two jurisdictions. These procedures include the creation of a joint airport zoning board to enforce airport zoning regulations applicable to the airport hazard area in question.

In accordance with the Century Code, each joint airport zoning board has as members, two representatives appointed by every jurisdiction to be affected by the zoning regulations for the airport hazard area. If the jurisdiction that owns or controls the airport feels that the other jurisdiction(s) is being uncooperative in establishing a joint airport zoning board or adopting airport zoning, the airport zoning regulations of the jurisdiction that controls or owns the airport shall prevail.

Ordinances

Planners have at their disposal ordinances which can be adopted to control both the height of development in the airport environs (necessary to comply with FAR Part 77) and also land use that is permitted within the Airport's zone of influence. By adopting both height and land use related control ordinances before development occurs in the airport environs is the best approach to insure long-term land use compatibility.

1 Zoning

Zoning is the most commonly used form of land use control. The purpose of zoning is to designate those areas of the community most suitable for particular land uses. The desired distribution of land uses in a comprehensive plan can become the basis for a zoning scheme. Land use zones, called districts, are shown on a map which is a required part of the zoning ordinance. The uses permitted in each district must be stated in the ordinance. Some permitted uses may be conditional, requiring a special permit.

A zoning ordinance can be adopted without a community comprehensive plan, but as discussed previously, the comprehensive plan strengthens the zoning plan's validity. The primary advantage of zoning is that it can promote compatibility while leaving the land in question in private ownership, on the tax rolls, and in a mode to produce economically. At the same time, zoning is subject to change and must be periodically evaluated if it is to

remain a viable land use compatibility tool. Used within its limitations, zoning is the preferred method for controlling land use to achieve airport-environs compatibility.

Zoning controls need careful tailoring in order to satisfy both the characteristics of the airport and the special conditions affecting the community. It is important for on-airport property and off-airport property to be appropriately zoned, so that required airport development can occur. There are generally three types of zoning that can be used in the airport environs to support compatible land use strategies. These are airport impact zoning, airport overlay zoning, and airport development zoning.

- *Airport Impact Zoning*

An Airport Impact Zone is a separate zone used to place restrictions on land impacted by airport operations. An Airport Impact Zone establishes a new zoning designation which replaces an existing zoning designation, conditions, and permitted uses. This type of zoning can be used to limit development in areas subjected to moderate to severe noise impacts and in areas beneath airport approach surfaces. An example of each type of impact zoning is included in Appendix B, **Example 1** (page 17-53).

- *Airport Development Zoning*

Like the Airport Impact Zone, the Airport Development Zone establishes a new zoning designation. This type of zoning for airports often replaces "Industrial" or "Public Facility" classifications or other designations currently given to the airport and its immediate environs. Property that is reasonably confined to the airport area; areas needed for anticipated facility growth and airport-related industry, and areas within the boundaries of RPZs should be encompassed within the Airport Development Zone (Appendix B, **Example 2**, page 17-57).

- *Airport Overlay Zoning*

An Airport Overlay Zone maintains the existing zoning designation, but places additional conditions on the activities and uses that can occur in the area beneath the overlay zone. An Airport Overlay Zone can be used to limit the height of objects surrounding an airport, restrict uses that produce hazardous conditions that could distract a pilot during critical phases of flight, such as smoke and distracting lights; and limit uses for areas subjected to significant noise levels or within designated safety zones. **Example 3** of Appendix B (page 17-60) provides a model Airport Overlay Zoning Ordinance that combines height, noise, and compatibility conditions that can be modified for specific airport use.

2 *Height Restrictions*

According to FAR Part 77 - Objects Affecting Navigable Airspace, any object or structure which penetrates any of the "Imaginary Surfaces" is considered by the FAA to be an

obstruction to air navigation. The purpose of height restrictions is to protect navigable airspace in the airport environs for traffic patterns and approaches. As an example, an industrial use permitted in an industrial zone near an airport would be prevented from erecting a water tower, if the tower height exceeded the zoning restrictions. A similar industrial use elsewhere in the community (not within the height limitation zone) would be permitted. A map is adopted as part of a height limitation zoning ordinance showing specific height limitations for specific areas. Details on specific height restrictions are included in the development of zoning regulations, height restrictions set forth by the Federal Aviation Administration in FAR Part 77 should form the basis for height restricted zoning. Height restrictions serve to maintain compliance with recommendations in FAR Part 77 - Objects Affecting Navigable Airspace. Such restrictions are necessary to ensure that objects will not impair flight safety or decrease the operational capability of the airport.

FAA Advisory Circular 150/5190-4A, 1987, A Model Zoning Ordinance to Limit Height of Objects Around Airports, provides a model zoning ordinance that can be used by the local jurisdictions as a guide to control the height of objects around their airport. Copies of this document may be obtained from The FAA Airport District Office (ADO) in Bismarck.

Acquisition

Acquisition strategies for land use control are most effective if they are used in the preventative mode. As a preventative strategy, acquisition techniques are generally less controversial and costly to implement. It is important to note, however, that acquisition strategies can also be employed as "corrective" actions when incompatibilities already exist related to various Federal and State safety or noise requirements. Those responsible for land use control in the environs of each North Dakota airport should consider acquisition strategies described in this section in both the preventative measures and the corrective actions categories.

1 Land Purchase

Land purchase in fee simple by an airport is the most positive of all forms of land use control, but it is usually also the most expensive. It is recommended by the FAA that airport proprietors own the property under the runway approach and departure areas, at least to the limits of their RPZs. Purchase of land within severely noise impacted areas and RPZs is eligible for funding through the FAA if the airport is included in the National Plan of Integrated Airport Systems (NPIAS) or State matching grant option. It is preferable that local officials try to protect other land in the airport environs through comprehensive planning and zoning first, before outright purchasing, since the positive control method is less costly. On the other hand, variations of this method include land purchase with either resale for compatible use (land banking with restrictive covenants) or use for a compatible public purpose. Under this scenario, costs may be effectively reduced.

2 Easements

An easement is a right of another to part of the total benefits of ownership of real property. Easements may be used as an effective and permanent form of land use control. Easements are permanent, with title held by the purchaser until sold or released, and work equally well inside or outside zoning jurisdictions. Short of purchasing fee simple easements, property can be acquired by negotiation or condemnation. Easements permit the purchaser the use of another's property and property rights for the special purposes stated in the easement agreement.

Aviation and hazard easements are those which grant

- the right of flight over the land in question
- the right to remove existing obstructions
- a restriction against the establishment of future obstruction
- compensation to the owner for the side effects of aircraft operations over the owner's property. This compensation can be used for home insulation, air conditioning, trees, and plants to help reduce overflight impacts.

The FAA defines three basic degrees of aviation and hazard easements. **Table 17-5** describes the rights acquired under each type of aviation and hazard easement. One major advantage of easements is that they can be permanent, whereas zoning can be changed. Additionally, easements often may be acquired for a fraction of the total value associated with the simple purchase of the land, and are thus less expensive.

Easements can be an effective strategy for assuring compatible development around airports. In the context of airport compatibility planning, easements may take several forms, such as a positive easement which allows the right of aviation and the right to make noise over someone's property, or a negative easement which prevents the creation or continuation of incompatible land uses on the property.

Acquisition of easements does not by and of itself change incompatible land use to compatible use or reduce the impact that airport operations have on the property, but the easement acquisition price can and should be dedicated to making the necessary change in use or providing soundproofing measures to achieve compatibility with the airport. Easements can be obtained in a number of ways including purchase, condemnation, and dedication (either voluntary or required at time of subdivision).

Table 17-5		
BASIC TYPES OF AVIGATION AND HAZARD EASEMENTS		
Type of Avigation/Hazard Easement		Rights Acquired
Model Avigation and Hazard Easement	1	Right-of-flight at any altitude above the approach surface
	2	Prevents any obstruction above approach surface
	3	Right to cause noise, vibrations, fumes, dust, and fuel particles
	4	Prohibits creation of electrical interference or unusual lighting
	5	Grants right-of-entry to remove trees, buildings, etc , above approach surface
Limited Avigation Easement	1	Right-of-flight above approach slope surface (20 1, 34 1, 50 1)
	2	Prohibits any obstruction above approach slope surface
	3	Right-of-entry to remove any structure or growth above approach slope surface
Clearance Easement	1	Prohibits any structures, growths or obstructions above approach slope surface (20 1, 34 1, or 50 1)
	2	Right-of-entry to remove, mark, or light any structures or growths above approach slope surface
Source Federal Aviation Administration		

A noise easement grants the airport the right to make noise over another person's property. **Exhibit 17-8** exemplifies the area that is impacted by noise generated from an aircraft in flight. Appendix B, **Example 4**, page 17-71 contains an example Noise Easement Ordinance.

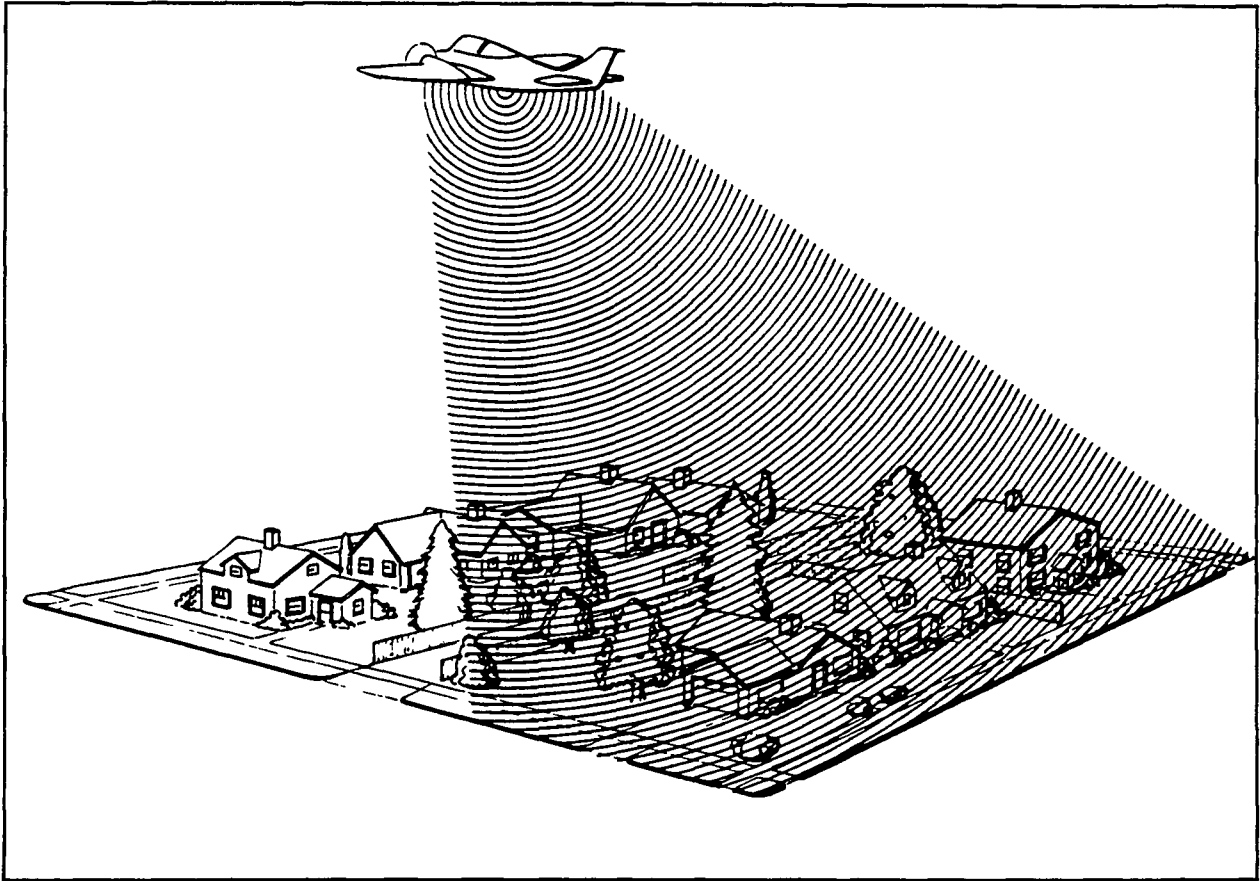


Exhibit 17-8 Area Impacted by Aircraft Noise

An aviation or hazard easement can be used to prohibit the creation of electrical interference or unusual lighting; prevent any obstruction from protruding into the approach surface; and provide the right-of-way to remove obstructions, such as trees, from above the approach surface. An aviation or hazard easement exists within a defined airspace area. **Exhibit 17-9** exemplifies the area controlled under an aviation easement. Appendix B, **Example 5**, page 17-72 contains an example Aviation and Hazard Easement Ordinance.

