BOARD OF PORT COMMISSIONERS
OF THE
LEE COUNTY PORT AUTHORITY

1. **REQUESTED MOTION/PURPOSE: Request Board award a contract resulting from RFB 20-53MMW (RSW Passenger Boarding Bridge Replacement Project) to the lowest, responsive and qualified bidder as a result of the ASMC Bid Dispute Committee informal hearings; and approve a Total Project Budget corresponding to the recommended contract award.**
2. **FUNDING SOURCE: Passenger Facility Charges, RSW Construction Account No. 20860841234.506540.30**
3. **TERM: 395 Calendar Days**
4. **WHAT ACTION ACCOMPLISHES: Consider ASMC recommendation to resolve Bid Protest and render final decision pursuant to the LCPA Purchasing Manual; recommend award of a contract; and approve a Total Project Budget.**

5. **CATEGORY: 26.**
   Consent Agenda

6. **ASMC MEETING DATE:**

7. **BoPC MEETING DATE: 11/5/2020**

8. **AGENDA:**
   _____ CEREMONIAL/PUBLIC PRESENTATION
   _____ CONSENT
   X ADMINISTRATIVE

9. **REQUESTOR OF INFORMATION:**
   (ALL REQUESTS)
   NAME Mark Fisher

   DIV. Development

10. **BACKGROUND:**

During the original construction of the Midfield Terminal Complex (2002-2005), twenty-seven (27) Passenger Boarding Bridges (PBB) were competitively procured, delivered and installed as part of the project. The bid award went to the lowest responsive bidder, DEW Bridge. DEW was a Canadian manufacturer that introduced itself into the PBB market in 1998 by designing a small bridge that was to be utilized on Regional Jet (RJ) type aircraft. They were the first PBB manufacturer to focus on the RJ aircraft and had very good success in that market. As other US manufacturers developed a competitive bridge to service RJs, DEW developed a full-service apron drive bridge to accommodate larger aircraft. They produced very few of these units prior to discontinuing their PBB venture. Apron drive bridges built by DEW were installed at several locations including: Harrisburg, Pennsylvania, Baltimore Washington International and Fort Myers, Florida. There are also a few other airport locations with one or two of these units installed. RSW purchased nearly one-half of all the apron drive bridges built by DEW, which were also very close to the last units built by this particular manufacturer.

As a result of earlier inspections of the current PBBs, coupled with challenges due to replacement parts becoming increasingly hard to find, it was determined that the 27 PBBs should be replaced. The design effort associated with the replacement of the bridges has been completed. Along with the replacement of the bridges, the project also includes

11. RECOMMENDED APPROVAL

DEPUTY EXEC DIRECTOR	COMMUNICATIONS AND MARKETING	OTHER	FINANCE	PORT ATTORNEY	ACTING EXECUTIVE DIRECTOR
Mark R. Fisher	*Victoria B. Moreland*	*N/A*	*Brian W. McGonagle*	*Gregory S. Hagen*	*Benjamin R. Siegel*

12. **SPECIAL MANAGEMENT COMMITTEE RECOMMENDATION**:

APPROVED
APPROVED as AMENDED
DENIED
OTHER

13. **PORT AUTHORITY ACTION:**

APPROVED
APPROVED as AMENDED
DENIED
DEFERRED to
OTHER

Background (continued)

foundation modifications, air conditioning/HVAC systems, ground power, APUs, lightning protection, signage, ramp and building/structural work.

On April 27, 2020, the LCPA advertised a Request for Bids (RFB) for the replacement of the 27 passenger boarding bridges. A Mandatory Pre-Bid meeting was held on May 8, 2020 to further present and discuss the project and answer questions from prospective bidders. On June 2, 2020, the following five (5) bids were received:

- AERO Bridgeworks = $24,159,600.00
- Thyssenkrupp Airport Systems, Inc. = $24,268,558.00
- JBT AeroTech Corp = $25,649,547.00 (Corrected to $25,654,552)
- Owen Ames Kimball Company (OAK/Florida) = $25,795,090.93
- The Whiting-Turner Contracting Company = $26,760,000.39 (Corrected to $26,759,998)

In reviewing the bids for responsiveness compared with the requirements of the LCPA Request for Bids, additional information was requested and clarifications obtained from the bidders. In reviewing all bid information, the LCPA staff determined that three (3) design specifications needed to be maintained as part of the project:

1. The lift mechanism shall consist of two (2) recirculating ball bearing screw assemblies.
2. The roof panel should be continuously welded to the side panels when constructing the bridge structure.
3. The sub floor of the C-tunnel shall be aluminum.

To ensure clarity of the information received as part of the bid submittals, a certification form was sent out to the three lowest bidders requesting they certify that their respective bids included the three specification items listed above, without substitution, to which they all responded with a signed certification that those items listed above would be provided for the price bid.

After the LCPA's evaluation and extensive effort of due diligence, LCPA staff determined that acceptance of the apparent low bid submitted by AERO Bridgeworks would present a potential conflict of interest. Therefore, staff does not recommend awarding a contract to AERO Bridgeworks (see attached LCPA memo).

As a result, on July 15, 2020, the LCPA issued a Notice of Intent to Award to the next lowest responsive bidder, Thyssenkrupp Airport Systems, Inc. Upon receipt of this notice, on July 23, 2020, JBT AeroTech filed a Formal Bid Protest.

Under the Port Authority's Bid Protest Policy the ASMC conducts an informal hearing of the bid protest. After hearing the bid protest presentations and deliberation, the following options were available to the ASMC:

- Reject the bid protest and recommend Board award a contract to Thyssenkrupp Airport Systems, Inc as the lowest, responsive, qualified bidder and approve a Total Project Budget in the amount of $34,892,158.
- Accept the bid protest and recommend Board award a contract to JBT AeroTech Corp as the lowest, responsive, qualified bidder and approve a Total Project Budget in the amount of $36,278,152.
- Any other action as deemed appropriate by the ASMC.

In accordance with the LCPA Purchasing Policy, on August 18, 2020, the ASMC held a Bid Protest Hearing regarding the award of this contract. The ASMC heard presentations by staff, JBT (protester) and ThyssenKrupp (affected party), and conducted a question and answer session with each party. At the August 18th Bid Dispute Committee Meeting, both presentations (by ThyssenKrupp and JBT) were held virtually. This was done in an effort to adhere to room capacity and social distancing constraints and to offer a benefit to both presenters reducing their cost and time of travel. Even though both presentations were required to be virtual to keep a level playing field for both presenters, at no time was anyone prohibited from attending the ASMC meeting. At this meeting, the ASMC voted unanimously to uphold the bid protest and recommend the Board award a contract to JBT AeroTech Corp as the lowest, responsive, qualified bidder and approve a Total Project Budget in the amount of $36,278,152. Unfortunately, after both presentations were concluded, the virtual feed for both presenters was inadvertently terminated. As a result, neither ThyssenKrupp nor JBT had the benefit of hearing any of the ASMC deliberations or the subsequent motion.

On August 24, 2020, the LCPA received a complaint from ThyssenKrupp that they were not permitted to hear the ASMC Bid Dispute Committee deliberations that led to their recommendation. Since a portion of the August 18 open meeting was inadvertently "closed" by disconnection of the presenters, the Port Attorney's Office recommended that the ASMC hold another Bid Dispute Committee meeting to conduct a second independent open public hearing and to reconsider the bid protest. A second Bid Protest Hearing was held before the ASMC on September 15, 2020. Both

Background (continued)

ThyssenKrupp and JBT were forwarded the audio recording of the entire August 18, 2020 meeting and a verbatim transcript of the entire prior Bid Protest Hearing was included in the agenda package (available to the general public). Presentations were allowed to be either virtual or in-person. The ASMC heard presentations by staff, JBT (protester) and ThyssenKrupp (affected party).

After an extensive question and answer period, the ASMC determined the following:

- ThyssenKrupp has never manufactured or installed a Passenger Boarding Bridge at any airport that meets the LCPA final project specifications.
- ThyssenKrupp does not have all the required certifications and approvals (NFPA, UL, etc.) to begin the project in October, and ThyssenKrupp could not satisfactorily demonstrate that the time needed for it to obtain all the required approvals would not impact the project schedule.
- ThyssenKrupp was recently (April 2020) terminated by the Charlotte Douglas International Airport in the middle of a similar project and received a bad reference by Charlotte airport staff. ThyssenKrupp did not explain the termination to the satisfaction of the ASMC.

Based on the above, the ASMC determined that ThyssenKrupp was not qualified to perform the work. Pursuant to Florida Statutes Section 255.20(1)(d)1.,"If a project is to be awarded based on price, the contract must be awarded to the lowest qualified and responsive bidder in accordance with the applicable county or municipal ordinance or district resolution and in accordance with the applicable contract documents." "This subsection is not intended to restrict the rights of any local government to reject the low bid of a nonqualified or nonresponsive bidder and to award the contract to any other qualified and responsive bidder in accordance with the standards and procedures of any applicable county or municipal ordinance or any resolution of a special district."

As a result, on September 15, 2020, the ASMC voted unanimously to recommend the Board uphold the bid protest and award a contract to JBT AeroTech Corp as the lowest, responsive, qualified bidder and approve a Total Project Budget in the amount of $36,278,152.

Attachments
A – Port Attorney Memos – RFB 20-53MMW
B – 8-18-2020 Verbatim Transcript
C - Project Exhibit and Organization
D – LCPA memo regarding ABW Conflict of Interest; ABW response memo
E – LCPA Notice of Intent to Award; TK Certification
F - JBT Bid Protest
G- JBT and TK Additional Information
H - Request for Bids & Bids Received (ABW, TK, and JBT)
I - Total Project Budget

MEMO TO: Board of Port Commissioners

FROM: Gregory S. Hagen
Senior Assistant Port Authority Attorney

DATE: September 15, 2020

LEE COUNTY PORT AUTHORITY

SUBJECT: RFB 20-53MMW – Passenger Boarding Bridge Replacement
at the Southwest Florida International Airport
DEV-006082

At the November 5, 2020, Joint Board meeting you will be asked to consider a bid protest filed in response to the Request for Bids referenced above. The project involves the manufacture, delivery and installation of twenty-seven replacement Passenger Boarding Bridges for the Midfield Terminal.

The bid protest comes to you after two full public hearings before the Airports Special Management Committee, sitting as the Port Authority's Bid Protest Committee. As explained in the attached memo, the second full public hearing was held to cure a possible departure from the Sunshine Law's public meeting requirements during the first public hearing.

At that first hearing, in an effort to follow CDC and Florida's Executive Order COVID-19 pandemic guidance, the bid dispute parties were directed to appear remotely and make their presentations via Google Meets. Unfortunately, they were inadvertently disconnected and unable to hear the ASMC's deliberations and motions at the end of the hearing.

On September 15, 2020, the ASMC held an independent second public hearing on the bid dispute. Prior to the second hearing, both parties, JBT AeroTech Corporation (bid protester) and ThyssenKrupp Airport Systems, Inc., (affected party), received an audio recording of the portion of the first hearing that they missed and a full verbatim transcript of the entire hearing.

The second public hearing was then conducted anew, with presentations by each party, a thorough question and answer session, Committee deliberations and the consideration of motions to adopt a recommended resolution of the bid protest to the Board. At the conclusion of the hearing, the Committee unanimously approved a motion recommending the Board accept the bid protest and award the contract to JBT AeroTech Corporation as the lowest, responsive, responsible bidder.

Since this Request for Bids is still in the procurement phase, the Port Authority's anti-lobbying prohibition remains in effect. Please avoid any contact with any of the parties associated with this project until the Board takes final action on the bid protest and award of the contract.

If you have any questions, please let me know.

GSH/slk

cc: Richard Wm. Wesch, Port Authority Attorney
Ben Siegel, Acting Executive Director
Brian McGonagle, Division Director, Administration
Mark Fisher, Deputy Executive Director, Development
Melissa Wendel, Purchasing Manager

MEMO TO: Airports Special Management Committee Members

FROM: Gregory S. Hagen
Senior Assistant Port Authority Attorney

DATE: September 8, 2020

LEE COUNTY PORT AUTHORITY

SUBJECT: RFB 20-53MMW – Passenger Boarding Bridge Replacement
at the Southwest Florida International Airport
DEV-006082

At your September 15, 2020 meeting, the Committee will be asked to reconvene as the Bid Dispute Committee to conduct a second informal protest hearing for Request for Bids 20-53MMW Passenger Boarding Bridges. As explained below, this hearing has been scheduled to ensure compliance with the public meeting requirements of the Sunshine Law, Section 286.011, Florida Statutes. The law states that no formal action of a board or commission will be considered binding, unless it is taken at a public meeting that is "open to the public at all times."

As you recall, last month the Committee held an informal hearing on this matter. In a first, the protester and the affected party (the "parties") were required to present their arguments remotely in order to comply with the social distancing requirements mandated in response to the ongoing COVID-19 pandemic. After each party had concluded their presentation and participated in a long question and answer session with members of the Committee, the Committee members commenced deliberations aimed at adopting a recommendation to the Board of Port Commissioners to resolve the bid protest.

Unfortunately, the parties' remote connection to the meeting was inadvertently severed at the start of the Committee's deliberations and was not restored. Even though the parties' direct participation in the hearing had concluded at this point, the result was to "close" an otherwise open public meeting.

Section 286.011, Florida Statutes, requires that all meetings of a public collegial body that has a role in the decision-making process of a board or commission be open to the public. This has been interpreted to include an advisory committee, such as the ASMC, that makes recommendations on final action to a governing body, here the Board of Port Commissioners.

To correct any potential violation of the Sunshine Law open meeting requirement, Florida courts have allowed collegial bodies to "cure" the violation by holding a second public hearing and taking "independent, final action completely in the Sunshine." Tolar v. School Board of Liberty County, 398 So.2d 427, 429 (Fla. 1981). In this case, the Committee will be asked to convene the hearing anew, hear the evidence and argument of the parties, ask questions of staff and the parties, and consider a recommendation to the Board to resolve the bid protest that is independent of the prior proceeding and after a full consideration of the matter.

To that end, Port Authority staff has compiled a complete record of this matter as part of your Agenda packet and supplemented it with a written transcript of the earlier hearing. Likewise, each party has received an audio recording of the (closed) portion of the last meeting and will receive a copy of the written transcript. Further, staff will notify each party of the procedures for this hearing. Staff and I will also be available at the hearing to answer any questions you may have regarding this process.

GSH/slk

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Melissa Wendel, Purchasing Manager

AIRPORT SPECIAL MANAGEMENT COMMITTEE MEETING

(Transcribed From Audio Recording)

DATE OF MEETING: August 18, 2020

TRANSCRIBED BY: Melissa Meeks, RPR
Notary Public
State of Florida at Large

FORT MYERS COURT REPORTING
2180 West First Street, Suite 120
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(239) 334-1411

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MS. ROEPSTORFF: Okay. All right. We'll call the meeting back to order here, and I'll turn it over to Melissa.

MS. WENDEL: Okay. So before I begin with the bid protest hearing, let me just find out what the pleasure of the committee is. Would you like me to go ahead and reveal the rankings for janitorial services or --

UNIDENTIFIED MALE SPEAKER: Oh, yeah.

MS. ROEPSTORFF: Sure.

UNIDENTIFIED MALE SPEAKER: Yeah, let's do it.

MS. WENDEL: So in reference to RFP 20-45, which is the janitorial services at Southwest Florida International Airport, the rankings are as follows: The first ranked firm is SP Plus BFS Joint Venture. The second place firm is Flagship. Third place is Sunshine. And placed in fourth is Service Management Systems, SS.

UNIDENTIFIED MALE SPEAKER: Jesus Christ.

UNIDENTIFIED MALE SPEAKER: Do you need a motion?

UNIDENTIFIED MALE SPEAKER: Do we need a motion to approve that?

UNIDENTIFIED MALE SPEAKER: We need a motion, right?

MS. ROEPSTORFF: Okay. Do I have a motion to approve the rankings for --

UNIDENTIFIED MALE SPEAKER: (Inaudible.)

UNIDENTIFIED MALE SPEAKER: Yeah, I'll second it.

MS. ROEPSTORFF: All right. There's a motion and a second. I'll -- any discussion or --

UNIDENTIFIED MALE SPEAKER: I just think we have four very, very good presentations from these folks under a difficult situation.

MS. ROEPSTORFF: Very, very qualified firms. Every single one of them, very.

All right. No further discussion. All those in favor?

(Multiple ayes.)

MS. ROEPSTORFF: Anyone opposed?

Okay.

MS. WENDEL: Just a second for the PowerPoint. Is this working?

UNIDENTIFIED MALE SPEAKER: Test. Test.

UNIDENTIFIED MALE SPEAKER: Is it turned on?

MS. WENDEL: So once again for the record, my name is Melissa Wendel. I'm the procurement manager for the Lee County Port Authority and the item before you today is an informal bid protest hearing

for a request for bid 20-53MMW, which is for passenger boarding bridge replacement at Southwest Florida International Airport.

So to begin, allow me to briefly explain the steps and the agenda. First, I will provide key dates to you that occurred during the bid protest and then provide an overview for you of the bid protest procedures that govern this proceeding.

Afterward, Mr. Fisher [phonetic] will provide project specific information, and he will lead us through the factors which resulted in identification of the lowest responsive and responsible bidder.

You will then hear from the protestor, JBT AeroTech Corporation, followed by the affected party, who is also the intended awardee, ThyssenKrupp Airport Systems, Inc.

You will have an unlimited amount of time to ask questions of staff or of our port attorney, the protestor, and/or the affected party. And then finally you will make your decision through a vote.

So moving to the background and the timeline for this item. Request for bid 2053 was issued on April 27th, 2020, and then shortly thereafter on June the 2nd, five bids were received in response to the request for a bid. And Mr. Fisher is going to

show you those five bids momentarily. But as indicated on the timeline, after evaluating all of the bids, on July the 15th, a notice of intent to award the RFP was issued to ThyssenKrupp Airport Systems.

On July 23rd, the Port Authority received a timely filed protest from JBT AeroTech Corporation. Since that time, an agenda packet has been prepared and provided to you, to the protestor, and to the affected party in advance of today's meeting.

The Lee County Port Authority purchasing manual contains bid protest procedures at Section 10, which I will explain. A bid protest occurs when a bidder is adversely affected by an intended decision and timely files an intent to protest, which JBT AeroTech did.

Our procedures require a notice of intent to protest with a formal written protest following that, along with a protest bond. JBT satisfied these filing requirements.

A formal written protest must contain a statement of disputed issues of material fact, or if there are none, then the protest should indicate that. The JBT protest indicates several points as its disputed issues of material fact. The protest

procedures also require that the formal protest contain a statement indicating the relief to which the protestor deems itself entitled and also requires a concise statement of the facts alleged and of the enabling authority that entitles the protestor to such relief.

In this case, the protestor, JBT AeroTech, states that award of the RFP must be made to itself and it points to specific statutes and a provision from our purchasing manual as the enabling authority. Upon receipt of a bid protest, the bid solicitation process or the award of a contract comes to a stay until that process is, per the manual, resolved pursuant to the fundamental principles of due process, which leads us here today.

These principles of due process are outlined in Section 10.2 of the bid protest procedures and the purchasing manual. The section begins by identifying the Airport Special Management Committee as the bid protest committee. Serving in that role as bid protest -- or as the bid dispute committee, rather, you are conducting a publicly advertised informal hearing to review the bid protest.

So the manual states that the purpose of the

hearing is to review the basis of the protest, evaluate the facts and the merits of the protest with the ultimate goal of making a recommendation to the Board of Port Commissioners as to whether to accept or reject the protest and for resolution of the protest.

The request for bid documents state that the bid award is based on the lowest responsive and responsible bidder. And this is key. Though the task at hand is not easy, it is vital that the bid dispute committee's recommendation to award uphold that basis of award that's published in the RFP, which is to award to the lowest responsive and responsible bidder.

The protest submitted by JBT calls into question the responsiveness of the competitor's bid and the responsibility of the -- of its competitor as bidder. Very shortly, JBT will be awarded seven minutes in order to present its position to you.

Afterward, ThyssenKrupp will be allotted the same seven minutes to have an opportunity to respond to and address the nonresponsive and nonresponsible issues that are raised in this protest.

As clearly set out in the RFP documents to be responsive, a bidder must submit a bid which

conforms in all material respects to the requirements that are set forth in writing in that RFP. And to be a responsible bidder, the bidder must have the capability in all respects to perform. And that means the experience, integrity, reliability, capacity, facilities, equipment, and credit that are going to assure good faith performance.

As you consider the facts presented to you today, please know that you may ask questions or request professional and technical advice and recommendations from staff, and as well the Port Authority attorney is available to provide legal counsel for you.

Once satisfied that you have all of the information you need, you will deliberate as a bid protest committee and then vote on a recommendation to forward to the Board of Port Commissioners.

So if there are no questions for me at this time, I will turn it over to Mr. Fisher to provide detailed information about the project and the bids that were received.

MR. FISHER: Good afternoon. Thank you all in advance of your time today. I know it's been a long meeting, but we'll try to -- we have a lot of

information to go through, but we'll try to do it as efficiently as possible.

So just to start off with, I'd like to give you a quick overview reminding you of the project scope. This project is the replacement of all 27 passenger boarding bridges at RSW. The total cost of the project is estimated to be about $35 million. That includes already spent design costs and future construction contingencies.

We were hoping to get some federal grant dollars for this project, but those didn't come through as we had planned, so the project will be funded by passenger facility charge revenues and state grants.

With your action today, we hope to move the construction contract to the board for approval in September and start construction in October. The phasing of this project is very important, and we worked very hard with our operations and maintenance departments, as well as the airlines so this project has the least impact to airline operations.

October to April, the contract will be strengthening the foundations at each gate in order to meet current hurricane wind codes. This should be able to be done in and around the current flight

schedules without taking down a gate for any extended period of time. This also is a time when the passenger boarding bridges themselves will begin to be manufactured at the plant, then trucked here and start showing up on site.

After season, from April to next year -- after season from April of next year to Thanksgiving during our off season, that's when the passenger boarding bridges will actually be replaced. It will be done in three crews rotating around the concourses with the goal that only one bridge is down at a time on each concourse. We always have the International gate open. No more than one airline gate is out of service at any time. And we always have a common use gate in service on each concourse. And so hopefully by Thanksgiving of next year, all 27 passenger boarding bridges are replaced.

This is the organization chart for the project. The contract we are here today for is highlighted in red, the general contractor doing the construction work. Valued at around $25 million. Then there are also contracts for construction administration, the engineering work during the construction phase, and for a construction manager

that will serve as the Port Authority's agent in managing the project. Those were on the consent agenda item today.

The challenging aspects of the design of this project was creating competition for the construction contract bidding. It's known throughout the airport industry that the two biggest manufacturers of passenger boarding bridges in the U.S. are ThyssenKrupp and JBT. They are the Ford and Chevy of passenger boarding bridges in the United States.

They each make their brand of passenger boarding bridge and each brand comes with its own standard typical equipment. So airports across the U.S. -- and we are definitely not the first, probably won't be the last -- struggle with developing and design in specification for passenger boarding bridges that meet the individual needs of their airport while trying to make sure there is competition during the bidding process so then the airport doesn't get only one bid from one manufacturer that's twice the expected price.

And, quite frankly, with only two big players, it's not an easy task. We did our best. The design team worked with our maintenance staff and made sure

that each specification listed and/or equal for anything that we specified. We entertained over 180 requests for information during the bid process, considering alternatives and substitutions by all the potential bidders. We allowed bidders to submit alternatives with their bid for consideration, even though the pricing on the bid day was only for the final specification.

A lot of time and effort went into this, but we think it was definitely worth it. We did receive five very competitive bids, all within about ten percent of each other. And all the bids were under the engineer's estimate of $28 million.

All five bidders proposed to install either a ThyssenKrupp or a JBT manufactured bridge, so we're very happy with the bids that we got. The apparent low bidder is AERO BridgeWorks. There is a memo in your backup that outlines staff's concerns over entering into a contract with ABW due to a potential conflict of interest.

Details are in the memo, but essentially AERO BridgeWorks is a sister company to Aero Systems Engineering, the designer of the project. And even though they may be legally two different and separate companies, staff can't be assured that ASE,

the designer, would represent the interests of the Port Authority above those of their sister company during construction --

UNKNOWN MALE SPEAKER: Test, test.

MR. FISHER: Test, test.

MS. ROEPSTORFF: Uh-uh.

(Inaudible.)

MR. FISHER: I'll just talk louder. How is that?

Staff feels that the checks and balances on the project would be undermined and hiring AERO BridgeWorks would be a risky venture for the board. This was relayed to ABW during the design and during the bid, so it's been over a two-year period that we've had discussions. But they decided to bid anyway. And we informed ABW we would be recommending not to award a contract to them for this project and even though they, of course, disagreed, as you heard earlier, they chose not to submit a formal bid protest.

So I wanted to pause here just to make sure you don't have any questions, as AERO BridgeWorks is the apparent low bidder, and if you want to discuss awarding a contract to them, there's really no reason to go forward with the bid protest with

Number 2 and Number 3 portion of the agenda, so is there any questions --

UNIDENTIFIED MALE SPEAKER: Is your -- is your consternation with their bid just that they're already the project engineer and that they would -- you cannot be assured there's no conflict of interest even though there's no allegations of any impropriety?

MR. FISHER: That's very well put. I mean, this summarizes what's in the memo in your backup and the previous decisions we've had (inaudible). You're absolutely right. We need to be comfortable that an engineer of record, as we go into construction, is totally independent of the contract. And because of these issues, we're not that assured.

UNIDENTIFIED MALE SPEAKER: Could you explain how Manhattan Construction fits into this puzzle?

MR. FISHER: Sure. So that's the contract organization. And, again, there are projects done around the country, for instance, a design-build delivery measure, the way it's procured, where you have the engineer and the contractor, they're all on one team and you're entering in one new contract. That's not the way this was procured. That's why we

need an engineer independent totally of the general contractor.

So, again, the issue we're here for today is in red, the low-bid contractor. Manhattan Construction will act as the Port Authority's agent, basically an extension of staff managing the construction, but the construction contract for this project will be held directly by the Port Authority.

Aero Systems Engineering, who is the designer, we already retained them for the construction phase as well because there's going to be a lot of engineering questions that come from the general contractor that the engineer has to answer.

UNIDENTIFIED MALE SPEAKER: So you're saying that the system was designed by Aero Systems?

MR. FISHER: Yes, sir.

UNIDENTIFIED MALE SPEAKER: And then we're looking for a contractor that's actually going to build the gates?

MR. FISHER: Yes, sir.

UNIDENTIFIED MALE SPEAKER: And then the contractor itself, Manhattan, is going to oversee installing the gates?

MR. FISHER: Yes, sir.

UNIDENTIFIED MALE SPEAKER: Okay. So that's

the brunt of what we have here?

MR. FISHER: That's correct. And Aero Systems, again, the designer, has a role in construction. They don't walk away because the contractor will say, you know, I need to substitute widget A for widget B.

And we go to our engineers, is that a good deal for the Port?

We just need to make sure that their answer is 100 percent Port and they don't have any other influences.

UNIDENTIFIED MALE SPEAKER: And that kind of demonstrates the conflict.

MR. FISHER: The potential conflict.

UNIDENTIFIED MALE SPEAKER: The potential conflict.

MR. FISHER: Yes, sir.

UNIDENTIFIED MALE SPEAKER: And this is just a wonder why kind of question, but if you told them pretty much you're not going to accept their bid, why did they go to the trouble of doing it?

MR. FISHER: I don't know that. Again, I think they felt very strong. Don't mean to speak for them --

UNIDENTIFIED MALE SPEAKER: Well, I think,

too, that ABW is saying we're owned by the employees and ASE is not, but I think also that the principals of those two organizations, whether it be the chairman of the board or they share office space, you know, co-locate with one another, just the appearance of it, I agree with staff and this -- the appearance of it is that there's a serious conflict or could be. Could be --

MR. FISHER: And, again --

UNIDENTIFIED MALE SPEAKER: -- you know.

MR. FISHER: -- the staff's, you know, discussions with counsel.

UNIDENTIFIED MALE SPEAKER: And for a reasonably small amount of money, you don't want to take that risk.

MR. FISHER: It was -- again, these items: They do share a website, they share some office space, they're under a corporate organization.

UNIDENTIFIED MALE SPEAKER: Yeah.

MR. FISHER: Technically, legally they may be two separate entities, you know, looks like a duck, sounds like a duck, walks like a duck, looks like a duck (inaudible) recommending that to you.

MS. ROEPSTORFF: So they're going to walk away from this. They're not going to -- they would have

already had to protest if they were going to file a protest.

MR. FISHER: They're officially not a part of this bid protest.

MS. ROEPSTORFF: Okay. Because --

UNIDENTIFIED MALE SPEAKER: But they did speak this morning.

MS. ROEPSTORFF: Right.

UNIDENTIFIED MALE SPEAKER: I mean, earlier I should say.

MS. ROEPSTORFF: I do recall that. I guess sitting on different boards and then having -- serving on multiple boards and then when it comes time to taking a vote on a board about something always -- what always comes up is conflict of interest, but they always look -- and the attorney there says, are you going to benefit financially from this? And that's how the conflict of interest has always been defined to me, definition-wise.

So is that -- I just don't want -- they may not be protesting the bid, but I don't want a lawsuit coming later that what's the definition of conflict of interest that we're using? Are there financials? Do they -- they went to great lengths in setting up different companies, but is there any

revenue -- does one benefit from the other financially?

MR. FISHER: And maybe I'll -- let me take a shot and then Mr. Hagan [phonetic] can --

MS. ROEPSTORFF: I mean, does that same thing apply here?

MR. FISHER: We spent a long time going back and forth with them trying to get information, officially and unofficially and --

UNIDENTIFIED MALE SPEAKER: I think the --

MR. FISHER: -- originally there were shareholders of one company, there were shareholders in the other company, majority shareholders, that changed recently. I think it was in 2019. And so now we've asked the question, well, are there mutual shareholders, and we keep getting back the answer not majority shareholders. So again --

UNIDENTIFIED MALE SPEAKER: That answer is yes.

MR. FISHER: There's the potential conflict. And, again, I'll --

UNIDENTIFIED MALE SPEAKER: Well, the -- I think the definition of conflict of interest that you're using is more in the individual sense. Do I have a financial interest in this particular

development coming to me for review?

In this case, it's more a relationship as between a client and a professional -- the responsibility to provide professional advice, and the concern is whether it's real or perceived, there seems to be a potential conflict between, in this case it would be ABW and ASE providing advice and services to the Port Authority.

So it's a little broader than it might be in the individual sense where you would say, well, where's the financial gain to the employee or the person that's asking the question?

MS. ROEPSTORFF: Okay. Okay. And that's your basis of conflict of interest?

MR. FISHER: Potentially, yes. Potentially it's there, and based on the information we have today, we just don't feel comfortable (inaudible).

UNIDENTIFIED MALE SPEAKER: Have you encountered this with any other situations like this in the past?

MR. FISHER: We have conflict of interest determinations all the time that run through Mr. Hagan's office, staff weighs in on what we know, and Mr. Hagan makes the decision pretty much, and it happens all the time. We've never had a conflict of

interest determination, to my knowledge, with Mr. Hagan where they have disagreed to the point where they submitted a (inaudible).

MS. ROEPSTORFF: So because the bid packet -- sorry to put you on the spot over here. Because the bid package was proposed out there and delivered to all these vendors as it would be the most response -- the lowest responsive bidder, right?

UNIDENTIFIED MALE SPEAKER: Responsible and responsive, I think, wasn't it?

UNIDENTIFIED MALE SPEAKER: Typically that's the standard for --

MS. ROEPSTORFF: Okay.

UNIDENTIFIED MALE SPEAKER: -- the board. The lowest responsive responsible bidder.

MS. ROEPSTORFF: Okay. Responsible is the key word in there, okay, that I need to hang onto. Okay.

UNIDENTIFIED MALE SPEAKER: I'm just going to commend the management because being somewhat of the developer, I see this low bid being change order, such that in the end product -- I mean, I'm not accusing anybody, but this is just -- it's blatant.

MR. FISHER: No, I mean --

UNIDENTIFIED MALE SPEAKER: What's the

appearance?

MR. FISHER: -- perspective, Aero Systems Engineering did an excellent job for us designing this project, and I'm sure (inaudible). ABW has an excellent reputation in the industry. They do quality work all over. The delivery method we have and the way we advertise this project just doesn't --

UNIDENTIFIED MALE SPEAKER: And we'll hire them for something else in the future.

MR. FISHER: Okay. So moving on.

Okay. So the next two lowest price bidders are ThyssenKrupp and JBT. In reviewing the bids, both bids were responsive, submitting all the required documents. Both exceeded the Lee goal, which was good. Both met the minimum qualifications of a similar project at a U.S. airport within the last five years.

There was one hiccup in our due diligence. When staff called to verify the experience of ThyssenKrupp, we were told by the Charlotte airport that they had just been fired. There are always two sides to a story.

UNIDENTIFIED MALE SPEAKER: Sure.

MR. FISHER: And ThyssenKrupp meets the

minimum qualifications even without the Charlotte work, but that is something that you may want to ask them about later.

So this leads us to does the bid submitted by each firm meet the project specifications, and is the firm qualified to do the work.

As I mentioned, there was a lot of back and forth during the bid period regarding the project specifications. We specified that we wanted this, not that. Is there substitution? In order to create the most competitive environment possible, we pretty much said yes to (inaudible) on the majority of the aspects of the specifications with the exception of three things: We need the vertical drive to be screw assemblies, not hydraulic; we need joints to be welded, not caulked; we need the subfloor to be aluminum.

There's a memo in your backup that further outlines why staff feels these three things are important. These things are -- our maintenance staff are pretty adamant on because unlike other U.S. airports we have hurricanes, we have a long rainy season, we live in a high humidity environment which means rust. So these three things we specified we would need.

ThyssenKrupp during the bidding process made a lot of statements that they could not bid with these three things included in the specifications, that they did not make a passenger boarding bridge of these three things, and that they weren't a part of their brand, but on bid day, they submitted a bid price that included these three things.

Just to be sure there's no confusion, after the bids were received, staff sent the three lowest bidders a certification that you certify that you're bidding for these three things, you will not request substitutions or changes to these three things and you will execute a contract with the Port Authority to provide passenger boarding bridges that include these three things. And all bidders signed this certification, including ThyssenKrupp.

So staff determined that the ThyssenKrupp bid was the lowest bid after (inaudible), was responsive, they certified that they will provide the three things and all the other specifications, and ThyssenKrupp has industry experience in manufacturing and installing passenger boarding bridges in U.S. airports.

So Port Authority staff issued a notice of intent to award the contract to ThyssenKrupp and

then JBT filed a formal bid protest. Even though staff felt that ThyssenKrupp did check all the boxes and issued a notice of intent to the board, there are some other points for discussion today, all that boil down to, does ThyssenKrupp qualify to do the project.

I would suggest that as we proceed, to the representatives of both firms that you'll hear from in a minute and to the ASMC, to focus on that question. This is not a legal proceeding. It's an administrative process. Florida Statutes are very liberal in allowing the agency to award a contract to anyone as long as it is the lowest price and the bidder is considered responsive and qualified in the opinion of the (inaudible). As long as your decision today is based on merit, not arbitrary (inaudible).

So as you hear from both parties, to try to help the discussions, some items of clarification could be, has ThyssenKrupp manufactured and installed passenger boarding bridges with the three things that's in the specifications; can ThyssenKrupp secure all required approvals and permits like the UL certification, so that it will not impact the project schedule; can ThyssenKrupp

meet the project schedule, and it would be nice to hear their side of the story of what happened at Charlotte recently.

At the end of the discussion today, if the ASMC is satisfied with ThyssenKrupp as a qualified bidder, then staff would recommend a contract be awarded to ThyssenKrupp. If not satisfied, then staff would recommend to uphold the bid protest. (Inaudible.)

So sorry for the lengthy background, but we (inaudible) to try to help you with your discussions today (inaudible).

MS. ROEPSTORFF: Are there any questions?

UNIDENTIFIED MALE SPEAKER: I have one question.

MS. ROEPSTORFF: Okay.

UNIDENTIFIED MALE SPEAKER: When this contract was first awarded, did they make presentations to us?

MR. FISHER: No, sir. It's a vote and award. So what we do is we look at the number first, was all the required documentation filled out, including minimum qualifications, and then we award -- we're mandated to award to the low, responsive qualifying bidder, so --

UNIDENTIFIED MALE SPEAKER: That's the rules of bidding?

MR. FISHER: That's the rules of this procurement bidding for construction, but different from the janitorial we just heard, which is price -- it was a proposal, price and qualifications. And when we bring engineering firms to you, that's really just qualifications without price. This is price first above all else, as long as they check all the other boxes.

MS. WENDEL: So in just a second, JBT AeroTech Corporation, as protestor, will present their position to you through Google Meet.

UNIDENTIFIED MALE SPEAKER: Thank you.

MS. WENDEL: Seven minutes is being allocated for this purpose. Since it's difficult for them to see the timer, as it was for our other presenters, I will let them know when time is up -- when their seven minutes is up.

Following their presentation, ThyssenKrupp as the affected party will have an opportunity to inform you on its position, same seven minutes. So when everyone is ready, then I will turn it over to JBT via Google Meet. I'd like to introduce you to JBT's representative, Lauren Kramer Sujeeth from the

Law Firm of Rogers, Joseph, O'Donnell.

Lauren?

Lauren, can you hear me?

Oh, she's muted. Lauren, you're muted.

Okay. It Looks like Lauren is having some technical difficulties, and she's going to log back in. Just give her a moment so she can work that out.

MS. SUJEETH: Can you hear me now?

MS. WENDEL: Yep.

MS. SUJEETH: Okay. Let me put up our presentation then.

All right. I'm ready when you are.

MS. WENDEL: Go ahead with your speech.

MS. SUJEETH: Thank you. All right. My name is Lauren Sujeeth. I'm an attorney with Rogers, Joseph, O'Donnell, speaking today on behalf of JBT AeroTech Corporation. With me is Brian DeRoche, president of Jetway Systems; members of the JBT team; and local counsel. Each of us is available to answer your questions.

There are five reasons the board should reject ThyssenKrupp's bid and instead award to JBT. Number one, TK's proposed design has not been certified by any nationally recognized testing laboratory,

including under the current safety standards.

Number two, TK is not a responsible bidder who can be relied upon by the authority.

Number three, TK's proposed installer, ATS, does not cut the requisite experience to meet the minimum qualifications of the RFP.

Number four, TK violated the cone of silence by lobbying Ben Siegel, interim director.

And number five, TK repeatedly told the authority that it could not meet the technical specifications. Within weeks, it certified it could. The authority can have no (inaudible).

Number one, the RFP stated that bidders were required to be UL or ETL listed at the time of bid and submit verification of that fact with their bid.

Although TK submitted ETL and UL listings, what it did not tell the authority, but has now conceded is that those listings are not for the completely redesigned bridge it now proposes.

Indeed, TK now admits that its certification requests for its redesigned bridge is pending and has not been approved.

NFPA 415 is a crucial OSHA fire safety standard to protect passengers. Here, the RFP required that offerers provide proof from a

nationally recognized testing laboratory or NRTL, that the proposed bridge, including all design changes met the 2016 version of the spec.

TK did not meet this requirement. It did it not, could not, and still cannot provide certification from an NRTL that its proposed bridge with glass candles in the walls is compliant. Yet TK tried and continues to try to obfuscate this fact to mislead the authority about its NFPA 415 compliance. It provided documents to show that its walls were certified to prior versions of the NFPA 415. This is a red herring. No version of the spec before 2016 allowed for glass in the tunnel walls.

In response to JBT's protest, TK then submitted a new statement of compliance and new documentation of a test recorded by Applus, a Barcelona company. This is not an OSHA recognized NRTL. Despite its efforts to hide the truth, the evidence is clear. TK does not meet the RFP requirement for (inaudible).

As one example in its bid, TK submitted a draft Intertech listing to the 2013 version of the spec. This was misleading because TK didn't mention that the 2013 edition had been superceded in 2016 and that it (inaudible).

As another example, TK has now submitted a new Intertech report. It highlighted the test date of April 24th, 2017, likely to create the impression the test had been performed under the 2016 version of the spec. Yet this test has no relevance to the bridge tunnel wall here. In the photos and drawing section of the report it's clear that Intertech tested a steel wall without any glass. This test, therefore, is wholly irrelevant.

Finally, TK makes the argument that the authority should simply rely on the test by Applus to the 2013 version of NFPA 415. Applus is not an OSHA recognized NRTL, but there are two other reasons that this test is not reliable.

First, Applus incorrectly concluded that there was no change between the 2013 and '16 versions of the spec. This ignores that no lab could certify a wall with glass to NFPA 415 under the 2013 version because the spec didn't allow for glass.

Second, as the testing scheme on photo shows, Applus wind loaded only the steel portion of the wall and not the glass. In contrast, Intertech, an NRTL, wind loads the glass portion of the wall to ensure that the glass won't break under the pressure of wind and heat. And there's good reason to

believe that TK's design would fail a wind loaded test.

According to the test documents TK provided, its glass broke at five minutes, 47 seconds. It's therefore very likely that with the additional pressure of wind, its design could not meet NFPA 415 five-minute threshold.

TK attempts to dismiss all of these certification failures as minor deviations, but Florida law states that an agency decision is subject to being overturned when the award is based on known misrepresentations or the selected offerer has gained a competitive advantage by deviating from the RFP.

Here, TK repeatedly misrepresented that its proposed design was certified and listed when it is not. And its proposal of an untested bridge design gave it a competitive advantage by allowing it to bid a lower price. Under these circumstances, the authority cannot lawfully proceed with an award to TK.

Moreover, the authority's own risk of liability should a passenger be injured is exponentially increased when it allows for the installation of a bridge and knows it's not OSHA

compliant or certified.

Number two, TK is not a responsible bidder. The authority cannot be assured that TK has the capability to perform. It said it could not provide a responsive design during the Q and A, but now says it's always been able to meet those requirements. One of those statements can't be truthful.

Second, it cannot demonstrate integrity. Beyond the misrepresentations already detailed, TK deceived the authority about the status of its project in Charlotte. In its August 4th response letter, it told the board that it was still performing in Charlotte and that the dispute was, quote, far from settled. That's not true. It had already been terminated by Charlotte in May.

And the substance of the Charlotte termination proves that TK is not reliable. The city found that TK lacked the knowledge, familiarity, and experience with its own product to identify and remedy engineering problems. Those risks are only increased here where it's proposing a novel design.

Number three, despite TK's argument to the contrary, its proposed installer, ATS, does not meet minimum qualifications. ATS has not completed three jobs of similar size and scope within five years.

The RFP says that this is going to be for 27 bridges. On its largest installation project, ATS installed half as many and in most circumstances far fewer. And for the only project of similar size, ATS only inspected the bridges and did no installation work. Because ATS doesn't meet the minimum qualifications, the authority was required by the terms of the RFP to reject TK's bid as nonresponsive.

And to the extent that TK relies on its own experience as an installer, the authority should be distrustful. After all, this was one of the reasons it was terminated from Charlotte.

Number four, on May 19th, TK sent a letter lobbying for changes to the RFP to its interim director, Ben Siegel, among others. This action violates the authority's lobbying restriction, which according to the purchasing manual must result in automatic disqualification. For this independent reason as well, TK must be disqualified.

Finally, TK repeatedly informed the authority that it couldn't submit a technically compliant bid. Its sudden certification is untrustworthy. Given the many improprieties, JBT respectfully requests that the committee rejects the recommendation to

award to ThyssenKrupp and instead proceed with an award to JBT, the true lowest responsible and responsive bidder. Thank you.

MS. WENDEL: Thank you, Ms. Sujeeth.

Okay. So at this time, I would like to introduce ThyssenKrupp Airport Systems. The seven minutes is being allocated to ThyssenKrupp and like the last time, if they exceed the seven-minute time allocation that we have, then I will provide an audible to let them know that they need to stop.

So representing ThyssenKrupp, allow me to introduce Mr. Michael Vitale of the law firm BakerHostetler.

MR. VITALE: Good afternoon, everyone. My name is Michael Vitale, and I'm the attorney for ThyssenKrupp in this matter. And joining me on this call and also available to answer any questions are Enver Sarilar and Greg Engleby of ThyssenKrupp.

I want to thank everyone for allowing us to appear remotely here. We have (inaudible) the committee, which is to sustain the award to my client, ThyssenKrupp. This was a very long deliberate and deliberative process, and I want to emphasize also that ThyssenKrupp's bid, which is $1.4 million lower than JBT will result in

substantial savings to the Port Authority and the citizens of Lee County.

A couple of -- you've been instructed a little bit about the law, but this award should only be overturned if it's arbitrary or there's signs of illegality, oppression, fraud, or misconduct, none of which are present here.

We would submit that JBT's protest is facially -- has a hurdle that's insurmountable based on Florida law.

I want to talk a little bit about some of the arguments that ThyssenKrupp cannot meet the certifications required for this bid. That is false, and we greatly contest that.

First, there was a document put on the screen. For those of you who have our packet in front of you, it's F2. Towards the end of this bidding process, Lee County asked the -- all of the parties to certify that they could do three things. One, that they could have a passenger boarding bridge with ball screw technology rather than a hydraulic lift system; one was installation of aluminum on the subfloors; and the other one was welding as opposed to putting caulk in the passenger boarding bridges where the metal is joined.

ThyssenKrupp, along with every other bidder certified that they can do so. It is absolutely reasonable under Florida law for any governmental entity to accept their certification, particularly as we just heard from an industry leader. That documentation that was signed by ThyssenKrupp was very clear by Lee County, no supplemental information would be permitted. They just wanted the certification at that time.

Notably, Lee County did not ask for amended certifications from nationally recognized testing laboratories at that time, and that is with good reason because they were asking ThyssenKrupp to change something from their original bid.

And ThyssenKrupp was very clear and does not make any bones about it that we did lobby -- excuse me, we did -- we did -- in our questions and RFAs to the committee, we did ask that the committee -- the panel, excuse me, consider our standard for hydraulic lift, but they decided not to. And so we were very clear that we could meet the hydraulic lift system. Same with glass pane, same with welding and same with a truss wall, which is already permitted by Q and A Number 33 of the specifications, and finishes and materials for

aluminum subfloor, which does not require a redesign. It only requires the installation of aluminum above our galvanized steel. So we can do it. We've certified that we've done it multiple times.

Now, another argument that we've heard from JBT is that we're not certified under UL, ETL, or the national fire protection agency. This is an absolute red herring for the panel. ThyssenKrupp is UL and ETL certified. Now, having to put aluminum and having to put ball screw technology, which we absolutely can do, would require a change to our standard design, which, again, we really wanted to use our standard design, but Lee County did this the right way.

Lee County asked for a certification and gave us several days to respond. We were able to go back to your team and we were able to put in and add several hundred thousand dollars to our bid to be able to use the ball screw technology and to be able to use the other two things in that certification. This does not put ThyssenKrupp in an advantage over the other bidders. It actually put them at a disadvantage. This was asking ThyssenKrupp to do something that it doesn't normally do, but that it

certified that it can do anyway.

And Florida law in the RFQ Section 18 is very clear that the authority has the absolute right to waive minor deviations or technicalities. There's a case called the Cappelletta [phonetic] case, which is cited in our materials, in which a contractor was supposed to have site access at the time of the bid. They submitted their bid, but didn't have site access yet, but certified that they would get site access at their own expense.

They -- the bid was challenged and the Florida courts upheld the award of the bid finding that because they certified at their own expense, at no additional cost to the government agency, that they would get site access, but it wasn't arbitrary and capricious to award the contract at that time.

And we have the exact same situation here, we've certified that we can get the certifications. We are already UL and ETL certified. The certification for the tweak of the design is already pending, and to answer one of the questions that was put up in the PowerPoint presentation, we absolutely can meet the deadline to get that certification without causing any delay to the project. So it was inherently reasonable for the panel to find

ThyssenKrupp as a responsible and responsive bidder.

For the allegation that we do not meet the national fire protection agency standards, this is one of the silliest things that's present in JBT's bid. ThyssenKrupp has met the 2002, 2008, 2013, and 2016 standard for NFPA. And the one section of the standard that JBT has identified harm for is a section that has actually been written out of the 2016 standard, which is not being able to have a translucent passenger boarding bridge.

In addition to ThyssenKrupp, JBT during this time period have gotten translucent passenger boarding bridges certified by local authorities despite the language in the NFPA standard. And JBT -- excuse me, ThyssenKrupp has submitted its bid protect response that is certified under the 2016 standard as well. So it's certified. And the only area of potential harm that was identified has actually been written out of the applicable standard right now.

I want to talk a little bit about responsibility. The main ground in the actual bid protest that ThyssenKrupp is not responsible was actually that we're not responsible because we can't do the work. That's speculation and we've certified

numerous times that we can.

I also want to address some comments about the Charlotte Douglas airport reference. From a legal perspective, just as a lawyer, I think that the information that was presented by JBT on this was untimely. It was mostly contained in an August 3rd letter, which is about ten days late, pursuant to the purchasing manual, and also we never got a copy of it until a few days ago, but to address the questions that the committee is going to have head on, it is true that we received a notice of default from Charlotte --

MS. WENDEL: Mr. Vitale.

MR. VITALE: -- however, the comment that we were fired or kicked off the job is not true. ThyssenKrupp has project managers. They have --

MS. WENDEL: Mr. Vitale.

MR. VITALE: -- workers still on site right now. We're working through our issues with Charlotte. We don't know exactly what's going to happen, but --

UNIDENTIFIED MALE SPEAKER: Time.

MR. VITALE: -- it's very much an issue that's still in progress, and this is very far from over. And we've cited law in our manual -- in our response

to the protest that one bad reference cannot make the bidder nonresponsible. You have to look at the entire body of work.

(Multiple speakers.)

MR. VITALE: ATS is a --

UNIDENTIFIED MALE SPEAKER: We're done.

MR. VITALE: -- qualified installer. Our submission of TK, along with ATS --

UNIDENTIFIED FEMALE SPEAKER: Melissa, we're muted. He can't hear what you're saying.

(Multiple speakers.)

MR. VITALE: Hello?

MS. WENDEL: Your time is expired. Time is expired. Thank you so much.

So at this time, ASMC, you guys can deliberate, ask questions.

UNIDENTIFIED MALE SPEAKER: Mr. Vitale, can you hear me?

Can you hear me?

Yes, you can? Okay. We just can't --

MS. SUJEETH: We can hear you.

UNIDENTIFIED MALE SPEAKER: Okay. Talk to us about Charlotte. What happened there? Why was the contract terminated? Why do you dispute that? And then on top of that, how many passenger boarding

bridges has ThyssenKrupp done?

MR. VITALE: This is Michael Vitale on behalf of ThyssenKrupp. With the Charlotte issue, it is true, although it was untimely submitted to Lee County, but we did receive a notice of termination from Charlotte. However, as I'm sure the authority knows, just receiving a notice doesn't necessarily mean a lot. I would submit that actions speak louder than words. ThyssenKrupp is still on site in Charlotte. They are still performing. They are working on punch list items, and they are trying to work through the issue with the customer.

They were never fired. They were never kicked off the job. They did receive a notice of termination, but it's still in process and it's far from over. I don't have an answer as to how it's going to turn out, but I can tell you that ThyssenKrupp is still on site there and are working --

UNIDENTIFIED MALE SPEAKER: Still on site under the original contract, or was that contract terminated?

MR. VITALE: We received a notice of termination, but the original contract -- there's been no formal action on the notice of termination.

The notice of termination is pending as the parties discuss the issue.

UNIDENTIFIED MALE SPEAKER: I think also your letter asked us to award the costs of your response and so forth, and you understand I don't think we can do that.

Can we, Greg?

UNKNOWN MALE SPEAKER: I think the section that's cited there is really for the Port Authority's benefit and not for a third party, so I don't think we have any jurisdiction, even if you were inclined to do that, to award attorney's fees or costs of defense.

UNIDENTIFIED MALE SPEAKER: Thank you.

We're not a court of law.

UNIDENTIFIED MALE SPEAKER: I would like to ask, has TK manufactured and installed the PBB with the three things that the airport authority here is requiring?

MR. VITALE: Not all at the same time, no. And that is because -- and the one that's -- the one that really is the reason why not is the hydraulic lift system versus the ball screw system. Most of TK's customers prefer the hydraulic lift system. It would have saved approximately $400,000 on the front

end and 250,000 on the back end if it were employed for this project. It was not, and that's perfectly fine. This is part -- this is, you know, part of procurement, but because most of our PBBs have the hydraulic lift system, we haven't done a project with all three of them at the same time.

UNIDENTIFIED MALE SPEAKER: Well, do you think you'll be able to get the permits that you're lacking now in a timely manner to keep our project schedule?

MR. VITALE: Absolutely. And one point I was not able to add is that the certifications that, you know, are already pending for the tweak to the design, UL certification is a continuous process, you know, and it's something that is always kind of going back and forth because they do site visits and things like that. We absolutely think we can meet this timeline without any adverse impact to the schedule. And, you know, it's -- it's -- Lee County didn't ask for amended certification within three days. They just asked for us to certify that we would be able to meet the requirements of the job and we can.

MS. SUJEETH: If I can address that issue briefly. Is that all right?

UNIDENTIFIED MALE SPEAKER: Yeah.

UNIDENTIFIED MALE SPEAKER: Yes.

MS. SUJEETH: So the RFP required proof of certification and ETL listing for the proposed design at the time of bid. TK has repeatedly said that the board didn't ask for amended certifications. That's because it asked for certifications to the proposed design at the time of bid. TK did not provide those, it still cannot provide those. Its assurances that it can get these certifications in time are nothing more than words.

When JBT went through its own process, it took months to receive these certifications because of the significant design changes. I just want to make it clear to the committee that these are not tweaks as TK has put it here. They repeatedly told the authority during the bid process itself that it had to do a complete redesign of its bridge. It was in its lobbying letter to get the RFP specifications changed, it was in its RFI Q and As, and it was in later representations.

So the idea that this is just a small thing, not a big deal, really just isn't true, and it puts the authority at risk because if this bridge is not OSHA compliant, the authority's own liability in

case of injury is exponentially increased.

UNIDENTIFIED MALE SPEAKER: Can I ask you the same question? Have you installed these bridges with these things already manufactured into your bridge?

MR. SARILAR: May I answer that question, please? There are three things required that are different than what we normally do on this job. One of them is the electro-mechanical lift system, which is (unintelligible) system. It's in the industry. We have actually done this in Europe in a couple of projects. The --

MS. SUJEETH: I'm sorry, I -- I'm sorry, I --

MS. ROEPSTORFF: Who is he?

MS. SUJEETH: Mr. Sarilar represents -- or is a member of ThyssenKrupp --

MR. SARILAR: Yes, ma'am.

MS. SUJEETH: -- and I thought the question was being addressed to JBT. If I'm mistaken --

MS. ROEPSTORFF: It was.

MS. WENDEL: Lauren, excuse me. Mr. Sarilar, we need to maintain order during this proceeding, so if you would like to say something, then ask, and then we'll let you know if we want you to speak at that time. So right now I think the pleasure of the

committee is to hear from --

UNKNOWN MALE SPEAKER: The question was to JBT.

MS. ROEPSTORFF: JBT. The question was to JBT. Uh-huh.

MS. SUJEETH: Sure. And I'll let Mr. DeRoche confirm, but I believe the answer is an unequivocal yes.

MR. DEROCHE: Yeah, so this is Brian DeRoche. I'm president of JBT AeroTech. I'm also a licensed engineer with about two decades of experience doing this. We actually went through the NFPA 415 2016 version of certification in late 2017 and into 2018. We received our certification (inaudible), and it was to provide a similar type of bridge system which had a glass -- had glass panels in our passenger boarding bridge in Sarasota, Florida, is what drove the requirement.

At that time, the new version of NFPA had just been released. That certification was very extensive. It took our engineering group approximately four months to come up with a testing protocol with Intertech, especially when you test the windows, not just the steel structure, and it took an additional three months of testing by the

time we booked the lab -- or booked the test facility at the NRTL and actually did it.

So our records indicate from the time of start to the time of finish, this, what TK is promoting to be a very minor change, took us seven months to do on a system that was much more similar to the specifications than the ThyssenKrupp offering -- that I think they're offering in their bid.

So it was seven months. It was a six-figure salary -- or six-figure cost to do it.

UNIDENTIFIED MALE SPEAKER: Will you be able to and for how long supply us with parts because what we've run into in the past is we can't get parts available for our bridges when they break down. So how long will we be able to get parts for these bridges out into the future?

MR. DEROCHE: Mr. Clemenson [phonetic], is that directed to me at JBT?

MR. CLEMENSON: Yes.

MR. DEROCHE: Yes, so all of the major parts of our passenger boarding bridge remain identical to our parts (unintelligible). The main change in the NFPA certification was the addition to the windows, which we had to do. JBT supports its parts. We currently are supporting parts to bridges that are

over 35 years old. We -- currently we do a lot of parts business. We have concurrent contracts right now that require us to maintain our design and parts availability up to 20 years. We do, in fact, keep our parts on site much longer than that.

MR. CLEMENSON: Thank you.

MR. DEROCHE: Or parts to bridges much older than that.

UNIDENTIFIED MALE SPEAKER: How many of these bridges has JBT done? How many bridges has -- PBBs has JBT done?

MR. DEROCHE: JBT has installed over 10,000 bridges. We estimate that we have just over 6,500 currently in operation worldwide.

UNIDENTIFIED MALE SPEAKER: Thank you.

UNIDENTIFIED MALE SPEAKER: Somebody explain the improper lobbying charge, please.

UNIDENTIFIED MALE SPEAKER: Oh, yeah, the letter sent to Mr. Siegel?

MS. SUJEETH: Sure. So as it shows in our materials, I believe it's at slide -- I think it's 8, the Lee County purchasing manual --

UNIDENTIFIED MALE SPEAKER: We're aware of what it says. Just --

MS. SUJEETH: Sorry. Yeah, it's Slide 10. So

it says that essentially you can't communicate outside of the procurement process of anyone other than the procurement officer. And here, a letter in May, so during the procurement, before bids were due, was sent CC'ing Mr. Siegel, a member of the authority, asking that the RFP technical specification be changed to allow ThyssenKrupp to provide its standard design. This was outside of the RFI process, outside of the permissive Q and A, which we contend constitutes lobbying action, which requires an automatic dismissal and disqualification.

UNIDENTIFIED MALE SPEAKER: So let me clarify that. I asked the question. You're saying that they sent a letter to procurement and copied Mr. Siegel, and that's improper lobbying?

MS. SUJEETH: That's correct, by asking Mr. Siegel in his authority to step in which would be the only reason to send a letter to him. That's improper lobbying and requires disqualification.

UNIDENTIFIED MALE SPEAKER: Okay. Now I'm even more confused. Was the letter sent to procurement and copied to Mr. Siegel or the letter sent to Mr. Siegel?

MS. SUJEETH: Well, the letter says that it's

CC'd to Mr. Siegel. Presumably that means it was sent to -- a carbon copy. I mean, CC is -- a carbon copy was sent to Mr. Siegel.

UNIDENTIFIED MALE SPEAKER: Right. But the letter was not a lobbying attempt at Mr. Siegel to go circumvent the procurement process. That's what I'm trying to understand.

MS. SUJEETH: I can't tell you what TK's intention was. What I can tell you is that there would be no reason to contact Mr. Siegel unless the expectation is that he would do something when he received the letter.

MR. VITALE: May I respond?

UNIDENTIFIED MALE SPEAKER: Go ahead.

UNIDENTIFIED MALE SPEAKER: Randy, he wants to respond.

UNIDENTIFIED MALE SPEAKER: Sir?

MR. VITALE: Yes.

UNIDENTIFIED MALE SPEAKER: Sir.

MR. VITALE: Michael Vitale again. Just to provide some clarification on this issue and when I was speaking earlier, I did accidently use a term lobbying, and I apologize. I misspoke, and I ask that you please don't punish my client for me making a misstatement in the moment.

This issue was of such importance in JBT's protest that it was relegated to a footnote. This issue is as simple as a letter that my client wrote to Melissa Wendel in procurement that copied someone that they're contending should not have been copied. It was directed to procurement. It was not directed to the individual who was CC'd on the letter. And there was no request made. This is not a -- this is not a request to lobby Mr. Siegel and should not be deemed as such by the panel, and my client can provide additional clarification if the committee would like.

UNIDENTIFIED MALE SPEAKER: The charge was made by JBL.

UNIDENTIFIED MALE SPEAKER: JBT.

UNIDENTIFIED MALE SPEAKER: JBT that you improperly lobbied. So that was what prompted my question, nothing that you said.

UNIDENTIFIED MALE SPEAKER: Did Mr. Siegel respond to the letter, or did it just go on the round file?

UNIDENTIFIED MALE SPEAKER: Did procurement respond to it? And if so, how was the response?

MR. SIEGEL: I did not respond to the letter.

UNIDENTIFIED MALE SPEAKER: Did procurement

respond about the qualifications?

MS. WENDEL: Yes, procurement did respond to the letter. The letter was received -- I don't remember the dates. I don't have the letter in front of me, but it had to do with the way that the specifications were written and ThyssenKrupp was alleging that they were restrictive and one-sided.

They copied Mr. Seigel during that correspondence. Mr. Siegel didn't respond or act to that at all. And I immediately went back and told them that -- (inaudible) told them that that is a form of lobbying and that if there were in the future similar incidents, then they would be disqualified from the process, but at that stage, that point in time in the process, we did not want to eliminate the competition, so we did not violate them for a lobbying attempt.

UNIDENTIFIED MALE SPEAKER: Well, then that makes me think of something else. So in other circumstances, that might violate somebody from --

MS. WENDEL: Yes.

UNIDENTIFIED MALE SPEAKER: Disqualify someone?

MS. WENDEL: Yes. So in the bid documents, there are several -- there's a list of items that

will result in automatic disqualification and lobbying is one of those items.

UNIDENTIFIED MALE SPEAKER: So is that arbitrary, or is that the rules?

MS. WENDEL: We could have treated it as lobbying, and we didn't. So, you know, we didn't treat it as lobbying. We warned them. We pointed it out. We told them not to do it again.

UNIDENTIFIED MALE SPEAKER: So it's kind of a fair charge by the other people in one way.

UNIDENTIFIED MALE SPEAKER: I think I disagree.

UNIDENTIFIED MALE SPEAKER: You disagree?

UNIDENTIFIED MALE SPEAKER: I don't think that this is lobbying. I think it's a stupid mistake. And there's nothing in our purchasing manual that's going to say this is a stupid mistake --

UNIDENTIFIED MALE SPEAKER: Right.

UNIDENTIFIED MALE SPEAKER: -- but, as you pointed out, there was no interaction here, so to say that in other circumstances that were the same factual situation we might disqualify somebody for lobbying, I don't know that that's necessarily true.

UNIDENTIFIED MALE SPEAKER: Well, was there interaction? Was there a note back from procurement

saying that --

UNIDENTIFIED MALE SPEAKER: Certainly, because that's who it was directed to. If Mr. Siegel had responded, if there was additional back and forth, then that is lobbying.

UNIDENTIFIED MALE SPEAKER: Yeah, but why did they get a second bite at the apple with a clarification of bid rules that were put out previously that everybody had?

UNIDENTIFIED MALE SPEAKER: Well, it didn't change the response from purchasing just because there happened to be a copy sent to Mr. Siegel. If it had, because Mr. Siegel got involved and said we need to do this, that, and the other thing, then that's lobbying. But if it's just purchasing doing their job, which is to review these types of issues and respond to the various bidders and the issue addenda, if it comes to that.

UNIDENTIFIED MALE SPEAKER: Was there any staff discussion of the letter once procurement received it?

MR. SIEGEL: Not that involved me.

UNIDENTIFIED MALE SPEAKER: Not that involved you. Or how about did it involve Jeff at the time? I don't know what the date there is.

MR. SIEGEL: I don't believe Jeff was here at the time. And this is, you know, communication with the procurement department. They are -- they are who our vendors communicate with during these processes. The fact that -- and Greg is exactly right. I mean, had I taken action, as a result of being copied and contacted TK or gotten involved or -- that's a -- that's something else, but I was copied on a letter that just was not part of what I get involved in. That was Melissa's job to manage the process.

UNIDENTIFIED MALE SPEAKER: Okay. So what do we do now? Do we -- once our questions are completed with the two parties, then do we start our deliberation as to -- amongst ourselves as to how we're going to see this issue?

UNIDENTIFIED MALE SPEAKER: Right. That would be your next step. Deliberation and then you see if you can put together a motion.

UNIDENTIFIED MALE SPEAKER: All right. Do we have any more --

MS. ROEPSTORFF: Are there any more questions of either of the parties?

None? Okay. So I guess you can excuse them, please.

MS. WENDEL: Okay. Thank you for your time. There are no further questions, so we're going to hang up. Thank you.

MR. VITALE: Thank you.

MS. ROEPSTORFF: So are there any questions of Melissa that you need to ask at this point?

UNIDENTIFIED MALE SPEAKER: Well, I'd like to make a statement. These are very expensive boarding gates, and they're going to be with us for a long time, and I don't want to be pound foolish here over a $1.4 million difference. I think it's clear that the company that's more qualified is not TK. They don't have the experience of dealing with these things. They don't even manufacture this type of boarding gate at all. They have to change their whole process to manufacture the ball bearing type of operation. They don't do the aluminum floors, they don't do the welded joints, they use caulk. And they're willing to change their manufacturing process to accommodate us, but we've got a company here that's done 10,000 of these, and, to me, they should be the clear choice to get this.

UNIDENTIFIED MALE SPEAKER: I've got like ten red flags up on TK.

UNIDENTIFIED MALE SPEAKER: Me too.

UNIDENTIFIED MALE SPEAKER: I'm not -- I'm not understanding how we're even here.

UNIDENTIFIED MALE SPEAKER: Well, I don't understand how they were able to write that and didn't get immediately disqualified. I understand that, you know, we want to try to get a competitive bid so that we don't wind up with double the cost of the project, but at the same time, the rules are the rules.

MS. ROEPSTORFF: Well, what I'm -- what I had heard, and what I am coming to the conclusion is and to kind of support what you two are saying, they couldn't check all the boxes. They could not perform -- they didn't have the certifications. They don't have the experience. They haven't -- they can't do it if we gave them the contract and said go do it tomorrow. They don't have everything they need to carry out that contract, hence they submitted a bid based on we will do this and we will do that and we'll -- for 30-something million dollars and 1.4 million difference, I'm not willing to take the risk of what they say they'll do.

And when a company is sitting here that has done 10,000 of them and they can produce the parts and are telling us that they're out there for

20 years, is that what they said? That, to me, I could sleep better at night. I would not want to get into this project based on what somebody will do. Either they've done it and they can do it and they're certified and qualified, and I didn't hear that, that they are. So I don't know how they -- the boxes were checked on them, you know.

UNIDENTIFIED MALE SPEAKER: They still don't even have to this day the permits, and we're talking about a schedule here starting, what, in September?

MS. ROEPSTORFF: So because the lowest bidder was a nonconflict and they can't check the boxes, I'm thinking this company is third in line automatically; is that correct?

UNIDENTIFIED MALE SPEAKER: I'm thinking --

MS. ROEPSTORFF: So if somebody wants to make a motion or if there's more discussion. Do you have more discussion?

UNIDENTIFIED MALE SPEAKER: And if there's no more discussion, I can put a motion on the floor that we uphold the protest and award the contract to the JB --

UNIDENTIFIED MALE SPEAKER: T.

UNIDENTIFIED MALE SPEAKER: -- T.

UNIDENTIFIED MALE SPEAKER: I'll second that.

MS. ROEPSTORFF: Okay. There's a motion and a second. Any more discussion?

Any further questions of staff or management?

UNIDENTIFIED MALE SPEAKER: Are we going to get recourse from ThyssenKrupp?

Who knows.

MS. ROEPSTORFF: I think we --

UNIDENTIFIED MALE SPEAKER: I guess you don't make a decision based on --

MS. ROEPSTORFF: -- for the records and the minutes, we came to our conclusion based on some solid facts there of what we heard during this hearing.

UNIDENTIFIED MALE SPEAKER: Right.

MS. ROEPSTORFF: So I -- even if they did, management -- or I'll sign the letter to say this was the basis, end of story.

So no more -- good question though. If there's nothing else, all those in favor?

(Multiple ayes.)

MS. ROEPSTORFF: Anyone opposed?

So the contract is as motioned.

UNIDENTIFIED MALE SPEAKER: Are you okay with that?

MS. ROEPSTORFF: Thank you. All right.

STATE OF FLORIDA)

COUNTY OF LEE)

I, Melissa Meeks, RPR, do hereby certify that:

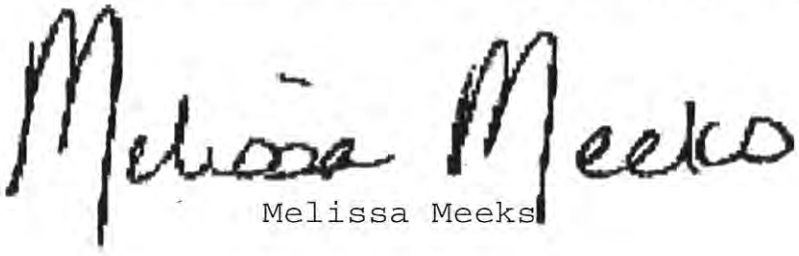
The foregoing pages numbered 1-62 contain a full transcript of the recorded meeting in the matter described on Page 1 hereof transcribed by me to the best of my knowledge and ability from the electronic recording provided.

I am not counsel for, related to, or employed by any of the parties in the above-entitled cause.

I am not financially or otherwise interested in the outcome of this case.

I am an approved transcriber for the Twentieth Judicial Circuit Court.

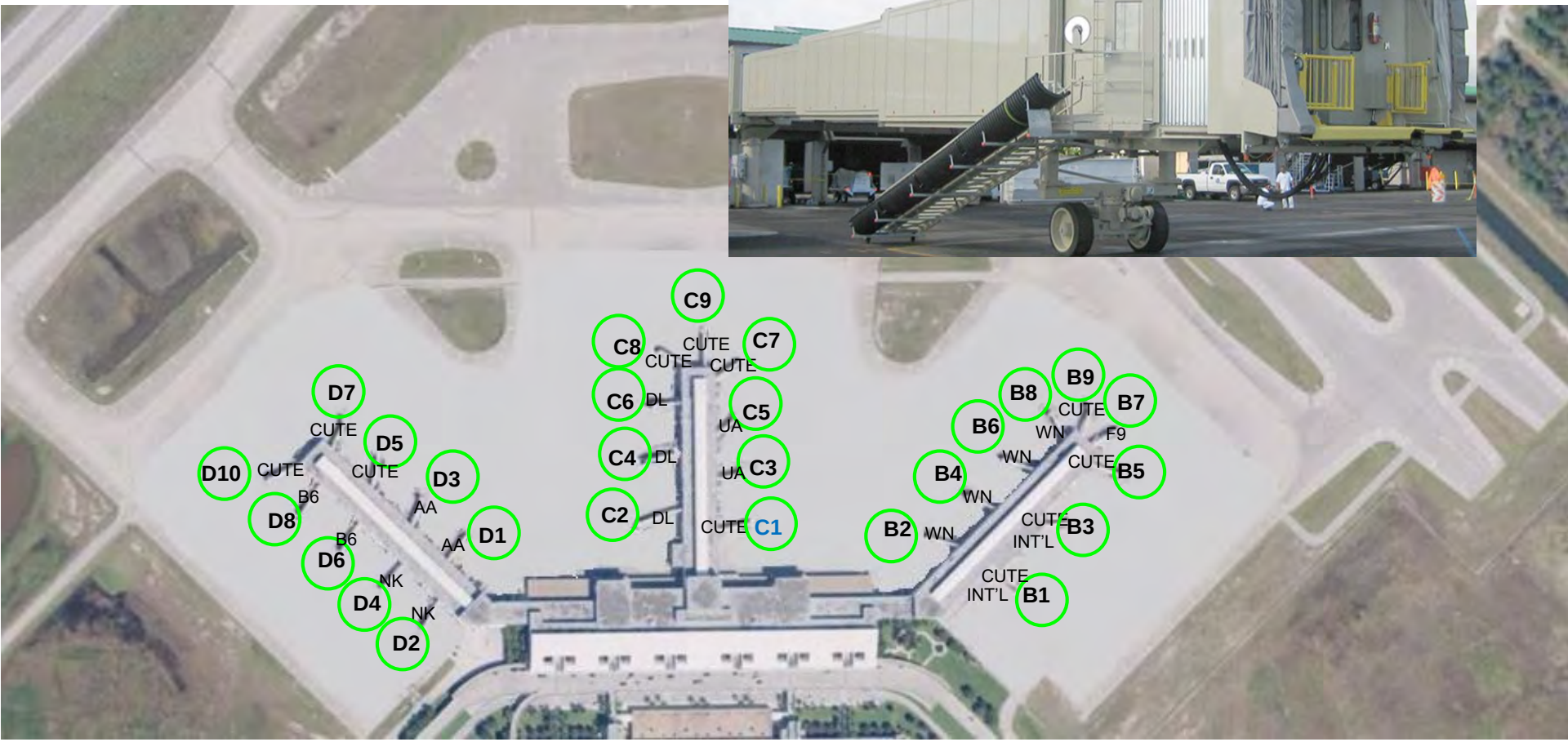
(This transcript has been digitally signed.)



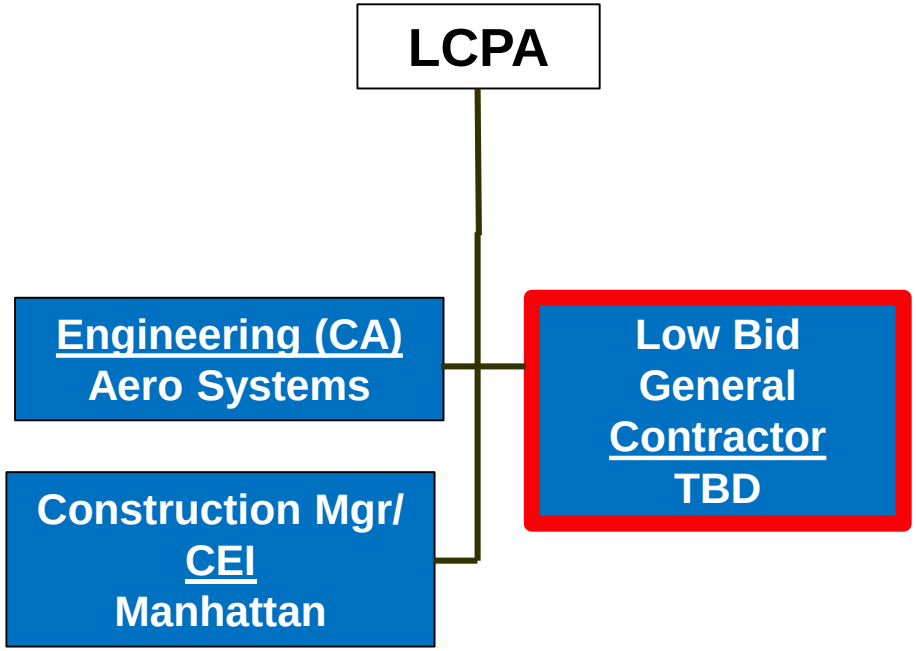
Melissa Meeks

August 31, 2020
Date

RSW Replace 27
Passenger Boarding Bridges



Project Contract Structure



MEMO TO: Melissa Wendel, CPPO
Procurement Manager

FROM: Emily Underhill, P.E., A.A.E.
Division Director - Development

DATE: July 15, 2020

SUBJECT: AERO BRIDGEWORKS – Conflict of Interest Determination
RSW- RFB 20-53 Passenger Boarding Bridge Replacement

On August 21, 2018, the Port Board approved a contract with AERO Systems Engineering (ASE) to act as the Engineer of Record to design the improvements associated with the RSW Passenger Boarding Bridge Replacement project. During the design process over the next year, during design meetings with ASE, Manhattan Construction (the project Construction Manager) and LCPA staff, discussions started surfacing that AERO BRIDGEWORKS (ABW), a sister company to ASE, would be interested in submitting a bid once the project was advertised for construction. The LCPA staff expressed its concerns regarding a potential conflict of interest (real or perceived) between ASE and ABW. On November 4, 2019, the Port Authority received a letter (see attached) from ABW addressing concerns raised by the Port Authority staff regarding a potential conflict of interest between ABW and ASE. On February 10, 2020, the Port Authority notified ABW that, despite supplemental information provided by ABW in response to concerns raised, since ASE was the designer and would also be reviewing the construction activities representing the interests of the LCPA, having construction work performed by an affiliated company has a high potential to result in a conflict of interest and unnecessary risk for the Port Board. The Board could never be sure whether ASE, in its decision making and recommendations to the Port Authority, is representing the interests of the LCPA or those of its sister company. As a result, the LCPA staff determined that there would a potential conflict for ABW to participate in construction activities related to this project. The basis for this determination included:

- Even though ASE and ABW may be legally separate firms, they still appear to have a shared market interest with each benefiting financially from one another's success
- Prior to January 2019, the President and other shareholders of one firm were majority shareholders of the other firm. Today it is uncertain if any employees of one firm have any financial interests in the other firm.
- The LCPA cannot be assured that ABW would not have an unfair competitive advantage over other bidders during the competitive bidding of the construction work
- Both firms are part of the Aero group
- Both firms share the same web site
- Both firms share the same headquarters address
- Both firms share the same booth at trade shows/conference expositions

ABW subsequently requested reconsideration of LCPA staff's determination (see attached letter dated March 16, 2020) and provided more supplemental information. LCPA staff reviewed this additional information and came to the same conclusion.

Over the course of 30+ exchanges of emails and letters between the Port Authority staff and ABW, the Port Authority made it clear in 2019 well before the procurement period that it believed that a conflict of interest would be realized, either directly or indirectly, if ABW were to hold the contract as either a prime construction contractor or as a subcontractor for the work as part of the RSW Passenger Boarding Bridge Replacement project. ASE, as the designer of the project, will be paid and be required to dutifully represent the LCPA's interests on the project, and not those of the construction contractor. ASE will review construction contractor substitution requests, interpret design plans, approve field work, etc. As ASE is the Engineer of Record and will be performing engineering review services during construction, the Port Authority cannot be assured that ASE decisions made during construction would not be made to favor or benefit ABW due to their shared relationship under the AERO Group. Additionally, if claims based on design errors/omissions were made by ABW against the Port Authority, it is unclear what role ASE would play in assisting the Port Authority in defending such claims against ABW. And, in the event unresolved claims related to the project end up in litigation between the LCPA and ASW, the LCPA needs to be assured that ASE will represent the interests of the LCPA fully and completely, without undue influence by its affiliated company.

On April 27, 2020, the Port Authority initiated a Request for Bids (RFB) #20-53 which solicited bids from a General Contractor. As part of this solicitation, Addendum #4 issued on May 28, 2020 stated "The LCPA does not intend to enter into a contract with Aero BridgeWorks as a prime contractor or subcontractor due to a prior conflict of interest determination made by the Port Authority." The procurement for this advertisement concluded with a bid opening on June 2, 2020. On bid day, the following five (5) bids were received with their respective bid amounts. (*Note: mathematical errors included on bid day have been corrected below to show correct values*). Based on bids received, AERO BRIDGEWORKS submitted the lowest bid.

AERO BRIDGEWORKS	$24,159,600
THYSSENKRUPP AIRPORT SYSTEMS, INC.	$24,268,558
JBT AERO TECH CORP	$25,654,552
OWEN-AMES-KIMBALL COMPANY (OAK/FLORIDA)	$25,795,090.93
THE WHITING TURNER CONTRACTING COMPANY	$26,759,998

Therefore, LCPA Development staff recommends that a contract with AERO BRIDGEWORKS for the construction of the RSW Passenger Boarding Bridge Project is not in the best interest of the Port Authority and such a contract would result in unnecessary risk for the Port Board and any potential future legal defense related to the project. Pursuant to the Conflict of Interest language contained in the current ASE design contract (see attached), and pursuant to Section A.18 of the bid solicitation which states the LCPA reserves the right to reject any and all bids if it is in the best interest of the Authority, in the Authority's sole judgement, LCPA staff recommends that the ABW bid be rejected. The Port Authority as outlined in this memorandum made it clear prior to and during the procurement period that ABW was not eligible for consideration as a bidder. As a result of the rejection, staff then recommends that the contract be awarded to the next lowest, responsible, responsive bidder.

Attachments:
ABW Correspondence (11.4.19 letter and 3.16.20 letter)
ASE Contract (Article 22 - Conflict of Interest Section)

Cc: Ben Siegel, CPA, Acting Executive Director
Greg Hagen, Chief Asst. Port Attorney
Mark Fisher, Deputy Executive Director – Development
Hector Yanez, Director – Engineering & Construction

July 24, 2020

Melisa M. Wendel, CPPO
Procurement Manager
mmwendel@flyLCPA.com
(239) 590-4556

REF: AERO Bid Package for RFB 20-53MMW
AERO Follow-Up to Notice of Protest for Project RFB 20-53MMW

Dear Ms. Wendel, CPPO

AERO BridgeWorks, Inc. ("ABW") was pleased to submit our bid package in response to RFB 20-53MMW for Lee County Port Authority ("LCPA") and we remain excited do deliver this project. Our bid package meets or exceeds all the Minimum Requirements, DBE participation, Technical data, Licensure, Insurance and Bonding requirements, Buy America requirements as well as all Contractual and Bid Document criteria. This is a Federally funded AIP project, and, as such, per the LCPA RFB requirements, this process should follow all AIP procurement guidelines and our bid adhered to all necessary and applicable Federal requirements. Please reference our original bid package which includes all the information to prove we are fully responsive and responsible.

We respectfully disagree with LCPA's evaluation of the bids, and, specifically, disagree with LCPA overlooking ABW as the lowest, responsive and responsible bid. We recognize LCPA has opinions related to the Engineer of Record's ("Engineer") relationship with ABW. As explained in our bid package, ABW and the Engineer are two individual and separate Type S Corporations, with individual and separate Tax ID numbers, different accounting systems and two independent groups of employees. ABW is an Employee Owned company and our majority ownership and controlling interest is strictly comprised of only ABW employees and ABW corporate officials; none of these ABW ESOP members or ABW corporate officials are employees of LCPA Engineer, nor do they have any controlling interest in the Engineer.

Throughout ABW's 21-year history of delivering thousands of aviation construction projects across the Country, not once has another public entity ever previously overlooked ABW when we were the lowest cost provider. ABW is the most qualified specialty airside aviation contractor in the Nation who self-performs installations. We have an extremely strong reputation and our corporate culture is to exceed client expectations. We are not a litigious, manipulative or claims oriented contractor; we have not preemptively coerced LCPA to limit competition on this Federal project, nor have we threatened legal action even prior to the bid period. ABW has never had a Contract terminated (or even threatened for termination), nor have we ever walked away from a Contract. ABW has never submitted an unsolicited or faulty claim to an Airport Authority, nor have we ever been involved with a Client on a construction lawsuit. As such, it is more common for Airport Authorities and Administrations to prefer ABW win these projects, especially when the engineer of record is the same as the Engineer. LCPA staff had the opportunity to select ABW as the lowest, responsible and responsive bidder and we would provide LCPA with the preferred combination of equipment. However, LCPA overlooked this opportunity.

After LCPA incorrectly responded to Addendum #4, Question #64 on May 28, 2020, the same ABW competitor submitted the exact same question on another public bid passenger boarding bridge project. This Airport Authority, as has been consistently the case for all public projects the past 21-years, responded via addendum on June 16, 2020, "*AERO BridgeWorks will be permitted to bid.*" The Owner further clarified, "*This will be a sealed bid, public opening. The Owner will award the project based on the lowest responsive and responsible bidder.*" Period. This Addenda is a public document and ABW is happy to provide copies to LCPA for review. We are also happy to provide written statements from Executive Leadership from other Airport(s) that state ABW is not in any concern when LCPA's Engineer is the engineer of record. It is concerning to ABW that LCPA staff did not contact all our references submitted with our bid package, but yet still decided to overlook our bid. Again, simply stated, there are absolutely no detrimental relationships between ABW and LCPA's Engineer, nor should LCPA hold any concern related to collusion or misrepresentation between ABW and LCPA Engineer to the detriment of LCPA.

In addition to LCPA's unsubstantiated opinions related to a perceived conflict, LCPA's decision is also in disagreement with published Federal Aviation Administration (FAA) Airport Improvement Program (AIP) written guidelines. This bid was originally managed by Manhattan Construction using PFC funds. During that bid process, the funding mechanism changed from PFC funds to AIP funds, thus forcing Manhattan to cancel the bid and making LCPA issue and manage the bid process in accordance with FAA AIP requirements. The LCPA RFP references in multiple places to follow the FAA AIP funding mechanisms and requirements. Part D Grant Requirements of LCPA's RFB states, *"The passenger boarding bridge replacement project described herein relies on using federal and state grants. As such, requirements of the grantor as specified in the Federal Contract Provisions document are applicable terms and conditions to any agreement resulting from this Request for Bid."* Article 3.3.5 of the Technical Specifications states, "*For federally funded projects, refer to the Airport Improvement Program (AIP) – Contract Provisions.".*

The FAA published *AIP Sponsor Guide* (https://www.faa.gov/airports/central/aip/sponsor_guide/) outlines the requirements to help Sponsors successfully facilitate and deliver AIP funded projects, such as this LCPA Passenger Boarding Bridge. *Section 420, Competition, Article 18.36c* specifically states, "*Sponsors must conduct all procurement transactions in a manner providing full and open competition. Sponsors must avoid practices that limit or unduly restrict competition. Restrictive practices that sponsors must avoid include … Organizational conflicts of interest."* LCPA did not properly follow FAA AIP Sponsor requirements when LCPA issued the answer to Question #64 in Addendum #4 and, then, overlooked ABW's bid, thus, unnecessarily limiting and restricting competition on a project that has Federal funding.

Combining the above facts with the narrative and data included within our original bid package, ABW knows LCPA was in error by issuing a Notice of Award to the second cost bidder, whom does not have any industry record of meeting these project Specifications. **LCPA's faulty decision** will cost LCPA and the community additional money, it will ensure LCPA Maintenance and Operations departments do not receive the combination of equipment they prefer, and it introduces the situation for LCPA to enter in a Contract with a non-responsive second place bidder.

Please note LCPA's incorrect answer to Addendum #4, Question #64 directly impacted ABW's ability to bid this project as either a 2nd or 3rd tier installation subcontractor to other firms bidding as a prime bidder. As such, LCPA forced ABW to submit a bid as a prime Contractor as none of the other prime bidders were comfortable to accept a subcontractor bid from ABW. A very similar situation arose at neighboring SRQ Airport in 2017, when the ABW ownership structure was quite different, and even then, both the SRQ Legal Counsel and the FAA Legal representation agreed there were no issues should ABW act as a 2nd or 3rd tier subcontractor to complete the installations. Should an opportunity present itself in the future, ABW certainly hopes LCPA would reasonably reconsider ABW's ability to perform work as either a 2nd or 3rd tier subcontractor on this project.

It is extremely unfortunate we are in this situation, but, regardless, ABW wants to support and assist LCPA, not create a hinderance. ABW filed a Notice of Intent to Protest this project on July 17, 2020 and, as stated herein, strongly disagrees with LCPA unprecedented and flawed decisions. As stated time and again, ABW is neither a litigious, manipulative or threatening firm. Our corporate culture is to establish strong long-lasting relationships with our Clients; we simply want to exceed your expectations by delivering safe and successful projects at the lowest cost possible to save you money. As such, ABW has elected to take the high road and not create detriment to LCPA. We are submitting this letter just to remind LCPA and the selection committee that ABW provided a fully responsive bid at the lowest cost. There are no issues or conflicts within our bid and we provide LCPA staff with the combination of products you want. Should LCPA decide to re-consider bid evaluations, ABW stands by our original bid and we are available to deliver the project as the lowest, responsive and responsible bidder. We are not requesting a response or any additional information from LCPA at this time. Should you have any questions or if we can be of assistance please contact me at (919) 796-2168.

Sincerely,

Jay Grantham

Jay Grantham, PE, LEED, CCM
President, AERO BridgeWorks

MEMO TO: **Melissa Wendel, CPPO**
Procurement Manager - Purchasing

FROM: **Emily Underhill, P.E., A.A.E.**
Division Director - Development

LEE COUNTY PORT AUTHORITY

DATE: **August 6, 2020**

SUBJECT: **RFB 20-53MMW Replacement of Passenger Boarding Bridges at RSW**
Background on Notice of Intent to Award

On September 6, 2018, the Board entered into a contract with Aero Systems Engineering (Aero) to design and prepare specifications for the replacement of the 27 existing Passenger Boarding Bridges (PBBs) at RSW. Early in the design process, Aero advised LCPA staff that there are a limited number of manufacturers of airport PBBs, particularly in the US. Each of these manufacturers builds PBBs specific to their brand. The challenge during the design would be to offer a broad enough specification to open competition for pricing as much as possible, while at the same time acquiring a PBB product that meets the needs specific to RSW. As such, a lot of time was spent during the design discussing specific aspects of the project specifications with Aero (the Designer); Manhattan Construction (the Construction Manager); LCPA engineering, operations, and maintenance staff; and RSW airlines in an attempt to prepare a competitive project design and specification.

LCPA issued a Request for Bids on April 27th, 2020 for the PBB Replacement Project. The LCPA received numerous Requests for Information (RFIs) in reference to the technical specifications outlined for this project. ThyssenKrupp, a PBB manufacturer and a potential bidder, was particularly vocal and objected to some of the PBB specifications stating that many of the specifications could not be met with their brand of manufactured PBB and, if not revised, ThyssenKrupp would be unable to bid on this project. Due to a vast number of RFIs received by LCPA from potential bidders, the LCPA worked with Aero and Manhattan to allow substitutions and alternatives to the project specifications in order to increase the potential for competition by potential bidders. Over 180 RFIs were responded to through addendums to the bid documents and specifications, all in an effort to enhance competition and competitive pricing.

The result of all this effort was successful, as on June 2, 2020, the LCPA received five (5) bids, all very competitive and all below the engineer's estimate of $29,243,709. These bids were:

- $24,159,600 Aero Bridgeworks
- $24,268,558 ThyssenKrupp
- $25,649,547 JBT Aerotech
- $25,795,091 OAK
- $26,760,000 Whiting-Turner

In reviewing each bid, the bid documents allowed the submittal of substitution information as part of each bid that could be considered by the LCPA at the same bid price. Working with the design team, LCPA maintenance staff was fundamental in the specifications review process as they are the ones working with this equipment daily to ensure uninterrupted operations. After an abundance of consideration for all alterations and substitution requests, the following three (3) specified items were determined to be a priority for the design team and LCPA maintenance staff for the RSW project without substitution.

1. *Specification 118504, Section 1.12.R.8.b, page 118504-18 Vertical Drive Column – The lift mechanism shall consist of two (2) recirculating ball bearing screw assemblies.*

   The lift mechanism for passenger boarding bridges controls the vertical elevation of the passenger boarding bridge to ensure the appropriate elevation is obtained to mate with the aircraft. These lift systems can be controlled mechanically with a recirculating ball screw assembly or hydraulically operated with a piston assembly. The existing bridges at RSW utilize a recirculating ball bearing screw assembly which is preferred by the LCPA for the following reasons:
   - The Terminal Maintenance Technicians have extensive (15 years) experience maintaining, troubleshooting, and repairing recirculating ball bearing screw mechanical lift systems. This institutional knowledge enables the maintenance technicians to maintain continuity of operations for our stakeholders minimizing downtime and inconvenience with far less dependency on outsourcing the repairs. In-house repair of passenger boarding bridges eliminates scheduling response delays and unnecessary manufacturer/contractor travel, lodging, and labor expenses.
   - PBBs are critical class equipment for the airlines and the Airports flight operations. Any PBB placed out of service has an immediate impact on airline gate utilization and creates passenger inconveniences especially during peak season.
   - The RSW SWPCC Plan is very specific to storm water contamination procedures. Any release of hydraulic fluid has the potential to enter the storm water drainage system.

2. *Specification 118504, Section 1.12.J.7, page 118504-14 Materials, Parts, and Processes – The roof panel should be continuously welded to the side panels when constructing the bridge structure.*

   Unlike most other airports in the US, RSW PBBs are subjected to hurricanes, a long storm/rainy season, and high humidity/condensation conditions resulting in rust. Structural metal fatigue due to rust is exacerbated under the stresses of weight (85,000 lbs.) and movement. An alternative design to continuous welds employs a method of spot or chain welding the roof panel to the sides, which is then followed up by caulk to provide a weather seal. LCPA maintenance staff reached out to other airports within the region and learned that airports are having issues with the caulk weather seal failing. The LCPA supports a specification that the roof panel should be continuously welded to the side panels for the following reasons:
   - A continuous weld installation would drastically reduce the chances of water intrusion, provide for better moisture control, and prevent premature corrosion of the bridge structure all of which helps to extend the useful life of the PBB.
   - Controlling water intrusion and moisture will prevent issues with mold, odors, and composite wall panel delamination.

3. *Specification 118504, Section 1.12.AB.10.k and m, page 118504-31 Finishes and Materials – The subfloor of the C-tunnel shall be aluminum.*

   The C-tunnel is the section of the bridge-tunnel closest to the aircraft away from the terminal building. This area inherently experiences increased water intrusion due to our heavy rains which results in premature deterioration of the subfloor. The Maintenance Department's Computerized

Maintenance Management System has documented that all but a few of the 27 passenger boarding bridges have had the flooring replaced at least twice. Portions of those PBBs have had floor repairs three (3) or more times due to water intrusion and the continuous high humidity environment. Some degree of floor maintenance has been required on average every four (4) to five (5) years which is costly, time consuming and renders the bridge out of service until repairs can be made. For the reasons stated herein, the LCPA desires to specify the use of aluminum in that section of the bridge subfloor (as opposed to wood or another material).

To ensure clarity of the information received as part of the bid submittals, a Specification Clarification and Certification form was sent out to the three (3) lowest bidders to certify that their respective bids included the three (3) specification items listed above, without substitution, to which they all responded with a signed Specification Clarification and Certification form that those items listed above would be provided for the price bid. The ThyssenKrupp signed certification is attached. Despite ThyssenKrupp's earlier claims that they would not be able to provide a bid if the specifications were not revised, with the signed certification, ThyssenKrupp is the next lowest responsive bidder (after Aero BridgeWorks). Therefore, on July 15, 2020, the LCPA issued a Notice of Intent to Award to ThyssenKrupp.

Attachment:
ThyssenKrupp Specification Clarification and Certification

Cc: Greg Hagen, Chief Asst. Port Attorney
Hector Yanez, Director – Engineering & Construction
James Furiosi, Director - Maintenance

LCPA RFB NO. 20-53MMW
SPECIFICATION CLARIFICATION AND CERTIFICATION

The LCPA has reviewed all information, submittals, substitution requests, etc. submitted with each bid. As a result of this review, the LCPA has determined that the following specifications need to be included as part of this project with no exceptions, substitutions or changes. You final bid and resulting contract must include all of the following specification requirements. Please provide your signature of concurrence below.

- *Specification 118504, Section 1.12.R.8.b, page 118504-18 Vertical Drive Column – The lift mechanism shall consist of two (2) recirculating ball bearing screw assemblies.*

- *Specification 118504, Section 1.12.J.7, page 118504-14 Materials, Parts and Processes – All intersecting steel planes, e.g. side to top, side to bottom, of exterior steel sections of the passenger boarding bridge shall be 100% welded. Caulk shall not be used to provide weather seals.*

- *Specification 118504, Section 1.12.AB.10.k and m, page 118504-31, Finishes and materials – Sub floor in the cab and bubble area shall be aluminum; C-tunnel sub-floors shall be aluminum.*

Please be advised that the LCPA is not seeking through this request any supplemental information or additional clarifications related to the above mentioned items. Any supplemental information that is submitted along with this certification will not be considered. The undersigned Bidder certifies that the submitted bid and price includes the above items without any exceptions or conditions. By signing below, the awarded bidder agrees to execute a contract with the LCPA to include the above items without substitution.

Name of Bidder thyssenkrupp Airport Systems Inc.

Printed Name of Authorized Representative Enver Sarilar

Signature of Authorized Representative E. Sarilar

Date of signature July 8, 2020

Return to below no later than close of business on July 10, 2020.

mmwendel@flylcpa.com
Melissa M. Wendel, CPPO
239-590-4557

Bidders that fail to reply as requested by the deadline may be deemed nonresponsive.
We appreciate your attention to this matter and request your prompt response.

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July 23, 2020

Melissa M. Wendel, CPPO
Procurement Manager
mmwendel@flylcpa.com
Lee County Port Authority
Southwest Florida International Airport
11000 Terminal Access Road, Ste. 8671
Fort Myers, FL 33913

RE: Protest regarding Request For Bids (RFB) 20-53MMW For Passenger Boarding Bridge Replacement at the Southwest Florida International Airport

This letter is the formal protest by JBT AeroTech Corporation ("JBT") of the intended award to thyssenkrupp Airport Systems, Inc. ("TK") under RFB 20-53 MMW for Passenger Boarding Bridge Replacement at the Southwest Florida International Airport. Protestor JBT's address is 1805 West 2550 South Ogden, Utah 84401. Proposed Awardee TK's address is 3201 N. Sylvania Suite 117, Fort Worth, TX 76111. To the extent that there are any disputed issues of material fact, they are described in detail in the following sections.

On July 16, 2020, JBT submitted its Notice of Intent to Protest, detailing the many reasons why the bid of thyssenkrupp ("TK") should have been rejected and JBT – the lowest responsive and responsible bidder remaining – should have been selected for award. A courtesy copy of this Notice of Intent to Protest is attached to this letter. JBT expressly incorporates by reference all of the arguments made in its Notice of Intent to Protest as part of this Formal Protest. For the most part JBT will not repeat those arguments here but rather supplements those arguments with the additional directly relevant points included here. Taken as a whole JBT's protest establishes that TK's bid must be rejected as nonresponsive, and that award must be made to JBT instead.

TK's Bid was Nonresponsive Because It Did Not Comply with the Technical Specifications

As JBT described in Item One of its Notice of Intent to Protest, TK repeatedly informed the Authority throughout the written Q&A process, and up to days before bids were due, that it could not meet the technical requirements of the RFB. JBT has since learned that TK has recently notified other jurisdictions that it was unable to meet identical requirements in the specifications for their procurements.

Section 11 8504-page 18, 1.12R.8.b Vertical Drive—Electrical Mechanical

> The RFB requires that the vertical drive column be electromechanical. TK twice attempted to convince the Authority to change this specification and allow for the use of a hydraulic lift system, which it described as part of its "standard design." Addendum 2 at Q32; Addendum 4 at Q58; *see also* Addendum 4 at Q14, Q20, Q29 (each referring to components of TK's hydraulic lift). And twice TK represented that it would be unable to bid if the electromechanical ball screw

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lift system specification was not removed. Addendum 2 at Q32 ("If electro-mechanical ball screw lift system is required, we will be unable to provide a bid"); Addendum 4 at Q58 ("**If electro-mechanical ball screw lift system is required, we will be unable to provide a compliant and competitive bid.**") (emphasis in original).

TK's representations to the Authority were consistent with its position during an almost contemporaneous Des Moines International Airport RFB Q&A in April 2020. In that Q&A, TK stated that it uses a "hydraulic lift system" and claimed that "[i]f electro-mechanical ball screw lift system is required, we can't bid." Exh. 1 at Q32.

JBT understands that TK has provided the Authority a certification that it is now suddenly able to meet this specification requirement. Given TK's repeated statements in this and other recent procurements that it is not able to meet this requirement, the Authority cannot reasonably give any credence to this claim. In fact, despite having signed such a certification, TK's bid still indicates that it intends to provide a hydraulic system. The drawings submitted with its bid show a hydraulic lift cylinder, a point which is made explicit by the description of the lift cylinder in Note 4. Exh. 2. In its list of recommended spare parts, TK included 16 line items of "hydraulic spare parts." Exh. 3. These parts would be wholly unnecessary unless TK intended to provide a hydraulic vertical drive column.

By its own repeated statements TK has made clear that its proposed equipment is technically noncompliant as to its vertical drive and so its proposal must be rejected.

Section 11 8504-page 14, 1.12J.7 Materials, Parts and Processes

The RFB required that "[a]ll intersection steel panels, eg. side to top, side to bottom, of exterior steel sections of the passenger boarding bridge shall be 100% welded. Caulk shall not be used to provide weather seals."

As with the electromechanical lift system, TK informed the Authority that its catalogue did not include a design in which continuous welding is possible. Addendum 4 at Q17. It has taken a consistent position in recent months with the Des Moines International Airport, the Sarasota Manatee Airport, and the Dallas Fort Worth International Airport. Exh. 1 at Q23 (asserting that TK uses "'C' panels which are welded to corner angles and to the tubes at the end of tunnels. Side of the panels are spot welded and seams sealed with high grade sealant. **Attempting to continuous welding the seams will cause warping**" and asserting that it cannot bid a continuously welded design) (emphasis added); Exh. 4 at Q6 ("ThyssenKrupp's standard tunnel side panels are spot-welded and caulked ..."); Exh. 5 at Q1 (TK seeking to avoid "[c]hanging our design to a corrugated or truss style").

In addition, TK's C-pan design does not allow for the inclusion of a glass pane window, as required by the RFB's specifications. PBB-81: PBB Glass Panel Layout; *see also* RFB at C.02 ("The

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base bid includes all of the work shown on the attached contract drawings..."). Instead, the RFB required a truss wall design, which TK does not utilize.

In this respect as well, therefore, TK has made abundantly clear that it is unable to provide a PBB that meets the technical requirements of the RFB. The Authority should not allow itself to be duped by last minute reversals claiming that various key requirements like this one can now suddenly be met. TK's bid should have been rejected as nonresponsive precisely because, as they have so frequently said, their offering cannot meet this requirement.

Section 11 8504-page 31, 1.12AB.10.k and 1.12AB.10.m Finished and Materials

These technical specifications of the RFB required that the sub-floor in the cab and bubble area and C tunnel subfloors be aluminum. Here too, TK informed airports around that country that its PBB uses a carbon steel subfloor in the cab area. Addendum 4 at Q37, Q40; Addendum 2 at Q38; Exh. 4 at Q10 ("ThyssenKrupp's subfloor in the cab area is carbon steel"). During the Q&A process, TK represented that it would be unable to provide a bid with an aluminum floor. Addendum 4 at Q37 ("If our standard is not allowed, we will not be able to provide a compliant or competitive bid.")

In each of these areas, TK represented in May 2020 that it could not meet the technical specification Even assuming *arguendo* that TK was somehow able to redesign its PBB in the two weeks between the time it told the Authority it could not bid and June 2020, when bids were due, it would have been impossible for TK to also acquire the necessary safety certifications. Its current representation of compliance is simply not credible and is not even consistent with its own bid submission. It must be disregarded.

TK's Bid Was Nonresponsive Because It Did Not Meet the Certification Requirements

In a provision critical to passenger safety, the RFB required that the proposed PBBs meet the relevant fire safety standards. Specifically, the RFB stated that all proposed bridges must "conform to the requirements of the National Fire Protection Association (NFPA) 'Standards of Construction and Protection of Aircraft Boarding Walkways,' NFPA-415, **latest edition**." Section 11 8504-page 9, 1.12C.9 (emphasis added). To provide compliance with this requirement, bidders were obliged to provide as part of their bid submittals certificates from a Nationally Recognized Testing Laboratory in the United States and "[p]rovide written certification that the total PBB, **including any design changes**, is in compliance with NFPA 415, **most recent edition**." *Id.* (emphasis added); *see also* Section 11 8504-page 3, 1.5B.2 (requiring that bidders provide NFPA certificates and compliance statements with their bids). The most recent edition of the NFPA 415 specification is the 2016 edition, which went into effect on June 15, 2015.

In addition, the RFB required that the proposed PBB "be UL, or ETL listed and shall be labeled by a nationally recognized testing laboratory **at the time of bid**." Section 11 8504-page 6, 1.6C (emphasis

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added). As with the NFPA 415 requirement, offerors were directed to "submit verification [of their UL or ETL listing/labeling] with bid submittals." *Id; see also* Section 11 8504-page 4, 1.5B.6 (requiring UL/ETL certification).

TK did not, and cannot, meet these requirements. In its bid package, TK submitted a Statement of NFPA 415-2013 compliance and an Intertek Listing Constructional Data report regarding its listing under the "NFPA 415: Standard on Airport Terminal Buildings, Fueling Ramp Drainage and Loading Walkways, 2013 Edition." Exh. 6. It also submitted a UL listing certificate from August 2009, regarding its UL 325 compliance. Exh. 7. **All of those certifications were to versions of the applicable standard that had long since been superseded by the time of bid.**

TK's Proposed PBB Is Not UL/ETL Listed Because It Significantly Varies from the Certified Version

As detailed in JBT's Notice of Intent to Protest, TK represented in May 2020 that it could not provide a technically compliant PBB without undergoing a "complete design" of its standard bridge. In a letter dated May 19, 2020, TK informed the Authority that, if the specification were not changed, it would be forced to undergo an extensive redesign of its PBB in order to bid on the project:

> The following items are significant changes which will force us to completely redesign our bridges. This will make us non-competitive. Additionally, there are several smaller items not listed below that are our competitors standard that would cause us to make additional design changes and further reduce the competitive bid process.
> 1. Electro-Mechanical Lift System: Ref. RFI #3, tk-2, tk-9, tk-20
> 2. Continuous Welding: Ref. RFI #tk-6
> 3. Plank Type Ceiling: Ref. RFI. # tk-22
> 4. Both sides of the canopy closure shall be independently adjustable: Ref. RFI # tk-13
> 5. Tunnel lighting shall be positioned parallel to the tunnel centerline: Ref. RFI # tk-21
> 6. Corrugated or truss style tunnel construction: Ref. RFI # tk-28
> 7. Aluminum subflooring: Ref. RFI # tk-31 & 9

Exh. 8.[1] The Authority did not change the specifications after this letter. That means that necessarily TK's ETL listing from January 2014 (Exh. 6) and UL listing from August 2009 (Exh. 7) are for its standard bridge, and not for one with an electromechanical lift, 100% welded tunnel, aluminum subfloor and

[1] TK's letter was sent not only to Melissa Wendel, the Purchasing Office representative designated to receive RFIs, but also to Ben Siegel, Lee County Port Authority Interim Executive Director (and possibly others). Any violation of the Authority's lobbying restriction, which prohibits contact outside of the designated Purchasing Office personnel, requires automatic disqualification from consideration. *See* Lee Cty. Port Authority Purchasing Manual § 4.D. ("Any firm contacting individuals mentioned herein in violation of this warning shall be automatically disqualified from further consideration for any solicitation.")

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glass pane window. *See* Addendum 4 at Q58; Addendum 4 at Q17, Q37. Each of these design change to the walks, flooring, welds, walls, and subfloors—which are both individually and collectively significant—would require a recertification by a Nationally Recognized Testing Laboratory. Indeed, TK admitted as much to the Authority. Exh. 8 (describing specification requirements as "significant changes which will force us to completely redesign our bridges").

TK failed to obtain such a recertification. As a result its bid is nonresponsive and must be rejected. Furthermore, its submission of these outdated ETL and UL listings as evidence that it satisfied the certification requirement for the redesigned version of its product was misleading at best. As discussed in more detail below, TK's submission of outdated certifications as demonstrating the safety of this very different revised design plays fast and loose with critical standards for protection of the travelling public.

TK Does Not Have a UL/ETL Listing for the Most Recent Edition of NFPA 415

With respect to the NFPA 415 standard, neither TK's Statement of Compliance nor its Intertek listing report meets the RFB requirements. As the RFB makes clear, offerors were required to certify and submit evidence that its PBB conforms to "NFPA-415, **latest edition**." Section 11 8504-page 9, 1.12C.9 (emphasis added). The latest edition of NFPA 415 is the 2016 edition. Yet TK's documents state that its PBB was tested with respect to the 2013 edition. TK's certification to the 2013 edition of NFPA 415 does not satisfy the RFB's explicit requirement to include with the bid a certification to the "most recent edition"(I .e., the 2016 edition) of that standard. Therefore, TK's bid was nonresponsive on its face and should have been rejected.

TK's lack of candor and attempt to sneak outdated certifications past the Authority is even more pronounced with respect to the glass panels in the bridge wall. *See* PBB-81: PBB Glass Panel Layout. Here, TK lists its glass wall under the heading "NFPA 415-2013 Section 6.4.6 Test of Walls." But the narrative of the document reveals that TK did not test its glass window bridge under NFPA 415 2016 edition, 2013 edition, or even the 2008 edition standards. Instead, its glass wall was tested to determine compliance with the requirements of the 2002 edition of NFPA 415 by Southwest Research Institute (SwRi), a different laboratory than that from which it received its mark and listing.

This is significant. First, it would have been impossible for SwRI or any other lab to certify that a bridge wall containing glass could fully meet the NFPA 415, 2002 edition standard. Specifically, section 6.2.4 of the 2002 edition expressly disallowed windows in passenger loading walkways: "6.2.4 There shall be no windows other than those located in the ramp access service door and in the cab area for the purpose of operating the aircraft loading walkway." NFPA 415-02 at § 6.4.2[2] This means that it is most probable

[2] Lest there be any confusion regarding the scope of the ban, the Technical Committee clarified in the 2008 edition that *all* transparent and translucent materials were banned from use in the passenger walkway. NFPA 415-08 at § 6.4.2 (); *see also* Comment on Proposal No 415-9 ("The Committee's intent of paragraph 6.2.4 has always been to restrict the use of glass and transparent or translucent materials

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that SwRI merely tested the glass for compliance with the temperature standards of NFPA 415, and not for compliance with the full NFPA 415 specification.

Second, even if SwRI had improperly certified a bridge wall with a transparent panel as NFPA 415 compliant under the 2002 edition standard, Intertek did not rely on the SwRI certification when it listed TK's PBB as NFPA 415 compliant in 2014. The January 2014 listing report from Intertek states that Intertek applied the 2013 edition of NFPA 415 to determine eligibility for listing. Exh. 6. And, like the 2002 edition, the 2013 edition of NFPA 415 prohibited the use of windows along the walkway: "[t]here shall be no transparent or translucent walls, windows, or surfaces other than those windows located in the ramp access service door and in the cab area for the purpose of operating the aircraft loading walkway." NFPA 415-13 at § 6.4.2. This means that the PBB for which the ETL listing and mark was granted could not have included a glass wall or panel, because such bridges would have been expressly out of spec. In other words, the ETL certification provided by TK is for a significantly different TK PBB—one that does not include a glass pane window.

TK failed to meet the requirement that it certify and submit evidence that its proposed PBB, including the addition of glass panels along the walkway, was NFPA 415 (2016 edition) compliant or UL/ETL listed and labelled. The Authority must deem its bid nonresponsive.

The effect of TK's failure to have its proposed PBB certified cannot be overstated. Without certification from a nationally recognized testing laboratory that TK's equipment meets the applicable fire and OSHA safety standards, the Authority can have no confidence that TK can ensure passenger safety in its PBB. This means that the Authority is taking on the risk that the equipment will fail, potentially resulting in devastating injury to passengers and airport personnel, including any resultant litigation.

TK Is Not A Responsible Bidder, And, Therefore Its Bid Must Be Rejected

Florida law requires not only that an offer must be responsive, offering the agency exactly what it requires, but also that the offeror must be responsible. Florida Statutes § 287.057(1)(b)(4). A responsible offeror must have "the capability in all respects to fully perform the contract and the integrity and reliability that will assure good faith performance." Florida Statutes § 287.012. By its conduct in this procurement, TK has shown that it cannot be found to be a responsible offeror.

First, as explained above, TK does not have the capability to fully perform the contract. It does not have equipment that meets the requirements for electro-mechanical lifts, continuously welded walls and aluminum flooring. Even if it could somehow cobble together such equipment, which it has repeatedly told this and other Airport Authorities that it cannot, it does not have the necessary certifications,

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in the passenger loading walkways to the minimum required for safe operation of the walkway. One of the main concerns has been the psychological impact of people being able to see the flames and smoke, potentially negatively impacting the evacuation of the aircraft.").

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required at the time of bid, that such changed equipment would satisfy the applicable safety standards such as NFPA 415. Because such certifications take months to obtain, TK will have already failed in this element of its contract requirements. Thus, TK does not have "the capability in all respects to fully perform the contract."

Second, TK's conduct has demonstrated that it does not have "the integrity and reliability that will assure good faith performance" as is required of a responsible bidder. In an effort to pressure the Authority to change the specifications in ways that would be more favorable to it, TK told the Authority less than two weeks before bids were due that it would not be able to bid if the requirements for an electro-mechanical lift, continuous seam weld walls and aluminum flooring remained part of the RFB. But within days, even though the specifications did not change, TK submitted a separate statement specifically representing to the Authority that it would meet all three elements of the specification. TK could not have been truthful on both occasions. Either it had the capability to provide PBBs with these three features or it did not; on one of those occasions it was lying.

TK's submission of certifications from independent laboratories dated in 2009 and 2014 as applicable to the equipment it proposes here is another element of misrepresentation. Even if it somehow it were able to change its offering within a few days to include these three features, its attempt to pass off certifications obtained several years earlier as relevant to its newly changed equipment would serve as another instance of lack of candor with the Authority that is entirely inconsistent with being a responsible offeror. That conduct is particularly misleading as to its attempt to demonstrate that it has the necessary NFPA certification for a PBB with the specified transparent wall. TK represents itself as having met that requirement by its reference to a certification to the NFPA 415 version from 2002 which expressly precluded glass wall and windows in the PBB walls. The only fair conclusion is that TK is attempting to deceive the authority into believing that it has the necessary certification to satisfaction of a critical fire safety standard when it knows full well that it does not.

This lack of candor is of particular relevance to a responsibility determination given the nature of the matters about which TK's offer misleads. Enforcement of the applicable NFPA and UL standards are the way that safety for the travelling public, particularly as to the danger of fire, is ensured. TK's apparent willingness to represent that it has a design certified to these critical safety standards when it does not speaks volumes to the question of whether it is a responsible bidder.

In short, it is apparent that TK has not been truthful with the Authority. In these circumstances, it would be arbitrary and capricious for the Authority to award this contract to it. *Academy Express, LLC v. Broward Cty.*, 53 So. 3d 1188 (4th Dis. Ct. App. 2011).

Additionally, JBT is informed that, following a cure notice and unsatisfactory response, TK has been terminated from a project at the Charlotte Douglas International Airport due to its inability to perform to the contract specifications. Given the relevance of TK's current nonperformance to its responsibility as a contractor, the Authority should be compelled to investigate TK's termination from the Charlotte

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project. This is particularly pressing due to TK's reliance on the Charlotte project in its bid as evidence of its ability to perform. The Charlotte Douglas International Airport RFP Project Manager – CLT Center, Crystal Bailey, may be reached at 704-359-4813 or cibailey@cltairport.com.

TK's Bid was Nonresponsive Because Its Proposed Installer Does Not Meet the Minimum Qualifications

Under the terms of the RFP, bidders or subcontractors performing the installation requirements were required to "have successfully installed no less than three (3) passenger boarding bridge projects in the United States on projects of similar size and scope within five (5) years prior to the date bids are due." Addendum 2 at Item 2; RFB at B.01.; Section 118504 – page 3, 1.4(H) ("[q]ualified manufacturers and installers will have completed no less than three (3) jobs of similar size and scope within the last five (5) years."). TK's proposed installer, ATS, does not have the experience to meet this requirement; none of its previous contracts involved work within the size and scope of the present RFB requirements.

The RFB described the scope of the work for the project as "the replacement of the twenty-seven (27) Passenger Boarding Bridges (PBBs), modifications to existing foundations for twenty-five (25) PBBs, construction of two (2) new foundations for gates C1 and C2, and engineered parking layouts that anticipate the carriers aircraft needs for the foreseeable future." RFB at C.01. Yet the chart of ATS' prior experience, provided to the Authority by TK, proves that ATS cannot meet the minimum qualification requirement:

Location	No. of Gates	Description
Phoenix 1528[3]	12	PBB Removals & Reinstall, (12) Fuel Pits, (12) Foundations, & (8) New Walkways
Houston 1610	7	PBB Removals
Houston 1611	9	PBB Removals and Reinstalls
Houston 1616	13	New PBB Install
Phoenix 1806	5	(3) PBB Removal & Reinstall, (2) New PBB Installs, (3) Fuel Pits, and (2) Foundation Installations
Houston 1810	6	PBB Removals
DFW 1821	9	(7) Relocates and (2) New Installs
Phoenix	36	Evaluation and Inspection of PPBs
DFW	11	Refurbish/Reconfigure (11) PPBs and replace ancillary equipment
DFW 1914	12	(6) PBB Removals & (6) New PBB Installs

The project involving the largest number of gates, 36 at Phoenix, does not involve installation work at all; it consisted exclusively of the "evaluation and inspection" of bridges, tasks of far less scope and

[3] TK's submission to the Authority omitted the project numbers from the location column, perhaps in an effort to conflate separate projects. Based on a bid received by JBT from ATS, JBT has inserted these numbers where known.

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complexity than the installation work required here. And none of the remaining projects are similar in size to the RFB requirements. In the last five years, ATS has not had a single project—much less the three required to meet the minimum qualification standard – in which it installed half the quantity of 27 replacement bridges needed here.

As a result of ATS' failure to satisfy the minimum requirements, TK's bid should have been deemed nonresponsive. As stated in the RFB, "[a]ny bid received which does not meet these minimum qualifications will be deemed nonresponsive." RFB at B.01. Additionally, a bidder's "[f]ailure to meet mandatory minimum qualifications" will result in its automatic disqualification. Id. at A.19. As indicated above, TK's proposed subcontractor for the installation work did not meet the minimum requirements. Therefore, TK's bid should have been deemed nonresponsive and TK should have been automatically disqualified.

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It is a basic tenant that in order to maintain a procurement system of quality and integrity, agencies must engage in fair and open competition and award only to "to the responsible and responsive vendor whose proposal is determined in writing to be the most advantageous." Florida Statutes §§ 287.001, 287.057(1)(b)(4); Lee Cty. Port Authority Purchasing Manual § 1.1. An award to TK would flout this mandate. Plainly put, TK is not a responsible and responsive bidder. It has repeatedly told the Authority that it cannot provide the required PBBs and, in an attempt to nonetheless secure the contract, has attempted to obfuscate and misrepresent its compliance with the RFB requirements. JBT therefore respectfully requests that the Authority reject the award to TK and instead proceed with an award to JBT, the true lowest responsive and responsible bidder.

Thank you for your prompt response.

Regards,

Frank Moore

Frank Moore
Vice President, Gate Equipment

CC: Mr. James Marvin, JBT Executive Vice President and General Counsel
Mr. Brian DeRoche, President, Jetway
Mr. Neil O'Donnell – Legal Counsel, Rogers Joseph O'Donnell

Attachment: JBT's Notice of Intent to Protest

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July 16, 2020

Melissa M. Wendel, CPPO
Procurement Manager
mmwendel@flylcpa.com
Lee County Port Authority
Southwest Florida International Airport
11000 Terminal Access Road, Ste. 8671
Fort Myers, FL 33913

RE: Notice of Intent to Protest regarding REQUEST FOR BIDS (RFB) 20-53MMW for PASSENGER BOARDING BRIDGE REPLACEMENT at the SOUTHWEST FLORIDA INTERNATIONAL AIRPORT

Ms. Wendel,

Pursuant to Section A22 "RIGHT TO PROTEST" in the RFB documents, as well as the Lee County Port Authority Purchasing Manual, JBT AeroTech Corporation (JBT) protests the pending award of the noted project. JBT is in receipt of the Intent to Award notification in favor of ThyssenKrupp Airport Systems, Inc (TK). This letter is JBT's Notice of Intent to File a Bid Protest of that intended award. JBT will file its formal written protest within five business days as provided by Section 10.1D of the Lee County Port Authority Purchasing Manual. For the following reasons, TK's bid should have been rejected and JBT – the lowest responsive and responsible bidder remaining – should have been selected for award.

ITEM 1 – TK's Bid Was Nonresponsive Because Its PBB Cannot Comply with the RFB's Technical Requirements

TK is unable to meet the specifications of the bid documents and its bid must be considered nonresponsive. Specifically, TK itself has repeatedly informed the Lee County Port Authority (the "Authority") that it cannot meet the following technical requirements set forth in Specification 118504 1.12 MATERIALS, PART AND PROCESSES:

1. Section 11 8504-page 18, 1.12R.8.b Vertical Drive—Electrical Mechanical
   The RFB requires that the vertical drive column be electromechanical. In the written questions and clarification requests, incorporated in the RFB by Addendum 2, TK stated that it was unable to provide a bid with an electromechanical ball screw lift system. In Question 32, TK wrote:

   > Reference: Section 118504-18: Vertical drive column shall be electromechanical. thyssenkrupp's vertical drive consists of two (2) extra capacity hydraulic rams. .... We have this same system in use in Orlando, Tampa, and Miami to name a few. .... We kindly ask that you accept our standard design. *If electro-mechanical ball screw lift system is required, we will be unable to provide a bid.*

   Addendum 2 at Q32 (emphasis added). In response, the Authority rejected TK's proposal to allow for a hydraulic system and instead confirmed that the "[s]pecifications require electromechanical lift columns." Addendum 2 at A32.

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TK tried once more to convince the Authority to change the vertical drive column specification and allow for the use of a hydraulic lift system. In Addendum 4, it again requested that the Authority allow for its "standard design" which uses hydraulic rams, and reiterated its inability to provide a compliant bid:

> Section 118504-18: Vertical drive column shall be electromechanical. Regarding question and answer 32 from Addendum 2 that discusses our lift column design. thyssenkrupp's vertical drive consists of two (2) extra capacity hydraulic rams. .... If you require us to bid to their standard, it will be a complete redesign and will be cost prohibitive for this bid. .... We kindly ask that you accept our standard design. **If electro-mechanical ball screw lift system is required, we will be unable to provide a compliant and competitive bid.**

Addendum 4 at Q58 (emphasis in original). As before, the Authority responded that it would not change the specification and that electromechanical lift columns were required. Addendum 4 at A58. In this same addendum, TK repeatedly stated its intent to propose the use of a hydraulic system. Addendum 4 at Q14 (TK requesting the use of solenoid valves on "the hydraulic lift cylinders"), Q20 (requesting the use of "velocity fuses on the hydraulic lift cylinders"), Q29 (stating that the proposed "vertical drive system incorporates single-acting hydraulic cylinders"). In each instance, the Authority's answer pointed to the specification 118504 requirement that electromechanical lift columns be used. *See* Addendum 4 at A14 ("The PBB specification 118504 requires electromechanical lift columns as answered in a previously issued addendum."), A20 ("The PBB specification 118504 requires electromechanical lift columns as answered in previous addenda Q&A."), A29 (same).

Because TK's PBB does not include an electromechanical vertical drive, it is technically noncompliant and must be rejected.

2. Section 11 8504-page 14, 1.12J.7 Materials, Parks and Processes

The RFB required that "[a]ll intersection steel panels, eg. side to top, side to bottom, of exterior steel sections of the passenger boarding bridge shall be 100% welded. Caulk shall not be used to provide weather seals."

As with the electromechanical lift system, TK put the Authority on notice through its questions and requests for clarification, that it could not provide a continuous weld bridge, and requested that the specification be changed:. In Question 17 of Addendum 4 TK stated:

> Section 11 8504-page 14, 1.12.J.7 .... Specifications are requiring continuous welding which would be a requirement of a corrugated tunnel design. W use "C" channel panels, which are continuously welded on the top and bottom, but are spot welded on the sides, and caulked to provide the final seal. .... *If continuous weld is mandatory, this will prevent us from submitting a compliant, competitive bid.* We respectfully ask that our standard tunnel structure be accepted.

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Addendum 4 at Q17 (emphasis added). The Authority rejected this request; it responded by reiterating that "[c]aulking shall not be permitted for weathersealing." Addendum 4 at A17.

Because TK conceded that it was unable to provide a PBB that meets the technical requirements of the RFB, its bid should have been rejected as nonresponsive.

3. Section 11 8504-page 31, 1.12AB.10.k and 1.12AB.10.m Finished and Materials

These technical specifications of the RFB required that the sub-floor in the cab and bubble area and C tunnel subfloors be aluminum. Here too, TK stated that it would be unable to provide a technically compliant bid unless a change was made to the specifications, and the Authority declined to alter the technical requirements of the RFB:

> Specification No. 118504, page 31, 1.12.AB.10.1 Aluminum Sub-Floor While our exterior cab area at the articulating cab floor is aluminum, we request the use of our standard carbon steel floor in the cab bubble area. *If our standard is not allowed, we will not be able to provide a compliant or competitive bid.*

Addendum 4 at Q37 (emphasis added); *see* Addendum 4 at A37 ("C tunnel and cab flooring shall be aluminum per PBB specification 118504 section 1.12.AB.10.m."). *See also* Addendum 4 at Q40 (requesting no subfloor and "[i]f you do require a sub floor, can we use galvanealed steel instead of aluminum"), A40 (rejecting change to specifications); Addendum 2 at Q38 (requesting use of "formed, galvannealed [*sic.*] sheet metal panels"), A38 ("Aluminum floor is required.")

ITEM 2 – TK Has Demonstrated That It Is Not a Responsible Bidder, And, Therefore, Its Bid Must Be Rejected

Alternatively, if TK has submitted a bid claiming that it will meet any of these three RFB technical requirements, it should be rejected as a non-responsible bidder. The Authority's Purchasing Manual defines a Responsible Bidder as "a person who has the capability in all respects to perform fully the contract requirements and the integrity and reliability which will ensure good faith performance of the contract." Authority Purchasing Manual, § 2.1, Definitions; *see also* RFB at B.02 (describing a responsible bidder as having, among other things, "integrity, reliability, [and] capacity"). As discussed above, TK itself told the Authority repeatedly in questions submitted no more than two weeks before bids were due, that its product did not provide electromechanical lift systems, continuous welds and aluminum flooring in the bubble area. It stressed that if those requirements were maintained, it could not bid. If it submitted a bid reversing course completely and claiming that it would meet those requirements, the Authority cannot reasonably conclude that TK has "the capability in all respects to perform fully the contract requirements." Moreover, such an abrupt and virtually instantaneous reversal of position would mean that TK was lying to the Authority either in its representations that it would be unable to bid if these conditions were maintained, or in its sudden claim that it could in fact provide those features. In one respect or the other, TK was not demonstrating the "integrity and reliability which will assure good faith performance of the contract" as is required to be a responsible bidder. Authority Purchasing Manual § 2.1.

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ITEM 3 – TK's Bid Was Nonresponsive Because Its PBB Could Not Have Been UL/ETL Certified

The RFB required that the proposed PBBs "conform to the requirements of the National Fire Protection Association (NFPA) 'Standards of Construction and Protection of Aircraft Boarding Walkways,' NFPA-415, latest edition." Section 11 8504-page 9, 1.12C.9. To provide compliance with this requirement, bidders were required to provide **as part of their bid submittals** certificates from a Nationally Recognized Testing Laboratory in the United States and "[p]rovide written certification that the total PBB, **including any design changes**, is in compliance with NFPA 415, most recent edition." *Id.* (emphasis added); *see also* Section 11 8504-page 3, 1.5B.2 (requiring that bidders provide NFPA certificates and compliance statements with their bids).

In addition, the RFB required that the proposed PBB "be UL, or ETL listed and shall be labeled by a nationally recognized testing laboratory **at the time of bid**." Section 11 8504-page 6, 1.6C (emphasis added). As with the NFPA 415 requirement, offerors were directed to "submit verification [of their UL or ETL listing/labeling] **with bid submittals**." *Id* (emphasis added)*; see also* Section 11 8504-page 4, 1.5B.6 (requiring UL/ETL certification).

Based on TK's representations in May 2020 that it did not currently have a technically compliant PBB in its catalogue and would have to undergo a "complete redesign" of its PBB in order to become compliant, JBT is informed and believes that TK could not have submitted the required safety testing certifications. Addendum 4 at Q58; Addendum 4 at Q17 (caulking part of TK's "standard tunnel structure"), Q37 (TK requesting use of "standard carbon steel floor in the cab bubble area"). Even if TK's standard PBB had been certified as NFPA 415 compliant and was listed/labelled by UL or ETL, the significant design changes to the walks, flooring, welds and the addition of aluminum to the cab would require a recertification by a Nationally Recognized Testing Laboratory. It is simply impossible that TK was able to obtain these certifications in the weeks between their May 2020 statements that they were unable to provide a PBB that met the technical requirements of the RFB and bid submission on June 2, 2020.[1]

JBT was required to undergo a large, expensive redesign of their PBB cab to incorporate aluminum into the structure, in lieu of steel, years ago. JBT was forced to undergo a complete recertification of the PBB, at great expense to JBT, due to this material change. Significantly, the ETL recertification of JBT's PBB took *seven months* to be completed. Because TK has not included aluminum flooring in its design before, it would also be required to recertify its PBB if it were to incorporate aluminum into its design now – a process that would take months, not weeks. For this reason, any PBB proposed by TK cannot meet the requirement for UL/ETL certification, including any design changes, at the time of bidding.

Because TK could not have provided the submittals required by the RFB, its bid should have been deemed nonresponsive.

[1] JBT is informed and believes that TK's PBB system ETL certification was last updated in 2017 and therefore could not include the critical design changes required for a technically compliant PBB.

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ITEM 4: TK's Bid Was Nonresponsive Because It Could Not Have Proposed an Installation Contractor Who Meets the Minimum Qualifications

In RFB Part B, Special Instructions and Requirements, B.01 Minimum Qualifications, the RFB it states that "Bids will be accepted from installer that have successfully installed no less than three (3) passenger boarding bridge projects installed in the U.S. on projects of a similar size and scope within five (5) years prior to the date bids are due." RFB at B.01; *see also* Addendum 2 at Item 2.

JBT requested installer qualifications to satisfy this experience clause. Firms contacted were AeroBridgeworks, Skycon, Airport Technical Support (ATS), Vanderlande, Elite Terminal Services and Airport Bridge Company (ABC). Only two installers qualified to these requirements: Aero Bridgeworks, who was precluded from bidding per the Q&A, and Skycon, the only installer eligible to work on this project that satisfies this requirement after AeroBridgeworks' disqualification. Skycon has informed JBT that TK has not contacted them regarding the project. This was a major concern to them as Skycon knew that only they and AeroBridgeWorks met the experience clause found in the specification documents. TK, therefore, could not have proposed an installation contractor who meets the required minimum qualifications. For this reason as well, its bid should have been found nonresponsive.

For the foregoing reasons, JBT respectfully requests that the Authority reject the award to TK and instead proceed with an award to JBT, the lowest responsive and responsible bidder.

***

Per the Lee County Port Authority Purchasing Manual, Section 10.1.E, JBT has submitted a $10,000 bond.

JBT will file a formal written protest within five business days and reserves its right to amend this protest as per the Lee County Port Authority Purchasing Manual.

I can be reached via mobile phone at (801) 940-1850, email via frank.moore@jbtc.com or at our office at 1805 West 2550 South, Ogden, Utah 84401.

I look forward to hearing from you.

Regards,

Frank Moore

Frank Moore
Vice President, Gate Equipment

CC: Mr. James Marvin, JBT Executive Vice President and General Counsel; Mr. Brian DeRoche, President, Jetway; Mr. Neil O'Donnell – Legal Counsel, Rogers Joseph O'Donnell
References: (1) Addendum 2 & 4 Questions & Answers related to Hydraulic vs Electomechanical Lift Systems, (2) Addendum 2 & 4 Questions & Answers related to Aluminum in Cab and C Tunnel, (3) Addendum 2 & 4 Questions & Answers related to Seam Welding

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REFERENCE #1 - Electromechanical Lift System

ADDENDUM 2

Q #	Question	Answer
5	JBT manufactures both hydraulic and electromechanical lift columns, please **confirm only electromechanical columns should be used**.	Correct
32	Reference: Section 118504-18: Vertical drive column shall be electromechanical. thyssenkrupp's vertical drive consists of two (2) extra capacity hydraulic rams. Each ram is independent of the other and capable of supporting the bridge under full design load. An adjustable flow control valve provides the required lift speed. The design includes internally mounted pilot operated check valves that prevent the bridge from descending in the event of fluid loss or other system failure. Mechanical stops in the cylinders prevent over travel and do not cause any damage should they be reached. A single hydraulic power unit prevents misscalibration as seen on Ball Screw designs and it is mounted at the wheel cross-member for easy access for maintenance. It should also be noted that no periodic maintenance is required on a thyssenkrupp PBB roof with our hydraulic system. **We have been using this system for the last 50 years** successfully. They require much less maintenance and will last the life of the bridge without major overhaul, unlike ball screw assemblies that have to be torn-down and resurfaced near ten years of service. We have this same system in use in Orlando, Tampa, and Miami to name a few. Also, in a previous meeting with the airport before the bid came out this was one of the standard design features that we discussed. It was our understanding from what was stated at that meeting that our standard design features would be allowed. Additionally, during the first pre-bid meeting held by Manhattan Construction we noted that the specification was written specifically for our competitor, JBT. We publicly asked during that pre-bid meeting if the specification would be opened up to allow for our standard design features and it was publicly stated that the specification would be opened up to allow for our standard design features. **We kindly ask that you accept our standard design. If electromechanical ball screw lift system is required, we will be unable to provide a bid**.	Specifications require electromechanical lift columns.

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ADDENDUM 4

14	Section 11 8504-page 9, 1.12.C.4 Hydraulic Lift columns shall be equipped with a safety pilot-operated-check-valve and velocity fuses to prevent the bridge from falling in the event of a failure in the hydraulic system. **We request the approval to use solenoid valves instead of the pilot-operated-check-valve and velocity fuses on the hydraulic lift cylinders**. We have used them in the past and have found that when raising the bridge they will lock in place and not allow the bridge to lower. Solenoid operated valves provide the same level of protection without the problems we have experienced using pilot-operated-check-valve and the velocity fuses.	The PBB specification 118504 requires electromechanical lift columns as answered in a previously issued addendum.

20	Section 11 8504-page 18, 1.12.R.8.a.2 The lift cylinders shall be equipped with internally mounted velocity fuses that prevent the bridge from descending in the event of fluid loss or other system failure. **The hydraulic circuit** shall be designed so that the bridge can be lowered manually in the case of power failure. We request approval to use solenoid valves instead of velocity fuses on the hydraulic lift cylinders. We have used them in the past and have found that when raising the bridge they lock in place and not allow the bridge to lower. Solenoid operated valves provide the same level of protection without the problems we have experienced using the velocity fuses.	The PBB specification 118504 requires electromechanical lift columns as answered in previous addenda Q&A.

29	Section 11 8504-Page 28 1.12.AA.23.i Vertical travel limit switches shall be provided to prevent travel of the vertical lift columns into the mechanical stops. **Our vertical drive system incorporates single-acting hydraulic cylinders**. This design has inherent and endof-travel stops with no chance of over travel. **We request acceptance of our standard system without electrical travel limits.**	The PBB specification 118504 requires electromechanical lift columns as answered in previous addendum Q&A.

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58	Section 118504-18: Vertical drive column shall be electromechanical. Regarding question and answer 32 from Addendum 2 that discusses our lift column design. thyssenkrupp's vertical drive consists of two (2) extra capacity hydraulic rams. The electromechanical system that you are requiring is a JBT standard design feature. If you require us to bid to their standard, it will be a complete redesign and will be cost prohibitive for this bid. Also, in a previous meeting with the airport before the bid came out this was one of the standard design features that we discussed. It was our understanding from what was stated at that meeting that our standard design features would be allowed. Additionally, during the first pre-bid meeting held by Manhattan Construction we noted that the specification was written specifically for our competitor, JBT. We publicly asked during that pre-bid meeting if the specification would be opened up to allow for our standard design features and it was publicly stated that the specification would be opened up to allow for our standard design features. **We kindly ask that you accept our standard design. If electro-mechanical ball screw lift system is required, we will be unable to provide a compliant and competitive bid**.	The PBB specification 118504 requires electromechanical lift columns as previously answered in previous addendum Q&A.

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REFERENCE #2 - Aluminum Flooring

ADDENDUM 2

Q #	Question	Answer
38	Section 118504-17 & 31 states that PBB C tunnel shall have aluminum floor. **We request approval to use our standard bridge floor. Our standard floor is made of formed, galvannealed sheet metal panels**. These are installed with a flat internal profile over the entire length of the bridge that allows a continuous surface for the adhesion of carpet. Our proven floor design is in use in over 6000 bridges worldwide.	Aluminum floor is required.

ADDENDUM 4

37	Specification No. 118504, page 31, 1.12.AB.10.1 Aluminum Sub-Floor While our exterior cab area at the articulating cab floor is aluminum, **we request the use of our standard carbon steel floor in the cab bubble area. If our standard is not allowed, we will not be able to provide a compliant or competitive bid**.	C tunnel and cab flooring shall be aluminum per PBB specification 118504 section 1.12.AB.10.m.

40	Regarding question and answer number 38 from addendum 2 that states that the PBB C tunnel shall have an aluminum sub floor. Corrugated tunnel construction bridges require the use of a subfloor due to their design. However, our design does not require a subfloor to be used as we already have a flat surface where the subfloor would go. **We ask that this requirement not apply to us to due to our design. If you do require a sub floor, can we use galvanealed steel instead of aluminum?**	C tunnel and cab flooring shall be aluminum per PBB specification 118504 section 1.12.AB.10.m.

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REFERENCE #3 - Seam Welding

ADDENDUM 4

Q #	Question	Answer
17	Section 11 8504-page 14, 1.12.J.7 All intersecting steel planes, e.g. side to top, side to bottom, of exterior steel sections of the PBB shall be 100% welded. Specifications are requiring continuous welding which would be a requirement of a corrugated tunnel design. **We use "C" channel panels, which are continuously welded on the top and bottom, but are spot welded on the sides, and caulked to provide the final seal**. This is required to maintain the structural integrity of the tunnel, attempting to continuously weld the seams would cause warping, and therefore it is not recommended. In order to achieve a complete seal, the seams are sealed with a high quality sealer. This has been used successfully on more than 6,000 bridges, including Miami, Orlando, Fort Lauderdale, Tampa, and Houston, and many other places. **If continuous weld is mandatory, this will prevent us from submitting a compliant, competitive bid**. We respectfully ask that our standard tunnel structure be accepted.	Caulking shall not be permitted for weathersealing

EXHIBIT 1

No:	Plan / Spec Item	Question	Response
ADDENDUM #1 QUESTIONS			
1	Notice to Bidders	Considering that there are many questions to be answered, and factored in estimate, we respectfully ask the bid date to be extended until May 5, 2020.	Bid opening date will be May 5, 2020.
2	Instruction To Bidders, Item 21.03.	It states "Reasonable grounds for believing that any Bidder has an interest in more than one Bid for the Work may be cause for disqualification." If a bridge manufacturer exclusively submits a bid to an installer to supply the bridge, and in exchange asks the installer to give an installation quote for the same equipment, than both of them bids for the same total scope of work (effectively each one of them having two chance of winning), would this be acceptable?	Yes, this is acceptable.
3	Performance, Payment and Maintenance Bond	It is states that the warranty period is for two years. Would warranty start at the end of each phase completion in case Phase II, and Phase III are exercised. Similarly, would the maintenance bond will be issued for each phase separately?	Yes, warranty will start at substantial completion of each phase. Maintenance bond will be issued for each phase separately at substantial completion for Phase I & II and at project acceptance following Phase III.
4	Attachment F4, Targeted Small Business	It is our understanding that TSB is desirable, but there is no specific goal set to be met for this project. Please verify if or understanding is correct.	Correct, no goal established. Contractor must make Good Faith Efforts to include TSB firm, as defined with Proposal Attachment F4A, and document these efforts on the required form.
5	Instruction To Bidders, Article	Please clarify if the bid bond will be provided based on the Base Bid, or for the total of Phase I, II and III?	Bid bond shall be based on Base Bid.
6	Section 34 77 13, 1.04, A, 1	It states that the existing foundations to be used. Please verify that the bidders has to assume that the existing foundations are adequate for the new bridge loads. As part of the submittals, bridge foundation reaction loads will be provided. Please confirm that our above understanding is correct.	Correct. Please assume that the existing foundations are adequate for the new bridge loads.

7	Section 34 77 13, 1.04, A, 2 & Section 34 77 13, 1.04, C, 13	Item states that cable retriever for 90 KVA is needed, but later on it implies that a cable hoist will be provided. Please verify that one cable hoist will be used for 90 KVA GPU power, and another one will be used for 28.5 VDC unit. Hoist is mounted on the side of the bridge, whereas, cable retriever is different and mounted under the cab. Although their function is the same, but they are significantly different from each other. It appears that cable retriever and hoist are used interchangeable. If retriever to be used, please provide specifications for it.	The 90kVA cable will be through a contractor provided/installed cable retriever, proposed by the contractor. The 28 vDC cable will be through a contractor provided/installed new cable hoist system.
8	Section 34 77 13	Please also verify if we are to use the existing GPU aircraft power cable or provide a new one.	New GPU cables to be provided/installed by the contractor for the 90kVA and 28vDC.
9	Section 34 77 13, 1.04, A, 5	It states that the power/disconnect panel to be provided. Please clarify if in addition to the panel, new disconnects are to be provided for PBB, PCA, and GPU.	New disconnects are to be provided/installed by the contractor for the PBB.
10	Section 34 77 13, 1.04, A, 7	It requires the PBB, GPU, PCA, and Potable Water Cabinets (PWC) to be monitored. Please verify if the existing GPU, and PCA are currently provide the data that is required to be monitored. If they are not capable of generating such data, please clarify how the needed data will be obtained and monitored.	Based on model numbers the equipment should provide the monitoring data. Contractor to verify during site survey prior to bid.
11	Section 34 77 13, 1.04, B, 3	It states that the bidder has to inspect the anchor bolts and foundation during the pre-bid meeting, and determine if the existing foundations/anchor bolt pattern is deemed unacceptable, the PBB contractor shall immediately notify the Owner in writing and provide associated costs for the new anchor bolt patterns, baseplate and foundation. Verifying the anchor bolt pattern will be possible by visual inspection, but it is impossible to verify if the foundation is adequate or not. Could you please verify: a. If the existing bolt pattern is #7 (eight bolt)?	a. Existing bolt pattern is shown on AP40 and shall be verified by the contractor. Prior to bid, the Contractor is required to visit the site to survey/verify existing and adjacent gate conditions and thoroughly familiarize themselves with the existing conditions and scope of work as defined in these contract documents. b. The intent is to reuse the existing anchors. Prior to bid, the Contractor is required to visit the site to survey/verify existing and adjacent gate conditions

		b. Are the anchor bolts are in good shape and can be used? c. Existing foundations are to be reused as is.	and thoroughly familiarize themselves with the existing conditions and scope of work as defined in these contract documents. c. Correct. Please assume that the existing foundations are adequate for the new bridge loads.
12	Section 34 77 13, 1.04, B, 6	It requires the re-installed GPU and PCA to be tested and commissioned. Please provide the brand name, and size of each existing GPU and PCA. It is our understanding that the intent of this paragraph is to demonstrate that the reinstalled GPU and PCA is at the same condition and function as it was before. Please clarify if our understanding is correct.	See table at the end of this document.
13	Section 34 77 13, 1.04, B, 13	It makes reference to IT Drawing package for and DSM security requirements at the Terminal door, pilot doors, cab bubble, cab bubble roof, and new PBB. Please provide this drawing, or be specify what needs to be provided.	This is referring to the Electrical plans within the project plans set.
14	Section 34 77 13, 1.04, C, 5	It requires double barrel pantographs to be provided on both sides of the bridges. We use side mounted cable conveyance system, which provides easy access to cables, and allows to add or delete cables. If we can carry the required cables without a pantograph, would it be allowed?	Acceptable as noted as it meets the intent of the requirement. Please ensure cable conveyance system does not negatively impact the functionality of the bridge and surrounding equipment.
15	Section 34 77 13, 1.04, C, 9 & 10	It states that the gate sign needs to be installed on the right side of the cab. This is another bridge manufacturer's standard. We install it on top of the fixed cab, at the center. It provides better visibility. Would our standard be acceptable?	Acceptable as noted as it meets the intent of the requirement.
16	Section 34 77 13, 1.04, C, 15	It requires the existing Telford bag chute to be reused. Page 38, Item 5.i. requires also J&B bag slide to be used. Please verify if both of them are required.	The existing Telford bag chute is mounted in the cab curtain and shall be removed and reused by the contractor along with any modifications required to the spacers to fit the existing bag chute, while a new J&B bag slide shall be provided also at each gate next to the service stairs.

17	Section 34 77 13, 1.05, O, 1	It states that eight hours of training will be provided for each type of PBB, PWC, and re-used GPU, PWC. Other than the size of the PBB, and PWC, they all comply to the same specifications, therefore eight our training for PBB, and PWC and reused GPU, PCA should be enough. Please verify.	8 hours of training per new equipment provided is sufficient per shift. 8 hours per shift includes PBB, PWC and any modifications made to the existing PCA/GPU (Facilities monitoring, cable retrieval system, hoses, etc).
18	Section 34 77 13, 1.05, O, 4	Please verify that the factory training is limited with the first PBB and PWC.	Correct.
19	Section 34 77 13, 1.09, B, 1	It requires two (2) year warranty. Considering that there will be three phases, please clarify if warranty will start separately for each phase.	Correct.
20		Please verify that the bridge models stated in the specifications will be used for bidding purpose, and when CAD drawings are provided they will be verified, if bridge models change, price will be adjusted accordingly.	Correct. Contractor to confirm final bridge models based upon CAD drawing review and discussion with the project team.
21	Section 34 77 13, 2A.03, B, 1, c	It requires PBB to comply with UL 325: Standard for Door, Gate Louver, and Window Operators Systems. This is not related to PBBs. Our bridges are UL listed and complies with UL's relevant requirements. We ask our standard to be accepted.	Accepted.
22	Section 34 77 13, 2A.06, C, 2	It states that curtains to have metallic finish. Industry standard is galvanized curtains. Would it be acceptable?	Acceptable as noted as it meets the intent of the requirement.
23	Section 34 77 13, 2A.07, C, 1	It states that tunnel roof to have uniform surface (no corrugation). Our design meets this requirement. It further requires continuous welding and no caulking. We use "C" panels which are welded to corner angles and to the tubes at the end of tunnels. Side of the panels are spot welded and seams sealed with high grade sealant. Attempting to continuous welding the seams will cause warping. We have been using this design for more	Acceptable as noted as it meets the intent of the requirement.

		than fifty (50) years and manufactured more than 6,000 PBBs worldwide. We ask our standard design to be accepted. If our design is not acceptable, we can not bid.	
24	Section 34 77 13, 2A.07, C, 2	It requires handrails to surround the lift column motors to protect the workers during periodic maintenance. We do not use electro mechanical lift system. Our lift columns don't have anything to be maintained on the roof. If no maintenance is to be performed at the roof for the vertical lift system, would the requirement of providing the mentioned handrail be deleted?	Correct. If there is no maintenance to be performed at the roof for the vertical lift system, handrails can be deleted. Fall protection shall still be provided in order to inspect the condition of the roof.
25	Section 34 77 13, 2A.07, C, 4	Please verify that the intent of this paragraph is requiring the tunnels to have smooth roof and walls (no corrugation), which we provide as a standard feature. Please confirm if it is the intent. It further states, that continuous welding of the panels are required. As mentioned earlier, our standard design is based on using "C" panels, welding them on top and bottom corner angles and to tubes at the end of the tunnel, we spot weld the sides, and seal the seams with high grade sealants. This has been used successfully on more than 6,000 bridges, including in Chicago, JFK, Toronto, Saskatoon, Calgary, and at many other places. If continuous weld is mandatory, this will prevent us from submitting a bid. We respectfully ask our standard tunnel structure to be allowed.	Acceptable as noted as it meets the intent of the requirement.
26	Section 34 77 13, 2A.07, D, 2	It requires the roof to be crowned. We provide smooth roof as our standard. We further use water diverters to deflect water to sides. This has been our standard for the last 50 years and have been used successfully over 6,000 bridges. We ask our standard to be allowed.	Acceptable as noted as it meets the intent of the requirement.
27	Section 34 77 13, 2A.08, D, 2, c	It requires rain gutters to have yellow / black safety markings. To meet this requirement, we use completely yellow gutter. Please accept our standard.	Acceptable as noted as it meets the intent of the requirement.

28	Section 34 77 13, 2A.08, F, 1, a	It requires ceiling to be eight inch metal plank ceiling. This is our competitor's standard ceiling finish. We use smooth continuous coil coat painted galvanized metal ceiling finish. It provides better finish, and much easier to maintain. Attempting to provide plank ceiling will require major design change, which we can't make. We request our standard to be allowed, otherwise we can't bid.	Acceptable as noted as it meets the intent of the requirement.
29	Section 34 77 13, 2A.08, G, 1	It requires light fixtures to be placed parallel to the tunnel axis. Our tunnel structure does not allow this, instead we put them perpendicular to the tunnel axis, and provide the same amount of lighting. We ask our standard to be allowed.	Acceptable as noted as it meets the intent of the requirement.
30	Section 34 77 13, 2A.11, A, 2	It requires steering angle to be adjustable from 18 to 40 degrees per second. This is too fast and not safe for our design. Our wheel bogie can be adjusted from 7 degrees to 14 degrees. We ask our standard to be allowed.	Acceptable as noted as it meets the intent of the requirement.
31	Section 34 77 13, 2A.11, A, 6	This item requires wheel bogie to have mechanical stop. Our standard wheel bogie allows it to be rotated 90 degrees to right, 90 degrees to left. If this limit is reached, it triggers electric switch, which stops the movement. If this limit switch fails, it triggers a second set of limit switches, which than cuts the power to bridge. It acts as mechanical stop. Even if it is rotates beyond 90 degrees, it does not damage anything. We have used this system for more than 6,000 bridges. We ask our standard to be accepted.	Acceptable as noted as it meets the intent of the requirement.
32	Section 34 77 13, 2A.12, A, 1	It requires the vertical lift system to be electro mechanical ball screw. We use hydraulic lift system, which is much more suitable for cold climate. We have bridges in many cold climates such as throughout Canada, Chicago even in Siberia. Hydraulic lift system is much more efficient, require less maintenance with respect to electro-mechanical lift system. If electro-mechanical	A substitution request may be submitted for the hydraulic lift system.

		ball screw lift system is required, we can't bid.	
33	Section 34 77 13, 2A.13, B, 1, a	We do not use plywood in in our floor construction. We use galvanealed smooth surface. We ask our standard to be allowed.	Please describe how carpet is installed and removed from this surface. Also please provide three references.
34	Section 34 77 13, 2A.13, E, 5	We do not use actuators to deploy canopy. Our design is different from what is specified in the specifications, which is standard of our competitor's bridge. Our canopy deployment arms don't require cover. We ask our standard to be accepted.	Acceptable as noted as it meets the intent of the requirement
35	Section 34 77 13, 2A.13, G, 1	It requires CE/CRJ floor, which is JBT's standard CRJ floor. If we demonstrate that our system meets the performance requirements and equal or better than JBT's CE floor, would our CRJ floor accepted?	Acceptable as noted as it meets the intent of the requirement. Please note mobile bridge adapters are to be reused by the Airlines also.
36	Section 34 77 13, 2A.13, E	It requires two buttons to deploy right and left actuator arms, and use of pressure sensitive limit switches. Our design does not use actuators, therefore no need for two buttons, nor pressure sensitive limit switches. Our canopy system is activated by pressing one button, which activates both arms. They are deployed and pushed against the aircraft until canopy properly seals on fuselage. One button is needed to retract the canopy. We ask our standard design to be accepted.	Acceptable as noted as it meets the intent of the requirement.
37	Section 34 77 13, 2A.13, O, 1	It states "A service ladder and roof handrail shall be provided to facilitate routine maintenance access to roof components, (e.g. motors, fans): If no roof access is required for routine maintenance, we ask: a) Roof access ladder not to be required. b) If even roof access ladder is required, no handrail should be provided on the roof.	a) Roof access ladder shall be provided and installed. b) Accepted while fall protection shall still be provided and installed.

38	Section 34 77 13, 2A.14, P, 1	This requires an electrical disconnect panel to be provided to contain all disconnects. Typically, we use panel board on the rotunda column, and install all disconnects individually on this panel. This makes all disconnects readily accessible and easy to maintain. Would our standard be acceptable?	The PCA and GPU disconnects are mounted on the building or rotunda as shown on the electrical drawings. The existing disconnects will either be reused or new, provided by the Electrical Contractor. The main disconnect/panel for the bridge motors, lighting, and control circuits is shown on the electrical drawings to be mounted on a unistrut support system next to the rotunda. Individual breakers/disconnects will also be required for the bridge motors, lighting, and control circuits. It is acceptable to mount the bridge main disconnect/panel on the rotunda, however, the mounting hardware, brackets, etc. will need to be provided with the rotunda as noted on Sheet AP401, Detail 2. Field welding is not acceptable.
39	AP400	Drawing states "Architectural finish and attachments to be coordinated with architect in the field". Please verify who will provide this finish and who will install it.	PBB manufacturer to provide finishes and PBB installer to install them. Shop drawings with samples to be submitted prior to fabrication.
40	Special Provisions, Attachment 1	We respectfully ask to remove 'loss of use' from this section and mutually waive any and all consequential and/or indirect damages by adding the following sentence to this section: "Contractor shall not be obligated or liable for errors, inconsistencies, or omissions produced by Owner or others. In in addition unless otherwise specifically agreed to in writing by Owner and Contractor, neither party shall be liable for any special, indirect or consequential damages"	The Airport Authority will not be modifying their Insurance and Indemnification Requirements for this project.
41	Contract	We respectfully ask the Liquidated Damages to be capped at 10 % of the contract value. In addition, please add the following: "Liquidated damages shall not be assessed for delays not caused by the Contractor. Liquidated damages, when assessed, shall not exceed Contractor's proportionate share of the responsibility for such	The Airport Authority will not be modifying Contract with respect to Liquidated Damages.

		delay. This provision does not preclude any claim the Owner may have for direct damages under law"	
42	Electrical Plans	Do we know how far from the communication j-box to the bridge termination connection points? Per note 1 on all electrical drawing they are requiring us to install a 1 ¼" conduit and I don't see where that will be.	Typical connection point to bridge raceway system shown below: 
43	E-601	Detail A2 states that the power connection is by bridge contractor, does that mean the electrical contractor doesn't have to provide conduit?	The Passenger Boarding Bridge Contractor is responsible for the conduit and circuit connections from the Bridge Power Panel to the bridge motors, equipment, lights, receptacles, etc. The Electrical Contractor is responsible for the feeder from the Power Panel (PP-XX) to Bridge Panel (BP-XX)
44	Contract	Are there any Buy American provisions?	No.
45	General	Can site photos be provided?	Representative photos will be provided in Addendum 1. A site visit is recommended. Contact Bryan Belt (515) 256-5160 to arrange a site visit.
46	General	Can O&M manual be provided for the existing GPU and PCAs?	Manuals will be provided with Addendum 1.
47	Electrical Plans	I don't see conduit and wire shown on the electrical plans for the PCA disconnects. Where is the demolition and new work requirements identified?	The partial plans only identify the location of the equipment. The demolition of conduit and wire is shown on the one-line diagrams. See Sheet ED1202 for demolition and Sheet E-601 for new work requirements.

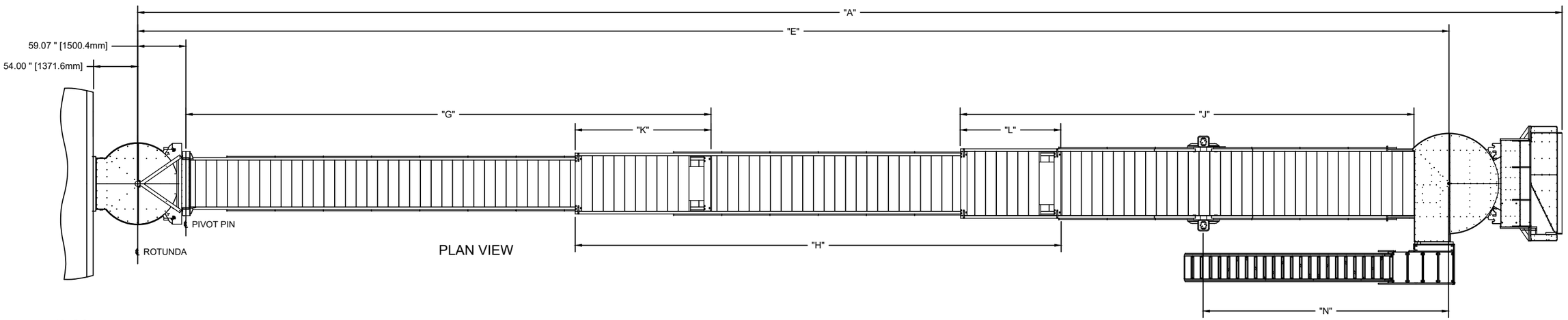
48	Electrical Plans	Will the cable for the Facilities Monitoring System be installed in the new 1-1/4" telecom conduit identified on the plans?	A data cable will be installed from the Facilities Monitoring System data jack location identified on Sheet E-400 to the IDF located in the Concourse. This cable will be installed by the Airport. The 1-1/4" conduit in the Concourse and from the Concourse to the PBB will be provided by the Electrical Contractor. Pathways on the PBB will be provided by the PBB Contractor. Pathways and control cabling from the Facilities Monitoring System control station to the GPU, PCA and Potable Water Cabinet will be provided by the PBB Contractor.
49	Bid Proposal	Could a separate bid item be added for the monitoring system?	A revised bid proposal form will be included with Addendum 1 to include three new bid items for the monitoring system. One item for each of the three phases.

	PCA				GPU		
Gate	**Mfg**	**Size**	**Model**	**Hose**	**Mfg**	**Size**	
A1	Trilectron	30 Ton	POU321	Reel	JBT	400 Hz	90 kVa/28VDC
A2	Trilectron	30 Ton	POU321	Reel	JBT	400 Hz	90 kVa/28VDC
A3	Trilectron	30 Ton	POU321	Snake	JBT	400 Hz	90 kVa/28VDC
A4	Trilectron	30 Ton	POU321	Reel	JBT	400 Hz	90 kVa/28VDC
C1	Trilectron	30 Ton	POU321	Basket	JBT	400 Hz	90 kVa/28VDC
C2	JBT	30 Ton	XPC-3013	Basket	JBT	400 Hz	90 kVa/28VDC
C3	JBT	30 Ton	XPC-3013	Basket	JBT	400 Hz	90 kVa/28VDC
C4	JBT	30 Ton	XPC-3013	Basket	JBT	400 Hz	90 kVa/28VDC
C5	HOBART	30 Ton	POU321	Basket	JBT	400 Hz	90 kVa/28VDC
C6	JBT	30	XPC-3013	Basket	JBT	400	90 kVa/28 DC

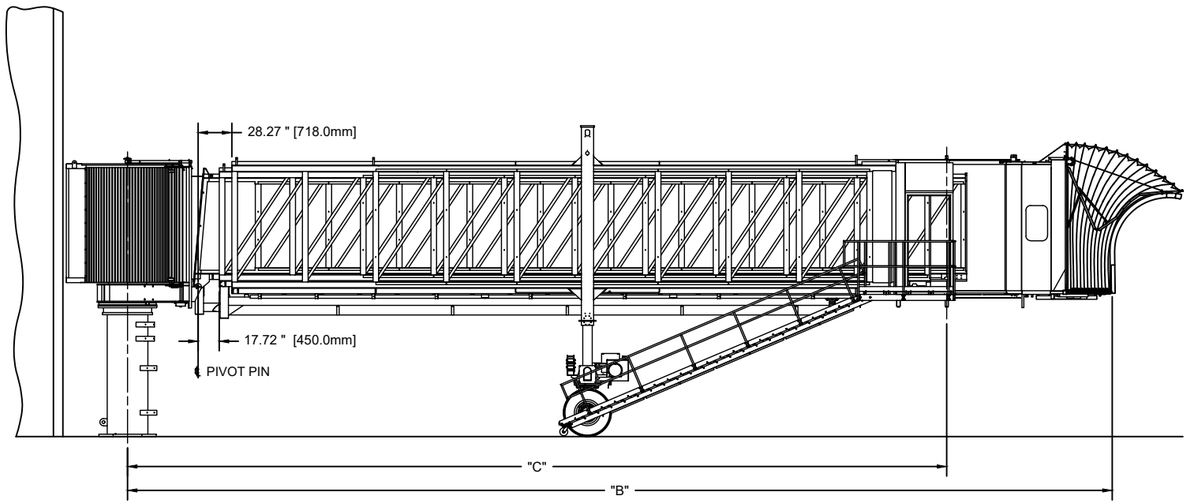
		Ton				Hz	
C7	JBT	30 Ton	XPC-3013	Basket	JBT	400 Hz	90 kVa/28 DC

EXHIBIT 2

MODEL NO.	"A" EXTENSION MAX	"B" RETRACTION MIN	"C" RETRACTION TO ELECTRICAL LIMITS	RECOMMENDED OPERATIONAL RETRACTION	"E" EXTENSION TO ELECTRICAL LIMITS	RECOMMENDED OPERATIONAL EXTENSION	"G" TUNNEL A	"H" TUNNEL B	"J" TUNNEL C	"K" EXTENDED TUNNEL OVERLAP A/B	"L" EXTENDED TUNNEL OVERLAP B/C	BRIDGE TRAVEL TO LIMITS	"N" LIFT COLUMN LOCATION
TC 23.00/13.10-3	76.44' (23.30 m)	44.13' (13.45 m)	32.64' (9.95 m)	35.93' (10.95 m)	64.96' (19.80 m)	61.68' (18.80 m)	26.64' (8.12 m)	25.00' (7.62 m)	21.72' (6.62 m)	9.06' (2.76 m)	7.81' (2.38 m)	32.35' (9.86 m)	10.30' (3.14 m)
TC 26.00/14.10-3	86.29' (26.30 m)	47.41' (14.45 m)	35.93' (10.95 m)	39.21' (11.95 m)	74.80' (22.80 m)	71.52' (21.80 m)	28.81' (8.78 m)	29.92' (9.12 m)	25.00' (7.62 m)	7.91' (2.41 m)	9.45' (2.88 m)	38.91' (11.86 m)	13.58' (4.14 m)
TC 29.00/16.10-3	96.13' (29.30 m)	53.97' (16.45 m)	42.49' (12.95 m)	45.77' (13.95 m)	84.65' (25.80 m)	81.36' (24.80 m)	31.56' (9.62 m)	29.92' (9.12 m)	31.56' (9.62 m)	9.06' (2.76 m)	7.81' (2.38 m)	42.19' (12.86 m)	15.22' (4.64 m)
TC 32.00/16.60-3	105.97' (32.30 m)	55.61' (16.95 m)	44.13' (13.45 m)	47.41' (14.45 m)	94.49' (28.80 m)	91.21' (27.80 m)	36.48' (11.12 m)	34.84' (10.62 m)	33.20' (10.12 m)	9.88' (3.01 m)	8.63' (2.63 m)	50.39' (15.36 m)	16.86' (5.14 m)
TC 35.00/17.10-3	115.81' (35.30 m)	57.25' (17.45 m)	45.77' (13.95 m)	49.05' (14.95 m)	104.33' (31.80 m)	101.05' (30.80 m)	41.40' (12.62 m)	39.76' (12.12 m)	34.84' (10.62 m)	10.70' (3.26 m)	9.45' (2.88 m)	58.60' (17.86 m)	18.50' (5.64 m)
TC 38.00/18.60-3	125.66' (38.30 m)	62.17' (18.95 m)	50.69' (15.45 m)	53.97' (16.45 m)	114.17' (34.80 m)	110.89' (33.80 m)	46.33' (14.12 m)	44.69' (13.62 m)	39.76' (12.12 m)	13.16' (4.01 m)	11.91' (3.63 m)	63.52' (19.36 m)	18.50' (5.64 m)
TC 41.00/19.60-3	135.50' (41.30 m)	65.45' (19.95 m)	53.97' (16.45 m)	57.25' (17.45 m)	124.02' (37.80 m)	120.73' (36.80 m)	48.69' (14.84 m)	44.69' (13.62 m)	43.04' (13.12 m)	12.20' (3.72 m)	8.63' (2.63 m)	70.08' (21.36 m)	21.78' (6.64 m)
TC 44.00/20.60-3	145.34' (44.30 m)	68.73' (20.95 m)	57.25' (17.45 m)	60.53' (18.45 m)	133.86' (40.80 m)	130.58' (39.80 m)	53.61' (16.34 m)	49.61' (15.12 m)	46.33' (14.12 m)	13.85' (4.22 m)	10.27' (3.13 m)	76.64' (23.36 m)	25.07' (7.64 m)



PLAN VIEW



ELEVATION VIEW

NOTES:

1. ROTUNDA DIMENSIONS (NOMINAL) -
   DOOR OPENING AT TERMINAL: 59.45"W X 90.91"H [1510mm X 2309mm]
   ROTATION: ± 87.5° (175° TOTAL)

2. TUNNEL INTERIOR DIMENSIONS (NOMINAL) -
   A - TUNNEL: 4'-11"W X 6'-11 3/16"H [1500mm X 2113mm]
   B - TUNNEL: 5'-9 11/16"W X 7'-10 13/32"H [1770mm X 2398mm]
   C - TUNNEL: 6'-8 5/16"W X 8'-9 5/8"H [2040mm X 2683mm]

3. ROTATING CAB DIMENSIONS (NOMINAL) -
   CANOPY (INTERNAL) WIDTH: 10'-2 1/2" [3111.5mm]
   ROTATION: 95° LEFT & 40° RIGHT (135° TOTAL)

4. LIFT AND DRIVE DIMENSIONS (NOMINAL) -
   HYDRAULIC LIFT CYLINDER STROKE: 120" [3048mm]
   WHEEL ROTATION: 90° LEFT & 90° RIGHT (180° TOTAL)

5. RETRACTION TO ELECTRICAL LIMITS (DIM "C") & EXTENSION TO ELECTRICAL LIMITS (DIM "E") ARE AT THE ELECTRICAL E-STOP, MECHANICAL STOPS ARE ±2.3" PAST E-STOP.

