



AIRPORT ADVISORY BOARD AGENDA

AIRPORT MEETING ROOM	WEDNESDAY, OCTOBER 18, 2023	7:00 AM
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1. Call to Order
2. Approval of the Minutes
3. Airport Manager Update
4. Other
 - A. 5010 Inspection Updates
5. Next Meeting Date:
6. Adjournment

June 16, 2023

Gerald Serres
Faribault Municipal-Liz Wall Strohfus Fld
3401 Highway 21 West
Faribault MN 55021-3648

Dear Gerald Serres,

This year an on-site inspection of the Faribault Municipal-Liz Wall Strohfus Fld was conducted under the FAA's Airport Master Record (Form 5010) Program. The inspector collected the most current information concerning the physical condition or status of the facility, the visual landing aids, and the obstructions surrounding the airport. In Minnesota, the Department of Transportation, Office of Aeronautics performs many of these inspections under contract to the FAA.

The 5010 inspections are intended to enhance safety for the flying public. The data gathered forms the basis for the federally produced flight publications such as the Airport Chart Supplements, Aeronautical Charts, and instrument Terminal Procedures Publications.

While onsite the inspectors will also be ensuring all Minnesota Statutes, Chapter 360, and Aeronautics Rules, Chapter 8800 pertaining to this airport are met.

We have enclosed an aerial view of the airport with inspection information overlaid for your reference. The numbers on this sheet correlate to the runway end and the object ID on the enclosed Obstacle Evaluation Report. Please review this carefully, as some objects may not obstruct an airport surface and some obstructions might not be required to be removed. Please see the map legend to identify the objects that are required to be addressed.

MnDOT uses handheld GPS units with local corrections and laser range-finders with inclinometers to collect airport data. While these devices are accurate, this is not survey grade data.

Note that where one point is identified on the aerial image, it may represent an entire group of trees. Further, the inspection is done looking out from the airport and the objects we identify may be obscuring objects farther away that would also be obstructions. The airport sponsor has the option of obtaining survey data to verify our data and further define the objects in areas we are unable to obtain.

Your attention is directed to the conditions identified as safety discrepancies on the second page of this report. We recommend that appropriate measures be taken to correct these problem areas in order to improve the condition of the airport and enhance safety. It is the Airport Manager's responsibility to request a Notice to Airmen (NOTAM) be issued to advise pilots of any safety related problems that cannot be corrected immediately.

The Faribault Municipal-Liz Wall Strohfus Fld was inspected on May 25, 2023, and the inspector noted the following:

1. A continuous row of trees was obstructing the approach surface to runway 12, penetrating by 33 feet. The data point collected can be identified by object ID 12-02 on the aerial image. The approach surface for runway 12 extends out and up at a 34:1 slope. Minnesota rules require the approach surface to remain clear. Please remove the obstructions and maintain the approach surface. Please note that we only collect data on the tallest obstruction in the area, so when trimming, all other trees of similar height will also need to be removed/trimmed. (See image 1) **Object ID12-02 Removed**
2. Trees were obstructing the approach surface to runway 01, penetrating by 12.86 feet. The data point collected can be identified by object ID 01-04 on the aerial image. The approach surface for runway 01 extends out and up at a 20:1 slope. Minnesota rules require the approach surface to remain clear. Please remove the obstructions and maintain the approach surface. (See image 2) **Removal of object ID01-04 in progress**
3. The approach surface to runway 30 is obstructed by two roads, Hwy 21 and Airport Rd W located at object ID 30-01 and 30-02. These roads do not meet the 34:1 approach clearance currently required by Minnesota rules. MnDOT has decided to waive the approach clearance on a temporary basis to allow operations to continue until the roads can be mitigated as obstructions. Please see attached waiver. (See image 3) **Reference Waiver**
4. Trees were growing up under the approach surface of runway 19, at object ID 19-03, and were within 1.6 feet of becoming obstructions. If they are not addressed, they will most likely penetrate the approach surface sometime in the next few years. Please start a maintenance program for the trees in the center of the approach surface. These will need to be cut on a regular basis to keep them from penetrating the approach surface. (See image 4) **Tree Control in Progress**
5. Trees were obstructing the primary surface at object ID 12-01. These trees are considered a close-in obstruction since they are located in the area within the first 200 feet of the runway end. This area is where aircraft are flying extremely low on final approach. Any obstructions in this area could be a serious hazard to pilots. Minnesota rules require the primary surface is to remain clear of obstructions. Please remove these obstructions and keep the primary surface maintained.(See image 1) **Tree and brush along object ID12-01 in progress**
6. The line of trees continues into the primary surface for runway 12/30 as obstructions, identified by object ID 12-03. The primary surface is 500 feet wide, centered on the runway centerline. This area must be kept clear of non-essential equipment, as well as other hazards to aircraft such as brush and trees. (See image 1) **Brush Removal of object ID12-03 in progress**
7. Trees were obstructing the primary surface near runway 01 approach end, identified by object ID 01-01. The primary surface for runway 01/19 is 250 feet wide, centered on the runway centerline. This area must be kept clear of non-essential equipment, as well as other hazards to aircraft such as brush and trees. Please clear and maintain the primary surface. (See image 5) **Brush removal of object ID01-01 in progress**
8. The airport license and waiver could not be found displayed at the airport. Minnesota public airport rules requires the airport license to be posted on a bulletin board. Please ensure the current license is posted. If you need an updated copy, please contact our office. **License Displayed.**

9. There was no area map posted at the airport. A map should be posted on your bulletin board to comply with the Minnesota airport rules. Enclosed is a new map for the airport. Please post this and if at any point you need another map, please notify me and we will send you a new one. **Bulletin and Map are and have always been in the Pilot's Lounge**
10. There was no phone available at the airport for pilots to use. The Minnesota Rules require access to a phone in the event of an emergency or to contact Flight Service via an 800-number. Please take measures to provide a phone at the airport. **Will discuss plans for phone**
11. Some tiedown rings have filled in with dirt and weeds are growing through. The Minnesota Rules requires at least three more tiedowns be available than the number of aircraft that regularly use the facilities. The tiedowns are to be marked and maintained so as to be readily located. Please clear the tiedown rings so they are available for transient aircraft. (See image 6) **Tie down rings cleaned**
12. Several lights were inoperative and/or broken at the time of the inspection. Please fix the light to ensure it is in operable condition. If you need assistance with addressing this issue, please contact Casey Carlson at 651-600-8656. Unless the light(s) can be immediately fixed, a NOTAM should be filed to notify pilots of the outage. (See image 7) **Lights were being replaced and repaired at the time of the 5010 inspection, all runway lights are operational**
 - a. Broken taxiway light at intersection of parallel taxiway and midfield connector taxiway C
 - b. Broken taxiway light on parallel taxiway
 - c. Broken taxiway light at intersection of midfield connector taxiway C and runway 12/30
13. Extra cones were placed 270 feet from runway 19 end. The placement is not in a typical area to outline the shape of runway 01/19 and could cause confusion to pilots. If these are extra cones, please place them in storage. If the cones are being used to mark an area, please use some other type of marker that won't be confused with a runway edge marker. (See image 8) **Cones adjusted**
14. The runway identifier sign at the intersection of runway 12/30 and the midfield connector taxiway C was broken and laying in the grass. This sign should be repaired as soon as possible to ensure pilots are able identify what intersection they are on. If you need assistance with addressing this issue, please contact Casey Carlson at 651-600-8656. Unless the light(s) can be immediately fixed, a NOTAM should be filed to notify pilots of the outage. (See image 9) **Runway sign was being repaired at the time of the 5010 inspection All runway identifiers operational.**
15. Runway 12/30 pavement was in fair condition and was showing signs of deterioration with widening cracks and weeds growing through. Please add a future project to your CIP and make sure crack sealing part of your regular maintenance program to ensure the most life out of your pavement. Enclosed is a copy of your CIP and most recent pavement condition index report. (See image 10) **Sealing is identified on CIP**
16. The turf on runway 01/19 was in fair condition with some bare spots showing in several places. Attached is a document that details how to build and maintain a turf runway. This will provide you information on what type of grass seed is best to plant in the sandy spots on the runway. Please reseed the runway and maintain the turf. (See image 11) **Low rain falls at the time of the 5010 inspection. Grass runway satisfactory no bare spots.**
17. The ramp pavement had some separation and with large cracks that measured at least 2 inches deep. This should be addressed as soon as possible. Please add a future project to your CIP and make sure

crack sealing part of your regular maintenance program to ensure the most life out of your pavement. (See image 12) **No action. These are cut joints, will be sealed with crack seal project.**

18. Some of the cones marking runway 01/19 faded and one damaged at runway 19 approach end. Minnesota rules require turf runways to be marked with edge markers and end markers, so they are clearly visible from traffic pattern altitude. If you need more cones, please let us know and we will add you to the list of airports with cone requests. (See image 13) **Cones Replaced**
19. Some of the blue reflective taxiway markers were broken. Please replace the markers so pilots are able to clearly see the taxiway edges. If you do not have extra markers, please Casey Carlson at 651-600-8656 and he can assist with ordering new ones. (See image 14) **Markers Replaced**
20. Slabs of asphalt were lying in the grass near the ramp. Large amounts of propeller wash, or high winds, could pick up or blow the debris onto the ramp and cause damage to aircraft. This debris should be removed to ensure it doesn't cause a hazard to aircraft. (See image 15) **Debris removed.**
21. Grass was overgrown at the bases around the REIL, PAPI and cones. If left unattended, the grass will cause the lights and markers to be hidden from view of the pilots. The grass should be maintained at a lower level to ensure the lights are visible. (See image 16) **Areas were cleared during normal grounds maintenance.**
22. The airport design standards states that equipment within the airfield safety areas must have frangible mounts. The height of frangible portions should not exceed three inches above grade. The PAPI bases were beginning to heave from the ground and soon will exceed this limit. Please correct this by adding fill around the bases to maintain a level grade. (See image 17) **In progress, fill added.**
23. The airport pavement markings were faded and peeling. Your airport is under the MnDOT contract to be routinely repainted. It is scheduled to be repainted next in 2024. If the markings deteriorate further, please let us know and we will repaint your airport as soon as possible. (See image 18) **Noted, state to comply with runway marking repaint.**

Enclosed is the listing of aircraft based at the Faribault Municipal-Liz Wall Strohfus Fld as reported to the FAA through the website www.basedaircraft.com. The last confirmed aircraft data was in June of 2017. This should be done at least annually to ensure that the FAA records are kept up to date with your based aircraft. Please review the report and visit the website to update the aircraft based at your airport.

