



U.S. Department
of Transportation
**Federal Aviation
Administration**

Technical Center

Atlantic City Int'l Airport
New Jersey 08405

June 10, 2008

James R. Burtle
Experimental Licensing Branch Chief
Office of Engineering and Technology
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Dear Mr. Burtle:

This letter is meant to serve as a follow up to a memo sent to you in November of 2007, confirming the Federal Aviation Administration's (FAA) involvement in sponsoring a demonstration and technology evaluation project of Trex Enterprises' FODFinder Detection System. The presence of foreign objects in the airport environment presents a major hazard to aircraft safety. Foreign object debris (FOD) is any substance, debris, or article alien to the vehicle or system would potentially cause damage. The presence of FOD can be the result of the loss of parts from aircraft, pavement cracking, wildlife, ice and salt accumulation, and construction debris. Identification of FOD at airports requires regular observation of airport surfaces by airport personnel, or by chance recognition by aircraft pilots operating on airport pavement. Removal of such FOD is only triggered by those actual observations.

In 2005, the Federal Aviation Administration (FAA), in cooperation with the University of Illinois, conducted a preliminary short term evaluation of an automated FOD detection system at the JFK International Airport. Through the use of millimeter wave radar, this system demonstrated that it was capable of detecting objects as small as a two-inch long bolt on the pavement surface. As a result, it was determined that this type of system could easily provide airport personnel with immediate FOD alerts, and even provide specific information on where the object is located. The conclusions from the preliminary research effort recognized successful detection of FOD under many operational and environmental conditions, but also identified a need for the FAA to conduct further evaluation of FOD detection systems at airports on a longer term basis, under varying seasonal conditions. Since my last letter to you, the FAA has identified a total of four different technologies that are mature enough to be deployed for testing purposes; one of these systems is Trex Enterprises' FodFinder.

The FAA has developed plans for further evaluation of the FODFinder system, and is nearing the beginning of real-world operational testing of their technology as soon as final adjustments are completed, and ready for deployment. Over the last nine months, Trex and the FAA have been evaluating the FodFinder at several other airports, collecting data and information on the systems performance. You may recall that we explained this

in our original letter, mentioning that during our evaluation activity, the system will be positioned at various large airports for demonstration purposes, as well as for evaluation by the University of Illinois. In addition, key operational characteristics of their FOD detection system will be evaluated, documented, and summarized into a final evaluation document, and then later included in an official FAA Advisory Circular that will provide our nations airports with the guidance material they need when selecting a FOD detection system for their airport. Specific issues to be looked at include ability to located FOD items, accuracy, speed, and capability to trigger alerts to airport personnel. Installation and evaluation of the four systems, including the Trex system, is expected to continue well into 2009, with final documentation immediately following. The FAA is excited about this technology, and is very eager to complete the research as soon as possible so that systems like these can be deployed in a timely manner.

The results of this evaluation involving the FODFinder unit, to date, have been very successful, and it is very likely that the performance characteristics of their specific system will be included in an FAA Advisory Circular, thus making acceptance of their system viable for any Part-139 Certificated US Airport. As part of our continued research activity through the end of 2009, the FAA or Trex may periodically position the FODFinder unit at any of the airports shown on the attached pages, either for the purposes of data collection or for demonstration. This list consists of airports that have indicated an interest in participating in the FAA's evaluation, have indicated interest in the system, or is an airport that may be eligible to apply for federal funding to procure such a system in the future. In addition, the list also contains a few military airports that have indicated interest.

The FAA is very excited about this new technology, and is very eager to conduct the research necessary to get this type of system into our specifications so that our nations airport's can begin putting them to use. The ability to evaluate this particular system at a variety of different airports greatly helps us better understand how the system behaves in different airport environments. This is something we just can't do with the other fixed technologies. To help support the FAA's mission to promote aviation safety, we ask that your office please consider extending the grant of authority for Trex and the FOD Finder System. We greatly appreciate any assistance you may be able to offer in this area.

If you have any questions, or require further information on the FAA's FOD Detection Research, please feel free to contact me at 609-485-4989 or via email at Jim.Patterson@faa.gov. Thank you in advance for your cooperation.