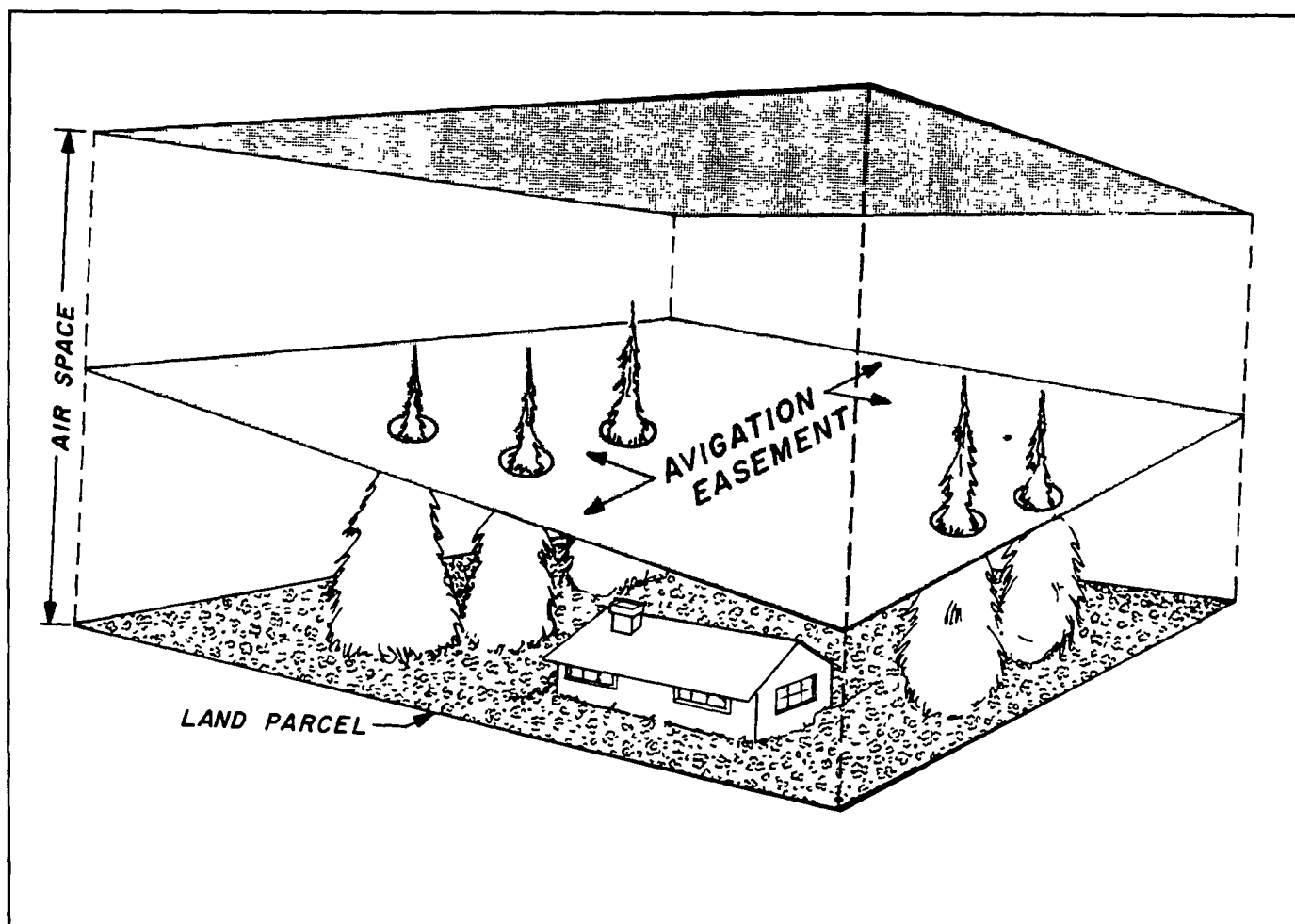


Exhibit 17-9 Area Controlled Under Avigation Easement

But What Happens If A Problem Already Exists?

As noted, it is best to take preventative measures described so that incompatible land use does not become an issue in the airport environs. If, however, development has already occurred, there are corrective actions which can be taken by planners to resolve or at least mitigate the impacts of incompatible land use on the airport's long-term operational efficiency. Corrective actions that can be considered fall into three general categories: Noise Mitigation, Operational Procedures, and Agreements. It is important to note that **land acquisition** and **easement strategies** discussed under the preventative measures section can also be considered as **corrective actions** in applicable situations.

Noise Mitigation

Minimizing aircraft noise impacts on area around an airport once it has become developed is one corrective action that can be considered to achieve airport-environs compatibility. Noise mitigation strategies include.

- *Noise Barriers*
- *Soundproofing*

1 Noise Barriers

Noise barriers, or shielding, can reduce ground-level generated aircraft noise. Ground level noise sources at an airport include aircraft engine run-up areas, aircraft maintenance areas, and taxiways. The impact of ground level generated noise is confined to those areas immediately adjacent to the source. Noise barriers can be constructed through the strategic placement of new hangars, terminal structures, buildings, or planted landforms (tree and vegetative screens).

2 Soundproofing

Soundproofing is another control used to lessen noise within an airport's noise impact area. Although it is not an "exact science," eliminating noise through use of soundproofing can reduce interior noise between 10 and 30 decibels. Soundproofing and insulation techniques may include double-glazed windows, acoustical doors, gasketing of enclosure doors, staggering of structural members ("isolated double membrane" building construction), and ceiling and wall insulation. Although soundproofing does not completely eliminate exterior noise effects within the home, it does reduce it to a more tolerable range.

While soundproofing is both a feasible and practical means of alleviating the impact of airport operations, particularly aircraft noise impacts, the analysis of its usefulness (benefits vs. costs) should be made on a case-by-case basis giving careful consideration of the condition and age of the existing structure.

Operational Procedures

If development has already occurred in the airport environs, restricting aircraft operational procedures is another action that can be considered to minimize noise exposure patterns around an airport. Examples of possible operational procedures targeted to effect noise control may include, but are not limited to, the following:

- Restrictions on ground movement of aircraft
- Preferential runway end selection during calm winds

- Restrictions on engine runups or use of ground equipment (identifying times of day and limiting locations)
- Raise glide slope angle or intercept on PAPI or VASIs
- Power and flap management through pilot signage
- Limited use of reverse thrust
- Changing traffic pattern altitudes or existing traffic legs in AFO materials

All of the above items are considered feasible methods for implementation at large airports that serve business jets and air carrier aircraft. However, due to the limited size and types of aircraft operating at smaller general aviation airports in North Dakota, several of the strategies mentioned above are considered impractical for implementation. The first two items are considered feasible aircraft operational restrictions for implementation at small general aviation airports. The last item can be used at both smaller general aviation airports and larger commercial airports. It should be noted that while changing traffic patterns can decrease or eliminate noise impacts on one area, an increase in noise impacts may be experienced in another. The use of this noise control works effectively if the traffic pattern is changed to an airspace area over a compatible land use. Regarding all noise control options, it should be noted that altering standard airport/aircraft operational procedures can compromise safety. Any modifications or restrictions in standard operational procedures should only be considered after careful consideration of all other potentially feasible alternatives and after thorough consultation with affected parties (airport users) and the FAA.

Agreements

When incompatible land use already exists or is proposed as part of a development package that cannot be stopped, agreements can be considered as a corrective action to limit adverse impacts. An airport sponsor can be held liable for noise generated from airport usage. In order to protect the airport sponsor from this liability, a Hold Harmless Agreement can be used. A Hold Harmless Agreement is recorded in the deed as a condition of approval for any regulatory land use decision. As part of the deed, the Hold Harmless Agreement appears in a future title search which would forewarn a prospective buyer that the subject property is affected by noise generated by aircraft or airport activity.

A Hold Harmless Agreement is often used to protect the airport sponsor from liability for noise and other impacts of airport operation where an incompatible development is either existing or proposed. Appendix B, **Example 6**, page 17-74 includes an example of a Hold Harmless Agreement. Under some circumstances, a local city or county can require this type of agreement and have it recorded in the deed as a condition of approval for any regulatory land use decision (i.e., subdivision request, zoning change, etc.). In this way, a future title search would forewarn a prospective buyer that the subject land is affected by aviation noise.

Another method that can be used to notify potential buyers of property near airports that they may be exposed to certain levels of aircraft noise is through fair disclosure statements. These

statements in no way abrogate an individual's right to take later action against the airport, but fair disclosure statements at least give buyers a fair warning. The major benefit of a fair disclosure statement is that buyers find out about the presence of the airport and its associated noise before they purchase property that is likely to be impacted by airport noise. The adoption of rules requiring fair disclosure statements requires the cooperation and education of realtors and lenders because of the complexity involved in understanding aircraft noise and land use compatibility. Because of this complexity, realtors and lenders are often fearful that they may become more exposed to malpractice suits and other litigation because of their failure to properly follow the fair disclosure statement rules. This situation can be alleviated with a good education program and coordination with real estate groups.

Fair disclosure statements do not decrease noise exposure. However, they do serve to advise potential purchasers of property near airports of the potential impact from aircraft noise *before* the decision to purchase is finalized. A sample Fair Disclosure Statement is provided in Appendix B, **Example 7**, page 17-75.

This section has provided examples of steps that can be considered to both prevent and to correct incompatible land use in the airport environs. Appendix B provides examples of specific ordinances and agreements that can be modified for local conditions and use. **Table 17-6** provides a summary of the various land use compatibility strategies contained in this section.

What Are The Next Steps?

Airport owners in conjunction with the airport and other impacted entities should consider appropriate land use/zoning controls prior to the development of land near their airport. Adequate safeguards should be incorporated early to prevent incompatible land uses from occurring in proximity to the boundaries of the airport. Adequate land use controls can also provide space for future airport expansion.

Specific efforts that airport sponsors can undertake to control and monitor land use compatibility around their airport are described below.

- Ensure land use restrictions for all surrounding jurisdictions are in place and reflect current operational levels by aircraft type.
- Assist surrounding jurisdictions in understanding how the airport operates, the airport's flight patterns and the type of aircraft operating at the airport. Also assist surrounding jurisdictions in understanding how the airport benefits the local economy and community's health, welfare, and safety.
- Stay involved because land use is fluid and subject to a public process that is constantly changing. By staying involved, the airport manager/sponsor can influence the compatibility of land use surrounding the airport.