The Minnesota Department of Transportation and the FAA greatly appreciate your efforts to provide a safe general aviation facility for use by the flying community. Once you have a plan to correct the items identified during the inspection, notify our office in writing as soon as possible but no later than 60 days after the receipt of this letter. If you need any assistance, please give me a call.

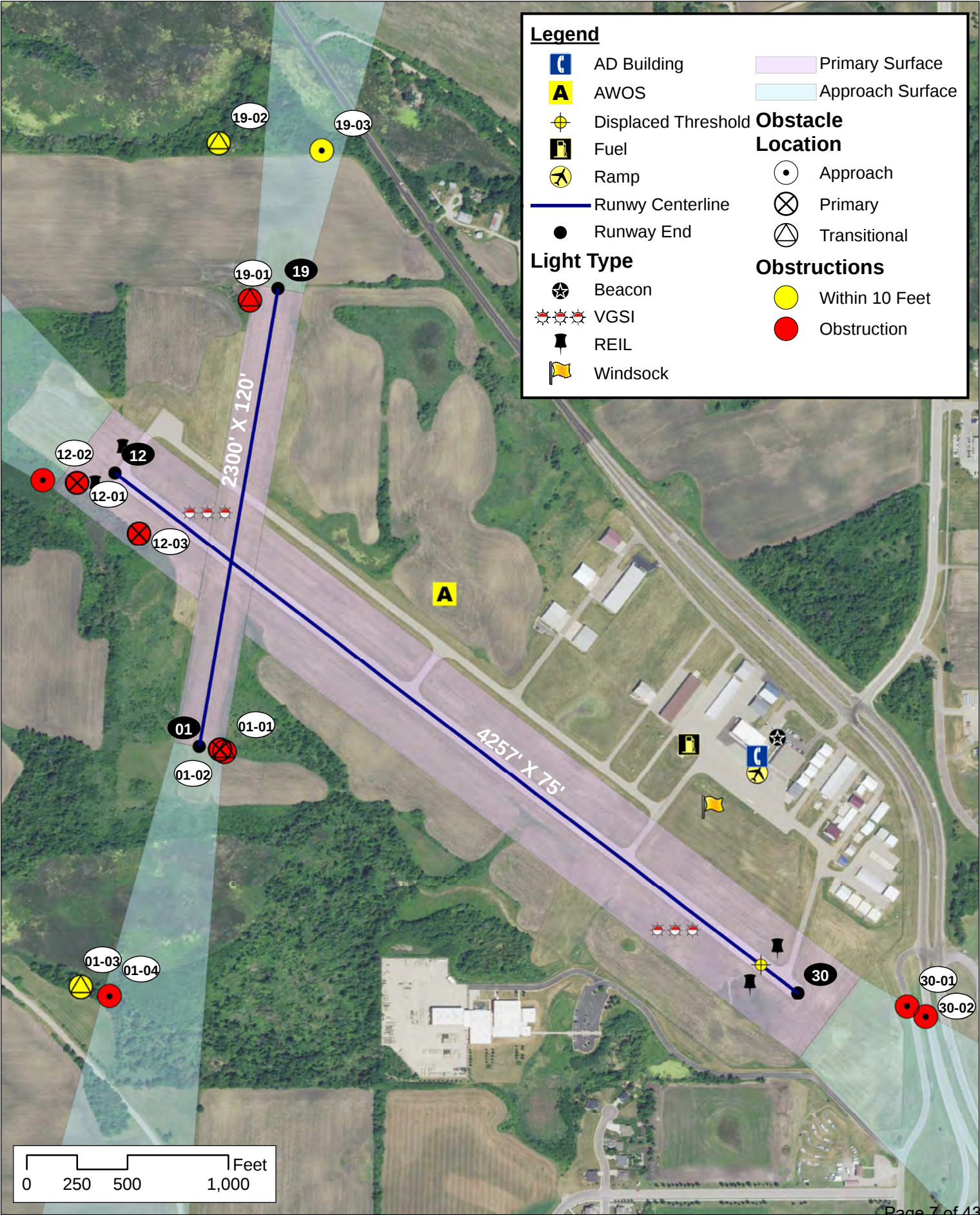
Sincerely,

A handwritten signature in black ink, reading "James McCanney". The signature is fluid and cursive, with the first name "James" and last name "McCanney" clearly distinguishable.

James McCanney
Airport Coordinator - South Region
Phone: 612-346-8029
E-mail: james.mccanney@state.mn.us

Enclosures (25)

cc: City of Faribault
MnDOT Regional Airport Engineer
FAA, Minneapolis Airports District Office



Obstacle Evaluation Report

ID: FBL **City Name:** Faribault **Airport Name:** Faribault Municipal
Airport-Liz Wall Strohfus Fld **Site Number:** 10689.*A

Runway: 01/19 **Surface:** Turf

Runway End: 01 **Part 77 Cat:** A(V) **Req'd Approach Slope:** 20 **Displ Thld:** <null>

Nbr	Pt77 Surf	Obst Type	Penet-ration	Ht Abv Rwy	Dist Fm Rwy End	Dist Fm Rwy Ctr	Dir Fm CtrLine	Slope	Slope to DT	Description
01-04	Approach	Tree	12.86	78.1	1295.66	221.87	L	16	0	Trees
01-02	Primary	Trees	10.97	11.5	3.48	107.49	R	0	0	Shrubs/tree
01-01	Transitional	Trees	14.2	15.2	4.08	131.23	R	0	0	Shrubs/small trees
01-03	Transitional	Tree	-3.89	78.1	1275.66	369.87	L	0	0	Trees

Runway End: 19 **Part 77 Cat:** A(V) **Req'd Approach Slope:** 20 **Displ Thld:** <null>

Nbr	Pt77 Surf	Obst Type	Penet-ration	Ht Abv Rwy	Dist Fm Rwy End	Dist Fm Rwy Ctr	Dir Fm CtrLine	Slope	Slope to DT	Description
19-03	Approach	Trees	-1.68	34.8	613.56	92.43	L	17	0	<null>
19-01	Transitional	Trees	24.66	25.7	79.95	129.99	R	0	0	Group of small trees
19-02	Transitional	Tree	-3.81	61.8	660.33	417.37	R	0	0	<null>

Runway: 12/30 **Surface:** Asph

Runway End: 12 **Part 77 Cat:** C **Req'd Approach Slope:** 34 **Displ Thld:** <null>

Nbr	Pt77 Surf	Obst Type	Penet-ration	Ht Abv Rwy	Dist Fm Rwy End	Dist Fm Rwy Ctr	Dir Fm CtrLine	Slope	Slope to DT	Description
12-02	Approach	Tree	33.92	37	263.71	246.15	R	1	0	Continuing row of trees varying heights
12-01	Primary	Trees	18.74	19.9	120.3	153.95	R	0	0	<null>
12-03	Primary	Trees	12.87	13.2	276.28	168.23	R	0	0	Line of brush/trees

Runway End: 30 **Part 77 Cat:** C **Req'd Approach Slope:** 34 **Displ Thld:** 230

Nbr	Pt77 Surf	Obst Type	Penet- ration	Ht Abv Rwy	Dist Fm Rwy End	Dist Fm Rwy Ctr	Dir Fm CtrLine	Slope	Slope to DT	Description
30-01	Approach	Road	1.98	10.9	469.92	276.47	B	24	74	Airport Rd W
30-02	Approach	Road	2.55	14.5	574.18	291.85	B	25	61	Hwy 21

