



One Air Terminal Parkway  
Suite 220  
Melbourne, FL 32901 USA  
[MLBair.com](http://MLBair.com)

July 1, 2018

The Honorable Rick Scott  
Governor, State of Florida  
400 S. Monroe Street  
Tallahassee, FL 32399-0001

Dear Governor Scott:

On behalf of the City of Melbourne Airport Authority, we are submitting a request for funding from the State's Public Infrastructure Grant Program in the amount of \$4 million to construct a Ground Run-Up Enclosure (GRE) at Orlando Melbourne International Airport (MLB).

We are very excited about this opportunity to create what will undoubtedly be an economic engine for our airport and the Space Coast. MLB is the home of Embraer, Northrup Grumman, STS Repair and Maintenance (MRO), and Discovery Aviation. This enclosure will allow our tenants to perform maximum-power engine run-ups with little or no noise impact on the community. Equally important, is that it provides a powerful marketing tool for us to attract new MROs, airlines, aircraft manufacturers, engine manufacturers, and hopefully space and aerospace manufacturers.

We can be under permit within two months, and can complete the GRE in less than a year. If you or your staff have any questions regarding this proposal, please contact me directly, or Bill Johnson, on my staff, who can answer any of your questions.

Sincerely,

Greg Donovan, A.A.E.  
Executive Director



## 2018-2019 Florida Job Growth Grant Fund Public Infrastructure Grant Proposal

Proposal Instructions: The Florida Job Growth Grant Fund Proposal (this document) must be completed by the governmental entity applying for the grant and signed by either the chief elected official, the administrator for the governmental entity or their designee. Please read the proposal carefully as some questions may require a separate narrative to be completed. If additional space is needed, attach a word document with your entire answer.

### Governmental Entity Information

Name of Governmental Entity: City of Melbourne Airport Authority  
Government Federal Employer Identification Number: [REDACTED]

Primary Contact Name: William R. Johnson, AAE  
Title: Senior Advisor  
Mailing Address: One Terminal Parkway, Ste 220  
Melbourne, FL 32901  
Phone Number: 850-528-2964  
Email: bjohnson@mlbair.com

Secondary Contact Name: Greg Donovan, AAE  
Title: Airport Director  
Phone Number: 321-723-6227

### Public Infrastructure Grant Eligibility

Pursuant to section 228.101, F.S., the Florida Job Growth Grant Fund was created to promote economic opportunity by improving public infrastructure and enhancing workforce training. Eligible entities that wish to access this grant fund must submit public infrastructure proposals that:

- Promote economic recovery in specific regions of the state, economic diversification or economic enhancement in a targeted industry ([View Florida's Targeted Industries here](#)).
- Are not for the exclusive benefit of any single company, corporation or business entity.
- Are for infrastructure that is owned by the public and is for public use or predominately benefits the public.

**1. Program Requirements:**

(If additional space is needed, attach a word document with your entire answer.)

Each proposal must include the following information describing how the project satisfies eligibility requirements listed on page 1.

A. Provide a detailed description of the public infrastructure improvements.

(See Attached Narrative)

B. Provide location of public infrastructure, including physical address and county of project.

Orlando Melbourne International Airport, Melbourne, Florida

C. Is this infrastructure currently owned by the public?  Yes  No

If no, is there a current option to purchase or right of way provided to the County?

N/A

D. Provide current property owner.

City of Melbourne Airport Authority

E. Is this infrastructure for public use or does it predominately benefit the public?

Yes  No

F. Will the public infrastructure improvements be for the exclusive benefit of any single company, corporation or business entity?

Yes  No

**G. Provide a detailed description of, and quantitative evidence demonstrating, how the proposed public infrastructure project will promote:**

- Economic recovery in specific regions of the state;
- Economic diversification; or
- Economic enhancement of a Targeted Industry ([View Florida's Targeted Industries here](#)).
  - o Describe how the project will promote specific job growth. Include the number of jobs that will be retained or created, and in which industry(ies) the new net jobs will be created using the North American Industry Classification System ([NAICS](#)) codes. Where applicable, you may list specific businesses that will retain or create jobs or make capital investment.
  - o Provide a detailed explanation of how the public infrastructure improvements will connect to a broader economic development vision for the community and benefit additional current or future businesses.

(See Attached Narrative)

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## **2. Additional Information:**

(If additional space is needed, attach a word document with your entire answer.)

**A. Is this an expansion of an existing training program?**  Yes  No

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**B. Provide the proposed commencement date and number of days required to complete construction of the public infrastructure project.**

November 1, 2018 commencement, 300-360 days to complete after commencement

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**C. What permits are necessary for the public infrastructure project?**

Environmental Permit, Water Management Permit, FAA Approval, City of Melbourne Building Permit

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- D. Detail whether required permits have been secured, and if not, detail the timeline for securing these permits. Additionally, if any required permits are local permits, will these permits be prioritized?**

Permits have not been secured, awaiting FDEO grant, and will take 4-6 weeks to secure.

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- E. What is the future land use and zoning designation on the proposed site of the infrastructure improvements, and will the improvements conform to those uses?**

Current land use is M-1. This Ground Run-Up Enclosure (GRE) conforms with this zoning.

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- F. Will an amendment to the local comprehensive plan or a development order be required on the site of the proposed project or on adjacent property to accommodate the infrastructure and potential current or future job creation opportunities? If yes, please detail the timeline.**

Yes       No

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- G. Is the project ready to commence upon grant fund approval and contract execution? If no, please explain.**

Yes       No

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- H. Does this project have a local match amount?**       Yes       No

If yes, please describe the entity providing the match and the amount.

The Airport Authority has requested funding from FDOT to construct the apron and taxiway infrastructure to the site at \$900,000.

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- I. Provide any additional information or attachments to be considered for this proposal. Maps and other supporting documents are encouraged.**

(See Attached Narrative)

### 3. Program Budget

(If additional space is needed, attach a word document with your entire answer.)

**Estimated Costs and Sources of Funding:** Include all applicable public infrastructure costs and other funding sources available to support the proposal.

1.) **Total Amount Requested**      \$ 4,000,000  
 Florida Job Growth Grant Fund

**A. Other Workforce Training Project Funding Sources:**

City/County                      \$ N/A

Private Sources                 \$ N/A

Other (grants, etc.)            \$ 900,000

Please Specify: FDOT grant

**Total Other Funding**        \$ 900,000

**B. Public Infrastructure Project Funding Sources:**

Construction                    \$ 3,500,000

Reconstruction                \$ N/A

Design & Engineering        \$ 500,000

Land Acquisition               \$ N/A

Land Improvement             \$ 900,000

Other                               \$ N/A

Please Specify: \_\_\_\_\_

**Total Project Costs**         \$ 4,900,000

**Note:** The total amount requested must equal the difference between the workforce training project costs in 3. and the other Public infrastructure project funding sources in 2.

- C. Provide a detailed budget narrative, including the timing and steps necessary to obtain the funding and any other pertinent budget-related information.

(See Attached Narrative)

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#### 4. Approvals and Authority

(If additional space is needed, attach a word document with your entire answer.)

- A. If the governmental entity is awarded grant funds based on this proposal, what approvals must be obtained before it can execute a grant agreement with the Florida Department of Economic Opportunity (e.g., approval of a board, commission or council)?

Approval of Melbourne Airport Authority Board

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If board authorization is not required, who is authorized to sign?

N/A

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- B. If approval of a board, commission, council or other group is needed prior to execution of an agreement between the governmental entity and the Florida Department of Economic Opportunity:

- i. Provide the schedule of upcoming meetings for the group for a period of at least six months.
- ii. State whether entity is willing and able to hold special meetings, and if so, upon how many days' notice.

MAA meets the fourth Wednesday of each month, and a special meeting can be called with ten (10) days notice.

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- C. Attach evidence that the undersigned has all necessary authority to execute this proposal on behalf of the governmental entity. This evidence may take a variety of forms, including but not limited to: a delegation of authority, citation to relevant laws or codes, policy documents, etc.

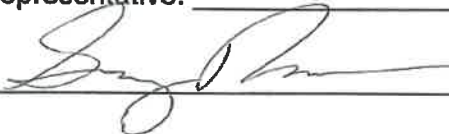
N/A

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I, the undersigned, do hereby certify that I have express authority to sign this proposal on behalf of the above-described entity and to the best of my knowledge, that all data and information submitted in proposal is truthful and accurate and no material fact has been omitted.

Name of Governmental Entity: City of Melbourne Airport Authority

Name and Title of Authorized Representative: Greg Donovan, AAE, Executive Director

Representative Signature: 

Signature Date: July 5, 2018





**Public Infrastructure Grant Proposal for 2018/19  
Construction of a Ground Run-Up Enclosure  
At Orlando Melbourne International Airport**

**Project Narrative**

**Overview**

The City of Melbourne Airport Authority requests financial assistance from the State of Florida to construct a Ground Run-Up Enclosure at Orlando Melbourne International Airport (MLB).

**Brevard County and Florida's Space Coast**

For more than 50 years, Brevard County has been the home of the nation's manned and unmanned space flight programs. The ending of NASA's Space Shuttle program in 2011 resulted in a loss of approximately 8,000 jobs over the course of a decade. The impact of the end of the shuttle program on local communities was compounded by not only to maintain, but to grow Florida's Space Coast as a hub for aerospace, defense, aviation, and technology industries. Presently the Space Coast has 48 engineers per 1,000 workers; more than any other Florida metro area or any of the 25 most populated metros in the country. This region also has the most concentrated high-tech economy in the state and the 16<sup>th</sup> most concentrated in the nation. MLB has become a focal point for job creation in the Space Coast region with major aerospace and aviation companies bringing new opportunities and thousands of jobs to the Melbourne area. In 2015, more than 6,000 people were employed by aerospace and aviation-related companies at MLB.

Brevard County is known for its high-technology innovation and entrepreneurialism leadership. Milliken Institute ranked Brevard County 1<sup>st</sup> in Florida with the most concentrated high-tech economy and 6<sup>th</sup> in the US. According to the Brookings Institution, Brevard County ranks 1<sup>st</sup> in Florida with 11 patents for every 10,000 workers, and 53<sup>rd</sup> in the US. According to the *TechAmerica Foundation*, Brevard County has the 5<sup>th</sup> most concentrated high-tech workforce in the US. Florida ranks 1<sup>st</sup> for aerospace start-ups and 8<sup>th</sup> for aerospace employment according to *BizMiner* in its *Business Xpansion Journal*, and, finally, according to the U.S. Department of Labor, Bureau of Labor Statistics, just under one-third of all aerospace employees in Florida work in Brevard County.

Brevard County has a special appreciation for transporting people and goods in the most efficient, cost-effective and innovative ways. Its central location on the Atlantic seaboard of Florida situates the county in the middle of major space, air, sea, highway and rail corridors, with many of our transportation hubs (such as MLB) as part of Foreign Trade Zone #136, which enables qualified businesses to defer or eliminate U.S. Customs' duties on imported goods.



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**Orlando Melbourne International Airport (MLB)**

MLB is a thriving hub for aviation, aerospace, and high-technology business. Its infrastructure and engineering-oriented workforce has attracted business that contributes more than \$2.6 billion in annual economic impact.

Orlando Melbourne International Airport is becoming well-known as “America’s Fastest Growing Aviation and Aerospace Manufacturing Center”. In an area that suffered the highest unemployment in the country (12.5%) after the space shuttle program was canceled, airport leadership has worked hard to attract and retain jobs to fill that void. Embraer Executive Jets was brought airside to MLB and has quadrupled in size and jobs provided at salaries of \$100,000 and more. Out-of-work rocket scientists and certified technicians have received training and jobs to work for Embraer. Embraer subsequently has grown by 400% at MLB, assembling the world’s most popular business jet (Phenom 100/300) and now the home of their Legacy 450/500 aircraft.

Northrop Grumman has also grown from 500 to 5,000 jobs airside at MLB. We work hard to bring these companies and jobs to our region and must accommodate their needs to ensure that they continue to grow here, and not somewhere else. It’s all about job retention and economic growth.

MLB is a financially self-sustaining enterprise of the City of Melbourne. One of its primary purposes is to provide and maintain scheduled air passenger and cargo service to residents of Brevard County and surrounding counties. It has three domestic carriers (Delta, American, and Elite Airways) and one International (Canadian) carrier, Porter Airlines. These airlines provide nonstop service to seven destinations, accommodating nearly 500,000 passengers per year. The airport has three runways, the longest at 10,181 feet can accommodate the largest passenger and cargo aircraft operating in the world today. The 160,000 square foot terminal includes eight gates and a 40,000 square foot state-of-the-art customs facility. Internationally respected corporations, such as: Northrup Grumman, Embraer Executive Jets, Harris Corporation, Rockwell Collins, Thales Group, General Electric Transportation Systems, L-3 Communications, General Dynamics, STS Repair and Modification, LLC and many more call MLB home.

The Authority continues to work on multiple capital improvement projects to maintain operational standards and continued improvement of overall customer experiences. Capital projects under way include rehabilitation of all three of its runways, a multi-phase renovation of its Main Airline Passenger Terminal, and a new Air Traffic Control Tower (ATCT). Each of these projects are funded with the assistance of the State of Florida, Department of Transportation, through its ‘Grants to Airports’ program.

In 2017, the airport achieved substantial completion of the \$52 million expansion of the aviation facilities for Embraer Executive Jets. The expansion includes a 120,000 square foot addition to the assembly building, a new 36,000 square foot paint facility and a 26,000 square foot delivery center. With the completion of these facilities, Embraer is able to assemble both Phenom and Legacy aircraft simultaneously and have the ability to paint two Legacy aircraft at the same time. This expansion has allowed Embraer to increase its production from five to twelve aircraft per month. Embraer corporate jets are some of the most successful in the world with demand constantly increasing.



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Over the last few months, Embraer and Boeing, the largest aerospace company in the world, have been in discussions to forge a strategic partnership. The two companies already work together to market and support Embraer's KC-390 Transport. Under the Agreement, the companies will jointly pursue new business opportunities, both for the aircraft itself and for aircraft support and sustainment. Driving this is competitor, Airbus' move to take a majority stake in Canadian aircraft manufacturer, Bombardier's C-Series commercial jetliner. A teaming of Boeing and Embraer will allow the two firms to better compete against the C-Series. The impact of this partnership/merger could have positive impact on the State of Florida, and especially on Orlando Melbourne International Airport, where Embraer is well-established with its Engineering Center of Excellence, aircraft assembly of its Phenom and Legacy aircraft line, and options of additional parcels of 'ready to build' land. The impact of this partnership on the state, Brevard County, and MLB simply cannot be overstated.

Global powerhouse, Northrop Grumman, continues with its \$500 million expansion to accommodate the \$20 billion-plus contract for the design and production of the Air Force's next-generation Long-Range Strike Bomber. (They did, after all, win the largest DOD contract in U. S. history). Northrop Grumman is constructing three new buildings and extensive site redevelopment at its MLB campus. Although this aircraft is being designed at MLB, it will be built in California. Construction of the GRE in Melbourne may help persuade them to move some of their manufacturing or testing for this aircraft to Brevard.

STS Repair and Modification, LLC established its maintenance, repair and overhaul (MRO) base at MLB in 2017, primarily servicing commercial service airline aircraft. They took possession of the 83,000 square foot hangar previously occupied by AeroMod International and have selected a site for a possible second, and even larger, hangar for expansion of their operation.

The Florida Institute of Technology (FIT) Research Park at MLB promotes research to enhance and expand Brevard County's technology research infrastructure and create jobs for the Space Coast. FIT actively promotes the Florida Tech Research Park to attract business, government, and academic allies to identify, facilitate, and accelerate innovation so it can more rapidly be brought to market.

### **MLB Literally IS a Targeted Industry**

Uniquely situated as neighbors to our nation's space program, Orlando Melbourne International Airport is perfectly poised for economic growth. To accommodate this growth, we must provide the infrastructure necessary for aerospace titans to operate their growing aircraft inventories airside at MLB.

In a region world famous as a tourism destination, growing clean industry is critical. The construction of a GRE on our airfield ensures economic growth in a region which must protect its natural resources and prevent noise intrusion on the quality of life for visitors, many of them international, who stay longer in our hotels and spend even more per day than our domestic visitors.

Enterprise Florida states that businesses able to locate in other states and serving multi-state and/or international markets are targeted industries, and Aviation/Aerospace is one of the state's premier Targeted Industries with its largest statewide presence in Brevard County. Targeted industries in this



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category include (but are not limited to): Aircraft and Aircraft Parts Manufacturing and Maintenance (NAICS code 336411, Aircraft Engine and Engine Parts Manufacturing (NAICS code 336412), Other Aircraft Parts and Auxiliary Equipment Manufacturing (NAICS code 336413) Repair, Overhaul of Aircraft (MROs) (NAICS code 488190). Nowhere in Florida are these industries more viable than in Brevard County and at MLB.

In its global marketing program, Enterprise Florida quotes three leaders with strong ties to Brevard County and MLB.