TABLE 17-6

**North Dakota Aeronautics Commission
Land Use Compatibility Guidelines**

SUMMARY OF LAND USE STRATEGIES

	<u>DESCRIPTION</u>	<u>ADVANTAGE</u>	<u>DISADVANTAGE</u>	<u>WHEN TO USE</u>
Preventive Measures				
Comprehensive Planning	Describes all future land use for the community	Low cost and minimal controversy if airport is not in a developed area	Not effective when existing incompatible development has encroached on the airport, only effective when supported by zoning	Each time a comprehensive plan is developed or updated steps should be taken to include compatible land use in the airport environs
Coordination Agreements	Agreement between two or more jurisdictions that are impacted by an airport	Most applicable when airport is located outside the physical boundaries of the public sponsor in another jurisdiction	Ineffective unless all parties have similar land use planning goals and objectives for areas in the airport environs	When comprehensive plans are updated
Height Restrictions	Safety mandated for NPIAS airports by FAA	Prevents the location of objects which pose violations to FAR Part 77 surface	Only effective in preventing not currently existing height obstructions, not effective when terrain or trees are obstructions	Should be adopted as part of zoning to support land use identified in comprehensive plan
Zoning: Airport Impact Zone	Establishes a new zone which replaces an existing zoning designation	Leaves land in private ownership on tax roles	Subject to frequent change	If existing zoning is incompatible with airport

TABLE 17-6

North Dakota Aeronautics Commission
Land Use Compatibility Guidelines

SUMMARY OF LAND USE STRATEGIES

	DESCRIPTION	ADVANTAGE	DISADVANTAGE	WHEN TO USE
Airport Overlay Zone	Places additional conditions on affected land, existing zoning remains unchanged	Easier to implement, while still reducing hazards and limiting incompatible land use	If land use is incompatible in underlying zone, this incompatibility will continue	Can be used to limit the height of objects or to restrict activities which produce smoke, glare, birds, or obstructive lighting Can be used in noise impacted area to enforce Hold Harmless Agreements or Fair Disclosure Statements
Airport Development Zone	Distinguishes separate zoning descriptions for airport, airports often zoned "Public Facility" or "Industrial"	Creates a more distinct area of influence for the airport, does not blend in with other surrounding uses Gives the airport better opportunity to expand	Not usually appropriate in areas that are already planned and zoned	Most applicable to new airports
Preventative Measures and Corrective Actions				
Fee Simple Acquisition	Purchase of land and all land use rights	Allow complete control over future and pre-existing land use, not reversible	Often very costly with possible legal opposition, takes land off tax roles	Should be considered to protect critical safety zones and areas subject to high levels of noise impact Most effective method for resolving existing problems may be eligible for FAA grant

TABLE 17-6

**North Dakota Aeronautics Commission
Land Use Compatibility Guidelines**

SUMMARY OF LAND USE STRATEGIES

	DESCRIPTION	ADVANTAGE	DISADVANTAGE	WHEN TO USE
Easements	Transfer of money to obtain the rights to use or restrict use in a specified manner	Can provide more positive control than zoning, less expensive than acquisitions, land <u>may</u> remain on active tax roles	Does not alter existing incompatible use	Can be used to compensate owner for substantial noise impacts, can be used to gain right to remove obstructions (i e , trim trees)
Corrective Actions				
Change Operational Procedures	Changing normal operating patterns to reduce noise can include preferential runway end use, non-standard turns on departures, non-approach and departure altitudes	Can help to reduce noise impacts on areas of incompatible development	Does not change incompatible land use, may be only temporary fix if continued development of incompatible use occurs or airport grows	Consider as part of Master Plan, Part 150 or Environmental Assessment for airport, must be fully coordinated with airport owner, users, and FAA
Noise Mitigation	Sound barriers or sound proofing can be used to mitigate existing noise impacts	Can help to reduce noise impacts in noise sensitive land use that has occurred in the airport environs	Very costly to implement, is not a long-term solution but a temporary fix	Can be investigated as part of an airport planning or noise study, only applicable for larger airports
Hold Harmless and Deed Notifications	Method for notifying purchaser and developer that property is in noise impacted area	Can be effective for mitigating noise complaints against the airport even when development has already occurred	Does not prevent legal action against airport	Part of Part 150 process, only applicable to largest airports

- Be aware of land use actions proposed by the local county or municipality and all adjacent jurisdictions in the airport environs.
- Stay apprised of the existing zoning or land use, how it is being enforced, and changing airport operations and associated needs and impacts on areas adjacent to the airport.
- Assist local jurisdictions in understanding Federal Aviation Regulations Part 77 notification requirements and the special needs for protecting the safety and efficiency of aircraft operations. The Guidelines contain specific information which can be drawn upon to fulfill this requirement.
- Provide copies of the Airport Layout Plan (ALP) to the local planning commission
- Attend planning meetings on land use decisions in the vicinity of the airport
- Be sensitive to operations at the airport and the impact they have on neighboring land uses
- Invite local government officials and planners to be part of airport advisory committee to keep them informed of the airport's plans and needs

These Guidelines offer the airport sponsor an opportunity to establish or strengthen their relationship with their local community officials, to show them the issues associated with airport land use compatibility and to explain how the airport and the community can most rationally be protected. By staying involved in local land use issues and the formulation and updating of their local growth management plan, airport managers and sponsors can ensure that their airport's needs are brought to the attention of the local government who can help control the surrounding land use designations through zoning or other appropriate controls.

How Do We Get Started?

There are several questions that communities should answer when they consider how to address land use planning for the airport within their jurisdiction. These questions include:

- Does your jurisdiction have existing height zoning regulations for the areas surrounding the airport?
- If you have a comprehensive plan, does it have a transportation element that includes the airport?
- Is an airport representative involved in the local planning process, especially when concerns arise regarding air transportation?

- Is your agency involved in planning processes that takes place at the airport such as master planning and environmental analyses?
- Does your agency have land use controls in place to prevent development of incompatible uses in the airport's area of influence?
- Is your agency working to resolve existing compatibility problems in the airport's environs?
- Is your jurisdiction coordinating with adjacent jurisdictions affected by the airport?

By answering these questions, communities can determine their needs as they relate to land use in the airport environs. **Exhibit 17-10** provides an overview of the process to follow to initiate and to revise compatible land use planning in the airport environs.

In those instances where land use incompatibilities currently exist and actions have not been taken to resolve these incompatibilities, a "troubleshooting" matrix has been developed. This matrix cites specific "problem" areas and identifies example actions that can be considered to address land use issues. As shown in **Exhibit 17-11**, specific land use situations are identified that represent possible conflicts with either safety or noise-related guidelines. Depending on whether the potential impact relates to noise or safety, different actions are available to address the incompatibility. This exhibit also references the page number in the Guidelines where more detail on specific actions or guidelines are available. A page number which corresponds to the appendix which contains sample ordinances that are applicable to addressing the particular concerns is also provided.

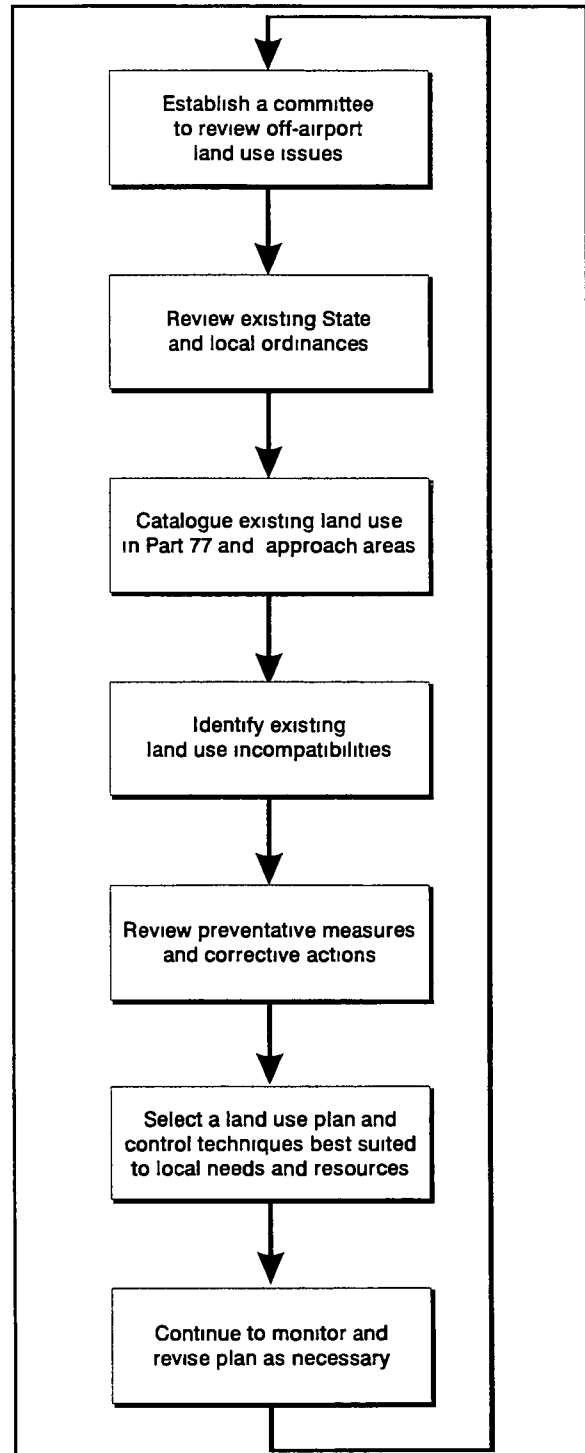


Exhibit 17-10 Planning for Compatible Land Use Around Airports

LAND USE ISSUES	Potential Impact	Example Actions Available	Guideline Reference	Appendix A Reference
Existing Residential Development	Noise Concern	Soundproofing	17-32	N/A
		Noise Easement	17-28	17-71
	Safety Concern	Fee Simple Aquisition	17-27	N/A
Proposed Residential Development	Noise Concern	Hold Harmless Agreement	17-33	17-74
		Fair Disclosure Statement	17-34	17-75
	Safety Concern	Comprehensive Plan	17-16	N/A
Proposed Landfill	Safety Concern	Airport Overlay Zoning	17-12 17-26	17-60
School, Hospital, and Church Development	Noise Concern	Soundproofing	17-32	N/A
		Noise Easement	17-28	17-71
Proposed School, Hospital, and Church Development	Safety Concern	Airport Overlay Zoning	17-12 17-26	17-60
Radio / Television Tower	Safety Concern	Avigation & Hazard Easement	17-26	17-72
		Height Limitation Ordinance	17-12 17-28	N/A
Factory Smoke	Safety Concern	Avigation & Hazard Easement	17-28	17-72
		Airport Overlay Zoning	17-12 17-26	17-60
Golf Course Lights	Safety Concern	Avigation & Hazard Easement	17-12 17-28	17-72
		Airport Overlay Zoning	17-12 17-26	17-60
Auditoriums / Outdoor Theaters	Safety Concern	Airport Overlay Zoning	17-26	17-60
Powerlines	Safety Concern	Avigation & Hazard Easement	17-28	17-72
		Height Limitation Ordinance	17-12 17-27	N/A



These Guidelines provide a logical sequence of activities for each community to examine their airport's compatibility with its environs. It is up to the local community to actually determine and identify where existing incompatible land uses have developed in the airport environs. Within the context of the Guidelines, each community which has zoning or land use planning responsibilities for an airport should use this information to resolve existing incompatible land uses within the airport's area of influence and to implement actions which will prevent future incompatible development from occurring.

With the assistance of a private consultant, airport legal counsel, and community, county, regional or metropolitan planning organizations, a task force team can be established to create and implement land use compatibility guidelines for your airport. By review of the guidelines discussed in this document, land use planning can be implemented which will preserve the airport's infrastructure investment and safety for the traveling public in the future.

Appendix A

North Dakota Century Code

CHAPTER 2-04 AIRPORT ZONING

2-04-01. Definitions. As used in this chapter, unless the context otherwise requires

1. "Airport" means any area of land or water designed and set aside for the landing and taking off of aircraft and utilized or to be utilized in the interests of the public for such purposes
2. "Airport hazard" means any structure or tree or use of land which obstructs the airspace required for the flight of aircraft in landing or taking off at any airport or is otherwise hazardous to such landing or taking off of aircraft.
3. "Airport hazard area" means any structure or tree or use of land which obstructs the airspace required for the flight of aircraft in landing or taking off at any airport or is otherwise hazardous to such landing or taking off of aircraft
4. "Person" means any individual, firm, copartnership, corporation, company, association, joint stock association, the state of North Dakota or any political subdivision thereof, and includes any trustee, receiver, assignee, or other similar representative thereof
5. "Political subdivision" means any county, city, park district, or township
6. "Structure" means any object constructed or installed by man, including, but without limitation, buildings, towers, smokestacks, and overhead transmission lines.
7. "Tree" means any object of natural growth

2-04-02. Airport hazards contrary to public interest. It is hereby found that an airport hazard endangers the lives and property of users of the airport and of occupants of land in its vicinity, and also, if of the obstruction type, in effect reduces the size of the area available for the landing, taking off, and maneuvering of aircraft, thus tending to destroy or impair the utility of the airport and the public investment therein. Accordingly, it is hereby declared. (a) that the creation or establishment of an airport hazard is a public nuisance and an injury to the community served by the airport in question, (b) that it is therefore necessary in the interest of the public health, public safety, and general welfare that the creation or establishment of airport hazards be prevented; and (c) that this should be accomplished, to the extent legally possible, by exercise of the police power, without compensation. It is further declared that both the prevention of the creation or establishment of airport hazards and the elimination, removal, alteration, mitigation, or marking and lighting of existing airport hazards are public purposes for which political subdivisions may raise and expend public funds and acquire land or property interests therein

2--04-03. Power to adopt airport zoning regulations.