- Continuous row of trees obstructing the approach and primary surface



- Trees obstructing the runway 01 approach surface





- Hwy 21 and Airport Rd. W obstructing the runway 30 approach surface

- Trees 1.6 feet under the approach surface to runway 19



- Trees obstructing the primary surface to runway 01





- Tiedown rings filled with dirt and weeds





- Inoperative/broken taxiway lights



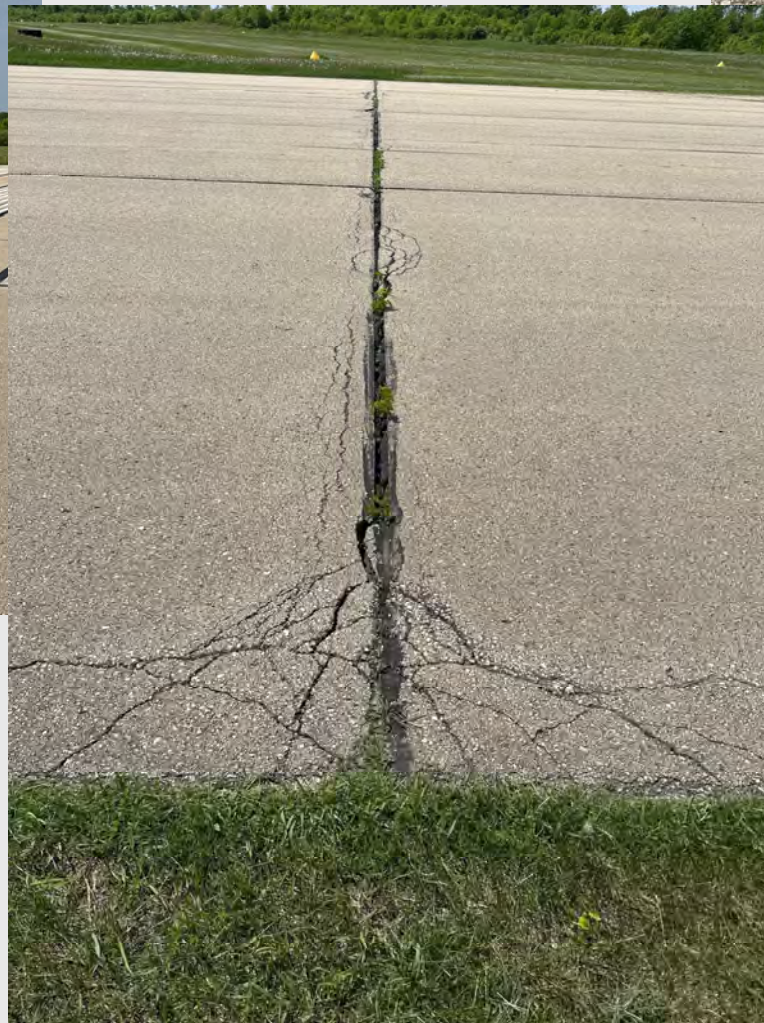


- Extra cones placed off the end of runway 19

- Broken runway sign at runway 12/30 and taxiway C



- Runway 12/30
pavement fair with
large cracks and
weeds





- Runway 01/19 turf in fair condition with several bare spots



- Large/widening cracks in ramp pavement

- Faded and damaged cones





- Broken taxiway marker

- Asphalt debris near ramp





- Overgrown grass around lights and cones



- PAPI bases heaving



- Airport markings beginning to fade



6/16/2023

mno

STATE OF MINNESOTA

WAIVER OF MINNESOTA RULES

COUNTY OF RAMSEY

CHAPTER 8800

WHEREAS, Minn. R. 8800.1600, Subp. 5 requires public-use airports maintain certain minimum clearances from obstructions as a condition of its airport license.

WHEREAS, under Minn. Stat. §360.015 and Minn. R. 8800.1500, the Commissioner of the Minnesota Department of Transportation (the “Commissioner”) has the discretion to waive and suspend such minimum standards in appropriate circumstances;

WHEREAS, the Commissioner has delegated her authority to waive and suspend minimum airport standards to Mn/DOT's Office of Aeronautics Director;

WHEREAS, the approach to Runway 30 at the Faribault Municipal Airport-Liz Wall Strohfus Field does not meet the 34:1 approach clearance currently required by Minn. R. 8800.1200 Subp.5, but does meet the siting criteria of the Federal Aviation Administration, and;

WHEREAS, the approach end of Runway 30 has been displaced 230 feet resulting in an approach clearance of 44:1 to the displaced threshold, and;

WHEREAS, the obstruction to the approach to Runway 30, two roads known as Western Airport Dr and Trunk Highway 21, does not adversely affect air traffic approaches to Runway 30 so as to create an imminent risk to public safety, but the roads should be relocated at a future date to mitigate any potential adverse risks that may later develop because of the obstruction;

NOW, THEREFORE, IT IS ORDERED that the minimum approach slope required by Minn. R. 8800.1600, Subp. 5 and Minn. R. 8800.1200, Subp. 5 is temporarily waived and suspended for the roads in the approach to Runway 30 at the Faribault Municipal Airport-Liz Wall Strohfus Field. This waiver is effective as of the date signed. The commissioner, through the Director of the Office of Aeronautics, reserves the right to terminate this waiver at any time.

It is in the public interest and safety that the Airport submit a plan for bringing the Airport into Compliance with Minnesota law. Please submit a plan to the Office of Aeronautics within 90 days for review. The plan must contain a timeline for compliance. Failure to comply with this order may result in the termination of the waiver and revocation of the Airport's license.

DATE _____

Ryan E. Gaug, AICP
Interim Director, Office of Aeronautics
Minnesota Department of Transportation



FARIBAULT MUNI-LIZ WALL STROHFUS FLD

FARIBAULT, MN

Loc ID: FBL

Site Number: 10689.*A

S/L: GA

	In 5010 06/15/2023 (A)	In Inventory* (B)	Currently Validated** (C)
Single Engine	36	36	34
Multi Engine	5	6	6
Jet	0	0	0
Helicopter	1	1	1
Single, Multi, Jet, Heli	42	43	41

N-Number Duplicates: **0** N-Numbers Reported by Other Apts: **3**
 Commented N-Numbers: **0** Acft Not in Acft Reg: **0**

Confirmation of Counts Date: 6/27/2017 10:01:05 AM By: Theresa Manz

*Type derived from FAA Aircraft Registration data.

**Total verified aircraft counts, excluding dups and aircraft not found in FAA Aircraft Registration data.

N Number	Data Entered by Inventory Users Type/Make/Model	Owner	Date Added	Reported by Other Apts	FAA BA Type	FAA Data (If N Number is found) Registrant	Make/Model
N103XS	BURKHART GROB G 103 TWIN II	Cross Country Soaring Inc 4231 - 120th Street W Lonsdale MN 55046- 4421	5/14/2007		Glider Cert: 08/19/2021 Airw: Standard Airw: 12/27/2005	PRAIRIE THERMALS LLC 3028 US HIGHWAY 14 BYP BROOKINGS, SD 570064316	BURKHART GROB G 103 TWIN II
N106RC	SCHEMPP HIRTH NIMBUS II	Ron S McLaughlin 4506 - 16th Avenue S Minneapolis MN 55407- 3604	5/14/2007		Glider Cert: Airw: Standard Airw: 6/16/1986	SALE REPORTED 204-3095 AVE ERNEST HEMINGWAY SAINT LAURENT, H4R 0A6	SCHEMPP HIRTH NIMBUS II (DEREG Exprt'd 2022-CANADA)
N1099H	AERONCA 15AC	Michael Tzenis 11285 - 172nd Street W Lakeville MN 55044- 7850	5/14/2007		Single Engine Cert: 06/20/2002 Airw: Standard Airw: 12/12/1955	TZENIS MICHAEL 11285 172ND ST W LAKEVILLE, MN 550447850	AERONCA 15AC
N10LM	EDMINSTON STEPHENS AKRO	Dan Pichelman 2800 Acadia Court Burnsville MN 55337- 3415	5/14/2007		Single Engine Cert: 05/16/2005 Airw: Experimental Airw: 9/28/1983	PICHELMAN DAN 2800 ACADIA CT BURNSVILLE, MN 553373415	EDMINSTON RAY R STEPHENS AKRO
N110AZ	DOKTOR FIBERGLAS H101 SALTO	Robert Wander Box 17250 Minneapolis MN 55417- 0250	5/14/2007		Single Engine Cert: 11/01/2021 Airw: Light Sport Airw: 3/1/2021	AZ AEROSERVICES LLC 73 E MONTE VISTA RD PHOENIX, AZ 850041435	ICP SRL SAVANNAH S
N1492P	PIPER PA23-150 APACHE	The Apache Club, Kenneth J Tuma 525 W Woodley Northfield MN 55057- 2747	5/14/2007		Multi Engine Cert: 04/25/1998 Airw: Standard Airw: 5/10/1956	TUMA KENNETH J 525 WOODLEY ST W NORTHFIELD, MN 550572747	PIPER PA-23- 150
N157PS	MOONEY 201 (M20J)	Jay E & Lizabeth P Schmidt 504 Seventh Street NE New Prague MN 56071-2048	5/14/2007		Single Engine Cert: 06/29/2000 Airw: Standard Airw: 11/22/1980	SCHMIDT JAY E 504 7TH ST NE NEW PRAGUE, MN 560712048	MOONEY M20J
N1773N	CESSNA 120	William P Rhoades 6425 Hazelwood Avenue Northfield MN 55057- 4258	5/14/2007		Single Engine Cert: 07/10/2002 Airw: Standard Airw: 2/27/1956	RHOADES WILLIAM P 6425 HAZELWOOD AVE NORTHFIELD, MN 550574258	CESSNA 120
N2215P	PIPER PA23-150 APACHE	Michael Tzenis 11285 - 172nd Street W Lakeville MN 55044- 7850	5/14/2007		Multi Engine Cert: 04/09/2001 Airw: Standard Airw: 12/13/1956	TZENIS MICHAEL 11285 172ND ST W LAKEVILLE, MN 550447850	PIPER PA-23- 150
N2277	WACO ZQC-6	David A Schroeder 1605 Wexford Circle Eagan MN 55122-2569	5/14/2007		Single Engine Cert: 06/16/2000 Airw: Standard Airw: 1/22/2002	SCHROEDER DAVID A 1605 WEXFORD CIR EAGAN, MN 551222569	WACO ZQC-6
N2311X	ROBINSON R22 BETA	Mark Haukom 40574 County Road 90 Mazeppa MN 55956- 9753	5/14/2007		Helicopter Cert: 12/18/2017 Airw: Standard Airw: 10/14/1991	HAUKOM MARK E 40574 COUNTY ROAD 90 MAZEPPA, MN 559564079	ROBINSON HELICOPTER R22 BETA
N2442N	Single Engine Cessna 120	Anthony Becker 207 Lincoln St S Northfield, MN 55057	7/22/2015		Single Engine Cert: 12/10/2012 Airw: Standard Airw: 5/12/1956	BECKER ANTHONY D 207 LINCOLN ST S NORTHFIELD, MN 550571630	CESSNA 120
N2516A	PIPER PA18-135 SUPER CUB	Faribault Thunderhawk Flying Club, James P Glynn 511 SW First Street Faribault MN 55021- 5803	5/14/2007		Single Engine Cert: 09/20/2022 Airw: Multiple Airw: 4/15/1959	ASCENSION AVIATION LLC 1220 VAN TYLE RD GAYLORD, MI 497358989	PIPER PA-18- 135
N273B	Single Engine COLONIAL C- 2	Hiram P. Gates 3672 - 120th Ct. W Faribault, MN 55021	10/4/2013		Single Engine Cert: 09/01/1999 Airw: Standard Airw: 3/9/1959	GATES HIRAM P 3672 120TH CT W FARIBAULT, MN 550217374	COLONIAL C-2
N2763Z	SCHWEIZER 1-26A	James E Hard 5940 Pioneer Road S St Pa 55071-1151	5/14/2007	208-OK 126 Hard	Glider Cert: 06/02/2021 Airw: Standard Airw: 8/20/1965	HARD STEVEN J 1042 N RIDGECREST WAY MUSTANG, OK 730642761	SCHWEIZER SGS 1-26A