"The talented workforce and global access Florida provides has allowed us to operate successfully here for decades. Our two new centers of excellence and state-of-the-art manufacturing facility will allow us to continue our growth and benefit our customers, our company and the community for many more years." *Rick Matthews, VP of Florida Operations, Northrop Grumman Aerospace Systems*

"Having led other manufacturing site searches around the globe, what I can share is a confirmation of what we experienced here and come to expect. Florida is a great place to do business from every perspective: a strong pro-business environment, a skilled workforce and an important mix of industrial capabilities to run a global operation." *Marco Pellegrini, President and CEO, Embraer Executive Jets.*

"Boeing has a rich history in the Sunshine State and we look forward to furthering that legacy. Our ability to grow our footprint is thanks in large part to partners like Enterprise Florida, who help to create a favorable business environment where Boeing, its employees and their families can thrive." *John Elbon, Vice President and Program Manager of Commercial Programs, Boeing*

MLB has proven that investing in its infrastructure and providing 'shovel-ready' construction sites has attracted significant and enviable growth with Embraer, Northrop Grumman, Thales, Southeast Aerospace, Rockwell Collins and others. Notably, MLB's visionary approach to business helped convince the world headquarters of Harris Corporation to remain at MLB after its merger with another D.C.-based entity. We held our breaths for months as Harris made this important decision which could have had a lasting negative impact on our community, the region, and the State of Florida.

Since landing and accommodating the growth outlined above, the economic impact of Orlando Melbourne International Airport has more than doubled to \$2.61 billion in the last ten years and continues growing at a steady pace. The airport has demonstrated a solid and consistent Return on Investment (ROI) to the State of Florida. With this further investment in the major employers at our airport, MLB, Brevard County, and the State of Florida will continue to flourish.

### **The Project**

The Melbourne Airport Authority requests a grant from the State of Florida, Department of Economic Opportunity, to design and build a **Ground Run-Up Enclosure (GRE) at Orlando Melbourne International Airport.**





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Aviation/Aerospace tenants at MLB have, for some time, requested the Authority consider constructing an engine run-up facility at the airport. With the recent completion of the Embraer campus, the opening of STS Repair and Modification, and expansion of Northrup Grumman, now is the time to construct this facility. In fact, Embraer has authorized the expenditure of \$200,000 for construction of a temporary facility on its property until the larger, state-of-the-art enclosure is completed by the Airport Authority. Quick approval of this request may allow the construction of that temporary facility to be postponed or cancelled.

According to the firm *Blast Deflectors Incorporated (BDI)*, there are only two such public ground run-up enclosures/blast deflectors in Florida – at Miami International Airport and at Tampa International Airport. Telephone conversations with staff from the airports indicate they are used multiple times each day by airport tenants, including fixed-base operators, airlines, and MRO companies. The MIA facility was constructed more than 20 years ago and the TPA enclosure was constructed in 2001.

Noise control is a fundamental consideration for airport operators, especially in congested states like Florida. Ground testing of aircraft engines is an essential function in the servicing lifecycle and is routinely carried out in addition to post engine overhauls and repairs. In order to protect local communities from the resulting noise of aircraft ground testing a GRE is used to reduce sound transmission and eject hot and turbulent gases away from the facility. The availability of a GRE for testing is important as airline fleets need to have their aircraft up and running in as short a timeframe as possible.

Attachment 'A' is illustrative of a typical GRE which should help to acquaint the review committee with the concept. A location in the center of the airfield at MLB has been identified, which has also been provided (Attachments 'B', 'C', 'D', and 'E') with the application. This location is ideal in that it is easily accessible to tenants from all quadrants of the airport. The facility will be open to the tenants on a 24-hour basis at no cost. Non-tenants will be expected to pay for use of this facility...or simply lease land and become tenants and employers for Brevard's aviation workforce.

Examples of ground run-up enclosures in North America include such airports as Detroit, Michigan; Vancouver, Canada; Winnipeg, Canada; St. Louis, Missouri; Memphis, Tennessee; Norfolk, Virginia; Albany, New York; Pontiac, Michigan; Milwaukee, Wisconsin; Oakland, California; Portland, Oregon; Indianapolis, Indiana; Portsmouth, Maine; Chicago (O'Hare), Illinois; Everett, Washington; Tampa, Florida; and Miami, Florida. St. Augustine, Florida has a private facility operated by Grumman for its military aircraft.

*We have included with this application an article from Airport Improvement magazine regarding the impact of construction of Vancouver International Airport's GRE on airport noise and an article from CAM magazine on construction of a GRE at Oakland County International Airport (Attachments 'F' and 'G'), respectively). A video on the facility at Vancouver International Airport, from the Discovery Channel, can be found at <https://youtu.be/r3ANTjlyQaa>.*



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### **Marketing the GRE**

Orlando Melbourne International Airport currently has several Maintenance/Repair/Overhaul (MRO) operators on the airport campus (including STS Repair and Modification, Apex Executive Jet Center, AAR Corporation, FIT Aviation, and IAG Engine Center) that will utilize this facility. The airport's Fixed Base Operators (Atlantic Jet Center, FIT Aviation, and Sheltair) will routinely utilize this facility for engine maintenance, as well. The airport's two aircraft manufacturers – Embraer and Discovery Aviation – will be able to utilize the enclosure after installing engines on their new aircraft and perform all testing necessary to assure each new aircraft is delivered in a perfect condition. MLB's four airlines (Delta, American, Elite, and Porter) can use the facility to meet their engine maintenance requirements, too, and on a 24 hour basis, which better enables them to provide needed passenger service flights during the day.

One of MLB's goals is to increase the number of aviation and aerospace companies leasing land and providing services (and hiring employees) at the airport. Equally important to the use of the GRE by current tenants is the ability to market this asset to prospective airlines, MROs, FBOs, engine and aircraft manufacturers, and even to Brevard's rapidly expanding aerospace and space industry. The Authority's business development team will have yet another 'arrow in their quiver' and will utilize this to demonstrate to prospective tenants that MLB is a leader in noise reduction technology, and that they should choose MLB for future expansions instead of locating outside of Florida. We absolutely believe that this project will attract new national and global corporations to join the aviation/aerospace cluster at MLB, increasing airport revenues, and adding much-needed jobs in the Space Coast. Construction of a GRE also demonstrates to the local community how committed MLB is to reducing the impact of airport noise on surrounding neighborhoods.

*We have included with this application an article (Attachment 'H') on the Spirit of St. Louis airport's GRE use as a marketing tool.*

### **Economic Impact**

Although this project began with the request of airport tenants, we believe this project is important to the Boeing/Embraer decision on whether to stay in Florida and, if so, where they will expand in Florida. We also believe the greatest economic impact may be in increasing our ability to attract new businesses to the Space Coast. At this time, we have one large, airline-focused MRO, but we are currently in various stages of discussions with other MROs who have expressed interest in relocating to Melbourne, will need, and will use a noise reduction enclosure.

If this project helps us attract just one new MRO to MLB, the annual economic impact to Brevard County will be greater than \$16 million, will add 212 direct and indirect jobs, and will increase wages by more than \$11 million. If this project will help us attract just one new aircraft manufacturer, we'll see 237 new jobs, \$13 million in wages, and an annual economic impact of more than \$21 million. (See attached Economic Impact Analysis (Attachments 'I' and 'J', prepared by the EDC of Florida's Space Coast, based on a new 100 employee company). We believe this is attainable within the next two-three years.



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**Cost**

The total estimated cost of this project is \$4.9 million, and we are requesting a grant from the Florida Department of Economic Opportunity in the amount of \$4.0 million. This will pay for design and construction of the GRE. There are multiple manufacturers of these structures, and as a public entity, the Authority will be required to solicit Requests for Proposals from these companies.

We are also requesting \$900,000 from the Florida Department of Transportation in its 2018/19 fiscal year to construct the infrastructure (taxiways, lighting, signage, and apron) for the facility as a part of the Department's annual appropriation for airports. Once a grant agreement has been executed, permitting will take approximately 4-6 weeks, and the entire project can be completed in less than a year.

The Melbourne Airport Authority will provide the land for this facility at no charge to the airport tenants.

**Summary**

Construction of a Ground Run-Up Enclosure at Orlando Melbourne International Airport will greatly benefit current tenants, including Embraer, Northrup Grumman, and STS. It will be a tremendous marketing tool for the MLB team to promote to new airlines, MROs, FBOs, aircraft manufacturers, engine manufacturers, and quite possibly Brevard's huge space industry. Enterprise Florida has identified the aviation and aerospace industry as a targeted market and this facility will help draw attention to the unique nature of Brevard County – Florida's Space & Aviation Hub.

The annual economic impact of attracting just one new MRO is more than \$16 million and more than \$21 million if we can attract one additional aircraft manufacturer, but the greatest opportunity may in enticing the new mega-partnership of Boeing/Embraer to expand and build their new facilities at MLB. The economic impact of this achievement, while still unknown, will be a monumental achievement for the State of Florida, Brevard County and Orlando Melbourne International Airport.

The following Letters of Support, demonstrating support of the MLB airport tenants, local and state leaders, are also attached:

- Embraer
- STS
- IAG Engine Center
- Susquehanna Holdings
- Diversified Aviation Services
- Southeast Aerospace
- Atlantic Jet Center
- Discovery Aviation
- Apex Jet Center
- Melbourne Area Pilots Association (MAPA)
- Brevard County
- Florida Institute of Technology



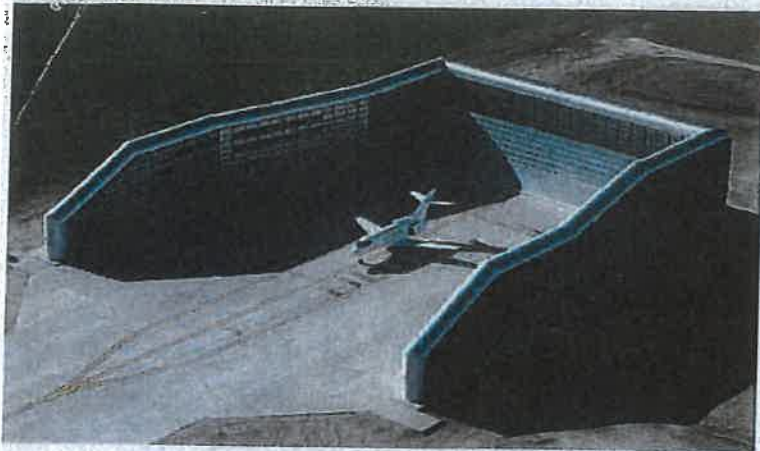
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- Economic Development Commission of Florida's Space Coast
- Senator Debbie Mayfield
- Senator Dorothy Hukill
- Representative Thad Altman
- Representative Tom Goodson

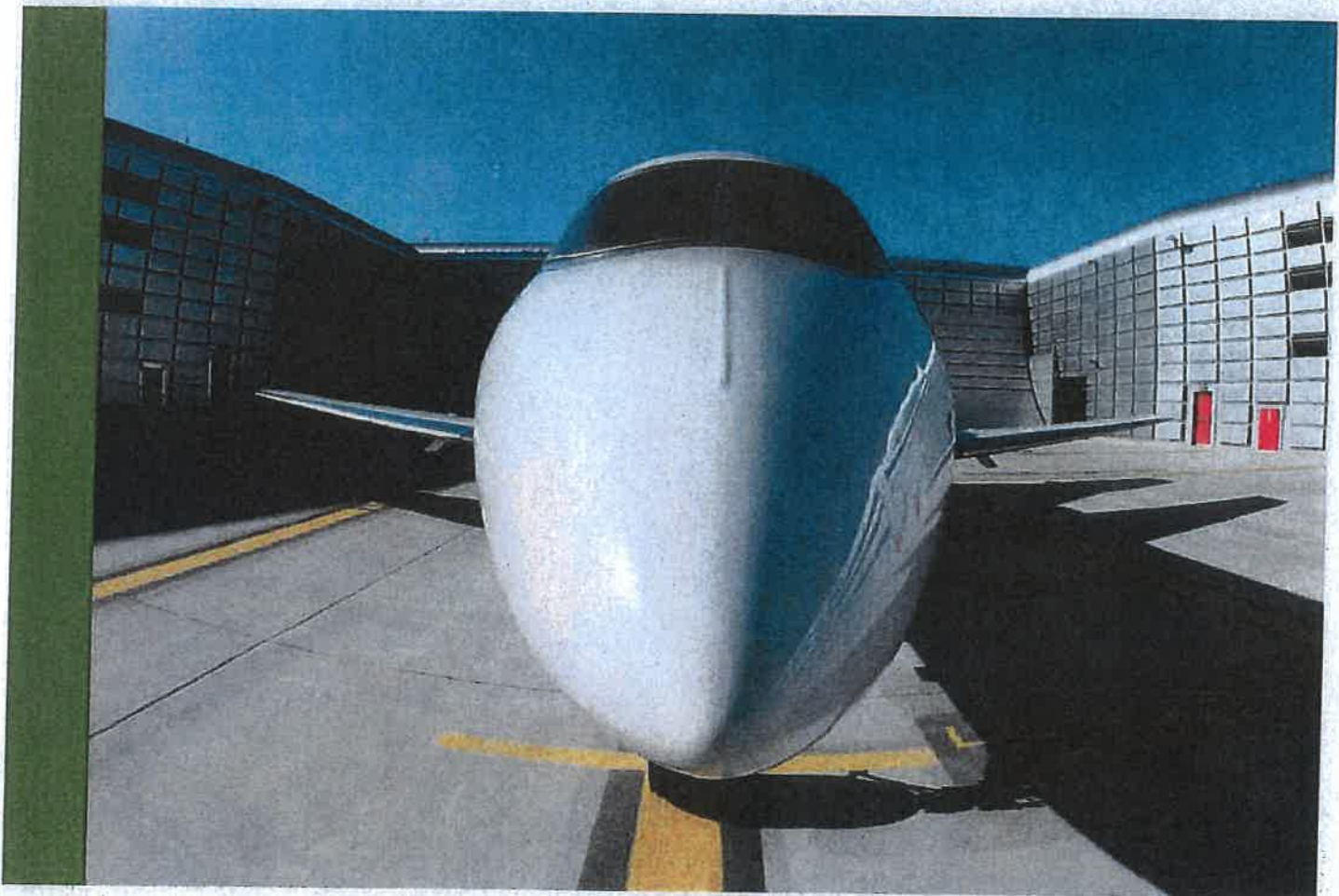
On behalf of the Melbourne Airport Authority, we appreciate your consideration of this project. For additional information, contact Bill Johnson, AAE, Senior Advisor, Orlando Melbourne International Airport at (850) 528-2692, or Greg Donovan, AAE, Airport Director, at 850-723-6227.

→ → →





# Ground Run-Up Enclosures



**Attachment A**



TECHNICALLY PROVEN DESIGNS | HIGHEST QUALITY MATERIALS | PROFESSIONAL INSTALLATION





## Aerodynamically Stable

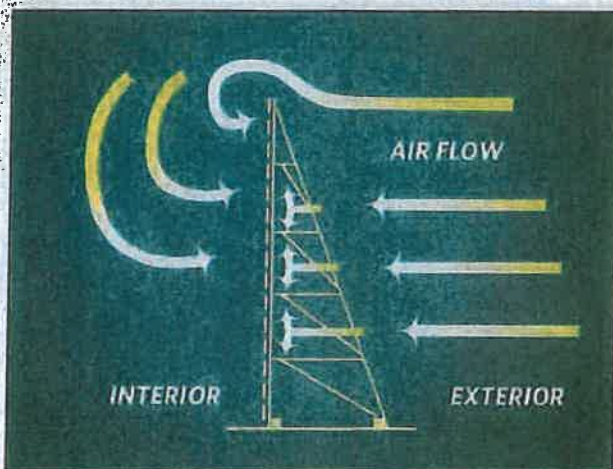
The key to a successful GRE project.



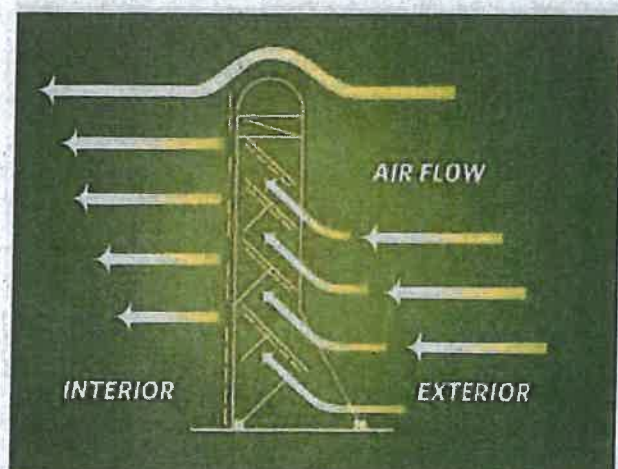
Aircraft engines require smooth, turbulence-free air to run effectively at high power settings while stationary. This is normally not a challenge when running in open-field conditions oriented into the wind. When the aircraft orientation is fixed and tall acoustic walls are placed around the aircraft, air flow can become a challenge for full power ground run-ups.