- 1 In order to prevent the creation or establishment of airport hazards, every political subdivision having an airport hazard area within its territorial limits may adopt, administer, and enforce, under the police power and in the manner and upon the conditions hereinafter prescribed, airport zoning regulations may divide such area into zones, and, within such zones, specify the land uses permitted and regulate and restrict the height to which structures and trees may be erected or allowed to grow
2. Where an airport is owned or controlled by a political subdivision and any airport hazard area appertaining to such airport is located outside the territorial limits of said political subdivision, the political subdivision owning or controlling the airport and the political subdivision within which the airport hazard area is located may, by ordinance or resolution duly adopted, create a joint airport zoning board, which board has the same power to adopt, administer, and force airport zoning regulations applicable to the airport hazard area in question as that vested by subsection 1 in the political subdivision within which such area is located. Each such joint board shall have as members two representatives appointed by each political subdivision participating in its creation and in addition a chairman elected by a majority of the members so appointed.
3. If in the judgement of a political subdivision owning or controlling an airport, the political subdivision within which is located an airport hazard area appertaining to that airport, has failed to adopt or enforce reasonable adequate airport zoning regulations for such area under subsection 1 and if that political subdivision has refused to join in creating a joint airport zoning board as authorized in subsection 2, the political subdivision owning or controlling the airport may itself adopt, administer, and enforce airport zoning regulations for the airport hazard area in question. In the event of conflict between such regulations and any airport zoning regulations adopted by the political subdivision owning or controlling the airport govern and prevail.

2-04-04. Relation to comprehensive zoning regulations.

1. Incorporation In the event that a political subdivision has adopted, or hereafter adopts, a comprehensive zoning ordinance regulating, among other things, the height of buildings, any airport zoning regulations applicable to the same area or portion thereof, may be incorporated in and made a part of such comprehensive zoning regulations, and be administered and enforced in connection therewith
2. Conflict. In the event of conflict between any airport zoning regulations adopted under this chapter and any other regulations applicable to the same area, whether the

conflict be with respect to the height of structures or trees, the use of land, or any other matter, and whether such other regulations were adopted by the political subdivision which adopted the airport zoning regulations or by some other political subdivision, the more stringent limitation or requirement governs and prevails

2-04-05. Procedure for adoption of zoning regulations.

1. No airport zoning regulations shall be adopted, amended, or changed under this chapter except by action of the legislative body of the political subdivision in question, or the joint board provided for in subsection 2 of section 2-04-03 after a public hearing in relation thereto, at which parties in interest and citizens shall have an opportunity to be heard. At least fifteen days notice of the hearing shall be published in an official newspaper, or a newspaper of general circulation, in the political subdivision or subdivisions in which is located the airport hazard area to be zoned
2. Prior to the initial zoning of any airport hazard area under this chapter, the political subdivision or joint airport zoning board which is to adopt the regulations shall appoint a commission, to be known as the airport zoning commission, to recommend the boundaries of the various zones to be established and the regulations to be adopted therefor. The commission shall make a preliminary report and hold public hearings thereon before submitting its final report, and the legislative body of the political subdivision or the joint airport zoning board shall not hold its public hearing or take other action until it has received the final report of such commission. Where a city planning commission or zoning commission already exists, it may be appointed as the airport zoning commission.

2-04-06. Airport zoning requirements.

1. Reasonableness. All airport zoning regulations adopted under this chapter must be reasonable and none may impose any requirement or restriction which is not reasonably necessary to effectuate the purposes of this chapter. In determining what regulations it may adopt, each political subdivision and joint airport zoning board shall consider, among other things, the character of the flying operations expected to be conducted at the airport, the nature of the terrain within the airport hazard area, the character of the neighborhood, and the uses to which the property to be zoned is put and adaptable
2. Nonconforming uses. No airport zoning regulations adopted under this chapter may require the removal, lowering, or other change or alteration of any structure or tree not conforming to the regulations when adopted or amended, or otherwise interfere with the continuance of any nonconforming use, except as provided in subsection 3 of section 2-04-07.

2-04-07. Permits and variances.

- 1 Permits. Any airport zoning regulations adopted under this chapter may require that a permit be obtained before any new structure or use may be constructed or established and before any existing use or structure may be substantially changed or substantially altered or repaired. In any event, however, all such regulations must provide that before any non conforming structure or tree be replaced, substantially altered or repaired, rebuilt, allowed to grow any higher, or replanted, a permit must be secured from the administrative agency authorized to administer and enforce the regulations, authorizing such replacement, change, or repair. No permit may be granted that would allow the establishment or creation of an airport hazard or permit a nonconforming structure or tree or nonconforming use to be made or become higher or become a greater hazard to air navigation than it was when applicable regulation was adopted or than it is when the application for a permit is made. Except as provided herein, all applications for permits must be granted.
- 2 Variances. Any person desiring to erect any structure, or increase the height of any structure, or permit the growth of any tree, or otherwise use his property in violation of airport zoning regulations adopted under this chapter may apply to the board of adjustment for a variance from the zoning regulations in question. Such variances must be allowed where a literal application or enforcement of the regulations would result in practical difficulty or unnecessary hardship and the relief granted would not be contrary to the public interest but do substantial justice and be in accordance with the spirit of the regulations and this chapter, provided, that any variance may be allowed subject to any reasonable conditions that the board of adjustment may deem necessary to effectuate the purposes of this chapter.
- 3 Hazard marking and lighting. In granting any permit or variance under this section, the administrative agency or board of adjustment may, if it deems such action advisable to effectuate the purposes of this chapter and reasonable in the circumstances, so condition such permit or variance the political subdivision, at its own expense, to install, operate, and maintain thereon such markers and lights as may be necessary to indicate to flyers the presence of an airport hazard.

2-04-08. Appeals.

- 1 Any person aggrieved, or taxpayer affected, by any decision of an administrative agency made in its administration of airport zoning regulations adopted under this chapter, or any governing body of a political subdivision, or any joint airport zoning board, which is of the opinion that a decision of such administrative agency is an improper application of airport zoning regulations of concern to such governing body or board of adjustment authorized to hear and decide appeals from the decisions of such administrative agency.

- 2 All appeals taken under this section must be taken within a reasonable time, as provided by the rules of the board, a notice of appeal specifying the grounds thereof. The agency from which the appeal is taken shall forthwith transmit to the board all the papers constituting the record upon which the action appealed from was taken.
- 3 An appeal stays all proceedings in furtherance of the action appealed from, unless the agency from which the appeal is taken certifies to the board, after the notice of appeal has been filed with it, that by reason of the facts stated in the certificate as stay would, in its opinion, cause imminent peril to life or property. In such cases proceedings may not be stayed otherwise than by order of the board on notice to the agency from which the appeal is taken and on due cause shown.
4. The board shall fix a reasonable time for the hearing of appeals, give public notice and due notice to the parties in interest, and decide the same within a reasonable time. Upon the hearing any party may appear in person or by attorney.
- 5 The board may in conformity with the provisions of this chapter, reverse or affirm wholly or partly, or modify, the order, requirement, decision, or determination appealed from and may make such order, requirement, decision, or determination as ought to be made, and to that end has all the powers of the administrative agency from which the appeal is taken.

2-04-09. Administration of airport zoning regulations.

All airport zoning regulations adopted under this chapter must provide for the administration and enforcement of such regulations by an administrative agency which may be an agency created by such regulations or any official, board, or other existing agency of the political subdivision adopting the regulations or of one of the political subdivisions which participated in the creation of the joint airport zoning board adopting the regulations, if satisfactory to that political subdivision, but in no case may such administrative agency be or include any member of the board of adjustment. The duties of any administrative agency designated pursuant to this chapter include that of hearing and deciding all permits under subsection 1 of section 2-04-07, but such agency shall not have or exercise any of the powers herein delegated to the board of adjustment.

2-04-10. Board of adjustment.

1. All airport zoning regulations adopted under this chapter must provide for a board of adjustment to have and exercise the following powers:
 - a To hear and decide appeals from any order, requirement, decision, or determination made by the administrative agency in the enforcement of the airport zoning regulations, as provided in section 2-04-08.

- b To hear and decide any special exceptions to the terms of the airport zoning regulations upon which such board may be required to pass under such regulations.
 - c To hear and decide specific variances under subsection 2 of section 2-04-07
- 2. Where a zoning board of appeals or adjustment already exists, it may be appointed as the board of adjustment. Otherwise, the board of adjustment shall consist of five members, each to be appointed for a term of three years by the authority adopting the regulations and to be removable by the appointing authority for cause, upon written charges and after public hearing.
- 3. The concurring vote of a majority of the members of the board of adjustment is sufficient to reverse any order, requirement, decision, or determination of the administrative agency, or to decide in favor of the applicant on any matter upon which it is required to pass under the airport zoning regulations, or to effect any variation in such regulations.
- 4. The board shall adopt rules in accordance with the provisions of the ordinance or resolution by which it was created. Meetings of the board shall be held at the call of the chairman and at such other times as the board may determine. The chairman, or in his absence the acting chairman, may administer oaths and compel the attendance of witnesses. All hearings of the board must be public. The board shall keep minutes of its proceedings, showing the vote of each member upon each question, or, if absent, or failing to vote, indicating such fact, and shall keep records of its examinations and other official actions, all of which must immediately be filed in the office of the board and shall be a public record.

2-04-11. Judicial review.

- 1. Any person aggrieved, or taxpayer affected, by any decision of a board of adjustment, or any governing body of a political subdivision or any joint airport zoning board which is of the opinion that a decision of a board of adjustment is illegal, may present to the district court a verified petition setting forth that the decision is illegal, in whole or in part, and specifying the grounds of the illegality. Such petition must be presented to the court within fifteen days after the decision is filed in the office of the board.
- 2. Upon presentation of such petition the court may allow a writ of certiorari directed to the board of adjustment to review such a decision of the board. The allowance of the writ does not stay proceedings upon the decision appealed from, but the court may, on application, on notice to the board and on due cause shown, grant a restraining order.

3. The board of adjustment is not required to return the original papers acted upon by it, but it is sufficient to return certified or sworn copies thereof or of such portions thereof as may be called for by the writ. The return must concisely set forth such other facts as may be pertinent and material to show the grounds of the decision appealed and must be verified.
4. The court has exclusive jurisdiction to affirm, modify, or set aside the decision brought up for review, in whole or in part, and if need be, to order further proceedings by the board of adjustment. The findings of fact of the board, if supported by substantial evidence, must be accepted by the court as conclusive, and no objection to a decision of the board may be considered by the court unless such objection has been urged before the board, or, if it was not so urged, unless there were reasonable grounds for failure to do so.
5. Costs may not be allowed against the board of adjustment unless it appears to the court that it acted with gross negligence, in bad faith, or with malice, in making the decision appealed from.
6. In any case in which airport zoning regulations adopted under this chapter, although generally reasonable, are held by a court to interfere with the use or enjoyment of a particular structure or parcel of land to such an extent, or to be so onerous in their application to such a structure or parcel of land, as to constitute a taking or deprivation of that property in violation of the Constitution of North Dakota or the Constitution of the United States, such holding does not affect the application of such regulations to other structures and parcels of land.