N29DG	GLASER DIRKS FLUGZEUGBAU DG-100G	Michael J Mowbray 9340 Cedar Forest Road Eden Prairie MN 55347-3703	5/14/2007	Glider Cert: 02/22/2016 Airw: Standard Airw: 8/3/1982	MOWBRAY MICHAEL J 9340 CEDAR FOREST RD EDEN PRAIRIE, MN 553473703	GLASER-DIRKS FLUGZEUGBAU DG-100G
N303KK	Glider Elan/Glaser Dirks DG-300 Elan	Allan Lajiness 2360 Apple Ridge Dr Duluth MN 55811	7/22/2015	Glider Cert: 08/13/2019 Airw: Experimental Airw: 3/2/2001	KIMBLE CHRISTOPHER J 314 2ND ST SW PINE ISLAND, MN 559639199	ELAN/GLASER DIRKS DG-300 ELAN
N312RA	SOCATA RALLYE 235E	Cross Country Soaring Inc 4231 - 120th Street W Lonsdale MN 55046-4421	5/14/2007	Single Engine Cert: 07/26/2004 Airw: Standard Airw: 1/17/1978	CROSS COUNTRY SOARING INC 4231 120TH ST W LONSDALE, MN 550464421	S.O.C.A.T.A. RALLYE 235E
N313GB	Single Engine CESSNA T210M	Gregory Burnett 10534 First Timberlane Dr Northfield, MN 55057	10/4/2013	Single Engine Cert: 05/26/2011 Airw: Standard Airw: 6/1/1977	BURNETT GREGORY C 525 S 88TH ST OMAHA, NE 681144221	CESSNA T210M
N3140P	LAKE LA4-200 BUCCANEER	Stephen D Remes 814 Prairie Street Northfield MN 55057-2628	5/14/2007	Single Engine Cert: 09/05/1990 Airw: Standard Airw: 8/31/1979	REMES STEPHEN D 814 PRAIRIE ST NORTHFIELD, MN 550572628	CONSOLIDATED AERONAUTICS INC. LAKE LA-4-200
N3320P	Multi Engine PIPER PA-23-160	Wayne Van Thomme 1600 Greenleaf Rd Faribault, MN 55021	10/4/2013	Multi Engine Cert: 04/09/1997 Airw: Standard Airw: 1/29/1958	VAN THOMME WAYNE A 1600 GREENLEAF RD FARIBAULT, MN 550212207	PIPER PA-23-160 (DEREG Canceled 07/2020)
	*2020-08-14 Help Desk JL: This aircraft does not have a valid FAA registration / airworthiness certificate. It does not meet the criteria required to be counted as a based aircraft because it is not legally airworthy.					
N3398V	BEECH 35 BONANZA	James Olson & John Kass 432 Independence Street New Prague MN 56071-2069	5/14/2007	Single Engine Cert: 07/14/2016 Airw: Standard Airw: 5/29/1958	WIGER THEODORE L 1775 ASBURY ST FALCON HEIGHTS, MN 551136249	BEECH 35
N34167	CESSNA 177B CARDINAL	Cardinal Wings Inc 3900 Wells Lake Way Faribault MN 55021-7810	5/14/2007	Single Engine Cert: 04/28/2023 Airw: Standard Airw: 12/21/1971	NICHOLS KEVIN R 1718 CLAYMONT ESTATES DR CHESTERFIELD, MO 630177728	CESSNA 177B
N3834Z	Multi Engine PIPER PA-34-200T	Robert May 17870 Irons Ct Lakeville, MN 55044	10/4/2013	Multi Engine Cert: 02/03/2021 Airw: Standard Airw: 3/16/1983	IMMEN DAVID F PO BOX 66 BONANZA, OR 976230066	PIPER PA-34-200T
N42301	Single Engine Voelker Ronald J Zenith 200	Started renting 6/8/10. State Aircraft registration lists FBL as primary airport.	7/22/2015	FAA registration also lists this owner.	SEAMAN STEVEN P 12224 DAPHNE DR HUNTLEY, IL 601426316	VOELKER RONALD J ZENITH 200
N4331L	CESSNA 172G SKYHAWK	Joseph Reeder 2676 89th Ct W Northfield, MN 55057	10/1/11. Current state registration lists FBL as primary airport.	Single Engine Cert: 04/12/2023 Airw: Experimental Airw: 4/30/1982	OPPEGAARD CRAIG E 8100 WESTWOOD HILLS DR SAINT LOUIS PARK, MN 554262411	CESSNA 172G
N43929	GLASER-DIRKS DG-100	Michael Tzenis 11285 - 172nd Street W Lakeville MN 55044-7850	5/14/2007	Single Engine Cert: 04/29/2023 Airw: Standard Airw: 3/29/1966	OPPEGAARD CRAIG E 8100 WESTWOOD HILLS DR SAINT LOUIS PARK, MN 554262411	CESSNA 172G
N43929	GLASER-DIRKS DG-100	James R Henry 16526 Irwindale Court Lakeville MN 55044-4507	5/14/2007	Glider Cert: 06/24/2002 Airw: Standard Airw: 4/27/1977	HENRY JAMES R 16526 IRWINDALE CT LAKEVILLE, MN 550444507	GLASER-DIRKS FLUGZEUGBAU DG-100
N51113	Single Engine Cessna 150J	Paul Stanton 10733 James Rd Bloomington MN 55431	7/22/2015	Single Engine Cert: 10/16/2017 Airw: Standard Airw: 10/24/1968	WANDER ROBERT P 1525 22ND AVE NW FARIBAULT, MN 550212802	CESSNA 150J
N5334Z	Single Engine Piper PA-22-108	Robert Ueek 6101 Eden Prairie Rd Minnetonka, MN 55345	7/22/2015	Single Engine Cert: 12/28/2018 Airw: Standard Airw: 9/19/1961	UEECK ROBERT D 6101 EDEN PRAIRIE RD MINNETONKA, MN 553456723	PIPER PA-22-108
N53RA	SCHLEICHER KA 6 E	Leon Zeug 711 Rucks Farm Road Delano MN 55328-8733	5/14/2007	Glider Cert: 02/02/2018 Airw: Standard Airw: 4/19/1994	WICHITA SOARING ASSOC 11117 WESTLAWN ST WICHITA, KS 67212	SCHLEICHER KA 6 E
N54462	Single Engine PIPER PA-28-180	Loon Aviation LLC 12425 Edwards Way Northfield, MN 55057	10/4/2013	Single Engine Cert: 08/21/2013 Airw: Standard Airw: 11/27/1973	LOON AVIATION LLC 12425 EDWARDS WAY NORTHFIELD, MN 550574452	PIPER PA-28-180
N5733C	CESSNA 170A	REnting hangar since 8/1/13. State registration lists FBL as primary airport.				
N5733C	CESSNA 170A	Duane R & Michael J Duea 13620 Harwell Path Apple Valley MN 55124-9530	5/14/2007	Single Engine Cert: 06/07/2023 Airw: Standard Airw: 8/4/1955	DUEA MICHAEL J 13173 GLENHURST AVE SAVAGE, MN 553782527	CESSNA 170A
N5855D	Single Engine PIPER PA-22-150	Roger Southwick 1317 Thomas Ct Northfield, MN 55021	10/4/2013	Single Engine Cert: 05/06/2021 Airw: Standard Airw: 10/24/1956	MILLER JUSTIN 134 OLD HOLLOW RD BOAZ, AL 359566347	PIPER PA-22-150
N5917C	Beech C35 Bonanza	Started Renting at FBL in 2011. Provided Current State Registration listing FBL as primary airport.			FAA Registration also listed under Southwick.	
N5917C	Beech C35 Bonanza	David Vierra 934 Walnut Ct Chaska, MN 55318	6/27/2017	Single Engine Cert: 09/14/2016 Airw: Standard Airw: 2/6/1956	VIERRA DAVID R 934 WALNUT CT CHASKA, MN 553181640	BEECH C35
N5987	PIETENPOL AIRCAMPER	Duane R Duea 13620 Harwell Path Apple Valley MN 55124-9530	5/14/2007	Single Engine Cert: 01/09/1978 Airw: Experimental Airw: 5/14/1977	DUEA DUANE ROBERT 13620 HARWELL PATH APPLE VALLEY, MN 55124	PIETENPOL AIRCAMPER