6. RECOMMENDED RETRACTION AND EXTENSION IS 39.37" [1000mm] SHORT OF ELECTRICAL STOPS.

7. MODEL TC 44.00/20.60-3 SHOWN

PARTS LIST

ITEM	QTY	UM	PART NUMBER	DESCRIPTION

ThyssenKrupp
Airport Systems, Inc.
A ThyssenKrupp Elevator Company

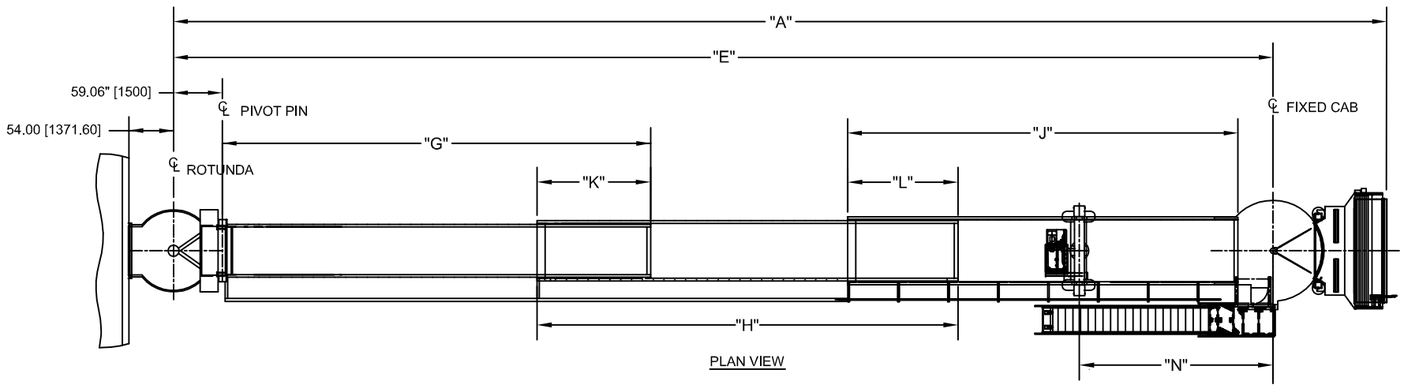
TITLE:
BRIDGE OPERATIONAL LIMITS
TKAS (3) TUNNEL CRYSTAL BRIDGE

ECN	LTR	DATE
11051	B	4/14/15
9243	A	8/19/11
REVISIONS		

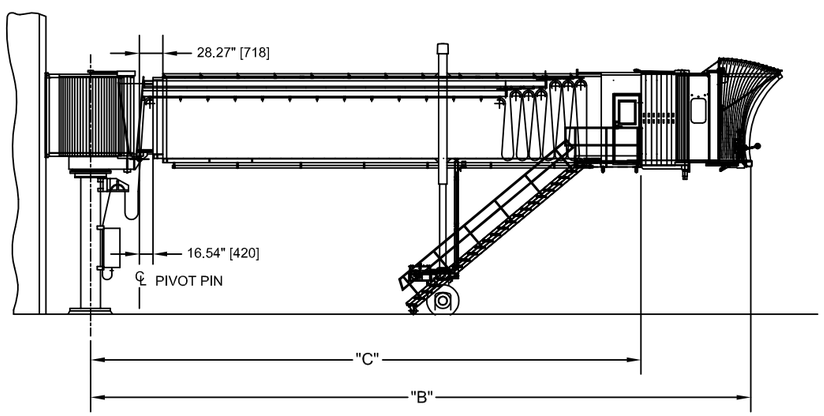
TOLERANCES: FRACTIONAL ± 1/16 DECIMAL XX ± .03 XXX ± .015 ANGULAR ± 1°
SIZE: D
DWG NO.: A8231151
REV.: B
DATE: 08/12/2008
DRAWN: CD
CHECKED: SPL
SCALE: 3/16"=1'0"
SHEET: 1 OF 1

PARTS LIST				
ITEM	QTY	UM	PART NUMBER	DESCRIPTION

MODEL #	"A" EXTENSION MAX	"B" RETRACTION MIN	"C" RETRACTION TO ELECTRICAL LIMITS	RECOMMENDED OPERATIONAL RETRACTION	"E" EXTENSION TO ELECTRICAL LIMITS	RECOMMENDED OPERATIONAL EXTENSION	"G" A-TUNNEL	"H" B-TUNNEL	"J" C-TUNNEL	"K" EXTENDED TUNNEL OVERLAP A/B	"L" EXTENDED TUNNEL OVERLAP B/C	BRIDGE TRAVEL TO LIMITS	"N" LIFT COLUMN LOCATION
TB 23/13.5-3	76.45' [23.30m]	45.28' [13.80m]	33.79' [10.30m]	37.08' [11.30m]	64.96' [19.80m]	61.68' [18.80m]	24.35' [7.42m]	23.62' [7.20m]	22.98' [7.00m]	7.38' [2.25m]	7.05' [2.15m]	31.17' [9.50m]	10.79' [3.29m]
TB 25/14.5-3	83.00' [25.30m]	48.56' [14.80m]	37.08' [11.30m]	40.36' [12.30m]	71.53' [21.80m]	68.24' [20.80m]	27.63' [8.42m]	26.90' [8.20m]	26.26' [8.00m]	9.02' [2.75m]	8.69' [2.65m]	34.45' [10.50m]	11.88' [3.62m]
TB 27/15.0-3	89.57' [27.30m]	50.20' [15.30m]	38.72' [11.80m]	42.00' [12.80m]	78.09' [23.80m]	74.81' [22.80m]	30.09' [9.17m]	29.36' [8.95m]	27.90' [8.50m]	9.02' [2.75m]	8.69' [2.65m]	39.37' [12.00m]	12.96' [3.95m]
TB 29/15.5-3	96.13' [29.30m]	51.84' [15.80m]	40.36' [12.30m]	43.64' [13.30m]	84.56' [25.80m]	81.37' [24.80m]	32.55' [9.92m]	31.83' [9.70m]	29.55' [9.00m]	9.02' [2.75m]	8.69' [2.65m]	44.29' [13.50m]	14.08' [4.29m]
TB 31/16.5-3	102.70' [31.30m]	55.12' [16.80m]	43.64' [13.30m]	46.92' [14.30m]	91.21' [27.80m]	87.93' [26.80m]	34.18' [10.42m]	33.47' [10.20m]	32.83' [10.00m]	9.02' [2.75m]	8.69' [2.65m]	47.57' [14.50m]	16.24' [4.95m]
TB 33/17.0-3	109.26' [33.30m]	56.76' [17.30m]	45.28' [13.80m]	48.56' [14.80m]	97.77' [29.80m]	94.49' [28.80m]	38.29' [11.67m]	37.57' [11.45m]	34.47' [10.50m]	10.66' [3.25m]	10.34' [3.15m]	52.50' [16.00m]	17.36' [5.29m]
TB 35/17.5-3	115.82' [35.30m]	58.40' [17.80m]	46.92' [14.30m]	50.20' [15.30m]	104.34' [31.80m]	101.05' [30.80m]	40.68' [12.42m]	40.03' [12.20m]	36.11' [11.00m]	10.66' [3.25m]	10.34' [3.15m]	57.42' [17.50m]	18.44' [5.62m]
TB 37/18.5-3	122.38' [37.30m]	61.68' [18.80m]	50.20' [15.30m]	53.48' [16.30m]	110.90' [33.80m]	107.62' [32.80m]	43.21' [13.17m]	42.49' [12.95m]	39.39' [12.00m]	11.49' [3.50m]	11.16' [3.40m]	60.70' [18.50m]	19.52' [5.95m]
TB 39/19.0-3	128.94' [39.30m]	63.32' [19.30m]	51.82' [15.80m]	55.12' [16.80m]	117.46' [35.80m]	114.18' [34.80m]	45.67' [13.92m]	44.95' [13.70m]	41.03' [12.50m]	11.49' [3.50m]	11.16' [3.40m]	65.62' [20.00m]	20.64' [6.29m]
TB 41/19.5-3	135.51' [41.30m]	64.96' [19.80m]	53.48' [16.30m]	56.76' [17.30m]	124.02' [37.80m]	120.74' [36.80m]	49.77' [15.17m]	49.05' [14.95m]	42.67' [13.00m]	13.13' [4.00m]	12.80' [3.90m]	70.54' [21.50m]	21.72' [6.62m]
TB 43/20.5-3	142.07' [43.30m]	68.24' [20.80m]	56.76' [17.30m]	60.04' [18.30m]	130.58' [39.80m]	127.30' [38.80m]	51.41' [15.67m]	50.69' [15.45m]	45.95' [14.00m]	13.13' [4.00m]	12.80' [3.90m]	73.83' [22.50m]	22.81' [6.95m]
TB 45/21.0-3	148.63' [45.30m]	69.89' [21.30m]	58.40' [17.80m]	61.68' [18.80m]	137.15' [41.80m]	133.86' [40.80m]	53.87' [16.42m]	53.15' [16.20m]	47.59' [14.50m]	13.13' [4.00m]	12.80' [3.90m]	78.74' [24.00m]	22.81' [6.95m]



PLAN VIEW



ELEVATION VIEW

NOTES:

1. ROTUNDA DIMENSIONS (NOMINAL) -
   DOOR OPENING AT TERMINAL: 59.45"W x 90.91"H [1510mm x 2309mm]
   ROTATION: ± 87.5° (175° TOTAL)

2. TUNNEL INTERIOR DIMENSIONS (NOMINAL) -
   A - TUNNEL: 4'-10"W x 6'-11"H [1472mm x 2110mm]
   B - TUNNEL: 5'-7"W x 7'-8 1/2"H [1702mm x 2350mm]
   C - TUNNEL: 6'-4 3/8"W x 8'-6 3/8"H [1940mm x 2600mm]

3. ROTATING CAB DIMENSIONS (NOMINAL) -
   CANOPY (INTERIOR) WIDTH: 10'-2 1/2"W [3111.5mm]
   ROTATION: 95° LEFT & 40° RIGHT (135° TOTAL)

4. LIFT AND DRIVE DIMENSIONS (NOMINAL) -
   HYDRAULIC LIFT CYLINDER STROKE: 120" [3048mm]
   WHEEL ROTATION: 90° LEFT & 90° RIGHT (180° TOTAL)

5. RETRACTION TO ELECTRICAL LIMITS (DIM "C") &
   EXTENSION TO ELECTRICAL LIMITS (DIM "E") ARE
   AT THE ELECTRICAL E-STOP, MECHANICAL STOPS
   ARE ±2.3" PAST E-STOP.

   WHEN ICE SRAPERS ARE USED, THE RETRACTION
   TO ELECTRICAL LIMITS (DIM "C") IS REDUCED BY 5",
   AND MECHANICAL STOP FOR RETRCATION IS
   RELOCATED 1/2" PAST E-STOP.

6. RECOMMENDED RETRACTION AND EXTENSION
   IS 39.37" [1000mm] SHORT OF ELECTRICAL STOPS.

NOTE: MODEL SHOWN TB 37/18.5-3.

LTR	DATE	REVISIONS
F.	10/7/04	
E.	3/27/03	
D.	3/8/01	
C.	8/11/99	
B.	11/18/98	
A.	10/27/98	

ThyssenKrupp Airport Systems, Inc.
A ThyssenKrupp Elevator Company

TITLE: BRIDGE OPERATIONAL LIMITS
TKAS (3) TUNNEL BRIDGE

TOLERANCES: FRACTIONAL ± 1/16 | DECIMAL .XX ± .03 .XXX ± .003 | ANGULAR ± 1°
SIZE: D | DWG NO.: A8209253 | REV: F
DATE: 8/16/98 | DRAWN: DL | SCALE: 1/8"=1'0" | SHEET: 1 OF 1

EXHIBIT 3

ThyssenKrupp Airport Systems
Recommended Spare Parts List

ThyssenKrupp

Project Name: Southwest Florida Int'l Airport (RSW) **Project Number:** Bids **# of Bridges:** 27

HYDRAULIC SPARE PARTS

Bid Part #	Description	MFG Name	MFG Model #	Base Qty	Project Qty	Unit Price	Total
BDA5228400	HYDRAULIC PUMP	PARKER	334-9112-227	1	2	$368.08	$736.16
BDA5228403	PC FLOW CONTROL	PARKER	FR101S550-20	1	2	$79.20	$158.40
BDA5234600	PILOT OPERATED RELIEF VALVE	PARKER	RAH101S50	1	2	$59.53	$119.06
BDA5228405	DIRECTIONAL VALVE	PARKER	DSL104BPD024D	1	2	$256.96	$513.92
BDA5228406	DIRECTIONAL VALVE	PARKER	DSL101NMD024D	1	2	$152.02	$304.04
BDA5228407	CHECK VALVE	PARKER	CVH103P	1	2	$26.40	$52.80
BDA5228408	NEEDLE VALVE	PARKER	NVH081S	1	2	$34.85	$69.70
BDA5234168	FILTER ELEMENT, HPU	PARKER	937617Q	10	10	$87.85	$878.46
BDA5228413	GAUGE	PARKER	2141SXB3000	1	2	$20.66	$41.32
BDA5228414	LEVEL GAUGE	PARKER	SNA-254-B-S-0-12	1	2	$44.88	$89.76
BDA5228415	BALL VALVE	PARKER	V502P-8	1	2	$40.37	$80.74
BDA5228416	CYLINDER HOSE ASSEMBLY	TKAS	FAX0641-8-8-8-62	1	2	$228.76	$457.51
BDA5228417	PO CHECKHOSE ASSEMBLY	TKAS	FAX0641-6-6-6-67	1	2	$213.82	$427.64
BDA5228418	PUMP HOSE ASSEMBLY	TKAS	FAX06OG05-6-10-6-18.00	1	2	$112.86	$225.72
BDA5232026	O RING KIT, WILSON HPU	PARKER	A4230293	1	2	$33.00	$66.00
BDA5215690	ELECTRIC MOTOR, 7.5 HP, 460VAC	PARKER	WWE7.5-18-213TD	1	2	$1,445.25	$2,890.49
						Subtotal	**$7,111.72**

Lead-Time estimate 1-2 weeks upon receipt of purchase order. Cost includes FOB TKAS Fort Worth, TX

Note: The above recommended spare parts listing is standard. Part numbers and prices are subject to change due to project specification requirements.

NOTE: These spare parts lists are for bid purposes only.
DO NOT order from these lists.

EXHIBIT 4

SARASOTA MANATEE AIRPORT AUTHORITY
Engineering, Planning & Facilities
6000 Airport Circle
Sarasota, FL 34243
Phone: (941) 359-2770, xt. 4270
Fax: (941) 359-5007

DATE: April 4, 2017

TO: All Interested Proposers

RE: Addendum #2, BID-2017-1-JBR, Q & A
Power Distribution & Jet Bridge Replacement Construction Project

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- The following questions were submitted by bidders, responses are noted in red.

Passenger Boarding Bridges
1.12.R.6 Axles, wheels and tires shall be operated within their respective manufacturer's recommendations. Tire footprint loads shall be limited to 200 P.S.I. The JBT Jetway standard design relies on solid tires. These do exceed the 200 psi limit specified but they are overwhelmingly accepted across the industry. Please allow our design.
This will be allowed.

SECTION 11 85 02 – POU DX UNITS
1.07.D. The spec requires motors, enclosures, and electrical accessories shall comply with NEMA standards and be so rated. If electrical accessories include contactors and circuit breakers then we cannot comply. We use IEC rated contactors and circuit breakers in our PCA units. IEC contactors are allowed per 2.06.N.4. Please allow our design.
This will be allowed.

2.04.B.2. An inlet Butterfly damper is required. We use outlet dampers. Please allow our design.
This will be allowed.

2.04.G. The DX POU unit components shall operate satisfactorily under ambient temperature conditions of -20° to 140° F (-29° to 60° C). We will not be able to comply with 140° F (60° C) ambient temperature with the blower VFD in the units. The VFDs that are used in the units have standard ambient operating condition of 5° F - 104° F (-15° C to 40° C). We can provide the next size larger VFD which will allow the increase of the ambient temperature to 122° F (50° C). Please allow ambient temperature conditions of -20° to 122° F (-29° to 50° C). This will require the next size larger VFD to be provided in the unit.
This will be allowed to the extent the remaining specifications are adhered to and there are no adverse effects on the VFD or the unit at the project site.

2.04.H. The blower wheel shall receive a two (2) plane dynamic balance at maximum RPM and the maximum allowable vibration velocity shall not exceed 0.1 inch/second or 0.5 MIL displacement. We use blowers manufactured by Aerovent that are balanced in accordance with ANSI/AMCA 204-96 "Balance Quality and Vibration Levels for Fans" to Fan Application Category BV-3, Balance Quality Grade G6.3. Fan Application Category BV-3 is equal 0.15 in/second. Please accept our standard.
This will be allowed.

2.04.J. Where the Dx POU unit components are assembled within a unitized enclosure, provide access doors of the hinged and insulated type. 2.03.J.9 allows as an alternate removable door panels. 2.07.B.1. requires a minimum of 1" thick thermal insulation for units with a unitized enclosure construction. We use hinged doors and bolt on panels to access components inside the PCA unit. Access to the VFD, blower, dampers, and coils require removing a bolt on panel. Access to the air inlet filters requires removing a bolt on louver. Our PCA unit design is not considered to be a unitized enclosure so our hinged doors and bolt on panels are not required to be insulated. Thermal insulation is applied to the evaporator coil and the outlet plenum as required per 2.07.I.1.a. Please accept our standard design.
This will be allowed.

2.05.A.1.d. Aircraft electrical load of 75,000 BTU/H should be used for design. The electrical load as specified for the design aircraft and referenced in the aircraft Maintenance Facility and Equipment Planning manual for each of the required aircraft will be used in place of 75,000 BTU per hour to verify PCA unit sizing. Using 75,000 BTU/H would increase the size of the PCA unit required.
This will be allowed to the extent the remaining specifications are adhered to, including properly cooling the aircraft as specified.

2.05.A.2.a. requires that Class III DX POU units shall be capable of providing a minimum of 240 lb/min of 35°F air at 22" static pressure at the end of a single 14" diameter 75' long insulated air hoses. The JBT 50 ton unit is rated at 240 lb/min at 22" static pressure and 34°-38°F air at the outlet of the unit. 2.05.S.2.b. requires that Class IV DX POU units shall be capable of providing a minimum of 550 lb/min of 35°F air at 35" of static pressure at the end of dual 14" diameter 75' long insulated air hoses. The JBT 120 ton unit is rated at 550 lb/min at 35" of static pressure and 34-38°F air at the outlet of the unit. Please note that 2.04.E. states that the unit external static pressure shall be defined as the gauge pressure measured at the outlet of the DX POU unit. The DX POU unit's manufacturer shall submit the gauge pressure the DX POU unit can produce at the outlet of the hose and at the aircraft connection through 75'0 of 14" hose.
This will be allowed to the extent the remaining specifications are adhered to, including properly cooling the aircraft as specified.

2.06.D.3. All wiring shall be terminated on terminal blocks and/or suitable connectors. Our standard is to cap the spare wires with heat shrink tubing and neatly secure them in the wire-way system inside the control panel. We request that you allow us to consider the heat shrink cap as a suitable connector. If this is not acceptable then additional manufacturing time and cost for terminal blocks will be required. Please allow our design.
This will be allowed.

2.06.D.4. The specification requires that all wiring shall be in conduit (preferably automotive split loom) or spot tied and shall be routed away from possible pinch points. For clarification, we use cables inside our PCA unit not individual wires that require conduit or automotive split loom. We do not use conduit or automotive split loom with cables. Please allow our design.
This will be allowed.

2.06.D.5. All meter panels and any components containing printed circuit boards or solid state electronics shall be shock mounted. We have components inside our PCA unit that contain circuit boards that are not shock mounted. These components are mounted per the manufacturer's recommendations.
This will be allowed.

2.06.D.9. Exterior conductor/cables shall be in conduit. Exposed cables will only be allowed where required due to flexibility and then will be limited to a maximum of 48". Exception should be taken to a maximum of 48". We use cables because of flexibility requirements but their exposure is not limited to 48". NEC permits the use of full run exposed cables when flexibility is required.
This will be allowed.

2.07.A.1. Hermetic sealed scroll compressors with integral vibration isolators are required. We solid mount the compressors in our PCA unit per the manufacturers recommendations. Low/high refrigerant pressure cutouts with manual reset are required. We use low and high refrigerant pressure cutouts that are automatic reset. A low oil pressure cutout with manual reset is required. The scroll compressor is not provided with an oil pressure cutout.
This will be allowed.

2.07.I.1.a. Disposable air filters are required. Filter media shall be made from polyurethane foam and open cell structure providing high arrestance and dust-holding capacity. Foam material shall have a flame-resistant additive making id self-extinguishing. Please note that this type of filter is considered to be a washable filter and not disposable.
No response.

2.07.M. A thermostatic expansion valve is required. We will comply by providing an electronic expansion valve in lieu of the thermostatic expansion valve.
This will be allowed.

2.07.N.2.c. The portable laptop computer shall include all hardware and software required to support local communications, trouble shooting and programming of the PCA Dx Unit's controller. We do not allow the PLC in the PCA unit to be programmed by the customer. Read only access will be granted.
This will not be acceptable.

2.07.N.4. Contactors shall be AC operated with 120V 50/60Hz holding coil. The contactors we use have 24VDC coils. Please allow our design.
This will be allowed.

2.07.N.5. Thermostats shall be utilized in the system to maintain the required temperature parameters of the supply air. We do not use thermostats to maintain the required temperature. We use the PLC to maintain temperature and control the unit. Please allow our design.
This will be allowed.

2.07.P.1. The control station shall be housed in a NEMA 4X stainless steel enclosure. The station shall be configured as indicated on the design drawings. Modifications to this configuration must be submitted and approved. Drawing E-702 shows the configuration of the push button control station which does not match our control scheme. We will provide a push button control station with a SST enclosure. This push button control station will follow our standard controls scheme and should be provided for approval. Reference the 511710 drawing for the configuration of the control station for the 50 ton unit.
TBD. No drawings were received.

2.07.T. The hose basket shall be installed at an approved location at the front or side of the wheel bogey as necessary based on aircraft serviced. Drawing M-106 shows a single large bay hose basket with a swivel connection mounted to the left side of the wheel bogie. Drawings ME-200 and ME-201 show the basket mounted on the aircraft side of the drive columns. Nothing is mentioned about extension hose storage and ABC adapter requirements. More clarification will be needed to determine what to provide for hose storage. Please provide.

Please note that it must be verified that there is clearance under the bridge to access the basket for the 120 ton units. There is not enough information to determine this at this time.
All information necessary is available. Comply with Section 118502 2.07T.2 which requires the hose basket be mounted at the front or side of the wheel bogey as necessary based on aircraft serviced. Extension hoses are required per M-106 legend note 2.

2.09.C.1. Maximum weight for Class III PCA unit is shown as 4000 lbs. The 50 ton unit weighs approximately 4200 lbs.
This will be allowed.

1.12.R.9.a.1 The lift mechanism shall consist of two (2) extra capacity hydraulic rams. Each assembly shall be independent of the other and capable of supporting the bridge under full design load. An adjustable rate pump and cylinder system shall provide the necessary lift speed measured at the aircraft cab bumper.
Our standard hydraulic pump is a constant volume pump. An adjustable rate pump adds considerable cost without much benefit. Please allow our standard.
This will be allowed.

TECHNICAL SPECIFICATIONS QUESTIONS

SECTION 118504 – PASSENGER BOARDING BRIDGE

Q1: Pg. 1, Section 1.01.A.1 SECTION INCLUDES, "…only truss style (smooth sided) 3-tunnel bridges will be allowed on this project."

ThyssenKrupp bridges use a standard tunnel design that consists of the exterior side, roof, and floor panels manufactured from 14 gauge galvannealed steel panels attached to a framework of angle and tubing. These panels are formed, welded, sealed, and painted to form the steel enclosure. Strength is derived from the formed sheet metal ribs, while the flat exterior walls provide a pleasing architectural appearance. We kindly request approval of our standard galvannealed steel panels attached by a framework of angle and tubing. It appears as if your description of your PBB meets the definition of a "truss" style PBB, which is allowed. The PBBs must adhere to the requirement contained in 118505 - 1.12.J.7 that requires all intersecting steel plates to be 100% welded.

Q2: Pg. 10, Section 1.12.D.3 Personnel Safety, "OSHA approved handrails will be installed atop ½ the outer most tunnel section to provide fall protection to personnel working on drive motors, etc."

ThyssenKrupp standard bridges do not require roof access for maintenance on the vertical drive motors, therefore we request an exception to this requirement. We can provide safety cable for the outermost tunnel that can be used if roof access is necessary.
Handrails will be required.

Q3: Pg. 12, Section 1.12.G.10 Technical Performance Requirements, "…the PBB shall be capable of achieving a minimum of 12% slope without causing damage to the PBB or ancillary equipment, including PCA or 400 Hz equipment, for maintenance or irregular operation activities."

ThyssenKrupp standard bridges are adjustable to +/- 10%, which is above the allowable ADA slope of 8.33% and should not hamper maintenance activities for the bridge or ancillary equipment. We kindly ask approval of our standard.
To the extent that all aircraft are properly services as specified, and all other performance requirements of the specification are adhered to, this will be allowed.

Q4: Pg. 12, Section 1.12.H.1 Environmental Considerations, "The bridge shall function satisfactorily and in accordance with these specifications under ambient temperatures from -40 degrees F…"

ThyssenKrupp's standard lowest operational temperature is -25 degrees F. Considering the locale and climate this airport resides in, -25 degrees F should be more than adequate for maintaining bridge function throughout the year. We kindly ask approval of our standard.
This will be allowed.

Q5: Pg. 12, Section 1.12.H.4 Environmental Considerations, "PBB shall be equipped with external tunnel roller ice scrapers to remove ice from the tracks prior to contact with the rollers."

Due to the environment and locale of this airport, we do not foresee a need for this requirement. We request an exception to this requirement.
This will be allowed.

Q6: Pg. 14, Section 1.12.J.7 Materials, Parts and Processes, "All intersecting steel planes, e.g. side to top, side to bottom, of exterior steel sections of the passenger boarding bridge shall be 100% welded. Caulk shall not be used to provide weather seals."

ThyssenKrupp's standard tunnel side panels are spot-welded and caulked to provide a weathertight seal and an appealing finished appearance. This standard is in use with many airports throughout the country in a variety of harsh environments. We kindly ask approval of our standard in order to provide a competitive bid for this project.
This will not be allowed. The specification will stand as is.

Q7: Pg. 18, Section 1.12.R.7 Drive Column, "Wheel/Tire assemblies shall be solid rubber tire tread on forged steel wheels as manufactured by Trelleborg or approved equal."

Our standard wheel/tire assemblies are from OTR and consist of solid rubber tires and aluminum hubs. These assemblies are in service on many of our standard bridges for a variety of projects. We kindly ask for approval of our standard.
This will be allowed.

Q8: Pg. 18, Section 1.12.R.9.a.2 Drive Column, "The lift cylinders shall be equipped with internally mounted velocity fuses that prevent the bridge from descending in the event of fluid loss or other system failure."

ThyssenKrupp's hydraulic lift cylinders are equipped with pilot-operated check valves instead of velocity fuses. We have used velocity fuses in the past and have found that when raising the bridge they will lock in place and not allow the bridge to lower. Pilot-operated check valves provide the same level of protection requested, but without the problems that we have experienced previously. We request approval of our standard.
This will be allowed.

Q9: Pg. 19, Section 1.12.R.9.b.2 Drive Column, "The hydraulic reservoir (tank) shall have the capability of being electrically heated during severe weather conditions."

Due to the environment and locale of this airport, we do not foresee a need for this requirement. We request an exception to this requirement.
Provided the hydraulic fluid is rated for the SRQ ambient extremes without additional heat, and to the extent that PBB performance is not degraded, this will be allowed.

Q10: Pg. 23, Section 1.12.S.19 Aircraft Cab with Operator's Station, "Subfloors in the cab area of the PBB, including the porch area outside the double doors shall be provided with aluminum sub-floors. Plywood is not allowed."

While our porch area consists of aluminum, ThyssenKrupp's subfloor in the cab area is carbon steel and does not utilize plywood. Therefore, the rotting/degradation typically seen with plywood is not present. We kindly request approval of our standard.
This will not be allowed. The specification will stand as is.

Q11: Pg. 30, Section 1.12.AB.22 Electrical System and Components, "The provisions shall include a flush mounted "J" box containing two (2) 12-pair CAT-6 communication cable…"

ThyssenKrupp requests an exception to this. It is our understanding from several cable manufactures and distributors that CAT-6 cable has limited choices of styles and designs. The cable comes in both stranded and solid conductor, but both have physical restraints. Solid cable is not recommended for continuous, flexing applications like the passenger boarding bridge's cable conveyance systems. It is also desirable to have shielding in this application, but it is not available with this cable. Stranded cable is manufactured for patch cables only and, according to the manufacturer and the standard, should be limited to a maximum of 10 meters in total length. Given the original purpose of this cable, it is not manufactured with the environmental considerations we need, nor with shielding that would be desirable in this application. We kindly request approval of our standard CAT-5E cabling.
This will be allowed.

Q12: Pg. 31, Section 1.12.AB.24.b Electrical Systems and Components, "Tunnel lighting shall be provided by recessed LED panel fixtures with diffusers …shall be positioned parallel to the tunnel centerline…"

ThyssenKrupp's lighting is aligned perpendicular to the tunnel centerline. We are able to meet all other requirements for tunnel lighting, but ask for acceptance of our standard lighting arrangement.
To the extent that all other lighting requirements are met as specified, and all other performance requirements of the specification are adhered to, this will be allowed.

Q13: Pg. 33, Section 1.12.AC.4.b Finishes and Materials, "Interior wall treatment shall consist of floor to ceiling 4-foot-wide laminated phenolic plastic panels…"

Our wall panels are made from fire-rated, particle board laminated between two pieces of Wilsonart Laminate to provide a durable surface finish. One side is a colored laminate, the other side a phenolic sheet. Melamine resin is used along with phenolic resin to manufacture this laminate surface. These materials are bonded together with kraft paper under high heat and pressure to form the finished decorative product. We request approval to use our standard laminate.
To the extent that all other requirements are met as specified, and all other performance requirements of the specification are adhered to, this will be allowed.

Q14: Pg. 11, Section 1.12.D.15 Personnel Safety, "Interior rain gutters shall be painted with alternating yellow/black safety striping the entire length."

ThyssenKrupp offers gutters in either a solid safety yellow or solid black for a pleasing finished appearance. We request approval of our standard in the color of the Owner's choosing.
Yellow will be allowed.

Q15: Pg. 26, Section 1.12.U.1 Aircraft Canopy, "Pressure sensitive limit switches shall be incorporated into each side of the closure actuator mechanisms as necessary."

ThyssenKrupp uses a specially-designed canopy deployment mechanism that precludes the possibility of applying excessive force to the aircraft fuselage. Self-contained struts limit the maximum pressure applied to the aircraft, making a pressure sensor unnecessary. The struts

provide sufficient pressure to extend the canopy and maintain a complete seal with the aircraft fuselage without applying additional contact pressure. Each side lowers independently and stops automatically when contact is made with the aircraft. We request approval of our standard.
To the extent that all other requirements are met as specified, and all other performance requirements of the specification are adhered to, this will be allowed.

Q16: Please provide the Airport Layout in CAD DWG format.
The Airport Layout CAD DWG will be provided.

Q17: On the Bid Form provided, it shows line items for the "PBB with all ancillaries" as well as line items for the actual ancillary equipment (GPU, PCA, etc.). It seems that this format would cause a "double-charge" once the total Base Bid is calculated. Is this correct? Or should the PBB items exclude the ancillary equipment? There should be no "double-charges". It will be up to each bidder to determine which items go into which line item. PBB ancillaries can include gate signs, hurricane tie downs, disconnect panels, CCTV, etc.

SECTION 118601 – OVERBRIDGE DEVICE

Q18: Pg. 1, Section 1.01.B.1 SECTION INCLUDES, "Devices may be referred to as "doglegs" or "pantographs"."

ThyssenKrupp standard bridges are equipped with a side-mounted exterior electrical conveyance system. Our design allows maintenance personnel easy access for inspections or cable additions at all bridge positions and operating conditions and also prevents the need for onsite installation of pantographs. We kindly ask acceptance of our standard.
This will be allowed. Note: All cables shall be UL listed and suitable for sunlight exposure.

Q19: If pantographs are required, can MCM be added to the approved manufacturers? From MCM: **"**We have been sourcing these devices for the entire life of our company and the design goes back to our predecessor company McCormick Morgan. We make arguably the best pantograph so being specifically excluded from the spec is uncalled for."
MCM can certainly be added.

SECTION 118502 – DX POU PCA UNITS

Q20: 2.06.F.1, Twist Inc. units are equipped with TVSS on the power that supplies the OEM Control Boards. We do not have TVSS on the entire unit. May our TVSS on the Control Boards be accepted in lieu of the whole unit?
This will not be allowed. The specification will stand as is.

Q21: 2.07.P.1, Twist Inc. remote control station is housed in a NEMA 4X fiberglass box. Is this acceptable in lieu of the required stainless steel box?
This will be allowed.

Q22: 2.09.C.1& .2, Twist Inc. PCA Class III Dimensions are 114"X88"X59", 4,700 pounds. Our PCA Class IV Dimensions are 160"X88"X62", 9,300 pounds. We have many of these size units in the field, mounted underneath the C Tunnel, as desired for this project. May our Class I and Class IV unit size and weight be allowed?
To the extent the units do not impact PBB operations, this will be allowed.

FINANCIAL & CONTRACTUAL QUESTIONS

CONTRACT FORM

Article 9. OWNER DIRECT PURCHASE.

This section states:

"9.1 It is intended that OWNER shall avail itself of its governmental exemption from sales and use taxes, by making "Owner Direct Purchase" (ODP) from the manufacturers of the equipment and materials described in Article 1. Accordingly, OWNER hereby assigns to the CONTACTOR limited authority to act as its agent in taking delivery of said equipment and materials. (…)"

We respectfully ask to confirm that Bidder will be exempt from any Sales and Use taxes related to the project.
Only the equipment for which the Contractor will act as an agent for the Owner is exempt from sales and use taxes. It is the intention of the Owner to purchase the passenger boarding bridges directly from the manufacturer using this method.

ERRATA SHEETS

70-11 Responsibility for Damage Claims.
b. Indemnification:

This section states:

"(1) The Contractor shall indemnify and hold harmless Owner and Engineer and their consultants, agents and employees from and against all claims, damages, losses and expenses, direct, indirect or consequential (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs), provided that any such claim, damage, loss or expense (a) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom and
(b) is caused in whole or in part by any negligent act or omission of Contractor, any Subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, regardless of whether or not it is caused by a party indemnified hereunder or arises by or is imposed by Law or Regulations regardless of the negligence of any such party."

We respectfully ask to remove the following part of the last sentence of 70-11 b. (10 (b): "regardless of whether or not it is caused by a party indemnified hereunder or arises by or is imposed by Law or Regulations regardless of the negligence of any such party."
This is standard SRQ bid language used on all projects and will not be modified.

This section further states:

"(2) In any and all claims against Owner or Engineer or any of their consultants, agents or employees by any employee of Contractor, any Subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, the indemnification obligation under paragraph 70-11.b(1) above shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for Contractor or any such Subcontractor or other person or organization under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.(…)"

We respectfully ask to mutually waive consequential and incidental damages.
This is standard SRQ bid language used on all projects and will not be modified.

GENERAL PROVISIONS

80-8 Failure to complete on time.

This section states:
"For each calendar day or working day, as specified in the contract, that any work remains uncompleted after the contract time (including all extensions and adjustments as provided in the subsection 80-07 titled DETERMINATION AND EXTENSION OF CONTRACT TIME of this Section) the sum specified in the contract and proposal as liquidated damages will be deducted from any money due or to become due the Contractor or his or her surety. (…)"

We respectfully ask the Liquidated Damages to be limited with 0.1 % per day and capped at 10 % of the contract value.
This is standard SRQ bid language used on all projects and will not be modified.

90-6 Partial payments.

This section states:

"Partial payments will be made to the Contractor at least once each month as the work progresses. Said payments will be based upon estimates, prepared by the Engineer, of the value of the work performed and materials complete and in place, in accordance with the contract, plans, and specifications. (…)"

We respectfully ask that Owner shall make monthly progress payments as agreed upon in schedule of values. Please confirm that it will be acceptable to include progress billings for engineering, material, and labor costs incurred during the manufacturing process and prior to delivery.
This is standard SRQ bid language used on all projects and will not be modified.

SECTION 130
COMPLIANCE WITH FEDERAL LAWS AND REGULATIONS
Termination for Convenience

This section states:

"The Owner may terminate this contract in whole or in part at any time by providing written notice to the Contractor.(…) Owner agrees to pay for: (…)"

We respectfully ask to include the following paragraph after 1. :
As well as the proportional contract value of work performed, including but not limited to the value of work in process, in transit, delivered to site, or in storage, and for any costs incurred and all work that the Contractor has performed up to the date of termination plus a reasonable rate of profit for the work performed. In addition, the Contractor reserves the right to assess other costs if the Owner terminates for convenience. Except as specifically agreed in writing, termination shall not relieve either party of any obligation arising out of work performed prior to the date of termination. The Owner agrees to limit possession to work and materials previously paid for by the Owner to the Contractor.
This is standard SRQ bid language used on all projects and will not be modified.

70-11 Responsibility for Damage Claims/ a. Insurance:

This section states:

"(…) All of the policies of insurance so required to be purchased and maintained (or the certificates or other evidence thereof) shall contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least thirty days prior written notice has been given to Owner and Engineer by certified mail."

Please remove the requirement "materially changed" as Bidder's insurance carriers will not agree to provide such notice.
This is standard SRQ bid language used on all projects and will not be modified.

This section further states:

"c. Coverages: The limits of liability for the insurance required by, Paragraph 70-11.a shall provide coverage for not less than the following amounts or greater where required by law:
(…)

(4) Builders Risk/Installation Floater:"

We respectfully ask to amend builder's risk/Installation Floater to "All-Risk Commercial Property.
This is standard SRQ bid language used on all projects and will not be modified.

This section further states:

d. The Contractor shall obtain in the name of the Owner, Owner's Protective Liability Insurance which will have the same limits of coverage for the same period as that required in paragraph 70-11.c(2) above for the Contractor's general liability coverage, including liability for acts of Subcontractors and Subordinate Contractors.

We respectfully ask to remove this requirement as this coverage is not currently available. Alternatively, we could offer additional insured status in lieu of OCP policy.
This is standard SRQ bid language used on all projects and will not be modified.

EXHIBIT 5

DALLAS FORT WORTH INTERNATIONAL AIRPORT

ADDENDUM NO. 5

Terminal B & E Passenger Boarding Bridge Replacement Gates B9, B26, E31, E34

CONTRACT NO. 9500667

January 15, 2019

The Request for Bids for the above is hereby revised as follows:

Technical Specifications Revisions

1. N/A

Plan Sheet Revisions

1. N/A

Schedule Revisions

1. N/A

RFB Revisions

1. Appendix 1 – Bid Detail is replaced with the attached and revised to include acknowledgement of this Addendum No.5.

Solicitation Questions (Q) and Answers (A)

1. (Q) Thyssenkrupp's standard bridge tunnel design consists of the exterior side, roof and floor panels manufactured from 14 gauge galvannealed (galvannealed material provides additional corrosion protection superior to hot-rolled, coil steel, and galvanized) steel panels attached to a framework of angle and tubing. These panels are formed, welded, sealed and painted to form the steel enclosure. Strength is derived from the formed sheet metal ribs, while the flat, exterior walls provide a pleasing architectural appearance. Changing our design to a corrugated or truss style would be significant cost. As an approved manufacturer, we feel that our standard design should be allowed.

(A) The Addendum-3 section 1.12.J.7, specifying welding and caulk, was removed. The Addendum-4 section 1.12.J.7 specifies the components to be installed per manufacturer's recommendations. The method of construction described above is consistent with the requirements of the contract specification, section 118504, 1.1, A, 1.

Appendix 1 – Bid Detail

Contract No. 9500667
Terminal B & E Passenger Boarding Bridge Replacement Gates B9, B26, E31, E34

1) This is a solicitation for bids on the construction of the project detailed in the contract documents of Appendix 5 – The Agreement. The Contractor shall be responsible for reviewing all existing conditions associated with the work prior to commencement of work activities.

2) The Board reserves the right to reject any bid for any reason, including if, on the face of the bid received, it is clear that acceptance of the bid would not comply with any applicable bidding laws, rules, or regulations.

3) The undersigned Contractor, declares that the only person or parties interested in this Bid as principals are those named herein; that this Bid is made without collusion with any other person, firm, or corporation; that he has carefully examined the Bid Requirements, all incorporated references and Appendices, and the conditions and classes of materials of the Work; and will provide all the necessary supervision, labor, machinery, tools, supplies, equipment, transportation and other facilities, apparatus, and other means of construction and will do all the Work and furnish all the materials called for by such, in the manner prescribed therein and according to the requirements therein set forth, and to perform all other obligations imposed by the Contract Documents for the prices named in the Bid Schedule hereinafter appearing.

4) It is understood and agreed that if awarded the Contract, the Work will commence within ten (10) calendar days after the date of the Notice to Proceed and that the total Work will be completed in accordance with the Schedule of Construction set forth herein.

5) It is further understood that the Prevailing Wage Rates TX180322 revised 01/12/2018, issued by the Department of Labor as established by law are to govern the Work. The Contractor certifies that he has examined the wage rate determination and that prices bid are based on compliance with said determination.

6) Accompanying this Bid is the required Bid Guaranty consisting of Bid Bond or Cashiers' Check in the amount of five percent (5%) of the total Bid, or in the case of bid alternates, five percent (5%) of the highest total Bid. The certified check accompanying a Bid shall be returned to the Contractor upon execution of the Contract.

7) In the event of the award of a Contract, the undersigned will deposit with the Board a Contract Performance Bond and a Payment Bond as required by the Contract Documents, guarantying faithful performance of the Contract, and any payment of all labor, materials and other sundry items, in accordance with the Contract Documents, and will deliver certificates of insurance evidencing insurance required by the Contract Documents.

8) The Work proposed to be done shall be fully completed and finished to the entire satisfaction of the Board.

9) The undersigned certifies that the price contained in this Bid has been carefully reviewed and is submitted as correct and final.

10) In conformity with the Special Provisions, the amount of liquidated damages for this Contract shall be as shown in Article 1.0, of the Special Provisions.

11) Ancillary/Integral Professional Services – Contractor certifies that in selecting an architect, engineer or land surveyor, etc., to provide professional services, if any, that are required by the specifications, Contractor shall not do so on the basis of competitive bids but shall make such selection on the basis of demonstrated competence and qualifications to perform the services in the manner provided by Section 2254-004 of the Texas Government Code.

12) Certification of compliance with the provisions of Section 2254-004 of the Texas Government Code:(initial here)_____

13) Certificate Regarding Debarment And Suspension – By submitting a bid/proposal under this solicitation, the Contractor or offeror certifies that at the time the Contractor or offeror submits its bid/proposal that neither it nor its principals are presently debarred or suspended by any Federal department or agency from participation in this transaction.

14) Receipt is hereby acknowledged of the following Addenda to the Contract Documents:

Addendum No. 1 Date Received 12/10/18 Ack. By _____
Addendum No. 2 Date Received 12/21/18 Ack. By _____
Addendum No. 3 Date Received 01/07/19 Ack. By _____
Addendum No. 4 Date Received 01/11/19 Ack. By _____
Addendum No. 5 Date Received 01/15/19 Ack. By _____

15) Summary of Bid

a. **Base Bid –** Contractor agrees to construct **Contract No. 9500667**, **Terminal B & E Passenger Boarding Bridge Replacement Gates B9, B26, E31, E34,** in accordance with the contract terms, plans and specifications and to complete the work within three hundred and thirty-five (335) consecutive calendar days for substantial completion, with an additional sixty (60) consecutive calendar days for final completion, from the date set forth in the Notice to Proceed for the following lump sum amount:

BASE BID PRICE: _____

_____ DOLLARS and ____/100 $_____.

Separate Cost Breakdown (for Tax Exemption Information)

Materials to be Incorporated ..... $_____
All Other Costs ..... $_____
Total Base Bid ..... $_____

TOTAL BID Detail	
Total Base Bid	$_____
Pre-Defined Allowances	$ 100,000.00
TOTAL BID	**$_____**

16) The contract, if awarded, shall be to the lowest responsive, responsible Contractor whose bid, conforming with all materials terms and conditions of the invitation for bids, is the lowest in price.

17) When alternates are used, the Board reserves the right to Contract for any combination of Base and or Alternates stated, or none of the above. Contractor must bid on the base and all alternates. Bids addressing only the base or alternate items will be considered non-responsive.

18) The Contractor shall complete the following statement by checking the appropriate space.

a. The Contractor has ____ has not ____ participated in a previous contract subject to the equal opportunity clause prescribed by Executive Order 10925, or Executive Order 11114, or Executive Order 11246.
b. The Contractor has ____ has not ____ submitted all compliance reports in connection with any such contract due under the applicable filing requirements; and that representations indicating submission of required compliance reports signed by proposed subcontractors will be obtained prior to award of subcontracts.
c. If the Contractor has participated in a previous contract subject to the equal opportunity clause and has not submitted compliance reports due under applicable filing requirements, the Contractor shall submit a

compliance report on Standard Form 100, "Employee Information Report EEO-1" prior to the award of contract.

d. Standard Form 100 is normally furnished contractors annually, based on a mailing list currently maintained by the Joint Reporting Committee. In the event a contractor has not received the form, he may obtain it by writing to the following address: Joint Reporting Committee,1800 G Street, Washington, DC 20506.
e. ( ) The below listed firm is a Disadvantaged Business Enterprise (DBE / M/WBE).

NAME OF CONTRACTOR/CORPORATION:_____

CONTRACTOR'S ADDRESS:_____

CITY, STATE, ZIP:_____ PHONE NO.:_____

_____ _____

PRINTED NAME & TITLE OF PERSON SIGNING BID FEDERAL I.D. NUMBER

SIGNATURE:_____

(Seal, if bid by a Corporation)

EXHIBIT 6

thyssenkrupp Airport Systems
3201 North Sylvania Avenue, Suite 117, Fort Worth, Texas 76111 USA
P: +1 817 210-5000 www.thyssenkrupp-airports.com

thyssenkrupp

Statement of NFPA 415-2013 (Standard on Airport Terminal Buildings, Fueling Ramp Drainage and Loading Walkways) Compliance

This is to certify that all Passenger Boarding Bridges furnished by ThyssenKrupp Airport Systems, Inc. are designed and manufactured in strict accordance with the requirements of NFPA 415-2013. We further state that:

(1) All components and assemblies of the bridges required to be tested under NFPA 415-2013 have been tested for compliance by a Nationally Recognized Testing Laboratory (NRTL) and meet or exceed the requirements of the standard.

(2) The design and construction of the entire bridge is in compliance with all the requirements of NFPA 415-2013.

(3) There have been no design changes since the component testing that would materially affect the outcome of the test certifications.

NFPA 415-2013 Section 6.4.6 Test of Floors
The bridge floor was tested and complied with NFPA 415-2013 as recorded by Intertek Testing Services NA, Inc. Test Report 3181041SAT-014, which includes material list, tested construction, and compliance information.

NFPA 415-2013 Section 6.4.6 Test of Walls
The bridge glass wall was tested and complied with NFPA 415-2002 as recorded by Southwest Research Institute, Project No. 01.11310.01.001, which includes the test procedure, description of the test assembly, test results, and compliance information.

NFPA 415-2013 Sect 6.4.7, Test of Flexible Closures
The bridge canopy was tested and complied with NFPA 415-2013 as recorded by Intertek Testing Services NA, Inc. Test Report G101258905SAT-002, which includes material lists, tested construction, and compliance information.

NFPA 415-2013 Sect 6.4.8, Test of Cab and Rotunda Slat Curtains
The bridge cab curtains were tested and complied with NFPA 415-2013 as recorded by Intertek Testing Services NA, Inc. Test Report G100015559SAT-001, which includes material lists, tested construction, and compliance information.

NFPA 415-2013 Sect 6.4.9, Test of Bumpers
The bridge bumper was tested and complied with NFPA 415-2013 as recorded by Intertek Testing Services NA, Inc. Test Report 3181041SAT-005B, which includes material lists, tested construction, and compliance information.

NFPA 415-2013 Sect 6.4.10, Tests of Misc. Seals and Weather Stripping Assemblies
The bridge seals were tested and complied with NFPA 415-2013 as recorded by Intertek Testing Services NA, Inc. Test Report 3181041SAT-012, which includes material lists, test construction, and compliance information.

thyssenkrupp Airport Systems
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P: +1 817 210-5000 www.thyssenkrupp-airports.com

thyssenkrupp

The above mentioned tests have been carried out successfully in accordance with the requirements of the NFPA 415-2013 and all the recorded test reports are available upon request for the review and approval of the Authority having jurisdiction on each project.

PSReddy

Reddy Poondla P.E.
Director of Engineering ET-AS-AIR
10/11/2019.

26. -

Listing Constructional Data Report (CDR)

1.0 Reference and Address			
Report Number	3181041SAT-006	DRAFT Issued: 22-Jan-2014	For Review and 22-Jan-2014
Standard(s)	NFPA 415 : Standard on Airport Terminal Buildings, Fueling Ramp Drainage and Loading Walkways, 2013 Edition (NFPA 415-13); Standard Method of Test of Surface Burning Characteristics of Building Materials, 2006 Edition (NFPA 255-06)		

Applicant	ThyssenKrupp Airport Systems, Inc.	Manufacturer	**ThyssenKrupp Airport Systems, Inc.**
Address	3201 North Sylvania Avenue Suite 117 Fort Worth, TX 76111	Address	3201 North Sylvania Avenue Suite 117 Fort Worth, TX 76111
Country	USA	Country	USA
Contact	Jason Bryan	Contact	Jason Bryan
Phone	(817) 344-7960	Phone	(817) 344-7960
FAX	(817) 834-6985	FAX	(817) 834-6985
Email	jason.bryan@thyssenkrupp.com	Email	jason.bryan@thyssenkrupp.com

2.0 Product Description	
Product	Basic Passenger Boarding Bridge System (Steel)
Brand name	NA
Description	The product covered in this report is a weather-protected walkway between the airport terminal building and commercial aircraft for enplaning and deplaning airline passengers.
Models	Basic Two-Tunnel Passenger Bridge System - Steel; Basic Three-Tunnel Passenger Bridge System - Steel
Model Similarity	The two models are identical except in the number of telescoping tunnels designed into each (two or three)
Ratings	NA
Other Ratings	NA

EXHIBIT 7

File E332865 Vol 1 Issued: 2009-08-31
Revised: 2009-08-31

FOLLOW-UP SERVICE PROCEDURE
(TYPE R)

PASSENGER BOARDING BRIDGES
(QGLA)

Manufacturer: (100238-823) THYSSENKRUPP AIRPORT SYSTEMS INC
3201 N SYLVANIA AVE
FORT WORTH TX 76111-3117

Applicant: (100238-823) SAME AS MANUFACTURER

Listee: (100238-823) SAME AS MANUFACTURER

This Procedure authorizes the above manufacturer to use the marking specified by Underwriters Laboratories Inc.(UL), or any authorized licensee of UL, only on products covered by this Procedure, in accordance with the applicable UL Services Agreement.

The prescribed Mark or Marking shall be used only at the above manufacturing location on such products which comply with this Procedure and any other applicable requirements.

The Procedure contains information for the use of the above named Manufacturer and representatives of Underwriters Laboratories Inc. and is not to be used for any other purpose. It is lent to the Manufacturer with the understanding that it is not to be copied, either wholly or in part, and that it will be returned to Underwriters Laboratories Inc. (UL) or any authorized licensee of UL, upon request.

This PROCEDURE, and any subsequent revision, is the property of Underwriters Laboratories Inc.(UL) and the authorized licensee of UL and is not transferable.

Underwriters Laboratories Inc.

Stephen Hewson
Senior Vice President
Global Follow-Up Service Operations

William R. Carney
Director
North American Certification Program

EXHIBIT 8

ThyssenKrupp Airport Systems

May 19, 2020

Ms. Melissa Wendel
Lee County Port Authority
P: 239-590-4556
E: mmwendel@flylcpa.com

Reference: Passenger Boarding Bridge Replacement Project
(RFB) 20-53MMW
Southwest Florida International Airport

Dear Ms. Wendel,

After reviewing Addendum 2 received May 19, 2020, it is apparent that the Lee County Port Authority has issued a sole-source bid for (RFB) 20-53MMW for the procurement of the passenger boarding bridges. Addendum 2 and the technical specification contained within, is restricting competition and is only allowing the equipment from our competitor. While theoretically, anything is possible and anything could be re-engineered, forcing us to design and build a passenger boarding bridge to our competitor's standard design indirectly, though effectively, eliminates us from submitting a competitive bid.
The technical specification contained in addendum 2 unequivocally states that thyssenkrupp Airport Systems is an approved manufacturer. Furthermore, *we actually exceed the required qualifications*, as listed in the specification. However, our standard design is not being allowed.

Our Passenger Boarding Bridge design represents an absolute service proven, very modern standard bridge design. It can be found in over 6,000 passenger boarding bridges around the world. And proudly, to name only a few, almost 2000 bridges in North America alone, can be found in reputable world-class airports like Miami, Tampa, Orlando, Fort Lauderdale, Los Angeles, Boston, New York, Newark, Chicago, Washington DC, Toronto, Dallas-Fort Worth, Houston, and Toronto to name a few.

We trust you are aware that this project is employing both State and FAA funding. Therefore, we are convinced that the specification should allow for reliable, impartial, and transparent competition, thus allowing for a fair and competitive bidding process. Considering that there are only two qualified Passenger Boarding Bridge manufacturers in the U.S., it cannot be in the best interest of the Lee County Port Authority to sole-source, neither would it be, we trust, appreciated by the elected Lee County representatives or by officials of the FAA. Furthermore, at this stage, this even precludes to assess the appropriateness, or legality, of deliberately restricting competition.

When this bid was re-issued the second time through the Lee County Port Authority, the specifications became much more one sided and almost identical to our competitor's PBB specifications. We have identified those items and submitted RFI's during the allowable time. Although our bridges meet and exceed the performance requirements of the specifications, they differ in some areas from our competitor's bridges. The following items are significant changes which will force us to completely re-design our bridges. This will make us non-competitive. Additionally, there are several smaller items not

listed below that are our competitors standard that would cause us to make additional design changes and further reduce the competitive bid process.

1. Electro-Mechanical Lift System: Ref. RFI #3, tk-2, tk-9, tk-20
2. Continuous Welding: Ref. RFI #tk-6
3. Plank Type Ceiling: Ref. RFI. # tk-22
4. Both sides of the canopy closure shall be independently adjustable: Ref. RFI # tk-13
5. Tunnel lighting shall be positioned parallel to the tunnel centerline: Ref. RFI # tk-21
6. Corrugated or truss style tunnel construction: Ref. RFI # tk-28
7. Aluminum subflooring: Ref. RFI # tk-31 & 9

In conclusion, We are prepared and intend to deliver a truly competitive offer with a superior technical and perfectly service-proven design and product. We require and expect your support, to ascertain that unjustifiable efforts to deliberately restrict competition shall not be entertained. We are convinced that your airport, county, and Lee County's official representatives wish for and deserve transparent and truly impartial competition.

We are looking forward to hearing from you ***at your very earliest convenience***, especially considering the very tight bid timeframe for Ft. Meyers, to address this serious issue. We are prepared to relinquish on no reasonable effort to ascertain this bid and its very process to be impartial and unbiased.

Sincerely,

Greg Engleby
North America Sales Manager
ThyssenKrupp Airport Systems, Inc.
(817)-734-7324
greg.engleby@thyssenkrupp.com

CC: Mr. Ben Siegel

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Fax: +1 (801) 629-3474

August 3, 2020

Melissa M. Wendel, CPPO
Procurement Manager
mmwendel@flylcpa.com
Lee County Port Authority
Southwest Florida International Airport
11000 Terminal Access Road, Ste. 8671
Fort Myers, FL 33913

RE: Protest regarding Request For Bids (RFB) 20-53MMW For Passenger Boarding Bridge Replacement at the Southwest Florida International Airport

Thank you for the opportunity to present additional materials to the Port Authority's Bid Dispute Committee.

On July 16, 2020, JBT submitted its Notice of Intent to Protest, detailing the many reasons why the bid of thyssenkrupp ("TK") should have been rejected and JBT – the lowest responsive and responsible bidder remaining – should have been selected for award. On July 24, 2020, JBT submitted its formal Protest, illustrating the many ways in which TK's bid was nonresponsive, including because its "completely redesign[ed]" bridge was not UL/ETL listed or NFPA 415-2016 tested and its proposed installer does not meet the minimum qualifications. Additionally, JBT explained that TK was not a responsible bidder because it does not have "the integrity and reliability that will assure good faith performance." Not only did TK demonstrate a lack of candor with the Authority by attempting to circumvent the requisite safety requirements, but TK has also proved so incompetent that the City of Charlotte was forced to terminate TK's contract for passenger boarding bridges at Charlotte Douglas International Airport.

Since the submission of its formal protest, JBT has acquired the Notice of Termination of Contract issued by the City of Charlotte on May 18, 2020. In that letter, the City states that TK was given a notice to cure on January 6, 2020. By May 18, 2020, the date of the letter, TK had failed to cure the defaults identified in the cure notice and the City was forced to terminate TK for cause. This means that TK's representation in its bid that it had been contracted to install 57 PBBs at Charlotte Douglas International Airport by February 1, 2021 was false; when bids were submitted on June 2, 2020, TK already knew that its contract at Charlotte had been terminated. TK's reliance on this project as evidence of its ability to perform without reference to its termination for cause was misleading at best and deceitful at worst.

The substance of the City's Notice of Termination also evidences that TK is not a responsible bidder. The City describes TK's contract work this way:

> As a result of our correspondence and discussions, it has become apparent that TKAS lacks the knowledge, familiarity and experience with

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> its own product that is needed to identify and adequately remedy engineering related deficiencies in both product materials and workmanship. And, it is also apparent that TKAS has failed to propose or provide a team with the requisite skills, knowledge and experience to satisfactorily perform the installation and commissioning services.

Because TK has touted its ability to redesign its standard bridge to meet the Authority's specifications here, its inability to remedy engineering and workmanship deficiencies at Charlotte is particularly troubling. In addition, TK has represented to the Authority that it "consider[s] [itself] to be the prime installer for projects such as these" because it "directly supervise[s] and manage[s]" all of its installations. *See* TK Letter to M. Wendel dated July 9, 2020. Yet TK's substandard installation services was one of the reasons its contract was terminated by the City of Charlotte. Plainly stated, TK is not a bidder who can be trusted.

A copy of the Notice of Termination of Contract issued by the City of Charlotte is attached as Exhibit 1. For the Committee's convenience, a courtesy copy of JBT's Notice of Intent to Protest is attached to this letter as Appendix A, and its formal Protest is attached as Appendix B.

***

For the reasons described here and in its prior submissions, JBT respectfully requests that the Authority reject the award to TK and instead proceed with an award to JBT, the true lowest responsive and responsible bidder.

Regards,

Frank Moore

Frank Moore
Vice President, Gate Equipment

CC: Mr. James Marvin, JBT Executive Vice President and General Counsel
Mr. Brian DeRoche, President, Jetway
Mr. Neil O'Donnell – Legal Counsel, Rogers Joseph O'Donnell

Attachment: Exhibit 1: Notice of Termination of Contract
Appendix A: JBT's Notice of Intent to Protest
Appendix B: JBT's Protest

May 18, 2020

VIA E-MAIL and U.S. MAIL

Thyssenkrupp Airport Systems
3201 North Sylvania Avenue, Suite 117
Fort Worth, Texas 76111, USA
Attn: Mauro Carneiro, CEO
mauro.carneiro@hyssenkrupp.com

RE: **Notice of Termination of Contract**
Passenger Boarding Bridges (PBB) - Charlotte Douglas International Airport (CLT)
City of Charlotte Contract No. 2017000779

Dear Mr. Carneiro:

On January 6, 2020 Thyssenkrupp Airport Systems (TKAS) was notified of the City's intent to terminate its contract with TKAS effective February 7, 2020 if TKAS failed to cure the defaults identified in the letter. Since that date there have been a series of letters exchanged between TKAS and the City. In these letters, the City set out criteria and conditions attached to continuing the contract with TKAS. This dialogue culminated in a meeting on May 14, 2020, with my staff and I and several TKAS personnel to further discuss the situation.

As a result of our correspondence and discussions, it has become apparent that TKAS lacks the knowledge, familiarity and experience with its own product that is needed to identify and adequately remedy engineering related deficiencies in both product materials and workmanship. And, it is also apparent that TKAS has failed to propose or provide a team with the requisite skills, knowledge and experience to satisfactorily perform the installation and commissioning services.

TKAS's failure to satisfactorily perform the contract work causes me to conclude that the City has no alternative but to terminate the contract. Accordingly, notice is hereby given in accordance with Section 10.2 entitled "Termination by the City for Cause" that the contract between the City of Charlotte and Thyssenkrupp Airport Systems is terminated, effective as of today's date.
Thyssenkrupp Airport Systems

TKAS is directed to discontinue any new work under the contract. TKAS is expected to honor its ongoing contractual obligations related to warranty and punch list work, and to address any latent defects that are currently unknown but that become known within the warranty period.

The City will process Payment Application No. 14 in the amount of $147,968.20. With regard to the $847,306.91 in retainage, the City will hold these funds until the leaks and other defective conditions of the existing bridges have been addressed and resolved to our satisfaction. Expenses incurred by the City to obtain that outcome will be subtracted from the retainage. If there is a surplus of funds, they will be paid to TKAS. If there is a shortfall, the City reserves the right to seek reimbursement. In this regard, the City reserves all other rights it may have for remedies in law or in equity.

We regret that this action has become necessary and thank you for the work that was performed under the contract.

If you have any questions, you may contact the undersigned at jlchristine@cltairport.com or at (704) 359.4932.

Sincerely,

Jack Christine, A.A.E.
Chief Operating Officer

cc: Chris Hazen
Jeff McSwain
Craig Fox

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July 16, 2020

Melissa M. Wendel, CPPO
Procurement Manager
mmwendel@flylcpa.com
Lee County Port Authority
Southwest Florida International Airport
11000 Terminal Access Road, Ste. 8671
Fort Myers, FL 33913

RE: Notice of Intent to Protest regarding REQUEST FOR BIDS (RFB) 20-53MMW for PASSENGER BOARDING BRIDGE REPLACEMENT at the SOUTHWEST FLORIDA INTERNATIONAL AIRPORT

Ms. Wendel,

Pursuant to Section A22 "RIGHT TO PROTEST" in the RFB documents, as well as the Lee County Port Authority Purchasing Manual, JBT AeroTech Corporation (JBT) protests the pending award of the noted project. JBT is in receipt of the Intent to Award notification in favor of ThyssenKrupp Airport Systems, Inc (TK). This letter is JBT's Notice of Intent to File a Bid Protest of that intended award. JBT will file its formal written protest within five business days as provided by Section 10.1D of the Lee County Port Authority Purchasing Manual. For the following reasons, TK's bid should have been rejected and JBT – the lowest responsive and responsible bidder remaining – should have been selected for award.

ITEM 1 – TK's Bid Was Nonresponsive Because Its PBB Cannot Comply with the RFB's Technical Requirements

TK is unable to meet the specifications of the bid documents and its bid must be considered nonresponsive. Specifically, TK itself has repeatedly informed the Lee County Port Authority (the "Authority") that it cannot meet the following technical requirements set forth in Specification 118504 1.12 MATERIALS, PART AND PROCESSES:

1. Section 11 8504-page 18, 1.12R.8.b Vertical Drive—Electrical Mechanical
   The RFB requires that the vertical drive column be electromechanical. In the written questions and clarification requests, incorporated in the RFB by Addendum 2, TK stated that it was unable to provide a bid with an electromechanical ball screw lift system. In Question 32, TK wrote:

   > Reference: Section 118504-18: Vertical drive column shall be electromechanical. thyssenkrupp's vertical drive consists of two (2) extra capacity hydraulic rams. .... We have this same system in use in Orlando, Tampa, and Miami to name a few. .... We kindly ask that you accept our standard design. *If electro-mechanical ball screw lift system is required, we will be unable to provide a bid.*

   Addendum 2 at Q32 (emphasis added). In response, the Authority rejected TK's proposal to allow for a hydraulic system and instead confirmed that the "[s]pecifications require electromechanical lift columns." Addendum 2 at A32.

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TK tried once more to convince the Authority to change the vertical drive column specification and allow for the use of a hydraulic lift system. In Addendum 4, it again requested that the Authority allow for its "standard design" which uses hydraulic rams, and reiterated its inability to provide a compliant bid:

> Section 118504-18: Vertical drive column shall be electromechanical. Regarding question and answer 32 from Addendum 2 that discusses our lift column design. thyssenkrupp's vertical drive consists of two (2) extra capacity hydraulic rams. .... If you require us to bid to their standard, it will be a complete redesign and will be cost prohibitive for this bid. .... We kindly ask that you accept our standard design. **If electro-mechanical ball screw lift system is required, we will be unable to provide a compliant and competitive bid.**

Addendum 4 at Q58 (emphasis in original). As before, the Authority responded that it would not change the specification and that electromechanical lift columns were required. Addendum 4 at A58. In this same addendum, TK repeatedly stated its intent to propose the use of a hydraulic system. Addendum 4 at Q14 (TK requesting the use of solenoid valves on "the hydraulic lift cylinders"), Q20 (requesting the use of "velocity fuses on the hydraulic lift cylinders"), Q29 (stating that the proposed "vertical drive system incorporates single-acting hydraulic cylinders"). In each instance, the Authority's answer pointed to the specification 118504 requirement that electromechanical lift columns be used. *See* Addendum 4 at A14 ("The PBB specification 118504 requires electromechanical lift columns as answered in a previously issued addendum."), A20 ("The PBB specification 118504 requires electromechanical lift columns as answered in previous addenda Q&A."), A29 (same).

Because TK's PBB does not include an electromechanical vertical drive, it is technically noncompliant and must be rejected.

2. Section 11 8504-page 14, 1.12J.7 Materials, Parks and Processes

The RFB required that "[a]ll intersection steel panels, eg. side to top, side to bottom, of exterior steel sections of the passenger boarding bridge shall be 100% welded. Caulk shall not be used to provide weather seals."

As with the electromechanical lift system, TK put the Authority on notice through its questions and requests for clarification, that it could not provide a continuous weld bridge, and requested that the specification be changed:. In Question 17 of Addendum 4 TK stated:

> Section 11 8504-page 14, 1.12.J.7 .... Specifications are requiring continuous welding which would be a requirement of a corrugated tunnel design. W use "C" channel panels, which are continuously welded on the top and bottom, but are spot welded on the sides, and caulked to provide the final seal. .... *If continuous weld is mandatory, this will prevent us from submitting a compliant, competitive bid.* We respectfully ask that our standard tunnel structure be accepted.

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Addendum 4 at Q17 (emphasis added). The Authority rejected this request; it responded by reiterating that "[c]aulking shall not be permitted for weathersealing." Addendum 4 at A17.

Because TK conceded that it was unable to provide a PBB that meets the technical requirements of the RFB, its bid should have been rejected as nonresponsive.

3. Section 11 8504-page 31, 1.12AB.10.k and 1.12AB.10.m Finished and Materials

These technical specifications of the RFB required that the sub-floor in the cab and bubble area and C tunnel subfloors be aluminum. Here too, TK stated that it would be unable to provide a technically compliant bid unless a change was made to the specifications, and the Authority declined to alter the technical requirements of the RFB:

> Specification No. 118504, page 31, 1.12.AB.10.1 Aluminum Sub-Floor While our exterior cab area at the articulating cab floor is aluminum, we request the use of our standard carbon steel floor in the cab bubble area. *If our standard is not allowed, we will not be able to provide a compliant or competitive bid.*

Addendum 4 at Q37 (emphasis added); *see* Addendum 4 at A37 ("C tunnel and cab flooring shall be aluminum per PBB specification 118504 section 1.12.AB.10.m."). *See also* Addendum 4 at Q40 (requesting no subfloor and "[i]f you do require a sub floor, can we use galvanealed steel instead of aluminum"), A40 (rejecting change to specifications); Addendum 2 at Q38 (requesting use of "formed, galvannealed [*sic.*] sheet metal panels"), A38 ("Aluminum floor is required.")

ITEM 2 – TK Has Demonstrated That It Is Not a Responsible Bidder, And, Therefore, Its Bid Must Be Rejected

Alternatively, if TK has submitted a bid claiming that it will meet any of these three RFB technical requirements, it should be rejected as a non-responsible bidder. The Authority's Purchasing Manual defines a Responsible Bidder as "a person who has the capability in all respects to perform fully the contract requirements and the integrity and reliability which will ensure good faith performance of the contract." Authority Purchasing Manual, § 2.1, Definitions; *see also* RFB at B.02 (describing a responsible bidder as having, among other things, "integrity, reliability, [and] capacity"). As discussed above, TK itself told the Authority repeatedly in questions submitted no more than two weeks before bids were due, that its product did not provide electromechanical lift systems, continuous welds and aluminum flooring in the bubble area. It stressed that if those requirements were maintained, it could not bid. If it submitted a bid reversing course completely and claiming that it would meet those requirements, the Authority cannot reasonably conclude that TK has "the capability in all respects to perform fully the contract requirements." Moreover, such an abrupt and virtually instantaneous reversal of position would mean that TK was lying to the Authority either in its representations that it would be unable to bid if these conditions were maintained, or in its sudden claim that it could in fact provide those features. In one respect or the other, TK was not demonstrating the "integrity and reliability which will assure good faith performance of the contract" as is required to be a responsible bidder. Authority Purchasing Manual § 2.1.

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ITEM 3 – TK's Bid Was Nonresponsive Because Its PBB Could Not Have Been UL/ETL Certified

The RFB required that the proposed PBBs "conform to the requirements of the National Fire Protection Association (NFPA) 'Standards of Construction and Protection of Aircraft Boarding Walkways,' NFPA-415, latest edition." Section 11 8504-page 9, 1.12C.9. To provide compliance with this requirement, bidders were required to provide **as part of their bid submittals** certificates from a Nationally Recognized Testing Laboratory in the United States and "[p]rovide written certification that the total PBB, **including any design changes**, is in compliance with NFPA 415, most recent edition." *Id.* (emphasis added); *see also* Section 11 8504-page 3, 1.5B.2 (requiring that bidders provide NFPA certificates and compliance statements with their bids).

In addition, the RFB required that the proposed PBB "be UL, or ETL listed and shall be labeled by a nationally recognized testing laboratory **at the time of bid**." Section 11 8504-page 6, 1.6C (emphasis added). As with the NFPA 415 requirement, offerors were directed to "submit verification [of their UL or ETL listing/labeling] **with bid submittals**." *Id* (emphasis added)*; see also* Section 11 8504-page 4, 1.5B.6 (requiring UL/ETL certification).

Based on TK's representations in May 2020 that it did not currently have a technically compliant PBB in its catalogue and would have to undergo a "complete redesign" of its PBB in order to become compliant, JBT is informed and believes that TK could not have submitted the required safety testing certifications. Addendum 4 at Q58; Addendum 4 at Q17 (caulking part of TK's "standard tunnel structure"), Q37 (TK requesting use of "standard carbon steel floor in the cab bubble area"). Even if TK's standard PBB had been certified as NFPA 415 compliant and was listed/labelled by UL or ETL, the significant design changes to the walks, flooring, welds and the addition of aluminum to the cab would require a recertification by a Nationally Recognized Testing Laboratory. It is simply impossible that TK was able to obtain these certifications in the weeks between their May 2020 statements that they were unable to provide a PBB that met the technical requirements of the RFB and bid submission on June 2, 2020.[1]

JBT was required to undergo a large, expensive redesign of their PBB cab to incorporate aluminum into the structure, in lieu of steel, years ago. JBT was forced to undergo a complete recertification of the PBB, at great expense to JBT, due to this material change. Significantly, the ETL recertification of JBT's PBB took *seven months* to be completed. Because TK has not included aluminum flooring in its design before, it would also be required to recertify its PBB if it were to incorporate aluminum into its design now – a process that would take months, not weeks. For this reason, any PBB proposed by TK cannot meet the requirement for UL/ETL certification, including any design changes, at the time of bidding.

Because TK could not have provided the submittals required by the RFB, its bid should have been deemed nonresponsive.

[1] JBT is informed and believes that TK's PBB system ETL certification was last updated in 2017 and therefore could not include the critical design changes required for a technically compliant PBB.

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ITEM 4: TK's Bid Was Nonresponsive Because It Could Not Have Proposed an Installation Contractor Who Meets the Minimum Qualifications

In RFB Part B, Special Instructions and Requirements, B.01 Minimum Qualifications, the RFB it states that "Bids will be accepted from installer that have successfully installed no less than three (3) passenger boarding bridge projects installed in the U.S. on projects of a similar size and scope within five (5) years prior to the date bids are due." RFB at B.01; *see also* Addendum 2 at Item 2.

JBT requested installer qualifications to satisfy this experience clause. Firms contacted were AeroBridgeworks, Skycon, Airport Technical Support (ATS), Vanderlande, Elite Terminal Services and Airport Bridge Company (ABC). Only two installers qualified to these requirements: Aero Bridgeworks, who was precluded from bidding per the Q&A, and Skycon, the only installer eligible to work on this project that satisfies this requirement after AeroBridgeworks' disqualification. Skycon has informed JBT that TK has not contacted them regarding the project. This was a major concern to them as Skycon knew that only they and AeroBridgeWorks met the experience clause found in the specification documents. TK, therefore, could not have proposed an installation contractor who meets the required minimum qualifications. For this reason as well, its bid should have been found nonresponsive.

For the foregoing reasons, JBT respectfully requests that the Authority reject the award to TK and instead proceed with an award to JBT, the lowest responsive and responsible bidder.

***

Per the Lee County Port Authority Purchasing Manual, Section 10.1.E, JBT has submitted a $10,000 bond.

JBT will file a formal written protest within five business days and reserves its right to amend this protest as per the Lee County Port Authority Purchasing Manual.

I can be reached via mobile phone at (801) 940-1850, email via frank.moore@jbtc.com or at our office at 1805 West 2550 South, Ogden, Utah 84401.

I look forward to hearing from you.

Regards,

Frank Moore

Frank Moore
Vice President, Gate Equipment

CC: Mr. James Marvin, JBT Executive Vice President and General Counsel; Mr. Brian DeRoche, President, Jetway; Mr. Neil O'Donnell – Legal Counsel, Rogers Joseph O'Donnell
References: (1) Addendum 2 & 4 Questions & Answers related to Hydraulic vs Electomechanical Lift Systems, (2) Addendum 2 & 4 Questions & Answers related to Aluminum in Cab and C Tunnel, (3) Addendum 2 & 4 Questions & Answers related to Seam Welding

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REFERENCE #1 - Electromechanical Lift System

ADDENDUM 2

Q #	Question	Answer
5	JBT manufactures both hydraulic and electromechanical lift columns, please **confirm only electromechanical columns should be used**.	Correct
32	Reference: Section 118504-18: Vertical drive column shall be electromechanical. thyssenkrupp's vertical drive consists of two (2) extra capacity hydraulic rams. Each ram is independent of the other and capable of supporting the bridge under full design load. An adjustable flow control valve provides the required lift speed. The design includes internally mounted pilot operated check valves that prevent the bridge from descending in the event of fluid loss or other system failure. Mechanical stops in the cylinders prevent over travel and do not cause any damage should they be reached. A single hydraulic power unit prevents misscalibration as seen on Ball Screw designs and it is mounted at the wheel cross-member for easy access for maintenance. It should also be noted that no periodic maintenance is required on a thyssenkrupp PBB roof with our hydraulic system. **We have been using this system for the last 50 years** successfully. They require much less maintenance and will last the life of the bridge without major overhaul, unlike ball screw assemblies that have to be torn-down and resurfaced near ten years of service. We have this same system in use in Orlando, Tampa, and Miami to name a few. Also, in a previous meeting with the airport before the bid came out this was one of the standard design features that we discussed. It was our understanding from what was stated at that meeting that our standard design features would be allowed. Additionally, during the first pre-bid meeting held by Manhattan Construction we noted that the specification was written specifically for our competitor, JBT. We publicly asked during that pre-bid meeting if the specification would be opened up to allow for our standard design features and it was publicly stated that the specification would be opened up to allow for our standard design features. **We kindly ask that you accept our standard design. If electromechanical ball screw lift system is required, we will be unable to provide a bid**.	Specifications require electromechanical lift columns.

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ADDENDUM 4

14	Section 11 8504-page 9, 1.12.C.4 Hydraulic Lift columns shall be equipped with a safety pilot-operated-check-valve and velocity fuses to prevent the bridge from falling in the event of a failure in the hydraulic system. **We request the approval to use solenoid valves instead of the pilot-operated-check-valve and velocity fuses on the hydraulic lift cylinders**. We have used them in the past and have found that when raising the bridge they will lock in place and not allow the bridge to lower. Solenoid operated valves provide the same level of protection without the problems we have experienced using pilot-operated-check-valve and the velocity fuses.	The PBB specification 118504 requires electromechanical lift columns as answered in a previously issued addendum.

20	Section 11 8504-page 18, 1.12.R.8.a.2 The lift cylinders shall be equipped with internally mounted velocity fuses that prevent the bridge from descending in the event of fluid loss or other system failure. **The hydraulic circuit** shall be designed so that the bridge can be lowered manually in the case of power failure. We request approval to use solenoid valves instead of velocity fuses on the hydraulic lift cylinders. We have used them in the past and have found that when raising the bridge they lock in place and not allow the bridge to lower. Solenoid operated valves provide the same level of protection without the problems we have experienced using the velocity fuses.	The PBB specification 118504 requires electromechanical lift columns as answered in previous addenda Q&A.

29	Section 11 8504-Page 28 1.12.AA.23.i Vertical travel limit switches shall be provided to prevent travel of the vertical lift columns into the mechanical stops. **Our vertical drive system incorporates single-acting hydraulic cylinders**. This design has inherent and endof-travel stops with no chance of over travel. **We request acceptance of our standard system without electrical travel limits.**	The PBB specification 118504 requires electromechanical lift columns as answered in previous addendum Q&A.

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58	Section 118504-18: Vertical drive column shall be electromechanical. Regarding question and answer 32 from Addendum 2 that discusses our lift column design. thyssenkrupp's vertical drive consists of two (2) extra capacity hydraulic rams. The electromechanical system that you are requiring is a JBT standard design feature. If you require us to bid to their standard, it will be a complete redesign and will be cost prohibitive for this bid. Also, in a previous meeting with the airport before the bid came out this was one of the standard design features that we discussed. It was our understanding from what was stated at that meeting that our standard design features would be allowed. Additionally, during the first pre-bid meeting held by Manhattan Construction we noted that the specification was written specifically for our competitor, JBT. We publicly asked during that pre-bid meeting if the specification would be opened up to allow for our standard design features and it was publicly stated that the specification would be opened up to allow for our standard design features. **We kindly ask that you accept our standard design. If electro-mechanical ball screw lift system is required, we will be unable to provide a compliant and competitive bid**.	The PBB specification 118504 requires electromechanical lift columns as previously answered in previous addendum Q&A.

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REFERENCE #2 - Aluminum Flooring

ADDENDUM 2

Q #	Question	Answer
38	Section 118504-17 & 31 states that PBB C tunnel shall have aluminum floor. **We request approval to use our standard bridge floor. Our standard floor is made of formed, galvannealed sheet metal panels**. These are installed with a flat internal profile over the entire length of the bridge that allows a continuous surface for the adhesion of carpet. Our proven floor design is in use in over 6000 bridges worldwide.	Aluminum floor is required.

ADDENDUM 4

37	Specification No. 118504, page 31, 1.12.AB.10.1 Aluminum Sub-Floor While our exterior cab area at the articulating cab floor is aluminum, **we request the use of our standard carbon steel floor in the cab bubble area. If our standard is not allowed, we will not be able to provide a compliant or competitive bid**.	C tunnel and cab flooring shall be aluminum per PBB specification 118504 section 1.12.AB.10.m.

40	Regarding question and answer number 38 from addendum 2 that states that the PBB C tunnel shall have an aluminum sub floor. Corrugated tunnel construction bridges require the use of a subfloor due to their design. However, our design does not require a subfloor to be used as we already have a flat surface where the subfloor would go. **We ask that this requirement not apply to us to due to our design. If you do require a sub floor, can we use galvanealed steel instead of aluminum?**	C tunnel and cab flooring shall be aluminum per PBB specification 118504 section 1.12.AB.10.m.

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REFERENCE #3 - Seam Welding

ADDENDUM 4

Q #	Question	Answer
17	Section 11 8504-page 14, 1.12.J.7 All intersecting steel planes, e.g. side to top, side to bottom, of exterior steel sections of the PBB shall be 100% welded. Specifications are requiring continuous welding which would be a requirement of a corrugated tunnel design. **We use "C" channel panels, which are continuously welded on the top and bottom, but are spot welded on the sides, and caulked to provide the final seal**. This is required to maintain the structural integrity of the tunnel, attempting to continuously weld the seams would cause warping, and therefore it is not recommended. In order to achieve a complete seal, the seams are sealed with a high quality sealer. This has been used successfully on more than 6,000 bridges, including Miami, Orlando, Fort Lauderdale, Tampa, and Houston, and many other places. **If continuous weld is mandatory, this will prevent us from submitting a compliant, competitive bid**. We respectfully ask that our standard tunnel structure be accepted.	Caulking shall not be permitted for weathersealing

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July 23, 2020

Melissa M. Wendel, CPPO
Procurement Manager
mmwendel@flylcpa.com
Lee County Port Authority
Southwest Florida International Airport
11000 Terminal Access Road, Ste. 8671
Fort Myers, FL 33913

RE: Protest regarding Request For Bids (RFB) 20-53MMW For Passenger Boarding Bridge Replacement at the Southwest Florida International Airport

This letter is the formal protest by JBT AeroTech Corporation ("JBT") of the intended award to thyssenkrupp Airport Systems, Inc. ("TK") under RFB 20-53 MMW for Passenger Boarding Bridge Replacement at the Southwest Florida International Airport. Protestor JBT's address is 1805 West 2550 South Ogden, Utah 84401. Proposed Awardee TK's address is 3201 N. Sylvania Suite 117, Fort Worth, TX 76111. To the extent that there are any disputed issues of material fact, they are described in detail in the following sections.

On July 16, 2020, JBT submitted its Notice of Intent to Protest, detailing the many reasons why the bid of thyssenkrupp ("TK") should have been rejected and JBT – the lowest responsive and responsible bidder remaining – should have been selected for award. A courtesy copy of this Notice of Intent to Protest is attached to this letter. JBT expressly incorporates by reference all of the arguments made in its Notice of Intent to Protest as part of this Formal Protest. For the most part JBT will not repeat those arguments here but rather supplements those arguments with the additional directly relevant points included here. Taken as a whole JBT's protest establishes that TK's bid must be rejected as nonresponsive, and that award must be made to JBT instead.

TK's Bid was Nonresponsive Because It Did Not Comply with the Technical Specifications

As JBT described in Item One of its Notice of Intent to Protest, TK repeatedly informed the Authority throughout the written Q&A process, and up to days before bids were due, that it could not meet the technical requirements of the RFB. JBT has since learned that TK has recently notified other jurisdictions that it was unable to meet identical requirements in the specifications for their procurements.

Section 11 8504-page 18, 1.12R.8.b Vertical Drive—Electrical Mechanical

> The RFB requires that the vertical drive column be electromechanical. TK twice attempted to convince the Authority to change this specification and allow for the use of a hydraulic lift system, which it described as part of its "standard design." Addendum 2 at Q32; Addendum 4 at Q58; *see also* Addendum 4 at Q14, Q20, Q29 (each referring to components of TK's hydraulic lift). And twice TK represented that it would be unable to bid if the electromechanical ball screw

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lift system specification was not removed. Addendum 2 at Q32 ("If electro-mechanical ball screw lift system is required, we will be unable to provide a bid"); Addendum 4 at Q58 ("**If electro-mechanical ball screw lift system is required, we will be unable to provide a compliant and competitive bid.**") (emphasis in original).

TK's representations to the Authority were consistent with its position during an almost contemporaneous Des Moines International Airport RFB Q&A in April 2020. In that Q&A, TK stated that it uses a "hydraulic lift system" and claimed that "[i]f electro-mechanical ball screw lift system is required, we can't bid." Exh. 1 at Q32.

JBT understands that TK has provided the Authority a certification that it is now suddenly able to meet this specification requirement. Given TK's repeated statements in this and other recent procurements that it is not able to meet this requirement, the Authority cannot reasonably give any credence to this claim. In fact, despite having signed such a certification, TK's bid still indicates that it intends to provide a hydraulic system. The drawings submitted with its bid show a hydraulic lift cylinder, a point which is made explicit by the description of the lift cylinder in Note 4. Exh. 2. In its list of recommended spare parts, TK included 16 line items of "hydraulic spare parts." Exh. 3. These parts would be wholly unnecessary unless TK intended to provide a hydraulic vertical drive column.

By its own repeated statements TK has made clear that its proposed equipment is technically noncompliant as to its vertical drive and so its proposal must be rejected.

Section 11 8504-page 14, 1.12J.7 Materials, Parts and Processes

The RFB required that "[a]ll intersection steel panels, eg. side to top, side to bottom, of exterior steel sections of the passenger boarding bridge shall be 100% welded. Caulk shall not be used to provide weather seals."

As with the electromechanical lift system, TK informed the Authority that its catalogue did not include a design in which continuous welding is possible. Addendum 4 at Q17. It has taken a consistent position in recent months with the Des Moines International Airport, the Sarasota Manatee Airport, and the Dallas Fort Worth International Airport. Exh. 1 at Q23 (asserting that TK uses "'C' panels which are welded to corner angles and to the tubes at the end of tunnels. Side of the panels are spot welded and seams sealed with high grade sealant. **Attempting to continuous welding the seams will cause warping**" and asserting that it cannot bid a continuously welded design) (emphasis added); Exh. 4 at Q6 ("ThyssenKrupp's standard tunnel side panels are spot-welded and caulked ..."); Exh. 5 at Q1 (TK seeking to avoid "[c]hanging our design to a corrugated or truss style").

In addition, TK's C-pan design does not allow for the inclusion of a glass pane window, as required by the RFB's specifications. PBB-81: PBB Glass Panel Layout; *see also* RFB at C.02 ("The

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base bid includes all of the work shown on the attached contract drawings..."). Instead, the RFB required a truss wall design, which TK does not utilize.

In this respect as well, therefore, TK has made abundantly clear that it is unable to provide a PBB that meets the technical requirements of the RFB. The Authority should not allow itself to be duped by last minute reversals claiming that various key requirements like this one can now suddenly be met. TK's bid should have been rejected as nonresponsive precisely because, as they have so frequently said, their offering cannot meet this requirement.

Section 11 8504-page 31, 1.12AB.10.k and 1.12AB.10.m Finished and Materials

These technical specifications of the RFB required that the sub-floor in the cab and bubble area and C tunnel subfloors be aluminum. Here too, TK informed airports around that country that its PBB uses a carbon steel subfloor in the cab area. Addendum 4 at Q37, Q40; Addendum 2 at Q38; Exh. 4 at Q10 ("ThyssenKrupp's subfloor in the cab area is carbon steel"). During the Q&A process, TK represented that it would be unable to provide a bid with an aluminum floor. Addendum 4 at Q37 ("If our standard is not allowed, we will not be able to provide a compliant or competitive bid.")

In each of these areas, TK represented in May 2020 that it could not meet the technical specification Even assuming *arguendo* that TK was somehow able to redesign its PBB in the two weeks between the time it told the Authority it could not bid and June 2020, when bids were due, it would have been impossible for TK to also acquire the necessary safety certifications. Its current representation of compliance is simply not credible and is not even consistent with its own bid submission. It must be disregarded.

TK's Bid Was Nonresponsive Because It Did Not Meet the Certification Requirements

In a provision critical to passenger safety, the RFB required that the proposed PBBs meet the relevant fire safety standards. Specifically, the RFB stated that all proposed bridges must "conform to the requirements of the National Fire Protection Association (NFPA) 'Standards of Construction and Protection of Aircraft Boarding Walkways,' NFPA-415, **latest edition**." Section 11 8504-page 9, 1.12C.9 (emphasis added). To provide compliance with this requirement, bidders were obliged to provide as part of their bid submittals certificates from a Nationally Recognized Testing Laboratory in the United States and "[p]rovide written certification that the total PBB, **including any design changes**, is in compliance with NFPA 415, **most recent edition**." *Id.* (emphasis added); *see also* Section 11 8504-page 3, 1.5B.2 (requiring that bidders provide NFPA certificates and compliance statements with their bids). The most recent edition of the NFPA 415 specification is the 2016 edition, which went into effect on June 15, 2015.

In addition, the RFB required that the proposed PBB "be UL, or ETL listed and shall be labeled by a nationally recognized testing laboratory **at the time of bid**." Section 11 8504-page 6, 1.6C (emphasis

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added). As with the NFPA 415 requirement, offerors were directed to "submit verification [of their UL or ETL listing/labeling] with bid submittals." *Id; see also* Section 11 8504-page 4, 1.5B.6 (requiring UL/ETL certification).

TK did not, and cannot, meet these requirements. In its bid package, TK submitted a Statement of NFPA 415-2013 compliance and an Intertek Listing Constructional Data report regarding its listing under the "NFPA 415: Standard on Airport Terminal Buildings, Fueling Ramp Drainage and Loading Walkways, 2013 Edition." Exh. 6. It also submitted a UL listing certificate from August 2009, regarding its UL 325 compliance. Exh. 7. **All of those certifications were to versions of the applicable standard that had long since been superseded by the time of bid.**

TK's Proposed PBB Is Not UL/ETL Listed Because It Significantly Varies from the Certified Version

As detailed in JBT's Notice of Intent to Protest, TK represented in May 2020 that it could not provide a technically compliant PBB without undergoing a "complete design" of its standard bridge. In a letter dated May 19, 2020, TK informed the Authority that, if the specification were not changed, it would be forced to undergo an extensive redesign of its PBB in order to bid on the project:

> The following items are significant changes which will force us to completely redesign our bridges. This will make us non-competitive. Additionally, there are several smaller items not listed below that are our competitors standard that would cause us to make additional design changes and further reduce the competitive bid process.
> 1. Electro-Mechanical Lift System: Ref. RFI #3, tk-2, tk-9, tk-20
> 2. Continuous Welding: Ref. RFI #tk-6
> 3. Plank Type Ceiling: Ref. RFI. # tk-22
> 4. Both sides of the canopy closure shall be independently adjustable: Ref. RFI # tk-13
> 5. Tunnel lighting shall be positioned parallel to the tunnel centerline: Ref. RFI # tk-21
> 6. Corrugated or truss style tunnel construction: Ref. RFI # tk-28
> 7. Aluminum subflooring: Ref. RFI # tk-31 & 9

Exh. 8.[1] The Authority did not change the specifications after this letter. That means that necessarily TK's ETL listing from January 2014 (Exh. 6) and UL listing from August 2009 (Exh. 7) are for its standard bridge, and not for one with an electromechanical lift, 100% welded tunnel, aluminum subfloor and

[1] TK's letter was sent not only to Melissa Wendel, the Purchasing Office representative designated to receive RFIs, but also to Ben Siegel, Lee County Port Authority Interim Executive Director (and possibly others). Any violation of the Authority's lobbying restriction, which prohibits contact outside of the designated Purchasing Office personnel, requires automatic disqualification from consideration. *See* Lee Cty. Port Authority Purchasing Manual § 4.D. ("Any firm contacting individuals mentioned herein in violation of this warning shall be automatically disqualified from further consideration for any solicitation.")

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glass pane window. *See* Addendum 4 at Q58; Addendum 4 at Q17, Q37. Each of these design change to the walks, flooring, welds, walls, and subfloors—which are both individually and collectively significant—would require a recertification by a Nationally Recognized Testing Laboratory. Indeed, TK admitted as much to the Authority. Exh. 8 (describing specification requirements as "significant changes which will force us to completely redesign our bridges").

TK failed to obtain such a recertification. As a result its bid is nonresponsive and must be rejected. Furthermore, its submission of these outdated ETL and UL listings as evidence that it satisfied the certification requirement for the redesigned version of its product was misleading at best. As discussed in more detail below, TK's submission of outdated certifications as demonstrating the safety of this very different revised design plays fast and loose with critical standards for protection of the travelling public.

TK Does Not Have a UL/ETL Listing for the Most Recent Edition of NFPA 415

With respect to the NFPA 415 standard, neither TK's Statement of Compliance nor its Intertek listing report meets the RFB requirements. As the RFB makes clear, offerors were required to certify and submit evidence that its PBB conforms to "NFPA-415, **latest edition**." Section 11 8504-page 9, 1.12C.9 (emphasis added). The latest edition of NFPA 415 is the 2016 edition. Yet TK's documents state that its PBB was tested with respect to the 2013 edition. TK's certification to the 2013 edition of NFPA 415 does not satisfy the RFB's explicit requirement to include with the bid a certification to the "most recent edition"(I .e., the 2016 edition) of that standard. Therefore, TK's bid was nonresponsive on its face and should have been rejected.

TK's lack of candor and attempt to sneak outdated certifications past the Authority is even more pronounced with respect to the glass panels in the bridge wall. *See* PBB-81: PBB Glass Panel Layout. Here, TK lists its glass wall under the heading "NFPA 415-2013 Section 6.4.6 Test of Walls." But the narrative of the document reveals that TK did not test its glass window bridge under NFPA 415 2016 edition, 2013 edition, or even the 2008 edition standards. Instead, its glass wall was tested to determine compliance with the requirements of the 2002 edition of NFPA 415 by Southwest Research Institute (SwRi), a different laboratory than that from which it received its mark and listing.

This is significant. First, it would have been impossible for SwRI or any other lab to certify that a bridge wall containing glass could fully meet the NFPA 415, 2002 edition standard. Specifically, section 6.2.4 of the 2002 edition expressly disallowed windows in passenger loading walkways: "6.2.4 There shall be no windows other than those located in the ramp access service door and in the cab area for the purpose of operating the aircraft loading walkway." NFPA 415-02 at § 6.4.2[2] This means that it is most probable

[2] Lest there be any confusion regarding the scope of the ban, the Technical Committee clarified in the 2008 edition that *all* transparent and translucent materials were banned from use in the passenger walkway. NFPA 415-08 at § 6.4.2 (); *see also* Comment on Proposal No 415-9 ("The Committee's intent of paragraph 6.2.4 has always been to restrict the use of glass and transparent or translucent materials

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that SwRI merely tested the glass for compliance with the temperature standards of NFPA 415, and not for compliance with the full NFPA 415 specification.

Second, even if SwRI had improperly certified a bridge wall with a transparent panel as NFPA 415 compliant under the 2002 edition standard, Intertek did not rely on the SwRI certification when it listed TK's PBB as NFPA 415 compliant in 2014. The January 2014 listing report from Intertek states that Intertek applied the 2013 edition of NFPA 415 to determine eligibility for listing. Exh. 6. And, like the 2002 edition, the 2013 edition of NFPA 415 prohibited the use of windows along the walkway: "[t]here shall be no transparent or translucent walls, windows, or surfaces other than those windows located in the ramp access service door and in the cab area for the purpose of operating the aircraft loading walkway." NFPA 415-13 at § 6.4.2. This means that the PBB for which the ETL listing and mark was granted could not have included a glass wall or panel, because such bridges would have been expressly out of spec. In other words, the ETL certification provided by TK is for a significantly different TK PBB—one that does not include a glass pane window.

TK failed to meet the requirement that it certify and submit evidence that its proposed PBB, including the addition of glass panels along the walkway, was NFPA 415 (2016 edition) compliant or UL/ETL listed and labelled. The Authority must deem its bid nonresponsive.

The effect of TK's failure to have its proposed PBB certified cannot be overstated. Without certification from a nationally recognized testing laboratory that TK's equipment meets the applicable fire and OSHA safety standards, the Authority can have no confidence that TK can ensure passenger safety in its PBB. This means that the Authority is taking on the risk that the equipment will fail, potentially resulting in devastating injury to passengers and airport personnel, including any resultant litigation.

TK Is Not A Responsible Bidder, And, Therefore Its Bid Must Be Rejected

Florida law requires not only that an offer must be responsive, offering the agency exactly what it requires, but also that the offeror must be responsible. Florida Statutes § 287.057(1)(b)(4). A responsible offeror must have "the capability in all respects to fully perform the contract and the integrity and reliability that will assure good faith performance." Florida Statutes § 287.012. By its conduct in this procurement, TK has shown that it cannot be found to be a responsible offeror.

First, as explained above, TK does not have the capability to fully perform the contract. It does not have equipment that meets the requirements for electro-mechanical lifts, continuously welded walls and aluminum flooring. Even if it could somehow cobble together such equipment, which it has repeatedly told this and other Airport Authorities that it cannot, it does not have the necessary certifications,

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in the passenger loading walkways to the minimum required for safe operation of the walkway. One of the main concerns has been the psychological impact of people being able to see the flames and smoke, potentially negatively impacting the evacuation of the aircraft.").

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required at the time of bid, that such changed equipment would satisfy the applicable safety standards such as NFPA 415. Because such certifications take months to obtain, TK will have already failed in this element of its contract requirements. Thus, TK does not have "the capability in all respects to fully perform the contract."

Second, TK's conduct has demonstrated that it does not have "the integrity and reliability that will assure good faith performance" as is required of a responsible bidder. In an effort to pressure the Authority to change the specifications in ways that would be more favorable to it, TK told the Authority less than two weeks before bids were due that it would not be able to bid if the requirements for an electro-mechanical lift, continuous seam weld walls and aluminum flooring remained part of the RFB. But within days, even though the specifications did not change, TK submitted a separate statement specifically representing to the Authority that it would meet all three elements of the specification. TK could not have been truthful on both occasions. Either it had the capability to provide PBBs with these three features or it did not; on one of those occasions it was lying.

TK's submission of certifications from independent laboratories dated in 2009 and 2014 as applicable to the equipment it proposes here is another element of misrepresentation. Even if it somehow it were able to change its offering within a few days to include these three features, its attempt to pass off certifications obtained several years earlier as relevant to its newly changed equipment would serve as another instance of lack of candor with the Authority that is entirely inconsistent with being a responsible offeror. That conduct is particularly misleading as to its attempt to demonstrate that it has the necessary NFPA certification for a PBB with the specified transparent wall. TK represents itself as having met that requirement by its reference to a certification to the NFPA 415 version from 2002 which expressly precluded glass wall and windows in the PBB walls. The only fair conclusion is that TK is attempting to deceive the authority into believing that it has the necessary certification to satisfaction of a critical fire safety standard when it knows full well that it does not.

This lack of candor is of particular relevance to a responsibility determination given the nature of the matters about which TK's offer misleads. Enforcement of the applicable NFPA and UL standards are the way that safety for the travelling public, particularly as to the danger of fire, is ensured. TK's apparent willingness to represent that it has a design certified to these critical safety standards when it does not speaks volumes to the question of whether it is a responsible bidder.

In short, it is apparent that TK has not been truthful with the Authority. In these circumstances, it would be arbitrary and capricious for the Authority to award this contract to it. *Academy Express, LLC v. Broward Cty.*, 53 So. 3d 1188 (4th Dis. Ct. App. 2011).

Additionally, JBT is informed that, following a cure notice and unsatisfactory response, TK has been terminated from a project at the Charlotte Douglas International Airport due to its inability to perform to the contract specifications. Given the relevance of TK's current nonperformance to its responsibility as a contractor, the Authority should be compelled to investigate TK's termination from the Charlotte

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project. This is particularly pressing due to TK's reliance on the Charlotte project in its bid as evidence of its ability to perform. The Charlotte Douglas International Airport RFP Project Manager – CLT Center, Crystal Bailey, may be reached at 704-359-4813 or cibailey@cltairport.com.

TK's Bid was Nonresponsive Because Its Proposed Installer Does Not Meet the Minimum Qualifications

Under the terms of the RFP, bidders or subcontractors performing the installation requirements were required to "have successfully installed no less than three (3) passenger boarding bridge projects in the United States on projects of similar size and scope within five (5) years prior to the date bids are due." Addendum 2 at Item 2; RFB at B.01.; Section 118504 – page 3, 1.4(H) ("[q]ualified manufacturers and installers will have completed no less than three (3) jobs of similar size and scope within the last five (5) years."). TK's proposed installer, ATS, does not have the experience to meet this requirement; none of its previous contracts involved work within the size and scope of the present RFB requirements.

The RFB described the scope of the work for the project as "the replacement of the twenty-seven (27) Passenger Boarding Bridges (PBBs), modifications to existing foundations for twenty-five (25) PBBs, construction of two (2) new foundations for gates C1 and C2, and engineered parking layouts that anticipate the carriers aircraft needs for the foreseeable future." RFB at C.01. Yet the chart of ATS' prior experience, provided to the Authority by TK, proves that ATS cannot meet the minimum qualification requirement:

Location	No. of Gates	Description
Phoenix 1528[3]	12	PBB Removals & Reinstall, (12) Fuel Pits, (12) Foundations, & (8) New Walkways
Houston 1610	7	PBB Removals
Houston 1611	9	PBB Removals and Reinstalls
Houston 1616	13	New PBB Install
Phoenix 1806	5	(3) PBB Removal & Reinstall, (2) New PBB Installs, (3) Fuel Pits, and (2) Foundation Installations
Houston 1810	6	PBB Removals
DFW 1821	9	(7) Relocates and (2) New Installs
Phoenix	36	Evaluation and Inspection of PPBs
DFW	11	Refurbish/Reconfigure (11) PPBs and replace ancillary equipment
DFW 1914	12	(6) PBB Removals & (6) New PBB Installs

The project involving the largest number of gates, 36 at Phoenix, does not involve installation work at all; it consisted exclusively of the "evaluation and inspection" of bridges, tasks of far less scope and

[3] TK's submission to the Authority omitted the project numbers from the location column, perhaps in an effort to conflate separate projects. Based on a bid received by JBT from ATS, JBT has inserted these numbers where known.

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complexity than the installation work required here. And none of the remaining projects are similar in size to the RFB requirements. In the last five years, ATS has not had a single project—much less the three required to meet the minimum qualification standard – in which it installed half the quantity of 27 replacement bridges needed here.

As a result of ATS' failure to satisfy the minimum requirements, TK's bid should have been deemed nonresponsive. As stated in the RFB, "[a]ny bid received which does not meet these minimum qualifications will be deemed nonresponsive." RFB at B.01. Additionally, a bidder's "[f]ailure to meet mandatory minimum qualifications" will result in its automatic disqualification. Id. at A.19. As indicated above, TK's proposed subcontractor for the installation work did not meet the minimum requirements. Therefore, TK's bid should have been deemed nonresponsive and TK should have been automatically disqualified.

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It is a basic tenant that in order to maintain a procurement system of quality and integrity, agencies must engage in fair and open competition and award only to "to the responsible and responsive vendor whose proposal is determined in writing to be the most advantageous." Florida Statutes §§ 287.001, 287.057(1)(b)(4); Lee Cty. Port Authority Purchasing Manual § 1.1. An award to TK would flout this mandate. Plainly put, TK is not a responsible and responsive bidder. It has repeatedly told the Authority that it cannot provide the required PBBs and, in an attempt to nonetheless secure the contract, has attempted to obfuscate and misrepresent its compliance with the RFB requirements. JBT therefore respectfully requests that the Authority reject the award to TK and instead proceed with an award to JBT, the true lowest responsive and responsible bidder.

Thank you for your prompt response.

Regards,

Frank Moore

Frank Moore
Vice President, Gate Equipment

CC: Mr. James Marvin, JBT Executive Vice President and General Counsel
Mr. Brian DeRoche, President, Jetway
Mr. Neil O'Donnell – Legal Counsel, Rogers Joseph O'Donnell

Attachment: JBT's Notice of Intent to Protest

EXHIBIT 1

No:	Plan / Spec Item	Question	Response
ADDENDUM #1 QUESTIONS			
1	Notice to Bidders	Considering that there are many questions to be answered, and factored in estimate, we respectfully ask the bid date to be extended until May 5, 2020.	Bid opening date will be May 5, 2020.
2	Instruction To Bidders, Item 21.03.	It states "Reasonable grounds for believing that any Bidder has an interest in more than one Bid for the Work may be cause for disqualification." If a bridge manufacturer exclusively submits a bid to an installer to supply the bridge, and in exchange asks the installer to give an installation quote for the same equipment, than both of them bids for the same total scope of work (effectively each one of them having two chance of winning), would this be acceptable?	Yes, this is acceptable.
3	Performance, Payment and Maintenance Bond	It is states that the warranty period is for two years. Would warranty start at the end of each phase completion in case Phase II, and Phase III are exercised. Similarly, would the maintenance bond will be issued for each phase separately?	Yes, warranty will start at substantial completion of each phase. Maintenance bond will be issued for each phase separately at substantial completion for Phase I & II and at project acceptance following Phase III.
4	Attachment F4, Targeted Small Business	It is our understanding that TSB is desirable, but there is no specific goal set to be met for this project. Please verify if or understanding is correct.	Correct, no goal established. Contractor must make Good Faith Efforts to include TSB firm, as defined with Proposal Attachment F4A, and document these efforts on the required form.
5	Instruction To Bidders, Article	Please clarify if the bid bond will be provided based on the Base Bid, or for the total of Phase I, II and III?	Bid bond shall be based on Base Bid.
6	Section 34 77 13, 1.04, A, 1	It states that the existing foundations to be used. Please verify that the bidders has to assume that the existing foundations are adequate for the new bridge loads. As part of the submittals, bridge foundation reaction loads will be provided. Please confirm that our above understanding is correct.	Correct. Please assume that the existing foundations are adequate for the new bridge loads.

7	Section 34 77 13, 1.04, A, 2 & Section 34 77 13, 1.04, C, 13	Item states that cable retriever for 90 KVA is needed, but later on it implies that a cable hoist will be provided. Please verify that one cable hoist will be used for 90 KVA GPU power, and another one will be used for 28.5 VDC unit. Hoist is mounted on the side of the bridge, whereas, cable retriever is different and mounted under the cab. Although their function is the same, but they are significantly different from each other. It appears that cable retriever and hoist are used interchangeable. If retriever to be used, please provide specifications for it.	The 90kVA cable will be through a contractor provided/installed cable retriever, proposed by the contractor. The 28 vDC cable will be through a contractor provided/installed new cable hoist system.
8	Section 34 77 13	Please also verify if we are to use the existing GPU aircraft power cable or provide a new one.	New GPU cables to be provided/installed by the contractor for the 90kVA and 28vDC.
9	Section 34 77 13, 1.04, A, 5	It states that the power/disconnect panel to be provided. Please clarify if in addition to the panel, new disconnects are to be provided for PBB, PCA, and GPU.	New disconnects are to be provided/installed by the contractor for the PBB.
10	Section 34 77 13, 1.04, A, 7	It requires the PBB, GPU, PCA, and Potable Water Cabinets (PWC) to be monitored. Please verify if the existing GPU, and PCA are currently provide the data that is required to be monitored. If they are not capable of generating such data, please clarify how the needed data will be obtained and monitored.	Based on model numbers the equipment should provide the monitoring data. Contractor to verify during site survey prior to bid.
11	Section 34 77 13, 1.04, B, 3	It states that the bidder has to inspect the anchor bolts and foundation during the pre-bid meeting, and determine if the existing foundations/anchor bolt pattern is deemed unacceptable, the PBB contractor shall immediately notify the Owner in writing and provide associated costs for the new anchor bolt patterns, baseplate and foundation. Verifying the anchor bolt pattern will be possible by visual inspection, but it is impossible to verify if the foundation is adequate or not. Could you please verify: a. If the existing bolt pattern is #7 (eight bolt)?	a. Existing bolt pattern is shown on AP40 and shall be verified by the contractor. Prior to bid, the Contractor is required to visit the site to survey/verify existing and adjacent gate conditions and thoroughly familiarize themselves with the existing conditions and scope of work as defined in these contract documents. b. The intent is to reuse the existing anchors. Prior to bid, the Contractor is required to visit the site to survey/verify existing and adjacent gate conditions

		b. Are the anchor bolts are in good shape and can be used? c. Existing foundations are to be reused as is.	and thoroughly familiarize themselves with the existing conditions and scope of work as defined in these contract documents. c. Correct. Please assume that the existing foundations are adequate for the new bridge loads.
12	Section 34 77 13, 1.04, B, 6	It requires the re-installed GPU and PCA to be tested and commissioned. Please provide the brand name, and size of each existing GPU and PCA. It is our understanding that the intent of this paragraph is to demonstrate that the reinstalled GPU and PCA is at the same condition and function as it was before. Please clarify if our understanding is correct.	See table at the end of this document.
13	Section 34 77 13, 1.04, B, 13	It makes reference to IT Drawing package for and DSM security requirements at the Terminal door, pilot doors, cab bubble, cab bubble roof, and new PBB. Please provide this drawing, or be specify what needs to be provided.	This is referring to the Electrical plans within the project plans set.
14	Section 34 77 13, 1.04, C, 5	It requires double barrel pantographs to be provided on both sides of the bridges. We use side mounted cable conveyance system, which provides easy access to cables, and allows to add or delete cables. If we can carry the required cables without a pantograph, would it be allowed?	Acceptable as noted as it meets the intent of the requirement. Please ensure cable conveyance system does not negatively impact the functionality of the bridge and surrounding equipment.
15	Section 34 77 13, 1.04, C, 9 & 10	It states that the gate sign needs to be installed on the right side of the cab. This is another bridge manufacturer's standard. We install it on top of the fixed cab, at the center. It provides better visibility. Would our standard be acceptable?	Acceptable as noted as it meets the intent of the requirement.
16	Section 34 77 13, 1.04, C, 15	It requires the existing Telford bag chute to be reused. Page 38, Item 5.i. requires also J&B bag slide to be used. Please verify if both of them are required.	The existing Telford bag chute is mounted in the cab curtain and shall be removed and reused by the contractor along with any modifications required to the spacers to fit the existing bag chute, while a new J&B bag slide shall be provided also at each gate next to the service stairs.

17	Section 34 77 13, 1.05, O, 1	It states that eight hours of training will be provided for each type of PBB, PWC, and re-used GPU, PWC. Other than the size of the PBB, and PWC, they all comply to the same specifications, therefore eight our training for PBB, and PWC and reused GPU, PCA should be enough. Please verify.	8 hours of training per new equipment provided is sufficient per shift. 8 hours per shift includes PBB, PWC and any modifications made to the existing PCA/GPU (Facilities monitoring, cable retrieval system, hoses, etc).
18	Section 34 77 13, 1.05, O, 4	Please verify that the factory training is limited with the first PBB and PWC.	Correct.
19	Section 34 77 13, 1.09, B, 1	It requires two (2) year warranty. Considering that there will be three phases, please clarify if warranty will start separately for each phase.	Correct.
20		Please verify that the bridge models stated in the specifications will be used for bidding purpose, and when CAD drawings are provided they will be verified, if bridge models change, price will be adjusted accordingly.	Correct. Contractor to confirm final bridge models based upon CAD drawing review and discussion with the project team.
21	Section 34 77 13, 2A.03, B, 1, c	It requires PBB to comply with UL 325: Standard for Door, Gate Louver, and Window Operators Systems. This is not related to PBBs. Our bridges are UL listed and complies with UL's relevant requirements. We ask our standard to be accepted.	Accepted.
22	Section 34 77 13, 2A.06, C, 2	It states that curtains to have metallic finish. Industry standard is galvanized curtains. Would it be acceptable?	Acceptable as noted as it meets the intent of the requirement.
23	Section 34 77 13, 2A.07, C, 1	It states that tunnel roof to have uniform surface (no corrugation). Our design meets this requirement. It further requires continuous welding and no caulking. We use "C" panels which are welded to corner angles and to the tubes at the end of tunnels. Side of the panels are spot welded and seams sealed with high grade sealant. Attempting to continuous welding the seams will cause warping. We have been using this design for more	Acceptable as noted as it meets the intent of the requirement.

		than fifty (50) years and manufactured more than 6,000 PBBs worldwide. We ask our standard design to be accepted. If our design is not acceptable, we can not bid.	
24	Section 34 77 13, 2A.07, C, 2	It requires handrails to surround the lift column motors to protect the workers during periodic maintenance. We do not use electro mechanical lift system. Our lift columns don't have anything to be maintained on the roof. If no maintenance is to be performed at the roof for the vertical lift system, would the requirement of providing the mentioned handrail be deleted?	Correct. If there is no maintenance to be performed at the roof for the vertical lift system, handrails can be deleted. Fall protection shall still be provided in order to inspect the condition of the roof.
25	Section 34 77 13, 2A.07, C, 4	Please verify that the intent of this paragraph is requiring the tunnels to have smooth roof and walls (no corrugation), which we provide as a standard feature. Please confirm if it is the intent. It further states, that continuous welding of the panels are required. As mentioned earlier, our standard design is based on using "C" panels, welding them on top and bottom corner angles and to tubes at the end of the tunnel, we spot weld the sides, and seal the seams with high grade sealants. This has been used successfully on more than 6,000 bridges, including in Chicago, JFK, Toronto, Saskatoon, Calgary, and at many other places. If continuous weld is mandatory, this will prevent us from submitting a bid. We respectfully ask our standard tunnel structure to be allowed.	Acceptable as noted as it meets the intent of the requirement.
26	Section 34 77 13, 2A.07, D, 2	It requires the roof to be crowned. We provide smooth roof as our standard. We further use water diverters to deflect water to sides. This has been our standard for the last 50 years and have been used successfully over 6,000 bridges. We ask our standard to be allowed.	Acceptable as noted as it meets the intent of the requirement.
27	Section 34 77 13, 2A.08, D, 2, c	It requires rain gutters to have yellow / black safety markings. To meet this requirement, we use completely yellow gutter. Please accept our standard.	Acceptable as noted as it meets the intent of the requirement.

28	Section 34 77 13, 2A.08, F, 1, a	It requires ceiling to be eight inch metal plank ceiling. This is our competitor's standard ceiling finish. We use smooth continuous coil coat painted galvanized metal ceiling finish. It provides better finish, and much easier to maintain. Attempting to provide plank ceiling will require major design change, which we can't make. We request our standard to be allowed, otherwise we can't bid.	Acceptable as noted as it meets the intent of the requirement.
29	Section 34 77 13, 2A.08, G, 1	It requires light fixtures to be placed parallel to the tunnel axis. Our tunnel structure does not allow this, instead we put them perpendicular to the tunnel axis, and provide the same amount of lighting. We ask our standard to be allowed.	Acceptable as noted as it meets the intent of the requirement.
30	Section 34 77 13, 2A.11, A, 2	It requires steering angle to be adjustable from 18 to 40 degrees per second. This is too fast and not safe for our design. Our wheel bogie can be adjusted from 7 degrees to 14 degrees. We ask our standard to be allowed.	Acceptable as noted as it meets the intent of the requirement.
31	Section 34 77 13, 2A.11, A, 6	This item requires wheel bogie to have mechanical stop. Our standard wheel bogie allows it to be rotated 90 degrees to right, 90 degrees to left. If this limit is reached, it triggers electric switch, which stops the movement. If this limit switch fails, it triggers a second set of limit switches, which than cuts the power to bridge. It acts as mechanical stop. Even if it is rotates beyond 90 degrees, it does not damage anything. We have used this system for more than 6,000 bridges. We ask our standard to be accepted.	Acceptable as noted as it meets the intent of the requirement.
32	Section 34 77 13, 2A.12, A, 1	It requires the vertical lift system to be electro mechanical ball screw. We use hydraulic lift system, which is much more suitable for cold climate. We have bridges in many cold climates such as throughout Canada, Chicago even in Siberia. Hydraulic lift system is much more efficient, require less maintenance with respect to electro-mechanical lift system. If electro-mechanical	A substitution request may be submitted for the hydraulic lift system.

		ball screw lift system is required, we can't bid.	
33	Section 34 77 13, 2A.13, B, 1, a	We do not use plywood in in our floor construction. We use galvanealed smooth surface. We ask our standard to be allowed.	Please describe how carpet is installed and removed from this surface. Also please provide three references.
34	Section 34 77 13, 2A.13, E, 5	We do not use actuators to deploy canopy. Our design is different from what is specified in the specifications, which is standard of our competitor's bridge. Our canopy deployment arms don't require cover. We ask our standard to be accepted.	Acceptable as noted as it meets the intent of the requirement
35	Section 34 77 13, 2A.13, G, 1	It requires CE/CRJ floor, which is JBT's standard CRJ floor. If we demonstrate that our system meets the performance requirements and equal or better than JBT's CE floor, would our CRJ floor accepted?	Acceptable as noted as it meets the intent of the requirement. Please note mobile bridge adapters are to be reused by the Airlines also.
36	Section 34 77 13, 2A.13, E	It requires two buttons to deploy right and left actuator arms, and use of pressure sensitive limit switches. Our design does not use actuators, therefore no need for two buttons, nor pressure sensitive limit switches. Our canopy system is activated by pressing one button, which activates both arms. They are deployed and pushed against the aircraft until canopy properly seals on fuselage. One button is needed to retract the canopy. We ask our standard design to be accepted.	Acceptable as noted as it meets the intent of the requirement.
37	Section 34 77 13, 2A.13, O, 1	It states "A service ladder and roof handrail shall be provided to facilitate routine maintenance access to roof components, (e.g. motors, fans): If no roof access is required for routine maintenance, we ask: a) Roof access ladder not to be required. b) If even roof access ladder is required, no handrail should be provided on the roof.	a) Roof access ladder shall be provided and installed. b) Accepted while fall protection shall still be provided and installed.

38	Section 34 77 13, 2A.14, P, 1	This requires an electrical disconnect panel to be provided to contain all disconnects. Typically, we use panel board on the rotunda column, and install all disconnects individually on this panel. This makes all disconnects readily accessible and easy to maintain. Would our standard be acceptable?	The PCA and GPU disconnects are mounted on the building or rotunda as shown on the electrical drawings. The existing disconnects will either be reused or new, provided by the Electrical Contractor. The main disconnect/panel for the bridge motors, lighting, and control circuits is shown on the electrical drawings to be mounted on a unistrut support system next to the rotunda. Individual breakers/disconnects will also be required for the bridge motors, lighting, and control circuits. It is acceptable to mount the bridge main disconnect/panel on the rotunda, however, the mounting hardware, brackets, etc. will need to be provided with the rotunda as noted on Sheet AP401, Detail 2. Field welding is not acceptable.
39	AP400	Drawing states "Architectural finish and attachments to be coordinated with architect in the field". Please verify who will provide this finish and who will install it.	PBB manufacturer to provide finishes and PBB installer to install them. Shop drawings with samples to be submitted prior to fabrication.
40	Special Provisions, Attachment 1	We respectfully ask to remove 'loss of use' from this section and mutually waive any and all consequential and/or indirect damages by adding the following sentence to this section: "Contractor shall not be obligated or liable for errors, inconsistencies, or omissions produced by Owner or others. In in addition unless otherwise specifically agreed to in writing by Owner and Contractor, neither party shall be liable for any special, indirect or consequential damages"	The Airport Authority will not be modifying their Insurance and Indemnification Requirements for this project.
41	Contract	We respectfully ask the Liquidated Damages to be capped at 10 % of the contract value. In addition, please add the following: "Liquidated damages shall not be assessed for delays not caused by the Contractor. Liquidated damages, when assessed, shall not exceed Contractor's proportionate share of the responsibility for such	The Airport Authority will not be modifying Contract with respect to Liquidated Damages.

		delay. This provision does not preclude any claim the Owner may have for direct damages under law"	
42	Electrical Plans	Do we know how far from the communication j-box to the bridge termination connection points? Per note 1 on all electrical drawing they are requiring us to install a 1 ¼" conduit and I don't see where that will be.	Typical connection point to bridge raceway system shown below: 
43	E-601	Detail A2 states that the power connection is by bridge contractor, does that mean the electrical contractor doesn't have to provide conduit?	The Passenger Boarding Bridge Contractor is responsible for the conduit and circuit connections from the Bridge Power Panel to the bridge motors, equipment, lights, receptacles, etc. The Electrical Contractor is responsible for the feeder from the Power Panel (PP-XX) to Bridge Panel (BP-XX)
44	Contract	Are there any Buy American provisions?	No.
45	General	Can site photos be provided?	Representative photos will be provided in Addendum 1. A site visit is recommended. Contact Bryan Belt (515) 256-5160 to arrange a site visit.
46	General	Can O&M manual be provided for the existing GPU and PCAs?	Manuals will be provided with Addendum 1.
47	Electrical Plans	I don't see conduit and wire shown on the electrical plans for the PCA disconnects. Where is the demolition and new work requirements identified?	The partial plans only identify the location of the equipment. The demolition of conduit and wire is shown on the one-line diagrams. See Sheet ED1202 for demolition and Sheet E-601 for new work requirements.

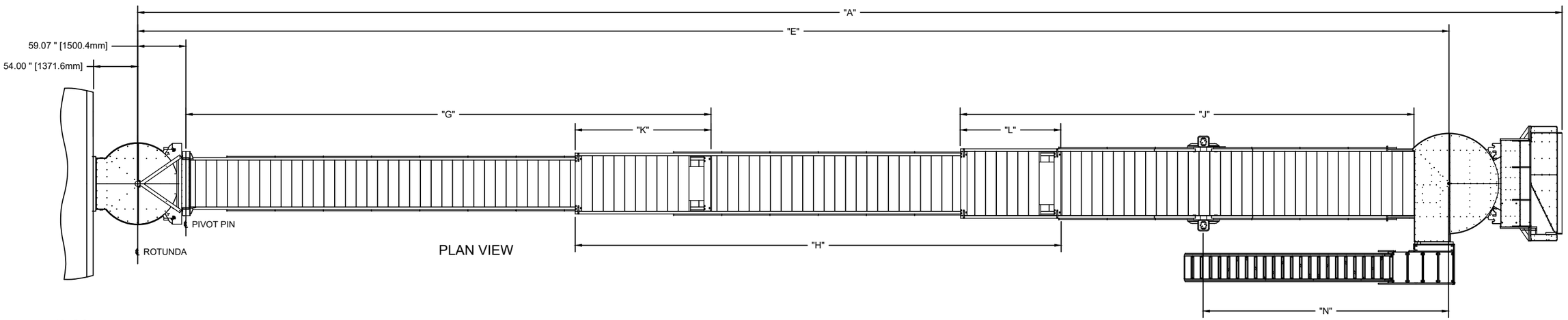
48	Electrical Plans	Will the cable for the Facilities Monitoring System be installed in the new 1-1/4" telecom conduit identified on the plans?	A data cable will be installed from the Facilities Monitoring System data jack location identified on Sheet E-400 to the IDF located in the Concourse. This cable will be installed by the Airport. The 1-1/4" conduit in the Concourse and from the Concourse to the PBB will be provided by the Electrical Contractor. Pathways on the PBB will be provided by the PBB Contractor. Pathways and control cabling from the Facilities Monitoring System control station to the GPU, PCA and Potable Water Cabinet will be provided by the PBB Contractor.
49	Bid Proposal	Could a separate bid item be added for the monitoring system?	A revised bid proposal form will be included with Addendum 1 to include three new bid items for the monitoring system. One item for each of the three phases.

	PCA				GPU		
Gate	**Mfg**	**Size**	**Model**	**Hose**	**Mfg**	**Size**	
A1	Trilectron	30 Ton	POU321	Reel	JBT	400 Hz	90 kVa/28VDC
A2	Trilectron	30 Ton	POU321	Reel	JBT	400 Hz	90 kVa/28VDC
A3	Trilectron	30 Ton	POU321	Snake	JBT	400 Hz	90 kVa/28VDC
A4	Trilectron	30 Ton	POU321	Reel	JBT	400 Hz	90 kVa/28VDC
C1	Trilectron	30 Ton	POU321	Basket	JBT	400 Hz	90 kVa/28VDC
C2	JBT	30 Ton	XPC-3013	Basket	JBT	400 Hz	90 kVa/28VDC
C3	JBT	30 Ton	XPC-3013	Basket	JBT	400 Hz	90 kVa/28VDC
C4	JBT	30 Ton	XPC-3013	Basket	JBT	400 Hz	90 kVa/28VDC
C5	HOBART	30 Ton	POU321	Basket	JBT	400 Hz	90 kVa/28VDC
C6	JBT	30	XPC-3013	Basket	JBT	400	90 kVa/28 DC

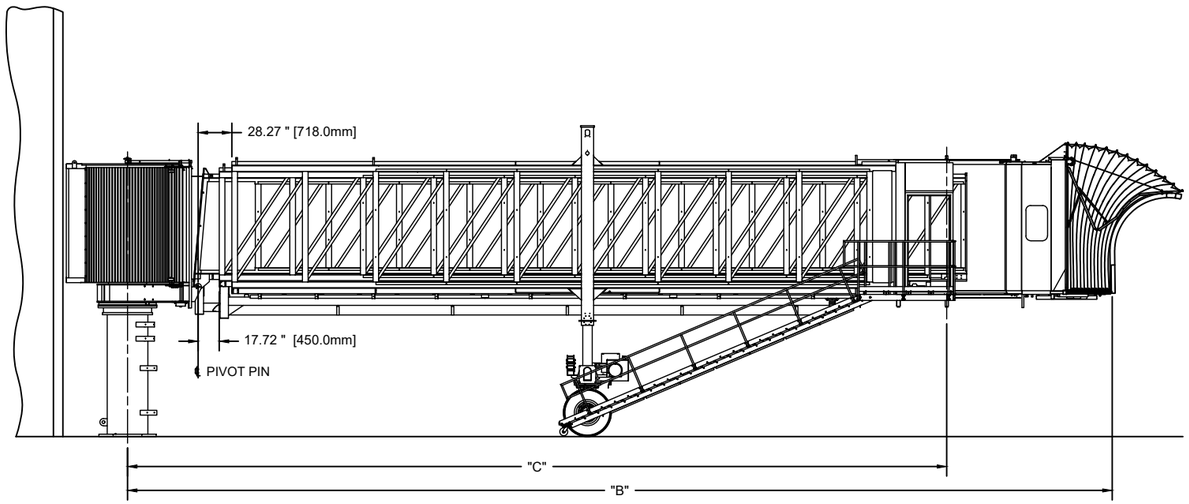
		Ton				Hz	
C7	JBT	30 Ton	XPC-3013	Basket	JBT	400 Hz	90 kVa/28 DC

EXHIBIT 2

MODEL NO.	"A" EXTENSION MAX	"B" RETRACTION MIN	"C" RETRACTION TO ELECTRICAL LIMITS	RECOMMENDED OPERATIONAL RETRACTION	"E" EXTENSION TO ELECTRICAL LIMITS	RECOMMENDED OPERATIONAL EXTENSION	"G" TUNNEL A	"H" TUNNEL B	"J" TUNNEL C	"K" EXTENDED TUNNEL OVERLAP A/B	"L" EXTENDED TUNNEL OVERLAP B/C	BRIDGE TRAVEL TO LIMITS	"N" LIFT COLUMN LOCATION
TC 23.00/13.10-3	76.44' (23.30 m)	44.13' (13.45 m)	32.64' (9.95 m)	35.93' (10.95 m)	64.96' (19.80 m)	61.68' (18.80 m)	26.64' (8.12 m)	25.00' (7.62 m)	21.72' (6.62 m)	9.06' (2.76 m)	7.81' (2.38 m)	32.35' (9.86 m)	10.30' (3.14 m)
TC 26.00/14.10-3	86.29' (26.30 m)	47.41' (14.45 m)	35.93' (10.95 m)	39.21' (11.95 m)	74.80' (22.80 m)	71.52' (21.80 m)	28.81' (8.78 m)	29.92' (9.12 m)	25.00' (7.62 m)	7.91' (2.41 m)	9.45' (2.88 m)	38.91' (11.86 m)	13.58' (4.14 m)
TC 29.00/16.10-3	96.13' (29.30 m)	53.97' (16.45 m)	42.49' (12.95 m)	45.77' (13.95 m)	84.65' (25.80 m)	81.36' (24.80 m)	31.56' (9.62 m)	29.92' (9.12 m)	31.56' (9.62 m)	9.06' (2.76 m)	7.81' (2.38 m)	42.19' (12.86 m)	15.22' (4.64 m)
TC 32.00/16.60-3	105.97' (32.30 m)	55.61' (16.95 m)	44.13' (13.45 m)	47.41' (14.45 m)	94.49' (28.80 m)	91.21' (27.80 m)	36.48' (11.12 m)	34.84' (10.62 m)	33.20' (10.12 m)	9.88' (3.01 m)	8.63' (2.63 m)	50.39' (15.36 m)	16.86' (5.14 m)
TC 35.00/17.10-3	115.81' (35.30 m)	57.25' (17.45 m)	45.77' (13.95 m)	49.05' (14.95 m)	104.33' (31.80 m)	101.05' (30.80 m)	41.40' (12.62 m)	39.76' (12.12 m)	34.84' (10.62 m)	10.70' (3.26 m)	9.45' (2.88 m)	58.60' (17.86 m)	18.50' (5.64 m)
TC 38.00/18.60-3	125.66' (38.30 m)	62.17' (18.95 m)	50.69' (15.45 m)	53.97' (16.45 m)	114.17' (34.80 m)	110.89' (33.80 m)	46.33' (14.12 m)	44.69' (13.62 m)	39.76' (12.12 m)	13.16' (4.01 m)	11.91' (3.63 m)	63.52' (19.36 m)	18.50' (5.64 m)
TC 41.00/19.60-3	135.50' (41.30 m)	65.45' (19.95 m)	53.97' (16.45 m)	57.25' (17.45 m)	124.02' (37.80 m)	120.73' (36.80 m)	48.69' (14.84 m)	44.69' (13.62 m)	43.04' (13.12 m)	12.20' (3.72 m)	8.63' (2.63 m)	70.08' (21.36 m)	21.78' (6.64 m)
TC 44.00/20.60-3	145.34' (44.30 m)	68.73' (20.95 m)	57.25' (17.45 m)	60.53' (18.45 m)	133.86' (40.80 m)	130.58' (39.80 m)	53.61' (16.34 m)	49.61' (15.12 m)	46.33' (14.12 m)	13.85' (4.22 m)	10.27' (3.13 m)	76.64' (23.36 m)	25.07' (7.64 m)



PLAN VIEW



ELEVATION VIEW

NOTES:

1. ROTUNDA DIMENSIONS (NOMINAL) -
   DOOR OPENING AT TERMINAL: 59.45"W X 90.91"H [1510mm X 2309mm]
   ROTATION: ± 87.5° (175° TOTAL)

2. TUNNEL INTERIOR DIMENSIONS (NOMINAL) -
   A - TUNNEL: 4'-11"W X 6'-11 3/16"H [1500mm X 2113mm]
   B - TUNNEL: 5'-9 11/16"W X 7'-10 13/32"H [1770mm X 2398mm]
   C - TUNNEL: 6'-8 5/16"W X 8'-9 5/8"H [2040mm X 2683mm]

3. ROTATING CAB DIMENSIONS (NOMINAL) -
   CANOPY (INTERNAL) WIDTH: 10'-2 1/2" [3111.5mm]
   ROTATION: 95° LEFT & 40° RIGHT (135° TOTAL)

4. LIFT AND DRIVE DIMENSIONS (NOMINAL) -
   HYDRAULIC LIFT CYLINDER STROKE: 120" [3048mm]
   WHEEL ROTATION: 90° LEFT & 90° RIGHT (180° TOTAL)

5. RETRACTION TO ELECTRICAL LIMITS (DIM "C") & EXTENSION TO ELECTRICAL LIMITS (DIM "E") ARE AT THE ELECTRICAL E-STOP, MECHANICAL STOPS ARE ±2.3" PAST E-STOP.

6. RECOMMENDED RETRACTION AND EXTENSION IS 39.37" [1000mm] SHORT OF ELECTRICAL STOPS.

7. MODEL TC 44.00/20.60-3 SHOWN

PARTS LIST

ITEM	QTY	UM	PART NUMBER	DESCRIPTION

ThyssenKrupp
Airport Systems, Inc.
A ThyssenKrupp Elevator Company

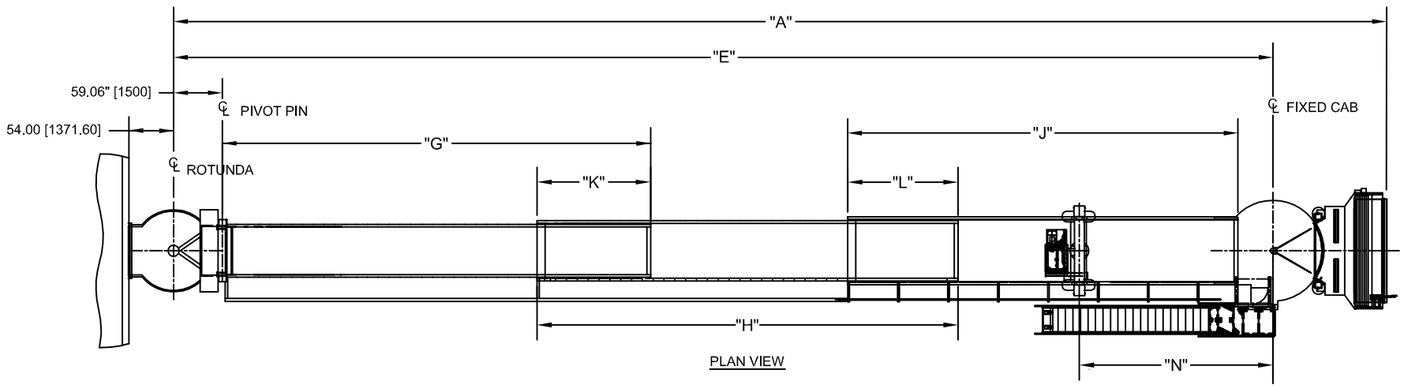
TITLE:
BRIDGE OPERATIONAL LIMITS
TKAS (3) TUNNEL CRYSTAL BRIDGE

ECN	LTR	DATE
11051	B	4/14/15
9243	A	8/19/11
REVISIONS		

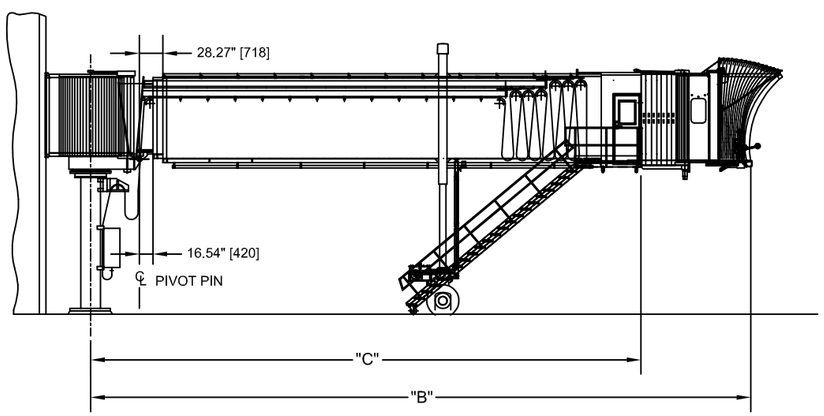
TOLERANCES: FRACTIONAL ± 1/16 DECIMAL XX ± .03 XXX ± .015 ANGULAR ± 1°
SIZE: D
DWG NO.: A8231151
REV.: B
DATE: 08/12/2008
DRAWN: CD
CHECKED: SPL
SCALE: 3/16"=1'0"
SHEET: 1 OF 1

PARTS LIST				
ITEM	QTY	UM	PART NUMBER	DESCRIPTION

MODEL #	"A" EXTENSION MAX	"B" RETRACTION MIN	"C" RETRACTION TO ELECTRICAL LIMITS	RECOMMENDED OPERATIONAL RETRACTION	"E" EXTENSION TO ELECTRICAL LIMITS	RECOMMENDED OPERATIONAL EXTENSION	"G" A-TUNNEL	"H" B-TUNNEL	"J" C-TUNNEL	"K" EXTENDED TUNNEL OVERLAP A/B	"L" EXTENDED TUNNEL OVERLAP B/C	BRIDGE TRAVEL TO LIMITS	"N" LIFT COLUMN LOCATION
TB 23/13.5-3	76.45' [23.30m]	45.28' [13.80m]	33.79' [10.30m]	37.08' [11.30m]	64.96' [19.80m]	61.68' [18.80m]	24.35' [7.42m]	23.62' [7.20m]	22.98' [7.00m]	7.38' [2.25m]	7.05' [2.15m]	31.17' [9.50m]	10.79' [3.29m]
TB 25/14.5-3	83.00' [25.30m]	48.56' [14.80m]	37.08' [11.30m]	40.36' [12.30m]	71.53' [21.80m]	68.24' [20.80m]	27.63' [8.42m]	26.90' [8.20m]	26.26' [8.00m]	9.02' [2.75m]	8.69' [2.65m]	34.45' [10.50m]	11.88' [3.62m]
TB 27/15.0-3	89.57' [27.30m]	50.20' [15.30m]	38.72' [11.80m]	42.00' [12.80m]	78.09' [23.80m]	74.81' [22.80m]	30.09' [9.17m]	29.36' [8.95m]	27.90' [8.50m]	9.02' [2.75m]	8.69' [2.65m]	39.37' [12.00m]	12.96' [3.95m]
TB 29/15.5-3	96.13' [29.30m]	51.84' [15.80m]	40.36' [12.30m]	43.64' [13.30m]	84.56' [25.80m]	81.37' [24.80m]	32.55' [9.92m]	31.83' [9.70m]	29.55' [9.00m]	9.02' [2.75m]	8.69' [2.65m]	44.29' [13.50m]	14.08' [4.29m]
TB 31/16.5-3	102.70' [31.30m]	55.12' [16.80m]	43.64' [13.30m]	46.92' [14.30m]	91.21' [27.80m]	87.93' [26.80m]	34.18' [10.42m]	33.47' [10.20m]	32.83' [10.00m]	9.02' [2.75m]	8.69' [2.65m]	47.57' [14.50m]	16.24' [4.95m]
TB 33/17.0-3	109.26' [33.30m]	56.76' [17.30m]	45.28' [13.80m]	48.56' [14.80m]	97.77' [29.80m]	94.49' [28.80m]	38.29' [11.67m]	37.57' [11.45m]	34.47' [10.50m]	10.66' [3.25m]	10.34' [3.15m]	52.50' [16.00m]	17.36' [5.29m]
TB 35/17.5-3	115.82' [35.30m]	58.40' [17.80m]	46.92' [14.30m]	50.20' [15.30m]	104.34' [31.80m]	101.05' [30.80m]	40.68' [12.42m]	40.03' [12.20m]	36.11' [11.00m]	10.66' [3.25m]	10.34' [3.15m]	57.42' [17.50m]	18.44' [5.62m]
TB 37/18.5-3	122.38' [37.30m]	61.68' [18.80m]	50.20' [15.30m]	53.48' [16.30m]	110.90' [33.80m]	107.62' [32.80m]	43.21' [13.17m]	42.49' [12.95m]	39.39' [12.00m]	11.49' [3.50m]	11.16' [3.40m]	60.70' [18.50m]	19.52' [5.95m]
TB 39/19.0-3	128.94' [39.30m]	63.32' [19.30m]	51.82' [15.80m]	55.12' [16.80m]	117.46' [35.80m]	114.18' [34.80m]	45.67' [13.92m]	44.95' [13.70m]	41.03' [12.50m]	11.49' [3.50m]	11.16' [3.40m]	65.62' [20.00m]	20.64' [6.29m]
TB 41/19.5-3	135.51' [41.30m]	64.96' [19.80m]	53.48' [16.30m]	56.76' [17.30m]	124.02' [37.80m]	120.74' [36.80m]	49.77' [15.17m]	49.05' [14.95m]	42.67' [13.00m]	13.13' [4.00m]	12.80' [3.90m]	70.54' [21.50m]	21.72' [6.62m]
TB 43/20.5-3	142.07' [43.30m]	68.24' [20.80m]	56.76' [17.30m]	60.04' [18.30m]	130.58' [39.80m]	127.30' [38.80m]	51.41' [15.67m]	50.69' [15.45m]	45.95' [14.00m]	13.13' [4.00m]	12.80' [3.90m]	73.83' [22.50m]	22.81' [6.95m]
TB 45/21.0-3	148.63' [45.30m]	69.89' [21.30m]	58.40' [17.80m]	61.68' [18.80m]	137.15' [41.80m]	133.86' [40.80m]	53.87' [16.42m]	53.15' [16.20m]	47.59' [14.50m]	13.13' [4.00m]	12.80' [3.90m]	78.74' [24.00m]	22.81' [6.95m]



PLAN VIEW



ELEVATION VIEW

NOTES:

1. ROTUNDA DIMENSIONS (NOMINAL) -
   DOOR OPENING AT TERMINAL: 59.45"W x 90.91"H [1510mm x 2309mm]
   ROTATION: ± 87.5° (175° TOTAL)

2. TUNNEL INTERIOR DIMENSIONS (NOMINAL) -
   A - TUNNEL: 4'-10"W x 6'-11"H [1472mm x 2110mm]
   B - TUNNEL: 5'-7"W x 7'-8 1/2"H [1702mm x 2350mm]
   C - TUNNEL: 6'-4 3/8"W x 8'-6 3/8"H [1940mm x 2600mm]

3. ROTATING CAB DIMENSIONS (NOMINAL) -
   CANOPY (INTERIOR) WIDTH: 10'-2 1/2"W [3111.5mm]
   ROTATION: 95° LEFT & 40° RIGHT (135° TOTAL)

4. LIFT AND DRIVE DIMENSIONS (NOMINAL) -
   HYDRAULIC LIFT CYLINDER STROKE: 120" [3048mm]
   WHEEL ROTATION: 90° LEFT & 90° RIGHT (180° TOTAL)

5. RETRACTION TO ELECTRICAL LIMITS (DIM "C") &
   EXTENSION TO ELECTRICAL LIMITS (DIM "E") ARE
   AT THE ELECTRICAL E-STOP, MECHANICAL STOPS
   ARE ±2.3" PAST E-STOP.

   WHEN ICE SRAPERS ARE USED, THE RETRACTION
   TO ELECTRICAL LIMITS (DIM "C") IS REDUCED BY 5",
   AND MECHANICAL STOP FOR RETRCATION IS
   RELOCATED 1/2" PAST E-STOP.

6. RECOMMENDED RETRACTION AND EXTENSION
   IS 39.37" [1000mm] SHORT OF ELECTRICAL STOPS.

NOTE: MODEL SHOWN TB 37/18.5-3.

LTR	DATE	REVISIONS
F.	10/7/04	
E.	3/27/03	
D.	3/8/01	
C.	8/11/99	
B.	11/18/98	
A.	10/27/98	

ThyssenKrupp Airport Systems, Inc.
A ThyssenKrupp Elevator Company

TITLE: BRIDGE OPERATIONAL LIMITS
TKAS (3) TUNNEL BRIDGE

TOLERANCES: FRACTIONAL ± 1/16 | DECIMAL .XX ± .03 .XXX ± .003 | ANGULAR ± 1°
SIZE: D | DWG NO.: A8209253 | REV: F
DATE: 8/16/98 | DRAWN: DL | SCALE: 1/8"=1'0" | SHEET: 1 OF 1

EXHIBIT 3

ThyssenKrupp Airport Systems
Recommended Spare Parts List

ThyssenKrupp

Project Name: Southwest Florida Int'l Airport (RSW) **Project Number:** Bids **# of Bridges:** 27

HYDRAULIC SPARE PARTS

Bid Part #	Description	MFG Name	MFG Model #	Base Qty	Project Qty	Unit Price	Total
BDA5228400	HYDRAULIC PUMP	PARKER	334-9112-227	1	2	$368.08	$736.16
BDA5228403	PC FLOW CONTROL	PARKER	FR101S550-20	1	2	$79.20	$158.40
BDA5234600	PILOT OPERATED RELIEF VALVE	PARKER	RAH101S50	1	2	$59.53	$119.06
BDA5228405	DIRECTIONAL VALVE	PARKER	DSL104BPD024D	1	2	$256.96	$513.92
BDA5228406	DIRECTIONAL VALVE	PARKER	DSL101NMD024D	1	2	$152.02	$304.04
BDA5228407	CHECK VALVE	PARKER	CVH103P	1	2	$26.40	$52.80
BDA5228408	NEEDLE VALVE	PARKER	NVH081S	1	2	$34.85	$69.70
BDA5234168	FILTER ELEMENT, HPU	PARKER	937617Q	10	10	$87.85	$878.46
BDA5228413	GAUGE	PARKER	2141SXB3000	1	2	$20.66	$41.32
BDA5228414	LEVEL GAUGE	PARKER	SNA-254-B-S-0-12	1	2	$44.88	$89.76
BDA5228415	BALL VALVE	PARKER	V502P-8	1	2	$40.37	$80.74
BDA5228416	CYLINDER HOSE ASSEMBLY	TKAS	FAX0641-8-8-8-62	1	2	$228.76	$457.51
BDA5228417	PO CHECKHOSE ASSEMBLY	TKAS	FAX0641-6-6-6-67	1	2	$213.82	$427.64
BDA5228418	PUMP HOSE ASSEMBLY	TKAS	FAX06OG05-6-10-6-18.00	1	2	$112.86	$225.72
BDA5232026	O RING KIT, WILSON HPU	PARKER	A4230293	1	2	$33.00	$66.00
BDA5215690	ELECTRIC MOTOR, 7.5 HP, 460VAC	PARKER	WWE7.5-18-213TD	1	2	$1,445.25	$2,890.49
						Subtotal	**$7,111.72**

Lead-Time estimate 1-2 weeks upon receipt of purchase order. Cost includes FOB TKAS Fort Worth, TX

Note: The above recommended spare parts listing is standard. Part numbers and prices are subject to change due to project specification requirements.

NOTE: These spare parts lists are for bid purposes only.
DO NOT order from these lists.

EXHIBIT 4

SARASOTA MANATEE AIRPORT AUTHORITY
Engineering, Planning & Facilities
6000 Airport Circle
Sarasota, FL 34243
Phone: (941) 359-2770, xt. 4270
Fax: (941) 359-5007

DATE: April 4, 2017

TO: All Interested Proposers

RE: Addendum #2, BID-2017-1-JBR, Q & A
Power Distribution & Jet Bridge Replacement Construction Project

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- The following questions were submitted by bidders, responses are noted in red.

Passenger Boarding Bridges
1.12.R.6 Axles, wheels and tires shall be operated within their respective manufacturer's recommendations. Tire footprint loads shall be limited to 200 P.S.I. The JBT Jetway standard design relies on solid tires. These do exceed the 200 psi limit specified but they are overwhelmingly accepted across the industry. Please allow our design.
This will be allowed.

SECTION 11 85 02 – POU DX UNITS
1.07.D. The spec requires motors, enclosures, and electrical accessories shall comply with NEMA standards and be so rated. If electrical accessories include contactors and circuit breakers then we cannot comply. We use IEC rated contactors and circuit breakers in our PCA units. IEC contactors are allowed per 2.06.N.4. Please allow our design.
This will be allowed.

2.04.B.2. An inlet Butterfly damper is required. We use outlet dampers. Please allow our design.
This will be allowed.

2.04.G. The DX POU unit components shall operate satisfactorily under ambient temperature conditions of -20° to 140° F (-29° to 60° C). We will not be able to comply with 140° F (60° C) ambient temperature with the blower VFD in the units. The VFDs that are used in the units have standard ambient operating condition of 5° F - 104° F (-15° C to 40° C). We can provide the next size larger VFD which will allow the increase of the ambient temperature to 122° F (50° C). Please allow ambient temperature conditions of -20° to 122° F (-29° to 50° C). This will require the next size larger VFD to be provided in the unit.
This will be allowed to the extent the remaining specifications are adhered to and there are no adverse effects on the VFD or the unit at the project site.

2.04.H. The blower wheel shall receive a two (2) plane dynamic balance at maximum RPM and the maximum allowable vibration velocity shall not exceed 0.1 inch/second or 0.5 MIL displacement. We use blowers manufactured by Aerovent that are balanced in accordance with ANSI/AMCA 204-96 "Balance Quality and Vibration Levels for Fans" to Fan Application Category BV-3, Balance Quality Grade G6.3. Fan Application Category BV-3 is equal 0.15 in/second. Please accept our standard.
This will be allowed.

2.04.J. Where the Dx POU unit components are assembled within a unitized enclosure, provide access doors of the hinged and insulated type. 2.03.J.9 allows as an alternate removable door panels. 2.07.B.1. requires a minimum of 1" thick thermal insulation for units with a unitized enclosure construction. We use hinged doors and bolt on panels to access components inside the PCA unit. Access to the VFD, blower, dampers, and coils require removing a bolt on panel. Access to the air inlet filters requires removing a bolt on louver. Our PCA unit design is not considered to be a unitized enclosure so our hinged doors and bolt on panels are not required to be insulated. Thermal insulation is applied to the evaporator coil and the outlet plenum as required per 2.07.I.1.a. Please accept our standard design.
This will be allowed.

2.05.A.1.d. Aircraft electrical load of 75,000 BTU/H should be used for design. The electrical load as specified for the design aircraft and referenced in the aircraft Maintenance Facility and Equipment Planning manual for each of the required aircraft will be used in place of 75,000 BTU per hour to verify PCA unit sizing. Using 75,000 BTU/H would increase the size of the PCA unit required.
This will be allowed to the extent the remaining specifications are adhered to, including properly cooling the aircraft as specified.

2.05.A.2.a. requires that Class III DX POU units shall be capable of providing a minimum of 240 lb/min of 35°F air at 22" static pressure at the end of a single 14" diameter 75' long insulated air hoses. The JBT 50 ton unit is rated at 240 lb/min at 22" static pressure and 34°-38°F air at the outlet of the unit. 2.05.S.2.b. requires that Class IV DX POU units shall be capable of providing a minimum of 550 lb/min of 35°F air at 35" of static pressure at the end of dual 14" diameter 75' long insulated air hoses. The JBT 120 ton unit is rated at 550 lb/min at 35" of static pressure and 34-38°F air at the outlet of the unit. Please note that 2.04.E. states that the unit external static pressure shall be defined as the gauge pressure measured at the outlet of the DX POU unit. The DX POU unit's manufacturer shall submit the gauge pressure the DX POU unit can produce at the outlet of the hose and at the aircraft connection through 75'0 of 14" hose.
This will be allowed to the extent the remaining specifications are adhered to, including properly cooling the aircraft as specified.

2.06.D.3. All wiring shall be terminated on terminal blocks and/or suitable connectors. Our standard is to cap the spare wires with heat shrink tubing and neatly secure them in the wire-way system inside the control panel. We request that you allow us to consider the heat shrink cap as a suitable connector. If this is not acceptable then additional manufacturing time and cost for terminal blocks will be required. Please allow our design.
This will be allowed.

2.06.D.4. The specification requires that all wiring shall be in conduit (preferably automotive split loom) or spot tied and shall be routed away from possible pinch points. For clarification, we use cables inside our PCA unit not individual wires that require conduit or automotive split loom. We do not use conduit or automotive split loom with cables. Please allow our design.
This will be allowed.

2.06.D.5. All meter panels and any components containing printed circuit boards or solid state electronics shall be shock mounted. We have components inside our PCA unit that contain circuit boards that are not shock mounted. These components are mounted per the manufacturer's recommendations.
This will be allowed.

2.06.D.9. Exterior conductor/cables shall be in conduit. Exposed cables will only be allowed where required due to flexibility and then will be limited to a maximum of 48". Exception should be taken to a maximum of 48". We use cables because of flexibility requirements but their exposure is not limited to 48". NEC permits the use of full run exposed cables when flexibility is required.
This will be allowed.

2.07.A.1. Hermetic sealed scroll compressors with integral vibration isolators are required. We solid mount the compressors in our PCA unit per the manufacturers recommendations. Low/high refrigerant pressure cutouts with manual reset are required. We use low and high refrigerant pressure cutouts that are automatic reset. A low oil pressure cutout with manual reset is required. The scroll compressor is not provided with an oil pressure cutout.
This will be allowed.

2.07.I.1.a. Disposable air filters are required. Filter media shall be made from polyurethane foam and open cell structure providing high arrestance and dust-holding capacity. Foam material shall have a flame-resistant additive making id self-extinguishing. Please note that this type of filter is considered to be a washable filter and not disposable.
No response.

2.07.M. A thermostatic expansion valve is required. We will comply by providing an electronic expansion valve in lieu of the thermostatic expansion valve.
This will be allowed.

2.07.N.2.c. The portable laptop computer shall include all hardware and software required to support local communications, trouble shooting and programming of the PCA Dx Unit's controller. We do not allow the PLC in the PCA unit to be programmed by the customer. Read only access will be granted.
This will not be acceptable.

2.07.N.4. Contactors shall be AC operated with 120V 50/60Hz holding coil. The contactors we use have 24VDC coils. Please allow our design.
This will be allowed.

2.07.N.5. Thermostats shall be utilized in the system to maintain the required temperature parameters of the supply air. We do not use thermostats to maintain the required temperature. We use the PLC to maintain temperature and control the unit. Please allow our design.
This will be allowed.

2.07.P.1. The control station shall be housed in a NEMA 4X stainless steel enclosure. The station shall be configured as indicated on the design drawings. Modifications to this configuration must be submitted and approved. Drawing E-702 shows the configuration of the push button control station which does not match our control scheme. We will provide a push button control station with a SST enclosure. This push button control station will follow our standard controls scheme and should be provided for approval. Reference the 511710 drawing for the configuration of the control station for the 50 ton unit.
TBD. No drawings were received.

2.07.T. The hose basket shall be installed at an approved location at the front or side of the wheel bogey as necessary based on aircraft serviced. Drawing M-106 shows a single large bay hose basket with a swivel connection mounted to the left side of the wheel bogie. Drawings ME-200 and ME-201 show the basket mounted on the aircraft side of the drive columns. Nothing is mentioned about extension hose storage and ABC adapter requirements. More clarification will be needed to determine what to provide for hose storage. Please provide.

Please note that it must be verified that there is clearance under the bridge to access the basket for the 120 ton units. There is not enough information to determine this at this time.
All information necessary is available. Comply with Section 118502 2.07T.2 which requires the hose basket be mounted at the front or side of the wheel bogey as necessary based on aircraft serviced. Extension hoses are required per M-106 legend note 2.

2.09.C.1. Maximum weight for Class III PCA unit is shown as 4000 lbs. The 50 ton unit weighs approximately 4200 lbs.
This will be allowed.

1.12.R.9.a.1 The lift mechanism shall consist of two (2) extra capacity hydraulic rams. Each assembly shall be independent of the other and capable of supporting the bridge under full design load. An adjustable rate pump and cylinder system shall provide the necessary lift speed measured at the aircraft cab bumper.
Our standard hydraulic pump is a constant volume pump. An adjustable rate pump adds considerable cost without much benefit. Please allow our standard.
This will be allowed.

TECHNICAL SPECIFICATIONS QUESTIONS

SECTION 118504 – PASSENGER BOARDING BRIDGE

Q1: Pg. 1, Section 1.01.A.1 SECTION INCLUDES, "…only truss style (smooth sided) 3-tunnel bridges will be allowed on this project."

ThyssenKrupp bridges use a standard tunnel design that consists of the exterior side, roof, and floor panels manufactured from 14 gauge galvannealed steel panels attached to a framework of angle and tubing. These panels are formed, welded, sealed, and painted to form the steel enclosure. Strength is derived from the formed sheet metal ribs, while the flat exterior walls provide a pleasing architectural appearance. We kindly request approval of our standard galvannealed steel panels attached by a framework of angle and tubing. It appears as if your description of your PBB meets the definition of a "truss" style PBB, which is allowed. The PBBs must adhere to the requirement contained in 118505 - 1.12.J.7 that requires all intersecting steel plates to be 100% welded.

Q2: Pg. 10, Section 1.12.D.3 Personnel Safety, "OSHA approved handrails will be installed atop ½ the outer most tunnel section to provide fall protection to personnel working on drive motors, etc."

ThyssenKrupp standard bridges do not require roof access for maintenance on the vertical drive motors, therefore we request an exception to this requirement. We can provide safety cable for the outermost tunnel that can be used if roof access is necessary.
Handrails will be required.

Q3: Pg. 12, Section 1.12.G.10 Technical Performance Requirements, "…the PBB shall be capable of achieving a minimum of 12% slope without causing damage to the PBB or ancillary equipment, including PCA or 400 Hz equipment, for maintenance or irregular operation activities."

ThyssenKrupp standard bridges are adjustable to +/- 10%, which is above the allowable ADA slope of 8.33% and should not hamper maintenance activities for the bridge or ancillary equipment. We kindly ask approval of our standard.
To the extent that all aircraft are properly services as specified, and all other performance requirements of the specification are adhered to, this will be allowed.

Q4: Pg. 12, Section 1.12.H.1 Environmental Considerations, "The bridge shall function satisfactorily and in accordance with these specifications under ambient temperatures from -40 degrees F…"

ThyssenKrupp's standard lowest operational temperature is -25 degrees F. Considering the locale and climate this airport resides in, -25 degrees F should be more than adequate for maintaining bridge function throughout the year. We kindly ask approval of our standard.
This will be allowed.

Q5: Pg. 12, Section 1.12.H.4 Environmental Considerations, "PBB shall be equipped with external tunnel roller ice scrapers to remove ice from the tracks prior to contact with the rollers."

Due to the environment and locale of this airport, we do not foresee a need for this requirement. We request an exception to this requirement.
This will be allowed.

Q6: Pg. 14, Section 1.12.J.7 Materials, Parts and Processes, "All intersecting steel planes, e.g. side to top, side to bottom, of exterior steel sections of the passenger boarding bridge shall be 100% welded. Caulk shall not be used to provide weather seals."

ThyssenKrupp's standard tunnel side panels are spot-welded and caulked to provide a weathertight seal and an appealing finished appearance. This standard is in use with many airports throughout the country in a variety of harsh environments. We kindly ask approval of our standard in order to provide a competitive bid for this project.
This will not be allowed. The specification will stand as is.

Q7: Pg. 18, Section 1.12.R.7 Drive Column, "Wheel/Tire assemblies shall be solid rubber tire tread on forged steel wheels as manufactured by Trelleborg or approved equal."

Our standard wheel/tire assemblies are from OTR and consist of solid rubber tires and aluminum hubs. These assemblies are in service on many of our standard bridges for a variety of projects. We kindly ask for approval of our standard.
This will be allowed.

Q8: Pg. 18, Section 1.12.R.9.a.2 Drive Column, "The lift cylinders shall be equipped with internally mounted velocity fuses that prevent the bridge from descending in the event of fluid loss or other system failure."

ThyssenKrupp's hydraulic lift cylinders are equipped with pilot-operated check valves instead of velocity fuses. We have used velocity fuses in the past and have found that when raising the bridge they will lock in place and not allow the bridge to lower. Pilot-operated check valves provide the same level of protection requested, but without the problems that we have experienced previously. We request approval of our standard.
This will be allowed.

Q9: Pg. 19, Section 1.12.R.9.b.2 Drive Column, "The hydraulic reservoir (tank) shall have the capability of being electrically heated during severe weather conditions."

Due to the environment and locale of this airport, we do not foresee a need for this requirement. We request an exception to this requirement.
Provided the hydraulic fluid is rated for the SRQ ambient extremes without additional heat, and to the extent that PBB performance is not degraded, this will be allowed.

Q10: Pg. 23, Section 1.12.S.19 Aircraft Cab with Operator's Station, "Subfloors in the cab area of the PBB, including the porch area outside the double doors shall be provided with aluminum sub-floors. Plywood is not allowed."

While our porch area consists of aluminum, ThyssenKrupp's subfloor in the cab area is carbon steel and does not utilize plywood. Therefore, the rotting/degradation typically seen with plywood is not present. We kindly request approval of our standard.
This will not be allowed. The specification will stand as is.

Q11: Pg. 30, Section 1.12.AB.22 Electrical System and Components, "The provisions shall include a flush mounted "J" box containing two (2) 12-pair CAT-6 communication cable…"

ThyssenKrupp requests an exception to this. It is our understanding from several cable manufactures and distributors that CAT-6 cable has limited choices of styles and designs. The cable comes in both stranded and solid conductor, but both have physical restraints. Solid cable is not recommended for continuous, flexing applications like the passenger boarding bridge's cable conveyance systems. It is also desirable to have shielding in this application, but it is not available with this cable. Stranded cable is manufactured for patch cables only and, according to the manufacturer and the standard, should be limited to a maximum of 10 meters in total length. Given the original purpose of this cable, it is not manufactured with the environmental considerations we need, nor with shielding that would be desirable in this application. We kindly request approval of our standard CAT-5E cabling.
This will be allowed.

Q12: Pg. 31, Section 1.12.AB.24.b Electrical Systems and Components, "Tunnel lighting shall be provided by recessed LED panel fixtures with diffusers …shall be positioned parallel to the tunnel centerline…"

ThyssenKrupp's lighting is aligned perpendicular to the tunnel centerline. We are able to meet all other requirements for tunnel lighting, but ask for acceptance of our standard lighting arrangement.
To the extent that all other lighting requirements are met as specified, and all other performance requirements of the specification are adhered to, this will be allowed.

Q13: Pg. 33, Section 1.12.AC.4.b Finishes and Materials, "Interior wall treatment shall consist of floor to ceiling 4-foot-wide laminated phenolic plastic panels…"

Our wall panels are made from fire-rated, particle board laminated between two pieces of Wilsonart Laminate to provide a durable surface finish. One side is a colored laminate, the other side a phenolic sheet. Melamine resin is used along with phenolic resin to manufacture this laminate surface. These materials are bonded together with kraft paper under high heat and pressure to form the finished decorative product. We request approval to use our standard laminate.
To the extent that all other requirements are met as specified, and all other performance requirements of the specification are adhered to, this will be allowed.

Q14: Pg. 11, Section 1.12.D.15 Personnel Safety, "Interior rain gutters shall be painted with alternating yellow/black safety striping the entire length."

ThyssenKrupp offers gutters in either a solid safety yellow or solid black for a pleasing finished appearance. We request approval of our standard in the color of the Owner's choosing.
Yellow will be allowed.

Q15: Pg. 26, Section 1.12.U.1 Aircraft Canopy, "Pressure sensitive limit switches shall be incorporated into each side of the closure actuator mechanisms as necessary."

ThyssenKrupp uses a specially-designed canopy deployment mechanism that precludes the possibility of applying excessive force to the aircraft fuselage. Self-contained struts limit the maximum pressure applied to the aircraft, making a pressure sensor unnecessary. The struts

provide sufficient pressure to extend the canopy and maintain a complete seal with the aircraft fuselage without applying additional contact pressure. Each side lowers independently and stops automatically when contact is made with the aircraft. We request approval of our standard.
To the extent that all other requirements are met as specified, and all other performance requirements of the specification are adhered to, this will be allowed.

Q16: Please provide the Airport Layout in CAD DWG format.
The Airport Layout CAD DWG will be provided.

Q17: On the Bid Form provided, it shows line items for the "PBB with all ancillaries" as well as line items for the actual ancillary equipment (GPU, PCA, etc.). It seems that this format would cause a "double-charge" once the total Base Bid is calculated. Is this correct? Or should the PBB items exclude the ancillary equipment? There should be no "double-charges". It will be up to each bidder to determine which items go into which line item. PBB ancillaries can include gate signs, hurricane tie downs, disconnect panels, CCTV, etc.

SECTION 118601 – OVERBRIDGE DEVICE

Q18: Pg. 1, Section 1.01.B.1 SECTION INCLUDES, "Devices may be referred to as "doglegs" or "pantographs"."