2-04-12. Enforcement and remedies. Each violation of this chapter or of any regulations, orders, or rulings promulgated or made pursuant to this chapter constitutes a Class B misdemeanor. In addition, the political subdivision or agency adopting zoning regulations under this chapter may institute in any court of competent jurisdiction, an action to prevent, restrain, correct, or abate any violation of this chapter, or of airport zoning regulations adopted under this chapter, or of any order or ruling made in connection with their administration or enforcement, and the court shall adjudge to the plaintiff such relief, by way of injunction (which may be mandatory) or otherwise, as may be proper under all the facts and circumstances of the case, in order fully to effectuate the purposes of this chapter and of the regulations adopted and orders and rulings made pursuant thereto.

2-04-13. Acquisition of air rights. In any case in which:

1. It is desired to remove, lower, or otherwise terminate a nonconforming structure or use;
2. The approach protection necessary cannot, because of constitutional limitations, be provided by airport zoning regulations under this chapter; or

- 3 It appears advisable that the necessary approach protection be provided by acquisition of property rights rather than by airport zoning regulations,

the political subdivision within which the property or nonconforming use is located or the political subdivision owning the airport or served by it may acquire, by purchase, grant, or condemnation in the manner provided by the law under which political subdivisions are authorized to acquire real property for public purposes, such air right, navigation easement, or other estate or interest in the property or nonconforming structure or use in question as may be necessary to effectuate the purposes of this chapter

2-04-14. Short title. This chapter must be known and may be cited as the "Airport Zoning Act"

Appendix B

Example Ordinances

Examples provided in this section need to be reviewed by each community and adjusted specifically to meet their particular needs

EXAMPLE ORDINANCES

- 1 Airport Noise Impact Zone
- 2 Airport Development Zone
- 3 Airport Overlay Zone
4. Noise Easement
- 5 Avigation and Hazard Easement
- 6 Hold Harmless Agreement
- 7 Fair Disclosure Statement

EXAMPLE 1**AIRPORT NOISE IMPACT ZONE**

An ordinance amending Title _____, Planning and Zoning, of the Code of the City of _____, North Dakota, by adding a new Chapter _____, "N" Noise Impact, amending the index of Chapters, Chapter _____ Definitions, and Section _____ Zones Enumerated

The City of _____ ordains

Section I The Council finds

- 1 The lands surrounding the _____ are subject to noise impact from the flight of aircraft to, from, and in the vicinity of the Airport which results in a condition warranting concern for the health and welfare of the public.
- 2 These health concerns are caused by the annual average level of noise generated by the flight of aircraft and the proximity of residences, work places and other places of human habitation to the source of sources of that noise
- 3 The City of _____ can mitigate the impacts of noise by providing a zoning mechanism which restricts noise sensitive land use near the Airport
- 4 The need to address noise impact in the area of the Airport was recognized by Ordinance No _____ requiring soundproofing of residential, hotel, and motel uses west of the Airport
- 5 In order to provide protection from noise impact, identify specifically the area of impact and to address federal and state guidelines for the control of noise sensitive uses in noise impact areas, it is appropriate and in the public interest to protect the health, safety, and welfare of the City that the following amendments to _____ be enacted

NOW, THEREFORE, the Council directs

- a That Title _____, Planning and Zoning, of the Code of the City of _____, North Dakota, is amended by the addition of a new Chapter _____¹, "N" Noise Impact, to be numbered, titled, and read as follows

Chapter _____

"N" NOISE IMPACT

Sections

_____ Purpose
 _____ Procedure
 _____ Regulations
 _____ Newly Annexed Areas

¹ Chapter and Section number

- _____ Zone Boundaries
- _____ Appeal Procedure
- _____ Review and Modification
- _____ Disclosure

_____ Purpose The purpose of this zone is to restrict the development of noise sensitive uses in areas with unique noise impacts. The zone is generally defined as the area within the significant noise impact area around _____ Airport. The Noise Impact Zone Map establishes and defines the boundary of the zone and is made part of this Code, and is established to promote sound land use planning in noise impact areas through the consideration of federal guidelines, Comprehensive Plan objectives, and past City actions affecting land use near the Airport.

_____ Procedure "N" Zones shall be established in combination with all other zones which lie within the boundaries of the Noise Impact Zone, as established by the Map referenced in _____. The boundaries of the Noise Impact Zone are, in part, determined by the location of noise contours. Where a specific noise contour is referenced as a determinant of the Noise Impact Zone and/or the regulations pertaining thereto, said noise contour will be identified by the year in which the measurements and computations deriving said noise contour were made. If no date is associated with a noise contour, the reference is to the most recently derived noise contour of the given value.

- (1) The development of all new residential uses, including single-family houses, mobile homes, rowhouses, duplexes, apartments, condominiums, residential care centers, and houseboats, shall be prohibited within the area encompassed by the 19__ 65 DNL or higher noise contour or the most recently derived 65 DNL noise contour where a reduction of noise has occurred, except where such uses are located in any currently zoned area of R10, R20, FF or County Residential. When the current zoning is superseded by Comprehensive Plan designations, the exception will apply to Plan designations of R10, R20, FF or County Residential. The intent of this exception statement is to recognize those properties within the 19__ 65 DNL noise contour which were zoned for residential use prior to the adoption of the Noise Impact Zone.
- (2) All new residential uses, as identified in _____, within the Noise Impact Zone boundaries, shall be constructed with sound insulation to achieve a day/night average interior noise level of 45 dBA as a maximum. Additionally prior to construction, all new residential uses, lying within the area of the 19__ 65 DNL noise contour and within the most recent 65 DNL noise contour with no greater extent than the 19__ 65 DNL noise contour, shall dedicate a noise easement to the _____², authorizing aircraft noise impact over the grantor's property at levels established by the latest review of this Ordinance, but not to exceed those levels identified in the Noise Impact Zone Map, as adopted by Council.
- (3) The development of new schools, libraries, churches, day care centers, museums, hospitals, auditoriums, concert halls, music halls, and resort and group camps, as defined by the underlying zone, shall be permitted within the 65 DNL noise contour, provided that they be constructed with sound insulation to achieve a day/night average interior noise level of 45 dBA as a maximum.
- (4) All new and reconstructed buildings for the following uses: Hotels, motels, office buildings, movie theaters, restaurants, sports arenas, and manufacturing uses which are noise-sensitive within the 65 DNL or higher noise contour, are required to be constructed with sound insulation to achieve a day/night average interior noise level of 45 dBA as a maximum. For the purpose of this Section,

² Airport Authority

"reconstructed" is defined as construction having a cost exceeding 75 percent of the prereconstruction value of the building

_____ Newly Annexed Areas The Noise Impact Zone shall be applied to areas within the Noise Impact Zone boundary as defined on the Noise Impact Zone Map which is made a part of this Code, when and if such properties become annexed to the City

_____ Zone Boundaries

- (1) The Noise Impact Zone Map establishes the boundaries of the "N" Noise Impact Zone. The boundaries may be amended from time to time as determined by the City Council consistent with Section _____
- (2) The _____ will be responsible for determining whether property is within the zone boundary and is either
 - (a) Outside the 65 DNL noise contour, or
 - (b) Within the 65 DNL noise contour, or
 - (c) Partially within the 65 DNL noise contour

Large-scale maps of the most recent noise contours for the area will be maintained in the _____ and will be the reference map for such determinations

- (3) For those lots or parcels partially within the 65 DNL noise contour, the building site shall be determined by scale from the large-scale Noise Impact Maps. If a residential building site remains outside the 65 DNL noise contour, including required side and rear yards, a residential building permit may be issued on the property outside the 65 DNL noise contour

_____ Appeal Procedure

- (1) Any property owner or owners, affected by the 65 DNL noise contour line, may appeal the validity of the location of the noise contour line as it applies to their property, to the City Planning Commission. The burden is on the appellant to prove that the 65 DNL noise contour line displayed on the Noise Impact Zone Map has changed, using established measurement standards and procedures, or their equivalent. If such proof is made, the Planning Commission shall so inform the _____, and a residential building permit may be issued
- (2) A determination of the Planning Commission may be appealed to the City Council. Such appeal will be heard in accordance with _____

_____ Review and modification

- (1) There shall be a review and hearing by the City Planning Commission of the location of the "N" Noise Impact Zone based on examination of the 65 DNL noise contour provided by the _____ at least every five (5) years. The 65 DNL noise contour shall be modified to reflect the findings of these reviews. Failure to initiate the review process by _____ of the review year shall void this chapter. The first such review shall be initiated not later than _____, 19____
- (2) There shall be notification to all affected property owners in the event of establishment, alternation, or abolishment of an "N" Noise Impact Zone, or any portion of said zone

_____ Disclosure The owner of any residential structure located inside the 65 DNL or higher noise contour shall provide a disclosure statement to all prospective purchasers or tenants of such residential structure, providing notice that the premises may be impacted by noise from aircraft operations from _____ Airport

EXAMPLE

EXAMPLE 2**AIRPORT DEVELOPMENT ZONE**

Section _____ - Purpose and Intent

The purpose of this area is to protect airport facilities from incompatible uses, to provide for future airport expansion, and to preserve lands adjacent to airports for future commercial and light industrial uses which will be directly dependent on air transportation

Section _____ - Uses Permitted

The following uses are permitted subject to issuance of a land use permit

- 1 Accepted Farming Practices
- 2 Air cargo terminals
- 3 Aircraft sales, repair, service, storage, and schools related to aircraft operations, and facilities on the airport property essential for the operation of airports, such as fuel storage, hangar use, F.B.O. offices, etc
- 4 Air passenger terminals
- 5 Public and semi-public buildings, structures, and uses essential to the welfare of an area, such as fire stations, pump stations, and water storage
- 6 Taxi and bus terminals
- 7 Snack shop for airport clientele with a total floor area of no larger than _____ square feet
- 8 Other uses where the ongoing operations and the use must be directly dependent upon and directly associated with the Airport

Section _____ - Uses Subject to a Conditional Use Permit

The following conditional uses will be permitted by the _____

- 1 Light industrial, as permitted in the _____ zone
- 2 Truck terminals

Section _____ - Conditional Use Criteria

The _____ may grant a Conditional Use Permit for uses described in Section _____ if each of the below criteria is met, as determined by the _____

- 1 The ongoing operations or the use must be directly dependent upon and directly associated with the airport

- 2 The use shall not discharge smoke, fumes, noise, sewage, or other nuisances beyond the property on which it is located
- 3 The use shall not conflict with any present or planned operations of the airport
- 4 Height Restriction standards will be met

Section _____ - Limitations of Use

In an Airport Development Zone, the following conditions shall apply.

A Liquid and Solid Wastes

Storage of animal, vegetable, or other wastes which attract insects, rodents, or birds or otherwise create a health hazard shall be prohibited.

B Discharge Standards

There shall be no emission of smoke, fly-ash, dust, vapor, gases, or other forms of air pollution that may cause nuisance or injury to human, plant, or animal life, or to property, or that may conflict with any present or planned operations of the airport

C Lighting

- 1 Sign lighting and exterior lighting shall not project directly into an adjoining residential zone
- 2 Unless necessary for safe and convenient air travel, sign lighting and exterior lighting shall not project directly into the runway, taxiway, or approach zone

D Landscaping

- 1 Site plan submitted with an application for a land use permit must include a landscaping plan which shows the location and type of plant materials
- 2 New uses which abut a residential zone shall provide and maintain a dense evergreen landscape buffer, sight obscuring fence, or landscaped berm which attains a (mature) height of at least six (6) feet
- 3 All unused property shall be maintained in native or existing vegetative ground cover or planted grass, shrub, and barkdust, or other suitable ground cover in an uncluttered manner
- 4 Responsibility for establishment and maintenance of landscaping rests with the property owner

E Parking

- 1 Site plan(s) submitted with an application for a land use permit must include a parking plan which shows the location and number of parking spaces, circulation patterns, and ingress and egress provisions
- 2 All industrial uses within an Airport Development Zone shall provide at least two parking spaces for every three employees on the major shift during normal season

- 3 All Commercial Uses shall follow the Zoning Ordinance for the required number of parking spaces
- 4 All parking lots shall have an all weather surface
- 5 Adequate provisions for safe and convenient circulation, ingress, and egress shall be provided

F Glare and Electro-magnetic Interference

- 1 Building materials shall not produce glare which may conflict with any present or planned operations of the airport
- 2 No use may produce electro-magnetic interference which may conflict with any present or planned operations of the airport

EXAMPLE

EXAMPLE 3

AIRPORT OVERLAY ZONE

SECTION _____ Purpose In order to carry out the provisions of these overlay zones, there are hereby created and established certain zones which include all of the land lying beneath the Airport Imaginary Surfaces as they apply to _____ (airport/currently existing or future public use airport) in the City of _____ County. Such zones are shown on the current Airport Airspace and Runway Protection Zone drawings, prepared by _____ and dated _____.