N6231E	CESSNA 172N SKYHAWK II	Edward P Miller & Tom K Harris 5736 Endwood Trail Northfield MN 55057-4692	5/14/2007		Single Engine Cert: 02/07/2000 Airw: Standard Airw: 12/21/1978	MILLER EDWARD P 5736 ENDWOOD TRL NORTHFIELD, MN 550574692	CESSNA 172N
N6398L	Single Engine American Aviation AA-1A	Mark Cassman 2963 Wilds Ln NW Prior Lake, MN 55372	7/22/2015	HYI-TX American AA-1A Michael Noland	Single Engine Cert: 05/06/2022 Airw: Standard Airw: 5/2/1972	ZURICK GARRETT 4907 STOWERS BLVD SAN ANTONIO, TX 782385404	AMERICAN AVIATION AA-1A
N6430Y	PIPER PA23-250C AZTEC	Edward P Miller 5736 Endwood Trail Northfield MN 55057-4692	5/14/2007		Multi Engine Cert: 09/02/2020 Airw: Standard Airw: 8/1/1967	FORD WILLIAM E 401 CITY VIEW DR MINNETONKA, MN 553051227	PIPER PA-23-250
N6553P	PIPER PA24-250 COMANCHE	Terry Bartsch 14935 Ibson Avenue Nerstrand MN 55053-2014	5/14/2007		Single Engine Cert: 11/17/2008 Airw: Standard Airw: 3/30/1960	FOX 1 DRAFTING & DESIGN INC 4155 OLD SIBLEY MEMORIAL HWY EAGAN, MN 551221949	PIPER PA-24-250 (DEREG Canceled 02/2022)
N6603J	Single Engine PIPER PA-28-180	Joel Workman 29930 Hayes Ave Northfield, MN 55057	10/4/2013		Single Engine Cert: 05/21/2014 Airw: Standard Airw: 7/23/1968	WORKMAN KAREN L 29930 HAYES AVE NORTHFIELD, MN 550575289	PIPER PA-28-180
N674KS	SCHLEICHER ASK-21	Steven E & Elizabeth C Wheeler 2445 - 313th Street W Northfield MN 55057-6400	5/14/2007		Glider Cert: 08/04/2005 Airw: Standard Airw: 5/10/1984	WHEELER STEVEN E 2445 313TH ST W NORTHFIELD, MN 550576400	SCHLEICHER ASK-21
N6922U	MOONEY M20E SUPER 21	Melford Henschel 15128 Dunbar Blvd Apple Valley MN 55124-6939	5/14/2007		Single Engine Cert: 08/20/1976 Airw: Standard Airw: (Blank Date)	HENSCHEL MELFORD H 15128 DUNBAR BLVD APPLE VALLEY, MN 55124	MOONEY M20E
N69HL	GLASFLUGEL STANDARD LIBELLE	Donald M De Pree 10636 Rich Road Bloomington MN 55437-2833	5/14/2007		Glider Cert: 05/19/2017 Airw: Standard Airw: 7/15/1974	RENWICK JOHN K 5505 MORGAN AVE S MINNEAPOLIS, MN 554191522	GLASFLUGEL STANDARD LIBELLE
N7258Z	Cessna T206H	Jesse & Debra Graber 1281 Bolenbacher Dr Northfield, MN 55057	6/27/2017		Single Engine Cert: 12/15/2015 Airw: Standard Airw: 11/1/1999	GRABER JESSE B 32675 NORTHFIELD BLVD NORTHFIELD, MN 550571491	CESSNA T206H
N757US	AMERICAN CHAMPION AIRCRAFT 8KCAB	Robert E & Linda L Peasley 5200 Clearwater Trail Lonsdale MN 55046-4428	5/14/2007		Single Engine Cert: 05/21/2019 Airw: Standard Airw: 4/15/2019	PEASLEY ROBERT E 5200 CLEARWATER TRL LONSDALE, MN 550464428	AMERICAN CHAMPION AIRCRAFT 7GCAA
N7609G	CESSNA 182P	Air Faribo LLC 3537 Great Oaks Pl Eagan, MN 55123	5/14/2007		Single Engine Cert: 08/30/2011 Airw: Standard Airw: 9/26/1974	AIR FARIBO LLC 3537 GREAT OAKS PL EGGAN, MN 551232432	CESSNA 182P (DEREG Canceled 12/2020)
N774GA	Multi Engine GRUMMAN AMERICAN AVN. CORP. GA-7	CJD Aviation LLC 431 Griggs Street N St. Paul, MN 55104	10/4/2013		Multi Engine Cert: 04/09/2020 Airw: Standard Airw: 11/10/1978	AIRCRAFT RESOURCE CENTER INC 22100 HAMBURG AVE LAKEVILLE, MN 550449101	GRUMMAN AMERICAN AVN. CORP. GA-7
N845DK	Single Engine BEECH D-45	Curtis Jones 13102 Heritage Way Apple Valley, MN 55124	10/4/2013		Single Engine Cert: 11/06/2019 Airw: Standard Airw: 11/29/1977	JONES CURTIS R 15311 TIMBER RIDGE DR BURNSVILLE, MN 553067303	BEECH D-45
N854BE	Glider Alisport SRL Silent 2 Electro	Jeffrey Hill 14006 Windsor Rd Minnetonka MN 55345	7/22/2015		Glider Cert: 03/08/2017 Airw: (Blank) Airw: (Blank Date)	JOYNER JOHNNY B 900 KELLY RD DYERSBURG, TN 380246505	ALISPORT SRL SILENT 2 ELECTRO
N88LA	Glider Rolladen-Schneider LS-4	Thomas Lehrke 9517 Wyoming Ave S Bloomington MN 55438	7/22/2015		Glider Cert: Airw: Experimental Airw: 5/20/1981	SALE REPORTED 306 BECKY CIRCLE SOUTH NIXA, MO 65714	ROLLADEN-SCHNEIDER LS-4 (DEREG Canceled 12/2020)
N9003J	Single Engine PIPER PA-28-180	David Black 9290 Amber Drive Lakeville, MN 55044	10/4/2013		Single Engine Cert: 05/25/2017 Airw: Standard Airw: 1/14/1966	BLACK DAVID 9290 AMBER DR LAKEVILLE, MN 550444597	PIPER PA-28-180
N93SB	REPUBLIC RC-3 SEABEE	Charles Mellies to Chad Mellies on June 1, 2010. Faribault Thunderhawk Flying Club, James P Glynn 511 SW First Street Faribault MN 55021-5803	5/14/2007		Single Engine Cert: 11/04/1992 Airw: Standard Airw: 8/19/1995	State aircraft registration lists FBL as primary airport. FARIBAULT THUNDERHAWK FLY CLUB 511 SW 1ST ST FARIBAULT, MN 55021	REPUBLIC RC-3 (DEREG Canceled 09/2022)
N9833Q	PIPER PA18-135 SUPER CUB	Michael A Russell 2280 - 277th Street W Randolph MN 55065-9512	5/14/2007		Single Engine Cert: 07/18/1995 Airw: Standard Airw: 4/7/1993	RUSSELL MICHAEL A 2280 277TH ST W RANDOLPH, MN 550659512	PIPER PA-18-135
N99LG	BEECH F33A BONANZA	Elizabeth R & Lew G Groth 953 Golfview Avenue Zumbrota MN 55992-7332	5/14/2007	PBF-AR Beechcraft F33A Washington Enterprises,	Single Engine Cert: 03/15/2021 Airw: Standard Airw: 8/7/1987	WASHINGTON ENTERPRISES LLC 92 DARTMOUTH DR LITTLE ROCK, AR 722044211	BEECH F33A

LLC The
aircraft has
been located
in PBF since
the new
owner
purchased it
a year ago.