ThyssenKrupp standard bridges are equipped with a side-mounted exterior electrical conveyance system. Our design allows maintenance personnel easy access for inspections or cable additions at all bridge positions and operating conditions and also prevents the need for onsite installation of pantographs. We kindly ask acceptance of our standard.
This will be allowed. Note: All cables shall be UL listed and suitable for sunlight exposure.

Q19: If pantographs are required, can MCM be added to the approved manufacturers? From MCM: **"**We have been sourcing these devices for the entire life of our company and the design goes back to our predecessor company McCormick Morgan. We make arguably the best pantograph so being specifically excluded from the spec is uncalled for."
MCM can certainly be added.

SECTION 118502 – DX POU PCA UNITS

Q20: 2.06.F.1, Twist Inc. units are equipped with TVSS on the power that supplies the OEM Control Boards. We do not have TVSS on the entire unit. May our TVSS on the Control Boards be accepted in lieu of the whole unit?
This will not be allowed. The specification will stand as is.

Q21: 2.07.P.1, Twist Inc. remote control station is housed in a NEMA 4X fiberglass box. Is this acceptable in lieu of the required stainless steel box?
This will be allowed.

Q22: 2.09.C.1& .2, Twist Inc. PCA Class III Dimensions are 114"X88"X59", 4,700 pounds. Our PCA Class IV Dimensions are 160"X88"X62", 9,300 pounds. We have many of these size units in the field, mounted underneath the C Tunnel, as desired for this project. May our Class I and Class IV unit size and weight be allowed?
To the extent the units do not impact PBB operations, this will be allowed.

FINANCIAL & CONTRACTUAL QUESTIONS

CONTRACT FORM

Article 9. OWNER DIRECT PURCHASE.

This section states:

"9.1 It is intended that OWNER shall avail itself of its governmental exemption from sales and use taxes, by making "Owner Direct Purchase" (ODP) from the manufacturers of the equipment and materials described in Article 1. Accordingly, OWNER hereby assigns to the CONTACTOR limited authority to act as its agent in taking delivery of said equipment and materials. (…)"

We respectfully ask to confirm that Bidder will be exempt from any Sales and Use taxes related to the project.
Only the equipment for which the Contractor will act as an agent for the Owner is exempt from sales and use taxes. It is the intention of the Owner to purchase the passenger boarding bridges directly from the manufacturer using this method.

ERRATA SHEETS

70-11 Responsibility for Damage Claims.
b. Indemnification:

This section states:

"(1) The Contractor shall indemnify and hold harmless Owner and Engineer and their consultants, agents and employees from and against all claims, damages, losses and expenses, direct, indirect or consequential (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs), provided that any such claim, damage, loss or expense (a) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom and
(b) is caused in whole or in part by any negligent act or omission of Contractor, any Subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, regardless of whether or not it is caused by a party indemnified hereunder or arises by or is imposed by Law or Regulations regardless of the negligence of any such party."

We respectfully ask to remove the following part of the last sentence of 70-11 b. (10 (b): "regardless of whether or not it is caused by a party indemnified hereunder or arises by or is imposed by Law or Regulations regardless of the negligence of any such party."
This is standard SRQ bid language used on all projects and will not be modified.

This section further states:

"(2) In any and all claims against Owner or Engineer or any of their consultants, agents or employees by any employee of Contractor, any Subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, the indemnification obligation under paragraph 70-11.b(1) above shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for Contractor or any such Subcontractor or other person or organization under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.(…)"

We respectfully ask to mutually waive consequential and incidental damages.
This is standard SRQ bid language used on all projects and will not be modified.

GENERAL PROVISIONS

80-8 Failure to complete on time.

This section states:
"For each calendar day or working day, as specified in the contract, that any work remains uncompleted after the contract time (including all extensions and adjustments as provided in the subsection 80-07 titled DETERMINATION AND EXTENSION OF CONTRACT TIME of this Section) the sum specified in the contract and proposal as liquidated damages will be deducted from any money due or to become due the Contractor or his or her surety. (…)"

We respectfully ask the Liquidated Damages to be limited with 0.1 % per day and capped at 10 % of the contract value.
This is standard SRQ bid language used on all projects and will not be modified.

90-6 Partial payments.

This section states:

"Partial payments will be made to the Contractor at least once each month as the work progresses. Said payments will be based upon estimates, prepared by the Engineer, of the value of the work performed and materials complete and in place, in accordance with the contract, plans, and specifications. (…)"

We respectfully ask that Owner shall make monthly progress payments as agreed upon in schedule of values. Please confirm that it will be acceptable to include progress billings for engineering, material, and labor costs incurred during the manufacturing process and prior to delivery.
This is standard SRQ bid language used on all projects and will not be modified.

SECTION 130
COMPLIANCE WITH FEDERAL LAWS AND REGULATIONS
Termination for Convenience

This section states:

"The Owner may terminate this contract in whole or in part at any time by providing written notice to the Contractor.(…) Owner agrees to pay for: (…)"

We respectfully ask to include the following paragraph after 1. :
As well as the proportional contract value of work performed, including but not limited to the value of work in process, in transit, delivered to site, or in storage, and for any costs incurred and all work that the Contractor has performed up to the date of termination plus a reasonable rate of profit for the work performed. In addition, the Contractor reserves the right to assess other costs if the Owner terminates for convenience. Except as specifically agreed in writing, termination shall not relieve either party of any obligation arising out of work performed prior to the date of termination. The Owner agrees to limit possession to work and materials previously paid for by the Owner to the Contractor.
This is standard SRQ bid language used on all projects and will not be modified.

70-11 Responsibility for Damage Claims/ a. Insurance:

This section states:

"(…) All of the policies of insurance so required to be purchased and maintained (or the certificates or other evidence thereof) shall contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least thirty days prior written notice has been given to Owner and Engineer by certified mail."

Please remove the requirement "materially changed" as Bidder's insurance carriers will not agree to provide such notice.
This is standard SRQ bid language used on all projects and will not be modified.

This section further states:

"c. Coverages: The limits of liability for the insurance required by, Paragraph 70-11.a shall provide coverage for not less than the following amounts or greater where required by law:
(…)

(4) Builders Risk/Installation Floater:"

We respectfully ask to amend builder's risk/Installation Floater to "All-Risk Commercial Property.
This is standard SRQ bid language used on all projects and will not be modified.

This section further states:

d. The Contractor shall obtain in the name of the Owner, Owner's Protective Liability Insurance which will have the same limits of coverage for the same period as that required in paragraph 70-11.c(2) above for the Contractor's general liability coverage, including liability for acts of Subcontractors and Subordinate Contractors.

We respectfully ask to remove this requirement as this coverage is not currently available. Alternatively, we could offer additional insured status in lieu of OCP policy.
This is standard SRQ bid language used on all projects and will not be modified.

EXHIBIT 5

DALLAS FORT WORTH INTERNATIONAL AIRPORT

ADDENDUM NO. 5

Terminal B & E Passenger Boarding Bridge Replacement Gates B9, B26, E31, E34

CONTRACT NO. 9500667

January 15, 2019

The Request for Bids for the above is hereby revised as follows:

Technical Specifications Revisions

1. N/A

Plan Sheet Revisions

1. N/A

Schedule Revisions

1. N/A

RFB Revisions

1. Appendix 1 – Bid Detail is replaced with the attached and revised to include acknowledgement of this Addendum No.5.

Solicitation Questions (Q) and Answers (A)

1. (Q) Thyssenkrupp's standard bridge tunnel design consists of the exterior side, roof and floor panels manufactured from 14 gauge galvannealed (galvannealed material provides additional corrosion protection superior to hot-rolled, coil steel, and galvanized) steel panels attached to a framework of angle and tubing. These panels are formed, welded, sealed and painted to form the steel enclosure. Strength is derived from the formed sheet metal ribs, while the flat, exterior walls provide a pleasing architectural appearance. Changing our design to a corrugated or truss style would be significant cost. As an approved manufacturer, we feel that our standard design should be allowed.

(A) The Addendum-3 section 1.12.J.7, specifying welding and caulk, was removed. The Addendum-4 section 1.12.J.7 specifies the components to be installed per manufacturer's recommendations. The method of construction described above is consistent with the requirements of the contract specification, section 118504, 1.1, A, 1.

Appendix 1 – Bid Detail

Contract No. 9500667
Terminal B & E Passenger Boarding Bridge Replacement Gates B9, B26, E31, E34

1) This is a solicitation for bids on the construction of the project detailed in the contract documents of Appendix 5 – The Agreement. The Contractor shall be responsible for reviewing all existing conditions associated with the work prior to commencement of work activities.

2) The Board reserves the right to reject any bid for any reason, including if, on the face of the bid received, it is clear that acceptance of the bid would not comply with any applicable bidding laws, rules, or regulations.

3) The undersigned Contractor, declares that the only person or parties interested in this Bid as principals are those named herein; that this Bid is made without collusion with any other person, firm, or corporation; that he has carefully examined the Bid Requirements, all incorporated references and Appendices, and the conditions and classes of materials of the Work; and will provide all the necessary supervision, labor, machinery, tools, supplies, equipment, transportation and other facilities, apparatus, and other means of construction and will do all the Work and furnish all the materials called for by such, in the manner prescribed therein and according to the requirements therein set forth, and to perform all other obligations imposed by the Contract Documents for the prices named in the Bid Schedule hereinafter appearing.

4) It is understood and agreed that if awarded the Contract, the Work will commence within ten (10) calendar days after the date of the Notice to Proceed and that the total Work will be completed in accordance with the Schedule of Construction set forth herein.

5) It is further understood that the Prevailing Wage Rates TX180322 revised 01/12/2018, issued by the Department of Labor as established by law are to govern the Work. The Contractor certifies that he has examined the wage rate determination and that prices bid are based on compliance with said determination.

6) Accompanying this Bid is the required Bid Guaranty consisting of Bid Bond or Cashiers' Check in the amount of five percent (5%) of the total Bid, or in the case of bid alternates, five percent (5%) of the highest total Bid. The certified check accompanying a Bid shall be returned to the Contractor upon execution of the Contract.

7) In the event of the award of a Contract, the undersigned will deposit with the Board a Contract Performance Bond and a Payment Bond as required by the Contract Documents, guarantying faithful performance of the Contract, and any payment of all labor, materials and other sundry items, in accordance with the Contract Documents, and will deliver certificates of insurance evidencing insurance required by the Contract Documents.

8) The Work proposed to be done shall be fully completed and finished to the entire satisfaction of the Board.

9) The undersigned certifies that the price contained in this Bid has been carefully reviewed and is submitted as correct and final.

10) In conformity with the Special Provisions, the amount of liquidated damages for this Contract shall be as shown in Article 1.0, of the Special Provisions.

11) Ancillary/Integral Professional Services – Contractor certifies that in selecting an architect, engineer or land surveyor, etc., to provide professional services, if any, that are required by the specifications, Contractor shall not do so on the basis of competitive bids but shall make such selection on the basis of demonstrated competence and qualifications to perform the services in the manner provided by Section 2254-004 of the Texas Government Code.

12) Certification of compliance with the provisions of Section 2254-004 of the Texas Government Code:(initial here)_____

13) Certificate Regarding Debarment And Suspension – By submitting a bid/proposal under this solicitation, the Contractor or offeror certifies that at the time the Contractor or offeror submits its bid/proposal that neither it nor its principals are presently debarred or suspended by any Federal department or agency from participation in this transaction.

14) Receipt is hereby acknowledged of the following Addenda to the Contract Documents:

Addendum No. 1 Date Received 12/10/18 Ack. By _____
Addendum No. 2 Date Received 12/21/18 Ack. By _____
Addendum No. 3 Date Received 01/07/19 Ack. By _____
Addendum No. 4 Date Received 01/11/19 Ack. By _____
Addendum No. 5 Date Received 01/15/19 Ack. By _____

15) Summary of Bid

a. **Base Bid –** Contractor agrees to construct **Contract No. 9500667**, **Terminal B & E Passenger Boarding Bridge Replacement Gates B9, B26, E31, E34,** in accordance with the contract terms, plans and specifications and to complete the work within three hundred and thirty-five (335) consecutive calendar days for substantial completion, with an additional sixty (60) consecutive calendar days for final completion, from the date set forth in the Notice to Proceed for the following lump sum amount:

BASE BID PRICE: _____

_____ DOLLARS and ____/100 $_____.

Separate Cost Breakdown (for Tax Exemption Information)

Materials to be Incorporated ..... $_____
All Other Costs ..... $_____
Total Base Bid ..... $_____

TOTAL BID Detail	
Total Base Bid	$_____
Pre-Defined Allowances	$ 100,000.00
TOTAL BID	**$_____**

16) The contract, if awarded, shall be to the lowest responsive, responsible Contractor whose bid, conforming with all materials terms and conditions of the invitation for bids, is the lowest in price.

17) When alternates are used, the Board reserves the right to Contract for any combination of Base and or Alternates stated, or none of the above. Contractor must bid on the base and all alternates. Bids addressing only the base or alternate items will be considered non-responsive.

18) The Contractor shall complete the following statement by checking the appropriate space.

a. The Contractor has ____ has not ____ participated in a previous contract subject to the equal opportunity clause prescribed by Executive Order 10925, or Executive Order 11114, or Executive Order 11246.
b. The Contractor has ____ has not ____ submitted all compliance reports in connection with any such contract due under the applicable filing requirements; and that representations indicating submission of required compliance reports signed by proposed subcontractors will be obtained prior to award of subcontracts.
c. If the Contractor has participated in a previous contract subject to the equal opportunity clause and has not submitted compliance reports due under applicable filing requirements, the Contractor shall submit a

compliance report on Standard Form 100, "Employee Information Report EEO-1" prior to the award of contract.

d. Standard Form 100 is normally furnished contractors annually, based on a mailing list currently maintained by the Joint Reporting Committee. In the event a contractor has not received the form, he may obtain it by writing to the following address: Joint Reporting Committee,1800 G Street, Washington, DC 20506.
e. ( ) The below listed firm is a Disadvantaged Business Enterprise (DBE / M/WBE).

NAME OF CONTRACTOR/CORPORATION:_____

CONTRACTOR'S ADDRESS:_____

CITY, STATE, ZIP:_____ PHONE NO.:_____

_____ _____

PRINTED NAME & TITLE OF PERSON SIGNING BID FEDERAL I.D. NUMBER

SIGNATURE:_____

(Seal, if bid by a Corporation)

EXHIBIT 6

thyssenkrupp Airport Systems
3201 North Sylvania Avenue, Suite 117, Fort Worth, Texas 76111 USA
P: +1 817 210-5000 www.thyssenkrupp-airports.com

thyssenkrupp

Statement of NFPA 415-2013 (Standard on Airport Terminal Buildings, Fueling Ramp Drainage and Loading Walkways) Compliance

This is to certify that all Passenger Boarding Bridges furnished by ThyssenKrupp Airport Systems, Inc. are designed and manufactured in strict accordance with the requirements of NFPA 415-2013. We further state that:

(1) All components and assemblies of the bridges required to be tested under NFPA 415-2013 have been tested for compliance by a Nationally Recognized Testing Laboratory (NRTL) and meet or exceed the requirements of the standard.

(2) The design and construction of the entire bridge is in compliance with all the requirements of NFPA 415-2013.

(3) There have been no design changes since the component testing that would materially affect the outcome of the test certifications.

NFPA 415-2013 Section 6.4.6 Test of Floors
The bridge floor was tested and complied with NFPA 415-2013 as recorded by Intertek Testing Services NA, Inc. Test Report 3181041SAT-014, which includes material list, tested construction, and compliance information.

NFPA 415-2013 Section 6.4.6 Test of Walls
The bridge glass wall was tested and complied with NFPA 415-2002 as recorded by Southwest Research Institute, Project No. 01.11310.01.001, which includes the test procedure, description of the test assembly, test results, and compliance information.

NFPA 415-2013 Sect 6.4.7, Test of Flexible Closures
The bridge canopy was tested and complied with NFPA 415-2013 as recorded by Intertek Testing Services NA, Inc. Test Report G101258905SAT-002, which includes material lists, tested construction, and compliance information.

NFPA 415-2013 Sect 6.4.8, Test of Cab and Rotunda Slat Curtains
The bridge cab curtains were tested and complied with NFPA 415-2013 as recorded by Intertek Testing Services NA, Inc. Test Report G100015559SAT-001, which includes material lists, tested construction, and compliance information.

NFPA 415-2013 Sect 6.4.9, Test of Bumpers
The bridge bumper was tested and complied with NFPA 415-2013 as recorded by Intertek Testing Services NA, Inc. Test Report 3181041SAT-005B, which includes material lists, tested construction, and compliance information.

NFPA 415-2013 Sect 6.4.10, Tests of Misc. Seals and Weather Stripping Assemblies
The bridge seals were tested and complied with NFPA 415-2013 as recorded by Intertek Testing Services NA, Inc. Test Report 3181041SAT-012, which includes material lists, test construction, and compliance information.

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thyssenkrupp

The above mentioned tests have been carried out successfully in accordance with the requirements of the NFPA 415-2013 and all the recorded test reports are available upon request for the review and approval of the Authority having jurisdiction on each project.

PSReddy

Reddy Poondla P.E.
Director of Engineering ET-AS-AIR
10/11/2019.

26. -

Listing Constructional Data Report (CDR)

1.0 Reference and Address			
Report Number	3181041SAT-006	DRAFT Issued: 22-Jan-2014	For Review and 22-Jan-2014
Standard(s)	NFPA 415 : Standard on Airport Terminal Buildings, Fueling Ramp Drainage and Loading Walkways, 2013 Edition (NFPA 415-13); Standard Method of Test of Surface Burning Characteristics of Building Materials, 2006 Edition (NFPA 255-06)		

Applicant	ThyssenKrupp Airport Systems, Inc.	Manufacturer	**ThyssenKrupp Airport Systems, Inc.**
Address	3201 North Sylvania Avenue Suite 117 Fort Worth, TX 76111	Address	3201 North Sylvania Avenue Suite 117 Fort Worth, TX 76111
Country	USA	Country	USA
Contact	Jason Bryan	Contact	Jason Bryan
Phone	(817) 344-7960	Phone	(817) 344-7960
FAX	(817) 834-6985	FAX	(817) 834-6985
Email	jason.bryan@thyssenkrupp.com	Email	jason.bryan@thyssenkrupp.com

2.0 Product Description	
Product	Basic Passenger Boarding Bridge System (Steel)
Brand name	NA
Description	The product covered in this report is a weather-protected walkway between the airport terminal building and commercial aircraft for enplaning and deplaning airline passengers.
Models	Basic Two-Tunnel Passenger Bridge System - Steel; Basic Three-Tunnel Passenger Bridge System - Steel
Model Similarity	The two models are identical except in the number of telescoping tunnels designed into each (two or three)
Ratings	NA
Other Ratings	NA

EXHIBIT 7

File E332865 Vol 1 Issued: 2009-08-31
Revised: 2009-08-31

FOLLOW-UP SERVICE PROCEDURE
(TYPE R)

PASSENGER BOARDING BRIDGES
(QGLA)

Manufacturer: (100238-823) THYSSENKRUPP AIRPORT SYSTEMS INC
3201 N SYLVANIA AVE
FORT WORTH TX 76111-3117

Applicant: (100238-823) SAME AS MANUFACTURER

Listee: (100238-823) SAME AS MANUFACTURER

This Procedure authorizes the above manufacturer to use the marking specified by Underwriters Laboratories Inc.(UL), or any authorized licensee of UL, only on products covered by this Procedure, in accordance with the applicable UL Services Agreement.

The prescribed Mark or Marking shall be used only at the above manufacturing location on such products which comply with this Procedure and any other applicable requirements.

The Procedure contains information for the use of the above named Manufacturer and representatives of Underwriters Laboratories Inc. and is not to be used for any other purpose. It is lent to the Manufacturer with the understanding that it is not to be copied, either wholly or in part, and that it will be returned to Underwriters Laboratories Inc. (UL) or any authorized licensee of UL, upon request.

This PROCEDURE, and any subsequent revision, is the property of Underwriters Laboratories Inc.(UL) and the authorized licensee of UL and is not transferable.

Underwriters Laboratories Inc.

Stephen Hewson
Senior Vice President
Global Follow-Up Service Operations

William R. Carney
Director
North American Certification Program

EXHIBIT 8

ThyssenKrupp Airport Systems

May 19, 2020

Ms. Melissa Wendel
Lee County Port Authority
P: 239-590-4556
E: mmwendel@flylcpa.com

Reference: Passenger Boarding Bridge Replacement Project
(RFB) 20-53MMW
Southwest Florida International Airport

Dear Ms. Wendel,

After reviewing Addendum 2 received May 19, 2020, it is apparent that the Lee County Port Authority has issued a sole-source bid for (RFB) 20-53MMW for the procurement of the passenger boarding bridges. Addendum 2 and the technical specification contained within, is restricting competition and is only allowing the equipment from our competitor. While theoretically, anything is possible and anything could be re-engineered, forcing us to design and build a passenger boarding bridge to our competitor's standard design indirectly, though effectively, eliminates us from submitting a competitive bid.
The technical specification contained in addendum 2 unequivocally states that thyssenkrupp Airport Systems is an approved manufacturer. Furthermore, *we actually exceed the required qualifications*, as listed in the specification. However, our standard design is not being allowed.

Our Passenger Boarding Bridge design represents an absolute service proven, very modern standard bridge design. It can be found in over 6,000 passenger boarding bridges around the world. And proudly, to name only a few, almost 2000 bridges in North America alone, can be found in reputable world-class airports like Miami, Tampa, Orlando, Fort Lauderdale, Los Angeles, Boston, New York, Newark, Chicago, Washington DC, Toronto, Dallas-Fort Worth, Houston, and Toronto to name a few.

We trust you are aware that this project is employing both State and FAA funding. Therefore, we are convinced that the specification should allow for reliable, impartial, and transparent competition, thus allowing for a fair and competitive bidding process. Considering that there are only two qualified Passenger Boarding Bridge manufacturers in the U.S., it cannot be in the best interest of the Lee County Port Authority to sole-source, neither would it be, we trust, appreciated by the elected Lee County representatives or by officials of the FAA. Furthermore, at this stage, this even precludes to assess the appropriateness, or legality, of deliberately restricting competition.

When this bid was re-issued the second time through the Lee County Port Authority, the specifications became much more one sided and almost identical to our competitor's PBB specifications. We have identified those items and submitted RFI's during the allowable time. Although our bridges meet and exceed the performance requirements of the specifications, they differ in some areas from our competitor's bridges. The following items are significant changes which will force us to completely re-design our bridges. This will make us non-competitive. Additionally, there are several smaller items not

listed below that are our competitors standard that would cause us to make additional design changes and further reduce the competitive bid process.

1. Electro-Mechanical Lift System: Ref. RFI #3, tk-2, tk-9, tk-20
2. Continuous Welding: Ref. RFI #tk-6
3. Plank Type Ceiling: Ref. RFI. # tk-22
4. Both sides of the canopy closure shall be independently adjustable: Ref. RFI # tk-13
5. Tunnel lighting shall be positioned parallel to the tunnel centerline: Ref. RFI # tk-21
6. Corrugated or truss style tunnel construction: Ref. RFI # tk-28
7. Aluminum subflooring: Ref. RFI # tk-31 & 9

In conclusion, We are prepared and intend to deliver a truly competitive offer with a superior technical and perfectly service-proven design and product. We require and expect your support, to ascertain that unjustifiable efforts to deliberately restrict competition shall not be entertained. We are convinced that your airport, county, and Lee County's official representatives wish for and deserve transparent and truly impartial competition.

We are looking forward to hearing from you ***at your very earliest convenience***, especially considering the very tight bid timeframe for Ft. Meyers, to address this serious issue. We are prepared to relinquish on no reasonable effort to ascertain this bid and its very process to be impartial and unbiased.

Sincerely,

Greg Engleby
North America Sales Manager
ThyssenKrupp Airport Systems, Inc.
(817)-734-7324
greg.engleby@thyssenkrupp.com

CC: Mr. Ben Siegel

BakerHostetler

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mvitale@bakerlaw.com

August 4, 2020

Melissa M. Wendel, CPPO
Procurement Manager
Lee County Port Authority
Southwest Florida International Airport
11000 Terminal Access Road, Ste. 8671
P: 239-590-4556
E: mmwendel@flylcpa.com

Re: ***Response in Opposition to JBT Aerotech Corp's Protest for RFB 20-53MMW For Passenger Boarding Bridge Replacement at the Southwest Florida International Airport***

Dear Ms. Wendel:

In this bid protest proceeding for the above-referenced project, thyssenkrupp Airport Systems Inc., ("Thyssenkrupp"), the prospective awardee of the contract at issue, responds and objects to the bid protest filed before the Lee County Port Authority ("LCPA") by aggrieved bidder JBT Aerotech Corporation ("JBT"). As explained in greater detail below, JBT's protest is wholly without merit and should be denied in its entirety without further delay.

Further, pursuant to the LCPA Purchasing Manual (the "Purchasing Manual") Section 10.2(F), Thyssenkrupp requests that the LCPA Bid Dispute Committee award it its costs and attorney's fees for having to file this response.

I. INTRODUCTION AND STANDING TO RESPOND

This protest pertains to LCPA's request for bids for project number RFB 20-553MMW, for Passenger Boarding Bridge Replacement at the Southwest Florida International Airport. (the "Project").

On or about July 15, 2020, LCPA provided its written notice of intent to award the Project at issue to Thyssenkrupp as the lowest responsible bidder. Thyssenkrupp is a worldwide leader in the manufacturing, installation and servicing of passenger boarding bridges. The company is located at 3201 N. Sylvania Ave., Suite 117, Fort Worth, TX 76111. It can be reached by phone at (817) 210-5000, and by facsimile at (817) 834-6985.

On July 16 and 17, 2020, pursuant to the Purchasing Manual, two entities filed Notices of Intent to Protest the intended award at issue. One Notice was filed by Aero Bridgeworks, Inc. ("Aerobridgeworks") and contained no specific protest grounds. Further, Aerobridgeworks did not timely follow up its Notice with a bid protest by the applicable deadline, and therefore has waived its right to file a protest for this Project.

The second Notice of Intent to Protest was filed by JBT on July 16, 2020. JBT followed up with the instant bid protest, which according to the LCPA was filed on July 23, 2020. Assuming the information provided by LCPA is correct, Thyssenkrupp does not dispute that JBT's protest was filed in a timely manner. However, for the reasons that follow, JBT's protest is both deficient and without legal merit, and is therefore due to be denied by the Bid Dispute Committee (the "Committee").

The undersigned attorneys are counsel for Thyssenkrupp and have been authorized by Thyssenkrupp to file a response to this appeal. This response is timely filed, being submitted via electronic mail on August 4, 2020 before 5:00 p.m. A courtesy copy will also be sent to LCPA by overnight delivery.

Bid opening revealed that five (5) contractors timely submitted bids for this Project. Those contractors were Thyssenkrupp, Aerobridgeworks, JBT, Owen Ames Kimball Co., and Whiting Turner Contracting. In terms of price, the unevaluated bids were as follows:

RFB 20-53: PASSENGER BOARDING BRIDGES

AEROBRIDGEWORKS:	$24,159,600.00
JBT CORPORATION:	$25,649,547.00
OWEN AMES KIMBALL CO. OF FLORIDA INC.	$25,795,090.93
WHITING TURNER CONTRACTING CO.	$26,760,000.39
THYSSEN KRUPP AIRPORT SYSTEMS INC.	$24,268,558.00

Although the lowest unevaluated bidder, Aerobridgeworks was not deemed by LCPA to be responsible, presumably because it was precluded from bidding per the Q&A due to a conflict of interest. Further, Aerobridgeworks has waived its right to an award by failing to file a timely protest.

Thus, JBT submitted the third-highest price of all bidders, and Thyssenkrupp's price was more competitive than JBT's price by about $1.4 million.

II. SPECIFIC FACTS SUPPORTING THE DENIAL OF THIS PROTEST

A. JBT's Protest Violates the LCPA Purchasing Manual and Should be Disregarded

Pursuant to the LCPA Purchasing Manual, Section 10.1(H), a formal written protest shall contain the following:

1. Port Authority bid identification number and title.
2. Name and address of the proposed recipient of the bid award (affected party).
3. The name and address of the protester, and the title or position of the person submitting the bid protest.
4. **A statement of disputed issues of material fact. If there are no disputed material facts, the written protest must so indicate.**
5. **A statement indicating the relief to which the protester deems him/herself entitled.**
6. **A concise statement of the facts alleged and of the rules, regulations, statutes, and constitutional provisions entitling the protester to relief.**
7. Such other information as the protester deems to be material to the issue.

Here, JBT's protest is materially deficient. First, JBT's protest does not set out a list of disputed issues of material fact, or the absence thereof. JBT includes only the blanket statement that "to the extent that there are any disputed issues of material fact, they are described in detail in the following sections." (Protest at p. 1). However, the "following sections" contain nothing but argument, and do not describe what is or is not a disputed fact. Nor is there a dedicated statement of facts alleged or facts at issue. This renders a proper review by the Committee impossible.

Section 10.1(J) of the LCPA Purchasing Manual clearly sets out that "**Failure to Follow the Bid Protest Procedure set out in the Lee County Port Authority Purchasing Manual Shall Constitute a Waiver of Your Protest and Resulting Claims**." JBT was clearly aware of the Purchasing Manual's requirements; it cites the Purchasing Manual in its Notice of Intent to Protest. JBT's failure to file a properly organized and detailed protest – for these reasons and the reasons that follow -- should result in a rejection of its protest by the Committee, and an award of the Project to Thyssenkrupp.

B. JBT's Protest Does not Discuss the Applicable Law or How it Applies to the Protest

As a further reason justifying why the protest should be disregarded, JBT's Protest does not contain any detailed discussion of the applicable law or how the law would be applied to the protest grounds it raises. This is because the grounds raised by JBT are not sufficient to disrupt the thorough and well-considered decision of LCPA.

For this particular Project, the award at issue should not be reversed, and a bid protest should not be granted, unless the protestor can show that the decision by the agency was clearly erroneous, arbitrary and capricious, or the product of fraud, duress, or other criminal activity. "In Florida...a public body has wide discretion in soliciting and accepting bids for public improvements and its decision, when based on an honest exercise of this discretion, will not be overturned if it may appear erroneous and even if reasonable persons may disagree." *Biscayne Marine Partners LLC v. City of Miami*, 273 So. 3d 97, 102 (Fla. 3d DCA 2019) (quoting *Liberty Cty. v. Baxter's Asphalt & Concrete, Inc*., 421 So. 2d 505, 507 (Fla. 1982)).

An action by a public body is only "arbitrary if it is not supported by logic or the necessary facts" and "capricious it if is adopted without thought or reason or is irrational." *Health Hadi v. Liberty Behavioral Health Corp*., 927 So. 2d 34, 38 (Fla. 1st DCA 2006). The discretion of a public entity to solicit, accept or reject contract bids should not be interfered with absent a showing of dishonesty, illegality, fraud, oppression or misconduct. *Dep't of Transp. v. Groves-Watkins Constructors*, 530 So. 2d 912, 914 (Fla. 1988); *Sutron Corp. v. Lake Co. Water Auth*., 870 So.2d 930, 932 (Fla. 5th DCA 2004).

An award may still be sustained even if the protestor shows an error or irregularity in a bid. Considering the nature of public contracting, involving many pages of specifications and criteria all requested within a limited period of time, a public body has the discretion to make an award despite minor irregularities. *See, e.g, Sunshine Towing at Broward, Inc. v. Dep't of Transp*., No. 10-0134BID (Fla. DOAH Apr. 6, 2010) (concluding that the agency's determination that the requirement was "minor irregularity" was not a "clearly erroneous" decision on the basis of the strict standard of proof required in bid protest cases). Not every deviation from the invitation to bid is material. A deviation is only material if it gives the bidder a substantial advantage over the other bidders and is shown to restrict or stifles competition. *Robinson Elec. Co., Inc. v. Dade Co*., 417 So. 2d 1032, 1034 (Fla. 3d DCA 1982).

For the reasons that follow, Thyssenkrupp will demonstrate that its bid was compliant with the specifications at issue, that the LCPA properly evaluated all bids using reasonable criteria that were reasonably considered, and that any alleged issues with Thyssenkrupp's bid were nonexistent, minor, or immaterial. The award of this Project to Thyssenkrupp by the LCPA should be sustained.

C. The Bid Satisfies the Criteria for Section 11 8504-page 18, 1.12R.8.b Vertical Drive – Electromechanical

JBT falsely states that Thyssenkrupp could never meet the requirement for Vertical Drive-Electromechanical and suggests that is it impossible that Thyssenkrupp is "now suddenly able to meet this specification requirement". This is untrue.

First, by way of background, Thyssenkrupp did attempt to convince LCPA to allow it to use a hydraulic lift system rather than ball screw technology in the lift system for the Passenger Boarding Bridges ("PBBs") under the Project at issue. It has been proven that the reliability of the hydraulic lift system is much better, while the life cycle cost is much less than ball screw system, offering the customer an up-front and life cycle cost savings. If the proven hydraulic lift system were allowed, LCPA would have saved $400,000.00 at initial purchase, and another approximately $250,000.00 in maintenance and spare part costs during the life of the PBBs. It is for this reason that Thyssenkrupp normally offers a hydraulic lift system, and attempted to convince LCPA to permit this standard for this Project. For example, LCPA's earlier specifications issued under Manhattan a month earlier allowed hydraulic lift system. (Exhibit C1). As stated during the pre-bid meeting, when the initial bid was being administered by Manhattan Construction, it was publicly stated that the bid specifications would be opened up to allow Thyssenkrupp's standard design features, such as hydraulic vertical lift system.[1]

However, LCPA, in its discretion, chose to require the ball screw technology to the exclusion of the hydraulic lift system. LCPA asked Thyssenkrupp to agree that it would agree to use LCPA's desired criteria for the electromechanical lift system, and Thyssenkrupp did so.

Thyssenkrupp's attempt to convince LCPA to switch to a less expensive and more reliable alternative was reasonable under the circumstances, but should not be mistaken as an inability to provide a ball screw system. Thyssenkrupp has always been able to meet the LCPA's electromechanical lift system requirements. Ball screw technology has been around since the late 19th century and it is a fairly simple technology used in many, many industries such as aviation, automotive, and machine tools. The technology is commercially and readily available and to convert a bridge from a hydraulic lifting system to an electromechanical lifting system was fairly simple and something that Thyssenkrupp agreed that it was able to provide.

Thyssenkrupp has engineering centers and manufacturing facilities around the world that are fully capable of providing a compliant product with an electromechanical lift system, and its manufacturing capabilities were described in detail in its bid package. LCPA committed no error in relying on Thyssenkrupp's agreement to provide LCPA's preferred specification.

JBT's protest also states that "TK's bid still indicates that it intends to provide a hydraulic lift

[1] While Thyssenkrupp fully intends to comply with LCPA's preferred specification, it notes that it can offer substantial savings, not only at the time of purchase, but during the life of the bridge, by using a hydraulic system, and encourages LCPA to permit both alternatives in future procurements. Further, to stand behind this claim, Thyssenkrupp would still offer this savings should LCPA so choose for this project.

system." (Protest at p. 2). This is not a factual statement and is not supported by any evidence. JBT attempts to use drawings submitted in Thyssenkrupp's original bid package, for another purpose, to support this statement. The drawings that were included in Thyssenkrupp's original bid package were simply catalog stock drawings depicting a passenger boarding bridge for ease of reference. It is quite common to see general drawings such as what was included in the bid documents.

The intent of Thyssenkrupp's bid was to provide a full, detailed, and compliant proposal, which was achieved. As noted in the final bid package, after all addenda, Thyssenkrupp acknowledged receipt of an agreement to all addenda, which of course include the requirement for an electromechanical lift system, and as such Thyssenkrupp has included this system in its bid. JBT's protest is simply grasping at straws by incorrectly suggesting Thyssenkrupp intends to ignore the wishes of its customer.

Although not necessary to overrule this Protest, Thyssenkrupp notes that it is willing to provide LCPA (under strict confidentiality) detailed engineering drawings upon request which demonstrate the PBB's electromechanical system with the ball screw technology. Although not required, Thyssenkrupp is willing to do this to assuage any concerns that it cannot fulfill this specification.

D. Thyssenkrupp's Bid Complies with Section 11 8504-page 14, 1.12.J.7 Material, Parts, and Processes

In its opening statement and several times in this section of its protest, JBT brings up past projects by Thyssenkrupp that have no relevance to the current project in Fort Myers. What Thyssenkrupp may or may not have offered to provide in past projects has nothing to do with whether or not it provided a compliant bid to the LCPA, which of course, it did. The Specifications for this Project do not require that Thyssenkrupp bid this project in the exact same way that it bid other projects. Just as Lee County's needs are not the same as every other airport in the United States, Thyssenkrupp, through its wide network of resources, personnel, and partners, has the flexibility to adapt its performance to the needs of the customer. JBT's arguments in this section of its protest again demonstrate its reliance on innuendo, rumor, and speculation rather than actual evidence.

JBT goes on to state that "TK's C-pan design does not allow for the inclusion of a glass pane window", as required by the RFB's specification. (Protest at p. 2). This also is not true. Thyssenkrupp is able to include glass pane windows as required per the specifications, as agreed to. Thyssenkrupp has done so in the past; for instance, this was done for Boeing Aircraft Company's 787 Dreamliner Delivery Center PBBs in Seattle. (*See* Exhibit D1). However, even if Thyssenkrupp had never constructed its PBBs in this manner before (which is untrue), LCPA committed no error in relying upon an industry leader's agreement that it could meet the specifications for this project.

JBT goes on to further state that regarding continuous welding, "The authority should not allow itself to be duped by last minute reversals claiming that various key requirements like this one can now suddenly be met." (Protest at p. 3). JBT would not know or be aware of the research,

development, and engineering that Thyssenkrupp has done over past years regarding this requirement. JBT's protest creates the false suggestion that they are the only company that is capable of doing continuous welds on their bridges. This is simply not true and is another example of a poor assumption by JBT. Thyssenkrupp has been in the steel business for more than 200 years, and is capable of welding in this manner if ultimately required by LCPA. JBT is well aware of this and should not make such clearly incorrect intimations to the contrary in its protest.

Next JBT states that, "the RFB required a truss wall design, which TK does not utilize". (Protest p. 2). This again is another misleading statement, and JBT's claim is not correct. Thyssenkrupp's design has been specifically allowed for this project. *See* Addendum #4, Q&A 33 (Exhibit D2).

Finally, regarding the "last minute reversals" mentioned above and originally found in JBT's protest, this statement holds no merit. All bidders are forced to make last minute decisions based on the contents of addenda, answers to requests for information, the need to offer a financially competitive bid, and the needs of the customer. Agreeing to a compromise in construction based on the individual needs of the consumer in a competitive bidding process is a common occurrence and Thyssenkrupp has followed the requirements of the bid documents and the addenda. LCPA committed no error in awarding the Project to Thyssenkrupp simply because it agreed to the requirements that LCPA published.

E. There is No Deviation With Section 11 8504-page 31, 1.12AB.10.k and 1.12.AB.10.m Finishes and Materials

This section of the specification, in pertinent part, states that the sub-floor in the cab and bubble areas and C tunnel subfloors shall be aluminum. JBT suggests with no proof that Thyssenkrupp cannot meet this specification. This protest ground is also in error.

JBT first suggests that Thyssenkrupp cannot meet this manufacturing requirement because it would require a complete redesign of its product in two weeks. This statement makes an unsupported assumption that Thyssenkrupp redesigned its floor in a two-week period of time and had not done any previous design work or development on an aluminum sub-floor. JBT is not and cannot be aware of any confidential and proprietary engineering or design work that may have occurred in the past regarding aluminum flooring. JBT engages in rank and irrelevant speculation that Thyssenkrupp cannot meet the aluminum requirement. What is relevant is that Thyssenkrupp adhered to the bid documents and addendums and submitted a compliant bid.

What is more, as Thyssenkrupp stated in response to Q37, its rotating cab floor is already aluminum. (Exhibit E1). At Q40, Thyssenkrupp explained that a subfloor is needed for JBTs bridges since they use corrugated floor construction. (Exhibit E2). Carpet cannot be laid over corrugated surface, and therefore JBT's bridges must have a subfloor. JBT's standard subfloor is plywood, which is not suitable in humid environment such as in Ft. Myers.

Rightfully, LCPA did not want plywood in the cab area and in tunnel C, which is more susceptible to absorption of moisture and other issues. However, LCPA allowed the subfloor to be plywood

in tunnels A and B. (Exhibit E3). It seems LCPA, in its discretion, allowed a plywood subfloor in some areas, which inured to JBT's benefit for some specifications, but not in others. Again, this is a common occurrence in procurements after questions are asked and concerns are raised.

Thyssenkrupp uses a galvanized / galvanealed flat surface throughout the bridge floor, except the rotating cab, where it uses aluminum flooring. At Q40, Thyssenkrupp asked if LCPA would allow galvanized / galvanealed sub-floor laid over already existing flat galvanealed surface. LCPA requested that this layer, subfloor, be aluminum as requested by the specifications. **This does not require any design change, or require additional certification.** It is merely an addition to Thyssenkrupp's existing floor, and not a substitution as it would be for JBT's design. Simply because this would require a redesign for another customer does not mean it would for Thyssenkrupp. More importantly, LCPA committed no error in selecting Thyssenkrupp as Thyssenkrupp agreed to LCPA's preferred specifications. Therefore, no additional certification would be required, and this argument is in error.

F. Thyssenkrupp is UL/ETL Certified and Is Obtaining Amended Certifications

In this section JBT incorrectly argues that Thyssenkrupp's ETL listing and UL certificate are not valid for the bridges that they submitted for this project. This is a protest ground based on another faulty premise.

Thyssenkrupp's standard design for its PBBs is both UL listed and certified and ETL certified. As noted above, Thyssenkrupp believed that the technical specification would be written, or an alternate specification accepted, in a way that would have allowed its standard design to be provided. Unfortunately, they were not, but this was only after LCPA confirmed this through multiple Q&As and RFIs.

After multiple RFI's requesting that a standard design be allowed, and eventually being informed via addenda that they would not be, Thyssenkrupp chose an acceptable alternate design which is fully compliant with the bid documents.

As is common knowledge in the airport construction industry, UL Certification is a lengthy and rigorous process, and certifications must be renewed from time to time. As LCPA knows, Thyssenkrupp, nor any other entity, cannot obtain a new certification overnight. As soon as the RFI and addenda required a design change, Thyssenkrupp moved expeditiously to obtain certifications for its revised design. Thyssenkrupp's request is pending, and it will expeditiously obtain the required certifications as required now that it will be using an alternate design that is compliant with the bid documents. It should be noted that Thyssenkrupp, along with all others who are UL certified, receives quarterly audits from UL in order to maintain their certification in any regard, as LCPA is likely aware. (*See* Exhibit F1). Certification is a continual process.

After the addenda at issue were published by LCPA, LCPA only asked that Thyssenkrupp agree to meet all addenda and sign the "Specification Clarification and Certification" sheet. (Exhibit F2). Notably, the addenda did not require the bidders to be recertified by the time of bid opening,

as LCPA presumably knew this would be an impossible timeline. Since Thyssenkrupp already had the requisite certifications, it will surely be able to obtain new certifications on its amended design; it simply just does not happen overnight. It was fully within LCPA's discretion to award the Project to Thyssenkrupp since Thyssenkrupp had the requisite certifications and will have amended certifications shortly, and agreed to be bound by all addenda. *See Acad. Express, LLC v. Broward Cty*., 53 So. 3d 1188, 1190 (Fla. 4th DCA 2011) (finding proposal facially responsive because awardee answered "Yes" to each question regarding experience).

On Page 8 of the Request for Qualifications ("RFQ") for this Project, LCPA states the following:

> **A.18 RESERVATION OF RIGHTS**
> The Authority reserves the right to reject any and/or all bids, accept or reject any alternates, waive irregularities and technicalities if it is in the best interest of the Authority, in the Authority's sole judgement, and conforms to applicable state and local laws or regulations. The Authority further reserves the right to make inquiries, request clarifications, require additional information and documentation from any bidder, or cancel this solicitation and solicit for new bids at any time prior to the execution of an agreement. […]. All such actions shall promote the best interest of the Authority.

(Exhibit F2). Thus, it was completely committed to LCPA's discretion to award the Project to Thyssenkrupp upon Thyssenkrupp's agreement to use an amended design, in order to promote the best interests of the Authority and save $1.4 million on the Project. Any argument to the contrary should not be well taken.

Further, the law of the State of Florida directly supports LCPA's decision in this regard. In addition to the language in Section A18 quoted above, Florida law provides that the LCPA can award the bid to Thyssenkrupp based on Thyssenkrupp's certification and representation that amended certifications are forthcoming. *See Capeletti Bros. v. State Dep't of Gen. Servs*., 432 So. 2d 1359, 1363 (Fla. 1st DCA 1983). In *Capeletti,* the Florida First District Court of Appeal affirmed a bid award to Bergeron Land Development, Inc. ("Bergeron") for rough site preparation and grading at a Dade County correctional facility. *Id*. at 1360. The correctional facility was not easily accessible because it was adjacent to a private roadway. *Id*. at 1361. At the time of awarding the bid and at a subsequent bid protest hearing, Bergeron "had not yet made definite arrangements to gain access to the project site, [but] it nevertheless assumed responsibility therefor at the amount for which it bid the job." *Id*. Even though Bergeron had not yet confirmed access to the project, the Court determined that the bid award to Bergeron was not arbitrary or capricious. *Id*. The Court further noted that Bergeron did not have any economic advantage in the bidding process because it assumed responsibility for obtaining access. *Id*.

The situation is substantially similar for this Project. Thyssenkrupp has not gained any economic advantage in the bidding process by the purported certification issues raised by JBT. To the contrary, Thyssenkrupp is obtaining the certifications at its own cost and, like the *Capeletti* case,

has represented that it will obtain the certifications before work begins. LCPA has complete discretion to affirm the intended award to Thyssenkrupp.

G. Thyssenkrupp is UL/ETL Listing for the Most Recent Edition of NFPA 415

In its next section, JBT's protest states that Thyssenkrupp is not certified to the latest edition of NFPA-415, which is the 2016 edition. In actuality, Thyssenkrupp **is** certified to the latest edition of NFPA-415. (Exhibit G7).

Thyssenkrupp's NFPA 415 Statement of Compliance, included in its bid, correctly stated that "The bridge glass wall was tested and complied with NFPA 415-2002". (Exhibit G1). Although it is a correct statement, LCPA should note that Thyssenkrupp had this wall tested for NFPA415-2016 and the wall **also** complies with this standard. The previously submitted Statement of Compliance is consistent with, and supported by, Thyssenkrupp's updated Compliance Statement. (Exhibit G7).

Additionally, JBT states that "it would have been impossible for SwRI or any other lab to certify that a bridge wall containing glass could fully meet the NFPA-415 2002 edition standard. Specifically, section 6.2.4 of the 2002 edition expressly disallowed windows in passenger boarding bridges." This statement mixes fact and argument and is misleading. Yes, NFPA-415 2002 edition did not allow windows in passenger boarding bridges, but neither did the 2008 nor 2013 editions. (*See* Exhibit G3, G4, G5, G6 for NFPA requirements). Item 6.2.4. states "*There shall be no transparent or translucent walls, windows, or surfaces other than those windows located in the ramp access service door and in the cab area for the purpose of operating the aircraft loading walkway*". Notably, this paragraph was removed in NFPA 415 - 2016.

However, this fact is immaterial, as Thyssenkrupp was able to get its glass bridges certified per NFPA-415 performance requirements. (Exhibit G7, G8, G9). Further, in 2005, Thyssenkrupp tested and received certification stating that glass panels meet the performance requirements of NFPA 415. (Exhibit G2). The NFPA testing requirements related to walls have been the same for many years.

Later, in 2018, Thyssenkrupp updated its NFPA-415 certification in accordance to NFPA 2016 for the glass bridges used in the Toronto International Airport. These tests were carried by an accredited testing laboratory, located in Europe. (Exhibit G9). See the enclosed letter from Intertek confirming this fact (Exhibit G10).

Even if Thyssenkrupp was not certified to NFPA standards, which it is, this would not be a material ground to protest the award. NFPA is not a regulatory organization with regulatory authority such as OSHA or the EPA and is not the final say in where a glass bridge can be manufactured, installed, or used across the country, and must defer to local authorities. Local city government and fire marshals have the authority to approve a glass panel bridge as NFPA complaint even in contravention of the old specifications. For instance, Thyssenkrupp was able to have its glass bridges certified according to NFPA-415 performance requirements in Texas before NFPA ever

stated that glass would be permitted in boarding bridges. This was because the local governments and fire marshal accepted Thyssenkrupp's certification as it met the performance requirements of NFPA-415.

But JBT knew this already, which makes this argument even more puzzling. Thyssenkrupp would also note a similar **approval for JBT's glass bridges** suppled to Santa Barbara, California in 2011, and Wichita, Kansas in 2014. Thus, JBT's statement that this is "impossible" is again a rank and quite frankly, untrue statement.

Assuming only for the sake of argument that Thyssenkrupp made a mistake by not clarifying this issue in its bid package (which is highly disputed), LCPA correctly exercised its discretion to award the Project to Thyssenkrupp, as this would be no more than a minor deviation or immaterial irregularity. Florida law as well as the LCPA Purchasing Manual allows a bidder to correct a minor irregularity, as well as provides for an owner to forgive a minor irregularity. *See, e.g., Harry Pepper & Assoc. v. Cape Coral*, 352 So. 2d 1190, 1192 (Fla. 1st DCA 1977).

In this instance, the case of *Mercedes Lighting & Elec. Supply v. State*, 560 So. 2d 272 (Fla. 1st DCA 1990) is instructive and should apply here. In *Mercedes Lighting*, a bid did not include a list of in-state service representatives as required under the bidding procedure. The court found this not to be a material error, because it was a waivable minor irregularity in the technical bidding requirements. By permitting the winning bidder to submit an untimely list of service representatives, the contracting entity did not prejudice or injure any other bidder or give itself an unfair advantage in the bidding process. *Mercedes Lighting*, 560 So. 2d at 278.

In any event, as noted above, the 2016 edition of the applicable NFPA requirements makes no mention of disallowing transparent or translucent walls, or windows. Thyssenkrupp is certified to both the 2002 and 2016 standards, and LCPA has the discretion to accept glass bridges here, as do other local authorities. This is a non-issue.

H. Thyssenkrupp is the Lowest Responsible Bidder

JBT argues that Thyssenkrupp is not a responsible bidder and does not have the integrity and reliability that will assure good faith performance. A responsible bidder is one "who has the capability in all respects to perform fully the contract requirements and the integrity and reliability which will assure good faith performance of the contract." LCPA Purchasing Manual, p. 7. Thyssenkrupp clearly meets this standard.

In this section of its Notice of Intent and its Protest, the only reasons that JBT sets forth to purportedly support a finding of non-responsibility are the same tired opinions set forth above that JBT feels Thyssenkrupp cannot perform the work for this Project based on the specifications at issue, along with unsupported argument that JBT is better for this Project than Thyssenkrupp. These statements made by JBT are based on their multiple incorrect claims as put forth in their protest and previously addressed in this response letter. Therefore, little additional response is required.

One additional point merits a brief response, though. As part of its lackluster argument that Thyssenkrupp is not a responsible bidder, JBT claims that Thyssenkrupp is somehow disqualified from receiving an award for this Project because it was "terminated" from an unrelated project at the Charlotte-Douglas International Airport ("CLT"). Although this argument lacks relevance and should not be considered, Thyssenkrupp writes to assuage any concerns that LCPA may have.

First, this ground was not present in JBT's Notice of Intent to Protest, and therefore it has been waived by JBT for failure to provide the requisite notice to the Committee and LCPA. (*See* LCPA Purchasing Manual §§ 10.1 (C), (D), (G)). Second, while it is true that Thyssenkrupp received a request from CLT to meet certain conditions on the project, Thyssenkrupp met those conditions and continues to work on the CLT project and continues to provide goods and services to its customer. Thus, any dispute with CLT is far from settled.

LCPA, like other county and municipal authorities, have a wide discretion in determination of the lowest responsible bidder in Florida. *E.g., William A. Berbusse, Jr., Inc. v. N. Broward Hosp. Dist*., 117 So. 2d 550, 551 (Fla. 2d DCA 1960). Where there is mandatory competitive bidding, there is a great public interest for a contract to be awarded to the lowest responsible bidder. There is no requirement for the contracting entity to make a qualitative comparison of bidders. Where more than one bidder is responsible, the award should be to the lowest responsible bidder. There is no requirement that the award be made to the most responsible bidder. An award should not be made subjectively to a "more" responsible bidder where that bidder is not the low bidder. *Caber Systems, Inc. v. Department of General Services*, 530 So. 2d 325 (Fla. 1st DCA 1988); *City of Sweetwater v. Solo Const. Corp*., 823 So. 2d 798 (Fla. 3d DCA 2002). A contractor's performance on one job does not establish a presumption of responsibility or lack thereof; decisionmakers look to the contractor's past history on many past jobs to make such a determination. *See, e.g., Baxter's Asphalt & Concrete, Inc. v. Dep't of Transp.*, 475 So. 2d 1284, 1285 & 1287 (Fla. 1st DCA 1985).

The fact that Thyssenkrupp, and industry leader for decades, is in one potential contract dispute, for one of its many contracts, with one airport 700 miles away from Ft. Myers, is legally insufficient to transform it from a responsible bidder to a non-responsive bidder. LCPA is not permitted to engage in a comparison between JBT and Thyssenkrupp and award the "most" responsible bidder; it has a duty to its citizens to award this project to the lowest responsible bidder. LCPA was well within its discretion to determine that Thyssenkrupp was a responsible bidder for this Project.

I. ThyssenKrupp Has A Qualified Installer for the Project

JBT makes a statement that Thyssenkrupp's Installer, ATS, does not meet the requirement of the Scope of the Work ("SOW"). JBT describes the Scope of Work as "the replacement of the twenty seven (27) Passenger Boarding Bridges (PBB), modifications to existing foundations for twenty-five (25) PBBs, construction of two (2) new foundations for gates C1 and C2, and engineered parking layouts that anticipate the carrier's aircraft needs for the foreseeable future." JBT then makes the conclusory statement that ATS cannot meet the minimum qualification requirements.

JBT is wrong again. Although Thyssenkrupp disputes JBT's statements as to lack of qualification, JBT makes another unsupported assumption, as Thyssenkrupp does not intend to use ATS for all of the above listed SOW. Foundation and electrical works will be done by a qualified DBE subcontractor. ATS's role will be limited with installation of bridges with the Thyssenkrupp team, and striping.

JBT makes a claim that Aerobridgeworks and Skycon are the only qualified installers (Notice of Intent to Protest, p. 5). These are the facts as JBT would like them. Aerobridgeworks was a bidder for this project in its own right and thereby would not work with Thyssenkrupp for its bid. As the Q&A notes, there are also potential conflicts of interest with Aerobridgeworks (Exhibit I-1). As far as Skycon is concerned, they have not installed any of Thyssenkrupp bridges on prior projects, and are not one of its certified installers. ATS is in fact much more qualified than Skycon to install Thyssenkrupp bridges, and using ATS for this item presents a financial and efficiency-based benefit to both LCPA and Thyssenkrupp.

This is further supported by the contract addenda. On May 29, 2020, a revised bid form was issued including addendum #5. In it, the bid form inquired whether bidders' subcontractors were an installer of passenger boarding bridges and whether they had installed no less than three (3) passenger boarding bridge projects in the United States on projects of similar size and scope within five (5) years prior. There was no firm definition of what constituted a "similar size" project, and LCPA clearly had the discretion to interpret the term "similar" in any reasonable way.[2]

In accordance with the addendum, Thyssenkrupp submitted its installer qualifications to LCPA along with a list of past projects within the time frame requested, and its submission was unconditionally accepted. Additionally, ATS is in fact more than qualified to perform the work. JBT's opinion that ATS is not qualified is mere biased opinion and not fact, and in any event does not rise to the level of pointing out a deviation from the specifications.

J. Thyssenkrupp is Entitled to An Award of Its Costs

Pursuant to Purchasing Manual Section 10.2(F), Thyssenkrupp requests that the LCPA Bid Dispute Committee award it its costs and attorney's fees for having to file this response.

There are multiple reasons supporting this request. The first is JBT's failure to conform to the requirements of the Purchasing Manual's form for bid protests. JBT offered little facts in its protest and strung together a protest based on opinion, rumor, and innuendo. Another factor would be the complete lack of professionalism in JBT's protest, which is little more than organized petulance and name-calling. JBT improperly attempted to boost its insufficient case by using unnecessary adjectives like: "duped," "not credible," "misleading," "play[ing] fast and loose," "lack of candor," "sneak[ing]," "no confidence," "[no] integrity and reliability," "lying," "lack of candor," "misleading," "misrepresent[ing]," and "attempting to deceive."

[2] Thyssenkrupp would also note that is listed its experience as co-installer for several projects that were similar in size and scope in response to the addendum, which JBT ignores.

These are not the words and statements made by a protest with a "rock solid" case. Thyssenkrupp has never been in the business of duping, lying, misleading, or misrepresenting itself. Ethics are a key core value for Thyssenkrupp and the fact that JBT claims that it is trying to dupe the LCPA is simply not true, and not called for in a professional document. For these reasons, and because JBT's protest lacks merit, Thyssenkrupp asks for its costs in preparing this response, including reasonable attorneys' fees.

Sincerely,

/s/ Michael S. Vitale

Michael S. Vitale

cc: thyssenkrupp Airport Systems, Inc.
Mr. Enver Sarilar
Denis L. Durkin

Enclosures

4827-7939-1174.2

EXHIBIT C1

10. Weather seals shall be provided at curtains to prevent wind blown dust, rain or snow from entering bridge interior.
11. Curtains, seals and covers shall provide complete protection from the exterior elements. There shall be no visible gaps or daylight apparent through the rotunda.
12. Threshold plates shall have chamfered edges to reduce tripping hazards.

Q. Telescoping Tunnels

1. The telescoping tunnels shall be rectangular in cross section and hinged for vertical motion at the rotunda.
    a. The telescoping tunnels shall permit servicing of all commercial jet aircraft as required by the aircraft parking layout such that the slope of the tunnels does not exceed 1 in 12 (8.33%), with the exception of the transition ramps.
    b. The minimum inside width of the tunnels shall be 4 feet, 10 inches and the minimum inside height shall be 6 feet 11 inches.
    c. Flexible seals are to be used between the tunnel sections to provide a weather-tight seal preventing entry of blowing dust, rain, or snow.
    d. Where the telescoping sections overlap, ramps shall be provided to accommodate the difference in elevation. The ramps shall have yellow chamfered edges and handrails on both sides. Ramps shall have floor coverings as indicated in the finishes section.
    e. All tunnels shall have flat roofs to prevent the collection of water. Corrugated roofs will not be approved. Flat roofs should be designed to facilitate positive water drainage.

R. Drive Column

1. The drive column assembly shall provide the force to swing, extend or retract, and raise or lower the bridge. This assembly shall be electro-mechanical.
2. The motors and mechanisms for vertical, horizontal, and radial motion shall be integral parts of the drive and lift column assembly and operate in a smooth and quiet manner.
3. The assembly shall be designed to permit simultaneous vertical travel, horizontal travel, and steering to permit expeditious movement to the aircraft.
4. The drive system shall permit the unit to be extended/retracted and rotated to any point within its operating envelope and shall permit these movements at variable speeds between 0 and 90 FPM. Maximum speed shall be limited to 85-90 FPM. Control of the drive system shall be such as to provide smooth starts and stops and positive fail safe braking. The brakes shall remain effective with power removed from the unit.
5. Axles, wheels and tires shall be operated within their respective manufacturer's recommendations. Tire footprint loads shall be limited to 200 P.S.I.
6. Wheel/Tire assemblies shall be solid rubber tire tread on steel wheels as manufactured by Trelleborg or approved equal. Drive assembly shall operate satisfactorily as specified in the construction documents on wet, iced, or snow laden ramp surfaces.
7. Provide a 2" wide reference stripe on each inner column tube indicating upper and lower travel limits.
8. The assembly shall be electro-mechanical driven and the following requirements shall be met as applicable:
    a. Vertical Drive—Hydraulic
        1) The lift mechanism shall consist of two (2) extra capacity hydraulic rams. Each assembly shall be independent of the other and capable of supporting the bridge under full design load. An adjustable rate pump and cylinder system shall provide the necessary lift speed measured at the aircraft cab bumper.

2) The lift cylinders shall be equipped with internally mounted velocity fuses that prevent the bridge from descending in the event of fluid loss or other system failure. The hydraulic circuit shall be designed so that the bridge can be lowered manually in case of a power failure.

3) Mechanical stops in the cylinders shall be provided to prevent over-travel of the lift column. The system shall not be damaged if the bridge is raised or lowered into the cylinder stops.

b. Horizontal Drive—Electro-Mechanical

1) An electrical mechanical drive system shall provide extend, retract, swing, and steer capabilities at variable speeds up to 90 feet per minute. This two-wheeled system shall operate on solid tires. Both wheels shall be independently driven by AC gear motors with solid state silicon controlled rectifier (SCR) controls. The entire system shall be contained within the bridge and require only AC power.

2) A dynamic braking system shall allow the bridge to come to a smooth, controlled stop. Spring actuated brakes shall be located on each drive motor and lock the bridge in place whenever electrical power is cut off by moving the control lever to the neutral position or when there is a power failure.

3) The horizontal drive motors shall be equipped with brake releases. Connection lugs shall be provided to allow the bridge to be towed in the event of power failures.

c. Vertical Drive—Electrical Mechanical

1) The lift mechanism shall consist of two (2) recirculating ball bearing screw assemblies. Each assembly shall be independent of the other, with individual motors, and be capable of supporting the bridge under full design load and raising and lowering the bridge at an approximate speed of 2 feet, 6 inches per minute measured at the cab bumper. The ball nut of this assembly shall be equipped with wiper brushes to remove grit or dirt from screw threads and a self-locking Acme type thread to prevent unit collapse in the event of a ball nut failure.

2) The vertical drive motors shall be fitted with spring-applied brakes that release only when electric power is applied and vertical motion, up or down, is signaled from the operator's console or the auto-leveler system.

3) The brakes shall hold securely at all elevations, without creeping, whether the bridge is in operation or not.

4) The fault detector circuit shall shut down the electrical power to the vertical drive motors and set the brakes independently of the operator. This shall occur if the bridge is in the vertical-operate mode and there is differential motion at the ball screws.

d. PBB's shall provide for "conventional steering" as well as "point & go" steering. The PBB shall default to conventional steering, but mode shall be selectable through a password protected maintenance screen.

S. Aircraft Cab with Operator's Station

1. The aircraft cab with operator's station shall be designed to rotate a minimum of 125 degrees, a minimum of 92.5 degrees counterclockwise and 32.5 degrees clockwise on bridges with right-side service stairs and a minimum of 92.5 degrees clockwise and 32.5 degrees counterclockwise on bridges with left-side service stairs from the tunnel centerline to facilitate alignment with multiple aircraft parking configurations. The rotation speed shall be between 2 and 2.41 degrees per second. The cab shall be enclosed to provide maximum security and

EXHIBIT D1


BOEING
Two glass panels near PBB Cab

EXHIBIT D2

A28. **This is acceptable.**

Q29. Section 11 8504-Page 28 1.12.AA.23.i Vertical travel limit switches shall be provided to prevent travel of the vertical lift columns into the mechanical stops. Our vertical drive system incorporates single-acting hydraulic cylinders. This design has inherent and end-of-travel stops with no chance of over travel. We request acceptance of our standard system without electrical travel limits

A29. **The PBB specification 118504 requires electromechanical lift columns as answered in previous addendum Q&A.**

Q30. Section 11 8504-Page 28, 1.12.AA.25.b Tunnel lighting shall be provided by recessed LED panel fixtures with diffusers. The fixtures shall be 4 feet long and shall be positioned parallel to the tunnel centerline on a maximum of 8-foot centers…the control cab and one in the rotunda corridor adjacent to the terminal door. Our standard fixtures are perpendicular to the tunnel centerline with 6 foot spacing in between each fixture which meets the specified lighting levels. Our switches which control the lights are located in the cab and tunnel A. Please confirm your acceptance of our standards. Additionally, our fixed walkways would have the same lighting layout. Please confirm acceptance. If our standard is not accepted, we will not be able to submit a compliant or competitive bid.

A30. **This is acceptable, assuming the lights are LED.**

Q31. Section 11 8504-Page 30, 1.12.AB.10.d & h Ceiling should be planked type panels manufactured from 0.020-inch thick aluminum. We use painted, galvannealed steel sheets for the ceiling panels instead of aluminum plank-type ceiling panels. The material is processed at the steel distribution warehouse and is formed in long continuous coils and cut the width that we require. It comes pre-painted (coated) in the color that we specify. We kindly request approval of our standard. If not allowed we will not be able to submit a compliant and competitive bid. If our standard is not allowed, we will not be able to submit a compliant or competitive bid.

A31. **Acceptable.**

Q32. Drawing No. AP-2.1 through 2.7 The drawings mentioned above state that bag slides are required however it does not state whether they are (N) new or (E) existing. Please confirm that 27 new bag slides are to be included with the new PBB's.

A32. **Please see AP-2 series drawings as issued in the previous addendum. All bag slides are new.**

Q33. Specification No. 118504, page 1, 1.1.A.1: This specification is intended to include both two and three tunnel PBB's, of corrugated or truss style construction. Our standard bridge tunnel design is smooth sided galvanealed (galvanized) panels that are welded to angle and tubes at the end of each of the tunnels without using diagonal truss members. Please confirm that our standard design meets the intent of this paragraph and is

therefore acceptable. If our standard is not allowed, we will not be able to provide a compliant or competitive bid.

A34. **This is acceptable.**

Q35. General question regarding tax. Please confirm if this project is subject to tax or not. If not, will you provide a tax exempt certificate.

A35. **All bidders shall include applicable taxes in their bid.**

Q36. Specification No. 118504, page 30 & 31, 1-12.AB Carpet and rubber flooring. Please confirm that the flooring in the PBB tunnels shall be carpet. Please confirm that the flooring in the cab and bubble shall be ribbed rubber.

A36. **Flooring requirements are listed in PBB specification 118504 section 1.12.AB.10.J and require rubber flooring in PBB tunnels.**

Q37. Specification No. 118504, page 31, 1.12.AB.10.1 Aluminum Sub-Floor While our exterior cab area at the articulating cab floor is aluminum, we request the use of our standard carbon steel floor in the cab bubble area. If our standard is not allowed, we will not be able to provide a compliant or competitive bid.

A37. **C tunnel and cab flooring shall be aluminum per PBB specification 118504 section 1.12.AB.10.m.**

Q38. Drawing No. PBB-2.1 through 2.3 The drawings indicated above show new exhaust fans on all PBB's but they are not mentioned in the specifications. Please confirm that all 27 PBB's shall be supplied with new exhaust fans.

A38. **Exhaust fans shall be provided on all 27 passenger boarding bridges in Rotunda per section 1.12.P.13.**

Q39. Drawing No. PBB-2.1 through 2.3, Specification No. 118504, page 26. The drawings and specs indicate that a single disconnect panel shall be mounted at the rotunda for the PBB, GPU & PCA. We request an exception to providing a single SS cabinet to house all of branch circuit protection for the bridge, PCA and GPU. We will comply with the specification's intent by supplying individual branch circuit protection in separate enclosures. These three enclosures will be mounted beside each other on a mounting plate attached to the front of the rotunda column. Please accept our request to provide separate enclosures instead of a single enclosure.

A39. **This is acceptable.**

Q40. Regarding question and answer number 38 from addendum 2 that states that the PBB C tunnel shall have an aluminum sub floor. Corrugated tunnel construction bridges require the use of a subfloor due to their design. However, our design does not require a subfloor to be used as we already have a flat surface where the subfloor would go. We ask that this requirement not apply to us to due to our design. If you do require a sub floor, can we use galvanealed steel instead of aluminum?

EXHIBIT E1

therefore acceptable. If our standard is not allowed, we will not be able to provide a compliant or competitive bid.

A34. **This is acceptable.**

Q35. General question regarding tax. Please confirm if this project is subject to tax or not. If not, will you provide a tax exempt certificate.

A35. **All bidders shall include applicable taxes in their bid.**

Q36. Specification No. 118504, page 30 & 31, 1-12.AB Carpet and rubber flooring. Please confirm that the flooring in the PBB tunnels shall be carpet. Please confirm that the flooring in the cab and bubble shall be ribbed rubber.

A36. **Flooring requirements are listed in PBB specification 118504 section 1.12.AB.10.J and require rubber flooring in PBB tunnels.**

Q37. Specification No. 118504, page 31, 1.12.AB.10.1 Aluminum Sub-Floor While our exterior cab area at the articulating cab floor is aluminum, we request the use of our standard carbon steel floor in the cab bubble area. If our standard is not allowed, we will not be able to provide a compliant or competitive bid.

A37. **C tunnel and cab flooring shall be aluminum per PBB specification 118504 section 1.12.AB.10.m.**

Q38. Drawing No. PBB-2.1 through 2.3 The drawings indicated above show new exhaust fans on all PBB's but they are not mentioned in the specifications. Please confirm that all 27 PBB's shall be supplied with new exhaust fans.

A38. **Exhaust fans shall be provided on all 27 passenger boarding bridges in Rotunda per section 1.12.P.13.**

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EXHIBIT E2

therefore acceptable. If our standard is not allowed, we will not be able to provide a compliant or competitive bid.

A34. **This is acceptable.**

Q35. General question regarding tax. Please confirm if this project is subject to tax or not. If not, will you provide a tax exempt certificate.

A35. **All bidders shall include applicable taxes in their bid.**

Q36. Specification No. 118504, page 30 & 31, 1-12.AB Carpet and rubber flooring. Please confirm that the flooring in the PBB tunnels shall be carpet. Please confirm that the flooring in the cab and bubble shall be ribbed rubber.

A36. **Flooring requirements are listed in PBB specification 118504 section 1.12.AB.10.J and require rubber flooring in PBB tunnels.**

Q37. Specification No. 118504, page 31, 1.12.AB.10.1 Aluminum Sub-Floor While our exterior cab area at the articulating cab floor is aluminum, we request the use of our standard carbon steel floor in the cab bubble area. If our standard is not allowed, we will not be able to provide a compliant or competitive bid.

A37. **C tunnel and cab flooring shall be aluminum per PBB specification 118504 section 1.12.AB.10.m.**

Q38. Drawing No. PBB-2.1 through 2.3 The drawings indicated above show new exhaust fans on all PBB's but they are not mentioned in the specifications. Please confirm that all 27 PBB's shall be supplied with new exhaust fans.

A38. **Exhaust fans shall be provided on all 27 passenger boarding bridges in Rotunda per section 1.12.P.13.**

Q39. Drawing No. PBB-2.1 through 2.3, Specification No. 118504, page 26. The drawings and specs indicate that a single disconnect panel shall be mounted at the rotunda for the PBB, GPU & PCA. We request an exception to providing a single SS cabinet to house all of branch circuit protection for the bridge, PCA and GPU. We will comply with the specification's intent by supplying individual branch circuit protection in separate enclosures. These three enclosures will be mounted beside each other on a mounting plate attached to the front of the rotunda column. Please accept our request to provide separate enclosures instead of a single enclosure.

A39. **This is acceptable.**

Q40. Regarding question and answer number 38 from addendum 2 that states that the PBB C tunnel shall have an aluminum sub floor. Corrugated tunnel construction bridges require the use of a subfloor due to their design. However, our design does not require a subfloor to be used as we already have a flat surface where the subfloor would go. We ask that this requirement not apply to us to due to our design. If you do require a sub floor, can we use galvanealed steel instead of aluminum?

A40. **C tunnel and cab flooring shall be aluminum per PBB specification 118504 section 1.12.AB.10.m.**

Q41. Please confirm if there are bollards that will interfere with the foundation expansions at 25 gates. If there are, can you please provide how many bollards per gate will interfere with this work? Also, do we include the pricing of removing the bollards with our bid our via a change order at a later date?

A41. **There are no bollards around existing PBB columns. There are no requirements for new bollards in the design documents.**

Q42. Will the bridges need to be power washed prior to being turned over to LCPA?

A42. **No.**

Q43. If we are able to complete a bridge installation and all associated work quicker than the schedule allows, will we be permitted to immediately move on to the next bridge on the schedule?

A43. **Yes. Two week lookahead schedule should be updated for each weekly progress meeting. If a bridge is on track to be turned over ahead of schedule, proper notification will be given to LCPA to allow coordination for the early closure of the next gate scheduled for replacement.**

Q44. Will there be an area available onsite at RSW where we will be able to park a 20' x 10' mobile office?

A44. **Yes, space is available. A suggested location near the RSW Control Tower is provided in the screenshot below.**

EXHIBIT E3

i. PBB interior floor covering, (not including the cab and bubble area) shall be carpet, provided and installed by the passenger boarding bridge manufacturer. Aluminum carpet molding shall be provided at the junction between the tunnel and the cab bubble.

j. The PBB's shall be carpeted with heavy commercial non-skid rubber as indicated. Flooring to be supplied and installed by bridge manufacturer in the factory.

1) TBD

k. Sub-floor in the cab and bubble area shall be aluminum. Sub-floor in the remainder of the passenger boarding bridge 3/4" thick moisture resistant, fire retardant plywood or oriented strand boardexposure 1, made with exterior phenolic resin adhesive, or smooth galvannealed steel.

l. Ribbed rubber 3/16" thick shall be applied to the floor from the aircraft end of the passenger boarding bridge to the terminal side of the service door.

m. A and B tunnel sub-floors shall be constructed of 3/4" fire retardent marine plywood which shall be securely fastened with fasteners suitable for this purpose. C tunnel sub-floors shall be aluminum. Insure adjoining sheets are supported and fastened to a common member to provide smooth even joints. Any remaining uneveness will be removed with filler. The sub-floor fasteners will not protrude through the exterior tunnel siding.

1) Subfloors shall be provided as necessary to meet floor covering manufacturer's requirements which may include tongue and groove flooring.

2) Cab floors shall be metal.

3) Other sub-floors as required by floor covering manufacturers.

4) See flooring requirements.

11. Exterior

a. All exterior surfaces, including support columns and base plates, shall be sand/grit blasted in accordance with specification SSPC-SP6 to a 1-1/2 mil minimum to 2.5 mil maximum profile.

b. The exterior shall be coated with a rust inhibiting primer applied to a minimum of 4 mil total dry thickness over the average measured blast profile followed by a finish coat of 5-1/2 mil thickness catalyzed polyurethane enamel.

1) Color: TBD

c. Clean area to be coated in accordance with SSPC-SP6, commercial blast cleaning. This specification calls for the removal of all rust, mill scale, paint, and other foreign matter except for any slight staining of same in less than one third of each square inch of blasted area.

d. The anchor pattern shall be no less than 1.5 mills (37.5 microns) nor more than 2.5 mils (62.5 microns).

1) American Coatings Epoxy Primer Rustlok 8000 Series Epoxy or equal

2) American Coatings PU Series High Solids Polyurethane or equal

a) Aliphatic Polyurethane color coat with satin gloss finish (60-65 @ 60 degree gloss meter).

3) The cured dry film thickness of the total system shall achieve a minimum of 6-7 mils.

e. Anodized aluminum, galvanized or stainless steel trim items, roll-up doors, and cab curtains shall be supplied in their original unpainted bright finish. Machined surfaces shall not be painted unless they are exposed after assembly.

f. All exterior metals requiring primer and paint shall be painted to match the bridge.

EXHIBIT F1

Follow-up Service Inspection Report
E332865 1200114144749

INSPECTION DETAILS			
Date:	2020-01-14	File Number.:	E332865
Responsible Office:	Northbrook	Volume:	1
Inspection Center:	835	CCN:	QGLA
Product Type:	Energy and Power Technologies	UL Rep Name:	Antonio Alaniz
Deliverable Type:	Listed	UL Rep ID:	15722
Party Site Number:	572215	Subscriber Factory No.:	100238-823
Manufacturer Name:	THYSSENKRUPP AIRPORT SYSTEMS INC	Factory Rep Name	Mr. Baltazar Cordero
Manufacturer Address:	3201 N SYLVANIA AVE FORT WORTH, TX 76111-3117	Factory Rep Phone:	979-255-5810
		Factory Rep Email:	Jason.Salinus@thyssenkrupp.com
Nature of visit:	Regular Inspection	Sample Status:	Samples not required
UL Marks Used?	Yes	UL Marks Removed?	No
Variation Notice Issued?	No		
Comments After Submission:			

PRODUCT DOCUMENTS/PRODUCTION READY VISIT			
Model	**Product**	**Section**	**Multiple Listed**
LAX 7550003420-Bridge (A4)	Passenger Boarding Bridge	1	No

SAMPLE DOCUMENTS			
If samples are required to be sent to ULI Laboratory, indicate below. If required samples are not sent, explain in the Comments area.			
No Samples			
Additional Comments			

In addition to the requirements specified in the applicable UL Services agreement and Follow-Up Service Procedure, UL further defines responsibilities, duties and requirements for both manufacturers and UL representatives in the document titled "UL Mark Surveillance Requirements" that can be located at www.ul.com/fus, and in accordance with the applicable terms and conditions of the document at www.ul.com/responsibilities. Manufacturers without Internet access may obtain the current versions of these documents from their local UL customer service representative or UL field representative.

EXHIBIT F2

LCPA RFB NO. 20-53MMW
SPECIFICATION CLARIFICATION AND CERTIFICATION

The LCPA has reviewed all information, submittals, substitution requests, etc. submitted with each bid. As a result of this review, the LCPA has determined that the following specifications need to be included as part of this project with no exceptions, substitutions or changes. You final bid and resulting contract must include all of the following specification requirements. Please provide your signature of concurrence below.

- *Specification 118504, Section 1.12.R.8.b, page 118504-18 Vertical Drive Column – The lift mechanism shall consist of two (2) recirculating ball bearing screw assemblies.*

- *Specification 118504, Section 1.12.J.7, page 118504-14 Materials, Parts and Processes – All intersecting steel planes, e.g. side to top, side to bottom, of exterior steel sections of the passenger boarding bridge shall be 100% welded. Caulk shall not be used to provide weather seals.*

- *Specification 118504, Section 1.12.AB.10.k and m, page 118504-31, Finishes and materials – Sub floor in the cab and bubble area shall be aluminum; C-tunnel sub-floors shall be aluminum.*

Please be advised that the LCPA is not seeking through this request any supplemental information or additional clarifications related to the above mentioned items. Any supplemental information that is submitted along with this certification will not be considered. The undersigned Bidder certifies that the submitted bid and price includes the above items without any exceptions or conditions. By signing below, the awarded bidder agrees to execute a contract with the LCPA to include the above items without substitution.

Name of Bidder thyssenkrupp Airport Systems Inc.

Printed Name of Authorized Representative Enver Sarilar

Signature of Authorized Representative E. Sarilar

Date of signature July 8, 2020

Return to below no later than close of business on July 10, 2020.

mmwendel@flylcpa.com
Melissa M. Wendel, CPPO
239-590-4557

Bidders that fail to reply as requested by the deadline may be deemed nonresponsive.
We appreciate your attention to this matter and request your prompt response.

EXHIBIT F3

understood and agreed to include any and all Florida sales and use tax payment obligations required by Florida law of the successful Bidder and all subcontractors or materials suppliers engaged by the successful Bidder.

A.17 EXAMINATION OF BID SOLICITATION INFORMATION

Each Bidder is required, before submitting a bid, to be thoroughly familiar with each and every requirement contained within the solicitation documents, including any addenda. No additional allowances will be made because of lack of knowledge of the requirements contained herein. All Bidders must carefully review the bid documents in their entirety to become familiar with what is required, including information on all bid forms.

A.18 RESERVATION OF RIGHTS

The Authority reserves the right to reject any and/or all bids, accept or reject any alternates, waive irregularities and technicalities if it is in the best interest of the Authority, in the Authority's sole judgement, and conforms to applicable state and local laws or regulations.

The Authority further reserves the right to make inquiries, request clarifications, require additional information and documentation from any bidder, or cancel this solicitation and solicit for new bids at any time prior to the execution of an agreement. If a single response is received by the deadline for receipt of bids, it may or may not be rejected by the Authority depending on available competition and current needs of the Authority. All such actions shall promote the best interest of the Authority.

A.19 AUTOMATIC DISQUALIFICATION

A Bidder will be disqualified from consideration for award of an agreement pursuant to this Request for Bids for any of the following reasons:

- Failure to meet mandatory minimum qualifications stated herein.
- Lobbying the Lee County Board of Port Commissioners, members of the Airports Special Management Committee, or employees of the Lee County Port Authority, individually or collectively, regarding this Request for Bids.
- Collusion with the intent to defraud or other illegal practices upon the part of any firm submitting a bid.
- Evidence that bidder has a financial interest in the company of a competing bidder.
- Being on the Convicted Vendors List.
- Being on a Scrutinized Companies List or otherwise ineligible to submit a bid to provide services under Section 287.135, Florida Statutes.
- Not being properly licensed by the State of Florida or Lee County prior to submitting a bid.
- Not being registered to do business in the State of Florida prior to submitting a bid.

The Authority, at its sole discretion, may request clarification or additional information to determine a Bidder's responsibility or responsiveness.

EXHIBIT G1

thyssenkrupp Airport Systems
3201 North Sylvania Avenue, Suite 117, Fort Worth, Texas 76111 USA
P: +1 817 210-5000 www.thyssenkrupp-airports.com

thyssenkrupp

Statement of NFPA 415-2013 (Standard on Airport Terminal Buildings, Fueling Ramp Drainage and Loading Walkways) Compliance

This is to certify that all Passenger Boarding Bridges furnished by ThyssenKrupp Airport Systems, Inc. are designed and manufactured in strict accordance with the requirements of NFPA 415-2013. We further state that:

(1) All components and assemblies of the bridges required to be tested under NFPA 415-2013 have been tested for compliance by a Nationally Recognized Testing Laboratory (NRTL) and meet or exceed the requirements of the standard.

(2) The design and construction of the entire bridge is in compliance with all the requirements of NFPA 415-2013.

(3) There have been no design changes since the component testing that would materially affect the outcome of the test certifications.

NFPA 415-2013 Section 6.4.6 Test of Floors
The bridge floor was tested and complied with NFPA 415-2013 as recorded by Intertek Testing Services NA, Inc. Test Report 3181041SAT-014, which includes material list, tested construction, and compliance information.

NFPA 415-2013 Section 6.4.6 Test of Walls
The bridge glass wall was tested and complied with NFPA 415-2002 as recorded by Southwest Research Institute, Project No. 01.11310.01.001, which includes the test procedure, description of the test assembly, test results, and compliance information.

NFPA 415-2013 Sect 6.4.7, Test of Flexible Closures
The bridge canopy was tested and complied with NFPA 415-2013 as recorded by Intertek Testing Services NA, Inc. Test Report G101258905SAT-002, which includes material lists, tested construction, and compliance information.

NFPA 415-2013 Sect 6.4.8, Test of Cab and Rotunda Slat Curtains
The bridge cab curtains were tested and complied with NFPA 415-2013 as recorded by Intertek Testing Services NA, Inc. Test Report G100015559SAT-001, which includes material lists, tested construction, and compliance information.

NFPA 415-2013 Sect 6.4.9, Test of Bumpers
The bridge bumper was tested and complied with NFPA 415-2013 as recorded by Intertek Testing Services NA, Inc. Test Report 3181041SAT-005B, which includes material lists, tested construction, and compliance information.

NFPA 415-2013 Sect 6.4.10, Tests of Misc. Seals and Weather Stripping Assemblies
The bridge seals were tested and complied with NFPA 415-2013 as recorded by Intertek Testing Services NA, Inc. Test Report 3181041SAT-012, which includes material lists, test construction, and compliance information.

EXHIBIT G2

SOUTHWEST RESEARCH INSTITUTE®

6220 CULEBRA RD. 78238-5166 • P.O. DRAWER 28510 78228-0510 • SAN ANTONIO, TEXAS, USA • (210) 684-5111 • WWW.SWRI.ORG
CHEMISTRY AND CHEMICAL ENGINEERING DIVISION
DEPARTMENT OF FIRE TECHNOLOGY
WWW.FIRE.SWRI.ORG
FAX (210) 522-3377

FIRE PERFORMANCE EVALUATION OF THYSSENKRUPP AIRPORT SYSTEMS' AIRCRAFT LOADING WALKWAY GLASS WALL ASSEMBLY IN ACCORDANCE WITH NFPA 415-02, *STANDARD ON AIRPORT TERMINAL BUILDINGS, FUELING RAMP DRAINAGE, AND LOADING WALKWAYS*, SECTION 6.4

FINAL REPORT
Consisting of 21 Pages
SwRI® Project No. 01.11310.01.001
December 2005

Prepared for:

ThyssenKrupp Airport Systems
3201 North Sylvania Ave., Ste. 100E
Fort Worth, TX 76111

Prepared by:

Barry Badders

Michael E. Luna FOR
Research Engineer
Fire Resistance Section

Approved by:

Marc L. Janssens, Ph.D.
Director
Department of Fire Technology

HOUSTON, TEXAS (713) 977-1377 • WASHINGTON, DC (301) 881-0226

ABSTRACT

Southwest Research Institute's® Department of Fire Technology, located in San Antonio, Texas, conducted a test on a glass wall assembly, submitted by ThyssenKrupp Airport Systems, located in Fort Worth, Texas. Testing was conducted in accordance with NFPA 415-02, *Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways*, Section 6.4.

A glass wall assembly, representative of an airplane passenger boarding bridge, was loaded with an I-beam and steel weights for a uniform load of 66.5 lb/ft and subjected to the fire exposure conditions of Section 6.4.6 of the test standard on November 1, 2005. The two-pane glass wall assembly was comprised of steel framing and two layers of glass.

The requirements of NFPA 415-02 states that flaming shall not appear on the unexposed side of the glass wall assembly for a minimum period of 5 min, and the maximum average temperature of the unexposed side of the wall shall not exceed 250°F during the same 5-min period. The glass wall assembly met the requirements of NFPA 415-02 for the minimum period of 5 min.

TABLE OF CONTENTS

1.0 INTRODUCTION

This report describes the testing of a representative glass wall assembly from ThyssenKrupp Airport Systems' passenger loading walkway design. The glass wall assembly tested was evaluated against a prescribed fire exposure condition. The results presented in this report apply only to the sample tested, in the manner tested, and not to any similar components or component combinations.

2.0 TEST PROCEDURE

Wall assemblies are tested on Southwest Research Institute's® (SwRI's®) large-vertical furnace. The vertical furnace is capable of exposing a test sample with maximum dimensions of 12 ft 6 in. × 12 ft 6 in. The 36-in. deep furnace is equipped with nine flat-flame burners symmetrically placed across the back wall, which are controlled by a variable air-gas ratio regulator.

The conduct of the fire test is controlled according to the standard time-temperature curve, as indicated by the average temperature obtained from the readings of nine thermocouples (TCs) symmetrically located across the face of the sample at a distance of 12 in. The TCs are "exposed bead" and designed such that the time constant of the TC assembly is less than 20 sec. The furnace temperature during a test is controlled such that the average temperature is not less than 90% of the standard temperature curve. The points on the standard time-temperature curve are provided in Table 1.

Table 1 . NFPA 415 Time-Temperature Curve for Wall Assemblies.

TIME (min:sec)	STANDARD TEMPERATURE (°F)
0:00	68
1:00	455
2:00	842
3:00	1175
4:00	1265
5:00	1274
6:00	1283
7:00	1292
8:00	1301
9:00	1310
10:00	1319

3.0 TEST ASSEMBLY

SwRI received the test materials on September 26, 2005. The two-pane glass wall assembly had overall dimensions of 122-13/16 in. (wide) by 99-5/16 in. (tall) and was comprised of steel framing and two layers of glass. Detailed drawings of the glass wall assembly, provided by ThyssenKrupp Airport Systems, can by found in Appendix C.

Nine TCs were placed in a symmetric pattern on the unexposed surface of the sample in accordance with section 6.4.4.2 of the test standard. A photograph of the TC layout is provided in Appendix A.

4.0 TEST RESULTS

A glass wall assembly, representative of an airplane passenger boarding bridge, was loaded with an I-beam and steel weights for a uniform load of 66.5 lb/ft and subjected to the fire exposure conditions of Section 6.4.6 of the test standard on November 1, 2005. A summary of the visual observations is provided in Table 2.

Table 2. Glass Wall Assembly Visual Observations.

TIME (min:sec)	OBSERVATIONS
0:00	Test started. Initial temperature of glass is 72°F.
1:00	No discoloration of glass observed.
2:00	Glass intact. No significant temperature rise.
3:00	Light smoke. Flaming on inside along gasket.
4:08	Inside layer of glass broke away on right side.
5:00	No flaming on unexposed side.
5:47	Glass on unexposed side breaks. Flaming on unexposed side.
6:00	Furnace shut off. Test ended. Remaining glass breaks away.

At 5 min, the average temperature of the unexposed side of the wall was 193°F. At 5 min 30 sec, the average temperature of the unexposed side of the wall was 262°F, which exceeded the maximum of 250°F allowed by the standard. There was no flaming on the unexposed side during the initial 5-min exposure. At 5 min 47 sec, the assembly failed to limit the passage flames to the unexposed side of the assembly. Photographic documentation is provided in Appendix A, and tabular and graphical data are provided in Appendix B.

5.0 CONCLUSIONS

SwRI's Department of Fire Technology, located in San Antonio, Texas, conducted a test on a glass wall assembly, submitted by ThyssenKrupp Airport Systems, located in Fort Worth, Texas. Testing was conducted in accordance with NFPA 415-02, *Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways*, Section 6.4.

The requirements of NFPA 415-02 states that flaming shall not appear on the unexposed side of the wall assembly for a minimum period of 5 min and the maximum average temperature of the unexposed side of the wall shall not exceed 250°F during the same 5-min period. The sidewall assembly met the requirements of NFPA 415-02 for the minimum period of 5 min.

EXHIBIT G3

NFPA 415

Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways

2002 Edition

NFPA, 1 Batterymarch Park, PO Box 9101, Quincy, MA 02269-9101
An International Codes and Standards Organization

Chapter 5 Aircraft Fueling Ramp Drainage

5.1 Aircraft Fueling Ramp Slope and Drain Design.

5.1.1* Aircraft fueling ramps shall slope away from terminal buildings, aircraft hangars, aircraft loading walkways, or other structures, with a minimum grade of 1 percent (1:100) for the first 50 ft (15.2 m). Beyond this distance, the ramp slope to drainage inlets shall be permitted to be reduced to a minimum of 0.5 percent (1:200).

5.1.2* Aircraft fueling ramp drainage as specified herein shall be accomplished by the provisions of 5.1.1 in conjunction with the following:

(1) The use of drain inlets with connected piping
(2) The use of open-grate trenches

5.1.3 Drainage inlets, where provided, shall be located a minimum of 50 ft (15.2 m) from structures outlined in 5.1.1.

5.1.4 The drainage system of any aircraft fueling ramp shall be so designed that the fuel or its vapor cannot enter into the drainage system of buildings, areas utilized for automobile parking, public or private streets, or the public side of airport terminal or aircraft hangar structures. In no case shall the design allow fuel to collect on the aircraft fueling ramp or adjacent ground surfaces where it could constitute a fire hazard.

5.1.5 The final separator or interceptor for the entire airport drainage system shall be designed to allow disposal of combustible or flammable liquids into a safely located, approved containment facility.

5.1.6 Grates and drain covers shall be removable to facilitate cleaning and flushing.

5.1.7* If open-grate drainage trenches are used as a collection means, such open trenches, including branches, shall not be over 125 ft (38 m) in length with a minimum interval of 6 ft (1.8 m) between open-trench sections to act as fire stops. Each 125 ft (38 m) section shall be individually drained through underground piping. Open trenches shall not be used where they are in the line of pedestrian or passenger traffic.

5.1.8 Underground piping and components used in drainage systems shall be noncombustible and inert to fuel.

5.2 Drain and Separator Maintenance.

5.2.1* Periodic maintenance checks shall be conducted of all ramp drainage systems and interceptors to ensure that they are clear of obstructions and function properly.

5.2.2 Large volume flushing with water shall be conducted through appropriate drainage elements to purge the residual fuel from these drainage elements after any large fuel spill on the aircraft fueling ramp enters the drainage system.

Chapter 6 Aircraft Loading Walkways

6.1 Basic Design.

6.1.1* Each aircraft loading walkway installation shall be designed to provide a safe means of egress from the aircraft for a period of five minutes under fire exposure conditions equivalent to a free-burning jet fuel spill fire.

6.1.2 Protection of the aircraft loading walkway shall be accomplished by one of the following methods:

(1) Construction design meeting the requirements of Section 6.1 through Section 6.4
(2) Fixed fire protection meeting the requirements of Sections 6.1, 6.2, and 6.5 of this chapter

6.2 Requirements for All Aircraft Loading Walkways.

6.2.1* Interior finish other than textiles of walls and ceilings and walkways shall be Class A as defined in 10.2.4.1 of NFPA *101, Life Safety Code,* and classified in accordance with NFPA 255, *Standard Method of Test of Surface Burning Characteristics of Building Materials.*

6.2.2 Interior textile finish of walls and ceilings in walkways shall be as limited by 10.2.4.1.5 of NFPA *101, Life Safety Code.*

6.2.3 Interior floor finish in walkways shall be Class I as defined in 10.2.7 of NFPA *101, Life Safety Code,* and classified in accordance with NFPA 253, *Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source.*

6.2.4 There shall be no windows other than those located in the ramp access service door and in the cab area for the purpose of operating the aircraft loading walkway.

6.2.5* During a ramp fire emergency, walkway interiors shall have a positive air pressure delivered from a source that shall remain uncontaminated.

6.2.6* Any source of negative air pressure in the aircraft loading walkway shall be automatically shut down in the event of a fire emergency.

6.2.7 Any door in the egress path through the loading walkway to the terminal building shall swing in the direction of egress from the aircraft towards the terminal building and shall be equipped with panic hardware on the aircraft side.

6.2.8* Where loading walkways are provided, the walkway including the bumpers, curtains, and canopies shall be seated according to the manufacturer's instruction and training whenever the walkway is in service.

6.2.9 Cab and Rotunda Slat Curtains.

6.2.9.1 Cab slat curtains and rotunda slat curtains shall meet the requirements of 6.4.8 by one of the following methods:

(1) Intrinsic structural features
(2) Fire-resistive coatings
(3) Automatically activated water cooling systems in accordance with 6.5.2
(4) Automatically activated fire curtains
(5) A local application of a foam system in accordance with 6.5.3 under the cab and rotunda that is automatically activated and covers an area extending 15 ft (4.6 m) beyond the perimeter of the cab and rotunda. This shall supersede the 10 ft (3 m) criteria of 6.5.3.

6.2.9.2 When the rotunda is located more than 50 ft (15 m) from the fuel fill or fuel vent point of aircraft and the rotunda slot curtain is of noncombustible construction, 6.2.9.1 shall not apply.

6.2.10 Emergency Lights. Emergency lights shall be installed in all aircraft loading walkways in accordance with NFPA *101, Life Safety Code.*

6.2.11* The minimum obstruction free walking surface shall be 36 in. (914 mm). Changes in elevation between telescoping sections of the loading walkway's walking surface shall not exceed 1 in 20 slope when the loading walkway is level. Existing loading walkways shall be permitted to be continued in service.

6.3 Materials.

6.3.1 Exterior surfaces of floor, roof, walls, and load-bearing structural members shall be constructed entirely of materials or composite assemblies that maintain the structural integrity and heat transfer characteristics needed to meet the requirements specified in 6.1.1 and Section 6.4.

6.3.2 Flexible closures, canopies, wipers, and weather-sealing devices shall be subjected to the accelerated weathering procedures specified in Section 8-6 of NFPA 701, *Standard Methods of Fire Tests for Flame Propagation of Textiles and Films,* after which they shall meet the requirements of 6.4.7 or 6.4.10 of this standard, as applicable.

6.3.3 The manufacturer shall provide, in writing, the anticipated service life expectancy of components that contribute to fire safety.

6.4 Fire Tests.

6.4.1 Scope of Fire Tests.

6.4.1.1 Tests shall be conducted to establish the performance of materials and methods of construction and to verify their structural integrity and heat transfer characteristics so as to satisfy the five-minute exit route criteria specified in 6.1.1.

6.4.1.2 The test methods specified in this chapter shall be applicable to assemblies of units and to composite assemblies of structural materials for aircraft loading walkways, including walls, girders, beams, slabs, and composite slab and beam assemblies for floor and walls either tested individually as floor or wall panels or as a complete assembly. Also, they shall be applicable to other assemblies and structural units that constitute permanent integral parts of a finished aircraft loading walkway.

6.4.1.3 The condition of acceptance for tests specified in this section for aircraft loading walkways shall be documented by one of the following methods. Such submittals shall be subject to acceptance by the authority having jurisdiction.

6.4.1.3.1 Tests shall be conducted in accordance with the requirements and procedures of Section 6.4.

6.4.1.3.2 Evidence of compliance shall be permitted to be achieved by other methods such as modeling, calculation, or testing. The submitter must show that the method used proves that components achieve a level of fire safety at least equal to that produced by the procedure in Section 6.4.

6.4.1.4 The tests shall register performance during the required period of exposure and shall not be construed as having determined suitability for use after fire exposure.

6.4.2 Time–Temperature Curve to Be Used. The conduct of fire tests of materials and construction shall be controlled by the time–temperature curves in Figure 6.4.2 and Table 6.4.2.

6.4.3 Furnace Temperatures.

6.4.3.1 The temperature fixed by the curve shall be deemed to be the average temperature obtained from the readings of not less than nine thermocouples for a floor or wall section.

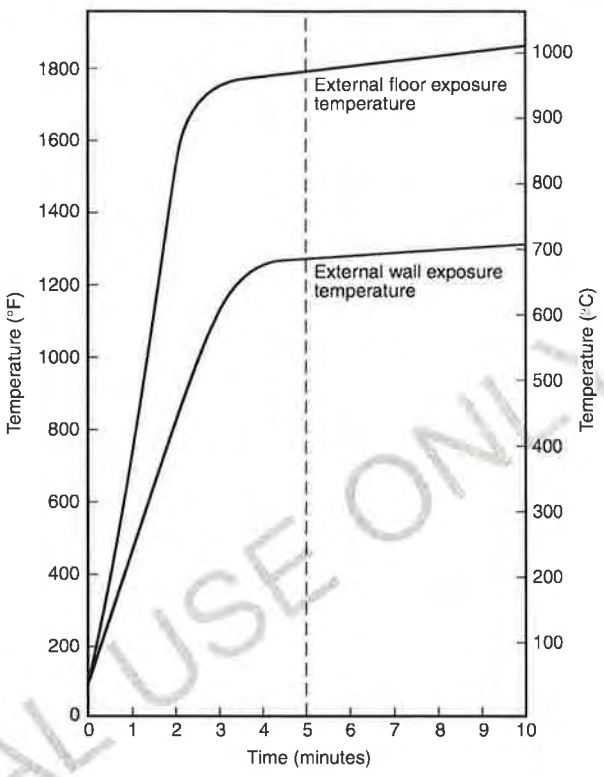

FIGURE 6.4.2 Typical Furnace Time–Temperature Curves for Fire Testing of Aircraft Loading Walkways. ***(See Table 6.4.2.)***

The thermocouples shall be symmetrically located and distributed to show the temperature near all parts of the sample and shall be partially enclosed in porcelain tubes ¾ in. (19 mm) in outside diameter and ⅛ in. (3 mm) in wall thickness with a minimum exposed length of thermocouple wires of 1½ in. (38 mm). The exposed length of the pyrometer tube and thermocouples in the furnace chamber shall be not less than 12 in. (305 mm). Other types of thermocouples or pyrometers, which under test conditions give the same indications as those specified herein within the limit of accuracy that applies for real-time furnace temperature measurements, shall be permitted to be used.

6.4.3.1.1 For floor sections, the junction of the thermocouples shall be placed 12 in. (305 mm) away from the exposed surface of the sample at the beginning of the test and during the test shall not touch the sample as a result of its deflection.

6.4.3.1.2 For walls, the thermocouples shall be placed 6 in. (152 mm) away from the exposed face of the sample at the beginning of the test and shall not touch the sample during the test as a result of its deflection.

6.4.3.2 The temperatures shall be measured and reported at intervals not exceeding 15 seconds.

6.4.3.3 The accuracy of the furnace control shall be such that at any given time the temperature obtained by averaging the results from the pyrometer readings shall not be less than 90 percent of the temperature curve shown in Figure 6.4.2.

Table 6.4.2 Typical Furnace Time–Temperature Gradients for Fire Testing of Aircraft Loading Walkways ***(See Figure 6.4.2.)***

Time (min:sec)	Exposed Floor Sections Temperature °C	Exposed Floor Sections Temperature °F	Exposed Wall Sections Temperature °C	Exposed Wall Sections Temperature °F
0:00	20	68	20	68
0:20	160	320	90	194
0:40	300	572	165	329
1:00	440	824	235	455
1:20	580	1076	310	590
1:40	720	1328	380	716
2:00	860	1580	450	842
2:20	915	1679	520	968
2:40	940	1724	595	1103
3:00	955	1751	635	1175
3:20	960	1760	660	1220
3:40	965	1769	675	1247
4:00	970	1778	685	1265
4:20	970	1778	690	1274
4:40	975	1787	690	1274
5:00	975	1787	690	1274
5:20	975	1787	695	1283
5:40	980	1796	695	1283
6:00	980	1796	695	1283
6:20	985	1805	700	1292
6:40	985	1805	700	1292
7:00	990	1814	700	1292
7:20	990	1814	705	1301
7:40	995	1823	705	1301
8:00	995	1823	705	1301
8:20	995	1823	710	1310
8:40	1000	1832	710	1310
9:00	1000	1832	710	1310
9:20	1005	1841	715	1319
9:40	1005	1841	715	1319
10:00	1005	1841	715	1319

6.4.4 Temperatures of Unexposed Surfaces of Floors and Walls.

6.4.4.1 Temperatures of unexposed surfaces shall be measured with exposed-type thermocouples placed under felted refractory fiber pads.

6.4.4.1.1 The refractory fiber pads shall be of flexible, felted material, free of organic additives, and they shall exhibit the following properties:

(1) Length and width shall be 6 in. ± ⅛ in. (152 mm ± 3.18 mm).
(2) Thickness shall be 0.375 in. ± 0.063 in. (9.5 mm ± 1.6 mm).
(3) Dry weight shall be 0.147 lb ± 0.053 lb (67 g ± 24 g).
(4) Thermal conductivity [at 150°F (66°C)] shall be 0.37 Btu in./h ft^2·°F ± 0.03 Btu in./h ft^2·°F (0.053 W/m·K ± 0.004 W/m·K).
(5) Hardness indentation on soft face shall be 0.075 in. ± 0.025 in. (1.9 mm ± 0.6 mm). Indentation shall be determined in accordance with ASTM Test Method C569, *Standard Test Method for Indentation Hardness of Preformed Thermal Insulations.* Modified Brinell values of hardness are obtained by the following relationship, where y = the measured indentation in inches:

$$\text{hardness} = \frac{2.24}{y}$$

(6) The pads shall be shaped by wetting, forming, and drying to constant weight to provide complete contact on sharply contoured surfaces.

6.4.4.1.2 The thickness measurement shall be made under the light load of a ½ in. (13 mm) diameter pad of a dial micrometer gauge.

6.4.4.1.3 The wire leads of the thermocouple shall have an immersion under the pad and shall be in contact with the unexposed surface for not less than 1½ in. (38 mm). The hot junction of the thermocouple shall be placed approximately under the center of the pad. The outside diameter of protecting or insulating tubes shall be not more than 3/16 in. (8 mm). The pad shall be held firmly against the surface and shall fit closely about the thermocouples. The wires from the thermocouple in the length covered by the pad shall be not heavier than No. 18 B & S gauge 0.04 in. (1.02 mm) and shall be electrically insulated with heat-resistant and moisture-resistant coatings.

6.4.4.2 Temperature readings shall be taken at not less than nine points on the surface. Five of these shall be symmetrically located: one to be approximately at the center of the walkway specimen and four to be approximately at the center of its quarter sections. The other four shall be located at the discretion of the testing authority to obtain representative information on the performance of the walkway specimen under test. None of the thermocouples shall be located nearer to the edges of the test specimen than one and one-half times the thickness of the construction, or 12 in. (305 mm). Thermocouples shall not be located opposite or on top of beams, girders, or other structural members.

6.4.4.3 Temperature readings shall be taken at intervals not exceeding 15 seconds.

6.4.4.4 Where the conditions of acceptance place a limitation on the temperature of the unexposed surface, the temperature end point of the fire-endurance period shall be determined by the average of the measurements taken at individual points. If a temperature rise of 30 percent in excess of the specified limit occurs at any one of these points, the remainder shall be ignored and the fire-endurance period judged as ended.

6.4.5 Test Specimen.

6.4.5.1 The test specimen shall be representative of the construction for the classification desired in regard to materials, workmanship, and details such as dimensions of parts and shall be built under conditions representative of actual aircraft loading walkway construction and operation. The physical properties of the materials and ingredients used in the test specimen shall be determined and recorded.

6.4.5.2 The test specimen shall be protected during and after fabrication in order to ensure normality of its quality and condition at the time of the test. The ambient air temperature at the beginning of the test shall be within the range of 50°F to 90°F (10°C to 32°C). The velocity of air across the unexposed surface of the sample, measured just before the test begins,

shall not exceed 4.4 ft/sec (1.3 m/s), as determined by an anemometer placed at right angles to the unexposed surface. If mechanical ventilation is employed during the test, an air stream shall not be directed across the surface of the specimen.

6.4.5.3* The fire-endurance test shall be continued on the specimen with its applied load, if any, until failure occurs, or until the specimen has withstood the test conditions for a period of 10 minutes.

6.4.5.4 Results shall be reported in accordance with the performance in the tests prescribed in these methods. Time–temperature results shall be reported at 15-second intervals. Reports shall include observations of significant details of the behavior of the material or construction during the test and after the furnace fire is cut off, including information on deformation, spalling, cracking, burning of the specimen or its component parts, continuance of flaming, and production of smoke.

6.4.6 Tests of Walls and Floors.

6.4.6.1 The dimensions of the sample to be tested shall be determined based upon the construction features of the specific walkway being tested. The dimensions selected shall ensure that the sample, when tested, will demonstrate the ability of the most critical elements of the walkway to withstand stress concentrations without failure and without separations that would permit fire and smoke intrusion. Verification documentation supporting the selection of the dimensions shall be approved by the authority having jurisdiction.

6.4.6.2 The effect of exposure to elevated temperatures of working stress seen as worst case load combinations during actual usage shall be accomplished by one of the following two methods:

(1) A superimposed load to the specimen shall be applied in a manner calculated to develop theoretically the design-allowable stresses contemplated by the design during the test described in 6.4.2.
(2) The yield strength of the structural medium shall be correlated to the maximum temperature recorded in 6.4.2. Structural submittals shall be made using this new yield strength showing nonfailure conditions have been met.

6.4.6.2.1 Worst-case load combinations shall be derived from the following:

(1) Floor Live Load: 40 lb/ft^2 (195 kg/m^2)
(2) Roof Load: 25 lb/ft^2 (122 kg/m^2)
(3) Wind Load: 12.5 lb/ft^2 (61 kg/m^2)

6.4.6.3 The test shall be successful when the following conditions of acceptance are met:

(1) The wall or floor section shall have sustained the applied load during the fire-endurance test without passage of flame for a minimum period of five minutes. Flaming shall not appear on the unexposed face.
(2) The maximum allowable surface temperature of the cool side of a wall or floor section shall not exceed 250°F (121°C) during a five-minute exposure as determined by 6.4.4.4.

6.4.7 Tests of Flexible Closures.

6.4.7.1 The test specimen area exposed to the test fire shall not be less than 2 ft × 2 ft (0.62 m × 0.62 m) square. The test specimen shall be representative of all elements of the flexible closure, including framework assembly and mechanisms for attachment to the aircraft loading walkway.

6.4.7.2 The test shall be successful when all of the conditions of acceptance in 6.4.7.2.1 through 6.4.7.2.3 are met.

6.4.7.2.1 The test specimen shall have withstood the fire-endurance test as defined by the time–temperature curve for external walkway wall exposure in Figure 6.4.2 without passage of flame for a minimum period of five minutes.

6.4.7.2.2 The closure material also shall pass the following test, designed to measure the radiant heat flux to which a human can be subjected while exiting an aircraft under a fuel spill fire emergency condition. A specimen of the closure material that reproduces the most expanded actual field operating configuration, regarding folds and pleats, existing 6 ft (1.8 m) above the floor shall be tested in a furnace. The furnace temperature applied to the exposed exterior surface of the closure material shall be raised in accordance with the time–temperature curve for external walkway wall exposure in Figure 6.4.2. Measurements shall be taken by a radiometer positioned between a minimum distance of 39.4 in. (1 m) and a maximum distance of 78.7 in. (2 m) away from the cool side surface of the test specimen. The radiometer shall have a view angle small enough such that it "sees" only the test specimen and not the frame or furnace wall. The approximate equivalent human exposure in the walkway shall not exceed 0.65 W/cm^2. The approximate equivalent human exposure shall be calculated by multiplying the maximum actual radiometer reading for the test in W/cm^2 at the radiometer by the following:

$$\frac{0.31\left(\tan^2\frac{\Theta}{2}+1\right)}{\tan^2\frac{\Theta}{2}\tau}$$

where:
Θ = the total view angle of the test radiometer
τ = the corrosion for absorption due to humidity

6.4.7.2.2.1 Table 6.4.7.2.2.1 shall be used to determine the appropriate τ.

Table 6.4.7.2.2.1 τ Factors

Relative Humidity During Test (%)	Distance of Source to Sensor		
	1 m	1.5 m	2 m
0 – 25	0.96	0.95	0.94
25 – 50	0.94	0.93	0.92
50 – 100	0.92	0.91	0.90

6.4.7.2.3 The framework assembly supporting the closure curtain material and mechanisms for attachment shall be capable of maintaining structural integrity when subjected to the fire defined by the time–temperature curve for external walkway wall exposure in Figure 6.4.2.

6.4.8 Test of Cab and Rotunda Slat Curtains.

6.4.8.1 The test specimen area exposed to the test fire shall not be less than 2 ft × 2 ft (0.62 m × 0.62 m) square. The test

specimen shall be representative of all elements of the cab and rotunda slat curtains, including framework assembly and mechanisms for attachment to the aircraft loading walkway.

6.4.8.2 For conditions of acceptance, the test sample shall be capable of withstanding the fire-endurance test as defined by the time–temperature curve in Figure 6.4.2 appropriate for the walkway location being tested without passage of flame for a period of five minutes. Flaming shall not appear on the unexposed face.

6.4.9 Tests of Bumpers.

6.4.9.1* Bumper assemblies shall be tested in continuous contact against a simulated aircraft fuselage in a manner representative of intended usage.

6.4.9.2 The specimen shall be configured in a manner representative of actual fabrication and shall include the bumper proper and mechanism for bumper attachment to the aircraft loading walkway.

6.4.9.3 For conditions of acceptance, bumpers shall be capable of withstanding the fire-endurance test as defined by the time–temperature curve for external walkway flooring exposure in Figure 6.4.2 without passage of flame for a period of five minutes. Flaming shall not appear on the unexposed face.

6.4.10 Tests of Miscellaneous Seals and Weather-Stripping Assemblies.

6.4.10.1 The testing laboratory shall construct a steel stud wall assembly consisting of one layer of ½ in. (13 mm) Type X gypsum wallboard on the exposed face. A hole shall be framed out in the center of the test wall where another steel stud/gypsum wallboard assembly shall be inserted. The smaller assembly to be inserted into the wall shall be constructed such that the opening between the test wall and the smaller assembly allows the weather stripping or seal material to fill the gap in a manner representative of end-use application. The entire assembly then shall be placed against the furnace for the required exposure.

6.4.10.2 The size of the test specimen shall not be less than 2 ft (0.62 m) long.

6.4.10.3 For conditions of acceptance, these components shall be capable of withstanding the fire-endurance test as defined by the time–temperature curve in Figure 6.4.2 appropriate for the walkway location being tested without passage of flame for a period of five minutes. Flaming shall not appear on the unexposed face.

6.5 Fire Suppression Systems.

6.5.1* The fixed fire suppression specified in 6.1.2 shall be provided by one of the following systems:

(1) Fixed water spray system specified in 6.5.2
(2) Fixed foam system specified in 6.5.3

6.5.2 The fixed water spray system shall be of the open head, deluge type and shall meet the requirements of NFPA 15, *Standard on Water Spray Fixed Systems for Fire Protection.* The system shall be designed so that the water is discharged directly on all walkway outer surfaces and structural members being protected. The system shall be automatically actuated and designed for a minimum discharge duration of five minutes.

6.5.3 The fixed foam system shall be adequate to blanket the area under the walkway when positioned at the aircraft exit door(s) and for a distance of approximately 10 ft (3 m) in all directions. The system shall meet the requirements of NFPA 11, *Standard for Low-Expansion Foam,* and NFPA 16, *Standard for the Installation of Foam-Water Sprinkler and Foam-Water Spray Systems.* The system shall be automatically activated. This system shall be capable of discharging in such a manner that the protected area previously described will be free of fire for a minimum duration of five minutes.

Annex A Explanatory Material

Annex A is not a part of the requirements of this NFPA document but is included for informational purposes only. This annex contains explanatory material, numbered to correspond with the applicable text paragraphs.

A.1.2 The adequacy and usefulness of airport terminal buildings depends, to a large extent, on the fire resistance of their construction and the fire protection provided within the buildings.

The provision of aircraft rescue and fire-fighting equipment at airports meeting the recommendations of NFPA 403, *Standard for Aircraft Rescue and Fire-Fighting Services at Airports,* and NFPA 414, *Standard for Aircraft Rescue and Fire-Fighting Vehicles,* will be useful in controlling ramp fires. The provision of hydrants on the ramp side of airport terminal buildings will assist in meeting supplemental fire protection needs in this area.

A.3.2.1 Approved. The National Fire Protection Association does not approve, inspect, or certify any installations, procedures, equipment, or materials; nor does it approve or evaluate testing laboratories. In determining the acceptability of installations, procedures, equipment, or materials, the authority having jurisdiction may base acceptance on compliance with NFPA or other appropriate standards. In the absence of such standards, said authority may require evidence of proper installation, procedure, or use. The authority having jurisdiction may also refer to the listings or labeling practices of an organization that is concerned with product evaluations and is thus in a position to determine compliance with appropriate standards for the current production of listed items.

A.3.2.2 Authority Having Jurisdiction (AHJ). The phrase "authority having jurisdiction," or its acronym AHJ, is used in NFPA documents in a broad manner, since jurisdictions and approval agencies vary, as do their responsibilities. Where public safety is primary, the authority having jurisdiction may be a federal, state, local, or other regional department or individual such as a fire chief; fire marshal; chief of a fire prevention bureau, labor department, or health department; building official; electrical inspector; or others having statutory authority. For insurance purposes, an insurance inspection department, rating bureau, or other insurance company representative may be the authority having jurisdiction. In many circumstances, the property owner or his or her designated agent assumes the role of the authority having jurisdiction; at government installations, the commanding officer or departmental official may be the authority having jurisdiction.

A.3.2.3 Listed. The means for identifying listed equipment may vary for each organization concerned with product evaluation; some organizations do not recognize equipment as listed unless it is also labeled. The authority having jurisdiction should utilize the system employed by the listing organization to identify a listed product.

EXHIBIT G4

NFPA® 415

Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways

2008 Edition

NFPA, 1 Batterymarch Park, Quincy, MA 02169-7471
An International Codes and Standards Organization

tem. Each 2½ in. (63.5 mm) hose connection shall be equipped with a 2½ in. × 1½ in. (63.5 mm × 38 mm) reducer and cap.

4.5.4.2 Class III standpipe systems shall be provided in nonsprinklered buildings. The exceptions in NFPA 14, *Standard for the Installation of Standpipe and Hose Systems*, for Class III systems shall be applicable to this requirement.

4.5.5 Water Supply. Water supply from public or private sources shall be adequate to supply maximum calculated sprinkler demand plus a minimum of 500 gpm (1893 L/min) for hose streams. The supply shall be available at the rate specified for a period of at least 1 hour.

4.5.5.1* Main sizes shall be hydraulically calculated based on the total domestic and fire protection requirements. Mains shall be not less than 8 in. (203 mm) in diameter except that laterals shall be permitted to be 6 in. (152 mm) in diameter if not over 200 ft (61 m) long.

4.5.5.2* Hydrants shall be readily accessible to fire-fighting vehicles traveling on surfaces adequate for supporting such vehicles.

4.5.5.2.1 Hydrants shall be listed.

4.5.5.2.2 Hydrants shall be located or protected to prevent mechanical or vehicular damage, including taxiing aircraft.

4.5.5.2.3 Hydrants recessed into the ground shall have identifiers in the pavement to assist in their prompt location at night and by personnel who might not be familiar with the location of the hydrants.

4.5.5.3* Water supply systems shall be regularly tested to ensure operation.

4.5.6 Portable Fire Extinguishers. Portable fire extinguishers shall be provided throughout the airport terminal building in accordance with NFPA 10, *Standard for Portable Fire Extinguishers.*

Chapter 5 Aircraft Fueling Ramp Drainage

5.1 Aircraft Fueling Ramp Slope and Drain Design.

5.1.1* Aircraft fueling ramps shall slope away from terminal buildings, aircraft hangars, aircraft loading walkways, or other structures, with a minimum grade of 1 percent (1:100) for the first 50 ft (15 m). Beyond this distance, the ramp slope to drainage inlets shall be permitted to be reduced to a minimum of 0.5 percent (1:200).

5.1.2* Aircraft fueling ramp drainage as specified herein shall be accomplished by the provisions of 5.1.1 in conjunction with the following:

(1) The use of drain inlets with connected piping
(2) The use of open-grate trenches

5.1.3 Drainage inlets, where provided, shall be located a minimum of 50 ft (15 m) from structures outlined in 5.1.1.

5.1.4 The drainage system of any aircraft fueling ramp shall be so designed that the fuel or its vapor cannot enter into the drainage system of buildings, areas utilized for automobile parking, public or private streets, or the public side of airport terminal or aircraft hangar structures. In no case shall the design allow fuel to collect on the aircraft fueling ramp or adjacent ground surfaces where it could constitute a fire hazard.

5.1.5 The final separator or interceptor for the entire airport drainage system shall be designed to allow disposal of combustible or flammable liquids into a safely located, approved containment facility.

5.1.6 Grates and drain covers shall be removable to facilitate cleaning and flushing.

5.1.7* If open-grate drainage trenches are used as a collection means, such open trenches, including branches, shall not be over 125 ft (38 m) in length with a minimum interval of 6 ft (1.8 m) between open-trench sections to act as fire stops. Each 125 ft (38 m) section shall be individually drained through underground piping. Open trenches shall not be used where they are in the line of pedestrian or passenger traffic.

5.1.8 Underground piping and components used in drainage systems shall be noncombustible and inert to fuel.

5.2 Drain and Separator Maintenance.

5.2.1* Periodic maintenance checks shall be conducted of all ramp drainage systems and interceptors to ensure that they are clear of obstructions and function properly.

5.2.2 Large-volume flushing with water shall be conducted through appropriate drainage elements to purge residual fuel from these drainage elements after any large fuel spill on the aircraft fueling ramp enters the drainage system.

Chapter 6 Aircraft Loading Walkways

6.1 Basic Design.

6.1.1* Each aircraft loading walkway installation shall be designed to provide a safe means of egress from the aircraft for a period of 5 minutes under fire exposure conditions equivalent to a free-burning jet fuel spill fire.

6.1.2 Protection of the aircraft loading walkway shall be accomplished by one of the following methods:

(1) Construction design meeting the requirements of Sections 6.1 through 6.4
(2) Fixed fire protection meeting the requirements of Sections 6.1, 6.2, and 6.5

6.2 Requirements for All Aircraft Loading Walkways.

6.2.1* Interior finish other than textiles of walls, ceilings, and walkways shall be Class A as defined in 10.2.3.4(1) of NFPA *101, Life Safety Code*, and classified in accordance with NFPA 255, *Standard Method of Test of Surface Burning Characteristics of Building Materials.*

6.2.2 Interior textile finish of walls and ceilings in walkways shall be as limited by 10.2.4.1(5) of NFPA *101, Life Safety Code.*

6.2.3 Interior floor finish in walkways shall be Class I as defined in 10.2.7.4(1) of NFPA *101, Life Safety Code*, and classified in accordance with NFPA 253, *Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source.*

6.2.4 There shall be no transparent or translucent walls, windows, or surfaces other than those windows located in the ramp access service door and in the cab area for the purpose of operating the aircraft loading walkway.

6.2.5* During a ramp fire emergency, walkway interiors shall have a positive air pressure delivered from a source that shall remain uncontaminated.

6.2.6* Any source of negative air pressure in the aircraft loading walkway shall be automatically shut down in the event of a fire emergency.

6.2.7 Any door in the egress path through the loading walkway to the terminal building shall swing in the direction of egress from the aircraft toward the terminal building and shall be equipped with panic hardware on the aircraft side.

6.2.8* Where loading walkways are provided, the walkway, including the bumpers, curtains, and canopies, shall be seated according to the manufacturer's instruction and training whenever the walkway is in service.

6.2.9 Cab and Rotunda Slat Curtains.

6.2.9.1 Cab slat curtains and rotunda slat curtains shall meet the requirements of 6.4.8 by one of the following methods:

(1) Intrinsic structural features
(2) Fire-resistive coatings
(3) Automatically activated water cooling systems in accordance with 6.5.2
(4) Automatically activated fire curtains
(5) Local application of a foam system in accordance with 6.5.3 under the cab and rotunda that is automatically activated and covers an area extending 15 ft (4.6 m) beyond the perimeter of the cab and rotunda. This shall supersede the 10 ft (3 m) criteria of 6.5.3.

6.2.9.2 When the rotunda is located more than 50 ft (15 m) from the fuel fill or fuel vent point of aircraft and the rotunda slot curtain is of noncombustible construction, 6.2.9.1 shall not apply.

6.2.10 Emergency Lights. Emergency lights shall be installed in all aircraft loading walkways in accordance with NFPA *101, Life Safety Code.*

6.2.11* The minimum obstruction-free width of walking surface shall be 36 in. (914 mm). Changes in elevation between telescoping sections of the loading walkway's walking surface shall not exceed 1 in 20 slope when the loading walkway is level. Existing loading walkways shall be permitted to be continued in service.

6.3 Materials.

6.3.1 Exterior surfaces of floors, roofs, walls, and load-bearing structural members shall be constructed entirely of materials or composite assemblies that maintain the structural integrity and heat transfer characteristics needed to meet the requirements specified in 6.1.1 and Section 6.4.

6.3.2 Flexible closures, canopies, wipers, and weather-sealing devices shall be subjected to the accelerated weathering procedures specified in 6.3.2.1, after which they shall meet the requirements of 6.4.7 or 6.4.10 of this standard, as applicable.

6.3.2.1 Specimens shall be exposed for 100 hours using the apparatus and procedure specified in AATCC Test Method 111A, "Water Resistance — Sunshine Arc Lamp Exposure with Wetting."

6.3.3 The manufacturer shall provide, in writing, the anticipated service life expectancy of components that contribute to fire safety.

6.4 Fire Tests.

6.4.1 Scope of Fire Tests.

6.4.1.1 Tests shall be conducted to establish the performance of materials and methods of construction and to verify their structural integrity and heat transfer characteristics so as to satisfy the 5-minute exit route criteria specified in 6.1.1.

6.4.1.2 The test methods specified in this chapter shall be applicable to assemblies of units and to composite assemblies of structural materials for aircraft loading walkways, including walls, girders, beams, slabs, and composite slab and beam assemblies for floor and walls either tested individually as floor or wall panels or as a complete assembly. Also, they shall be applicable to other assemblies and structural units that constitute permanent integral parts of a finished aircraft loading walkway.

6.4.1.3 The condition of acceptance for tests specified in this section for aircraft loading walkways shall be documented by one of the methods in 6.4.1.3.1 and 6.4.1.3.2. Such submittals shall be subject to acceptance by the authority having jurisdiction.

6.4.1.3.1 Tests shall be conducted in accordance with the requirements and procedures of Section 6.4.

6.4.1.3.2 Evidence of compliance shall be permitted to be achieved by other methods such as modeling, calculation, or testing. The submitter must show that the method used proves that components achieve a level of fire safety at least equal to that produced by the procedure in Section 6.4.

6.4.1.4 The tests shall register performance during the required period of exposure and shall not be construed as having determined suitability for use after fire exposure.

6.4.2 Time–Temperature Curve to Be Used. The conduct of fire tests of materials and construction shall be controlled by the time–temperature curves in Figure 6.4.2 and Table 6.4.2.

6.4.3 Furnace Temperatures.

6.4.3.1 The temperature fixed by the curve shall be deemed to be the average temperature obtained from the readings of not fewer than nine thermocouples for a floor or wall section. The thermocouples shall be symmetrically located and distributed to show the temperature near all parts of the sample and shall be partially enclosed in porcelain tubes ¾ in. (19 mm) in outside diameter and ⅛ in. (3 mm) in wall thickness, with a minimum exposed length of thermocouple wires of 1½ in. (38 mm). The exposed length of the pyrometer tube and thermocouples in the furnace chamber shall be not less than 12 in. (305 mm). Other types of thermocouples or pyrometers that under test conditions give the same indications as those specified herein within the limit of accuracy that applies for real-time furnace temperature measurements shall be permitted to be used.

6.4.3.1.1 For floor sections, the junction of the thermocouples shall be placed 12 in. (305 mm) away from the exposed surface of the sample at the beginning of the test and during the test shall not touch the sample as a result of its deflection.

6.4.3.1.2 For walls, the thermocouples shall be placed 6 in. (152 mm) away from the exposed face of the sample at the beginning of the test and shall not touch the sample during the test as a result of its deflection.

6.4.3.2 The temperatures shall be measured and reported at intervals not exceeding 15 seconds.

6.4.3.3 The accuracy of the furnace control shall be such that at any given time the temperature obtained by averaging the results from the pyrometer readings shall not be less than 90 percent of the temperature curve shown in Figure 6.4.2.

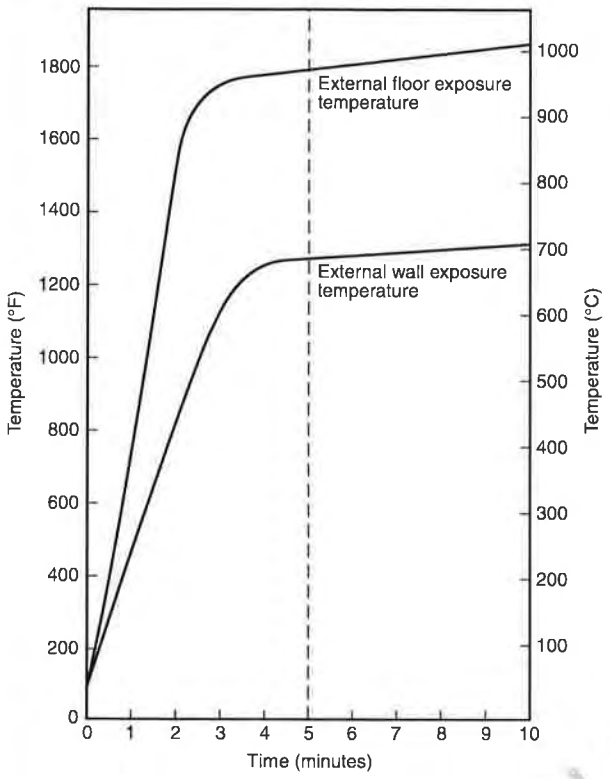

FIGURE 6.4.2 Typical Furnace Time–Temperature Curves for Fire Testing of Aircraft Loading Walkways. *(See Table 6.4.2.)*

6.4.4 Temperatures of Unexposed Surfaces of Floors and Walls.

6.4.4.1 Temperatures of unexposed surfaces shall be measured with exposed-type thermocouples placed under felted refractory fiber pads.

6.4.4.1.1 The refractory fiber pads shall be of flexible, felted material, free of organic additives, and they shall exhibit the following properties:

(1) Length and width shall be 6 in. ± ⅛ in. (152 mm ± 3.18 mm).
(2) Thickness shall be 0.375 in. ± 0.063 in. (9.5 mm ± 1.6 mm).
(3) Dry weight shall be 0.147 lb ± 0.053 lb (67 g ± 24 g).
(4) Thermal conductivity [at 150°F (66°C)] shall be 0.37 Btu in./hr ft^2·°F ± 0.03 Btu in./hr ft^2·°F (0.053 W/m·C ± 0.004 W/m·C).
(5) Hardness indentation on soft face shall be 0.075 in. ± 0.025 in. (1.9 mm ± 0.6 mm). Indentation shall be determined in accordance with ASTM Test Method C569, *Standard Test Method for Indentation Hardness of Preformed Thermal Insulations.* Modified Brinell values of hardness are obtained by the following relationship, where y = the measured indentation in inches:

$$Hardness = \frac{2.24}{y}$$

(6) The pads shall be shaped by wetting, forming, and drying to constant weight to provide complete contact on sharply contoured surfaces.

Table 6.4.2 Typical Furnace Time–Temperature Gradients for Fire Testing of Aircraft Loading Walkways

Time (min:sec)	Exposed Floor Section Temperatures		Exposed Wall Section Temperatures	
	°C	°F	°C	°F
0:00	20	68	20	68
0:20	160	320	90	194
0:40	300	572	165	329
1:00	440	824	235	455
1:20	580	1076	310	590
1:40	720	1328	380	716
2:00	860	1580	450	842
2:20	915	1679	520	968
2:40	940	1724	595	1103
3:00	955	1751	635	1175
3:20	960	1760	660	1220
3:40	965	1769	675	1247
4:00	970	1778	685	1265
4:20	970	1778	690	1274
4:40	975	1787	690	1274
5:00	975	1787	690	1274
5:20	975	1787	695	1283
5:40	980	1796	695	1283
6:00	980	1796	695	1283
6:20	985	1805	700	1292
6:40	985	1805	700	1292
7:00	990	1814	700	1292
7:20	990	1814	705	1301
7:40	995	1823	705	1301
8:00	995	1823	705	1301
8:20	995	1823	710	1310
8:40	1000	1832	710	1310
9:00	1000	1832	710	1310
9:20	1005	1841	715	1319
9:40	1005	1841	715	1319
10:00	1005	1841	715	1319

Note: See also Figure 6.4.2.

6.4.4.1.2 The thickness measurement shall be made under the light load of a ½ in. (13 mm) diameter pad of a dial micrometer gauge.

6.4.4.1.3 The wire leads of the thermocouple shall have an immersion under the pad and shall be in contact with the unexposed surface for not less than 1½ in. (38 mm). The hot junction of the thermocouple shall be placed approximately under the center of the pad. The outside diameter of protecting or insulating tubes shall be not more than 5⁄16 in. (8 mm). The pad shall be held firmly against the surface and shall fit closely about the thermocouples. The wires from the thermocouple in the length covered by the pad shall be not heavier than No. 18 B & S gauge 0.04 in. (1.02 mm) and shall be electrically insulated with heat-resistant and moisture-resistant coatings.

6.4.4.2 Temperature readings shall be taken at not less than nine points on the surface. Five of these shall be symmetrically located: one to be approximately at the center of the walkway specimen and four to be approximately at the center of its quarter sections. The other four shall be located at the discretion of

the testing authority to obtain representative information on the performance of the walkway specimen under test. None of the thermocouples shall be located nearer to the edges of the test specimen than one and one-half times the thickness of the construction or 12 in. (305 mm). Thermocouples shall not be located opposite or on top of beams, girders, or other structural members.

6.4.4.3 Temperature readings shall be taken at intervals not exceeding 15 seconds.

6.4.4.4 Where the conditions of acceptance place a limitation on the temperature of the unexposed surface, the temperature end point of the fire-endurance period shall be determined by the average of the measurements taken at individual points. If a temperature rise of 30 percent in excess of the specified limit occurs at any one of these points, the remainder shall be ignored and the fire-endurance period judged as having ended.

6.4.5 Test Specimen.

6.4.5.1 The test specimen shall be representative of the construction for the classification desired in regard to materials, workmanship, and details such as dimensions of parts and shall be built under conditions representative of actual aircraft loading walkway construction and operation. The physical properties of the materials and ingredients used in the test specimen shall be determined and recorded.

6.4.5.2 The test specimen shall be protected during and after fabrication to ensure normality of its quality and condition at the time of the test. The ambient air temperature at the beginning of the test shall be within the range of 50°F to 90°F (10°C to 32°C). The velocity of air across the unexposed surface of the sample, measured just before the test begins, shall not exceed 4.4 ft/sec (1.3 m/s), as determined by an anemometer placed at right angles to the unexposed surface. If mechanical ventilation is employed during the test, an air stream shall not be directed across the surface of the specimen.

6.4.5.3* The fire-endurance test shall be continued on the specimen with its applied load, if any, until failure occurs, or until the specimen has withstood the test conditions for a period of 10 minutes.

6.4.5.4 Results shall be reported in accordance with the performance in the tests prescribed in these methods. Time–temperature results shall be reported at 15-second intervals. Reports shall include observations of significant details of the behavior of the material or construction during the test and after the furnace fire is cut off, including information on deformation, spalling, cracking, burning of the specimen or its component parts, continuance of flaming, and production of smoke.

6.4.6 Tests of Walls and Floors.

6.4.6.1 The dimensions of the sample to be tested shall be determined based on the construction features of the specific walkway being tested. The dimensions selected shall ensure that the sample, when tested, will demonstrate the ability of the most critical elements of the walkway to withstand stress concentrations without failure and without separations that would permit fire and smoke intrusion. Verification documentation supporting the selection of the dimensions shall be approved by the authority having jurisdiction.

6.4.6.2 The effect of exposure to elevated temperatures of working stress seen as worst-case load combinations during actual usage shall be accomplished by one of the following two methods:

(1) A superimposed load to the specimen shall be applied in a manner calculated to develop theoretically the design-allowable stresses contemplated by the design during the test described in 6.4.2.
(2) The yield strength of the structural medium shall be correlated to the maximum temperature recorded in 6.4.2. Structural submittals shall be made using this new yield strength showing nonfailure conditions have been met.

6.4.6.2.1 Worst-case load combinations shall be derived from the following:

(1) Floor live load: 40 lb/ft^2 (195 kg/m^2)
(2) Roof load: 25 lb/ft^2 (122 kg/m^2)
(3) Wind load: 12.5 lb/ft^2 (61 kg/m^2)

6.4.6.3 The test shall be successful when the following conditions of acceptance are met:

(1) The wall or floor section shall have sustained the applied load during the fire-endurance test without passage of flame for a minimum period of 5 minutes. Flaming shall not appear on the unexposed face.
(2) The maximum allowable surface temperature of the cool side of a wall or floor section shall not exceed 250°F (121°C) during a 5-minute exposure as determined by 6.4.4.4.

6.4.7 Tests of Flexible Closures.

6.4.7.1 The test specimen area exposed to the test fire shall not be less than 2 ft × 2 ft (0.62 m × 0.62 m). The test specimen shall be representative of all elements of the flexible closure, including framework assembly and mechanisms for attachment to the aircraft loading walkway.

6.4.7.2 The test shall be successful when all the conditions of acceptance in 6.4.7.2.1 through 6.4.7.2.3 are met.

6.4.7.2.1 The test specimen shall have withstood the fire-endurance test as defined by the time–temperature curve for external walkway wall exposure in Figure 6.4.2 without passage of flame for a minimum period of 5 minutes.

6.4.7.2.2 The closure material also shall pass the following test, designed to measure the radiant heat flux to which humans can be subjected while exiting an aircraft under a fuel spill fire emergency condition. A specimen of the closure material that reproduces the most expanded actual field operating configuration, regarding folds and pleats, existing 6 ft (1.8 m) above the floor shall be tested in a furnace. The furnace temperature applied to the exposed exterior surface of the closure material shall be raised in accordance with the time–temperature curve for external walkway wall exposure in Figure 6.4.2. Measurements shall be taken by a radiometer positioned between a minimum distance of 39.4 in. (1 m) and a maximum distance of 78.7 in. (2 m) away from the cool side surface of the test specimen. The radiometer shall have a view angle small enough such that it "sees" only the test specimen and not the frame or furnace wall. The approximate equivalent human exposure in the walkway shall not exceed 0.65 W/cm^2. The approximate equivalent human exposure shall be calculated by multiplying the maximum actual radiometer reading for the test in W/cm^2 at the radiometer by the following:

$$\frac{0.31\left(\tan^2\frac{\Theta}{2}+1\right)}{\tan^2\frac{\Theta}{2}\tau}$$

where:
Θ = the total view angle of the test radiometer
τ = correction factor for absorption due to humidity

6.4.7.2.2.1 Table 6.4.7.2.2.1 shall be used to determine the appropriate τ.

Table 6.4.7.2.2.1 τ Factors

Relative Humidity During Test (%)	τ Factors Based on Distance from Source to Sensor		
	1 m	1.5 m	2 m
0–25	0.96	0.95	0.94
25–50	0.94	0.93	0.92
50–100	0.92	0.91	0.90

6.4.7.2.3 The framework assembly supporting the closure curtain material and mechanisms for attachment shall be capable of maintaining structural integrity when subjected to the fire defined by the time–temperature curve for external walkway wall exposure in Figure 6.4.2.

6.4.8 Test of Cab and Rotunda Slat Curtains.

6.4.8.1 The test specimen area exposed to the test fire shall not be less than 2 ft × 2 ft (0.62 m × 0.62 m). The test specimen shall be representative of all elements of the cab and rotunda slat curtains, including framework assembly and mechanisms for attachment to the aircraft loading walkway.

6.4.8.2 For conditions of acceptance, the test sample shall be capable of withstanding the fire-endurance test as defined by the time–temperature curve in Figure 6.4.2 appropriate for the walkway location being tested without passage of flame for a period of 5 minutes. Flaming shall not appear on the unexposed face.

6.4.9 Tests of Bumpers.

6.4.9.1* Bumper assemblies shall be tested in continuous contact against a simulated aircraft fuselage in a manner representative of intended usage.

6.4.9.2 The specimen shall be configured in a manner representative of actual fabrication and shall include the bumper proper and mechanism for bumper attachment to the aircraft loading walkway.

6.4.9.3 For conditions of acceptance, bumpers shall be capable of withstanding the fire-endurance test as defined by the time–temperature curve for external walkway flooring exposure in Figure 6.4.2 without passage of flame for a period of 5 minutes. Flaming shall not appear on the unexposed face.

6.4.10 Tests of Miscellaneous Seals and Weather-Stripping Assemblies.

6.4.10.1 The testing laboratory shall construct a steel stud wall assembly consisting of one layer of ½ in. (13 mm) Type X gypsum wallboard on the exposed face. A hole shall be framed out in the center of the test wall where another steel stud–gypsum wallboard assembly shall be inserted. The smaller assembly to be inserted into the wall shall be constructed such that the opening between the test wall and the smaller assembly allows the weather stripping or seal material to fill the gap in a manner representative of end-use application. The entire assembly then shall be placed against the furnace for the required exposure.

6.4.10.2 The size of the test specimen shall not be less than 2 ft (0.62 m) long.

6.4.10.3 For conditions of acceptance, these components shall be capable of withstanding the fire-endurance test as defined by the time–temperature curve in Figure 6.4.2 appropriate for the walkway location being tested without passage of flame for a period of 5 minutes. Flaming shall not appear on the unexposed face.

6.5 Fire Suppression Systems.

6.5.1* The fixed fire suppression specified in 6.1.2 shall be provided by one of the following systems:

(1) Fixed water spray system specified in 6.5.2
(2) Fixed foam system specified in 6.5.3

6.5.2 The fixed water spray system shall be of the open-head, deluge type and shall meet the requirements of NFPA 15, *Standard for Water Spray Fixed Systems for Fire Protection.* The system shall be designed so that the water is discharged directly on all walkway outer surfaces and structural members being protected. The system shall be automatically actuated and designed for a minimum discharge duration of 5 minutes.

6.5.3 The fixed foam system shall be adequate to blanket the area under the walkway when positioned at the aircraft exit door(s) and for a distance of approximately 10 ft (3 m) in all directions. The system shall meet the requirements of NFPA 11, *Standard for Low-, Medium-, and High-Expansion Foam,* and NFPA 16, *Standard for the Installation of Foam-Water Sprinkler and Foam-Water Spray Systems.* The system shall be automatically activated. This system shall be capable of discharging in such a manner that the protected area previously described will be free of fire for a minimum duration of 5 minutes.

Annex A Explanatory Material

Annex A is not a part of the requirements of this NFPA document but is included for informational purposes only. This annex contains explanatory material, numbered to correspond with the applicable text paragraphs.

A.1.2 The adequacy and usefulness of airport terminal buildings depend, to a large extent, on the fire resistance of their construction and the fire protection provided within the buildings.

The provision of aircraft rescue and fire-fighting equipment at airports meeting the recommendations of NFPA 403, *Standard for Aircraft Rescue and Fire-Fighting Services at Airports,* and NFPA 414, *Standard for Aircraft Rescue and Fire-Fighting Vehicles,* will be useful in controlling ramp fires. The provision of hydrants on the ramp side of airport terminal buildings will assist in meeting supplemental fire protection needs in those areas.

EXHIBIT G5

NFPA® 415

Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways

2013 Edition

NFPA, 1 Batterymarch Park, Quincy, MA 02169-7471
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4.5.4.2 Class III standpipe systems shall be provided in nonsprinklered buildings. The exceptions in NFPA 14, *Standard for the Installation of Standpipe and Hose Systems*, for Class III systems shall be applicable to this requirement.

4.5.5 Water Supply. Water supply from public or private sources shall be adequate to supply maximum calculated sprinkler demand plus a minimum of 500 gpm (1893 L/min) for hose streams. The supply shall be available at the rate specified for a period of at least 1 hour.

4.5.5.1* Main sizes shall be hydraulically calculated based on the total domestic and fire protection requirements. Mains shall be not less than 8 in. (203 mm) in diameter except that laterals shall be permitted to be 6 in. (152 mm) in diameter if not over 200 ft (61 m) long.

4.5.5.2* Hydrants shall be readily accessible to fire-fighting vehicles traveling on surfaces adequate for supporting such vehicles.

4.5.5.2.1 Hydrants shall be listed.

4.5.5.2.2 Hydrants shall be located or protected to prevent mechanical or vehicular damage, including taxiing aircraft.

4.5.5.2.3 Hydrants recessed into the ground shall have identifiers in the pavement to assist in their prompt location at night and by personnel who might not be familiar with the location of the hydrants.

4.5.5.3* Water supply systems shall be regularly tested to ensure operation.

4.5.6 Portable Fire Extinguishers. Portable fire extinguishers shall be provided throughout the airport terminal building in accordance with NFPA 10, *Standard for Portable Fire Extinguishers*.

Chapter 5 Aircraft Fueling Ramp Drainage

5.1 Aircraft Fueling Ramp Slope and Drain Design.

5.1.1* Aircraft fueling ramps shall slope away from terminal buildings, aircraft hangars, aircraft loading walkways, or other structures, with a minimum grade of 1 percent (1:100) for the first 50 ft (15 m). Beyond this distance, the ramp slope to drainage inlets shall be permitted to be reduced to a minimum of 0.5 percent (1:200).

5.1.2* Aircraft fueling ramp drainage as specified herein shall be accomplished by the provisions of 5.1.1 in conjunction with the following:

(1) The use of drain inlets with connected piping
(2) The use of open-grate trenches

5.1.3 Drainage inlets, where provided, shall be located a minimum of 50 ft (15 m) from structures outlined in 5.1.1.

5.1.4 The drainage system of any aircraft fueling ramp shall be so designed that the fuel or its vapor cannot enter into the drainage system of buildings, areas utilized for automobile parking, public or private streets, or the public side of airport terminal or aircraft hangar structures. In no case shall the design allow fuel to collect on the aircraft fueling ramp or adjacent ground surfaces where it could constitute a fire hazard.

5.1.5 The final separator or interceptor for the entire airport drainage system shall be designed to allow disposal of combustible or flammable liquids into a safely located, approved containment facility.

5.1.6 Grates and drain covers shall be removable to facilitate cleaning and flushing.

5.1.7* If open-grate drainage trenches are used as a collection means, such open trenches, including branches, shall not be over 125 ft (38 m) in length with a minimum interval of 6 ft (1.8 m) between open-trench sections to act as fire stops. Each 125 ft (38 m) section shall be individually drained through underground piping. Open trenches shall not be used where they are in the line of pedestrian or passenger traffic.

5.1.8 Underground piping and components used in drainage systems shall be noncombustible and inert to fuel.

5.2 Drain and Separator Maintenance.

5.2.1* Periodic maintenance checks shall be conducted of all ramp drainage systems and interceptors to ensure that they are clear of obstructions and function properly.

5.2.2 Large-volume flushing with water shall be conducted through appropriate drainage elements to purge residual fuel from these drainage elements after any large fuel spill on the aircraft fueling ramp enters the drainage system.

Chapter 6 Aircraft Loading Walkways

6.1 Basic Design.

6.1.1* Each aircraft loading walkway installation shall be designed to provide a safe means of egress from the aircraft for a period of 5 minutes under fire exposure conditions equivalent to a free-burning jet fuel spill fire.

6.1.2 Protection of the aircraft loading walkway shall be accomplished by one of the following methods:

(1) Construction design meeting the requirements of Sections 6.1 through 6.4
(2) Fixed fire protection meeting the requirements of Sections 6.1, 6.2, and 6.5

6.2 Requirements for All Aircraft Loading Walkways.

6.2.1* Interior finish other than textiles of walls, ceilings, and walkways shall be Class A as defined in 10.2.3.4(1) of NFPA *101*, *Life Safety Code*, and classified in accordance with ASTM E 84, *Standard Test Method for Surface Burning Characteristics of Building Materials* or ANSI/UL 723, *Standard for Test for Surface Burning Characteristics*.

6.2.2 Interior textile finish of walls and ceilings in walkways shall be as limited by 10.2.4.1(5) of NFPA *101*, *Life Safety Code*.

6.2.3 Interior floor finish in walkways shall be Class I as defined in 10.2.7.4(1) of NFPA *101*, *Life Safety Code*, and classified in accordance with NFPA 253, *Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source*.

6.2.4 There shall be no transparent or translucent walls, windows, or surfaces other than those windows located in the ramp access service door and in the cab area for the purpose of operating the aircraft loading walkway.

6.2.5* During a ramp fire emergency, walkway interiors shall have a positive air pressure delivered from a source that shall remain uncontaminated.

6.2.6* Any source of negative air pressure in the aircraft loading walkway shall be automatically shut down in the event of a fire emergency.

6.2.7 Any door in the egress path through the loading walkway to the terminal building shall swing in the direction of egress from the aircraft toward the terminal building and shall be equipped with panic hardware on the aircraft side.

6.2.8* Where loading walkways are provided, the walkway, including the bumpers, curtains, and canopies, shall be seated according to the manufacturer's instruction and training whenever the walkway is in service.

6.2.9 Cab and Rotunda Slat Curtains.

6.2.9.1 Cab slat curtains and rotunda slat curtains shall meet the requirements of 6.4.8 by one of the following methods:

(1) Intrinsic structural features
(2) Fire-resistive coatings
(3) Automatically activated water cooling systems in accordance with 6.5.2
(4) Automatically activated fire curtains
(5) Local application of a foam system in accordance with 6.5.3 under the cab and rotunda that is automatically activated and covers an area extending 15 ft (4.6 m) beyond the perimeter of the cab and rotunda. This shall supersede the 10 ft (3 m) criteria of 6.5.3.

6.2.9.2 When the rotunda is located more than 50 ft (15 m) from the fuel fill or fuel vent point of aircraft and the rotunda slot curtain is of noncombustible construction, 6.2.9.1 shall not apply.

6.2.10 Emergency Lights. Emergency lights shall be installed in all aircraft loading walkways in accordance with NFPA *101, Life Safety Code.*

6.2.11* The minimum obstruction-free width of walking surface shall be 36 in. (914 mm). Changes in elevation between telescoping sections of the loading walkway's walking surface shall not exceed 1 in 20 slope when the loading walkway is level. Existing loading walkways shall be permitted to be continued in service.

6.3 Materials.

6.3.1 Exterior surfaces of floors, roofs, walls, and load-bearing structural members shall be constructed entirely of materials or composite assemblies that maintain the structural integrity and heat transfer characteristics needed to meet the requirements specified in 6.1.1 and Section 6.4.

6.3.2 Flexible closures, canopies, wipers, and weather-sealing devices shall be subjected to the accelerated weathering procedures specified in 6.3.2.1, after which they shall meet the requirements of 6.4.7 or 6.4.10 of this standard, as applicable.

6.3.2.1 Specimens shall be exposed for 100 hours using the apparatus and procedure specified in Cycle 1 Option A of AATCC Test Method 192, "Weather Resistance of Textiles: Sunshine-Arc Lamp Exposure With and Without Wetting."

6.3.3 The manufacturer shall provide, in writing, the anticipated service life expectancy of components that contribute to fire safety.

6.4 Fire Tests.

6.4.1 Scope of Fire Tests.

6.4.1.1 Tests shall be conducted to establish the performance of materials and methods of construction and to verify their structural integrity and heat transfer characteristics so as to satisfy the 5-minute exit route criteria specified in 6.1.1.

6.4.1.2 The test methods specified in this chapter shall be applicable to assemblies of units and to composite assemblies of structural materials for aircraft loading walkways, including walls, girders, beams, slabs, and composite slab and beam assemblies for floor and walls either tested individually as floor or wall panels or as a complete assembly. Also, they shall be applicable to other assemblies and structural units that constitute permanent integral parts of a finished aircraft loading walkway.

6.4.1.3 The condition of acceptance for tests specified in this section for aircraft loading walkways shall be documented by one of the methods in 6.4.1.3.1 and 6.4.1.3.2. Such submittals shall be subject to acceptance by the authority having jurisdiction.

6.4.1.3.1 Tests shall be conducted in accordance with the requirements and procedures of Section 6.4.

6.4.1.3.2 Evidence of compliance shall be permitted to be achieved by other methods such as modeling, calculation, or testing. The submitter must show that the method used proves that components achieve a level of fire safety at least equal to that produced by the procedure in Section 6.4.

6.4.1.4 The tests shall register performance during the required period of exposure and shall not be construed as having determined suitability for use after fire exposure.

6.4.2 Time-Temperature Curve to Be Used. The conduct of fire tests of materials and construction shall be controlled by the time-temperature curves in Figure 6.4.2 and Table 6.4.2.

6.4.3 Furnace Temperatures.

6.4.3.1 The temperature fixed by the curve shall be deemed to be the average temperature obtained from the readings of not fewer than nine thermocouples for a floor or wall section. The thermocouples shall be symmetrically located and distributed to show the temperature near all parts of the sample and shall be partially enclosed in porcelain tubes ¾ in. (19 mm) in outside diameter and ⅛ in. (3 mm) in wall thickness, with a minimum exposed length of thermocouple wires of 1½ in. (38 mm). The exposed length of the pyrometer tube and thermocouples in the furnace chamber shall be not less than 12 in. (305 mm). Other types of thermocouples or pyrometers that under test conditions give the same indications as those specified herein within the limit of accuracy that applies for real-time furnace temperature measurements shall be permitted to be used.

6.4.3.1.1 For floor sections, the junction of the thermocouples shall be placed 12 in. (305 mm) away from the exposed surface of the sample at the beginning of the test and during the test shall not touch the sample as a result of its deflection.

6.4.3.1.2 For walls, the thermocouples shall be placed 6 in. (152 mm) away from the exposed face of the sample at the beginning of the test and shall not touch the sample during the test as a result of its deflection.

6.4.3.2 The temperatures shall be measured and reported at intervals not exceeding 15 seconds.

6.4.3.3 The accuracy of the furnace control shall be such that at any given time the temperature obtained by averaging the results from the pyrometer readings shall not be less than 90 percent of the temperature curve shown in Figure 6.4.2.

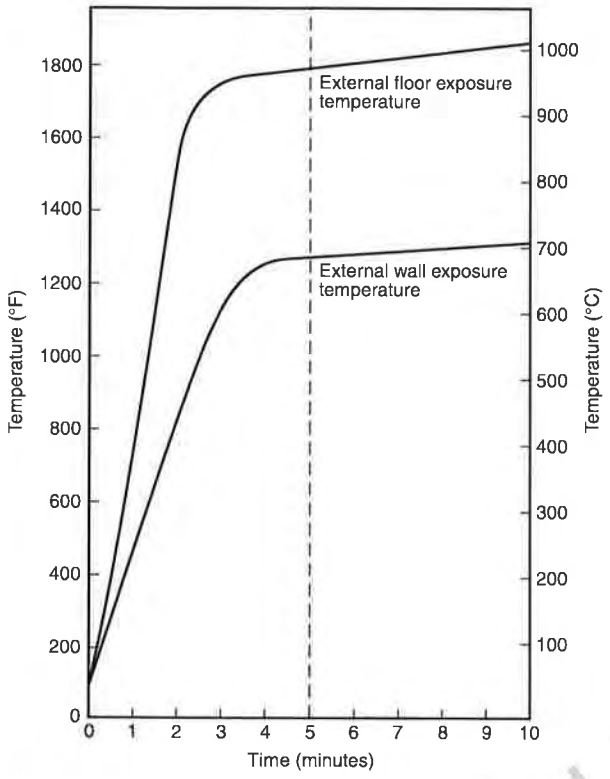

FIGURE 6.4.2 Typical Furnace Time-Temperature Curves for Fire Testing of Aircraft Loading Walkways. ***(See Table 6.4.2.)***

Table 6.4.2 Typical Furnace Time-Temperature Gradients for Fire Testing of Aircraft Loading Walkways

Time (min:sec)	Exposed Floor Section Temperatures		Exposed Wall Section Temperatures	
	°C	°F	°C	°F
0:00	20	68	20	68
0:20	160	320	90	194
0:40	300	572	165	329
1:00	440	824	235	455
1:20	580	1076	310	590
1:40	720	1328	380	716
2:00	860	1580	450	842
2:20	915	1679	520	968
2:40	940	1724	595	1103
3:00	955	1751	635	1175
3:20	960	1760	660	1220
3:40	965	1769	675	1247
4:00	970	1778	685	1265
4:20	970	1778	690	1274
4:40	975	1787	690	1274
5:00	975	1787	690	1274
5:20	975	1787	695	1283
5:40	980	1796	695	1283
6:00	980	1796	695	1283
6:20	985	1805	700	1292
6:40	985	1805	700	1292
7:00	990	1814	700	1292
7:20	990	1814	705	1301
7:40	995	1823	705	1301
8:00	995	1823	705	1301
8:20	995	1823	710	1310
8:40	1000	1832	710	1310
9:00	1000	1832	710	1310
9:20	1005	1841	715	1319
9:40	1005	1841	715	1319
10:00	1005	1841	715	1319

Note: See also Figure 6.4.2.

6.4.4 Temperatures of Unexposed Surfaces of Floors and Walls.

6.4.4.1 Temperatures of unexposed surfaces shall be measured with exposed-type thermocouples placed under felted refractory fiber pads.

6.4.4.1.1 The refractory fiber pads shall be of flexible, felted material, free of organic additives, and they shall exhibit the following properties:

(1) Length and width shall be 6 in. ± ⅛ in. (152 mm ± 3.18 mm).
(2) Thickness shall be 0.375 in. ± 0.063 in. (9.5 mm ± 1.6 mm).
(3) Dry weight shall be 0.147 lb ± 0.053 lb (67 g ± 24 g).
(4) Thermal conductivity [at 150°F (66°C)] shall be 0.37 Btu in./hr ft^2·°F ± 0.03 Btu in./hr ft^2·°F (0.053 W/m·C ± 0.004 W/m·C).
(5)*Hardness indentation on soft face shall be 0.075 in. ± 0.025 in. (1.9 mm ± 0.6 mm).
(6) The pads shall be shaped by wetting, forming, and drying to constant weight to provide complete contact on sharply contoured surfaces.

6.4.4.1.2 The thickness measurement shall be made under the light load of a ½ in. (13 mm) diameter pad of a dial micrometer gauge.

6.4.4.1.3 The wire leads of the thermocouple shall have an immersion under the pad and shall be in contact with the unexposed surface for not less than 1½ in. (38 mm). The hot junction of the thermocouple shall be placed approximately under the center of the pad. The outside diameter of protecting or insulating tubes shall be not more than 5/16 in. (8 mm). The pad shall be held firmly against the surface and shall fit closely about the thermocouples. The wires from the thermocouple in the length covered by the pad shall be not heavier than No. 18 B&S gauge 0.04 in. (1.02 mm) and shall be electrically insulated with heat-resistant and moisture-resistant coatings.

6.4.4.2 Temperature readings shall be taken at not less than nine points on the surface. Five of these shall be symmetrically located: one to be approximately at the center of the walkway specimen and four to be approximately at the center of its quarter sections. The other four shall be located at the discretion of the testing authority to obtain representative information on the performance of the walkway specimen under test. None of the thermocouples shall be located nearer to the edges of the test specimen than one and one-half times the thickness of the construction or 12 in. (305 mm). Thermocouples shall not be located opposite or on top of beams, girders, or other structural members.

6.4.4.3 Temperature readings shall be taken at intervals not exceeding 15 seconds.

6.4.4.4 Where the conditions of acceptance place a limitation on the temperature of the unexposed surface, the temperature end point of the fire-endurance period shall be determined by the average of the measurements taken at individual points. If a temperature rise of 30 percent in excess of the specified limit occurs at any one of these points, the remainder shall be ignored and the fire-endurance period judged as having ended.

6.4.5 Test Specimen.

6.4.5.1 The test specimen shall be representative of the construction for the classification desired in regard to materials, workmanship, and details such as dimensions of parts and shall be built under conditions representative of actual aircraft loading walkway construction and operation. The physical properties of the materials and ingredients used in the test specimen shall be determined and recorded.

6.4.5.2 The test specimen shall be protected during and after fabrication to ensure normality of its quality and condition at the time of the test. The ambient air temperature at the beginning of the test shall be within the range of 50°F to 90°F (10°C to 32°C). The velocity of air across the unexposed surface of the sample, measured just before the test begins, shall not exceed 4.4 ft/sec (1.3 m/s), as determined by an anemometer placed at right angles to the unexposed surface. If mechanical ventilation is employed during the test, an air stream shall not be directed across the surface of the specimen.

6.4.5.3* The fire-endurance test shall be continued on the specimen with its applied load, if any, until failure occurs, or until the specimen has withstood the test conditions for a period of 10 minutes.

6.4.5.4 Results shall be reported in accordance with the performance in the tests prescribed in these methods. Time-temperature results shall be reported at 15-second intervals. Reports shall include observations of significant details of the behavior of the material or construction during the test and after the furnace fire is cut off, including information on deformation, spalling, cracking, burning of the specimen or its component parts, continuance of flaming, and production of smoke.

6.4.6 Tests of Walls and Floors.

6.4.6.1 The dimensions of the sample to be tested shall be determined based on the construction features of the specific walkway being tested. The dimensions selected shall ensure that the sample, when tested, will demonstrate the ability of the most critical elements of the walkway to withstand stress concentrations without failure and without separations that would permit fire and smoke intrusion. Verification documentation supporting the selection of the dimensions shall be approved by the authority having jurisdiction.

6.4.6.2 The effect of exposure to elevated temperatures of working stress seen as worst-case load combinations during actual usage shall be accomplished by one of the following two methods:

(1) A superimposed load to the specimen shall be applied in a manner calculated to develop theoretically the design-allowable stresses contemplated by the design during the test described in 6.4.2.
(2) The yield strength of the structural medium shall be correlated to the maximum temperature recorded in 6.4.2. Structural submittals shall be made using this new yield strength showing nonfailure conditions have been met.

6.4.6.2.1 Worst-case load combinations shall be derived from the following:

(1) Floor live load: 40 lb/ft^2 (195 kg/m^2)
(2) Roof load: 25 lb/ft^2 (122 kg/m^2)
(3) Wind load: 12.5 lb/ft^2 (61 kg/m^2)

6.4.6.3 The test shall be successful when the following conditions of acceptance are met:

(1) The wall or floor section shall have sustained the applied load during the fire-endurance test without passage of flame for a minimum period of 5 minutes. Flaming shall not appear on the unexposed face.
(2) The maximum allowable surface temperature of the cool side of a wall or floor section shall not exceed 250°F (121°C) during a 5-minute exposure as determined by 6.4.4.4.

6.4.7 Tests of Flexible Closures.

6.4.7.1 The test specimen area exposed to the test fire shall not be less than 2 ft × 2 ft (0.62 m × 0.62 m). The test specimen shall be representative of all elements of the flexible closure, including framework assembly and mechanisms for attachment to the aircraft loading walkway.

6.4.7.2 The test shall be successful when all the conditions of acceptance in 6.4.7.2.1 through 6.4.7.2.3 are met.

6.4.7.2.1 The test specimen shall have withstood the fire-endurance test as defined by the time-temperature curve for external walkway wall exposure in Figure 6.4.2 without passage of flame for a minimum period of 5 minutes.

6.4.7.2.2 The closure material also shall pass the following test, designed to measure the radiant heat flux to which humans can be subjected while exiting an aircraft under a fuel spill fire emergency condition. A specimen of the closure material that reproduces the most expanded actual field operating configuration, regarding folds and pleats, existing 6 ft (1.8 m) above the floor shall be tested in a furnace. The furnace temperature applied to the exposed exterior surface of the closure material shall be raised in accordance with the time-temperature curve for external walkway wall exposure in Figure 6.4.2. Measurements shall be taken by a radiometer positioned between a minimum distance of 39.4 in. (1 m) and a maximum distance of 78.7 in. (2 m) away from the cool side surface of the test specimen. The radiometer shall have a view angle small enough such that it "sees" only the test specimen and not the frame or furnace wall. The approximate equivalent human exposure in the walkway shall not exceed 0.65 W/cm^2. The approximate equivalent human exposure shall be calculated by multiplying the maximum actual radiometer reading for the test in W/cm^2 at the radiometer by the following:

$$\frac{0.31\left(\tan^2\frac{\Theta}{2}+1\right)}{\tan^2\frac{\Theta}{2}\tau}$$

where:
Θ = the total view angle of the test radiometer
τ = correction factor for absorption due to humidity

6.4.7.2.2.1 Table 6.4.7.2.2.1 shall be used to determine the appropriate τ.

Table 6.4.7.2.2.1 τ Factors

Relative Humidity During Test (%)	τ Factors Based on Distance from Source to Sensor		
	39.4 in. (1 m)	59.1 in. (1.5 m)	78.7 in. (2 m)
0–25	0.96	0.95	0.94
25–50	0.94	0.93	0.92
50–100	0.92	0.91	0.90

6.4.7.2.3 The framework assembly supporting the closure curtain material and mechanisms for attachment shall be capable of maintaining structural integrity when subjected to the fire defined by the time-temperature curve for external walkway wall exposure in Figure 6.4.2.

6.4.8 Test of Cab and Rotunda Slat Curtains.

6.4.8.1 The test specimen area exposed to the test fire shall not be less than 2 ft × 2 ft (0.62 m× 0.62 m). The test specimen shall be representative of all elements of the cab and rotunda slat curtains, including framework assembly and mechanisms for attachment to the aircraft loading walkway.

6.4.8.2 For conditions of acceptance, the test sample shall be capable of withstanding the fire-endurance test as defined by the time-temperature curve in Figure 6.4.2 appropriate for the walkway location being tested without passage of flame for a period of 5 minutes. Flaming shall not appear on the unexposed face.

6.4.9 Tests of Bumpers.

6.4.9.1* Bumper assemblies shall be tested in continuous contact against a simulated aircraft fuselage in a manner representative of intended usage.

6.4.9.2 The specimen shall be configured in a manner representative of actual fabrication and shall include the bumper proper and mechanism for bumper attachment to the aircraft loading walkway.

6.4.9.3 For conditions of acceptance, bumpers shall be capable of withstanding the fire-endurance test as defined by the time-temperature curve for external walkway flooring exposure in Figure 6.4.2 without passage of flame for a period of 5 minutes. Flaming shall not appear on the unexposed face.

6.4.10 Tests of Miscellaneous Seals and Weather-Stripping Assemblies.

6.4.10.1 The testing laboratory shall construct a steel stud wall assembly consisting of one layer of ½ in. (13 mm) Type X gypsum wallboard on the exposed face. A hole shall be framed out in the center of the test wall where another steel stud–gypsum wallboard assembly shall be inserted. The smaller assembly to be inserted into the wall shall be constructed such that the opening between the test wall and the smaller assembly allows the weather stripping or seal material to fill the gap in a manner representative of end-use application. The entire assembly then shall be placed against the furnace for the required exposure.