Further, these overlay zones are intended to prevent the establishment of airspace obstructions in airport approaches and surrounding areas through height restrictions and other land use controls as deemed essential to protect the health, safety, and welfare of the people of the (City/Cities) of _____ and _____ County.

SECTION _____ Special Definitions.

- 1 Utility Runway A runway that is constructed for and intended to be used by propeller driven aircraft of 12,500 pounds maximum gross weight or less
- 2 Visual Runway A runway that is intended solely for the operation of aircraft using visual approach procedures with no instrument approach procedures has been approved, or planned, or indicated on an FAA or state planning document or military service airport planning document
- 3 Nonprecision Instrument Runway A runway having an existing instrument approach procedure utilizing air navigation facilities with only horizontal guidance, or area type navigation equipment, for which a straight-in nonprecision instrument approach procedure has been approved, or planned, or indicated on an FAA or state planning document or military service airport planning document
- 4 Precision Instrument Runway A runway having an existing instrument approach procedure utilizing an Instrument Landing System (ILS), Microwave Landing System (MLS), or a Precision Approach Radar (PAR). It also means a runway for which a precision approach system is planned and is not indicated by an FAA approved airport layout plan, any other FAA or state planning document, or military service airport planning document
- 5 Airport Imaginary Surfaces Those imaginary areas in space which are defined by the Approach Surface, Transitional Surface, Horizontal Surface, and Conical Surface and in which any object extending above these imaginary surfaces is an obstruction
- 6 Airport Hazard Any structure, tree, or use of land which exceeds height limits established by the Airport Imaginary Surfaces
- 7 Approach Surface A surface longitudinally centered on the extended runway centerline and extending outward and upward from each end of the Primary Surface. The inner edge of the approach surface is the same width as the Primary Surface and extends to a width of 1,250 feet for utility runway having only visual approaches, 1,500 feet for a runway other than a utility runway having only visual approaches, 2,000 feet for a utility runway having a nonprecision instrument approach, 3,500 feet for a nonprecision instrument runway other than utility, having visibility minimums greater than three-fourths of a statute mile, 4,000 feet for a nonprecision instrument runway having visibility minimums

as low as three-fourths statute mile, and 16,000 feet for precision instrument runways. The Approach Surface extends for a horizontal distance of 5,000 feet at a slope of 20 feet outward to each foot upward (20:1) for all utility and visual runways, 10,000 feet at a slope of 34 feet outward for each foot upward (24:10) for all nonprecision instrument runways other than utility, and for all precision instrument runways extends for a horizontal distance of 10,000 feet at a slope of 50 feet outward for each foot upward (50:1), thence slopes upward 40 feet outward for each foot upward (40:1) an additional distance of 40,000 feet.

- 8 Primary Surface A surface longitudinally centered on a runway. When the runway has a specially prepared hard surface, the Primary Surface extends 200 feet beyond each end of that runway. When the runway has no specially prepared hard surface or planned hard surface, the Primary Surface ends at each end of that runway. The width of the primary Surface is 250 feet for utility runways having only visual approaches, 500 feet for utility runways having nonprecision instrument approaches, 500 feet for other than utility runways having only visual approaches or nonprecision instrument approaches with visibility minimums greater than three-fourths of a mile and 1,000 feet for nonprecision instrument runways with visibility minimums of three-fourths of a mile or less and for precision instrument runways.
- 9 Transitional Surface Extend seven feet outward for each one foot upward (7:1) beginning on each side of the Primary Surface which point is the same elevation as the runway surface, and form the sides of the approach surfaces thence extending upward to a height of 150 feet above the airport elevation (Horizontal Surface).
- 10 Horizontal Surface A horizontal plane 150 feet above the established airport elevation, the perimeter of which is constructed by swinging arcs of 5,000 feet from the center of each end of the Primary Surface of each visual or utility runway and 10,000 feet from the center of each end of the Primary Surface of all other runways and connecting the adjacent arcs by lines tangent to those arcs.
- 11 Conical Surface Extends 20 feet outward for each one foot upward (20:1) for 4,000 feet beginning at the edge of the horizontal surface (5,000 feet from the center of each end of the Primary Surface of each visual and utility runway or 10,000 feet for all nonprecision instrument runways other than utility at 150 feet above and airport elevation) and upward extending to a height of 350 feet above the airport elevation.
- 12 Runway Protection Zone (RPZ) An area off the runway end (formerly the clear zone) used to enhance the protection of people and property on the ground. The RPZ is trapezoidal in shape and centered about the extended runway centerline. It begins 200 feet (60 m) beyond the end of the arcs usable for takeoff or landing. The RPZ dimensions are functions of the type of aircraft and operations to be conducted on the runway.
- 13 Airport Approach Safety Zone The land that underlies the approach surface, excluding the RPZ.
- 14 Noise Sensitive Areas Within 1,500 feet of an airport or within established noise contour boundaries exceeding 65 DNL.
- 15 Place of Public Assembly Structure of place which the public may enter for such purposes as deliberation, education, worship, shopping, entertainment, amusement, awaiting transportation, or similar activity.

SECTION _____ No Development Area (ND)1 Purpose and Intent

The purpose of this zone is to protect airport facilities from incompatible uses, to provide for future airport expansion, and to preserve lands adjacent to airports for future commercial and light industrial uses which will be directly dependent on air transportation

2 Uses Permitted

The following uses are permitted subject to issuance of a land use permit

- A Accepted Farming Practices
- B Air cargo terminals
- C Aircraft sales, repair, service, storage, and schools related to aircraft operations, and facilities on the airport property essential for the operation of airports, such as fuel storage, hangar use, F.B.O. offices, etc
- D Air passenger terminals
- E Public and semi-public buildings, structures, and uses essential to the welfare of an area, such as fire stations, pump stations, and water storage
- F Taxi and bus terminals
- G Snack shop for airport clientele with a total floor area of no larger than _____ square feet
- H Other uses where the ongoing operations and the use must be directly dependent upon and directly associated with the Airport

3 Uses Subject to a Conditional Use Permit

The following conditional uses will be permitted by the _____, provided they meet all the criteria outlines in Section _____ and meet the requirements of Article _____

- A Light industrial, as permitted in the _____ zone
- B Truck terminals

4 Conditional Use Criteria

The _____ may grant a Conditional Use Permit for uses described in Section _____ if each of the below criteria is met, as determined by the _____

- A The ongoing operations or the use must be directly dependent upon and directly associated with the airport
- B The use shall not discharge smoke, fumes, noise, sewage, or other nuisances beyond the property on which it is located

- C The use shall not conflict with any present or planned operations of the airport
- D Height Restriction standards will be met

5 Limitations of Use

In an Airport Development Zone area, the following conditions shall apply

A Liquid and Solid Wastes

Storage of animal, vegetable, or other wastes which attract insects, rodents, or birds or otherwise create a health hazard shall be prohibited.

B Discharge Standards

There shall be no emission of smoke, fly ash, dust, vapor, gases, or other forms of air pollution that may cause nuisance or injury to human, plant, or animal life, or to property, or that may conflict with any present or planned operations of the airport

C Lighting

- 1 Sign lighting and exterior lighting shall not project directly into an adjoining residential zone
- 2 Unless necessary for safe and convenient air travel, sign lighting and exterior lighting shall not project directly into the runway, taxiway, or approach zone

D Landscaping

- 1 Site plan submitted with an application for a land use permit must include a landscaping plan which shows the location and type of plant materials
- 2 New uses which abut a residential zone shall provide and maintain a dense evergreen landscape buffer, sight obscuring fence, or landscaped berm which attains a (mature) height of at least six (6) feet
- 3 All unused property shall be maintained in native or existing vegetative ground cover or planted grass, shrub, and barkdust, or other suitable ground cover in an uncluttered manner
- 4 Responsibility for establishment and maintenance of landscaping rests with the property owner

E Parking

- 1 Site plan(s) submitted with an application for a land use permit must include a parking plan which shows the location and number of parking spaces, circulation patterns, and ingress and egress provisions
- 2 All industrial uses within a No Development Area shall provide at least two parking spaces for every three employees on the major shift during normal season
- 3 All Commercial Uses shall follow the Zoning Ordinance for the required number of parking spaces

- 4 All parking lots shall have an all weather surface
- 5 Adequate provisions for safe and convenient circulation, ingress, and egress shall be provided

F Glare and Electro-magnetic Interference

- 1 Building materials shall not produce glare which may conflict with any present or planned operations of the airport
- 2 No use may produce electro-magnetic interference which may conflict with any present or planned operations of the airport

SECTION _____ Limited Development Area (LD). In an LD Area, the following regulations shall apply

- 1 Uses Permitted Outright In an LD Area, the following uses and their accessory uses are permitted outright

A. Airport

- B. Farm use, excluding livestock feed or sales yard and excepting those uses set forth in subsection (2) of this section

- 2 Conditional Uses In an LD Area, the following uses and their accessory uses are permitted when authorized in accordance with the requirements of this section and Article _____ of this ordinance

A Farm accessory buildings and uses

- B Mining, quarrying, or other extraction activity, including the processing or refining of ore or other raw materials

C Utility facility necessary of public service

D Golf course

E Water supply and treatment facility

F Manufacturing and warehousing

G Retail and wholesale trade facilities

- 3 Use Limitations In an LD Area, the following limitations and standards shall apply to all uses permitted

- A The height of any structure or part of a structure such as chimneys, towers, antennas, etc shall be limited according to requirements established by the County or any governmental agency relative to uses in the vicinity of an airport, but in no case shall any building or structure exceed 35 feet

- B In approach zones beyond the Runway Protection Zones, no meeting place for public or private purposes which is designed to accommodate more than 25 persons at any one time shall be permitted, nor shall any residential use be permitted
 - C All parking demand created by any use permitted by this section shall be accommodated on the subject premises entirely off-street
 - D No use permitted by this section shall require the backing of traffic onto a public or private street or road right-of-way to accommodate ingress or egress to any use or the premises thereof
 - E There shall not be more than one ingress and one egress from properties accommodating uses permitted by this section per each 800 feet of frontage on an arterial or per each 300 feet of frontage on a collector. If necessary to meet this requirement, permitted uses shall provide for shared ingress and egress
 - F No use permitted under the provisions of this section that generates more than 30 truck-trailer or other heavy equipment trips per day to and from the subject property shall be permitted to locate on a lot adjacent to or across from a residential use or lot in a duly platted subdivision, nor shall a residential use or lot be permitted adjacent to or across the street from an existing or planned use that is expected to generate such traffic
 - G No use permitted under the provisions of this section that generates more than 20 auto-truck trips during the busiest hour of the day to and from the premises shall be permitted unless served directly by an arterial or collector, or other improved street or road designed to serve such types of uses, and in no case shall such traffic be permitted to utilize a street or road which passes through a residential use area
 - H Any use permitted under the provisions of this section that is determined to be incompatible with an existing or planned use adjacent thereto or across the street from shall be screened from such incompatible uses by densely planted trees and shrubs or sight-obscuring fencing
 - I Mining or quarry operation permitted by subsection (2) (B) of this section may not be permitted if such use will allow or cause ponding which is likely to attract birds
 - J No use permitted by subsection (2)(C) of this section shall permit any power lines to be located in clear zones and any power line located within an approach zone shall be in conformance with designated approach slope ratios
 - K No use permitted by this section shall be allowed if such use is likely to attract an unusual quantity of birds, particularly birds which are normally considered high flight
- 4 Design and Use Criteria In the consideration of an application for a proposed use in an LD Area, the Commission shall take into account the impact of the proposed use on nearby residential and commercial uses, on resource carrying capacities, on the capacity of transportation and other public facilities and services, and on the appearance of the proposal. In approving a proposed use the Commission shall find that
- A Proposal is in compliance with the Airport Master Plan, and more specifically, the Land Use Element thereof
 - B Proposal is in compliance with the Comprehensive Plan