Total Currently Validated Aircraft Excluding Duplicates & Acft. Not Found in FAA Acft. Reg. Data: 41

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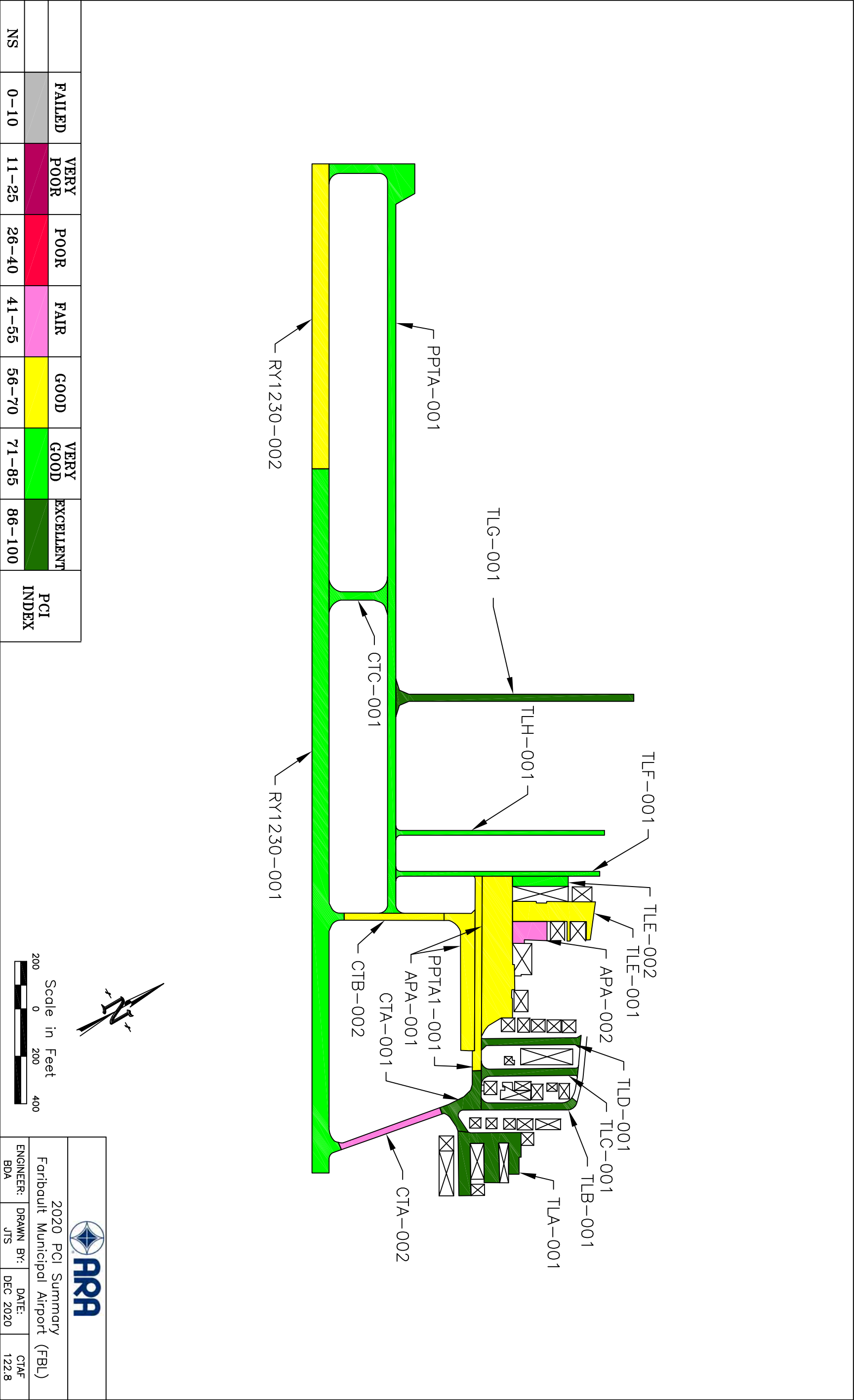


Figure 4. 2020 Pavement Condition Index Rating at Faribault Municipal Airport (FBL).

Airport Turf Building and Maintenance

No. 1 General

Airport runway turf building and maintenance becomes an increasingly important problem as civil aviation expands in these post war years. New aircraft designs, particularly those of the tricycle or nose wheel type, together with cleaner and faster civilian aircraft, require, both in the interest of safety and utility, that the runway turf on the small airport be both well built and well maintained. The federal airport act and the state airport program make possible the development and improvement of a substantial number of turf airports in the smaller communities. A well built and well maintained turf runway will repay the municipality in the form of greater utility and greater attractiveness to the transient airman, and repay the local aircraft owner and operator by eliminating costly ground accidents and reducing wear and tear on the small aircraft.

Even with state and federal aid, the average small municipality will not find the money to build hard surfaced runways nor will the volume of traffic in the next few years require or justify the installation of such runways except in rare instances. The well built and well maintained turf runway is not just a substitute on such airports but a very practical solution to the runway problem. It is, however, essential that these runways be safe, usable, and attractive. If this is to be accomplished, an understanding of the problems of design, construction, and maintenance of turf runways is imperative.

For the purpose of a better approach to the problem, it is assumed in the first seven divisions of this bulletin the municipality or airport has adequate funds to carry out a thorough program. Division No. 8 goes into the problem of communities who do not have enough money to develop the proper airport in one or two seasons and must rely on a gradual growth of traffic and the resulting funds available over a period of years.

No. 2 Seed Bed Preparation

In planning an airport, careful attention must first be paid to drainage. Proper drainage must be established before grading or filling can be started. After proper drainage has been developed, it is further wise to take samples of the soil to estimate its fertility as well as the top soil that will have to be hauled in. Soil may be analyzed for fertility to determine desired fertilizer treatment.

Grasses need plant food and more airport turf is probably in poor condition from the lack of fertilizer than from any other cause. The best time to apply fertilizer in this area is in the fall, because it insures good growth late in the season and also insures a vigorous growth in the spring. If fertilizer can not be applied in the fall, it should be used as early in the spring as possible. Fertilizer of a fairly high nitrogen content for fall application should be applied at 300 to 500 lbs per acre. Spring applications can be made at the same rate. Fertilizer should be applied from time to time once the turf has been established, in order to insure its continued good growth. In the past, seedings have been made using as high as 100 to 110 pounds of seed per acre. This amount could be reduced sharply and better results obtained by using the savings from the cost of the seed in applying fertilizer. Fortunately, in Minnesota and surrounding states, Kentucky blue grass will develop naturally in turf if it has proper care, even without the sowing of substantial amounts of seed. This is extremely important when Kentucky blue grass seed is very high priced.

As a general rule, the following steps should be carefully taken in order to establish the proper seed bed:

(a) DRAINAGE. Assuming the airport has already been graded and the drainage has been established, again check to see that the landing strips have been properly crowned and proper drainage has been established through soil tile, ditches, etc. If shallow ditches are used throughout the airport, they should be sodded immediately in order to eliminate erosion.

(b) A FIRM SEEDBED. A good seedbed is essential for obtaining good stands. Small seedlings are unable to survive on dry, cloddy, loose soil. Go over the entire area with a disc or spring-tooth harrow. A disc is preferable, as it tends to pack the soil more than the spring-tooth harrow. Rework the ground until a mellow, firm seedbed is attained. When that has been done, if fertilizer is to be added, work it into the soil by further discing; and, when the fertilizer has been thoroughly worked into the soil, cross-drag it lightly in order to get a smooth, level surface. Fertilizer should be applied using a commercial spreader by an individual who has had considerable experience applying fertilizers to be sure that it is distributed evenly throughout the entire field. This is a very important procedure since, if the fertilizer is spread heavily in one area, it will burn the seedlings and, if it is not heavy enough in other areas, of course, proper growth will not result.

In Western and Southern Minnesota where top soil is a heavy clay loam, the top soil shall be processed for seeding only when the moisture content is low enough so that the soil will not puddle, and can be granulated uniformly. A rotary tiller is recommended for use in preparing the seedbed. In no case shall the disc or rotary tiller disturb the subgrade during preparation of the seedbed.

No. 3 Seeding

Various types of seed used in seeding down an airport vary considerably as to size; Red Top, for example, being roughly 3/16 of an inch in length, with a diameter almost too small to measure for commercial purposes. Whereas Brome is, roughly, the size of an oat kernel. For this reason Bromegrass, when used in the mixture should be seeded separately from the small-seeded grasses and the small-seeded grasses should be thoroughly mixed in the proper proportion before seeding. BROADCAST the seed, using a seeder having a good agitator to insure the seed staying mixed during the process of seeding. Be sure an experienced individual is employed in seeding the airport, since too many fields as well as airports have shown excessively heavy seeding at the beginning of the strip with little or practically no seeding at the end of the strip. Proper seeding is one of the important individual functions in developing a good airport, since any amount of money can be spent on grading, fertilizing and preparation of the seedbed; but, if the seed isn't distributed thoroughly and evenly, an uneven turf will result. Be sure to measure the length and width of each strip to be seeded so you will know the number of square feet to be covered with each strip; then the amount of seed can be determined arithmetically. Guessing or estimating is a sure way of ending up with a poor job. It may be well at this time to point out again a BROADCAST seeder is recommended. DO NOT attempt to drill the seed into the soil. It is impossible to maintain an even depth with the average commercial drill, which will result in seed being sown too deeply, with the resulting difficulties.

