



**Reconstruction of Runway 14-32
Greenville Municipal Airport
Greenville, Maine
Dedication Date: 9 September 2006**



The Greenville Municipal Airport is a public facility which has been owned by the Town of Greenville since it was built in 1943. It is located approximately two miles east of the center of Town on 250 acres of land at an elevation of approximately 1,400 feet. It can be accessed by Pleasant Street and Drew Road.

A number of improvements were completed by the Town of Greenville to enhance the safety and functionality of the Greenville Municipal Airport. The 4,000 foot long Runway 14-32 was reconstructed to meet current FAA design standards and to remove obstructions to Federal Aviation Regulation (FAR) Part 77 protected airspace surfaces. The project was designed by Stantec Consulting Services of Presque Isle, Maine and constructed by Sargent Corporation of Stillwater, Maine. The Town of Greenville applied for and received Federal and State Department of Transportation grants which together financed over 95 percent of the total project costs.

Prior Runway Deficiencies:

By 2005, there were a number of serious deficiencies, both safety and operational in nature, associated with the main runway at the Greenville Municipal Airport. These included:

1. Aircraft pilots on opposite ends of the runway could not see each other due to a runway profile that was much higher in the center of the runway.
2. The asphalt pavement on the runway surface was severely cracked to the extent that loose aggregate and shards of pavement posed a serious FOD (foreign object debris) hazard to aircraft.
3. The runway edge lighting system was unreliable and needed increasingly frequent maintenance and repairs to keep the airport operational for night use.
4. Trees located within the protected airspace adjacent to the runway, including the approach surfaces, had grown to the extent that they posed obstruction hazards.
5. Runway safety areas were inadequate in size and not in compliance with current FAA standards.
6. Surface and subsurface drainage systems on the airfield were inadequate and in need upgrades.
7. Airfield navigational aids (NAVAID) including the runway end identifier lights (REIL), precision approach path indicators (PAPI) and airport rotating beacon (ARB) and airfield guidance signs were in need of relocation or replacement.

Completed Improvements:

To correct the safety-related deficiencies and improve the functionality of the airport, a number of specific improvements were incorporated into the reconstruction project. These improvements were completed in July 2006 and are described as follows:

1. The asphaltic surface of the runway was pulverized and blended with approximately 10 inches of existing and manufactured base materials in a reclaiming process. This blended material was then stockpiled for later use as the new runway base course.
2. Approximately 60,000 cubic yards of embankment fill was placed, compacted and graded to raise both ends of the runway approximately six feet to create an improved line-of-sight runway profile for pilots. Embankment material was also utilized in the construction of new 240-foot runway safety areas in compliance with current FAA design standards. A new aircraft turnaround with stub taxiway was installed at the Runway 32 end.
3. To reduce frost heaving beneath the runway, which accelerates pavement cracking and breakage, the existing unsuitable subsurface materials were removed and replaced with a 61-inch depth of new non-frost susceptible subbase course.
4. The reclaimed base course was then installed with an eight-inch compacted depth and then resurfaced with three inches of new 12.5 mm MDOT Superpave bituminous asphalt concrete pavement. New pavement markings were painted on the surface in compliance with current FAA runway marking standards.
5. Drainage improvements consist of 10,000 feet of new perimeter underdrain system and 2,000 feet of stormdrain piping and culverts. Catch basins were also installed and adjusted.
6. A runway lighting system was installed with new medium intensity edge and threshold lights and lighted airport guidance signs.
7. Approximately 10 acres of trees were cleared in order to remove obstruction hazards in areas where trees had penetrated FAR Part 77 protected airspace surrounding Runway 14-32. Ground obstructions were also removed on the east side of the runway. Cleared areas were grubbed, graded and restored to allow the Town to maintain critical areas free of tree growth in the future.
8. Airport navigational aids (NAVAID) improvements completed under the project include a new airport rotating beacon, new runway end identifier lights (REIL), new precision approach path indicator (PAPI) system, and new primary and supplemental windcones with segmented circle markers.
9. With assistance from the National Weather Service, site work and foundations for an automated surface observation system (ASOS) have been installed. The ASOS will be located directly on the airfield to provide airport users and the public with accurate real-time local weather conditions at the airport.