Respectfully,

A handwritten signature in blue ink, appearing to read "Jim Patterson".

James Patterson Jr.
Project Manager
Airport Safety Technology R&D Section
AJP-6311

List of Potential Airports

Chicago Midway Airport, IL
Chicago O'Hare Airport, IL
Chicago Dupage Airport, IL
Atlantic City International Airport, NJ
Theodore Francis Green State Airport, RI
Zamperni Field Airport, CA
Seattle-Tacoma International Airport, WA
Portland International Airport, OR
Los Angeles International Airport, CA
San Diego International Airport, CA
Albany International Airport, NY
Albuquerque International Sunport Airport, NM
Lehigh Valley International Airport, PA
Ted Stevens Anchorage International Airport, AK
Austin-Bergstrom International Airport, TX
Hartsfield-Jackson Atlanta International Airport, GA
Baltimore/Washington International Thurgood Marshall Airport, MD
Bangor International Airport, ME
General Edward Lawrence Logan International Airport, MA
Buffalo Niagara International Airport, NY
Bob Hope Airport, CA
Charlotte/Douglas International Airport, NC
Lovell Field Airport, TN
Cincinnati/Northern Kentucky International Airport, OH
Cleveland-Hopkins International Airport, OH
Port Columbus International Airport, OH
City of Colorado Springs Municipal Airport, CO
Dallas/Fort Worth International Airport, TX
Daytona Beach International Airport, FL
Denver International Airport, CO
Des Moines International Airport, IA
Detroit Metropolitan Wayne County Airport, MI
El Paso International Airport, TX
Fairbanks International Airport, AK
Bishop International Airport, MI
Fresno Yosemite International Airport, CA
Fort Lauderdale/Hollywood International Airport, FL
Southwest Florida International Airport, FL
Gulfport-Biloxi International Airport, MS
Harrisburg International Airport, PA
Bradley International Airport, CT
Honolulu International Airport, HI
George Bush Intercontinental/Houston Airport, TX
William P. Hobby Airport, TX
Indianapolis International Airport, IN
Jackson-Evers International Airport, MS
Jacksonville International Airport, FL
John F. Kennedy International Airport, NY

La Guardia Airport, NY
John Wayne-Orange County Airport, CA
McGhee Tyson Airport, TN
McCarran International Airport, NV
Adams Field Airport, AR
Long Beach Airport (Daugherty Field), CA
Louisville International Airport-Standiford Field, KY
Melbourne International Airport, FL
Memphis International Airport, TN
Miami International Airport, FL
General Mitchell International Airport, WI
Minneapolis-St. Paul International/Wold-Chamberlain Airport, MN
Nashville International Airport, TN
Newark Liberty International Airport, NJ
Louis Armstrong New Orleans International Airport, LA
Will Rogers World Airport, OK
Eppley Airfield, NE
Ontario International Airport, CA
Executive Airport, FL
Palm Springs International Airport, CA
Greater Peoria Regional Airport, IL
Philadelphia International Airport, PA
Phoenix Sky Harbor International Airport, AZ
Pittsburgh International Airport, PA
Raleigh-Durham International Airport, NC
Reno/Tahoe International Airport, NV
Richmond International Airport, VA
Roanoke Regional Airport/Woodrum Field, VA
Greater Rochester International Airport, NY
Sacramento Executive Airport, CA
Lambert-St. Louis International Airport, MO
Salt Lake City International Airport, UT
San Antonio International Airport, TX
San Francisco International Airport, CA
Norman Y. Mineta San Jose International Airport, CA
Sarasota/Bradenton International Airport, FL
Savannah/Hilton Head International Airport, SC
Joe Foss Field Airport, SD
Spokane International Airport, WA
Tampa International Airport, WA
Tucson International Airport, AZ
Washington Dulles International Airport, VA
Ronald Reagan Washington National Airport, VA
Wichita Mid-Continent Airport, KS

Holloman Air Force Base, NM
Luke Air Force Base, AZ
Langley Air Force Base, VA
Hill Air Force Base, UT
Nellis Air Force Base, AZ