For the final operation use a packer to compact the soil and to imbed the seed into the soil at a depth of about one quarter inch. If a careful job is done, it will not be necessary to cross-pack, one direction being sufficient and considered generally better, since the small furrows resulting from proper packing will hold moisture. If the seedbed has been properly prepared and packed, it is conceivable a small plane could land on the runway even before the seed has begun to grow, without injury to the runway or loss of seed. Of course, it is assumed, in landing a light plane or driving across the field with

an automobile, the field is perfectly dry. Serious damage to the new seeding could result by driving over it when the soil is wet.

Final finishing of the landing strip are as shall be accomplished by the use of a multi-wheeled pneumatic tired roller or other equipment as approved by the engineer. It is very essential that the final finish of the landing strips be smooth and even so as not to affect the airplane landing or taking off and to provide positive drainage so as to prevent surface moisture from percolating down through top soil and into subgrade.

The landing strip area shall be watered after seeding if it is determined that the top soil is too dry to promote seed growth.

No. 4 Time of Seeding

Mr. L. E. Longley of the University of Minnesota Agricultural Experiment Station has conducted experiments regarding the date and rate of seeding and published the results of his findings in his Bulletin No. 355, dated June, 1941. In his experiments, Mr. Longley learned that, contrary to general opinion, late fall seeding is not desirable. Generally speaking, for the northern half of Minnesota the latest fall seeding should be around the first of September and for the Southern half of the state the deadline is September 15.

Seed can be sowed anytime from early spring, as soon as it is possible to get the ground in condition, until September, as indicated above. Seedings in June, July and August have developed very well; however, early fall seedings are preferable to summer seedings, as less moisture is needed during cool fall weather. July and August seedings will show good growth if the above instructions are followed carefully and a little water is available should the month be very dry or the soil too dry when seeding is completed. Since most airports are community projects, there should be no difficulty in obtaining the use of municipal equipment to apply a small amount of water, if necessary. Rather, the greatest problem in July and August are the sudden heavy downpours or local showers, which tend to wash the soil out before the grass is far enough along to establish a good root system. As outlined above, the possibility of erosion can be reduced to a minimum by use of a double packer and sodding shallow ditches.

No. 5 Types of Grasses

Many of the airports in Minnesota and adjoining states have shown evidences of substantial planting of legumes in the runways and taxi strips. Legumes, of course, are nice for putting nitrogen into the soil; but they are not good for turf development because of the ease in which they are damaged. Proper turf can be developed in relatively short time by using approximately thirty to forty pounds of seed per acre. The ultimate objective in seeding airports is to develop a runway with a turf of one color and the outfields a turf of another color. Experiments are being conducted along this line and another bulletin will be issued later when the results of these experiments have been determined. Red Top, Rye Grass, Meadow Fescue, Brome Grass, and Crested Wheat Grass, plus a small percentage of Kentucky blue grass, can be used to good advantage.

At the time of sowing, if the soil is light and weather dry and soil drifting is a possibility, from a half to three-quarters bushel of spring or fall grain can be used to hold the soil until the grasses have had an opportunity to take hold; however the grain should be moved off as soon as it is about twelve inches high or at the hay stage, so that it will not compete too heavily with the grasses.

KENTUCKY BLUE GRASS, the grass most common in lawns and permanent pastures in Minnesota, is very aggressive and forms a tough sod. It will stand frequent close clipping and, if given proper care, will eventually become the predominating grass in the entire airport.

RED TOP is a small-bladed grass which spreads rapidly by means of underground stems and grows to a maximum height under normal conditions of 20 to 24 inches. It too will stand frequent close clippings.

RYE GRASS establishes quick growth but lacks winter hardiness. Its only useful purpose, therefore, is to hold the soil while the slower growing grasses are becoming established; consequently, there is no point in using it in spring-seeded mixtures where a small grain is included to hold the soil or in fall-seeded mixtures.

BROME GRASS is a long-lived, sod-forming perennial. It thrives under a wide range of conditions and is fairly drought resistant. The Canadian grown seed of brome grass is satisfactory for Minnesota.

MEADOW FESCUE is a perennial sod-forming grass, but which is not entirely winter hardy in all parts of Minnesota. It has been found to be well adapted in northwestern Minnesota. It has good seedling vigor and is easy to establish.

CHEWINGS FESCUE is a winter hardy perennial grass frequently used on lawns in shady places. It is dark green in color, low growing and produces a bunch type growth.

CRESTED WHEAT GRASS is a long lived, drought resistant perennial best adapted for the western part of Minnesota. The leaf blades are narrow and blue-green in color. The Fairway strain has been found to be most desirable for Minnesota.

TIMOTHY is generally considered a relatively short lived perennial when compared to such grasses as Kentucky blue grass and brome grass. Under humid conditions, such as exist in eastern Minnesota, it produces a good sod. Seed of timothy is usually pure and cheap.

No. 6 Mixtures

The type of mixtures used will vary in different parts of the State due to climate, soil and rainfall, so any mixtures suggested below are for general guidance only. It is essential that only adapted grasses be used in the mixtures. Seed is expensive and, if the proper mixture isn't used, it will result in the loss of approximately \$15.00 to \$16.00 per acre in the cost of seed, plus labor in preparing the seed bed and cost of fertilizer. However, suggested mixtures and pounds per acre apply in the various areas are generally as follows:

Northwestern, West Central and South Western Minnesota:

6# Kentucky bluegrass
6# Red Top
10# Brome grass
6# Meadow Fescue
6# Crested Wheat Grass

All of Eastern and Central Minnesota:

6# Kentucky bluegrass

6# Red Top

10# Brome Grass

6# Timothy

IN ADDITION TO ABOVE MIXTURES, USE 10 LBS. OF RYE GRASS OR $\frac{3}{4}$ TO 1 BUSHEL OF SMALL GRAIN AS A COMPANION CROP DEPENDING ON THE DATE OF SEEDING WHETHER FALL OR SPRING.

NOTE 1. Where close, frequent clipping is to be practiced, the rates for Kentucky bluegrass and Red Top may be increased and some Chewings Fescue added and the other grasses decreased. Where no close, frequent clipping is to be practiced, the rates of Kentucky bluegrass and Red Top may be decreased.

NOTE 2. On sandy land, the brome grass should be increased and the other constituents decreased.

The above mixtures are figured on a per acre basis and should cost not more than \$15.00 to \$16.00 per acre, maximum, depending upon the type of mixture. Generally speaking, cost per acre, which covers the seed, commercial fertilizer, preparation of seedbed and seeding operation, should not cost over \$40.00 to \$45.00 per acre.

No. 7 Maintenance

There is considerable difference of opinion regarding the number of times an airport should be mowed. Too many airports visited during the spring, summer and fall have shown no evidence whatsoever of mowing or, if mowed, of mowing after it was too late. Quite often a deal has been made with a farmer to mow the field without cost for the hay he is able to take from the field. This is good for the farmer; but frequently costly to the airport owner. Mowing should be often enough to maintain a turf at from three to five inches in height, which of course, may vary somewhat, depending upon climates. In warm, humid areas turf can be clipped closer; and in dry, arid regions, a higher cut is more desirable. Runways should be mowed frequently and, since most communities have golf courses, it should be no great problem to use their power mower in maintaining a closely cut turf. Then, in extended periods of drought, water the runways is very desirable. In any case, it must be realized that both traffic and non-traffic areas must be kept cut at regular intervals in order to maintain a proper turf. Everyone has noticed beautiful pastures driving through the country during the summer months which cattle or sheep have been grazing very closely. The turf is generally practically all Bluegrass and of smooth, even texture. This is because it is kept so closely cropped that the weeds and other coarse grasses do not have a chance to develop.

In our opinion, too much emphasis has been made in the past to heavy original seedings and not enough attention paid to proper fertilization and maintenance once the turf has been started. During the War, the Army was able to produce a usable turf on its runways in sixty days by combining all factors of heavy seeding, proper fertilization and maintenance. However, time is no longer as important a factor and substantial amounts of money can be saved by reducing the amount of seed sown, using only adapted grasses and analyzing the soil for proper fertilizer application before the seed is planted.

Generally, fertilization, mowing and watering will comprise about 90% of the maintenance cost of the airport.

(a) FERTILIZING. It is not enough to fertilize the field only when the seedbed is prepared. Fertilization must be continued from time to time as required, the amounts applied being dependant upon the fertility of the soil and the standards under which the airport is maintained. Most of the experimental work done with lawn or turf fertilizer at the Minnesota Experiment Station does not indicate the need of much phosphate or potash. For this reason the fertilizer used should be high in nitrogen content. A good fertilizer is one having a formula of approximately 10-8-6; that is, 10% nitrogen, 8% phosphoric acid and 6% potash. Other formulas, such as 8-8-6 and 5-10-5 are also good. Of course, the lower the nitrogen percentage the more fertilizer that must be used. When using any kind of commercial fertilizer it is always desirable to apply just before rain is expected or during rainy weather, to prevent burning.