6.4.10.2 The size of the test specimen shall not be less than 2 ft (0.62 m) long.

6.4.10.3 For conditions of acceptance, these components shall be capable of withstanding the fire-endurance test as defined by the time-temperature curve in Figure 6.4.2 appropriate for the walkway location being tested without passage of flame for a period of 5 minutes. Flaming shall not appear on the unexposed face.

6.5 Fire Suppression Systems.

6.5.1* The fixed fire suppression specified in 6.1.2 shall be provided by one of the following systems:

(1) Fixed water spray system specified in 6.5.2
(2) Fixed foam system specified in 6.5.3

6.5.2 The fixed water spray system shall be of the open-head, deluge type and shall meet the requirements of NFPA 15, *Standard for Water Spray Fixed Systems for Fire Protection*. The system shall be designed so that the water is discharged directly on all walkway outer surfaces and structural members being protected. The system shall be automatically actuated and designed for a minimum discharge duration of 5 minutes.

6.5.3 The fixed foam system shall be adequate to blanket the area under the walkway when positioned at the aircraft exit door(s) and for a distance of approximately 10 ft (3 m) in all directions. The system shall meet the requirements of NFPA 11, *Standard for Low-, Medium-, and High-Expansion Foam*, or NFPA 16, *Standard for the Installation of Foam-Water Sprinkler and Foam-Water Spray Systems*. The system shall be automatically activated. This system shall be capable of discharging in such a manner that the protected area previously described will be free of fire for a minimum duration of 5 minutes.

Annex A Explanatory Material

Annex A is not a part of the requirements of this NFPA document but is included for informational purposes only. This annex contains explanatory material, numbered to correspond with the applicable text paragraphs.

A.1.2 The adequacy and usefulness of airport terminal buildings depend, to a large extent, on the fire resistance of their construction and the fire protection provided within the buildings.

The provision of aircraft rescue and fire-fighting equipment at airports meeting the recommendations of NFPA 403, *Standard for Aircraft Rescue and Fire-Fighting Services at Airports*, and NFPA 414, *Standard for Aircraft Rescue and Fire-Fighting Vehicles*, will be useful in controlling ramp fires. The provision of hydrants on the ramp side of airport terminal buildings will assist in meeting supplemental fire protection needs in those areas.

A.3.2.1 Approved. The National Fire Protection Association does not approve, inspect, or certify any installations, procedures, equipment, or materials; nor does it approve or evaluate testing laboratories. In determining the acceptability of installations, procedures, equipment, or materials, the authority having jurisdiction may base acceptance on compliance with NFPA or other appropriate standards. In the absence of such standards, said authority may require evidence of proper installation, procedure, or use. The authority having jurisdiction may also refer to the listings or labeling practices of an organization that is concerned with product evaluations and is thus in a position to determine compliance with appropriate standards for the current production of listed items.

EXHIBIT G6

NFPA® 415

Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways

2016 Edition

NFPA, 1 Batterymarch Park, Quincy, MA 02169-7471
An International Codes and Standards Organization

4.5.2.3 If the public fire department has two-way voice communication with a constantly attended location, 4.5.2.2 shall not apply.

4.5.3 Fire Hydrants. Fire hydrants shall be provided on both the ramp and the street sides of airport terminal buildings. Such hydrants shall be located so that no portion of the terminal building is more than 500 ft (152.4 m) from a hydrant.

4.5.4 Standpipe and Hose Systems. Standpipe and hose systems shall be provided for all airport terminal buildings in excess of two stories [35 ft (10.7 m)] in height or 100 ft (30.5 m) in shortest horizontal dimension. Standpipe and hose systems shall be installed in accordance with NFPA 14.

4.5.4.1 Class I standpipe systems shall be provided in buildings protected throughout by an approved automatic sprinkler system. Each 2½ in. (63.5 mm) hose connection shall be equipped with a 2½ in. × 1½ in. (63.5 mm × 38 mm) reducer and cap.

4.5.4.2 Class III standpipe systems shall be provided in nonsprinklered buildings. The exceptions in NFPA 14, for Class III systems shall be applicable to this requirement.

4.5.5 Water Supply. Water supply from public or private sources shall be adequate to supply maximum calculated sprinkler demand plus a minimum of 500 gpm (1893 L/min) for hose streams. The supply shall be available at the rate specified for a period of at least 1 hour.

4.5.5.1* Main sizes shall be hydraulically calculated based on the total domestic and fire protection requirements. Mains shall be not less than 8 in. (203 mm) in diameter except that laterals shall be permitted to be 6 in. (152 mm) in diameter if not over 200 ft (61 m) long.

4.5.5.2* Hydrants shall be readily accessible to fire-fighting vehicles traveling on surfaces adequate for supporting such vehicles.

4.5.5.2.1 Hydrants shall be listed.

4.5.5.2.2 Hydrants shall be located or protected to prevent mechanical or vehicular damage, including taxiing aircraft.

4.5.5.2.3 Hydrants recessed into the ground shall have identifiers in the pavement to assist in their prompt location at night and by personnel who might not be familiar with the location of the hydrants.

4.5.5.3* Water supply systems shall be regularly tested to ensure operation.

4.5.6 Portable Fire Extinguishers. Portable fire extinguishers shall be provided throughout the airport terminal building in accordance with NFPA 10.

Chapter 5 Aircraft Fueling Ramp Drainage

5.1 Aircraft Fueling Ramp Slope and Drain Design.

5.1.1* Aircraft fueling ramps shall slope away from terminal buildings, aircraft hangars, aircraft loading walkways, or other structures, with a minimum grade of 1 percent (1:100) for the first 50 ft (15 m). Beyond this distance, the ramp slope to drainage inlets shall be permitted to be reduced to a minimum of 0.5 percent (1:200).

5.1.2* Aircraft fueling ramp drainage as specified herein shall be accomplished by the provisions of 5.1.1 in conjunction with the following:

(1) The use of drain inlets with connected piping
(2) The use of open-grate trenches

5.1.3 Drainage inlets, where provided, shall be located a minimum of 50 ft (15 m) from structures outlined in 5.1.1.

5.1.4 The drainage system of any aircraft fueling ramp shall be so designed that the fuel or its vapor cannot enter into the drainage system of buildings, areas utilized for automobile parking, public or private streets, or the public side of airport terminal or aircraft hangar structures. In no case shall the design allow fuel to collect on the aircraft fueling ramp or adjacent ground surfaces where it could constitute a fire hazard.

5.1.5 The final separator or interceptor for the entire airport drainage system shall be designed to allow disposal of combustible or flammable liquids into a safely located, approved containment facility.

5.1.6 Grates and drain covers shall be removable to facilitate cleaning and flushing.

5.1.7* If open-grate drainage trenches are used as a collection means, such open trenches, including branches, shall not be over 125 ft (38 m) in length with a minimum interval of 6 ft (1.8 m) between open-trench sections to act as fire stops. Each 125 ft (38 m) section shall be individually drained through underground piping. Open trenches shall not be used where they are in the line of pedestrian or passenger traffic.

5.1.8 Underground piping and components used in drainage systems shall be noncombustible and inert to fuel.

5.2 Drain and Separator Maintenance.

5.2.1* Periodic maintenance checks shall be conducted of all ramp drainage systems and interceptors to ensure that they are clear of obstructions and function properly.

5.2.2 Large-volume flushing with water shall be conducted through appropriate drainage elements to purge residual fuel from these drainage elements after any large fuel spill on the aircraft fueling ramp enters the drainage system.

Chapter 6 Aircraft Loading Walkways

6.1 Basic Design.

6.1.1* Each aircraft loading walkway installation shall be designed to provide a safe means of egress from the aircraft for a period of 5 minutes under fire exposure conditions equivalent to a free-burning jet fuel spill fire.

6.1.2 Protection of the aircraft loading walkway shall be accomplished by one of the following methods:

(1) Construction design meeting the requirements of Sections 6.1 through 6.4
(2) Fixed fire protection meeting the requirements of Sections 6.1, 6.2, and 6.5

6.2 Requirements for All Aircraft Loading Walkways.

6.2.1* Interior finish other than textiles of walls, ceilings, and walkways shall be Class A as defined in 10.2.3.4.1 of NFPA *101* and classified in accordance with ASTM E84, *Standard Test*

Method for Surface Burning Characteristics of Building Materials, or ANSI/UL 723, *Standard for Test for Surface Burning Characteristics of Building Materials*.

6.2.2 Interior textile finish of walls and ceilings in walkways shall be as limited by 10.2.4.1(5) of NFPA *101*.

6.2.3 Interior floor finish in walkways shall be Class I as defined in 10.2.7.4.1 of NFPA *101* and classified in accordance with NFPA 253.

6.2.4* During a ramp fire emergency, walkway interiors shall have a positive air pressure delivered from a source that shall remain uncontaminated.

6.2.5* Any source of negative air pressure in the aircraft loading walkway shall be automatically shut down in the event of a fire emergency.

6.2.6 Any door in the egress path through the loading walkway to the terminal building shall swing in the direction of egress from the aircraft toward the terminal building and shall be equipped with panic hardware on the aircraft side.

6.2.7* Where loading walkways are provided, the walkway, including the bumpers, curtains, and canopies, shall be seated according to the manufacturer's instruction and training whenever the walkway is in service.

6.2.8 Cab and Rotunda Slat Curtains.

6.2.8.1 Cab slat curtains and rotunda slat curtains shall meet the requirements of 6.4.8 by one of the following methods:

(1) Intrinsic structural features
(2) Fire-resistive coatings
(3) Automatically activated water cooling systems in accordance with 6.5.2
(4) Automatically activated fire curtains
(5) Local application of a foam system in accordance with 6.5.3 under the cab and rotunda that is automatically activated and covers an area extending 15 ft (4.6 m) beyond the perimeter of the cab and rotunda. This shall supersede the 10 ft (3 m) criteria of 6.5.3.

6.2.8.2 When the rotunda is located more than 50 ft (15 m) from the fuel fill or fuel vent point of aircraft and the rotunda slot curtain is of noncombustible construction, 6.2.8.1 shall not apply.

6.2.9 Emergency Lights. Emergency lights shall be installed in all aircraft loading walkways in accordance with NFPA *101*.

6.2.10* The minimum obstruction-free width of walking surface shall be 36 in. (914 mm). Changes in elevation between telescoping sections of the loading walkway's walking surface shall not exceed 1 in 20 slope when the loading walkway is level. Existing loading walkways shall be permitted to be continued in service.

6.3 Materials.

6.3.1 Exterior surfaces of floors, roofs, walls, and load-bearing structural members shall be constructed entirely of materials or composite assemblies that maintain the structural integrity and heat transfer characteristics needed to meet the requirements specified in 6.1.1 and Section 6.4.

6.3.2 Flexible closures, canopies, wipers, and weather-sealing devices shall be subjected to the accelerated weathering procedures specified in 6.3.2.1, after which they shall meet the requirements of 6.4.7 or 6.4.10 of this standard, as applicable.

6.3.2.1 Specimens shall be exposed for 100 hours using the apparatus and procedure specified in Cycle 1 Option A of AATCC Test Method 192, "Weather Resistance of Textiles: Sunshine-Arc Lamp Exposure With and Without Wetting."

6.3.3 The manufacturer shall provide, in writing, the anticipated service life expectancy of components that contribute to fire safety.

6.4 Fire Tests.

6.4.1 Scope of Fire Tests.

6.4.1.1 Tests shall be conducted to establish the performance of materials and methods of construction and to verify their structural integrity and heat transfer characteristics so as to satisfy the 5-minute exit route criteria specified in 6.1.1.

6.4.1.2 The test methods specified in this chapter shall be applicable to assemblies of units and to composite assemblies of structural materials for aircraft loading walkways, including walls, girders, beams, slabs, and composite slab and beam assemblies for floor and walls either tested individually as floor or wall panels or as a complete assembly. Also, they shall be applicable to other assemblies and structural units that constitute permanent integral parts of a finished aircraft loading walkway.

6.4.1.3 The condition of acceptance for tests specified in this section for aircraft loading walkways shall be documented by one of the methods in 6.4.1.3.1 and 6.4.1.3.2. Such submittals shall be subject to acceptance by the authority having jurisdiction.

6.4.1.3.1 Tests shall be conducted in accordance with the requirements and procedures of Section 6.4.

6.4.1.3.2 Evidence of compliance shall be permitted to be achieved by other methods such as modeling, calculation, or testing. The submitter must show that the method used proves that components achieve a level of fire safety at least equal to that produced by the procedure in Section 6.4.

6.4.1.4 The tests shall register performance during the required period of exposure and shall not be construed as having determined suitability for use after fire exposure.

6.4.2 Time-Temperature Curve to Be Used. The conduct of fire tests of materials and construction shall be controlled by the time-temperature curves in Figure 6.4.2 and Table 6.4.2.

6.4.3 Furnace Temperatures.

6.4.3.1 The temperature fixed by the curve shall be deemed to be the average temperature obtained from the readings of not fewer than nine thermocouples for a floor or wall section. The thermocouples shall be symmetrically located and distributed to show the temperature near all parts of the sample and shall be partially enclosed in porcelain tubes ¾ in. (19 mm) in outside diameter and ⅛ in. (3 mm) in wall thickness, with a minimum exposed length of thermocouple wires of 1½ in. (38 mm). The exposed length of the pyrometer tube and thermocouples in the furnace chamber shall be not less than 12 in. (305 mm). Other types of thermocouples or pyrometers that under test conditions give the same indications as those specified herein within the limit of accuracy that applies for real-

Table 6.4.2 Typical Furnace Time-Temperature Gradients for Fire Testing of Aircraft Loading Walkways

Time (min:sec)	Exposed Floor Section Temperatures		Exposed Wall Section Temperatures	
	°C	°F	°C	°F
0:00	20	68	20	68
0:20	160	320	90	194
0:40	300	572	165	329
1:00	440	824	235	455
1:20	580	1076	310	590
1:40	720	1328	380	716
2:00	860	1580	450	842
2:20	915	1679	520	968
2:40	940	1724	595	1103
3:00	955	1751	635	1175
3:20	960	1760	660	1220
3:40	965	1769	675	1247
4:00	970	1778	685	1265
4:20	970	1778	690	1274
4:40	975	1787	690	1274
5:00	975	1787	690	1274
5:20	975	1787	695	1283
5:40	980	1796	695	1283
6:00	980	1796	695	1283
6:20	985	1805	700	1292
6:40	985	1805	700	1292
7:00	990	1814	700	1292
7:20	990	1814	705	1301
7:40	995	1823	705	1301
8:00	995	1823	705	1301
8:20	995	1823	710	1310
8:40	1000	1832	710	1310
9:00	1000	1832	710	1310
9:20	1005	1841	715	1319
9:40	1005	1841	715	1319
10:00	1005	1841	715	1319

Note: See also Figure 6.4.2.

time furnace temperature measurements shall be permitted to be used.

6.4.3.1.1 For floor sections, the junction of the thermocouples shall be placed 12 in. (305 mm) away from the exposed surface of the sample at the beginning of the test and during the test shall not touch the sample as a result of its deflection.

6.4.3.1.2 For walls, the thermocouples shall be placed 6 in. (152 mm) away from the exposed face of the sample at the beginning of the test and shall not touch the sample during the test as a result of its deflection.

6.4.3.2 The temperatures shall be measured and reported at intervals not exceeding 15 seconds.

6.4.3.3 The accuracy of the furnace control shall be such that at any given time the temperature obtained by averaging the results from the pyrometer readings shall not be less than 90 percent of the temperature curve shown in Figure 6.4.2.

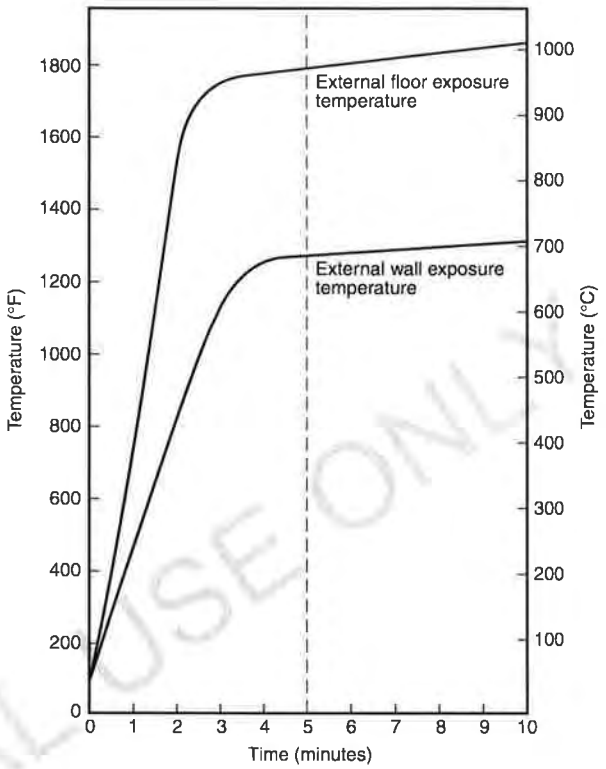

FIGURE 6.4.2 Typical Furnace Time-Temperature Curves for Fire Testing of Aircraft Loading Walkways. *(See Table 6.4.2.)*

6.4.4 Temperatures of Unexposed Surfaces of Floors and Walls.

6.4.4.1 Temperatures of unexposed surfaces shall be measured with exposed-type thermocouples placed under felted refractory fiber pads.

6.4.4.1.1 The refractory fiber pads shall be of flexible, felted material, free of organic additives, and they shall exhibit the following properties:

(1) Length and width shall be 6 in. ± ⅛ in. (152 mm ± 3.18 mm).
(2) Thickness shall be 0.375 in. ± 0.063 in. (9.5 mm ± 1.6 mm).
(3) Dry weight shall be 0.147 lb ± 0.053 lb (67 g ± 24 g).
(4) Thermal conductivity [at 150°F (66°C)] shall be 0.37 Btu in./hr ft^2·°F ± 0.03 Btu in./hr ft^2·°F (0.053 W/m·C ± 0.004 W/m·C).
(5)* Hardness indentation on soft face shall be 0.075 in. ± 0.025 in. (1.9 mm ± 0.6 mm).
(6) The pads shall be shaped by wetting, forming, and drying to constant weight to provide complete contact on sharply contoured surfaces.

6.4.4.1.2 The thickness measurement shall be made under the light load of a ½ in. (13 mm) diameter pad of a dial micrometer gauge.

6.4.4.1.3 The wire leads of the thermocouple shall have an immersion under the pad and shall be in contact with the unexposed surface for not less than 1½ in. (38 mm). The hot

junction of the thermocouple shall be placed approximately under the center of the pad. The outside diameter of protecting or insulating tubes shall be not more than $\frac{5}{16}$ in. (8 mm). The pad shall be held firmly against the surface and shall fit closely about the thermocouples. The wires from the thermocouple in the length covered by the pad shall be not heavier than No. 18 B&S gauge 0.04 in. (1.02 mm) and shall be electrically insulated with heat-resistant and moisture-resistant coatings.

6.4.4.2 Temperature readings shall be taken at not less than nine points on the surface. Five of these shall be symmetrically located: one to be approximately at the center of the walkway specimen and four to be approximately at the center of its quarter sections. The other four shall be located at the discretion of the testing authority to obtain representative information on the performance of the walkway specimen under test. None of the thermocouples shall be located nearer to the edges of the test specimen than one and one-half times the thickness of the construction or 12 in. (305 mm). Thermocouples shall not be located opposite or on top of beams, girders, or other structural members.

6.4.4.3 Temperature readings shall be taken at intervals not exceeding 15 seconds.

6.4.4.4 Where the conditions of acceptance place a limitation on the temperature of the unexposed surface, the temperature end point of the fire-endurance period shall be determined by the average of the measurements taken at individual points. If a temperature rise of 30 percent in excess of the specified limit occurs at any one of these points, the remainder shall be ignored and the fire-endurance period judged as having ended.

6.4.5 Test Specimen.

6.4.5.1 The test specimen shall be representative of the construction for the classification desired in regard to materials, workmanship, and details such as dimensions of parts and shall be built under conditions representative of actual aircraft loading walkway construction and operation. The physical properties of the materials and ingredients used in the test specimen shall be determined and recorded.

6.4.5.2 The test specimen shall be protected during and after fabrication to ensure normality of its quality and condition at the time of the test. The ambient air temperature at the beginning of the test shall be within the range of 50°F to 90°F (10°C to 32°C). The velocity of air across the unexposed surface of the sample, measured just before the test begins, shall not exceed 4.4 ft/sec (1.3 m/s), as determined by an anemometer placed at right angles to the unexposed surface. If mechanical ventilation is employed during the test, an air stream shall not be directed across the surface of the specimen.

6.4.5.3* The fire-endurance test shall be continued on the specimen with its applied load, if any, until failure occurs, or until the specimen has withstood the test conditions for a period of 10 minutes.

6.4.5.4 Results shall be reported in accordance with the performance in the tests prescribed in these methods. Time-temperature results shall be reported at 15-second intervals. Reports shall include observations of significant details of the behavior of the material or construction during the test and after the furnace fire is cut off, including information on deformation, spalling, cracking, burning of the specimen or its component parts, continuance of flaming, and production of smoke.

6.4.6 Tests of Walls and Floors.

6.4.6.1 The dimensions of the sample to be tested shall be determined based on the construction features of the specific walkway being tested. The dimensions selected shall ensure that the sample, when tested, will demonstrate the ability of the most critical elements of the walkway to withstand stress concentrations without failure and without separations that would permit fire and smoke intrusion. Verification documentation supporting the selection of the dimensions shall be approved by the authority having jurisdiction.

6.4.6.2 The effect of exposure to elevated temperatures of working stress seen as worst-case load combinations during actual usage shall be accomplished by one of the following two methods:

(1) A superimposed load to the specimen shall be applied in a manner calculated to develop theoretically the design-allowable stresses contemplated by the design during the test described in 6.4.2.
(2) The yield strength of the structural medium shall be correlated to the maximum temperature recorded in 6.4.2. Structural submittals shall be made using this new yield strength showing nonfailure conditions have been met.

6.4.6.2.1 Worst-case load combinations shall be derived from the following:

(1) Floor live load: 40 lb/ft^2 (195 kg/m^2)
(2) Roof load: 25 lb/ft^2 (122 kg/m^2)
(3) Wind load: 12.5 lb/ft^2 (61 kg/m^2)

6.4.6.3 The test shall be successful when the following conditions of acceptance are met:

(1) The wall or floor section shall have sustained the applied load during the fire-endurance test without passage of flame for a minimum period of 5 minutes. Flaming shall not appear on the unexposed face.
(2) The maximum allowable surface temperature of the cool side of a wall or floor section shall not exceed 250°F (121°C) during a 5-minute exposure as determined by 6.4.4.4.

6.4.7 Tests of Flexible Closures.

6.4.7.1 The test specimen area exposed to the test fire shall not be less than 2 ft × 2 ft (0.62 m × 0.62 m). The test specimen shall be representative of all elements of the flexible closure, including framework assembly and mechanisms for attachment to the aircraft loading walkway.

6.4.7.2 The test shall be successful when all the conditions of acceptance in 6.4.7.2.1 through 6.4.7.2.3 are met.

6.4.7.2.1 The test specimen shall have withstood the fire-endurance test as defined by the time-temperature curve for external walkway wall exposure in Figure 6.4.2 without passage of flame for a minimum period of 5 minutes.

6.4.7.2.2 The closure material also shall pass the following test, designed to measure the radiant heat flux to which humans can be subjected while exiting an aircraft under a fuel spill fire emergency condition. A specimen of the closure material that reproduces the most expanded actual field operating configu-

ration, regarding folds and pleats, existing 6 ft (1.8 m) above the floor shall be tested in a furnace. The furnace temperature applied to the exposed exterior surface of the closure material shall be raised in accordance with the time-temperature curve for external walkway wall exposure in Figure 6.4.2. Measurements shall be taken by a radiometer positioned between a minimum distance of 39.4 in. (1 m) and a maximum distance of 78.7 in. (2 m) away from the cool side surface of the test specimen. The radiometer shall have a view angle small enough such that it "sees" only the test specimen and not the frame or furnace wall. The approximate equivalent human exposure in the walkway shall not exceed 0.65 W/cm^2. The approximate equivalent human exposure shall be calculated by multiplying the maximum actual radiometer reading for the test in W/cm^2 at the radiometer by the following:

[6.4.7.2.2]

$$\frac{0.31\left(\tan^2\frac{\Theta}{2}+1\right)}{\tan^2\frac{\Theta}{2}\tau}$$

where:

Θ = the total view angle of the test radiometer
τ = correction factor for absorption due to humidity

6.4.7.2.2.1 Table 6.4.7.2.2.1 shall be used to determine the appropriate τ.

6.4.7.2.3 The framework assembly supporting the closure curtain material and mechanisms for attachment shall be capable of maintaining structural integrity when subjected to the fire defined by the time-temperature curve for external walkway wall exposure in Figure 6.4.2.

6.4.8 Test of Cab and Rotunda Slat Curtains.

6.4.8.1 The test specimen area exposed to the test fire shall not be less than 2 ft × 2 ft (0.62 m× 0.62 m). The test specimen shall be representative of all elements of the cab and rotunda slat curtains, including framework assembly and mechanisms for attachment to the aircraft loading walkway.

6.4.8.2 For conditions of acceptance, the test sample shall be capable of withstanding the fire-endurance test as defined by the time-temperature curve in Figure 6.4.2 appropriate for the walkway location being tested without passage of flame for a period of 5 minutes. Flaming shall not appear on the unexposed face.

Table 6.4.7.2.2.1 τ Factors

Relative Humidity During Test (%)	τ Factors Based on Distance from Source to Sensor		
	39.4 in. (1 m)	59.1 in. (1.5 m)	78.7 in. (2 m)
0–25	0.96	0.95	0.94
25–50	0.94	0.93	0.92
50–100	0.92	0.91	0.90

6.4.9 Tests of Bumpers.

6.4.9.1* Bumper assemblies shall be tested in continuous contact against a simulated aircraft fuselage in a manner representative of intended usage.

6.4.9.2 The specimen shall be configured in a manner representative of actual fabrication and shall include the bumper proper and mechanism for bumper attachment to the aircraft loading walkway.

6.4.9.3 For conditions of acceptance, bumpers shall be capable of withstanding the fire-endurance test as defined by the time-temperature curve for external walkway flooring exposure in Figure 6.4.2 without passage of flame for a period of 5 minutes. Flaming shall not appear on the unexposed face.

6.4.10 Tests of Miscellaneous Seals and Weather-Stripping Assemblies.

6.4.10.1 The testing laboratory shall construct a steel stud wall assembly consisting of one layer of ½ in. (13 mm) Type X gypsum wallboard on the exposed face. A hole shall be framed out in the center of the test wall where another steel stud–gypsum wallboard assembly shall be inserted. The smaller assembly to be inserted into the wall shall be constructed such that the opening between the test wall and the smaller assembly allows the weather stripping or seal material to fill the gap in a manner representative of end-use application. The entire assembly then shall be placed against the furnace for the required exposure.

6.4.10.2 The size of the test specimen shall not be less than 2 ft (0.62 m) long.

6.4.10.3 For conditions of acceptance, these components shall be capable of withstanding the fire-endurance test as defined by the time-temperature curve in Figure 6.4.2 appropriate for the walkway location being tested without passage of flame for a period of 5 minutes. Flaming shall not appear on the unexposed face.

6.5 Fire Suppression Systems.

6.5.1* The fixed fire suppression specified in 6.1.2 shall be provided by one of the following systems:

(1) Fixed water spray system specified in 6.5.2
(2) Fixed foam system specified in 6.5.3

6.5.2 The fixed water spray system shall be of the open-head, deluge type and shall meet the requirements of NFPA 15. The system shall be designed so that the water is discharged directly on all walkway outer surfaces and structural members being protected. The system shall be automatically actuated and designed for a minimum discharge duration of 5 minutes.

6.5.3 The fixed foam system shall be adequate to blanket the area under the walkway when positioned at the aircraft exit door(s) and for a distance of approximately 10 ft (3 m) in all directions. The system shall meet the requirements of NFPA 11 or NFPA 16. The system shall be automatically activated. This system shall be capable of discharging in such a manner that the protected area previously described will be free of fire for a minimum duration of 5 minutes.

EXHIBIT G7

thyssenkrupp Airport Systems
3201 North Sylvania Avenue, Suite 117, Fort Worth, Texas 76111 USA
P: +1 817 210-5000 www.thyssenkrupp-airports.com

thyssenkrupp

Statement of NFPA 415-2016 (Standard on Airport Terminal Buildings, Fueling Ramp Drainage and Loading Walkways) Compliance.

This is to certify that all Passenger Boarding Bridges furnished by thyssenkrupp Airport Systems, Inc., are designed and manufactured in strict accordance with the requirements of NFPA 415-2016. We further state that:

(1) All components and assemblies of the bridges required to be tested under NFPA 415-2016 have been tested for compliance by a Nationally Recognized Testing Laboratory (NRTL) and meet or exceed the requirements of the standard.

(2) The design and construction of the entire bridge is in compliance with all the requirements of NFPA 415-2016.

(3) There have been no design changes since the component testing that would materially affect the outcome of the test certifications.

NFPA 415-2016 Section 6.4.6 Test of Floors
The bridge floor was tested and compiled with NFPA 415-2016 as recorded by Intertek Testing Services NA, Inc. Test report 3181041SAT-014, which includes material list, tested construction, and compliance information.

NFPA 415-2016 Section 6.4.6 Test of Walls
The bridge steel walls were was tested and compiled with NFPA 415-2016 as recorded by Intertek Testing Services NA, Inc. Test report 318104SAD-005D, which includes material list, tested construction, and compliance information.

NFPA 415-2016 Section 6.4.6 Test of Walls
The bridge walls were tested and compiled with NFPA 415-2016 as recorded by Intertek Testing Services NA, Inc. Test report G102705791SAT-003, which includes material list, tested construction, and compliance information.

NFPA 415-2013 Section 6.4.6 Test of Walls
The bridge glazed glass walls were tested and compiled with NFPA 415-2016 as recorded by Applus-LGAI. Test reports 14/8437-577, 14/8437-578, 14/8437-579, & 15/10394-2110, which includes material list, tested construction, and compliance information.

NFPA 415-2016 Section 6.4.7, Test of Flexible Closures
The bridge canopy was tested and complied with NFPA 415-2016 as recorded by Intertek Testing Services NA, Inc. Test report G10258905SAT-002, which includes material lists, tested construction, and compliance information

NFPA 415- 2016 Section 6.4.8 Test of Cab and Rotunda Slat Curtains
The bridge cab curtains were tested and complied with NFPA 415-2016 as recorded by Intertek Testing Services NA, Inc. Test report GI00015559SAT-001, which includes material lists, tested construction, and compliance information.

NFPA 415-2016 Section 6.4.9 Test of Bumpers
The bridge bumper was tested and complied with NFPA 415-2016 as recorded by Intertek Testing Services NA, Inc. Test report 318104SAT-005B, which includes material lists, tested construction, and compliance information.

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NFPA 415-2016 Section 6.4.10 Tests Misc. Seals and Weather Stripping Assemblies

The bridge seals were tested and complied with NFPA 415-2016 as recorded by Intertek Testing Services NA, Inc. Test report 318104ISAT-0112, which includes material lists, test construction, and compliance information.

[1] Tests were performed IAW NFPA 415-2013. The testing standards between NFPA 415-2013 and NFPA 415-2016 are the same. The only difference between the two standards is NFPA 415-2016 includes a provision for glass tunnel bridges.

These tests have been carried out successfully in accordance with the requirements of the NFPA 415-2016 & NFPA 415-2013 and all the recorded test reports are available upon request for the review and approval of the Authority having jurisdiction on each project.

PSReddy 07/28/2020

Reddy Poondla, P.E.
Director of Engineering
ET-AS-AIR

EXHIBIT G8

TEST REPORT

Intertek

REPORT NUMBER: 102705791SAT-003
ORIGINAL ISSUE DATE: April 24, 2017
REVISED DATE: N/A

EVALUATION CENTER
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Elmendorf, TX 78112
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www.intertek.com

RENDERED TO

ThyssenKrupp Airport Systems
3201 North Sylvania Avenue, Suite 117
Fort Worth, Texas 76111
U.S.A.

PRODUCT EVALUATED: Tunnel Wall System (2-Tunnel and 3-Tunnel)
EVALUATION PROPERTY: Fire Resistance

Report of Testing Tunnel Wall System (2-Tunnel and 3-Tunnel) for compliance with the applicable requirements of the following criteria: *NFPA 415, Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways, 2016 Edition, Section 6.*

1 Table of Contents

2 Introduction

Intertek Testing Services NA, Inc. (Intertek) has conducted testing for ThyssenKrupp Airport Support, on a Tunnel Wall System (2-Tunnel and 3-Tunnel), to evaluate its fire resistance. Testing was conducted in accordance with, and following the standard methods of **NFPA 415, Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways, 2016 Edition, Section 6**. This evaluation was completed on April 12, 2017.

3 Test Samples

3.1. SAMPLE SELECTION

Sample construction was witnessed on February 27, 2017 by Intertek representative John Waskow, at the ThyssenKrupp Airport Systems manufacturing facility, located at 3201 N. Sylvania Ave., Suite 117, Fort Worth, Texas, 76111, U.S.A. The Tunnel Wall System (Intertek Sample ID No. [SAT1703011153-001]) was received in good order at the Evaluation Center on March 1, 2017. The sample contained the mark of the inspector. The subject test specimen is a traceable sample selected from the manufacturer's facility. Intertek selected the specimen and has verified the composition, manufacturing techniques and quality assurance procedures.

3.2. SAMPLE AND ASSEMBLY DESCRIPTION

The purpose of this test was to evaluate the fire resistance properties of the load-bearing Tunnel Wall System. The wall panel had approximated dimensions of 92-5/16 in. wide × 79-5/8 high (minus the roof and floor angles) × 2-1/2 in. thick. Details of the panel construction are presented in Appendix A.

Two pieces of 5 in. × 5 in. square tubing were stitch welded along the bottom and top of the assembly (roof and floor angles) in order to evenly distribute the vertical load and to offset a portion of the unused area in the test frame. Solid concrete masonry units (CMU) were also installed into the test frame for this purpose. The wall panel was then installed into a 10 ft × 10 ft load-bearing test frame. Ceramic fiber insulation was installed on all exposed structural steel sections not pertaining to the sample and in all open gaps. Photos of the assembly are presented in Appendix C.

4 Testing and Evaluation Methods

4.1. INSTRUMENTATION

The unexposed surface of the assembly was instrumented with a total of nine (9), 24 GA, Type K, fiberglass jacketed thermocouples (see Appendix A). The output of the thermocouples and furnace probes were monitored by a 100-channel Yokogawa, Inc., Darwin Data Acquisition Unit. The computer was programmed to scan and save data every 6 seconds. A vertical roof load of 83.3 lbs./ft, and a horizontal wind load of 12.5 lbs./ft^2 was applied to the test specimen and allowed to stabilize prior to commencement of the fire-resistance portion of the test. Following the test, the files were imported into MS Excel for tabular and graphical display

(presented in Appendix B).

4.2. TEST STANDARD

Testing was conducted in accordance with the applicable requirements of, and following the standard methods described in **NFPA 415, Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways, 2016 Edition, Section 6**.

The asymmetric wall assembly was secured to the large scale vertical furnace and was tested to the standard time-temperature curve described in Section 6.4.3 of the standard for Tests of Walls and Floors per NFPA 415.

5 Testing and Evaluation Results

5.1. RESULTS AND OBSERVATIONS

The test was initiated on April 12, 2017. Mario Torres, representing ThyssenKrupp Airport Systems, was present to witness the test. The ambient temperature at the time of the test was 79 °F and the humidity was 60 % R.H. As previously indicated, a vertical roof load of 83.3 lbs./ft, and a horizontal wind load of 12.5 lbs./ft^2 was applied to the test specimen and allowed to stabilize for approximately 10 minutes prior to commencement of the fire-resistance portion of the test.

Observations made during the test are listed below:

Time (min:sec)	Observation(s)
0:00	Ignition at 4:00 p.m.
2:00	Light smoke visible from the un-exposed side; small pops heard
3:30	Flaming visible from the exposed side of the wall
5:00	Flaming intermittent from the joints of the exposed side of the wall. Deflection of wall now visible into furnace. Bottom side of wall warping
7:00	Flames no longer visible from the exposed side of the wall
9:00	No visible changes. Wall continuing to hold superimposed loads, no flaming from the un-exposed side
10:00	The test was terminated

The wall assembly met the conditions of acceptance as outlined in Section 6 of NFPA 415 and did not exceed the allowable temperature criteria on the un-exposed side of the assembly (single point of 325 °F above ambient or 250 °F above ambient for the average of the nine thermocouples) and maintained the superimposed axial and lateral loads without passage of flame or gases hot enough to ignite cotton for more than 5 minutes. As per the standard, the test was continued for up to 10 minutes without flames on the un-exposed side or structural failure.

6 Conclusion

Intertek Testing Services NA, Inc. (Intertek) has conducted testing for ThyssenKrupp Airport Support, on a Tunnel Wall System (2-Tunnel and 3-Tunnel), to evaluate its fire resistance. Testing was conducted in accordance with, and following the standard methods of **NFPA 415, Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways, 2016 Edition, Section 6**. This evaluation was completed on April 12, 2017.

Based on the results of this test, the tunnel wall assembly described herein did not exceed the allowable temperature criteria on the un-exposed side of the assembly (single point of 325 °F above ambient or 250 °F above ambient for the average of the nine thermocouples) and maintained the superimposed loads without passage of flame or gases hot enough to ignite cotton for more than 5 minutes. Per the standard, the test was continued for up to 10 minutes without flames on the un-exposed side or structural failure. In turn, the Tunnel Wall Assembly (2-Tunnel and 3-Tunnel) met the conditions of acceptance as outlined in Section 6 of NFPA 415-2016.

INTERTEK TESTING SERVICES NA, INC.

Tested & Reported by:

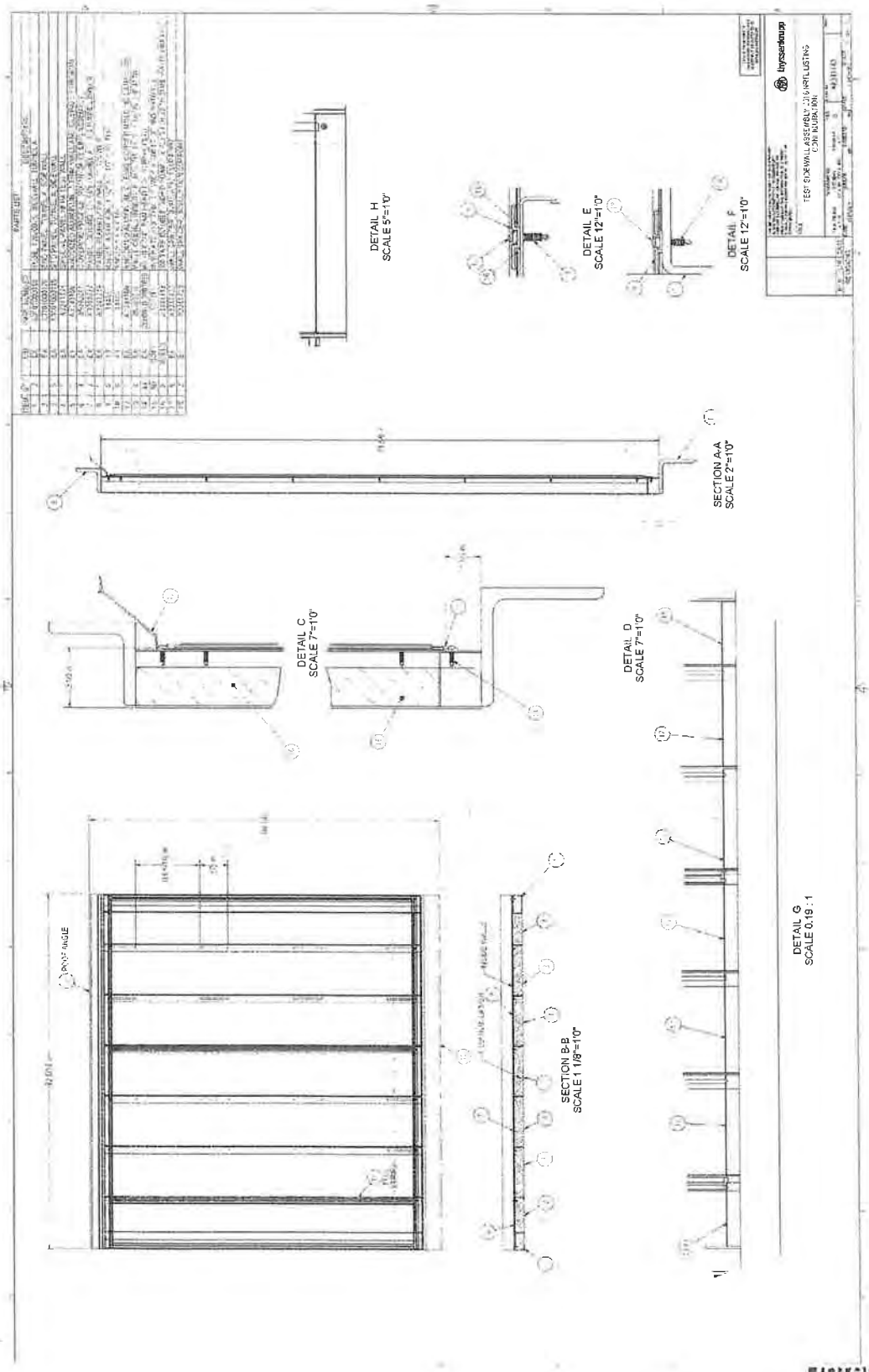
Victor M. Burgos
Engineering Team Leader, Fire Resistance

Reviewed by:

Herbert W. Stansberry II
Engineering Supervisor

APPENDIX A

Assembly Drawings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DETAIL C
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DETAIL D
SCALE 7"=1'0"
SECTION B-B
SCALE 1 1/8"=1'0"
DETAIL G
SCALE 0.19 : 1

3M
Double Coated Polyethylene
Foam Tapes
4462W • 4462B • 4466W • 4466B
4492W • 4492B • 4496W • 4496B

Technical Data — September 2015

Product Description

3M™ Double Coated Polyethylene Foam Tapes 4462W, 4462B, 4466W and 4466B combine a conformable closed cell foam with a rubber adhesive that provides high initial adhesion to a variety of surfaces including metal/polyolefin and polypropylene. 3M™ Double Coated Polyethylene Foam Tapes 4492W, 4492B, 4496W and 4496B combine a conformable closed cell foam with a high strength acrylic adhesive that provides good initial tack and stiffness. High adhesion allows for a wide variety of applications.

Constructions

	Tapes 4462W 4462B	Tapes 4466W 4466B	Tapes 4492W 4492B	Tapes 4496W 4496B
Adhesive Type	No Carrier Adhesive		ASA Acrylic Adhesive	
Adhesive Color	Colored Low Migration Polyolefin Foam		Colored Cell Conditioned Polyolefin Foam	
Thickness Nominal	1/32 in. (0.80 mm)	1/16 in. (1.60 mm)	1/32 in. (0.80 mm)	1/16 in. (1.60 mm)
Thickness Tolerance	±0.004 in. (±0.10 mm)	±0.008 in. (±0.20 mm)	±0.004 in. (±0.10 mm)	±0.008 in. (±0.20 mm)
Foam Color	White (W) Black (B)	White (W) Black (B)	White (W) Black (B) Grey (G)	White (W) Black (B)
Release Liner	0.003 in. Blue Paper (0.08 mm)		0.003 in. Blue Paper (0.08 mm)	
Approximate Density (pounds per cubic foot)	4 lb/ft3 (64 kg/m3)		4 lb/ft3 (64 kg/m3)	

PAGE 1

3M™ Double Coated Polyethylene Foam Tapes
4462W • 4462B • 4466W • 4466B • 4492W • 4492B • 4496W • 4496B

Typical Physical Properties and Performance Characteristics

Note: The following technical data and test methods are intended for reference purposes only and should not be used for specification purposes.

	Tapes 4462W 4462B	Tapes 4466W 4466B	Tapes 4492W 4492B	Tapes 4496W 4496B
Peel Adhesion: 2 lb/in. Steel Backing, 1 lb/in. Polyethylene Backing, 12 in./min. Peel Rate, 180° Peel Angle, 15 min. Dwell Time, Room Temperature	8 lb/in. width (1.4 N/10 mm)	8 lb/in. width (1.4 N/10 mm)	8 lb/in. width (1.4 N/10 mm)	8 lb/in. width (1.4 N/10 mm)
Tensile Strength, Machine Direction	60 lb/in.² (415 kPa)	60 lb/in.² (415 kPa)	60 lb/in.² (415 kPa)	60 lb/in.² (415 kPa)
Elongation, Machine Direction	300%	300%	300%	300%
Shear Strength, 1 in.² Overlap, 1 lb Load, Room Temperature	35 lb/in.² (240 kPa)	35 lb/in.² (240 kPa)	35 lb/in.² (240 kPa)	35 lb/in.² (240 kPa)
Service Temperature, Continuous	200°F (93°C)		200°F (93°C)	
Service Temperature, Intermittent	250°F (121°C)		250°F (121°C)	
UV Resistance	Has passed accelerated weathering test equivalent to 2 years outdoor exposure in Florida, USA		Has passed accelerated weathering test equivalent to 2 years outdoor exposure in Florida, USA	
Solvent Resistance	No significant degradation when exposed to typical cleaning solvents			
Dielectric Strength, 25 mil Polyethylene Backing	1500 V/mil		1500 V/mil	
Dielectric Constant, 25 mil Polyethylene Backing	2.3 @ 1 MHz		2.3 @ 1 MHz	
Dissipation Factor, 25 mil Polyethylene Backing	0.0004 @ 1 MHz		0.0004 @ 1 MHz	
Dead Load Performance	No creep after 24 hours at 158°F (70°C) with 1 kg load per in.² (6.9 kPa)		No creep after 24 hours at 158°F (70°C) with 1 kg load per in.² (6.9 kPa)	
Flame Resistance	Not self-extinguishing		Not self-extinguishing	
Humidity Resistance	No significant change after 2 weeks at 100°F (38°C) and 100% relative humidity			
Outdoor Performance	Adhesive is designed for indoor applications. Exposure to outdoor conditions will result in loss of adhesion.			

PAGE 2

3M™ Double Coated Polyethylene Foam Tapes
4462W • 4462B • 4466W • 4466B • 4492W • 4492B • 4496W • 4496B

Application Techniques

Bond strength is dependent upon the amount of adhesive-to-surface contact. Use adequate hand application pressure to help develop intimate adhesive contact and improve bond strength.

- For the best performance, clean surfaces with appropriate solvent cleaner (depending on substrate) to remove dirt, dust, oil and other surface contaminants. Allow surfaces to dry before application. Refer to manufacturer's instructions and directions for use when using cleaning products.
- Most tape applications perform well in 50°F to 100°F (10°C to 38°C) ambient temperature ranges. For low temperature applications (below 50°F (10°C)) and environments with high humidity, use tape that has been conditioned at room temperature (70°F (21°C)) for 24 hours prior to application. Bond strength will build over time. Application pressure should be applied uniformly to ensure intimate contact.

Application Hints

- This tape product carries no liner. Keep product clean before applying. Remove protective liner, position tape and apply pressure to activate adhesive.
- 3M™ Double Coated Polyethylene Foam Tapes 4462 and 4466 are specially formulated for many indoor applications. Polyethylene and many other plastics, where maximum strength and long term performance are required.
- 3M™ Double Coated Polyethylene Foam Tapes 4492 and 4496 are formulated for general purpose mounting and bonding applications.
- Applications ideal for these tapes include:
  - Signs, Nameplates and Plaques
  - Plastic Hooks, Racks and Dispensers
  - Wire and Cable Clips — meets UL Spec QOQW2.MH17478
  - Appliance Display Cover and Electronic Component Trim

Application Equipment

For optimum application results, hand roller application is required to provide intimate contact and apply consistent pressure. Laminating Adhesive 1 (LA 0760-1493-8) is a solvent adhesive formulated for use with 3M™ Double Coated Polyethylene Foam Tapes to facilitate the lamination of Laminating Adhesive 1 (LA 0760-1493-8).

For technical support information, contact your local 3M sales representative or call toll free 3M sales assistance number at 1-800-362-3550.

PAGE 3

3M™ Double Coated Polyethylene Foam Tapes
4462W • 4462B • 4466W • 4466B • 4492W • 4492B • 4496W • 4496B

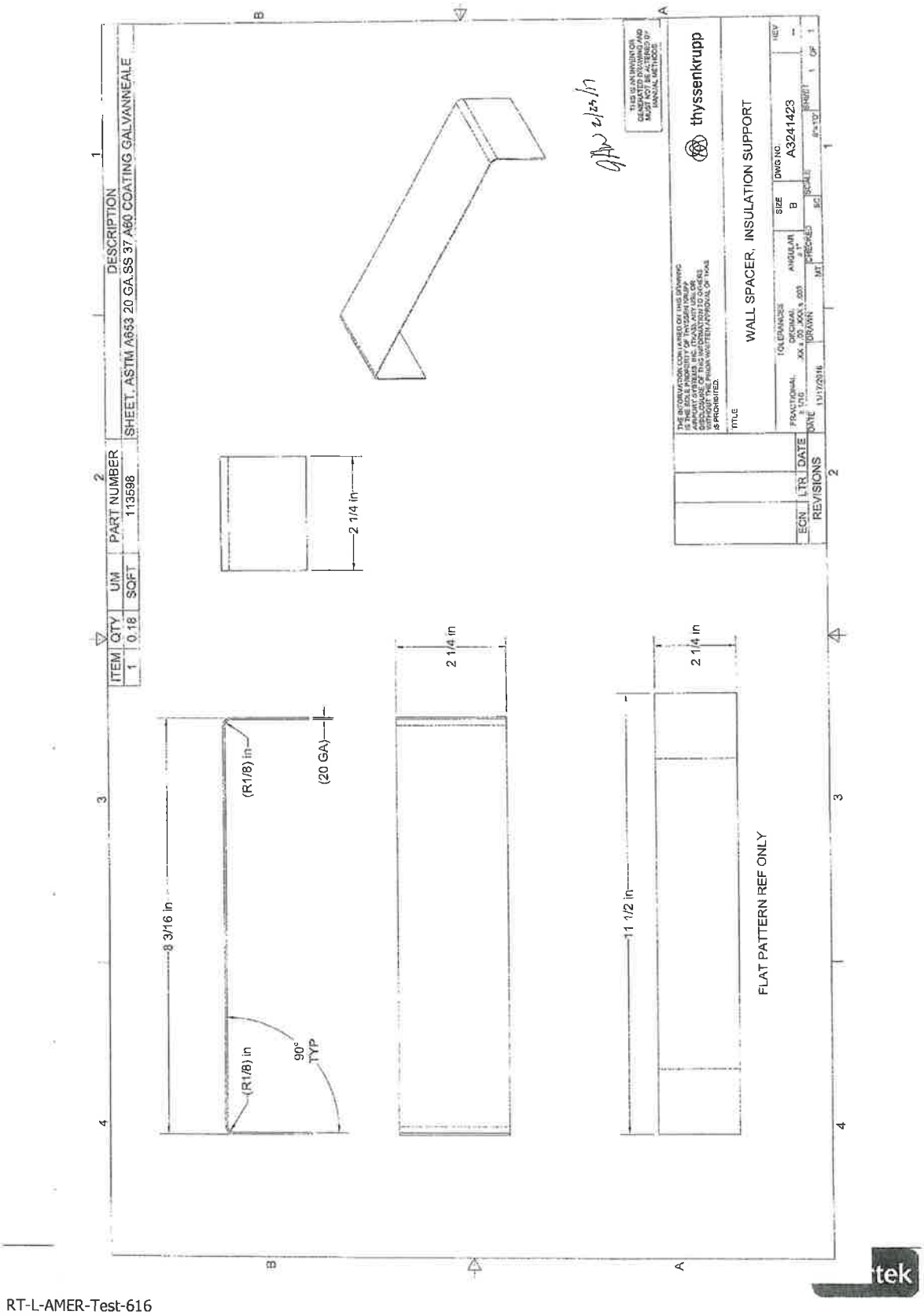
Technical Information

Product Use

Warranty, Limited Remedy, and Disclaimer

Limitation of Liability

PAGE 4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thyssenkrupp
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DRAWN MT
CHECKED
DATE 11/17/2016
ECN | LTR | DATE
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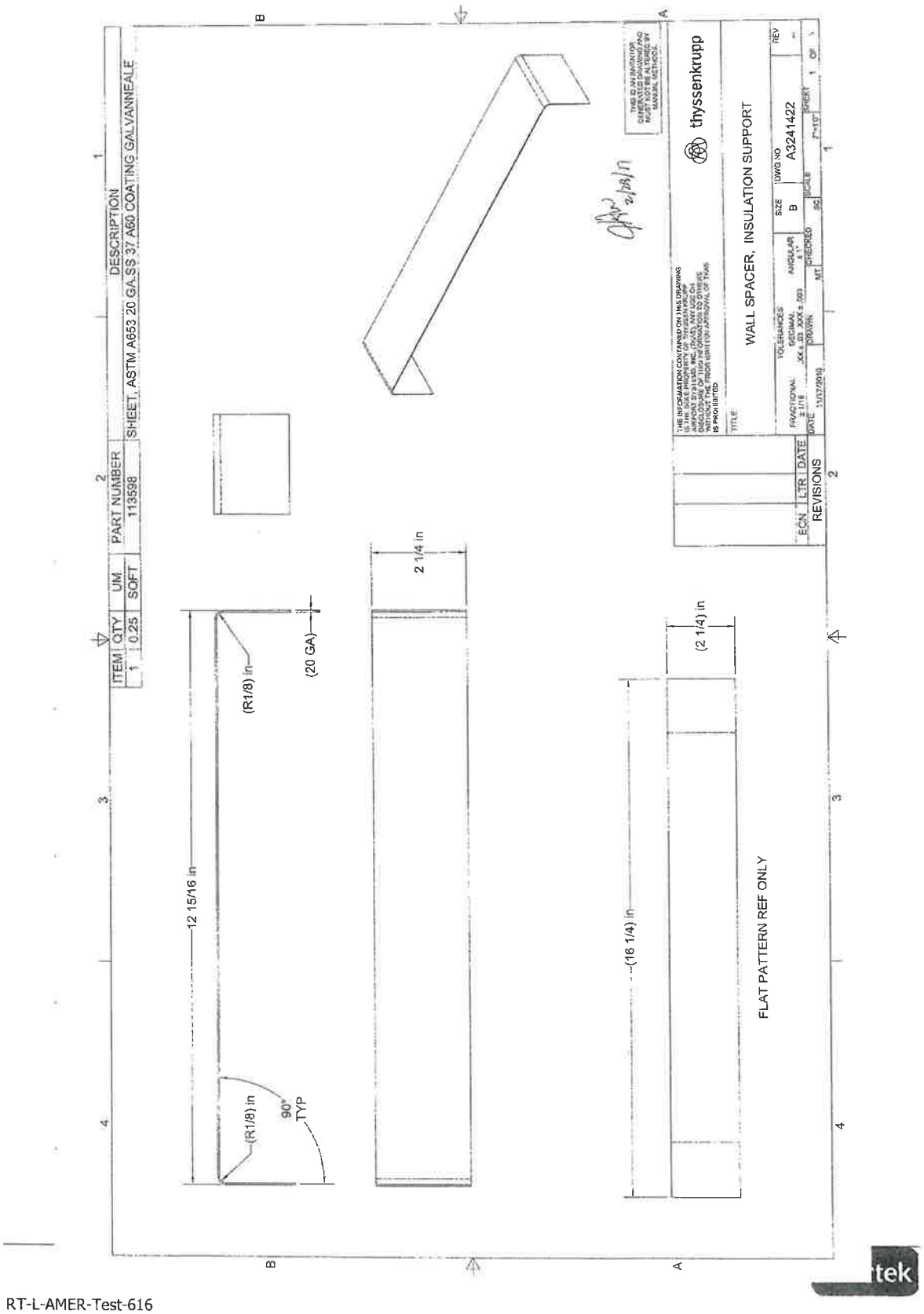
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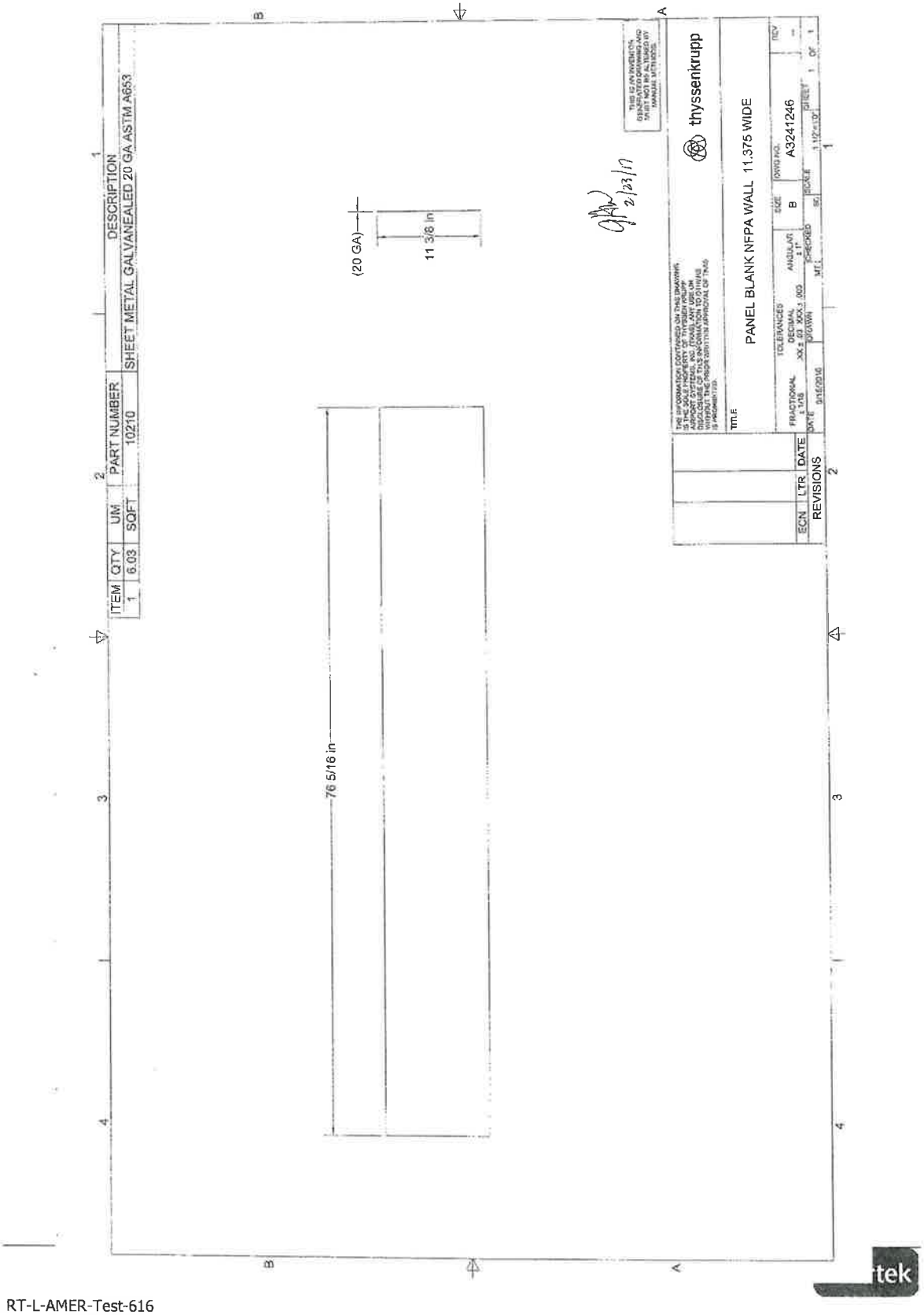
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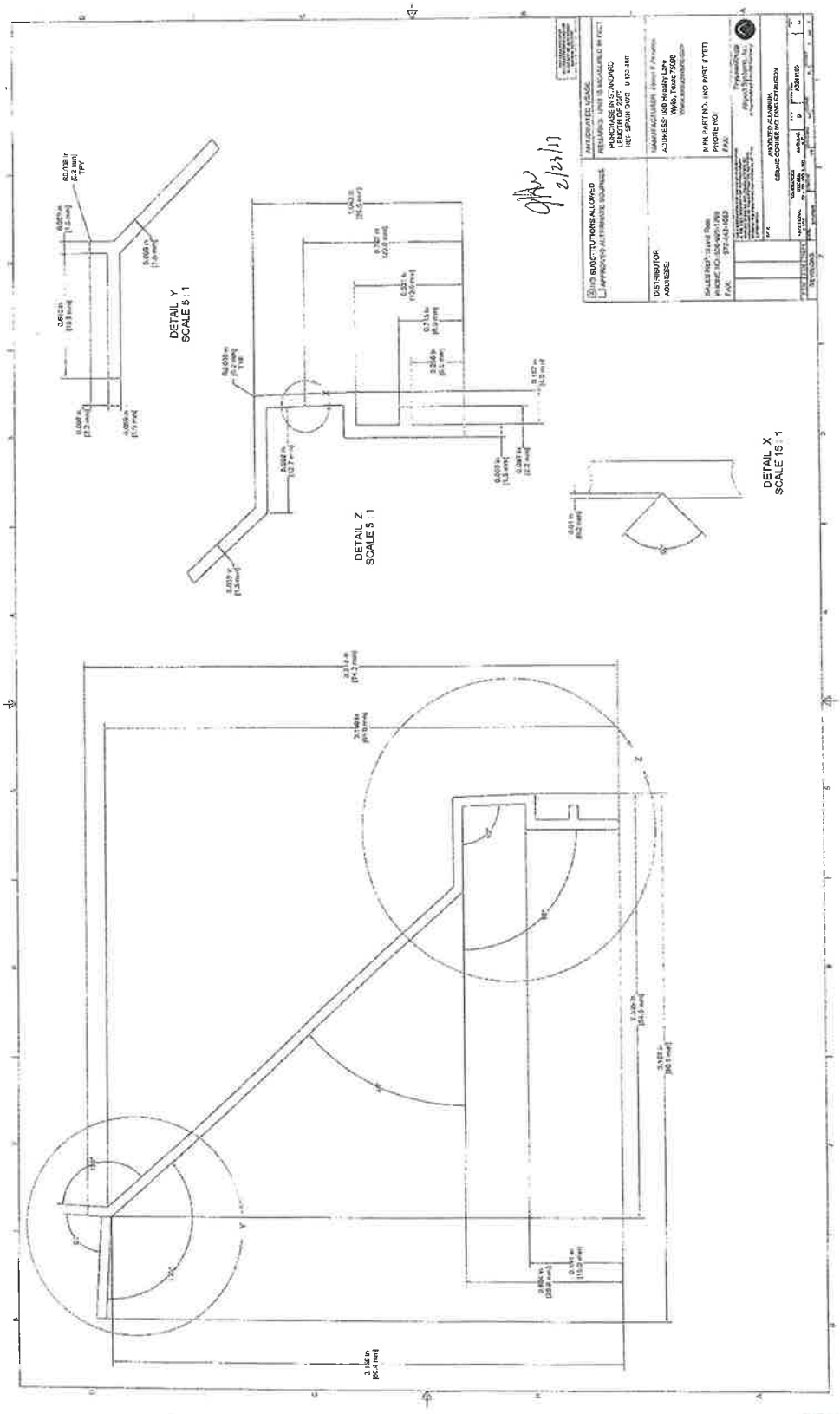
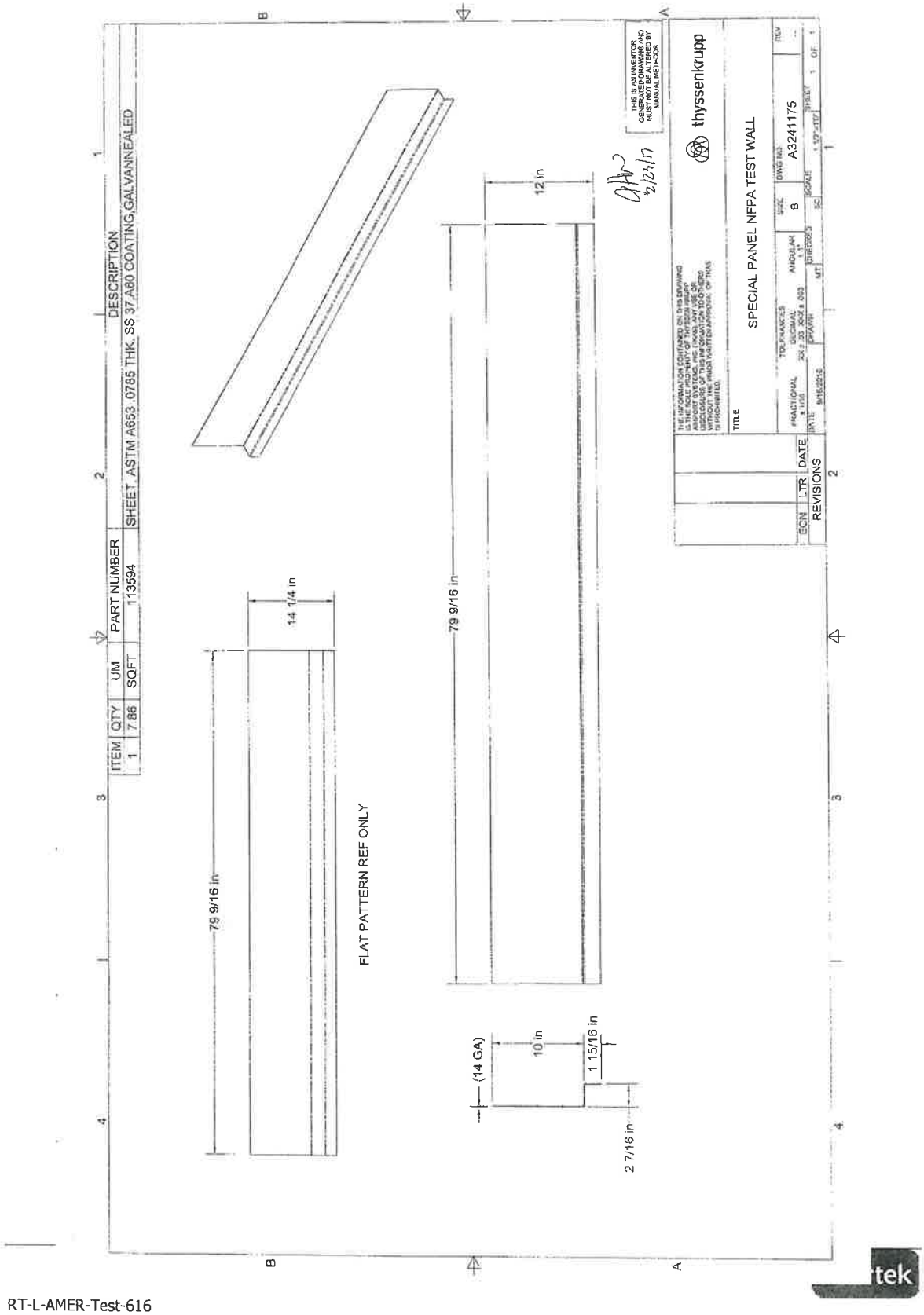
REVISIONS

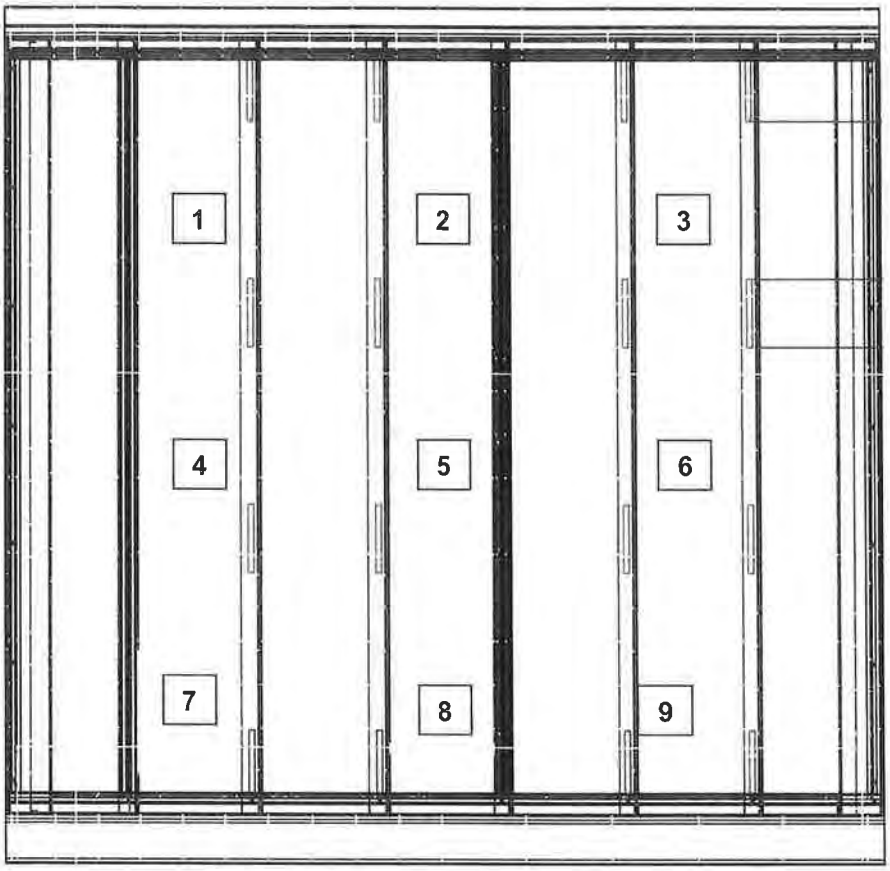


RT-L-AMER-Test-616
Issued: 3/31/2017
Revised: Original



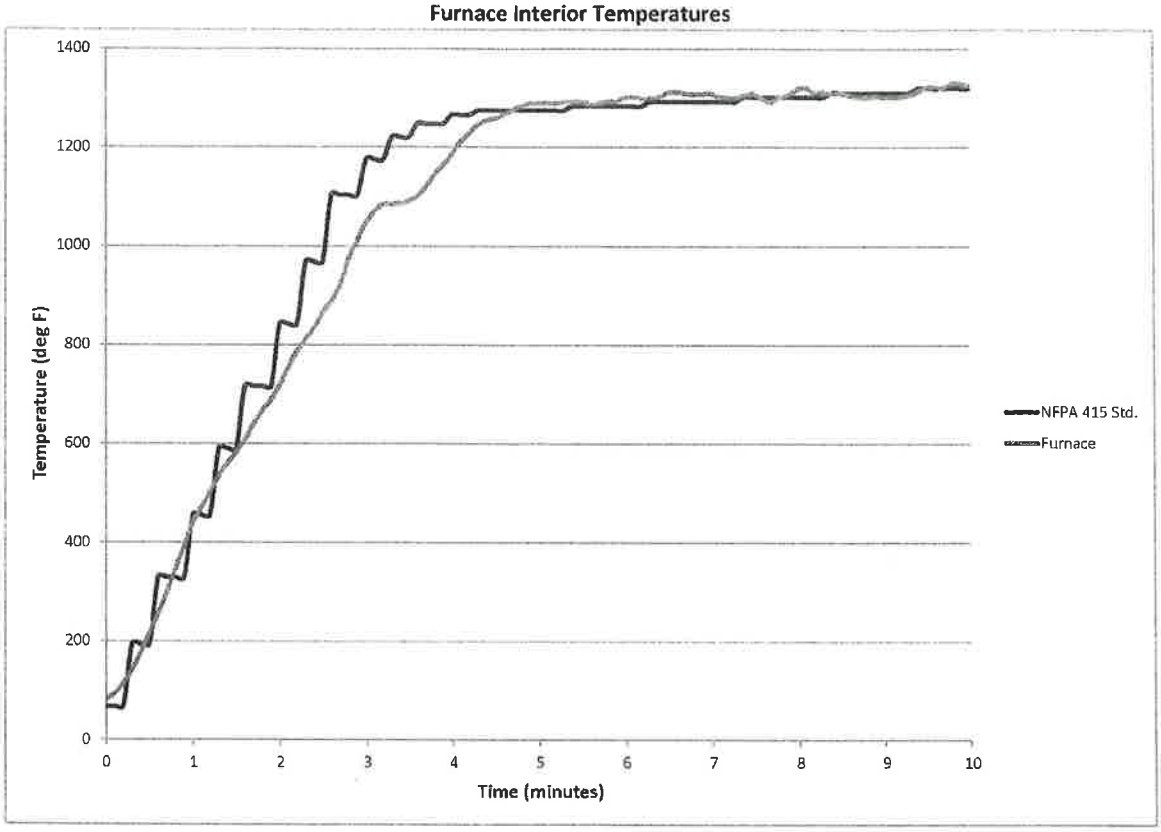
RT-L-AMER-Test-616
Issued: 3/31/2017
Revised: Original

Thermocouple Locations
(view from the un-exposed side)

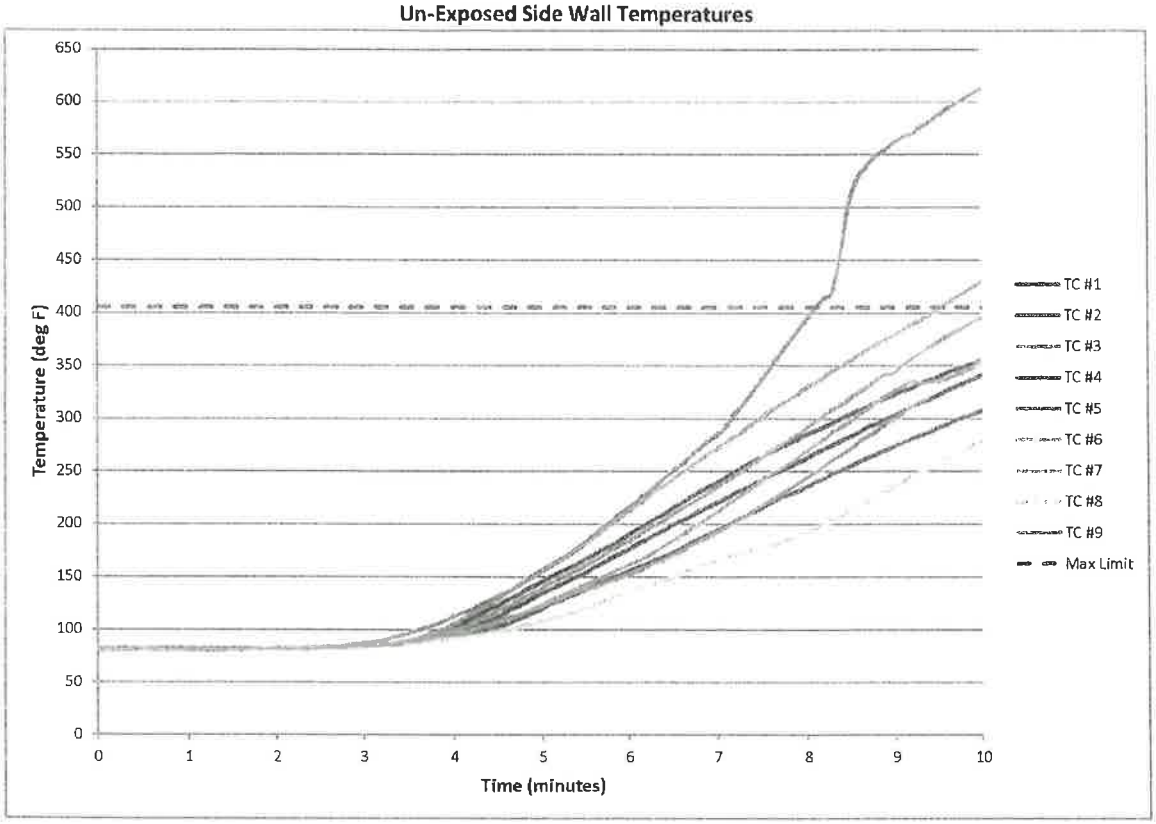


APPENDIX B
Test Data

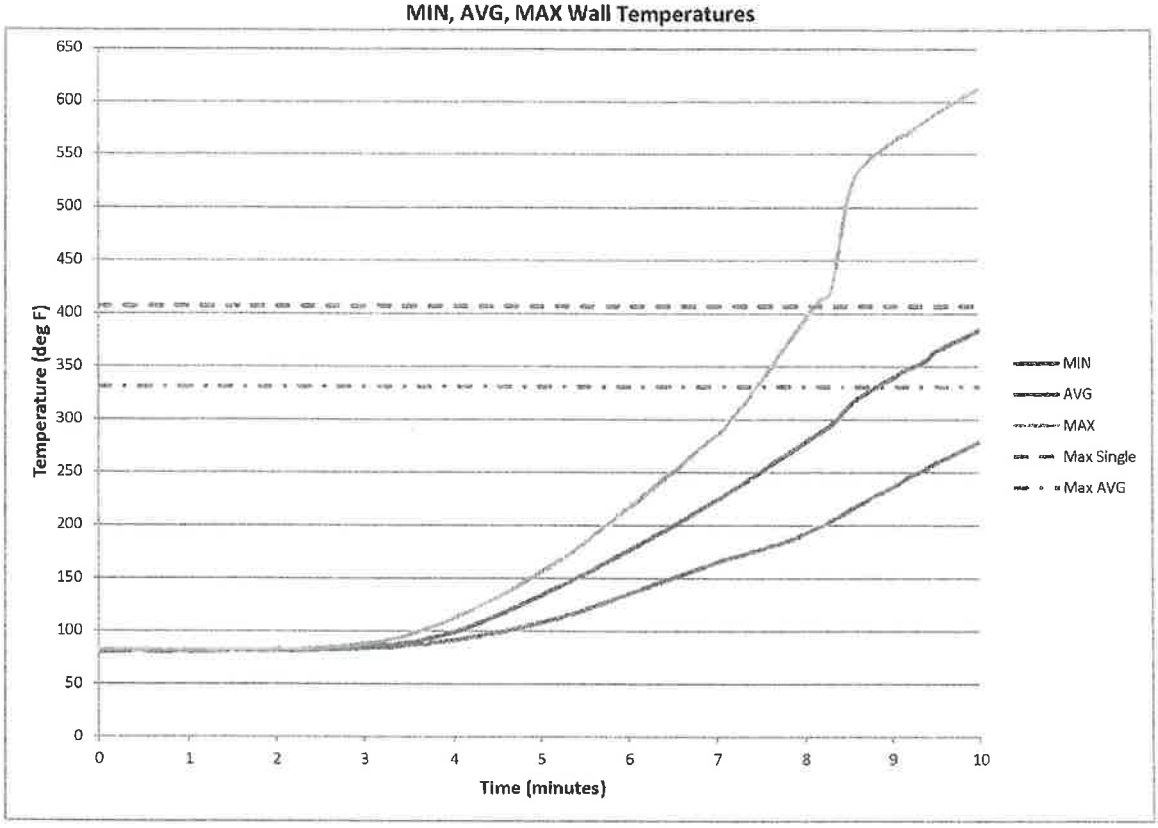
ThyssenKrupp Airport Support
Project No. G102705791SAT-003
12-April-2017
Furnace Interior Temperatures



ThyssenKrupp Airport Support
Project No. G102705791SAT-003
12-April-2017
Un-Exposed Side Wall Temperatures



ThyssenKrupp Airport Support
Project No. G102705791SAT-003
12-April-2017
MIN, AVG, MAX Wall Temperatures



ThyssenKrupp Airport Systems | Project No. G102705791SAT-003 | 12-April-2017

Time (min)	NFPA 415 Std. Average (°F)	Furnace Average (°F)	Furnace Probe #1 (°F)	Fumace Probe #2 (°F)	Furnace Probe #3 (°F)	Furnace Probe #4 (°F)
0	68	83	84	86	81	81
0.1	68	94	106	102	85	83
0.2	68	115	143	128	96	91
0.3	194	142	196	153	118	100
0.4	194	177	269	175	149	116
0.5	194	217	327	209	195	136
0.6	329	256	359	262	245	159
0.7	329	299	414	312	296	174
0.8	329	347	477	353	358	199
0.9	329	396	536	406	410	230
1	455	438	585	461	453	253
1.1	455	472	631	494	497	265
1.2	455	503	668	534	531	278
1.3	590	535	691	574	570	304
1.4	590	560	721	604	599	317
1.5	590	583	750	632	617	332
1.6	716	608	770	664	638	358
1.7	716	641	795	713	679	375
1.8	716	667	806	745	718	399
1.9	716	690	818	751	753	437
2	842	718	835	779	788	470
2.1	842	754	874	807	824	512
2.2	842	787	914	809	841	583
2.3	968	811	941	831	856	616
2.4	968	836	964	857	880	643
2.5	968	865	991	878	914	678
2.6	1103	889	1017	905	937	697
2.7	1103	921	1051	930	969	732
2.8	1103	975	1125	978	1008	789
2.9	1103	1013	1157	1023	1051	820
3	1175	1048	1184	1062	1086	861
3.1	1175	1071	1204	1086	1114	881
3.2	1175	1084	1215	1099	1126	896
3.3	1220	1085	1210	1096	1129	903
3.4	1220	1087	1196	1104	1134	915
3.5	1220	1091	1187	1109	1142	925
3.6	1247	1101	1198	1115	1149	942
3.7	1247	1120	1211	1139	1169	962
3.8	1247	1146	1231	1161	1192	1000
3.9	1247	1164	1242	1184	1208	1021
4	1265	1187	1270	1203	1224	1050
4.1	1265	1211	1287	1224	1251	1081
4.2	1265	1227	1298	1235	1266	1109
4.3	1274	1246	1309	1266	1278	1129
4.4	1274	1254	1317	1269	1287	1141
4.5	1274	1258	1308	1274	1291	1160
4.6	1274	1265	1310	1277	1296	1177
4.7	1274	1274	1314	1290	1299	1192
4.8	1274	1282	1306	1304	1310	1209
4.9	1274	1288	1307	1311	1319	1215
5	1274	1288	1303	1305	1319	1225
5.1	1274	1289	1294	1300	1318	1244
5.2	1274	1288	1290	1299	1315	1249
5.3	1274	1291	1292	1300	1314	1259

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Time (min)	NFPA 415 Std. Average (°F)	Furnace Average (°F)	Furnace Probe #1 (°F)	Furnace Probe #2 (°F)	Furnace Probe #3 (°F)	Furnace Probe #4 (°F)
5.4	1283	1292	1287	1302	1313	1267
5.5	1283	1292	1285	1299	1313	1270
5.6	1283	1287	1262	1298	1314	1275
5.7	1283	1288	1258	1296	1318	1281
5.8	1283	1294	1254	1307	1321	1292
5.9	1283	1292	1249	1301	1319	1300
6	1283	1300	1263	1305	1322	1310
6.1	1283	1302	1269	1306	1322	1311
6.2	1283	1299	1244	1311	1326	1314
6.3	1292	1300	1241	1307	1331	1319
6.4	1292	1301	1247	1306	1330	1322
6.5	1292	1310	1266	1312	1331	1330
6.6	1292	1312	1264	1315	1334	1333
6.7	1292	1308	1251	1315	1332	1335
6.8	1292	1308	1243	1314	1335	1340
6.9	1292	1308	1243	1310	1339	1338
7	1292	1308	1234	1315	1340	1343
7.1	1292	1302	1209	1314	1336	1350
7.2	1292	1300	1201	1313	1332	1355
7.3	1292	1300	1200	1314	1327	1357
7.4	1301	1306	1219	1316	1330	1358
7.5	1301	1307	1223	1313	1333	1360
7.6	1301	1298	1189	1311	1328	1363
7.7	1301	1291	1169	1315	1314	1365
7.8	1301	1301	1207	1312	1319	1364
7.9	1301	1306	1227	1306	1329	1362
8	1301	1317	1249	1311	1337	1371
8.1	1301	1320	1259	1315	1341	1366
8.2	1301	1310	1216	1313	1343	1367
8.3	1301	1312	1221	1315	1344	1367
8.4	1310	1309	1212	1316	1344	1363
8.5	1310	1309	1213	1317	1342	1364
8.6	1310	1305	1205	1315	1338	1361
8.7	1310	1301	1191	1313	1338	1362
8.8	1310	1299	1181	1312	1339	1362
8.9	1310	1302	1201	1310	1327	1371
9	1310	1301	1197	1310	1332	1366
9.1	1310	1300	1179	1312	1338	1371
9.2	1310	1302	1171	1315	1344	1378
9.3	1310	1305	1176	1320	1347	1378
9.4	1319	1312	1205	1318	1345	1379
9.5	1319	1321	1225	1325	1349	1384
9.6	1319	1322	1232	1326	1348	1381
9.7	1319	1319	1222	1325	1341	1388
9.8	1319	1330	1223	1325	1384	1386
9.9	1319	1329	1229	1327	1376	1383
10	1319	1324	1218	1327	1356	1394

Max Temp:
Max Allowed:

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Time (min)	TC #1 (°F)	TC #2 (°F)	TC #3 (°F)	TC #4 (°F)	TC #5 (°F)	TC #6 (°F)	TC #7 (°F)	TC #8 (°F)	TC #9 (°F)	MIN (°F)	AVG (°F)	MAX (°F)
0	82	82	81	81	82	80	80	81	81	80	81	82
0.1	82	82	81	81	82	80	80	81	81	80	81	82
0.2	82	82	81	81	82	80	81	81	81	80	81	82
0.3	82	82	81	81	82	80	81	81	81	80	81	82
0.4	82	82	81	81	82	81	81	81	81	81	81	82
0.5	82	82	81	81	82	81	81	81	81	81	81	82
0.6	82	82	81	81	82	80	81	81	81	80	81	82
0.7	82	82	81	81	82	80	80	81	81	80	81	82
0.8	82	82	81	81	82	80	81	81	81	80	81	82
0.9	82	82	81	81	82	81	81	81	81	81	81	82
1	82	82	81	81	82	81	80	81	81	80	81	82
1.1	82	82	81	81	82	81	80	81	81	80	81	82
1.2	82	82	81	81	82	81	80	81	81	80	81	82
1.3	82	82	81	81	82	81	80	81	81	80	81	82
1.4	82	82	81	81	82	81	81	81	81	81	81	82
1.5	82	82	81	81	82	81	81	81	81	81	81	82
1.6	82	82	81	81	82	81	81	81	81	81	81	82
1.7	82	82	81	81	82	81	81	81	81	81	81	82
1.8	82	82	82	81	82	81	81	81	81	81	81	82
1.9	82	82	82	81	82	82	81	81	81	81	82	82
2	82	82	82	81	83	82	81	81	81	81	82	83
2.1	82	82	82	81	83	82	81	81	81	81	82	83
2.2	82	82	82	82	83	82	81	82	81	81	82	83
2.3	82	82	83	82	83	83	81	81	81	81	82	83
2.4	83	83	83	82	84	83	82	82	81	81	83	84
2.5	83	83	83	82	84	84	82	82	82	82	83	84
2.6	83	83	84	82	85	84	82	82	82	82	83	85
2.7	83	84	84	83	85	84	83	82	82	82	83	85
2.8	83	84	84	83	86	85	83	82	82	82	84	86
2.9	84	84	85	84	87	85	84	83	83	83	84	87
3	84	84	85	84	88	86	84	83	83	83	85	88
3.1	84	85	86	85	89	86	85	84	84	84	85	89
3.2	84	85	87	86	90	87	86	84	84	84	86	90
3.3	85	86	87	87	92	87	87	84	85	84	87	92
3.4	86	87	88	88	94	88	88	85	86	85	88	94
3.5	86	87	89	90	96	89	90	86	88	86	89	96
3.6	87	88	90	91	99	90	92	87	89	87	90	99
3.7	88	90	92	93	102	91	95	87	91	87	92	102
3.8	89	91	93	96	105	92	98	89	93	89	94	105
3.9	90	93	94	99	108	94	101	90	96	90	96	108
4	92	95	96	102	112	95	105	91	99	91	99	112
4.1	93	98	98	106	116	97	110	92	102	92	101	116
4.2	95	101	100	110	119	99	114	94	106	94	104	119
4.3	97	105	103	114	124	102	119	95	110	95	108	124
4.4	100	108	105	119	128	104	124	97	113	97	111	128
4.5	103	112	108	123	132	107	129	98	118	98	114	132
4.6	105	117	111	128	136	110	135	100	122	100	118	136
4.7	109	121	113	132	141	113	140	102	126	102	122	141
4.8	112	125	116	137	146	116	145	104	131	104	126	146
4.9	116	130	119	141	151	120	150	106	135	106	130	151
5	119	134	122	145	156	123	155	108	139	108	133	156
5.1	124	138	126	150	161	128	160	110	144	110	138	161
5.2	127	142	128	154	166	131	165	112	148	112	141	166
5.3	131	146	132	158	171	135	170	115	152	115	146	171

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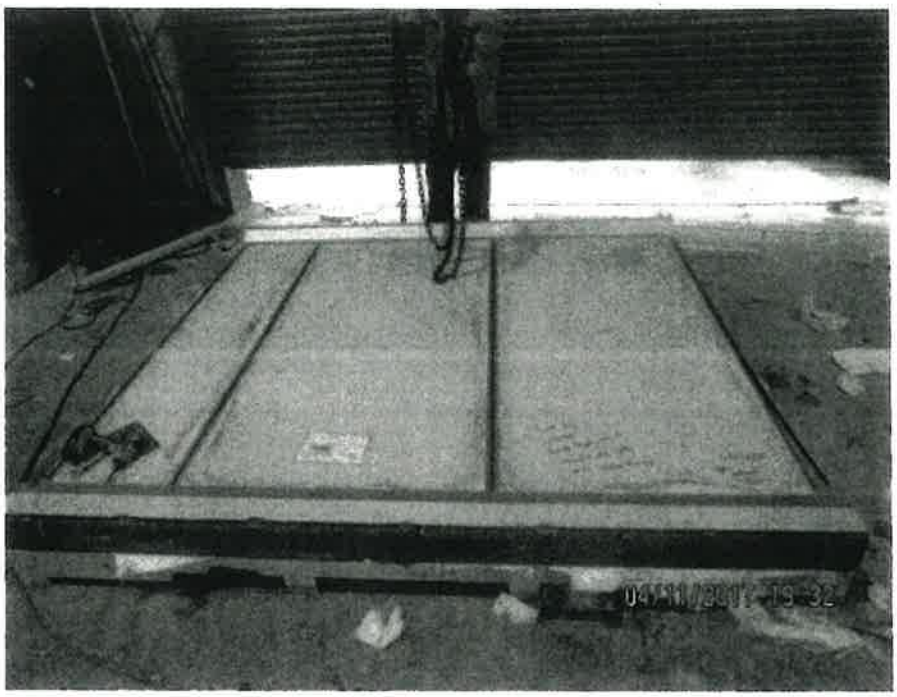
Time (min)	TC #1 (°F)	TC #2 (°F)	TC #3 (°F)	TC #4 (°F)	TC #5 (°F)	TC #6 (°F)	TC #7 (°F)	TC #8 (°F)	TC #9 (°F)	MIN (°F)	AVG (°F)	MAX (°F)
5.4	134	150	135	162	177	139	176	117	156	117	150	177
5.5	138	154	138	167	183	142	182	120	161	120	154	183
5.6	142	159	140	171	190	146	187	123	165	123	158	190
5.7	145	163	143	176	197	150	194	126	170	126	163	197
5.8	149	168	146	180	203	154	200	129	175	129	167	203
5.9	152	172	149	185	210	158	206	132	180	132	172	210
6	156	176	152	190	216	162	212	135	184	135	176	216
6.1	159	181	155	195	222	165	218	138	189	138	180	222
6.2	162	185	159	200	229	169	224	141	194	141	185	229
6.3	166	190	163	205	236	174	231	144	199	144	190	236
6.4	169	194	166	209	243	179	236	147	203	147	194	243
6.5	173	199	170	215	250	184	242	150	209	150	199	250
6.6	177	203	174	220	256	189	248	153	214	153	204	256
6.7	182	207	179	225	264	195	254	156	219	156	209	264
6.8	186	212	183	230	271	200	260	159	224	159	214	271
6.9	190	216	187	235	278	206	266	162	229	162	219	278
7	194	220	192	239	284	211	271	165	235	165	223	284
7.1	198	224	196	244	292	217	277	168	240	168	228	292
7.2	203	229	202	249	304	223	283	170	246	170	234	304
7.3	207	233	206	254	313	228	288	172	251	172	239	313
7.4	211	237	212	259	325	234	295	175	257	175	245	325
7.5	215	241	217	263	335	240	300	177	262	177	250	335
7.6	220	246	222	268	347	246	307	180	269	180	256	347
7.7	224	250	228	272	359	252	312	182	274	182	261	359
7.8	228	254	233	276	371	257	317	185	280	185	267	371
7.9	231	258	238	280	382	263	323	188	285	188	272	382
8	235	262	244	285	393	269	329	192	291	192	278	393
8.1	240	267	249	288	404	275	334	196	297	196	283	404
8.2	243	271	255	292	413	280	339	199	303	199	288	413
8.3	248	275	261	296	419	287	345	204	308	204	294	419
8.4	251	279	266	300	456	292	349	208	313	208	302	456
8.5	255	283	271	304	504	297	355	213	319	213	311	504
8.6	259	287	278	308	528	304	360	218	325	218	319	528
8.7	263	292	283	311	539	309	365	222	330	222	324	539
8.8	266	295	288	315	548	315	370	227	336	227	329	548
8.9	270	299	295	319	554	321	375	231	341	231	334	554
9	273	303	299	322	560	326	379	235	343	235	338	560
9.1	277	307	305	326	566	331	384	240	351	240	343	566
9.2	281	311	311	329	569	335	389	245	357	245	347	569
9.3	284	315	316	333	575	334	393	249	362	249	351	575
9.4	287	318	320	336	580	334	398	253	367	253	355	580
9.5	291	322	Bad TC	339	586	335	403	258	372	258	363	586
9.6	294	326	Bad TC	343	592	337	408	262	377	262	367	592
9.7	298	330	Bad TC	346	597	341	414	266	382	266	372	597
9.8	301	333	Bad TC	349	602	344	418	270	386	270	375	602
9.9	304	337	Bad TC	352	607	348	424	274	391	274	380	607
10	307	341	Bad TC	355	612	354	429	278	395	278	384	612
Max Temp	**307**	**341**	**320**	**355**	**612**	**354**	**429**	**278**	**395**			
Max Allow	**407**	**407**	**406**	**406**	**407**	**405**	**405**	**406**	**406**		**331**	

APPENDIX C
Photographs

Setup Photos

1.



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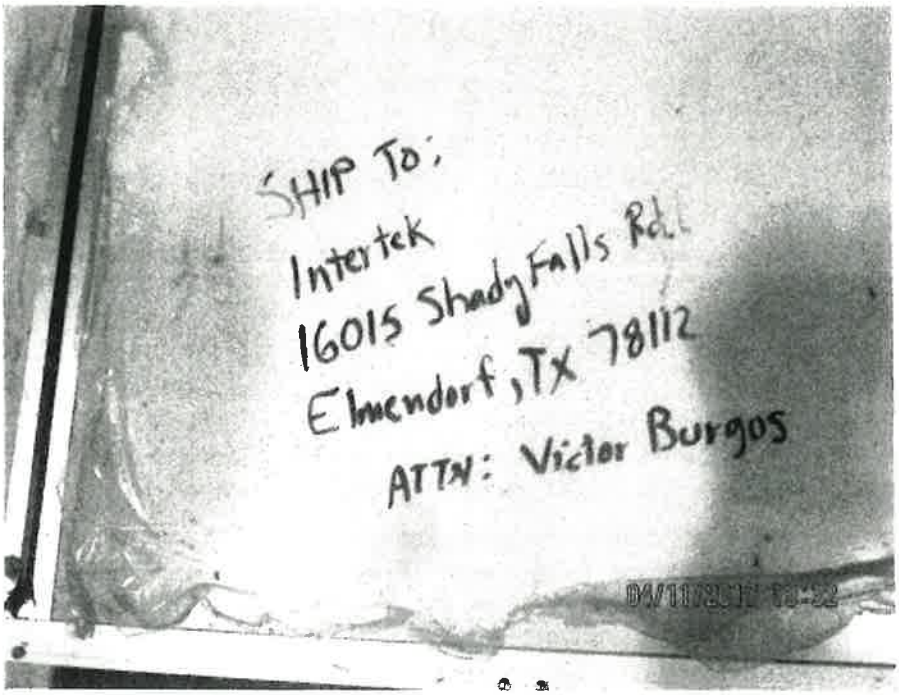

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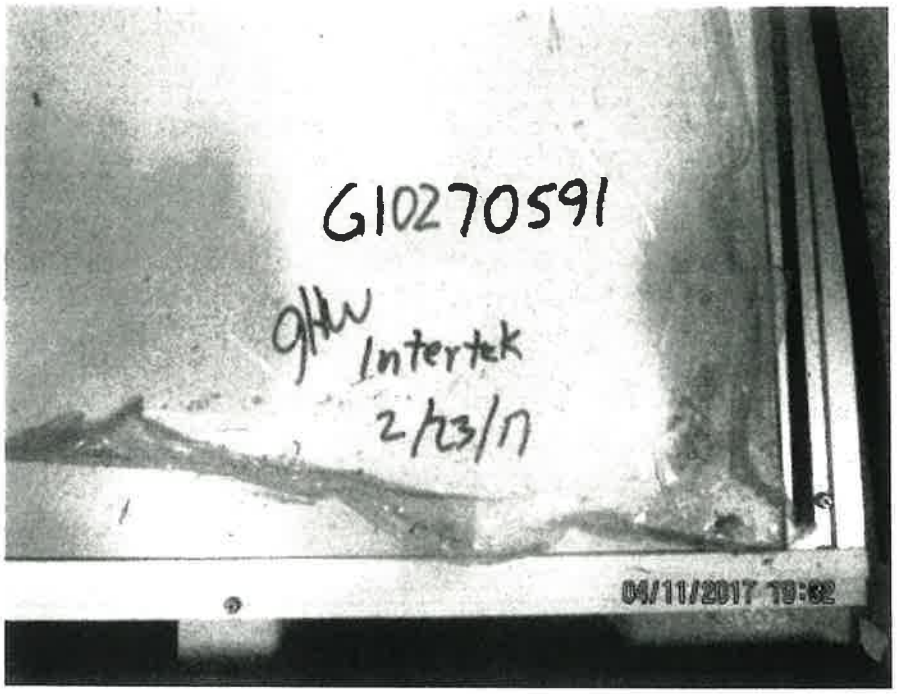
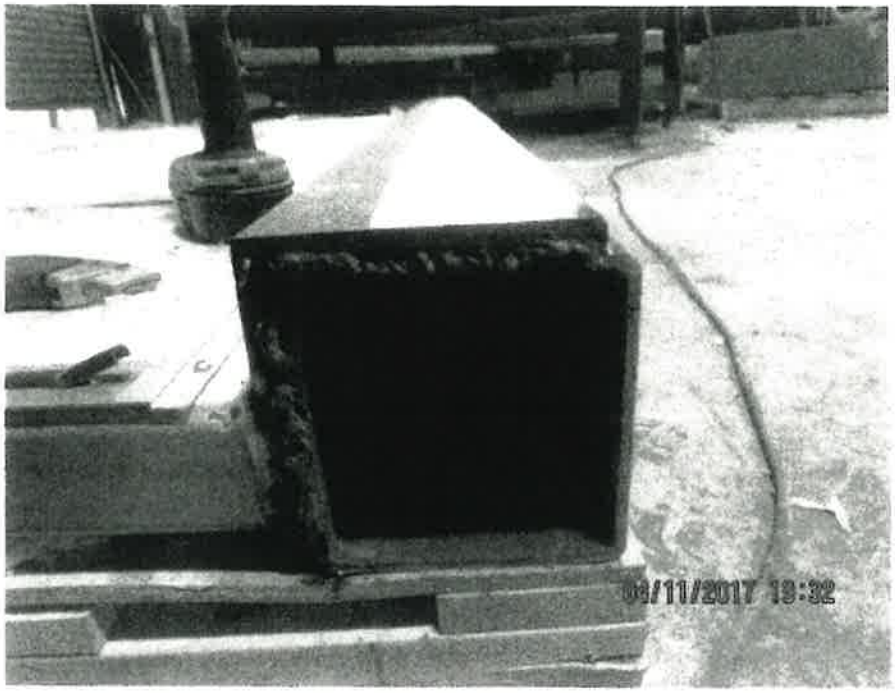


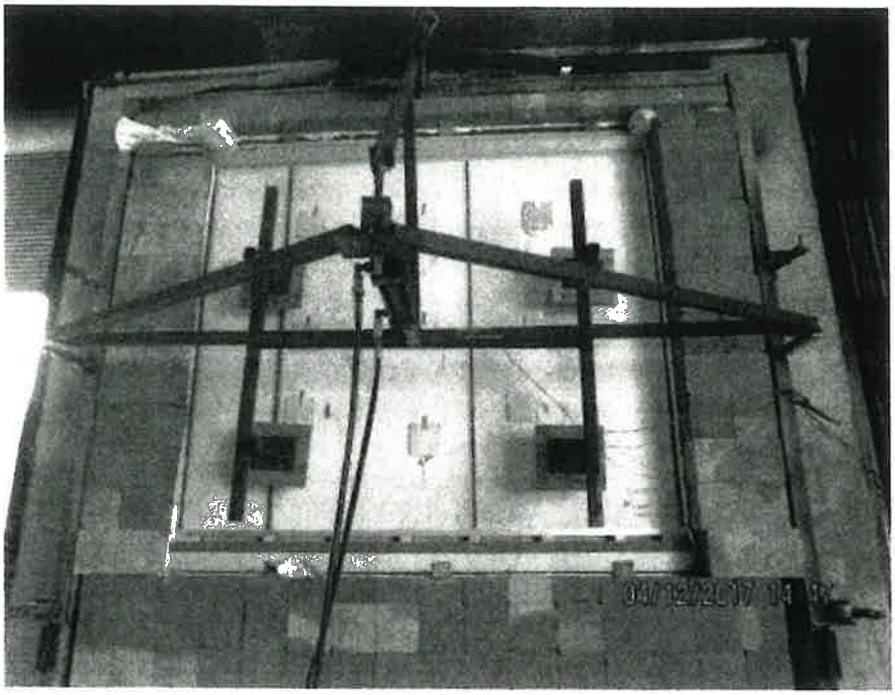
4.

5.



Test Photos

6.



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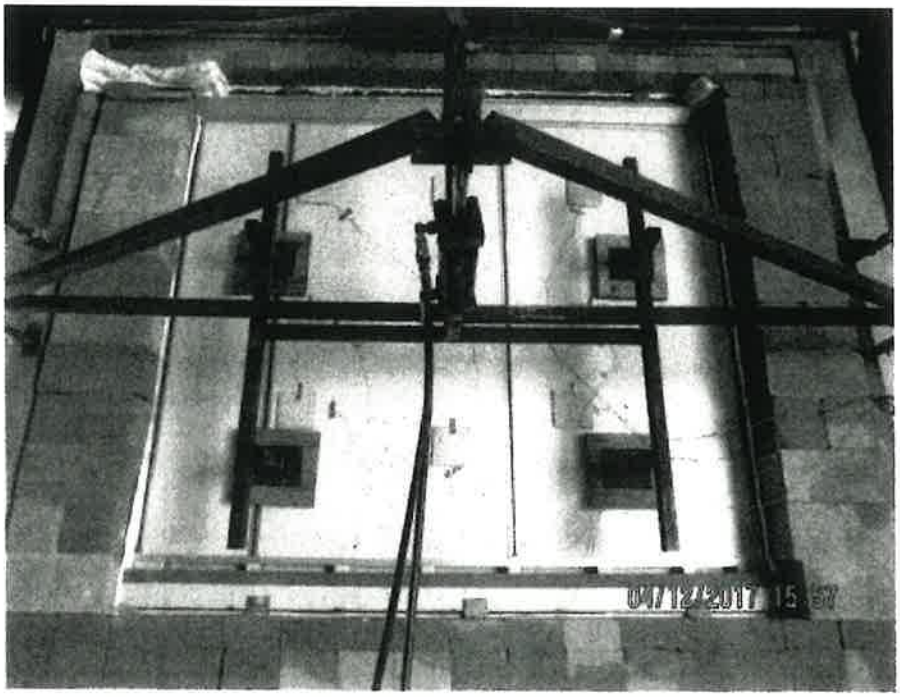

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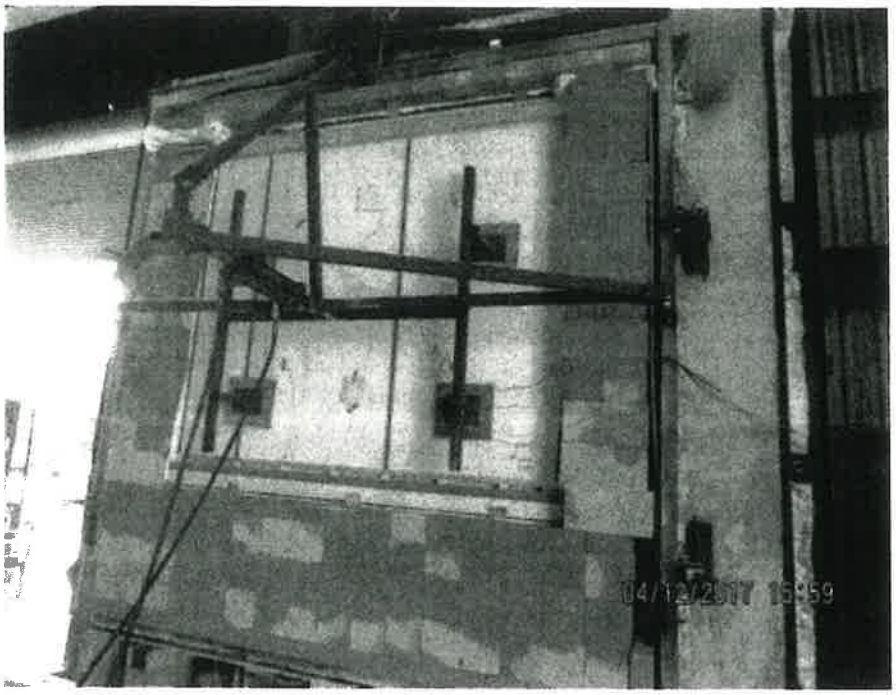

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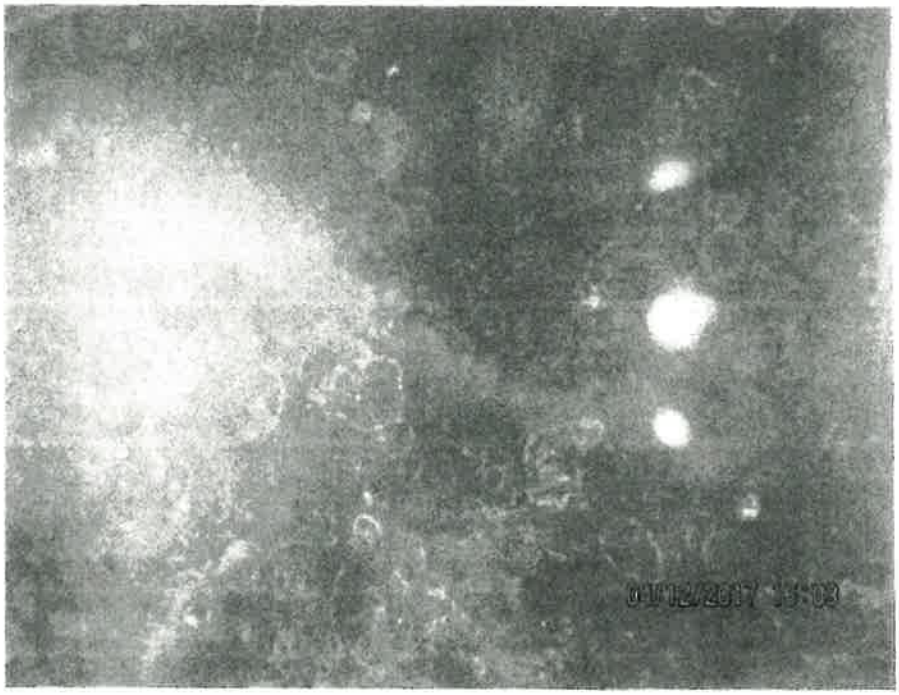

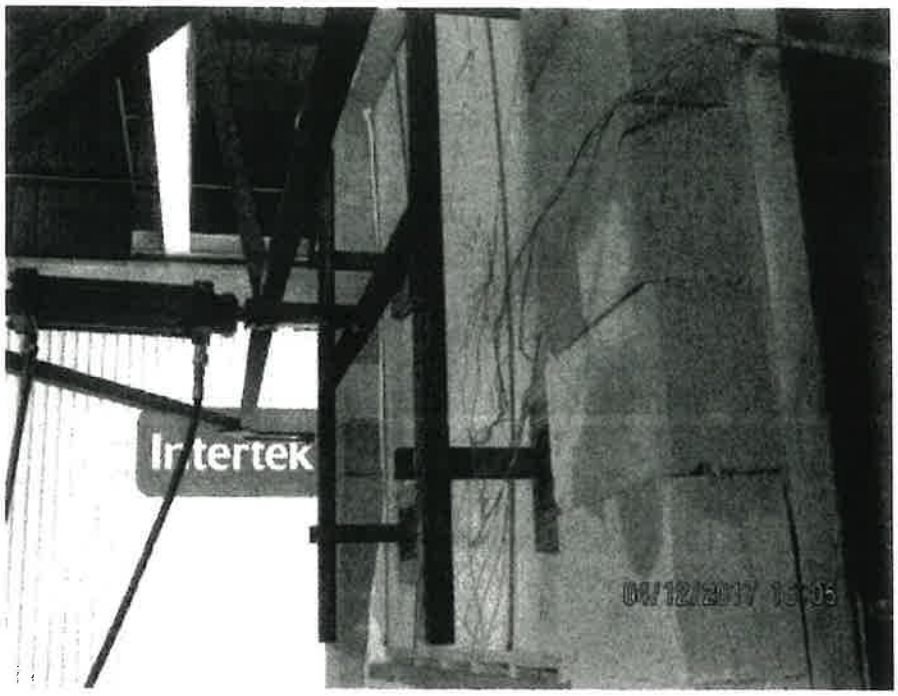

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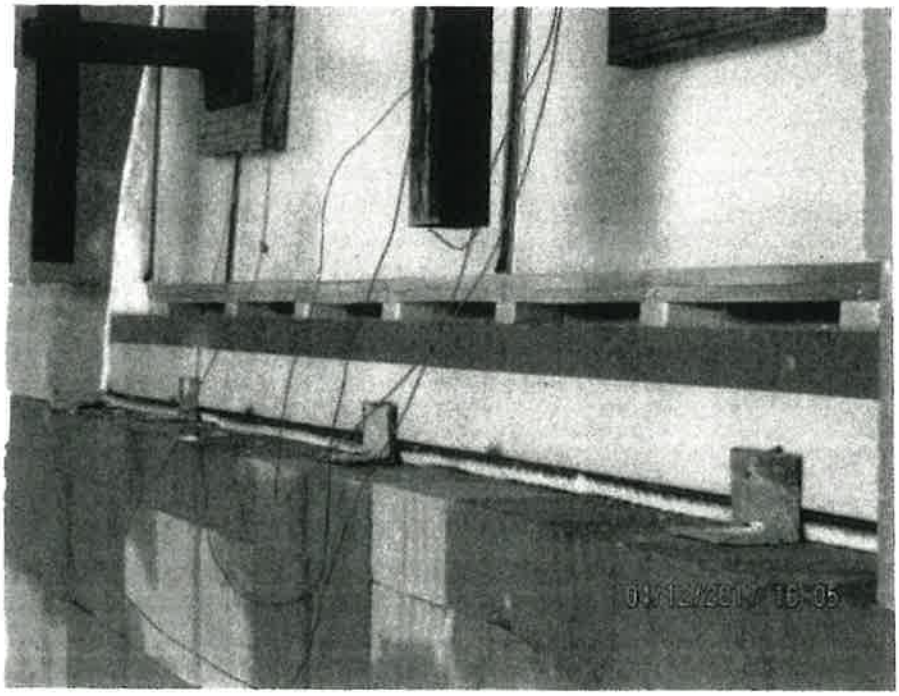

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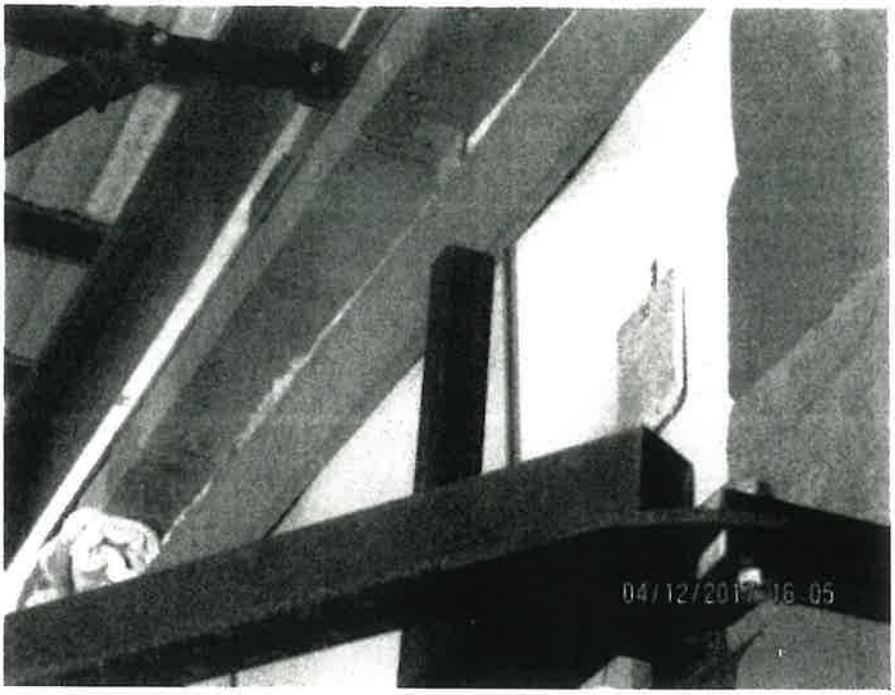
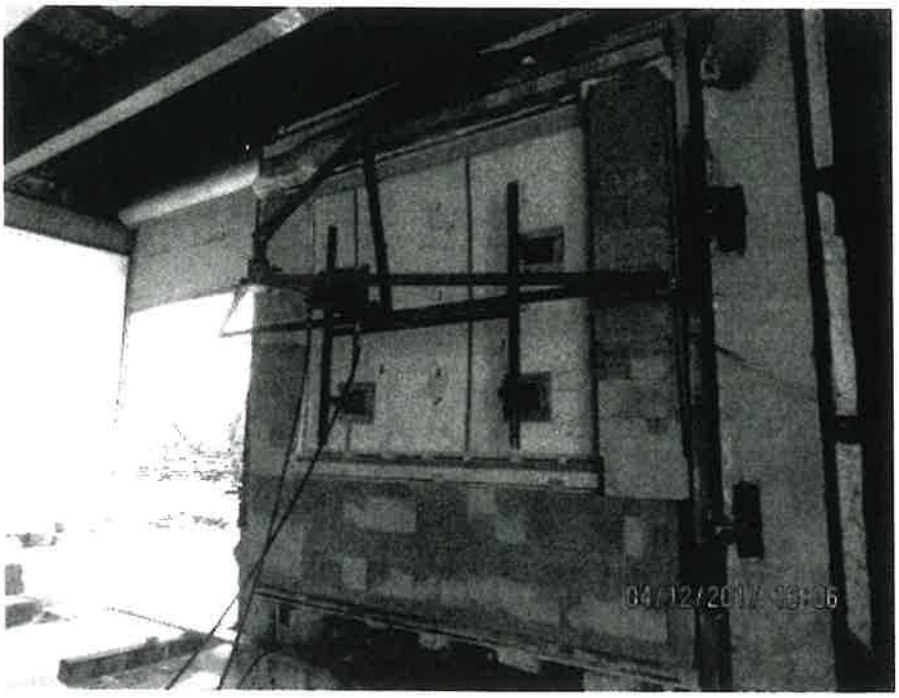
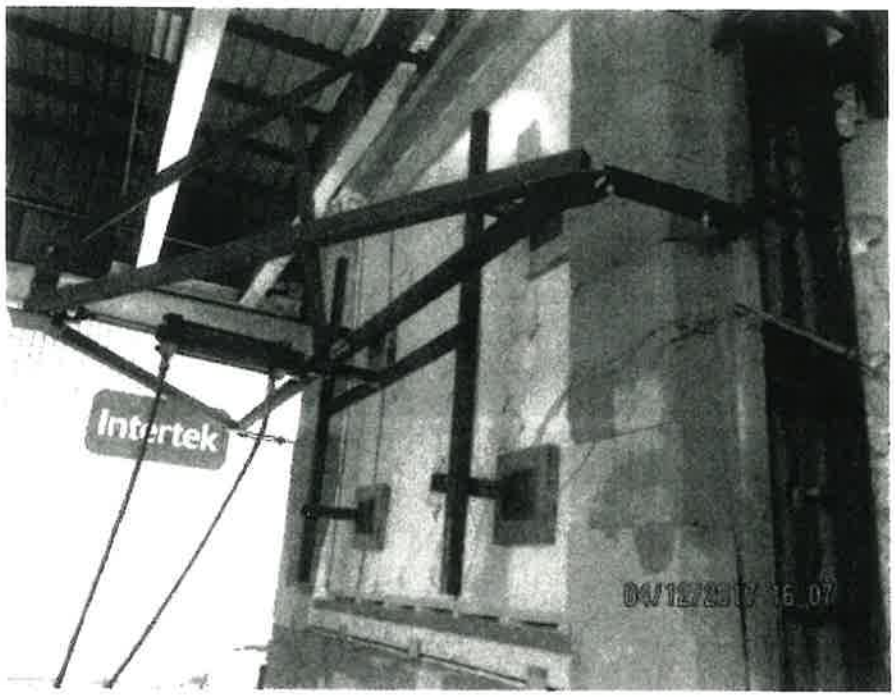
12.

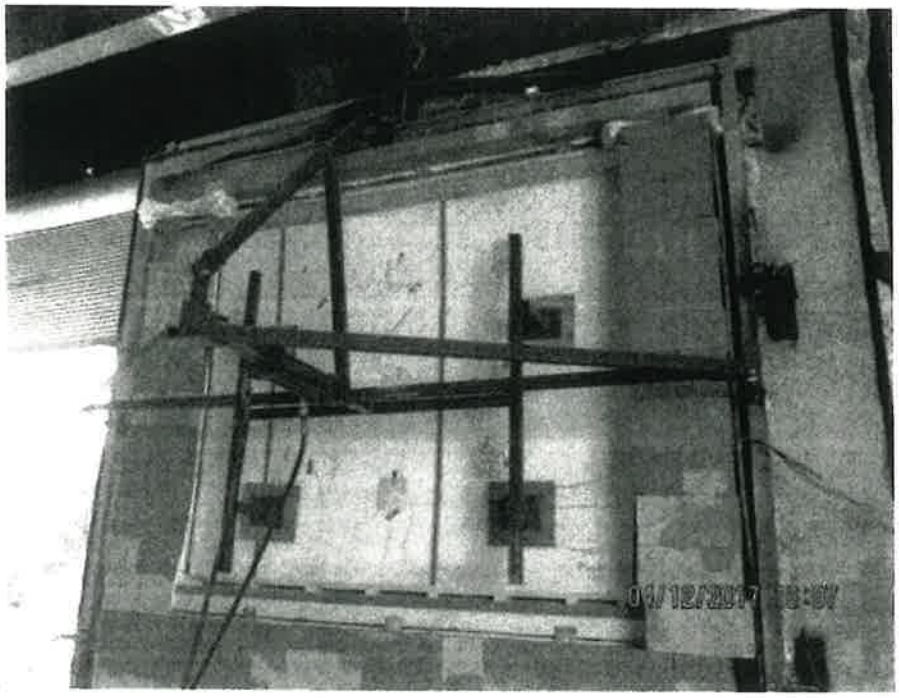


13.





14.



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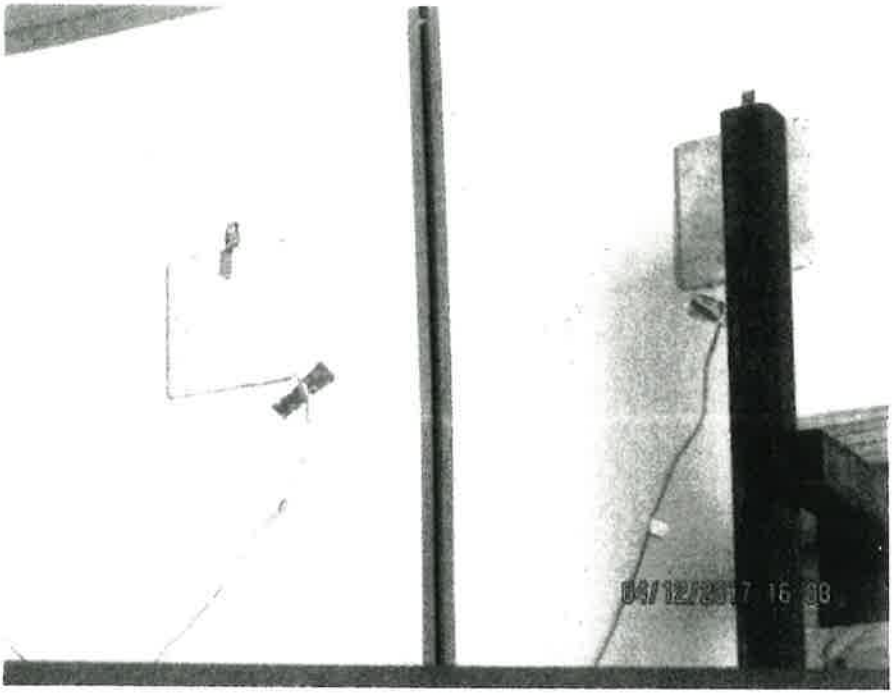
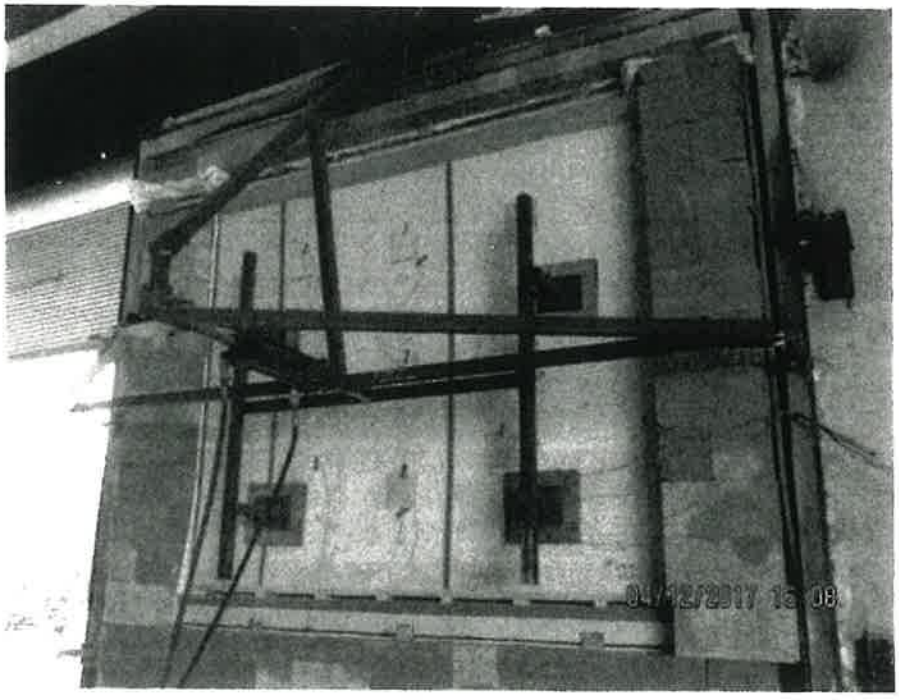
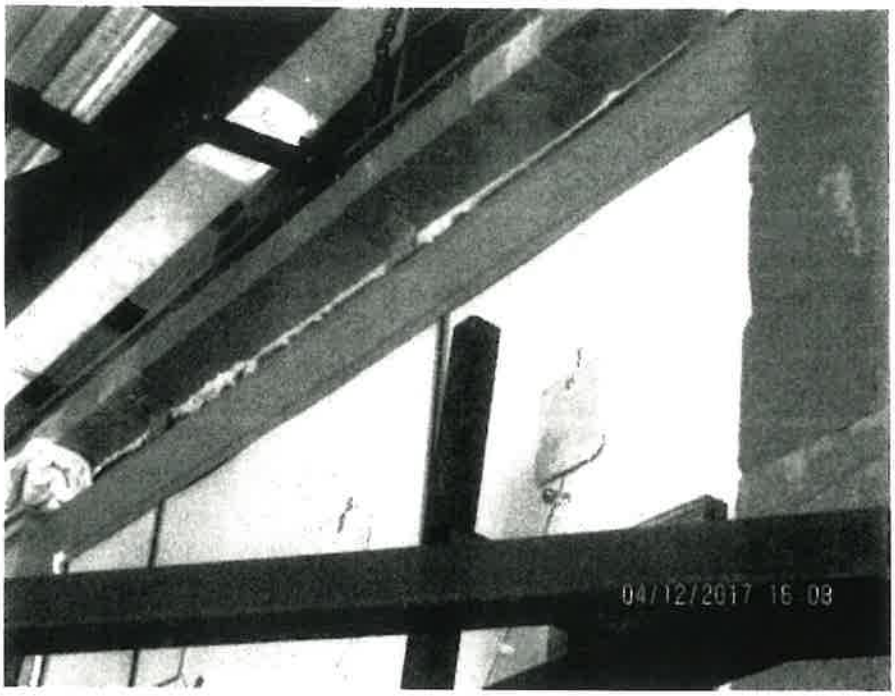


16.



17.

18.



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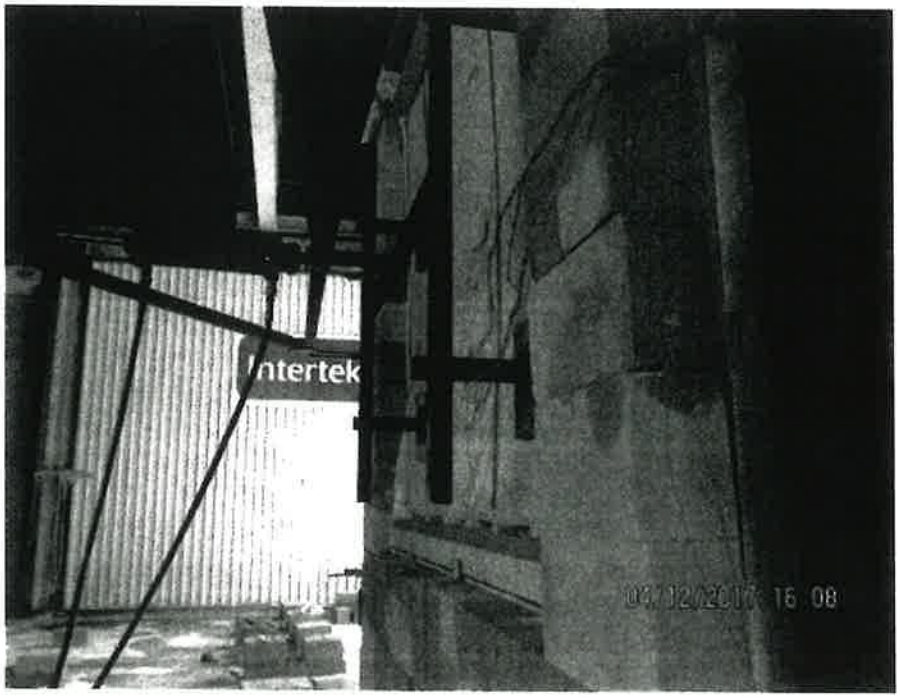

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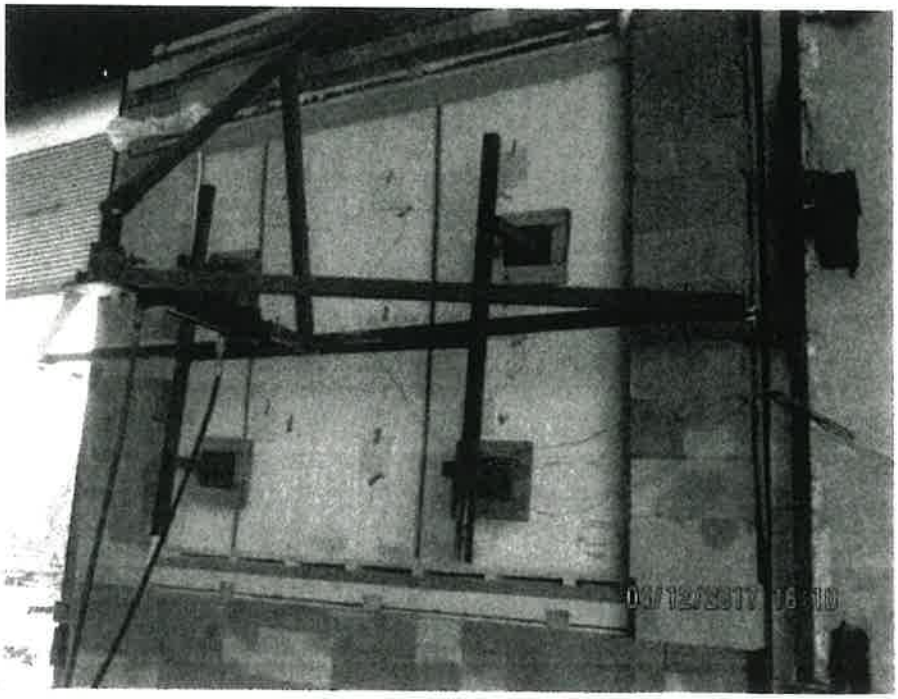

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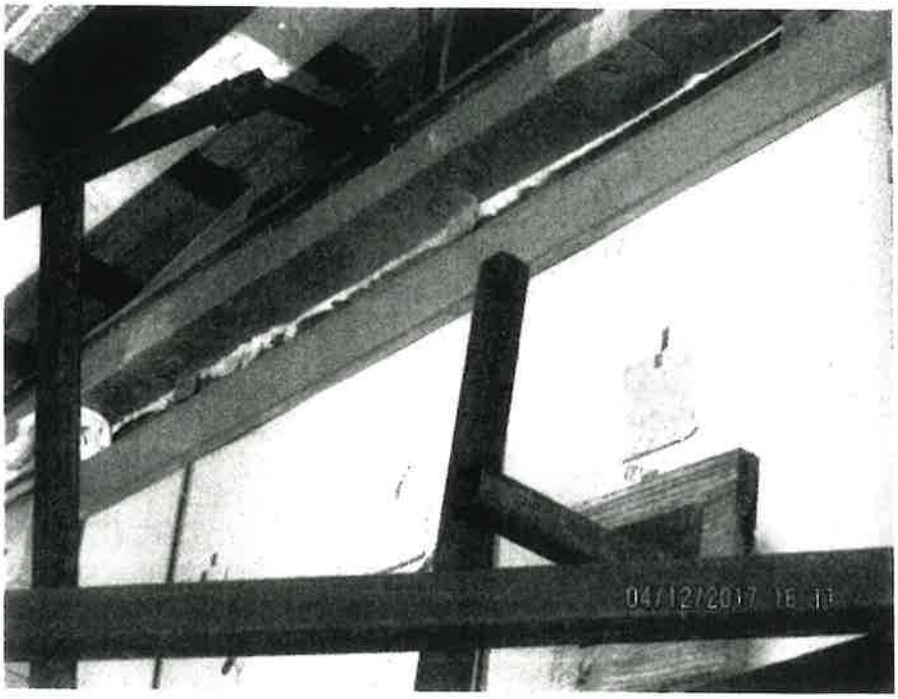

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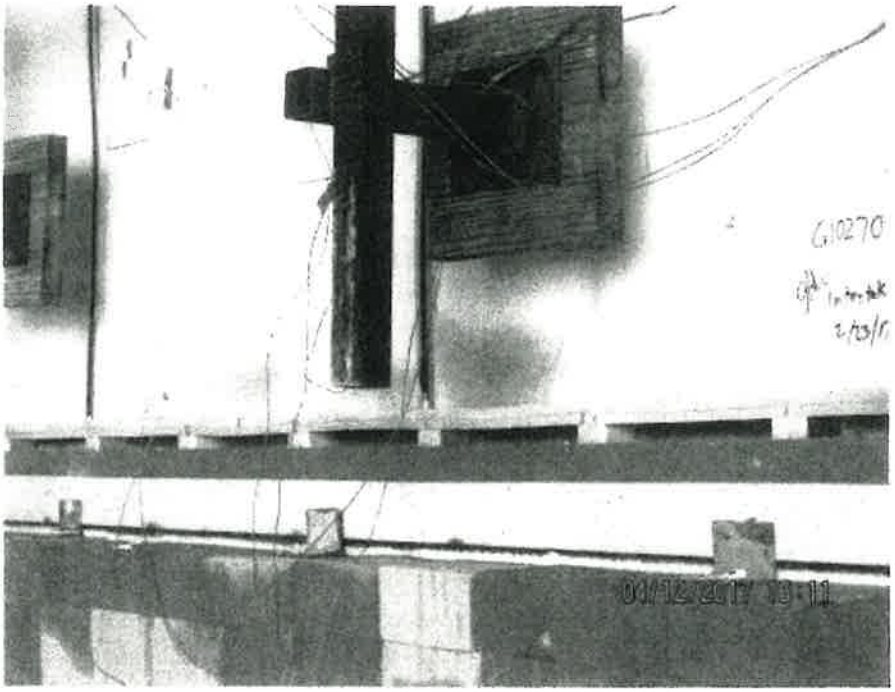
24. 

Post Test Photos

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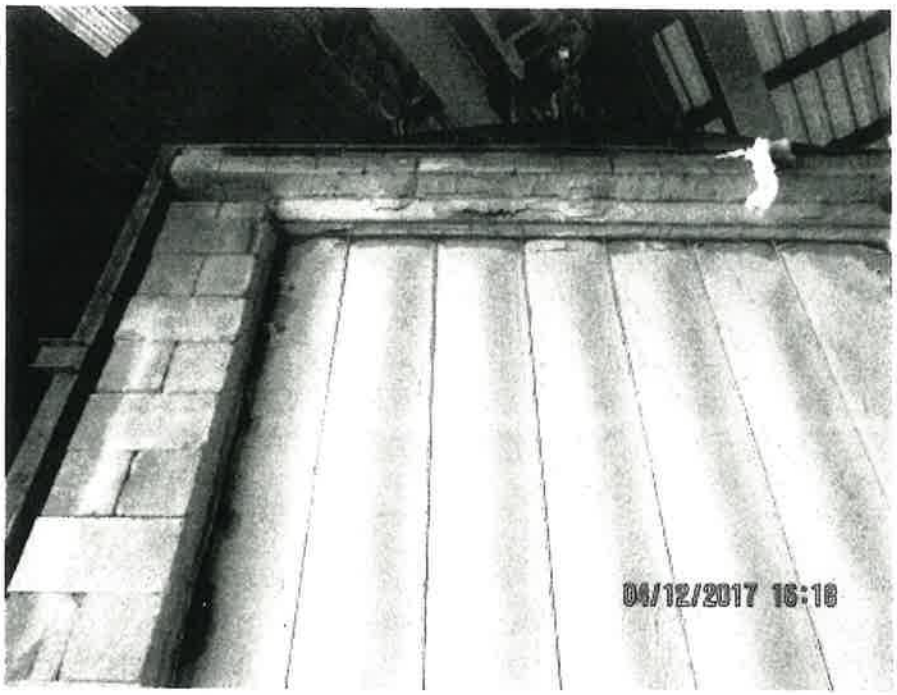
27. 

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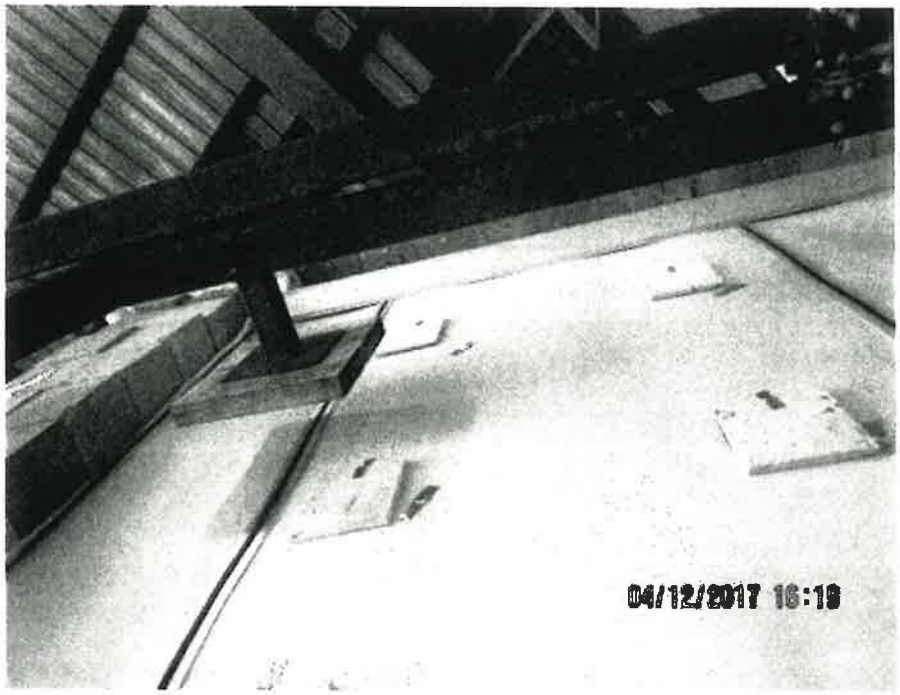

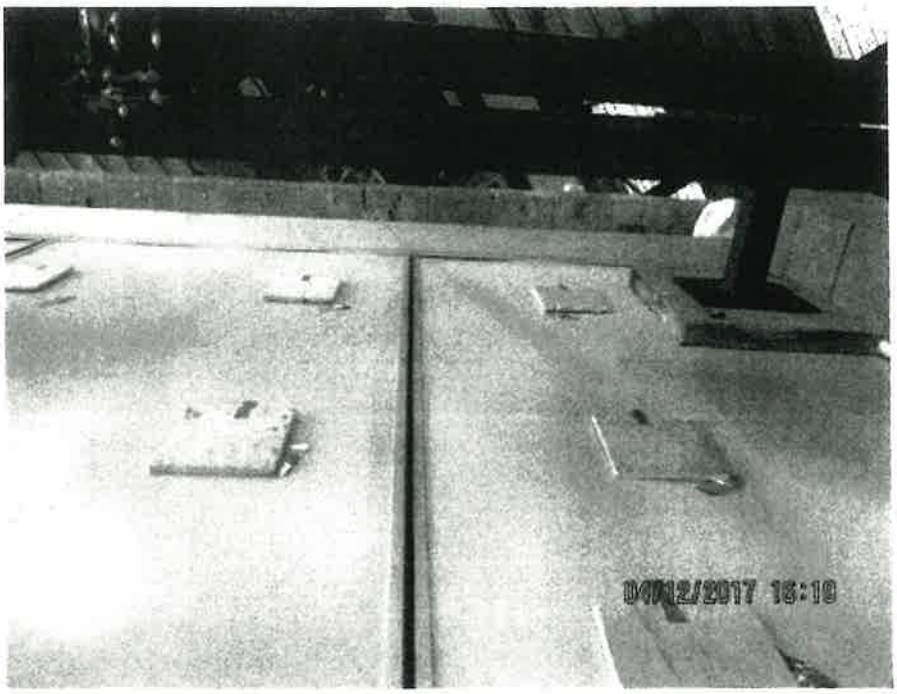

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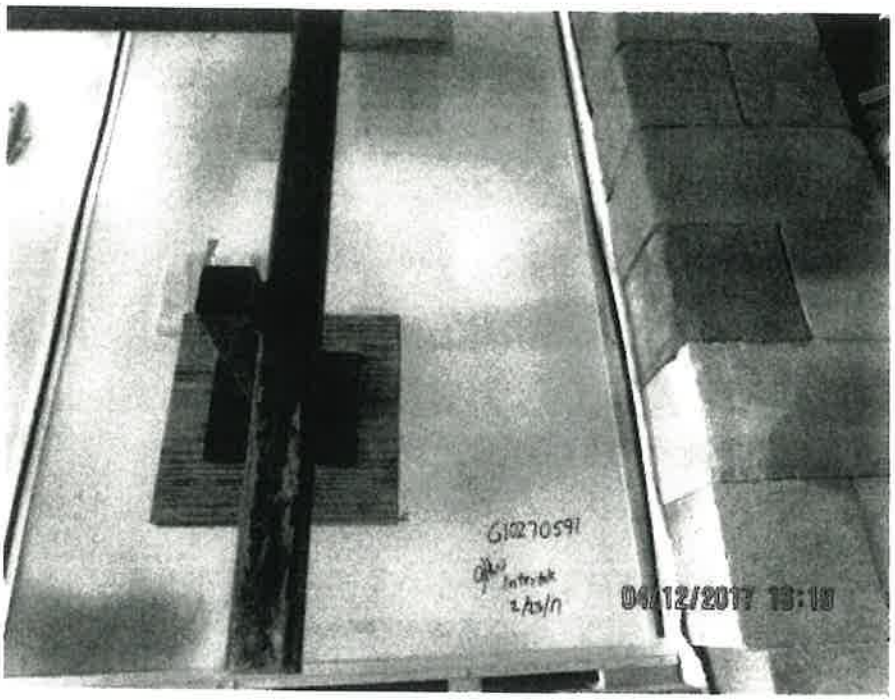

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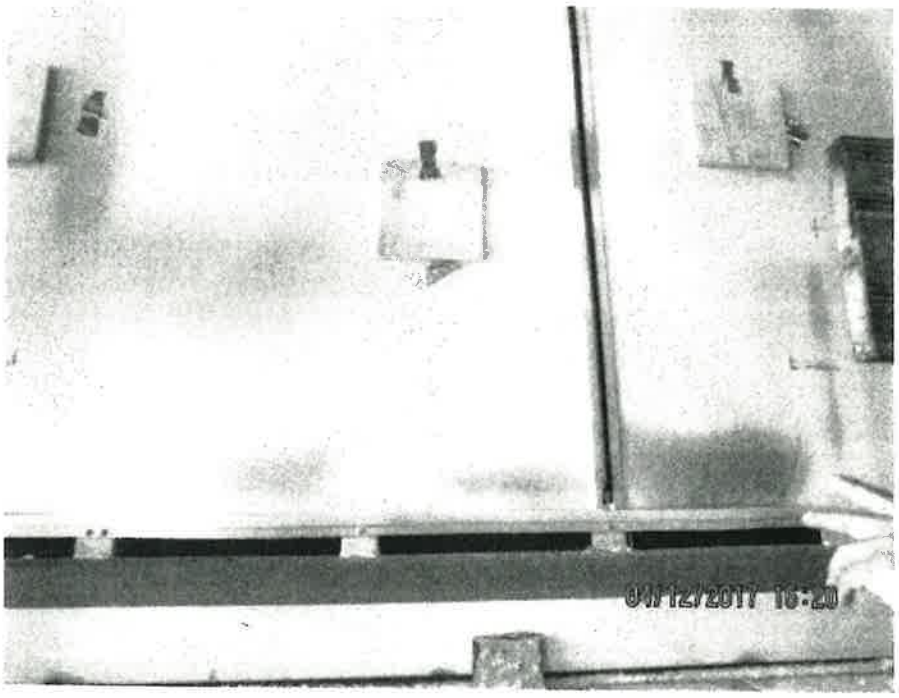

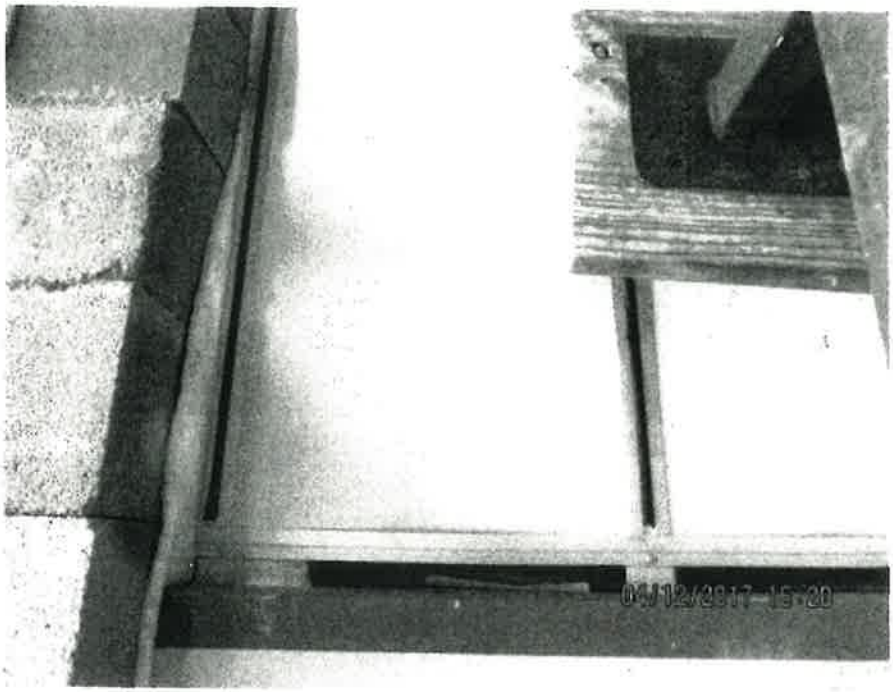

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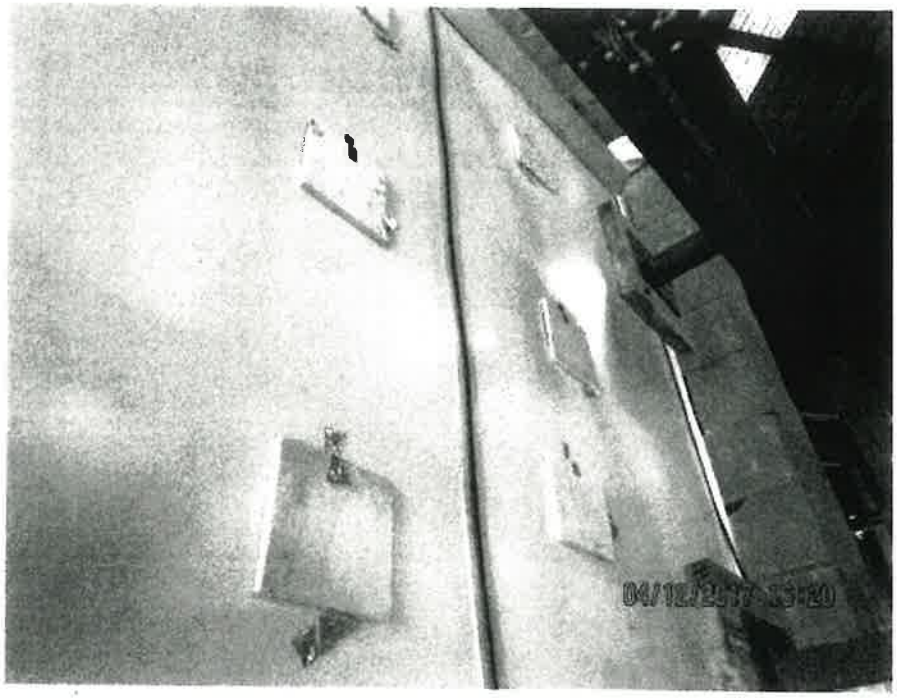

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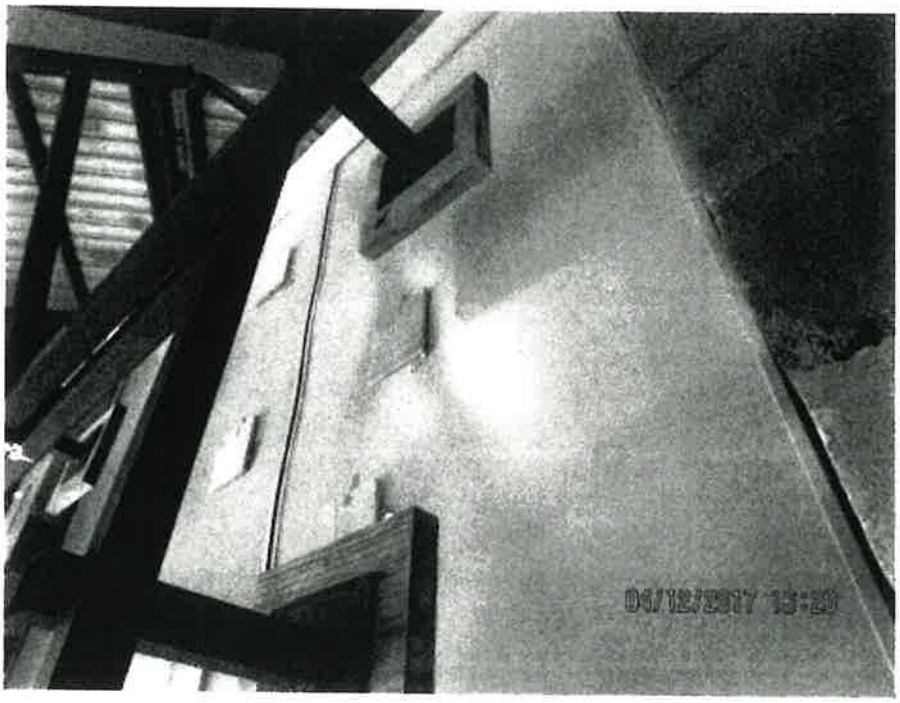

CALIBRATED INSTRUMENTATION USED FOR TESTING

Description	Serial No.	Calibration Due Date
DAQ	99LE004	9/22/2017
Stopwatch	151950620	12/17/2017
Thermo/Hygrometer	151860229	10/23/2017
Pressure Gauge	20TC76-3	5/2/2017
Pressure Gauge	20TC76-1	5/2/2017

REVISION SUMMARY

DATE	SUMMARY
April 24, 2017	Original Issue Date

EXHIBIT G9

Lloyd's Register
Energy

Office: BARCELONA

Date: **26/06/2018**

This certificate is issued to:
Thyssenkrupp Airport Solutions S.A

This is to certify that the undersigned surveyor to Lloyd's Register España S.A., on ThyssenKrupp Airport Systems, S.A. request, reviewed the below listed tests reports for the purpose of evaluating the compliance of Passenger Boarding Bridge Components Fire Tests with the requirements of the standard:

NFPA 415:2016 "Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways".

Following test reports and results, issued by laboratory Applus-LGAI or Intertek Testing Services NA, Inc., were reviewed:

NFPA 415 Section 6.4.6 Test of Walls and Floors

Report No.:	**13/7411-3286 M1,issued by Applus-LGAI**
Tested sample:	Floor Tunnel
Result:	The samples withstand the acceptance criteria set out in clause 6.4.6.3 of NFPA 415:2016 Standard during the entire test, 10 minutes.
Report No.:	**13/7411-3283 M2, issued by Applus-LGAI**
Tested sample:	Vertical wall reference: "Lateral Tunnel"
Result:	The samples withstand the acceptance criteria set out in clause 6.4.6.3 of NFPA 415:2016 Standard during the entire test, 6 minutes.
Report No.:	**14/8437-579, 14/8437-577, 14/8437-578, and 15/10394-2110 issued by Applus-LGAI**
Tested sample:	PBB Tunnel glazed sidewall
Result:	The samples withstand the acceptance criteria set out in clause 6.4.6.3 of NFPA 415:2016 Standard for a minimum period of 5 minutes.
Report No.:	**17/14945-2063 issued by Applus-LGAI**
Tested sample:	Floor Tunnel
Result:	The samples withstand the acceptance criteria set out in clause 6.4.6.3 of NFPA 415:2016 Standard for a minimum period of 5 minutes.

Testing Data Sheets Attached ☒Yes / ☐No

NFPA 415 Section 6.4.7 Test of Flexible Closures

Report No.:	**G101259083SAT-001, issued by Intertek Testing Services NA, Inc**
Tested sample:	Canopy fabric
Result:	The samples withstand the acceptance criteria set out in clauses 6.4.7.2.1 through 6.4.7.2.3 of NFPA 415:2016 Standard.
Report No.:	**101770949SAT-004B, issued by Intertek Testing Services NA, Inc**
Tested sample:	Canopy fabric
Result:	The samples withstand the acceptance criteria set out in clauses 6.4.7.2.1 through 6.4.7.2.3 of NFPA 415:2016 Standard.

NFPA 415 Section 6.4.8 Test of Slat Curtains

Report No.:	**13/7411-3288 M1, issued by Applus-LGAI**
Tested sample:	Slat Curtain - Sample A: "Aluminium Slat Curtain" - Sample B: "Stainless Steel Slat Curtain" - Sample C: "Galvanized Steel Slat Curtain"
Result:	The samples withstand the acceptance criteria set out in clause 6.4.8.2 of NFPA 415:2016 Standard during the entire test, 11 minutes.
Report No.:	**17/13251-1399, issued by Applus-LGAI**
Tested sample:	Slat Curtain - Sample A: "Galvanized steel slat curtain with two types of glasses" - Sample B: "Aluminium slat curtain with two types of glasses"
Result:	The samples withstand the acceptance criteria set out in clause 6.4.8.2 of NFPA 415:2016 Standard during the entire test, 10 minutes.
Report No.:	**13/7411-3284 M1, issued by Applus-LGAI**
Tested sample:	Cabin windows: - Sample A: "(3+3)mm tempered glass" - Sample B: "(6)mm Monolithic Glass E30" - Sample C: "(4+4)mm Thermal tempered glass" - Sample D: "(3+3)mm Thermal Heat Strengthened glass"
Result:	The samples withstand the acceptance criteria set out in clause 6.4.8.2 of NFPA 415:2016 Standard for at least 5 minutes.

NFPA 415 Section 6.4.9 Test of Bumpers

Report No.:	**13/7411-3287 M1,issued by Applus-LGAI**
Tested sample:	Three bumpers: - Sample A: "Triangular Neoprene Bumper" - Sample B: "Round Grey Bumper EPDM" - Sample C: "Round Black Bumper EPDM"
Result:	The samples withstand the acceptance criteria set out in clause 6.4.9.3 of NFPA 415:2016 Standard during the entire test, 10 minutes.

NFPA 415 Section 6.4.10 Test of Miscellaneous Seals

Report No.:	**13/7411-3285 M1, issued by Applus-LGAI**
Tested sample:	Tunnel sealing's
Result:	The samples withstand the acceptance criteria set out in clause 6.4.10.3 of NFPA 415:2016 Standard for a minimum period of 5 minutes.

The above mentioned Fire Tests have been carried out successfully in accordance with the requirements of NFPA 415:2016 and the results comply with the acceptable criteria set out in the corresponding clause. All the recorded test reports includes technical specification of materials, test construction and compliance information.

Barcelona
Lloyd's Register España SA

C. López and Juan Carlos Ortega
Surveyor to Lloyd's Register España S.A.
A member of Lloyd's Register Group

LGAI

LGAI Technological Center, S.A.
Campus UAB - Ronda de la Font del Carme, s/n
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E - 08193 Bellaterra (Barcelona)
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Applus laboratories

Bellaterra, 8 October 2015

To whom it may concern,

APPLUS has carried out a detailed clause to clause analysis between NFPA415: 2013 and 2016 editions, concluding that in chapter 6, related to "aircraft loading Walkways", there is not any additional requirement in 2016 edition, other than those already mentioned in 2013 edition. Hence APPLUS confirms that test with file number 13/7411-3286 M1 performed on 18 November 2013 in our facilities according to NFPA 415:2013, paragraph 6.4.6 requirements, not only fulfills NFPA415:2013 requirements but also NFPA415:2016 ones.

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Applus laboratories

Bellaterra, 8 October 2015

To whom it may concern,

APPLUS has carried out a detailed clause to clause analysis between NFPA415: 2013 and 2016 editions, concluding that in chapter 6, related to "aircraft loading Walkways", there is not any additional requirement in 2016 edition, other than those already mentioned in 2013 edition. Hence APPLUS confirms that test with file number 13/7411-3283 M2 performed on 18 November 2013 in our facilities according to NFPA 415:2013, paragraph 6.4.6 requirements, not only fulfills NFPA415:2013 requirements but also NFPA415:2016 ones.

LGAI

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Bellaterra, 8 October 2015

To whom it may concern,

APPLUS has carried out a detailed clause to clause analysis between NFPA415: 2013 and 2016 editions, concluding that in chapter 6, related to "aircraft loading Walkways", there is not any additional requirement in 2016 edition, other than those already mentioned in 2013 edition. Hence APPLUS confirms that test with file number 14/8437-579 M1 performed on 24 April 2014 in our facilities according to NFPA 415:2013, paragraph 6.4.6 requirements, not only fulfills NFPA415:2013 requirements but also NFPA415:2016 ones.

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X/F

Title:

Test report for the determination of the Fire Resistance of a glazed wall, exposed to fire in accordance with NFPA 415:2013 "Standard on Airport Terminal Buildings, Fueling Ramp Drainage and Loading Walkways".

Tested sample:
"PBB tunnel glazed sidewall" supplied by THYSSENKRUPP AIRPORT SYSTEMS, S.A.

File number: 14/8437-579

Test Laboratory: Applus-LGAI

Test Sponsor:
THYSSENKRUPP AIRPORT SYSTEMS, S.A.
Pol. Ind. Vega de Baiña, s/n
33682 Mieres (Asturias)

Report date:
23 July 2014

Test date:
24 April 2014

This document consists of 39 pages from which 29 are annexes.

RECEIVED MATERIAL

PBB tunnel glazed sidewall" supplied by THYSSENKRUPP AIRPORT SYSTEMS, S.A. has been received. Details of sample is described on clause 3 "Assembly method and fitting of samples" according to technical specifications supplied by the test sponsor (annex C).

REQUESTED TEST

Determination of the fire resistance of a glazed wall exposed to fire in accordance with NFPA 415:2013 "Standard on Airport Terminal Buildings, Fueling Ramp Drainage and Loading Walkways".

INDEX

1. AIM OF TEST

1.1. The sample has been exposed to conditions stated in NFPA 415:2013 "Standard on Airport Terminal Buildings, Fueling Ramp Drainage and Loading Walkways" to check the compliance with the performance criteria established therein.

1.2. The dimensions of the sample to be tested shall be determined based on the construction features of the specific walkway being tested (clause 6.4.6.1 of NFPA 415:2013).

1.3. The effect of exposure to elevated temperatures of working stress seen as worst-case load combinations during actual usage shall be accomplished by a superimposed load to the specimen applied in a manner calculated to develop theoretically the design-allowable stresses contemplated by the design during the test (clause 6.4.6.2 of NFPA 415:2013).

1.4. The applied loads are (clause 6.4.6.2.1 of NFPA 415:2013) :

1.4.1. Roof load: 25 lb/ft^2 (122 kg/m^2).
1.4.2. Wind load: 12.5 lb/ft^2 (61 kg/m^2).

1.5. Acceptance criteria (clause 6.4.6.3 NFPA 415:2013):

1.5.1. Wall section shall sustain the applied load during the fire-endurance test without passage of flame for a minimum period of 5 minutes. Flaming shall not appear on the unexposed face.
1.5.2. The maximum allowable surface temperature of the unexposed face shall not exceed 121ºC during a 5-minute exposure as determined by clause 6.4.4.4 of the NFPA 415:2013.
1.5.3. The maximum allowable temperature of any of the individual points of the unexposed face shall not exceed 157ºC during a 5-minute exposure as determined by clause 6.4.4.4 of the NFPA 415:2013.

1.6. Where the conditions of acceptance place a limitation on the temperature of the unexposed surface, the temperature end point of the fire-endurance period shall be determined by the average of the measurements taken at individual points. If a temperature rise of 30% in excess of the specified limit occurs at any one of these points, the remainder shall be ignored and the fire-endurance period judged as having ended (clause 6.4.4.4 of NFPA 415:2013).

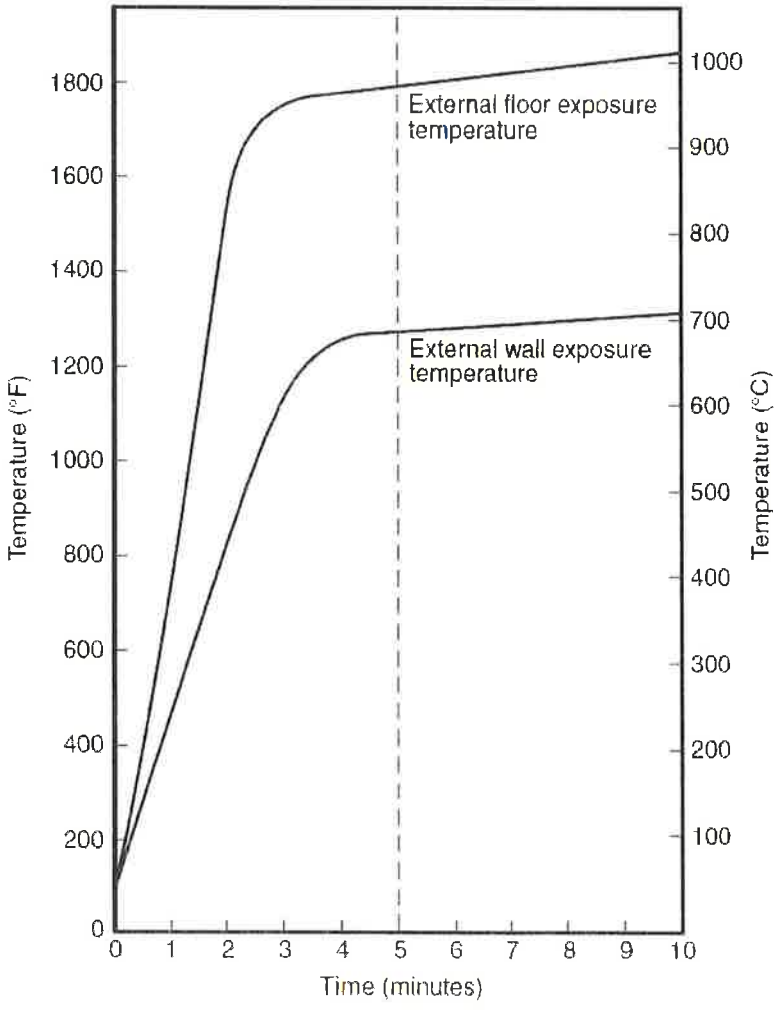
2. GENERAL FEATURES OF FURNACE

The characteristics of the furnace are as follows

- Its dimensions are 3.0 x 3.0 m, in vertical plane.

- The average temperature of the furnace is measured by nine thermocouples placed symmetrically and 152 mm away from the exposed face of the sample, following the instructions of clause 6.4.3 of NFPA 415:2013 standard.

- The average furnace temperature is controlled according to the temperature indicated in Figure 6.4.2 and Table 6.4.2 of NFPA 415:2013 for external wall exposure temperature.



Furnace Time-Temperature curve according to Figure 6.4.2 and Table 6.4.2 of NFPA 415:2013

3. ASSEMBLY METHOD AND FITTING OF SAMPLES

Characteristics of received sample are:

Reference: "PBB tunnel glazed sidewall".

Total dimensions: 2592 mm x 1620 mm (height x width). Remaining dimensions can be consulted in annex C (Technical specifications supplied by the test sponsor).

Glass composition: 28 mm of total thickness. From exposed to unexposed face:

- 6+4 mm laminated glass tempered glass
- 12 mm of air gap
- 6 mm tempered glass

Further details of the sample (including references of glass) can be consulted in annex C.

Support construction.
Sample is screwed at ten points (five per side) to the support construction by means of L shape profiles. No mechanical fixing was used at the top and bottom of the sample. Support construction is made of concrete bricks of 200 mm in thickness

4. TEST PREPARATION

4.1. Furnace thermocouples: nine thermocouples placed symmetrically and 152 mm away from the exposed face of the sample, following the instructions of clause 6.4.3 of NFPA 415:2013 standard.

4.2. Sample is installed on a concrete brick wall of 200 mm of thickness which once assembled, becomes the vertical side of the furnace, as indicated in figure 1.

4.3. Temperature readings are taken at 9 points of the sample unexposed surface (see figure 2):

4.3.1. Five symmetrically located: one at the center (nº 13) and four at the center of its quarter sections (nº 11, 12, 14, 15). These thermocouples are used to verify surface temperature criterion (see clause 1.5.2 of this report).

4.3.2. The remaining thermocouples are located at middle height at 305 mm from the edges (nº 16, 18) and at middle width at 305 mm from the edges (nº 17, 19). These thermocouples are used to verify individual point temperature criterion (see clause 1.5.3 of this report).