Historically, GRE designs placed square walls around the aircraft with little regard for aerodynamic performance. This resulted in a GRE usable only in extremely limited wind

conditions due to unsatisfactory airflow conditions at the engine inlet, which can lead to dangerous stalls and surges. Recognizing these issues, BDI began an extensive design program using scale and computer modeling to develop a new approach in GRE technology. The resulting Stable Flow™ design has been demonstrated to drastically improve GRE usability in adverse wind conditions. By reducing vortex formation at the walls, pressure buildup at the rear of the aircraft and inlet pressure drops, the Stable Flow™ system assures appropriate flow conditions are maintained at the engine inlet and that exhaust recirculation is minimized.



*Traditional Acoustic Wall*



*BDI's Patented Stable Flow™ Design*



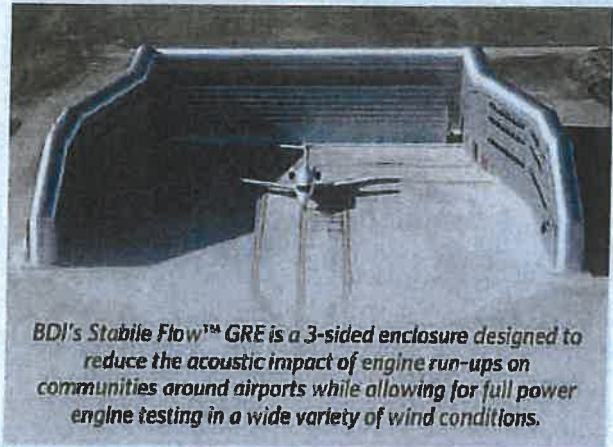
# A Run-Up Noise Solution

■ Aircraft engine run-ups typically create a greater noise nuisance than takeoffs, and are often scheduled at night. This can result in noise complaints from the community and creates a serious public relations challenge for airport officials. BDI's Christopher Lynn and Mark Boe pioneered a cost effective, technologically advanced solution for ground run-up noise attenuation.

■ BDI's philosophy is based on balancing project requirements with practical solutions. We offer turnkey design-build ground run-up enclosure (GRE) facilities that use patented components, proven designs and a spotless track record of successful installations.

■ BDI can design and build ground run-up enclosures for any aircraft mix including commercial, general aviation and military.

■ For a complimentary analysis of how BDI technology can mitigate a specific ground run-up noise problem, please



*BDI's Stable Flow™ GRE is a 3-sided enclosure designed to reduce the acoustic impact of engine run-ups on communities around airports while allowing for full power engine testing in a wide variety of wind conditions.*

contact us. BDI's philosophy is based on providing our customers with the highest quality products and services that match our international reputation of performance and value, earned over the last 55 years. This reputation includes technically sound designs, timely deliveries, professional installation and outstanding post-project customer service.

■ The combination of the aerodynamically advanced Stable Flow™ design with the effectiveness of Noise Blotter™ acoustic panels provides a stable, effective GRE with very high usability and outstanding noise reduction.

■ BDI utilizes the latest aerodynamic, acoustical and structural software packages combined with scale modeling and numerous field measurements to ensure project requirements are met.

■ Let us assist with your project by providing a complimentary analysis demonstrating how BDI technology can mitigate a specific ground run-up noise challenge.



*BDI carefully considers the concerns of all stakeholders during each stage of a GRE project.*





## GRE Features & Options

Each BDI facility is customized using a variety of standard options to meet the project requirements.

Obstruction Lights



Limit Lines



Safety Features



Interior Work Lights



Noise Blotter Acoustic Panels



Curved/Skirted Jet Blast Deflector



Exterior Cladding



Signage



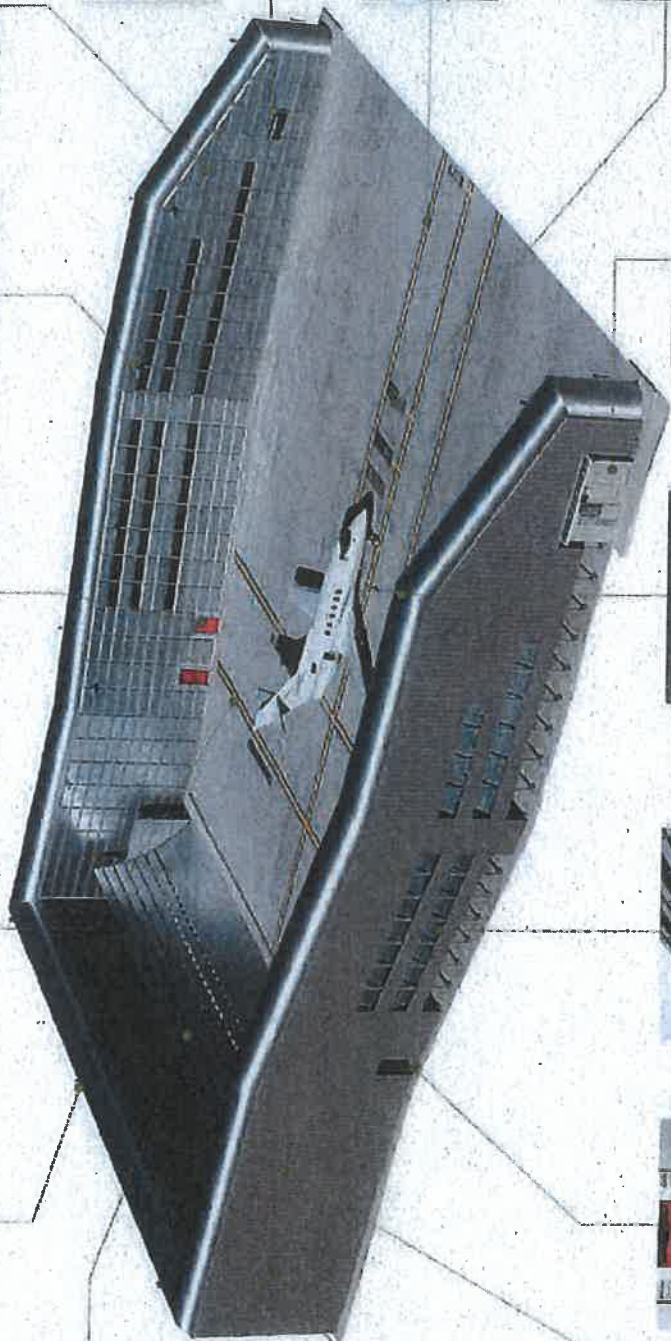
Wind Condition Display



Ingress/Egress Guides



Aircraft Stop Positions



Access Doors



Acoustically Treated Aero Vents



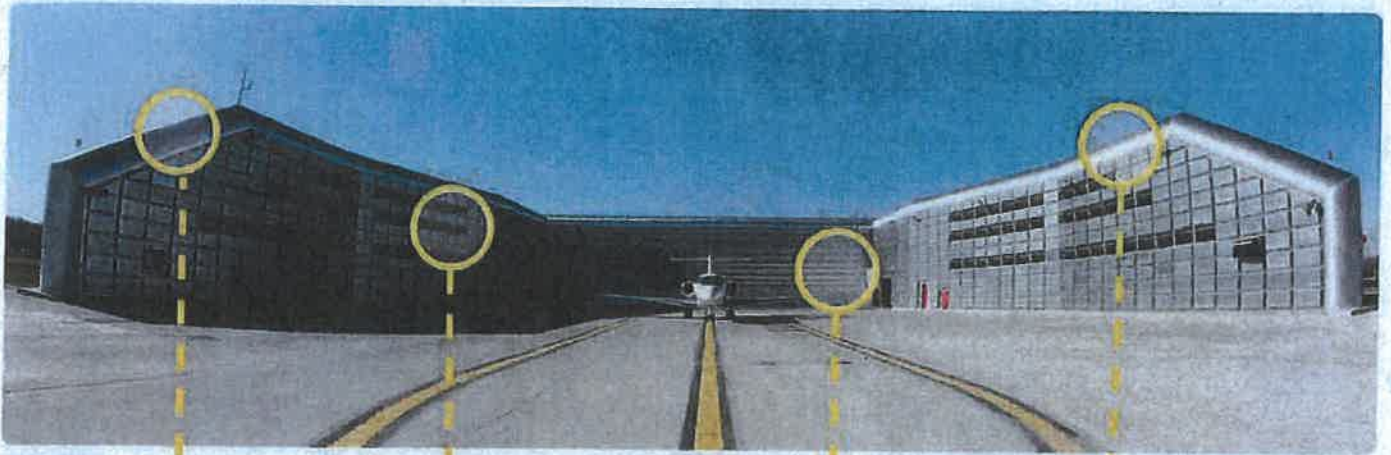
Instrumentation



Observation Cabins





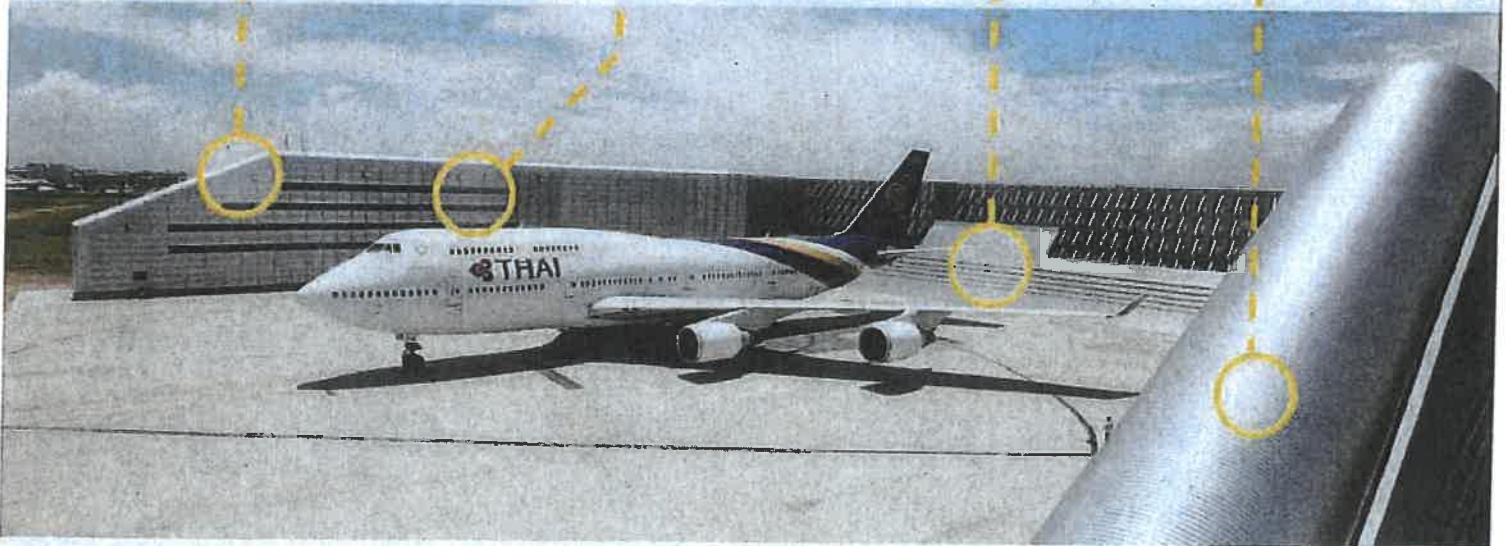


**Roll Top**  
Rounded top edge eliminates turbulence in cross wind conditions.

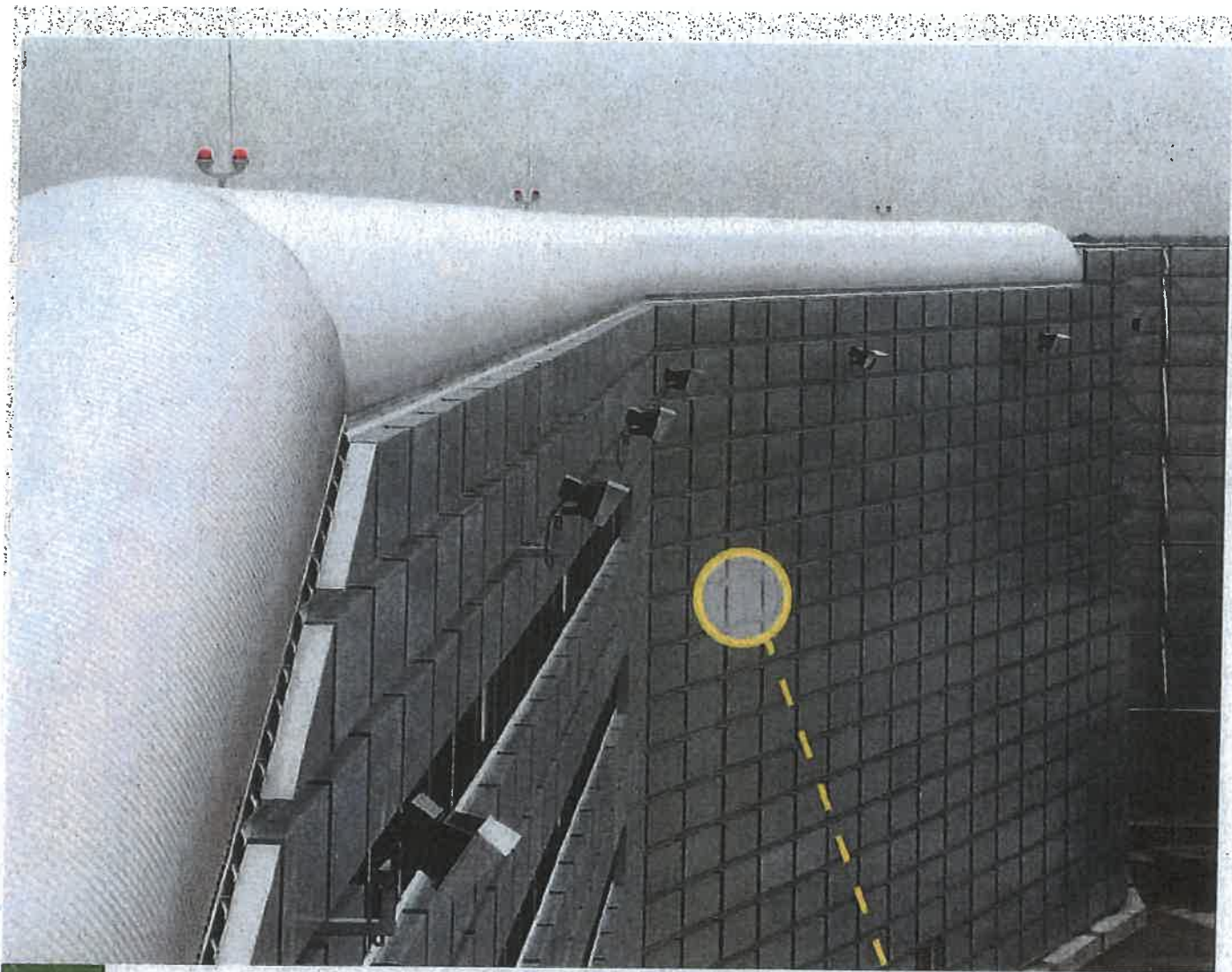
**Independent Curved/Slotted JBD**  
Protects acoustically treated rear wall and directs exhaust out of the GRE to avoid exhaust gas recirculation.

**Acoustically Treated Vented Side Walls**  
Provides adequate turbulence-free air during side wind conditions.

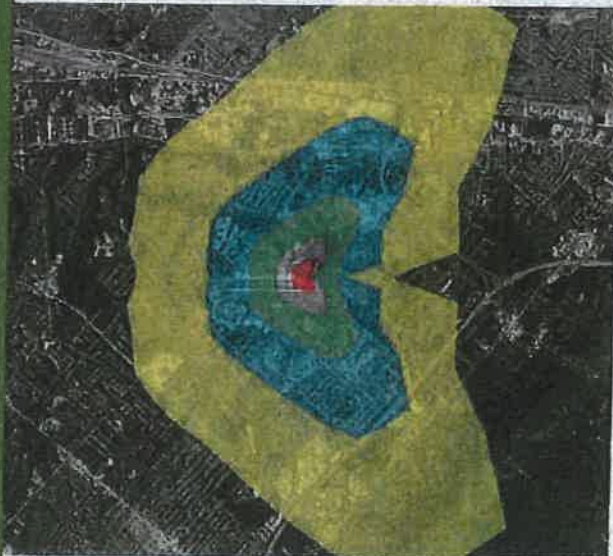
**Sloped Entry**  
Improves air flow during quartering head wind conditions.







A BDI GRE is equipped with thousands of laboratory-tested Noise Blotter™ acoustic panels. The acoustic performance, which is measured in terms of insertion loss, is determined by the height of the facility and the type of aircraft and the power setting used during engine run-ups. A typical BDI facility has a near field insertion loss of 15 dBA, but can be customized to meet a variety of acoustic performance requirements.



Example of noise contour without GRE



Example of noise contour with GRE

50 - 60 dBA   60 - 70 dBA   70 - 80 dBA   80 - 90 dBA   90 + dBA





## Outstanding Acoustic Performance

The core requirement for a GRE.