(b) CLIPPING. Keep runways clipped to about 2 ½ inches; the outfields to 4 inches. Cut as necessary, leaving the outfields longer for protection, to discourage landing elsewhere than the runways. For communities having a golf course or extensive park systems the municipal gang lawn mowers may be used. For the outfields, a good farm type mower is very satisfactory. At this point it would be well to note that keeping the outfield and runways properly clipped is of prime importance, since too great growth is injurious to the turf and tends to shade or crowd the smaller grasses.

(c) WATERING. Watering is very important during prolonged dry periods and should be applied generously, particularly on the runways. It is amazing how far a nice, green, healthy runway can be spotted from the air and how attractive it can be to visiting pilots.

No. 8 Developing Small Airports

This section is devoted to the discussion of problems of the smaller communities who find it necessary to develop their airports over a period of years. Many of the smaller communities want and need airports but, obviously, lack the funds to develop the entire tract available and must necessarily develop it gradually over a period of years. On this basis is one or perhaps two runways should be developed, as outlined above, the balance of the tract can be put into meadow crops or grain. Certain areas of the State, particularly the northern half, are extremely suitable for growing Legumes for seed. There is always a ready market for this type of seed and it is possible for the airport to get enough revenue from its outfield to pay the entire cost of running the airport year after year. The airfield at Thief River Falls, Minnesota, comprises a tract of approximately 375 acres (1/2 section). A year ago this municipality produced enough grain at this airport to pay for the cost of administration, salaries, etc., with enough left over to erect a small hangar and enough improvements to permit licensing by the State. Revenue from the crops amounted to roughly \$5,000.00. For further information regarding this write E.J. Barzen at Thief River Falls. During times such as these, when the price of flax, for example, is very high, the outfields can be seeded into flax with the usual good results. Red Clover, Alfalfa, Alsike and White Dutch Clover are other seeds that can be produced to advantage in certain areas of the State. Lower growing types of grains such as Flax, Oats and Barely are desirable. In addition to providing a source of revenue, this helps prepare the ground for the eventful turf that is necessary. Airports tin the northern half of Minnesota, for example, can be put into flax for one or two years, depending upon market prices, and eventually sown down to Red Clover or Alfalfa alone or in a mixture with some Brome grass. The first two or three years Red Clover or Alfalfa will be the predominant crop, after which brome will begin to crowd out the legumes and, once brome has become established, it will gradually give way to bluegrass. It is a cheap and very desirable way of getting a good turf at very little or no cost over a period of years. Further, it reduces the cost of adding fertilizer, since legumes put nitrogen into the soil. This is extremely important generally, because so often the tracts available for

airports have usually been chosen from the poor or marginal lands near the community and they need considerable building up before they develop fertility enough to maintain good turf.

The southern half of Minnesota is not as conducive to developing Red Clover, Alfalfa or other legumes for seed; but they do produce good growth and one or two cuttings of hay can be taken off during the course of the year, although this is not particularly desirable. It would be better, depending upon markets and areas, to sow flax, oats or barley for a year or two, then seeding the outfield down to a mixture of a brome and alfalfa as outlined above.

No. 9 Summary

There is no reason why any community, regardless of size, can not develop an attractive airport over a period of years. The smaller the community, the longer time it will take to develop an attractive field; but, if proper methods and a definite plan is followed, this can be done to very good advantage. It must be pointed out, however, thoughtful and progressive plans should be made to cover periods of not less than five years and these plans carried out to an exacting degree.

Capital Improvement Program Report

Minnesota Department of Transportation - Aviation Division

Faribault Municipal Airport

Report Filter - Types: All, Statuses: All

Year	Project Name	Status	FAA	State	Local	Total
All Projects						
2016						
	E TAXILANE IMPR (REHAB/PVMNT/DRNAGE) FAA FUNDING (FFY 2015)	CIP	428,010.00	313,955.00	163,194.00	\$905,159.00
		SubTotal:	\$428,010.00	\$313,955.00	\$163,194.00	\$905,159.00
2018						
	CRACK SEAL RWY 12/30, TAXIWAYS & APRON	CIP	90,000.00	5,000.00	5,000.00	\$100,000.00
	NEW FUEL FACILITY (JET A & 100LL) 10,000 GALLON TANKS	CIP	0.00	264,795.00	264,795.00	\$529,590.00
	NEW TAXILANE, WATER, SEWER CONSTRUCTION	CIP	0.00	361,200.00	155,000.00	\$516,200.00
	REPAY NPE FUNDS TO PAYNESVILLE	CIP	0.00	0.00	0.00	\$130,000.00
		SubTotal:	\$90,000.00	\$630,995.00	\$424,795.00	\$1,275,790.00
2019						
	COMMERICAL TAXILANE DRAINAGE IMPR & PVMNT REHAB (FFY 2018)	CIP	310,000.00	20,000.00	70,000.00	\$400,000.00
		SubTotal:	\$310,000.00	\$20,000.00	\$70,000.00	\$400,000.00
2021						
	PARALLEL TAXIWAY & APRON/TIEDOWN EXTENSION FFY 2019	CIP	4,555,200.00	0.00	0.00	\$4,555,200.00
		SubTotal:	\$4,555,200.00	\$0.00	\$0.00	\$4,555,200.00
2023						
	CRACK SEALING	CIP	0.00	35,000.00	15,000.00	\$50,000.00
	TRACTOR & MOWER	CIP	0.00	102,500.00	52,500.00	\$155,000.00
	UPGRADE AIRFIELD LIGHTS & ELECTRICAL SYSTEM FFY 2021	CIP	731,500.00	0.00	38,500.00	\$770,000.00
		SubTotal:	\$731,500.00	\$137,500.00	\$106,000.00	\$975,000.00
2024						
	AWOS REPLACEMENT	CIP	0.00	227,500.00	97,500.00	\$325,000.00
		SubTotal:	\$0.00	\$227,500.00	\$97,500.00	\$325,000.00
2025						
	TORO 4110D MOWER	CIP	0.00	52,500.00	22,500.00	\$75,000.00

Year	Project Name	Status	FAA	State	Local	Total
SubTotal:			\$0.00	\$52,500.00	\$22,500.00	\$75,000.00
2026						
	EXPAND PARKING AREA	CIP	0.00	0.00	0.00	\$0.00
	LAND ACQUISITION FOR RUNWAY EXTENSION (4900')	CIP	598,500.00	33,250.00	33,250.00	\$665,000.00
	LAND ACQUISITION RWY 12/30 EXT	CIP	315,000.00	0.00	0.00	\$315,000.00
	RELOCATE ROTATING BEACON	CIP	0.00	0.00	0.00	\$0.00
SubTotal:			\$913,500.00	\$33,250.00	\$33,250.00	\$980,000.00
2028						
	DESIGN RWY 12/30 EXT (4900')	CIP	612,900.00	34,500.00	34,500.00	\$681,900.00
	EA FOR RUNWAY EXTENSION - PHASE I FFY 2024	CIP	180,000.00	10,000.00	10,000.00	\$200,000.00
	MASTER PLAN, AGIS	CIP	315,000.00	17,500.00	17,500.00	\$350,000.00
	OVERLAY RWY 12/30	CIP	450,000.00	25,000.00	25,000.00	\$500,000.00
	PERIMETER WILDLIFE FENCING (FFY 2024)	CIP	311,400.00	17,300.00	17,300.00	\$346,000.00
	REPLACE LOADER	CIP	315,000.00	0.00	35,000.00	\$350,000.00
SubTotal:			\$2,184,300.00	\$104,300.00	\$139,300.00	\$2,427,900.00
2029						
	LARGE AIRCRAFT STORAGE HANGAR	CIP	0.00	387,000.00	387,500.00	\$774,500.00
	MILL AND OVERLAY EAST TAXILANE AREA	CIP	270,000.00	15,000.00	15,000.00	\$300,000.00
	RWY 12/30 CONSTRUCTION	CIP	4,902,300.00	200,000.00	344,700.00	\$5,447,000.00
SubTotal:			\$5,172,300.00	\$602,000.00	\$747,200.00	\$6,521,500.00
2030						
	DESIGN AND SITE PREP T-HANGAR	CIP	0.00	150,000.00	150,000.00	\$300,000.00
	MILL OVERLAY APRON	CIP	400,000.00	0.00	40,000.00	\$440,000.00
	REPAY NPE	CIP	131,400.00	0.00	0.00	\$131,400.00
SubTotal:			\$531,400.00	\$150,000.00	\$190,000.00	\$871,400.00
2031						
	CONSTRUCT T-HANGAR	CIP	0.00	700,000.00	0.00	\$700,000.00
	CRACK SEALING	CIP	0.00	52,500.00	22,500.00	\$75,000.00
	DESIGN & CONSTRUCT TAXILANE F	CIP	0.00	350,000.00	150,000.00	\$500,000.00
SubTotal:			\$0.00	\$1,102,500.00	\$172,500.00	\$1,275,000.00
2032						
	COMMERCIAL TAXILANE DRAINAGE IMPROVEMENTS & PAVEMENT RECONSTRUCTION	CIP	495,000.00	27,500.00	27,500.00	\$550,000.00
SubTotal:			\$495,000.00	\$27,500.00	\$27,500.00	\$550,000.00

Year	Project Name	Status	FAA	State	Local	Total
All Projects			\$15,411,210.00	\$3,402,000.00	\$2,193,739.00	\$21,136,949.00