TO: Patricia deLaBruere,
JNU Airport Manager

DATE: April 3, 2014

FROM: Catherine Fritz, AIA
JNU Airport Architect

RE: Gate 5 Jet Bridge.

The existing Jet Bridge at Gate 5 was installed in 1984 as part of the terminal expansion project. It was purchased as used equipment and is estimated to have been constructed in the 1970's. It is assembled as two distinct pieces. The first section projects out of the building approximately 40 feet as a walkway – it has no moving parts. The second section is about 60 feet long and extends out to meet the jet with a rotating nose portion. This section has the ability to move vertically and horizontally to accommodate various jet front door designs. For many years, this jet bridge has only been used by Alaska Airlines for a single style of jet (737) and has not needed to be adjusted. As part of their use agreement, Alaska Airlines has provided a limited amount of maintenance to the jet bridge to keep it in safe operating condition for their use.

Delta Air Lines will be using Gate 5. They plan to bring 757 aircraft to Juneau. This aircraft's forward passenger door threshold is approximately 13'-2" above the ground. The same measurement on a 737 is approximately 8'-5". This vertical difference (4'-9") means that the adjustable portion of the jet bridge must move to accommodate the two different types of aircraft. JNU Maintenance staff has tested the moving parts of the existing bridge. They currently operate, but visual inspection illustrates extensive rust and poor general condition throughout the jet bridge assembly. The cosmetic rust, especially that associated with the fixed walkway can be reduced by grinding and then painted. This will extend the life of those sections of the bridge by several years.

The more unpredictable components are those related to the moving jet bridge parts. Given the age and condition of the existing jet bridge, we are pursuing replacement. Ken and I have been working with consultant Roland Hill from JetBridge America (Fort Worth, TX http://jetbridgeamerica.com) on possible replacement of a portion of Gate 5 JetBridge. Roland sells and installs both used (refurbished) and new jet bridges across the US. His company also does maintenance, repair, and relocation of jet bridges.

Roland agrees that we should keep section 1 (walkway) for now, due to complications associated with replacing the component that extends into the building. This section could be replaced in the future, especially if associated with an expansion of the Hold Room and Gates. There are at least two options for replacing section 2 (moveable sections) with used equipment. Used equipment is easy for the Airport to procure, and is significantly less costly than new. The used equipment we would be interested in is typically about 10 years old and very basic in design. The first replacement option is to remove the rotating end piece and add a new nose loader that will adjust as needed to connect to both a 757 and a 737. A second option is to purchase a used ramp bridge that would extend from the existing support column and telescope out to meet the jet.

Both options need further exploration and are worthy of considering. I have spoken with FAA Pat Zettler, Project Engineer at FAA, who has confirmed that jet bridge replacement is eligible for AIP funds, and that we can request entitlement funds for such use. We need to promptly modify our CIP list to include this new project, including justification of our request. If we are able to meet Delta Air Lines' arrival date of May 29th, we would also need to request FAA authorization to use existing terminal funding immediately, then receive FAA reimbursement per their program schedule (approximately July).

While this is not an expense that we had scheduled in our CIP, it seems important from both a facilities maintenance and airport operations perspective. Since we are still narrowing the scope of the project, I suggest that we ask the Airport Board to authorize up to $400,000 for this project. It is my hope that we can establish a less costly solution, and I will continue to use creative and cost effect problem solving.

Existing Gate 5 jet bridge

Underside of rotating headpiece.

Existing stairway is too short for 757 jet bridge settings.

Option 1 Used nose loader

Option 2 Used ramp bridge.