- C Proposal is in compliance with the intent and provisions of this ordinance and more particularly with this section
- D That economic and environmental considerations are in balance
- E That any social, economical, physical, or environmental impacts are minimized
- F Any application for a proposed use in an LD Area may be denied if, in the opinion of the Planning Commission, the proposed use is not related to the present land use patterns in the area
- G An application for a proposed use in an LD Area may be denied if the applicant fails to demonstrate that the proposed use is essential to the public interest and to the full development of the area
- H In approving a proposed use in an LD Area, the Commission shall be satisfied that the applicant is fully appraised of the County's policy relative to development in the area in relation to the existing airport and accessory uses thereof.
- I The Planning Commission may require establishment and maintenance of screenings, the use of glare resistant material in construction and landscaping, or may attach other similar conditions or limitations that will serve to reduce hazards to airport operations

5 Additional Requirements As a condition of approval of any use proposed within an LD Area, the _____ may require

- A An increase in required setbacks
- B Additional off-street parking and loading facilities and building standards
- C Limitations on signs or lighting, time of operations, points of ingress and egress, and building heights
- D Additional landscaping, screening, and other improvement
- E Any other conditions considered necessary to achieve compliance with the intent and purpose of this ordinance and policies of the Comprehensive Plan

SECTION _____ Height Restricted Development Area (HR)

1 Height Limitations

Except as otherwise provided in this Ordinance, no structure shall be erected, altered, or maintained, and no tree shall be allowed to grow in any zone created by this Section to a height in excess of the applicable height limit herein established for such zone. Such applicable height limitations are hereby established for each of the zones in question as follows:

- A Utility Runway Visual Approach Zone - Slopes twenty (20) feet outward for each foot upward beginning at the end of and at the same elevation as the primary surface and extending to a horizontal distance of 5,000 feet along the extended runway centerline

- B Utility Runway Nonprecision Instrument Approach Zone - Slopes twenty (20) feet outward for each foot upward beginning at the end of and at the same elevation as the primary surface and extending to a horizontal distance of 5,000 feet along the extended runway centerline
- C Runway Larger Than Utility Visual Approach Zone - Slopes twenty (20) feet outward for each foot upward beginning at the end of and at the same elevation as the primary surface and extending to a horizontal distance of 5,000 feet along the extended runway centerline
- D Runway Larger Than Utility With A Visibility Minimum Greater Than 3/4 Mile Nonprecision Instrument Approach Zone - Slopes thirty-four (34) feet outward for each foot upward beginning at the end of and at the same elevation as the primary surface and extending to a horizontal distance of 10,000 feet along the extended runway centerline
- E Runway Larger Than Utility With A Visibility Minimum As Low As 3/4 Mile Nonprecision Instrument Approach Zone - Slopes thirty-four (34) feet outward for each foot upward beginning at the end of and at the same elevation as the primary surface and extending to a horizontal distance of 10,000 feet along the extended runway centerline
- F Precision Instrument Runway Approach Zone - Slopes fifty (50) feet outward for each foot upward beginning at the end of and at the same elevation as the primary surface and extending to a horizontal distance of 10,000 feet along the extended runway centerline, thence slopes upward forty (40) feet horizontally for each foot vertically to an additional horizontal distance of 40,000 feet along the extended runway centerline
- G Transitional Zones - Slope seven (7) feet outward for each foot upward beginning at the sides of and at the same elevation as the primary surface and the approach surface, and extending to a height of 150 feet above the airport elevation which is 100 feet above mean sea level. In addition to the foregoing, there are established height limits sloping seven (7) feet outward for each one (1) foot upward beginning at the sides of and at the same elevation as the approach surface, and extending to where they intersect the conical surface
- H Horizontal Zone - The horizontal zone is established for visual approach airports by swinging arcs of 5,000 feet radii from the center of each end of the primary surface of each runway and connecting the adjacent arcs by drawing lines tangent to those arcs. The horizontal zone does not include the approach and transitional zones
- I Conical Zone - Slopes 20 feet outward for each foot upward beginning at the periphery of the horizontal zone and at 150 feet above the airport elevation and extending outward to a distance of 4,000 feet and to a height of 350 feet above the airport elevation
- J Excepted Height Limitations - Nothing in this Section shall be construed as prohibiting the construction or maintenance of any structures, or growth of any tree to a height of up to ____³ feet above the surface of the land

³ The adoption of height limits should be reasonable and based on land use considerations in the vicinity of the airport and the nature of the area to be zoned. The adoption of height limits should not be so low as to constitute a taking of private property without due process of law

2 Use Restrictions

Notwithstanding any other provisions of this Section, no use may be made of land or water within any zone established by this Section, in such a manner as to create electrical interference with navigational signals or radio communication between the airport and aircraft, make it difficult for pilots to distinguish between airport lights and other, result in glare in the eyes of pilots using the airport, impair visibility in the vicinity of the airport, create bird strike hazards, or otherwise in any way endanger or interfere with the landing, takeoff, or maneuvering of aircraft intending to use the airport

3 Nonconforming Uses

- A Regulations Not Retroactive - The regulations prescribed by this Section shall not be construed to require the removal, lowering, or other change or alternation of any structure or tree not conforming to the regulations as of the effective date of this Section, or otherwise interfere with the continuance of a nonconforming use. Nothing contained herein shall require any change in the construction, alternation, or intended use of any structure, the construction or alternation of which was begun prior to the effective date of this Section, and is diligently prosecuted
- B Marking and Lighting - Notwithstanding the preceding provision of this Section, the owner of any existing nonconforming structure or tree is hereby required to permit the installation, operation, and maintenance thereon of such markets and lights as shall be deemed necessary by the _____⁴ to indicate to the operators of aircraft in the vicinity of the airport the presence of such airport obstruction. Such markers and lights shall be installed, operated, and maintained at the expense of the _____⁵

4 Permits

- A Future Uses - Except as specifically provided in a, b, and c hereunder, no material change shall be made in the use of land, no structure shall be erected or otherwise established, and no tree shall be planted in any zone hereby created unless a permit therefor shall have been applied for and granted. Each application for a permit shall indicate the purpose for which the permit is desired, with sufficient particularity to permit it to be determined whether the resulting use, structure, or tree would conform to the regulations herein prescribed. If such determination is in the affirmative, the permit shall be granted. No permit for a use inconsistent with the provisions of this Ordinance shall be granted unless a variance has been approved in accordance with Section _____
- 1 In the area lying within the limits of the horizontal zone and conical zone, no permit shall be required for any tree or structure less than seventy-five feet of vertical height above the ground, except when, because of terrain, land contour, or topographic features, such tree or structure would extend above the height limits prescribed for such zones
 - 2 In areas lying within the limits of the approach zones, but at a horizontal distance of not less than 4,200 feet from each end of the runway, no permit shall be required for any tree or

⁴ Insert the title of the appropriate official who has been charged with the responsibility for determining the necessity for marking and lighting

⁵ Insert name of the appropriate political body of subdivision

structure less than seventy-five feet of vertical height above the ground, except when such tree or structure would extend above the height limit prescribed for such approach zones

- 3 In the areas lying within the limits of the transition zones beyond the perimeter of the horizontal zone, no permit shall be required for any tree or structure less than seventy-five feet of vertical height above the ground, except when such tree or structure, because of terrain, land contour, or topographic features, would extend above the height limit prescribed for such transition zones

Nothing contained in any of the foregoing exceptions shall be construed as permitting or intending to permit any construction, or alternation of any structure, or growth of any tree in excess of any of the height limits established by this Ordinance except as set forth in Section _____

- B Existing Uses - No permit shall be granted that would allow the establishment or creation of an obstruction or permit a nonconforming use, structure, or tree to become a greater hazard to air navigation than it was on the effective date of this Ordinance or any amendments thereto or than it is when the application for a permit is made. Except as indicated, all applications for such a permit shall be granted.
- C Nonconforming Uses Abandoned or Destroyed - Whenever the _____⁶ determines that a nonconforming tree or structure has been abandoned or more than 80 percent torn down, physically deteriorated, or decayed, no permit shall be granted that would allow such structure or tree to exceed the applicable height limit or otherwise deviate from the zoning regulations
- D Variances - Any person desiring to erect or increase the height of any structure, or permit the growth of any tree, or use property, not in accordance with the regulations prescribed in this Section, may apply to the Board of Adjustment for a variance from such regulations. The application for variance shall be accompanied by a determination from the Federal Aviation Administration as to the effect of the proposal on the operation of air navigation facilities and the safe, efficient use of navigable airspace. Such variances shall be allowed where it is duly found that a literal application or enforcement of the regulations will result in unnecessary hardship and relief granted, will not be contrary to the public interest, will not create a hazard to air navigation, will do substantial justice, and will be in accordance with the spirit of this Section. Additionally, no application for variance to the requirements of this Section may be considered by the Board of Adjustment unless a copy of the application has been furnished to the _____⁷ for advice as to the aeronautical effects of the variance. If the _____⁷ does not respond to the application within 15 days after receipt, the Board of Adjustment may act on its own to grant or deny said application.
- E Obstruction Marking and Lighting - Any permit or variance granted may, if such action is deemed advisable to effectuate the purpose of this Section and be reasonable in the circumstances, be so conditioned as to require the owner of the structure or tree in question to install, operate, and maintain, at the owner's expense, such markings and lights as may be necessary. If deemed proper by the Board of Adjustment, this condition may be modified to require the owner to permit

⁶ Insert here the title of the appropriate official charged with making this determination

⁷ Insert here the official or body responsible for operation and maintenance of the airport to be zoned, e g , Airport Manager

the _____⁷, at its own expense, to install, operate, and maintain the necessary markings and lights

SECTION _____ Procedures An applicant seeking a conditional use under Section _____ above, shall provide the following information

- 1 Property boundary lines as they relate to the Airport Imaginary Surfaces
- 2 Location and height of all existing and proposed buildings, structures, utility lines, and roads
In accordance with _____, _____ Planning Authority shall notify the owner of the airport and North Dakota Aeronautics Commission on land use permits or zone changes within 5,000 feet of a visual and 10,000 feet of instrument airport so as to provide North Dakota Aeronautics Commission an opportunity to review and comment

SECTION _____ Limitations

- 1 To meet the standards established in FAA Regulations, Part 77 and _____, no structure shall penetrate into the Airport Imaginary Surfaces as defined above under Section _____
- 2 No place of public assembly shall be permitted in the Airport Development Zone or RPZ
- 3 No structure or building shall be allowed within the RPZ
- 4 Whenever there is a conflict in height limitations prescribed by this overlay zone and the primary zoning district, the lowest height limitation fixed shall govern, provided, however, that the height limitations here imposed shall not apply to such structures customarily employed for aeronautical purposes
- 5 No glare producing materials shall be used on the exterior of any structure located within the Limited Development Zone
- 6 In noise sensitive areas (within 1,500 feet of an airport or within established noise contour boundaries of 65 DNL and above for identified airports) where noise levels are a concern, a declaration of anticipated noise levels shall be attached to any building permit, land division appeal, deed, and mortgage records. In areas where the noise level is anticipated to be 65 DNL and above, prior to issuance of a building permit for construction of noise sensitive land use (real property normally used for sleeping or normally used as schools, churches, hospitals, or public libraries) the permit applicant shall be required to demonstrate that a noise abatement strategy will be incorporated into the building design which will achieve an indoor noise level equal to or less than 65 DNL. The planning and building department will review building permits or noise sensitive developments
- 7 No development that attracts or sustains hazardous bird movements from feeding, watering, or roosting across the runways and/or approach and departure patterns of aircraft. Planning authority shall notify North Dakota Aeronautics Commission of such development (e.g., waste disposal sites and wetland enhancements) within the airport overlay zone so as to provide North Dakota Aeronautics Commission an opportunity to review and comment on the site in accordance with FAA AC 150/5200-33

EXAMPLE 4

NOISE EASEMENT

THIS AGREEMENT, made this _____ day of _____, 19____, between the _____ (Airport Authority), a municipal corporation of the State of North Dakota, hereinafter referred to as "Grantee",

The Grantor does hereby grant, in consideration for the right to develop the subject property for residential use, pursuant to City Planning and Zoning Code, Chapter (no.), to the Grantee, its successors and assigns, to have and to hold an easement for aircraft noise impact until _____ Airport shall be abandoned or shall cease to be used for public airport purposes, over the following described parcel of land situated in the County of _____, State of North Dakota, as follows

(Legal description and street address of Grantor's parcel of land)

Said Easement shall encompass the right, in the airspace above the surface of the Grantor's property having the same boundaries as the above described property and extending from the surface upwards to the limits of the atmosphere of the earth, to cause in said airspace a maximum of such noise as reflected by the Noise Impact Zone Map adopted by City Ordinance No _____. This easement is only applicable to airport noise caused from runway alignments existing in (year) _____. More specifically, the noise created by aircraft now known or hereafter used for navigation of or flight in air, shall not exceed the permitted annual average DNL level obtained by using established measurement standards and procedures. The permitted annual average DNL level shall not be greater than the annual average DNL level established in (year) _____ or the most recent annual average DNL established, pursuant to Section (no.), prior to the date of said Easement, whichever is the lesser. If the permitted annual average DNL level can be shown to have been exceeded, as provided for by Section (no.), said Easement shall be void.