Engine run-ups typically occur at night, precisely when communities near airports are most sensitive to noise. For this reason, BDI's patented Noise Blotter™ acoustic panels were designed specifically for control of the low frequency noise generally associated with aircraft ground run-ups. They feature a high transmission loss (STC) of 36 and effective absorption of low frequency noise. These panels have a demonstrated noise reduction coefficient (NRC) of 1.25 and maintain an absorption coefficient of 1.0 at 100Hz. The use of non-hydroscopic materials and acoustically transparent wrap materials ensure a long and maintenance-free life.



*Illuminated signs and logos can be installed on the exterior of the facility. This feature provides a unique branding and messaging opportunity.*





**Memphis/US Air Force (USA)**  
Project Highlight: Designed for the C-5A, a very large aircraft.



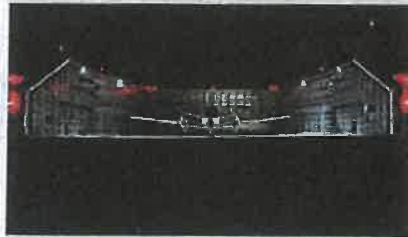
**Dubai (United Arab Emirates)**  
Project Highlight: First GRE built in the Middle East.



**Norfolk (USA)**  
Project Highlight: Designed primarily for regional jets.



**Kuala Lumpur (Malaysia)**  
Project Highlight: Facility was widened to accommodate A380.



**Albany (USA)**  
Project Highlight: Small GRE for turboprop aircraft.



**Pontiac (USA)**  
Project Highlight: First general aviation GRE facility in the USA.



**Tampa (USA)**  
Project Highlight: Rated for hurricane wind velocities.



**Milwaukee (USA)**  
Project Highlight: Facility was installed directly on existing aircraft pavement.



**Oakland (USA)**  
Project Highlight: Aircraft up to B747 can perform run-ups in GRE.



**Portland (USA)**  
Project Highlight: Used in two opposite prevailing wind directions.



**Indianapolis (USA)**  
Project Highlight: Accommodates high tail engines.



**Portsmouth (USA)**  
Project Highlight: Last non-vented GRE built by BDI.



**Chicago O'Hare (USA)**  
Project Highlight: First installation of BDI's Stable Flow™ system.



**St. Augustine/Grumman (USA)**  
Project Highlight: Designed for both afterburner and non-AB Military Aircraft.



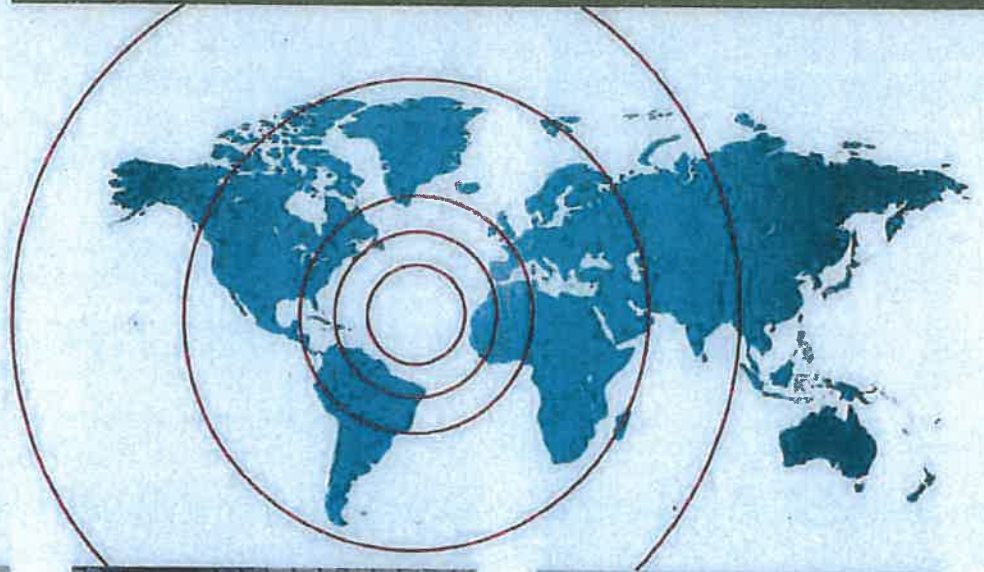
**Everett/TRAMCO (USA)**  
Project Highlight: "L" shaped facility.





# Recognized World Leader

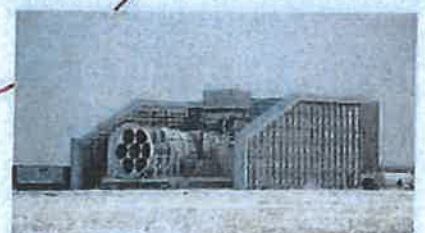
BDI has extensive project experience with proven GRE designs.



**Detroit (USA)**  
Project Highlight: Anti-radar cladding on exterior.



**Vancouver (Canada)**  
Project Highlight: LED signage on cladding.



**Winnipeg/GE (Canada)**  
Project Highlight: Engine test facility with Augmentor & exhaust stack.



**Zurich (Switzerland)**  
Project Highlight: Viewing windows incorporated into side walls.



**St. Louis (USA)**  
Project Highlight: Exclusively for general aviation use.



**Bangkok (Thailand)**  
Project Highlight: Accommodates A380 and MD-11.



**Bogotá (Colombia)**  
Project Highlight: First GRE in South America.

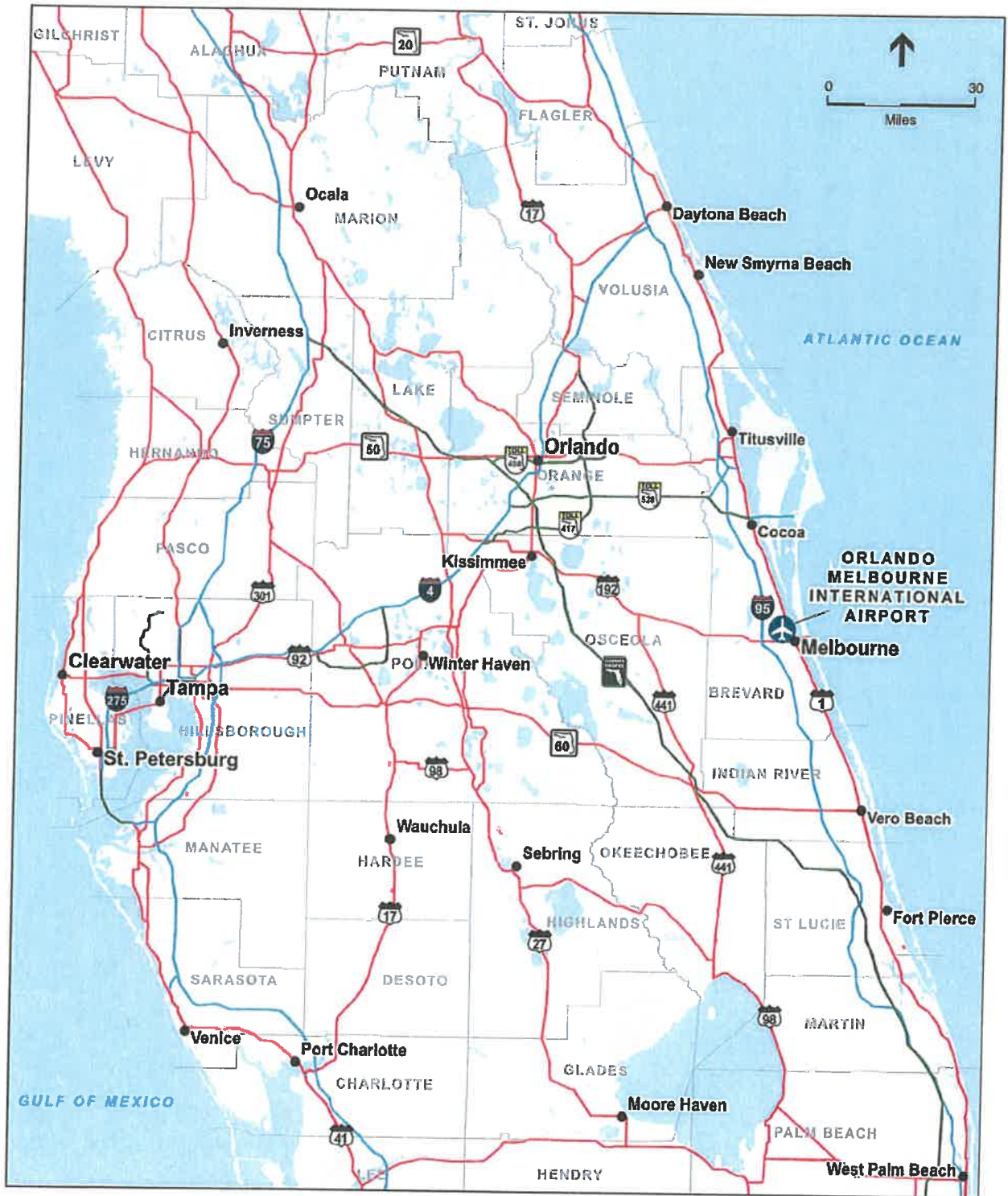


**Memphis/FedEx (USA)**  
Project Highlight: Accommodates all commercial aircraft.

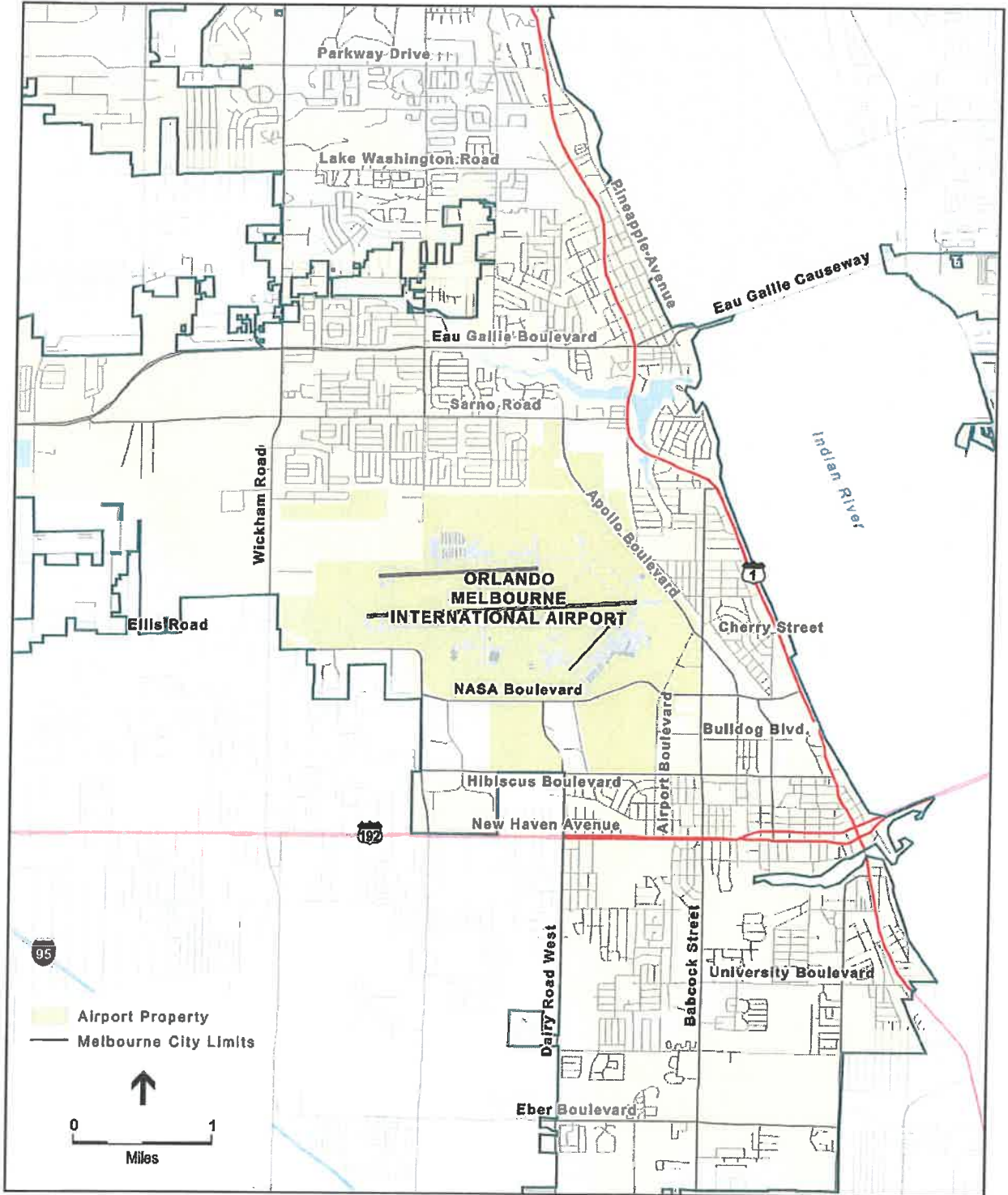


**Sofia (Bulgaria)**  
Project Highlight: First modern GRE in Eastern Europe.



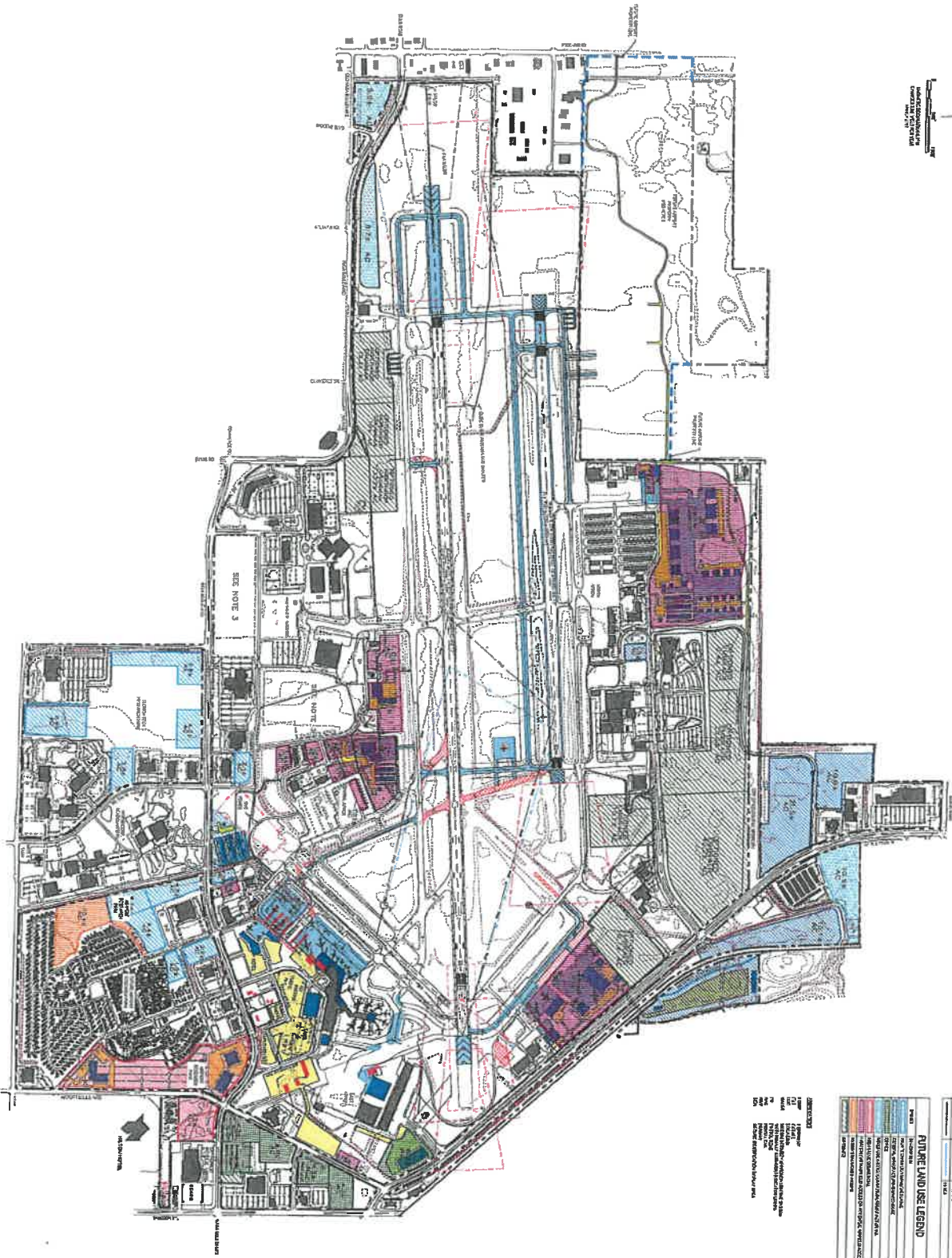


## Attachment B



## Attachment C





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PROPOSED	PROPOSED
... (Detailed legend items with symbols and descriptions) ...	... (Detailed legend items with symbols and descriptions) ...

ROAD AND LAND USE LEGEND	
... (Detailed legend items with symbols and descriptions) ...	... (Detailed legend items with symbols and descriptions) ...