4.4. Applied load (acc. to clause 6.4.6.2.1 of NFPA 415:2013)

4.4.1. Wind load:
A total horizontal load of 257 kg (equivalent to 61 kg/m^2) is applied on the sample. It is applied at 9 points outwards the furnace (see figure 2).

4.4.2. Roof load:
A total vertical load of 197.5 kg (equivalent to 122 kg/m^2) is applied on the sample. It is applied all along the top of the sample.

5. AMBIENT CONDITIONS.

Temperature: (20 ± 4) ºC
Relative humidity: (49 ± 3) %
Air velocity across the sample: 0.1 m/s

6. TESTING RESULTS

6.1 Figure 3 shows temperature/time curve of furnace for this test and the standard curve.

6.2 Table 1 shows the furnace temperature during test. It also shows the difference (in %) between the real temperature and the standard temperature. The accuracy of the furnace temperature is never less than 90% of the standard temperature curve (as requested in clause 6.4.3.3 of NFPA 415:2013).

6.3 Figure 4 and table 2 show the temperatures of the thermocouples placed inside the furnace.

6.4 Figure 5 and table 3 show the average temperature of the unexposed face of the sample by averaging thermocouples 11, 12, 13, 14 and 15.

6.5 Figure 6 and table 4 show the individual temperatures of the thermocouples used for the average temperature.

6.6 Figure 7 and table 5 show the temperatures of the thermocouples 16, 17, 18, 19.

6.7 **Summary of the events**

Time	REMARKS DURING THE TEST
0	Ambient temperature: 20 ºC Test starting time: 11:00
2′	No remarks to report
3′	No remarks to report
5′	No remarks to report
6′	Detachment of the first layer of glass
8′30″	Flame appearance.
8′45″	Average temperature > 121ºC
9′	Detachment of the entire sample. End of test.

6.8 **Compliance with acceptance criteria:**

Acceptance criteria defined in clause 1.5 of this report are maintained for 8 minutes.

7. CONCLUSION.

The tested sample, "PBB tunnel glazed sidewall", supplied by THYSSENKRUPP AIRPORT SYSTEMS, S.A., was tested in accordance with NFPA 415:2013 "Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways".

Sample	Flaming on the unexposed side during 5 minute test period	Temperature criteria compliance during 5 minute test period	Met minimum requirements of NFPA 415:2013.
"PBB tunnel glazed sidewall"	NO	YES	YES

The sample withstands the acceptance criteria set out in clause 6.4.6.3 of NFPA 415:2013 Standard for a minimum period of 5 minutes.

8. UNCERTAINITIES.

The uncertainties on the furnace thermocouples do not surpass ± 15ºC.
The uncertainties of the ambient thermocouples and thermocouples on the unexposed face of the sample do not surpass ± 4ºC
The uncertainties of other thermocouples do not surpass ± 10ºC

The expanded uncertainty of the measure has been expressed as to the typical uncertainty of the measure multiplied by a covering factor k = 2 which corresponds to a probability for a normal distribution of approximately 95%.

Firmado digitalmente por Jordi Mirabent Junyent

Responsible of Fire Laboratory
LGAI Technological Center, S.A.

Digitally Signed By Albert Ger

Responsible of Fire Resistance
LGAI Technological Center, S.A.

The results refer exclusively to the sample, product or material surrendered to the Laboratory, just as it is informed in the section of received material and tested under the conditions indicated in the norms mentioned in this document.

Quality Service Warranty

Applus+, guaranties that this work has been realized following the exigencies of our Quality and Sustainable System, complying with honouring the contractual conditions and the legal standard.

We would be very grateful if you would send us any comment you consider appropriate , addressing either to the signatory of this document or to the Applus+ Quality Director, to the direction satisfaccion.cliente@appluscorp.com

9. ANNEXES:

A. - PICTURES

B. - FIGURES

C. - TECHNICAL SPECIFICATIONS PROVIDED BY THE TEST SPONSOR.

A. PICTURES.

PICTURE no 1. Detail of the sample before the test.

PICTURE no 2. General view of the furnace and sample at starting time.

PICTURE no 3. View of the sample during the test.

PICTURE no 4. View of the sample at the end of test, minute 9.

B. FIGURES

26. -

TEST SCHEMA

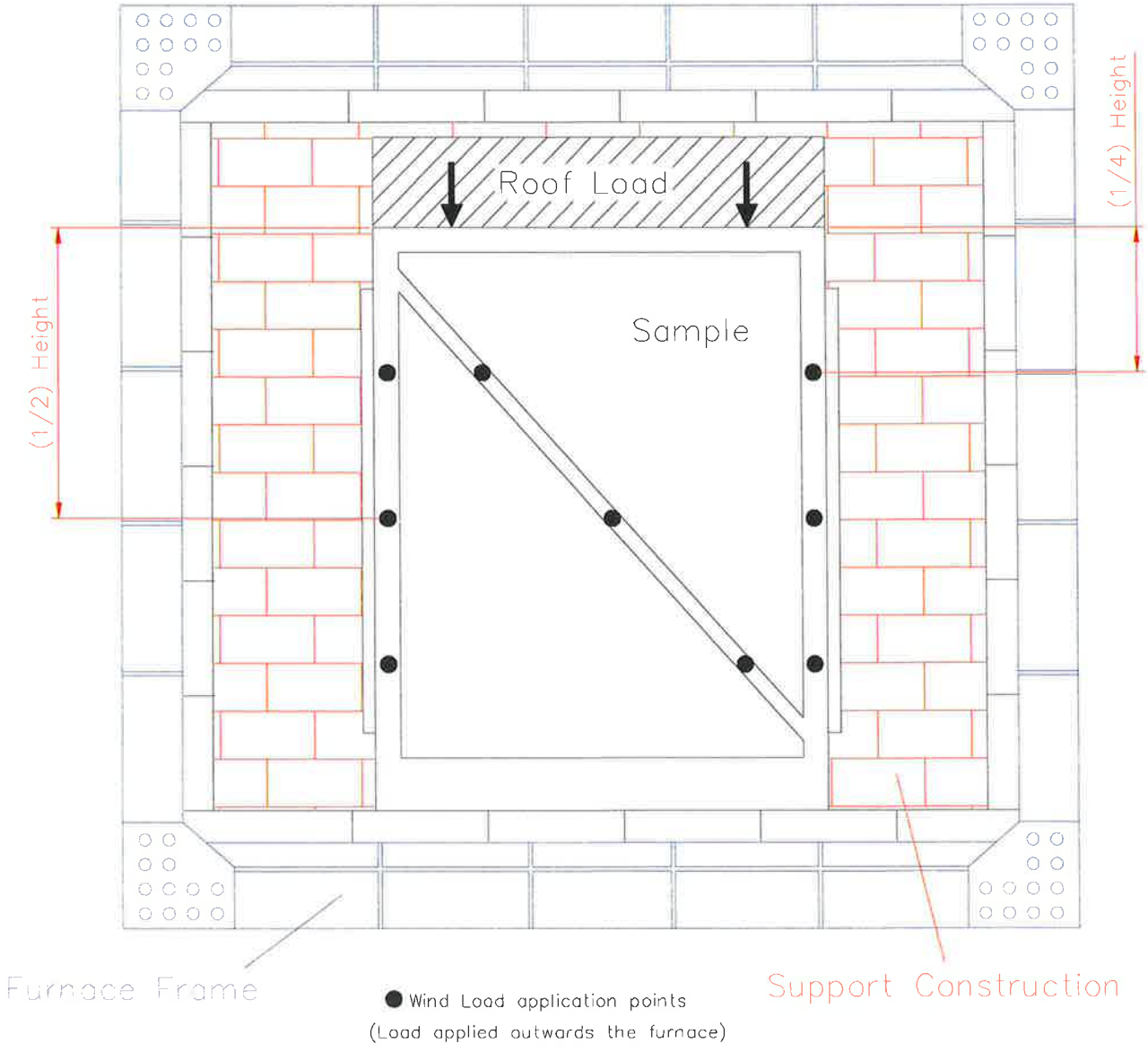


FIGURE N° 1

THERMOCOUPLE LAYOUT

Thermocouples placed on the unexposed face of the sample

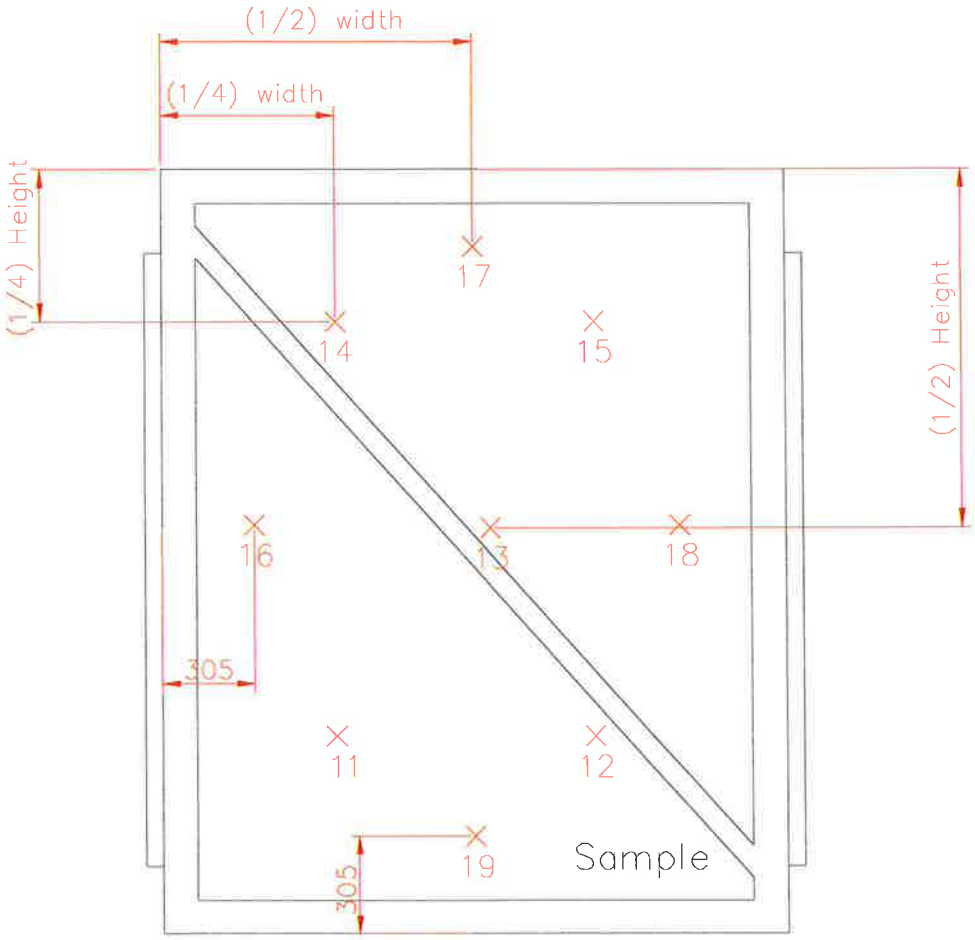


FIGURE N° 2

FURNACE AVERAGE TEMPERATURE

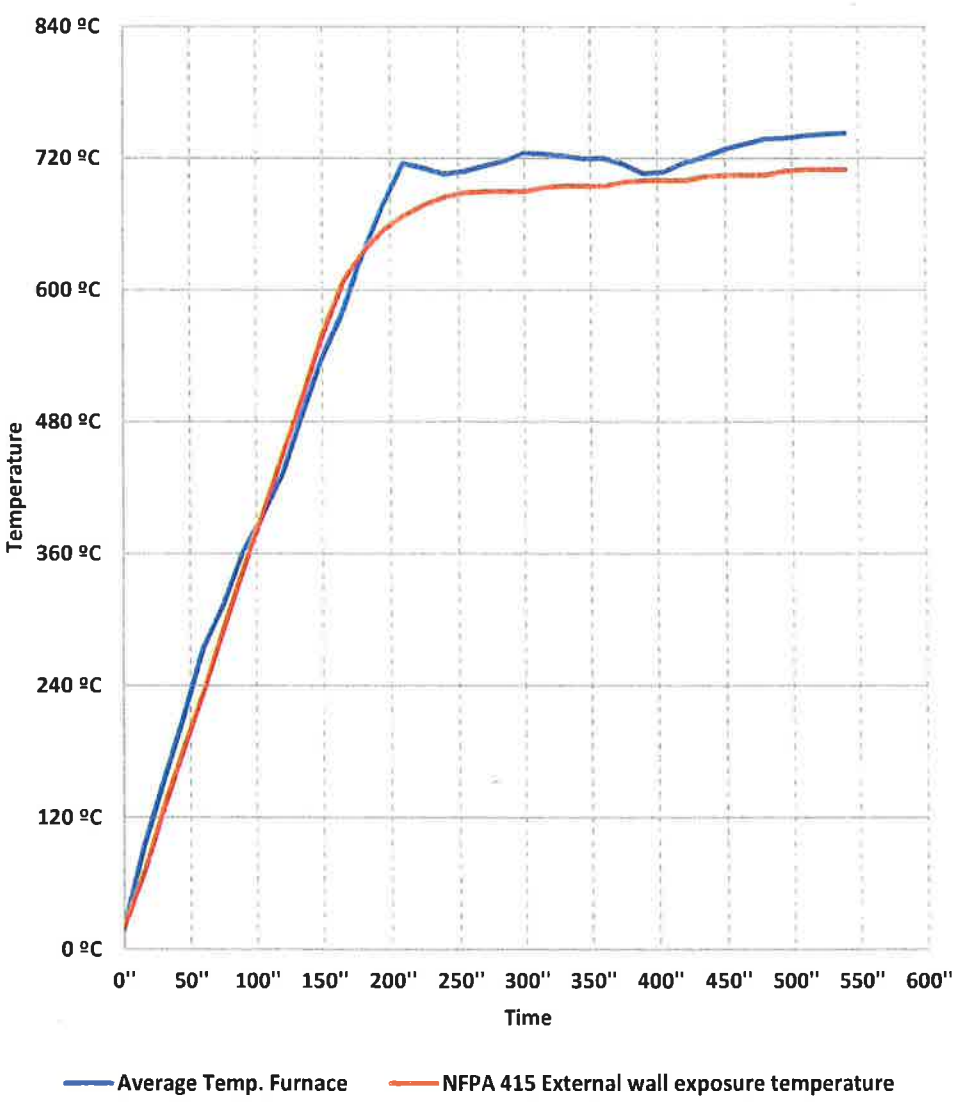


Figure 3

FURNACE AVERAGE TEMPERATURE

Time (sec)	Furnace average temperature	Temperature acc. NFPA 415	Difference between real temperature and standard temperature
0"	19 ºC	20 ºC	-5,3 %
15"	94 ºC	70 ºC	25,4 %
30"	155 ºC	130 ºC	15,9 %
45"	212 ºC	183 ºC	13,7 %
60"	275 ºC	235 ºC	14,5 %
75"	314 ºC	292 ºC	6,9 %
90"	362 ºC	345 ºC	4,6 %
105"	395 ºC	397 ºC	-0,6 %
120"	432 ºC	450 ºC	-4,2 %
135"	485 ºC	502 ºC	-3,4 %
150"	538 ºC	560 ºC	-4,1 %
165"	580 ºC	608 ºC	-4,8 %
180"	632 ºC	635 ºC	-0,4 %
195"	678 ºC	655 ºC	3,4 %
210"	716 ºC	668 ºC	6,7 %
225"	711 ºC	678 ºC	4,7 %
240"	706 ºC	685 ºC	3,0 %
255"	708 ºC	689 ºC	2,7 %
270"	713 ºC	690 ºC	3,3 %
285"	717 ºC	690 ºC	3,8 %
300"	725 ºC	690 ºC	4,9 %
315"	724 ºC	694 ºC	4,2 %
330"	722 ºC	695 ºC	3,8 %
345"	720 ºC	695 ºC	3,5 %
360"	720 ºC	695 ºC	3,5 %
375"	715 ºC	699 ºC	2,3 %
390"	707 ºC	700 ºC	0,9 %
405"	708 ºC	700 ºC	1,1 %
420"	716 ºC	700 ºC	2,3 %
435"	722 ºC	704 ºC	2,4 %
450"	729 ºC	705 ºC	3,3 %
465"	733 ºC	705 ºC	3,8 %
480"	738 ºC	705 ºC	4,5 %
495"	739 ºC	709 ºC	4,0 %
510"	741 ºC	710 ºC	4,2 %
525"	742 ºC	710 ºC	4,4 %
540"	743 ºC	710 ºC	4,5 %

Table 1

INDIVIDUAL TEMPERATURES OF THE FURNACE

Individual temperatures of the thermocouples placed inside the furnace.

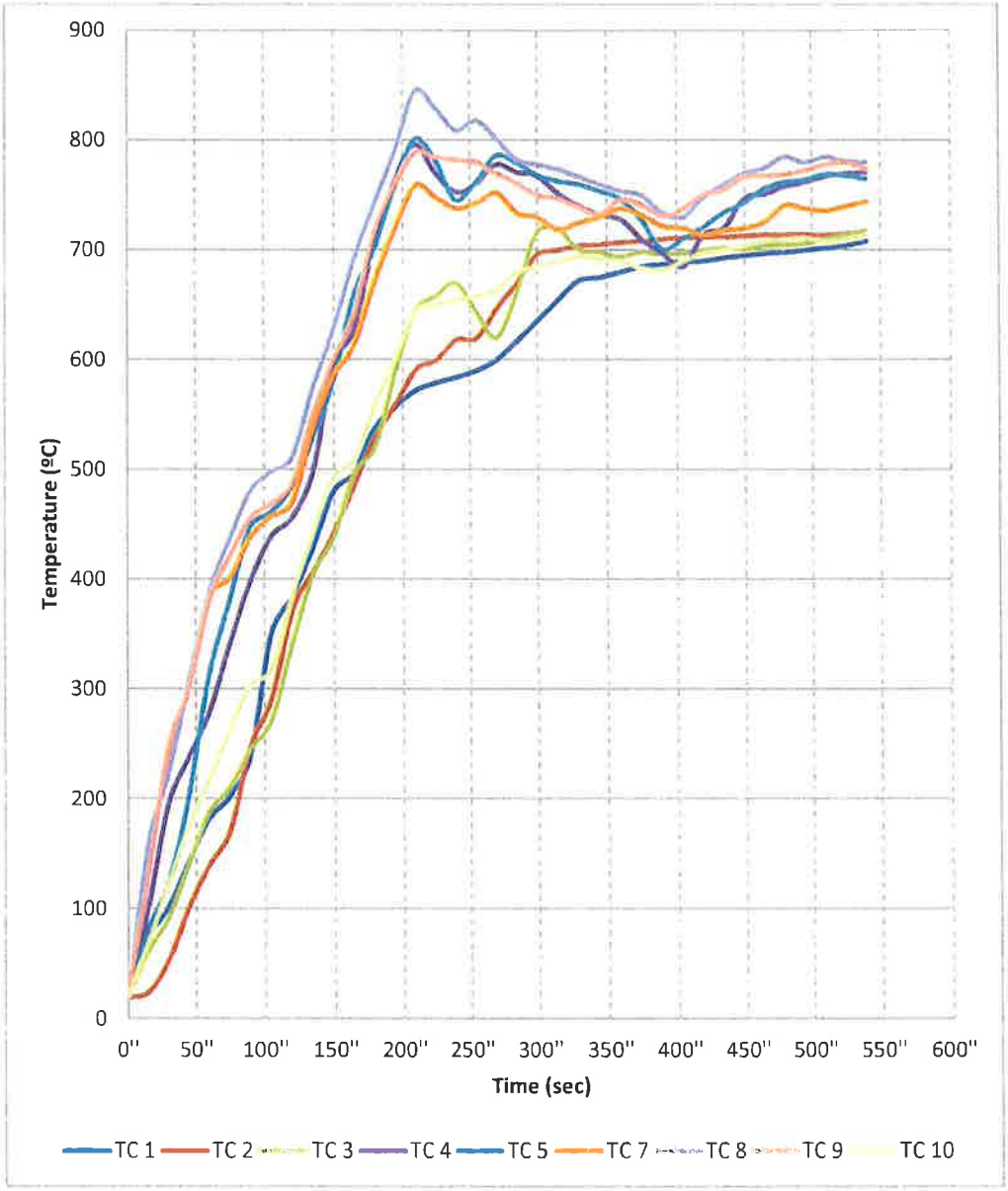


Figure 4

INDIVIDUAL TEMPERATURES OF THE FURNACE

Individual temperatures of the thermocouples placed inside the furnace.
Note: due to an electrical failure, tc 6 was no used. Tc 10 was used instead.

Time (sec)	Tc 1 (ºC)	Tc 2 (ºC)	Tc 3 (ºC)	Tc 4 (ºC)	Tc 5 (ºC)	Tc 7 (ºC)	Tc 8 (ºC)	Tc 9 (ºC)	Tc 10 (ºC)
0	19	19	19	18	18	18	18	22	20
15	73	24	61	101	81	147	160	130	68
30	101	53	91	195	123	235	223	249	121
45	143	102	140	238	202	301	308	300	174
60	182	140	188	279	313	384	388	381	218
75	202	171	210	341	380	401	437	421	261
90	239	248	245	398	447	438	480	456	304
105	350	291	271	439	461	457	498	469	317
120	384	372	340	456	484	470	511	487	384
135	429	407	404	498	529	537	574	550	441
150	480	443	438	595	581	585	628	600	493
165	497	487	497	627	658	614	692	641	509
180	538	529	520	710	701	673	743	718	558
195	557	560	589	764	758	721	791	760	601
210	572	591	645	796	801	759	845	789	644
225	579	600	658	770	782	748	829	785	650
240	584	618	670	753	746	738	809	782	654
255	590	620	644	760	761	743	818	780	658
270	600	647	620	778	786	752	802	770	664
285	617	670	661	771	780	734	783	761	680
300	635	696	716	768	769	730	778	750	685
315	654	700	720	752	763	719	774	747	690
330	672	704	701	740	760	725	767	739	694
345	675	705	698	732	754	730	760	733	692
360	680	707	694	728	747	738	754	746	690
375	685	708	698	710	728	732	750	741	684
390	687	710	696	697	701	722	734	731	681
405	689	711	697	685	710	720	730	738	690
420	690	712	700	714	721	714	748	751	697
435	693	712	702	720	734	718	760	755	700
450	695	713	701	747	743	720	770	767	704
465	697	714	704	751	756	726	775	768	708
480	698	714	705	758	762	741	785	769	710
495	700	714	706	762	764	738	780	773	711
510	702	714	710	767	769	736	785	778	708
525	704	715	714	770	768	740	781	780	710
540	708	717	718	771	765	744	780	774	714

Table 2

AVERAGE TEMPERATURE

Average temperature of the unexposed face of the sample (averaging tc's 11, 12, 13, 14 and 15).

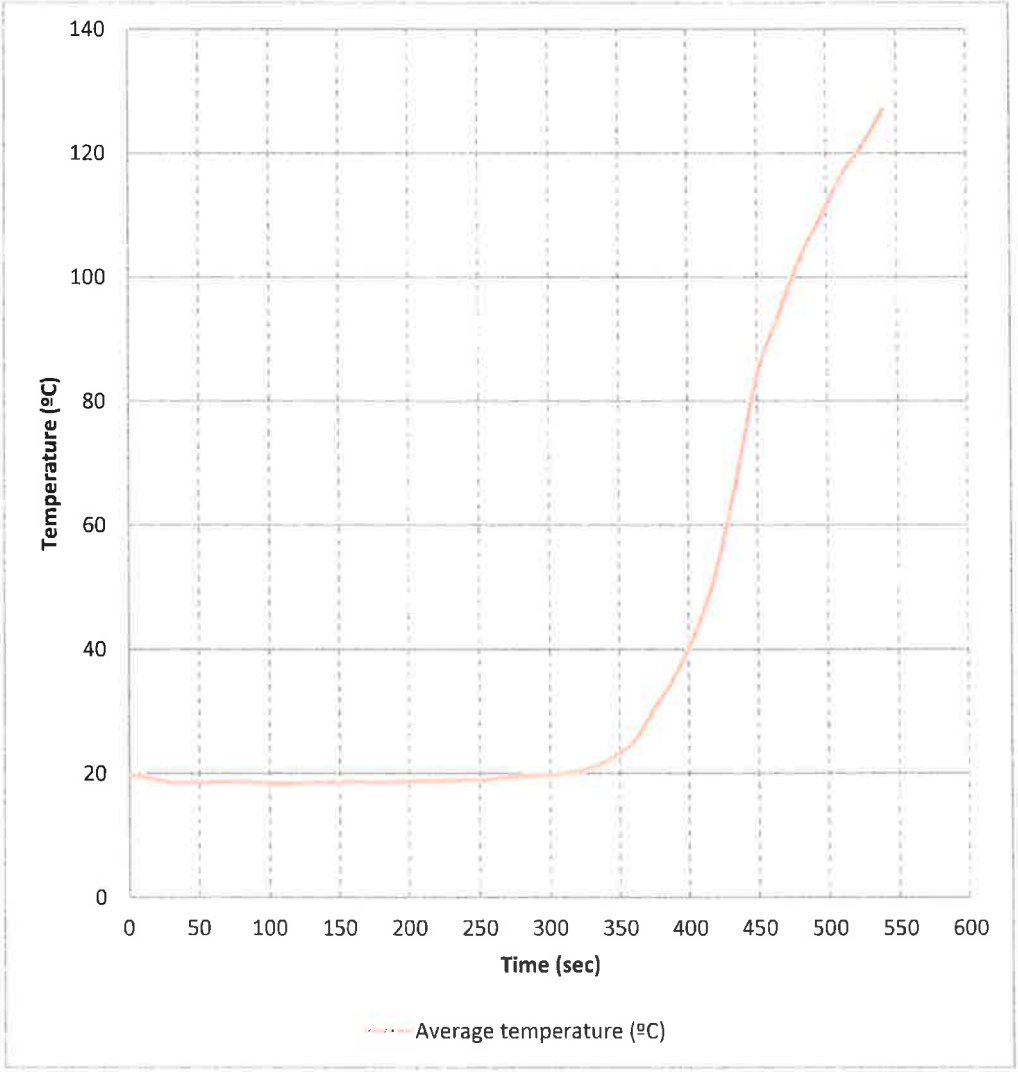


Figure 5

AVERAGE TEMPERATURE

Average temperature of the unexposed face of the sample (averaging tc's 11, 12, 13, 14 and 15).

Time (sec)	Average temperature (ºC)
0	20
15	19
30	19
45	19
60	19
75	19
90	19
105	18
120	18
135	19
150	19
165	19
180	19
195	19
210	19
225	19
240	19
255	19
270	19
285	20
300	20
315	20
330	21
345	23
360	25
375	31
390	36
405	43
420	53
435	68
450	85
465	94
480	103
495	109
510	116
525	121
540	127

Table 3

INDIVIDUAL TEMPERATURES

Individual temperatures of thermocouples used for the average temperature of the unexposed face of the sample.

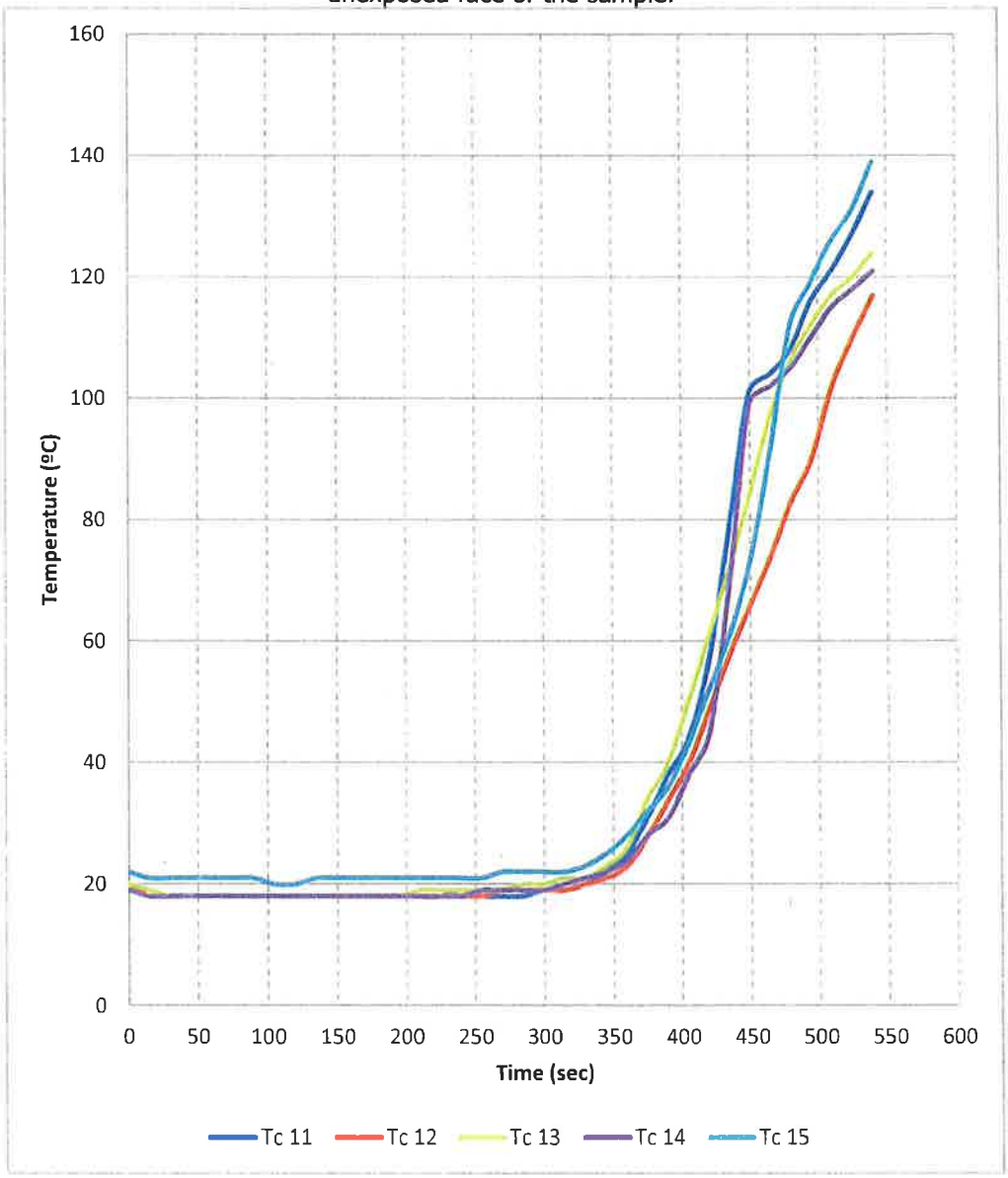


Figure 6

INDIVIDUAL TEMPERATURES

Individual temperatures of thermocouples used for the average temperature of the unexposed face of the sample.

Time (sec)	Tc 11 (ºC)	Tc 12 (ºC)	Tc 13 (ºC)	Tc 14 (ºC)	Tc 15 (ºC)
0	19	19	20	19	22
15	19	19	19	18	21
30	18	18	18	18	21
45	18	18	18	18	21
60	18	18	18	18	21
75	18	18	18	18	21
90	18	18	18	18	21
105	18	18	18	18	20
120	18	18	18	18	20
135	18	18	18	18	21
150	18	18	18	18	21
165	18	18	18	18	21
180	18	18	18	18	21
195	18	18	18	18	21
210	18	18	19	18	21
225	18	18	19	18	21
240	19	18	19	18	21
255	18	18	19	19	21
270	18	19	19	19	22
285	18	19	20	19	22
300	19	19	20	19	22
315	19	19	21	20	22
330	20	20	21	21	23
345	22	21	23	22	25
360	25	23	26	24	28
375	31	28	34	28	32
390	38	34	40	31	36
405	44	40	50	38	43
420	57	49	61	45	52
435	79	58	72	70	61
450	101	66	84	99	73
465	104	74	97	102	91
480	108	83	106	105	112
495	116	90	112	110	119
510	121	102	117	115	126
525	127	110	120	118	131
540	134	117	124	121	139

Table 4

INDIVIDUAL TEMPERATURES

Individual temperatures of thermocouples used to verify the individual point temperature criterion, placed on the unexposed face of the sample.

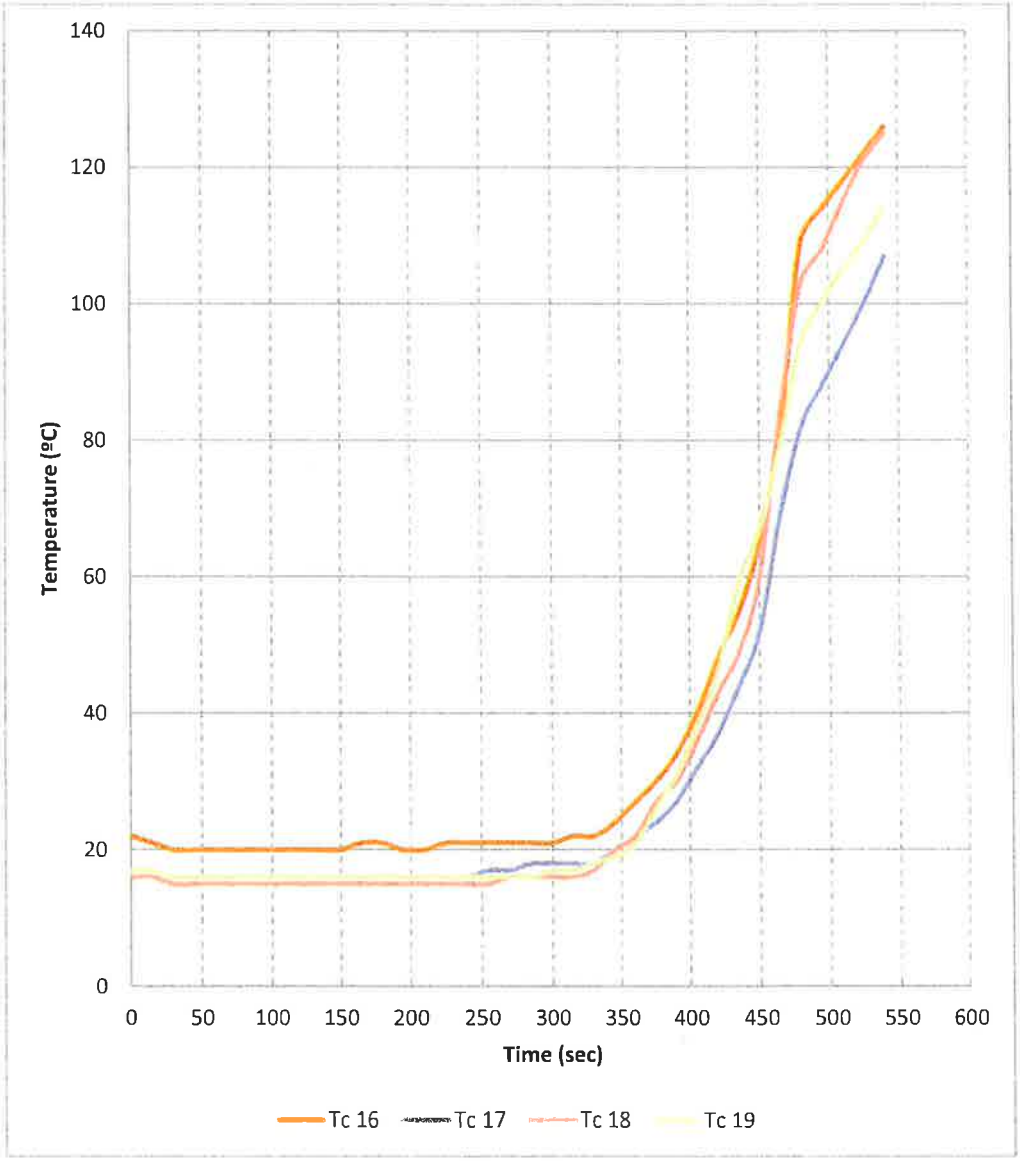


Figure 7

INDIVIDUAL TEMPERATURES

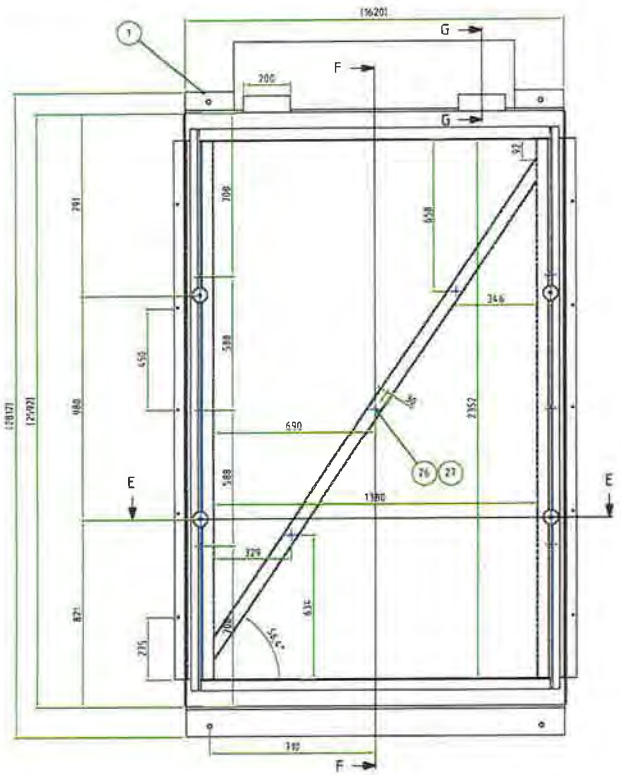
Individual temperatures of thermocouples used to verify the individual point temperature criterion, placed on the unexposed face of the sample.

Time (sec)	Tc 16 (ºC)	Tc 17 (ºC)	Tc 18 (ºC)	Tc 19 (ºC)
0	22	17	16	17
15	21	17	16	17
30	20	16	15	16
45	20	16	15	16
60	20	16	15	16
75	20	16	15	16
90	20	16	15	16
105	20	16	15	16
120	20	16	15	16
135	20	16	15	16
150	20	16	15	16
165	21	16	15	16
180	21	16	15	16
195	20	16	15	16
210	20	16	15	16
225	21	16	15	16
240	21	16	15	16
255	21	17	15	16
270	21	17	16	16
285	21	18	16	16
300	21	18	16	17
315	22	18	16	17
330	22	18	17	18
345	24	20	20	19
360	27	22	22	21
375	30	24	27	26
390	34	27	30	31
405	40	32	36	38
420	48	37	43	46
435	55	44	49	59
450	65	52	60	67
465	81	69	84	79
480	109	82	103	94
495	114	88	108	100
510	118	94	115	105
525	122	100	121	109
540	126	107	125	114

Table 5

C.- TECHNICAL SPECIFICATIONS PROVIDED BY THE TEST SPONSOR.

26. -



ACORDING TO NFPA 415-13 6.4.6.2.1

-WIND LOAD 61 Kg/m2 = 257 Kg
AREA 2592x1620 mm APPLIED TO THE TOOL
-UPPER LOAD 122Kg/m2 = 197.5 Kg

-POS 26 and 27, in holes of the rear side to apply wind load

Pos	Cntdad	Descripción	Material
27	9	Rivet hul M8x16.5	S-eel (Zn)
26	9	EYE BOLT SCREW M8 DIN 580 A2	S-eel
25	1	Adhesive	Adhesive
24	1	White double-coated tape 12x0,8mm	Adhesive
23	1	Weigh 70x300x1200 mm (197,5 Kg)	S235JR
22	2	Fireproof support	Silicate
21	1	Screw ISO 10642 M8x55	A2-70
20	4	Washer for ISO 10642	S235JR (Zn)
19	4	Rubber washer	EPDM
18	1	Fireproof Sealant	Sealant
17	5 m	Black silicate paper 15x18	Silicate
16	2	Tube 10x10x2457mm	Aluminum
15	1	Glass TC 6 Durlite/12/6+4	Glass
14	7,8 m	Black silicate paper	Silicate
13	4	Rivtite M6	S-eel (Zn)
12	2	Silicone profile Ø1 l= 2444 mm	Silicone
1	1	Welded frame TC JEODAH	S-eel

DIN ISO 7368 (F1SP2) | DIN 6935 | DIN EN ISO 13920 | DIN 2310 II B | DIN 6930 g | DIN 2310 II D | ISO 8015

NFPA GLASS

JEODAH GLASS 28 mm
NFPA TEST

F3-310 018-00 P

File number 14/8437-579

tvitec
www.tvitec.com

DATA SHEET TECLUX®

Insulating glass units

CE
UNE- EN 1279-5

YEDDAH
12 – 0304 – 13

CONFIGURATION:

Outside pane	**LAMISTAR® DURITEC® STOPLUX S Grey 20 6+4.4**
Cavity	**12 mm air**
Inside pane	**DURITEC® 6 mm CONFORTPLUS®**

TECHNICAL VALUES:

Light factors

Light transmittance (%)	τ_v	16
Light reflectance outside (%)	ρ_{ve}	10

Solar radiant factors

Solar direct transmittance (%)	τ_e	9
Solar direct reflectance (%)	ρ_e	12
Solar direct absorptance (%)	α_e	79
Shading coefficient	sc	0.20
Solar factor (%)	g	17

Thermal transmítance coefficient

U declared(W/m^2K)	U	1.59

Acoustic insulation index

Direct airborne sound insulation (dBa)	38 (-1;-5)

Note:
These data sheet values are obtained from calculating systems as described at nowadays standards (UNE-EN 410 and UNE-EN 673) and may be different from the ones obtained from final products.
Results are the ones reached at the preparation time of this data sheet. TVITEC S.L. reserves the right to modify them without prior advice.

Pol Ind El Bayo S/N
24492 Cubillos de l Sil (Ponferrada)
Tfno.: (+34) 987 078 888 • Fax: (+34) 987 088 880

C/ Santa Engracia, 151, 6ª , • 28003 MADRID
Tfno.: (+34) 91 534 10 60 • Fax: (+34) 91 129 9500

Pol Ind "Las Viñas" • C/Moscatel, 65
29532 Mollina (Málaga)
Telf.: (+34) 951 700 650 • Fax: (+34) 952 747 942

HTV SILIKONE

General properties of silicone

Aging-, weathering- and ozone-resistance
HTV silicone is extremely resistant to ozone, atmospheric oxygen, UV- and cosmic radiation.

Physiological properties
HTV-silicone is physiological inert and is also available in food safe quality according to FDA formalities.

Radiation resistance
Radiation up to level 10 Mrad is without effect to the elongation.

Dielectric properties
HTV-silicone has excellent insulating properties even for high temperatures. Electrical conductive special qualities are possible.

Temperature stability
HTV-silicone is temperature stable in a range of -60° C to +200°C. Special qualities are available for a temperature range of – 110°C to + 300°C.

Steam stability
HTV-silicone has good resistance to boiling water (ca. 140°C), repeated sterilisations are possible. The hydrophobic properties prevent water absorption.

Chemical resistance
HTV-silicone is neutral to plastics and varnish.

Fire behavior
Standard qualities conform to DIN 4102 B2. Special qualities match DIN 4102 B1.

Physical properties:

spec. weight	g/cm³	1,1 – 1,5	(DIN 53550)
hardness	shore A	25 – 90	(DIN 53505)
elongation of break	%	200 – 700	(DIN 53504)
tensile strengh	mPa	3,0 – 9,0	(DIN 53504)
tear stengh	N/mm	10 – 20	(ASTM D 624)
rebound resilience	%	20 – 40	(DIN 53512)
compression set	%	10 – 25	(DIN 53517)

SILICATE PAPER

Classified as B2 (normally flamable) according to DIN 4102-1 also as E according to DIN EN 13501-1

Product Description

It is based on a calcium-magensium-sillicat-chemistry and gives excellent thermal and physical stability up to 1.100 ºC. It contains no ceramic fibres and can be used as thermal insulation in a wide range of applications, particulary in fire protection.

It is designed for the following application as for example:

- Fire stopping glazings
- Insulation material in industrial and domestic appliances
- Back-up insulation for aluminium heat-reataining ovens
- Expansion joints

Technical data

Material structure: Light, flexible and compressible rolls

Temperature classification: 1.100 ºC

Density [Kg/m^3]: 250+/-50

Melting point: > 1.330 ºC

Binders content: < 12,0 %

Special features: Must be kept dry

FIREPROOF SEALANT

TECHNICAL DATA

Density, g/cm³:	approx. 1.45
Sag resistance:	no sagging (DIN profile 15 mm)
Skin formation time, min*:	approx. 20
Cure rate, mm/24 hrs:	approx. 3
Shore-A-hardness (ISO 868, Durometer A):	approx. 55
Tensile strength (acc. to ISO 37), MPa:	approx. 3.5
Elongation at break (acc. to ISO 37, speed 200 mm/min),%:	approx. 180
Stress at 100 % elongation (acc. to ISO 37), MPa:	approx. 2.1
Volume change (acc. to DIN 52451), %:	<2
UV resistance:	no signif. changes
UV source:	Osram Vitalux 300W, dry UV
Distance to the specimen, cm:	25
Test period, weeks:	6
Application temperature, °C:	5 to 40
In service temperature range, °C:	-40 to +100
Short exposure (up to 1 h), °C:	120
* ISO 291 standard climate:	23°C, 50% relative air humidity

Certificates and Approvals

- Flammability acc. to DIN 5510

Compustibility level:	S4
Smoke generation level:	SR 2
Dripping level:	ST 2

- NF P 92-501 "Epiradiateur"; classification M1
- NF P 16-101 "Epiradiateur and emission"; classification F0

EPDM:

TECHNICAL PROPERTIES EPDM RUBBER				
UNE 53.526	SPECIFIC GRAVITY		1.17 grs./cm3	
UNE 53.130	HARDNESS		65+-5° SHORE A	
UNE 53.510	TENSILE		10 Mpa	
UNE 53.510	ELONGATION		325%	
UNE 53.516	TEAR RESISTANCE		43 Kgs./cm	
UNE 53.572	RESISTENCE TO OZONE 40°C 50 ppcm 20% ALR 1 WEEK		PASS	
	WORKING TEMPERATURE		-35° C A 150° C	

FIREPROOF SUPPORT:

Typical Mechanical Properties

Modulus of elasticity, E (BS EN 310: 1993)	Longitudinal N/mm² Transverse N/mm²	4995 4389
Flexural strength, $F_{rupture}$ (BS EN 310: 1993)	Longitudinal N/mm² Transverse N/mm²	10 6
Tensile strength, $T_{rupture}$ (BS 5669: Part 1: 1989)	Longitudinal N/mm² Transverse N/mm²	7.16 4.94
Compressive strength (average, perpendicular on board face) (BS 5669: Part 1: 1989)	N/mm²	11.36

General Technical Properties

Product generic description		Matrix engineered mineral board
Material class (DIN 4102: Part 1: 1998, BS 476: Part 4: 1970 and AS 1530: Part 1: 1994)		Non combustible
Surface spread of flame	(BS 476: Part 7: 1997) (AS 1530: Part 3: 1989)	Class 1 Class 0.0.0.0
Building regulations classification		Class 0
Nominal density at EMC* (average)	kg/m³	975
Alkalinity (approximate)	pH	12
Thermal conductivity (approximate) at 40°C (ASTM C518: 1991)	W/m°K	0.242
Coefficient of expansion	m/mk	-6.4 x 10^{-6}
Nominal moisture content at EMC*		6%
Thickness tolerance of standard boards	mm	± 0.5
Length x Width tolerance of standard boards	mm	± 5
Surface condition		Front face: smooth Back face: sanded

DOUBLE-SIDED TAPE:

PRODUCT INFORMATION:

- Highly conformable PE-foam
- High immediate bonding strength even on rough or uneven surfaces
- High bonding strength at low mounting pressure
- High bonding strength on low surface energy substrates

Main Application

- Construction of POS-displays
- Mounting of indoor signs and posters
- Mounting of shelf edge labeling systems
- Additional dampening and anti-rattle

Technical Data

Backing material	PE foam	Tensile strength	7 N/cm
Colour	white	Type of liner	glassine
Total thickness	1050 µm	Thickness of liner	70 µm
Type of adhesive	synthetic rubber	Colour of liner	yellow
Elongation at break	200 %	Weight of liner	80 g/m²

Adhesion to

Steel (initial)	4.0 N/cm	Steel (after 14 days)	4.0 N/cm
PC (initial)	4.0 N/cm	PC (after 14 days)	4.0 N/cm
PE (initial)	4.0 N/cm	PE (after 14 days)	4.0 N/cm
PET (initial)	4.0 N/cm	PET (after 14 days)	4.0 N/cm
PP (initial)	4.0 N/cm	PP (after 14 days)	4.0 N/cm
PVC (initial)	4.0 N/cm	PVC (after 14 days)	4.0 N/cm

Properties

Temperature resistance short term	80 °C	Resistance to chemicals	o
Temperature resistance long term	40 °C	Softener resistance	o
Tack	-	Static shear resistance at 23°C	--
Ageing resistance (UV)	o	Static shear resistance at 40°C	o
Humidity resistance	-		

Evaluation across relevant tesa® assortment: -- very good - good, o medium, - low

Additional Info

Peel Adhesion
- immediately: foam splitting on Steel, Aluminium, ABS, PC, PS, PET, PVC, PE
- after 14 days: foam splitting on Steel, Aluminium, ABS, PC, PS, PET, PVC, PP, PE

Adhesive:

Structural adhesive

Technical Product Data

Chemical base		1-C polyurethane
Colour (CQP[1] 001-1)		Black, white
Cure mechanism		Humidity-curing
Density (uncured) (CQP 006-4)		1.16 kg/l - 1.22 kg/l depending on colour
Non-sag properties		Very good
Application temperature		10°C - 35°C
Tack-free time[2] (CQP 019-1)		40 min. approx.
Curing speed (CQP 049-1)		(see diagram)
Shrinkage (CQP 014-1)		6% approx.
Shore A hardness (CQP 023-1 / ISO 868)		55 approx.
Tensile strength (CQP 036-1 / ISO 37)		4 N/mm^2 approx.
Elongation at break (CQP 036-1 / ISO 37)		> 300%
Tear propagation resistance (CQP 045-1 / ISO 34)		9 N/mm approx.
Tensile-shear strength (CQP 046-1 / ISO 4587)		2.5 N/mm^2 approx.
Glass transition temperature (CQP 509-1 / ISO 4663)		-40°C approx.
Electrical resistance (CQP 079-2 / ASTM D 257-99)		5 x 10^9 Ω cm approx.
Service temperature (CQP 513-1) Short term	permanent 4 hours 1 hour	-40°C to +90°C 130°C 150°C
Shelf life (storage below 25°C) (CQP016-1)		12 months

[1] CQP= Corporate Quality Procedures [2] 23°C / 50% r.h.

LGAI
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N/F

Title:
Test report to determine the fire resistance of a floor, exposed to fire by one of its faces, in accordance with NFPA 415:2016 "Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways".

Tested material:
A horizontal floor with reference "FLOOR TUNNEL", supplied by THYSSENKRUPP AIRPORT SYSTEMS, S.A.

File number: 17/14945-2063

Petitioner:
THYSSENKRUPP AIRPORT SYSTEMS, S.A.
Pol. Ind. Vega de Baiña, s/n
33682 Mieres (Asturias)

Report date:
15th of January, 2018

Test date:
24th of October, 2017

This document contains 48 pages of which 38 are annexes.

MATERIAL RECEIVED

A horizontal floor with reference "FLOOR TUNNEL" supplied by THYSSENKRUPP AIRPORT SYSTEMS, S.A. has been received. Details of the sample is shown in clause 3 'Assembly method and fitting of the sample', according to the technical specifications supplied by the petitioner (see annex C).

Assembly is carried out by the petitioner at Applus-LGAI Technological Center S.A.

Laboratory has verified through inspection the sample received for the test.

Laboratory conducted no supervision during the sample-taking for the test.

TEST REQUESTED

Determination of the fire resistance of a horizontal floor exposed to fire by one of their faces in accordance with NFPA 415:2016 "Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways".

INDEX

1. TEST PURPOSE

1.1 The sample has been exposed to conditions stated in NFPA 415:2016 "Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways", in order to verify the performance criteria established therein.

1.2 The dimensions of the sample to be tested shall be determined based on the construction features of the specific walkway being tested (clause 6.4.6.1 of NFPA 415:2016).

1.3 The effect of exposure to elevated temperatures of working stress seen as worst-case load combinations during actual usage shall be accomplished by a superimposed load to the specimen applied in a manner calculated to develop theoretically the design-allowable stresses contemplated by the design during the test (clause 6.4.6.2 of NFPA 415:2016).

1.4 The applied load is (clause 6.4.6.2.1 of NFPA 415:2016):
- Floor live load: 40 lb/ft^2 (195 kg/m^2)

1.5 For conditions of acceptance, the test sample shall be successful when following conditions are fulfilled (paragraph 6.4.6.3 of NFPA 415:2016):

1.5.1 The wall or floor section shall have sustained the applied load during the fire-endurance test without passage of flame for a minimum period of 5 minutes. Flaming shall not appear on the unexposed face.

1.5.2 The maximum allowable surface temperature of the unexposed face shall not exceed 121°C during 5 minutes exposure as determined by clause 6.4.4.4 of NFPA 415:2016.

1.5.3 The maximum allowable temperature of any of the individual points of the unexposed face shall not exceed 157°C during 5 minutes exposure as determined by clause 6.4.4.4 of NFPA 415:2016.

2. GENERAL CHARACTERISTICS OF THE FURNACE

The characteristics of the furnace comply with the specification of NFPA 415:2016.

- Dimensions 3.00 x 4.00 m (width x height), in horizontal plane.
- The average temperature of the furnace is measured by nine thermocouples placed symmetrically following the instructions of clause 6.4.3 of NFPA 415:2016.
- The average furnace temperature is controlled according to the temperature indicated in Figure 6.4.2 and Table 6.4.2 of NFPA 415:2016 for external floor exposure temperature (see Image 1).

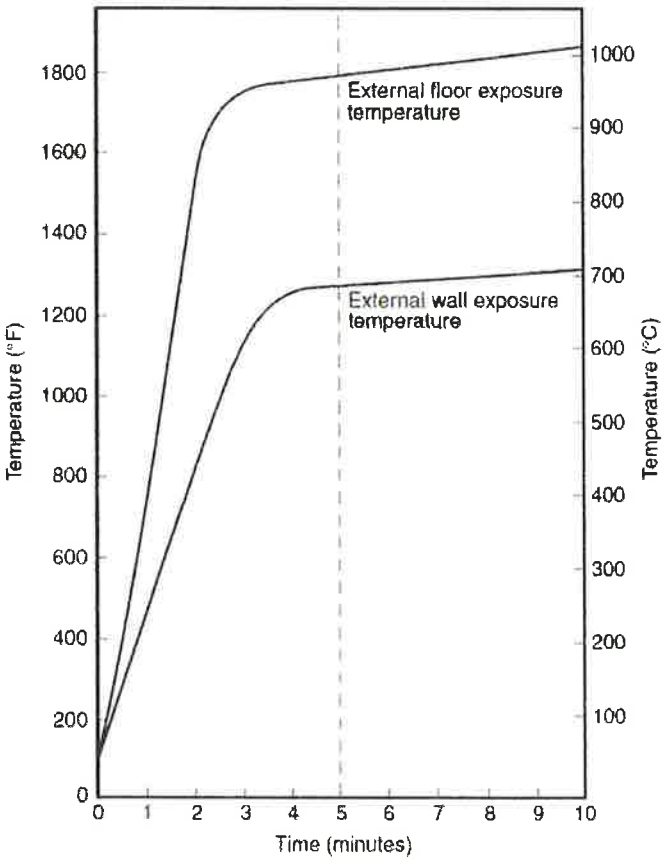

Image 1 - Furnace Time – Temperature curve according to Figure 6.4.2 and Table 6.4.2 of NFPA 415:2016

EXHIBIT G10

intertek
Total Quality. Assured.

16015 Shady Falls Road
Elmendorf, Texas 78112

Telephone: 210-635-8100
Facsimile: 210-635-8101
www.intertek.com/building

Issue Date: July 30, 2020

Dana Gross
Thyssenkrupp Airport Systems, Inc.
3201 North Sylvania Avenue Suite 117
Fort Worth, Texas 76111

Phone: (817) 210-5017
Email: dana.gross@thyssenkrupp.com

Subject: Intertek Certification for Aircraft Loading Walkways in Accordance with Section 6.4 of NFPA 415, 2016 Edition

Dear Mr. Gross,

This letter is to confirm Thyssenkrupp Airport Systems, Inc. is in the process of opening a project to update the Intertek certification for their aircraft loading walkway. The scope of this project includes review of existing test reports from ISO 17025 accredited laboratories and, where necessary, conduct additional testing in accordance with NFPA 415, *Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways,* Chapter 6, *Airport Loading Walkways,* Section 6.4, *Fire Tests.* The data from the test reports will be used to update the current Intertek certification which will include glass wall components and other items.

If you have any questions regarding this letter report, please do not hesitate to contact the undersigned.

Sincerely,

INTERTEK TESTING SERVICES NA, INC.

Reported by:

Barry Badders

Barry L. Badders, M.S., P.E.
Chief Engineer

Intertek Intertek Intertek

EXHIBIT I1

Q59. Bid form line items 38 and 39 show quantities in linear foot. Typically, airport striping projects are based on square footage for reflective and non-reflective markings, since both are used and the line widths can be different. This project calls for envelope markings to be 12" wide and the taxiway/lead in markings are 24" wide. So to provide linear foot pricing would not make sense. Please clarify the unit of measure to be used.

A59. **Provide a lump sum cost for the striping based on the striping as shown in the design documents.**

Q60. Drawing sheet S-3.1: Please provide the thickness of the existing slab.

A60. **Existing apron concrete thicknesses vary across the airport from approximately 10" to approximately 22".**

Q61. Will the contractor be allowed to receive the new bridge at the airport the same day that the existing bridge will be removed so that they can immediately install the new bridge and avoid any storage or additional mobilization costs. Or, will the new bridge be delivered, unloaded, and stored for some period of time? This will add significant cost related to cranes and trucking if the bridge must be stored prior to the actual installation.

A61. **The delivery, storage, and installation of each PBB within the outage window provided for each gate is up to the Contractor.**

Q62. Can you please review the RFI that was submitted regarding question 94 of addendum 2? The question, as shown in the addendum has the following statement in it: "These overload set points have proven sufficient and necessary to meet the needs of all commercial aircrafts according to ThyssenKrupp". This statement was not part of the original RFI and thyssenkrupp has made no such statement over ITW's set points.

A62. **Acknowledged.**

Q63. Please confirm gates B2, B4, B6, B7 & B8 will not receive new hose baskets.

A63. **Refer to drawing PBB-4.3 as issued in previous addendum**

Q64. From Addendum 2, someone asked if the engineering firm and its affiliates would be permitted to bid this project. The answer provided in the addendum only addressed the engineering firm and not their affiliates. Considering that Aero Engineering and Aero Bridge works are both part of the Aero Group and both are housed under the same roof and at the same address, we believe that it would be a conflict of interest for the Aero Group and either its two affiliates to be able to bid this project. Please see statement below directly pulled from the Aero Group website. While this project is not a true design-build, it is clear that that Aero Bridge Works would have had unprecedented access to information and for a much longer of period time than the other bidders would have had access to. A prime bidder should not be allowed to collaborate with the engineering firm prior to the bid being issued or in preparation of the bid.

A64. **Lee County Port Authority does not intend to enter into a contract with Aero BridgeWorks as a prime contractor or subcontractor due to a prior conflict of interest determination made by the Port Authority.**

ITEM 2. ATTACHMENTS:

Revised Form 2, Official Bid Form. This bid form supersedes all previously issued Form 2, Official Bid Forms.

Revised Plans, v.2. This file contains plan sheets that have been revised as referenced in the responses provided above.

321723 Striping Specifications. These specifications were inadvertently omitted from the Request for Bid documents.

118504 User-Passenger Boarding Bridge Specifications. This specification is revised and supersedes the 118504 specification previously issued.

Reminder: Bids must be submitted electronically in Ionwave at www.ionwave.net no later than 2:00 p.m., June 2, 2020.

Melissa M. Wendel, CPPO
Procurement Manager

Distribution
Gregory S. Hagen, Port Attorney
Hector Yanez, Director of Engineering & Construction
George Ghorayeb, Engineer

PURCHASING OFFICE
11000 Terminal Access Road, Suite 8671
Fort Myers, Florida 33913

REQUEST FOR BIDS (RFB) 20-53MMW

for

PASSENGER BOARDING BRIDGE REPLACEMENT at the SOUTHWEST FLORIDA INTERNATIONAL AIRPORT

Released: April 27, 2020

PURCHASING OFFICE DESIGNATED CONTACT

Melissa M. Wendel, CPPO, Procurement Manager
Telephone: (239) 590-4556 * Email: mmwendel@flyLCPA.com

NON-MANDATORY PRE-BID MEETING

Friday, May 08, 2020 at 10:00 a.m., local time
This is a remote meeting. There is no provision for physical attendance
Remote Meeting ID/Phone:
Meeting ID - meet.google.com/uvi-xgqg-dcz

Phone Number - (US) +1 478-239-2155
PIN: 201 585 414#

INQUIRIES/CLARIFICATION REQUEST DEADLINE

Thursday, May 14, 2020 by 5:00 p.m. local time

ELECTRONIC BID SUBMISSION DUE DATE & TIME

Friday, May 29, 2020 by 2:00 p.m. local time
Use this link to access the bid opening:
Meeting ID - meet.google.com/kez-csgk-uym

PART A - INFORMATION FOR BIDDERS
PART B - SPECIAL INSTRUCTIONS & REQUIREMENTS
PART C - PROJECT INFORMATION
PART D - GRANT REQUIREMENTS & DAVIS BACON WAGE REQUIREMENTS
PART E - DISADVANTAGED BUSINESS ENTERPRISE PROGRAM
PART F - INSURANCE, INDEMNIFICATION AND BOND REQUIREMENTS
PART G - FORMS

Form 1: Bidder's Certification

Form 2: Official Bid Form

Form 3: Lobbying Affidavit

Form 4: Public Entity Crimes Form

Form 5: Bidder's Scrutinized Companies Certification

Form 6: Bid Bond

Form 7: Reserved

Form 8: Reserved

Form 9: Utilization Statement - DBE

Form 10: Letter Of Commitment (DBE)

Form 11: Certificate of Buy America Compliance for Total Facility

Form 12: Certificate of Buy America Compliance - Manufactured Products

Form 13: Certificate of Bidder regarding Tax Delinquency and Felony Conviction

Form 14: Trade Restriction Certification

Form 15: No bid submission (optional form)

ATTACHMENTS:

GENERAL CONDITIONS

SPECIAL CONDITIONS

TECHNICAL SPECIFICATIONS

PLANS

Construction Safety & Phasing Plan (CSPP)

Project Summary Schedule

Request for Bid 20-53MMW

PASSENGER BOARDING BRIDGE REPLACEMENT
at the
SOUTHWEST FLORIDA INTERNATIONAL AIRPORT

The Lee County Port Authority (Authority) invites the submission of sealed bids from all interested and qualified bidders to replace twenty seven (27) passenger boarding bridges (hereafter referred to as PBBs), modify existing foundations for twenty-five PBBs, and perform related work at the Southwest Florida International Airport.

Solicitation documents are available electronically at www.ionwave.net or by calling the Lee County Port Authority Purchasing Office at (239) 590-4557.

A **non-mandatory pre-bid meeting** will be conducted remotely at 10:00 a.m. on Friday, May 8, 2020. To access the pre-bid meeting, potential bidders must select one or both of the following options:

Login: https://meet.google.com/uvi-xgqq-dcz?hs=122 or **Phone**: (US) **+1 478-239-2155 PIN: 201 585 414#**

Roll call will be taken. Remote attendees must be able to communicate bidder representative name and company for the attendance register.

Sealed bids must be submitted electronically in Ionwave at www.ionwave.net no later than 2:00 p.m., May 29, 2020.

AMERICANS WITH DISABILITIES ACT: Any person needing special accommodation to attend a remote public meeting such as a pre-bid meeting or the public opening should contact the Authority's contact person listed below at least 7 days prior to the scheduled meeting.

The Lee County Port Authority, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

Disadvantaged Business Enterprise (DBE) and Woman and Minority-Owned Business Enterprises (W/MBE) companies are encouraged to respond to this notification.

For more information, please contact Melissa M. Wendel, CPPO - Procurement Manager at (239) 590-4557 or email: mmwendel@flylcpa.com

*

PART A
INFORMATION FOR BIDDERS

A.01 PUBLIC RECEIVING AND OPENING OF BIDS

Bids will be electronically unsealed and read publicly after the opening time specified on the cover page of this Request for Bids. The Lee County Port Authority (hereinafter referred to as "Authority") reserves the right to extend this date and time at Authority's sole discretion when deemed to be in the best interest of the Authority. Bidders, their authorized agents and other interested persons are invited to view the bid opening through electronic means by using the link provided on the cover page of this Request for Bids.

A.02 SUBMISSION OF ELECTRONIC BIDS

The Authority is accepting electronic bids submitted to IonWave at www.ionwave.net. Submission of the sealed bid to the Authority by way of IonWave prior to the deadline is solely and strictly the responsibility of the Bidder. Bidder is responsible for taking all necessary steps to ensure their bid is received by the due date and time. The Authority is not responsible for missing, lost or delayed bids. Hard copy bids sent electronically and directly to the Authority will not be accepted. Faxed bids will not be accepted.

All documents must be PDF/A compliant. PDF/A compliant documents have embedded fonts and do not reference external files. Layers must not be preserved from CADD drawings. Scanned documents must be created as PDF/A compliant, made text searchable and have a minimum resolution of 300 dpi. Submittal in PDF format shall have navigational bookmarks inserted in lieu of any tabs required in the hard copy. The entire submittal must be contained in a single PDF file.

A.03 DELAYS CAUSED BY TECHNOLOGICAL ISSUES

Electronic submission of sealed bids to IonWave prior to the end time stated in IonWave is solely and strictly the responsibility of the Bidder. The Authority will not be responsible for delays caused by technological issues that may be used or for any other reason. The Bidder is hereby directed to cause delivery of their bid prior to the bid opening time.

A.04 INQUIRIES/CLARIFICATION

Except during a scheduled pre-bid meeting, the Authority will not respond to oral inquiries concerning this RFB. Each bidder must examine all RFB documents and must judge all matters relating to their adequacy and accuracy. Any inquiries, suggestion, or requests concerning interpretation, clarification or additional information pertaining to this RFB must be made through the Purchasing Office. No interpretation of the meaning of the plans, specifications or any other portion of the solicitation documents will be binding if made to any bidder orally by the Authority or by any representative of the Authority. Bidders may submit written email inquiries regarding this RFB to the Purchasing Office contact indicated on the cover page. The deadline to submit to the Purchasing Office, in writing, all inquiries, suggestions, or requests concerning interpretation, clarification or additional information pertaining to this RFB can be located on the cover page of this RFB. The Authority may choose not to respond to inquiries received after the inquiry/clarification deadline has passed.

A.05 DISTRIBUTION OF INFORMATION, RESULTS AND ADDENDA

The Authority uses IonWave to distribute solicitation documents including addenda and bid results. Interested parties may register to receive this information free of charge by

contacting IonWave Support at 866.277.2645, or by registering at https://www.flylcpa.ionwave.net.

Interpretations, corrections or changes made by the Authority to this Request for Bids will be made by written addenda. It shall be the responsibility of the Bidder, prior to submitting their bid, to contact the Purchasing Office to determine if addenda to this RFB have been issued and, if issued, acknowledging and incorporating same into their bid. All addenda shall become part of the bid documents.

All results concerning this Request for Bids will be posted via IonWave.

A.06 PRE-BID MEETING

If indicated, a pre-bid meeting will be held on the date and time specified on the cover page of this RFB. The cover page will also note if the pre-bid meeting is Non-Mandatory or Mandatory and if a site visit is planned and whether remote or physical attendance is available. While attendance is not required at a pre-bid meeting that has been deemed non-mandatory; it is strongly advised and encouraged. Conversely, attendance is **mandatory** for pre-bid meetings that are indicated as mandatory on the cover page of this RFB. Bidders' failure to attend a mandatory pre-bid meeting will result in its bid being considered non-responsive.

The purpose of the pre-bid meeting is to discuss the requirements and objectives of this RFB, to answer any questions potential bidders have about the RFB, and to answer any general questions about the Authority. At the pre-bid meeting, the Authority will attempt to answer all questions received, reserving the right however, to answer any question in writing in a subsequent addendum to the RFB. All prospective bidders are encouraged to obtain and review the RFB prior to the pre-bid meeting in order to be prepared to discuss questions or concerns about the requirements of the Authority.

In order to conduct the pre-bid meeting as expeditiously and efficiently as possible, it is requested that all pre-bid questions be sent to the Purchasing Office contact indicated on the cover page of this RFB at least three (3) days prior to the scheduled pre-bid meeting to allow staff time to research the questions.

A.07 EXAMINATION OF BID DOCUMENTS AND SITE(S)

It is the responsibility of each bidder before submitting a bid, to (a) examine the RFB documents thoroughly; (b) visit the project site(s) to become familiar with local conditions that may affect cost, progress, performance, or furnishing of the work; (c) consider federal, state, and local codes, laws, and regulations that may affect costs, progress, performance, or furnishing of the work; (d) study and carefully correlate bidder's observations with the RFB documents; and (e) notify the Authority of all conflicts, errors, or discrepancies in the RFB documents.

Each bidder may, at bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests and studies, and obtain any additional information and data which pertain to the physical conditions at or contiguous to the project site(s) or otherwise which may affect cost, progress, performance or furnishing of the work and which bidder deems necessary to determine its bid for performing and furnishing the work in accordance with the time, price and other terms and conditions of the RFB documents.

The Authority will provide each bidder access to the site(s) to conduct such explorations and tests.

Bidder shall fill all holes, clean up and restore the project site(s) to its former condition upon completion of such explorations. The lands upon which the work is to be performed, rights-of-way and easements for access thereto, and other lands designated for use by successful bidder in performing the work are identified in the RFB documents.

Prior to submitting a bid, each bidder shall examine the project site(s) and all conditions thereon fully familiarizing themselves with the full scope of the work. Failure to become familiar with project site conditions will in no way relieve the successful bidder from the necessity of furnishing any materials or performing any work that is required to complete the project in accordance with the plans and specifications. Bidder shall acknowledge inspection of the project site(s) on his/her signed, submitted Bid Form.

A.08 COST OF PREPARATION

The cost of preparing a bid in response to this RFB shall be borne entirely by the Bidder.

A.09 AMERICANS WITH DISABILITIES ACT NOTICE

The Authority will not discriminate against individuals with disabilities. Any person needing special accommodations for attendance at a public bid opening or pre-bid meeting should contact the designated Purchasing Office contact indicated on the cover page of this solicitation document at least seven (7) days before the meeting.

A.10 NONDISCRIMINATION

Pursuant to Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally assisted programs of the Department of Transportation – Effectuation of Title VI of the Civil Rights Act of 1964, the Restoration Act of 1987, the Florida Civil Rights Act of 1992, and as said Regulations may be amended, the Bidder must assure that "*no person in the United States shall on the basis of race, color, national origin, sex, creed or disability be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity",* and in the selection and retention of subcontractors/sub consultants, including procurement of materials and leases of equipment. The successful Bidder will not participate directly or indirectly in discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project or program set forth in Appendix B of 49 CFR, Part 21.

A.11 GENERAL CIVIL RIGHTS

The successful Bidder agrees to comply with pertinent statutes, Executive Orders and such rules as are promulgated to ensure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or disability be excluded from participating in any activity conducted with or benefiting from federal assistance. This provision binds the successful Bidder and its subcontractors from the bid solicitation period though the completion of any resulting contract. This provision is in addition to that required by Title VI of the Civil Rights Act of 1964.

A.12 CALCULATIONS, ERRORS, OMISSIONS

All bids will be reviewed mathematically and, if necessary, corrected. In the event of multiplication/addition or extension error(s), the unit pricing shall prevail. In the case of a

disparity between the grand total bid price expressed numerically and that expressed in written words, the grand total price expressed in words as shown on the Bidder's submission will govern.

Bidders must fill in all information requested on the bid forms. All blanks on the bid forms must be legibly completed in ink or typewritten. Where submitted bids have erasures or corrections, such erasures or corrections must be initialed in ink by the Bidder. Bids submitted on a form other than what is furnished herein, or bids submitted on the Authority's bid form that is altered or detached, will be considered irregular. Bidders must fully comply with all requirements of this RFB in its entirety. Bid Forms must be executed by an authorized signatory who has the legal authority to make the bid and bind the company.

A.13 DIRECT PURCHASE

If applicable, the Authority reserves the right to purchase directly, various materials, supplies, and equipment that may be a part of any purchase agreement resulting from this RFB.

A.14 TERMINATION FOR CONVENIENCE

The Authority may cancel any agreement resulting from this RFB at its discretion upon giving thirty (30) calendar days written notice to the successful Bidder. In addition, the Authority reserves the right during the term of the agreement to terminate the agreement with any single successful Bidder and award the agreement to the next ranking Bidder if deemed to be in the Authority's best interest.

A.15 PUBLIC RECORDS AND DISCLOSURE

Information and materials received by the Authority shall be deemed to be public records subject to public inspection upon the issuance of a notice to award, recommendation for award, or thirty (30) days after bid opening, whichever occurs first. However, certain exemptions to the public records laws are statutorily provided for in Section 119.07.

If a Bidder believes any of the information contained in their response is exempt from disclosure under the Florida public records law, Bidder must specifically identify the material which it claims is exempt and cite the legal authority for the exemption. Upon the Authority's receipt and review of an exemption claim, the Authority's determination of whether an exemption applies shall be final.

All Bidders are notified and acknowledge by submitting a response to this Request for Bids that the provisions of Section 119.071(3) (b) Florida Statutes (2005), may apply. Generally, the law exempts building plans, blueprints, schematic drawings, and diagrams depicting the internal layout and structural elements of a public building or structure from the Florida Public Records law. To the extent the law applies to this project, Bidders agree to treat all such information as confidential and not to disclose it without prior written consent of the Authority.

A.16 TAX EXEMPT

The Authority is generally a tax-exempt entity, subject to the provisions of the Florida Statutes regarding sales tax. The successful Bidder shall be responsible for complying with the Florida sales and use tax law as it may apply. The amount(s) of compensation set forth in the contract, or in any change orders authorized pursuant to the contract, shall be

understood and agreed to include any and all Florida sales and use tax payment obligations required by Florida law of the successful Bidder and all subcontractors or materials suppliers engaged by the successful Bidder.

A.17 EXAMINATION OF BID SOLICITATION INFORMATION

Each Bidder is required, before submitting a bid, to be thoroughly familiar with each and every requirement contained within the solicitation documents, including any addenda. No additional allowances will be made because of lack of knowledge of the requirements contained herein. All Bidders must carefully review the bid documents in their entirety to become familiar with what is required, including information on all bid forms.

A.18 RESERVATION OF RIGHTS

The Authority reserves the right to reject any and/or all bids, accept or reject any alternates, waive irregularities and technicalities if it is in the best interest of the Authority, in the Authority's sole judgement, and conforms to applicable state and local laws or regulations.

The Authority further reserves the right to make inquiries, request clarifications, require additional information and documentation from any bidder, or cancel this solicitation and solicit for new bids at any time prior to the execution of an agreement. If a single response is received by the deadline for receipt of bids, it may or may not be rejected by the Authority depending on available competition and current needs of the Authority. All such actions shall promote the best interest of the Authority.

A.19 AUTOMATIC DISQUALIFICATION

A Bidder will be disqualified from consideration for award of an agreement pursuant to this Request for Bids for any of the following reasons:

- Failure to meet mandatory minimum qualifications stated herein.
- Lobbying the Lee County Board of Port Commissioners, members of the Airports Special Management Committee, or employees of the Lee County Port Authority, individually or collectively, regarding this Request for Bids.
- Collusion with the intent to defraud or other illegal practices upon the part of any firm submitting a bid.
- Evidence that bidder has a financial interest in the company of a competing bidder.
- Being on the Convicted Vendors List.
- Being on a Scrutinized Companies List or otherwise ineligible to submit a bid to provide services under Section 287.135, Florida Statutes.
- Not being properly licensed by the State of Florida or Lee County prior to submitting a bid.
- Not being registered to do business in the State of Florida prior to submitting a bid.

The Authority, at its sole discretion, may request clarification or additional information to determine a Bidder's responsibility or responsiveness.

A.20 SCRUTINIZED COMPANIES UNDER SECTION 287.135, FLORIDA STATUTES

Notwithstanding any provision to the contrary, Authority will have the option to immediately terminate any agreement, in the exercise of its sole discretion, if Bidder is found to have submitted a false certification under Section 287.135(5) F.S. or has been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List created under Section 215.473 F.S.; or if bidder is engaged in business operations in Cuba or Syria; or has been placed on the Scrutinized Companies that Boycott Israel List or is engaged in a boycott of Israel.

The Bidder certifies through submission of the attached Bidders Scrutinized Companies Certification that it is not listed on any Scrutinized Companies Lists described above; is not engaged in business operations in Cuba or Syria; is not engaged in a boycott of Israel and is not barred from submitting a bid or proposal under Section 287.135, Florida Statues.

A.21 NO LOBBYING:

All Bidders are hereby placed on notice that the Lee County Port Authority Board of Port Commissioners, Members of the Airports Special Management Committee and all Authority employees are not to be lobbied, either individually or collectively, regarding this solicitation. During the entire procurement process, all Bidders and their subcontractors, or agents are hereby placed on notice that they are not to contact any persons listed above (with the exception of the designated Purchasing Office contact indicated on the cover page of this RFB) if they intend to submit or have submitted a bid for this project. All Bidders and their subcontractors, and any agents must submit individual affidavits with their submission in substantially the form attached, stating that they have not engaged in lobbying activities or prohibited contacts in order to be considered for this Request for Bids. **Joint ventures must file a separate affidavit for each joint venture partner.**

ANY BIDDER IN VIOLATION OF THIS WARNING SHALL BE AUTOMATICALLY DISQUALIFIED FROM FURTHER CONSIDERATION FOR THIS REQUEST FOR BIDS.

A.22 RIGHT TO PROTEST

A bidder affected adversely by an intended decision to award a bid shall file a written notice of intent to file a protest with the Purchasing Office no later than forty-eight (48) hours (excluding Saturdays, Sundays, and legal holidays) after receipt of the notice of the intended decision with respect to a bid award.

Details regarding the bid protest policy are contained within the Lee County Port Authority Purchasing Manual, which is available for inspection and/or copying at 11000 Terminal Access Road, Suite 8671, 3rd Floor, Fort Myers, Florida, 33913. **Failure to follow the protest procedure requirements within the timeframe established by Lee County Port Authority constitutes a waiver of any protest and resulting claims.**

A.23 FINANCIAL RESPONSIBILITY

During the bid evaluation process, Bidders may, upon request by the Authority, be required to demonstrate financial responsibility by furnishing audited financial statements for the past two fiscal years. Such statements must be prepared in accordance with generally acceptable accounting practices and include an independent Certified Public Accountant (CPA) statement and shall be provided to the Authority within ten (10) calendar days of the Authority's request.

A.24 OFFER EXTENDED TO OTHER GOVERNMENTAL ENTITIES

If mutually agreeable to the successful Bidder, other governmental entities may desire to utilize, i.e., piggyback, an agreement entered into pursuant to this RFB, subject to the rules and regulations of that governmental entity. The Authority accepts no responsibility for other agreements entered into utilizing this method.

A.25 COMPLIANCE WITH STATE AND FEDERAL REQUIREMENTS

In agreements financed in whole or in part by Federal or State grant funds, all requirements set forth in the grant documents or in the law, rules, and regulations governing the grant, including federal or state cost principles, shall be satisfied. To the extent that they differ from those of the Authority, the cost principles of the grantor shall be used.

A.26 NONEXCLUSIVITY OF AGREEMENT

The successful Bidder understands and agrees that any resulting contractual relationship is nonexclusive and the Authority reserves the right to seek similar or identical services elsewhere if deemed in the best interest of the Authority.

A.27 NON-APPROPRIATION OF FUNDS

Any agreement resulting from this RFB is contingent upon the receipt of grant funds by the Authority. If funds are not appropriated or otherwise made available to support the Project, an award of the lowest, responsive and responsible bid may not be made.

A.28 WITHDRAWAL OR REVISION OF BIDS

A Bidder may withdraw or revise a bid (by withdrawal of one (1) bid and submission of another) provided the Bidder's written request to withdraw is received by the Authority before the time specified for receiving the bids. Revised bids must be received prior to the date and time of the bid opening at the place specified. Bids that have been properly withdrawn (by written request) prior to the scheduled opening time or received after the time specified for opening bids will be returned to the Bidder unopened.

A.29 UNBALANCED BIDS

The Authority recognizes that large and/or complex projects will often result in a variety of methods, sources, and prices used by Bidders in preparing their bids. However, where in the opinion of the Authority such variation does not appear to be justified, given bid requirements and industry and market conditions, the bid will be presumed to be unbalanced. Examples of unbalanced bids include:

a. Bids showing omissions, alterations of form, additions not specified, or required conditional or unauthorized alternate bids.

b. Bids quoting prices that substantially deviate, either higher or lower, from those included in the bids of competing Bidders for the same line item unit costs.

c. Bids where the unit costs offered are in excess of or below reasonable cost analysis values.

If the Authority determines that a bid is presumed unbalanced, it will request the opportunity to and reserves the right to, review all source quotes, bids, price lists, letters of intent, etc., that the Bidder obtained and upon which the Bidder relied to develop its

bid. The Authority reserves the right to reject as non-responsive any presumptively unbalanced bid(s) where the Bidder is unable to demonstrate the validity and /or necessity of the unbalanced unit costs.

A.30 FRONT LOADING OF BID PRICING PROHIBITED

Prices offered for performance and/or acquisition activities which occur early in the project schedule, such as mobilization; clearing and grubbing; or maintenance of traffic; that are substantially higher than pricing of competitive bidders within the same portion of the project schedule, will be presumed to be front loaded. Front loaded bids could reasonably appear to be an attempt to obtain unjustified early payments creating a risk of insufficient incentive for the bidder to complete the work or otherwise creating an appearance of an undercapitalized bidder.

In the event the Authority presumes a bid to be front loaded, it will request the opportunity to, and reserves the right to, review all source quotes, bids, price lists, letters of intent, etc., which the bidder obtained and upon which the bidder relied upon to develop the pricing or acquisition timing for these bid items. The Authority reserves the right to reject as nonresponsive any presumptive front loaded bids where the bidder is unable to demonstrate the validity and/or necessity of the front loaded costs.

A.31 PUBLIC ENTITY CRIMES

In accordance with Florida Statute 287.133, a person, affiliate, or corporation who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a proposal on a contract to provide any goods or services to a public entity on a contract; may not submit a proposal on a contract with a public entity for the construction or repair of a public building or public work; may not submit proposals on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017 Florida Statutes, for category two for a period of thirty-six (36) months from the date of being placed on the convicted vendor list.

To ensure compliance with the foregoing, proposers shall certify by submission of the enclosed public entity crimes certification, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from participation in this transaction by any state or federal entity, department or agency.

A.32 BID EVALUATION

Upon evaluation of all bids received, a Notice of Intent to Award may be made to the lowest, responsive, and responsible Bidder(s) whose bid(s) serves the best interests of the Authority, in the Authority's sole judgment.

No award will be made until the Authority has concluded such investigations, as it deems necessary to establish the responsibility, qualifications and financial ability of any Bidder to provide the required goods and services in accord with the agreement and to the satisfaction of the Authority and within the time prescribed. The Authority may reject any bid if the evidence submitted by the Bidder, or an investigation of the qualifications and/or experience of the Bidder, fails to satisfy the Authority that such Bidder is sufficiently qualified or experienced to provide the goods or services required, or to carry out the obligations as required in this Request for Bids.

After the Notice of Intent to Award is issued, the recommendation for award of the agreement will be forwarded to the Airports Special Management Committee and/or the Authority Board of Port Commissioners for approval.

A.33 EXECUTION OF AGREEMENT

The successful Bidder(s) shall execute and return the Authority provided agreement within ten (10) calendar days from issuance of the notice of intent to award the bid. A sample agreement in substantially the same form as the agreement the successful bidder will be required to sign is available on request. **The successful Bidder will be required to execute the Authority's form of agreement.** Failure of the successful Bidder to execute the agreement within ten (10) calendar days from the date the notice of intent to award is announced shall be just cause for cancellation of the award and forfeiture of the bid bond.

Upon receipt of the agreement executed by the successful Bidder, the Authority will submit the agreement for review and approval of the Board of Port Commissioners; complete the execution of the awarded agreement in accordance with local laws or ordinances, and return one fully executed original agreement, along with the bid bond, if applicable, to the Bidder. Delivery of the fully executed awarded agreement to the Bidder shall constitute the Authority's approval to be bound by the successful Bidder's bid and the terms of the agreement.

Until approval and final execution of the agreement, the Authority reserves the right to reject any or all bids, to waive technicalities and to advertise for new bids, or to proceed to do the work otherwise when the best interests of the Authority will be promoted.

A.34 PAYMENT

The accepted bid price for the scope of work to be provided will be paid to the successful Bidder after completion and acceptance of the work and upon receipt of the successful Bidder's invoice. **All invoices shall include the assigned contract number and must be submitted to Lee County Finance Department, PO Box 2463, Fort Myers, Florida, 33902.**

[**END of PART A.**]

PART B
SPECIAL INSTRUCTIONS AND REQUIREMENTS

Bidders must carefully review the Request for Bids documents in their entirety to become familiar with what is required, what is to be submitted in the Bidder's bid, and to properly complete all bid forms.

B.01 MINIMUM QUALIFICATIONS

Bidders contracting in a corporate capacity must be registered to do business in the State of Florida as evidenced through documentation from the Florida Department of State verifying that the entity is a Florida Corporation or other Florida legal business entity in good standing or is a foreign corporation which has registered and is authorized to do business in the State of Florida.

Bids will be accepted from manufacturers that have manufactured no less than one hundred (100) passenger boarding bridges for projects in the United States within the past ten years from the date bids are due.

Bids will be accepted from installers that have successfully installed no less than three (3) passenger boarding bridge projects installed in the U.S. on projects of similar size and scope within five (5) years prior to the date bids are due.

Bids will not be considered from bidders who have been found guilty by any court in the United States of crimes pertaining to industrial espionage or intellectual property theft.

Bidders are required to provide reference information on Form 2: Official Bid Form to demonstrate the minimum qualifications have been met.

Each bidder must demonstrate to the satisfaction of the Authority that all minimum qualifications have been met. Any bid received which does not meet these minimum qualifications will be deemed nonresponsive.

B.02 BASIS OF AWARD

The bid award will be based on the lowest, responsive and responsible Bidder. The lowest bid will be based on the grand total bid, which is the sum of all bid line items. To be considered for award, bidder is required to bid all line items.

The lowest, responsible bidder shall mean that bidder who makes the lowest bid to provide goods and/or services of a quality which meets or exceeds the quality of goods and/or services set forth in the RFB documents or otherwise required by the Authority.

To be responsive, a bidder shall submit a bid which conforms in all material respects to the requirements set forth in the RFB.

To be a responsible bidder, the bidder shall have the capability in all respects to perform fully the bid requirements, and the tenacity, perseverance, experience, integrity, reliability, capacity, facilities, equipment, and credit which will assure good faith performance.

The Authority reserves the right to make such investigation as it deems necessary to determine the ability of any bidder to furnish the services requested. Information that the Authority deems necessary to make this determination must be provided by the bidder. Such information may include, but will not be limited to current financial statements, verification of availability of equipment and personnel, and past performance records.

B.03 PUBLIC BID DISCLOSURE ACT

Pursuant to the requirements of Section 218.80, Florida Statutes, the following local government permits must be obtained and paid for by the successful bidder:

Permit:
Foundation permit
Electrical permit

This information is provided to disclose permits required by Lee County and the Authority for this project and does not relieve the Bidder of its responsibility to obtain and pay for permits required by other governmental entities as specified elsewhere in the bidding or contract documents. Costs for fees are to be included in the bid item for mobilization costs.

B.04 AIR OPERATIONS AREA (AOA) SECURITY MAINTENANCE

Employees of the successful bidder or subcontractors who must work full or part time within the Air Operations Area (AOA) at Southwest Florida International Airport must qualify for and obtain airport-issued identification badges which must be worn at all times while within the AOA. Badges shall be worn on outer, uppermost garments so as to be clearly visible in order to distinguish, on site, employees assigned to a particular Provider. Badges shall be issued individually. Drivers of delivery or hauling vehicles will not require badges but must be under the escort of a properly badged employee.

B.05 WARRANTY

Successful bidder must warrant that for a period of one year from the date the Authority accepts all work, that all work, materials, and equipment furnished as defined herein shall be guaranteed and warranted to be free from defects due either to faulty materials or equipment or faulty workmanship.

During the warranty period, Authority may, at its option, request that successful bidder, at its cost, repair or replace any defective materials, equipment or workmanship upon written notice to successful bidder. In that event successful bidder shall repair or replace the defective materials, equipment or workmanship, at its sole expense, within thirty days of receiving notice. Alternatively, Authority may return the defective goods at successful bidder's expense, for a full refund. Exercise of either option shall not relieve successful bidder of any liability to Authority for damages sustained by virtue of successful bidder's breach of the warranty.

[END OF PART B.]

PART C
PROJECT INFORMATION

C.01 PROJECT DESCRIPTION

The scope of work for this project includes the replacement of the twenty-seven (27) Passenger Boarding Bridges (PBBs), modifications to existing foundations for twenty-five (25) PBBs, construction of two (2) new foundations for gates C1 and C2, and engineered parking layouts that anticipate the carriers aircraft needs for the foreseeable future.

Construction elements associated with this project include:

- mobilization and demobilization
- maintenance of traffic
- demolition
- pavement (adjacent to foundations)
- primary power connections
- back-up power supply for data infrastructure
- demolition
- foundations
- new Passenger Boarding Bridges
- signage
- stairs
- interior finishes
- PC Air 400 Hz.
- pavement markings
- lighting connection to and expansion of the security system and communications
- all materials, equipment, labor, and incidentals required to purchase, install, and commission the complete PBB replacement project.

C.02 BASE BID DESCRIPTION

The base bid includes all of the work shown on the attached contract drawings prepared by AERO SYSTEMS ENGINEERING and dated 02/14/2020 and called for in the project specifications dated 12/13/2019. Together this information represents the scope of work detailed in the project description above and as outlined in the attached Milestone Schedule Overview.

Bidders are required to hold lump sum bid pricing firm for at least 180 days from the bid submission due date.

C.03 CONTRACT TIME

-- From the date of issuance of Notice to Proceed (NTP) to overall project substantial completion = 395 calendar days
-- From the date of substantial completion to project final completion = 30 calendar days

C.04 LIQUIDATED DAMAGES

$250 per day for Contractor's failure to install and turnover each new boarding bridge within thirty (30) days from the date the existing bridge has been removed from service.

$2,500 per day for Contractor's failure to achieve overall project Substantial Completion within 395 calendar days.

$250 per day for Contractor's failure to achieve overall project Final Completion within 30 calendar days of substantial completion.

C.05 WARRANTY PERIOD

The completed project, including all systems and equipment, shall have a 1-year unlimited warranty which commences on the date of final acceptance by the Authority.

C.06 EARLY COMPLETION INCENTIVE

$3,000 per day for Contractors ability to achieve overall substantial completion prior to November 1, 2021. This incentive may be earned per day for a maximum of 31 calendar days.

C.07 DBE PARTICIPATION GOAL

The DBE goal established for this project is ten percent (10%).

[END OF PART C]

PART D
GRANT REQUIREMENTS
And
DAVIS BACON WAGE RATES

The Lee County Port Authority has worked with the Federal Aviation Administration (FAA), Florida Department of Transportation (FDOT) and partner airlines to secure funding for this project. The passenger boarding bridge replacement project described herein relies on using federal and state grants. As such, requirements of the grantor as specified in the Federal Contract Provisions document are applicable terms and conditions to any agreement resulting from this Request for Bid. Further, each bidder shall submit with its bid the applicable forms that are attached and included in this Request for Bid.

In the technical specifications under General Contract Provisions, where the term "Contractor" is used, it shall be understood to mean the successful bidder who is awarded an agreement pursuant to this Request for Bid. In addition, where the term "Owner" is used in this Part D, it is understood to mean the Lee County Port Authority.

Davis-Bacon Requirements apply to this contract resulting from this solicitation. The following wage rate determination is provided as a convenience. Successful Bidder is responsible to verify and utilize the most current applicable wage rates in effect at the time of the agreement. Wages rates determination is posted at www.dol.gov

"General Decision Number: FL20200211 03/27/2020

Superseded General Decision Number: FL20190211

State: Florida

Construction Type: Building

County: Lee County in Florida.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of $10.80 for calendar year 2020 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least $10.80 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for

all hours spent performing on the contract in calendar year 2020. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate,if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/03/2020
1	02/21/2020
2	03/27/2020

* ASBE0067-003 03/01/2020

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR	$ 28.93	16.68

ELEC0349-008 09/01/2019

	Rates	Fringes
ELECTRICIAN (Includes Low Voltage Wiring)	$ 31.05	10.38

ELEV0074-001 01/01/2020

	Rates	Fringes
ELEVATOR MECHANIC	$ 42.52	34.765

FOOTNOTE:
A. Employer contributions 8% of regular hourly rate to vacation pay credit for employee who has worked in business more than 5 years; Employer contributions 6% of regular hourly rate to vacation pay credit for employee who has worked in business less than 5 years.

Paid Holidays: New Year's Day; Memorial Day; Independence Day; Labor Day; Thanksgiving Day; The Friday after Thanksgiving Day; and Christmas Day.

ENGI0487-021 07/01/2016

	Rates	Fringes
OPERATOR: Crane		
All Cranes 160 Ton Capacity and Over	$ 33.05	9.20
All Cranes Over 15 Ton Capacity	$ 32.05	9.20
OPERATOR: Forklift	$ 23.25	9.20
OPERATOR: Mechanic	$ 32.05	9.20
OPERATOR: Oiler	$ 23.50	9.20

IRON0397-007 07/01/2019

	Rates	Fringes
IRONWORKER, STRUCTURAL	$ 30.85	16.47

IRON0402-001 01/01/2019

	Rates	Fringes
IRONWORKER, ORNAMENTAL	$ 23.69	12.70

SUFL2014-020 08/16/2016

	Rates	Fringes
CARPENTER	$ 18.00	0.00
CEMENT MASON/CONCRETE FINISHER	$ 14.85	0.60
IRONWORKER, REINFORCING	$ 26.37	12.65
LABORER: Common or General, Including Cement Mason Tending and Pipelaying	$ 14.41	0.00
OPERATOR: Backhoe/Excavator/Trackhoe	$ 22.07	8.80
OPERATOR: Bulldozer	$ 15.40	1.90
OPERATOR: Grader/Blade	$ 18.97	0.00
OPERATOR: Loader	$ 14.00	1.40
OPERATOR: Roller	$ 14.43	4.78
PAINTER: Brush, Roller and Spray	$ 14.72	2.13
PIPEFITTER	$ 21.36	7.93
PLUMBER	$ 18.01	2.88
ROOFER	$ 19.00	1.17
SHEET METAL WORKER, Includes HVAC Duct Installation	$ 20.11	3.41

SPRINKLER FITTER (Fire Sprinklers).....$ 18.25 0.00

TILE SETTER.....$ 18.01 0.00

TRUCK DRIVER: Dump Truck.....$ 13.22 2.12

TRUCK DRIVER: Lowboy Truck.....$ 14.24 0.00

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular

rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate

that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"

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[END OF PART D.]

PART E
DISADVANTAGED BUSINESS ENTERPRISE (DBE)

Participation by Disadvantaged Business Enterprises (DBE)
The Lee County Port Authority (Port Authority) is dedicated to promoting the full participation of Disadvantaged Business Enterprises (DBE) in all Port Authority projects. Therefore, for the purposes of this Request for Bids 20-53MMW: Passenger Boarding Bridge Replacement**,** any individual or firm who enters into an agreement with the Port Authority shall make every possible effort to meet or exceed the established Project DBE Goal. This includes, but is not limited to, subcontracting, and the expenditures for materials and supplies.

The Port Authority and its contractors agree to ensure that DBEs will have the maximum opportunity to participate in the performance of this Project. In this regard, contractors shall take all necessary and reasonable steps to ensure that DBEs have adequate opportunities to compete for and perform contracts under this project. The Port Authority and their contractors shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of Department of Transportation-assisted and Port Authority contracts.

Participation Goals
If awarded, the contractor will enter into a lump sum contract with the Port Authority. The attainment of the DBE goal established for this project is to be measured as a percentage of the total value of the base bid, including all contract amendments. The DBE goal established by the Port Authority under this project is anticipated at **10%** participation.

Responsible and Responsive
In order to be considered responsible and responsive, bidders must make good faith efforts to meet the identified DBE goal. This may be accomplished in one of two ways:

1. By meeting the project DBE goal and documenting the commitments with the DBE firm(s); or

2. By providing documentation of the bidder's good faith efforts to meet the project goal.

DBE participation or reasonable good faith efforts is a matter of responsiveness. Failure to provide this information may result in your bid being declared non-responsive. It is incumbent on the bidder to submit appropriate documentation or to demonstrate that "good faith efforts" were made to reach out to DBEs to obtain participation. Additional information may be requested from the Bidder/Proposer regarding their proposed DBE participation.

Required Certification
All DBE firms must be properly certified prior to the bid opening. The Port Authority only recognizes the following DBE certification under this project.

DBE Certification - Only DBE firms certified under the Florida Unified Certification Program (FUCP) in the State of Florida shall be counted toward the established DBE goal. All DBE

firms in Florida are listed in a single DBE UCP Directory. Contractors should refer to this directory to identify potential DBEs for the work. The FUCP Directory is found at: https://fdotxwp02.dot.state.fl.us/EqualOpportunityOfficeBusinessDirectory/CustomSearch.aspx
or
http://www.flylcpa.com/dbe.

Additional assistance may be obtained by calling the Port Authority's DBE Manager Julio Rodriguez at 239-590-4625.

DBE CONDITIONS

The Lee County Port Authority (Port Authority) and its contractors agrees to ensure that DBEs as defined in 49 CFR Part 26 have the maximum opportunity to participate in the performance of contracts and subcontracts financed in whole or in part with Federal funds. In this regard, contractors shall take all necessary and reasonable steps in accordance with 49 CFR Part 26 to ensure that DBEs have the maximum opportunity to compete for and perform contracts. The Port Authority and their contractors shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of DOT-assisted and Port Authority contracts.

DEFINITIONS

- Disadvantaged Business Enterprise (DBE) – This term, as used in this Request for Bids solicitation document shall have the same meaning as defined in paragraph 26.5 of Subpart A to 49 CFR Part 26.

- General Contractor – This term refers to the successful bidder whose bid is awarded pursuant to this RFB.

- Good Faith Efforts – means the successful bidders efforts to achieve a DBE goal.

The following conditions apply to any contract resulting from this Request for Bids. Submission of a bid by a prospective contractor/subcontractor shall constitute full acceptance of these bid conditions:

2. DBE BID CONDITIONS

a. Expenditures Counting Towards DBE Goal – For non-DBE contractor(s) and subcontractor(s), the Port Authority and its CM/GC will count towards the DBE goal sixty percent (60%) of expenditures for materials and supplies required under the contract and obtained from a DBE established dealer, and one hundred percent (100%) of such expenditures obtained from a DBE manufacturer.

b. Responsible and Responsive - In order to be considered responsible and responsive, bidder must make good faith efforts to meet the identified DBE goal established for this project. This may be

accomplished in one of two ways:

1. By meeting the DBE Participation Goal and documenting the commitments of the DBE firms; or

2. By documenting adequate bidder's good faith efforts to meet the goal.

DBE participation or reasonable good faith efforts is a matter of responsiveness. Failure to provide this information may result in your bid being declared non-responsive. It is incumbent on the bidder to submit appropriate documentation to demonstrate that "good faith efforts" (as defined in 49 Code of Federal Regulation Part 26, Appendix A, Subpart C 26.53) was made to reach out to DBEs to obtain participation.

c. **DBE Forms** - Completed *DBE Utilization Statement* and *Letter of Commitment(s)* must be submitted with this Request for Bid. The *Letter(s) of Commitment* must be completed by each DBE firm proposed to be used in this project.

Note: Additional information may be requested from any bidder regarding their proposed DBE participation.

d. **DBE Required Certification** – All DBEs MUST BE PROPERLY CERTIFIED PRIOR TO THE BID OPENING. Only DBE firms certified under the Florida Unified Certification Program (FUCP) in the State of Florida shall be counted toward the established goal. DBE firms in Florida are listed in a single DBE FUCP directory. Bidders should refer to this directory to identify potential DBEs for the work.

The Directory is found at:
https://fdotxwp02.dot.state.fl.us/EqualOpportunityOfficeBusinessDirectory/CustomSearch.aspx

Or http://www.flylcpa.com/dbe

Additional assistance may be obtained by calling the Port Authority's DBE Manager at 239-590-4625.

3. DBE CONTRACT CONDITIONS

a. **Policy -** The policy of the Port Authority is to ensure nondiscrimination in the award and administration of DOT-assisted contracts; to create a level playing field on which DBEs can compete fairly for DOT-assisted contracts; to ensure that the DBE Program is narrowly tailored by utilizing race neutral/race

conscious means; to ensure that only firms that fully meet the 49 CFR Part 23 and Part 26 eligibility standards are permitted to participate as DBEs; to help remove barriers to the participation of DBEs in DOT-assisted contracts; and to assist in the development of firms that can compete successfully in the marketplace outside the DBE Program.

b. **Contract Assurances -** Each contractual agreement with a contractor (and each subcontract the Prime Contractor signs with a Subcontractor) must include the following assurance:

The Contractor or Subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy, as the recipient deems appropriate.

c. **Prompt Payment and Release of Retainage Clause** - The Port Authority will include the following clause in each DOT-assisted prime contract, and the prime contractor will require all subcontractors to have this clause in their subcontracts:

The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than fifteen (15) days from the receipt of each payment the Prime Contractor receives from the Port Authority. The Prime Contractor agrees further to return retainage payments to each Subcontractor within forty-five (45) days after the Subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above-referenced timeframe may occur only for good cause following written approval of the Authority.

Note: This clause applies to both DBE and non-DBE subcontractors.

d. **DBE Signed Contracts -** The General Contractor/Consultant must submit copies of the signed contracts with the DBE(s) who will be utilized as subcontractors and are listed in its bid for work to be performed under the scope of services of the General Contractor/Consultant's contract with the Port Authority. Said contracts shall be submitted not later than fifteen (15) days after the General Contractor/Consultant is in receipt of their signed contract from the Port Authority. Said contracts shall be submitted not later than fifteen (15) days after the General Contractor is in receipt of their Notice-To-Proceed from the Port Authority.

e. **Bidders List Data** – For all DOT-assisted contracts a list of all DBE and Non-DBE firms that bid on prime contracts, or bid or quote subcontracts and

materials supplied shall be submitted to the Port Authority no later than fifteen (15) days after the General Contractor/Consultant is in receipt of their signed contract from the Lee County Port Authority. Bid Opportunity form to be provided and completed by the successful bidder.

f. **Mobilization** – The General Contractor will provide the DBE Subcontractor with mobilization funds provided by the Port Authority based on the DBE's portion of work to be performed. The mobilization funds will be included as a part of the DBE Subcontractor's bid price. The total DBE mobilization funds will be indicated as a separate line item on the schedule of values.

g. **On-Site Visits** – Upon request, the General Contractor will assist the Port Authority's DBE Office in conducting on-site monitoring of all DBE Subcontractors.

h. **Prohibited** – Agreements between the General Contractor and a DBE in which the DBE promises not to provide subcontracting quotations to other bidders are prohibited.

i. **Replacements** - If the General Contractor deems it necessary to replace a DBE subcontractor/subconsultant, the General Contractor shall make an acceptable good faith effort to use another DBE subcontractor. **Substitutions must be coordinated with and approved by the Port Authority at the Authority's sole discretion.**

[END OF PART E.]

PART F
INSURANCE, INDEMNIFICATION AND BOND REQUIREMENTS

No agreement will be made pursuant to this Request for Bid until all insurance coverage indicated herein has been obtained. The cost for obtaining insurance coverage is the sole responsibility of the successful bidder. The successful bidder shall obtain and submit to the Purchasing Office within five (5) calendar days from the date of notice of intent to award, proof of the following minimum amounts of insurance on a standard ACCORD form. The insurance provided will include coverage for all parties employed by the bidder. At the discretion of the Authority, insurance limits may be reevaluated and revised at any time during the agreement.

All bidders should furnish proof of acceptable insurance. A copy of the bidder's current insurance certificate or a statement from the firm's insurance company verifying the firm's ability to obtain the insurance coverage as stated herein, should be submitted with the bid.

F.01 Insurance Requirements (Types and Limits)

Successful bidder must provide the following types of insurance with minimum limits as indicated:

Worker's Compensation	Florida Statutory Requirements
Employers Liability	
Each Accident	$1,000,000
Disease Each Employee	$1,000,000
Limit Disease Each Employee	$1,000,000
Bodily Injury & Property Damage Liability	
Each Occurrence	$10,000,000
Aggregate	$10,000,000
Automobile Liability	
Bodily Injury & Property Damage Liability (Combined Single Limit Each Accident)	$5,000,000
Builder's Risk	$ Amount of Contract

F.02 Additional Insured

The Authority shall be named as an additional insured on all policies except for workers' compensation. The policy shall be endorsed to include the following language "The Lee County Port Authority, its officers, officials and employees, are to be covered as an additional insured with respect to liability arising out of the "work" or operations performed by or on behalf of the insured, including materials, parts or equipment furnished in connection with such Work or Operations."

F.03 Acceptability of Insurers

Insurance is to be placed with insurers duly licensed and authorized to do business in the State of Florida and with an AM Best rating of not less than A-Vii. The Authority in no way warrants that the above required minimum insurer rating is sufficient to protect the successful Respondent from potential insurer insolvency.

F.04 Waiver of Subrogation

Insurance will be primary and noncontributory and shall include a Waiver of Subrogation by both the successful bidder and its insurers in favor of the Authority on all policies including general liability, auto liability and the workers' compensation policy, as well as any umbrella or excess policy coverage.

F.05 Certificate of Insurance

Prior to the execution of an agreement or the issuance of a Purchase Order, and then annually upon the anniversary date(s) of the insurance policy(s) renewal date for as long as the agreement is in effect, successful bidder shall furnish a certificate of insurance using an ACORD form and containing the solicitation number with the Authority named as an additional insured on the applicable coverage. A current insurance certificate or a statement from the firm's insurance company verifying the firm's ability to obtain the insurance coverage as stated herein, should be submitted with the offer. The appointed insurance agent or carrier shall be duly licensed to provide coverage and honor claims within Florida. Send the certificate of insurance with Authority as certificate holder to riskmanagement@flylcpa.com

The certificate of insurance must give the Authority prior notice of cancellation and state that the coverage is primary and noncontributory. A waiver of subrogation in favor of the Authority will also be required.

F.06 Policy on Request

In addition, when requested in writing by the Authority, the successful bidder will provide the Authority with a certified copy of all applicable insurance policies.

F.07 Change in coverage

The successful bidder is required to provide a minimum of thirty (30) days written notice to the Port Authority Risk Manager of any cancellation, nonrenewal, termination, material change or reduction of any coverage called for herein. All such notices shall be sent directly to the Lee County Port Authority Risk Manager, 11000 Terminal Access Road, Suite 8671, For Myers FL 33913. If the bidder fails to meet the requirements set forth herein, the Authority may terminate any agreement it has with the successful bidder.

F.08 Subcontractor's requirement

The successful bidder must ensure that its agents, representatives, and subcontractors comply with the insurance requirements set forth herein.

F.09 Sovereign Immunity

The successful bidder understands and agrees that by entering an agreement with bidder, the Authority does not waive its sovereign immunity and nothing herein shall be interpreted as a waiver of the Authority's rights, including the limitation of waiver

of immunity, as set forth in Florida Statutes Section 768.28, or any other statutes, and the Authority expressly reserves these rights to the fullest extent allowed by law.

F.10 Indemnification, General Liability & Patent or Copyright

The successful bidder shall indemnify, hold harmless, and defend Lee County, Lee County Port Authority and their respective Boards of Commissioners, their agents and employees, and anyone directly or indirectly employed by either of them, from and against any and all liabilities, losses, claims, damages, demands, expenses, or actions, either at law or in equity, monies, or other loss, allegedly caused or incurred, in whole or in part, as a result of any negligent, wrongful, or intentional act or omission, or based on any action of fraud or defalcation by the successful bidder, or anyone performing any act required of the bidder in connection with performance of any contract awarded pursuant to this Request for Bids.

These obligations shall survive acceptance of any goods and/or performance of services and payment therefore by the Lee County Port Authority.

F.11 Bid Bond or Other Security

Bidders must submit a bid bond, certified check, or cashier's check payable to the Lee County Port Authority Board of Port Commissioners with their bid and in a dollar amount representing not less than five percent (5%) of the total amount bid.

F.12 Performance And Payment Bond

A performance and payment bond for the benefit of and directed to the Lee County Port Authority Board of Port Commissioners, satisfying the requirements of Section 255.05, Florida Statutes, covering the faithful performance by the successful bidder of its obligations under the Agreement.

The performance and payment bond assures that the successful bidder will promptly complete the work and promptly pay in full all bills and accounts for material and labor used in connection with the work in accordance with the terms of the Agreement.

The performance and payment bond, satisfactory to the Authority, shall be submitted within fifteen (15) calendar days from the date of issuance of the written notice of intent to award. The performance and payment bond must comply with the requirements of Florida Statute 255.05 and shall be submitted on the exact form contained herein.

F.13 Recording the Performance And Payment Bond

Pursuant to Section 255.05(1)(b), Florida Statutes, prior to commencement of any work on the Project, the successful bidder shall be responsible for and bear all costs associated to obtain and record Payment and the Performance Bonds with the Lee County Clerk of the Circuit Court.

A certified copy of the recorded bonds must be furnished to the Purchasing Office upon filing. Pursuant to Section 255.05(1)(b), Florida Statutes, the Authority will make no payment to the successful bidder until the successful bidder has complied

with this paragraph.

F.14 Qualifications of Surety Companies

To be acceptable to the Authority, a Surety must comply with the following minimum provisions:

a. All Sureties must be admitted to do business in Florida and all bonds must be submitted on the exact forms contained within the contract documents.

b. Attorneys-in-Fact who sign bid bonds or payment and performance must file with such bond a certified copy of their Power of Attorney to sign such bond.

c. Agents of surety companies must list their name, address and telephone number on all bonds. A Florida registered agent must sign all bonds.

d. Surety must have twice the minimum surplus and capital required by the Florida Insurance Code at the time of bid solicitation.

e. Surety must be in compliance with all provisions of the Florida Insurance Code and hold a currently valid certificate of authority issued by the United States Department of the Treasury under SS.31 U.S.C. 9304-9308.

f. Surety must have a minimum underwriting limitation of $5,000,000 published in the latest edition of the Federal Register for Federal Bonds.

F.15 A.M. Best

Sureties rated through A.M. Best shall be rated as "A-" or better as to General Policyholders Rating and Class VII or better as to financial category by the most current Best's Key Rating Guide, published by A.M. Best Company. Further, surety must have fulfilled all of its obligations on all other bonds previously given to the Lee County Port Authority or Lee County, Florida.

[END OF PART F.]

PART G – FORMS **Note: This form must be submitted with the bidder's bid submittal**

FORM 1: BIDDER'S CERTIFICATION

I have carefully examined this Request for Bids (RFB) which includes information for bidders, special instructions and requirements, project information, grant requirements, Davis Bacon Wage Rates, DBE, insurance and bond requirements, special conditions, general conditions and plans and technical specifications. I acknowledge receipt and incorporation of the following addenda. The cost, if any, of such revisions has been included in the price of the bid.

Addendum No. ___; dated _____. Addendum No. ___; dated_____.
Addendum No. ___; dated _____. Addendum No. ___; dated_____.

I hereby propose to provide the services requested in this bid. I agree to hold pricing for at least **180** calendar days to allow the Authority time to properly evaluate this bid. I agree that the Authority terms and conditions (http://www.flylcpa.com/purchasing/) herein shall take precedence over any conflicting terms and conditions submitted with the bid and agree to abide by all conditions of this document.

I certify that all information contained in the bid is truthful to the best of my knowledge and belief. I further certify that I am duly authorized to submit this bid on behalf of the company as its agent and that the company is ready, willing and able to perform if awarded a contract.

I further certify, under oath, that this bid is made without prior understanding, agreement, connection, discussion, or collusion with any other person, company, or corporation submitting a bid for the same product or service; no officer, employee or agent of the Authority or of any other company who is interested in said bid; and that the undersigned executed this Bidder's Certification with full knowledge and understanding of the matters therein contained and was duly authorized to do so.

NAME OF BUSINESS	MAILING ADDRESS
AUTHORIZED SIGNATURE	CITY, STATE & ZIP CODE
NAME, TITLE, TYPED	TELEPHONE NUMBER / FAX NUMBER
FEDERAL IDENTIFICATION #	EMAIL ADDRESS

State of: _____

County of: _____

This foregoing instrument was acknowledged before me this _____ day of _____, 20___, by _____, who is personally known to me or produced _____ as identification.

Signature of Notary	Serial/Commission No.

FORM 2: OFFICIAL BID FORM. This form must be submitted with the bidder's bid submittal

RFB NO. **20-53MMW** **BIDDER'S NAME:** _____

BIDS ARE DUE ON: **FRIDAY, MAY 29, 2020**
PRIOR TO **2:00 P.M. LOCAL TIME**

Lee County Port Authority Purchasing Office
Southwest Florida International Airport
11000 Terminal Access Road, Suite 8671
Fort Myers, Florida 33913

The undersigned, hereinafter called "bidder," having become familiar with the local conditions, nature, and extent of the work, and having examined carefully the bid solicitation documents, including but not limited to, Information to Bidders, Special Instructions and Requirements, Project Information, Insurance and Bonding Requirements, Disadvantaged Business Enterprise Program requirements, Project Plans and Specifications, schedule & phasing, forms, and other contract documents, and having fulfilled bid requirements herein, agrees to furnish all labor, materials, equipment, and other incidental items, facilities and services necessary to perform:

PASSENGER BOARDING BRIDGE REPLACEMENT

in full accordance with the solicitation and contract documents and all other documents related thereto on file in the Purchasing Office and, if awarded the contract, to complete the said work within the time limits specified for the pricing awarded, which is based on the following bid schedule:

	Bidder's Company Name				
Item No.	**Description**	**Unit**	**Estimated Quantity**	**Unit Price**	**Extended Price**
1	Mobilization	LS	1		
2	DBE Mobilization	LS	1		
3	Remove / Discard or Turnover to Owner: Phone	EACH	11		
4	Remove / Discard or Turnover to Owner: Illuminated Sign	EACH	11		
5	Remove / Discard or Turnover to Owner: Cable Hoist	EACH	11		
6	Remove / Discard or Turnover to Owner: 10" PBB Pre-Cool Plenum Hose	EACH	2		
7	DCO - Demo Cut Out Sidewalks and haul off @ Existing Pile Caps	EACH	27		
8	Remove Existing Passenger Boarding Bridge	EACH	27		
9	Remove Concrete Paving / Walkways @ Pile Caps	SQFT	5400		

10	Hand Excavation around existing Pile Caps	CUYD	54		
11	Pile Cap Edge Form	SQFT	1620		
12	Drill / Epoxy Dowels into exist. Pile Cap	EACH	1134		
13	4000 PSI Concrete Pile Cap	CUYD	324		
14	Patch Back Exist Concrete Paving / Walkways	SQFT	5400		
15	Temporary Infill / Opening @ Gate Door (Remove & Reinstall)	EACH	27		
16	iOPS BMS Bldg Management System	LS	1		
17	New PBB (Like for Like) A3-58/110 (including shipping to site, insurance)	EACH	8		
18	New PBB (Like for Like) A3-68/141 (including shipping to site, insurance)	EACH	1		
19	New PBB (Like for Like) A3-64/131 (including shipping to site, insurance)	EACH	1		
20	New PBB (Upsize) A3-58/110 (including shipping to site, insurance)	EACH	6		
21	New PBB (Upsize) A3-58/110 (including shipping to site, insurance)	EACH	1		
22	New PBB (Downsize) A3-64/131 (including shipping to site, insurance)	EACH	10		
23	New Fixed Walkway (40.0' Inft)	EACH	2		
24	Gate Sign	EACH	27		
25	Bag Slide	EACH	27		
26	Installation (Incl PBB, WW, GPU, PCA)	EACH	27		
27	Manufacturer Commissioning	EACH	27		
28	Relocate Condensate Drain due to Pile Cap Expansion (Drain to Pavement)	EACH	27		
29	Re-Install 45-ton PCA Unit	EACH	4		
30	New 45-ton PCA Unit	EACH	19		
31	New 75-ton PCA Unit	EACH	4		
32	Disconnect / Make Safe Existing Electrical to Exist PBB	EACH	27		
33	Re-Install Exist 400Hz SSFC 90KVA	EACH	11		
34	Replace 400Hz SSFC 90KVA	EACH	11		
35	Replace 400Hz SSFC 180KVA	EACH	5		
36	Cameras, Software Licensing & Programming (Recording Servers and Video Storage Servers by LCPA)	EACH	27		
37	Remove Stop Bar (1-Each)	LNFT	10		
38	Striping to be Removed (Grind Only)	LNFT	4617		
39	Striping at Gates	LNFT	4997		
40	New Stop Bar (1-Each)	LNFT	10		
	GRAND TOTAL EXTENDED BID PRICE				

NOTICE: Bidders are responsible for verifying quantities to the degree he/she deems necessary in order to submit a lump sum bid. Quantities and unit prices will NOT be used to determine award in any case. The Grand Total Bid Price only will be used for consideration of low bid award. This is not a unit price contract. There will be NO adjustments for errors of quantity take offs or variations caused by existing conditions regardless of bidder's basis of information.

Bidder must bid on all bid items. Any bidder not bidding all bid items will be considered nonresponsive and disqualified.

FAA Advisories to be followed (or newer version as updated by FAA): FAA AC 150/5370-2G Operational Safety on Airports During Construction, FAA AC 150/5200-18C Airport Safety Self Inspection, FAA AC 150/5210-5D Painting, Marking & Lighting of Vehicles Used on an Airport, FAA AC 150/5200-33B Hazardous Wildlife Attractants on or Near Airports.

NOTES / INSTRUCTIONS:
1) All bidders are required to hold their bid prices for 180 days after the date bids are due. Bidder shall provide a Bid Bond with their bid submittal. Bid Bonds shall be provided in the amount of 5% of the Grand Total Bid Number.
2) Contractor shall submit a complete bid including pricing for the entire scope of work and by providing unit costs for each item indicated herein. It shall be the bidder's sole responsibility to ensure formatting and mathematical calculations be precise and correct. Bidders shall provide prices for all items to be considered a complete and responsive bid.
3) Basis for ranking of bids shall be determined by a number of factors including but not limited to the Grand Total Bid Number for all items within the bid schedule.
4) The bidder shall provide a Unit Price and the extended Bid Price for each line item in the bid schedule. Failure to follow bid instructions may be grounds for bid rejection.
5) Prospective responsive low bidder (based on Grand Total Bid Number) will enter into a lump sum contract with the Lee County Port Authority.
6) Estimated quantities herein are published solely for the purpose of establishing the basis for lump sum bid award.
7) The project will be awarded as a lump sum contract according to the low responsive bidders provided Grand Total Bid Number.
8) C-105 Mobilization shall be limited to 10 percent of the Grand Total Bid Number.
9) The bidder proposes to furnish all material, equipment and labor to execute all work associated with the project.
10) All project design documents and specifications take precedence over any bid notes mentioned herein.

NAME OF BIDDER _____

FORM 2: OFFICIAL BID FORM (Page 4 of 4)

Each Bidder must demonstrate that the minimum qualifications set forth in Part B have been met. Each bidder must provide the up to date and current information as requested below. . The inability to perform reference checks due to the submittal of inaccurate or outdated reference contact information may affect the LCPA's determination of responsiveness.

1. _____ Has bidder been found guilty by any court in the United States of crimes pertaining to industrial espionage or intellectual property theft. (Indicate Yes or No).

2. Project Information and Reference

A. _____
BIDDER FIRM NAME

_____ _____
PROJECT NAME AIRPORT NAME

_____ _____
YEAR PROJECT STARTED/COMPLETED DOLLAR VALUE OF CONSTRUCTION

_____ _____
AIRPORT CONTACT NAME POSITION HELD ON PROJECT

_____ _____
AIRPORT CONTACT CURRENT TITLE CURRENT ADDRESS

_____ _____
CURRENT CITY, STATE ZIP CODE CURRENT TELEPHONE #

_____
CURRENT EMAIL

B. _____
BIDDER FIM NAME

_____ _____
PROJECT NAME AIRPORT NAME

_____ _____
YEAR PROJECT STARTED/COMPLETED DOLLAR VALUE OF CONSTRUCTION

_____ _____
AIRPORT CONTACT NAME POSITION HELD ON PROJECT

_____ _____
AIRPORT CONTACT CURRENT TITLE CURRENT ADDRESS

_____ _____
CURRENT CITY, STATE ZIP CODE CURRENT TELEPHONE #

_____
CURRENT EMAIL

FORM 3: LOBBYING AFFIDAVIT
Note: This form must be submitted with the bidder's bid submittal

_____, being first duly sworn, deposes and says that he or she is the (circle one as appropriate – sole owner, general partner, joint venture partner, president, secretary or authorized representative of bidder, maker of the attached bid and that neither the bidder nor its agents have lobbied to obtain an award of the agreement pursuant to this bid from the Lee County Board of Port Commissioners, members of the Airports Special Management Committee, or employees of the Lee County Port Authority, individually or collectively, regarding this competitive solicitation.

Bidder further affirms that bidder has complied with the federal regulations concerning lobbying activities contained in 31 U.S.C. 1352 and 49 CFR Part 20 and Lee County Lobbying Ordinance No. 03-14.

AFFIANT: _____

Date:_____

State of: _____

County of: _____

This foregoing instrument was acknowledged before me this _____ day of _____ , 20___, by _____, who is personally known to me or produced _____ as identification.

_____ _____

Signature of Notary Serial/Commission No.

FORM 4: PUBLIC ENTITY CRIMES FORM

SWORN STATEMENT PURSUANT TO SECTION 287.133(3)(a) FLORIDA STATUTES

A person, affiliate, or corporation who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a vendor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, Florida Statutes, for CATEGORY TWO for a period of thirty-six (36) months from the date of being placed on the convicted vendor list.

The Bidder certifies by submission of this form that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any State or Federal entity, department or agency.

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH 1 (ONE) ABOVE IS FOR THAT PUBLIC ENTITY ONLY AND, THAT THIS FORM IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT IN EXCESS OF THE THRESHOLD AMOUNT PROVIDED IN SECTION 287.017, FLORIDA STATUTES FOR CATEGORY TWO OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

BIDDER'S NAME: _____

Note: This form must be submitted with the bidder's bid submittal.

FORM 5: BIDDER'S SCRUTINIZED COMPANIES CERTIFICATION

Bidder hereby certifies under penalties of perjury as of the date of this bid to provide goods and services to the Lee County Port Authority that it has not been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List as defined in Section 287.135, Fla. Stat., is not engaged in business operations in Cuba and Syria; and is not on the Scrutinized Companies that Boycott Israel List or is engaged in a boycott of Israel.

I further certify that I am duly authorized to submit this certification on behalf of the company as its agent and that the company is ready, willing and able to perform if awarded a contract.

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE LEE COUNTY PORT AUTHORITY IS FOR THAT PUBLIC ENTITY ONLY AND, THAT FALSIFICATION OF THIS CERTIFICATION MAY RESULT IN TERMINATION OF THE CONTRACT, DEBARMENT OF THE COMPANY FROM SUBMITTING A BID OR PROPOSAL FOR A PERIOD OF THREE (3) YEARS FROM THE DATE THE CERTIFICATION IS DETERMINED TO BE FALSE, CIVIL PENALTIES, AND THE ASSESSMENT OF ATTORNEY'S FEES AND COSTS AGAINST THE COMPANY. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

_____

Authorized Signature

State of: _____

County of: _____

This foregoing instrument was acknowledged before me this _____ day of _____, 20___, by _____, who is personally known to me or produced _____ as identification.

_____ _____

Signature of Notary Serial/Commission No.

Note: This form must be submitted with the bidder's bid submittal

FORM 6: BID BOND **BID BOND NO.___**

KNOW ALL MEN BY THESE PRESENTS, that we _____, as Principal, and _____, a corporation licensed to do business in the State of Florida as a surety, are held firmly bound unto LEE COUNTY PORT AUTHORITY, LEE COUNTY, FLORIDA (obligee), in the sum of $_____ ($____.__) for the payment whereof, well and truly to be made, we bind ourselves, our heirs, successors, personal representatives and assigns, jointly and severally, firmly, by these presents.

SIGNED AND SEALED this _____ day of _____, 2020.

WHEREAS, said Principal is herewith submitting a bid for RFB 20-53MMW, Passenger Boarding Bridge Replacement – Southwest Florida International Airport.

NOW, THEREFORE, the condition of the above obligation is such that if said Principal shall be awarded the contract upon said bid within the specified time and shall enter into a written agreement, satisfactory in form, and shall provide an acceptable Performance and Payment Bond from a Surety acceptable to the Authority as well as other insurance as may be required by the Authority within ten (10) calendar days from the issuance of the written Notice of Intent to Award date, or within such extended period as the Port Authority may grant, then this obligation shall be null and void. Otherwise, said Principal and Surety shall pay to said Authority in money the difference between the amount of the bid of said Principal and the amount for which said Authority may legally contract with another party to perform said work, if the latter amount be in excess of the former, together with any expenses and reasonable attorney's fees incurred by said Port Authority if suit be brought hereon, but in no event shall said Surety's liability exceed the penal sum hereof plus such expenses and attorney's fees. For purposes of unsuccessful bid protests filed by the Principal herein, this obligation shall bind the Surety to pay costs and damages associated with the bid protest or delays to the project upon finding from the Board of Port Commissioners for Lee County that the bid protest was frivolous and/or lacked merit.

Witness as to Principal: _____ (SEAL)
(Principal)

_____
(By)

Witness as to Surety: _____ (SEAL)
(Surety's name)

_____
(By-As Attorney in Fact, Surety)

Affix Corporate Seals and attach proper Power of Attorney for Surety.

FORM 7: RESERVED

FORM 8: RESERVED

26. -

FORM 9: Utilization Statement: Disadvantaged Business Enterprise (DBE). Note: This form must be submitted with the bidder's bid submittal

By completing this form Bidders must identify and document whether they will meet the Port Authority's DBE participation goal for this project **(10%)**, and if not, Bidders should identify and document its good faith efforts to meet the goal, as set forth in 49 CFR, Appendix A, Subpart C 26.53**.**

CERTIFIED DBE(s) LIST

DBE Firm Name(s)	**$ Value of Work**	**Percent of Total Project**
1. _____	$_____	_____%
Type of Work/Specialty:_____		
2. _____	$_____	_____%
Type of Work/Specialty:_____		
3. _____	$_____	_____%
Type of Work/Specialty:_____		
4. _____	$_____	_____%
Type of Work/Specialty:_____		
5. _____	$_____	_____%
Type of Work/Specialty:_____		

Attach Additional Sheets as Necessary

The undersigned bidder has satisfied the requirements of the bid conditions in the following manner. (Please mark appropriate box)

☐ **The bidder is committed to a minimum of _____% DBE utilization on this project.**

☐ **The bidder, while unable to meet the established goal, hereby commits to a minimum of _____% DBE utilization on this project and also submits documentation, as an attachment(s) demonstrating good faith efforts (GFE).**

Total Value of Base Bid	**$**
Total of DBE Subcontract(s) Work	**$**

Print Bidder's/Offeror's Company Name	
Print Name of Authorized Representative	

Company Address:			
	City:	State:	Zip Code:
Phone Number :	E-mail:		

The undersigned hereby further assures that the information included herein is true and correct, and that the DBE firm(s) listed herein, have agreed to perform a commercially useful function as described in 49 CFR Part 26.55(c) in the work items noted for each firm. The undersigned further understands that no changes to this statement may be made without prior approval from the Lee County Port Authority and the CM for this project.

_____

Signature of Authorized Representative Date

FORM 10: LETTER OF COMMITMENT: Disadvantaged Business Enterprise (DBE)

LETTER OF COMMITMENT
Disadvantaged Business Enterprise
(This page shall be submitted with bid submittal for each proposed DBE firm)

Bidder/Offeror Company Name:_____

Project Name/#: _____

DBE Firm: Company Name: _____

Address: _____

City: _____State:_____ Zip_____

DBE Contact Person: Name: _____Phone: (____) _____

E-mail:_____

Work items(s) to be performed by DBE Firm	***Quantity/Unit Price***	***Total Value of Work***
Totals		

The bidder/offeror is committed to utilizing the above-named DBE firm for the work described above. The estimated participation is as follows:

Total DBE contract amount: $_____

Affirmation:
The above-named DBE firm affirms that it will perform the portion of the contract for the estimated dollar value as stated above.

By: _____
(Signature of DBE Firm's Authorized Representative) (Date)

_____
(Title)

**In the event the bidder does not receive award of bid, any and all representations in this Letter of Commitment and Affirmation shall be null and void.*

DBE Letter of Commitment – 02/25/2020JR

FORM 11: CERTIFICATE OF BUY AMERICAN COMPLIANCE FOR TOTAL FACILITY. Submission of this form is REQUIRED with bid submittal.

CERTIFICATE OF BUY AMERICAN COMPLIANCE FOR TOTAL FACILITY

As a matter of bid responsiveness, the bidder must complete, sign, date, and submit this certification statement with its proposal. The bidder must indicate how it intends to comply with 49 USC § 50101 by selecting one of the following certification statements. These statements are mutually exclusive. Bidder must select one or the other (i.e. not both) by inserting a checkmark (□) or the letter "X".

□ **Bidder hereby certifies that it will comply with 49 USC § 50101 by:**

a) Only installing steel and manufactured products produced in the United States; or
b) Installing manufactured products for which the Federal Aviation Administration (FAA) has issued a waiver as indicated by inclusion on the current FAA Nationwide Buy American Waivers Issued listing; or
c) Installing products listed as an Excepted Article, Material or Supply in Federal Acquisition Regulation Subpart 25.108.

By selecting this certification statement, the bidder agrees:

- To provide to the Owner evidence that documents the source and origin of the steel and manufactured product.
- To faithfully comply with providing U.S. domestic products.
- To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

□ **Bidder hereby certifies it cannot comply with the 100 percent Buy American Preferences of 49 USC § 50101(a) but may qualify for either a Type 3 or Type 4 waiver under 49 USC § 50101(b). By selecting this certification statement, the apparent bidder with the apparent low bid agrees:**

a) To the submit to the Owner within 15 calendar days of the bid opening, a formal waiver request and required documentation that supports the type of waiver being requested.
b) That failure to submit the required documentation within the specified timeframe is cause for a non-responsive determination that may result in rejection of the bid.
c) To faithfully comply with providing U.S. domestic products at or above the approved U.S. domestic content percentage as approved by the FAA.
d) To furnish U.S. domestic product for any waiver request that the FAA rejects.
e) To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

REQUIRED DOCUMENTATION

Type 3 Waiver – The cost of components and subcomponents produced in the United States is more than 60 percent of the cost of all components and subcomponents of the "facility". The required documentation for a Type 3 waiver is:

a) Listing of all manufactured products that are not comprised of 100 percent U.S. domestic content (excludes products listed on the FAA Nationwide Buy American Waivers Issued listing and products excluded by Federal Acquisition Regulation Subpart 25.108; products of unknown origin must be considered as non-domestic products in their entirety).
b) Cost of non-domestic components and subcomponents, excluding labor costs associated with final assembly and installation at project location.
c) Percentage of non-domestic component and subcomponent cost as compared to total "facility" component and subcomponent costs, excluding labor costs associated with final assembly and installation at project location.

Type 4 Waiver – Total cost of project using U.S. domestic source product exceeds the total project cost using non-domestic product by 25 percent. The required documentation for a Type 4 of waiver is:

a) Detailed cost information for total project using U.S. domestic product
b) Detailed cost information for total project using non-domestic product

False Statements: Per 49 USC § 47126, this certification concerns a matter within the jurisdiction of the Federal Aviation Administration and the making of a false, fictitious or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code.

_____	_____
Date	**Signature**
_____	_____
Company Name	**Title**

[END OF FORM]

FORM 12: CERTIFICATE OF BUY AMERICAN COMPLIANCE-MANUFACTURERED PRODUCTS. Submission of this form with bidder's bid submittal is REQUIRED.

Certificate of Buy American Compliance for Manufactured Products

As a matter of bid responsiveness, the bidder must complete, sign, date, and submit this certification statement with their bid. The bidder must indicate how they intend to comply with 49 USC § 50101 by selecting one on the following certification statements. These statements are mutually exclusive. Bidder must select one or the other (not both) by inserting a checkmark (✓) or the letter "X".

☐ Bidder hereby certifies that it will comply with 49 USC § 50101 by:

a) Only installing steel and manufactured products produced in the United States;
b) Installing manufactured products for which the Federal Aviation Administration (FAA) has issued a waiver as indicated by inclusion on the current FAA Nationwide Buy American Waivers Issued listing; or
c) Installing products listed as an Excepted Article, Material or Supply in Federal Acquisition Regulation Subpart 25.108.

By selecting this certification statement, the bidder agrees:

1. To provide to the Owner evidence that documents the source and origin of the steel and manufactured product.
2. To faithfully comply with providing U.S. domestic product.
3. To furnish U.S. domestic product for any waiver request that the FAA rejects
4. To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

☐ The bidder hereby certifies it cannot comply with the 100 percent Buy American Preferences of 49 USC § 50101(a) but may qualify for either a Type 3 or Type 4 waiver under 49 USC § 50101(b). By selecting this certification statement, the apparent bidder with the apparent low bid agrees:

1. To the submit to the Owner within 15 calendar days of the bid opening, a formal waiver request and required documentation that supports the type of waiver being requested.
2. That failure to submit the required documentation within the specified timeframe is cause for a non-responsive determination may result in rejection of the proposal.
3. To faithfully comply with providing U.S. domestic products at or above the approved U.S. domestic content percentage as approved by the FAA.
4. To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.
5.

REQUIRED DOCUMENTATION

Type 3 Waiver – The cost of the item components and subcomponents produced in the United States is more that 60 percent of the cost of all components and subcomponents of the "item". The required documentation for a Type 3 waiver is:

a) Listing of all product components and subcomponents that are not comprised of 100 percent U.S. domestic content (Excludes products listed on the FAA Nationwide Buy American Waivers Issued listing and products excluded by Federal Acquisition Regulation Subpart 25.108; products of unknown origin must be considered as non-domestic products in their entirety).
b) Cost of non-domestic components and subcomponents, excluding labor costs associated with final assembly at place of manufacture.
c) Percentage of non-domestic component and subcomponent cost as compared to total "item" component and subcomponent costs, excluding labor costs associated with final assembly at place of manufacture.

Type 4 Waiver – Total cost of project using U.S. domestic source product exceeds the total project cost using non-domestic product by 25 percent. The required documentation for a Type 4 of waiver is:

a) Detailed cost information for total project using U.S. domestic product
b) Detailed cost information for total project using non-domestic product

False Statements: Per 49 USC § 47126, this certification concerns a matter within the jurisdiction of the Federal Aviation Administration and the making of a false, fictitious or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code.

_____	_____
Date	Signature
_____	_____
Company Name	Title

[END OF FORM]

FORM 13: CERTIFICATION OF BIDDER REGARDING TAX DELINQUENCY AND FELONY CONVICTIONS

Submission of this form with bidder's bid submittal is REQUIRED.

CERTIFICATION OF BIDDER REGARDING TAX DELINQUENCY AND FELONY CONVICTIONS

The applicant must complete the following two certification statements. The applicant must indicate its current status as it relates to tax delinquency and felony conviction by inserting a checkmark (✓) in the space following the applicable response. The applicant agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification in all lower tier subcontracts.

Certifications

1) The applicant represents that it is ( ) is not ( ) a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.
2) The applicant represents that it is ( ) is not ( ) is not a corporation that was convicted of a criminal violation under any Federal law within the preceding 24 months.

_____	_____
Date	**Signature**
_____	_____
Company Name	**Title**

FORM 14: TRADE RESTRICTION CERTIFICATION

By submission of an offer, the Offeror certifies that with respect to this solicitation and any resultant contract, the Offeror –

1) is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms as published by the Office of the United States Trade Representative (USTR);

2) has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country included on the list of countries that discriminate against U.S. firms as published by the USTR; and

3) has not entered into any subcontract for any product to be used on the Federal project that is produced in a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR.

This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18 USC Section 1001.

The Offeror/Contractor must provide immediate written notice to the Owner if the Offeror/Contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The Contractor must require subcontractors provide immediate written notice to the Contractor if at any time it learns that its certification was erroneous by reason of changed circumstances.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR 30.17, no contract shall be awarded to an Offeror or subcontractor:

1) who is owned or controlled by one or more citizens or nationals of a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR or

2) whose subcontractors are owned or controlled by one or more citizens or nationals of a foreign country on such USTR list or

3) who incorporates in the public works project any product of a foreign country on such USTR list.

Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

The Offeror agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in all lower tier subcontracts. The Contractor may rely on the certification of a prospective subcontractor that it is not a firm from a foreign country included on the list of countries that discriminate against U.S.

firms as published by USTR, unless the Offeror has knowledge that the certification is erroneous.

This certification is a material representation of fact upon which reliance was placed when making an award. If it is later determined that the Contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration (FAA) may direct through the Owner cancellation of the contract or subcontract for default at no cost to the Owner or the FAA.

Signature of bidder: _____

[END OF FORM]

FORM 15 - NO BID SUBMISSION. Submission of this form is optional.

Return this form to the Purchasing Office if not submitting a bid. Please indicate the reason(s) by checking any appropriate item(s) listed below. Submit to: PROCUREMENT MANAGER by email at mmwendel@FlyLCPA.com or by mail to Lee County Port Authority, 11000 Terminal Access Road, Suite 8671, Fort Myers, Florida, 33913

We are not responding to this Authority Bid for the following reason(s):

_____ Services are not available through our company

_____ Cannot meet the scope of work or specifications

_____ Circle one - Scope of Services/Specifications are:

not applicable	too rigid	too vague
not clearly understood	Insufficient time allowed for preparation	

_____ Other reason(s): _____

How did you learn about this solicitation?

_____ Public Purchase
_____ Local newspaper
_____ Florida Airports Council
_____ Airport Minority Advisory Council
_____ Word of mouth

Company _____

Representative _____

Telephone _____ Fax: _____

Email Address: _____

DATE: _____

26. -

AERO BridgeWorks, Inc.
2700 Delk Road SE, Suite 150
Marietta, GA 30067
P 770-423-4200
F 770-423-4203

JUNE 2, 2020

LEE COUNTY PORT AUTHORITY

SOUTHWEST FLORIDA INTERNATIONAL AIRPORT

Passenger Boarding Bridge Replacement

RFB: 20-53MMW

LEE COUNTY PORT AUTHORITY
Southwest Florida
International Airport

June 2, 2020

Melisa M. Wendel, CPPO
Procurement Manager
mmwendel@flyLCPA.com
(239) 590-4556

REF: AERO Bid Package for RFB 20-53MMW
Passenger Boarding Bridge Replacement at Southwest Florida International Airport

Dear Ms. Wendel, CPPO

AERO BridgeWorks, Inc. (ABW) is pleased to submit this bid package in response to RFB 20-53MMW for Lee County Port Authority (LCPA) consideration. ABW has reviewed all the Bid documents, Contract, Specifications, Drawings and all Addenda issued to-date. We are proud to prepare and submit a fully responsive bid that meets or exceeds all the Minimum Requirements, DBE participation, Technical data, Licensure, Insurance and Bonding requirements, as well as all Contractual and Bid Document criteria.

We have attached this cover letter to specifically highlight ABW is in full compliance with the Bid Requirements, as well as to address Question #64 in Addendum #4. Question #64 is related to a potential "perceived" Conflict between ABW and LCPA's Engineer of Record. We reviewed Question #64 with Counsel and, per the items included herein, ABW is confident there is not a conflict. **Please also note the information included in this letter is confidential and proprietary, so shall not be shared publicly should another firm submit a FOIA request, or similar.**

- **DBE Participation.** This is an important requirement in the Bid package and was a focus during the Pre-Bid meeting discussion. ABW has solicited bids and/or partnered with local and DBE firms to exceed LCPA DBE goals. Throughout the bid process, ABW assisted firms to understand the project and ABW solicited proposals for civil, foundation, ramp striping, electrical, low voltage and equipment scope(s) of this project. **ABW is committed to provide a minimum of 15% of DBE Participation**.

- **Minimum Qualifications.** As outlined in the Bid Package, and as discussed during the Pre-Bid Meeting, the Minimum Qualifications are a focus point for this procurement and are very important to the Owner. To this point, Addendum #2, dated May 18, 2020, was issued to further clarify the Minimum Requirements needed.

  - *"Item 2: Special Instructions and Requirements"* on page 19 of Addendum 2 states, "*2.a, The manufacturer must have manufactured no less than one hundred (100) passenger boarding bridges for project in the United States within the past ten years prior to the date bids are due."* **ABW is pleased to list JBT as our PBB manufacturer and ITW/GSE Hobart as our PCA and GPU Manufacturer.** Both manufacturers, as evidenced in the Bid Submittals, meet and exceed this requirement.

  - Item 2.b, *"The installer must have successfully installed no less than three (3) passenger boarding bridge projects in the United States on projects of similar size and scope within the past five (5) years prior to the date bids are due."* Since 1999, ABW has self-performed passenger boarding bridge installations across the Country. We have developed into the nation's largest and most experienced passenger boarding installation firm. Specific to this requirement, within the past five years, ABW completed an eighty-six (86) gate project in ATL in 2019, a twenty-nine (29) gate project at MSY in 2019, a thirty (30) gate project in ATL in 2020, and a twenty-four (24) gate project in BOS in 2019. In addition to these completed projects, ABW is currently working on a 25-gate project at MEM, a 17-gate project at ORF, a 26-gate project at SFO and 20+ gates at SLC. **ABW exceeds the minimum installation requirements as written in the Bid Package and as confirmed in Addendum #2. PBB Manufacturing minimum qualifications are covered in *Statement 2.a* and manufacturer's do not self-perform installation. Thus, ABW would question which other PBB installer(s) – not manufacturer(s)**

– meets the minimum requirement listed in *Statement 2.b* for installation. ABW employs over eighty (80) full time employee's dedicated to the PBB industry; as such we have the resources and capability to complete RSW's project per the schedule in the Bid Documents.

- Minimum Qualifications B.01 states, "*Bidder must have previously contracted with one or more FAA Part 139 medium or large hub airport(s) … with a combined project value of no less than $10 million dollars, however, no individual contract shall be valued at less than $2M dollars, and; have performed within the past ten (10) years prior to date bids are due.*" ABW has specifically focused on aviation work since 1999. Within the past ten (10) years, ABW has successfully completed dozens of projects with medium and large hub airports with a combined project value far exceeding $10M. ABW is happy to provide additional information to LCPA to further substantiate this, if needed.

- **Bid Bond.** ABW has included the proper RSW Bid Bond Forms, signed and executed by personnel with the necessary authority and attorney-in-fact authorization.

- **Insurance.** ABW has included a COI and/or letter from our insurance agency stating our compliance with the Contractual Insurance Requirements listed in the Bid.

- **Licensure.** ABW is a fully licensed General Contractor in the State of Florida. ABW is also properly registered to do business in the State of Florida. Our Contractor's license is attached to this bid.

- **Addendum #4 dated May 28, 2020, Question #64.** ABW is in receipt of Addendum #4 which references Lee County Port Authorities "*prior conflict of interest determination.*" ABW respectfully disagrees with LCPA's determination as, per correspondence from LCPA prior to the bid process dated March 18, 2020, this decision was based on a "***perception***" and it is not an accurate legal determination. Public bidding and Florida State Statutes are not based on 'perceptions,' but based on fact and legal merit. LCPA's *perception* was based on high-level information, as well as documentation provided from neighboring SRQ Airport in 2017. The 2017 information regarding AERO BridgeWorks, Inc. is now outdated and no longer applicable as ABW changed ownership and legal structure on January 1, 2019.

  We submit that a bidder cannot be legally excluded from a public bid process based solely on a "perception of a conflict" that has not been, and cannot be, proven to be a "factual conflict". To allow such would create an environment where competing parties can plant seeds of "perception" within an Owner's organization that result in an unfair and improper exclusion of a potential viable bidder.

  The PBB industry is a small niche market and all providers, both on the design side and the construction side, work with the other firms in the industry on a routine basis across the country. So, in essence, any one of these parties could claim that other parties have "relationships" with other firms simply based on the fact that they have worked together previously. We suggest that if working together on previous projects was a proper basis for excluding a bidder, there would be no qualified firm within the industry that could bid this project.

  As it relates to LCPA "*perception*," ABW presents the following factual, current and legal data to refute prior determinations and to refute manipulative questions presented by competing bidders.

  - Question #64 in Addendum #4 states, "*AERO BridgeWorks would have had unprecedented access to information and for a much longer time than other bidders…*". This is not accurate. Prior to LCPA issuing this procurement on April 27, 2020, the bidding for this project was handled by Manhattan Construction, acting as a CM/GC. Throughout the design life of the project, Manhattan Construction issued and advertised the project throughout both the local contracting industry and the national PBB industry. Manhattan, as LCPA well knows, issued the 30% design, 60% design and 90% design documents to all PBB manufacturers for review, questions

and evaluation. As one of the key players in the industry, ABW knows that all documents were issued by Manhattan to all the potential bidders. Not only did Manhattan solicit budget pricing from all manufacturers throughout the design process, they also encouraged questions and inquiries from PBB manufacturer's related to schedule, product data and DBE participation levels. Acting as CM/GC, Manhattan Construction issued design documents to any and all interested and willing parties, starting as early as June 2019. As such, ABW did not have *"unprecedented access to information for a longer time than the other bidders."* All bidders had all the same information at the same time as it was provided by CM/GC throughout the design process.

- ABW is a Type S Corporation, with a dedicated Tax ID number and dedicated group of Full-Time employees. LCPA's Engineer of Record is a completely separate Type S Corporation with its own dedicated Tax ID and their own group of dedicated employees. ABW and the Engineer of Record do not operate using the same accounting books, records, financial statements or tax records.

- Question #64 in Addendum #4 states, *"Aero Engineering and Aero Bridgeworks are both housed under the same roof and at the same address..."*. ABW operates out of a large office complex and the overall office complex is home to multiple different business, each with a unique and individual lease for their individual spaces. ABW has a separate and dedicated office lease for ABW office spaces. Other tenants in the same office complex include a local insurance company, a local road and highway civil contractor and a local staffing agency. The Engineer of Record operates in the same office complex, but ABW is not privy or involved with The Engineer of Record's office lease, nor any of the other business leases in the same large office complex.

- Question #64 in Addendum #4 states, *"Aero Engineering and Aero Bridge works are both part of Aero Group..."*. The term, "Aero Group," is not a legal entity. Aero Group is not a licensed business. Aero Group is not an institution, nor does Aero Group have any Owners, have any employees, have any leases, own any equipment, have a Tax ID, have any insurance, nor does Aero Group complete or provide any type of service. Aero Group has never, nor will it ever hold a Contract, and is not a legal entity. As stated directly on the "*ABOUT*" tab of the referenced website, ***"The AERO Group is comprised of two separate companies ... The companies operate independently, as well as collaboratively when teamed for design-build projects."*** When a project delivery method is Design-Build, it is routine and expected for the engineer and the builder to collaborate together. This PBB project at RSW is not a design-build delivery; the competing firm who submitted Question #64 even specifically acknowledged in their submitted question *"this project is not a true design-build."* Since this delivery is not a design-build, ABW and the Engineer of Record have not worked "*collaboratively*" together on the project in any capacity, nor has ABW received additional or unprecedented information. ABW has not received any additional or influential information moreso than any other firm when Manhattan previously issued multiple rounds of design documents to the entire industry; including the competing firms who presumably submitted Question #64 to attempt to limit LCPA competition on the project.

- Legal determinations of *Conflict* often fall onto the firm's Authority and Ownership structure. ABW is an Employee Owned Company and the single largest shareholder of ABW is the Employee Stock Ownership Program (ESOP). This ESOP is comprised strictly of only ABW employees and none of the ABW ESOP members are employees of the Engineer of Record. The ABW ESOP is a stand-alone Program to benefit ABW employees. Please note being an ESOP company provides many advantages to our Clients.

- Legal determinations of *Conflict* often fall onto the firm's Authority and Ownership structure. The entire corporate decision-making structure of ABW and the Engineer of Record are truly independent and different. The two different Type S Corporations have two distinct and different employee groups. The two different Corporations have two different and distinct decision making and Authority structures. There is not a single employee that has voting or operational rights to the other Corporation's decision-making ability. ABW Leadership includes four (4) corporate officers; a CEO, President, Vice President and Secretary. All four of these individuals are fully employed by ABW. None of these individuals work for, or have decision authority at any level for, the Engineer of Record. In addition, the ABW Board of Directors includes four (4) individuals.

Similar to the Officers of the company, none of these individuals work for, or have decision authority at any level for the Engineer of Record. The Engineer of Record has a separate group of Corporate Officials and Board members. None of the Engineer's corporate officials or Board Members are employees of ABW, nor do they have any decision-making authority within ABW. To reiterate, there is not a legal conflict between ABW and Engineer of Record. LCPA's prior opinion related to "perception," was heavily influenced by ABW's competing firms in a manipulative and malicious manner in an attempt to reduce LCPA's competition on a publicly bid project. We trust LCPA will re-consider the prior "*perception*" by completing a thorough, un-biased and factual legal review in concert with public Florida procurement requirements. ABW is happy to provide additional information should it be needed for a satisfactory review.

- ABW received an email from LCPA in February 2020 that noted the '*perception*' of conflict was related to *"The president and majority shareholder of one firm is a significant shareholder in the other firm."* This statement from LCPA is not accurate. As explained above, the single largest shareholder in ABW is the ABW ESOP. The single largest shareholder in the Engineer of Record is that firm's ESOP. As outlined above, the corporate decision-making authority and operational authority of ABW is strictly limited to the Corporate Officials and Board Members of ABW, all of which are ABW employees and none of which are employed by the Engineer of Record, and all of which act in the best interest of the majority shareholder ABW ESOP. The Engineer of Record has a distinct and separate corporate decision-making structure, none of which includes any ABW involvement and all of which act in the best interest of the Engineer of Record's ESOP.

- **Precedent.** Should LCPA still have concern about working relationships between ABW and Engineer of Record, please note this exact situation has been previously raised on prior publicly bid Airport projects across the Country. A precedent has been set and determined on prior projects. We strongly encourage LCPA to consult other airports where ABW recently Bid or successfully completed projects with the exact same Contractual arrangement between the Airport Authority, Engineer of Record and ABW. Two references are included below;
    - James Hay, Director of Development at Memphis Shelby County Airport (MEM)
    - Office: 901-922-8224. Mobile: 901-237-5837. Email: JHay@Flymemphis.com
    - AERO BridgeWorks currently holds a construction contract directly with MEM. The Contract was a publicly advertised low bid procurement by MEM Airport Authority. AERO Systems Engineering is the Engineer of Record on this project working directly for MEM.

    - John Connell, Vice President of Asset & Facility Management, Raleigh Durham Int'l Airport (RDU)
    - Office: 919.840.7856. Email John.Connell@rdu.com
    - AERO BridgeWorks held two Contracts at RDU in the past two years. One Contract was a publicly advertised low-bid procurement directly by RDUAA. AERO Systems Engineering was an engineer of record. Please note before working at RDUAA, John Connell previously worked at Charleston, SC (CHS) airport. This question came up at CHS and – again – was ruled not a conflict. ABW was not successful winning the project at CHS, but we did have the fair and reasonable opportunity to pursue.

- **CM/GC Role.** As proven above, there is not a legal Conflict between ABW and LCPA Engineer of Record. In addition, LCPA has also engaged Manhattan Construction in a CM/GC role for this project. In this role, the CM/GC serves as intermediary and representative of the Owner to offer third-party management and issue resolution. Neither the Engineer of Record or PBB Contractor is contracted directly through Manhattan and Manhattan's sole responsibility is to assist LCPA in managing the project and resolving potential issues. As such, should an issue ever arise between Engineer of Record and the PBB Contractor, LCPA has already engaged a reputable and professional source to identify and resolve an issue without influence and without conflict. ABW suspects Manhattan's CM/GC role at RSW to be very similar to the role of Parsons Corporation, who happens to be the CM at both MEM and RDU. Again, we encourage LCPA to contact these project Owners and see if any issues between ABW and Engineer of Record have ever been a detriment to the Airport Authority.

- **Basis of Award.** As stated in the Bid Package, "*The bid award will be based on the lowest, responsive, and responsible bidder. The lowest, responsible bidder shall mean that bidder who makes the lowest bid to provide goods and/or services of a quality which meets or exceeds the quality of goods and/or services set forth in the RFB documents.*" ABW is pleased to submit a fully responsive bid and, should ABW be the lowest bid, we know we will provide goods and/or services of a quality which meet or exceed the quality of goods and/or services set forth in the RFB documents.

    - RFB Basis of Award states, "*To be a responsive bidder, a bidder shall submit a bid which conforms in all material respects to the requirements set forth in RFB.*" ABW's bid conforms in all material respects to the requirements.

    - RFB Basis of Award states, "*To be a responsible bidder, the bidder shall have the capacity in all respects to perform full the bid requirements, and the tenacity, perseverance, experience, integrity, reliability, capacity, facilities, equipment, and credit which will assure good faith performance.*" As proven with the qualifications, technical data, firm experience and project references included within this bid package, ABW has the tenacity, capacity, experience, integrity, reliability, equipment and credit to safely and successfully complete this project for LCPA.

In closing, ABW is pleased to submit this proposal. It is unfortunate we had to write a letter in this manner, but given the circumstance and the inaccurate and damaging statements to ABW's business based on a 'perception,' ABW felt it was a business necessity to ensure a fair and reasonable evaluation once bids are received by LCPA. This is a public procurement by a public Agency in the State of Florida and, as such, LCPA cannot pre-determine to prevent any firm from submitting a bid. Any willing and able firm has the right to prepare and submit a bid for Owner evaluation. We believe LCPA answered Question #64 incorrectly; prior to even receiving or evaluating any bids, LCPA publicly noted ABW would likely not receive this Contract. That answer is now a public document. It not only inaccurately impacted our ability with the sub-contractor market to bid this project, but it will also impact our ability to bid future work where an Owner may select the same Engineer of Record. This is damaging to our business beyond RSW; we request a fair and reasonable review of ABW's eligibility to receive this Contract.

ABW requests the LCPA Procurement Team complete an un-biased and thorough review of all bidders' proposals to ensure compliance with all the listed Bid requirements and goals. This is a very important project for ABW, and we trust a fair and reasonable review of any prior "*perceptions*" held by LCPA Staff will be re-considered and evaluated based on all the factual data included in this letter, regarding both ABW and in regards to the specific requirements included in RFB 20-53MMW. Please note ABW's Counsel is copied on this letter and we, collectively, are happy to answer additional questions, if needed, to satisfy a reasonable and satisfactory LCPA review.

If we are the successful low bidder, ABW very much looks forward to delivering a safe and successful project. ABW has specifically worked in the airside PBB/GSE industry since 1999 and we are one of the Nation's most experienced and trusted specialty passenger boarding contractor for Airports and Airlines. We very much look forward to safely delivering a successful project on-schedule, on-budget and to exceed LCPA expectations. We trust that you will find our entire proposal in order, however, should you have any questions, please contact me at (919) 796-2168.

Sincerely,

Jay Grantham

Jay Grantham, PE, LEED, CCM
AERO BridgeWorks

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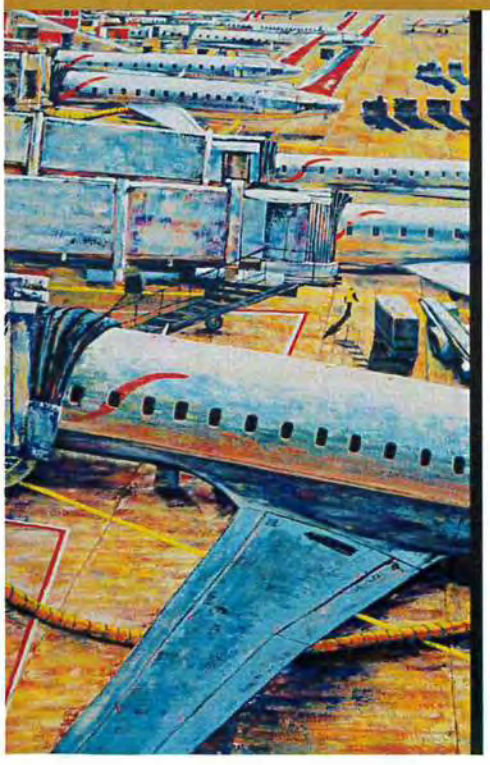


LEE COUNTY PORT AUTHORITY
Southwest Florida
International Airport

PART G – FORMS **Note: This form must be submitted with the bidder's bid submittal**

FORM 1: BIDDER'S CERTIFICATION

I have carefully examined this Request for Bids (RFB) which includes information for bidders, special instructions and requirements, project information, grant requirements, Davis Bacon Wage Rates, DBE, insurance and bond requirements, special conditions, general conditions and plans and technical specifications. I acknowledge receipt and incorporation of the following addenda. The cost, if any, of such revisions has been included in the price of the bid.

Addendum No. 1 ; dated 5/4/2020 . Addendum No. 2 ; dated 5/19/2020 .
Addendum No. 3 ; dated 5/22/2020 . Addendum No. 4 ; dated 5/28/2020 .
Addendum No. 5 ; dated 5/29/2020 Addendum No. 6 ; dated 5/22/2020 (received 6/1/2020)

I hereby propose to provide the services requested in this bid. I agree to hold pricing for at least **180** calendar days to allow the Authority time to properly evaluate this bid. I agree that the Authority terms and conditions (http://www.flylcpa.com/purchasing/) herein shall take precedence over any conflicting terms and conditions submitted with the bid and agree to abide by all conditions of this document.

I certify that all information contained in the bid is truthful to the best of my knowledge and belief. I further certify that I am duly authorized to submit this bid on behalf of the company as its agent and that the company is ready, willing and able to perform if awarded a contract.

I further certify, under oath, that this bid is made without prior understanding, agreement, connection, discussion, or collusion with any other person, company, or corporation submitting a bid for the same product or service; no officer, employee or agent of the Authority or of any other company who is interested in said bid; and that the undersigned executed this Bidder's Certification with full knowledge and understanding of the matters therein contained and was duly authorized to do so.

AERO BridgeWorks, Inc.	2700 Delk Road SE, Suite 150
NAME OF BUSINESS	MAILING ADDRESS
	Marietta, GA 30067
AUTHORIZED SIGNATURE	CITY, STATE & ZIP CODE
Jay Grantham - President	770.423.4200 / 770.423.4203
NAME, TITLE, TYPED	TELEPHONE NUMBER / FAX NUMBER
58-2504642	jay.grantham@aerobridgeworks.net
FEDERAL IDENTIFICATION #	EMAIL ADDRESS

State of: GEORGIA

County of: COBB

This foregoing instrument was acknowledged before me this 2nd day of JUNE, 2020 by JAY GRANTHAM, who is personally known to me or produced _____ as identification.

Renae OeOham
Signature of Notary

Serial/Commission No.

RENAE OLDHAM NOTARY PUBLIC COBB COUNTY, GEORGIA MY Commission Expires 11-13-2023

REVISED - ADDENDUM 5. **FORM 2: OFFICIAL BID FORM. This form must be submitted with the bidder's bid submittal**

RFB NO. **20-53MMW** **BIDDER'S NAME:** AERO BridgeWorks, Inc.

BIDS ARE DUE ON: **TUESDAY, JUNE 2, 2020**
PRIOR TO **2:00 P.M. LOCAL TIME**

Lee County Port Authority Purchasing Office
Southwest Florida International Airport
11000 Terminal Access Road, Suite 8671
Fort Myers, Florida 33913

The undersigned, hereinafter called "bidder," having become familiar with the local conditions, nature, and extent of the work, and having examined carefully the bid solicitation documents, including but not limited to, Information to Bidders, Special Instructions and Requirements, Project Information, Insurance and Bonding Requirements, Disadvantaged Business Enterprise Program requirements, Project Plans and Specifications, schedule & phasing, forms, and other contract documents, and having fulfilled all bid requirements herein, agrees to furnish all labor, materials, equipment, and other incidental items, facilities and services necessary to perform:

PASSENGER BOARDING BRIDGE REPLACEMENT

in full accordance with the solicitation and contract documents and all other documents related thereto on file in the Purchasing Office and, if awarded the contract, to complete the said work within the time limits specified for the pricing awarded, which is based on the following bid schedule:

	Bidder's Company Name	AERO BridgeWorks, Inc.			
Item No.	**Description**	**Unit**	**Estimated Quantity**	**Unit Price**	**Extended Price**
1	Mobilization	LS	1	424,887	424,887
2	DBE Mobilization	LS	1	INCLUDED	INCLUDED
3	Remove / Discard or Turnover to Owner: Phone	EACH	11	1,050	11550
4	Remove / Discard or Turnover to Owner: Illuminated Sign	EACH	11	1,050	11550
5	Remove / Discard or Turnover to Owner: Cable Hoist	EACH	11	2,600	28,600
6	Remove / Discard or Turnover to Owner: 10" PBB Pre-Cool Plenum Hose	EACH	2	2,100	4,200
7	DCO - Demo Cut Out Sidewalks and haul off @ Existing Pile Caps	EACH	25	1,600	40,000
8	Remove Existing Passenger Boarding Bridge	EACH	27	20,000	540,000
9	Remove Concrete Paving / Walkways @ Pile Caps	SQFT	5000	16.75	83,750
10	Hand Excavation around existing Pile Caps	CUYD	50	1,300	65,000
11	Pile Cap Edge Form	SQFT	1500	12	18,000

12	Drill / Epoxy Dowels into exist. Pile Cap	EACH	1050	64	67,200
13	4000 PSI Concrete Pile Cap @ Existing	CUYD	300	229	68,700
14	Patch Back Exist Concrete Paving / Walkways	SQFT	5000	13	65,000
15	Temporary Infill / Opening @ Gate Door (Remove & Reinstall)	EACH	27	2626	73,902
16	iOPS BMS Bldg Management System	LS	1	704,500	704,500
17	New PBB A3-58/116 (including shipping to site, insurance)	EACH	14	551,000	7,714,000
18	New PBB A3-61/127 (including shipping to site, insurance)	EACH	8	566,700	4,533,600
19	New PBB A3-65/133 (including shipping to site, insurance)	EACH	2	580,000	1,160,000
20	New PBB A3-68/144 (including shipping to site, insurance)	EACH	2	580,000	1,160,000
21	New PBB A3-72/150 (including shipping to site, insurance)	EACH	1	600,000	600,000
22	2 new PBB foundations for C1 and C2	~~EACH~~	2	19,000	38,000
23	New Fixed Walkway (40.0' LF ~~Inft~~)	EACH	2	102,000	204,000
24	Gate Sign	EACH	27	3040	82,080
25	Bag Slide	EACH	27	5006	135,162
26	Installation (Incl PBB, WW, GPU, PCA)	EACH	27	50,000	1,350,000
27	Manufacturer Commissioning	EACH	27	2300	62,100
28	**Remove and Cap** ~~Relocate~~ Condensate Drain due **at** ~~to~~ Pile Cap Expansion **Condensate will** Drain to Pavement	EACH	27	840	22,680
29	Re-Install 45-ton PCA Unit	EACH	4	2000	8,000
30	New 45-ton PCA Unit	EACH	~~19~~ 18	88,000	1,584,000
31	New ~~75~~ 90 ton PCA Unit	EACH	5	125,000	625,000
32	Disconnect / Make Safe Existing Electrical to Exist PBB	EACH	27	420	11,340
33	Re-Install Exist 400Hz SSFC 90KVA	EACH	12	2675	44,100
34	Replace 400Hz SSFC 90KVA	EACH	10	38650	386,500
35	Replace 400Hz SSFC 180KVA	EACH	5	59300	294,000
36	Cameras, Software Licensing & Programming (Recording Servers and Video Storage Servers by LCPA)	EACH	27	70,000 ~~1890,00~~	1,890,000
37	Remove Stop Bar (1-Each)	LNFT	10	52	520
38	Striping to be Removed (Grind Only)	~~LNFT~~ LS	~~4617~~ 1	24240	24240
39	Striping at Gates	~~LNFT~~ LS	~~4997~~ 1	26,234	26,234
40	New Stop Bar (1-Each)	LNFT	10	21	210
	GRAND TOTAL EXTENDED BID PRICE				$ 24,159,600

JA

NOTICE: Bidders are responsible for verifying quantities to the degree he/she deems necessary in order to submit a lump sum bid. Quantities and unit prices will NOT be used to determine award in any case. The Grand Total Bid Price only will be used for consideration of low bid award. This is not a unit price contract. There will be NO adjustments for errors of quantity take offs or variations caused by existing conditions regardless of bidder's basis of information.