The granting of said Easement shall establish the Grantor's right to develop the above described parcel of land for residential use. The Grantor's execution and offering of said Easement is sufficient to fulfill the requirements for the issuing of a building permit if all other zoning requirements have been met.

It is understood and agreed that these covenants and agreements shall run with the land, that notice shall be made to and shall be binding upon heirs, administrators, executors, successors, and assigns of the Grantor.

IN WITNESS WHEREOF, the Grantor has hereunto set his hand and seal this _____ day of _____, 19____

Grantor

EXAMPLE 5**AVIGATION AND HAZARD EASEMENT**

WHEREAS, (full name of property owner(s)) hereinafter called the Grantors, are the owners in fee of that certain parcel of land situated in the City of _____, County of _____, State of _____, more particularly described as follows

(full description of property to be covered by easement)

hereinafter called "Grantors' property," and outlined on the attached map (Figure 1),

NOW, THEREFORE, in consideration of the sum of _____ dollars (\$ _____) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Grantors, for themselves, their heirs, administrators, executors, successors, and assigns, do hereby grant, bargain, sell, and convey unto (owner and operator of airport, i.e., City of _____) hereinafter called the Grantee, its successors and assigns, for the use and benefit of the public, as easement and right of way, appurtenant to (full name of airport) or the unobstructed passage of all aircraft, ("aircraft" being defined for the purpose of this instrument of any contrivance now known or hereafter invented, used, or designed for navigation of or flight in the air) by whomsoever owned and operated

in the airspace above Grantors' property above an imaginary plane rising and extending in a general (i.e., Easterly) direction over Grantors' property, said imaginary plane running from approximately (i.e., 25) feet Mean Sea level above Point A on Figure 1 at the rate of one foot vertically for each (i.e., 50) feet horizontally to approximately (i.e., 55) feet Mean Sea level above Point B on Figure 1, to an infinite height above said imaginary plane,¹

(OR USE THE FOLLOWING)

in the air space above Grantors' property above a Mean Sea level of (i.e., 150) feet, to an infinite height above said Mean Sea level of (i.e., 150) feet,¹

(OR USE FOLLOWING)

in all air space above the surface of Grantors' property, to an infinite height above said Grantor's property,¹

together with the right to cause in all air space above the surface of Grantors' property such noise, vibrations, fumes, dust, fuel particles, and all other effects that may be caused or may have been caused by the operation of aircraft landing at, or taking off from, or operating at or on said (full name of airport)

The easement and right of way hereby granted includes the continuing right in the Grantee to prevent the erection or growth upon Grantors' property of any building, structure, tree, or other object,

extending into the air space above the aforesaid imaginary plane,¹

(OR USE THE FOLLOWING)

¹ Alternative language depending upon desired coverage of easement

extending into the air space above the said Mean Sea level of (i e , 150) feet,¹

(OR USE THE FOLLOWING)

extending into the air space above the surface of Grantors' property,¹

and to remove from said air space, or at the sole option of the Grantee, as an alternative, to mark and light as obstructions to air navigation, any such building, structure, tree or other objects now upon, or which in the future may be upon Grantors' property, together with the right of ingress to, egress from, and passage over Grantors' property for the above purposes

TO HAVE AND TO HOLD said easement and right of way, and all rights appertaining thereto unto the Grantee, its successors, and assigns, until said (full name of airport) shall be abandoned and shall cease to be used for public airport purposes

AND for the consideration hereinabove set forth, the Grantors, for themselves, their heirs, administrators, executors, successors, and assigns, do hereby agree that for and during the life of said easement and right of way, they will not hereafter erect, permit the erection or growth of, or permit or suffer to remain upon Grantors' property any building, structure, tree, or other object extending into the aforesaid prohibited air space, and that they shall not hereafter use or permit or suffer the use of Grantors' property in such a manner as to create electrical interference with radio communication between any installation upon said airport and aircraft, or as to make it difficult for flyers to distinguish between airport lights and others, or as to impair visibility in the vicinity of the airport or as otherwise to endanger the landing, taking off, or maneuvering of aircraft, it being understood and agreed that the aforesaid covenants and agreements shall run with the land

In consideration of the premises and to assure Grantee of the continued benefits accorded it under this Easement, (name of mortgagee), owner and holder of a mortgage dated _____ and recorded _____ covering the premises above described, does hereby covenant and agree that said mortgage shall be subject to and subordinate to this Easement and the recording of this Easement shall have preference and precedence and shall be superior and prior in lien to said mortgage irrespective of the date of the making or recording of said mortgage instrument²

IN WITNESS WHEREOF, the Grantors have hereunto set their hands and seals this _____ day of _____, 19 _____

Signed, sealed, and delivered in the presence of

_____(SEAL)

_____(SEAL)

(Notarial Acknowledgement)

² Local recordation and subordination practices must also be met. If subordination is necessary, in which case the mortgagee must join in the agreement, the above language is suggested

EXAMPLE 6**HOLD HARMLESS AGREEMENT**

KNOW ALL MEN BY THESE PRESENTS, that the undersigned, hereinafter referred to as Grantees (whether singular or plural), hereby covenant and agree that they shall not, by reason of their ownership or occupation of the following described real property, protest or bring suit or action against the _____ Airport or the City (County) of _____ for aviation related noise, property damage or personal injuries resulting from activities at or connected with the _____ Airport when such activities conform to the then existing rules and regulations of said airport and the applicable federal air regulations and no negligence on the part of said airport is involved. The real property of Grantees subject to this covenant and agreement is situated in the County of _____, State of North Dakota, and described as follows

(Insert Legal Description and Appropriate Map)

This covenant and agreement is made and executed by the Grantees in consideration of the City (County) of _____ granting a conditional use permit for Grantees use and development of the above described real property, which real property is located in the airport approach zone of the _____ Airport. The execution of this covenant and agreement by Grantees is required by the City (County) of _____ as a pre-requisite to the granting of the above said conditional use permit to Grantees. This agreement is executed for the protection and benefit of the _____ Airport and the City (County) of _____ interest in said airport and to prevent development in adjacent lands to said airport which will interfere with the continued operation existent and development of said airport. This covenant and agreement is intended to be binding upon the Grantees, their heirs, assigns, and successors and inure to the benefit of the City (County) of _____ and the Airport, their successors and assigns.

DATED this _____ day of _____, 19____

STATE OF NORTH DAKOTA)

GRANTEES

)

)

SS _____

)

City/County of _____)

EXAMPLE 7**FAIR DISCLOSURE STATEMENT**

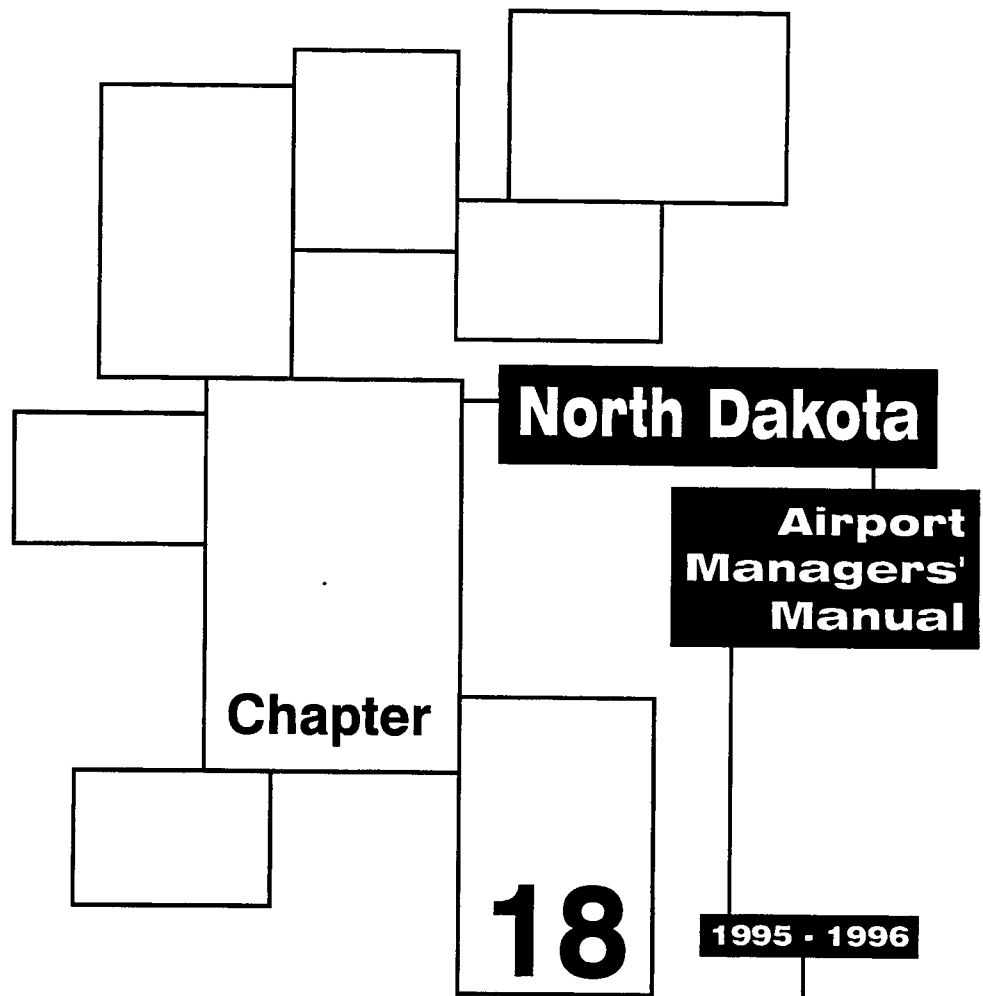
A disclosure statement, adhering to the form of the statement below, shall be provided to and signed by each potential purchaser of property within the Airport Influence Area as shown on the approved Airport Land Use Drawing. The signed statement will then be affixed by the Seller to the agreement of the sale.

The tract of land situated at _____
in _____ consisting of approximately _____
_____ acres
(County and State)
which is being conveyed from _____ to _____ lies
within _____ miles of (airport name) may be subjected to varying noise levels, as the same
is shown and depicted on the official Zoning Maps.

CERTIFICATION

The undersigned purchaser(s) of said tract of land certify(ies) that (he) (they) (has) (have) read the above disclosure statement and acknowledge(s) the pre-existence of the airport named above and the noise exposure due to the operation of said airport.

(SIGNED)



FILE

EMPTY