# Attachment D



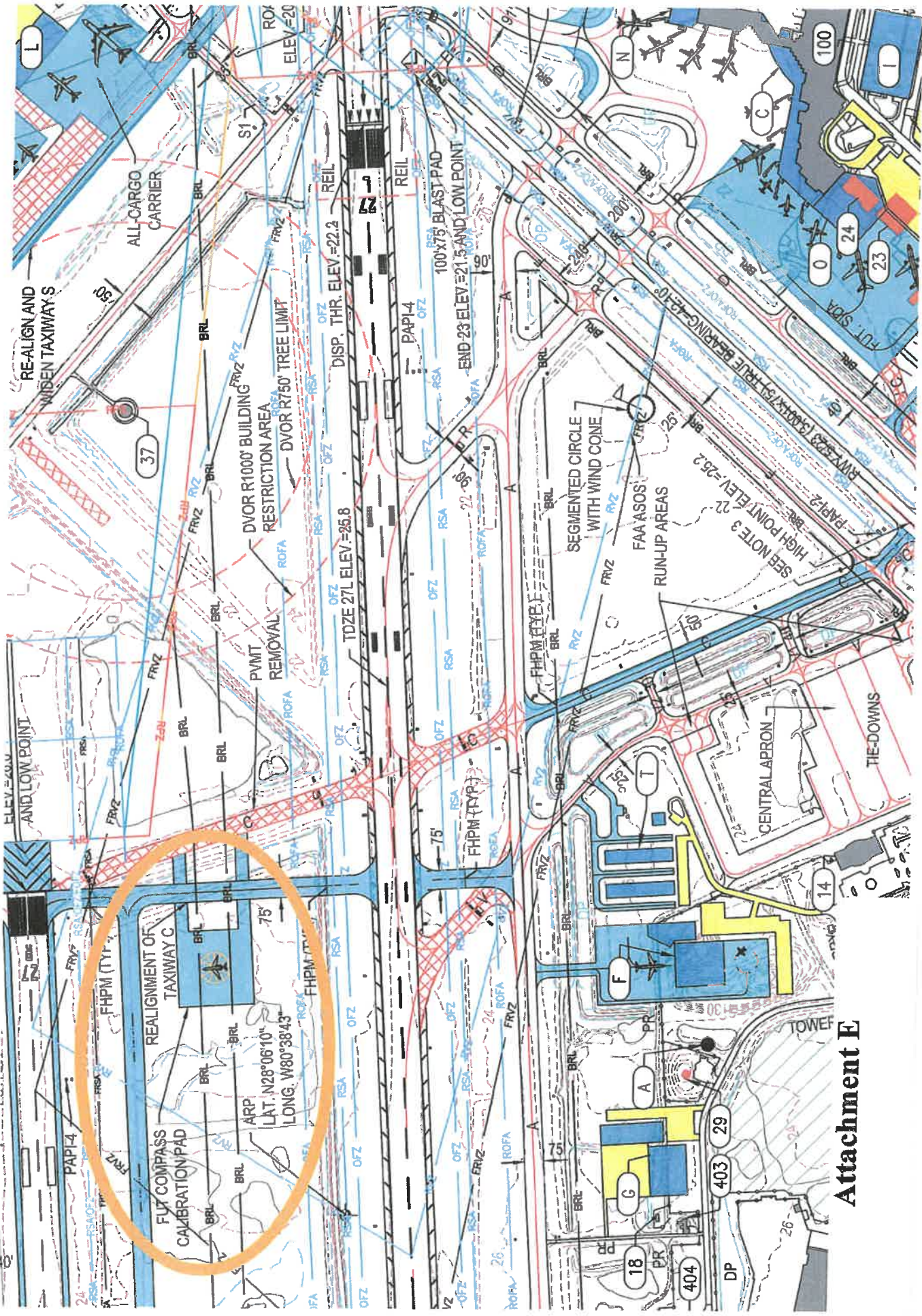
**AEC**  
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 ASSOCIATION

**FSA**

**CS**  
 COMPANIES

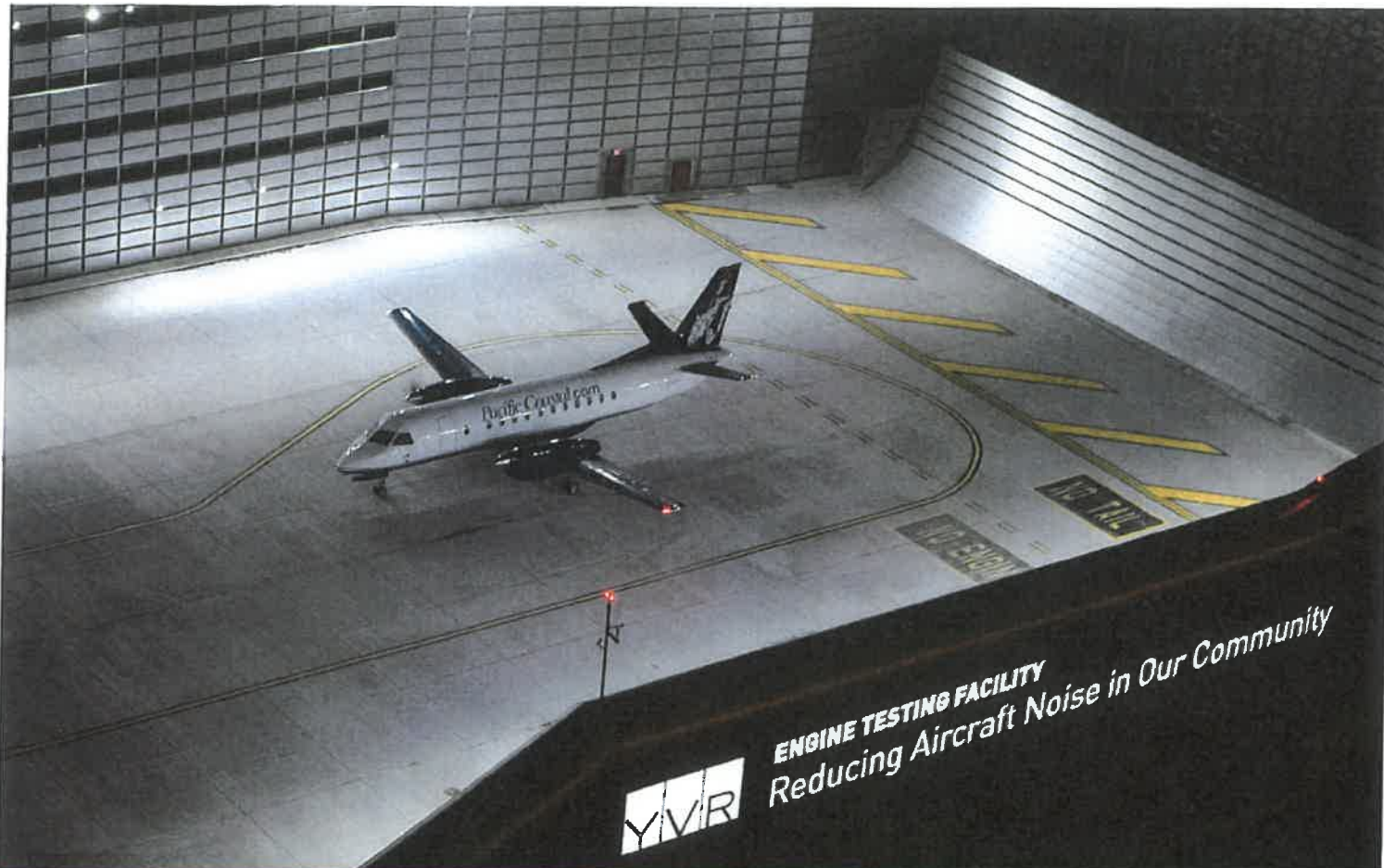
4101 LAKESHORE BLVD, SUITE 2100  
 HOUSTON, TEXAS 77024  
 PHONE: 713.865.2000  
 FAX: 713.865.2001  
 WWW.AEC-COM.PK





Attachment E





**ENGINE TESTING FACILITY**  
**Reducing Aircraft Noise in Our Community**

# LIKE A GOOD NEIGHBOR

## Vancouver Int'l Installs Ground Run-up Enclosure to Cut Maintenance Noise in Half

By Kimberly Kaiser

With round-the-clock operations and an urban location, Vancouver International Airport (YVR) has long been attuned to noise issues. In December, Vancouver Airport Authority finished a \$12 million project to help keep peace with YVR's neighbors. A new ground run-up enclosure (GRE) — Canada's first — is expected to cut the acoustic impact of ground run-ups in half. The structure will also serve as a deicing station — another industry first.



Anne Murray

Anne Murray, vice president of community and environmental affairs for Vancouver Airport Authority, explains the rationale for the GRE project: "We're a 24-hour airport, and that's

really important in terms of supporting the economy of this community. While we have a comprehensive noise management plan to balance air travel with urban living, it's impossible to eliminate the sound of aircraft landing and taking off."

It is possible, however, to reduce the noise produced by engine run-ups performed during regular maintenance. And that's exactly what the airport did.

"Engine run-ups are particularly bothersome to the community because they are done at night, often at high power and often for extended periods of time," explains Murray. "We knew this was a concern for the community and we looked at what sorts of things we could do to address that."



VANCOUVER  
AIRPORT  
AUTHORITY

### factsfigures

**Project:** Ground Run-up Enclosure

**Location:** Vancouver Int'l Airport

**Size:** 67 meters wide; 80 meters deep

**Cost:** \$12 million (Canadian)

**Construction:** April to Dec. 2011

**Engineering Consultant:** URS Corporation

**GRE Supplier:** Blast Deflectors

**Primary Objective:** Cut engine run-up noise in half

**Additional Benefit:** Provide deicing location for smaller aircraft on south side of airport

## Attachment F



*A Saab 340 engine is started for acoustic acceptance testing while a technician observes. The close proximity of the run-up facility to the maintenance hangars at YVR provides a convenient location to perform aircraft run-ups.*

Analysis showed that large jets weren't causing the most noise complaints; smaller propeller aircraft were the bigger culprits. "That's a lot easier to build a structure for," she relates.

Although the airport's new GRE is designed to handle large 757 jet aircraft, its primary users will be propeller aircraft such as Dash-8s, Beech 1900s, Saab 340s, Otters and Metroliners — equipment operated by fixed-based operators, charter outfits and carriers offering scheduled service to small communities in British Columbia, Murray explains.

The three-sided, open-top structure will be used primarily from 10 p.m. to 6 a.m., when aircraft are undergoing maintenance rather than flying.

The airport authority selected Blast Defectors to supply the GRE and URS Corp. to provide engineering support for the project. URS had previously worked on GRE location and site studies at Boeing Field in Seattle, Calgary International in Alberta and Tampa International. Blast Defectors has built 20+ GREs worldwide.

### **Planning & Design**

Due to the size of the facility and the need for easy access by aircraft, YVR had eight potential locations to consider, relates Murray. A site adjacent to the airport's South Terminal was chosen for its proximity to south side airline operations and advantageous control tower sightlines, prevailing winds, and acoustic, economic and environmental benefits.

After the site was selected, URS created a computerized model of the future structure. Using the simulated GRE, engineers ran noise software to help determine the optimum place on the site to place the structure and forecasted how effective it would be reducing noise in the surrounding community, explains Shammi S. Ratti, P.E., senior project manager for URS. The design that resulted is a steel structure engineered to reduce run-up noise by 50%, or approximately 15 decibels.

"URS prepared a series of highly detailed renderings that showed exactly what the completed facility would look like at the proposed location," recalls Don Bergin, director of technical sales for Blast Defectors. "They also produced an animated tour of the facility that turned out to be a great tool for community outreach."

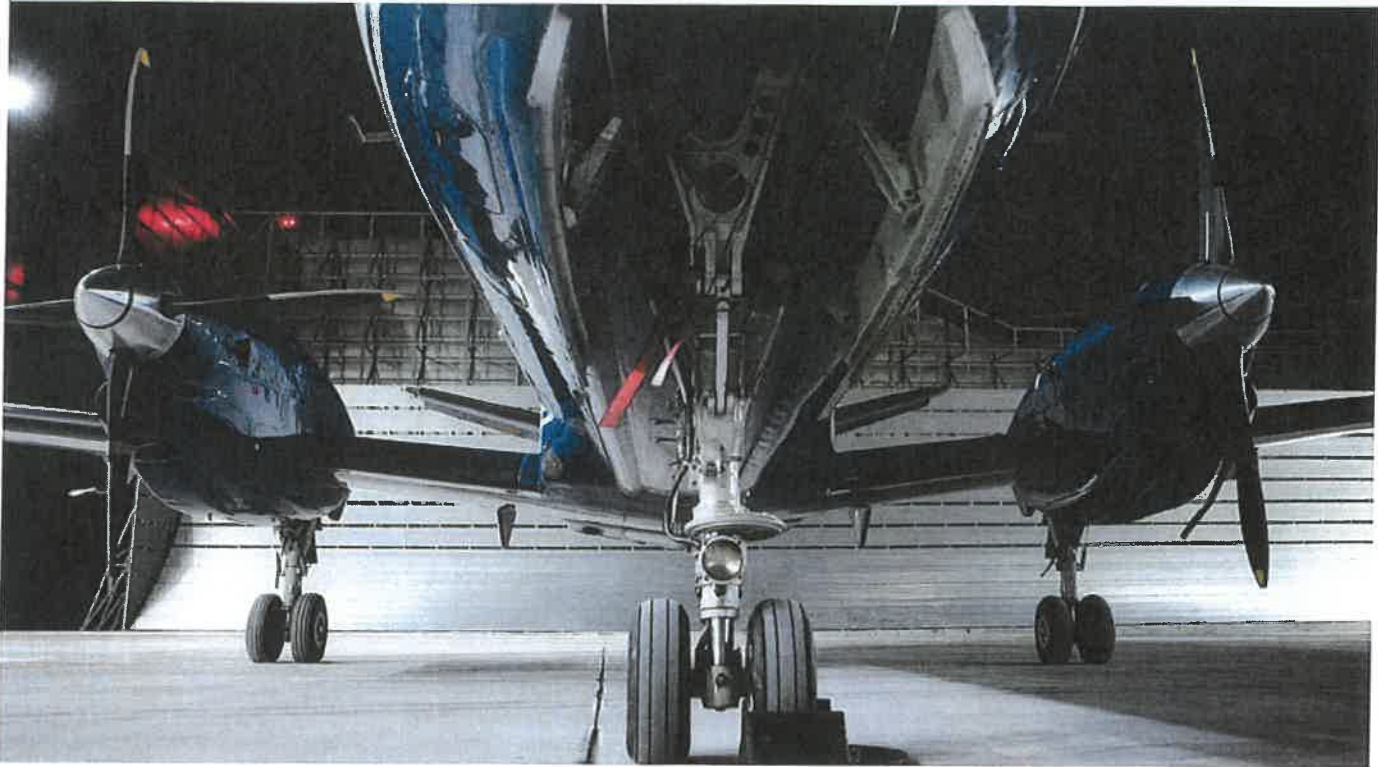
YVR eventually posted the video on YouTube.

One side of the facility is slightly taller than the other to maximize its acoustic benefits while keeping the project under budget, explains Bergin. At its high point, the structure is about as tall as a five-story building. Acoustic panels inside absorb sound as well as direct it up and out so run-up noise dissipates before reaching the nearby community. The exterior walls feature steel cladding, which not only improves the acoustic performance of the GRE, but enhances the aesthetics of the facility as well, he adds.

"One very unique feature of the facility is a sign mounted on the aesthetic cladding," notes Bergin. "It not only has the logo of the airport, but also a clear explanation of the purpose of the facility, which is really great for community relations."



The YVR facility is used by both jet and propeller aircraft.



### Working with the Community

Since the goal of the GRE project was to reduce the impact noise has on YVR's neighbors, the airport authority worked closely with the community to educate it about the project and how it would benefit residents. The airport's noise management committee, which includes local citizens, municipal government staff, pilots, air traffic control personnel and government officials, was involved in the project from the earliest stages, including site selection.

"The community is very supportive," Murray notes. "It's very well-received."

A launch event helped kick off the project on a positive note. YVR used the occasion to show media and community members where the GRE would be built and explain what the project would accomplish. Because the structure is in a secure area of the airport, YVR created a viewing platform so guests could view it, Murray notes. After the project began, YVR provided construction updates on its website and through electronic newsletters and photos posted to Twitter.

# BDI

## Blast Deflectors, Inc.

The Jet Blast & Run-Up Noise Experts

■ BDI offers turnkey solutions for ground run-up noise and jet blast impacts. Let our worldwide experience of more than 55 years benefit your project.