Bidder must bid on all bid items. Any bidder not bidding all bid items will be considered nonresponsive and disqualified.

FAA Advisories to be followed (or newer version as updated by FAA): FAA AC 150/5370-2G Operational Safety on Airports During Construction, FAA AC 150/5200-18C Airport Safety Self Inspection, FAA AC 150/5210-5D Painting, Marking & Lighting of Vehicles Used on an Airport, FAA AC 150/5200-33B Hazardous Wildlife Attractants on or Near Airports.

NOTES / INSTRUCTIONS:
1) All bidders are required to hold their bid prices for 180 days after the date bids are due. Bidders shall provide a Bid Bond with their bid submittal. Bid Bonds shall be provided in the amount of 5% of the Grand Total Bid Number.
2) Bidder shall submit a complete bid including pricing for the entire scope of work and by providing unit costs for each item indicated herein. It shall be the bidder's sole responsibility to ensure formatting and mathematical calculations be precise and correct. Bidders shall provide prices for all items to be considered a complete and responsive bid.
3) Basis for ranking of bids shall be determined by a number of factors including but not limited to the Grand Total Bid Number for all items within the bid schedule.
4) The bidder shall provide a Unit Price and the extended Bid Price for each line item in the bid schedule. Failure to follow bid instructions may be grounds for bid rejection.
5) Prospective responsive low bidder (based on Grand Total Bid Number) will enter into a lump sum contract with the Lee County Port Authority.
6) Estimated quantities herein are published solely for the purpose of establishing the basis for lump sum bid award.
7) The project will be awarded as a lump sum contract according to the Grand Total Extended Bid Price of the lowest, responsive and responsible bidder.
8) C-105 Mobilization shall be limited to 10 percent of the Grand Total Bid Number.
9) The bidder proposes to furnish all material, equipment and labor to execute all work associated with the project.
10) All project design documents and specifications take precedence over any bid notes mentioned herein.

NAME OF BIDDER AERO BridgeWorks, Inc.

FORM 2: OFFICIAL BID FORM (Page 4 of 4)

Each Bidder must demonstrate that the minimum qualifications set forth in Part B have been met. Each bidder must provide the up to date and current information as requested below. . The inability to perform reference checks due to the submittal of inaccurate or outdated reference contact information may affect the LCPA's determination of responsiveness.

1. No Has bidder been found guilty by any court in the United States of crimes pertaining to industrial espionage or intellectual property theft. (Indicate Yes or No).

2. Project Information and Reference

A. AERO BridgeWorks, Inc.
BIDDER FIRM NAME

PBB Replacement/Refurbishment Project	Hartsfield-Jackson Atlanta International Airport (ATL)
PROJECT NAME	AIRPORT NAME
2016/2020	$50,175,000
YEAR PROJECT STARTED/COMPLETED	DOLLAR VALUE OF CONSTRUCTION
Shawn Craig	Prime General Contractor
AIRPORT CONTACT NAME	POSITION HELD ON PROJECT
Senior Program Manager	3368 Hardee Ave.
AIRPORT CONTACT CURRENT TITLE	CURRENT ADDRESS
Atlanta, GA 30341	678.749.9443
CURRENT CITY, STATE ZIP CODE	CURRENT TELEPHONE #
scraig@cps-atlanta.com	
CURRENT EMAIL	

B. AERO BridgeWorks, Inc.
BIDDER FIM NAME

North Terminal Project	Louis Armstrong New Orleans International Airport (MSY)
PROJECT NAME	AIRPORT NAME
2015/2019	$24,000,000
YEAR PROJECT STARTED/COMPLETED	DOLLAR VALUE OF CONSTRUCTION
Jerry Sheets	Subcontractor
AIRPORT CONTACT NAME	POSITION HELD ON PROJECT
Senior VP - Aviation	13355 Noel Rd, Floor 4
AIRPORT CONTACT CURRENT TITLE	CURRENT ADDRESS
Dallas, TX 75240	504.715.2544
CURRENT CITY, STATE ZIP CODE	CURRENT TELEPHONE #
jerry.sheets@aecom.com	
CURRENT EMAIL	

The Bid Specifications require bidders to prove a minimum level of experience for PBB installation and a separate minimum requirement for PBB manufacturing. It is not possible to prove we meet the minimum requirements by only listing two projects on this form. As such, in order to prove we meet the minimum qualifications, additional sheets are necessary and attached at end of our proposal.

FORM 3: LOBBYING AFFIDAVIT
Note: This form must be submitted with the bidder's bid submittal

Jay Grantham, being first duly sworn, deposes and says that he or she is the (circle one as appropriate – sole owner, general partner, joint venture partner, president, secretary or authorized representative of bidder, maker of the attached bid and that neither the bidder nor its agents have lobbied to obtain an award of the agreement pursuant to this bid from the Lee County Board of Port Commissioners, members of the Airports Special Management Committee, or employees of the Lee County Port Authority, individually or collectively, regarding this competitive solicitation.

Bidder further affirms that bidder has complied with the federal regulations concerning lobbying activities contained in 31 U.S.C. 1352 and 49 CFR Part 20 and Lee County Lobbying Ordinance No. 03-14.

AFFIANT: Jay Grantham - President

Date: 6/2/2020

State of: GEORGIA

County of: COBB

This foregoing instrument was acknowledged before me this 2nd day of JUNE, 2020 by JAY GRANTHAM, who is personally known to me or produced _____ as identification.

Renae Oldham
Signature of Notary

Serial Commission No.

RENAE OLDHAM NOTARY PUBLIC COBB COUNTY, GEORGIA My Commission Expires 11-13-2023

FORM 4: PUBLIC ENTITY CRIMES FORM

SWORN STATEMENT PURSUANT TO SECTION 287.133(3)(a) FLORIDA STATUTES

A person, affiliate, or corporation who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a vendor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, Florida Statutes, for CATEGORY TWO for a period of thirty-six (36) months from the date of being placed on the convicted vendor list.

The Bidder certifies by submission of this form that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any State or Federal entity, department or agency.

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH 1 (ONE) ABOVE IS FOR THAT PUBLIC ENTITY ONLY AND, THAT THIS FORM IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT IN EXCESS OF THE THRESHOLD AMOUNT PROVIDED IN SECTION 287.017, FLORIDA STATUTES FOR CATEGORY TWO OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

BIDDER'S NAME: AERO BridgeWorks, Inc.

Note: This form must be submitted with the bidder's bid submittal

FORM 5: BIDDER'S SCRUTINIZED COMPANIES CERTIFICATION

Bidder hereby certifies under penalties of perjury as of the date of this bid to provide goods and services to the Lee County Port Authority that it has not been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List as defined in Section 287.135, Fla. Stat., is not engaged in business operations in Cuba and Syria; and is not on the Scrutinized Companies that Boycott Israel List or is engaged in a boycott of Israel.

I further certify that I am duly authorized to submit this certification on behalf of the company as its agent and that the company is ready, willing and able to perform if awarded a contract.

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE LEE COUNTY PORT AUTHORITY IS FOR THAT PUBLIC ENTITY ONLY AND, THAT FALSIFICATION OF THIS CERTIFICATION MAY RESULT IN TERMINATION OF THE CONTRACT, DEBARMENT OF THE COMPANY FROM SUBMITTING A BID OR PROPOSAL FOR A PERIOD OF THREE (3) YEARS FROM THE DATE THE CERTIFICATION IS DETERMINED TO BE FALSE, CIVIL PENALTIES, AND THE ASSESSMENT OF ATTORNEY'S FEES AND COSTS AGAINST THE COMPANY. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

Authorized Signature

State of: GEORGIA

County of: COBB

This foregoing instrument was acknowledged before me this 2nd day of JUNE, 2020 by JAY GRANTHAM, who is personally known to me or produced _____ as identification.

Signature of Notary

Serial/Commission No.

RENAE OLDHAM NOTARY PUBLIC COBB COUNTY, GEORGIA My Commission Expires 11-13-2023

Note: This form must be submitted with the bidder's bid submittal.

FORM 6: BID BOND **BID BOND NO.** LMIABW-47

KNOW ALL MEN BY THESE PRESENTS, that we AERO BridgeWorks, Inc., as Principal, and Liberty Mutual Insurance Company, a corporation licensed to do business in the State of Florida as a surety, are held firmly bound unto LEE COUNTY PORT AUTHORITY, LEE COUNTY, FLORIDA (obligee), in the sum of $ Five Percent of Amount Bid (5% of $ Amount Bid) for the payment whereof, well and truly to be made, we bind ourselves, our heirs, successors, personal representatives and assigns, jointly and severally, firmly, by these presents.

SIGNED AND SEALED this 29th day of May, 2020.

WHEREAS, said Principal is herewith submitting a bid for RFB 20-53MMW, Passenger Boarding Bridge Replacement – Southwest Florida International Airport.

NOW, THEREFORE, the condition of the above obligation is such that if said Principal shall be awarded the contract upon said bid within the specified time and shall enter into a written agreement, satisfactory in form, and shall provide an acceptable Performance and Payment Bond from a Surety acceptable to the Authority as well as other insurance as may be required by the Authority within ten (10) calendar days from the issuance of the written Notice of Intent to Award date, or within such extended period as the Port Authority may grant, then this obligation shall be null and void. Otherwise, said Principal and Surety shall pay to said Authority in money the difference between the amount of the bid of said Principal and the amount for which said Authority may legally contract with another party to perform said work, if the latter amount be in excess of the former, together with any expenses and reasonable attorney's fees incurred by said Port Authority if suit be brought hereon, but in no event shall said Surety's liability exceed the penal sum hereof plus such expenses and attorney's fees. For purposes of unsuccessful bid protests filed by the Principal herein, this obligation shall bind the Surety to pay costs and damages associated with the bid protest or delays to the project upon finding from the Board of Port Commissioners for Lee County that the bid protest was frivolous and/or lacked merit.

Witness as to Principal: AERO BridgeWorks, Inc. (SEAL)
(Principal)

(By)

Witness as to Surety: Liberty Mutual Insurance Company (SEAL)
(Surety's name)

(By-As Attorney in Fact, Surety)
Robert M. Hrehor, Attorney-in-Fact

Affix Corporate Seals and attach proper Power of Attorney for Surety.

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated. Not valid for mortgage, note, loan, letter of credit, bank deposit, currency rate, interest rate or residual value guarantees. To confirm the validity of this Power of Attorney call 610-832-8240 between 9:00 am and 4:30 pm EST on any business day.

Liberty Mutual SURETY

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint Robert M. Hrehor of the city of Lilburn, state of GA its true and lawful attorney-in-fact, with full power and authority hereby conferred to sign, execute and acknowledge the following surety bond:

Principal Name: AERO BridgeWorks, Inc.

Obligee Name: Lee County Port Authority, Lee County, Florida

Surety Bond Number: Bid Bond Bond Amount: See Bond Form

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 12th day of December, 2018.

The Ohio Casualty Insurance Company
Liberty Mutual Insurance Company
West American Insurance Company

By: _____
David M. Carey, Assistant Secretary

STATE OF PENNSYLVANIA ss
COUNTY OF MONTGOMERY

On this 12th day of December, 2018, before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at King of Prussia, Pennsylvania, on the day and year first above written.

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Teresa Pastella, Notary Public
Upper Merion Twp., Montgomery County
My Commission Expires March 28, 2021
Member, Pennsylvania Association of Notaries

By: _____
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of Liberty Mutual Insurance Company, The Ohio Casualty Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS – Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII – Execution of Contracts – SECTION 5. Surety Bonds and Undertakings. Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, of Liberty Mutual Insurance Company, The Ohio Casualty Insurance Company, and West American Insurance Company do hereby certify that this power of attorney executed by said Companies is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 29th day of May, 2020.

By: _____
Renee C. Llewellyn, Assistant Secretary

FORM 7: RESERVED

FORM 8: RESERVED

26. -

FORM 9: Utilization Statement: Disadvantaged Business Enterprise (DBE). Note: This form must be submitted with the bidder's bid submittal

By completing this form Bidders must identify and document whether they will meet the Port Authority's DBE participation goal for this project **(10%)**, and if not, Bidders should identify and document its good faith efforts to meet the goal, as set forth in 49 CFR, Appendix A, Subpart C 26.53.

CERTIFIED DBE(s) LIST

DBE Firm Name(s)	$ Value of Work	Percent of Total Project
1. Airport Contractor Services	$ 2,169,000	9.1 %
Type of Work/Specialty: Site Logistics and Specialty Equipment Supplier		
2. Structures Development Group Inc.	$ 2,547,000	10.7 %
Type of Work/Specialty: Civil, Electrical, Low Voltage		
3. Hyatt Survey Services	$ 7,000	<1%
Type of Work/Specialty: Survey		
4.	$	%
Type of Work/Specialty:		
5.	$	%
Type of Work/Specialty:		

Attach Additional Sheets as Necessary

The undersigned bidder has satisfied the requirements of the bid conditions in the following manner. (Please mark appropriate box)

☒ **The bidder is committed to a minimum of 15% % DBE utilization on this project.**

☐ **The bidder, while unable to meet the established goal, hereby commits to a minimum of _____% DBE utilization on this project and also submits documentation, as an attachment(s) demonstrating good faith efforts (GFE).**

Total Value of Base Bid	**$**
Total of DBE Subcontract(s) Work	**$**

Print Bidder's/Offeror's Company Name	AERO BridgeWorks, Inc.
Print Name of Authorized Representative	Jay Grantham - President

Company Address:	2700 Delk Road SE, Suite 150		
	City: Marietta	State: GA	Zip Code: 30067
Phone Number:	770.423.4200	E-mail:	jay.grantham@aerobridgeworks.net

The undersigned hereby further assures that the information included herein is true and correct, and that the DBE firm(s) listed herein, have agreed to perform a commercially useful function as described in 49 CFR Part 26.55(c) in the work items noted for each firm. The undersigned further understands that no changes to this statement may be made without prior approval from the Lee County Port Authority and the CM for this project.

Signature of Authorized Representative — Date: 6/2/2020

Utilization Statement Form – Rev02/24/20

FORM 10: LETTER OF COMMITMENT: Disadvantaged Business Enterprise (DBE)

LETTER OF COMMITMENT
Disadvantaged Business Enterprise
(This page shall be submitted with bid submittal for each proposed DBE firm)

Bidder/Offeror Company Name: Aero Bridgeworks Inc.

Project Name/#: PBB Replacement / (RFB) 20-53 MMW

DBE Firm: Company Name: Airport Contractors Services LLC

Address: 540 N. State Rd. 434 Unit 9501

City: Altamonte Springs State: FL Zip 32714

DBE Contact Person: Name: Sherrie Wesley Phone: (407) 722-1735

E-mail: ACSplanetServices@yahoo.com

Work items(s) to be performed by DBE Firm	*Quantity/Unit Price*	*Total Value of Work*
Site logistics		
Specialty Equipment Supplier	LUMPSUM	$2,169,000
Totals		

The bidder/offeror is committed to utilizing the above-named DBE firm for the work described above. The estimated participation is as follows:

Total DBE contract amount: $ $2,169,000

Affirmation:
The above-named DBE firm affirms that it will perform the portion of the contract for the estimated dollar value as stated above.

By: _____ 5/28/2020
(Signature of DBE Firm's Authorized Representative) (Date)

President
(Title)

**In the event the bidder does not receive award of bid, any and all representations in this Letter of Commitment and Affirmation shall be null and void.*

ORLANDO INTERNATIONAL AIRPORT | MCO

Orlando International Airport
5850 B Cargo Road
Orlando, Florida 32827-4399
Phone: (407) 825-7133
Fax: (407) 825-3004

June 7, 2019

Mrs. Sherrie L. Wasley
Airport Contractors Services, LLC
540 N. State Road 434
Unit 9501
Altamonte Springs, FL 32714

Disadvantaged Business Enterprise (DBE) Certification
Anniversary Date: July 3, 2020

Dear Mrs. Wasley:

The Small Business Development Department of the Greater Orlando Aviation Authority (Authority) has reviewed the **No Change Affidavit (NCA)** along with the supporting documentation, submitted on behalf of **Airport Contractors Services, LLC** to determine whether the entity continues to meet the **Disadvantaged Business Enterprise (DBE)** eligibility requirements of **49 CFR, PART 26.** I am pleased to inform you that your firm remains eligible for **DBE** certification in accordance with **49 CFR, Part 26.**

Your firm has been certified under the North American Industry Classification System (NAICS) Codes listed on page 2 of this letter.

Your firm will be listed in **Florida's Unified Certification Program (UCP) DBE Directory** which can be accessed via the Florida Department of Transportation's (FDOT) website at https://fdotxwp02.dot.state.fl.us/EqualOpportunityOfficeBusinessDirectory. The Authority is a member of the Florida UCP. As long as your firm is listed as a **DBE** in Florida's UCP DBE Directory, it is considered **DBE** certified by all members of the Florida UCP.

DBE certification is NOT a guarantee of work, but enables the firm to compete for, and perform, contract work on all USDOT Federal Aid (FAA, FTA, and FHWA) projects in Florida as a DBE contractor, sub-contractor, consultant, and sub-consultant or material supplier.

DBE certification is continuing from the date of this letter. However, it is contingent upon the firm confirming its eligibility annually. Your current Anniversary Date is **July 3, 2020.** For continued eligibility, a **No Change Declaration (NCD)** form must be submitted to our office annually. While we will make every attempt to notify you prior to the anniversary date of your certification, it is ultimately your responsibility to provide a NCD to our office. You may complete your NCD online at https://goaa.diversitycompliance.com. To help facilitate the processing of your NCD prior to your anniversary date, **please submit your NCD and all required documentation ninety (90) days in advance of your anniversary date.** Failure to timely submit your annual NCD may result in the removal of your firm as a **DBE.**

If, there is a material change in the firm, including, but not limited to: ownership, officers, directors, scope of work being performed, daily operations, affiliations with other businesses or individuals or physical location of the firm, you must promptly notify this office in writing. Notification should include supporting documentation.

June 7, 2019

Sherrie L. Wasley
Airport Contractors Services, LLC

Airport Contractors Services, LLC is Disadvantaged Business Enterprise (DBE) Certified by the Greater Orlando Aviation Authority under the following NAICS Commodity Codes/Area(s) of Specialty:

NAICS 238120: STRUCTURAL STEEL AND PRECAST CONCRETE CONTRACTORS
NAICS 238990: ALL OTHER SPECIALTY TRADE CONTRACTORS
NAICS 423810: CONSTRUCTION AND MINING (EXCEPT OIL WELL) MACHINERY AND EQUIPMENT MERCHANT WHOLESALERS
NAICS 541611: ADMINISTRATIVE MANAGEMENT AND GENERAL MANAGEMENT CONSULTING SERVICES
NAICS 541612: HUMAN RESOURCES CONSULTING SERVICES
NAICS 541614: PROCESS, PHYSICAL DISTRIBUTION, AND LOGISTICS CONSULTING SERVICES

Congratulations on your certification. Your anniversary date is **July 3, 2020.** Please contact our office at 407-825-7133 or certifications@goaa.org if you have any questions or if we can be of any assistance.

Sincerely,

George I. Morning
Director, Small Business Development Department

FORM 10: LETTER OF COMMITMENT: Disadvantaged Business Enterprise (DBE)

LETTER OF COMMITMENT
Disadvantaged Business Enterprise
(This page shall be submitted with bid submittal for each proposed DBE firm)

Bidder/Offeror Company Name: AERO BRIDGE WORKS

Project Name/#: PBB Replacement

DBE Firm: Company Name: Hyatt Survey Services, Inc.

Address: 2012 Lena Road

City: Bradenton State: FL Zip 34211

DBE Contact Person: Name: Pamela Hyatt Phone: (941) 748-4693

E-mail: pam@hyattsurvey.com

Work items(s) to be performed by DBE Firm	*Quantity/Unit Price*	*Total Value of Work*
Construction Stakeout & Asbuilt Surveys	Lump Sum	7,000
Totals		

The bidder/offeror is committed to utilizing the above-named DBE firm for the work described above. The estimated participation is as follows:

Total DBE contract amount: $ 7,000 MINIMUM

Affirmation:
The above-named DBE firm affirms that it will perform the portion of the contract for the estimated dollar value as stated above.

By: Pamela A. Hyatt 6/2/2020
(Signature of DBE Firm's Authorized Representative) (Date)

President
(Title)

**In the event the bidder does not receive award of bid, any and all representations in this Letter of Commitment and Affirmation shall be null and void.*

FORM 10: LETTER OF COMMITMENT: Disadvantaged Business Enterprise (DBE)

LETTER OF COMMITMENT
Disadvantaged Business Enterprise
(This page shall be submitted with bid submittal for each proposed DBE firm)

Bidder/Offeror

Company Name: AERO BRIDGEWORKS, INC.

Project Name/#: RBB Replacement

DBE Firm:

Company Name: Structures Development Group Inc.

Address: 6601 Broken Arrow Rd, FX

City: Ft. Myers State: FL Zip 33912

DBE Contact Person: Name: Mona Henry Phone: (239) 888-6050

E-mail: mona@structuresdg.com

Work items(s) to be performed by DBE Firm	*Quantity/Unit Price*	*Total Value of Work*
Electrical, Low Voltage	Lump Sum	$2,046,672.00
Concrete	Lump Sum	$ 500,328.00
~~Striping~~	N/A	
Totals		

The bidder/offeror is committed to utilizing the above-named DBE firm for the work described above. The estimated participation is as follows:

Total DBE contract amount: $ [redacted] 2,547,000

Affirmation:
The above-named DBE firm affirms that it will perform the portion of the contract for the estimated dollar value as stated above.

By: [signature], V.P. Brent Zawilinski 6/1/2020
(Signature of DBE Firm's Authorized Representative) (Date)

VP
(Title)

**In the event the bidder does not receive award of bid, any and all representations in this Letter of Commitment and Affirmation shall be null and void*

Florida Unified Certification Program

CERTIFIED

Disadvantaged Business Enterprise

Structures Development Group, Inc.

This certificate acknowledges that the above named firm is approved by the Florida Unified Certification Program (FUCP) as a Disadvantaged Business Enterprise (DBE), under rules promulgated by the U.S. Department of Transportation (DOT) in Title 49, Part 26 of the US Code of Federal Regulations.

This certification entitles the above named firm to provide product(s) and/or service(s) and received DBE credits under the following category(s) only: Commercial and Institutional Building Construction, Residential Building Construction, and Residential Remodelers

NAICS Code(s): 23611, 236118, 236220

ANNIVERSARY DATE: Annually April 14
REVIEW DATE: April 14, 2022

Jeff Mulder, A.A.E.
Executive Director

LEE COUNTY PORT AUTHORITY
CERTIFYING AGENCY

Julio A. Rodriguez
DBE Program Manager

Florida Unified Certification Program

Disadvantaged Business Enterprise (DBE) Certificate of Eligibility

HYATT SURVEY SERVICES INC

MEETS THE REQUIREMENTS OF 49 CFR, PART 26

APPROVED NAICS CODES:

541370

Samuel (Sammy) Febres

DBE & Small Business Development Manager

Florida Department of Transportation

State of Florida

Woman Business Certification

Hyatt Survey Services, Inc.

Is certified under the provisions of
287 and 295.187, Florida Statutes, for a period from:

09/03/2019 to 09/03/2021

Jonathan R. Satter, Secretary
Florida Department of Management Services

Department of
MANAGEMENT
SERVICES
Office of Supplier Diversity

Office of Supplier Diversity
4050 Esplanade Way, Suite 380
Tallahassee, FL 32399
850-487-0915
www.dms.myflorida.com/osd

Florida Department of Transportation

CHARLIE CRIST
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

STEPHANIE C. KOPELOUSOS
SECRETARY

March 16, 2009

Certified Mail – Return Receipt Requested

Hyatt Survey Services, Inc.
Mr. Russell P. Hyatt
11007 8th Ave. East
Bradenton, FL 34212

ANNIVERSARY DATE – Annually on March 13

Dear Mr. Hyatt:

The Florida Department of Transportation [FDOT] is pleased to announce that your firm is certified under the **Florida Unified Certification Program [UCP]** as a **Disadvantaged Business Enterprise [DBE]** in accordance with Part 49 Section 26, Code of Federal Regulations.

DBE certification is continuing, but is contingent upon the firm maintaining its eligibility annually through this office. You will be notified of your annual responsibilities in advance of the **Anniversary Date.** You must submit the annual **AFFIDAVIT FOR CONTINUING ELIGIBILITY** no later than the **Anniversary Date.** Failure to do so will result in immediate action to remove certification.

Only those firms listed in the UCP DBE Directory, are certified by Florida UCP Members. **Prime contractors and consultants should verify your firm's DBE certification status, and identify the work area(s) for which the firm is DBE eligible, through this Directory.**

Your firm will be listed in Florida's UCP DBE Directory which can be accessed via the internet, at http://www.bipincwebapps.com/biznetflorida/ or through The Department's website at www.dot.state.fl.us/equalopportunityoffice, then select "DBE Directory."

DBE certification is **NOT** a guarantee of work, but enables the firm to compete for, and perform, contract work on all USDOT Federal Aid (FAA, FTA and FHWA) projects in Florida as a DBE contractor, sub-contractor, consultant, sub-consultant or material supplier.

If, at any time, there is a material change, you **must advise this office, by sworn affidavit and supporting documents, within thirty [30] days.** Changes include, but are not limited to, ownership, officers, Directors, management, key personnel, scope of work performed, daily operations, on-going business relationships with other firms or individuals, or the physical location of your firm. After our review, you will receive instructions as to how you should proceed, if necessary. Failure to do so will be deemed a failure, on your part, to cooperate, and will result in immediate action to Remove DBE certification.

Your firm is eligible to compete for, and perform, work on all USDOT Federal Aid projects throughout Florida, and may earn DBE credit for work performed in the following areas:

NAICS:	FDOT Specialty Code & Description
541370	946-Land Surveying and Mapping Services

Questions or concerns should be directed to this office by mail or telephone. Our telephone number is (850) 414-4747. Our Fax number is (850) 414-4879

Sincerely,

John Goodeman

John Goodeman
DBE Certification Manager

FORM 11: CERTIFICATE OF BUY AMERICAN COMPLIANCE FOR TOTAL FACILITY. Submission of this form is REQUIRED with bid submittal.

CERTIFICATE OF BUY AMERICAN COMPLIANCE FOR TOTAL FACILITY

As a matter of bid responsiveness, the bidder must complete, sign, date, and submit this certification statement with its proposal. The bidder must indicate how it intends to comply with 49 USC § 50101 by selecting one of the following certification statements. These statements are mutually exclusive. Bidder must select one or the other (i.e. not both) by inserting a checkmark (☐) or the letter "X".

☐ **Bidder hereby certifies that it will comply with 49 USC § 50101 by:**

a) Only installing steel and manufactured products produced in the United States; or
b) Installing manufactured products for which the Federal Aviation Administration (FAA) has issued a waiver as indicated by inclusion on the current FAA Nationwide Buy American Waivers Issued listing; or
c) Installing products listed as an Excepted Article, Material or Supply in Federal Acquisition Regulation Subpart 25.108.

By selecting this certification statement, the bidder agrees:

- To provide to the Owner evidence that documents the source and origin of the steel and manufactured product.
- To faithfully comply with providing U.S. domestic products.
- To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

☒ **Bidder hereby certifies it cannot comply with the 100 percent Buy American Preferences of 49 USC § 50101(a) but may qualify for either a Type 3 or Type 4 waiver under 49 USC § 50101(b). By selecting this certification statement, the apparent bidder with the apparent low bid agrees:**

a) To the submit to the Owner within 15 calendar days of the bid opening, a formal waiver request and required documentation that supports the type of waiver being requested.
b) That failure to submit the required documentation within the specified timeframe is cause for a non-responsive determination that may result in rejection of the bid.
c) To faithfully comply with providing U.S. domestic products at or above the approved U.S. domestic content percentage as approved by the FAA.
d) To furnish U.S. domestic product for any waiver request that the FAA rejects.
e) To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

REQUIRED DOCUMENTATION

Type 3 Waiver – The cost of components and subcomponents produced in the United States is more than 60 percent of the cost of all components and subcomponents of the "facility". The required documentation for a Type 3 waiver is:

a) Listing of all manufactured products that are not comprised of 100 percent U.S. domestic content (excludes products listed on the FAA Nationwide Buy American Waivers Issued listing and products excluded by Federal Acquisition Regulation Subpart 25.108; products of unknown origin must be considered as non-domestic products in their entirety).
b) Cost of non-domestic components and subcomponents, excluding labor costs associated with final assembly and installation at project location.
c) Percentage of non-domestic component and subcomponent cost as compared to total "facility" component and subcomponent costs, excluding labor costs associated with final assembly and installation at project location.

Type 4 Waiver – Total cost of project using U.S. domestic source product exceeds the total project cost using non-domestic product by 25 percent. The required documentation for a Type 4 of waiver is:

a) Detailed cost information for total project using U.S. domestic product
b) Detailed cost information for total project using non-domestic product

False Statements: Per 49 USC § 47126, this certification concerns a matter within the jurisdiction of the Federal Aviation Administration and the making of a false, fictitious or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code.

6/2/2020	
Date	**Signature**
AERO BridgeWorks, Inc.	Jay Grantham - President
Company Name	**Title**

[END OF FORM]

FORM 12: CERTIFICATE OF BUY AMERICAN COMPLIANCE-MANUFACTURERED PRODUCTS. Submission of this form with bidder's bid submittal is REQUIRED.

Certificate of Buy American Compliance for Manufactured Products

As a matter of bid responsiveness, the bidder must complete, sign, date, and submit this certification statement with their bid. The bidder must indicate how they intend to comply with 49 USC § 50101 by selecting one on the following certification statements. These statements are mutually exclusive. Bidder must select one or the other (not both) by inserting a checkmark (✓) or the letter "X".

☐ Bidder hereby certifies that it will comply with 49 USC § 50101 by:

a) Only installing steel and manufactured products produced in the United States;

b) Installing manufactured products for which the Federal Aviation Administration (FAA) has issued a waiver as indicated by inclusion on the current FAA Nationwide Buy American Waivers Issued listing; or

c) Installing products listed as an Excepted Article, Material or Supply in Federal Acquisition Regulation Subpart 25.108.

By selecting this certification statement, the bidder agrees:

1. To provide to the Owner evidence that documents the source and origin of the steel and manufactured product.
2. To faithfully comply with providing U.S. domestic product.
3. To furnish U.S. domestic product for any waiver request that the FAA rejects
4. To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

☒ The bidder hereby certifies it cannot comply with the 100 percent Buy American Preferences of 49 USC § 50101(a) but may qualify for either a Type 3 or Type 4 waiver under 49 USC § 50101(b). By selecting this certification statement, the apparent bidder with the apparent low bid agrees:

1. To the submit to the Owner within 15 calendar days of the bid opening, a formal waiver request and required documentation that supports the type of waiver being requested.
2. That failure to submit the required documentation within the specified timeframe is cause for a non-responsive determination may result in rejection of the proposal.
3. To faithfully comply with providing U.S. domestic products at or above the approved U.S. domestic content percentage as approved by the FAA.
4. To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.
5.

REQUIRED DOCUMENTATION

Type 3 Waiver – The cost of the item components and subcomponents produced in the United States is more that 60 percent of the cost of all components and subcomponents of the "item". The required documentation for a Type 3 waiver is:

a) Listing of all product components and subcomponents that are not comprised of 100 percent U.S. domestic content (Excludes products listed on the FAA Nationwide Buy American Waivers Issued listing and products excluded by Federal Acquisition Regulation Subpart 25.108; products of unknown origin must be considered as non-domestic products in their entirety).

b) Cost of non-domestic components and subcomponents, excluding labor costs associated with final assembly at place of manufacture.

c) Percentage of non-domestic component and subcomponent cost as compared to total "item" component and subcomponent costs, excluding labor costs associated with final assembly at place of manufacture.

Type 4 Waiver – Total cost of project using U.S. domestic source product exceeds the total project cost using non-domestic product by 25 percent. The required documentation for a Type 4 of waiver is:

a) Detailed cost information for total project using U.S. domestic product

b) Detailed cost information for total project using non-domestic product

False Statements: Per 49 USC § 47126, this certification concerns a matter within the jurisdiction of the Federal Aviation Administration and the making of a false, fictitious or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code.

6/2/2020
Date

Signature

AERO BridgeWorks, Inc.
Company Name

Jay Grantham - President
Title

[END OF FORM]

FORM 13: CERTIFICATION OF BIDDER REGARDING TAX DELINQUENCY AND FELONY CONVICTIONS

Submission of this form with bidder's bid submittal is REQUIRED.

CERTIFICATION OF BIDDER REGARDING TAX DELINQUENCY AND FELONY CONVICTIONS

The applicant must complete the following two certification statements. The applicant must indicate its current status as it relates to tax delinquency and felony conviction by inserting a checkmark (✓) in the space following the applicable response. The applicant agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification in all lower tier subcontracts.

Certifications

1) The applicant represents that it is ( ) is not (✓) a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax **liability.**
2) The applicant represents that it is ( ) is not (✓) is not a corporation that was convicted of a criminal violation under any Federal law within the preceding 24 months.

6/2/2020
Date

Signature

AERO BridgeWorks, Inc.
Company Name

Jay Grantham - President
Title

FORM 14: TRADE RESTRICTION CERTIFICATION

By submission of an offer, the Offeror certifies that with respect to this solicitation and any resultant contract, the Offeror –

1) is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms as published by the Office of the United States Trade Representative (USTR);

2) has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country included on the list of countries that discriminate against U.S. firms as published by the USTR; and

3) has not entered into any subcontract for any product to be used on the Federal project that is produced in a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR.

This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18 USC Section 1001.

The Offeror/Contractor must provide immediate written notice to the Owner if the Offeror/Contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The Contractor must require subcontractors provide immediate written notice to the Contractor if at any time it learns that its certification was erroneous by reason of changed circumstances.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR 30.17, no contract shall be awarded to an Offeror or subcontractor:

1) who is owned or controlled by one or more citizens or nationals of a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR or

2) whose subcontractors are owned or controlled by one or more citizens or nationals of a foreign country on such USTR list or

3) who incorporates in the public works project any product of a foreign country on such USTR list.

Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

The Offeror agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in all lower tier subcontracts. The Contractor may rely on the certification of a prospective subcontractor that it is not a firm from a foreign country included on the list of countries that discriminate against U.S.

firms as published by USTR, unless the Offeror has knowledge that the certification is erroneous.

This certification is a material representation of fact upon which reliance was placed when making an award. If it is later determined that the Contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration (FAA) may direct through the Owner cancellation of the contract or subcontract for default at no cost to the Owner or the FAA.

Signature of bidder: _____

[END OF FORM]

Additional Information

Proof of Insurance and Licenses

skinner & company
BONDS • INSURANCE • RISK MANAGEMENT

RE: Passenger Boarding Bridge Replacement project at Southwest Florida International Airport with AERO Bridgeworks, Inc.

To Whom it May Concern:

Skinner & Company, Inc., as the agent of record for AERO Bridgeworks, Inc., certifies coverage in place meets or exceeds insurance requirements outlined by Lee County Port Authority for Workers Compensation, Employers Liability, General Liability and Automobile Liability. Our markets have the capability of binding and writing a stand-alone project specific Builder's Risk policy based on the contact price determined as well.

Please feel free to contact our office with any additional questions on coverage or our relationship with the insured.

Respectfully,

Todd Skinner
President

Ron DeSantis, Governor

Halsey Beshears, Secretary

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

CONSTRUCTION INDUSTRY LICENSING BOARD

THE GENERAL CONTRACTOR HEREIN IS CERTIFIED UNDER THE
PROVISIONS OF CHAPTER 489, FLORIDA STATUTES

MONACO, NICHOLAS V

AERO BRIDGEWORKS, INC.
2700 DELK ROAD SE
SUITE 150
MARIETTA GA 30067

LICENSE NUMBER: CGC1528234

EXPIRATION DATE: AUGUST 31, 2022

Always verify licenses online at MyFloridaLicense.com

Do not alter this document in any form.

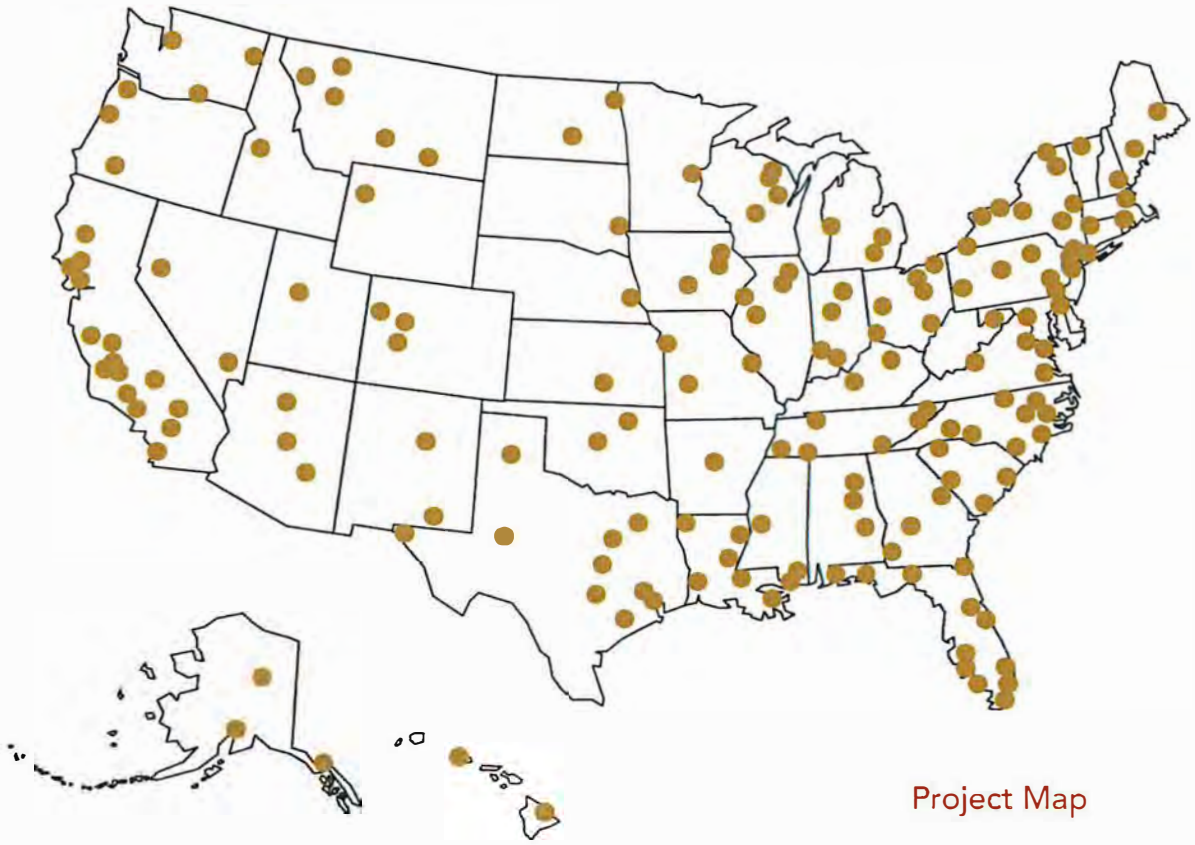
This is your license. It is unlawful for anyone other than the licensee to use this document.

Qualifications

Since 1999, AERO BridgeWorks, Inc (ABW) has developed into the largest PBB contractor in the country, and has become the leading supplier of airside construction and design services for major airlines, airports, and large contractors. ABW has excellent working relationships with all major fixed ground support equipment suppliers. In fact, ABW has worked closely with many of them to help develop equipment innovations and improvements. With over 80 full-time aviation professionals serving clients needs nationwide and leadership of 245+ years of aviation construction experience, ABW brings unparalleled experience and expertise to this project at Southwest Florida International Airport (RSW) for the Lee County Port Authority to ensure complete satisfaction and continued support for all project stakeholders. Having completed more than 2,000 projects at more than 200 airports across the U.S., AERO BridgeWorks has a vast amount of project experience specific to the procurement, construction, management, installation and commissioning of passenger boarding bridges, including concrete pavement removal and replacement and all other fixed ground support equipment necessary for RSW.

This vast project experience provides extremely valuable insight to the specific and often overlooked challenges to plan, procure, remove, relocate, power, and install these very specialized pieces of equipment and the terminal gate areas being served by them. AERO BridgeWorks is headquartered in Marietta, Georgia and as a nationwide contractor with personnel located throughout the country, ABW is accustomed to travel to projects and team with local subcontractors, vendors and suppliers to engage the local market and ensure a successful and safe project.

ABW far exceeds the minimum bid requirements established in the bid documents from RSW. We are confident we can provide RSW Maintenance, Operations and Engineering a combination of equipment that meets the specifications and that we can achieve the aggressive project schedule.



Project Map

ABW has a tremendous history in Florida. Since 2011, ABW has completed forty-eight (48) aviation projects in Florida, and a total of twenty-five (25) in just the last five years. The below table is just a sample of some of the airside aviation projects we have successfully completed at Florida airports.

Project	Year	Scope	Location
PCA Unit Installation (1 Gate)	2011	Construction	TPA
PCA Installation Project (4 Gates)	2012	Construction	MLB
Passenger Boarding Bridge Replacement (3 Gates)	2012	Construction	FLL
Passenger Boarding Bridge Inspection (7 Gates)	2014	Construction	MLB
PLB Replacement with Foundations (2 Gates)	2014	Construction	VPS
Passenger Boarding Bridge Installation (19 Gates)	2014	Construction	FLL
Bag Valet and Baggage Lift Installation (5 Gates)	2015	Construction	MCO
New South Terminal Project (24 Gates)	2016	Construction	MCO
PBB Removal, Storage and Re-install (3 Gates)	2016	Construction	FLL
Remove and Install Gates 30, 33 and 50	2017	Construction	MCO
Passenger Boarding Bridge Installation (14 Gates)	2017	Construction	FLL
PBB Replacement Project	2018	Construction	MCO
PBB Installation Project	2019	Construction	MCO

200 AIRPORTS | **2,000** PROJECTS | **15,000** GATES

We are an employee owned company, and no matter what the position or job title, all our staff take extreme pride to exceed our client's expectations.

In addition to being Employee Owned, ABW was voted as the #1 Best Place to Work in all of Atlanta in both 2018 and 2019. Our corporate culture focuses on delivering for our clients, but also ensures our employees are engaged in their work and are proud of what they do.

ducation
lasters, Construction
ngineering - NC State University
nd University of Washington

SCE,
ivil/Structural Engineering,
inor in Business Management -
orth Carolina State University

Jay Grantham, PE, LEED, CCM

President, AERO BridgeWorks

Professional Background

Mr. Grantham has dedicated his career to the aviation construction and contracting industry, specifically focused on managing and supporting large Terminal development programs. As one of the Owners of AERO BridgeWorks, Mr. Grantham provides leadership to project teams, builds relationships with clients and industry partners nationwide and is responsible for pre-construction services and business development. Mr. Grantham is dedicated to ABW's projects and their success and always looks for avenues to exceed client and project expectations.

Licenses/Certifications:

- Licensed General Contractor and Professional Engineer
- LEED BD+C Accredited
- Certified Construction Manager

Sample of Airports Supported:
ATL, RDU, BNA, MEM, FLL, MIA, RSW, MLB, AGS, DTW, ORD, DCA, IAD, BWI, CLT, ILM, BOS, PSM, MSN, CID, GRR, GRK, LAX, SEA, PAE, MFR, BZM, MSO, SAN, PHX, GSO, AVL

ducation
S, Mechanical Engineering,
NC at Charlotte

IS, Civil Engineering,
niversity of North Carolina

BA,
niversity of North Carolina

Jason Pearson, PE, MBA

Project Executive

Professional Background

Jason has delivered construction projects working for a general contractor, construction manager, and Airport Authority and brings a deep understanding of what clients are looking for in a successful project. Jason has led many teams, large and small, ranging from field crews to designers at airports across the country for more than 15 years. He knows the importance of coordination among the Owner, Designers, General Contractor, and all project stakeholders. Jason will be the lead executive level point of contact for the project and looks forward to ensuring ABW delivers a safe and successful project for RSW.

Licenses/Certifications:

- Licensed Professional Engineer
- OSHA 30 Certified
- NASCLA Accredited

Sample of Airports Supported:
ATL, RDU, BNA, FLL, MLB, SEA, PSM, BOS, DCA, IAD, BWI, LAX, AVL, RSW, SRQ, MEM

Tim Carruba

Vice President of Operations

Professional Background

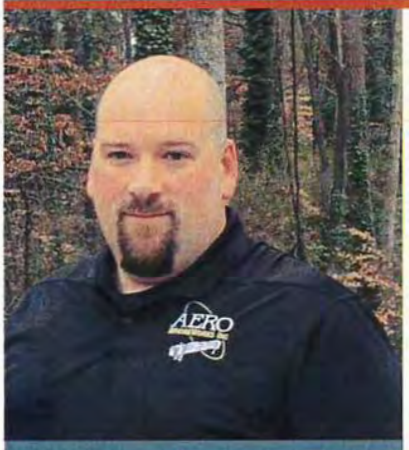
Mr. Carruba has over 31 years of experience in the aviation construction industry, specifically focused on fixed ground support equipment, hydrant fueling and ramp services market. Mr. Carruba has built AERO BridgeWorks, Inc. into the largest PBB and ramp services Contractor in the nation. He directs all day-to-day business, oversees project managers, safety coordination, company assets, client relationships and value engineering.

Education
U.S. Air Force Academy

Licenses/Registrations/Certifications:

- EPA HVAC Universal Certificate
- Six Sigma
- Environmental Coordinator

Sample of Airports Supported:
CVG, BNA, MEM, IND, JFK, LGA, BOS, LAX, SEA, DFW, ATL, MCO, RSW, PNS, FLL, MIA, MLB, JAX, CHS, SDF, LEX, MOB, TPA, SRQ



Allan Gray, II

Project Manager

Professional Background

Mr. Gray has over 8 years of professional experience in reviewing and executing contracts, forecasting budgets, developing change orders, reviewing and approving shop drawings, developing punch lists, interpreting contract documents and dealing with closeout documentation procedures. Proficient in managing, coordinating, and inspecting contractor field progress, conducting and participating in contractor/owner meetings, and handling startup testing. Meets all goals and objectives with the use of excellent interpersonal and communication skills as well as strong leadership capabilities.

Education
BS, Construction Management, Ferris State University

AA, Architectural Technology, Ferris State University

Licenses/Registrations/Certifications:

- OSHA 30 Certified
- AutoCAD
- Revit and Suretrack

Sample of Airports Supported:
ATL, FLL, DFW, OAK, MSY, MIA

Jeff Bailey

Construction Operations

Professional Background

A dedicated construction operations manager with over 30 years of expertise in the aviation GSE industry. Jeff is responsible for overseeing and managing aviation projects, preserving safety compliance and monitoring day-to-day field operations, all while promoting a positive team environment and superior customer service. Jeff provides oversight and management of on-site ABW and subcontractor operations. He has decades of expertise in passenger boarding bridges, preconditioned air, ground power, ramp striping, foundations, fueling, potable water, battery charging, and aircraft docking systems.

30+ years of experience in aviation construction and program management

Sample of Airports Supported:
ANC, CVG, LEX, SDF, CMH, CLE, BNA, DTW, MKE, PIT, PHL, MCO, FLL, MSP, DAY, IND, SEA, LAX, SFO, SAN, TYS, MEM, MIA, LGA

Superintendent
AERO BridgeWorks

Mark Martinez

Professional Background

Mr. Martinez has over 29 years of experience in the manufacturing and shipping of passenger boarding bridges across the United States and overseas. Currently managing the installations and refurbishments of PBBs for a variety of clients including airlines and airports. Mr. Martinez has successfully led construction teams and subcontractors to exceed client expectations by meeting contractual goals while also staying within budget.

Assistant
Superintendent
AERO BridgeWorks

Sean Quinton

Professional Background

Mr. Quinton is a highly motivated professional, offering a diversified arsenal of management, operations, and business growth experience. He has a proven record of identifying opportunities for program/process improvement and implementing plans to maximize existing resources. Mr. Quinton emphasizes the essential communication component for business growth and profitability. His passionate pursuit of proactive leadership is rooted in accountability, high expectation, and fairness. He also has experience and vast knowledge in the strategic formulas for revenue and profit growth, combined with the tactical experience for ensuring stability and success.

Project Engineer
AERO BridgeWorks

Jonathan Nathan

Professional Background

Jonathan has 2 years of experience in commercial construction, including projects at Hartsfield-Jackson Atlanta International Airport. Having recently completed his master's degree, he is committed to providing excellent service focusing on industry best practices to ensure successful outcomes. As Project Engineer, Mr. Nathan is responsible for submittal data, RFIs, field surveys, subcontractor coordination, invoice and purchase order support, and overall support of the Project Manager.

Badging Manager
AERO BridgeWorks

Wanda Arce

Professional Background

Wanda has 10 years of experience in administrative duties for the airport construction industry and manages 85+ employee security badges across the nation. She ensures all personnel information is accurate and all employee personal identifications are up to date for newly issued/renewal badge processing purposes. She coordinates employees across the nation to comply with all security airport badge requirements and processes all new hire paperwork according to HR guidelines.

client
City of Atlanta Department of Aviation

client contact
Shawn Craig
678.749.9443

delivery method
design-bid-build

completion date
2020

project cost
$50,175,000

City of Atlanta Department Of Aviation – PBB Replacement and Upgrade Project (86 Gates - Phase 1, 30 Gates - Phase 2)

Hartsfield-Jackson Atlanta International Airport – Atlanta, GA (ATL)

The project included replacement of 116 PBBs, 91 400Hz gateboxes, 59 PCA AHUs, 15 POU 400Hz units, eight POU PCA units, building electrical upgrades, central PCA plants, central 400Hz plants, GSE communication buses, and building egress systems across seven concourses. It impacted every gate and every airline operating at the world's busiest airport.

Scope

- Full site surveys, complete airside, planning and construction
- Renovation, relocation, and upgrades of 116 gate positions
- PBBs and fixed ground support systems
- Construction and installation of terminal doors and structural foundations
- PCA, 400Hz, 28.5VDC
- Terminal electrical/mechanical infrastructure and security access upgrades, including emergency egress modifications

Challenges and Accomplishments

- Met requirements of the Department of Aviation (DOA) and all impacted airlines
- Fast-paced, phased schedule
- Schedule analysis achieved gate flexibility to serve multiple airlines with operational requirements at individual gates simultaneously
- Aircraft parking changes to accommodate new generation PBBs
- Gate construction required significant coordination and phasing to minimize impacts on adjacent gate operations

client
Hunt

client contact
Jerry Sheets
504.715.2544

delivery method
CMR

completion date
2019

project cost
$24,000,000

New Orleans Aviation Board - North Terminal Project (35 Gates)

Louis Armstrong New Orleans International Airport - New Orleans, LA (MSY)

Scope

AERO BridgeWorks was selected by the Construction Management at Risk Joint Venture, Hunt Gibbs-Boh Metro, to procure, furnish and install Passenger Boarding Bridges, PCAs, GPUs and Fixed Walkways for 29 new gates. In addition, 6 existing PBBs, PCAs and GPUs were relocated and cosmetic refurbishment was performed on all 6 gates.

AERO BridgeWork's contract of approximately $24M is part of MSY's new $800M Terminal. PBB installation commenced in Spring 2018 and was completed on schedule and within budget.

Challenges and Accomplishments

AERO BridgeWorks reviewed the existing aircraft layout plans and identified ADA, equipment and architectural concerns.

Upon completing an aircraft layout analysis, ABW presented a modified aircraft layout plan which reduced all ADA concerns, expanded the aircraft service fleet and reduced nearly $2M of equipment and fixed walkway sections, plus the associated foundations. The Owner approved the plan and the direct savings, plus the construction schedule savings, was passed on to the Hunt Construction Management Team.

client
American Airlines/Turner Construction

delivery method
CMR

completion date
2019

client contact
Mike Napoli - AA
817.967.1097

Terminal B Optimization Project (24 Gates)

Boston Logan International Airport - Boston, MA (BOS)

This multi-gate passenger boarding bridge and ancillary equipment installation project is part of a massive Terminal B Optimization Program for MassPort. The contracts include multi-gate GSE removals, relocations and installations and specifically includes GPU equipment. ABW also removed and scrapped the existing PBBs at Terminal B.

Scope

- Renovation, relocation and upgrades of 24 gate positions
- PBBs and fixed ground support systems
- Removal, relocation and installation of new GSE, including GPU equipment
- Multiple contracts with Turner and American
- Furnish and install new fixed walkways
- All ramp striping at Terminal B
- Coordinate changing schedules

Challenges and Accomplishments

- Met requirements of DOA and all impacted airlines
- Fast-paced, phased design schedule
- Schedule analysis achieved gate flexibility to serve multiple airlines with operational requirements at individual gates simultaneously
- Aircraft parking changes to accommodate new generation PBBs
- Gate construction required significant coordination and phasing to minimize impacts on adjacent gate operations

client
MSCAA

delivery method
design-bid-build

client contact
James Hay
901.922.8224

completion date
Ongoing

Passenger Boarding Bridge and Aircraft Parking Modernization (25 Gates)

Memphis International Airport - Memphis, TN (MEM)

This project included construction to ultimately consolidate all air carriers from Concourses A, B, and C to a modernized and redeveloped Concourse B. Concourse A and C were to be partially demolished, decommissioned and mothballed.

Scope

- Passenger Boarding Bridges
- PCA
- 400Hz GPU Systems
- Fueling Systems
- Baggage Valets
- Structural Foundations
- Terminal electrical/mechanical infrastructure upgrades

Challenges and Accomplishments

- Completion of project with refurbishing of many existing equipment items
- Obtaining approvals from all airport and airline user groups
- Multiple phases to minimize "throw away" costs while minimizing impact to tenant airlines
- Obtained FAA VALE Grant funding for emissions reductions

client
Norfolk Airport Authority

client contact
Jeffery Bass, PE
757.857.3351

delivery method
design-bid-build

completion date
Ongoing

project cost
$15,893,000

Norfolk Airport Authority - Jetbridge Replacement Project (17 Gates) - Norfolk International Airport - Norfolk, VA (ORF)

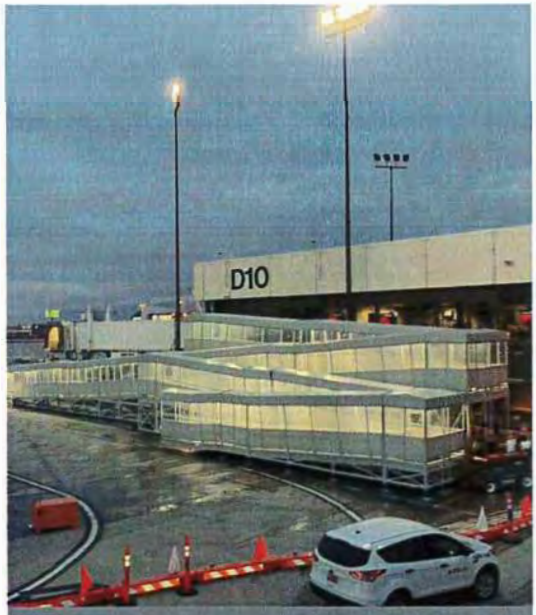
ABW was the prime general contractor on this project, which included the removal of 15 existing passenger boarding bridges and equipment, demolition of existing foundations and surrounding apron. New installation consisted of 17 PBBs and equipment, a fixed walkway, new PC Air and GPU units, new foundations and adjacent concrete apron, new terminal door to accommodate a new PBB location, electrical infrastructure and panels, and moving equipment from normal to emergency power.

Scope

- Removal of 15 existing PBBs, PCA and GPU's
- Supply and install 17 new PBB's, PCA's, GPU's and fixed walkway
- 400Hz GPU systems
- Aircraft apron, sidewalk, light pole and trench drain modifications
- Demolition/installation of 17 PBB foundations and adjacent concrete apron
- Pedestrian boarding bridge, PCA and GPU monitoring system and associated new communication backbone for the facility

Challenges and Accomplishments

- ABW turned over Gate 18 several weeks ahead of project schedule to accommodate a new airline service at ORF
- ABW worked with Norfolk Airport Authority officials and subcontractors to ensure this turnover happened without issue or interruption to service
- ABW worked closely with the airport to revise the original project phasing. It is anticipated that this will result in final project completion 6-8 months ahead of original schedule.



client
JBT

client contact
Frank Moore
801.940.1850

delivery method
design-bid-build

completion date
2022

Terminal Redevelopment Project

Salt Lake City International Airport - Salt Lake City, UT (SLC)

Installation services for the new passenger boarding bridges, as well as all associated GSE equipment for a new terminal complex. This comprised of three buildings: North Concourse West, South Concourse West and South Concourse East.

Scope

- Full site surveys, complete airside construction
- Aircraft parking planning, ramp striping and layouts
- PBBs and related fixed ground support system installation
- 4-pipe central PCA systems with 8,240 ton-hours of thermal storage
- Gate-located PCA and 400Hz systems, baggage valets
- Aircraft docking, RIDS, and GSE charging and monitoring
- Terminal electrical/mechanical infrastructure and security interfaces

Challenges and Accomplishments

- Met requirements of the Department of Aviation (DOA) and airlines
- PCA studies of available systems
- Central PCA systems instrumental in obtaining LEED Gold® certification
- Full BIM analysis using REVIT and clash detect
- Phased construction to maintain operations of existing facilities
- Met all applicable SLCIA Airport Authority standards and those of multiple tenants, the FAA, Transportation Security Administration (TSA), and Customs and Border Protection

client
JBT/Skanska

delivery method
design-bid-build

client contact
Don Peterson
628.895.6301

completion date
2020

project cost
$4.6 M

Boarding Area A Gate Enhancements (14 Gates)

San Francisco International Airport - San Francisco, CA (SFO)

ABW is providing airside construction and installation for this 14-gate, 24 PBB project. The primary focus is to increase the ADG-V and ADV-VI capacity at the international terminal to accommodate the airlines' larger aircraft and plan for future aircraft, such as the B777-9X.

Scope

- Complete construction and installation of PBBs and other equipment at 14 gates at the international boarding area
- Phasing planning with stakeholders to maximize construction and minimize gate outages
- Relocation and installation of new PBBs, PCA, 400Hz, potable water cabinets, RIDS, and ADGUs to accommodate gate changes

Challenges and Accomplishments

- Coordinated with 3 other projects to minimize impacts on operations and limit gate closures to one at a time
- Reduced construction costs by optimizing passenger boarding flow through fixed walkways instead of adding boarding doors
- Increased GSE efficiency with fixed walkway bridges for vehicles to pass under

client
Delta Air Lines

delivery method
design-build

client contact
John Head
404.715.2544

completion date
2015

project cost
$46.5 M

Delta Air Lines - NWA Fleet Integration/Boeing Fleet Winglet Project (440 Gates)

Multiple Hub Cities - MEM, LAX, MSP, DTW & ATL

ABW performed construction, fleet mix/flight schedule analysis, aircraft parking layouts, passenger boarding bridge and related fixed ground support system installation for the integration of the NWA fleet into the Delta Air Lines fleet mix and the Boeing fleet winglet modification.

Scope

- Passenger boarding bridges, walkways, Bag valets
- Fleet mix/flight schedule analysis
- Structural foundations
- Preconditioned air, 400Hz 28.5VDC
- Hydrant fueling Docking systems
- CCTV, Wi-Fi Security access upgrades
- Striping/taxi-lane layouts
- Ramp Information Display System (RIDS)

Challenges and Accomplishments

- ATL's study demonstrated this project improved operations, significant fuel usage savings, enhanced customer service and reduced gate delays
- Analysis resulted in an extremely cost-effective approach with the refurbishment/relocation of PBBs, relocation amongst the five hubs, and only required 13 new PBBs to achieve total fleet integration and maximum effective gate usage and flexibility at the 440 hub gates

client
RDUAA

client contact
Vincent DelNero
919.840.5280

delivery method
design-bid-build

completion date
est. June 2020

project cost
$5.4 M

Passenger Boarding Bridge and Fixed Walkway Project

Raleigh-Durham International Airport - Raleigh, NC (RDU)

ABW is currently completing a one-of-a-kind PBB and fixed walkway project at Raleigh-Durham International Airport. The project includes two side by side, 300 ft long, single sided glass walkways supported on above ground spread frames with a shared column. ABW worked seamlessly with the airport, general contractor and design teams to devise solutions to a number of unique challenges and delivery this exceptional project.

Scope

- PBB and associated GSE removal and installation
- Innovative fixed-walkway installation

Challenges and Accomplishments

- ABW recommended a unique solution for the support connections to allow the walkways to be assembled in the field with only a few inches clearance between them.
- The walkways included above ceiling conduits to accommodate fire alarm, special systems, and sprinklers. ABW provided coordination and expertise to successfully incorporate those systems into the walkway construction.

client
Melbourne Airport Authority

client contact
David Perley
321.723.6227

delivery method
design-build

completion date
Ongoing (est. 2020)

project cost
$2.5 M

Passenger Boarding Bridge Replacement Project (2 Gates)

Melbourne Orlando International Airport - Melbourne, FL (MLB)

ABW hired AERO Systems Engineering as a subconsultant designer in this design-build project to replace PBBs, PCAs, and GPUs at Gates 4 and 7. Existing aircraft parking plans were evaluated and ramp striping refreshed. Hurricane tie downs for the PBBs were installed in the apron to help protect the PBBs during strong wind events.

Scope

- Site surveys, verification of airside parking plan
- Refresh of ramp striping
- Replacement of PBBs, PCAs, and GPUs
- Installation of hurricane tie downs
- Installation of cab-mounted bag conveyor

Challenges and Accomplishments

- ABW worked closely with MLB to specify and provide equipment and materials that are most suited for harsh salty environment
- Provided appropriate equipment for the allocated airline at each gate

ABW Sample Project List

Project	Gate Quantity	Year Completed	PBB Procurement	PCA/GPU Procurement	PBB Installation	PCA/GPU Installation	PBB Foundations/ Construction	Ramp Striping	A-VDGS	Within Budget	On Schedule	Engineer of Record
MLB, Melbourne-Orlando Int'l Airport, Passenger Boarding Bridge Replacement Project	2	Active Project	✓	✓	✓	✓	✓	✓	✓	✓	✓	ASE*
BOS, Boston Logan Int'l Airport, American Airlines/Turner Construction, Terminal B Optimization	14	2019	✓		✓	✓	✓	✓		✓	✓	AECOM
SLC, Salt Lake City Int'l Airport, Terminal Redevelopment & PBB Replacement	74	Active Project			✓	✓		✓	✓	✓	✓	ASE*
ORF, Norfolk Int'l Airport, Passenger Boarding Bridge Replacement Project	17	Active Project	✓	✓	✓	✓	✓	✓		✓	✓	GSP
ATL, Hartsfield-Jackson Atlanta Int'l Airport, PBB Replacement	116	2020	✓	✓	✓	✓		✓		✓	✓	ASE*
ATL, Hartsfield-Jackson Atlanta Int'l Airport, SafeDock System Installation	154	2019			✓			✓	✓	✓	✓	ASE*
PAE, Paine Field, Glass PBB and GSE Installation Project	2	2019			✓	✓	✓			✓	✓	---
SEA, Seattle-Tacoma Int'l Airport, PCA & 400Hz, PBB Replacement	7	Active Project	✓		✓	✓	✓		✓	✓	✓	ARUP
PSM, Portsmouth Int'l Airport, Terminal Passenger Boarding Bridge Project	1	Active Project	✓	✓	✓	✓	✓			✓	✓	Garver
GRK, Killeen Regional Airport, Passenger Boarding Bridge Replacement Project	5	2019	✓	✓	✓	✓	✓	✓		✓	✓	ASE*
LGA, LaGuardia Int'l Airport/ Delta Air Lines, Airfield Reconfiguration	11	2019			✓	✓			✓	✓	✓	ASE*
SFO, San Francisco Int'l Airport, Boarding Area A Gate Enhancements & PBB Replacement	24	Active Project			✓	✓				✓	✓	ASE*
Delta Air Lines, Multi-City PBB Replacement, NWA Fleet Integration	440	2015	✓	✓	✓	✓		✓	✓	✓	✓	ASE*
MEM, Memphis / Shelby County Airport, Concourse B Optimization Project	25	Active Project	✓	✓	✓	✓	✓	✓	✓	✓	✓	ASE*
DTW, Gerald Ford Int'l Airport, Passenger Boarding Bridge Replacement	3	2020	✓	✓	✓	✓	✓			✓	✓	Mead & Hunt
RDU, Raleigh-Durham Int'l Airport, PCA Upgrades and Electrical Modifications	26	2019		✓		✓				✓	✓	ASE*

*AERO Systems Engineering, Inc.

Additional References

1.) Shawn Craig - CPS Atlanta
(p) 678.749.9443
(e) scraig@cps-atlanta.com

Background: Shawn was the Program Manager for ATL and was responsible to oversee the two-phased Gate PBB Replacement Program. This was the largest PBB/GSE replacement in United States history and AERO BridgeWorks was the Prime General Contractor.

2.) Jerry Sheets - AECOM Hunt
(p) 504.715.2544
(e) jerry.sheets@aecom.com

Background: Mr. Sheets is a Senior Vice President with Hunt AECOM. Jerry has a very long relationship with several people at ABW, including President Jay Grantham, Vice President/Project Executive Jason Pearson and Project Manager Allan Gray. Jerry lead Hunt Construction efforts at MSY Airport and prior to that lead large Terminal programs at RDU, Abu Dhabi and others.

3.) James Hay - MSCAA
(p) 901.922.8224
(e) JHay@flymemphis.com

Background: Mr. Hay is Head of Development at MEM Airport and oversees the current MEM Concourse B Optimization Program. James has a long relationship with several people at ABW. ABW is a Prime General Contractor to MEM completing all hydrant fueling, PBB foundations, paving and PBB/GSE installations at Concourse B. **Similar to this project at RSW, please note that AERO Systems Engineering was the engineer of record for this project working directly for MEM Airport Authority. AERO BridgeWorks submitted on the public low-bid project and saved MEM a significant amount of money during the procurement.**

4.) Jeffery Bass - Norfolk Airport Authority
(p) 757.857.3351
(e) jbass@norfolkairport.com

Background: Jeff works as a Senior Leader for Norfolk Airport Authority and, among many other tasks, is responsible to oversee the multi-year 17-Gate PBB Replacement Program. This includes PBB/GSE, foundations, paving, building infrastructure and ramp striping. AERO BridgeWorks is currently the Prime General Contractor and the project is anticipated to complete later this year.

5.) Vincent DelNero - Parsons
(p) 919.840.5280
(e) vin.delnero@parsons.com

Background: ABW and Vincent have a long history, dating back to early 2000's when personnel from ABW worked with Vin on the $700M RDU Terminal 2 Terminal Expansion. Recently, ABW has submitted on two separate low-bid public procurements at RDU and were awarded both projects. Vin was responsible for the oversight and management of these two projects. **Similar to this project at RSW, please note that AERO Systems Engineering was the engineer of record for both of these projects at RDU and AERO BridgeWorks submitted on the public low-bid project and was awarded the project by RDUAA.**

Technical Submittals

JBT materials will go here.

TRANSMITTAL

AERO BRIDGEWORKS INC

Date	06/02/2020	**Re:**	RSW Bid Submittals
To:	Bid Review Board		per Bid Documents and Technical Specs
	Southwest Florida International Airport		

We are sending you the following:

	Contract Drawings		Drawings		Project Submittal
	Contract		Compact Discs		Project Manual
	Change Order		Digital Video Discs		Brochures
	Subcontract		Flash Drives/SD Cards	✔	Other

Description

For information purposes, specified equipment submittals are included.
Contents of this package are confidential.
CONFIDENTIAL

These are as checked below.

	For Approval Please Return ( ) Copies		Approved
	Resubmitted for Approval Please Return ( ) Prints		Approved as Noted
	Disapproved - RESUBMIT		Please Return ( ) Corrected Copies
	For Your Signature	✔	For Your Use

Remarks:

cc: Jay Grantham	By: Jonathan Nathan

This submittal has been prepared and reviewed with intent to comply with the Contract requirements. Should this submittal provide information different than the Contract requirements, and that information is reviewed and returned without significant comment, the Contractor will proceed with reviewer's approval as superseding the Contract requirements.

B. In the event of conflict between a reference and another reference or this specification, request clarifications. All responses are final, and will be at no additional cost to the Owner.

1.6 SUBMITTALS

A. Bid-Submittals: The following submittals shall be included with bid.

1. Alternate Configurations per 1.04.G. No alternate mounting configurations, installation or assemblies
2. Spare Parts List: Provide manufacturer's recommended spare parts list. Click here
3. UL Certification per 1.07.E. Click here

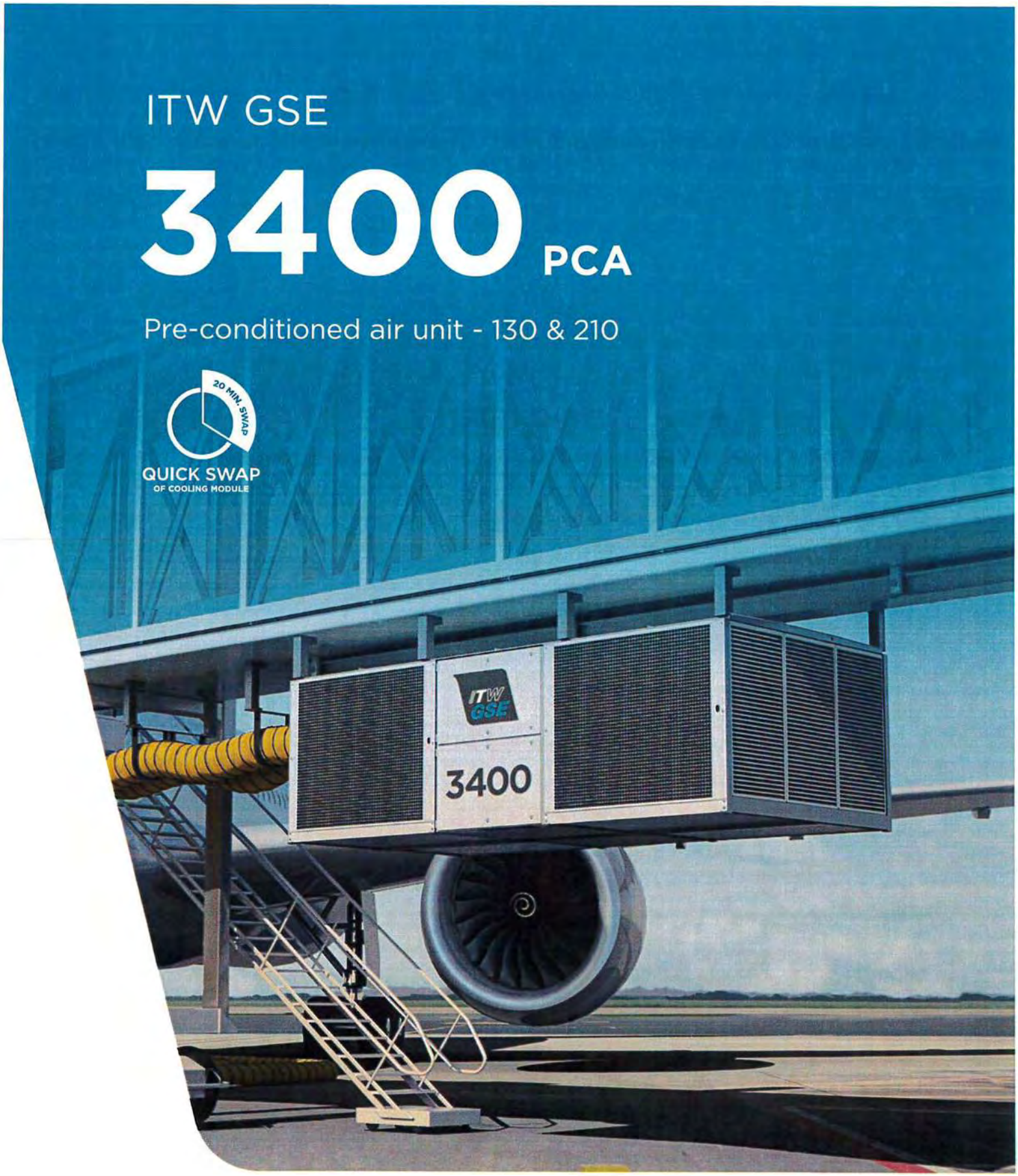
B. Pre-Manufacture Submittals: The following submittals shall be made as necessary to meet the project schedule, and shall be submitted and approved prior to manufacturing the Dx POU PCA units.

1. Product data for selected models including specialties, accessories, and the following:
   a. Direct expansion (Dx) Point-Of-Use (POU) Preconditioned Air (PCA) unit airflow performance curves with system operating conditions indicated; include: airflow vs static pressure and airflow vs blower horsepower.
   b. Manufacturer shall submit performance data of the Dx POU units at the design conditions indicated in this Section. Performance data shall include, but not be limited to, air flow, static pressures, temperatures and humidity levels, at points of significance through the unit and at the aircraft inlet, refrigerant pressures and temperatures at points of significance through the refrigeration circuits, and power requirements of major components as well as entire unit.
   c. Motor ratings and electrical characteristics including motor and fan accessories.
   d. Materials, gauges and finishes.
   e. Dampers, including housings, linkages, and operators.
   f. Air filter manufacturer's technical product data including dimensions, weights, required clearances and access, flow capacity including initial and final pressure drop at rated air flow, efficiency and test method, fire classification, and installation instructions.
   g. Certification report of airflow test apparatus by an independent third party such as the National Environmental Balancing Bureau (NEBB) or other approved agency.
   h. Dx POU unit air flow control, capacity control and defrost control.
   i. Flexible hoses, clamps, rigid ducts and mounting brackets.
2. Shop Drawings: Provide schematics and interconnection diagrams, indicate front and side views of enclosures with overall dimensions and weights shown; conduit/cable entrance locations and requirements; and nameplate legends. Differentiate between manufacturer-installed wiring and field-installed connections. Include appurtenances such as hose baskets, ducts, pushbuttons, etcetera.
3. Installation Details: Provide complete installation details including, without limitation, installation details of all appurtenances. Show installed configuration as well as any pertinent details regarding interface to other equipment and systems, include electrical connection service points.
4. Maintenance Data: Include routine preventive maintenance schedule.

C. Pre-Ship Submittals: The following shall be submitted and approved prior to shipping Dx POU units to the project site:

1. Factory Test Reports: Indicate factory tests and results and inspection procedures.

D. Pre-Substantial Completion Submittals: The following submittals shall be submitted and approved prior to 14 days before substantial completion, unless otherwise noted herein.



It's all about connections

ITW

GO GREEN
on ground

THE SMART CHOICE

ITW GSE is a trustworthy partner designing and optimizing GSE equipment. We have strong expertise within cooling technology and the ITW GSE 3400 PCA is the market's most innovative, reliable and environmentally friendly point-of-use PCA. The 3400 PCA is also the market's only true modular PCA (patented).

The 3400 PCA supplies fresh, clean air into parked aircraft, at carefully monitored temperatures and provides a pleasant atmosphere for the crew and the passengers. It also makes aircraft turn-around faster and more effective.

DESIGNED FOR ALL KINDS OF AIRCRAFT

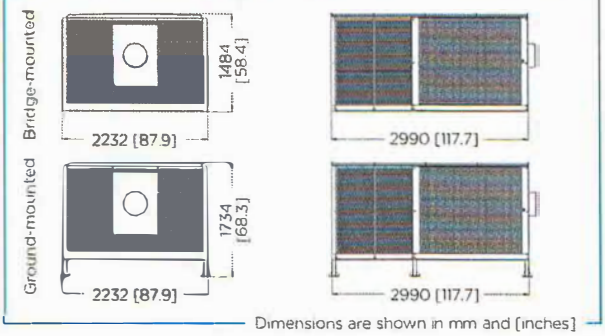
The 3400 PCA is available for bridge- or ground-mounting for aircraft parking positions or hangar applications. It is designed to suit all types of aircraft from the Narrow-Body (Code C: A320) & Wide-Body (Code D: B767) equipped with 1 PCA connector over the Jumbo (Code E: B777) to the Super Jumbo (Code F: A380) equipped with 4 PCA connectors connected to two ITW GSE 3400 PCA 210 units.

The 3400 PCA uses a minimal amount of refrigerant due to micro channel condenser technology and the compact design of the unit. The refrigerant R410A does not degrade the ozone layer at all. The refrigerant further provides reliable operation at high ambient temperatures. The distance between the evaporators and the low air velocity optimize the efficiency of each cooling circuit and prevent condensation drops from moving from one evaporator to the next.

IMPROVE YOUR ENVIRONMENT AND CUT COST

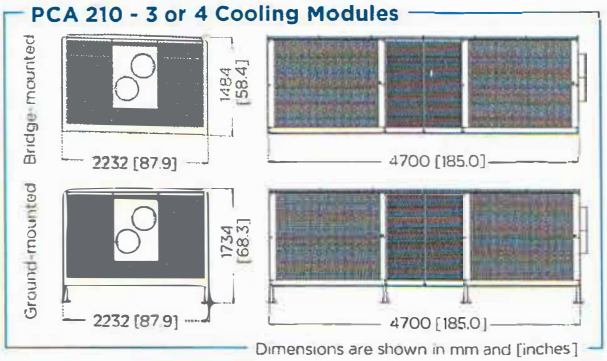
The increasing focus on environmental issues means that airports aim to let an external pre-conditioned air unit and a 400 Hz solid-state unit take over the functions of the aircraft APU while the aircraft is parked at the gate. We call this the "Go Green on Ground" concept whereby carbon emission is reduced by approx. 80-85%. The concept furthermore provides savings on the costly maintenance to the on-board APU, based on hours of operations. For the airports, the "Go Green on Ground" also means a reduction of the noise level to the benefit of the airport personnel, passengers and to surroundings in general.

PCA 130 - 2 Cooling Modules



Dimensions are shown in mm and [inches]

PCA 210 - 3 or 4 Cooling Modules



Dimensions are shown in mm and [inches]

INNOVATIVE DESIGN

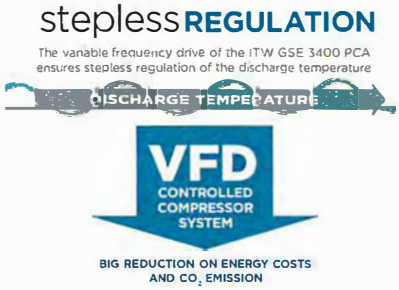
The ITW GSE 3400 PCA is the market's only modular PCA. It is designed around identical cooling modules that are easy to swap by a technician with no special skills and in 20 minutes only. This helps you keep aircraft turn-arounds on schedule.
The modular design also means big savings on spare part inventories. All parts (e.g. the self-containing cooling modules, condenser fans, main blower etc.) can be replaced without removing the PCA unit from underneath the passenger boarding bridge.

POWER CONSUMPTION

The 3400 PCA enables limiting of the current drawn. In this way, the PCA does not overload the entire mains supply with blown fuses and aircraft delays as possible consequences. In the event of a later infrastructure upgrade, the current limit can be set to another value allowing the PCA to cool more!
The excellent high power factor of > 0.97, means a line current reduction of up to 20% compared to similar PCA units with the same rating. Also, smaller and less costly cables can be used. Add to this the choice of state-of-the-art components that ensures a high performance at the output as well as a low energy consumption. Further reductions on the energy consumption are achieved due to the variable frequency drive (VFD) control of all main parts such as compressors and blowers. Therefore, the life time costs of the ITW GSE 3400 PCA are as low as they can possibly be.

STEPLESS REGULATION

The 3400 design breaks completely new ground by using variable frequency drive technology that gives easy, stepless regulation of the discharge temperature. Therefore, the ITW GSE 3400 PCA units supply exactly the required amount of cold air and not more. They use much less energy than other PCAs that are designed for peak load conditions although these conditions probably only apply for 10-20 days each year. Those PCAs deliver excess capacity for about 80% of the time, wasting lots of expensive energy and creating undesirable emissions. Another advantage of the stepless regulation is less mechanical stress – which boosts reliability and service life and gives you a better return on investment.



OPTIMUM PERFORMANCE ENSURED

The ITW GSE PCA is, as standard, designed with one stage of ePM10 70% filtre. The whole internal plenum and stainless steel drain pan can be cleaned in less than 2 hours once the cooling modules have been pulled-out. Afterwards, the evaporators and condensers can be cleaned to optimize the efficiency of the 3400 PCA, which again reduces the whole life costs of the PCA to a minimum.

THE ITW GSE OPERATOR INTERFACE

The ITW GSE operator interface is easy and intuitive. This is your guarantee for correct operation and on-time aircraft departures. The operator only has to press the combined start/stop button. Also, he can monitor various parameters such as temperature and air flow at the display screen.
The operator interface is common from one ITW GSE product to another. Therefore, airport staff familiar with one ITW GSE product can easily switch to another as the icons and display are the same. For easy set-up and maintenance purposes, there is a deeper level dedicated for the technician. The software-based control system means that your 3400 PCA can be updated and given additional capabilities in the future, simply by transferring new software from a USB stick.

SPECIFICATIONS
ITW GSE 3400 PCA 130 & 210

March 2018; M10484

Input
- Rectification: 12 pulse
- Line current distortion: < 10%
  Inrush current: None, softstart
- Power factor: >0.97 at 100% load

Output
- Discharge air temperature: Subzero, depending on ambient temperature relative humidity and air flow

Environmental data
- Operating temperature: -30°C to +50°C (-22°F to +122°F)
- Relative humidity: 10-100%, non condensing
- Noise level: < 85 dB(A) at 4.6 m
- IP class: IP54 (Electronic part)

Miscellaneous
- MTTR: Typically 20 minutes
- Refrigerant: R410A
- Construction: Welded, anti-corrosive coated steel frame

Directive conformity
- UL 1995 480 V version, only
- 2004/108/EC EMC Directive
- 2006/95/EC LVD Directive
- 2006/42/EC Machinery Directive

Conformity by complying with
- ETL listing 480 V version, only
- EN61000-6-2 EMC - immunity standard
- EN61000-6-4 EMC - emission standard
- EN62040-1-1 LVD safety standard
- EN61558-2-6 General & safety requirement
- 1915-1&2 Machinery - general safety requirement
- 12312-17 Aircraft ground support equipment, specific requirements

The 3400 PCA is equipped with the following features
- Stepless regulation via VFD on main blower & compressors
- Quick swap of cooling module; only takes 20 minutes
- Internal ducts made of stainless steel
- Smoke detector
- Measure of outlet pressure and air flow
- Air temperature sensors (discharge and inlet)
- 2 pressure and 3 temperature sensors as well as 1 sight glass on each refrigerant circuit
- Micro channel condensers (sea water resistant aluminium)
- "ePM10 70%" filtration including clogging alarm
- Remote control station with display and single communication cable
- Internal 14" damper of the second outlet
- Special condenser coating
- TCP/IP interface via RJ45 port
- Fast evaporator de-icing

Available standard options
- Cabin sensor
- Feet for ground mounted units
- RS485 port with Modbus/Jbus protocol
- ITW GSE Service Tool
- Colour: RAL 7035 (standard) or any other RAL colour on an optional basis
- Heater with overtemp. protection

Model	Marking	Input voltage	Frequency	Current (Line)	Current (MCA)	Current (MOP)	Nominal compressor rating	Airflow	Airflow	Pressure	Pressure	Weight	Weight	Heater (Optional)	Condensate Pumps	Outlets
		[V]	[Hz]	[A]	[A]	[A]	[Tons]	[kg/min]	[lb/min]	[Pa]	[inH$_2$O]	[kg]	[lbs]	[kW]	[Qty]	[Qty]
ADF-130/2 (H)	CE	3 x 400	50	145	180	200	45	130	280	8,500	34	3,200	7,000	72	2	1 x 14"
	UL	3 x 480	50/60	120	146	150	45	130	280	8,500	34	3,200	7,000	72	2	1 x 14"
ADF-130/2X (H)	CE	3 x 400	50	175	200	225	60	130	280	8,500	34	3,200	7,000	72	2	1 x 14"
	UL	3 x 480	50/60	145	170	200	60	130	280	8,500	34	3,200	7,000	72	2	1 x 14"
ADF-210/3 (H)	CE	3 x 400	50	275	300	350	90	210	460	10,000	40	4,000	8,800	120	4	2 x 14"
	UL	3 x 480	50/60	220	250	300	90	210	460	10,000	40	4,000	8,800	120	4	2 x 14"
ADF-210/4 (H)	CE	3 x 400	50	345	370	400	120	210	460	10,000	40	4,500	9,900	120	4	2 x 14"
	UL	3 x 480	50/60	290	310	350	120	210	460	10,000	40	4,500	9,900	120	4	2 x 14"

It's all about connections

PCA 3400 Recommended Spare Parts

Part Number	Description	Qty	price	Extended Price	Remarks	Designator
SI4929	Semi conductor fuse	3	$94.70	$947.00		F1-F3
AP-PS0011	DC Power Supply	1	$466.79	$466.79		G1
AP-DI2600	Diode	1	$4.50	$4.50		
AP-DP1234	MCB	1	$240.00	$240.00		Q9
AP-AE2004	PT100 sensor, fast	5	$310.00	$1,550.00		S2X
AP-AE2024	Pressure Transmitter	1	$396.48	$396.48		S4
AP-572507	Cooling Module HGBP UL	1	$21,325.00	$21,325.00		CM1
AP-572315	VFD without fan	1	$3,960.08	$3,960.08		A11
AP-579526	GSE Control Board	1	$1,738.14	$1,738.14		A1
579536	Display	1	$1,367.50	$1,367.50		A3
AP-579555	Interfaceboard	1	$3,083.42	$3,083.42		A2
KO4382	Contactor	1	$995.92	$995.92		Q2
AE2020	Smoke Detector	1	$998.48	$998.48		S6
AP-AE2030	Water pump	1	$729.24	$729.24		M5-M6
AP-AE2014	Flow Measure Sensor	1	$507.40	$507.40		
AP-AE2013	Pressure Transmitter	1	$322.14	$322.14		S5
AP-AE2009	Pressure Switch	1	$168.45	$168.45		S3
AP-VN0018	Fan	2	$128.33	$256.66		M3-M4
KO4378	Contactor	1	$106.20	$106.20		Q4-Q5
KO4379	Thermal O/L Relay	1	$94.99	$94.99		Q4-Q5
KO4006	Contactor	1	$39.29	$39.29		Q12
AP-AF0403	Emergency stop, compact	1	$27.04	$27.04		S7
AP-SI2076	ATO fuse	10	$12.76	$127.60		2A
AP-SI2066	ATO fuse	1	$4.50	$4.50		10A
AM5011	Compact Filter	2	$322.82	$645.64	2 per unit	

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AUTHORIZATION TO MARK

This authorizes the application of the Certification Mark(s) shown below to the models described in the Product(s) Covered section when made in accordance with the conditions set forth in the Certification Agreement and Listing Report. This authorization also applies to multiple listee model(s) identified on the correlation page of the Listing Report.

This document is the property of Intertek Testing Services and is not transferable. The certification mark(s) may be applied only at the location of the Party Authorized To Apply Mark.

Applicant:	ITW GSE ApS	**Manufacturer:**	ITW GSE ApS
Address:	Smedebakken 31-33 DK-5270 Odense N	**Address:**	Smedebakken 31-33 DK-5270 Odense N
Country:	Denmark	**Country:**	Denmark
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FAX:	NA	**FAX:**	NA
Email:	ra@itwgse.com	**Email:**	ra@itwgse.com

Party Authorized To Apply Mark: Same as Manufacturer
Report Issuing Office: Cortland, NY

Control Number: 5004933 **Authorized by:**

Ulla-Pia Johansson-Nilsson
for Dean Davidson, Certification Manager

C ETL LISTED US
Intertek

This document supersedes all previous Authorizations to Mark for the noted Report Number.

Intertek Testing Services NA Inc.
545 East Algonquin Road, Arlington Heights, IL 60005
Telephone 800-345-3851 or 847-439-5667 Fax 312-283-1672

Standard(s):	Heating And Cooling Equipment <Expires: 30Nov2022> [UL 1995:2011 Ed.4 +R: 03Oct2014] Heating And Cooling Equipment <Expires: 30Nov2022> [CSA C22.2#236:2011 Ed.4]
Product:	Air-conditioner with optional electric heat.
Models:	GSE3400 PCA 210; GSE3400 PCA 130

passenger loading bridge. The intent is to eliminate site welding/painting after final factory painting.

G. The manufacturer shall be a qualified source, who has been regularly engaged in the engineering, manufacturing and installation of commercial aviation PBB equipment and components for a minimum of ten (10) years and with a minimum of one hundred (100) units installed in the United States.

H. Qualified manufacturers and installers will have completed no less than three (3) jobs of similar size and scope within the last five (5) years.

I. The manufacturer shall have proven technical capabilities and adequate manufacturing facilities together with sufficient financial depth and stability to permit prompt and satisfactory execution of the contract.

J. Manufacturers are required to satisfy all requirements of this specification. Should the Manufacturer desire to deviate from any portion, either because the specification is in error, violation of any law or regulation, or is in need of modification to permit a more satisfactory functional and economical design, they must submit a written request for such deviation. The Manufacturer shall not contract, purchase or cause to be delivered, equipment which does not meet all requirements of this document as specified, without obtaining prior written approval.

K. The Manufacturer shall be responsible for verifying installation locations and methods and shall notify the Engineer of any conflicts or code violations prior to manufacture of the PBB units. Verifications shall include field verifications of terminal building heights, appurtenances and finishes, including terminal doors; electrical, mechanical, special systems, and communications interfaces; as well as PBB and walkway foundation locations, rotations, elevations and bolt details. Modifications to eliminate conflicts or code violations will be coordinated with and approved by the Engineer. Modifications shall be made at no additional cost to the Owner.

L. The Manufacturer shall furnish and install all necessary equipment to provide a complete, operable and maintainable unit.

M. Should alternate mounting configurations or physical attributes, other than those specified herein, or indicated on the project drawings, be proposed, manufacturers shall submit alternates for approval prior to bid date. Alternate mounting, configurations, or equipment attributes shall be provided at no additional cost to the Owner.

N. EMI/RFI: Unit shall be designed so as not to affect aircraft radio/navigation equipment. It shall be applicable throughout the entire aircraft radio frequency range. Provisions shall be designed into the unit to protect it from voltage fluctuations which might result from the operation of aircraft radio frequency equipment.

O. The equipment and its accessories shall be designed and constructed with reliability of operation a primary consideration. The minimum reliability design requirement is that the equipment be designed to operate between periodic preventative maintenance periods of 300 operating hours or six weeks, whichever occurs first. The above interval does not apply to components in those cases where the component manufacturer recommends more frequent maintenance intervals.

1.5 SUBMITTALS

A. Drawings, sketches, details, and materials shall be submitted in the English language, with United States Units, including dimensions, volumes, weights, and forces. The use of the metric or SI units is **not acceptable.**

B. Bid-Submittals: The following submittals shall be **included with bid.**

1. **Alternate** Configurations per 1.04.L. No alternate mounting configurations, installation or assemblies
2. **NFPA 415** certificates and manufacturer's **compliance statement per 1.12.C.9.** Click here

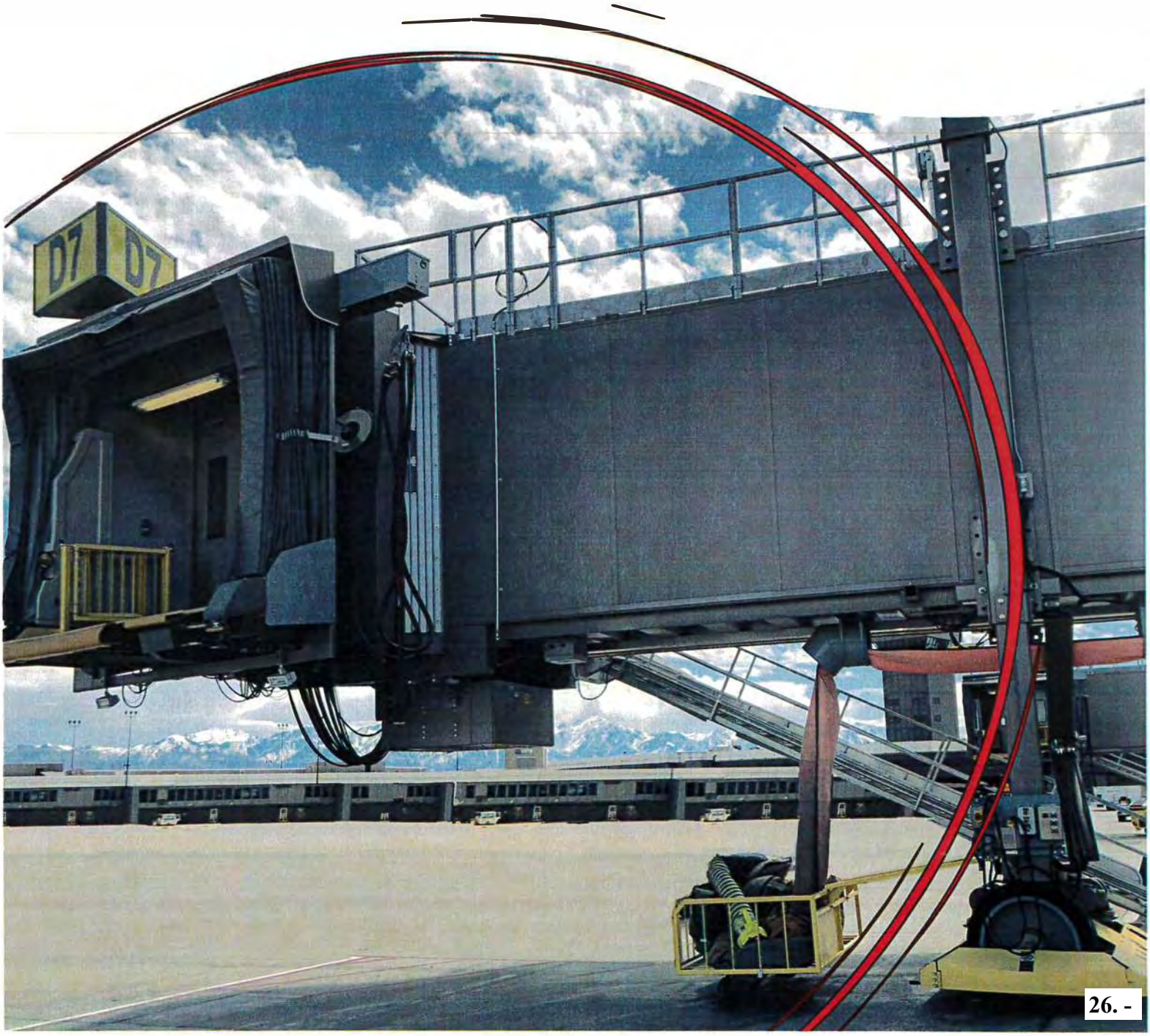
3. Spare Parts List: Provide manufacturer's recommended spare parts list. Spare parts list shall include Owner applicable pricing. Spare parts pricing shall remain valid for two (2) years from the date of final completion. Click here
4. Proposed PBB models with manufacturer's standard cut sheets for proposed models. Click here
5. Foundation loads for each passenger boarding bridge model proposed. Click here
6. UL/ETL Certification per 1.06.C. Click here

C. Pre-Manufacture Submittals: The following submittals shall be made as necessary to meet the project schedule, and shall be submitted to and approved prior to manufacturing the PBB units.

1. The manufacturer shall submit shop drawings, technical specifications, and descriptive product data for review and approval. An index prepared in chronological order listing drawings, sketches, details, and material submitted shall be provided.
2. Product data for selected models including specialties, accessories, and the following:
   a. Critical design items related to the human factors including operation and maintenance shall be addressed with Shop Drawing and shall include, but not be limited to:
      1) General:
         a) General Arrangement drawings to include dimensions
         b) General Erections drawings to include dimensions
      2) Interior Finishes:
         a) Interior scheme of each type
         b) Transition details
         c) Wall finish attachment
         d) Light fixture details and layout
         e) Joint details
         f) Interior Finishes
         g) Carpet edging details, including, lines of demarcation between carpeted and hard surfaced floor at wall areas and treatment at doors and thresholds
      3) Exterior Configurations:
         a) General bridge layout
         b) Exterior sketch of each type
         c) Graphics
         d) Paint finishes
         e) Handrails
         f) Flashing (terminal to passenger loading bridge)
         g) Flashing (terminal to fixed walkway)
         h) Flashing (fixed walkway to passenger loading bridge)
         i) Flashing (bridge segments)
         j) Cab door seal
         k) Ramp Service Stairway
      4) Cab:
         a) Operator's cone of visibility
         b) Control panel location and functional layout with labeling.
         c) View panels

Jetway® Glass & Steel Truss Passenger Boarding Bridges

JBT - FOR THE PERFECT TURN



Glass & Steel Truss Bridge Technical Specifications

General Arrangements

The JBT® Glass and Steel Truss Apron Drive Bridges are designed to extend from an elevated terminal departure lounge doorway to the aircraft boarding door enabling passengers to walk between the two protected from atmospheric conditions, aircraft engine blast, and blown dust.

The Apron Drive Bridge consists of the following (in order progressing from the terminal towards the aircraft):

A. Rotunda and Corridor B. Tunnel Sections C. Drive Column

D. Service Door, Landing E. Cab Bubble, Cab, and Aircraft Closure

Models

JBT ® offers a number of Glass and Steel Truss Apron Drive Bridge models. Models can be grouped into two categories:

A. Two-Tunnel B. Three-Tunnel

Bridge models can dock to any commercial jet aircraft in operation today. The elevation of the rotunda (to match the height of the terminal departure doorway) and other factors affect the ability of any one bridge model to most appropriately serve a desired aircraft mix. For this reason, we suggest you discuss this matter with your JBT® Representative.

Bridge models are determined by the measured length of the bridge from the center of the rotunda to the end of the cab spacer at full retraction and full extension. The AT2 46/65 model, for example, is a two tunnel Apron Drive measuring 46 feet at full retraction and 65 feet at full extension.

Two-Tunnel Models:

Model	Fully Extended	Fully Retracted	Travel	Operational Extension*	Operational Retraction*
AT2 41/55	55.000' (16.764m)	40.104' (12.224m)	14.496' (4.418m)	40.236' (12.264m)	32.302' (9.846m)
AT2 46/65	65.000' (19.812m)	45.104' (13.748m)	19.496' (5.942m)	50.236' (15.312m)	37.302' (11.370m)
AT2 51/75	75.000' (22.860m)	50.104' (15.272m)	24.496' (7.467m)	60.236' (18.360m)	42.302' (12.894m)
AT2 56/85	85.000' (25.908m)	55.104' (16.796m)	29.496' (8.990m)	70.236' (21.408m)	47.302' (14.418m)
AT2 61/95	95.000' (28.956m)	60.104' (18.320m)	34.496' (10.514m)	80.236' (24.456m)	52.302' (15.942m)
AT2 66/105	105.000' (32.004m)	65.104' (19.844m)	39.496' (12.038m)	90.236' (27.504m)	57.302' (17.466m)
AT2 72/116	116.000' (35.357m)	71.104' (21.673m)	44.496' (13.562m)	101.236' (30.857m)	63.302' (19.294m)
AT2 77/126	126.000' (38.405m)	76.104' (23.197m)	49.496' (15.086m)	111.236' (33.905m)	68.302' (20.818m)
AT2 82/136	136.000' (41.453m)	81.104' (24.721m)	54.496' (16.610m)	121.236' (36.953m)	73.302' (22.342m)
AT2 88/147	147.000' (44.806m)	87.104' (26.549m)	59.496' (18.134m)	132.236' (40.306m)	79.302' (24.171m)

Three-Tunnel Models:

Model	Fully Extended	Fully Retracted	Travel	Operational Extension*	Operational Retraction*
AT3 42/70	70.629' (21.528m)	41.015' (12.501m)	28.614' (8.722m)	55.766' (16.997m)	33.713' (10.276m)
AT3 47/85	85.629' (26.100m)	46.015' (14.025m)	38.614' (11.770m)	70.766' (21.569m)	38.713' (11.800m)
AT3 52/100	100.629' (30.672m)	51.015' (15.549m)	48.614' (14.818m)	85.766' (26.141m)	43.713' (13.324m)
AT3 58/116	116.629' (35.549m)	57.015' (17.378m)	58.614' (17.866m)	101.766' (31.018m)	49.713' (15.152m)
AT3 61/127	127.129' (38.749m)	60.515' (18.445m)	65.614' (19.999m)	112.266' (34.219m)	53.213' (16.219m)
AT3 65/133	133.629' (40.730m)	64.015' (19.512m)	68.614' (20.914m)	118.766' (36.200m)	56.713' (17.286m)
AT3 68/144	144.129' (43.931m)	67.515' (20.579m)	75.614' (23.047m)	129.266' (39.400m)	60.213' (18.353m)
AT3 72/150	150.629' (45.912m)	71.015' (21.645m)	78.614' (23.962m)	135.766' (41.381m)	63.713' (19.420m)

*Dimensions are measured from the center of the rotunda to the center of the cab pivot.

Design Parameters

Dimensional Characteristics: Minimum dimensions for all two-tunnel and three-tunnel Apron Drive Bridges:

Rotunda Interface	Width	4'4"	(1.32m)
	Height	7'7"	(2.31m)
Tunnels (Minimum "A" tunnel only)			
A. Floor Width		4'10"	(1.47m)
B. Interior Height		7'0"	(2.13m)
C. Interior Tunnel Ramp	Width	4'5"	(1.35m)
D. Interior Cab	Width	10'2"	(3.10m)
Cab Weather Door	Width	3'7"	(1.09m)
	Height	7'8"	(2.34m)

Service Door, Landing, and Stairs

A service door, landing, and stairs are situated at the end of the bridge to provide apron access. The right hand side of the cab bubble is standard. Other locations are available.

A. Right-hand side of cab bubble (standard)
B. Left-hand side of cab bubble
C. Right-hand side of outboard telescoping tunnel aft of cab bubble
D. Left-hand side of outboard telescoping tunnel aft of cab bubble

Self-Adjusting Stair Risers:			
Minimum Tread	Width	2'4"	(0.71m)
Minimum Tread	Depth	9.5"	(0.24m)
Clear Width Between Handrails:		2'8"	(0.81m)
Door Opening	Width	2'6"	(0.76m)
	Height	6'7"	(2.01m)
Landing Illumination		Outdoor Rated	

Operational Characteristics

Rotunda swing	175° (87.5° cw/87.5° ccw of centerline)	
Cab rotation	125° (92.5° cw/32.5° ccw) (optional 185° available)	
Cab rotation speed	145° /min.	
Vertical rate of travel/lift	3.5' /min.	(1.09m /min.)
Horizontal rate of travel	0 to 90' /min.	(0-27m/min.)

Environmental Characteristics

Bridge operations at temperatures from -40°F (-40°C) to 125°F (52°C) (May require selection of certain optional equipment.)

Interior Finish Characteristics (Standard)

Wall: Laminated phenolic plastic panels — 5'0" (1.52m) wide

Ceiling: Aluminum Planks — 0.032" (0.8mm) thick

Tunnel Floors: Carpeted and rubber flooring

Cab Floor: Ribbed Rubber — 0.188" (4.8mm) thick

Sub Floor: Marine Grade Plywood—0.75" (19mm) thick

Insulation: 1" (25mm) fiberglass above the ceiling (additional insulation available)

Interior Finish Options

- Steel Subfloors
- Aluminum Cab Floor
- Full Insulation R-14
- Floor Coverings

Exterior Finish Options

- Steel Panels
- Aluminum Panels
- Glass
- Galvannealed Panels
- 3 coat zinc prime system

Painting

Base: One coat, Sherwin Williams High Build Epoxy Primer 6 to 10 mils dry film thickness (DFT)

Finish: One coat, Sherwin Williams High Polane Polyurethane topcoat 2 to 3 mils DFT

Minimum total DFT: 8 mils

Electrical Characteristics/Power Requirements

Operates on 480VAC, 3-phase, 60Hz, 4 wire, 380VAC, 3-phase, 50Hz, 5 wire, and 600VAC, 3-phase, 60Hz, 4 wire. 480VAC and 600VAC are transformed down to 240V/120VAC for lighting and control circuits. 380VAC systems use 240VAC for lighting and control circuits.

Interior Lighting: 6" x 4' Low Profile LED Light.

Exterior Lighting: Three floodlights illuminate the apron and wheel bogie areas. A sealed dual fluorescent tube 4'0" fixture illuminates the cab/aircraft interface area.

Communications

Quantity of 3, CAT-6, 4-pair, 24 AWG communication cables with one routed to the Phone J-Box located on the left side of the control console and a 12-pair, 22 AWG, twisted, shielded cable, all standard on a JBT® Passenger Boarding Bridge. Other communication cables installed as required.

Telephone, Ethernet, and Digital Output capable.

Additional Features

- Touch screen or push button control
- Point N' Go™ Steering
- PLC Control Based
- Fully welded roof seams
- Open Truss design (No wall board)
- Auto Positioning

Codes and Standards

The Glass and Steel Truss Apron Drive Bridge is designed to meet or exceed codes and regulations as adopted by the passenger boarding bridge industry. The JBT® Passenger Boarding Bridges have been ETL & cETL listed by a third party testing facility to meet NFPA 415, ANSI/UL-325, CAN/CSA C22.2 No. 247 and CE.

Structural:
American Institute of Steel Construction (AISC) and American Welding Society (AWS).

Material:	
Structural Steel Plate and Shapes	ASTM-A36
T-1 Steel	ASTM-A514
Hinge Pins	AISI-C1018
Steel Tube	ASTM-A500
Bolts-Standard	SAE J429, Grade 5
Steel Pipe	ASTM-A53-GR.B
Bolts-Hi Strength	SAE J429, Grade 8
Steel Sheet	ASTM-A1011

Code Compliance: SAE, ASME, NFPA, AIA, NEMA, and NEC.

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JBT® is the leading provider of solutions to comfortably and safely transfer passengers between terminal building and aircraft.

Each Jetway® Glass and Steel Truss Apron Drive Bridge is customized and manufactured per our customer's specifications.

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Rev.6. April 2019

Brochure Reference # 506

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AUTHORIZATION TO MARK

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Applicant:	John Bean Technologies Corporation	**Manufacturer:**	John Bean Technologies Corporation
Address:	1805 W. 2550 S. Ogden, UT 84401	**Address:**	3100 S. Pennsylvania Ave. Ogden, UT 84401
Country:	USA	**Country:**	USA
Contact:	Preston Murray Gordon Ferris	**Contact:**	Preston Murray Gordon Ferris
Phone:	(801) 629-3311 (801) 629-3267	**Phone:**	(801) 629-3311 (801) 629-3267
FAX:	(801) 629-3288	**FAX:**	(801) 629-3288
Email:	Preston.murray@jbtc.com Gordon.ferris@jbtc.com	**Email:**	Preston.murray@jbtc.com Gordon.ferris@jbtc.com

Party Authorized To Apply Mark: Same as Manufacturer
Report Issuing Office: Dallas, TX

Control Number: 70332 **Authorized by:** Jade Vladeson
for L. Matthew Snyder, Certification Manager

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Intertek

This document supersedes all previous Authorizations to Mark for the noted Report Number.

Intertek Testing Services NA Inc.
545 East Algonquin Road, Arlington Heights, IL 60005
Telephone 800-345-3851 or 847-439-5667 Fax 312-283-1672

Standard(s):	Door, Drapery, Gate, Louver, And Window Operators And Systems [ANSI/CAN/UL 325:2017 Ed.7] CSA C22.2#247 Issued: 2014/07/01 Operators and Systems of Doors, Gates, Draperies, and Louvres
Product:	Apron-style Passenger Boarding Bridges
Models:	A2, A3, AT2, AT3

AUTHORIZATION TO MARK

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Applicant:	John Bean Technologies Corporation	**Manufacturer:**	John Bean Technologies Corporation
Address:	3100 Pennsylvania Ave Ogden, Utah 84401	**Address:**	3100 Pennsylvania Ave Ogden, Utah 84401
Country:	USA	**Country:**	USA
Contact:	Gordon Ferris	**Contact:**	Gordon Ferris
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Email:	gordon.ferris@jbtc.com	**Email:**	gordon.ferris@jbtc.com

Party Authorized To Apply Mark: Same as Manufacturer
Report Issuing Office: Dallas, TX

Control Number: 70332 **Authorized by:** Edward Kelly Jr

for Dean Davidson, Certification Manager

C ETL LISTED US

Intertek

This document supersedes all previous Authorizations to Mark for the noted Report Number.

Intertek Testing Services NA Inc.
545 East Algonquin Road, Arlington Heights, IL 60005
Telephone 800-345-3851 or 847-439-5667 Fax 312-283-1672

Standard(s):	NFPA 70, Issued: 2013/08/21 Version: 2014 National Electrical Code; Err. 1: 2013, Err. 2: 2013, Err. 3: 2014, Err. 4: 2014 CSA C22.2#0, Issued: 2010/09/01 (R2015) General Requirements - Canadian Electrical Code, Part II; Gen. Inst. No. 1: 2011, Gen. Inst. No. 2:2014
Product:	Passenger Boarding Walkways
Brand Name:	Jetway® and Jetwalk®
Models:	J-25-BB (J-XX--YY) XX- represents centerline length in ft YY- represents the width and height (alphanumeric code)

Listing Section(s): PASSENGER BOARDING BRIDGES AND WALKWAYS

CSI Code: 34 77 13 Passenger Boarding Bridges

Description:

Product: Jetway® Corrugated Passenger Boarding Bridges;
Jetwalk® Passenger Boarding Walkways

Description: Corrugated apron-style passenger boarding bridges, and corrugated fixed passenger boarding walkways for loading and unloading passengers to and from aircraft.

Models: Passenger Boarding Bridges: Models A2 and A3;
Passenger Boarding Walkways: Model J;
Cab Section only: for Models A2 and A3

Ratings: Meets applicable fire performance requirements of NFPA 415-2016 Edition, Chapter 6

Party(s) Authorized by Manufacturer To Apply Mark:

John Bean Technologies Corporation
3100 S Pennsylvania Avenue

Ogden , UT 84401 ,
Gordon Ferris
801-629-3267

gordon.ferris@jbtc.com

Party(s) Authorized by Other Parties To Apply Mark:

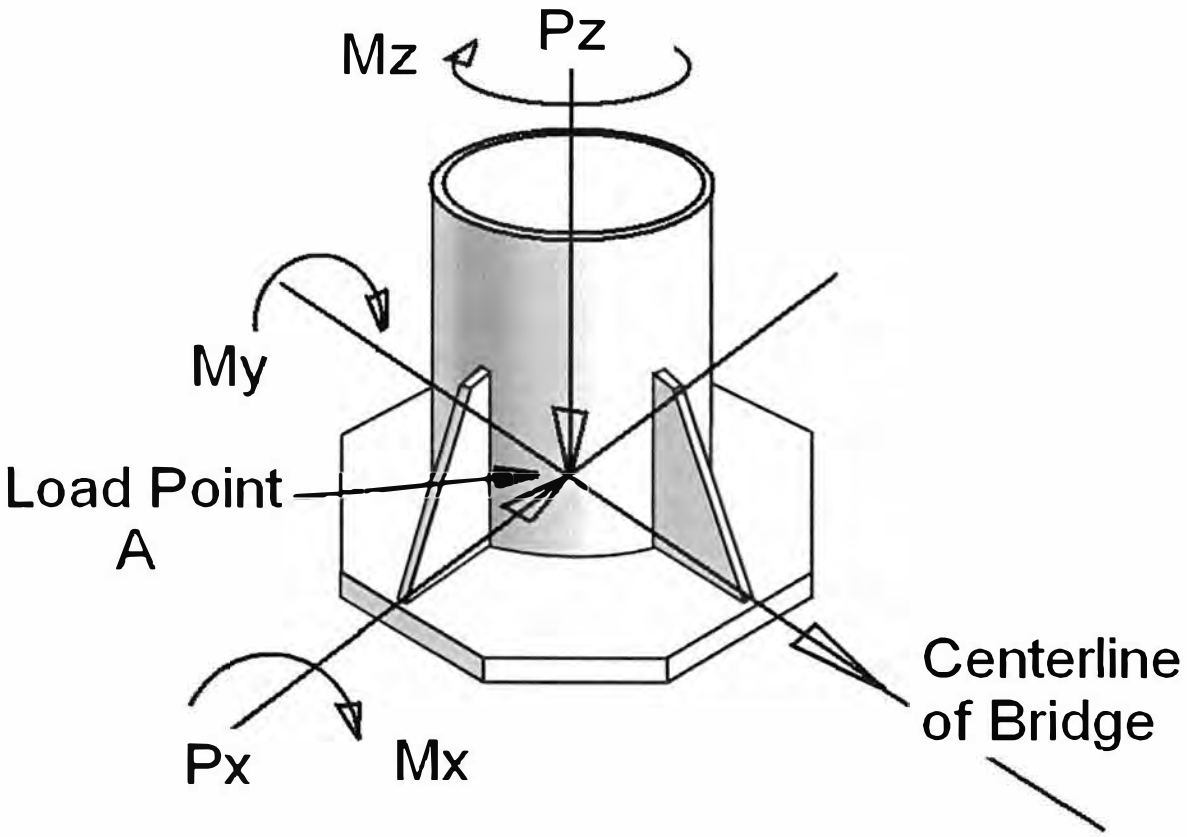
None

JBT AEROTECH - JETWAY SYSTEMS

FOUNDATION LOADS FOR PASSENGER BOARDING BRIDGE

By: SKL 5/28/2020 JOB: RSW (SW FL Int'l, Ft. Myers, FL), Gate B1, B3 RQ: 3757 LS#: 5647

Model AT3-61/127 Apron Drive



Note: Px, Py, Mx, and My can be either (+) or (-)
Program Revision 1.8

Jetway Systems makes no representation nor provides any guarantee as to the suitability or conditions of any foundation that is intended to be used to support the passenger boarding bridge(s)

LOAD ANALYSIS FOR APRON DRIVE
ASSUMPTIONS

Description	
Code:	ASCE 7-10
Risk Category	II

Wind	
Analysis Method	Velocity pressure per 27.3.2
Exposure Category	C
Directionality Factor (K_d)	0.85
Topographic Factor (K_{zt})	1
Velocity pressure exposure coefficient (K_z)	0.9
Wind Pressure (Operational)	12.5 PSF (80 mph)
Wind Pressure (Stowed)	46.5 PSF (154 mph)

Seismic	
Seismic importance factor (Ie)	1
Analysis method	Equivalent lateral force (12.8)
Sds	0.058
Response modification factor	2

General Assumptions

1. Wind and seismic forces are applied perpendicular to the walkway.

2. Loads can be positive or negative.

3. The extended condition is when the bridge is operational.
   Higher winds than this and the airport closes and the bridges are retracted and stowed.
   The higher wind load is not applicable when the bridge is in service.

4. PBBs are considered an inverted pendulum structure because more than 50% of the weight of the structure is at the top of the column (ASCE 7-10, Section 11.2).
   Per ASCE 7-10, Table 15.4-2 (page 143), R=2 for inverted pendulum type structures.

STEEL SIDING

LOAD ANALYSIS FOR APRON DRIVE
(SPECIAL LOADS)
MODEL: AT3-61/127

HEIGHT FROM APRON TO ROTUNDA FLOOR (FT) 13.08

LOADING CONDITIONS AT ROTUNDA COLUMN BASE	LOAD POINT A Pz KIPS	Mx FT-KIPS	My FT-KIPS	Px KIPS	Mz FT-KIPS
EXTENDED (OPERATIONAL)					
1. DEAD LOAD (SEE NOTE)	30.0	74.7	65.9	0.0	0.0
2. FLOOR LOAD (40 PSF)	9.0	30.1	13.9	0.0	0.0
3. ROOF LOAD (25 PSF)	7.4	25.7	4.8	0.0	0.0
4. ROOF LOAD/2	3.7	12.8	2.4	0.0	0.0
5. WIND LOAD (12.5 PSF)	0.0	0.0	284.6	5.3	0.0
6. SEISMIC LOAD (Sds = 0.058)	0.0	0.0	49.0	0.8	0.0
RETRACTED (STOWED)					
7. DEAD LOAD (SEE NOTE)	10.1	-14.9	65.9	0.0	0.0
8. ROOF LOAD (25 PSF)	-0.2	-8.4	4.8	0.0	0.0
9. WIND LOAD (46.5 PSF)	0.0	0.0	435.7	2.7	0.0
ASD Load Combinations for Foundation Design per ASCE 7-10					
1. D	30.0	74.7	65.9	0.0	0.0
2. D + FL	39.0	104.8	79.8	0.0	0.0
3. D + RL	37.4	100.4	70.7	0.0	0.0
4. D + 0.75FL + 0.75RL	42.3	116.5	79.9	0.0	0.0
5a. D + 0.6W	30.0	74.7	327.3	3.2	0.0
5b. D + 0.7SL	30.0	74.7	100.3	0.6	0.0
6a. D + 0.75FL + 0.75*0.6W + 0.75RL	42.3	116.5	208.0	2.4	0.0
6b. D + 0.75FL + 0.75*0.7SL + 0.75RL	42.3	116.5	105.7	0.4	0.0
7. 0.6D + 0.6W	18.0	44.8	210.3	3.2	0.0
8. 0.6D + 0.7SL	18.0	44.8	73.9	0.6	0.0

NOTE: Px, Mx AND My CAN BE EITHER (+) OR (-)

NOTE: Additional Dead Loads: A Tun = 50 Lbs/ft; B Tun = 50 Lbs/ft; C Tun = 50 Lbs/ft

**HURRICANE TIE DOWN LOAD = 41.1 KIPS - DOUBLE STRAP REQUIRED

**ROTUNDA REQUIRES ROCKET FINS

** MAX TIRE LOAD EXTENDED = 108.8 KIPS MAX TIRE LOAD RETRACTED = 120.3 KIPS

JOB DESCRIPTION: RSW (SW FL Int'l, Ft. Myers, FL), Gate B1, B3 5/28/2020

CONCENTRATED LOADS

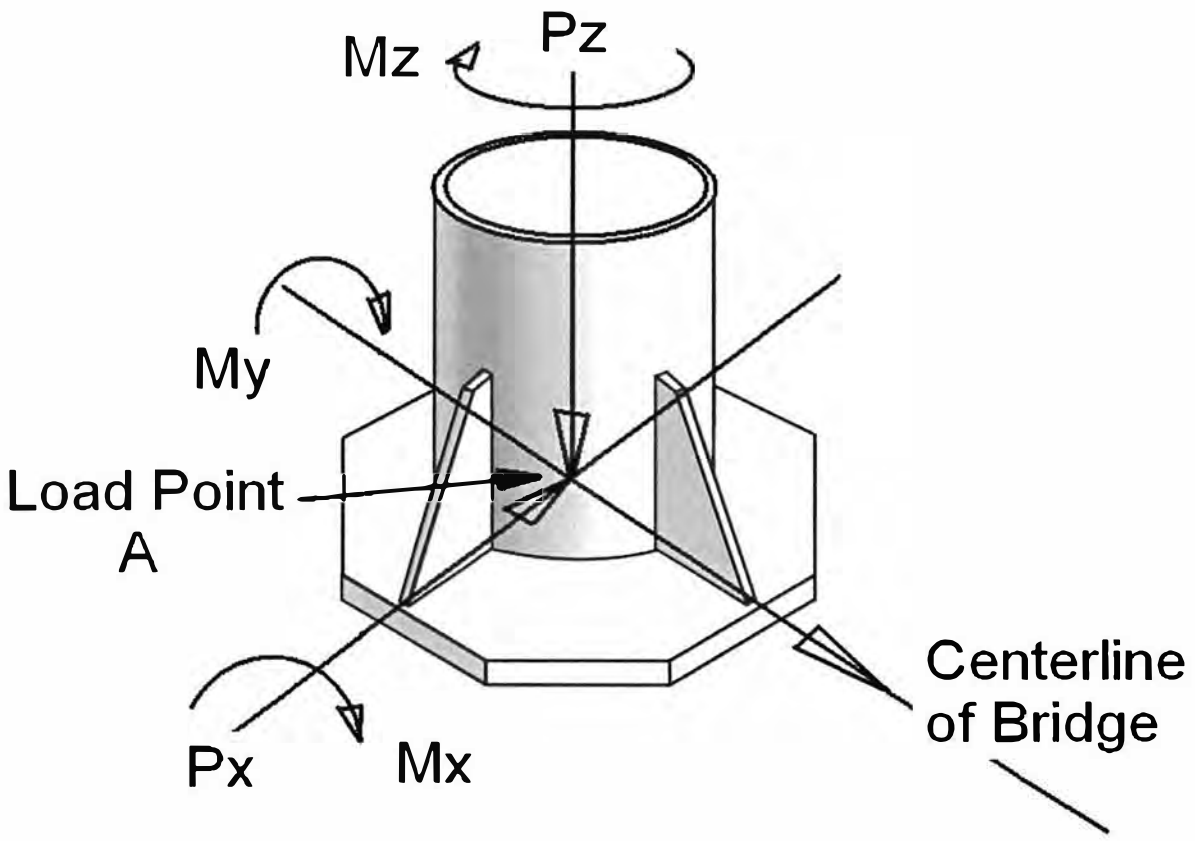
LOAD (KIPS)	X FT	Y FT	Z FT	
8.80	0.00	-11.50	-3.00	90T POU Hobart PCA
3.10	0.00	5.00	-3.00	180kva Hobart Power Coil
1.50	-9.00	13.00	0.00	Bag-slide
0.60	4.00	5.00	10.00	Cable Hoist

JBT AEROTECH - JETWAY SYSTEMS

FOUNDATION LOADS FOR PASSENGER BOARDING BRIDGE

By: SKL 5/28/2020 JOB: RSW, Gate B2, B4, B6, B7, B8, B9, C3, C6, C7, C9, D1, D3, D5, D6 RQ: 3757 LS#: 5648 1 of 3

Model AT3-58/116 Apron Drive



Note: Px, Py, Mx, and My can be either (+) or (-)
Program Revision 1.8

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LOAD ANALYSIS FOR APRON DRIVE
ASSUMPTIONS

Description	
Code:	ASCE 7-10
Risk Category	II

Wind	
Analysis Method	Velocity pressure per 27.3.2
Exposure Category	C
Directionality Factor (K_d)	0.85
Topographic Factor (K_{zt})	1
Velocity pressure exposure coefficient (K_z)	0.9
Wind Pressure (Operational)	12.5 PSF (80 mph)
Wind Pressure (Stowed)	46.5 PSF (154 mph)

Seismic	
Seismic importance factor (Ie)	1
Analysis method	Equivalent lateral force (12.8)
Sds	0.058
Response modification factor	2

General Assumptions

1. Wind and seismic forces are applied perpendicular to the walkway.

2. Loads can be positive or negative.

3. The extended condition is when the bridge is operational.
   Higher winds than this and the airport closes and the bridges are retracted and stowed.
   The higher wind load is not applicable when the bridge is in service.

4. PBBs are considered an inverted pendulum structure because more than 50% of the weight of the structure is at the top of the column (ASCE 7-10, Section 11.2).
   Per ASCE 7-10, Table 15.4-2 (page 143), R=2 for inverted pendulum type structures.

STEEL SIDING

LOAD ANALYSIS FOR APRON DRIVE
(SPECIAL LOADS)
MODEL: AT3-58/116

HEIGHT FROM APRON TO ROTUNDA FLOOR (FT) 13.17

LOADING CONDITIONS AT ROTUNDA COLUMN BASE	LOAD POINT A Pz KIPS	Mx FT-KIPS	My FT-KIPS	Px KIPS	Mz FT-KIPS
EXTENDED (OPERATIONAL)					
1. DEAD LOAD (SEE NOTE)	29.1	70.5	65.9	0.0	0.0
2. FLOOR LOAD (40 PSF)	8.6	28.3	13.9	0.0	0.0
3. ROOF LOAD (25 PSF)	7.1	24.2	4.8	0.0	0.0
4. ROOF LOAD/2	3.5	12.1	2.4	0.0	0.0
5. WIND LOAD (12.5 PSF)	0.0	0.0	263.1	5.1	0.0
6. SEISMIC LOAD (Sds = 0.058)	0.0	0.0	46.2	0.8	0.0
RETRACTED (STOWED)					
7. DEAD LOAD (SEE NOTE)	13.6	0.9	65.9	0.0	0.0
8. ROOF LOAD (25 PSF)	0.7	-4.3	4.8	0.0	0.0
9. WIND LOAD (46.5 PSF)	0.0	0.0	420.5	4.3	0.0
ASD Load Combinations for Foundation Design per ASCE 7-10					
1. D	29.1	70.5	65.9	0.0	0.0
2. D + FL	37.7	98.8	79.8	0.0	0.0
3. D + RL	36.1	94.7	70.7	0.0	0.0
4. D + 0.75FL + 0.75RL	40.8	109.9	79.9	0.0	0.0
5a. D + 0.6W	29.1	70.5	318.2	3.0	0.0
5b. D + 0.7SL	29.1	70.5	98.3	0.5	0.0
6a. D + 0.75FL + 0.75*0.6W + 0.75RL	40.8	109.9	198.3	2.3	0.0
6b. D + 0.75FL + 0.75*0.7SL + 0.75RL	40.8	109.9	104.2	0.4	0.0
7. 0.6D + 0.6W	17.4	42.3	197.4	3.0	0.0
8. 0.6D + 0.7SL	17.4	42.3	71.9	0.5	0.0

NOTE: Px, Mx AND My CAN BE EITHER (+) OR (-)

NOTE: Additional Dead Loads: A Tun = 50 Lbs/ft; B Tun = 50 Lbs/ft; C Tun = 50 Lbs/ft

**HURRICANE TIE DOWN LOAD = 36.5 KIPS - DOUBLE STRAP REQUIRED

**ROTUNDA REQUIRES ROCKET FINS

** MAX TIRE LOAD EXTENDED = 100.7 KIPS MAX TIRE LOAD RETRACTED = 107.6 KIPS

JOB DESCRIPTION: RSW, Gate B2, B4, B6, B7, B8, B9, C3, C6, C7, C9, D1, D3, D5, D6 5/28/2020

CONCENTRATED LOADS

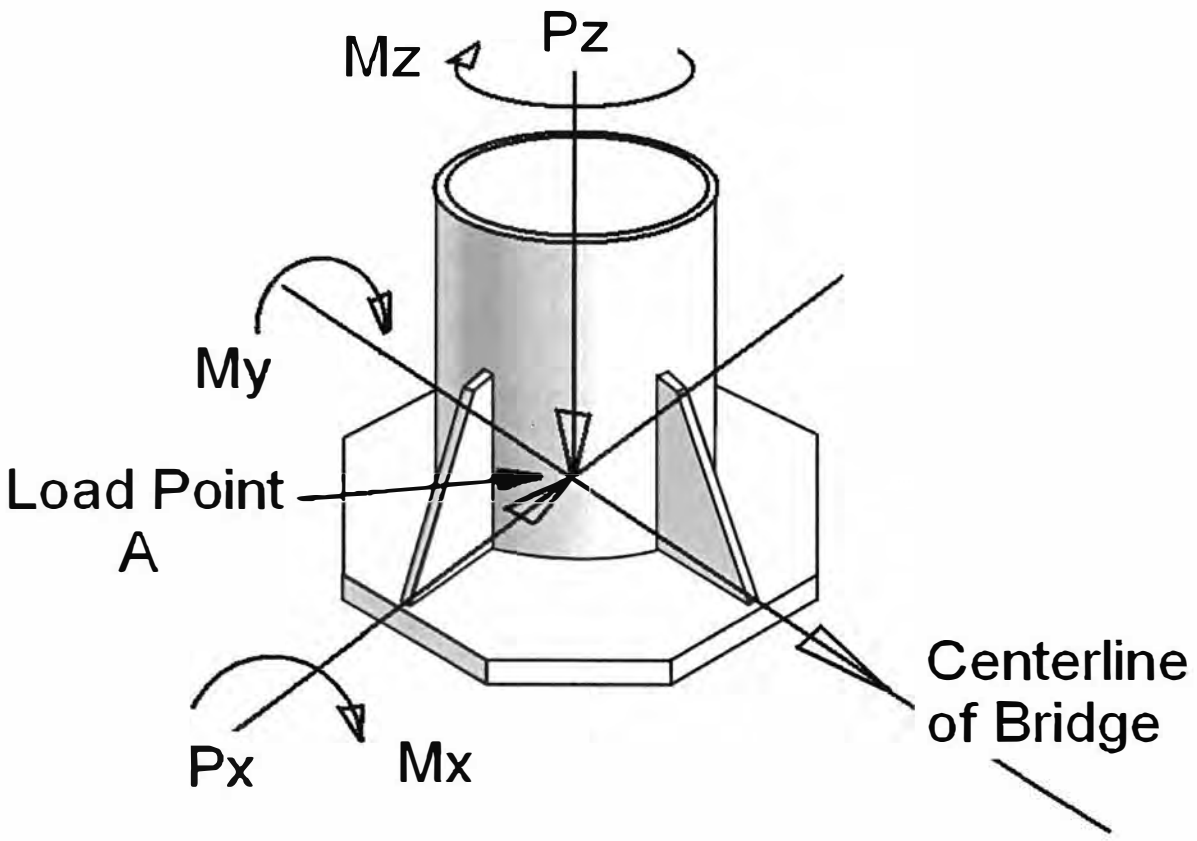
LOAD (KIPS)	X FT	Y FT	Z FT	
7.00	0.00	-11.40	-3.00	45T POU Hobart PCA
3.10	0.00	5.00	-3.00	90kva Hobart Power Coil
1.50	-9.00	13.00	0.00	Bag-slide
0.60	4.00	5.00	10.00	Cable Hoist

JBT AEROTECH - JETWAY SYSTEMS

FOUNDATION LOADS FOR PASSENGER BOARDING BRIDGE

By: SKL 5/28/2020 JOB: RSW (SW FL Int'l, Ft. Myers, FL), Gate B5 RQ: 3757 LS#: 5649

Model AT3-72/150 Apron Drive



Note: Px, Py, Mx, and My can be either (+) or (-)
Program Revision 1.8

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LOAD ANALYSIS FOR APRON DRIVE
ASSUMPTIONS

Description	
Code:	ASCE 7-10
Risk Category	II

Wind	
Analysis Method	Velocity pressure per 27.3.2
Exposure Category	C
Directionality Factor (K_d)	0.85
Topographic Factor (K_{zt})	1
Velocity pressure exposure coefficient (K_z)	0.9
Wind Pressure (Operational)	12.5 PSF (80 mph)
Wind Pressure (Stowed)	46.5 PSF (154 mph)

Seismic	
Seismic importance factor (Ie)	1
Analysis method	Equivalent lateral force (12.8)
Sds	0.058
Response modification factor	2

General Assumptions

1. Wind and seismic forces are applied perpendicular to the walkway.

2. Loads can be positive or negative.

3. The extended condition is when the bridge is operational.
   Higher winds than this and the airport closes and the bridges are retracted and stowed.
   The higher wind load is not applicable when the bridge is in service.

4. PBBs are considered an inverted pendulum structure because more than 50% of the weight of the structure is at the top of the column (ASCE 7-10, Section 11.2).
   Per ASCE 7-10, Table 15.4-2 (page 143), R=2 for inverted pendulum type structures.

STEEL SIDING

LOAD ANALYSIS FOR APRON DRIVE
(SPECIAL LOADS)
MODEL: AT3-72/150

HEIGHT FROM APRON TO ROTUNDA FLOOR (FT) 13.09

LOADING CONDITIONS AT ROTUNDA COLUMN BASE	LOAD POINT A Pz KIPS	Mx FT-KIPS	My FT-KIPS	Px KIPS	Mz FT-KIPS
EXTENDED (OPERATIONAL)					
1. DEAD LOAD (SEE NOTE)	33.4	90.1	65.9	0.0	0.0
2. FLOOR LOAD (40 PSF)	10.2	35.7	13.9	0.0	0.0
3. ROOF LOAD (25 PSF)	8.4	30.2	4.8	0.0	0.0
4. ROOF LOAD/2	4.2	15.1	2.4	0.0	0.0
5. WIND LOAD (12.5 PSF)	0.0	0.0	335.3	6.1	0.0
6. SEISMIC LOAD (Sds = 0.058)	0.0	0.0	55.9	0.9	0.0
RETRACTED (STOWED)					
7. DEAD LOAD (SEE NOTE)	9.8	-15.9	65.9	0.0	0.0
8. ROOF LOAD (25 PSF)	-0.2	-8.6	4.8	0.0	0.0
9. WIND LOAD (46.5 PSF)	0.0	0.0	496.2	2.7	0.0
ASD Load Combinations for Foundation Design per ASCE 7-10					
1. D	33.4	90.1	65.9	0.0	0.0
2. D + FL	43.7	125.9	79.8	0.0	0.0
3. D + RL	41.8	120.3	70.7	0.0	0.0
4. D + 0.75FL + 0.75RL	47.4	139.6	79.9	0.0	0.0
5a. D + 0.6W	33.4	90.1	363.7	3.6	0.0
5b. D + 0.7SL	33.4	90.1	105.0	0.6	0.0
6a. D + 0.75FL + 0.75*0.6W + 0.75RL	47.4	139.6	230.8	2.7	0.0
6b. D + 0.75FL + 0.75*0.7SL + 0.75RL	47.4	139.6	109.2	0.5	0.0
7. 0.6D + 0.6W	20.0	54.1	240.7	3.6	0.0
8. 0.6D + 0.7SL	20.0	54.1	78.7	0.6	0.0

NOTE: Px, Mx AND My CAN BE EITHER (+) OR (-)

NOTE: Additional Dead Loads: A Tun = 50 Lbs/ft; B Tun = 50 Lbs/ft; C Tun = 50 Lbs/ft

**HURRICANE TIE DOWN LOAD = 49.5 KIPS - DOUBLE STRAP REQUIRED

**ROTUNDA REQUIRES ROCKET FINS

** MAX TIRE LOAD EXTENDED = 124.1 KIPS MAX TIRE LOAD RETRACTED = 137.3 KIPS

JOB DESCRIPTION: RSW (SW FL Int'l, Ft. Myers, FL), Gate B5 5/28/2020

CONCENTRATED LOADS

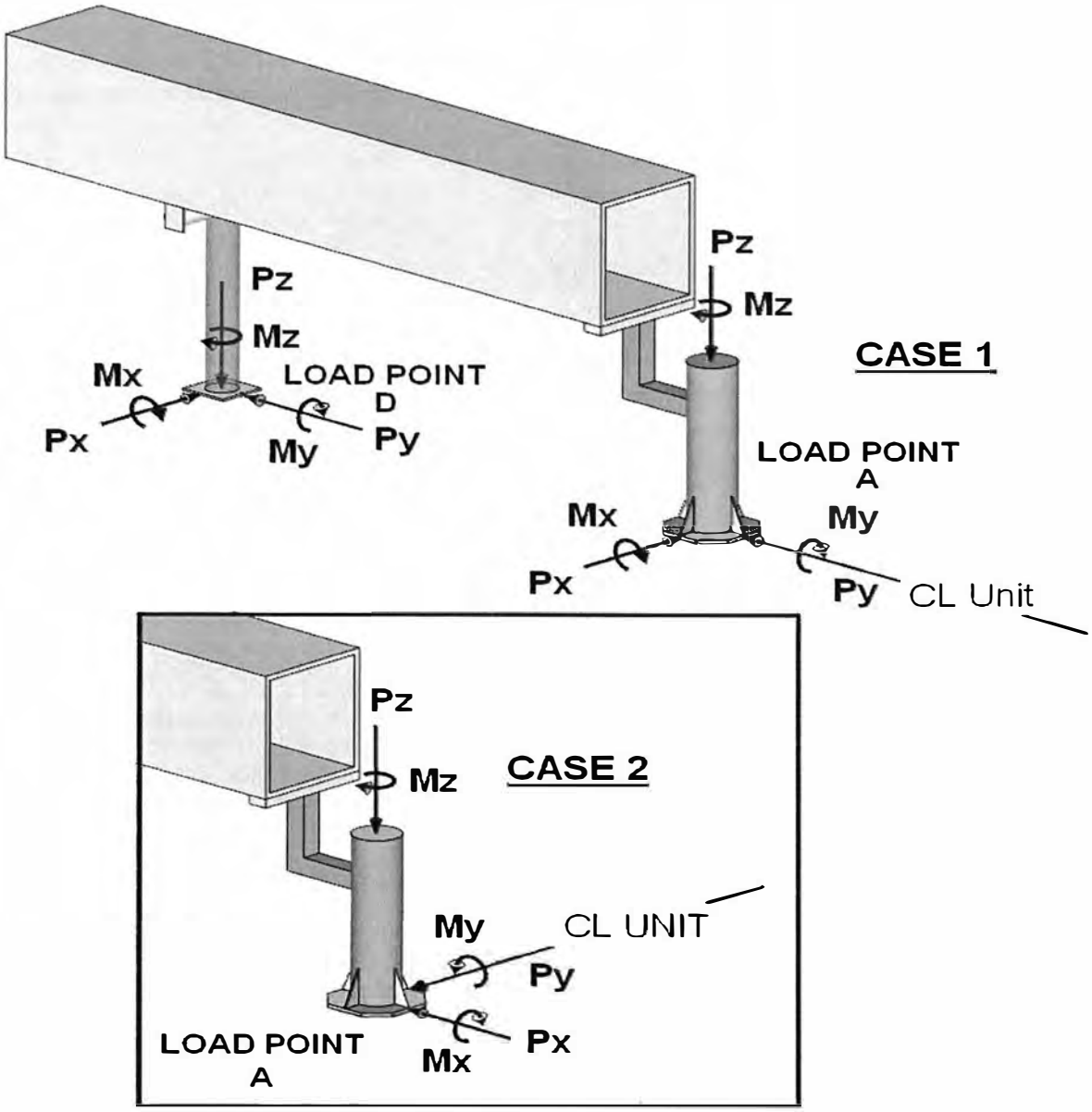
LOAD (KIPS)	X FT	Y FT	Z FT	
8.80	0.00	-11.50	-3.00	90T POU Hobart PCA
3.10	0.00	5.00	-3.00	180kva Hobart Power Coil
1.50	-9.00	13.00	0.00	Bag-slide
0.60	4.00	5.00	10.00	Cable Hoist

JBT AEROTECH - JETWAY SYSTEMS

FOUNDATION LOADS FOR PASSENGER BOARDING BRIDGE

By: SKL 5/28/2020 JOB: RSW (SW FL Int'l, Ft. Myers, FL), Gate C1 RQ: 3757 LS#: 5650

Model AT3-61/127 With 41 (FT) Walkway



Note: Px, Py, Mx, and My can be either (+) or (-)
Program Revision 1.8

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LOAD ANALYSIS FOR APRON DRIVE
ASSUMPTIONS

Description	
Code:	ASCE 7-10
Risk Category	II

Wind	
Analysis Method	Velocity pressure per 27.3.2
Exposure Category	C
Directionality Factor (K_d)	0.85
Topographic Factor (K_{zt})	1
Velocity pressure exposure coefficient (K_z)	0.9
Wind Pressure (Operational)	12.5 PSF (80 mph)
Wind Pressure (Stowed)	46.5 PSF (154 mph)

Seismic	
Seismic importance factor (Ie)	1
Analysis method	Equivalent lateral force (12.8)
Sds	0.058
Response modification factor	2

General Assumptions

1. Wind and seismic forces are applied perpendicular to the walkway.

2. Loads can be positive or negative.

3. The extended condition is when the bridge is operational.
   Higher winds than this and the airport closes and the bridges are retracted and stowed.
   The higher wind load is not applicable when the bridge is in service.

4. PBBs are considered an inverted pendulum structure because more than 50% of the weight of the structure is at the top of the column (ASCE 7-10, Section 11.2).
   Per ASCE 7-10, Table 15.4-2 (page 143), R=2 for inverted pendulum type structures.

STEEL SIDING

LOAD ANALYSIS FOR APRON DRIVE
(SPECIAL LOADS)
MODEL: AT3-61/127
WITH 41 (FT) WALKWAY (BB)

CASE #1: WALKWAY AND UNIT CENTERLINES PARALLEL

HEIGHT FROM APRON TO ROTUNDA FLOOR (FT) 13.17

LOADING CONDITIONS AT ROTUNDA COLUMN BASE	LOAD POINT A Pz KIPS	Mx FT-KIPS	My FT-KIPS	Px KIPS	Mz FT-KIPS
EXTENDED (OPERATIONAL)					
1. DEAD LOAD (SEE NOTE)	35.2	43.3	65.9	0.0	0.0
2. FLOOR LOAD (40 PSF)	19.6	-28.8	13.9	0.0	0.0
3. ROOF LOAD (25 PSF)	10.4	9.0	4.8	0.0	0.0
4. ROOF LOAD/2	5.2	4.5	2.4	0.0	0.0
5. WIND LOAD (12.5 PSF)	0.0	0.0	320.0	7.3	11.1
6. SEISMIC LOAD (Sds = 0.058)	0.0	0.0	51.2	1.0	0.9
RETRACTED (STOWED)					
7. DEAD LOAD (SEE NOTE)	14.7	-49.0	65.9	0.0	0.0
8. ROOF LOAD (25 PSF)	2.8	-25.0	4.8	0.0	0.0
9. WIND LOAD (46.5 PSF)	0.0	0.0	567.5	10.1	41.2
ASD Load Combinations for Foundation Design per ASCE 7-10					
1. D	35.2	43.3	65.9	0.0	0.0
2. D + FL	54.8	14.5	79.8	0.0	0.0
3. D + RL	45.6	52.4	70.7	0.0	0.0
4. D + 0.75FL + 0.75RL	57.7	28.5	79.9	0.0	0.0
5a. D + 0.6W	35.2	43.3	406.5	6.0	24.7
5b. D + 0.7SL	35.2	43.3	101.8	0.7	0.6
6a. D + 0.75FL + 0.75*0.6W + 0.75RL	57.7	28.5	223.9	3.3	5.0
6b. D + 0.75FL + 0.75*0.7SL + 0.75RL	57.7	28.5	106.8	0.5	0.5
7. 0.6D + 0.6W	21.1	26.0	231.6	4.4	6.6
8. 0.6D + 0.7SL	21.1	26.0	75.4	0.7	0.6

NOTE: Px, Mx AND My CAN BE EITHER (+) OR (-)

NOTE: Additional Dead Loads: A Tun = 50 Lbs/ft; B Tun = 50 Lbs/ft; C Tun = 50 Lbs/ft

**HURRICANE TIE DOWN LOAD = 41.1 KIPS - DOUBLE STRAP REQUIRED

**ROTUNDA REQUIRES ROCKET FINS

** MAX TIRE LOAD EXTENDED = 107.2 KIPS MAX TIRE LOAD RETRACTED = 119.4 KIPS

JOB DESCRIPTION: RSW (SW FL Int'l, Ft. Myers, FL), Gate C1 5/28/2020

CONCENTRATED LOADS

LOAD (KIPS)	X FT	Y FT	Z FT	
7.00	0.00	-11.40	-3.00	45T POU Hobart PCA
3.10	0.00	5.00	-3.00	90kva Hobart Power Coil
1.50	-9.00	13.00	0.00	Bag-slide
0.60	4.00	5.00	10.00	Cable Hoist

LOAD ANALYSIS FOR APRON DRIVE
(SPECIAL LOADS)
MODEL: AT3-61/127
WITH 41 (FT) WALKWAY (BB)
(COLUMN SUPPORTED)

CASE #2: WALKWAY AND UNIT CENTERLINES PERPENDICULAR

HEIGHT FROM APRON TO ROTUNDA FLOOR (FT) 13.17

LOADING CONDITIONS AT ROTUNDA COLUMN BASE	LOAD POINT A Pz KIPS	Mx FT-KIPS	My FT-KIPS	Px KIPS	Mz FT-KIPS
EXTENDED (OPERATIONAL)					
1. DEAD LOAD (SEE NOTE)	35.2	73.6	96.2	0.0	0.0
2. FLOOR LOAD (40 PSF)	19.6	30.1	72.8	0.0	0.0
3. ROOF LOAD (25 PSF)	10.4	25.7	21.4	0.0	0.0
4. ROOF LOAD/2	5.2	12.8	10.7	0.0	0.0
5. WIND LOAD (12.5 PSF)	0.0	0.0	285.3	5.3	0.0
6. SEISMIC LOAD (Sds = 0.058)	0.0	0.0	50.6	1.0	0.9
RETRACTED (STOWED)					
7. DEAD LOAD (SEE NOTE)	14.7	-18.6	96.2	0.0	0.0
8. ROOF LOAD (25 PSF)	2.8	-8.4	21.4	0.0	0.0
9. WIND LOAD (46.5 PSF)	0.0	0.0	438.5	2.7	0.0
ASD Load Combinations for Foundation Design per ASCE 7-10					
1. D	35.2	73.6	96.2	0.0	0.0
2. D + FL	54.8	103.7	169.1	0.0	0.0
3. D + RL	45.6	99.3	117.7	0.0	0.0
4. D + 0.75FL + 0.75RL	57.7	115.5	166.9	0.0	0.0
5a. D + 0.6W	35.2	73.6	359.4	3.2	0.0
5b. D + 0.7SL	35.2	73.6	131.6	0.7	0.6
6a. D + 0.75FL + 0.75*0.6W + 0.75RL	57.7	115.5	295.3	2.4	0.0
6b. D + 0.75FL + 0.75*0.7SL + 0.75RL	57.7	115.5	193.4	0.5	0.5
7. 0.6D + 0.6W	21.1	44.2	228.9	3.2	0.0
8. 0.6D + 0.7SL	21.1	44.2	93.1	0.7	0.6

NOTE: Px, Mx AND My CAN BE EITHER (+) OR (-)

**ROTUNDA REQUIRES ROCKET FINS

JOB DESCRIPTION: RSW (SW FL Int'l, Ft. Myers, FL), Gate C1
5/28/2020

WALKWAY DISCRIPTION (BB)
SPECIAL LOADS - COLUMN SUPPORTED

LENGTH OF JETWALK	40.20 FT
HEIGHT AT TERMINAL END	13.67 FT
HEIGHT AT AIRCRAFT END	13.17 FT
TERMINAL END OF WALKWAY TO COLUMN D	4.25 FT
DISTANCE BETWEEN COLUMN & HAUNCH SUPPORT	34.95 FT

	LOAD POINT D				
LOADING CONDITIONS	Pz KIPS	Px KIPS	Py KIPS	My FT-KIPS	Mx FT-KIPS
1. DL	8.2	0.0	0.0	0.0	0.0
2. FL (100 PSF)	12.9	0.0	0.0	0.0	0.0
3. RL (25 PSF)	3.6	0.0	0.0	0.0	0.0
4. RL/2	1.8	0.0	0.0	0.0	0.0
5. WL (12.5 PSF Operational)	0.0	2.4	0.0	42.1	0.0
6. WL (46.5 PSF Stowed)	0.0	9.0	0.0	156.5	0.0
7. SEISMIC LOAD (Sds = 0.058)	0.0	0.2	0.0	3.4	0.0
ASD Load Combinations for Foundation Design per ASCE 7-10					
1. D	8.2	0.0	0.0	0.0	0.0
2. D + FL	21.1	0.0	0.0	0.0	0.0
3. D + RL	11.8	0.0	0.0	0.0	0.0
4. D + 0.75FL + 0.75RL	20.6	0.0	0.0	0.0	0.0
5a. D + 0.6W	8.2	5.4	0.0	93.9	0.0
5b. D + 0.7E	8.2	0.2	0.0	2.4	0.0
6a. D + 0.75FL + 0.75*0.6W + 0.75RL	20.6	4.0	0.0	70.4	0.0
6b. D + 0.75FL + 0.75*0.7SL + 0.75RL	20.6	0.1	0.0	1.8	0.0
7. 0.6D + 0.6W	4.9	5.4	0.0	93.9	0.0
8. 0.6D + 0.7SL	4.9	0.2	0.0	2.4	0.0

NOTE: Px, Mx AND My CAN BE EITHER (+) OR (-)

ANCHOR BOLT PATTERN FOR WALKWAY COLUMN IS #127 OR EQUIVALENT
MAX HAUNCH LOAD = 19 KIPS STANDARD HAUNCH OK
** STANDARD U-BOLT SPACING INADEQUATE. SPACING MUST BE 18.3 INCHES

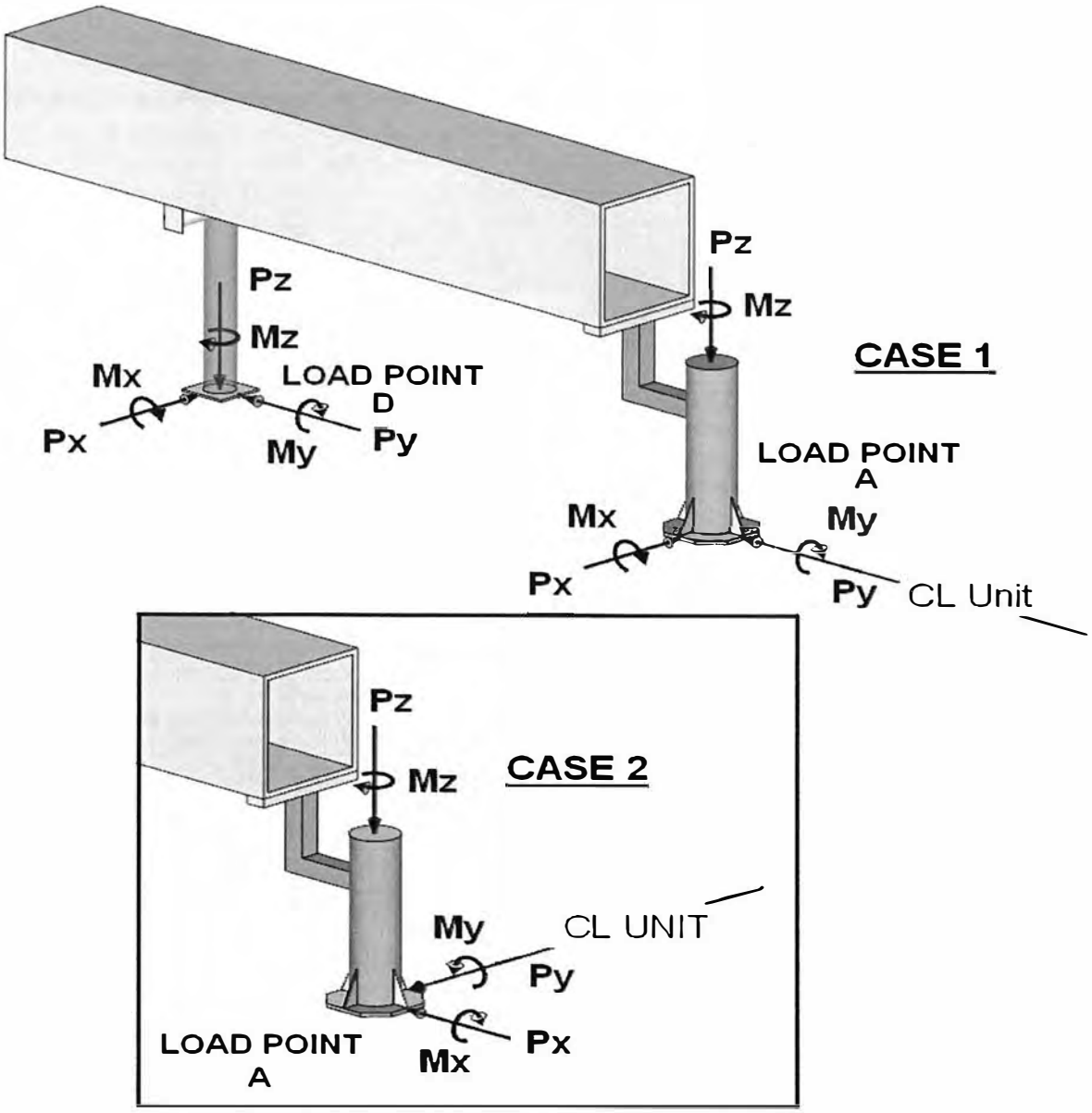
JOB DESCRIPTION: RSW (SW FL Int'l, Ft. Myers, FL), Gate C1
5/28/2020

JBT AEROTECH - JETWAY SYSTEMS

FOUNDATION LOADS FOR PASSENGER BOARDING BRIDGE

By: SKL 5/28/2020 JOB: RSW (SW FL Int'l, Ft. Myers, FL), Gate C2 RQ: 3757 LS#: 5651

Model AT3-68/144 With 40.2 (FT) Walkway



Note: Px, Py, Mx, and My can be either (+) or (-)
Program Revision 1.8

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LOAD ANALYSIS FOR APRON DRIVE
ASSUMPTIONS

Description	
Code:	ASCE 7-10
Risk Category	II

Wind	
Analysis Method	Velocity pressure per 27.3.2
Exposure Category	C
Directionality Factor (K_d)	0.85
Topographic Factor (K_{zt})	1
Velocity pressure exposure coefficient (K_z)	0.9
Wind Pressure (Operational)	12.5 PSF (80 mph)
Wind Pressure (Stowed)	46.5 PSF (154 mph)

Seismic	
Seismic importance factor (Ie)	1
Analysis method	Equivalent lateral force (12.8)
Sds	0.058
Response modification factor	2

General Assumptions

1. Wind and seismic forces are applied perpendicular to the walkway.

2. Loads can be positive or negative.

3. The extended condition is when the bridge is operational.
   Higher winds than this and the airport closes and the bridges are retracted and stowed.
   The higher wind load is not applicable when the bridge is in service.

4. PBBs are considered an inverted pendulum structure because more than 50% of the weight of the structure is at the top of the column (ASCE 7-10, Section 11.2).
   Per ASCE 7-10, Table 15.4-2 (page 143), R=2 for inverted pendulum type structures.

STEEL SIDING

LOAD ANALYSIS FOR APRON DRIVE
(SPECIAL LOADS)
MODEL: AT3-68/144
WITH 41 (FT) WALKWAY (BB)

CASE #1: WALKWAY AND UNIT CENTERLINES PARALLEL

HEIGHT FROM APRON TO ROTUNDA FLOOR (FT) 12.54

LOADING CONDITIONS AT ROTUNDA COLUMN BASE	LOAD POINT A Pz KIPS	Mx FT-KIPS	My FT-KIPS	Px KIPS	Mz FT-KIPS
EXTENDED (OPERATIONAL)					
1. DEAD LOAD (SEE NOTE)	37.2	52.7	65.9	0.0	0.0
2. FLOOR LOAD (40 PSF)	20.4	-25.1	13.9	0.0	0.0
3. ROOF LOAD (25 PSF)	11.1	12.0	4.8	0.0	0.0
4. ROOF LOAD/2	5.5	6.0	2.4	0.0	0.0
5. WIND LOAD (12.5 PSF)	0.0	0.0	350.2	7.8	11.1
6. SEISMIC LOAD (Sds = 0.058)	0.0	0.0	54.9	1.0	0.9
RETRACTED (STOWED)					
7. DEAD LOAD (SEE NOTE)	10.4	-68.0	65.9	0.0	0.0
8. ROOF LOAD (25 PSF)	2.0	-28.9	4.8	0.0	0.0
9. WIND LOAD (46.5 PSF)	0.0	0.0	577.6	8.5	41.2
ASD Load Combinations for Foundation Design per ASCE 7-10					
1. D	37.2	52.7	65.9	0.0	0.0
2. D + FL	57.6	27.6	79.8	0.0	0.0
3. D + RL	48.3	64.8	70.7	0.0	0.0
4. D + 0.75FL + 0.75RL	60.8	42.9	79.9	0.0	0.0
5a. D + 0.6W	37.2	52.7	412.5	5.1	24.7
5b. D + 0.7SL	37.2	52.7	104.3	0.7	0.6
6a. D + 0.75FL + 0.75*0.6W + 0.75RL	60.8	42.9	237.5	3.5	5.0
6b. D + 0.75FL + 0.75*0.7SL + 0.75RL	60.8	42.9	108.7	0.5	0.5
7. 0.6D + 0.6W	22.3	31.6	249.7	4.7	6.6
8. 0.6D + 0.7SL	22.3	31.6	78.0	0.7	0.6

NOTE: Px, Mx AND My CAN BE EITHER (+) OR (-)

NOTE: Additional Dead Loads: A Tun = 50 Lbs/ft; B Tun = 50 Lbs/ft; C Tun = 50 Lbs/ft

**HURRICANE TIE DOWN LOAD = 47.8 KIPS - DOUBLE STRAP REQUIRED

**ROTUNDA REQUIRES ROCKET FINS

** MAX TIRE LOAD EXTENDED = 118.1 KIPS MAX TIRE LOAD RETRACTED = 136.1 KIPS

JOB DESCRIPTION: RSW (SW FL Int'l, Ft. Myers, FL), Gate C2 5/28/2020

CONCENTRATED LOADS

LOAD (KIPS)	X FT	Y FT	Z FT	
7.00	0.00	-11.40	-3.00	45T POU Hobart PCA
3.10	0.00	5.00	-3.00	90kva Hobart Power Coil
1.50	-9.00	13.00	0.00	Bag-slide
0.60	4.00	5.00	10.00	Cable Hoist

LOAD ANALYSIS FOR APRON DRIVE
(SPECIAL LOADS)
MODEL: AT3-68/144
WITH 41 (FT) WALKWAY (BB)
(COLUMN SUPPORTED)

CASE #2: WALKWAY AND UNIT CENTERLINES PERPENDICULAR

HEIGHT FROM APRON TO ROTUNDA FLOOR (FT) 12.54

LOADING CONDITIONS AT ROTUNDA COLUMN BASE	LOAD POINT A Pz KIPS	Mx FT-KIPS	My FT-KIPS	Px KIPS	Mz FT-KIPS
EXTENDED (OPERATIONAL)					
1. DEAD LOAD (SEE NOTE)	37.2	83.1	96.2	0.0	0.0
2. FLOOR LOAD (40 PSF)	20.4	33.8	72.8	0.0	0.0
3. ROOF LOAD (25 PSF)	11.1	28.7	21.4	0.0	0.0
4. ROOF LOAD/2	5.5	14.3	10.7	0.0	0.0
5. WIND LOAD (12.5 PSF)	0.0	0.0	316.2	5.8	0.0
6. SEISMIC LOAD (Sds = 0.058)	0.0	0.0	54.1	1.0	0.9
RETRACTED (STOWED)					
7. DEAD LOAD (SEE NOTE)	10.4	-37.7	96.2	0.0	0.0
8. ROOF LOAD (25 PSF)	2.0	-12.3	21.4	0.0	0.0
9. WIND LOAD (46.5 PSF)	0.0	0.0	450.9	1.1	0.0
ASD Load Combinations for Foundation Design per ASCE 7-10					
1. D	37.2	83.1	96.2	0.0	0.0
2. D + FL	57.6	116.9	169.1	0.0	0.0
3. D + RL	48.3	111.7	117.7	0.0	0.0
4. D + 0.75FL + 0.75RL	60.8	129.9	166.9	0.0	0.0
5a. D + 0.6W	37.2	83.1	366.8	3.5	0.0
5b. D + 0.7SL	37.2	83.1	134.1	0.7	0.6
6a. D + 0.75FL + 0.75*0.6W + 0.75RL	60.8	129.9	309.2	2.6	0.0
6b. D + 0.75FL + 0.75*0.7SL + 0.75RL	60.8	129.9	195.3	0.5	0.5
7. 0.6D + 0.6W	22.3	49.8	247.4	3.5	0.0
8. 0.6D + 0.7SL	22.3	49.8	95.6	0.7	0.6

NOTE: Px, Mx AND My CAN BE EITHER (+) OR (-)

**ROTUNDA REQUIRES ROCKET FINS

JOB DESCRIPTION: RSW (SW FL Int'l, Ft. Myers, FL), Gate C2
5/28/2020

WALKWAY DISCRIPTION (BB)
SPECIAL LOADS - COLUMN SUPPORTED

LENGTH OF JETWALK	40.20 FT
HEIGHT AT TERMINAL END	13.67 FT
HEIGHT AT AIRCRAFT END	12.54 FT
TERMINAL END OF WALKWAY TO COLUMN D	4.25 FT
DISTANCE BETWEEN COLUMN & HAUNCH SUPPORT	34.95 FT

	LOAD POINT D				
LOADING CONDITIONS	Pz	Px	Py	My	Mx
	KIPS	KIPS	KIPS	FT-KIPS	FT-KIPS
1. DL	8.2	0.0	0.0	0.0	0.0
2. FL (100 PSF)	12.9	0.0	0.0	0.0	0.0
3. RL (25 PSF)	3.6	0.0	0.0	0.0	0.0
4. RL/2	1.8	0.0	0.0	0.0	0.0
5. WL (12.5 PSF Operational)	0.0	2.4	0.0	41.3	0.0
6. WL (46.5 PSF Stowed)	0.0	9.0	0.0	153.7	0.0
7. SEISMIC LOAD (Sds = 0.058)	0.0	0.2	0.0	3.3	0.0
ASD Load Combinations for Foundation Design per ASCE 7-10					
1. D	8.2	0.0	0.0	0.0	0.0
2. D + FL	21.1	0.0	0.0	0.0	0.0
3. D + RL	11.8	0.0	0.0	0.0	0.0
4. D + 0.75FL + 0.75RL	20.6	0.0	0.0	0.0	0.0
5a. D + 0.6W	8.2	5.4	0.0	92.2	0.0
5b. D + 0.7E	8.2	0.2	0.0	2.3	0.0
6a. D + 0.75FL + 0.75*0.6W + 0.75RL	20.6	4.0	0.0	69.2	0.0
6b. D + 0.75FL + 0.75*0.7SL + 0.75RL	20.6	0.1	0.0	1.7	0.0
7. 0.6D + 0.6W	4.9	5.4	0.0	92.2	0.0
8. 0.6D + 0.7SL	4.9	0.2	0.0	2.3	0.0

NOTE: Px, Mx AND My CAN BE EITHER (+) OR (-)

ANCHOR BOLT PATTERN FOR WALKWAY COLUMN IS #127 OR EQUIVALENT
MAX HAUNCH LOAD = 19 KIPS STANDARD HAUNCH OK
** STANDARD U-BOLT SPACING INADEQUATE. SPACING MUST BE 18.3 INCHES

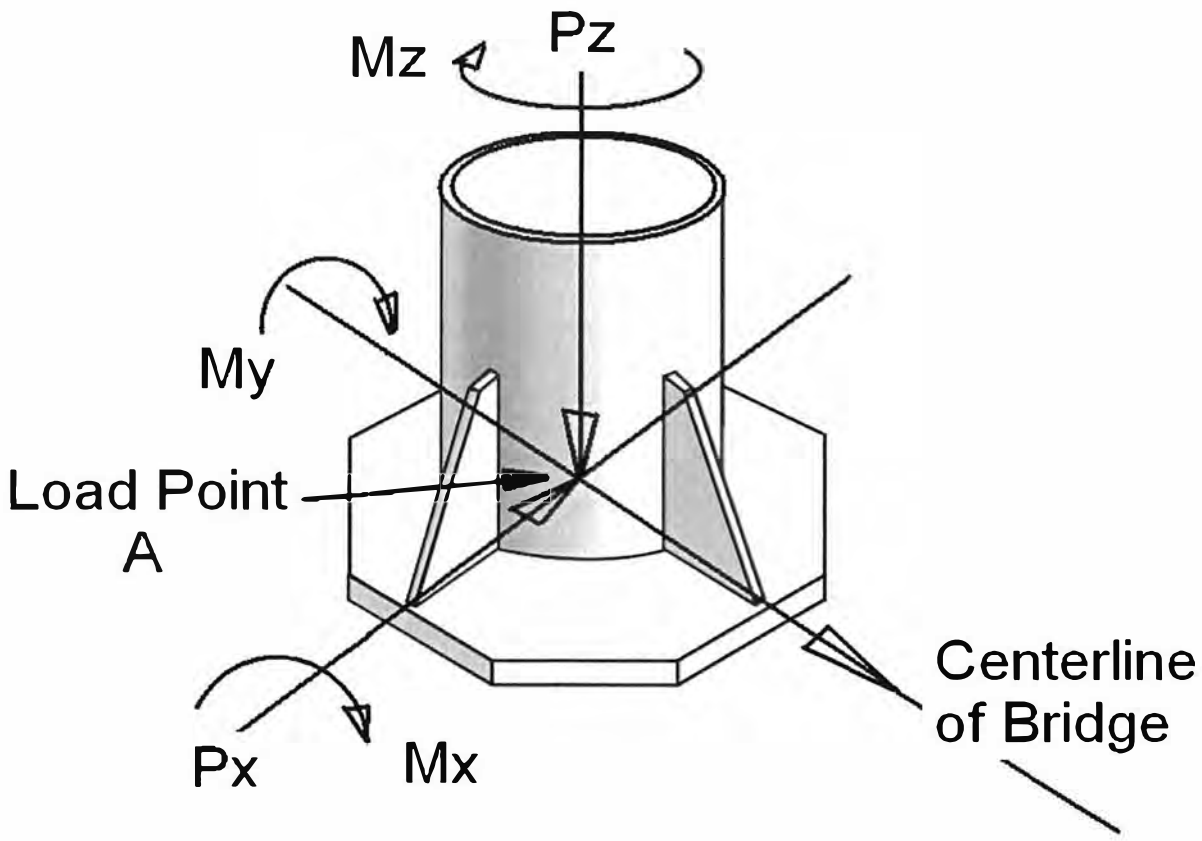
JOB DESCRIPTION: RSW (SW FL Int'l, Ft. Myers, FL), Gate C2
5/28/2020

JBT AEROTECH - JETWAY SYSTEMS

FOUNDATION LOADS FOR PASSENGER BOARDING BRIDGE

By: SKL 5/28/2020 JOB: RSW (SW FL Int'l, Ft. Myers, FL), Gate C4, C5, D4, D7, D8 RQ: 3757 LS#: 5652

Model AT3-61/127 Apron Drive



Note: Px, Py, Mx, and My can be either (+) or (-)
Program Revision 1.8

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LOAD ANALYSIS FOR APRON DRIVE
ASSUMPTIONS

Description	
Code:	ASCE 7-10
Risk Category	II

Wind	
Analysis Method	Velocity pressure per 27.3.2
Exposure Category	C
Directionality Factor (K_d)	0.85
Topographic Factor (K_{zt})	1
Velocity pressure exposure coefficient (K_z)	0.9
Wind Pressure (Operational)	12.5 PSF (80 mph)
Wind Pressure (Stowed)	46.5 PSF (154 mph)

Seismic	
Seismic importance factor (Ie)	1
Analysis method	Equivalent lateral force (12.8)
Sds	0.058
Response modification factor	2

General Assumptions

1. Wind and seismic forces are applied perpendicular to the walkway.

2. Loads can be positive or negative.

3. The extended condition is when the bridge is operational.
   Higher winds than this and the airport closes and the bridges are retracted and stowed.
   The higher wind load is not applicable when the bridge is in service.