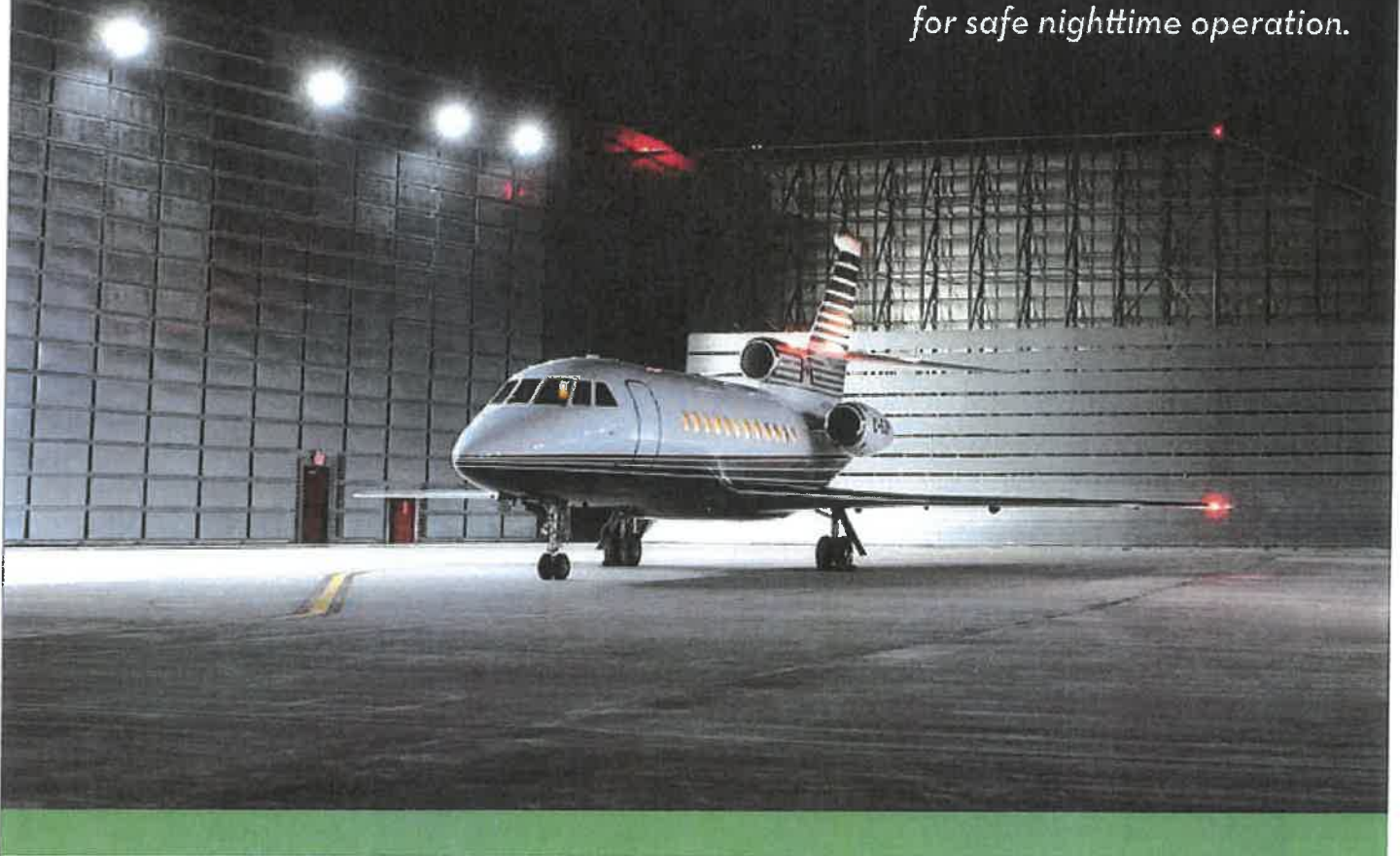
- Ground Run-Up Enclosures
- Jet Blast Deflectors
- Blast Fences
- Acoustic Barriers
- Site Analysis & Design Assistance



www.bdi.aero  
Tel: (775) 856-1928



*Focused flood lighting illuminates the interior of the facility and allow for safe nighttime operation.*



Beyond the substantial noise reduction the GRE provides, Murray recognizes its public relations value: "I think the community appreciates that we take their concerns seriously, and they see that we're working on it, that we're investing in addressing a community concern."

### **Dual-Purpose Design**

In addition to reducing engine run-up noise, an in-ground glycol collection system allows the airport's GRE to double as a de-icing facility — another notable first, says Bergin.

"We have built a GRE that had an aircraft wash rack, another with a restroom and a couple with GPU pits," he relates. "But never before have we been involved in a project with a glycol capture unit."

The dual-purpose design, he notes, is an excellent example of maximizing a development project to benefit both the community and airport operations.

Previously, the airport had a primary deicing facility for its major carriers and main operations, but it didn't have anything on the south side for smaller propeller planes. "The small air carriers either wouldn't operate in the snow or they would have

a glycol recovery vehicle that would come in after," Murray explains. "The GRE will now provide a centralized location for deicing at the south side of the airport."

The GRE also provides fuel and time efficiencies and reduces greenhouse gas emissions for south-side operators, because they no longer need to taxi to the designated run-up area at the west end of Sea Island.

Although a glycol capture unit is an unusual feature for a GRE, it was included in YVR's plans from the get-go, recalls Ratti. As such, engineers included a separate capture system and glycol storage tank in the original designs.

Between the good will the new GRE has built with airport neighbors and the innovative shared use of infrastructure it provides by doubling as a deicing facility, Murray notes that YVR is "very happy" with the project. "It's good for business and good for our operators; good for the community and good for the environment," she concludes. "It's rare to have such a significant noise reduction, and we're really pleased." ✈️

 To share or view this article online visit [AirportImprovement.com](http://AirportImprovement.com).

# Thoughtful Silence

By David R. Miller, Associate Editor



When Paul Simon and Art Garfunkel recently reunited for their first tour in 20 years, most concertgoers found it very easy to enjoy the intricate harmony of the duo's standard, "Sounds of Silence." Some modern realities are pushing the sounds of silence out of reach for residents of Oakland County, but thoughtful design can be utilized to reintroduce many to the simple pleasures of quiet conversation or a good night's sleep.

Few facilities present a greater noise control challenge than general aviation airports. Since general aviation, which includes all air traffic except military and airline flights, accounts for approximately 70 percent of the total flights in the United States, general aviation airports are usually situated in densely populated areas to allow easy access to their services. To be considered a good neighbor, general aviation airports must work diligently to control the noise generated by aircraft engines.

As part of a noise control effort, Oakland County International Airport (OCIA) in Waterford recently underwent a part 150 noise/land use compatibility study. This five-year study was instrumental in the development of a series of noise control recommendations for OCIA, including the creation of a Ground Run-up Enclosure (GRE). The Garrison

Company of Farmington Hills and Blast Deflectors, Inc. of Reno, Nevada combined their talents to design and build this highly specialized aviation structure.

### DEFINING PROBLEMS AND SOLUTIONS

Airports are never quiet, but several unique circumstances combine to make the noise generated at OCIA particularly troublesome. OCIA is designated as a reliever facility for Detroit Metro Airport, and OCIA therefore accommodates a large amount of business traffic that would normally have used Detroit Metro. Jets favored by business travelers are typically large enough to accommodate multiple passengers, but small enough to escape stringent federal noise regulations that govern jets in excess of 70,000 pounds. The engines that propel business travelers can be among the noisiest in the world and as the nation's 43rd busiest airport, OCIA frequently serves as ground zero for their sonic disruptions.

"We felt that it was necessary to address the noise," said J. David VanderVeen, director of the Department of Central Services for Oakland County. "Because of the combination of the traffic that we have, and the legislation that regulates that traffic, we have become a very noisy facility. We undertook a comprehensive study where we measured the volume of traffic, the intensity and longevity of noise, and its effect on our

neighbors."

OCIA logs over 270,000 takeoffs and landings annually. These events generate a lot of noise, but they are less irritating than other airport operations because of the short duration. Ground run-ups are equally noisy, but their longer duration makes them a key area of concern.

"When engines are undergoing maintenance, they need to be run up, sometimes for periods of up to 20 minutes," said VanderVeen. "The duration plus the intensity makes run-ups a very irritating source of noise at this airport. The ground run-up enclosure will reduce that by up to 70 percent."

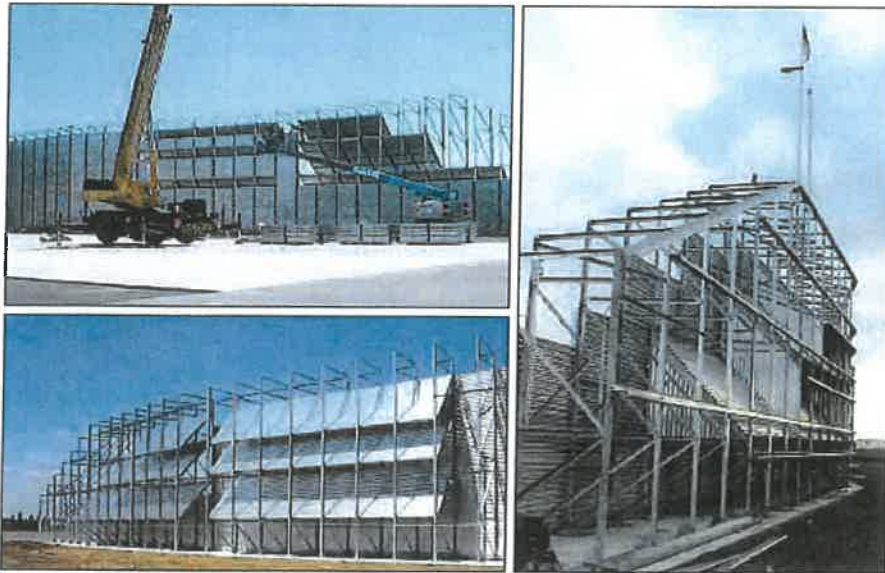
As part of its noise control program, the airport has purchased approximately 50 homes, and has implemented a "Fly Quiet" program to encourage pilots to use quiet arrival and departure procedures, but the GRE represents the most radical step taken by OCIA.

### NOISE REDUCTION

Acoustical engineering is a complex science, however the movement of sound waves is surprisingly simple. Sound waves can be absorbed, reflected or transmitted when they strike an object. Walls can be designed to facilitate one or more of these three actions. Acoustical engineers design interior spaces with walls that offer a combination of these abilities, thereby controlling the sound that is gen-

## Attachment G





Noise reduction was a key project consideration. Acoustic panels were installed along the inside of the wall (upper left photo), while vents are turned to direct sound towards the ground (lower left photo).

The sidewalls of the GRE feature a steep downward slope towards the front of the structure to eliminate any hard point that could create a vortex (right photo).

erated within the space.

Designers are using acoustic engineering principals to design the GRE at OCIA. Aircraft will be positioned inside the three-walled structure during run-up testing. Even though the structure has no roof, it will reduce the noise outside the facility by 15 decibels. Since sound is measured on a logarithmic scale, this represents a 70 percent decrease in overall noise transmission. After the GRE is in place, no sound louder than 70 decibels, which is roughly equal to the sound of a lawnmower, will reach any residential area during run-up testing.

"Sound travels in straight lines," said Karl Randall, airport manager for OCIA. "Right now, the sound just goes straight out into residential areas. This structure [the GRE] will absorb a lot of the sound. The rest of the sound will be deflected upwards. The open end of the structure faces towards the west, back towards the interior of the airport. Going that direction, sound needs to travel the better part of a mile before it exits airport property."

Although the engineering was quite complicated, the approach was fairly simple.

"We used absorbent barrier technology," said Mark Boe, chief engineer for Blast Deflectors, Inc. "If you have a sound source and a receiver, you can greatly reduce the noise level at the receiver by

simply placing a barrier between the two. The sound needs to take a longer path up and over."

The GRE was a design/build project based against performance specs. In other words, the project team would be evaluated based on its ability to develop a cost-effective design that met a number of minimum standards set forth by the owner. Creating a barrier that would meet the noise reduction needs of OCIA required careful planning.

"It is very similar to the barriers that you see along highways, although 15 decibels is a big number for a barrier," said Boe. "We actually need to do two things with the wall. We need to make sure that no sound goes through, and that is done with the mass of the metal in the wall. We also need to make sure that sound that hits the wall is absorbed. We lined the inside with panels that were designed specifically for that application."

The acoustic panels are approximately six inches thick and are specifically designed to absorb the low frequency sounds that are most problematic with jet engines. Sound travels through the perforations in the metal face sheet of the panels and its energy is dissipated by the fiberglass fill until it is greatly reduced in intensity.

"Compared to any other stock panels on the shelf, these offer much more

## CONSTRUCTION HIGHLIGHT



The GRE frame features extensive cross bracing to provide sufficient wind resistance relative to the height of the structure.

absorption at the low frequencies," said Boe.

Acoustic engineering was a daunting challenge, but many other OCIA requirements equally tested the project team.

### IT'S ALL ABOUT LOCATION

OCIA is situated on a 751-acre site in the heart of Oakland County. Despite a vast amount of available land, there were very few suitable sites for the GRE.

"We needed to have a location on the South side of the airport because the jet activity tends to be concentrated there," said VanderVeen. "The open end needed to face West because of the prevailing westerly wind."

The location was not ideal from a construction standpoint, and many subcontractors needed to alter tried and true methods to get the job done. G & B Electrical Co. provided a power supply for the sensitive monitoring equipment that will be accessed from a centralized control room built into the wall of the GRE.

"Routing the electrical lines from the terminal was a project in itself," said Danny Plantus, vice president of The Garrison Company. "Power was brought in underneath taxiways and ramps to power gauging and monitoring equipment for noise levels, exhaust and wind

direction."

The site chosen for the GRE may not have been exactly where every contractor wanted, but the land at OCIA is almost uniformly conducive to construction.

"The airport happens to be blessed with very good soils," said Plantus. "There is a lot of sand, so it is a builder's dream to work out here. There also were not any other structures in the way, so the site happened to be a good place to build."

If the selected site had not been suitable, OCIA would have been left with few options. A stable airflow is needed to test jet aircraft. The opening of the structure needed to be positioned to provide this stable airflow from the prevailing winds. Even though wind conditions are not a constant, the project team was expected to design a facility that could be used 90 percent of the time.

"A jet engine needs to run pointed directly into the wind," said Boe. "By constructing the facility, we determine which way the jet is going to point."

The need for a stable airflow also mandated the addition of vents along the sides of the structure. Without careful planning, the vents could help the project team in meeting the aerodynamic needs of the facility while undermining their efforts to meet its acoustical needs.



**The large vertical walls subject the structure to strong wind loads, while lightweight construction results in relatively low structural loads. A specialized foundation meets the support needs of the structure without adding more rigidity than needed.**

"We will not see a lack of acoustic performance from the vents," said Boe. "They are fully lined and also turned down to direct sound into the ground. Sound will lose more intensity going through the vent than it will going over the top of the wall."

The unusually shaped walls of the structure are also instrumental in directing the proper airflow to jet engines. Walls at the sides of the GRE feature a steep downward slope towards the front of the structure.

"We are trying to get rid of any hard point in the front so we do not create a vortex that would be drawn into the engine inlet," said Boe. "We needed to create a smooth, steady airflow into the engine and the elimination of the sharp point in front helps."

The sidewalls of the GRE are parallel until they reach a certain point at the back of the structure. At that point, they angle inwards to narrow the space inside.

"It [the GRE] is a constant width until you get behind the wing area of the jet," said Boe. "We wanted to contain the area behind the high-velocity airflow so the air doesn't recirculate into the engine inlet. If the exhaust air got pulled into an engine, it could stall or surge, preventing successful testing."

Aircraft technicians who will use the GRE in the future should be thankful that the project team oriented the facility to supply a stable airflow. Contractors working on the project, however, would have appreciated calmer winds.

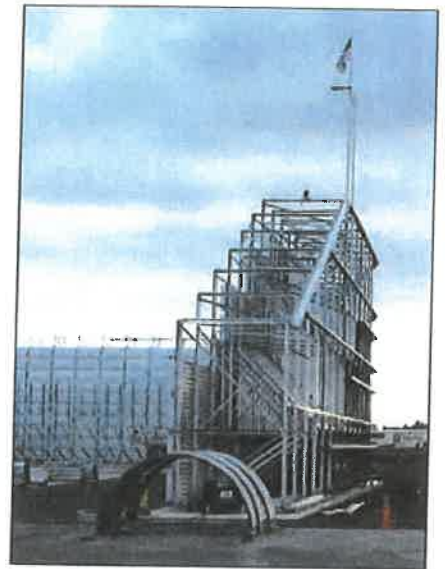
"It was very windy because of all of the open space," said Kurk Edwards, president of Edwards and Pollard Concrete Service. "We needed to keep an eye on everything that we brought to the jobsite because the owner didn't want anything to be able to blow onto the runways. They



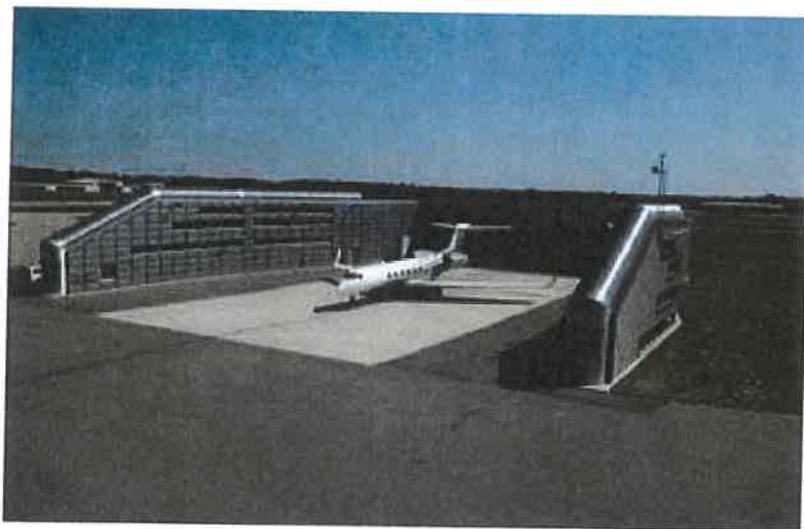
**The Oakland County Int'l Airport required a facility that was both practical and aesthetically pleasing. The solution was a Stabile Flow facility with steel siding.**



## CONSTRUCTION HIGHLIGHT



The framing seen here will be covered with a pre-engineered metal skin. The Garrison Company worked with Butler Manufacturing to design the custom girls seen in this photograph.



Although designed to accommodate up to a B737, the facility is used primarily by business jets such as the Hawker/Beech (top) and Gulfstream (bottom).

were very strict about that."

Safety and security concerns placed an unusual burden on every contractor who worked on the job. Communications were difficult while airplanes roared overhead, and access to the jobsite was limited to a single gate that needed to be kept locked unless it was being used. Despite these constraints, Edwards and Pollard installed a flawless concrete floor for the GRE. The 16,000-square-foot floor consists of a one-foot thick layer of 4,000 psi concrete. Individual slabs are connected by steel dowels that allow a limited range of motion to accommodate freeze-thaw shifting while still maintaining a level surface.

Finding local contractors capable of meeting the rigorous demands posed by the GRE project could have been a tricky proposition for Reno, Nevada-based Blast Deflectors. Fortunately, the company was able to rely on The Garrison Company's local expertise to find qualified contractors.

"They [The Garrison Company] were great to work with," said Boe. "Our scope of work on this project was larger than on any other job that we've done, but Garrison really made things easy. They helped us find all of the local subs that we needed."

An additional challenge would impact the operations of every subcontractor

who was selected for the project. The completed GRE not only needed to meet all of the operational criteria set forth by OCIA, it also needed to look good.

### CREATING A POSITIVE IMPRESSION

"This airport is a very important part of the community," said VanderVeen. "When people land at this airport, we make an impression about Oakland County. The question is, will it be a good one, or a bad one?"

Because of their specialized nature, GREs tend to stress function over form. OCIA asked the project team to facilitate a good impression by creating an attractive facility. Adding aesthetic touches to the purely utilitarian function of the GRE proved to be a daunting challenge that would require precise teamwork.

Blast Deflectors built the specialized framing that supports the GRE, while The Garrison Company worked with Butler Manufacturing to design custom girts upon which a pre-engineered metal skin could be placed. Fortunately, Butler Manufacturing has developed a national reputation for quality pre-engineered building components, and The Garrison Company has a 38-year working relationship with this industry leader. The cladding solution developed by the two companies proves that even custom applications can benefit from the efficiency of pre-engineered construction.

"This was a modification of a pre-engineered building," said Plantus. "The facility is, no doubt, prefabricated. A lot of the components, including the framing, round top frame covers and siding, were fabricated offsite and then brought onsite to be erected. The structure is actually a marriage between pre-engineered building and traditional construction techniques. We used some components normally found in a pre-engineered building, but the facility is not pre-engineered in terms of being prepackaged. It is a very specialized pre-engineered structure. It is one of those firsts that sometimes happen when engineers work to solve problems."

The finished GRE clearly demonstrates the success of this problem-solving approach.

"We insisted on aesthetic considerations, and they [the project team] met those objectives by designing a hangar-like building," said VanderVeen. "It looks like it belongs on an airport."

Creating the hangar-like appearance of

the structure added an additional complication to the project. The large vertical walls would subject the structure to strong wind loads, while lightweight construction would result in relatively low structural loads. The Garrison Company installed a specialized foundation designed by Blast Deflectors to meet the unusual support needs of the structure without increasing costs by adding more rigidity than was needed. The 760-cubic-yard concrete foundation includes 31 tons of reinforcement, only slightly higher than the amount that would typically be included in a similarly sized foundation.

Overall, the project team has met a demanding list of acoustic, aerodynamic and aesthetic criteria to create the new GRE at OCIA. Visitors catching a glimpse of the facility from the air will probably be unimpressed by its attractive, but unremarkable, appearance. Residents near the airport will undoubtedly have a much deeper appreciation for the sounds of silence, as well as the thoughtful design process that brought them back.

The Following Subcontractors and Professional Consultants Contributed Their Skills to the Project:

Asphalt Paving – Nagel Paving Co., Farmington Hills

Concrete – North Channel Construction, Harsen's Island

Concrete Flatwork – Edwards and Pollard Concrete Service, Detroit

Electrical – G & B Electrical Co., West Bloomfield

Layout – Atwell-Hicks, Inc., Ann Arbor

Prefab Building – Parkline Great Lakes, Inc., Grand Blanc

Steel Erection – ACE Steel Erectors, Grand Rapids

Wall System – Butler Manufacturing, Kansas City, MO

*Subcontractors and professional consultants listed in the Construction Highlight are identified by the general contractor, architect or owner.*






*A Hawker 800XP performs a ground run-up inside the GRE facility. The enclosure can accommodate both corporate and commercial aircraft up to a BBJ.*



## Ground Run-up Enclosure Becomes a Marketing Advantage at Spirit of St. Louis Airport



 Spirit of St. Louis Airport is a large general aviation reliever situated in an upscale suburban community just west of St. Louis, and being a good neighbor is high on its list of priorities. In the spirit of neighborly consideration, it completed a \$3.2 million ground run-up enclosure (GRE) in November 2011 to help decrease its noise impact on the surrounding community. As a result, the airport has a new marketing hook.



John Bales

For years, the airport limited engine run-ups to the hours of 7 a.m. to 10 p.m., but they still caused a lot of noise, acknowledges airport director John Bales. And although they were previously performed on a remote taxiway for safety, the location didn't do much to reduce the noise.

"We received a fair amount of noise complaints from engine run-ups because it's up and it's down and it's longer duration," Bales explains. The airport's technical advisory committee (made up of airport users and a citizens' advisory committee) flagged run-ups as a hot topic and a Part 150 noise study in 2005 recommended a GRE as one remedy.

The six-month project cost \$3.2 million and was funded by a 95% federal/5% local grant from the FAA. The airport worked with Parsons Brinkerhoff and Blast Deflectors to design and build the structure. The facility will be used for a large variety of general aviation aircraft, ranging from small twin-engine piston aircraft up to larger MD80s and B737s, explains Don Bergin, director of technical sales for Blast Deflectors.

"This is only the second GRE at a general aviation airport in North America,





*The Spirit of St. Louis GRE incorporates BDI's patented Stable Flow™ technology; including the vented side walls, sloped entry and aerodynamic roll top. These features allow turbulence-free airflow to the aircraft engines during high power runs.*

which is really a testament to the airport's commitment to the local community as well as current and prospective tenants," reflects Bergin. "And the fact that this facility has all the aerodynamic and acoustic features of larger GREs we have built at international airports confirms the airport's drive to provide world-class amenities."

The facility includes upgraded siding to enhance the appearance of the structure. This was an important requirement for the airport, due to its high aesthetic standards for airfield structures, Bergin explains. From a practical standpoint, the GRE was designed to reduce run-up noise by approximately 15 decibels.



Jennifer Kuchinski

In selecting the site, the project team ruled out locations that would typically encounter tail winds or those that would adversely affect current tenants or future development, recalls construction manager Jennifer Kuchinski, P.E., of Parsons Brinckerhoff. Accessibility was also key, so fixed-base operators and other tenants wouldn't have to cross runways or incur significant taxi or tug time to use the sound-dampening structure.

Once complete, staff leveraged the new GRE as a competitive feature for the airport — a characteristic move considering Spirit of St. Louis also has a 200-acre FAA-approved golf course that doubles as a storm water detention system.

The GRE's extra "bells and whistles" such as wind speed indicators and other features make the facility easier for operators to use and could help attract new tenants, notes Kuchinski.

Bales similarly sees the GRE's advantages as twofold: "It greatly benefits the community because they won't be affected by engine run-ups. It's also a great benefit for the airport operators because they can do engine tests 24 hours a day ... The maintenance operators were actually more excited than I thought they'd be." ✈️

📱 To share or view this article online visit [AirportImprovement.com](http://AirportImprovement.com).

BDI

## Blast Deflectors, Inc.

*The Jet Blast & Run-Up Noise Experts*

■ BDI offers turnkey solutions for ground run-up noise and jet blast impacts. Let our worldwide experience of more than 55 years benefit your project.

- Ground Run-Up Enclosures
- Blast Fences
- Site Analysis & Design Assistance

- Jet Blast Deflectors
- Acoustic Barriers

www.bdi.aero

Tel: (775) 856-1928

**Orlando Melbourne International Airport**

**Brevard County, FL**

**06/29/18**

<b>Overview:</b>		Sector: Aircraft maintenance and repair services (NAICS 488190)
New Job Commitment:	100	
Average Annual Wage:	\$62,500	

**ANNUAL Economic impact from job creation:**

<u>Jobs</u>	<u>Net New Wage</u>	<u>Contribution to GDP</u>
100 (Direct)	\$6,250,000 (Direct)	\$8,453,655 (Direct)
60 (Indirect)	\$3,020,297 (Indirect)	\$4,134,988 (Indirect)
52 (Induced)	\$1,968,311 (Induced)	\$3,540,588 (Induced)
<b>212 TOTAL</b>	<b>\$11,238,607 TOTAL</b>	<b>\$16,129,231 TOTAL</b>

- For every employment position at the Orlando Melbourne International Airport, approximately 1.1 additional jobs will be developed to support the operation of the facility.
- For every payroll dollar paid to at Orlando Melbourne International Airport employees approximately \$0.80 will be generated for consumer spending.

*Economic impact calculations furnished by EDC Research Office, using IMPLAN Professional 3.1 (www.IMPLAN.com).  
Abatement & millage numbers are estimates; all final numbers determined solely by the Brevard County Property Appraiser's Office.*

**Attachment I**

**Orlando Melbourne International Airport**

**Brevard County, FL**

**06/29/18**

<b>Overview:</b>		Sector: Aircraft manufacturing (NAICS 336411)
New Job Commitment:	100	
Average Annual Wage:	\$62,500	

**ANNUAL Economic impact from job creation:**

<u>Jobs</u>	<u>Net New Wage</u>	<u>Contribution to GDP</u>
100 (Direct)	\$6,250,000 (Direct)	\$11,148,974 (Direct)
75 (Indirect)	\$4,636,543 (Indirect)	\$6,684,656 (Indirect)
62 (Induced)	\$2,311,572 (Induced)	\$4,157,834 (Induced)
<b>237 TOTAL</b>	<b>\$13,198,116 TOTAL</b>	<b>\$21,991,464 TOTAL</b>

- For every employment position at the Orlando Melbourne International Airport, approximately 1.4 additional jobs will be developed to support the operation of the facility.
- For every payroll dollar paid to at Orlando Melbourne International Airport employees approximately \$1.11 will be generated for consumer spending.

---

*Economic impact calculations furnished by EDC Research Office, using IMPLAN Professional 3.1 (www.IMPLAN.com).  
Abatement & millage numbers are estimates; all final numbers determined solely by the Brevard County Property Appraiser's Office.*

**Attachment J**

# Letters of Support



**EMBRAER**

Embraer Aircraft Holding, Inc.

276 Southwest 34th Street  
Fl. Lauderdale, FL 33315  
USA  
(954) 359-3700

*Gary J. Spulak*  
President

June 13, 2018

The Honorable Rick Scott  
Governor, State of Florida  
The Capitol  
400 S. Monroe Street  
Tallahassee, FL 32399-0001

Dear Governor Scott:

I write this in support of a grant application from the Melbourne Airport Authority requesting funds from the State of Florida to construct a Ground Run-Up Enclosure (GRE) at Orlando Melbourne International Airport (MLB).

As you know, MLB is one of the fastest growing aerospace centers in the country with a considerable number of airlines, corporate aircraft companies, aircraft manufacturers and maintenance/repair facilities. These companies must regularly perform full-power run-ups and this Ground Run-Up Enclosure will help reduce the impact of noise from these operations on the adjacent communities.

This facility will also make MLB more attractive as a location for other aerospace companies, aircraft and engine manufacturers, and Maintenance/Repair/Overhaul companies (MROs), which will help put more Floridians to work and bring more capital into our state.

On behalf of Embraer, I urge you to approve this grant application of the Melbourne Airport Authority.

Sincerely,

Gary J. Spulak  
President



---

The Company with "Solutions To Keep You Flying!"

April 13, 2018

RE: Engine Run Up Facility

Dear Mr. Busalacchi,

This letter expresses our support of the airport's effort to secure funding for the purpose of constructing an engine run up facility as this is something our company and our customers will have a use for.

Regards,

A handwritten signature in black ink, appearing to read "Philip Anson, Jr.", written in a cursive style.

Philip Anson, Jr.  
CEO  
STS Mod Center

---

**Solutions To Keep You Flying<sup>SM</sup>**

Unit 6 - 100 Aerospace Drive, Melbourne, Florida, 32901 | (321) 405-3700 | [www.stsmidcenter.com](http://www.stsmidcenter.com)





June 28, 2018

The Honorable Rick Scott  
Governor, State of Florida  
The Capitol  
400 S. Monroe Street  
Tallahassee, FL 32399-0001

Dear Governor Scott:

I write this in support of a grant application from the Melbourne Airport Authority requesting funds from the State of Florida to construct a Ground Run-Up Enclosure (GRE) at Orlando Melbourne International Airport (MLB).

As you know, MLB is one of the fastest growing aerospace centers in the country with a considerable number of airlines, corporate aircraft companies, aircraft manufacturers and maintenance/repair facilities. These companies must regularly perform full-power run-ups and this Ground Run-Up Enclosure will help reduce the impact of noise from these operations on the adjacent communities.

This facility will also make MLB more attractive as a location for other aerospace companies, aircraft and engine manufacturers, and Maintenance/Repair/Overhaul companies (MROs), which will help put more Floridians to work and bring more capital into our state.

On behalf of IAG ENGINE CENTER, LLC, I urge you to approve this grant application of the Melbourne Airport Authority.

Sincerely,



Larry Serlo  
CCO

Susquehanna Holdings Company &  
1110 Hibiscus Realty, LLC  
8633 South Bay Drive  
Orlando, FL 32819

The Honorable Rick Scott  
Governor, State of Florida  
The Capitol  
400 S. Monroe Street  
Tallahassee, FL 32399-0001

Dear Governor Scott:

I write this in support of a grant application from the Melbourne Airport Authority requesting funds from the State of Florida to construct a Ground Run-Up Enclosure (GRE) at Orlando Melbourne International Airport (MLB).

As you know, MLB is one of the fastest growing aerospace centers in the country with a considerable number of airlines, corporate aircraft companies, aircraft manufacturers and maintenance/repair facilities. These companies must regularly perform full-power run-ups and this Ground Run-Up Enclosure will help reduce the impact of noise from these operations on the adjacent communities.

This facility will also make MLB more attractive as a location for other aerospace companies, aircraft and engine manufacturers, and Maintenance/Repair/Overhaul companies (MROs), which will help put more Floridians to work and bring more capital into our state.

On behalf of Susquehanna Holdings Company, I urge you to approve this grant application of the Melbourne Airport Authority.

Sincerely,



Edmund C. Wideman III

President

Susquehanna Holdings Company



June 19, 2018

The Honorable Rick Scott  
Governor, State of Florida  
The Capitol  
400 S. Monroe Street  
Tallahassee, FL 32399-0001

Dear Governor Scott:

I am writing to you today in support of a grant application from the Melbourne Airport Authority requesting funds from the State of Florida to construct a Ground Run-Up Enclosure (GRE) at Orlando Melbourne International Airport (MLB).

As you are well aware, MLB is one of the fastest growing aerospace centers in the country with a considerable number of airlines, corporate aircraft companies, aircraft manufacturers and maintenance/repair facilities. These companies must regularly perform full-power run-ups and this Ground Run-Up Enclosure will help reduce the impact of noise from these operations on the adjacent communities.

This facility will also make MLB more attractive as a location for other aerospace companies, aircraft and engine manufacturers, and Maintenance/Repair/Overhaul companies (MROs), which will help put more Floridians to work and bring more capital into our state.

On behalf of Diversified Aviation Services, LLC, I urge you to approve this grant application of the Melbourne Airport Authority.

All the best,

A handwritten signature in blue ink, appearing to read 'Gary Girard', is written over a light blue horizontal line.

Gary Girard  
President

GG/mer

100 Aerospace Drive, Unit 1, Melbourne, Florida 32901  
T: (305) 828-2559 • E: info@diversified.aero

June 8, 2018

The Honorable Rick Scott  
Governor, State of Florida  
The Capitol  
400 S. Monroe Street  
Tallahassee, FL 32399-0001

Dear Governor Scott,

I write this in support of a grant application from the Melbourne Airport Authority requesting funds from the State of Florida to construct a Ground Run-Up Enclosure (GRE) at Orlando Melbourne International Airport (MLB).