4. PBBs are considered an inverted pendulum structure because more than 50% of the weight of the structure is at the top of the column (ASCE 7-10, Section 11.2).
   Per ASCE 7-10, Table 15.4-2 (page 143), R=2 for inverted pendulum type structures.

STEEL SIDING

LOAD ANALYSIS FOR APRON DRIVE
(SPECIAL LOADS)
MODEL: AT3-61/127

HEIGHT FROM APRON TO ROTUNDA FLOOR (FT) 13.09

LOADING CONDITIONS AT ROTUNDA COLUMN BASE	Pz KIPS	Mx FT-KIPS	My FT-KIPS	Px KIPS	Mz FT-KIPS
			LOAD POINT A		
EXTENDED (OPERATIONAL)					
1. DEAD LOAD (SEE NOTE)	29.7	73.6	65.9	0.0	0.0
2. FLOOR LOAD (40 PSF)	9.0	30.1	13.9	0.0	0.0
3. ROOF LOAD (25 PSF)	7.4	25.7	4.8	0.0	0.0
4. ROOF LOAD/2	3.7	12.8	2.4	0.0	0.0
5. WIND LOAD (12.5 PSF)	0.0	0.0	284.7	5.3	0.0
6. SEISMIC LOAD (Sds = 0.058)	0.0	0.0	48.4	0.8	0.0
RETRACTED (STOWED)					
7. DEAD LOAD (SEE NOTE)	9.2	-18.6	65.9	0.0	0.0
8. ROOF LOAD (25 PSF)	-0.2	-8.4	4.8	0.0	0.0
9. WIND LOAD (46.5 PSF)	0.0	0.0	436.0	2.7	0.0
ASD Load Combinations for Foundation Design per ASCE 7-10					
1. D	29.7	73.6	65.9	0.0	0.0
2. D + FL	38.7	103.7	79.8	0.0	0.0
3. D + RL	37.2	99.3	70.7	0.0	0.0
4. D + 0.75FL + 0.75RL	42.0	115.5	79.9	0.0	0.0
5a. D + 0.6W	29.7	73.6	327.5	3.2	0.0
5b. D + 0.7SL	29.7	73.6	99.8	0.6	0.0
6a. D + 0.75FL + 0.75*0.6W + 0.75RL	42.0	115.5	208.0	2.4	0.0
6b. D + 0.75FL + 0.75*0.7SL + 0.75RL	42.0	115.5	105.3	0.4	0.0
7. 0.6D + 0.6W	17.8	44.2	210.4	3.2	0.0
8. 0.6D + 0.7SL	17.8	44.2	73.4	0.6	0.0

NOTE: Px, Mx AND My CAN BE EITHER (+) OR (-)

NOTE: Additional Dead Loads: A Tun = 50 Lbs/ft; B Tun = 50 Lbs/ft; C Tun = 50 Lbs/ft

**HURRICANE TIE DOWN LOAD = 41.1 KIPS - DOUBLE STRAP REQUIRED

**ROTUNDA REQUIRES ROCKET FINS

** MAX TIRE LOAD EXTENDED = 107.2 KIPS MAX TIRE LOAD RETRACTED = 119.4 KIPS

JOB DESCRIPTION: RSW (SW FL Int'l, Ft. Myers, FL), Gate C4, C5, D4, D7, D8 5/28/2020

CONCENTRATED LOADS

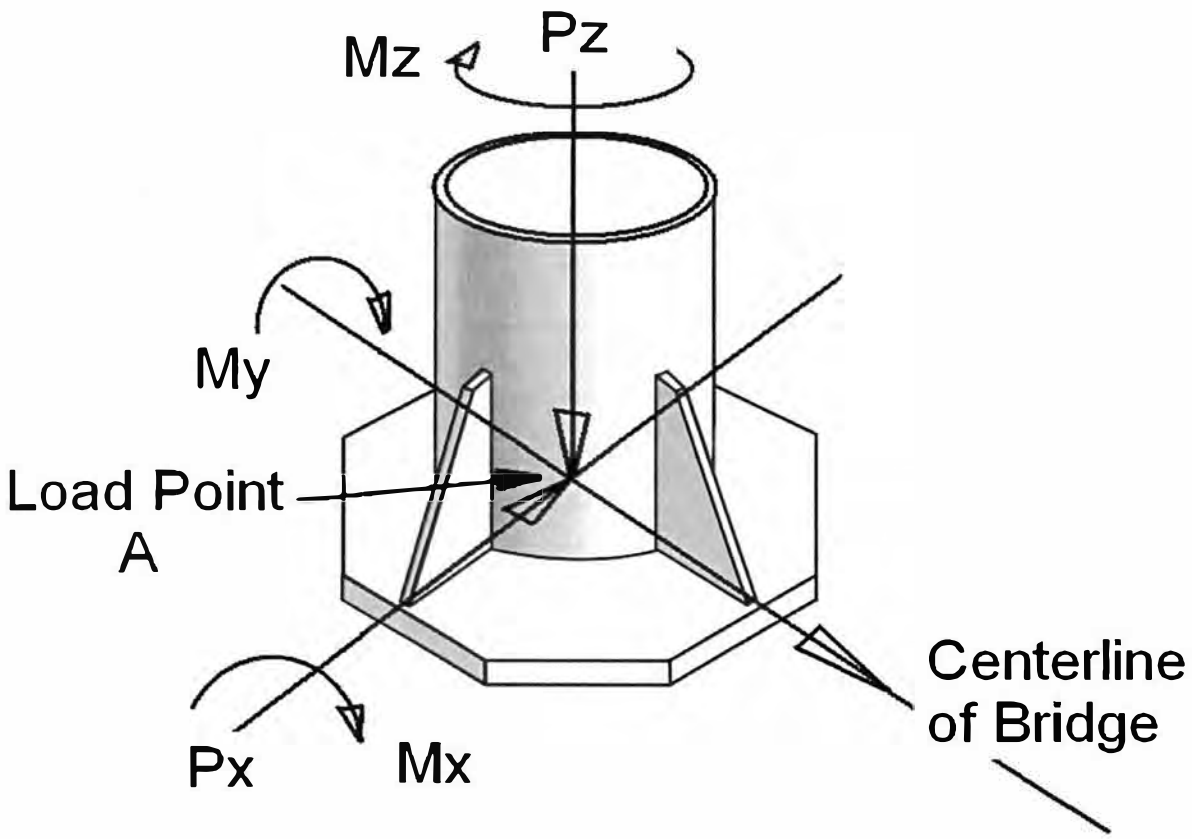
LOAD (KIPS)	X FT	Y FT	Z FT	
7.00	0.00	-11.40	-3.00	45T POU Hobart PCA
3.10	0.00	5.00	-3.00	90kva Hobart Power Coil
1.50	-9.00	13.00	0.00	Bag-slide
0.60	4.00	5.00	10.00	Cable Hoist

JBT AEROTECH - JETWAY SYSTEMS

FOUNDATION LOADS FOR PASSENGER BOARDING BRIDGE

By: SKL 5/28/2020 JOB: RSW (SW FL Int'l, Ft. Myers, FL), Gate C8, D10 RQ: 3757 LS#: 5653

Model AT3-65/133 Apron Drive



Note: Px, Py, Mx, and My can be either (+) or (-)
Program Revision 1.8

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LOAD ANALYSIS FOR APRON DRIVE
ASSUMPTIONS

Description	
Code:	ASCE 7-10
Risk Category	II

Wind	
Analysis Method	Velocity pressure per 27.3.2
Exposure Category	C
Directionality Factor (K_d)	0.85
Topographic Factor (K_{zt})	1
Velocity pressure exposure coefficient (K_z)	0.9
Wind Pressure (Operational)	12.5 PSF (80 mph)
Wind Pressure (Stowed)	46.5 PSF (154 mph)

Seismic	
Seismic importance factor (Ie)	1
Analysis method	Equivalent lateral force (12.8)
Sds	0.058
Response modification factor	2

General Assumptions

1. Wind and seismic forces are applied perpendicular to the walkway.

2. Loads can be positive or negative.

3. The extended condition is when the bridge is operational.
   Higher winds than this and the airport closes and the bridges are retracted and stowed.
   The higher wind load is not applicable when the bridge is in service.

4. PBBs are considered an inverted pendulum structure because more than 50% of the weight of the structure is at the top of the column (ASCE 7-10, Section 11.2).
   Per ASCE 7-10, Table 15.4-2 (page 143), R=2 for inverted pendulum type structures.

STEEL SIDING

LOAD ANALYSIS FOR APRON DRIVE
(SPECIAL LOADS)
MODEL: AT3-65/133

HEIGHT FROM APRON TO ROTUNDA FLOOR (FT) 13.21

LOADING CONDITIONS AT ROTUNDA COLUMN BASE	LOAD POINT A Pz KIPS	Mx FT-KIPS	My FT-KIPS	Px KIPS	Mz FT-KIPS
EXTENDED (OPERATIONAL)					
1. DEAD LOAD (SEE NOTE)	31.3	80.7	68.3	0.0	0.0
2. FLOOR LOAD (40 PSF)	9.4	32.0	13.9	0.0	0.0
3. ROOF LOAD (25 PSF)	7.8	27.2	4.8	0.0	0.0
4. ROOF LOAD/2	3.9	13.6	2.4	0.0	0.0
5. WIND LOAD (12.5 PSF)	0.0	0.0	299.9	5.6	0.0
6. SEISMIC LOAD (Sds = 0.058)	0.0	0.0	51.9	0.8	0.0
RETRACTED (STOWED)					
7. DEAD LOAD (SEE NOTE)	10.5	-13.1	68.3	0.0	0.0
8. ROOF LOAD (25 PSF)	-0.1	-7.9	4.8	0.0	0.0
9. WIND LOAD (46.5 PSF)	0.0	0.0	457.3	2.9	0.0
ASD Load Combinations for Foundation Design per ASCE 7-10					
1. D	31.3	80.7	68.3	0.0	0.0
2. D + FL	40.7	112.6	82.2	0.0	0.0
3. D + RL	39.1	107.9	73.1	0.0	0.0
4. D + 0.75FL + 0.75RL	44.2	125.0	82.3	0.0	0.0
5a. D + 0.6W	31.3	80.7	342.7	3.3	0.0
5b. D + 0.7SL	31.3	80.7	104.7	0.6	0.0
6a. D + 0.75FL + 0.75*0.6W + 0.75RL	44.2	125.0	217.3	2.5	0.0
6b. D + 0.75FL + 0.75*0.7SL + 0.75RL	44.2	125.0	109.6	0.4	0.0
7. 0.6D + 0.6W	18.8	48.4	220.9	3.3	0.0
8. 0.6D + 0.7SL	18.8	48.4	77.4	0.6	0.0

NOTE: Px, Mx AND My CAN BE EITHER (+) OR (-)

NOTE: Additional Dead Loads: A Tun = 50 Lbs/ft; B Tun = 50 Lbs/ft; C Tun = 50 Lbs/ft

**HURRICANE TIE DOWN LOAD = 43 KIPS - DOUBLE STRAP REQUIRED

**ROTUNDA REQUIRES ROCKET FINS

** MAX TIRE LOAD EXTENDED = 113.9 KIPS MAX TIRE LOAD RETRACTED = 125.4 KIPS

JOB DESCRIPTION: RSW (SW FL Int'l, Ft. Myers, FL), Gate C8, D10 5/28/2020

CONCENTRATED LOADS

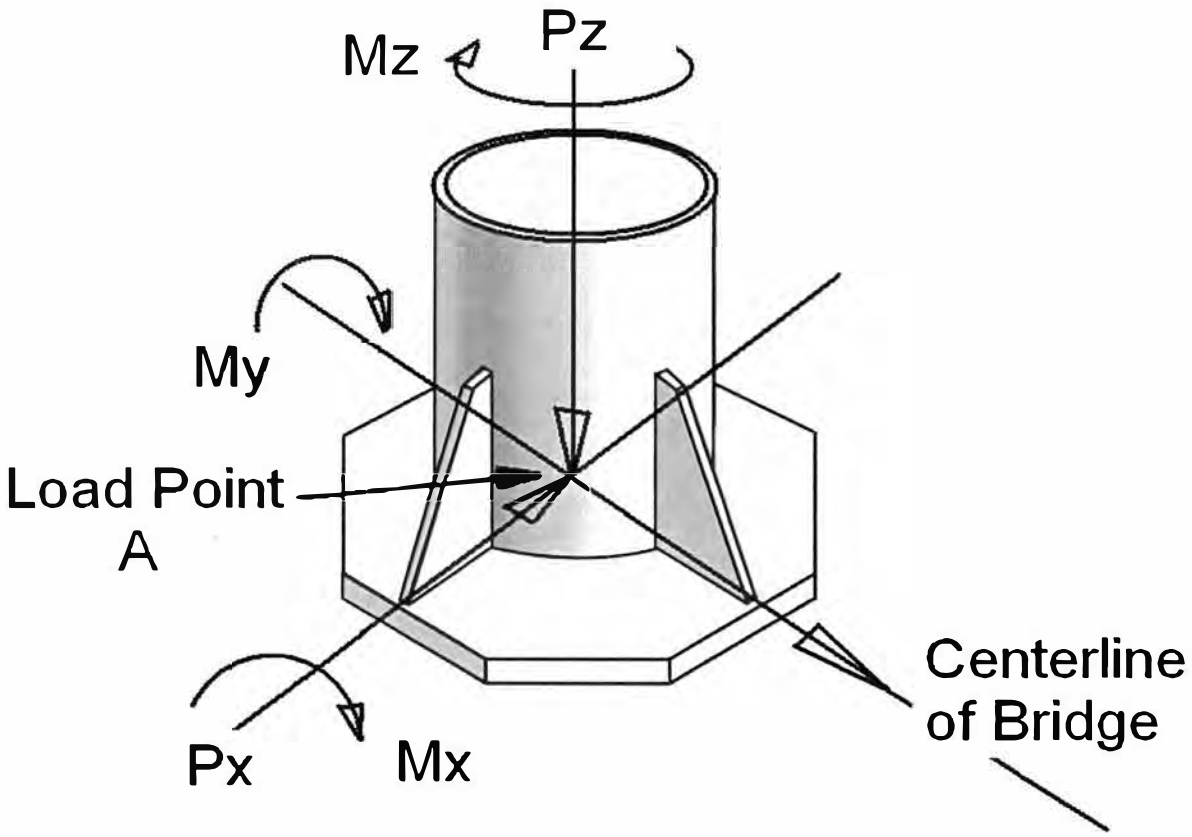
LOAD (KIPS)	X FT	Y FT	Z FT	
8.80	0.00	-11.50	-3.00	90T POU Hobart PCA
3.10	0.00	5.00	-3.00	180kva Hobart Power Coil
1.50	-9.00	13.00	0.00	Bag-slide
1.20	4.00	5.00	10.00	Cable Hoist

JBT AEROTECH - JETWAY SYSTEMS

FOUNDATION LOADS FOR PASSENGER BOARDING BRIDGE

By: SKL 5/28/2020 JOB: RSW (SW FL Int'l, Ft. Myers, FL), Gate D2 RQ: 3757 LS#: 5654

Model AT3-68/144 Apron Drive



Note: Px, Py, Mx, and My can be either (+) or (-)
Program Revision 1.8

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LOAD ANALYSIS FOR APRON DRIVE
ASSUMPTIONS

Description	
Code:	ASCE 7-10
Risk Category	II

Wind	
Analysis Method	Velocity pressure per 27.3.2
Exposure Category	C
Directionality Factor (K_d)	0.85
Topographic Factor (K_{zt})	1
Velocity pressure exposure coefficient (K_z)	0.9
Wind Pressure (Operational)	12.5 PSF (80 mph)
Wind Pressure (Stowed)	46.5 PSF (154 mph)

Seismic	
Seismic importance factor (Ie)	1
Analysis method	Equivalent lateral force (12.8)
Sds	0.058
Response modification factor	2

General Assumptions

1. Wind and seismic forces are applied perpendicular to the walkway.

2. Loads can be positive or negative.

3. The extended condition is when the bridge is operational.
   Higher winds than this and the airport closes and the bridges are retracted and stowed.
   The higher wind load is not applicable when the bridge is in service.

4. PBBs are considered an inverted pendulum structure because more than 50% of the weight of the structure is at the top of the column (ASCE 7-10, Section 11.2).
   Per ASCE 7-10, Table 15.4-2 (page 143), R=2 for inverted pendulum type structures.

STEEL SIDING

LOAD ANALYSIS FOR APRON DRIVE
(SPECIAL LOADS)
MODEL: AT3-68/144

HEIGHT FROM APRON TO ROTUNDA FLOOR (FT) 13.09

LOADING CONDITIONS AT ROTUNDA COLUMN BASE	Pz KIPS	Mx FT-KIPS	My FT-KIPS	Px KIPS	Mz FT-KIPS
			LOAD POINT A		
EXTENDED (OPERATIONAL)					
1. DEAD LOAD (SEE NOTE)	31.8	83.1	65.9	0.0	0.0
2. FLOOR LOAD (40 PSF)	9.8	33.8	13.9	0.0	0.0
3. ROOF LOAD (25 PSF)	8.1	28.7	4.8	0.0	0.0
4. ROOF LOAD/2	4.0	14.3	2.4	0.0	0.0
5. WIND LOAD (12.5 PSF)	0.0	0.0	321.1	5.8	0.0
6. SEISMIC LOAD (Sds = 0.058)	0.0	0.0	52.9	0.9	0.0
RETRACTED (STOWED)					
7. DEAD LOAD (SEE NOTE)	5.0	-37.7	65.9	0.0	0.0
8. ROOF LOAD (25 PSF)	-1.0	-12.3	4.8	0.0	0.0
9. WIND LOAD (46.5 PSF)	0.0	0.0	470.1	1.1	0.0
ASD Load Combinations for Foundation Design per ASCE 7-10					
1. D	31.8	83.1	65.9	0.0	0.0
2. D + FL	41.7	116.9	79.8	0.0	0.0
3. D + RL	39.9	111.7	70.7	0.0	0.0
4. D + 0.75FL + 0.75RL	45.3	129.9	79.9	0.0	0.0
5a. D + 0.6W	31.8	83.1	348.0	3.5	0.0
5b. D + 0.7SL	31.8	83.1	103.0	0.6	0.0
6a. D + 0.75FL + 0.75*0.6W + 0.75RL	45.3	129.9	224.4	2.6	0.0
6b. D + 0.75FL + 0.75*0.7SL + 0.75RL	45.3	129.9	107.7	0.5	0.0
7. 0.6D + 0.6W	19.1	49.8	232.2	3.5	0.0
8. 0.6D + 0.7SL	19.1	49.8	76.6	0.6	0.0

NOTE: Px, Mx AND My CAN BE EITHER (+) OR (-)

NOTE: Additional Dead Loads: A Tun = 50 Lbs/ft; B Tun = 50 Lbs/ft; C Tun = 50 Lbs/ft

**HURRICANE TIE DOWN LOAD = 47.8 KIPS - DOUBLE STRAP REQUIRED

**ROTUNDA REQUIRES ROCKET FINS

** MAX TIRE LOAD EXTENDED = 118.1 KIPS MAX TIRE LOAD RETRACTED = 136.1 KIPS

JOB DESCRIPTION: RSW (SW FL Int'l, Ft. Myers, FL), Gate D2 5/28/2020

CONCENTRATED LOADS

LOAD (KIPS)	X FT	Y FT	Z FT	
7.00	0.00	-11.40	-3.00	45T POU Hobart PCA
3.10	0.00	5.00	-3.00	90kva Hobart Power Coil
1.50	-9.00	13.00	0.00	Bag-slide
0.60	4.00	5.00	10.00	Cable Hoist

Sample Maintenance Schedule and Procedures

Inspector's Name/Title: _____
Installing Contractor: _____
Make: _____ Date: _____
Model: _____ Location: _____
Serial Number: _____ Gate: _____

✓ = Good	X = Bad	N/A = Not Applicable

Section 1: Walkway and Rotunda Interior

___1. Fully extend bridge for inspection
___2. Terminal door interlock operation
___3. Walkway properly installed
___4. Flooring installation is correct
___5. Interior cleaned and touch-up painting completed
___6. Ceiling color
___7. LED rotunda lamps
___8. Threshold plate properly installed
___9. Interior flashing properly designed and installed
___10. Rotunda floor leveled
___11. Floor access cover is secured
___12. Weather exterior seal, rigid frame to A-tunnel
___13. Rotunda curtain interior weather seals correctly installed
___14. Rotunda curtains properly tensioned
___15. Ceiling light switch is working properly
___16. Emergency light working properly
___17. Receptacle is wired correctly (test)
___18. Stainless steel receptacle cover plates

Section 2: A Tunnel Interior

___1. Tunnel end caps undamaged
___2. Tunnel hinge pins were greased at install
___3. Tunnel is centered in the rotunda rigid frame
___4. Wall boards have been cleaned and properly installed
___5. Aluminum "A" Tunnel Handrails installed
___6. Ceiling panels are properly installed
___7. Ceiling trim is properly installed
___8. LED light fixtures operating properly and spaced at 12' centers
___9. Tunnel flooring clean and properly installed
___10. Tunnel transition ramp properly installed

Section 3: B Tunnel Interior

___1. Rain gutters cleaned and safety tape installed
___2. Wall boards have been cleaned and properly installed
___3. Ceiling panels are properly installed
___4. LED light fixtures operating properly and spaced at 12' centers
___5. Tunnel flooring clean and properly installed
___6. Tunnel transition ramp properly installed
___7. Transition ramp handrails are properly installed
___8. Flashing properly installed on corner of wall and floor on each side

Section 4: C Tunnel Interior

___1. Rain gutters cleaned and safety tape installed
___2. Wall boards have been cleaned and properly installed
___3. Ceiling panels are properly installed
___4. LED light fixtures operating properly and spaced at 12' centers
___5. Tunnel flooring clean and properly installed

Section 5: Cab Interior

___1. High grip flooring has been properly installed
___2. Cab curtains properly tensioned
___3. Cab curtains have been cleaned
___4. ~~Provisions for DL Kiosk PC in cab~~
___5. ~~4 direction camera~~
___6. Swinging doors operate properly
___7. ~~DL alignment notch in bumper~~
___8. Aircraft bumper is clean and properly attached
___9. CE floor installed
___10. ACF Cab Floor installed
___11. Fiberglass canopy side panels covers properly installed
___12. Canopy closure and pads properly installed
___13. Cab ceiling and walls cleaned
___14. Cab porch floor deicer properly installed
___15. Cab fall protection
___16. A300 Closure Modification
___17. Battery Emergency Lights at Ramps & Bubble

Section 6: Operator's Console Layout

___1. Control console faceplate has been cleaned
___2. Placards properly installed
___3. 4 Quad Joystick with trigger
___4. Cab Floor Manual/Automatic Switch
___5. Canopy Individual/Both Switch
___6. HMI Touchscreen
___7. DL HMI Console options
___8. 5" Video Monitor
___9. ~~Prepositioning option on monitor~~
___10. Audible Warning Button
___11. Interlock - AC Closure Cab Rotate option on monitor
___12. Interlock -Canopy Forward Drive option on monitor
___13. Verify Point and Go steering disabled
___14. Console floodlight & maintenance lights
___15. Heater - VFD cabinet w/ thermostat – inside control panel and inverter panel
___16. ~~Network Switch – Operator Console~~
___17. ~~DL IP address scheme~~
___18. ~~Allen Bradley PLC Controls~~
___19. Operators console control function test:

Section 7: Operational Inspection

___1. Sign ON function operates properly
___2. Cab rotate left
  ___a. Cab rotate left slowdown
  ___b. Cab rotate left limit
___3. Cab rotate right
  ___a. Cab rotate right slowdown
  ___b. Cab rotate right limit
___4. Vertical up
  ___a. Vertical up slowdown
  ___b. Vertical up limit
___5. Vertical down
  ___a. Vertical down slowdown
  ___b. Vertical down limit
___6. Bridge swing left
  ___a. Swing left slowdown
  ___b. Swing left limit
___7. Bridge swing right
  ___a. Swing right slowdown
  ___b. Swing right limit
___8. Bridge extend
  ___a. Extend slowdown
  ___b. Extend limit
___9. Bridge retract
  ___a. Retract slowdown
  ___b. Retract limit
___10. Slope limits operate properly
___11. Travel bell operation and visible strobes
___12. ~~Full PLC Prepositioning operation~~
___13. PBB Emergency Stop Button operates properly
  ___c. Stair
  ___d. Bogie
  ___e. Console
___14. ACF floor manual operation
___15. ACF floor auto operation
___16. CE Floor operates correctly
___17. CE Floor sensors properly attached and operational
___18. Auto Level operation (Up/Down/Time/Alarm)
___19. Auto Level Warning Klaxon Horn under Cab
___20. Canopy operates correctly (independently and together)
___21. Drive functions disabled when canopy extended (all directions)
___22. Aircraft Sensors – Slow Down Sensors
___23. Aircraft Sensors – Dual Stop Sensors
___24. Engine sensor
___25. Extend Sensor (laser)
___26. 400 HZ alarm activates
___27. PCA alarm activates
___28. Flood lights operate properly
___29. Bumper switch operates properly

___30. Verify bridge information is properly displayed on console
___31. Verify 400Hz information is properly displayed on console
___32. Verify PCA information is properly displayed on console
___33. ~~Gate Monitoring System - PBB, PCA, 400hz (FactoryTalk View)~~
___34. ~~Aircraft Optical Guidance System Cable – 10C #16 – dock light system~~

Section 8: Service Platform and Stairs

___1. Service door properly installed and closes w/o catching on frame
___2. Service door glass is not cracked or broken
___3. Service door threshold plate has been installed properly
___4. Service door lock operates and combinations set correctly
___5. Service platform grip strut or expanded metal installed correctly
___6. Door hold open latch is installed correctly
___7. Service platform handrails installed correctly
___8. No Galvanized mirror on service platform handrail
___9. Galvanized roof access ladder with cage properly installed
___10. Service stairs properly installed
___11. Service step handrails properly installed
___12. Spliced Stair Handrail, replaceable lower 6ft section
___13. Emergency stop on stairs
___14. Baggage Slide installed correctly, in good condition

Section 9: Bridge Roof

___1. A-300 cab hood properly installed and sealed
___2. Roof has been cleaned and the paint touched up
___3. Roof handrails, ladder & cage properly installed
___4. Flat Roof
___5. Safety Walk Down Centerline of PBB Roof
___6. Galvanized Half Roof Handrails in lieu of Full Roof

Section 10: Vertical Lift Columns and Wheel Bogie

___1. Columns fault limit switches properly installed and adjusted
___2. Scissor arm assembly correctly installed
___3. Travel warning bell correctly installed
___4. Wheel bogie J-box is not damaged
___5. Wheel bogie J-box GFI receptacle is operational
___6. Flood lights properly installed

Section 11: Exterior of Bridge

___1. Limit switch arms are contacting ramps
___2. Cables carrier is operating correctly
___3. Slow and Stop Sensors installed correctly
___4. Galvanized Mirror on Cab
___5. LED floodlights (2 under porch floor, 1 behind bogie)
___6. Standard Brake Release Configuration
___7. Trelleborg cast wheels
___8. Cable hoist installed properly, operates correctly
___9. Emergency stop on wheel bogie
___10. Bridge Cool
___11. ~~Prep for future gate sign~~

Section 12: Exterior Seals and Grouting

___1. Cabin seal (over curtains) correctly attached
___2. Exterior seal C-tunnel to B-tunnel correctly attached
___3. Exterior seal B-tunnel to A-tunnel correctly attached
___4. Exterior seal A-tunnel to rotunda correctly attached
___5. Exterior seal rotunda to corridor correctly attached
___6. Exterior flashing corridor to terminal correctly attached
___7. Rotunda base plate is properly grouted
___8. Rotunda anchor bolt nuts properly installed

Section 13: Exterior Paint

___1. Bridge has been pressure washed and cleaned
___2. Touch up painting has been completed
___3. Galvanized services touched up as required
___4. ~~Corporate Logos properly installed~~

Section 14: Electrical Cabling

___1. Bridge rotunda disconnect panel properly installed
___2. Input power wiring is to specification and code
___3. Wiring in terminal J-box is to specification and code
___4. Electrical junction boxes installed properly and free from damage
___5. Exterior/interior Duplex GFI Receptacles with Dedicated Circuit
___6. Network CAT6 cabling to terminal j-box
___7. ~~Fiber Optic network cabling in festoon~~
___8. Network Cabling, Cab to PCA
___9. Network Cabling, Cab to 400hz
___10. ~~NTRON 708 8 port Network Switches~~
___11. ~~Network switch – Rotunda or terminal~~

RQ3757

JETWAY SYSTEMS
TYPICAL RECOMMENDED SPARE PARTS LIST
APRON DRIVE 2&3 TUNNEL UNIT
PROGRAMMABLE LOGIC CONTROL (PLC)

PART NUMBER	DESCRIPTION	RECOMMENDED QTY	LIST PRICE	EXT PRICE
2964160	PRGMD INV AC 10HP HORZ HITACHI	5	$1,865.00	$9,325.00
2964161	PRGMD INV AC 1HP CAB HITACHI	5	$717.00	$3,585.00
2964737.01	MDLACF DIGITAL PLC W/3' CA	5	$2,075.00	$10,375.00
3613462	BELL GONG 10 DIA	5	$164.00	820.00
3613463	BELL VIBRATING MECHANISM 120V	5	$150.00	$750.00
3618029	HTR STRIP 240V 250W 60" LEADS	5	$68.00	$340.00
3623768	BLOCK CNTOR 1N/O 10AMP	25	$24.00	$600.00
3643395	RLY SSR 24VDC 480V / 20A	5	$88.00	$440.00
3645952	RLY SPDT 5A 24VDC TERM BLOCK	5	$54.00	$270.00
3650110	SW TAPE 1'0 TS-46 15' LEADS	5	$238.00	$1,190.00
3650139	PLC AB MDL INPUT 16 PT	5	$759.00	$3,795.00
3650141	PLC AB MDL OUTPUT 16 PT	5	$981.00	$4,905.00
3650143	PLC AB MDL OUTPUT ANALOG 2 CHAN	5	$1,085.00	$5,425.00
3706605	SW TAPE 1'0 TS-46 15' LEADS	5	$235.00	$1,175.00
3718287	PWR SPLY 115-230VAC/24VDC 10A	5	$314.00	$1,570.00
3724701	JOYSTICK DUAL AXIS PROP 4-20MA TRG	5	$839.00	$4,195.00
3726240	CNTOR XT 3P 40A IND/60A RES	5	$279.00	$1,395.00
3726241	CNTOR XT 3P 12A IND/22A RES	5	$157.00	$785.00
3726242	CNTOR RVSG XT 3P 32A FRAME C	5	$536.00	$2,680.00
3726244	CNTOR AUX 4NO 16AMP XT (3726240)	10	$44.00	$440.00
3728007	PWR SPLY 120-240VAC/12VDC 15W	5	$125.00	$625.00
3728180	MONITOR LCD 5"	5	$387.00	$1,935.00
3729950	DISPLAY LCD W/TCH 10.4 ETHERNET GTO	5	$6,029.00	$30,145.00
3736680	SNSR POSN ROTG 4-20 MA 1 TURN IP67	10	$906.00	$9,060.00
3736681	SNSR POSN ROTG 4-20 MA 16 TURN IP67	5	$850.00	$4,250.00
4100210	SW LIMIT CW/CCW W/3/4 ENTRY	5	$140.00	$700.00
4100211	SW LIMIT DPDT W/3/4 ENTRY	5	$157.00	$785.00
4100212	SW LIMIT SPDT	5	$118.00	$590.00
4100213	SW LIMIT 2 STEP	5	$140.00	$700.00
4100214	SW LIMIT PLUNGER 90 DEG SPDT	5	$187.00	$935.00
4100215	SW LIMIT EXTD PLUNGER 90DEG	5	$197.00	$985.00
4100217	SW LIMIT CW/CCW W/CA	5	$187.00	$935.00
4100218	SW LIMIT CW/CCW W/4' CA	5	$223.00	$1,115.00
4140141	RES 250 OHM 225W 1% MTL FILM	5	$42.00	$210.00
4140220	SW LIMIT RLR PRECISION 15AMP	5	$91.00	$455.00
4140272	DIO 600V 3A 1N5406	5	$0.73	$3.65
4140404	OPER PB SGL BTN	5	$33.00	$165.00
4140412	OPER PB TWO BTN 120V	5	$126.00	$630.00
4140593	CAPA 30-36 MFD 330VAC	10	$21.00	$210.00
4142641	OPER PUSH/PULL 24V	5	$142.00	$710.00
4570480	MOV AC 480V	10	$3.65	$36.50
4960596	ACTR LINEAR 4 STRK 115 VAC	5	$671.00	$3,355.00
4960699	ACTR LINEAR 1'0 STRK 115VAC	5	$1,132.00	$5,660.00
			TOTAL	$118,255.15

NOTE: PARTS AND PART NUMBERS ARE SUBJECT TO CHANGE WITHOUT NOTICE DUE TO NEW PRODUCT DESIGNS AND PART VENDORS ADJUSTING THEIR PRODUCT LINE.
PLEASE NOTE 3729950 WILL NEED A PROGRAM

unit to protect it from voltage fluctuations which might result from the operation of aircraft radio frequency equipment.

1.5 SUBMITTALS

A. Bid Submittals: The following submittals shall be included with bid.

1. Alternates per 1.04.G. ITW GSE Powercoil product data provided, as alternate to hose basket system
2. UL Certification per 1.06.A. Click here
3. Spare Parts List: Provide manufacturer's recommended spare parts list. Spare parts list shall include Owner applicable pricing. Spare parts pricing shall remain valid for two (2) years from the date of final completion. Click here

B. Pre-Manufacture Submittals: The following submittals shall be made as necessary to meet the project schedule, and shall be submitted for approval prior to manufacturing the SSFC units.

1. Product Data and Specifications: Provide manufacturer's data and specifications indicating, as a minimum, input/output voltages and amperages, power rating, physical characteristics, short circuit ratings, dimensions, and enclosure details.
2. Shop Drawings: Provide schematics and interconnection diagrams, indicate front and side views of enclosures with overall dimensions and weights shown; conduit entrance locations and requirements; and nameplate legends. Differentiate between manufacturer-installed wiring and field-installed connections.
3. Installation Details: Provide complete installation details including, without limitation, installation details of all appurtenances. Show installed configuration as well as any pertinent details regarding interface to other equipment and systems, include electrical connection service points.

C. Pre-Ship Submittals: The following shall be submitted and approved prior to shipping SSFC units to the project site:

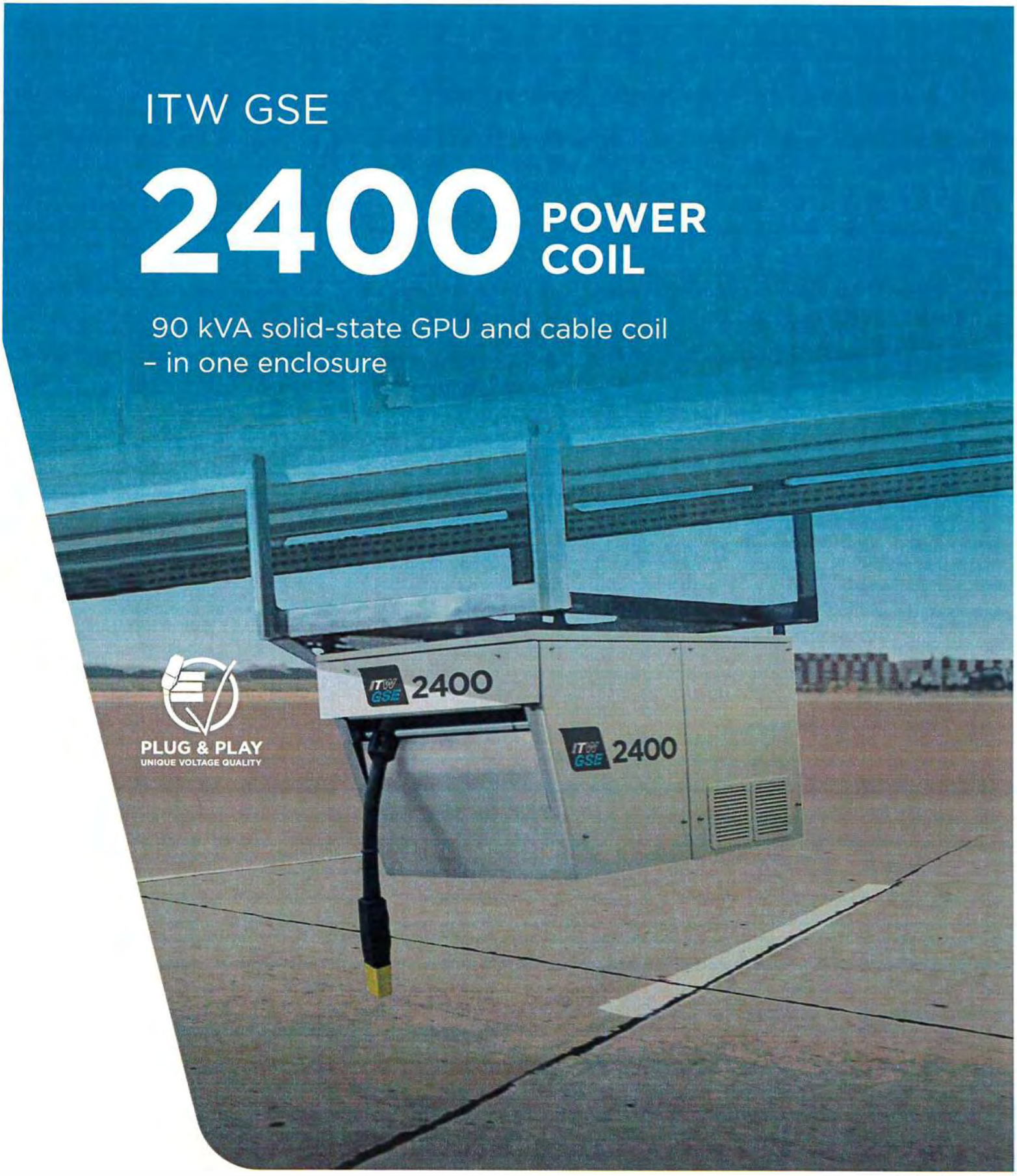
1. Factory Test Reports: Indicate factory tests and results and inspection procedures.

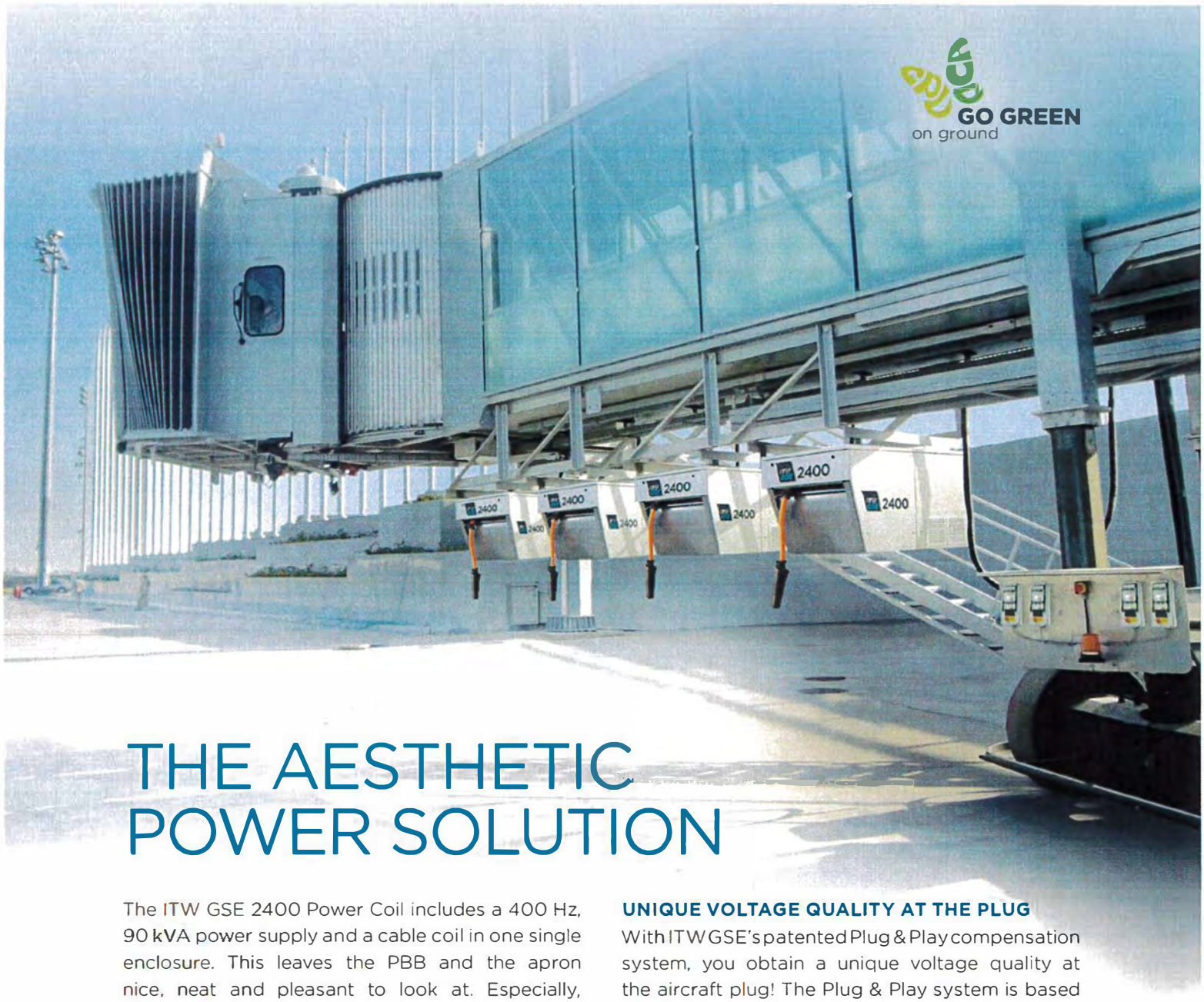
D. Pre-Substantial Completion Submittals: The following submittals shall be submitted and approved prior to 14 days before substantial completion, unless otherwise noted herein.

1. Operation and Maintenance Manuals.
2. Training Program: At least 60 days prior to substantial completion, a training program summary, course syllabus, instructor qualifications, and copy of the training manual shall be submitted for review and approval.
3. Field Commissioning Report: Submit proposed field commissioning report for approval. This approved form shall be utilized for the final field commissioning as specified in Section 3.

E. Pre-Final Completion Submittals: The following submittals shall be submitted and approved prior to 14 days before final completion.

1. As-Built Drawings. Provide field edited redlined project drawings showing deviations from design documents.
2. Warranty: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and have been registered with the manufacturer.
3. Field Commissioning Report: A completed field commissioning report for each installed unit as specified herein. Utilize approved form.
4. Training Rosters. Provide training roster with trainee names, dates and types of training, as well as durations.
5. Original software and documentation registered in the Owner's name.


ITW GSE
2400 POWER COIL
90 kVA solid-state GPU and cable coil
– in one enclosure
PLUG & PLAY
UNIQUE VOLTAGE QUALITY
2400
2400
It's all about connections
ITW GSE



THE AESTHETIC POWER SOLUTION

The ITW GSE 2400 Power Coil includes a 400 Hz, 90 kVA power supply and a cable coil in one single enclosure. This leaves the PBB and the apron nice, neat and pleasant to look at. Especially, where glass bridges is the preferred solution, the aesthetic aspect is important. The Power Coil works perfectly well with all sizes of bridges and all types of aircraft.

INNOVATIVE SOLUTION, BASED ON EXPERIENCE

The 2400 Power Coil offers a highly reliable and robust design including a front plate in stainless steel. The Power Coil has an improved cable guidance system that ensures easy and smooth cable handling. As a standard, the Power Coil comes with 24 m of cable (useable length). However, the spacious housing has room for at least 28 m cable. The cable is rolled completely into the housing after use. The rolling automatically stops when the plug head reaches the lower edge of the Power Coil thus leaving the apron free.

UNIQUE VOLTAGE QUALITY AT THE PLUG

With ITW GSE's patented Plug & Play compensation system, you obtain a unique voltage quality at the aircraft plug! The Plug & Play system is based on a true individual phase regulation combined with a predetermined model of the actual cable installation. Therefore, the voltage quality at the aircraft connector is simply the best you can get!

SUPPLY ALL AIRCRAFT INCL. PF1

The 2400 Power Coil is based on the ITW GSE design and provides all performance features from the well-known 2400 Compact GPU i.e. the unique voltage quality and the 400% overload at output as a standard. Further, it is equipped with the smart ITW GSE user interface. And software can be updated via USB. The Power Coil also includes standard overload capabilities that match all types of aircraft even those requiring Power Factor 1 like the B787/A350/A380.

INNOVATIVE DESIGN

The ITW GSE 2400 Power Coil consists of a 90 kVA solid-state converter and a cable drum in one enclosure. The completely encased unit is less susceptible to effects from exposure to the elements, such as sunlight and harsh weather. This minimizes the overall maintenance costs. And what's more, the 2400 Power Coil saves space and weighs up to 40% less compared to a traditional solution with a separate GPU and a separate coil. The frequency controlled direct driven coil with its robust cable guidance system, provides smooth coiling and less mechanical stress. All in all, the Power Coil is a very reliable power supply system, built to last. For power requirements above 90 kVA, two or more Power Coils are installed side by side.

QUICK INSTALLATION

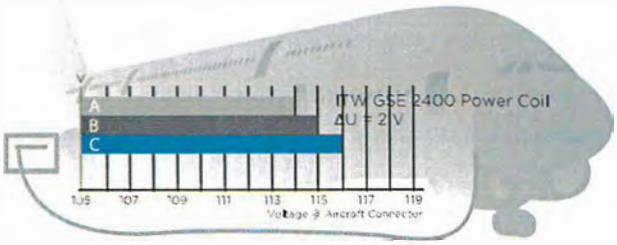
Traditionally, a 400 Hz ground power solution for passenger boarding bridges is made up of entirely separate systems or parts. These typically include a GPU, a cable handling system, interconnection cable and aircraft cable; components that are usually sourced from different suppliers and require separate on-site installation and testing.
The ITW GSE Power Coil combines all these parts in one state-of-the-art unit that comes fully tested and adjusted from the factory - ready to be placed under the PBB. Mount the unit under the bridge, connect the input cable and the power coil is ready for use. This is easy and helps you save time and money!

SUPPLY ALL AIRCRAFT INCL. PF1

The 2400 Power Coil is a true Power Factor 1 ground power unit. Its standard overload capabilities match all types of aircraft from the narrow-body to the wide-body incl. aircraft requiring Power Factor 1 like the B787/ A350/A380.

UNIQUE VOLTAGE QUALITY

The output voltage quality of the 2400 Power Coil is unique due to ITW GSE's patented Plug & Play system.
The Power Coil is even designed to fulfil the ISO 6858 standard that requires max. phase unbalance of less than 4 V and a phase angle of 120° ± 2.5°.



The ITW GSE 2400 Power Coil fulfils the ISO 6858 standard

THE ITW GSE OPERATOR INTERFACE

The ITW GSE operator interface is easy and intuitive. This is your guarantee for correct operation and on-time aircraft departures. The operator interface is common from one ITW GSE product to another. Therefore, airport staff familiar with one ITW GSE product can easily switch to another as the icons and display are the same.
The operator only has to press the combined start/stop button. Also, he can monitor various parameters such as voltage and current at the display screen. For easy set-up and maintenance purposes, there is a deeper level dedicated for the technician.

DOWNLOADS AND UPDATES

The software-based control system means your ITW GSE 2400 Power Coil can be updated and given additional capabilities in the future, simply by transferring new software from a USB stick/flash drive. Service log files and maintenance data can also be transferred the same way for analysis and to help ensure more efficient back-office procedures and more effective facility management.

SPECIFICATIONS

ITW GSE 2400 Power Coil

March 2018 v2. M10484

Specifications for GPU Output

- Power: 90 kVA PF 0,8-1
- Voltage: 3 x 115/200 V
- Frequency: 400 Hz ± 0,1 %
- Power factor: 0.7 lagging to 0.95 leading
- Voltage regulation: <0,5% for balanced and up to 30% unbalanced loads
- Voltage recovery: Δ<8% and rec. time <10 ms at 100% load change
- Total harmonic content: <2% at linear load (typ. 1,5%) <2% at non linear load according to ISO 1540
- Crest factor: 1,414 ± 3%
- Voltage modulation: <1,0%
- Phase angle symmetry: 120° ± 1° for balanced load 120° ± 2° for 30% unbalanced load

Protection

- Protection class: IP55
- No break power transfer
- Over/under voltage at output
- Overload
- Internal high temperature
- Control voltage error
- Short circuit at output
- GPU Enable
- 90% switch interlock
- Neutral voltage supervision
- Broken neutral supervision
- Leakage current supervision

Environmental

- Operating temperature: -40°C to +56°C (-40°F to 132°F) (+60°C (140°F) at Aircraft Load)
- Relative humidity: 10-100%
- Noise level: <65 dB(A)@1m

Efficiency

- Overall efficiency: 0,94 at 35-90 kVA load PF 0,8 0,90 at 25 kVA load PF 0,8
- Stand by losses: 65 W
- No load losses: 2.2 kW

Miscellaneous

- MTTR: max. 20 minutes
- Colour: RAL 7035 (standard)
- Weight: 700 kg (1.543 lbs.) incl. 24 m (79 ft) cable w.strain relief

Norms and Standards

• DFS400	Specification for 400 Hz aircraft power
• ISO 6858	Aircraft ground support electric supplies
• BS 2G 219	General requirements for ground support equipment
• MIL-STD-704F	Aircraft electric power characteristics
• SAE ARP 5015	Ground equipment 400 Hz ground power performance requirement
• EN2282	Aerospace series characteristics of aircraft electrical supplies
• EN62040-1-1	General & safety requirement
• EN61558-2-6	General & safety requirement
• EN61000-6-4	Electromagnetic compatibility Generic emission standard
• EN61000-6-2	Generic immunity standard
• EN1915-1&2	Machinery; general safety requirements
• EN12312-20	Machinery; general safety requirements
• UL 355	Cord Reels
• ETL	Listed to above UL standard (Only 480 V version)

Specifications for Coil Cable/ Connector

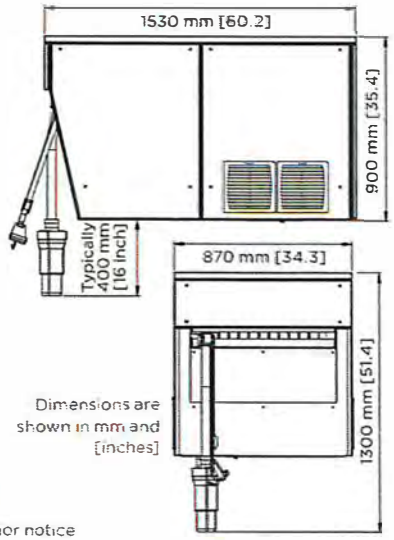
- Special twisted highly flexible cable harness for power transfer from fixed part to moving part
- 24 m (79 ft) flexible composite cable
- Aircraft connector with:
  - Start/stop push buttons
  - Cable IN/OUT push buttons
  - Replaceable pins & front
    - 90% Switch*
    - Indication lamps*

Electro Mechanical System

- Cable drum with spiral cable trace
- 1,1 kW gear motor
- VFD for gear motor
- Coiling speed 40 m/min

Protection

- Cable blocked
- Motor overload



Common specification for GPU & Coil Input

- Voltage range: 3 x 400 V ± 15%*
- Rated current: PF (load) 0,8 / PF 1 111 A ± 15% / 141 A ± 15%*
- Voltage range: 3 x 480 V ± 10%
- Rated current: PF (load) 0,8 / PF 1 97 A ± 15% / 123 A ± 15%
- Frequency: 50/60 Hz ± 5 Hz
- Rectification: Magnetic wave-shaping incl. 12-pulse rectification
- Line current distortion: <5%
- Power factor: 90 kVA: 1 @ nominal load
- Inrush current: None

Overload Ratings

- 125% for 600 seconds
- 150% for 60 seconds
- 200% for 30 seconds
- 300% for 10 seconds
- 400% for 1 second

Available standard options

- RS485
- 26 m* or 28 m (92 ft) flexible composite cable instead of standard cable
- Split F-pin/split F-contact (Americas only)
- Apron mounting stand*

***(Products sold outside Americas)**

Specifications are subject to change without prior notice

It's all about connections

GO GREEN
on ground

OPTIMAL POWER AT THE AIRCRAFT

At ITW GSE, we monitor the market and are at the forefront of new aircraft requirements and market developments. This has been an objective since we introduced our first 400 Hz unit to the market. And it still is ! Therefore, the ITW GSE 2400 Compact is designed to fulfil the ISO 6858 standard regarding voltage imbalance and phase displacement at the aircraft plug.

SMALL, SIMPLE, RELIABLE AND ROBUST

The 2400 series is the market's best choice when it comes to solid-state, point-of-use units. It is small and simple, reliable and robust. It has all kinds of outstanding technical qualities from the unique output voltage, the smart ITW GSE user interface, soft-ware update via USB and the standard overload capabilities that matches all types of aircraft.

UNIQUE VOLTAGE QUALITY AT THE PLUG MEANS ON-TIME DEPARTURES

Fixed installations often include a mix of long symmetrical and asymmetrical output cables as well as connection boxes that makes it difficult to keep the required voltage quality at the aircraft connector. This is exactly where ITW GSE's patented Plug & Play voltage compensation system makes a difference. The Plug & Play system is based on a true individual phase regulation combined with a predetermined model of the actual cable installation. Therefore, the 2400 GPU provides an outstanding voltage quality at the connector thus ensuring on-time departures and happy passengers!

FURTHER BENEFITS OF THE ITW GSE 2400

- 400% overload
- 90 kW continuous at an ambient temperature of 56°C
- Clean input power with a unity power factor and a current THD less than 5% due to the magnetic wave-shaping topology
- TCP / IP connection to BMS as standard

SPECIFICATIONS

ITW GSE 2400 30-45-60-90 kVA solid-state GPU

Input

Type	Amps (0.8)	Amps (1.0)	Hertz	Voltage
30 kVA	63 A	78 A	45-65	230 ± 15%
	38 A	48 A	45-65	400 ± 15%
	30 A	37 A	45-65	480 ± 10%
	25 A	32 A	45-65	600 ± 10%
45 kVA	91 A	114 A	45-65	230 ± 15%
	58 A	71 A	45-65	400 ± 15%
	48 A	59 A	45-65	480 ± 10%
	39 A	47 A	45-65	600 ± 10%
60 kVA	75 A	93 A	45-65	400 ± 15%
	63 A	78 A	45-65	480 ± 10%
	50 A	62 A	45-65	600 ± 10%
90 kVA	111 A	140 A	45-65	400 ± 15%
	93 A	117A	45-65	480 ± 10%
	74 A	94 A	45-65	600 ± 10%

- Rectification: Magnetic wave-shaping
- Line current distortion: 90 kVA <5%, 60 kVA < 9% 45 kVA< 10%, 30 kVA < 12%
- Power factor: 90 kVA: 1 @ nominal load 45-60 kVA: 0,99 30 kVA: 0.97
- Inrush current: None

Output

- Rated Power: 30-45-60-90 kVA PF 0,8-1
- Voltage: 3 x 115/200 V
- Frequency: 400 Hz ± 0,1%
- Power factor: 0,7 lagging to 0,95 leading
- Voltage regulation: <0,5% for balanced load and up to 30% unbalanced load
- Voltage recovery: ΔU <8% and rec. time <10 ms at 100% load change
- Total harm. content: <2% at linear load (typ. 1,5%) <2% at non linear load according to ISO 1540
- Crest factor: 1,414 ± 3%
- Voltage modulation: <1,0%
- Phase angle symmetry: 120° ± 1° for balanced load 120° ± 2° for 30% unbal. load

Protection

- Protection class: IP55
- No break power transfer
- Over/under voltage at output
- Overload
- Internal high temperature
- Control voltage error
- Short circuit at output
- GPU enable
- 90% switch interlock
- Neutral voltage supervision
- Broken neutral supervision
- Leakage current supervision

Weight

- Fixed & PBB units: 310 kg (683 lbs.)
- Mobile units: 460 kg (1,014 lbs.)

Efficiency

- Overall efficiency: 0,94 at 35-90 kVA load PF 0,8 0.90 at 25 kVA load PF 0,8
- Stand by losses: 65 W
- No load losses: 2,2 kW

Environmental

- Operating temperature: -40°C to 56°C (-40°F to +132°F) (+60°C (+140°F) at Aircraft Load)
- Relative humidity 10-100%
- Noise level <65 dB(A)@1m - typically 60 dB(A)

Overload Ratings

- 125% for 600 seconds
- 150% for 60 seconds
- 200% for 30 seconds
- 300% for 10 seconds
- 400% for 1 second

Miscellaneous

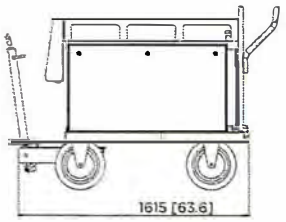
- MTTR: max. 20 minutes
- Colour: RAL 7035 (standard)

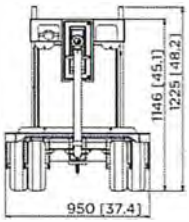
Available Standard Options

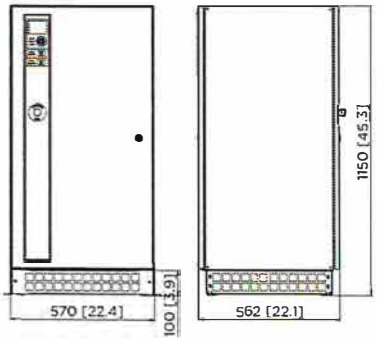
- 28 VDC, 600 A output (ARU) Kindly refer to page "Power two aircraft with just one GPU"
- Additional base module
- Additional output contactor
- Terminal extension for 2 pcs. of 7 core cable
- Remote control box
- Lockable door
- Door switch
- RS485 interface
- Military interlock
- Dry Contacts
- ITW GSE service tool

Norms and Standards

- See next page







Converter for under-bridge mounting

Dimensions are shown in mm and [inches]

Specifications are subject to change without prior notice

ITW GSE 2400 120-140-180 kVA solid-state GPU

Input

Type	Amps (0.8)	Amps (1.0)	Hertz	Voltage
120 kVA	150	190	45-65	400 ± 15%*
	130	160	45-65	480 ± 10%*
	105	130	45-65	600 ± 15%*
140 kVA	175	220	45-65	400 ± 15%*
	150	185	45-65	480 ± 10%*
	120	150	45-65	600 ± 15%*
180 kVA	230	285	45-65	400 ± 15%*
	190	240	45-65	480 ± 10%*
	150	190	45-65	600 ± 15%*

* Values adjusted to next 5A value

- Rectification: Magnetic wave-shaping
- Line current distortion: 120 kVA: 9%, 140 kVA: 7%, 180 kVA: 5%
- Power factor: 120 - 140 kVA: 0.99 180 kVA: 1 @ nominal load
- Inrush current: None

Output

- Rated Power: 120-140-180 kVA PF 0,8-1
- Voltage: 3 x 115/200 V
- Frequency: 400 Hz ± 0.1%
- Power factor: 0,7 lagging to 0,95 leading
- Voltage regulation: <0.5% for balanced load and up to 30% unbalanced load
- Voltage recovery: ΔU <8% and rec. time <10 ms at 100% load change
- Total harm. content: <2% at linear load (typ. 1,5%) <2% at non linear load according to ISO 1540
- Crest factor: 1,414 ± 3%
- Voltage modulation: <1,0%
- Phase angle symmetry: 120° ± 1° for balanced load 120° ± 2° for 30% unbal. load

Protection

- Protection class: IP55 input & output zones
- No break power transfer
- Over/under voltage at output
- Overload
- Internal high temperature
- Control voltage error
- Short circuit at output
- GPU enable
- 90% switch interlock
- Neutral voltage supervision
- Leakage current supervision

Weight

- Fixed & PBB units: 650 kg (1,433 lbs.)

Efficiency

- Overall efficiency: 0.93 at 180 kVA load PF 0.8-1
- Stand by losses: 150 W
- No load losses: 4,4 kW

Environmental

- Operating temperature: -40°C to +56°C (-40°F to +132°F) (+60°C (+140°F) at Aircraft Load)
- Relative humidity 10-100%
- Noise level < 65 dB(A) @1m

Overload Ratings

- 125% for 600 seconds
- 150% for 60 seconds
- 200% for 30 seconds
- 300% for 10 seconds
- 400% for 1 second

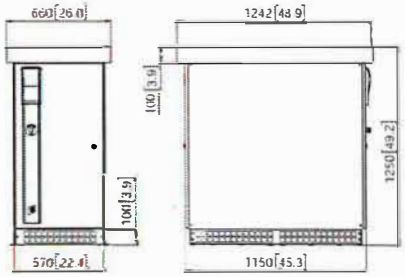
Miscellaneous

- MTTR: max. 20 minutes
- Colour: RAL 7035 (standard)

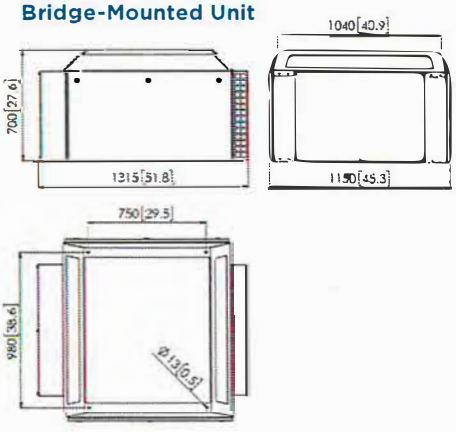
Available Standard Options

- Additional base module
- Single output configuration
- Terminal extension for 2 pcs. of 7 core cable
- Remote control box
- Lockable door
- Door switch
- RS485 interface
- Military interlock
- Dry Contacts
- ITW GSE service tool

Fixed Unit



Bridge-Mounted Unit



Dimensions are shown in mm and [inches]

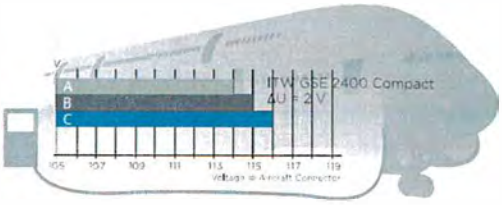
Norms and Standards (valid for 30 to 180 kVA units)

DFS400	Specification for 400 Hz aircraft power
ISO 6858	Aircraft ground support electric supplies
BS 2G 219	General requirements for ground support equipment
MIL-STD-704F	Aircraft electric power characteristics
SAE ARP 5015	Ground equipment 400 Hz ground power performance requirement
EN2282	Aerospace series characteristics of aircraft electrical supplies
EN62040-1-1	General & safety requirement
EN61558-2-6	General & safety requirement
EN61000-6-4	Electromagnetic compatibility Generic emission standard
EN61000-6-2	Generic immunity standard
EN1915-1&2	Machinery; general safety requirements
EN12312-20	Machinery; specific safety requirements
Listed per UL1012 (Only valid for 230/480/600V versions)	

Specifications are subject to change without prior notice

UNIQUE VOLTAGE QUALITY

The output voltage quality of the ITW GSE 2400 Compact is unique due to the patented Plug & Play system. The ITW GSE 2400 is designed to fulfil the ISO 6858 standard that requires max. phase unbalance of less than 4 V and a phase angle of 120° ± 2.5°.
The example to the right shows the voltage of the 3 phases at 35% unbalanced load @ PF 0.8 by use of a typical cable consisting of 65 m of 7x35 mm² installation cable and 26 m of 4x70 mm² flexible cable.



The ITW GSE 2400 Compact fulfils the ISO 6858 standard

SUPPLY ALL AIRCRAFT INCL. PF1

The ITW GSE 2400 Compact is a true Power factor 1 ground power unit that allows for 400% overload meaning that it can be used for all types of aircraft from the narrow-body to the wide-body incl. B787/A350/A380.

THE ITW GSE OPERATOR INTERFACE

The ITW GSE operator interface is easy and intuitive. This is your guarantee for correct operation and on-time aircraft departures. The operator interface is common from one ITW GSE product to another. Therefore, airport staff familiar with one ITW GSE product can easily switch to another as the icons and display are the same. The operator only has to press the combined start/stop button. Also, he can monitor various parameters such as voltage and current at the display screen. For easy set-up and maintenance purposes, there is a deeper level dedicated for the technician.

MAXIMUM PERSONAL SAFETY

- Protective covers behind access doors to prevent accidental exposure to "live" parts
- Supervision of neutral conductor rupture & leakage current
- Supervision of neutral voltage
- Detection of hazardous voltages at aircraft frame (by supervision of interlock voltage)
- Avoidance of hazardous voltages in control wires through prevention of insulation failures in cable or plug

EASY CABLE CONNECTION

Connection of the rigid in- and output cables is easy since there is room for a very good manoeuvrability at the bottom of the cabinet. Further, we have integrated a robust bar at the bottom for cable relief. Access to the vital parts of the converter is extremely easy since those parts have all been positioned right behind the front door in a well-arranged way.

DOWNLOADS AND UPDATES

The software-based control system means your ITW GSE 2400 Compact can be updated and given additional capabilities in the future, simply by transferring new software from a USB stick/flash drive. Service log files and maintenance data can also be transferred the same way for analysis and to help ensure more efficient back-office procedures and more effective facility management.

POWER TWO AIRCRAFT WITH JUST ONE GPU?

Yes – Choose option
ITW GSE 2400 Combi Compact Unit

www.itwgse.com

March 2018 v2: M10484

Often, the same parking position accommodates a large mix of aircraft during a day. Typically, a parking position would require a 400 Hz source in the morning where the bigger aircraft are docking – but 28 V during other times of the day. Is this your requirement, the 2400 Compact Combi unit is the answer.

The combi unit is capable of delivering 400 Hz and regulated 28 VDC power, simultaneously and independently! The 28 V Active Rectifier Unit (ARU) - available as a standard option - delivers superior voltage quality at the aircraft plug without jeopardising the 400 Hz voltage. It goes without saying that the ITW GSE 2400 Compact Combi will power your aircraft, whether a narrow body or a turbo prop, whenever you need it!

Output Specifications, 28 VDC ARU

- Voltage: 28 VDC
  Max. output power for complete unit is limited to the nominal rating of the 400 Hz part of the unit
- Current: 600 A (400 A) continuously
- Voltage regulation: < 0.5%
- Voltage ripple: < 2%
- Voltage transient recovery
  Complies with ISO 6858 / MIL-704F
- Overload capability: 600 A (400 A)
  1200 A (800 A) for 30 seconds
  1800 A (1200 A) for 10 seconds
  2100 A (1400 A) for 5 seconds
  2400 A (1600 A) for 2 seconds
  To protect the aircraft, the output voltage is decreased by 2 V per 600 A (400 A) in the overload range 600-2400 A (400-1600 A)
  Complies with ISO 6858

Setup:

- Output voltage: 19-33 V
- Voltage compensation: 0-3 V (600/400 A)
- Current limit: 300-2400 A in steps (600 A units)
  200-1600 A in steps (400 A units)

Protection

- Rectifier temperature too high
- Short circuit at output
- Over and under voltage at output
  U < 20 VDC for more than 4 seconds
  U > 32 VDC for more than 4 seconds
  U > 40 VDC for more than 150 ms

Weight

- Fixed Combi Compact: 410 kg (903 lbs.)
- Mobile Combi Compact: 585 kg (1.290 lbs.)

Environmental

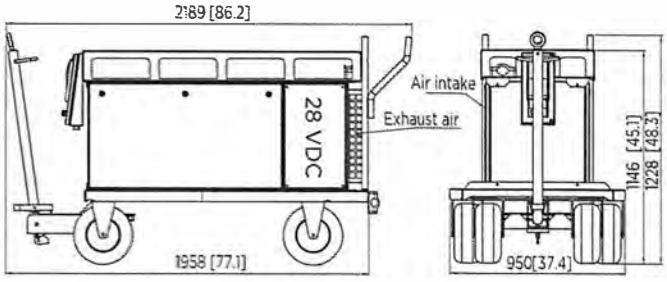
- Operating temperature -40°C to +45°C (-40°F to 113°F)

Available Ratings

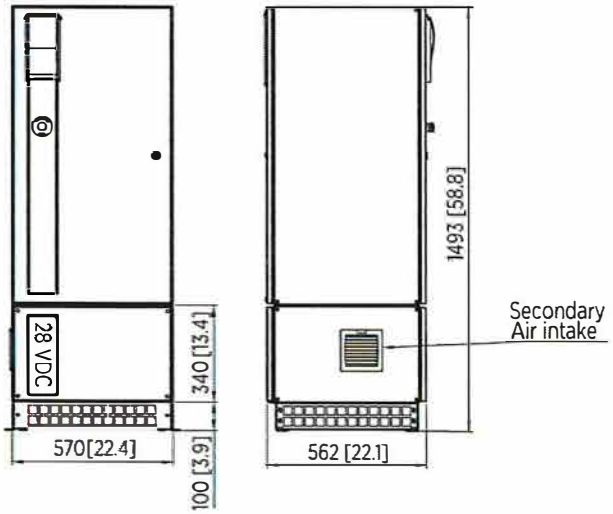
- 30 kVA with 28 VDC ARU
- 45 kVA with 28 VDC ARU
- 60 kVA with 28 VDC ARU
- 90 kVA with 28 VDC ARU

All available in fixed and mobile versions

Mobile Version



Fixed Version



Dimensions are shown in mm and (inches)

Specifications are subject to change without prior notice

It's all about connections

It's all about connections

RECOMMENDED SPARE PARTS LIST
ITW GSE 2400 30-90kVA

Part Number	Description	Qty	Unit Price	Extended Price	Remarks	Designator
579526-24	GSE Control Board	1	$ 1,753.00	$ 1,753.00		A1
579536-24	Display	1	$ 1,367.50	$ 1,367.50		A4
AM0067	Air filter for plinth	3	$ 14.26	$ 42.78		
AP-579527	Interface board	1	$ 2,079.00	$ 2,079.00		A2
AP-579532	Capacitor Board	1	$ 1,249.00	$ 1,249.00		A5
AP-AF0403	Emergency stop, compact	1	$ 27.04	$ 27.04		S1
AP-AM0131	Air filter	2	$ 86.58	$ 173.16		
AP-DP0222	Circuit breaker	1	$ 92.34	$ 92.34		Q4
AP-IT0032	Current Transformer	1	$ 19.77	$ 19.77		T5
AP-KM0200	Feed-through terminal	10	$ 2.07	$ 20.70		X1
AP-KP7087	Capacitor	3	$ 158.42	$ 475.26		C7-C9
AP-PS0010	DC Power Supply	1	$ 272.88	$ 272.88		G1
AP-SI2066	ATO fuse, 10A	10	$ 4.50	$ 45.00		F5
AP-SI2075	ATO fuse, 5A	10	$ 7.50	$ 75.00		F4
AP-SI2076	ATO fuse, 2A	10	$ 12.76	$ 127.60		F1-F3
AP-VN0017	Fan	2	$ 284.00	$ 568.00		M1-M2

FOB Palmetto
RSL_2400.xlsx
6/7/2018

Prices and Part Numbers are subject to change.

ITW GSE

1400 28 VDC GPU

Rating 600 & 400 A

LOOKING FOR A SMALL POWERFUL UNIT?

Easy to manoeuver and not space demanding neither in its mobile nor fixed version. Then the ITW GSE 1400 solid-state GPU is the answer.

The solid-state technology means that wear and tear is limited to a minimum since there are no rotating parts. The result is a very reliable and dependable unit that is built to last for a long time. In case of service or repair, the canopy can be completely removed within minutes, thus leaving full access to all parts.

INTUITIVE AND EASY-TO-USE INTERFACE

The icon based operator interface is common for all ITW GSE products. It is easy and intuitive and guarantees you correct operation.

The daily operator only has to press the combined start/stop button - nothing more. But he can monitor various parameters such as voltage and current at the display screen. For set-up and maintenance purposes, there is a deeper level dedicated for the technician.

DOWNLOADS AND UPDATES

The software-based control system means that the ITW GSE 1400 GPU can easily be updated in the future simply by transferring new software from a USB stick/flash drive. Power log and Black Box files for analysis can be downloaded the same way.

It's all about connections

It's all about connections

ITW GSE ApS
DK-5270 Odense N

Contr. By: NIJ Revised: 22-01-19

Type: AXA1400 28VDC Title: Recommended Spare Parts Revision: A Page: 1 (1) Part. No: 543320

Quantity	Unit	Comp. No.	Part No.	Description	Manufact./vend.	Type/Part No.	Data	Remarks
1	PCS		AM0072	Air Filter Output	DGI	PPI-10C, sort	HxWxD: 107x398x20 mm	AXA1400 28 VDC
1	PCS		543295	DC/AC Module (for 600 A unit)	AXA	3GWF-28/600-N	28 VDC, 600 A	SUBESDS
1	PCS		579526	GSE Control Board	AXA POWER	GSE-X400		
1	PCS		DP0228	Circuit Breaker	ABB	S 203-C40	40 A / 3 Polet	
1	PCS		KM0108	Terminal, Earth	Phönix	USLKG 16 N	2,5-25 mm² - 101 A	
1	PCS		KM2006	Terminal	Phönix	UK 16 N	1,5-16 mm²	
1	PCS		PS0010	DC Power Supply	ABB	CP-T 24/10.0	24 VDC, 10.0 A	cURus
1	PCS		579536	Display	AXA POWER	GSE-X400		
1	PCS		DV3022	Operator membrane keyboard	Seritronic I/S	AXA1400 28 VDC	28 VDC Single Output	
1	PCS		VN0020	Fan	EBM/Papst	4114 NH4U-372	24 VDC (16-30 VDC)	33.5 W, 355 m³/h, UR/CSA
1	PCS		AM0071	Air Filter Input	DGI	PPI-10C, sort	HxWxD: 150x330x20 mm	AXA1400 28 VDC
1	PCS		KP0490	Snubber Capacitor	Arcotronics	C4BHNBX4100ZAFJ	1µF 1000VDC 10%	
0								
1	PCS		SI2075	ATO fuse	Littelfuse	0287005.PXCN	5A	
1	PCS		SI2066	ATO fuse	Littelfuse	0287010.PXCN	10 A (F)	Farnell: 213-7128
1	PCS		SI2076	ATO fuse	Littelfuse	0287002 PXCN	2A	

ITW GSE ApS Smedebakken 31-33 DK-5270 Odense N Denmark
Phone +45 6318 6000 Fax: +45 6318 6049 Email: sales@itwgse.com Web: www.itwgse.com CVR/VAT No.: DK 74218814

AUTHORIZATION TO MARK

This authorizes the application of the Certification Mark(s) shown below to the models described in the Product(s) Covered section when made in accordance with the conditions set forth in the Certification Agreement and Listing Report. This authorization also applies to multiple listee model(s) identified on the correlation page of the Listing Report.

This document is the property of Intertek Testing Services and is not transferable. The certification mark(s) may be applied only at the location of the Party Authorized To Apply Mark.

Applicant:	GSE Holdings, Inc. DBA Hobart Ground Systems	**Manufacturer:**	GSE Holdings, Inc. DBA Hobart Ground Systems
Address:	11001 US Highway 41 North Palmetto, FL. 34221	**Address:**	11001 US Highway 41 North Palmetto, FL. 34221
Country:	USA	**Country:**	USA
Contact:	Ed Upshaw	**Contact:**	Ed Upshaw
Phone:	(941) 721-1061	**Phone:**	(941) 721-1061
FAX:	(941) 721-1081	**FAX:**	(941) 721-1081
Email:	eupshaw@itwgse.us	**Email:**	eupshaw@itwgse.us

Party Authorized To Apply Mark: Same as Manufacturer
Report Issuing Office: Cortland, NY USA

Control Number: 118681 **Authorized by:** Ellen Swialek

for Thomas J. Patterson, Certification Manager

C ETL LISTED US

Intertek

This document supersedes all previous Authorizations to Mark for the noted Report Number.

Intertek Testing Services NA Inc.
545 East Algonquin Road, Arlington Heights, IL 60005
Telephone 800-345-3851 or 847-439-5667 Fax 312-283-1672

Standard(s):	Standard for Power Units Other than Class 2, UL-1012, 8th Edition, Dated November 9, 2010, including revisions through January 19, 2012. Canadian Standard for General Use Power Supplies,CSA C22.2 # 107.1-01, Issued September 1, 2001, Ed 3, Reaffirmed 2011
Product:	Power Supply
Models:	2400 GPU

PART G – FORMS **Note: This form must be submitted with the bidder's bid submittal**
FORM 1: BIDDER'S CERTIFICATION

I have carefully examined this Request for Bids (RFB) which includes information for bidders, special instructions and requirements, project information, grant requirements, Davis Bacon Wage Rates, DBE, insurance and bond requirements, special conditions, general conditions and plans and technical specifications. I acknowledge receipt and incorporation of the following addenda. The cost, if any, of such revisions has been included in the price of the bid.

Addendum No. 1; dated 05/04/20. Addendum No. 3; dated 05/22/20.
Addendum No. 2; dated 05/18/20. Addendum No. 4; dated 05/28/20.
Addendum No. 5; dated 05/29/20 Addenum No. 6; dated 05/22/20

I hereby propose to provide the services requested in this bid. I agree to hold pricing for at least **180** calendar days to allow the Authority time to properly evaluate this bid. I agree that the Authority terms and conditions (http://www.flylcpa.com/purchasing/) herein shall take precedence over any conflicting terms and conditions submitted with the bid and agree to abide by all conditions of this document.

I certify that all information contained in the bid is truthful to the best of my knowledge and belief. I further certify that I am duly authorized to submit this bid on behalf of the company as its agent and that the company is ready, willing and able to perform if awarded a contract.

I further certify, under oath, that this bid is made without prior understanding, agreement, connection, discussion, or collusion with any other person, company, or corporation submitting a bid for the same product or service; no officer, employee or agent of the Authority or of any other company who is interested in said bid; and that the undersigned executed this Bidder's Certification with full knowledge and understanding of the matters therein contained and was duly authorized to do so.

thyssenkrupp Airport Systems, Inc
NAME OF BUSINESS

AUTHORIZED SIGNATURE
Enver Sarilar, Sales Officer
Brooke Smiddy, Controller
NAME, TITLE, TYPED

52-2089962
FEDERAL IDENTIFICATION #

3201 N. Sylvania Suite 117
MAILING ADDRESS
Fort Worth, TX. 76111
CITY, STATE & ZIP CODE
817-210-5012
TELEPHONE NUMBER / FAX NUMBER
enver.sarilar@thyssenkrupp.com
EMAIL ADDRESS

State of: Texas
County of: Tarrant

This foregoing instrument was acknowledged before me this 2nd. day of June, 2020, by Enver Sarilar/Brooke Smiddy, who is personally known to me or produced _____ as identification.

Signature of Notary

11543412
Serial/Commission No.

LINDA K KINSEL
Notary ID #11543412
My Commission Expires
April 16, 2023

REVISED - ADDENDUM 5. **FORM 2: OFFICIAL BID FORM. This form must be submitted with the bidder's bid submittal**

RFB NO. **20-53MMW** **BIDDER'S NAME:** thyssenkrupp Airport Systems, Inc

BIDS ARE DUE ON: **TUESDAY, JUNE 2, 2020**
PRIOR TO **2:00 P.M. LOCAL TIME**

Lee County Port Authority Purchasing Office
Southwest Florida International Airport
11000 Terminal Access Road, Suite 8671
Fort Myers, Florida 33913

The undersigned, hereinafter called "bidder," having become familiar with the local conditions, nature, and extent of the work, and having examined carefully the bid solicitation documents, including but not limited to, Information to Bidders, Special Instructions and Requirements, Project Information, Insurance and Bonding Requirements, Disadvantaged Business Enterprise Program requirements, Project Plans and Specifications, schedule & phasing, forms, and other contract documents, and having fulfilled all bid requirements herein, agrees to furnish all labor, materials, equipment, and other incidental items, facilities and services necessary to perform:

PASSENGER BOARDING BRIDGE REPLACEMENT

in full accordance with the solicitation and contract documents and all other documents related thereto on file in the Purchasing Office and, if awarded the contract, to complete the said work within the time limits specified for the pricing awarded, which is based on the following bid schedule:

	Bidder's Company Name	thyssenkrupp Airport Systems, Inc			
Item No.	**Description**	**Unit**	**Estimated Quantity**	**Unit Price**	**Extended Price**
1	Mobilization	LS	1	1,928,642.00	1,928,642.00
2	DBE Mobilization	LS	1	276,016.00	276,016.00
3	Remove / Discard or Turnover to Owner: Phone	EACH	11	11.00	121.00
4	Remove / Discard or Turnover to Owner: Illuminated Sign	EACH	11	169.00	1,859.00
5	Remove / Discard or Turnover to Owner: Cable Hoist	EACH	11	169.00	1,859.00
6	Remove / Discard or Turnover to Owner: 10" PBB Pre-Cool Plenum Hose	EACH	2	58.00	116.00
7	DCO - Demo Cut Out Sidewalks and haul off @ Existing Pile Caps	EACH	25	1,568.00	39,200.00
8	Remove Existing Passenger Boarding Bridge	EACH	27	19,807.00	534,789.00
9	Remove Concrete Paving / Walkways @ Pile Caps	SQFT	5000	30.00	150,000.00
10	Hand Excavation around existing Pile Caps	CUYD	50	1,296.00	64,800.00
11	Pile Cap Edge Form	SQFT	1500	12.00	18,000.00

12	Drill / Epoxy Dowels into exist. Pile Cap	EACH	1050	63.00	66,150.00
13	4000 PSI Concrete Pile Cap @ Existing	CUYD	300	263.00	78,900.00
14	Patch Back Exist Concrete Paving / Walkways	SQFT	5000	27.00	135,000.00
15	Temporary Infill / Opening @ Gate Door (Remove & Reinstall)	EACH	27	286.00	7,722.00
16	iOPS BMS Bldg Management System	LS	1	174,225.00	174,225.00
17	New PBB A3-58/116 (including shipping to site, insurance)	EACH	14	511,066.00	7,154,924.00
18	New PBB A3-61/127 (including shipping to site, insurance)	EACH	8	526,079.00	4,208,632.00
19	New PBB A3-65/133 (including shipping to site, insurance)	EACH	2	544,589.00	1,089,178.00
20	New PBB A3-68/144 (including shipping to site, insurance)	EACH	2	534,664.00	1,069,328.00
21	New PBB A3-72/150 (including shipping to site, insurance)	EACH	1	600,590.00	600,590.00
22	2 new PBB foundations for C1 and C2	EACH	2	18,212.00	36,424.00
23	New Fixed Walkway (40.0' LF ~~lnft~~)	EACH	2	87,410.00	174,820.00
24	Gate Sign	EACH	27	1,842.00	49,734.00
25	Bag Slide	EACH	27	4,013.00	108,351.00
26	Installation (Incl PBB, WW, GPU, PCA)	EACH	27	46,764.00	1,262,628.00
27	Manufacturer Commissioning	EACH	27	2,400.00	64,800.00
28	Remove and Cap ~~Relocate~~ Condensate Drain due at ~~to~~ Pile Cap Expansion Condensate will Drain to Pavement	EACH	27	523.00	14,121.00
29	Re-Install 45-ton PCA Unit	EACH	4	4,170.00	16,680.00
30	New 45-ton PCA Unit	EACH	~~19~~ 18	71,260.00	1,282,680.00
31	New ~~75~~-90 ton PCA Unit	EACH	5	110,744.00	553,720.00
32	Disconnect / Make Safe Existing Electrical to Exist PBB	EACH	27	1,076.00	29,052.00
33	Re-Install Exist 400Hz SSFC 90KVA	EACH	12	3,377.00	40,524.00
34	Replace 400Hz SSFC 90KVA	EACH	10	35,357.00	353,570.00
35	Replace 400Hz SSFC 180KVA	EACH	5	60,008.00	300,040.00
36	Cameras, Software Licensing & Programming (Recording Servers and Video Storage Servers by LCPA)	EACH	27	74,369.00	2,007,963.00
37	Remove Stop Bar (1-Each)	LNFT	10	422.00	4,220.00
38	Striping to be Removed (Grind Only)	~~LNFT~~LS	~~4617~~ 1	184,905.00	184,905.00
39	Striping at Gates	~~LNFT~~LS	~~4997~~ 1	181,235.00	181,235.00
40	New Stop Bar (1-Each)	LNFT	10	304.00	3,040.00
	GRAND TOTAL EXTENDED BID PRICE				24,268,558.00

NOTICE: Bidders are responsible for verifying quantities to the degree he/she deems necessary in order to submit a lump sum bid. Quantities and unit prices will NOT be used to determine award in any case. The Grand Total Bid Price only will be used for consideration of low bid award. This is not a unit price contract. There will be NO adjustments for errors of quantity take offs or variations caused by existing conditions regardless of bidder's basis of information.

Bidder must bid on all bid items. Any bidder not bidding all bid items will be considered nonresponsive and disqualified.

FAA Advisories to be followed (or newer version as updated by FAA): FAA AC 150/5370-2G Operational Safety on Airports During Construction, FAA AC 150/5200-18C Airport Safety Self Inspection, FAA AC 150/5210-5D Painting, Marking & Lighting of Vehicles Used on an Airport, FAA AC 150/5200-33B Hazardous Wildlife Attractants on or Near Airports.

NOTES / INSTRUCTIONS:
1) All bidders are required to hold their bid prices for 180 days after the date bids are due. Bidders shall provide a Bid Bond with their bid submittal. Bid Bonds shall be provided in the amount of 5% of the Grand Total Bid Number.
2) Bidder shall submit a complete bid including pricing for the entire scope of work and by providing unit costs for each item indicated herein. It shall be the bidder's sole responsibility to ensure formatting and mathematical calculations be precise and correct Bidders shall provide prices for all items to be considered a complete and responsive bid.
3) Basis for ranking of bids shall be determined by a number of factors including but not limited to the Grand Total Bid Number for all items within the bid schedule.
4) The bidder shall provide a Unit Price and the extended Bid Price for each line item in the bid schedule. Failure to follow bid instructions may be grounds for bid rejection.
5) Prospective responsive low bidder (based on Grand Total Bid Number) will enter into a lump sum contract with the Lee County Port Authority.
6) Estimated quantities herein are published solely for the purpose of establishing the basis for lump sum bid award.
7) The project will be awarded as a lump sum contract according to the Grand Total Extended Bid Price of the lowest, responsive and responsible bidder.
8) C-105 Mobilization shall be limited to 10 percent of the Grand Total Bid Number.
9) The bidder proposes to furnish all material, equipment and labor to execute all work associated with the project.
10) All project design documents and specifications take precedence over any bid notes mentioned herein.

NAME OF BIDDER thyssenkrupp Airport Systems, Inc

REVISED - ADDENDUM 2 -FORM 2: OFFICIAL BID FORM (Page 4 of 4)

Each Bidder must demonstrate the minimum qualifications set forth in Part B have been met by providing the information requested below. The inability to verify minimum qualifications have been met due to bidders' submission of inadequate, inaccurate or outdated reference information may result in determination of non-responsiveness. Attach additional sheets as needed to provide complete information.

Yes or No Yes . Bidder contracting in a corporate capacity is registered with the Florida Department of State and is authorized to do business in the State of Florida.

Yes or No Yes . Bidder has previously contracted with one or more medium or large hub FAA Part 139 airport(s) for work occurring on the airfield that was performed in accordance with FAA prescribed technical specifications, phasing and airfield maintenance of traffic procedures.

And,

Yes or No Yes .This/these contract(s) has/have a combined project value of no less than $10 million dollars with no individual contract valued at less than $2 million dollars,

And,

Yes or No Yes . This/these contract(s) has/have been performed within the past ten (10) years prior to the date bids are due.

Provide the following information for each contract Bidder is relying on to meet minimum qualifications

Name & location of Airport
Airport Contact Name and Title & Airport Contact Telephone and Email address
Project Name
Contract value & contract begin and end dates

Yes or No Yes . Bidder is a manufacturer of passenger boarding bridges (PBB) and has manufactured 100 or more PBB's for projects in the United States within the past ten years prior to date bids are due.

Yes or No No . Bidder's **subcontractor** is a manufacturer of passenger boarding bridges (PBB) and has manufactured 100 or more PBB's for projects in the United States within the past ten years. Name of proposed subcontractor? _____

Yes or No No . Bidder is an installer of passenger boarding bridges and has installed no less than three (3) passenger boarding bridge projects in the United States on projects of similar size and scope within five (5) years prior to the date bids are due.

Yes or No Yes . Bidder's **subcontractor** is an installer of passenger boarding bridges and has installed no less than three (3) passenger boarding bridge projects in the United States on projects of similar size and scope within five (5) years prior to the date bids are due. Name of proposed subcontractor? Airport Techincal Support

Yes or No Yes . Bidder has **not** been found guilty by any court in the United States of crimes pertaining to industrial espionage or intellectual property theft.

Name of Bidder thyssenkrupp Airport Systems, Inc

Project	Location	Estimated Value	Project Completion Date	Number of PBB's	Owner	Contacts
Miami International Airport	Miami, FL	9,191,031	10/31/14	28	Miami International Airport, Aviation Dept	Manuel Freire, Construction Manager, 305-869-3471, c 786-498-7587, mfreire@miami-airport.com
Miami International Airport	Miami, FL	4,496,785	02/28/14	8	Miami International Airport, Aviation Dept	Manuel Freire, Construction Manager, 305-869-3471, c 786-498-7587, mfreire@miami-airport.com
Birmingtham Shuttlesworth International	Birmingham, AL	9,002,694	09/30/16	19	Brasfield & Gorrie	Scott Coleman, 205-328-4000, f: 205-458-0147, bhmairport@brasfieldgorrie.com
Calgary International Airport	Calgary, Alberta Canada	22,488,878	99%	22	Calgary Airport Authority	James Praestegaard, Project Manager, 2000 Airport Road, NE Calgary, AB, T2E 6W5 403-735-5503, c: 403-801-5105, jamesp@yyc.com
Nuevo Dorado Aeropuerto Internacional	Bogota City, Columbia	16,644,463	100%	33	Consorcio Constructor Nuevo	Sr. Jose Maria Llorente, 439-7171 option 1
San Diego International Airport	San Diego, CA	7,249,209	05/31/15	2	Turner PCL Flatiron	Dan Colburn, 602-478-3676/John Neil, jneil@tdpc1.com
Plattsburgh International Airport	Plattsburgh,NY	2,982,738	02/28/16			
Pulkovo - St. Peterburg Airport	St Petersburg, Russia	7,621,513	10/31/2017	16	ICTAS Astaldi Joint Venture	7-812-240-4815
DFW - Terminal B North Stinger Project	Dallas, TX	4,725,225	9/30/2017	9	Austin Commercial, LP	Gary Gunter, 3535 Travis St. Ste. 300, Dallas, TX., ggunter@austin-ind.com
Orlando Sanford International Airport	Sanford, FL	7,306,986	12/31/16	12	Sanford Airport Authority	Gerard Balajadia, Maintenance, 2971 Carrier, Ave., Sanford FL. 32773, 407-585-4611 c: 407-969-9998, gerard.balajadia@aww.aero
Boston Logan International Airport	East Boston, MA	4,580,959	09/30/16	11	Massachusetts Port Authority	Rona Kysilovsky, Project Manager, 617-568-3972, f: 617-568-5999 rkysilovsky@massport.com
Boston Logan International Airport	East Boston, MA	3,761,183	05/31/15	8	Massachusetts Port Authority	Rona Kysilovsky, Project Manager, 617-568-3972, f: 617-568-5999 rkysilovsky@massport.com
John F. Kennedy International Airport	New York, NY	2,123,765	09/30/16	3	JetBlue Airways Corporation	Peter McManus, 718-286-7900, c 646-734-2124
Ottawa Macdonald-Cartier International Aiport	Ottawa, Canada	8,751,957	99%	8	Ottawa Macdonald-Cartier International Airport Authority	Barbara Rupert, Project Manager, 613-248-2000 ext.1910 barb.rupert@vow.ca

Project	Location	Estimated Value	Project Completion Date	Number of PBB's	Owner	Contacts
Kurumoch International Airport	Samara, Russia	3,414,035	09/30/16	7	Kurumoch International Airport	Oleg Melenevskiy, 7 499 714 39 50/Vladimir 5haskin, shashkinvg@gmail.com
Punta Cana Internatinal Airport	Punta Cana, Dominican Republic	4,307,099	09/30/16	7	Corporacion Aeroportuaria del Este, S.A.A.	Giovanni, Rainieri, 809-959-2376/Tim 5chneiter, 407-248-9036, tschneiter@aviatdesign.com
Tampa International Airport	Tampa, FL	9,325,763	10/31/16	13	Walbridge	Greg Keresi, 704-362-4129, gkeresi@wallbridge.com
Houston Intercontinental Airport	Houston, TX	2,295,335	09/30/16	2	Manhattan Construction Company	Keith Knighten, Project Manager, 18100 Lee Rd. Humble, TX. 738 713-332-7266 c: 832-435-8387
San Diego International Airport	San Diego, CA	1,920,135	10/31/16	2	San Diego County Regional Airport Authority	Alfredo Arrieta, Project Manager, 619-400-2400
Baltimore-Washington International Thurgood Marshall Airport	Baltimore, MD	7,035,221	5/31/2018	12	Maryland Aviation	Mark M. Petrowicz, Resident Engineer, 410-487-8414, c 410-212-8923, mark.petrowicz@parsons.com
El Paso International Airport	El Paso, TX	8,644,608	7/31/2017	15	Urban Associates, Inc	Frank 5ierra, Project Manager, 915-772-8857, Daniel Alvarado, Estimator, Daniel.a@urbanassociates.com
Northwest Florida Regional Airport	Eglin AFB, FL	1,963,708	12/31/16	2	County of Okaloosa	Doug Hambrechi, PE, 813-889-3892
Montréal-Pierre Elliott Trudeau International Airport	Montreal, Canada	7,797,742	99%	7	Aeroports de Montreal	Philipe Lacombe, 514-394-7283, Procurement Contract Agent, 800 Place Leigh-Capreo, Dorval,Quebec, Canada, philippe.lacombe@admtl.com
LaGuardia International Airport	La Guardia, NY	3,528,589	09/30/16	8	American Airlines, Inc.	Mike Napoli, Corporate Real Estate-Project Manager-Airport Planning, 4333 Amon Carter Blvd., Fort Worth TX. 76155, 817-967-1097, c 817-863-6174, mike.napoli@aa.com
Huntsville International Airport	Huntsville, AL	8,829,583	99%	12	Johnson Contractors	Thomas Counts, 256-383-0313, tcounts@johnsoncont.com
Miami International Airport	Miami, FL	2,964,248	1/31/2018	1	Parsons Odebrecht	Jorge L. Zurita, Project Manager, 305-869-4006, jorge.zurita@pojv-ntd.com

Project	Location	Estimated Value	Project Completion Date	Number of PBB's	Owner	Contacts
Los Angeles International Airport	Los Angeles, CA	2,199,583	12/31/16	4	American Airlines, Inc.	Mike Napoli, Corporate Real Estate-Project Manager-Airport Planning, 4333 Amon Carter Blvd., Fort Worth TX. 76155, 817-967-1097, c 817-863-6174, mike.napoli@aa.com
Miami International Airport	Miami, FL	13,103,344	1/31/2018	10	Miami International Airport Aviation Department	Eugene Strozier, Airport Facilities Superintendent, Miami-Dade Aviation Dept. PO Box 02554, Miami, FL, 33102-5504
Westchester Regional Airport	White Plains, NY	2,230,617	97%	2	Westchester County	Mike Napoli, Corporate Real Estate-Project Manager-Airport Planning, 4333 Amon Carter Blvd., Fort Worth TX. 76155, 817-967-1097, c 817-863-6174, mike.napoli@aa.com
Boston Logan International Airport	Boston, MA	7,036,502	1/31/2018	6	Massachusetts Port Authority	Louie Ferolito, Technical Lead G5E Ramp Specialist, 151 Michigan Ave. Ste. 543, Miami Beach, FL 33139, 305-213-8590 Louis.Ferolito@aecom.com
Calgary International Airport	Calgary, Alberta Canada	2,167,880	100%	2	Calgary Airport Authority	Jill McNichol, PMP, 403-735-1515, jillm@yyc.com
Roanoke Regional Airport	Roanoke, VA	3,037,246	100%	5	Roanoke Regional Airport Commission	Diana Lewis, 540-362-1999, fax: 540-540-563-4838, dianalewis@flyroa.com
Los Angeles International	Los Angeles, CA	20,290,011.00	5/15/2020	26	Turner PCL	626-833-4923
Austin Bergstrom	Austin, TX.	7,203,305.00	5/30/2019	6	Hensel Phelps	Phil Randel, 936-615-5346,
Baltimore Washington International	Baltimore, MD	3,730,638	99%	6	Whiting Turner	Gregory Shotto, Project Manager, 6305 Ivy Lane, Suite 800, Greenbelt, MD. 20770, 410-365-037, gregory.shotto@whiting-turner.com
Charlotte Douglas International Airport	Charlotte, NC	42,769,028.00	2/1/2021	57	Charlotte Douglas International Airport	Crystal Bailey, 704-359-4813 cibailey@cltairport.com/John Worley, Maintenance, 704-579-2882, c: 704-359-4885, jaworley@cltairport.com
Dallas Fort Worth Int'l	Dallas, TX	2,200,000.00	8/20/2019	6	American Airlines	Mike Napoli, Corporate Real Estate-Project Manager-Airport Planning, 4333 Amon Carter Blvd., Fort Worth TX. 76155, 817-967-1097, c 817-863-6174, mike.napoli@aa.com

Project	Location	Estimated Value	Project Completion Date	Number of PBB's	Owner	Contacts
LaGuardia International Airport	La Guardia, NY	30,730,638.00	6/28/2019	35	Skanska Walsh	Bob Cranston, 917-543-8271
Bermuda L.F Wade Airport	St. George's Bermuda	3,820,000.00	2/1/2020	6	L.F. Wade International Airport/Aecon Airport Constructors	Mirek Futkowski, Sr. Project Manager, 416-432-0037, mfutkowski@aaecon.com,
St. Johns International Airport	St Johns, Newfoundland	2,944,293	98%	4	WSP	Jerome-Alexandre Soumaster, Senior Project Manager, Ste. 306 Terrace on the Square, 8-10 Rowan Street, St. John's, NL A1B @X1, Canada, 709-986-4759' jsoumastre@stjohnsairport.com
Philadelphia International Airport	Philadelphia, PA	8,393,645.00	8/15/2019	12	Daniel J. Keating Company	William Farrell, 610-664-4550 ext. 332, wfarrell@djkeating
Boston Logan International	Boston, MA	7,812,000.00	6/1/2019	18	American Airlines	Mike Napoli, Corporate Real Estate-Project Manager-Airport Planning, 4333 Amon Carter Blvd., Fort Worth TX. 76155, 817-967-1097, c 817-863-6174, mike.napoli@aa.com
Miami International Airport	Miami, FL	4,717,919.00	5/30/2019	5	Miami-Dade Aviation	Eugene Strozier, Airport Facilities Superintendent, Miami-Dade Aviation Dept. PO Box 02554, Miami, FL, 33102-5504
Ronald Reagan International Airport	Arlington, VA	14,285,050.00	5/1/2021	14	Turner Construction	Lee Palermiti, 703-841-7096, lpalermiti@tcco.com
Newark Liberty International Airport	Newark, NJ.	28,685,000.00	4/1/2022	33	Port Authority of New York/Tutor/Parsons, JV	Tim Sarre, P.E., 1000 Main St., New Rochelle, NY 10801, 818-408-5554, tim.sarre@tutorperini.com
Westchester County Airport	White Plains, NY	2,422,952.00	6/28/2019	2	County of Westchester	Martin Connolly, Program Admin. Contract Mgt. 914-231-1329 fax 914-231-1546 mmcf@westchestergov.com
Central Wisconsin	Mosinee, WI	2,958,541.00	2/1/2021	4	J.H. Findorff & Sons	Jon Winch, Project Engineer, 608-316-9343, jwinch@findorff.com
Toronto C30	Toronto, Canada	3,240,702.00	5/15/2019		Greater Toronto Airport Authority	Jonathan Kwan, Project Manager,3111Convair Dr. Toronto, AMF, ON L5P 1B2, 1-416-776-3676, f: 416-776-5740

ThyssenKrupp Airport Systems

North America Project List

thyssenkrupp

Airport	Location	Customer	Type	Qty. Sold	Mfg Start	Mfg End
San Francisco International Airport	US — San Francisco, CA	City of San Francisco	AD	40	1998	1998
Northwest Arkansas Regional Airport	US — Bentonville, AR	American Airlines	DS	1	1999	1999
Cincinnati/Northern Kentucky International Airport	US — Cincinnati, OH	Northwest Airlines	DS	1	1999	1999
George Bush Intercontinental Airport	US — Houston, TX	City of Houston	AD	S	1998	1998
McGhee Tyson Airport	US — Knoxville, TN	Rentenbach, Bovis, Russell JV	AD/DS	9	1999	1999
Los Angeles International Airport	US — Los Angeles, CA	American Airlines	AD	4	1999	1999
Nassau International Airport	BS — Nassau, Bahamas	American Airlines	DS	1	1999	1999
Memphis International Airport	US — Memphis, TN	Northwest Airlines	AD	1	1999	1999
Vancouver International Airport	CA -- Vancouver, B.C., Canada	Vancouver Airport Authority	CB	7	1999	2000
Buffalo Niagara International Airport	US — Buffalo, NY	Niagara Frontier Transportation Authority	AD	2	1999	1999
Naval Air Station Norfolk	US — NAS Norfolk, VA	Beneco Construction	AD	2	1999	1999
Los Angeles International Airport	US — Los Angeles, CA	American Airlines	AD	4	2002	2002
Nassau International Airport	BS — Nassau, Bahamas	American Airlines	DS	1	1999	1999
Edmonton International Airport Main Terminal	CA — Edmonton, Alberta, Canada	Edmonton Regional Airport Authority	AD	8	2000	2000
Bradley International Airport	US — Windsor Locks, CT	American Airlines	DS	1	1999	1999
Cleveland Hopkins International Airport	US — Cleveland, OH	American Airlines	DS	1	1999	1999
William P. Hobby Airport	US — Houston, TX	City of Houston	AD	14	2000	2000
San Diego International Airport	US — San Diego, CA	San Diego County Regional Airport Authority	AD	12	2000	2000
Buffalo Niagara International Airport	US — Buffalo, NY	Niagara Frontier Transportation Authority	AD	1	2000	2000
George Bush Intercontinental Airport	US — Houston, TX	City of Houston	AD	3	2000	2000
Minneapolis-St. Paul International Airport	US — Minneapolis, MN	US Airways	AD	1	2000	2001
Minneapolis-St. Paul International Airport	US — Minneapolis, MN	Peneco GC	AD	4	2000	2000
Harrisburg International Airport	US — Harrisburg, PA	Susquehanna Area Regional Airport Authority	AD	2	2000	2000
Toronto Pearson International Airport	CA — Mississauga, Ontario, Canada	PCL	AD	11	2000	2000
Philadelphia International Airport	US — Philadelphia, PA	US Airways	AD	2	2000	2000
Dallas/Fort Worth International Airport	US — DFW Airport, TX	Hensel Phelps	AD	3		
Chicago Midway International Airport	US — Chicago, IL	MATCO	AD	10	2001	2003
LaGuardia International Airport	US — New York, NY	American Eagle	AD	4	2001	2001
Southeast Texas Regional Airport	US — Beaumont, TX	Jefferson County	DS	3	2001	2001
Fort Lauderdale Hollywood International Airport	US — Fort Lauderdale, FL	American Airlines	AD	3	2000	2000
Dallas/Fort Worth International Airport	US — DFW Airport, TX	Hensel Phelps	AD	4	2001	2001
Chicago Midway International Airport	US — Chicago, IL	MATCO	AD	11	2001	2001
Chicago Midway International Airport	US — Chicago, IL	MATCO	AD	8	2001	2001
Chicago Midway International Airport	US — Chicago, IL	MATCO	AD	12	2001	2001
Aeropuerto Internacional de la Ciudad de México	MX — Mexico City, Mexico	Inmobiliaria Fumisa, S.A. de C.V.	AD	8	2001	2001
Minneapolis-St. Paul International Airport	US — Minneapolis, MN	Metropolitan Airport Commission	AD	2	2001	2001
Charlotte/Douglas International Airport	US — Charlotte, NC	City of Charlotte	AD	8	2001	2002
Valley International Airport	US — Harligen, TX	City of Harligen	AD	1	2001	2001
Corpus Christi International Airport	US — Corpus Christi, TX	City of Corpus Christi	AD	5	2002	2002
Saskatoon John G. Diefenbaker International Airport	CA — Saskatoon, Saskatchewan, Canada	Saskatoon Airport Authority	AD	2	2001	2001
Will Rogers World Airport	US — Oklahoma City, OK	Oklahoma City Airport Trust	AD	17	2002	2003
Bradley International Airport	US — Windsor Locks, CT	Connecticut Department of Transportation	AD	16	2002	2004
John F. Kennedy International Airport	US — New York, NY	American Airlines	AD	14	2002	2006

ThyssenKrupp Airport Systems

North America Project List

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Airport	Location	Customer	Type	Qty. Sold	Mfg Start	Mfg End
Atlantic City International Airport	US — Pomona, NJ	South Jersey Transportation Authority	AD	3	2002	2002
San Antonio International Airport	US — San Antonio, TX	City of San Antonio Aviation Department	AD	2	2002	2002
Toronto Pearson International Airport	CA — Mississauga, Ontario, Canada	Greater Toronto Airport Authority	AD	10	2000	2000
Calgary International Airport	CA — Calgary, Alberta, Canada	Calgary Airport Authority	AD	10	2002	2002
Toronto Pearson International Airport	CA — Mississauga, Ontario, Canada	Greater Toronto Airport Authority	AD	54	2003	2005
Logan International Airport	US — Boston, MA	Massachusetts Port Authority	AD	4	2003	2003
Dallas/Fort Worth International Airport	US — DFW Airport, TX	American Airlines	AD	27	2003	2004
Miami International Airport	US — Miami, FL	American Airlines	AD	28	2003	2004
Cleveland Hopkins International Airport	US — Cleveland, OH	City of Cleveland	AD	1	1999	1999
Lambert-St. Louis International Airport	US — St. Louis, MO	City of St. Louis	AD	10	2002	2003
Chicago Midway International Airport	US — Chicago, IL	City of Chicago	AD	2	1999	1999
Brownsville/South Padre Island International Airport	US — Brownsville, TX	City of Brownsville	AD	1	2002	2003
Calgary International Airport	CA — Calgary, Alberta, Canada	Calgary Airport Authority	AD	4	2002	2003
O'Hare International Airport	US — Chicago, IL	American Airlines	AD	3	2002	2003
Washington Dulles International Airport	US — Dulles, VA	Metropolitan Washington Airports Authority	AD	5	2002	2003
Luis Muñoz Marín International Airport	PR — Carolina, Puerto Rico	Puerto Rico Ports Authority	AD	7	2002	2003
Miami International Airport	US — Miami, FL	Miami-Dade Aviation Department	AD	17	2002	2003
Astana International Airport	KZ — Astana, Kazakhstan	Malaysia Airports Holdings Bhd	AD	6	2002	2003
Montréal-Pierre Elliott Trudeau International Airport	CA — Dorval, Quebec, Canada	Aéroports de Montréal	AD	12	2002	2003
Greenville-Spartanburg International Airport	US — Greer, SC	Greenville-Spartanburg Airport Commission	AD	2	2004	2004
Montréal-Pierre Elliott Trudeau International Airport	CA — Dorval, Quebec, Canada	Aéroports de Montréal	AD	3	2002	2003
Calgary International Airport	CA — Calgary, Alberta, Canada	Calgary Airport Authority	AD	1	2003	2004
Tallahassee Regional Airport	US — Tallahassee, FL	City of Tallahassee	AD	2	2003	2004
Lafayette Regional Airport	US — Lafayette, LA	Hugh E. Stevens, SR, CSI	AD	2	2003	2004
Syracuse Hancock International Airport	US — Syracuse, NY	City of Syracuse Department of Aviation	AD	2	2003	2004
Akron-Canton Regional Airport	US — Green, OH	Akron Canton Regional Airport Authority	AD	5	2003	2004
Duluth International Airport	US — Duluth, MN	City of Duluth	AD	1	2003	2004
Raleigh-Durham International Airport	US — RDU Airport, NC	Raleigh-Durham Airport Authority	AD	2	2003	2004
Little Rock National Airport	US — Little Rock, AR	City of Little Rock	AD	2	2003	2004
San Diego International Airport	US — San Diego, CA	San Diego County Regional Airport Authority	AD	2	2004	2005
Princess Juliana International Airport	AN — Philipsburg, Sint Maarten, Netherlands Antillles	Princess Juliana Int'l Airport Holding Company N.V.	AD	4	2005	2006
Atlantic City International Airport	US — Egg Harbor Twp, NJ	Atlantic Shore Drilling Contractors	CW	0	2005	2006
Dallas/Fort Worth International Airport	US — DFW Airport, TX	American Airlines	AD	2	2005	2005
John F. Kennedy International Airport	US — New York, NY	American Airlines	AD	9	2005	2007
Baltimore-Washington International Thurgood Marshall Airport	US —Linthicum, MD	Maryland Aviation Administration	AD	4	2005	2006
John F. Kennedy International Airport	US — New York, NY	jetBlue Airways	WW	1	2005	2005
Cibao International Airport	DO — Santiago de los Caballeros, Dominican Republic	Zortek Systems	AD	3	2005	2005
John F. Kennedy International Airport	US — New York, NY	jetBlue Airways	AD	26	2006	2007
Saskatoon John G. Diefenbaker International Airport	CA — Saskatoon, Saskatchewan, Canada	Saskatoon Airport Authority	AD	1	2005	2005

ThyssenKrupp Airport Systems

North America Project List

thyssenkrupp

Airport	Location	Customer	Type	Qty. Sold	Mfg Start	Mfg End
Blue Grass Airport	US — Lexington, KY	Messer Construction Company	AD	4	2005	2005
Orlando International Airport	US — Orlando, FL	Gomez Construction Company	AD	1	2005	2006
Abbotsford International Airport	CA — Abbotsford, British Columbia, Canada	City of Abbotsford	AD	1	2005	2006
Los Angeles International Airport	US — Los Angeles, CA	Los Angeles World Airports	AD/A380	26	2006	2008
İzmir Adnan Menderes International Airport	TR — Izmir, Turkey	IC ICTAS INSAAT SANAYI ve TICARET	AD	10	2006	2006
Toncontín International Airport	HN — Tegucigalpa, Honduras	Zortek Systems	AD	2	2005	2006
Murtala Muhammed International Airport	NG — Lagos, Nigeria	Zortek Systems	AD	6	2005	2006
Winnipeg James Armstrong Richardson International Airport	CA — Winnipeg, Manitoba, Canada	Winnipeg Airports Authority	AD	1	2005	2005
Dallas Love Field	US — Dallas, TX	American Airlines	AD	1	2005	2005
McAllen-Miller International Airport	US — McAllen, TX	City of McAllen	AD	1	2004	2004
Dallas/Fort Worth International Airport	US — DFW Airport, TX	Azteca Enterprises, Inc.	AD	6	2006	2006
John F. Kennedy International Airport	US — New York, NY	American Airlines	AD	13	2006	2007
Managua International Airport	NI — Managua, Nicaragua	Empresa Administradora De Aeropuertos Internacionales	AD	1	2006	2006
Logan International Airport	US — Boston, MA	American Airlines	AD	1	2006	2006
El Paso International Airport	US — El Paso, TX	Continental Airlines, Inc.	AD	1	2006	2006
Hawler International Airport	IQ — Erbil, Iraq	Mak-Yol	AD	2	2006	2006
Tbilisi International Airport	GE — Tbilisi, Georgia	TAV Havalimanlari Terminal Isletmeciligi A.S.	AD	3	2006	2006
Port-au-Prince International Airport	HT — Port-au-Prince, Haiti	American Airlines	AD	2	2006	2006
Baltimore-Washington International Thurgood Marshall Airport	US —Linthicum, MD	Maryland Aviation Administration	AD	1	2007	2007
San Francisco International Airport	US — San Francisco, CA	City of San Francisco	AD	4	2007	2007
Palm Beach International Airport	US — West Palm Beach, FL	Palm Beach County Department of Airports	AD	28	2007	2007
Buffalo Niagara International Airport	US — Buffalo, NY	DK Consultants	AD	1	2006	2006
Sheremetyevo International Airport	RU — Moscow, Russia	Bovis Lend Lease	AD	22	2007	2007
Norman Manley International Airport	JM — Kingston, Jamaica	Kier Construction Ltd.	CB	4	2007	2007
Indianapolis International Airport	US — Indianapolis, IN	Hunt Smoot	AD	40	2007	2008
Ottawa Macdonald-Cartier International Airport	CA — Ottawa, Ontario, Canada	Ottawa Macdonald-Cartier International Airport Authority	AD/LR	8	2007	2008
Plattsburgh International Airport	US — Plattsburgh, NY	Murnane Building Contractors	AD	1	2007	2007
San Francisco International Airport	US — San Francisco, CA	City of San Francisco	AD/A380	5	2007	2007
Licenciado Gustavo Díaz Ordaz International Airport	MX — Puerto Vallarta, Jalisco, Mexico	Grupo Aeroportuario del Pacífico	AD	4	2007	2007
Manuel Carlos Piar Guayana Airport	VE — Ciudad Guayana/Puerto Ordaz, Venezuela	JCI Distributors, Inc	CB	3	2007	2007
Hawler International Airport	IQ — Erbil, Iraq	Mak-Yol	AD	4	2007	2007
San Antonio International Airport	US — San Antonio, TX	City of San Antonio Aviation Department	AD	1	2007	2007
Rochester International Airport	US — Rochester, MN	City of Rochester	AD	1	2007	2007
Killeen-Fort Hood Regional Airport	US — Killeen, TX	Carter & Burgess	CB	2	2008	2008
Norman Manley International Airport	JM — Kingston, Jamaica	Kier Construction Ltd.	CB	5	2008	2008
Louis Armstrong New Orleans International Airport	US — Kenner, LA	IMDC, Inc.	AD	24	2008	2008
Haiti Port-au-Prince International Airport	HT — Port-au-Prince, Haiti	JCI Distributors	AD	1	2008	2009
LaGuardia International Airport	US — Queens, NY	American Airlines	AD	1	2006	2007

ThyssenKrupp Airport Systems

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thyssenkrupp

Airport	Location	Customer	Type	Qty. Sold	Mfg Start	Mfg End
Raleigh-Durham International Airport	US — RDU Airport, NC	Raleigh-Durham Airport Authority	AD	1	2008	2008
Orlando International Airport	US — Orlando, FL	Greater Orlando Aviation Authority	AD	33	2008	2009
San Diego International Airport	US — San Diego, CA	San Diego County Regional Airport Authority	AD	1	2002	2002
Miami International Airport	US — Miami, FL	Miami-Dade Aviation Department	AD	8	2009	2009
Niagara Falls International Airport	US — Niagara Falls, NY	Niagara Frontier Transportation Authority	AD	1	2009	2009
Springfield-Branson National Airport	US — Springfield, MO	Reynolds, Smith and Hills	AD	5	2009	2009
Saskatoon John G. Diefenbaker International Airport	CA — Saskatoon, Saskatchewan, Canada	Saskatoon Airport Authority	AD	1	2009	2009
Sabiha Gökçen International Airport	TR — Istanbul, Turkey	Linmark-GMR Joint Venture	AD	16	2009	2009
Wilmington International Airport	US — Wilmington, NC	New Hanover County Airport Authority	AD	1	2009	2009
San Antonio International Airport	US — San Antonio, TX	City of San Antonio Aviation Department	AD	12	2009	2010
Los Angeles International Airport	US — Los Angeles, CA	Los Angeles World Airports	AD	1	2009	2009
St. Petersburg-Clearwater International Airport	US — St. Petersburg, FL	The LPA Group, Inc.	AD	2	2009	2009
El Tepual Airport	CL — Puerto Montt, Chile	Zortek Systems	AD	3	2009	2009
Gustavo Rojas Pinilla International Airport	CO — San Andrés, Colombia	Zortek Systems	AD	1	2009	2009
Lynden Pindling International Airport	BS — Nassau	Nassau Airport Development Company (NAD)	AD	10	2010	2010
MIA Regional Commuter Facility	US — Miami, FL	Central Florida Equipment Rentals, Inc.	AD	2	2010	2010
Outagamie County Regional Airport	US — Appleton, WI	Miron Construction Co., Inc.	LR	1	2009	2009
Asheville Regional Airport	US — Fletcher, NC	Asheville Regional Airport Authority	AD	2	2009	2010
Kalamazoo/Battle Creek International Airport	US — Kalamazoo, MI	Kalamazoo County Purchasing Department	AD	S	2010	2010
MBS International Airport (Saginaw)	US — Freeland, MI	MBS International Airport	LR	4	2010	2010
Baltimore-Washington International Thurgood Marshall Airport	US —Linthicum, MD	P. Flanigan & Sons, Inc.	AD	S	2009	2010
Raleigh-Durham International Airport	US — RDU Airport, NC	Parsons	AD	16	2010	2010
Sioux Gateway Airport	US — Sioux City, IA	W.A. Klinger, LLC	LR	1	2009	2010
Bradley International Airport	US — Windsor Locks, CT	American Airlines	AD	1	2009	2009
Greenville-Spartanburg International Airport	US — Greer, SC	Greenville-Spartanburg Airport Commission	AD	2	2009	2010
Monroe Regional Airport	US — Monroe, LA	Lincoln Builders of Ruston, LA	LR	4	2010	2011
Duluth International Airport	US — Duluth, MN	City of Duluth	LR	2	2009	2009
Jan Santamaria International Airport	CR — San Jose, Costa Rica	Edica Ltda.	AD	3	2009	2010
Comodoro Arturo Merino Benítez International Airport	CL — Santiago, Chile	ThyssenKrupp Elevadores S.A. Chile	AD	1	2009	2010
Chicago O'Hare International Airport	US — Chicago, IL	American Airlines	AD	7	2009	2010
Logan International Airport	US — Boston, MA	Massachusetts Port Authority	AD	S	2010	2010
George Bush Intercontinental Airport	US — Houston, TX	Houston Airport Systems	AD	7	2010	2010
Peoria Regional Airport	US — Peoria, IL	Peoria International Airport	AD	3	2010	2011
Miami International Airport, Terminal J A380	US — Miami, FL	Miami-Dade Aviation Department	AD/A380	2	2010	2010
Calgary International Airport	CA — Calgary, Alberta, Canada	Calgary Airport Authority	AD	36	2010	2012
Tulsa International Airport	US - Tulsa, Oklahoma	Tulsa Airport Authority	AD	S	2011	2011
Sacramento International Airport	US - Sacramento, CA	County of Sacramento	AD	12	2010	2011
Jackson-Evers International Airport	US - Jackson, MS	Jackson-Evers Airport Authority	AD	S	2010	2011
Amarillo Rick Husband International Airport	US - Amarillo, TX	City of Amarillo	CB	6	2010	2011
Chippewa Valley Regional Airport	US - Euclaire, WI	The Samuels Group	AD	1	2011	2011

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Airport	Location	Customer	Type	Qty. Sold	Mfg Start	Mfg End
Ponce Mercedita Airport	Puerto Rico	AJ Constructors	AD	1	2011	2011
Louis Armstrong New Orleans International Airport	US - New Orleans, LA	City of New Orleans	AD	5	2011	2012
Lubbock Preston Smith International Airport	US - Lubbock, TX	City of Lubbock	AD	9	2011	2011
St. John's Newfoundland	CA - St. John's, NF	New Foundland	AD	1	2011	2011
Hobby International Airport	US - Houston, TX	Houston Airport Authority	AD	2	2011	2012
Boston Logan International Airport	US - Boston, MA	Massachusetts Port Authority	AD	1	2011	2011
St. Louis International Airport	US - St. Louis, MO	City of St. Louis	AD	1	2011	2011
Milas-Bodrum International Airport	Turkey - Bodrum	Bodrum, Turkey	AD	9	2011	2012
Boeing Delivery Center	US - Charleston, SC	Boeing	AD	2	2011	2012
Rio Hondo Airport	Argentina - Termas de Rio Hondo	MOJIVI	AD	1	2011	2011
San Antonio International Airport	US - San Antonio, TX	City of San Antonio Aviation Department	AD	9	2012	2013
Birmingham Shuttlesworth International Airport	US - Birmingham, AL	Birmingham Airport Authority	AD	19	2012	2013
Nassau International Airport	BS — Nassau, Bahamas	Nassau Airport Development Company (NAD)	AD	S	2012	2012
Calgary International Airport	CA - Calgary, Alberta, Canada	Calgary Airport Authority	AD	22	2013	201S
Nuevo Dorado Aeropuerto Internacional	CO — Bogota, Colombia	CCND	AD	33	2012	2014
Comodoro Arturo Merino Benítez International Airport	CL - Santiago, Chile	ThyssenKrupp Elevadores S.A. Chile	AD	1	2011	2011
Aeropuertos Argentinos 2000 - Cordoba	Argentina - Cordoba, Argentina	Aeropuertos Argentinos 2000	CB	4	2011	2012
Tulsa International Airport Phase 2	US - Tulsa, Oklahoma	Tulsa Airport Authority	AD	2	2011	2012
Curacao International Airport	Netherlands Antilles	Curacao Airport Patners	AD	2	2012	2013
Bemidji Regional Airport	US - Bemidji, MN	Bemidji Regional Airport Authority	AD	1	2011	2011
Aeropuertos Argentinos 2000 - Aeroparque	Argentina - Aeroparque	Aeropuertos Argentinos 2000	CB	5	2011	2012
LAX Alaska Airlines	US - Los Angeles, CA	Hensel Phelps	AD	2	2011	2012
San Diego International Airport	US - San Diego, CA	Turner, PCL, Flatiron Joint Venture	AD	10	2012	2013
Greenville-Spartanburg International Airport	US - Geer, NC	Greenville-Spartanburg Airport Commission	AD	8	2011	2012
Aeropuerto Maiquetia	Venezuela - Maiquetia, Venezuela	Sapeca, USA	CB	1	2011	2012
Wilmington International Airport	US - Wilmington, NC	New Hanover County Airport Authority	AD	1	2011	2012
Aeropuertos Argentinos 2000 - Ezeiza	Argentina, Buenos Aires	Aeropuertos Argentinos 2000	CB	S	2012	2012
The Christ Hospital	US- Clevelend, OH	The Christ Hospital	WW		2012	2012
Houston Intercontinental Airport	US - Houston, TX	Manhattan Construction Company	AD/A380	1	2012	2012
McAllen-Miller International Airport	US - McAllen, TX	Kruger Construction	AD	1	2012	2012
Asheville Regional Airport	US - Fletcher, NC	Asheville Regional Airport Authority	AD	3	2012	2012
Kelowna International Airport	CA - Kelowna	City of Kelowna	WW		2012	2013
Ezeiza International Airport	Argentina - Buenos Aires	Aeropuertos Argentinos 2000	CB	8	2012	2013
Port of Toronto	CA - Toronto	Toronto Port Authority	WW		2012	2012
San Diego International Airport	US - San Diego, CA	Stronghold Engineering	AD	1	2012	2012
Pulkovo - St. Peterburg Airport	RU - St. Peterburg	IC ICTAS - ASTALDI J.V.	AD	16	2012	2014
Lafayette Regional Airport	US - Lafayette, LA	Lafayette Regional Airport Authority	AD	2	2012	2012
Louis Armstrong New Orleans International Airport	US - New Orleans, LA	City of New Orleans	AD	2	2012	2012
Comandante Armando Tola International Airport	Argentina - Calafate	Petersen, Thiele Y Cruz, S.A.C y M	AD	1	2012	2013
Gregorio Luperon Puerto Plata Airport	DR - Puerto Plata	Aeropuertos Dominicanos Siglo XXI	AD	2	2012	2013
Multan Pakistan	Pakistan - Multan	Multan International Airport	AD	2	2012	2013
Antofagasta Chile	Chile - Antofagasta	A-Port Services	AD	1	2013	2013
Saskatoon John G. Diefenbaker International Airport	CA — Saskatoon, Saskatchewan, Canada	Saskatoon Airport Authority	AD	4	2013	2014

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Airport	Location	Customer	Type	Qty. Sold	Mfg Start	Mfg End
Baltimore-Washington International Thurgood Marshall Airport	US - Baltimore	Maryland Aviation Administration	AD	2	2013	2013
Fort Lauderdale Hollywood International Airport	US - Fort lauderdale	Broward County	AD	3	2013	2013
Calama, Chile	Chile - Calama	TKE Chile	AD	3		
Iquique Chile	Chile - Iquique	A-Port Services	AD	2	2013	2013
El Cibao Airport	DR - El Cibao	Jordim International	AD	2	2013	2013
Ciudad Juarez	MX - Cd. Juarez	OMA Airports	AD	2	2013	2013
DFW - Terminal B North Stinger Project	US - DFW, TX	Austin Commercial	AD	9	2013	2014
Norfolk International Airport	US - Norfolk, VA	Norfolk Airport Authority	AD	1	2013	2013
Guadalajara Int'l Airport	MX - Guadalajara	Grupo Aeroportuario del Pacífico	CB	2	2013	2013
Orlando Sanford International Airport	US - Sanford, FL	Sanford Airport Authority	AD	12	2013	2014
Burlington International Airport	US - Burlington,VT	City of Burlington	AD	1	2013	2013
Jorge Wiltersmann International Airport	Bolivia - Cochabamba	SABSA, Nacionalizada	AD	2	2013	2013
VC Bird International Airport	Antigua & Barbuda	China Civil Engineering Const. Corp	AD	4	2013	2013
Rodriguez Ballon Int'l Airport	Peru - Arequipa	Proyecta & Construye	AD	2	2013	2013
Aeropuerto Internacional El Salvador	El Salvador - San Salvador	UNOPS/PNUD	AD	11	2014	2014
Boston Logan International Airport	US - Boston, MA	Massachusetts Port Authority	AD	8	2013	2014
Montréal-Pierre Elliott Trudeau International Airport	Canada - Montreal	Aeroports de Montreal	AD	1	2013	2013
Wichita Falls Municipal Airport	US - Wichita Falls, TX	City of Wichita Falls	AD	2	2014	2014
John F. Kennedy International Airport	US — New York, NY	jetBlue Airways	AD	3	2014	2014
Aeropuerto Internacional el Alto	Bolivia - La Paz	SABSA, Nacionalizada	AD	2	2014	2014
Oklahoma Transfer Facility	US - Oklahoma City, OK	Federal Bereau of Prisons	AD	1	2014	2014
Miami International Airport	US - Miami, FL	Miami-Dade Aviation Department	AD/A380	2	2014	2014
Argyle International Airport	Saint Vicent	NSG Exports, Ltd.	AD	2	2014	2014
Ottawa Macdonald-Cartier International Airport	CA — Ottawa, Ontario, Canada	Ottawa Macdonald-Cartier International Airport Authority	AD	8	2014	2017
Nashville International Airport	US - Nashville, TN	US Airways	AD	2	2014	2014
Kurumoch International Airport	Russia - Samara	Oleg Melenevsky	AD	7	2014	201S
Boston Logan International Airport	US - Boston, MA	Massachusetts Port Authority	AD	1	2014	2014
Punta Cana Internatinal Airport	Dominican Republic - Punta Cana	Corporacion Aeropuertaria del Este	AD	7	2014	2014
East Texas Regional Airport	US - Longview, TX	Gregg County	LR	1	2014	2014
Tampa International Airport	US - Tampa, FL	Wallbridge Construction	AD	13	2014	2016
Valley International Airport	US - Harlingen, TX	City of Harligen	AD	2	2014	2014
Boeing Delivery Center	US - Seattle, WA	Lease Crutcher Lewis	AD/S	3	2014	2015
Houston Intercontinental Airport	US - Houston, TX	Manhattan Construction Company	AD/A380	2	2014	2014
Louis Armstrong New Orleans International Airport	US - New Orleans, LA	City of New Orleans	AD	2	2014	2015
San Diego International Airport	US - San Diego, CA	San Diego County Regional Airport Authority	AD	3	2014	2014
Montréal-Pierre Elliott Trudeau International Airport	Canada - Montreal	Aeroports de Montreal	AD	9	2014	2015
Baltimore-Washington International Thurgood Marshall Airport	US - Baltimore	Maryland Aviation Administration	AD	12	2015	2016
San Jose International Airport	Costa Rica - San Jose	Edica Ltda.	AD	2	2014	2015
El Paso International Airport	US - El Paso, TX	City of El Paso	AD	15	2015	2016
Northwest Florida Regional Airport	US - Okaloosa, FL	Okaloosa County	AD	2	201S	2015
Montréal-Pierre Elliott Trudeau International Airport	Canada - Montreal	Aeroports de Montreal	AD	1	2015	2015

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Airport	Location	Customer	Type	Qty. Sold	Mfg Start	Mfg End
Montréal-Pierre Elliott Trudeau International Airport	Canada - Montreal	Aeroports de Montreal	AD	7	201S	2016
Yeager International Airport	US - Yeager, WV	Central West Virginia Airport Authority	AD	3	201S	201S
Range Regional International Airport	US - Hibbing, MN	Max Grey Contruction	AD	1	201S	2016
Plattsburgh International Airport	US - Plattsburg, NY	Murnane Building Contractors	AD	3	201S	2016
LaGuardia International Airport	US - Newark, NY	American Airlines	AD	8	2015	201S
Huntsville International Airport	US - Huntsville, AL	Johnson Contractors	CB	12	2015	2018
Miami International Airport	US - Miami, FL	Miami-Dade Aviation Department	AD	1	2015	2016
Lynden Pindling International Airport	BS — Nassau	Nassau Airport Development Company (NAD)	AD	1	201S	2016
Chicago O'Hare International Airport	US - Chicago, IL	American Airlines	AD	2	2015	2015
Peoria Regional Airport	US - Peoria, IL	Greater Peoria Regional Airport	AD	2	201S	2016
Boston Logan International Airport	US - Boston, MA	Massachusetts Port Authority	WW		2015	2016
Los Angeles International Airport	US - Los Angeles, CA	American Airlines	AD	4	201S	2016
Miami International Airport	US - Miami, FL	Miami-Dade Aviation Department	AD	10	201S	2017
Westchester Regional Airport	US-Westchester, NY	Westchester County	AD	2	2016	2016
Chicago O'Hare International Airport	US-Chicago, IL	American Airlines	AD	2	2016	2016
Boston Logan International Airport	US- Boston, MA	Massachusetts Port Authority	AD/A380	6	2016	2016
Calgary International Airport	Canada -	Calgary Airport Authority	AD	2	2016	2016
Bangor International Airport	US-Bangor, Maine	Sheridan Corporation	AD	1	2016	2016
Roanoke -Blacksburg Regional Airport	US- Roanoke, Virginia	Roanoke Regional Airport Authority	AD	S	2017	2018
North West Florida Beaches Airport	US-Panama City, US	Panama City Bay County Bay	AD	2	2016	2017
Toledo Express Airoprt	US- Swanton, Ohio	Toledo-Lucas County Port Authority	AD	1	2017	2017
Baltimore-Washington International Thurgood Marshall Airport	US - Baltimore	Maryland Aviation Administration	AD	1	2017	2017
Curacao International Airport	Curacao	Curacao Airport Partners	AD	1	2017	2017
Los Angeles International Airport	US - California	Los Angeles World Airports	AD	26	2018	2019
Austin-Bergstrom International Airport	US- Austin, Texas	City of Austin	AD	6	2017	2018
Baltimore-Washington International Thurgood Marshall Airport	US - Baltimore	Maryland Aviation Administration	AD	6	2018	2018
Chicago O'Hare International Airport	US - Chicago, IL	American Airlines	AD	5	2017	2018
Charlotte/Douglas International Airport	US- Charlotte	City of Charlotte	AD	S7	2017	2019
Philadelphia International Airport	US-Philadelphia	DL Keating	AD	12	2017	2018
St. John's Newfoundland	Newfoundland	St. John's International Airport	AD	2	2017	2018
LaGuardia International Airport	US-New York	Skansa-Walsh	AD	35	2017	2019
Boston Logan International Airport	US-Boston	AA	AD	7	2017	2018
Valdosta Regional Airport	US-Valdosta	Kellerman Construction	AD	1	2017	2018
Wilmington International Airport	US-Wilmington	Wilmington Regional Airport	AD	1	2017	2018
Pierre Regional Airport	US-Pierre	Sharpe Enterprises	AD	1	2017	2018
LF Wade International Airport	Bermuda	Aecon	AD	6	2017	2018
Juan Santa Maria International Airport	Costa Rica - San Jose	Edica Ltda.	AD	2	2017	2018
Miami International	US-Florida	Miami-Dade Aviation Department	AD	S	2018	2019
Chicago O'Hare International Airport	US-Chicago, IL	American Airlines	AD	3	2018	2019
Chicago O'Hare International Airport	US-Chicago, IL	Spirit Airlines	AD	1	2018	2018
Reagan-Washington National	US-Arlington, VA	Turner Construction	AD	14	2018	2021
Westchester Regional Airport	US-White Plains, NY	Westchester County	AD	2	2018	2019

ThyssenKrupp Airport Systems

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Airport	Location	Customer	Type	Qty. Sold	Mfg Start	Mfg End
Fayetteville Regional	US-Fayetteville, NC	Resolute Building Co.	AD	3	2018	2019
Worcester Regional Airport	US-Worcester, MA	Massachusetts Port Authority	AD	2	2018	2019
Dallas Fort Worth International Airport	US-Dallas, TX	DFW Airport	AD	6	2018	2019
Central Wisconsin	US-Mosinee, WI	J.H. Findorff & Sons, Inc.	AD	4	2019	2019
Toronto Pearson International Airport	Canada-Toronto	GTAA	AD	2	2018	2019
Chicago O'Hare International Airport	US-Chicago, IL	American Airlines	AD	2	2019	2019
Midland International Airport	Midland, TX.	City of Midland	AD	2	2020	2020

FORM 3: LOBBYING AFFIDAVIT
Note: This form must be submitted with the bidder's bid submittal

Enver Sarilar, being first duly sworn, deposes and says that he or she is the (circle one as appropriate – sole owner, general partner, joint venture partner, president, secretary or authorized representative of bidder, maker of the attached bid and that neither the bidder nor its agents have lobbied to obtain an award of the agreement pursuant to this bid from the Lee County Board of Port Commissioners, members of the Airports Special Management Committee, or employees of the Lee County Port Authority, individually or collectively, regarding this competitive solicitation.

Bidder further affirms that bidder has complied with the federal regulations concerning lobbying activities contained in 31 U.S.C. 1352 and 49 CFR Part 20 and Lee County Lobbying Ordinance No. 03-14.

AFFIANT: E. Sarilar

Date: June 1, 2020

State of: Texas

County of: Tarrant

This foregoing instrument was acknowledged before me this 1st. day of June 1, 2020, 2020, by Enver Sarilar, who is personally known to me or produced _____ as identification.

Linda K. Kinsel

Signature of Notary

11543412

Serial/Commission No.

LINDA K KINSEL
Notary ID #11543412
My Commission Expires
April 16, 2023

FORM 4: PUBLIC ENTITY CRIMES FORM

SWORN STATEMENT PURSUANT TO SECTION 287.133(3)(a) FLORIDA STATUTES

A person, affiliate, or corporation who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a vendor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, Florida Statutes, for CATEGORY TWO for a period of thirty-six (36) months from the date of being placed on the convicted vendor list.

The Bidder certifies by submission of this form that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any State or Federal entity, department or agency.

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH 1 (ONE) ABOVE IS FOR THAT PUBLIC ENTITY ONLY AND, THAT THIS FORM IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT IN EXCESS OF THE THRESHOLD AMOUNT PROVIDED IN SECTION 287.017, FLORIDA STATUTES FOR CATEGORY TWO OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

BIDDER'S NAME: thyssenkrupp Airport Systems, Inc

Note: This form must be submitted with the bidder's bid submittal

FORM 5: BIDDER'S SCRUTINIZED COMPANIES CERTIFICATION

Bidder hereby certifies under penalties of perjury as of the date of this bid to provide goods and services to the Lee County Port Authority that it has not been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List as defined in Section 287.135, Fla. Stat., is not engaged in business operations in Cuba and Syria; and is not on the Scrutinized Companies that Boycott Israel List or is engaged in a boycott of Israel.

I further certify that I am duly authorized to submit this certification on behalf of the company as its agent and that the company is ready, willing and able to perform if awarded a contract.

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE LEE COUNTY PORT AUTHORITY IS FOR THAT PUBLIC ENTITY ONLY AND, THAT FALSIFICATION OF THIS CERTIFICATION MAY RESULT IN TERMINATION OF THE CONTRACT, DEBARMENT OF THE COMPANY FROM SUBMITTING A BID OR PROPOSAL FOR A PERIOD OF THREE (3) YEARS FROM THE DATE THE CERTIFICATION IS DETERMINED TO BE FALSE, CIVIL PENALTIES, AND THE ASSESSMENT OF ATTORNEY'S FEES AND COSTS AGAINST THE COMPANY. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

Authorized Signature

State of: Texas

County of: Tarrant

This foregoing instrument was acknowledged before me this 1st. day of June, 2020, by Enver Sarilar, who is personally known to me or produced _____ as identification.

Signature of Notary

11543412
Serial/Commission No.

LINDA K KINSEL
Notary ID #11543412
My Commission Expires
April 16, 2023

Note: This form must be submitted with the bidder's bid submittal

FORM 6: BID BOND **BID BOND NO.** N/A

KNOW ALL MEN BY THESE PRESENTS, that we ThyssenKrupp Airport Systems, Inc., as Principal, and Aspen American Insurance Company, a corporation licensed to do business in the State of Florida as a surety, are held firmly bound unto LEE COUNTY PORT AUTHORITY, LEE COUNTY, FLORIDA (obligee), in the sum of $ Five Percent of Amount Bid ($5% .__) for the payment whereof, well and truly to be made, we bind ourselves, our heirs, successors, personal representatives and assigns, jointly and severally, firmly, by these presents.

SIGNED AND SEALED this 29th day of May, 2020, 2020.

WHEREAS, said Principal is herewith submitting a bid for RFB 20-53MMW, Passenger Boarding Bridge Replacement – Southwest Florida International Airport.

NOW, THEREFORE, the condition of the above obligation is such that if said Principal shall be awarded the contract upon said bid within the specified time and shall enter into a written agreement, satisfactory in form, and shall provide an acceptable Performance and Payment Bond from a Surety acceptable to the Authority as well as other insurance as may be required by the Authority within ten (10) calendar days from the issuance of the written Notice of Intent to Award date, or within such extended period as the Port Authority may grant, then this obligation shall be null and void. Otherwise, said Principal and Surety shall pay to said Authority in money the difference between the amount of the bid of said Principal and the amount for which said Authority may legally contract with another party to perform said work, if the latter amount be in excess of the former, together with any expenses and reasonable attorney's fees incurred by said Port Authority if suit be brought hereon, but in no event shall said Surety's liability exceed the penal sum hereof plus such expenses and attorney's fees. For purposes of unsuccessful bid protests filed by the Principal herein, this obligation shall bind the Surety to pay costs and damages associated with the bid protest or delays to the project upon finding from the Board of Port Commissioners for Lee County that the bid protest was frivolous and/or lacked merit.

Witness as to Principal: ThyssenKrupp Airport Systems, Inc. (SEAL)
(Principal)
Brooke Nidday
(By)

Witness as to Surety: Aspen American Insurance Company (SEAL)
(Surety's name)
Kimberly Bragg
(By-As Attorney in Fact, Surety)

Affix Corporate Seals and attach proper Power of Attorney for Surety.

ACKNOWLEDGEMENT OF SURETY

STATE OF ILLINOIS
COUNTY OF COOK

On this 29th day of May, 2020, before me personally came Kimberly Bragg to me known, who being by so duly sworn, did depose and say that he/she is Attorney-In-Fact of

Aspen American Insurance Company

the Corporation described in and which executed the foregoing instrument; that he/she knows the seal of said Corporation; that the seal affixed by authority granted to him/her in accordance with By-Laws of the said Corporation, and that he/she signed his/her name thereto by like authority.

Sarah E. Green
Notary Public, Sarah E. Green

"OFFICIAL SEAL"
SARAH E. GREEN
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 2/17/2024

ASPEN

Aspen American Insurance Company
175 Capital Boulevard, Rocky Hill, CT 06067

Surety Bond No. **Bid Bond**
Principal: **ThyssenKrupp Airport Systems, Inc.**
Obligee: **Lee County Port Authority**

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, THAT **Aspen American Insurance Company**, a corporation duly organized under the laws of the State of Texas, and having its principal offices in Rocky Hill, Connecticut, (hereinafter the "Company") does hereby make, constitute and appoint: **Kimberly Bragg** of **Willis Towers Watson Midwest, Inc.** its true and lawful Attorney-in-Fact, with full power and authority hereby conferred to sign, execute and acknowledge on behalf of the Company, at any place within the United States, the following instrument(s) by his/her sole signature and act: any and all bonds, recognizances, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking and any and all consents incident thereto, and to bind the Company thereby as fully and to the same extent as if the same were signed by the duly authorized officers of the Company. All acts of said Attorney-in-Fact done pursuant to the authority herein given are hereby ratified and confirmed.

This appointment is made under and by authority of the following Resolutions of the Board of Directors of said Company effective on April 7, 2011, which Resolutions are now in full force and effect;

VOTED: All Executive Officers of the Company (including the President, any Executive, Senior or Assistant Vice President, any Vice President, any Treasurer, Assistant Treasurer, or Secretary or Assistant Secretary) may appoint Attorneys-in-Fact to act for and on behalf of the Company to sign with the Company's name and seal with the Company's seal, bonds, recognizances, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said Executive Officers at any time may remove any such appointee and revoke the power given him or her.

VOTED: The foregoing authority for certain classes of officers of the Company to appoint Attorneys-in-Fact by virtue of a Power of Attorney to sign and seal bonds, recognizances, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, as well as to revoke any such Power of Attorney, is hereby granted specifically to the following individual officers of Aspen Specialty Insurance Management, Inc.:

Michael Toppi, Executive Vice President, **Scott Sadowsky**, Senior Vice President, **Mathew Raino**, Vice President, **Kevin Gillen**, Senior Vice President and **Ryan Field**, Vice President,

This Power of Attorney may be signed and sealed by facsimile (mechanical or printed) under and by authority of the following Resolution voted by the Boards of Directors of Aspen American Insurance Company, which Resolution is now in full force and effect:

VOTED: That the signature of any of the Officers identified by title or specifically named above may be affixed by facsimile to any Power of Attorney for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any and all consents incident thereto, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company. Any such power so executed and certified by such facsimile signature and/or facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking so executed.

IN WITNESS WHEREOF, Aspen American Insurance Company has caused this instrument to be signed and its corporate seal to be hereto affixed this 24th day of June, 2016.

Aspen American Insurance Company

STATE OF CONNECTICUT
SS. ROCKY HILL
COUNTY OF HARTFORD

Kevin Gillen, Senior Vice President

On this 24th day of June, 2016 before me personally came Kevin Gillen to me known, who being by me duly sworn, did depose and say; that he/she is Senior Vice President, of Aspen American Insurance Company, the Company described in and which executed the above instrument; that he/she knows the seal of said corporation; that the seal affixed to the said instrument is such corporate seal; and that he/she executed the said instrument on behalf of the Company by authority of his/her office under the above Resolutions thereof.

Patricia C. Taber
Notary Public
My commission expires: May 31, 2021

Patricia C. Taber
Notary Public
State of Connecticut
My Commission Expires May 31, 2021

CERTIFICATE

I, the undersigned, Kevin Gillen of Aspen American Insurance Company, a stock corporation of the State of Texas, do hereby certify that the foregoing Power of Attorney remains in full force and has not been revoked; and furthermore, that the Resolutions of the Boards of Directors, as set forth above, are now and remain in full force and effect.

Given under my hand and seal of said Company, in Rocky Hill, Connecticut, this 29th day of May, 2020

By: Kevin Gillen

Name: Kevin Gillen, Senior Vice President

* For verification of the authenticity of the Power of Attorney you may call (860) 760-7728 or email:Patricia.Taber@aspen-insurance.com

FORM 7: RESERVED

FORM 8: RESERVED

FORM 9: Utilization Statement: Disadvantaged Business Enterprise (DBE). Note: This form must be submitted with the bidder's bid submittal

By completing this form Bidders must identify and document whether they will meet the Port Authority's DBE participation goal for this project **(10%)**, and if not, Bidders should identify and document its good faith efforts to meet the goal, as set forth in 49 CFR, Appendix A, Subpart C 26.53.

CERTIFIED DBE(s) LIST

DBE Firm Name(s)	$ Value of Work	Percent of Total Project
1. Davis Freight Management	$ 498,502.00	2.05 %
Type of Work/Specialty: Freight		
2. Structures Development Group, Inc.	$ 2,431,794.00	10.02 %
Type of Work/Specialty: Electrical and Concrete		
3. _____	$ _____	_____ %
Type of Work/Specialty: _____		
4. _____	$ _____	_____ %
Type of Work/Specialty: _____		
5. _____	$ _____	_____ %
Type of Work/Specialty: _____		

Attach Additional Sheets as Necessary

The undersigned bidder has satisfied the requirements of the bid conditions in the following manner. (Please mark appropriate box)

☑ **The bidder is committed to a minimum of 10 % DBE utilization on this project.**

☐ **The bidder, while unable to meet the established goal, hereby commits to a minimum of _____% DBE utilization on this project and also submits documentation, as an attachment(s) demonstrating good faith efforts (GFE).**

Total Value of Base Bid	$ 24,268,553.00
Total of DBE Subcontract(s) Work	$ 2,930,296.00

Print Bidder's/Offeror's Company Name	thyssenkrupp Airport Systems, Inc
Print Name of Authorized Representative	Enver Sarilar

Company Address:	3201 N. Sylvania Suite 117			
	City: Fort Worth	State: Texas	Zip Code: 76111	
Phone Number :	817-210-5012	E-mail:	enver.sarilar@thyssenkrupp.com	

The undersigned hereby further assures that the information included herein is true and correct, and that the DBE firm(s) listed herein, have agreed to perform a commercially useful function as described in 49 CFR Part 26.55(c) in the work items noted for each firm. The undersigned further understands that no changes to this statement may be made without prior approval from the Lee County Port Authority and the CM for this project.

Signature of Authorized Representative — Date: 6/2/2020

FORM 9: Utilization Statement: Disadvantaged Business Enterprise (DBE). Note: This form must be submitted with the bidder's bid submittal

By completing this form Bidders must identify and document whether they will meet the Port Authority's DBE participation goal for this project **(10%)**, and if not, Bidders should identify and document its good faith efforts to meet the goal, as set forth in 49 CFR, Appendix A, Subpart C 26.53.

CERTIFIED DBE(s) LIST

DBE Firm Name(s)	$ Value of Work	Percent of Total Project
1. Davis Freight Management	$ 498,502.00	2.05 %
Type of Work/Specialty: Freight		
2. Structures Development Group, Inc.	$2,431,794.00	10.02 %
Type of Work/Specialty: Electrical and Concrete		
3. _____	$_____	_____%
Type of Work/Specialty: _____		
4. _____	$_____	_____%
Type of Work/Specialty: _____		
5. _____	$_____	_____%
Type of Work/Specialty: _____		

Attach Additional Sheets as Necessary

The undersigned bidder has satisfied the requirements of the bid conditions in the following manner. (Please mark appropriate box)

☑ **The bidder is committed to a minimum of 10 % DBE utilization on this project.**

☐ **The bidder, while unable to meet the established goal, hereby commits to a minimum of _____% DBE utilization on this project and also submits documentation, as an attachment(s) demonstrating good faith efforts (GFE).**

Total Value of Base Bid	$ 24,268,558.00
Total of DBE Subcontract(s) Work	$ 2,930,296.00

Print Bidder's/Offeror's Company Name	thyssenkrupp Airport Systems, Inc
Print Name of Authorized Representative	Enver Sarilar

Company Address:	3201 N. Sylvania Suite 117		
	City: Fort Worth	State: Texas	Zip Code: 76111
Phone Number :	817-210-5012	E-mail:	enver.sarilar@thyssenkrupp.com

The undersigned hereby further assures that the information included herein is true and correct, and that the DBE firm(s) listed herein, have agreed to perform a commercially useful function as described in 49 CFR Part 26.55(c) in the work items noted for each firm. The undersigned further understands that no changes to this statement may be made without prior approval from the Lee County Port Authority and the CM for this project.

Signature of Authorized Representative — Date: 6/2/2020

Utilization Statement Form – Rev02/24/20

FORM 10: LETTER OF COMMITMENT: Disadvantaged Business Enterprise (DBE)

LETTER OF COMMITMENT
Disadvantaged Business Enterprise
(This page shall be submitted with bid submittal for each proposed DBE firm)

Bidder/Offeror Company Name: thyssenkrupp Airport Systems, Inc

Project Name/#: Passenger Boarding Bridge Replacement/20-53MMW

DBE Firm: Company Name: Structures Development Group, Inc.

Address: 6601 Broken Arrow Rd.

City: Ft. Myers State: Florida Zip 33912

DBE Contact Person: Name: Mona Henry Phone: (237) 288-6090

E-mail: mona@structureids.com

Work items(s) to be performed by DBE Firm	*Quantity/Unit Price*	*Total Value of Work*
Electrical		1,862,425.00
Concrete		569,369.00
Totals		2,431,794.00

The bidder/offeror is committed to utilizing the above-named DBE firm for the work described above. The estimated participation is as follows:

Total DBE contract amount: $ 2,431,794.00

Affirmation:
The above-named DBE firm affirms that it will perform the portion of the contract for the estimated dollar value as stated above.

By: [signature], VP 6/1/2020
(Signature of DBE Firm's Authorized Representative) (Date)

Vice President
(Title)

**In the event the bidder does not receive award of bid, any and all representations in this Letter of Commitment and Affirmation shall be null and void.*

Florida Unified Certification Program

CERTIFIED

Disadvantaged Business Enterprise

Structures Development Group, Inc.

This certificate acknowledges that the above named firm is approved by the Florida Unified Certification Program (FUCP) as a Disadvantaged Business Enterprise (DBE), under rules promulgated by the U.S. Department of Transportation (DOT) in Title 49, Part 26 of the US Code of Federal Regulations.

This certification entitles the above named firm to provide product(s) and/or service(s) and received DBE credits under the following category(s) only: Commercial and Institutional Building Construction, Residential Building Construction, and Residential Remodelers

NAICS Code(s): 23611, 236118, 236220

ANNIVERSARY DATE: Annually April 14
REVIEW DATE: April 14, 2022

Jeff Mulder, A.A.E.
Executive Director

LEE COUNTY PORT AUTHORITY
CERTIFYING AGENCY

Julio A. Rodriguez
DBE Program Manager

FORM 10: LETTER OF COMMITMENT: Disadvantaged Business Enterprise (DBE)

LETTER OF COMMITMENT
Disadvantaged Business Enterprise
(This page shall be submitted with bid submittal for each proposed DBE firm)

Bidder/Offeror Company Name: thyssenkrupp Airport Systems, Inc

Project Name/#: Passenger Boarding Bridge Replacement/20-53MMW

DBE Firm: Company Name: Davis Freight Management

Address: 13238 Broadway

City: Alden State: NY Zip 14004

DBE Contact Person: Name: Wendy Davis Schlabach Phone: (716) 716-902-4244

E-mail: wendy@shipdavisfreight.com

Work items(s) to be performed by DBE Firm	*Quantity/Unit Price*	*Total Value of Work*
Freight		$498,502.00
Totals		$498,502.00

The bidder/offeror is committed to utilizing the above-named DBE firm for the work described above. The estimated participation is as follows:

Total DBE contract amount: $ $498,502.00

Affirmation:
The above-named DBE firm affirms that it will perform the portion of the contract for the estimated dollar value as stated above.

By: _____ 6/01/2020
(Signature of DBE Firm's Authorized Representative) (Date)

DOUGLAS R. HAAK - MANAGER
(Title)

**In the event the bidder does not receive award of bid, any and all representations in this Letter of Commitment and Affirmation shall be null and void.*

OFFICE OF ECONOMIC AND SMALL BUSINESS DEVELOPMENT
Governmental Center Annex
115 S. Andrews Avenue, Room A680 • Fort Lauderdale, Florida 33301
954-357-6400 • FAX 954-357-5674 • TTY 954-357-5664

October 7, 2019

Ms. Wendy Davis-Schlabach
DAVIS FREIGHT MANAGEMENT, INC.
13238 Broadway
Alden, New York 14004

ANNIVERSARY DATE – Annually, on November 12th

Dear Ms. Davis-Schlabach:

Broward County is pleased to announce **Davis Freight Management, Inc.** has renewed its certification as a **Disadvantaged Business Enterprise [DBE]** in Florida, under a **Unified Certification Program [UCP]** in accordance with 49 CFR, PART 26.

DBE certification continues from your anniversary date, but is contingent upon Davis Freight Management, Inc. renewing its eligibility annually through this office, the Office of Economic and Small Business Development (OESBD). OESBD will notify you in advance of your obligation to provide continuing eligibility documents; however, ensuring continued certification is your responsibility. Failure to continue your eligibility will result in immediate action to decertify Davis Freight Management, Inc. as a DBE.

As long as Davis Freight Management, Inc. is listed in the DBE Directory, it is considered DBE Certified by all Florida UCP Members.

DBE Certification is subject to actions by governmental agencies impacting the disadvantaged status of Davis Freight Management, Inc.

Davis Freight Management, Inc. will be listed in Florida's **UCP DBE Directory** which can be accessed via the internet, at:

https://fdotxwp02.dot.state.fl.us/EqualOpportunityOfficeBusinessDirectory/CustomSearch

DBE certification is **NOT** a guarantee of work, but enables Davis Freight Management, Inc. to compete for, and perform, contract work on all USDOT Federal Aid (FAA, FTA and FHWA) projects in Florida as a DBE contractor, sub-contractor, consultant, and sub-consultant or material supplier.

Re: Davis Freight Management, Inc. **October 7, 2019**

If, at any time, there is a material change in Davis Freight Management, Inc. including, but not limited to, ownership, officers, directors, scope of work being performed, daily operations, affiliations with other businesses or individuals or physical location of Davis Freight Management, Inc., you must notify OESBD, in writing, without delay. Notification should include supporting documentation. You will receive acknowledgement and confirmation of continued eligibility, if applicable after notification of changes.

Davis Freight Management, Inc. may compete for, and perform, work on all USDOT Federal Aid projects throughout Florida, receiving DBE credit for work performed in the following areas:

NAICS CODES: 484121 General Freight Trucking, Long-Distance, Truckload
NAICS CODES: 484230 Specialized Freight Trucking (except used goods) Long Distance
NAICS CODES: 488510 Freight Transportation Arrangement
NAICS CODES: 488999 All Other Support Activities for Transportation
NAICS CODES: 492110 General Warehousing and Storage

Please feel free to contact OESBD for any questions or concerns pertaining to your DBE certification. Our telephone number is (954) 357-6400; our fax number is (954) 357-5674.

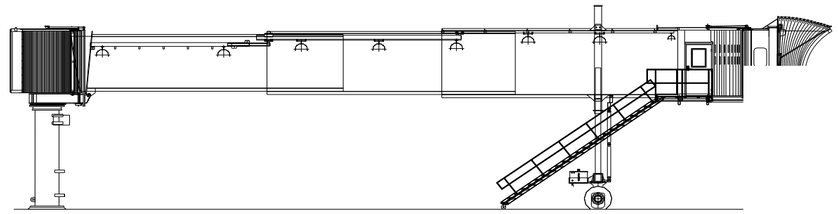
Sincerely,

Sandy-Michael McDonald, Director
Office of Economic and Small Business Development

Thyssen Krupp Airport Systems

TKAS Rotunda Column Reactions

PBB RSW Worst-case scenario



Loads Prepared for: RSW
Date Prepared: 05/21/20
Revision -

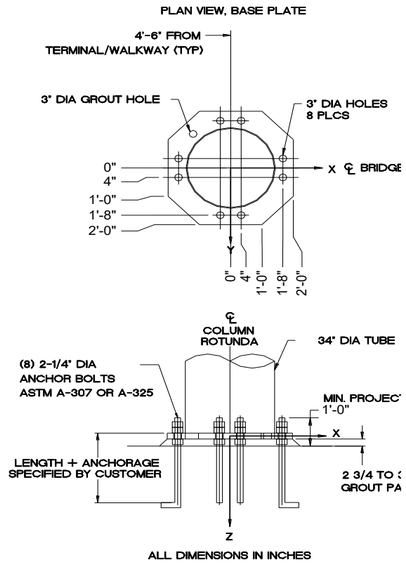
Inputs:							
Enter Fields Below For the Largest Bridge in the Customers Contract		**Wind Load Calculation**			**Seismic Information**		**Walkway Informatic**
Gate No.	N.A	Wind Speed, Operational	65	mph	Spectral Response Accel (SS)	0.047	
Bridge Model:	TB 45/3	Wind Speed, Stowed	90	mph	Site Class (info from GC/client)	D	Is There A Walkway
Live Load:	40.0 psf	Risk Category	II		Site Coefficient (FA)	1.6	
Roof Load:	25.0 psf	Exposure	B		Risk Category	I	If Yes, Then Enter th
Finished Floor Height:	13.8 ft				Design Spectral Response (SDS)	0.050	
Wind Load, Operational: (7-10 LRFD)	12.5 psf				Siesmic Importance Factor	1	Walkway Length
Wind Load, Stowed: (7-10 LRFD)	25.0 psf				Cs	0.02	
					Equivalent Lateral Force Procedure		

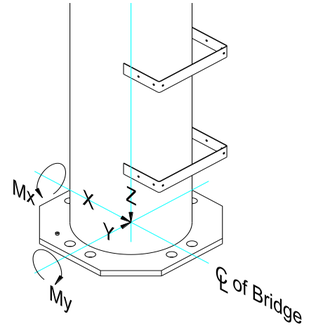
Use LRFD Factored Loads? N

Outputs

Bridge Model: **TB 45/21.0-3 Steel**

	FORCE IN Z DIRECTION KIPS	MOMENT ABOUT Y KIP-FT	MOMENT ABOUT X KIP-FT	MOMENT ABOUT Z KIP-FT
Operational:				
Dead Load	[29.7]	[38.8]	[8.1]	
Live Load	[14.9]	[19.7]	[28.8]	
Roof Load	[11.6]	[17.8]	[0.0]	[0.0] [0.0]
Wind Load	[0.0]	[0.0]	[369.9]	[2.9] [10.5]
Seismic Load	[0.3]	[0.4]	[20.6]	[1.0] [0.4]
	[ ]	[ ]	[ ]	[ ] [ ]
Stowed:				
Dead Load	[33.0]	[55.1]	[8.1]	
Roof Load	[1.4]	[-32.6]	[0.0]	
Wind Load	[0.0]	[0.0]	[413.3]	[-35.8] [4.1]
Seismic Load	[0.3]	[0.6]	[20.6]	[0.6] [0.4]
	[ ]	[ ]	[ ]	[ ] [ ]
	[ ]	[ ]	[ ]	[ ] [ ]

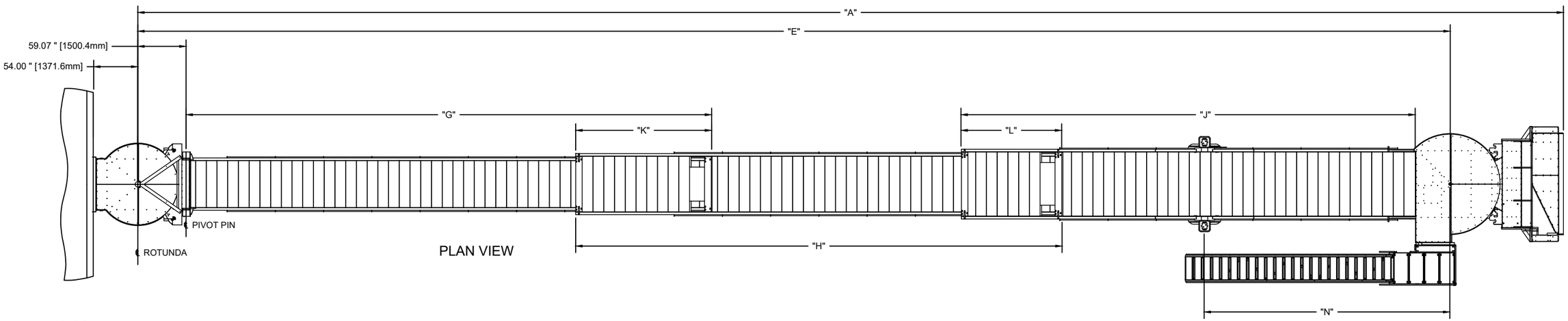




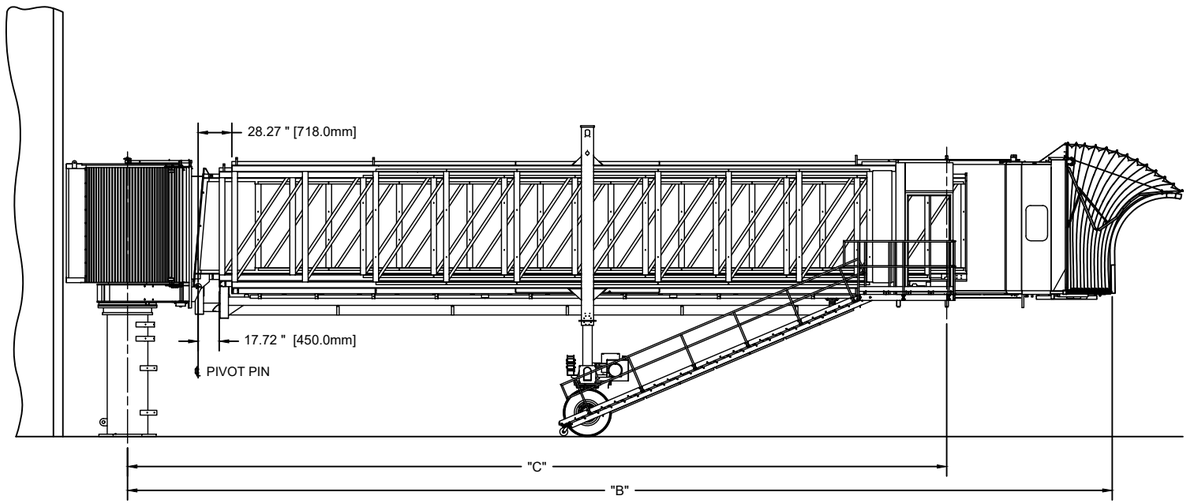
Notes:
1. Calculations for reaction loads per AISC 7-10 LRFD.
2. Rotunda column reactions vary more with design conditions than bridge model.
3. Actual foundation design is by others. Appropriate safety factors should be applied to these loads.
4. Walkway calculation is for a walkway that is supported on the terminal end by a column or support, and on the bridge end by a haunch. The WW is in-line with the bridge centerline.
5. Reactions include auxiliary equipment (PCA, 400Hz) that may be on the bridge.