As you know, MLB is one of the fastest growing aerospace centers in the country with a considerable number of airlines, corporate aircraft companies, aircraft manufacturers and maintenance/repair facilities. These companies must regularly perform full-power run-ups and this Ground Run-Up Enclosure will help reduce the impact of noise from these operations on the adjacent communities.

This facility will also make MLB more attractive as a location for other aerospace companies, aircraft and engine manufacturers, and Maintenance/Repair/Overhaul companies (MROs), which will help put more Floridians to work and bring more capital into our state.

On behalf of Southeast Aerospace, I urge you to approve this grant application of the Melbourne Airport Authority.

Sincerely,



Joe Braddock  
Vice President





Atlantic Jet Center, Inc.  
1401 General Aviation Drive  
Melbourne, FL 32935

---

June 8<sup>th</sup>, 2018

The Honorable Rick Scott  
Governor, State of Florida  
The Capitol  
400 S. Monroe Street  
Tallahassee, FL 32399-0001

Dear Governor Scott:

I write this in support of a grant application from the Melbourne Airport Authority requesting funds from the State of Florida to construct a Ground Run-Up Enclosure (GRE) at Orlando Melbourne International Airport (MLB).

As you know, MLB is one of the fastest growing aerospace centers in the country with a considerable number of airlines, corporate aircraft companies, aircraft manufacturers and maintenance/repair facilities. These companies must regularly perform full-power run-ups and this Ground Run-Up Enclosure will help reduce the impact of noise from these operations on the adjacent communities.

This facility will also make MLB more attractive as a location for other aerospace companies, aircraft and engine manufacturers, and Maintenance/Repair/Overhaul companies (MROs), which will help put more Floridians to work and bring more capital into our state.

On behalf of Atlantic Jet Center, Inc., I urge you to approve this grant application of the Melbourne Airport Authority.

Sincerely;

A handwritten signature in black ink that reads "Kim Brose".

Kim Brose  
VP Atlantic Jet Center, Inc.

# DISCOVERY AVIATION

The Honorable Rick Scott  
Governor, State of Florida  
The Capitol  
400 S. Monroe Street  
Tallahassee, FL 32399-0001

June 6<sup>th</sup>, 2018

RE: User Support Letter

Dear Governor Scott:

I write this in support of a grant application from the Melbourne Airport Authority requesting funds from the State of Florida to construct a Ground Run-Up Enclosure (GRE) at Orlando Melbourne International Airport (MLB).

As you know, MLB is one of the fastest growing aerospace centers in the country with a considerable number of airlines, corporate aircraft companies, aircraft manufacturers and maintenance/repair facilities. These companies must regularly perform full-power run-ups and this Ground Run-Up Enclosure will help reduce the impact of noise from these operations on the adjacent communities.

This facility will also make MLB more attractive as a location for other aerospace companies, aircraft and engine manufacturers, and Maintenance/Repair/Overhaul companies (MROs), which will help put more Floridians to work and bring more capital into our state.

On behalf of Discovery Aviation, Inc., I urge you to approve this grant application of the Melbourne Airport Authority.

Sincerely,



C. J. Corman  
Vice President, Business Development



Apex Executive Jet Center, Inc.  
150 S. Apollo Blvd., Melbourne, FL 32901  
+1 321.956.8695 | ApexEJC.com

The Honorable Rick Scott  
Governor, State of Florida  
The Capitol  
400 S. Monroe Street  
Tallahassee, FL 32399-0001

Dear Governor Scott:

I write this in support of a grant application from the Melbourne Airport Authority requesting funds from the State of Florida to construct a Ground Run-Up Enclosure (GRE) at Orlando Melbourne International Airport (MLB).

As you know, MLB is one of the fastest growing aerospace centers in the country with a considerable number of airlines, corporate aircraft companies, aircraft manufacturers and maintenance/repair facilities. These companies must regularly perform full-power run-ups and this Ground Run-Up Enclosure will help reduce the impact of noise from these operations on the adjacent communities.

This facility will also make MLB more attractive as a location for other aerospace companies, aircraft and engine manufacturers, and Maintenance/Repair/Overhaul companies (MROs), which will help put more Floridians to work and bring more capital into our state.

On behalf of Apex Executive Jet Center, I urge you to approve this grant application of the Melbourne Airport Authority.

Sincerely,

A handwritten signature in black ink that reads "Kyle Eiserer".

Kyle Eiserer  
President





June 17, 2018

The Honorable Rick Scott  
Governor, State of Florida  
The Capitol  
400 S. Monroe Street  
Tallahassee, FL 32399-0001

Dear Governor Scott:

I am writing on behalf of our Melbourne Area Pilots Association (MAPA) in support of a grant application from the Melbourne Airport Authority requesting funds from the State of Florida to construct a Ground Run-Up Enclosure (GRE) at Orlando Melbourne International Airport (MLB).

As you know, MLB is one of the fastest growing aerospace centers in the country with a considerable number of airlines, corporate aircraft companies, aircraft manufacturers and maintenance/repair facilities. These companies must regularly perform full-power run-ups and this Ground Run-Up Enclosure will help reduce the impact of noise from these operations on the adjacent communities.

This facility will also make MLB more attractive as a location for other aerospace companies, aircraft and engine manufacturers, and Maintenance/Repair/Overhaul companies (MROs), which will help put more Floridians to work and bring more capital into our state.

The Melbourne Area Pilots Association (MAPA) is a Florida Not for Profit Corporation formed in 2004 to represent and promote the interests of general aviation and safety within our local South Brevard airport system. We count over 200 active members in South Brevard County.

On behalf of MAPA and its Board of Directors and members, I urge you to approve this grant application of the Melbourne Airport Authority.

Sincerely,

A handwritten signature in black ink, appearing to read "C. Randy Carmichael", is written over a light blue horizontal line.

C. Randy Carmichael  
President  
Melbourne Area Pilots Association



BOARD OF COUNTY COMMISSIONERS

County Manager's Office  
2725 Judge Fran Jamieson Way  
Building C, Room 301  
Viera, Florida 32940

The Honorable Rick Scott  
Governor, State of Florida  
The Capitol  
400 S. Monroe Street  
Tallahassee, FL 32399-0001

Dear Governor Scott:

I write this in support of a grant application from the Melbourne Airport Authority requesting funds from the State of Florida to construct a Ground Run-Up Enclosure (GRE) at Orlando Melbourne International Airport (MLB).

As you know, MLB is one of the fastest-growing aerospace centers in the country with a considerable number of airlines, corporate and governmental aircraft companies, aircraft manufacturers and maintenance/repair facilities. These companies must regularly perform full-power run-ups and this Ground Run-Up Enclosure will help reduce the impact of noise from these operations on the adjacent communities.

This facility will also make MLB more attractive as a location for other aerospace companies, aircraft and engine manufacturers, and Maintenance/Repair/Overhaul companies (MROs), which will help put more Floridians to work and bring more capital into our state.

I urge you to approve this grant application of the Melbourne Airport Authority.

Sincerely,

Frank Abbate  
County Manager





June 7, 2018

The Honorable Rick Scott  
Governor, State of Florida  
The Capitol  
400 S. Monroe Street  
Tallahassee, FL 32399-0001

Dear Governor Scott:

I write this in support of a grant application from the Melbourne Airport Authority requesting funds from the State of Florida to construct a Ground Run-Up Enclosure (GRE) at Orlando Melbourne International Airport (MLB).

As you know, MLB is one of the fastest growing aerospace centers in the country with a considerable number of airlines, corporate aircraft companies, aircraft manufacturers and maintenance/repair facilities. These companies must regularly perform full-power run-ups and this Ground Run-Up Enclosure will help reduce the impact of noise from these operations on the adjacent communities.

This facility will also make MLB more attractive as a location for other aerospace companies, aircraft and engine manufacturers, and Maintenance/Repair/Overhaul companies (MROs), which will help put more Floridians to work and bring more capital into our state.

Florida Institute of Technology has enjoyed a close working relationship with the Melbourne Airport Authority for 50 years. On behalf our university, I urge you to approve this grant application of the Melbourne Airport Authority.

Sincerely,

T. Dwayne McCay, Ph.D.  
President



June 11, 2018

The Honorable Rick Scott  
Governor, State of Florida  
The Capitol  
400 S. Monroe Street  
Tallahassee, FL 32399-0001

Dear Governor Scott:

I write this in support of a grant application from the Melbourne Airport Authority requesting funds from the State of Florida to construct a Ground Run-Up Enclosure (GRE) at Orlando Melbourne International Airport (MLB).

As you know, MLB is one of the fastest growing aerospace centers in the country with a considerable number of airlines, corporate aircraft companies, aircraft manufacturers and maintenance/repair facilities. These companies must regularly perform full-power run-ups and this Ground Run-Up Enclosure will help reduce the impact of noise from these operations on the adjacent communities.

This facility will also make MLB more attractive as a location for other aerospace companies, aircraft and engine manufacturers, and Maintenance/Repair/Overhaul companies (MROs), which will help put more Floridians to work and bring more capital into our state.

On behalf of the Economic Development Commission of Florida's Space Coast, I urge you to approve this grant application of the Melbourne Airport Authority.

Sincerely,

Lynna Weatherman  
President & CEO



## THE FLORIDA SENATE

Tallahassee, Florida 32399-1100

**SENATOR DEBBIE MAYFIELD**  
17th District

### COMMITTEES:

Education, *Vice Chair*  
Governmental Oversight and  
Accountability, *Vice Chair*  
Agriculture  
Appropriations Subcommittee on the Environment  
and Natural Resources  
Appropriations Subcommittee on General  
Government  
Judiciary

### JOINT COMMITTEE:

Joint Legislative Auditing Committee,  
*Alternating Chair*

June 13, 2018

The Honorable Rick Scott  
Governor, State of Florida  
The Capitol  
400 S. Monroe Street  
Tallahassee, FL 32399-0001

Dear Governor Scott:

I write this letter in support of a grant application from the Melbourne Airport Authority requesting funds from the State of Florida to construct a Ground Run-Up Enclosure (GRE) at Orlando Melbourne International Airport (MLB).

As you know, MLB is one of the fastest growing aerospace centers in the country with a considerable number of airlines, corporate and governmental aircraft companies, aircraft manufacturers and maintenance/repair facilities. These companies must regularly perform full-power run-ups and this Ground Run-Up Enclosure will help reduce the impact of noise from these operations on the adjacent communities.

This facility will also make MLB more attractive as a location for other aerospace companies, aircraft and engine manufacturers, and Maintenance/Repair/Overhaul companies (MROs), which will help put more Floridians to work and bring more capital into our state.

On behalf of my District and my community, I would ask that you please consider approving this grant application of the Melbourne Airport Authority to allow them the opportunity to continue to expand and create jobs. Should you have any questions or concerns, please don't hesitate to contact our office.

Sincerely,

A handwritten signature in blue ink that reads "Debbie".

Debbie Mayfield  
State Senator, District 17

### REPLY TO:

- 800 E Strawbridge Avenue, Melbourne, Florida 32901 (321) 408-2025 FAX: (888) 283-3815
- 1801 27th Street, Vero Beach, Florida 32980 (772) 226-1970
- 324 Senate Office Building, 404 South Monroe Street, Tallahassee, Florida 32399-1100 (850) 487-5017

Senate's Website: [www.flsenate.gov](http://www.flsenate.gov)

**JOE NEGRON**  
President of the Senate

**ANITERE FLORES**  
President Pro Tempore





## THE FLORIDA SENATE

Tallahassee, Florida 32399-1100

### COMMITTEES:

Education, *Chair*  
Appropriations Subcommittee on the  
Environment and Natural Resources, *Vice Chair*  
Regulated Industries, *Vice Chair*  
Agriculture  
Environmental Preservation and Conservation  
Health Policy  
Transportation

### JOINT COMMITTEE:

Joint Committee on Public Counsel Oversight

**SENATOR DOROTHY L. HUKILL**  
14th District

June 18, 2018

The Honorable Rick Scott  
Governor, State of Florida  
The Capitol  
400 S. Monroe Street  
Tallahassee, FL 32399-0001

Dear Governor Scott:

I am pleased to write in support of a grant application from the Melbourne Airport Authority requesting funds from the State of Florida to construct a Ground Run-Up Enclosure (GRE) at Orlando Melbourne International Airport (MLB).

As you are aware, MLB is one of the fastest growing aerospace centers in the country with a considerable number of airlines, corporate and governmental aircraft companies, aircraft manufacturers and maintenance/repair facilities. These companies must regularly perform full-power run-ups and this Ground Run-Up Enclosure will help reduce the impact of noise from these operations on the adjacent communities.

This facility will also make MLB more attractive as a location for other aerospace companies, aircraft and engine manufacturers, and Maintenance/Repair/Overhaul companies (MROs) that will help put more Floridians to work and bring more capital into our state.

I respectfully ask for your support of this grant application by the Melbourne Airport Authority.

Thank you for your consideration and continued service to the citizens of the State of Florida.

Sincerely,

A handwritten signature in cursive script that reads "Dorothy L. Hukill".

Dorothy L. Hukill  
State Senator, District 14

### REPLY TO:

- 209 Dunlawton Avenue, Unit 17, Port Orange, Florida 32127 (386) 304-7630 FAX: (888) 263-3818
- 406 Senate Office Building, 404 South Monroe Street, Tallahassee, Florida 32399-1100 (850) 487-5014
- 434 Delannoy Avenue, Suite 204, Cocoa, Florida 32922 (321) 634-3549

Senate's Website: [www.flsenate.gov](http://www.flsenate.gov)

**JOE NEGRON**  
President of the Senate

**ANITERE FLORES**  
President Pro Tempore



# Florida House of Representatives

*Representative Thad Altman*

District 52

**District Office:**

150 5<sup>th</sup> Avenue, Suite A  
Indianapolis, FL 32903  
(321) 409-2022  
(888) 635-8305 (fax)

**Tallahassee Office:**

1101 House Office Building  
402 South Monroe Street  
Tallahassee, FL 32399  
(850) 717-5052

Thad.Altman@myfloridahouse.gov

June 7, 2018

The Honorable Rick Scott  
Governor, State of Florida  
The Capitol  
400 S. Monroe Street  
Tallahassee, FL 32399-0001

Dear Governor Scott:

It is with great pleasure to provide this letter in support of a grant application from the Melbourne Airport Authority. The Melbourne Airport Authority is requesting funds from the State of Florida to construct a Ground Run-Up Enclosure (GRE) at Orlando Melbourne International Airport (MLB).

As you know, MLB is one of the fastest growing aerospace centers in the country with a considerable number of airlines, corporate and governmental aircraft companies, aircraft manufacturers and maintenance/repair facilities. These companies must regularly perform full-power run-ups and this Ground Run-Up Enclosure will help reduce the impact of noise from these operations on the adjacent communities.

This facility will also make MLB more attractive as a location for other aerospace companies, aircraft and engine manufacturers, and Maintenance/Repair/Overhaul companies (MROs), which will help put more Floridians to work and bring more capital into our state.

On behalf of the residents who are impacted by the noise from airport operations, and the benefit of increasing job opportunities, I urge you to approve this grant application from the Melbourne Airport Authority.

Thank you for your consideration.

Sincerely,

A handwritten signature in blue ink that reads "Thad Altman".

Thad Altman

TA/svb

## Committees

Post-Secondary Education Subcommittee, Vice Chair

Criminal Justice Subcommittee · Ways and Means Committee · Natural Resources & Public Lands Subcommittee  
Government Operations & Technology Appropriations Subcommittee



FLORIDA HOUSE OF REPRESENTATIVES  
*Representative Tom Goodson*  
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June 7, 2018

The Honorable Rick Scott  
Governor, State of Florida  
The Capitol  
400 S. Monroe Street  
Tallahassee, FL 32399-0001

Dear Governor Scott:

I write this in support of a grant application from the Melbourne Airport Authority requesting funds from the State of Florida to construct a Ground Run-Up Enclosure (GRE) at Orlando Melbourne International Airport (MLB).

As you know, MLB is one of the fastest growing aerospace centers in the country with a considerable number of airlines, corporate and governmental aircraft companies, aircraft manufacturers and maintenance/repair facilities. These companies must regularly perform full-power run-ups and this Ground Run-Up Enclosure will help reduce the impact of noise from these operations on the adjacent communities.

This facility will also make MLB more attractive as a location for other aerospace companies, aircraft and engine manufacturers, and Maintenance/Repair/Overhaul companies (MROs), which will help put more Floridians to work and bring more capital into our state.

I urge you to approve this grant application of the Melbourne Airport Authority.

Sincerely,

A handwritten signature in blue ink that reads "Tom Goodson".

Tom Goodson

Agriculture & Property Rights Subcommittee, Chairman  
Commerce Committee \*\* Agriculture & Natural Resources Appropriations Subcommittee  
Natural Resources & Public Lands Subcommittee \*\* Tourism & Gaming Control Subcommittee