PARTS LIST				
ITEM	QTY	UM	PART NUMBER	DESCRIPTION

MODEL NO.	"A" EXTENSION MAX	"B" RETRACTION MIN	"C" RETRACTION TO ELECTRICAL LIMITS	RECOMMENDED OPERATIONAL RETRACTION	"E" EXTENSION TO ELECTRICAL LIMITS	RECOMMENDED OPERATIONAL EXTENSION	"G" TUNNEL A	"H" TUNNEL B	"J" TUNNEL C	"K" EXTENDED TUNNEL OVERLAP A/B	"L" EXTENDED TUNNEL OVERLAP B/C	BRIDGE TRAVEL TO LIMITS	"N" LIFT COLUMN LOCATION
TC 23.00/13.10-3	76.44' (23.30 m)	44.13' (13.45 m)	32.64' (9.95 m)	35.93' (10.95 m)	64.96' (19.80 m)	61.68' (18.80 m)	26.64' (8.12 m)	25.00' (7.62 m)	21.72' (6.62 m)	9.06' (2.76 m)	7.81' (2.38 m)	32.35' (9.86 m)	10.30' (3.14 m)
TC 26.00/14.10-3	86.29' (26.30 m)	47.41' (14.45 m)	35.93' (10.95 m)	39.21' (11.95 m)	74.80' (22.80 m)	71.52' (21.80 m)	28.81' (8.78 m)	29.92' (9.12 m)	25.00' (7.62 m)	7.91' (2.41 m)	9.45' (2.88 m)	38.91' (11.86 m)	13.58' (4.14 m)
TC 29.00/16.10-3	96.13' (29.30 m)	53.97' (16.45 m)	42.49' (12.95 m)	45.77' (13.95 m)	84.65' (25.80 m)	81.36' (24.80 m)	31.56' (9.62 m)	29.92' (9.12 m)	31.56' (9.62 m)	9.06' (2.76 m)	7.81' (2.38 m)	42.19' (12.86 m)	15.22' (4.64 m)
TC 32.00/16.60-3	105.97' (32.30 m)	55.61' (16.95 m)	44.13' (13.45 m)	47.41' (14.45 m)	94.49' (28.80 m)	91.21' (27.80 m)	36.48' (11.12 m)	34.84' (10.62 m)	33.20' (10.12 m)	9.88' (3.01 m)	8.63' (2.63 m)	50.39' (15.36 m)	16.86' (5.14 m)
TC 35.00/17.10-3	115.81' (35.30 m)	57.25' (17.45 m)	45.77' (13.95 m)	49.05' (14.95 m)	104.33' (31.80 m)	101.05' (30.80 m)	41.40' (12.62 m)	39.76' (12.12 m)	34.84' (10.62 m)	10.70' (3.26 m)	9.45' (2.88 m)	58.60' (17.86 m)	18.50' (5.64 m)
TC 38.00/18.60-3	125.66' (38.30 m)	62.17' (18.95 m)	50.69' (15.45 m)	53.97' (16.45 m)	114.17' (34.80 m)	110.89' (33.80 m)	46.33' (14.12 m)	44.69' (13.62 m)	39.76' (12.12 m)	13.16' (4.01 m)	11.91' (3.63 m)	63.52' (19.36 m)	18.50' (5.64 m)
TC 41.00/19.60-3	135.50' (41.30 m)	65.45' (19.95 m)	53.97' (16.45 m)	57.25' (17.45 m)	124.02' (37.80 m)	120.73' (36.80 m)	48.69' (14.84 m)	44.69' (13.62 m)	43.04' (13.12 m)	12.20' (3.72 m)	8.63' (2.63 m)	70.08' (21.36 m)	21.78' (6.64 m)
TC 44.00/20.60-3	145.34' (44.30 m)	68.73' (20.95 m)	57.25' (17.45 m)	60.53' (18.45 m)	133.86' (40.80 m)	130.58' (39.80 m)	53.61' (16.34 m)	49.61' (15.12 m)	46.33' (14.12 m)	13.85' (4.22 m)	10.27' (3.13 m)	76.64' (23.36 m)	25.07' (7.64 m)



PLAN VIEW



ELEVATION VIEW

NOTES:

1. ROTUNDA DIMENSIONS (NOMINAL) -
   DOOR OPENING AT TERMINAL: 59.45"W X 90.91"H [1510mm X 2309mm]
   ROTATION: ± 87.5° (175° TOTAL)

2. TUNNEL INTERIOR DIMENSIONS (NOMINAL) -
   A - TUNNEL: 4'-11"W X 6'-11 3/16"H [1500mm X 2113mm]
   B - TUNNEL: 5'-9 11/16"W X 7'-10 13/32"H [1770mm X 2398mm]
   C - TUNNEL: 6'-8 5/16"W X 8'-9 5/8"H [2040mm X 2683mm]

3. ROTATING CAB DIMENSIONS (NOMINAL) -
   CANOPY (INTERNAL) WIDTH: 10'-2 1/2" [3111.5mm]
   ROTATION: 95° LEFT & 40° RIGHT (135° TOTAL)

4. LIFT AND DRIVE DIMENSIONS (NOMINAL) -
   HYDRAULIC LIFT CYLINDER STROKE: 120" [3048mm]
   WHEEL ROTATION: 90° LEFT & 90° RIGHT (180° TOTAL)

5. RETRACTION TO ELECTRICAL LIMITS (DIM "C") & EXTENSION TO ELECTRICAL LIMITS (DIM "E") ARE AT THE ELECTRICAL E-STOP, MECHANICAL STOPS ARE ±2.3" PAST E-STOP.

6. RECOMMENDED RETRACTION AND EXTENSION IS 39.37" [1000mm] SHORT OF ELECTRICAL STOPS.

7. MODEL TC 44.00/20.60-3 SHOWN

ThyssenKrupp
Airport Systems, Inc.
A ThyssenKrupp Elevator Company

TITLE:
BRIDGE OPERATIONAL LIMITS
TKAS (3) TUNNEL CRYSTAL BRIDGE

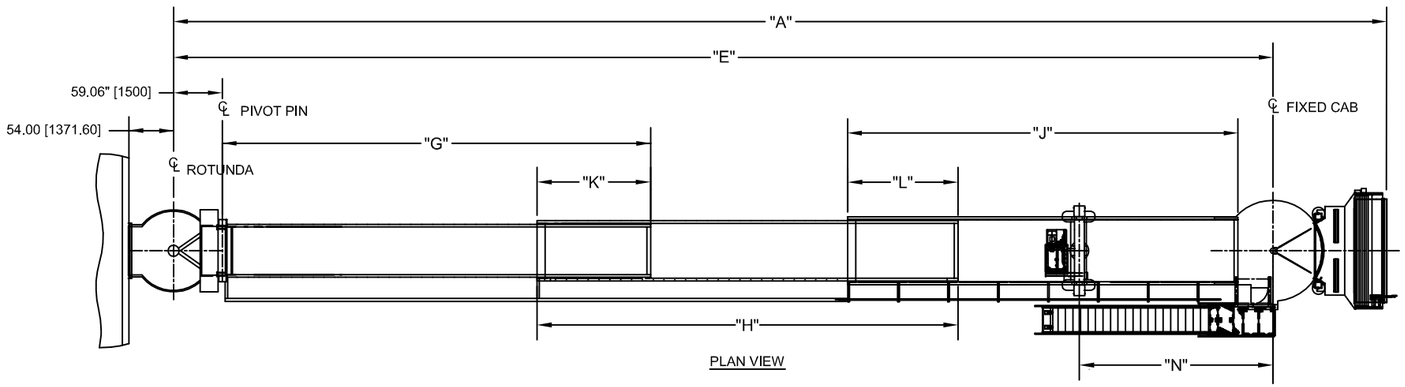
ECN	LTR	DATE
11051	B	4/14/15
9243	A	8/19/11
REVISIONS		

TOLERANCES: FRACTIONAL ± 1/16 DECIMAL .XX ± .03 .XXX ± .015 ANGULAR ± 1°
SIZE: D
DWG NO.: A8231151
REV.: B
DATE: 08/12/2008
DRAWN: CD
CHECKED: SPL
SCALE: 3/16"=1'0"
SHEET: 1 OF 1

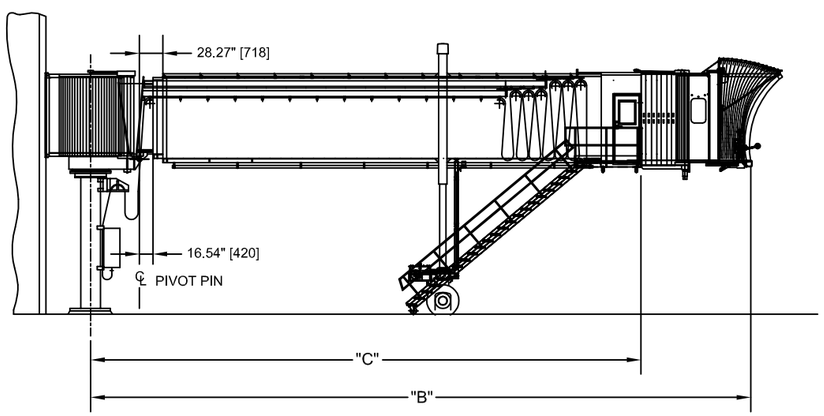
ITEM	QTY	UM	PART NUMBER	DESCRIPTION

PARTS LIST

MODEL #	"A" EXTENSION MAX	"B" RETRACTION MIN	"C" RETRACTION TO ELECTRICAL LIMITS	RECOMMENDED OPERATIONAL RETRACTION	"E" EXTENSION TO ELECTRICAL LIMITS	RECOMMENDED OPERATIONAL EXTENSION	"G" A-TUNNEL	"H" B-TUNNEL	"J" C-TUNNEL	"K" EXTENDED TUNNEL OVERLAP A/B	"L" EXTENDED TUNNEL OVERLAP B/C	BRIDGE TRAVEL TO LIMITS	"N" LIFT COLUMN LOCATION
TB 23/13.5-3	76.45' [23.30m]	45.28' [13.80m]	33.79' [10.30m]	37.08' [11.30m]	64.96' [19.80m]	61.68' [18.80m]	24.35' [7.42m]	23.62' [7.20m]	22.98' [7.00m]	7.38' [2.25m]	7.05' [2.15m]	31.17' [9.50m]	10.79' [3.29m]
TB 25/14.5-3	83.00' [25.30m]	48.56' [14.80m]	37.08' [11.30m]	40.36' [12.30m]	71.53' [21.80m]	68.24' [20.80m]	27.63' [8.42m]	26.90' [8.20m]	26.26' [8.00m]	9.02' [2.75m]	8.69' [2.65m]	34.45' [10.50m]	11.88' [3.62m]
TB 27/15.0-3	89.57' [27.30m]	50.20' [15.30m]	38.72' [11.80m]	42.00' [12.80m]	78.09' [23.80m]	74.81' [22.80m]	30.09' [9.17m]	29.36' [8.95m]	27.90' [8.50m]	9.02' [2.75m]	8.69' [2.65m]	39.37' [12.00m]	12.96' [3.95m]
TB 29/15.5-3	96.13' [29.30m]	51.84' [15.80m]	40.36' [12.30m]	43.64' [13.30m]	84.56' [25.80m]	81.37' [24.80m]	32.55' [9.92m]	31.83' [9.70m]	29.55' [9.00m]	9.02' [2.75m]	8.69' [2.65m]	44.29' [13.50m]	14.08' [4.29m]
TB 31/16.5-3	102.70' [31.30m]	55.12' [16.80m]	43.64' [13.30m]	46.92' [14.30m]	91.21' [27.80m]	87.93' [26.80m]	34.18' [10.42m]	33.47' [10.20m]	32.83' [10.00m]	9.02' [2.75m]	8.69' [2.65m]	47.57' [14.50m]	16.24' [4.95m]
TB 33/17.0-3	109.26' [33.30m]	56.76' [17.30m]	45.28' [13.80m]	48.56' [14.80m]	97.77' [29.80m]	94.49' [28.80m]	38.29' [11.67m]	37.57' [11.45m]	34.47' [10.50m]	10.66' [3.25m]	10.34' [3.15m]	52.50' [16.00m]	17.36' [5.29m]
TB 35/17.5-3	115.82' [35.30m]	58.40' [17.80m]	46.92' [14.30m]	50.20' [15.30m]	104.34' [31.80m]	101.05' [30.80m]	40.68' [12.42m]	40.03' [12.20m]	36.11' [11.00m]	10.66' [3.25m]	10.34' [3.15m]	57.42' [17.50m]	18.44' [5.62m]
TB 37/18.5-3	122.38' [37.30m]	61.68' [18.80m]	50.20' [15.30m]	53.48' [16.30m]	110.90' [33.80m]	107.62' [32.80m]	43.21' [13.17m]	42.49' [12.95m]	39.39' [12.00m]	11.49' [3.50m]	11.16' [3.40m]	60.70' [18.50m]	19.52' [5.95m]
TB 39/19.0-3	128.94' [39.30m]	63.32' [19.30m]	51.82' [15.80m]	55.12' [16.80m]	117.46' [35.80m]	114.18' [34.80m]	45.67' [13.92m]	44.95' [13.70m]	41.03' [12.50m]	11.49' [3.50m]	11.16' [3.40m]	65.62' [20.00m]	20.64' [6.29m]
TB 41/19.5-3	135.51' [41.30m]	64.96' [19.80m]	53.48' [16.30m]	56.76' [17.30m]	124.02' [37.80m]	120.74' [36.80m]	49.77' [15.17m]	49.05' [14.95m]	42.67' [13.00m]	13.13' [4.00m]	12.80' [3.90m]	70.54' [21.50m]	21.72' [6.62m]
TB 43/20.5-3	142.07' [43.30m]	68.24' [20.80m]	56.76' [17.30m]	60.04' [18.30m]	130.58' [39.80m]	127.30' [38.80m]	51.41' [15.67m]	50.69' [15.45m]	45.95' [14.00m]	13.13' [4.00m]	12.80' [3.90m]	73.83' [22.50m]	22.81' [6.95m]
TB 45/21.0-3	148.63' [45.30m]	69.89' [21.30m]	58.40' [17.80m]	61.68' [18.80m]	137.15' [41.80m]	133.86' [40.80m]	53.87' [16.42m]	53.15' [16.20m]	47.59' [14.50m]	13.13' [4.00m]	12.80' [3.90m]	78.74' [24.00m]	22.81' [6.95m]



PLAN VIEW



ELEVATION VIEW

NOTES:

1. ROTUNDA DIMENSIONS (NOMINAL) -
   DOOR OPENING AT TERMINAL: 59.45"W x 90.91"H [1510mm x 2309mm]
   ROTATION: ± 87.5° (175° TOTAL)

2. TUNNEL INTERIOR DIMENSIONS (NOMINAL) -
   A - TUNNEL: 4'-10"W x 6'-11"H [1472mm x 2110mm]
   B - TUNNEL: 5'-7"W x 7'-8 1/2"H [1702mm x 2350mm]
   C - TUNNEL: 6'-4 3/8"W x 8'-6 3/8"H [1940mm x 2600mm]

3. ROTATING CAB DIMENSIONS (NOMINAL) -
   CANOPY (INTERIOR) WIDTH: 10'-2 1/2"W [3111.5mm]
   ROTATION: 95° LEFT & 40° RIGHT (135° TOTAL)

4. LIFT AND DRIVE DIMENSIONS (NOMINAL) -
   HYDRAULIC LIFT CYLINDER STROKE: 120" [3048mm]
   WHEEL ROTATION: 90° LEFT & 90° RIGHT (180° TOTAL)

5. RETRACTION TO ELECTRICAL LIMITS (DIM "C") &
   EXTENSION TO ELECTRICAL LIMITS (DIM "E") ARE
   AT THE ELECTRICAL E-STOP, MECHANICAL STOPS
   ARE ±2.3" PAST E-STOP.

   WHEN ICE SRAPERS ARE USED, THE RETRACTION
   TO ELECTRICAL LIMITS (DIM "C") IS REDUCED BY 5",
   AND MECHANICAL STOP FOR RETRCATION IS
   RELOCATED 1/2" PAST E-STOP.

6. RECOMMENDED RETRACTION AND EXTENSION
   IS 39.37" [1000mm] SHORT OF ELECTRICAL STOPS.

NOTE: MODEL SHOWN TB 37/18.5-3.

ThyssenKrupp Airport Systems, Inc.
A ThyssenKrupp Elevator Company

LTR	DATE	REVISIONS
F.	10/7/04	
E.	3/27/03	
D.	3/8/01	
C.	8/11/99	
B.	11/18/98	
A.	10/27/98	

TITLE: BRIDGE OPERATIONAL LIMITS
TKAS (3) TUNNEL BRIDGE

TOLERANCES: FRACTIONAL ± 1/16 | DECIMAL .XX ± .03 .XXX ± .003 | ANGULAR ± 1°
SIZE: D | DWG NO.: A8209253 | REV: F
DATE: 8/16/98 | DRAWN: DL | SCALE: 1/8"=1'0" | SHEET: 1 OF 1

ThyssenKrupp Airport Systems
Recommended Spare Parts List

ThyssenKrupp

Project Name: Southwest Florida Int'l Airport (RSW) **Project Number:** Bids **# of Bridges:** 27

MECHANICAL SPARE PARTS

Bid Part #	Description	MFG Name	MFG Model #	Base Qty	Project Qty	Unit Price	Total
BD2240016	CASTER, SWIVEL, 6	TKAS	76659-979-7 COLSON	2	2	$151.01	$302.02
BD00009106090	CAM ROLLER, 90mm DIAMETER	TKAS	NUKR-90-BK	1	2	$101.66	$203.32
BD00009439480	PILLOW BLK BEARING FYH NAP 210	TKAS	NAP 210	2	2	$91.43	$182.86
BD99200013	ACTUATOR AUTOLEVELER	TKAS	SL24-17A8-04SF	1	2	$339.26	$678.52
BDA2215431	2" PILLOW BLOCK BEARING,	TKAS	A2215431	2	4	$92.58	$370.30
BDA2215433	2 Bolt FLG BRG, 1 1/4	TKAS	A2215433	2	4	$25.85	$103.40
BDA25825001010	CAM ROLLER, 127mm DIAMETER	TRINITY SLING	YR-5-XC-10	1	2	$88.00	$176.00
BDA4220058	PILLOW BLOCK, ACF	KAMAN IND	UCP205-25mm	2	4	$17.38	$69.52
BDA4230283	GAS-SPRING 700N	TKAS	A4230283	1	2	$318.78	$637.56
BDA4230284	GAS-SPRING 300N	TKAS	A4230284	1	2	$382.36	$764.72
BDA4230293	PULLY RT	TKAS	4319943200	1	2	$2,314.40	$4,628.80
BDA4230294	PULLY LT	TKAS	4319943400	1	2	$2,314.40	$4,628.80
BDA4230300	TUBE MOTOR	TKAS	4310224600	1	2	$3,328.60	$6,657.20
BDA4230304	BELT 19MM	TKAS	4310193700	2	4	$383.70	$1,534.81
BDA5209314	SLIDING BLOCK, UPPER, LIFT	TKAS	A5209314	8	8	$17.60	$140.80
BDA5209315	SLIDING BLOCK, LIFT COLUMN,	TKAS	A5209315	8	8	$16.50	$132.00
BDA6301000110	GEARBOX, WHEEL BOGIE DRIVE	BONFIGLIOLI USA,	F630100011	1	2	$3,537.56	$7,075.11
BDA4213977	BRAKE GEARMOTOR, 480V, COLD	SUMITOMO, 480V	A4232465	1	2	$1,131.57	$2,263.14
BD00500020860	AC MOTOR, 400V/50Hz,460V/60Hz	BALDOR	36K681T284G1	1	2	$2,276.36	$4,552.72
BDA3161943	EQUALIZING CABLE, LONG	TKAS	A3161943	1	2	$315.83	$631.66
BDA3162043	EQUALIZING CABLE, SHORT	TKAS	A3162043	1	2	$245.87	$491.74
BDA4234387	ACTUATOR, 4" STROKE, W/ 3/4"	TKAS	NOOK CCHD-5451	1	2	$1,075.25	$2,150.50
						Subtotal	**$38,375.52**

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ThyssenKrupp Airport Systems
Recommended Spare Parts List

ThyssenKrupp

Project Name: Southwest Florida Int'l Airport (RSW) **Project Number:** Bids **# of Bridges:** 27

ELECTRICAL SPARE PARTS

Bid Part #	Description	MFG Name	MFG Model #	Base Qty	Project Qty	Unit Price	Total
BD99200013	ACTUATOR AUTOLEVELER	DANAHER MOTION	SL24-17A8-04SF	1	2	$339.26	$678.52
BD25521067	CIRCUIT BREAKER, 1P, 10A, 120V	SQUARE-D	QO110	1	2	$11.79	$23.58
BD25521081	CIRCUIT BREAKER, 1P, 15A	SCHNEIDER	QO115	1	2	$11.77	$23.54
BD25521070	CIRCUIT BREAKER, 1P, 50A, 240V	SQUARE-D	QOU150	1	2	$15.18	$30.36
BD25521069	CIRCUIT BREAKER, TANDEM, 15A	SCHNEIDER	QOT1515	1	2	$24.73	$49.46
BD2552216	CONT BLK, 1 N.O. 1 N.O.	SQUARE-D	ZB4BZ103	1	2	$4.52	$9.04
BD25522161	CONT BLK, MTG BASE W/1NO & 1NC	SCHNEIDER	ZB4BZ105	1	2	$5.85	$11.70
BD2552015	CONT, 2P, 30A DP, 120V COIL	SQUARE-D	8910DPA32V02	1	2	$57.13	$114.27
BD2552016	CONT, 3P, 75A DP, 120V COIL	SCHNEIDER	8910DPA73V02	1	2	$165.90	$331.80
BD00009457200	CONTACTOR 2.2 KW, 3S+10E	SCHNEIDER	LP1-KO601BD3	1	2	$17.64	$35.29
BD00009457310	CONTACTOR,REV,4POL,LPK09008BD3	SCHNEIDER	LP1K090008BD3	1	2	$26.14	$52.27
BD00009448940	CONTACTOR,REV2,2KW,LP2KO601BD3	SCHNEIDER	LP2KO601BD3	1	2	$44.40	$88.79
BD25524121	DISPLAY, MAGELIS, 5.7" COLOR.	SCHNEIDER	XBT GK2330	1	2	$1,548.80	$3,097.60
BD2556076	FUSE,1000VDC,030A,CLASS 101	SHAWMUT	A4230293	1	2	$86.44	$172.88
BD2556142	FUSE,125V,3A,1.5",SLOW BLOW	BUSSMAN	FNA-3	3	6	$3.67	$22.04
BD2556080	FUSE,250V,10A,1.25" FAST ACT	LITTELFUSE	212.010 (AG3)	3	6	$0.31	$1.85
BD2556071	FUSE,250V,1A,1.25"FAST ACT	LITTELFUSE	212.001 (3AG)	3	6	$0.24	$1.45
BD2556072	FUSE,250V,2A,1.25"FAST ACT	LITTELFUSE	212.002 (3AG)	3	6	$0.24	$1.45
BD2556073	FUSE,250V,3A,1.25",FAST ACT	LITTELFUSE	212.003 (3AG)	3	6	$0.24	$1.45
BD2556074	FUSE,250V,4A,1.25"FAST ACT	LITTELFUSE	212.004, (3AG)	3	6	$0.33	$1.98
BD2556075	FUSE,250V,5A,1.25"FAST ACT	LITTELFUSE	212.005 (3AG)	3	6	$0.33	$1.98
BD2556081	FUSE,250V,7A,1.25FAST ACT	BUSSMAN	AGC-7	3	6	$0.37	$2.24
BD2556305	FUSE,600V,.250A,CLASS CC	BUSSMAN	FNQ-R-1/4	3	6	$10.52	$63.10
BD25562010	FUSE,600V,1.5A,CLASS CC	BUSSMAN	FNQ-R-1.5	3	6	$9.59	$57.55
BD2556196	FUSE,600V,10A,CLASS CC	BUSSMAN	FNQ-R-10	3	6	$10.12	$60.72
BD2556254	FUSE,600V,20A,CLASS CC	BUSSMAN	FNQ-R-20	3	6	$9.88	$59.27
BD2556419	FUSE,600V,20A,CLASS J	BUSSMAN	LPJ-20SP	6	12	$11.35	$136.22
BD2556256	FUSE,600V,30A,CLASS CC	BUSSMAN	FNQ-R-30	3	6	$9.88	$59.27

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ThyssenKrupp Airport Systems
Recommended Spare Parts List

ThyssenKrupp

Project Name: Southwest Florida Int'l Airport (RSW) **Project Number:** Bids **# of Bridges:** 27

ELECTRICAL SPARE PARTS

Bid Part #	Description	MFG Name	MFG Model #	Base Qty	Project Qty	Unit Price	Total
BD2556132	FUSE,600V,60A,CLASS RK5	BUSSMAN	FRS-R-60	3	6	$11.88	$71.28
BD2552009	HTR, O.L., THERMAL UNIT, SQ-D	SQUARE-D	B19.5	3	6	$6.86	$41.18
BD2552010	HTR, O.L., THERMAL UNIT, SQ-D	SQUARE-D	B1.45	3	6	$6.86	$41.18
BD2570613	JOYSTICK, 2 AXIS, NO POT	SQUARE-D	XKB-A14220	1	2	$317.28	$634.57
BD2552257	LIGHT MODULE WITH WHITE LED	SCHNEIDER	ZB5AVB1	1	2	$9.79	$19.58
BD00009795560	LIMIT SWITCH ACTUATOR HEAD CSA	SCHNEIDER	ZCKE 056	1	2	$10.87	$21.74
BD256010610	PWR SPLY, 24VDC,10A,PHASEO	TELEMECANIQUE	ABL8RPS24100	1	2	$224.14	$448.27
BD2552022	RELAY, 3/NO-1/NC,120VAC COIL	TELEMECANIQUE	CA2KN31F7	1	2	$22.33	$44.66
BD2597076	RELAY,24VDC,4P,MINI,PLUG IN,	SQUARE-D	RXM 4AB2BD	2	4	$7.70	$30.80
BD2597079	RELAY,HOLD DOWN,MINI,PLUG IN	SQUARE-D	RXZ 400	2	4	$0.57	$2.29
BD2597078	RELAY,PROT. DIODE,6-250VDC	SQUARE-D	RXM 040W	2	4	$2.22	$8.89
BD2597077	RELAY,SOCKET,2/4P,MINI,PLUG IN	SQUARE-D	RXZ E2M114	2	4	$5.74	$22.97
BD2515641	SENSOR, PHOTO, DIFFUSE	TELEMECANIQUE	XUX0AKSAT16	1	2	$155.87	$311.74
BD00009476700	SENSOR, PROX, INDUCTIVE, 18MM	TELEMECANIQUE	XS618B1PAL2TF	1	2	$76.05	$152.11
BD25156153	SENSOR, PROX, INDUCTIVE, 18MM	SQUARE-D	XS1-N18PB349TF	2	4	$74.07	$296.30
BD2552000	STR,NR,SZ 1, 120V COIL,SS O.L.	SQUARE-D	8536SCO3V02S	1	2	$169.49	$338.98
BD2552011	STR,O.L, AUX CONT, 1NO/1NC	SQUARE-D	9999S04	1	2	$36.83	$73.66
BD2552001	STR,REV.SZ 00,120V COIL,SS O.L	SQUARE-D	8736SAO16V02S	1	2	$281.86	$563.73
BD2552247	SW, SEL, 2 POS, MAINT,BLK,22MM	TELEMECANIQUE	ZB4BD2	1	2	$5.57	$11.13
BD00500012780	SW,INTERLOCK,DOOR,SPDT,15A	HONEYWELL	642-1029	1	2	$52.76	$105.51
BD2515574	SW,LIM, 2 NO, 2 NC, 2 STEP	SQUARE-D	ZCKJ4	1	2	$52.36	$104.72
BD2515599	SW,LIM,BODY C-H #E50SN	CUTLER HAMMER	E50SN	1	2	$128.70	$257.40
BD2510607	SW,LIM,DPDT,10DGR TRIP	SQUARE-D	9007C68T10	1	2	$120.05	$240.11
BD2515598	SW,LIM,HEAD,CW-CCW, 5 DEG.-40C	CUTLER HAMMER	E50DN19	1	2	$108.90	$217.80
BD2510608	SW,LIM,LEVER ARM,2INCH	SQUARE-D	CA11	1	2	$18.44	$36.87
BD2515605	SW,LIM,LEVER,ADJ,C-H #E50KL201	CUTLER HAMMER	E50KL201	1	2	$28.27	$56.54
BD2515572	SW,LIM,RECP,2NO,2NC,C-H #E50RB	CUTLER HAMMER	E50RB	1	2	$32.89	$65.78
BD2552350	SW,LIM,WOBBLE HEAD	SQUARE-D	9007C54JS9	1	2	$129.73	$259.47

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ThyssenKrupp Airport Systems
Recommended Spare Parts List

Project Name: Southwest Florida Int'l Airport (RSW) **Project Number:** Bids **# of Bridges:** 27

ELECTRICAL SPARE PARTS

Bid Part #	Description	MFG Name	MFG Model #	Base Qty	Project Qty	Unit Price	Total
BD00009795550	SWITCH, MECHANICAL LIMIT	SQUARE-D	ZCKJ2	1	2	$38.57	$77.13
BD2552402	PLC,MICRO/M340,TELEFAST 2,16IN	TELEMECANIQUE	ABE7H16R21	1	2	$92.44	$184.89
BD2552403	PLC,MICRO/M340,TELEFAST,16OUT	TELEMECANIQUE	ABE7R16S210	1	2	$162.12	$324.24
BD2552471	PLC,M340,PWR SUPPLY	TELEMECANIQUE	BMX CPS 2000	1	2	$403.72	$807.44
BD2552472	PLC,M340,CPU	TELEMECANIQUE	BMX P34 1000	1	2	$900.90	$1,801.80
BD2552475	PLC,M340,64 INPUT MODULE	TELEMECANIQUE	BMX DDI 6402 K	1	2	$817.48	$1,634.95
BD2552476	PLC,M340,32 INPUT MODULE	TELEMECANIQUE	BMX DDI 3202 K	1	2	$520.34	$1,040.69
BD2552477	PLC,M340,64 OUTPUT MODULE	TELEMECANIQUE	BMX DDO 6402 K	1	2	$984.08	$1,968.16
BD2552479	PLC,M340,CABLE,I/O MODULES-10M	TELEMECANIQUE	BMXFCC1003	1	2	$273.33	$546.66
BD2552042	VFD, 7.5HP, 480 VAC, UL	SQUARE-D	HU55N4	2	1	$1,163.03	$1,163.03
BD25580938	XFMR 100VA,380/400/415-24 OPEN	SQUARE-D	9070T100D52	1	1	$151.80	$151.80
BD2558156	XFMR 10KVA,EXPORT-240/120 NM3R	SQUARE-D	10S67F	1	1	$1,656.47	$1,656.47
						Subtotal	**$21,026.19**

Lead-Time estimate 1-2 weeks upon receipt of purchase order. Cost includes FOB TKAS Fort Worth, TX

Note: The above recommended spare parts listing is standard. Part numbers and prices are subject to change due to project specification requirements.

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ThyssenKrupp Airport Systems
Recommended Spare Parts List

ThyssenKrupp

Project Name: Southwest Florida Int'l Airport (RSW) **Project Number:** Bids **# of Bridges:** 27

HYDRAULIC SPARE PARTS

Bid Part #	Description	MFG Name	MFG Model #	Base Qty	Project Qty	Unit Price	Total
BDA5228400	HYDRAULIC PUMP	PARKER	334-9112-227	1	2	$368.08	$736.16
BDA5228403	PC FLOW CONTROL	PARKER	FR101S550-20	1	2	$79.20	$158.40
BDA5234600	PILOT OPERATED RELIEF VALVE	PARKER	RAH101S50	1	2	$59.53	$119.06
BDA5228405	DIRECTIONAL VALVE	PARKER	DSL104BPD024D	1	2	$256.96	$513.92
BDA5228406	DIRECTIONAL VALVE	PARKER	DSL101NMD024D	1	2	$152.02	$304.04
BDA5228407	CHECK VALVE	PARKER	CVH103P	1	2	$26.40	$52.80
BDA5228408	NEEDLE VALVE	PARKER	NVH081S	1	2	$34.85	$69.70
BDA5234168	FILTER ELEMENT, HPU	PARKER	937617Q	10	10	$87.85	$878.46
BDA5228413	GAUGE	PARKER	2141SXB3000	1	2	$20.66	$41.32
BDA5228414	LEVEL GAUGE	PARKER	SNA-254-B-S-0-12	1	2	$44.88	$89.76
BDA5228415	BALL VALVE	PARKER	V502P-8	1	2	$40.37	$80.74
BDA5228416	CYLINDER HOSE ASSEMBLY	TKAS	FAX0641-8-8-8-62	1	2	$228.76	$457.51
BDA5228417	PO CHECKHOSE ASSEMBLY	TKAS	FAX0641-6-6-6-67	1	2	$213.82	$427.64
BDA5228418	PUMP HOSE ASSEMBLY	TKAS	FAX06OG05-6-10-6-18.00	1	2	$112.86	$225.72
BDA5232026	O RING KIT, WILSON HPU	PARKER	A4230293	1	2	$33.00	$66.00
BDA5215690	ELECTRIC MOTOR, 7.5 HP, 460VAC	PARKER	WWE7.5-18-213TD	1	2	$1,445.25	$2,890.49
						Subtotal	**$7,111.72**

Lead-Time estimate 1-2 weeks upon receipt of purchase order. Cost includes FOB TKAS Fort Worth, TX

Note: The above recommended spare parts listing is standard. Part numbers and prices are subject to change due to project specification requirements.

NOTE: These spare parts lists are for bid purposes only.
DO NOT order from these lists.

thyssenkrupp Airport Systems
3201 North Sylvania Avenue, Suite 117, Fort Worth, Texas 76111 USA
P: +1 817 210-5000 www.thyssenkrupp-airports.com

thyssenkrupp

Statement of NFPA 415-2013 (Standard on Airport Terminal Buildings, Fueling Ramp Drainage and Loading Walkways) Compliance

This is to certify that all Passenger Boarding Bridges furnished by ThyssenKrupp Airport Systems, Inc. are designed and manufactured in strict accordance with the requirements of NFPA 415-2013. We further state that:

(1) All components and assemblies of the bridges required to be tested under NFPA 415-2013 have been tested for compliance by a Nationally Recognized Testing Laboratory (NRTL) and meet or exceed the requirements of the standard.

(2) The design and construction of the entire bridge is in compliance with all the requirements of NFPA 415-2013.

(3) There have been no design changes since the component testing that would materially affect the outcome of the test certifications.

NFPA 415-2013 Section 6.4.6 Test of Floors
The bridge floor was tested and complied with NFPA 415-2013 as recorded by Intertek Testing Services NA, Inc. Test Report 3181041SAT-014, which includes material list, tested construction, and compliance information.

NFPA 415-2013 Section 6.4.6 Test of Walls
The bridge glass wall was tested and complied with NFPA 415-2002 as recorded by Southwest Research Institute, Project No. 01.11310.01.001, which includes the test procedure, description of the test assembly, test results, and compliance information.

NFPA 415-2013 Sect 6.4.7, Test of Flexible Closures
The bridge canopy was tested and complied with NFPA 415-2013 as recorded by Intertek Testing Services NA, Inc. Test Report G101258905SAT-002, which includes material lists, tested construction, and compliance information.

NFPA 415-2013 Sect 6.4.8, Test of Cab and Rotunda Slat Curtains
The bridge cab curtains were tested and complied with NFPA 415-2013 as recorded by Intertek Testing Services NA, Inc. Test Report G100015559SAT-001, which includes material lists, tested construction, and compliance information.

NFPA 415-2013 Sect 6.4.9, Test of Bumpers
The bridge bumper was tested and complied with NFPA 415-2013 as recorded by Intertek Testing Services NA, Inc. Test Report 3181041SAT-005B, which includes material lists, tested construction, and compliance information.

NFPA 415-2013 Sect 6.4.10, Tests of Misc. Seals and Weather Stripping Assemblies
The bridge seals were tested and complied with NFPA 415-2013 as recorded by Intertek Testing Services NA, Inc. Test Report 3181041SAT-012, which includes material lists, test construction, and compliance information.

thyssenkrupp Airport Systems
3201 North Sylvania Avenue, Suite 117, Fort Worth, Texas 76111 USA
P: +1 817 210-5000 www.thyssenkrupp-airports.com

thyssenkrupp

The above mentioned tests have been carried out successfully in accordance with the requirements of the NFPA 415-2013 and all the recorded test reports are available upon request for the review and approval of the Authority having jurisdiction on each project.

PSReddy

Reddy Poondla P.E.
Director of Engineering ET-AS-AIR
10/11/2019.

26. -

Listing Constructional Data Report (CDR)

1.0 Reference and Address			
Report Number	3181041SAT-006	DRAFT Issued: 22-Jan-2014	For Review and 22-Jan-2014
Standard(s)	NFPA 415 : Standard on Airport Terminal Buildings, Fueling Ramp Drainage and Loading Walkways, 2013 Edition (NFPA 415-13); Standard Method of Test of Surface Burning Characteristics of Building Materials, 2006 Edition (NFPA 255-06)		

Applicant	ThyssenKrupp Airport Systems, Inc.	Manufacturer	**ThyssenKrupp Airport Systems, Inc.**
Address	3201 North Sylvania Avenue Suite 117 Fort Worth, TX 76111	Address	3201 North Sylvania Avenue Suite 117 Fort Worth, TX 76111
Country	USA	Country	USA
Contact	Jason Bryan	Contact	Jason Bryan
Phone	(817) 344-7960	Phone	(817) 344-7960
FAX	(817) 834-6985	FAX	(817) 834-6985
Email	jason.bryan@thyssenkrupp.com	Email	jason.bryan@thyssenkrupp.com

2.0 Product Description	
Product	Basic Passenger Boarding Bridge System (Steel)
Brand name	NA
Description	The product covered in this report is a weather-protected walkway between the airport terminal building and commercial aircraft for enplaning and deplaning airline passengers.
Models	Basic Two-Tunnel Passenger Bridge System - Steel; Basic Three-Tunnel Passenger Bridge System - Steel
Model Similarity	The two models are identical except in the number of telescoping tunnels designed into each (two or three)
Ratings	NA
Other Ratings	NA

Certificate of Compliance

Certificate Number **20090515 – E192681**
Report Reference **E192681, 1998 May 15**
Issue Date **2009 May 15**

Underwriters Laboratories Inc.®

Issued to:

THYSSEN STEARNS INC

SUITE 100E
3201 N SYLVANIA AVE
FT WORTH, TX 76111 USA

This is to certify that representative samples of

Industrial Control Panels

Model Descriptions: Industrial control panel – General Coverage

Have been investigated by Underwriters Laboratories Inc.® in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety:

The basic standards used to investigate products in this category are UL 508A, "Industrial Control Panels" and CSA-C22.2 No. 14, "Industrial Control Equipment."

Additional Information:

None

Only those products bearing the UL Listing Mark for the US and Canada should be considered as being covered by UL's Listing and Follow-Up Service meeting the appropriate requirements for US and Canada.

The UL Listing Mark for the US and Canada generally includes: the UL in a circle symbol with "C" and "US" identifiers: c UL us the word "LISTED"; a control number (may be alphanumeric) assigned by UL; and the product category name (product identifier) as indicated in the appropriate UL Directory.

Look for the UL Listing Mark on the product

Issued by: *Jim Larin*

Jim Larin, Customer Service Specialist
Underwriters Laboratories Inc.

Reviewed by: *William Bartunek*

William Bartunek, Senior Staff Engineer
Underwriters Laboratories Inc.

File E332865 Vol 1 Issued: 2009-08-31
Revised: 2009-08-31

FOLLOW-UP SERVICE PROCEDURE
(TYPE R)

PASSENGER BOARDING BRIDGES
(QGLA)

Manufacturer: (100238-823) THYSSENKRUPP AIRPORT SYSTEMS INC
3201 N SYLVANIA AVE
FORT WORTH TX 76111-3117

Applicant: (100238-823) SAME AS MANUFACTURER

Listee: (100238-823) SAME AS MANUFACTURER

This Procedure authorizes the above manufacturer to use the marking specified by Underwriters Laboratories Inc.(UL), or any authorized licensee of UL, only on products covered by this Procedure, in accordance with the applicable UL Services Agreement.

The prescribed Mark or Marking shall be used only at the above manufacturing location on such products which comply with this Procedure and any other applicable requirements.

The Procedure contains information for the use of the above named Manufacturer and representatives of Underwriters Laboratories Inc. and is not to be used for any other purpose. It is lent to the Manufacturer with the understanding that it is not to be copied, either wholly or in part, and that it will be returned to Underwriters Laboratories Inc. (UL) or any authorized licensee of UL, upon request.

This PROCEDURE, and any subsequent revision, is the property of Underwriters Laboratories Inc.(UL) and the authorized licensee of UL and is not transferable.

Underwriters Laboratories Inc.

Stephen Hewson
Senior Vice President
Global Follow-Up Service Operations

William R. Carney
Director
North American Certification Program

Environmental Testing Laboratory, Inc.

11034 Indian Trail
Dallas, TX 75229-3513
(972) 247-9657
Fax (972) 247-9659
info@etldallas.com

CERTIFICATE OF TEST 14914

Customer: Motor Controls, Inc. P.O. Box 59986 Dallas, TX 75229	**Test:** Capacity Verification
	Test Completion Date: 12 July 2018
	Purchase Order Number: 0181917

Test Unit Description

One (1) Cable Hoist.

Specification

Motor Controls Inc. Capacity Verification Test.

Equipment

Equipment Name	Description	Model #	Calibration Due
ETL #108	Carroll Coolers, Inc. Custom Chamber	Carroll Coolers, Inc. 23W x 26L x 15.6H (feet)	CNR
ETL #1225	Eclipse Chart Recorder	DR45ET-1100	21 July 2018
ETL #1394	Mettler-Toledo Weighing Terminal	IND221	15 January 2019
ETL #1567	Micristar Controller	828-D11-403-403-020-00	13 December 2018
Sand Bags	Sand Bags	N/A	CNR

Procedure

The test unit was subjected to Capacity Verification testing in accordance with the specification.

Results

The test unit operated as specified at both temperature extremes and at ambient conditions. Operational tests were performed by Environmental Testing Laboratory personnel. Test completed 12 July 2018.

Traceability

This Certificate of Test certifies that the above test was run in accordance with applicable specifications and that all instrumentation was in calibration and is traceable to the NATIONAL INSTITUTE OF STANDARDS and TECHNOLOGY or other recognized calibration sources when applicable.

Accreditation

This test is accredited and meets the requirements of Motor Controls Inc. Capacity Verification Test. as verified by the ANSI-ASQ National Accreditation Board (ANAB). Refer to Certificate and Scope of Accreditation AT-1787. This document cannot be reproduced without the approval of the Laboratory.

Respectfully,
ENVIRONMENTAL TESTING LABORATORY, INC.

Brady Richard
President

BKR/ja

Environmental Testing Laboratory, Inc.

11034 Indian Trail
Dallas, TX 75229-3513
(972) 247-9657
Fax (972) 247-9659
info@etldallas.com

JOB #: 14914	**CUSTOMER:** Motor Controls, Inc.
TEST: Capacity Verification	
TEST UNIT: One (1) Cable Hoist.	
SPECIFICATION: Motor Controls, Inc. Capacity Verification Test.	

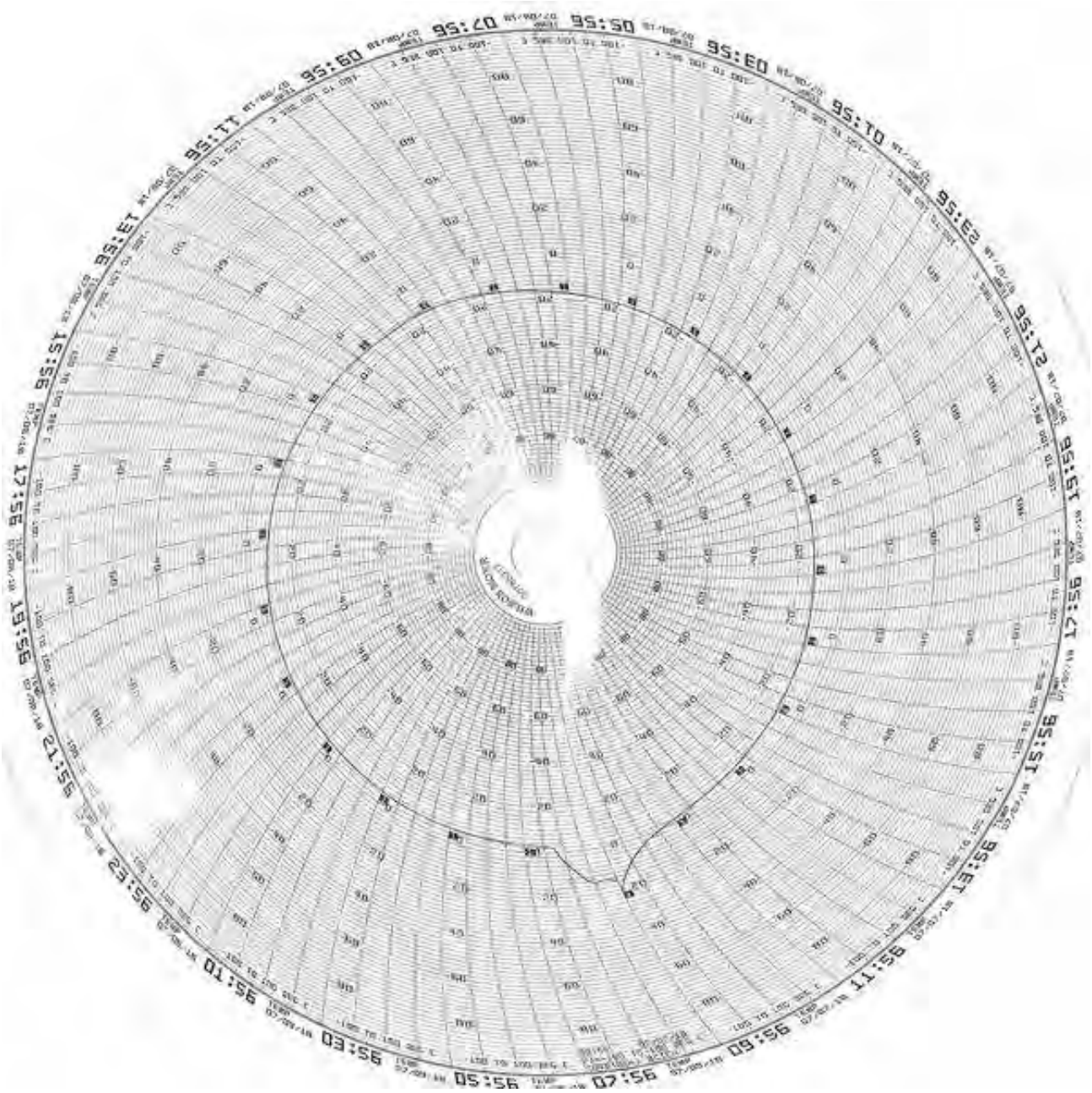
EQUIPMENT LIST		
1. ETL #108	6.	11.
2. ETL #1225	7.	12.
3. ETL #1394	8.	13.
4. ETL #1567	9.	14.
5. Sand Bags	10.	15.

DATE	TIME	LOG AND OBSERVATIONS
		Checked calibration dates.
7/3/18	0915	Inspect cable hoist for any wiring or mechanical discrepancies. None found. Wire main power 480Vac into incoming buss and wire remote control into the proper connector.
	1015	Mount cable hoist on top of a 14 foot high frame to allow hoist to be operated with load. Verify proper operation of the up safety switch by activating it 10 times. Verify operation of the down safety switch by activating 10 times. Lift 375 lbs. load 10 feet 10 times. Cable hoist is operating as specified.
7/7/18	0955	Set chamber to -20°C.
7/8/18	0956	Test unit at -20°C. Verify proper operation of the up safety switch by activating switch 10 times. Verify operation of the down safety switch by activating switch 10 times. Lift 375 lbs. load 10 feet 10 times. Cable hoist is operating as specified. Startup was normal with no sign of stress from motor.
7/9/18	0915	Chamber at ambient conditions. Verify proper operation of the up safety switch by activating switch 10 times. Verify operation of the down safety switch by activating switch 10 times. Lift 375 lbs. load 10 feet 10 times. Cable hoist is operating as specified. Startup was normal with no sign of stress from motor.
	1313	Set chamber to 65°C.
7/10/18	1333	Test unit at 65°C. Verify proper operation of the up safety switch by activating switch 10 times. Verify operation of the down safety switch by activating switch 10 times. Lift 375 lbs. load 10 feet 10 times. Cable hoist is operating as specified. Startup was normal with no sign of stress from motor.
7/11/18	1145	Test unit at 40°C. Verify proper operation of the up safety switch by activating switch 10 times. Verify operation of the down safety switch by activating switch 10 times. Lift 375 lbs. load 10 feet 10 times. Cable hoist is operating as specified. Startup was normal with no sign of stress from motor.
7/12/18	1250	Chamber at ambient conditions. Verify proper operation of the up safety switch by activating switch 10 times. Verify operation of the down safety switch by activating switch 10 times. Lift 375 lbs. load 10 feet 10 times. Cable hoist is operating as specified. Startup was normal with no sign of stress from motor.
7/12/18		Test completed.
		A visual examination of the test unit was performed after testing.
		No damage was observed.
		The test unit was returned to Motor Controls, Inc.
Technician		Brady Richard

Environmental Testing Laboratory, Inc.

11034 Indian Trail
Dallas, TX 75229-3513
(972) 247-9657
Fax (972) 247-9659
info@etldallas.com

Motor Controls, Inc.
ETL Job #14914
One (1) Cable Hoist
Motor Controls, Inc. Capacity Verification Test
7/7/18 through 7/9/18 -20°C



Environmental Testing Laboratory, Inc.

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Fax (972) 247-9659
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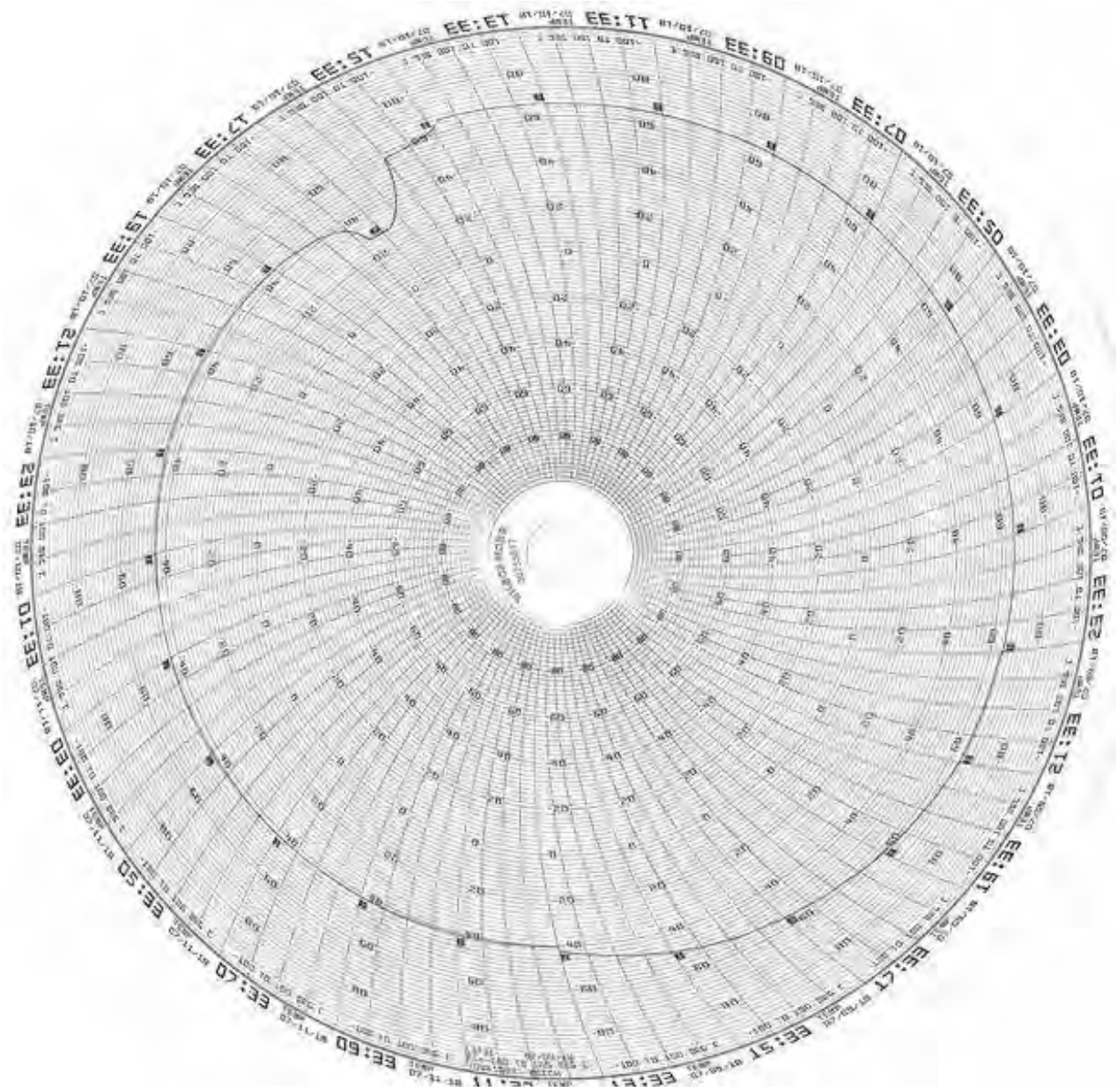
Motor Controls Incorporated
ETL Job #14914
One (1) Cable Hoist
Motor Controls, Inc. Capacity Verification Test
7/9/18 through 7/11/18 40°C - 60°C



ETL	**Environmental Testing Laboratory, Inc** **Calibration Data**	ETL #1225

Condition of instrument as received:		X	**Within tolerance**	**Instrument:** Eclipse Chart Recorder
			Out of tolerance	**Manufacturer:** Eclipse Controls
			Limited Use	**Due Date:** 7/11/2017
			New	**Calibration Date:** 7/21/2017
X	**Internal Calibration**		**External Calibration**	**Cal Freq:** 12 months
Serial #: 93501452840002		**Model #:** DR45ET-1100		**Next Cal Due:** 7/21/2018
ETL Calibration Procedure #: 2.02-ETL-QS				**Budget:** N/A

Calibrator and Additional Standards

ETL Asset #	Manufacturer	Model	Accuracy	Ch#	Uncertainty	Cert #	Cal Due Date
ETL #1200	Omega Engineering	CL27	+/-0.3 C	1	0.125 C	7174-28	7/6/2018
ETL #1327	Omega Engineering	CL27	+/-0.3 C	2	0.125 C	7174-27	7/6/2018

Ambient conditions during cal:	**Barometric Pressure:**	29.93	**"Hg**	**Relative Humidity:**	44	**%**	**Temperature:** 26 **°C**

STD IN*			PRE CAL*		POST CAL*	
MU*	**Channel #1**	**Channel #2**	**Channel #1**	**Channel #2**	**Channel #1**	**Channel #2**
Y	-55.0 C	-55.0 C	-54.6 C	-54.7 C	-54.8 C	-54.9 C
Y	-35.0 C	-35.0 C	-34.8 C	-34.9 C	-34.9 C	-34.9 C
Y	-15.0 C	-15.0 C	-14.8 C	-14.9 C	-14.9 C	-15.0 C
Y	0.0 C	0.0 C	0.0 C	0.1 C	0.0 C	0.1 C
Y	20.0 C	20.0 C	20.2 C	20.1 C	20.0 C	20.1 C
Y	40.0 C	40.0 C	40.2 C	40.1 C	40.1 C	40.0 C
Y	60.0 C	60.0 C	60.2 C	60.0 C	60.0 C	60.0 C
Y	80.0 C	80.0 C	80.1 C	80.0 C	80.1 C	80.0 C
Y	100.0 C	100.0 C	100.1 C	100.0 C	99.9 C	100.0 C

Measurement Uncertainty(1,2):Channel #1 = 0.1436139, Channel #2 = 0.1335934

MU* = Use for measurement uncertainty calculation, Y = Yes, N = No

Keegan Larimer

Calibrated By: Keegan Larimer

Calibration Date:7/21/2017

ETL	**Environmental Testing Laboratory, Inc Calibration Data**	ETL #1394

Condition of instrument as received:		X	**Within tolerance**	**Instrument:** Mettler-Toledo Weighing Terminal
			Out of tolerance	**Manufacturer:** Mettler-Toledo, Inc.
			Limited Use	**Due Date:** 1/10/2018
			New	**Calibration Date:** 1/15/2018
	Internal Calibration	X	**External Calibration**	**Cal Freq:** 12 months
Serial #: 04169756HM		**Model #:** IND221		**Next Cal Due:** 1/15/2019
ETL Calibration Procedure #: External Calibration				

Calibrator and Additional Standards							
ETL Asset #	**Manufacturer**	**Model**	**Accuracy**	**Ch#**	**Measurement Uncertainty**	**Cert #**	**Cal Due Date**

Ambient conditions during cal:	**Barometric Pressure:** “Hg	**Relative Humidity:** %	**Temperature:** °C

STD IN*			**PRE CAL***		**POST CAL***	
MU*	**Channel #1**	**Channel #2**	**Channel #1**	**Channel #2**	**Channel #1**	**Channel #2**
Measurement Uncertainty:						

Calibrated by: Aldinger Company 1440 Prudential Dallas TX 75235 (214) 638-1750

Calibration Info: See attached Calibration Certificate # A622677 dated 1/15/2018.

MU* = Use for measurement uncertainty calculation, Y = Yes, N = No

Calibrated By: Aldinger Company 1440 Prudential Dallas TX 75235 (214) 638-1750

Calibration Date:1/15/2018

Calibration Certificate

Certificate #: A622677

Aldinger
888-822-1299

Calibration Performed By:	For:
ALDINGER CO	ENVIRONMENTAL TESTING LAB
1440 PRUDENTIAL	11034 INDIAN TRAIL
DALLAS, TX 75235	DALLAS , TX 75229

Equipment Information

I.D.:	1394	Serial Number:	04169756HM
Manufacturer:	METTLER - TOLEDO	Model Number:	IND221
Gage Type:	SCALE-1	Performed By:	510
Temp./RH:	43.9 F / 70 %	Location:	
Cal Date:	1/15/2018	Cal. Due Date:	1/15/2019
Department:		As Found Condition:	In Tolerance
Description:	SCALE - PALLET JACK	As Left Condition:	In Tolerance
Event Type:	SHOP CALIBRATION		

Calibration Notes

Test Points

Seq.	Description	Standard	Tolerance -	Tolerance +	As Found	*	As Left	Unit
1	Linearity WC>=F	125.0	124.5	125.5	125.0		125.0	
2	Linearity WC>=F	250.0	249.5	250.5	250.0		250.0	
3	Linearity WC>=F	375.0	374.0	376.0	375.0		375.0	
4	Linearity WC>=F	500.0	499.0	501.0	500.0		500.0	
5	Cornerload 1 250lbs	250.0	249.5	250.5	250.0		250.0	
6	Cornerload 2 250lbs	250.0	249.5	250.5	250.0		250.0	
7	Cornerload 3 250lbs	250.0	249.5	250.5	250.0		250.0	
8	Cornerload 4 250lbs	250.0	249.5	250.5	250.0		250.0	
9	Repeatability 1 500lbs	500.0	499.0	501.0	500.0		500.0	
10	Repeatability 2 500lbs	500.0	499.0	501.0	499.5		499.5	
11	Repeatability 3 500lbs	500.0	499.0	501.0	500.0		500.0	

*In "As Left" column "A" denotes an adjusted test point, "F" a failed test point and "R" a report of value. Blank denotes an acceptable value.

Standards Used	I.D.	Description	Last Cal.	Cal. Due Date	Traceability #
RICE LAKE	509D	WEIGHT SET	10/31/2017	4/30/2018	A602527
VWR	510T	HYGROMETER	10/2/2017	10/31/2019	A607100

Procedure Used	Procedure Name	Description	Revision Level	Revision Date
ALDINGER CO	PPCA503	SCALES	8	1/10/2011

Technician Signature _____ PAUL AMMERMAN

Aldinger Company certifies that the instrument listed above has been tested, calibrated (if necessary), and meets the criteria established in the associated test procedure unless otherwise noted. The standards used are traceable to the National Institute of Standards and Technology (NIST). This report shall not be reproduced, except in full, without the written approval of Aldinger Company. The calibration interval has been specified by the customer. Any number of factors may cause the calibration to drift out of tolerance before the recommended interval has expired.

ETL	**Environmental Testing Laboratory, Inc Calibration Data**	ETL #1567

Condition of instrument as received:		X	**Within tolerance**	**Instrument:** Micristar Controller
			Out of tolerance	**Manufacturer:** Research, Inc.
			Limited Use	**Due Date:** 12/22/2017
			New	**Calibration Date:** 12/13/2017
X	**Internal Calibration**		**External Calibration**	**Cal Freq:** 12 months
Serial #: 82417-01-4741197		**Model #:** 828-D11-403-403-020-00		**Next Cal Due:** 12/13/2018
ETL Calibration Procedure #: 2.01-ETL-QS				**Budget:** N/A

Calibrator and Additional Standards

ETL Asset #	Manufacturer	Model	Accuracy	Ch#	Uncertainty	Cert #	Cal Due Date
ETL #1200	Omega Engineering	CL27	+/-0.3 C	1	0.125 C	7174-28	7/6/2018
ETL #1327	Omega Engineering	CL27	+/-0.3 C	2	0.125 C	7174-27	7/6/2018

Ambient conditions during cal:	**Barometric Pressure:**	30.05 **"Hg**	**Relative Humidity:**	49 **%**	**Temperature:**	25 **°C**

STD IN*			PRE CAL*		POST CAL*	
MU*	**Channel #1**	**Channel #2**	**Channel #1**	**Channel #2**	**Channel #1**	**Channel #2**
Y	-55.0 C	-55.0 C	-54.8 C	-54.9 C	-54.9 C	-54.9 C
Y	-35.0 C	-35.0 C	-34.8 C	-34.9 C	-34.8 C	-34.9 C
Y	-15.0 C	-15.0 C	-14.6 C	-14.9 C	-14.9 C	-14.9 C
Y	0.0 C	0.0 C	0.1 C	0.0 C	0.1 C	0.0 C
Y	20.0 C	20.0 C	20.2 C	20.2 C	20.2 C	20.2 C
Y	40.0 C	40.0 C	40.1 C	40.2 C	40.1 C	40.1 C
Y	60.0 C	60.0 C	60.1 C	60.2 C	60.2 C	60.2 C
Y	80.0 C	80.0 C	80.0 C	80.3 C	80.0 C	80.3 C
Y	100.0 C	100.0 C	100.0 C	100.2 C	100.0 C	100.1 C

Measurement Uncertainty(1,2):Channel #1 = 0.1565692, Channel #2 = 0.1668751

MU* = Use for measurement uncertainty calculation, Y = Yes, N = No

Keegan Larimer

Calibrated By: Keegan Larimer

Calibration Date:12/13/2017

ITW GSE

2400 COMPACT GPU

30-45-60-90-120-140-180 kVA solid-state GPU

PLUG & PLAY
UNIQUE VOLTAGE QUALITY

It's all about connections

GO GREEN
on ground

OPTIMAL POWER AT THE AIRCRAFT

At ITW GSE, we monitor the market and are at the forefront of new aircraft requirements and market developments. This has been an objective since we introduced our first 400 Hz unit to the market. And it still is ! Therefore, the ITW GSE 2400 Compact is designed to fulfil the ISO 6858 standard regarding voltage imbalance and phase displacement at the aircraft plug.

SMALL, SIMPLE, RELIABLE AND ROBUST

The 2400 series is the market's best choice when it comes to solid-state, point-of-use units. It is small and simple, reliable and robust. It has all kinds of outstanding technical qualities from the unique output voltage, the smart ITW GSE user interface, soft-ware update via USB and the standard overload capabilities that matches all types of aircraft.

UNIQUE VOLTAGE QUALITY AT THE PLUG MEANS ON-TIME DEPARTURES

Fixed installations often include a mix of long symmetrical and asymmetrical output cables as well as connection boxes that makes it difficult to keep the required voltage quality at the aircraft connector. This is exactly where ITW GSE's patented Plug & Play voltage compensation system makes a difference. The Plug & Play system is based on a true individual phase regulation combined with a predetermined model of the actual cable installation. Therefore, the 2400 GPU provides an outstanding voltage quality at the connector thus ensuring on-time departures and happy passengers!

FURTHER BENEFITS OF THE ITW GSE 2400

- 400% overload
- 90 kW continuous at an ambient temperature of 56°C
- Clean input power with a unity power factor and a current THD less than 5% due to the magnetic wave-shaping topology
- TCP / IP connection to BMS as standard

SPECIFICATIONS

ITW GSE 2400 30-45-60-90 kVA solid-state GPU

Input

Type	Amps (0.8)	Amps (1.0)	Hertz	Voltage
30 kVA	63 A	78 A	45-65	230 ± 15%
	38 A	48 A	45-65	400 ± 15%
	30 A	37 A	45-65	480 ± 10%
	25 A	32 A	45-65	600 ± 10%
45 kVA	91 A	114 A	45-65	230 ± 15%
	58 A	71 A	45-65	400 ± 15%
	48 A	59 A	45-65	480 ± 10%
	39 A	47 A	45-65	600 ± 10%
60 kVA	75 A	93 A	45-65	400 ± 15%
	63 A	78 A	45-65	480 ± 10%
	50 A	62 A	45-65	600 ± 10%
90 kVA	111 A	140 A	45-65	400 ± 15%
	93 A	117A	45-65	480 ± 10%
	74 A	94 A	45-65	600 ± 10%

- Rectification: Magnetic wave-shaping
- Line current distortion:
  90 kVA <5%, 60 kVA < 9%
  45 kVA< 10%, 30 kVA < 12%
- Power factor:
  90 kVA: 1 @ nominal load
  45-60 kVA: 0,99 30 kVA: 0,97
- Inrush current: None

Output

- Rated Power: 30-45-60-90 kVA PF 0,8-1
- Voltage: 3 x 115/200 V
- Frequency: 400 Hz ± 0,1%
- Power factor:
  0,7 lagging to 0,95 leading
- Voltage regulation:
  <0,5% for balanced load and up to 30% unbalanced load
- Voltage recovery: ΔU <8% and rec. time <10 ms at 100% load change
- Total harm. content: <2% at linear load (typ. 1,5%) <2% at non linear load according to ISO 1540
- Crest factor: 1,414 ± 3%
- Voltage modulation: <1,0%
- Phase angle symmetry:
  120° ± 1° for balanced load
  120° ± 2° for 30% unbal. load

Protection

- Protection class: IP55
- No break power transfer
- Over/under voltage at output
- Overload
- Internal high temperature
- Control voltage error
- Short circuit at output
- GPU enable
- 90% switch interlock
- Neutral voltage supervision
- Broken neutral supervision
- Leakage current supervision

Weight

- Fixed & PBB units: 310 kg (683 lbs.)
- Mobile units: 460 kg (1,014 lbs.)

Efficiency

- Overall efficiency:
  0,94 at 35-90 kVA load PF 0,8
  0,90 at 25 kVA load PF 0,8
- Stand by losses: 65 W
- No load losses: 2,2 kW

Environmental

- Operating temperature:
  -40°C to 56°C (-40°F to +132°F)
  (+60°C (+140°F) at Aircraft Load)
- Relative humidity 10-100%
- Noise level <65 dB(A)@1m
  - typically 60 dB(A)

Overload Ratings

- 125% for 600 seconds
- 150% for 60 seconds
- 200% for 30 seconds
- 300% for 10 seconds
- 400% for 1 second

Miscellaneous

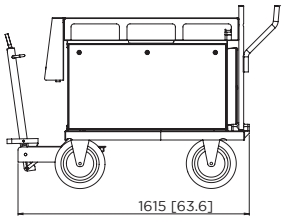
- MTTR: max. 20 minutes
- Colour: RAL 7035 (standard)

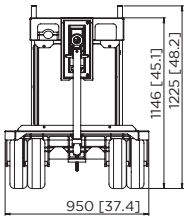
Available Standard Options

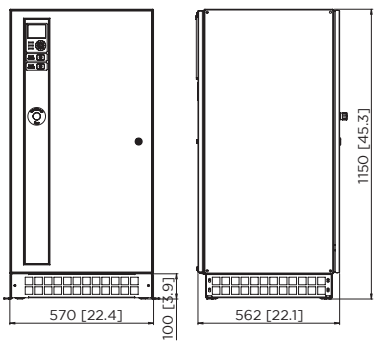
- 28 VDC, 600 A output (ARU)
  Kindly refer to page "Power two aircraft with just one GPU"
- Additional base module
- Additional output contactor
- Terminal extension for 2 pcs. of 7 core cable
- Remote control box
- Lockable door
- Door switch
- RS485 interface
- Military interlock
- Dry Contacts
- ITW GSE service tool

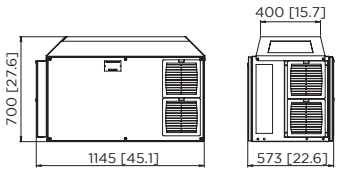
Norms and Standards

- See next page









Converter for under-bridge mounting

Dimensions are shown in mm and [inches]

Specifications are subject to change without prior notice

ITW GSE 2400 120-140-180 kVA solid-state GPU

Input

Type	Amps (0.8)	Amps (1.0)	Hertz	Voltage
120 kVA	150	190	45-65	400 ± 15%*
	130	160	45-65	480 ± 10%*
	105	130	45-65	600 ± 15%*
140 kVA	175	220	45-65	400 ± 15%*
	150	185	45-65	480 ± 10%*
	120	150	45-65	600 ± 15%*
180 kVA	230	285	45-65	400 ± 15%*
	190	240	45-65	480 ± 10%*
	150	190	45-65	600 ± 15%*

* Values adjusted to next 5A value

- Rectification: Magnetic wave-shaping
- Line current distortion: 120 kVA: 9%, 140 kVA: 7%, 180 kVA: 5%
- Power factor: 120 - 140 kVA: 0,99 180 kVA: 1 @ nominal load
- Inrush current: None

Output

- Rated Power: 120-140-180 kVA PF 0,8-1
- Voltage: 3 x 115/200 V
- Frequency: 400 Hz ± 0,1%
- Power factor: 0,7 lagging to 0,95 leading
- Voltage regulation: <0.5% for balanced load and up to 30% unbalanced load
- Voltage recovery: ΔU <8% and rec. time <10 ms at 100% load change
- Total harm. content: <2% at linear load (typ. 1,5%) <2% at non linear load according to ISO 1540
- Crest factor: 1,414 ± 3%
- Voltage modulation: <1,0%
- Phase angle symmetry: 120° ± 1° for balanced load 120° ± 2° for 30% unbal. load

Protection

- Protection class: IP55 input & output zones
- No break power transfer
- Over/under voltage at output
- Overload
- Internal high temperature
- Control voltage error
- Short circuit at output
- GPU enable
- 90% switch interlock
- Neutral voltage supervision
- Leakage current supervision

Weight

- Fixed & PBB units: 650 kg (1,433 lbs.)

Efficiency

- Overall efficiency: 0.93 at 180 kVA load PF 0.8-1
- Stand by losses: 150 W
- No load losses: 4,4 kW

Environmental

- Operating temperature: -40°C to +56°C (-40°F to +132°F) (+60°C (+140°F) at Aircraft Load)
- Relative humidity 10-100%
- Noise level < 65 dB(A) @1m

Overload Ratings

- 125% for 600 seconds
- 150% for 60 seconds
- 200% for 30 seconds
- 300% for 10 seconds
- 400% for 1 second

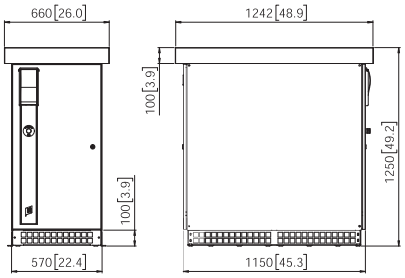
Miscellaneous

- MTTR: max. 20 minutes
- Colour: RAL 7035 (standard)

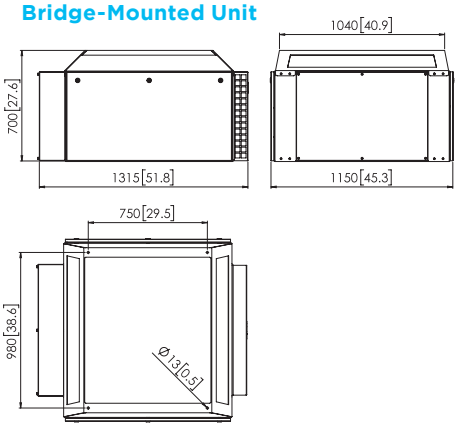
Available Standard Options

- Additional base module
- Single output configuration
- Terminal extension for 2 pcs. of 7 core cable
- Remote control box
- Lockable door
- Door switch
- RS485 interface
- Military interlock
- Dry Contacts
- ITW GSE service tool

Fixed Unit



Bridge-Mounted Unit



Dimensions are shown in mm and [inches]

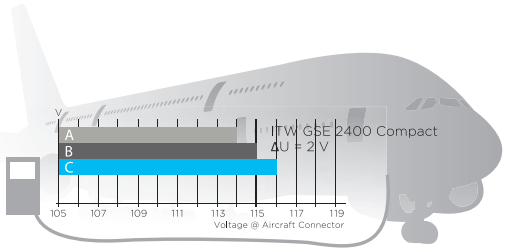
Norms and Standards (valid for 30 to 180 kVA units)

- DFS400 Specification for 400 Hz aircraft power
- ISO 6858 Aircraft ground support electric supplies
- BS 2G 219 General requirements for ground support equipment
- MIL-STD-704F Aircraft electric power characteristics
- SAE ARP 5015 Ground equipment 400 Hz ground power performance requirement
- EN2282 Aerospace series characteristics of aircraft electrical supplies
- EN62040-1-1 General & safety requirement
- EN61558-2-6 General & safety requirement
- EN61000-6-4 Electromagnetic compatibility Generic emission standard
- EN61000-6-2 Generic immunity standard
- EN1915-1&2 Machinery; general safety requirements
- EN12312-20 Machinery; specific safety requirements
- Listed per UL1012 (Only valid for 230/480/600V versions)

Specifications are subject to change without prior notice

UNIQUE VOLTAGE QUALITY

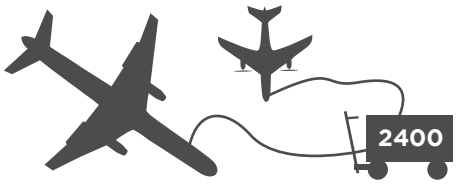
The output voltage quality of the ITW GSE 2400 Compact is unique due to the patented Plug & Play system. The ITW GSE 2400 is designed to fulfil the ISO 6858 standard that requires max. phase unbalance of less than 4 V and a phase angle of 120° ± 2.5°.
The example to the right shows the voltage of the 3 phases at 35% unbalanced load @ PF 0.8 by use of a typical cable consisting of 65 m of 7x35 mm² installation cable and 26 m of 4x70 mm² flexible cable.



The ITW GSE 2400 Compact fulfils the ISO 6858 standard

SUPPLY ALL AIRCRAFT INCL. PF1

The ITW GSE 2400 Compact is a true Power factor 1 ground power unit that allows for 400% overload meaning that it can be used for all types of aircraft from the narrow-body to the wide-body incl. B787/A350/A380.



THE ITW GSE OPERATOR INTERFACE

The ITW GSE operator interface is easy and intuitive. This is your guarantee for correct operation and on-time aircraft departures. The operator interface is common from one ITW GSE product to another. Therefore, airport staff familiar with one ITW GSE product can easily switch to another as the icons and display are the same. The operator only has to press the combined start/stop button. Also, he can monitor various parameters such as voltage and current at the display screen. For easy set-up and maintenance purposes, there is a deeper level dedicated for the technician.

MAXIMUM PERSONAL SAFETY

- Protective covers behind access doors to prevent accidental exposure to “live” parts
- Supervision of neutral conductor rupture & leakage current
- Supervision of neutral voltage
- Detection of hazardous voltages at aircraft frame (by supervision of interlock voltage)
- Avoidance of hazardous voltages in control wires through prevention of insulation failures in cable or plug

EASY CABLE CONNECTION

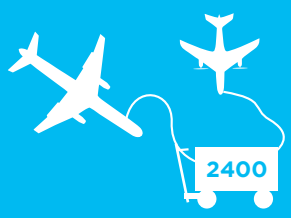
Connection of the rigid in- and output cables is easy since there is room for a very good manoeuvrability at the bottom of the cabinet. Further, we have integrated a robust bar at the bottom for cable relief. Access to the vital parts of the converter is extremely easy since those parts have all been positioned right behind the front door in a well-arranged way.

DOWNLOADS AND UPDATES

The software-based control system means your ITW GSE 2400 Compact can be updated and given additional capabilities in the future, simply by transferring new software from a USB stick/flash drive. Service log files and maintenance data can also be transferred the same way for analysis and to help ensure more efficient back-office procedures and more effective facility management.

POWER TWO AIRCRAFT WITH JUST ONE GPU?

Yes – Choose option
ITW GSE 2400 Combi Compact Unit



www.itwgse.com

March 2018 v2: M10484

Often, the same parking position accommodates a large mix of aircraft during a day. Typically, a parking position would require a 400 Hz source in the morning where the bigger aircraft are docking – but 28 V during other times of the day. Is this your requirement, the 2400 Compact Combi unit is the answer.

The combi unit is capable of delivering 400 Hz and regulated 28 VDC power, simultaneously and independently! The 28 V Active Rectifier Unit (ARU) - available as a standard option - delivers superior voltage quality at the aircraft plug without jeopardising the 400 Hz voltage. It goes without saying that the ITW GSE 2400 Compact Combi will power your aircraft, whether a narrow body or a turbo prop, whenever you need it!

Output Specifications, 28 VDC ARU

- Voltage: 28 VDC
  Max. output power for complete unit is limited to the nominal rating of the 400 Hz part of the unit
- Current: 600 A (400 A) continuously
- Voltage regulation: < 0,5%
- Voltage ripple: < 2%
- Voltage transient recovery
  Complies with ISO 6858 / MIL-704F
- Overload capability: 600 A (400 A)
  1200 A (800 A) for 30 seconds
  1800 A (1200 A) for 10 seconds
  2100 A (1400 A) for 5 seconds
  2400 A (1600 A) for 2 seconds
  To protect the aircraft, the output voltage is decreased by 2 V per 600 A (400 A) in the overload range 600-2400 A (400-1600 A)
  Complies with ISO 6858

Setup:

- Output voltage: 19-33 V
- Voltage compensation: 0-3 V (600/400 A)
- Current limit: 300-2400 A in steps (600 A units)
  200-1600 A in steps (400 A units)

Protection

- Rectifier temperature too high
- Short circuit at output
- Over and under voltage at output
  U < 20 VDC for more than 4 seconds
  U > 32 VDC for more than 4 seconds
  U > 40 VDC for more than 150 ms

Weight

- Fixed Combi Compact: 410 kg (903 lbs.)
- Mobile Combi Compact: 585 kg (1,290 lbs.)

Environmental

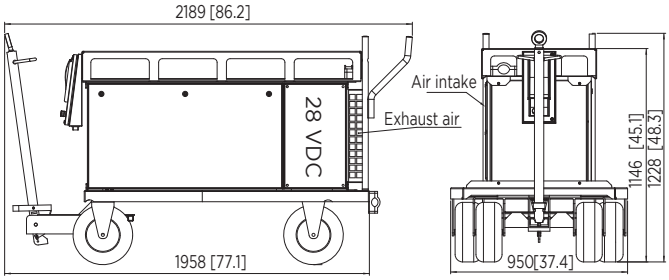
- Operating temperature -40°C to +45°C (-40°F to 113°F)

Available Ratings

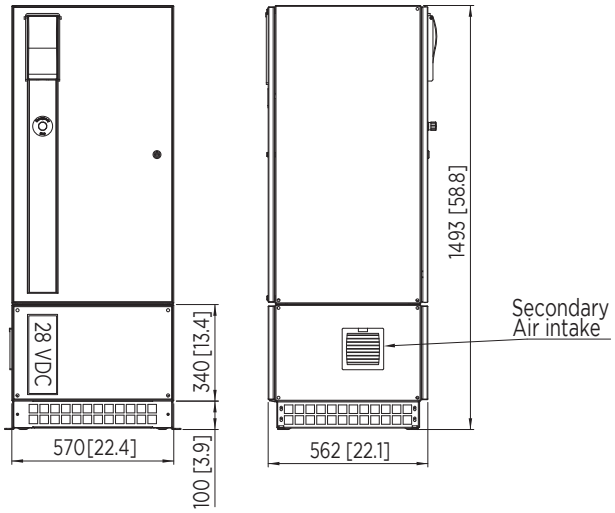
- 30 kVA with 28 VDC ARU
- 45 kVA with 28 VDC ARU
- 60 kVA with 28 VDC ARU
- 90 kVA with 28 VDC ARU

All available in fixed and mobile versions

Mobile Version



Fixed Version



Dimensions are shown in mm and (inches)

It's all about connections

RECOMMENDED SPARE PARTS LIST FOR: SOLID STATE GPU 2400

Prices USD, subject to change without notice

Recommended quantity based on 1 to 3 units

Part Number	Description	Qty	Price Each	Extended Price	Remarks
AP-579526-24	GSE Control Board	1	$1,620.30	$1,620.30	
AP-579527	Interface board	1	$1,155.00	$1,155.00	
AP-579532	Capacitor Board	1	$865.70	$865.70	
AP-579536-24	Display	1	$1,203.40	$1,203.40	
AP-AF0403	Emergency stop, compact	1	$17.82	$17.82	
AP-AM0067	Air filter for plinth	3	$11.00	$33.00	
AP-AM0131	Air filter	2	$67.10	$134.20	
AP-DP0222	Circuit breaker	1	$80.30	$80.30	
AP-IT0032	Current Transformer	1	$108.90	$108.90	
AP-KM0200	Feed-through terminal	10	$1.38	$13.75	
AP-KP7087	Capacitor	3	$156.27	$468.81	
AP-PS0010	DC Power Supply	1	$151.80	$151.80	
AP-SI2066	ATO fuse, 10A	10	$4.18	$41.80	
AP-SI2075	ATO fuse, 5A	10	$4.18	$41.80	
AP-SI2076	ATO fuse, 2A	10	$4.18	$41.80	
AP-VN0017	Fan	2	$150.70	$301.40	
AP-578826	Power Module 28 V ARU UL	1	$7,064.77	$7,064.77	28VDC units only
AP-AM0137	Air filter	1	$93.50	$93.50	28VDC units only
AP-VN0020	Fan	1	$159.50	$159.50	28VDC units only
AP-578105	Power Module 90 kVA	1	$7,775.90	$7,775.90	480V input units only. For 400V input order AP-578100

To order: parts@itwgse.us (USA,CA,SA)
support@itwgse.com (EU, Asia, Africa, Middle East)

LAST UPDATE:11/12/2019

Leadtime for Spares are are two weeks or less. Depending on availibilty at time of order

RECOMMENDED SPARE PARTS LIST FOR: 2400 120-180 KVA

Prices USD, subject to change without notice

Recommended quantity based on 1 to 3 units

Part Number	Description	Qty	Price Each	Extended Price	Remarks	Designator
AP-578105	Power Module 90 kVA UL	1	$7,775.90	$7,775.90		PM1-PM2
AP-KO4382	Contactor	1	$986.70	$986.70		Q4
DP1000	MCCB	1	$1,606.50	$1,606.50		Q2-Q3
AP-DP0222	Circuit breaker	1	$80.30	$80.30		Q6
AP-IT0032	Current Transformer	1	$108.90	$108.90		T5
AP-PS0041	DC Power Supply	1	$1,199.00	$1,199.00		G1
AP-AF0403	Emergency stop, compact	1	$17.82	$17.82		S1
AP-DV3017	Operator membrane keyboard	1	$201.30	$201.30		A4
AP-579526	GSE Control Board	1	$1,620.30	$1,620.30		A1
AP-579532	Capacitor Board	1	$865.70	$865.70		A5-A6
AP-AF0274	Disconnect Switch	1	$1,133.01	$1,133.01		Q1
AP-579547	180kVA Interfaceboard	1	$1,574.66	$1,574.66		A2
AP-KM0200	Feed-through terminal	10	$1.38	$13.75		X1
AP-AM0069	Inlet Air Filter Mat	2	$75.52	$151.04		
AP-VN0017	Fan	2	$150.70	$301.40		M1-M4
AP-KP7087	Capacitor	3	$156.27	$468.81		C7-C12
AP-AM0067	Air filter for plinth	6	$11.00	$66.00		
AP-AM0131	Air filter	6	$67.10	$402.60		
AP-VR6115	Varistor	6	$7.70	$46.20		R7-R12
AP-SI2066	ATO fuse, 10A	10	$4.18	$41.80		F5-F6
AP-SI2075	ATO fuse, 5A	10	$4.18	$41.80		F4
AP-SI2076	ATO fuse, 2A	10	$4.18	$41.80		F1-F3
AP-579536	Display	1	$1,203.40	$1,203.40		A3

To order: parts@itwgse.us (USA,CA,SA)
support@itwgse.com (EU, Asia, Africa, Middle East)

LAST UPDATE: 3/12/2018

AUTHORIZATION TO MARK

This authorizes the application of the Certification Mark(s) shown below to the models described in the Product(s) Covered section when made in accordance with the conditions set forth in the Certification Agreement and Listing Report. This authorization also applies to multiple listee model(s) identified on the correlation page of the Listing Report.

This document is the property of Intertek Testing Services and is not transferable. The certification mark(s) may be applied only at the location of the Party Authorized To Apply Mark.

Applicant:	GSE Holdings, Inc. DBA Hobart Ground Systems	**Manufacturer:**	GSE Holdings, Inc. DBA Hobart Ground Systems
Address:	11001 US Highway 41 North Palmetto, FL. 34221	**Address:**	11001 US Highway 41 North Palmetto, FL. 34221
Country:	USA	**Country:**	USA
Contact:	Ed Upshaw	**Contact:**	Ed Upshaw
Phone:	(941) 721-1061	**Phone:**	(941) 721-1061
FAX:	(941) 721-1081	**FAX:**	(941) 721-1081
Email:	eupshaw@itwgse.us	**Email:**	eupshaw@itwgse.us

Party Authorized To Apply Mark: Same as Manufacturer
Report Issuing Office: Cortland, NY USA

Control Number: *118681*

Authorized by: Ellen Swialek

for Thomas J. Patterson, Certification Manager

This document supersedes all previous Authorizations to Mark for the noted Report Number.

Intertek Testing Services NA Inc.
545 East Algonquin Road, Arlington Heights, IL 60005
Telephone 800-345-3851 or 847-439-5667 Fax 312-283-1672

Standard(s):	Standard for Power Units Other than Class 2, UL-1012, 8th Edition, Dated November 9, 2010, including revisions through January 19, 2012. Canadian Standard for General Use Power Supplies,CSA C22.2 # 107.1-01, Issued September 1, 2001, Ed 3, Reaffirmed 2011
Product:	Power Supply
Models:	2400 GPU

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AUTHORIZATION TO MARK

This authorizes the application of the Certification Mark(s) shown below to the models described in the Product(s) Covered section when made in accordance with the conditions set forth in the Certification Agreement and Listing Report. This authorization also applies to multiple listee model(s) identified on the correlation page of the Listing Report.

This document is the property of Intertek Testing Services and is not transferable. The certification mark(s) may be applied only at the location of the Party Authorized To Apply Mark.

Applicant:	ITW GSE Inc.	**Manufacturer:**	Nabson, Inc
Address:	11001 US HWY 41 N Palmetto, FL 34221	**Address:**	45 Independence Drive Taunton, MA 02780
Country:	USA	**Country:**	USA
Contact:	Mr. Drew Johnson	**Contact:**	Greg Calabrese
Phone:	941-721-1037	**Phone:**	(781) 821 9622
FAX:	NA	**FAX:**	(781) 821-9627
Email:	djohnson@itwgse.us	**Email:**	greg@nabson.com

Party Authorized To Apply Mark: Same as Manufacturer
Report Issuing Office: Cortland, NY

Control Number: 5001386 **Authorized by:** Natalie Tobin
for L. Matthew Snyder, Certification Manager

C ETL LISTED US
Intertek

This document supersedes all previous Authorizations to Mark for the noted Report Number.

Intertek Testing Services NA Inc.
545 East Algonquin Road, Arlington Heights, IL 60005
Telephone 800-345-3851 or 847-439-5667 Fax 312-283-1672

Standard(s):	UL 1682 Issued: 2013/10/04 Ed: 4 Rev: 2014/02/07 Plugs, Receptacles, and Cable Connectors, of the Pin and Sleeve Type Plugs, Receptacles, And Cable Connectors Of The Pin And Sleeve Type [CSA C22.2#182.1:2013 Ed.4 +U1]
Product:	400 Hz Portable Power Cable/Connector Assemblies
Models:	JM or JS; followed by 1400, 1401, 8400, 8401, 8500, 8501, 9000, 9002, 9006, 9007, 9008, 9009, 9011, 9014, 9018, 9100, 9101, 9102, 9103, 9104, 9105, 9106, 9200, 9201, 9202, 9203, 9210, 9211, 9212, 9213, 9220, 9221, 9230, 9231, 9232, 9233, 9234, 9235. JJ followed by 1000, 1001, 1004, 1005.

Twist Aero 45 Ton Gen B PCA Recommended Spare Parts REV 1 480 ELECTRIC

QTY PER UNIT	PART NUMBER	DESCRIPTION	STOCK QTY	ACTUAL COST EACH	TOTAL COST BASED ON STOCK QTY
1	I/O FLEX 6126-CP	MAIN CONTROL BOARD	1	$1,155.00	$1,155.00
2	316-02-22A30A-CP	FILTER, ALUMINUM, 22x30x2	2	$76.00	$152.00
9	PCA-HTR-08860-4100-CP	HEATING ELEMENT	3	$152.00	$456.00
1	BA-10K-2-RA-12-WP	TEMPERATURE PROBE	1	$61.00	$61.00
1	PC9013	PRESSURE TRANSDUCER	1	$200.00	$200.00
1	LD270	HIGH LIMIT SENSOR	1	$38.00	$38.00
1	LD200	TEMPERATURE SENSOR	1	$45.00	$45.00
1	GV2P16	MOTOR CIRCUIT	1	$166.00	$166.00
1	3D50UM	50 AMP MINI CB	1	$138.00	$138.00
1	3D40UM	50 AMP MINI CB	1	$116.00	$116.00
1	8910DPA43V14	40 AMP CONTACTOR	1	$148.00	$148.00
1	HDL36150SK	150 AMP CIRCUIT BREAKER	1	$775.00	$775.00

TOTAL SPARE PARTS **$3,450.00**

Twist Aero 90 Ton PCA Recommended Spare Parts 480 ELECTRIC

QTY PER UNIT	PART NUMBER	DESCRIPTION	STOCK QTY	ACTUAL COST EACH	TOTAL COST BASED ON STOCK QTY
1	I/O FLEX 6126-CP	MAIN CONTROL BOARD	1	$1,155.00	$1,155.00
2	316-002-863CO-CP	FILTER, ALUMINUM, 24x24x2	2	$77.00	$154.00
9	PCA-HTR-13300-4200CO-CP	HEATING ELEMENT	3	$351.00	$1,053.00
1	BA-10K-2-RA-12-WP	TEMPERATURE PROBE	1	$61.00	$61.00
1	PC9013	PRESSURE TRANSDUCER	1	$200.00	$200.00
1	LD270	HIGH LIMIT SENSOR	1	$38.00	$38.00
1	LD200	TEMPERATURE SENSOR	1	$45.00	$45.00
1	GV2P16	MOTOR CIRCUIT	1	$166.00	$166.00
1	3D60UM	60 AMP MINI CB	1	$248.00	$248.00
1	8910DPA63V14	60 AMP CONTACTOR	1	$196.00	$196.00
1	NJG3B300L	300 AMP CIRCUIT BREAKER	1	$1,095.00	$1,095.00

TOTAL SPARE PARTS **$4,411.00**

CERTIFICATE OF COMPLIANCE

Certificate Number	20140129-SA34023
Report Reference	SA34023-20140129
Issue Date	2014-JANUARY-29
Issued to:	TWIST INC 47 S LIMESTONE ST PO BOX 177 JAMESTOWN OH 45335-0177
This is to certify that representative samples of	HEATING AND COOLING EQUIPMENT Special Purpose air-conditioner models PCA020, -030, -045, -060, -075, -090, -120 and -150; may be followed by additional suffix numbers or letters.
	Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.
Standard(s) for Safety:	CSA C22.2 NO. 236-11 HEATING AND COOLING EQUIPMENT , UL 1995 HEATING AND COOLING EQUIPMENT
Additional Information:	See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Listing Mark for the US and Canada should be considered as being covered by UL's Listing and Follow-Up Service meeting the appropriate requirements for US and Canada.
The UL Listing Mark for the US and Canada generally includes: the UL in a circle symbol with "C" and "US" identifiers: c(UL)us the word "LISTED"; a control number (may be alphanumeric) assigned by UL; and the product category name (product identifier) as indicated in the appropriate UL Directory.

Look for the UL Listing Mark on the product.

William R. Carney

William R. Carney, Director, North American Certification Programs

UL LLC

NOTICE OF COMPLETION
AND
AUTHORIZATION TO APPLY THE UL MARK

02/25/2015

Twist Inc
Scott Schrinner
5100 Waynesville-jamestown Rd
Jamestown Oh 45335, Us

Our Reference:	File SA34023, Vol. 1	Project Number	4786753089
Your Reference:	72299		
Project Scope:	(RFI 24992) SA34023 Vol.1 - Expand listing to include a 575 Supply Voltage Option (71790)		

Dear Scott Schrinner:

Congratulations! UL's investigation of your product(s) has been completed under the above Reference Number and the product was determined to comply with the applicable requirements. This letter temporarily supplements the UL Follow-Up Services Procedure and serves as authorization to apply the UL Mark at authorized factories under UL's Follow-Up Service Program. To provide your manufacturer(s) with the intended authorization to use the UL Mark, you must send a copy of this notice to each manufacturing location currently authorized under File SA34023, Vol. 1.

Records in the Follow-Up Services Procedure covering the product are now being prepared and will be sent in the near future. Until then, this letter authorizes application of the UL Mark for 90 days from the date indicated above.

Additional requirements related to your responsibilities as the Applicant can be found in the document "Applicant responsibilities related to Early Authorizations" that can be found at the following web-site:
http://www.ul.com/EAResponsibilities

Any information and documentation provided to you involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

We are excited you are now able to apply the UL Mark to your products and appreciate your business. Feel free to contact me or any of our Customer Service representatives if you have any questions.

Very truly yours,

Glenn M. Woo
847-664-2016
Senior Staff Engineer
Glenn.M.Woo@ul.com

Reviewed by:

Bruce A. Mahrenholz
847-664-3009
CPO Director
Bruce.A.Mahrenholz@ul.com

NBKCE13-7DAE64

FORM 11: CERTIFICATE OF BUY AMERICAN COMPLIANCE FOR TOTAL FACILITY. **Submission of this form is REQUIRED with bid submittal.**

CERTIFICATE OF BUY AMERICAN COMPLIANCE FOR TOTAL FACILITY

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a) Only installing steel and manufactured products produced in the United States; or
b) Installing manufactured products for which the Federal Aviation Administration (FAA) has issued a waiver as indicated by inclusion on the current FAA Nationwide Buy American Waivers Issued listing; or
c) Installing products listed as an Excepted Article, Material or Supply in Federal Acquisition Regulation Subpart 25.108.

By selecting this certification statement, the bidder agrees:

- To provide to the Owner evidence that documents the source and origin of the steel and manufactured product.
- To faithfully comply with providing U.S. domestic products.
- To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

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a) To the submit to the Owner within 15 calendar days of the bid opening, a formal waiver request and required documentation that supports the type of waiver being requested.
b) That failure to submit the required documentation within the specified timeframe is cause for a non-responsive determination that may result in rejection of the bid.
c) To faithfully comply with providing U.S. domestic products at or above the approved U.S. domestic content percentage as approved by the FAA.
d) To furnish U.S. domestic product for any waiver request that the FAA rejects.
e) To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

REQUIRED DOCUMENTATION

Type 3 Waiver – The cost of components and subcomponents produced in the United States is more than 60 percent of the cost of all components and subcomponents of the "facility". The required documentation for a Type 3 waiver is:

FORM 12: CERTIFICATE OF BUY AMERICAN COMPLIANCE-MANUFACTURERED PRODUCTS. Submission of this form with bidder's bid submittal is REQUIRED.

Certificate of Buy American Compliance for Manufactured Products
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3. To furnish U.S. domestic product for any waiver request that the FAA rejects
4. To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

☑ The bidder hereby certifies it cannot comply with the 100 percent Buy American Preferences of 49 USC § 50101(a) but may qualify for either a Type 3 or Type 4 waiver under 49 USC § 50101(b). By selecting this certification statement, the apparent bidder with the apparent low bid agrees:

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3. To faithfully comply with providing U.S. domestic products at or above the approved U.S. domestic content percentage as approved by the FAA.
4. To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.
5.

REQUIRED DOCUMENTATION

Type 3 Waiver – The cost of the item components and subcomponents produced in the United States is more that 60 percent of the cost of all components and subcomponents of the "item". The required documentation for a Type 3 waiver is:

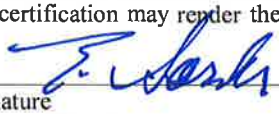
a) Listing of all product components and subcomponents that are not comprised of 100 percent U.S. domestic content (Excludes products listed on the FAA Nationwide Buy American Waivers Issued listing and products excluded by Federal Acquisition Regulation Subpart 25.108; products of unknown origin must be considered as non-domestic products in their entirety).
b) Cost of non-domestic components and subcomponents, excluding labor costs associated with final assembly at place of manufacture.
c) Percentage of non-domestic component and subcomponent cost as compared to total "item" component and subcomponent costs, excluding labor costs associated with final assembly at place of manufacture.

Type 4 Waiver – Total cost of project using U.S. domestic source product exceeds the total project cost using non-domestic product by 25 percent. The required documentation for a Type 4 of waiver is:

a) Detailed cost information for total project using U.S. domestic product
b) Detailed cost information for total project using non-domestic product

False Statements: Per 49 USC § 47126, this certification concerns a matter within the jurisdiction of the Federal Aviation Administration and the making of a false, fictitious or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code.

June 1, 2020
Date


Signature

thyssenkrupp Airport Systems, Inc
Company Name

Sales Officer
Title

[END OF FORM]

FORM 13: CERTIFICATION OF BIDDER REGARDING TAX DELINQUENCY AND FELONY CONVICTIONS

Submission of this form with bidder's bid submittal is REQUIRED.

CERTIFICATION OF BIDDER REGARDING TAX DELINQUENCY AND FELONY CONVICTIONS

The applicant must complete the following two certification statements. The applicant must indicate its current status as it relates to tax delinquency and felony conviction by inserting a checkmark (✓) in the space following the applicable response. The applicant agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification in all lower tier subcontracts.

Certifications

1) The applicant represents that it is ( ) is not (✓) a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.
2) The applicant represents that it is ( ) is not (✓) is not a corporation that was convicted of a criminal violation under any Federal law within the preceding 24 months.

June 1, 2020
Date


Signature

thyssenkrupp Airport Systems, Inc
Company Name

Sales Officer
Title

FORM 14: TRADE RESTRICTION CERTIFICATION

By submission of an offer, the Offeror certifies that with respect to this solicitation and any resultant contract, the Offeror –

1) is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms as published by the Office of the United States Trade Representative (USTR);

2) has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country included on the list of countries that discriminate against U.S. firms as published by the USTR; and

3) has not entered into any subcontract for any product to be used on the Federal project that is produced in a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR.

This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18 USC Section 1001.

The Offeror/Contractor must provide immediate written notice to the Owner if the Offeror/Contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The Contractor must require subcontractors provide immediate written notice to the Contractor if at any time it learns that its certification was erroneous by reason of changed circumstances.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR 30.17, no contract shall be awarded to an Offeror or subcontractor:

1) who is owned or controlled by one or more citizens or nationals of a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR or

2) whose subcontractors are owned or controlled by one or more citizens or nationals of a foreign country on such USTR list or

3) who incorporates in the public works project any product of a foreign country on such USTR list.

Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

The Offeror agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in all lower tier subcontracts. The Contractor may rely on the certification of a prospective subcontractor that it is not a firm from a foreign country included on the list of countries that discriminate against U.S.

firms as published by USTR, unless the Offeror has knowledge that the certification is erroneous.

This certification is a material representation of fact upon which reliance was placed when making an award. If it is later determined that the Contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration (FAA) may direct through the Owner cancellation of the contract or subcontract for default at no cost to the Owner or the FAA.

Signature of bidder: _____

[END OF FORM]

thyssenkrupp

Buy American Certification Waiver

We, thyssenkrupp Airport Systems, Inc. certify that we cannot fully comply with the Buy American preferences subject to 100% steel and manufactured products manufactured in the United States. We certify that **90.30%** of the cost of components and subcomponents comprising the facility or equipment are produced in the United States and that the final assembly occurs in the United States. Therefore we request a waiver for the following manufactured components:

Component/ Subcomponents	Name of Manufacturer	Country of Origin	Cost of Foreign Manufactured Components/ Subcontractors	Cost of USA Manufactured Components/ Subcomponents
Inner and Outer Guide Tubes	Bruck	Germany	1,300.00	380,172.00
Bearings	Tecnomeca	Spain	455.00	380,172.00
Wheel Bogie	Castec	Germany	1,757.00	380,172.00
Canopy	Anortec	Spain	5,102.00	380,172.00
Lift System	TKAS	Spain	27,500.00	380,172.00
Glass Pane	Pedro Roquet	Spain	760.00	380,172.00

Sum of US Manufactured Component/Subcomponent Costs:	380,172.00
Sum of All Foreign Manufactured Components/Subcontractors Costs:	36,874.00
Sum of all Facility Components and Subcomponents:	380,172.00
Percentage of Facility Components Manufactured in the United States:	90.30%
Place of Final Assembly:	Fort Worth, Texas, USA

I hereby certify the above information is accurate and complete

Signature

6/2/2020
Date

thyssenkrupp Airport Systems, 3201 North Sylvania Avenue, Suite 117, Fort Worth, Texas, 76111
main: +1.817.210.5000, info.tkas.usa@thyssenkrupp.com, www.thyssenkrupp-airports.com

FORM 11: CERTIFICATE OF BUY AMERICAN COMPLIANCE FOR TOTAL FACILITY. **Submission of this form is REQUIRED with bid submittal.**

CERTIFICATE OF BUY AMERICAN COMPLIANCE FOR TOTAL FACILITY

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REQUIRED DOCUMENTATION

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b) Cost of non-domestic components and subcomponents, excluding labor costs associated with final assembly and installation at project location.
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Type 4 Waiver – Total cost of project using U.S. domestic source product exceeds the total project cost using non-domestic product by 25 percent. The required documentation for a Type 4 of waiver is:

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June 2, 2020
Date

Signature

thyssenkrupp Airport Systems, Inc
Company Name

Sales Officer
Title

[END OF FORM]

thyssenkrupp

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I hereby certify the above information is accurate and complete

Signature

6/2/2020
Date

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main: +1.817.210.5000, info.tkas.usa@thyssenkrupp.com, www.thyssenkrupp-airports.com

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June 1, 2020
Date

Signature

thyssenkrupp Airport Systems, Inc
Company Name

Sales Officer
Title

[END OF FORM]

thyssenkrupp

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I hereby certify the above information is accurate and complete

T. Sarver

Signature

6/2/2020

Date

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main: +1.817.210.5000, info.tkas.usa@thyssenkrupp.com, www.thyssenkrupp-airports.com

Buy American Preferences – Final Assembly Questionnaire

To assist the Federal Aviation Administration (FAA) in making the determination of whether final assembly of the product occurs in the United States, please complete and submit this questionnaire when requesting a Buy American Waiver under 49 USC § 50101(b)(3)(A).

1. Please provide a description of the assembly process occurring at the specified final location in the United States.

   We design, manufacture, assemble and test the final product (Passenger Boarding Bridge) at our factory in Ft. Worth, TX. Manufactured components are assembled to form the final product at the factory.

2. Please describe the final assembly process and its various operations.

   After the components manufactured, they are assembled as final product, than tested as a complete unit. It is disassembled to major components for shipping, than re-assembled on site.

3. How long does the final assembly process take to complete?

   One week on site.

4. Please provide a description of the resources used to conduct the assembly of the product at the specified location in the United States.

   We have 120 to 130 people consisting of welders, painters, electricians / mechanics, engineers.

5. How many employees are involved in the final assembly process and what is the general skill level of those employees?

   Final assembly happens on site. Requires six people, consisting of electricians, mechanics, crane operator.

6. What type of equipment is used during the final assembly process?

   Cranes, forklifts, scissor lifts.

7. What is a rough estimate of the associated cost to conduct final assembly of the product at the specified location in the United States?

   Final assembly takes place on site (airport). It varies from $40K to $60K depending on the location.

The undersigned certifies that this information is true and accurate to the best of their knowledge. A false certification represents a violation of 18 U.S.C § 1001 and 49 U.S.C § 47126. Signatory has the burden of proof to establish compliance.

Signature: 

Name: Enver Sarilar / Sales Officer

JBT AeroTech Corporation
1805 West 2550 South
Ogden UT 84401-3396 USA
Phone: 801-627-6600
EIN# 83-3763708

JBT Quotation # 3757-A

Lee County Port Authority

Southwest Florida International Airport

Passenger Boarding Bridge Replacement

RFB No. 20-53MMW

Bid Opening: June 02, 2020 @ 2pm EDT

PART G – FORMS **Note: This form must be submitted with the bidder's bid submittal**
FORM 1: BIDDER'S CERTIFICATION

I have carefully examined this Request for Bids (RFB) which includes information for bidders, special instructions and requirements, project information, grant requirements, Davis Bacon Wage Rates, DBE, insurance and bond requirements, special conditions, general conditions and plans and technical specifications. I acknowledge receipt and incorporation of the following addenda. The cost, if any, of such revisions has been included in the price of the bid.

Addendum No. 1 ; dated May 04, 2020. Addendum No. 2 ; dated May 18, 2020.
Addendum No. 3 ; dated May 22, 2020. Addendum No. 4 ; dated May 28, 2020.
Addendum No. 5; dated May 29, 2020 Addendum No. 6; dated June 01, 2020

I hereby propose to provide the services requested in this bid. I agree to hold pricing for at least **180** calendar days to allow the Authority time to properly evaluate this bid. I agree that the Authority terms and conditions (http://www.flylcpa.com/purchasing/) herein shall take precedence over any conflicting terms and conditions submitted with the bid and agree to abide by all conditions of this document.

I certify that all information contained in the bid is truthful to the best of my knowledge and belief. I further certify that I am duly authorized to submit this bid on behalf of the company as its agent and that the company is ready, willing and able to perform if awarded a contract.

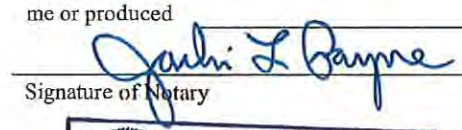
I further certify, under oath, that this bid is made without prior understanding, agreement, connection, discussion, or collusion with any other person, company, or corporation submitting a bid for the same product or service; no officer, employee or agent of the Authority or of any other company who is interested in said bid; and that the undersigned executed this Bidder's Certification with full knowledge and understanding of the matters therein contained and was duly authorized to do so.

JBT AeroTech Corporation NAME OF BUSINESS	1805 W 2550 S MAILING ADDRESS
 AUTHORIZED SIGNATURE	Ogden, Utah 84401 CITY, STATE & ZIP CODE
Brian DeRoche, President - Jetway NAME, TITLE, TYPED	801-629-3125 Fax: N/A TELEPHONE NUMBER / FAX NUMBER
83-3763708 FEDERAL IDENTIFICATION #	john.thompson@jbtc.com EMAIL ADDRESS

State of: Utah

County of: Weber

This foregoing instrument was acknowledged before me this 01 (first) day of June, 2020 by Brian DeRoche, who is personally known to me or produced _____ as identification.



Signature of Notary

705698
Serial/Commission No.

REVISED - ADDENDUM 5. **FORM 2: OFFICIAL BID FORM. This form must be submitted with the bidder's bid submittal**

RFB NO. **20-53MMW** **BIDDER'S NAME:** JBT AeroTech Corporation

BIDS ARE DUE ON: **TUESDAY, JUNE 2, 2020**
PRIOR TO **2:00 P.M. LOCAL TIME**

Lee County Port Authority Purchasing Office
Southwest Florida International Airport
11000 Terminal Access Road, Suite 8671
Fort Myers, Florida 33913

The undersigned, hereinafter called "bidder," having become familiar with the local conditions, nature, and extent of the work, and having examined carefully the bid solicitation documents, including but not limited to, Information to Bidders, Special Instructions and Requirements, Project Information, Insurance and Bonding Requirements, Disadvantaged Business Enterprise Program requirements, Project Plans and Specifications, schedule & phasing, forms, and other contract documents, and having fulfilled all bid requirements herein, agrees to furnish all labor, materials, equipment, and other incidental items, facilities and services necessary to perform:

PASSENGER BOARDING BRIDGE REPLACEMENT

in full accordance with the solicitation and contract documents and all other documents related thereto on file in the Purchasing Office and, if awarded the contract, to complete the said work within the time limits specified for the pricing awarded, which is based on the following bid schedule:

	Bidder's Company Name				
Item No.	Description	Unit	Estimated Quantity	Unit Price	Extended Price
1	Mobilization	LS	1	565,404	565,404
2	DBE Mobilization	LS	1	698,388	698,388
3	Remove / Discard or Turnover to Owner: Phone	EACH	11	235	2,585
4	Remove / Discard or Turnover to Owner: Illuminated Sign	EACH	11	235	2,585
5	Remove / Discard or Turnover to Owner: Cable Hoist	EACH	11	235	2,585
6	Remove / Discard or Turnover to Owner: 10" PBB Pre-Cool Plenum Hose	EACH	2	235	470
7	DCO - Demo Cut Out Sidewalks and haul off @ Existing Pile Caps	EACH	25	2,029	50,725
8	Remove Existing Passenger Boarding Bridge	EACH	27	19,976	539,532
9	Remove Concrete Paving / Walkways @ Pile Caps	SQFT	5000	21.42	107,100
10	Hand Excavation around existing Pile Caps	CUYD	50	1,676	83,795
11	Pile Cap Edge Form	SQFT	1500	14.70	22,050

12	Drill / Epoxy Dowels into exist. Pile Cap	EACH	1050	81.58	85,659
13	4000 PSI Concrete Pile Cap @ Existing	CUYD	300	295.18	88,554
14	Patch Back Exist Concrete Paving / Walkways	SQFT	5000	17.26	86,300
15	Temporary Infill / Opening @ Gate Door (Remove & Reinstall)	EACH	27	235.00	6,345
16	iOPS BMS Bldg Management System	LS	1	670,900	670,900
17	New PBB A3-58/116 (including shipping to site, insurance)	EACH	14	530,442	7,426,188
18	New PBB A3-61/127 (including shipping to site, insurance)	EACH	8	544,355	4,354,840
19	New PBB A3-65/133 (including shipping to site, insurance)	EACH	2	557,581	1,115,162
20	New PBB A3-68/144 (including shipping to site, insurance)	EACH	2	560,927	1,121,854
21	New PBB A3-72/150 (including shipping to site, insurance)	EACH	1	577,928	577,928
22	2 new PBB foundations for C1 and C2	EACH	2	23,571	47,142
23	New Fixed Walkway (40.0' LF ~~lnft~~)	EACH	2	95,532	191,064
24	Gate Sign	EACH	27	2,818	76,086
25	Bag Slide	EACH	27	4,768	128,736
26	Installation (Incl PBB, WW, GPU, PCA)	EACH	27	55,702	1,503,954
27	Manufacturer Commissioning	EACH	27	2,197	59,319
28	Remove and Cap ~~Relocate~~ Condensate Drain due at ~~to~~ Pile Cap Expansion Condensate will Drain to Pavement	EACH	27	1,059	28,593
29	Re-Install 45-ton PCA Unit	EACH	4	4,847	19,388
30	New 45-ton PCA Unit	EACH	~~19~~ 18	104,726	1,885,068
31	New ~~75~~ 90 ton PCA Unit	EACH	5	167,334	831,670
32	Disconnect / Make Safe Existing Electrical to Exist PBB	EACH	27	6,588	177,876
33	Re-Install Exist 400Hz SSFC 90KVA	EACH	12	2,706	32,472
34	Replace 400Hz SSFC 90KVA	EACH	10	35,587	355,870
35	Replace 400Hz SSFC 180KVA	EACH	5	55, 536	277,680
36	Cameras, Software Licensing & Programming (Recording Servers and Video Storage Servers by LCPA)	EACH	27	82,529	2,228,283
37	Remove Stop Bar (1-Each)	LNFT	10	196.00	1,960
38	Striping to be Removed (Grind Only)	~~LNFT~~LS	~~4617~~ 1	57,616	57,616
39	Striping at Gates	~~LNFT~~LS	~~4997~~ 1	135,011	135,011
40	New Stop Bar (1-Each)	LNFT	10	299.00	2,990
	GRAND TOTAL EXTENDED BID PRICE				25,649,547

NOTICE: Bidders are responsible for verifying quantities to the degree he/she deems necessary in order to submit a lump sum bid. Quantities and unit prices will NOT be used to determine award in any case. The Grand Total Bid Price only will be used for consideration of low bid award. This is not a unit price contract. There will be NO adjustments for errors of quantity take offs or variations caused by existing conditions regardless of bidder's basis of information.

Bidder must bid on all bid items. Any bidder not bidding all bid items will be considered nonresponsive and disqualified.

FAA Advisories to be followed (or newer version as updated by FAA): FAA AC 150/5370-2G Operational Safety on Airports During Construction, FAA AC 150/5200-18C Airport Safety Self Inspection, FAA AC 150/5210-5D Painting, Marking & Lighting of Vehicles Used on an Airport, FAA AC 150/5200-33B Hazardous Wildlife Attractants on or Near Airports.

NOTES / INSTRUCTIONS:
1) All bidders are required to hold their bid prices for 180 days after the date bids are due. Bidders shall provide a Bid Bond with their bid submittal. Bid Bonds shall be provided in the amount of 5% of the Grand Total Bid Number.
2) Bidder shall submit a complete bid including pricing for the entire scope of work and by providing unit costs for each item indicated herein. It shall be the bidder's sole responsibility to ensure formatting and mathematical calculations be precise and correct. Bidders shall provide prices for all items to be considered a complete and responsive bid.
3) Basis for ranking of bids shall be determined by a number of factors including but not limited to the Grand Total Bid Number for all items within the bid schedule.
4) The bidder shall provide a Unit Price and the extended Bid Price for each line item in the bid schedule. Failure to follow bid instructions may be grounds for bid rejection.
5) Prospective responsive low bidder (based on Grand Total Bid Number) will enter into a lump sum contract with the Lee County Port Authority.
6) Estimated quantities herein are published solely for the purpose of establishing the basis for lump sum bid award.
7) The project will be awarded as a lump sum contract according to the Grand Total Extended Bid Price of the lowest, responsive and responsible bidder.
8) C-105 Mobilization shall be limited to 10 percent of the Grand Total Bid Number.
9) The bidder proposes to furnish all material, equipment and labor to execute all work associated with the project.
10) All project design documents and specifications take precedence over any bid notes mentioned herein.

NAME OF BIDDER JBT AeroTech Corporation

REVISED - ADDENDUM 2 -FORM 2: OFFICIAL BID FORM (Page 4 of 4)

Each Bidder must demonstrate the minimum qualifications set forth in Part B have been met by providing the information requested below. The inability to verify minimum qualifications have been met due to bidders' submission of inadequate, inaccurate or outdated reference information may result in determination of non-responsiveness. Attach additional sheets as needed to provide complete information.

Yes or No Yes **.** Bidder contracting in a corporate capacity is registered with the Florida Department of State and is authorized to do business in the State of Florida.

Yes or No Yes **.** Bidder has previously contracted with one or more medium or large hub FAA Part 139 airport(s) for work occurring on the airfield that was performed in accordance with FAA prescribed technical specifications, phasing and airfield maintenance of traffic procedures.

And,

Yes or No Yes **.**This/these contract(s) has/have a combined project value of no less than $10 million dollars with no individual contract valued at less than $2 million dollars,

And,

Yes or No Yes **.** This/these contract(s) has/have been performed within the past ten (10) years prior to the date bids are due.

Provide the following information for each contract Bidder is relying on to meet minimum qualifications

Name & location of Airport
Airport Contact Name and Title & Airport Contact Telephone and Email address
Project Name
Contract value & contract begin and end dates

Yes or No Yes **.** Bidder is a manufacturer of passenger boarding bridges (PBB) and has manufactured 100 or more PBB's for projects in the United States within the past ten years prior to date bids are due.

Yes or No Yes **.** Bidder's **subcontractor** is a manufacturer of passenger boarding bridges (PBB) and has manufactured 100 or more PBB's for projects in the United States within the past ten years. Name of proposed subcontractor? JBT AeroTech Corporation

Yes or No Yes **.** Bidder is an installer of passenger boarding bridges and has installed no less than three (3) passenger boarding bridge projects in the United States on projects of similar size and scope within five (5) years prior to the date bids are due.

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Yes or No Yes **.** Bidder's **subcontractor** is an installer of passenger boarding bridges and has installed no less than three (3) passenger boarding bridge projects in the United States on projects of similar size and scope within five (5) years prior to the date bids are due. Name of proposed subcontractor? Skycon, Inc.

Yes or No Yes **.** Bidder has **not** been found guilty by any court in the United States of crimes pertaining to industrial espionage or intellectual property theft.

Name of Bidder JBT AeroTech Corporation

JBT AeroTech Corporation
70 West Madison Suite 4400
Chicago IL 60602

DELEGATION OF SIGNATURE AUTHORITY

By resolution of the Board of Directors of JBT AeroTech Corporation (the "Corporation"), I was vested with authority, in my capacity as President, to execute, and to delegate to any person authority to execute, all written instruments whatsoever pertaining to matters that are in the ordinary course of business of the Corporation.

Pursuant to this authority, I hereby authorize Brian DeRoche, President of Jetway Systems, a business unit of the Corporation, to execute and deliver all written instruments whatsoever which are in the ordinary course of business of the Corporation that pertain to Jetway Systems.

The authority conveyed by this delegation of signature authority may not be further delegated.

This delegation shall become effective on 1 June 2019 and shall continue in effect through 31 December 2020, unless revoked earliery in writing.

Dated: 1 June 2019

JBT AeroTech Corporation

By: _____
Printed Name: David C. Burdakin
Title: President

Ron DeSantis, Governor

Halsey Beshears, Secretary

Florida dbpr

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

CONSTRUCTION INDUSTRY LICENSING BOARD

THE GENERAL CONTRACTOR HEREIN IS CERTIFIED UNDER THE
PROVISIONS OF CHAPTER 489, FLORIDA STATUTES

THOMPSON, JOHN PAUL

JBT AEROTECH CORPORATION
1805 W 2550 S
OGDEN UT 84401

LICENSE NUMBER: CGC1528566

EXPIRATION DATE: AUGUST 31, 2020

Always verify licenses online at MyFloridaLicense.com

Do not alter this document in any form.

This is your license. It is unlawful for anyone other than the licensee to use this document.

State of Florida
Department of State

I certify from the records of this office that JBT AEROTECH CORPORATION is a Delaware corporation authorized to transact business in the State of Florida, qualified on June 13, 2019.

The document number of this corporation is F19000002754.

I further certify that said corporation has paid all fees due this office through December 31, 2020, that its most recent annual report/uniform business report was filed on May 3, 2020, and that its status is active.

I further certify that said corporation has not filed a Certificate of Withdrawal.

Given under my hand and the Great Seal of the State of Florida at Tallahassee, the Capital, this the Twenty-seventh day of May, 2020

GREAT SEAL OF THE STATE OF FLORIDA
IN GOD WE TRUST

Secretary of State

Tracking Number: 9981661516CU

To authenticate this certificate,visit the following site,enter this number, and then follow the instructions displayed.

https://services.sunbiz.org/Filings/CertificateOfStatus/CertificateAuthentication

Delaware

The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF INCORPORATION OF "JBT AEROTECH CORPORATION", FILED IN THIS OFFICE ON THE FIRST DAY OF FEBRUARY, A.D. 2019, AT 11:43 O`CLOCK A.M.

A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS.

Jeffrey W. Bullock, Secretary of State

7263292 8100
SR# 20190662515

Authentication: 202186584
Date: 02-01-19

You may verify this certificate online at corp.delaware.gov/authver.shtml

FORM 2: OFFICIAL BID FORM (Page 4 of 4)

Each Bidder must demonstrate that the minimum qualifications set forth in Part B have been met. Each bidder must provide the up to date and current information as requested below. . The inability to perform reference checks due to the submittal of inaccurate or outdated reference contact information may affect the LCPA's determination of responsiveness.

1. NO Has bidder been found guilty by any court in the United States of crimes pertaining to industrial espionage or intellectual property theft. (Indicate Yes or No).

2. Project Information and Reference

A. John Bean Technologies Corporation, Jetway
BIDDER FIRM NAME

PBB Replacement - Phase 2 PROJECT NAME	Atlanta Hartsfield-Jackson Int'l Airport AIRPORT NAME
2016-2020 YEAR PROJECT STARTED/COMPLETED	$80,739,325 DOLLAR VALUE OF CONSTRUCTION
Shawn Craig AIRPORT CONTACT NAME	Project Manager POSITION HELD ON PROJECT
Project Manager (Agent for AATC) AIRPORT CONTACT CURRENT TITLE	3368 Hardee Avenue CURRENT ADDRESS
Atlanta, Georgia 30341 CURRENT CITY, STATE ZIP CODE	678-749-9443 CURRENT TELEPHONE #
scraig@cps-atlanta.com CURRENT EMAIL	

B. John Bean Technologies Corporation, Jetway
BIDDER FIM NAME

PBB Replacement Project 1649A PROJECT NAME	Nashville International Airport AIRPORT NAME
2015-2018 YEAR PROJECT STARTED/COMPLETED	$23,392,643 DOLLAR VALUE OF CONSTRUCTION
Tracy Holton AIRPORT CONTACT NAME	Chief Engineer POSITION HELD ON PROJECT
Asst. VP Development & Eng. AIRPORT CONTACT CURRENT TITLE	1 Terminal Drive CURRENT ADDRESS
Nashville, TN 37214 CURRENT CITY, STATE ZIP CODE	615-275-1675 CURRENT TELEPHONE #
traci_holton@nashintl.com CURRENT EMAIL	

Sample of Past Performance

This intent of this document is to describe the experience and past performance employed by JBT AeroTech Corporation, Jetway Systems®. JBT AeroTech Corporation, Jetway® Systems, for the rest of the document will be known as Jetway®.

JBT AeroTech Corporation, Jetway manufactures approximately 200 Jetway passenger boarding bridges, walkways and associated ancillary equipment each year for projects in the Americas. The following is a representative sample of projects; a more comprehensive list is available if desired. This list represents a cross section of projects that meet many of the criteria, however not all projects reflect all the criteria listed. These projects are fixed price contracts and we are not involved in the preconstruction project estimates.

Atlanta Hartsfield-Jackson International Airport

Customer	Atlanta Airline Terminal Corporation (AATC)
Scope	This project included the replacement of 116 passenger boarding bridges. Many of the gates include new PCA and GPU equipment. JBT in conjunction with Aero System Engineering were the designers of the work. JBT supplied all equipment and Aero Bridge Works, through a direct contract with AATC was the installation contractor. This work required intimate coordination with the AATC, the Airlines and Aero Bridge Works (ABW) to deliver the equipment on time and in the correct configuration for a seamless installation.
Schedule	Varied, but generally two bridges per every two weeks
JBT PM	Mark Nelson, 801-940-1862, mark.nelson@jbtc.com
Owner PM	Shawn Craig, 678-749-9443, scraig@cps-atlanta.com
Project Price	$80,739,325
RQ#	3389 & 3030
Dates	March 2016 – September 2020

Los Angeles International Airport

Customer	United Airlines
Scope	This project included the replacement of 17 Passenger Boarding Bridges at Terminals 7 and 8 at Los Angeles International Airport. The equipment contract was directly with United Airlines and the installation contract was through Hensel-Phelps Construction. We were responsible for the removal and scrap of the existing Passenger Boarding Bridges and associated equipment and the installation of the new PBB's, GPU's and PCA. There was extensive refurbishment work on 10 other gates requiring new Cab's, new PBB interiors and the like. At the end of the installation of each gate we provide commissioning services.
Schedule	One Gate down at a time, however there were several two bridge gates. The sequence time was approximately two weeks per gate
JBT PM	Lonnie Rackham, 801-629-3227, Lonnie.rackham@jbtc.com
Owner PM	Richard Cloud, 872-825-7299, richard.r.cloud@united.com
Project Price	$4,727,850
RQ#	3216
Dates	September 2017 – February 2018

Denver International Airport

Customer	Denver International Airport
Scope:	We have a Master Purchase Agreement with Denver International Airport/City and County of Denver for the supply of Passenger Boarding Bridges. We coordinate with the DIA project manager and the DIA installation contractor to supply the equipment when required. At the end of the installation of each gate we provide commissioning services. We are currently involved with the DEN expansion work as well as a 10-bridge replacement program. We have supplied 80 bridges over the last 15 years to DEN.
Schedule	Seven working days
JBT PM	Seth Whitworth, 801-629-3104, seth.whitworth@jbtc.com
Owner PM	Steve Simpson, 303-342-2609, steven.simpson@flydenver.com, Expansion Dan Trexler, 303-342-2655, danny.trexler@flydenver.com Replacement
Project Price	$38,300,000 for the expansion work & $5,231,534 for the scheduled replacement equipment
RQ#	3121 & 2957
Dates	June 2016 – December 2017

San Francisco International Airport Boarding Area A

Customer	Skanska Builders USA
Scope	The scope is to replace the existing 23 Passenger Boarding Bridges at Boarding Area A. These are international gates and the we are to take down and scrap the existing bridges and glycol air handlers and dispose of the equipment. We are to erect new PBB's and walkways. This work required multiple mobilizations as the bridge equipment is removed and construction activities take place and we return for the installation of the new equipment.
Schedule	One Month Per Gate
JBT PM	Jake Brown, 801-629-3109, jake.brown@jbtc.com
Owner PM	Jeff Robinson, 510-908-1148, jeff.robinson@skanska.com
Project Price	$18,134,000
RQ#	3325
Dates	September 2017 – January 2019

Salt Lake City International Airport North Concourse, Phase I

Customer	Austin-Oakland Joint Venture
Scope	The scope is to replace the existing 20 Passenger Boarding Bridges in the North Concourse. These gates are to take down and scrap the existing bridges and glycol air handlers and dispose of the equipment. We are to erect new PBB's and walkways. This work required multiple mobilizations as the bridge equipment is removed and construction activities take place and we return for the installation of the new equipment.
Schedule	One Month Per Gate
JBT PM	Mark Nelson, 801-629-3147, mark.nelson@jbtc.com
Owner PM	Brian Anderson, 801-386-0140, banderson@aojvteam.com
Project Price	$24,184,878
RQ#	3291
Dates	June 2018 – December 2021

Salt Lake City International Airport South Concourse, Phase I

Customer	Holder Big-D
Scope	The scope is to replace the existing 25 Passenger Boarding Bridges in the South Concourse. These gates are to take down and scrap the existing bridges and glycol air handlers and dispose of the equipment. We are to erect new PBB's and walkways. This work required multiple mobilizations as the bridge equipment is removed and construction activities take place and we return for the installation of the new equipment.
Schedule	One Month Per Gate
JBT PM	Mark Nelson, 801-629-3147, mark.nelson@jbtc.com
Owner PM	John O'Connor, 508-365-8908, joconnor@hdjvteam.com
Project Price	$28,786,581
RQ#	2745
Dates	December 2016 – December 2021

FORM 3: LOBBYING AFFIDAVIT
Note: This form must be submitted with the bidder's bid submittal

Brian DeRoche, being first duly sworn, deposes and says that he or she is the (circle one as appropriate – sole owner, general partner, joint venture partner, president, secretary or authorized representative of bidder, maker of the attached bid and that neither the bidder nor its agents have lobbied to obtain an award of the agreement pursuant to this bid from the Lee County Board of Port Commissioners, members of the Airports Special Management Committee, or employees of the Lee County Port Authority, individually or collectively, regarding this competitive solicitation.

Bidder further affirms that bidder has complied with the federal regulations concerning lobbying activities contained in 31 U.S.C. 1352 and 49 CFR Part 20 and Lee County Lobbying Ordinance No. 03-14.

AFFIANT: _____

Date: June 01, 2020

State of: Utah

County of: Weber

This foregoing instrument was acknowledged before me this 01 (first) day of June, 20 20 by Brian DeRoche, who is personally known to me or produced _____ as identification.

_____ 705698

Signature of Notary Serial Commission No.

JACKI L PAYNE
NOTARY PUBLIC • STATE of UTAH
COMMISSION # 705698
COMM. EXP. 04/25/2023

FORM 4: PUBLIC ENTITY CRIMES FORM

SWORN STATEMENT PURSUANT TO SECTION 287.133(3)(a) FLORIDA STATUTES

A person, affiliate, or corporation who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a vendor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, Florida Statutes, for CATEGORY TWO for a period of thirty-six (36) months from the date of being placed on the convicted vendor list.

The Bidder certifies by submission of this form that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any State or Federal entity, department or agency.

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH 1 (ONE) ABOVE IS FOR THAT PUBLIC ENTITY ONLY AND, THAT THIS FORM IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT IN EXCESS OF THE THRESHOLD AMOUNT PROVIDED IN SECTION 287.017, FLORIDA STATUTES FOR CATEGORY TWO OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

BIDDER'S NAME: JBT AeroTech Corporation

Note: This form must be submitted with the bidder's bid submittal

FORM 5: BIDDER'S SCRUTINIZED COMPANIES CERTIFICATION

Bidder hereby certifies under penalties of perjury as of the date of this bid to provide goods and services to the Lee County Port Authority that it has not been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List as defined in Section 287.135, Fla. Stat., is not engaged in business operations in Cuba and Syria; and is not on the Scrutinized Companies that Boycott Israel List or is engaged in a boycott of Israel.

I further certify that I am duly authorized to submit this certification on behalf of the company as its agent and that the company is ready, willing and able to perform if awarded a contract.

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE LEE COUNTY PORT AUTHORITY IS FOR THAT PUBLIC ENTITY ONLY AND, THAT FALSIFICATION OF THIS CERTIFICATION MAY RESULT IN TERMINATION OF THE CONTRACT, DEBARMENT OF THE COMPANY FROM SUBMITTING A BID OR PROPOSAL FOR A PERIOD OF THREE (3) YEARS FROM THE DATE THE CERTIFICATION IS DETERMINED TO BE FALSE, CIVIL PENALTIES, AND THE ASSESSMENT OF ATTORNEY'S FEES AND COSTS AGAINST THE COMPANY. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

Brian DeRoche _____
Authorized Signature

State of: Utah

County of: Weber

This foregoing instrument was acknowledged before me this 01 (first) day of June, 2020 by Brian DeRoche, who is personally known to me or produced _____ as identification.

_____ 705698
Signature of Notary Serial/Commission No.

JACKI L PAYNE
NOTARY PUBLIC • STATE of UTAH
COMMISSION # 708698
COMM. EXP. 04/25/2023

Note: This form must be submitted with the bidder's bid submittal

FORM 6: BID BOND **BID BOND NO.** 38203-CNA-20-16

KNOW ALL MEN BY THESE PRESENTS, that we JBT AeroTech Corporation, as Principal, and Western Surety Company, a corporation licensed to do business in the State of Florida as a surety, are held firmly bound unto LEE COUNTY PORT AUTHORITY, LEE COUNTY, FLORIDA (obligee), in the sum of $ One million two hundred eight two thousand, four hundred seventy eight dollars ($1,282,478) for the payment whereof, well and truly to be made, we bind ourselves, our heirs, successors, personal representatives and assigns, jointly and severally, firmly, by these presents.

SIGNED AND SEALED this 12th day of May, 2020.

WHEREAS, said Principal is herewith submitting a bid for RFB 20-53MMW, Passenger Boarding Bridge Replacement – Southwest Florida International Airport.

NOW, THEREFORE, the condition of the above obligation is such that if said Principal shall be awarded the contract upon said bid within the specified time and shall enter into a written agreement, satisfactory in form, and shall provide an acceptable Performance and Payment Bond from a Surety acceptable to the Authority as well as other insurance as may be required by the Authority within ten (10) calendar days from the issuance of the written Notice of Intent to Award date, or within such extended period as the Port Authority may grant, then this obligation shall be null and void. Otherwise, said Principal and Surety shall pay to said Authority in money the difference between the amount of the bid of said Principal and the amount for which said Authority may legally contract with another party to perform said work, if the latter amount be in excess of the former, together with any expenses and reasonable attorney's fees incurred by said Port Authority if suit be brought hereon, but in no event shall said Surety's liability exceed the penal sum hereof plus such expenses and attorney's fees. For purposes of unsuccessful bid protests filed by the Principal herein, this obligation shall bind the Surety to pay costs and damages associated with the bid protest or delays to the project upon finding from the Board of Port Commissioners for Lee County that the bid protest was frivolous and/or lacked merit.

Witness as to Principal: JBT AeroTech Corporation (SEAL)
(Principal)

(By)

Witness as to Surety: Western Surety Company (SEAL)
(Surety's name)

Aaron D. Griffin (By-As Attorney in Fact, Surety)

Affix Corporate Seals and attach proper Power of Attorney for Surety.

Western Surety Company

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That WESTERN SURETY COMPANY, a South Dakota corporation, is a duly organized and existing corporation having its principal office in the City of Sioux Falls, and State of South Dakota, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Aaron D. Griffin , Individually

of Chicago , Illinois , its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts –

Surety Bond Number: 38203-CNA-20-16
Principal: JBT AeroTech Corporation
Obligee: Lee County Port Authority

and to bind it thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the corporation and all the acts of said Attorney, pursuant to the authority hereby given, are hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the By-Law printed on the reverse hereof, duly adopted, as indicated, by the shareholders of the corporation.

In Witness Whereof, WESTERN SURETY COMPANY has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 3rd day of June, 2015.

WESTERN SURETY COMPANY

Paul T. Bruflat, Vice President

State of South Dakota }
County of Minnehaha } ss

On this 3rd day of June, 2015, before me personally came Paul T. Bruflat, to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is the Vice President of WESTERN SURETY COMPANY described in and which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said corporation and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said corporation.

My commission expires
February 12, 2021

S. EICH
NOTARY PUBLIC
SOUTH DAKOTA

S. Eich, Notary Public

CERTIFICATE

I, L. Nelson, Assistant Secretary of WESTERN SURETY COMPANY do hereby certify that the Power of Attorney hereinabove set forth is still in force, and further certify that the By-Law of the corporation printed on the reverse hereof is still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said corporation this 12th day of May , 2020 .

WESTERN SURETY COMPANY

L. Nelson, Assistant Secretary

Form F4280-7-2012

JBT AeroTech Corporation
70 West Madison Suite 4400
Chicago IL 60602

DELEGATION OF SIGNATURE AUTHORITY

By resolution of the Board of Directors of JBT AeroTech Corporation (the "Corporation"), I was vested with authority, in my capacity as President, to execute, and to delegate to any person authority to execute, all written instruments whatsoever pertaining to matters that are in the ordinary course of business of the Corporation.

Pursuant to this authority, I hereby authorize Brian DeRoche, President of Jetway Systems, a business unit of the Corporation, to execute and deliver all written instruments whatsoever which are in the ordinary course of business of the Corporation that pertain to Jetway Systems.

The authority conveyed by this delegation of signature authority may not be further delegated.

This delegation shall become effective on 1 June 2019 and shall continue in effect through 31 December 2020, unless revoked earliery in writing.

Dated: 1 June 2019

JBT AeroTech Corporation

By: _____
Printed Name: David C. Burdakin
Title: President

FORM 7: RESERVED

26. -

FORM 8: RESERVED

26. -

FORM 9: Utilization Statement: Disadvantaged Business Enterprise (DBE). Note: This form must be submitted with the bidder's bid submittal

By completing this form Bidders must identify and document whether they will meet the Port Authority's DBE participation goal for this project **(10%)**, and if not, Bidders should identify and document its good faith efforts to meet the goal, as set forth in 49 CFR, Appendix A, Subpart C 26.53.

CERTIFIED DBE(s) LIST

DBE Firm Name(s)	$ Value of Work	Percent of Total Project
1. Structures Development Group Inc.	$ 1,635,217	6.4 %
Type of Work/Specialty: General Contractor/Conditions, Civil Works and Apron Striping		
2. Wentco	$ 2,219,820	7.9 %
Type of Work/Specialty: Electrical & Telecom Work		
3. _____	$ _____	_____ %
Type of Work/Specialty: _____		
4. _____	$ _____	_____ %
Type of Work/Specialty: _____		
5. _____	$ _____	_____ %
Type of Work/Specialty: _____		

Attach Additional Sheets as Necessary

The undersigned bidder has satisfied the requirements of the bid conditions in the following manner. (Please mark appropriate box)

☐ **The bidder is committed to a minimum of** 10 % **DBE utilization on this project.**

☐ **The bidder, while unable to meet the established goal, hereby commits to a minimum of _____% DBE utilization on this project and also submits documentation, as an attachment(s) demonstrating good faith efforts (GFE).**

Total Value of Base Bid	$ 25,649,557
Total of DBE Subcontract(s) Work	$ 3,855,037

Print Bidder's/Offeror's Company Name	JBT AeroTech Corporation
Print Name of Authorized Representative	Brian DeRoche

Company Address:	1805 W 2550 S			
	City: Ogden	State: UT	Zip Code:	84401
Phone Number :	801-629-3125	E-mail:	john.thompson@jbtc.com	

The undersigned hereby further assures that the information included herein is true and correct, and that the DBE firm(s) listed herein, have agreed to perform a commercially useful function as described in 49 CFR Part 26.55(c) in the work items noted for each firm. The undersigned further understands that no changes to this statement may be made without prior approval from the Lee County Port Authority and the CM for this project.

Signature of Authorized Representative — Date: June 01, 2020

FORM 10: LETTER OF COMMITMENT: Disadvantaged Business Enterprise (DBE)

LETTER OF COMMITMENT
Disadvantaged Business Enterprise
(This page shall be submitted with bid submittal for each proposed DBE firm)

Bidder/Offeror Company Name: JBT AeroTech Corporation

Project Name/#: Passenger Boarding Bridge Replacement, RFB 20-53MMW

DBE Firm: Company Name: Structures Development Group, Inc.

Address: 6601 Broken Arrow Road

City: Ft. Myers State: FL Zip 33912

DBE Contact Person: Name: Mona Henry Phone: (941) 288-6090

E-mail: mona@structuresdg.com

Work items(s) to be performed by DBE Firm	*Quantity/Unit Price*	*Total Value of Work*
General Contractor/Conditions, Civil Works and Apron Striping	1 lot sum	$1,635,217
Totals		

The bidder/offeror is committed to utilizing the above-named DBE firm for the work described above. The estimated participation is as follows:

Total DBE contract amount: $ 1,635,217

Affirmation:
The above-named DBE firm affirms that it will perform the portion of the contract for the estimated dollar value as stated above.

By: _____, V.P. June 01, 2020
(Signature of DBE Firm's Authorized Representative) (Date)

President
(Title)

**In the event the bidder does not receive award of bid, any and all representations in this Letter of Commitment and Affirmation shall be null and void.*

DBE Letter of Commitment – 02/25/2020JR

Florida Unified Certification Program

CERTIFIED

Disadvantaged Business Enterprise

Structures Development Group, Inc.

This certificate acknowledges that the above named firm is approved by the Florida Unified Certification Program (FUCP) as a Disadvantaged Business Enterprise (DBE), under rules promulgated by the U.S. Department of Transportation (DOT) in Title 49, Part 26 of the US Code of Federal Regulations.

This certification entitles the above named firm to provide product(s) and/or service(s) and received DBE credits under the following category(s) only: Commercial and Institutional Building Construction, Residential Building Construction, and Residential Remodelers

NAICS Code(s): 23611, 236118, 236220

ANNIVERSARY DATE: Annually April 14
REVIEW DATE: April 14, 2022

Jeff Mulder, A.A.E.
Executive Director

LEE COUNTY PORT AUTHORITY
CERTIFYING AGENCY

Julio A. Rodriguez
DBE Program Manager

Lee County Tax Collector
State of Florida

Local Business Tax Receipt

Dear Business Owner:

Your 2019-2020 Lee County Local Business Tax Receipt is attached below for account number **9600670.**

If there is a change in one of the following, refer to the instructions on the back of this receipt.

- Business name
- Ownership
- Physical location
- Business closed

This is not a bill. Detach the bottom portion and display in a public location.

I hope you have a successful year.

Sincerely,

Lacy D. Hart

Lee County Tax Collector

2019 - 2020
LEE COUNTY LOCAL BUSINESS TAX RECEIPT

Account Number: 9600670
State License Number: CGC057721
If state license has changed, contact our office at 239.533.6000

Location:
6601 BROKEN ARROW RD
FT MYERS FL 33912

STRUCTURES DEVELOPMENT GROUP INC
HENRY MONA LEA
6601 BROKEN ARROW RD
FT MYERS FL 33912

Account Expires: September 30, 2020

May engage in the business of:
GENERAL CONTRACTOR-CERTIFIED
THIS LOCAL BUSINESS TAX RECEIPT IS NON REGULATORY

Payment Information:		
PAID	527275-75-1	08/13/2019 09:40 AM
		$50.00

RICK SCOTT, GOVERNOR

JONATHAN ZACHEM, SECRETARY

Florida dbpr

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

CONSTRUCTION INDUSTRY LICENSING BOARD

THE GENERAL CONTRACTOR HEREIN IS CERTIFIED UNDER THE
PROVISIONS OF CHAPTER 489, FLORIDA STATUTES

HENRY, MONA LEA

STRUCTURES DEVELOPMENT GROUP INC
6601 Broken 6601 BROKEN ARROW ROAD
FORT MYERS FL 33912

LICENSE NUMBER: CGC057721

EXPIRATION DATE: AUGUST 31, 2020

Always verify licenses online at MyFloridaLicense.com

Do not alter this document in any form.

This is your license. It is unlawful for anyone other than the licensee to use this document.

FORM 10: LETTER OF COMMITMENT: Disadvantaged Business Enterprise (DBE)

LETTER OF COMMITMENT
Disadvantaged Business Enterprise
(This page shall be submitted with bid submittal for each proposed DBE firm)

Bidder/Offeror Company Name: JBT AeroTech Corporation

Project Name/#: Passenger Boarding Bridge Replacement, RFB 20-53MMW

DBE Firm: Company Name: WENTCO, Inc.

Address: 5877 Enterprise Pkwy

City: Fort Myers State: FL Zip 33905

DBE Contact Person: Name: Cathy Reynolds Phone: (239) 694-2700

E-mail: Cathy.reynolds@wentcoinc.com

Work items(s) to be performed by DBE Firm	*Quantity/Unit Price*	*Total Value of Work*
Electric/Data/CCTV	1 lot sum	$1,950,000.00
Totals		

The bidder/offeror is committed to utilizing the above-named DBE firm for the work described above. The estimated participation is as follows:

Total DBE contract amount: $ 1,950,000.00

Affirmation:
The above-named DBE firm affirms that it will perform the portion of the contract for the estimated dollar value as stated above.

By: Cathy Reynolds 6/1/2020
(Signature of DBE Firm's Authorized Representative) (Date)

PRESIDENT
(Title)

**In the event the bidder does not receive award of bid, any and all representations in this Letter of Commitment and Affirmation shall be null and void.*

DBE Letter of Commitment – 02/25/2020JR

Florida Unified Certification Program

CERTIFIED

Disadvantaged Business Enterprise

Wentco, Inc.

This certificate acknowledges that the above named firm is approved by the Florida Unified Certification Program (FUCP) as a Disadvantaged Business Enterprise (DBE), under rules promulgated by the U.S. Department of Transportation (DOT) in Title 49, Part 26 of the US Code of Federal Regulations.

This certification entitles the above named firm to provide product(s) and/or service(s) under the following category(s) only: Electrical Contractors and Other Wiring Installation Contractors, Plumbing, Heating, and Air Conditioning Contractors

NAICS Code(s): 238210, 238220

ANNIVERSARY DATE: Annually April 10
REVIEW DATE: October 10, 2021

Jeff Mulder, A.A.E.
Executive Director

LEE COUNTY PORT AUTHORITY
CERTIFYING AGENCY

Julio A. Rodriguez
DBE Program Manager

FORM 11: CERTIFICATE OF BUY AMERICAN COMPLIANCE FOR TOTAL FACILITY. **Submission of this form is REQUIRED with bid submittal.**

CERTIFICATE OF BUY AMERICAN COMPLIANCE FOR TOTAL FACILITY

As a matter of bid responsiveness, the bidder must complete, sign, date, and submit this certification statement with its proposal. The bidder must indicate how it intends to comply with 49 USC § 50101 by selecting one of the following certification statements. These statements are mutually exclusive. Bidder must select one or the other (i.e. not both) by inserting a checkmark (□) or the letter "X".

□ **Bidder hereby certifies that it will comply with 49 USC § 50101 by:**

a) Only installing steel and manufactured products produced in the United States; or
b) Installing manufactured products for which the Federal Aviation Administration (FAA) has issued a waiver as indicated by inclusion on the current FAA Nationwide Buy American Waivers Issued listing; or
c) Installing products listed as an Excepted Article, Material or Supply in Federal Acquisition Regulation Subpart 25.108.

By selecting this certification statement, the bidder agrees:

- To provide to the Owner evidence that documents the source and origin of the steel and manufactured product.
- To faithfully comply with providing U.S. domestic products.
- To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

☒ **Bidder hereby certifies it cannot comply with the 100 percent Buy American Preferences of 49 USC § 50101(a) but may qualify for either a Type 3 or Type 4 waiver under 49 USC § 50101(b). By selecting this certification statement, the apparent bidder with the apparent low bid agrees:**

a) To the submit to the Owner within 15 calendar days of the bid opening, a formal waiver request and required documentation that supports the type of waiver being requested.
b) That failure to submit the required documentation within the specified timeframe is cause for a non-responsive determination that may result in rejection of the bid.
c) To faithfully comply with providing U.S. domestic products at or above the approved U.S. domestic content percentage as approved by the FAA.
d) To furnish U.S. domestic product for any waiver request that the FAA rejects.
e) To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

REQUIRED DOCUMENTATION

Type 3 Waiver – The cost of components and subcomponents produced in the United States is more than 60 percent of the cost of all components and subcomponents of the "facility". The required documentation for a Type 3 waiver is:

a) Listing of all manufactured products that are not comprised of 100 percent U.S. domestic content (excludes products listed on the FAA Nationwide Buy American Waivers Issued listing and products excluded by Federal Acquisition Regulation Subpart 25.108; products of unknown origin must be considered as non-domestic products in their entirety).
b) Cost of non-domestic components and subcomponents, excluding labor costs associated with final assembly and installation at project location.
c) Percentage of non-domestic component and subcomponent cost as compared to total "facility" component and subcomponent costs, excluding labor costs associated with final assembly and installation at project location.

Type 4 Waiver – Total cost of project using U.S. domestic source product exceeds the total project cost using non-domestic product by 25 percent. The required documentation for a Type 4 of waiver is:

a) Detailed cost information for total project using U.S. domestic product
b) Detailed cost information for total project using non-domestic product

False Statements: Per 49 USC § 47126, this certification concerns a matter within the jurisdiction of the Federal Aviation Administration and the making of a false, fictitious or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code.

June 01, 2020
Date


Signature

JBT AeroTech Corporation
Company Name

President - Jetway
Title

[END OF FORM]

FORM 12: CERTIFICATE OF BUY AMERICAN COMPLIANCE-MANUFACTURERED PRODUCTS. Submission of this form with bidder's bid submittal is REQUIRED.

Certificate of Buy American Compliance for Manufactured Products
As a matter of bid responsiveness, the bidder must complete, sign, date, and submit this certification statement with their bid. The bidder must indicate how they intend to comply with 49 USC § 50101 by selecting one on the following certification statements. These statements are mutually exclusive. Bidder must select one or the other (not both) by inserting a checkmark (✓) or the letter "X".

☐ Bidder hereby certifies that it will comply with 49 USC § 50101 by:

a) Only installing steel and manufactured products produced in the United States;
b) Installing manufactured products for which the Federal Aviation Administration (FAA) has issued a waiver as indicated by inclusion on the current FAA Nationwide Buy American Waivers Issued listing; or
c) Installing products listed as an Excepted Article, Material or Supply in Federal Acquisition Regulation Subpart 25.108.

By selecting this certification statement, the bidder agrees:

1. To provide to the Owner evidence that documents the source and origin of the steel and manufactured product.
2. To faithfully comply with providing U.S. domestic product.
3. To furnish U.S. domestic product for any waiver request that the FAA rejects
4. To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

☒ The bidder hereby certifies it cannot comply with the 100 percent Buy American Preferences of 49 USC § 50101(a) but may qualify for either a Type 3 or Type 4 waiver under 49 USC § 50101(b). By selecting this certification statement, the apparent bidder with the apparent low bid agrees:

1. To the submit to the Owner within 15 calendar days of the bid opening, a formal waiver request and required documentation that supports the type of waiver being requested.
2. That failure to submit the required documentation within the specified timeframe is cause for a non-responsive determination may result in rejection of the proposal.
3. To faithfully comply with providing U.S. domestic products at or above the approved U.S. domestic content percentage as approved by the FAA.
4. To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.
5.

REQUIRED DOCUMENTATION

Type 3 Waiver – The cost of the item components and subcomponents produced in the United States is more that 60 percent of the cost of all components and subcomponents of the "item". The required documentation for a Type 3 waiver is:

a) Listing of all product components and subcomponents that are not comprised of 100 percent U.S. domestic content (Excludes products listed on the FAA Nationwide Buy American Waivers Issued listing and products excluded by Federal Acquisition Regulation Subpart 25.108; products of unknown origin must be considered as non-domestic products in their entirety).
b) Cost of non-domestic components and subcomponents, excluding labor costs associated with final assembly at place of manufacture.
c) Percentage of non-domestic component and subcomponent cost as compared to total "item" component and subcomponent costs, excluding labor costs associated with final assembly at place of manufacture.

Type 4 Waiver – Total cost of project using U.S. domestic source product exceeds the total project cost using non-domestic product by 25 percent. The required documentation for a Type 4 of waiver is:

a) Detailed cost information for total project using U.S. domestic product
b) Detailed cost information for total project using non-domestic product

False Statements: Per 49 USC § 47126, this certification concerns a matter within the jurisdiction of the Federal Aviation Administration and the making of a false, fictitious or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code.

June 01, 2020
Date

JBT AeroTech Corporation
Company Name

Signature

President - Jetway
Title

[END OF FORM]

FORM 13: CERTIFICATION OF BIDDER REGARDING TAX DELINQUENCY AND FELONY CONVICTIONS

Submission of this form with bidder's bid submittal is REQUIRED.

CERTIFICATION OF BIDDER REGARDING TAX DELINQUENCY AND FELONY CONVICTIONS

The applicant must complete the following two certification statements. The applicant must indicate its current status as it relates to tax delinquency and felony conviction by inserting a checkmark (✓) in the space following the applicable response. The applicant agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification in all lower tier subcontracts.

Certifications

1) The applicant represents that it is ( ) is not (X) a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.
2) The applicant represents that it is ( ) is not (X) is not a corporation that was convicted of a criminal violation under any Federal law within the preceding 24 months.

June 01, 2020
Date


Signature

JBT AeroTech Corporation
Company Name

President - Jetway
Title

FORM 14: TRADE RESTRICTION CERTIFICATION

By submission of an offer, the Offeror certifies that with respect to this solicitation and any resultant contract, the Offeror –

1) is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms as published by the Office of the United States Trade Representative (USTR);

2) has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country included on the list of countries that discriminate against U.S. firms as published by the USTR; and

3) has not entered into any subcontract for any product to be used on the Federal project that is produced in a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR.

This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18 USC Section 1001.

The Offeror/Contractor must provide immediate written notice to the Owner if the Offeror/Contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The Contractor must require subcontractors provide immediate written notice to the Contractor if at any time it learns that its certification was erroneous by reason of changed circumstances.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR 30.17, no contract shall be awarded to an Offeror or subcontractor:

1) who is owned or controlled by one or more citizens or nationals of a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR or

2) whose subcontractors are owned or controlled by one or more citizens or nationals of a foreign country on such USTR list or

3) who incorporates in the public works project any product of a foreign country on such USTR list.

Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

The Offeror agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in all lower tier subcontracts. The Contractor may rely on the certification of a prospective subcontractor that it is not a firm from a foreign country included on the list of countries that discriminate against U.S.

firms as published by USTR, unless the Offeror has knowledge that the certification is erroneous.

This certification is a material representation of fact upon which reliance was placed when making an award. If it is later determined that the Contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration (FAA) may direct through the Owner cancellation of the contract or subcontract for default at no cost to the Owner or the FAA.

Signature of bidder: 

[END OF FORM]

CURRENT AND PAST PROJECTS

Passenger Boarding PBB's & Related Equipment

LOCATION CONTRACT NUMBER/RQ *APPROXIMATE* CONTRACT VALUE	OWNER/ARCHITECT	PROJECT	PROJECT DURATION
Vancouver International Airport **Vancouver, British Columbia, CA** RQ#3538 $5,644,219	**Vancouver Int'l Airport Authority** **Farrah Ataie** 3011 Aylmer Road Project Offices Richmond, BC, V7B 1A2 O: 604-276-7750	(7)PBB's (2)Walkways (2)400Hz (1)PCA's	Mar 19 – Sept 19
Wayne County Airport **Detroit, Michigan** RQ#3516 $1,692,301	**DES Electric** **Brian Minton, Project Manager** 11145 E 7 MILE RD DETROIT, MI 48234-3734 M: 313.218.0971	(3)PBB's (3)Walkways	Mar 19 – July 19
Salt Lake International Airport **Salt Lake City, Utah** RQ#3532 $15,262,241	**Austin-Oakland Joint Venture** **Brian Anderson | Preconstruction Manager** Salt Lake City International Airport North Concourse Program 4050 West 1200 North Salt Lake City, Utah 84116 Cell 801-386-0140 banderson@aojvteam.com	(11)PBB's (10)Walkways (11)400Hz (11)PCA's	Feb 19 – July 20
Norfolk International Airport **Norfolk, Virginia** RQ#3522 $8,187,598	**Aero BridgeWorks** **Jay Grantham, PE, LEED, CCM** AERO BridgeWorks | President **O:** 770.423.4200 x111 **M:** 919.796.2168 **E:** Jay.Grantham@aerobridgeworks.net **W:** www.TheAEROGroup.net	(17)PBB's (1)Walkway	Jan 19 – Jan 20
Portland Int'l Airport **Portland, Oregon** RQ#3531 $4,996,211	**Skanska USA Building, Inc.** Caitlin Powell 8855 NE Airport Way Portland, OR 97218 503-962-9322	(7)PBB's (7)400Hz (7)PCA	Nov 18 – Oct 19
Los Angeles Int'l Airport **Los Angeles, California** RQ#3469 $3,128,053	**Hensel-Phelps Construction Co.** 18850 Von Karman Avenue, Suite # 100 Irvine, CA. 92612 Scott E. Mongeau, - Project Manager, Construction Group Phone: 949.337.0365 Fax: 949.852.0218 Email: SMongeau@henselphelps.com	(2)PBB's (4)Walkways (2)400Hz (2)PCA (2)AHU	Nov 18 – June 19
Dallas/Fort Worth Int'l Airport **Dallas/Fort Worth, Texas** RQ#3514 $983,356	**American Airlines** PO Box 619616 Dallas/Ft. Worth Airport Dallas, TX 75261	(1)PBB (5)Walkways	Oct 18 – May 19

San Jose Int'l Airport **San Jose, California** RQ#3455 $2,892,073	**Aero PBB Works** **Jay Grantham, PE, LEED, CCM** AERO BridgeWorks | President **O:** 770.423.4200 x111 **M:** 919.796.2168 **E:** Jay.Grantham@aerobridgeworks.net **W:** www.TheAEROGroup.net	(5)PBB's	Oct 18 – April 19
Logan Int'l Airport **Boston, Massachusetts** RQ#3509 $4,277,177	**Southwest Airlines– Logan Int'l Airport** 1 Harborside Drive Boston, MA 02128	(7)PBB's (4)Walkways (7)400Hz (7)PCA	Sept 18 – Mar 19
Helena Regional Airport **Helena, Montana** RQ#3406 $1,855,499	**Dick Anderson Construction** TIM THOLT Project Manager Dick Anderson Construction DAC - *Always* part of the solution O: 406-443-3225 C: 406-579-4006 ttholt@daconstruction.com	(2)PBB's (3)Walkways (2)400Hz (3)PCA (3)Bag Valets	Sept 18 – April 19
Outagamie County Airport **Appleton, Wisconsin** RQ#3495 $1,009,702	**SMA Construction Services** Mike Abhold President/Sr. Project Manager O: 920-438-3833 M: 920-883-0694 mike@smaconstructionservices.com	(1)PBB (1)Walkway (1)400Hz (1)PCA	Sept 18 – Jan 19
LaGuardia Int'l Airport **New York, New York** RQ#3453 $40,083,850	**Delta Air Lines** Jim Tiefenthaler Delta Airlines General Manager – JFK T4 O: 718.565.3891 M: 718.736.4620 E: james.tiefenthaler@delta.com	(35)PBB's (23)Walkways (38)400Hz (38)PCAir	Sept 18 – Feb 19
Gray AAF **Killeen, Texas** RQ#3472 $2,887,033	**Aero PBB Works** **Jay Grantham, PE, LEED, CCM** AERO BridgeWorks | President O: 770.423.4200 x111 M: 919.796.2168 E: Jay.Grantham@aerobridgeworks.net W: www.TheAEROGroup.net	(4)PBB's (5)Walkways (4)400Hz (4)PCA	Sept 18 – Mar 19
Gallatin Field **Bozeman, Montana** RQ#3430 $1,564,883	**Gallatin Airport Authority** Scott Humphrey, Deputy Airport Director O: 406.388.6632 x 117 F: 406.388.6634 E: scott.humphrey@bozemanairport.com	(3)PBB's (3)400Hz	Aug 18 – Dec 18
Aberdeen Municipal Airport **Aberdeen, South Dakota** RQ#3484 $776,567	**Aberdeen Regional Airport Authority** 4740 6th Ave SE Aberdeen, SD 57401	(1)PBB (2)Walkways (1)400Hz	Aug 18 – Jan 19
Gulfport-Biloxi Int'l Airport **Gulfport, Mississippi** RQ#3434 $771,386	**Gulfport-Biloxi Regional Airport Authority** 14035-L Airport Road Gulfport, MS 39503 O: 228 863 5951	(1)PBB (1)400Hz	Aug 18 – Dec 18

O'Hare Int'l Airport **Chicago, Illinois** RQ#3421 $557,451	**American Airlines** Real Estate – Airport Planning 4333 Amon Carter Blvd MD 5317 Ft Worth, TX 76155 Mike Napoli O: 817-967-1097 E: mike.napoli@aa.com	(1)PBB (2)Walkways	Aug 18 – Jan 19
Albany County Airport **Albany, New York** RQ#3443 $2,292,936	**Oxford Airport Technical Services** Joe Ferraro VP, Operations - Oxford Airport Tech Services O: 516.326.6262 M: 516.807.1996 E: jferraro@oxford1.com	(4)PBB (4)400Hz (4)PCA	Aug 18 – Mar 19
William B. Hartsfield Int'l Airport **Atlanta, Georgia** RQ#3389 $24,794,572	**Atlanta Airlines Terminal Corporation** Todd Butler VP, Compressive Program Services M: 678.414.8285 E: Tbutler@cps-atlanta.com	(30)PBB's (27)400Hz (27)PCA AHU's	Aug 18 – Sept 20
Gulfport-Biloxi Int'l Airport **Gulfport, Mississippi** RQ#3434 $771,386	**Gulfport-Biloxi Regional Airport Authority** 14035-L Airport Road Gulfport, MS 39503 O: 228 863 5951	(1)PBB (1)400Hz	Aug 18 – Dec 18
John F Kennedy Int'l Airport **New York, New York** RQ#3402 $4,307,074	**Vanderlande Industries, Inc.** 1975 West Oak Circle Marietta, GA 30062 Glenn Shaw O: 903-513-9400 E: Glenn.Shaw@vanderlande.com	(7)PBB's (7)400Hz	July 18 – Dec 18
O'Hare Int'l Airport **Chicago, Illinois** RQ#3411 $343,707	**Rossi Contractors, Inc.** Douglas Johnson Rossi Contractors, Inc. O: 773.287.7545 djohnson@rossicontractors.com	(2)PBB's (2)Walkways	July 18 – Nov 18
Augusta Regional Airport **Augusta, Georgia** RQ#3376 $1,356,469	**City of Augusta Georgia** 535 Telfair Street Augusta, GA 30901 Paul B. Strycharz E: pstrycharz@augustaga.gov	(2)PBB's (2)400Hz (2)PCA	July 18 – Oct 18
Walker Field **Grand Junction, Colorado** RQ#3399 $824,743	**FCI Construction, Inc.** 3070 I-70, Bldg A Grand Junction, CO 81504 Adam Shuler Project Manager O: 970.434.9093 E: AShuler@fciol.com	(1)PBB (1)Walkway (1)400Hz	July 18 – Nov 18
Williston Basin Int'l Airport **Williston, North Dakota** RQ#3371 $2,177,782	**JE Dunn Construction** 501 East Broadway Suite 1 Williston, ND 58801 Jim Westlund O: 952.833.5949 E: Jim.Westlund@jedunn.com	(3)PBB's (4)Walkways (3)400Hz (3)PCA	June 18 – Nov 18

Salt Lake Int'l Airport **Salt Lake City, Utah** RQ#3291 $23,238,596	**Austin-Okland Joint Venture** Brian Anderson | Preconstruction Manager Salt Lake City International Airport North Concourse Program 4050 West 1200 North Salt Lake City, Utah 84116 Cell 801-386-0140 banderson@aojvteam.com	(20)PBB's (11)Walkways (20)400Hz (20)PCA (20)Nova Bag Slides	June 18 – Oct 21
Orlando Int'l Airport **Orlando, Florida** RQ#3375 $2,285,130	**Greater Orlando Aviation Authority** 5999 Cargo Road Orlando, FL 32862 O: 407-825-2098	(4)PBB's	May 18 – Oct 18
Whitehorse Airport **Whitehorse, Yukon Territory Canada** RQ#3424 $648,115	**JBT Canada Ltd.** 2900 E Airport Dr., Ste 1002 Ontario, CAN 91761 Dave McCully E: dave.mccully@jbtc.com O: 909.937.8888	(1)PBB (1)400Hz	May 18 – Aug 18
Fresno Yosemite Int'l Airterminal **Fresno, California** RQ#3336 $879,976	**DIVCON, Inc.** 2882 LARKIN AVE STE B CLOVIS, CA 93612-3954 John Gandy O: 559.490.0205 E: john@divconinc.com	(1)PBB (3)Walkways (1)400Hz (1)PCA	May 18 – Oct 18
Eagle County Airport **Vail, Colorado** RQ#3200 $2,262,564	**Hensel-Phelps Construction Co.** Tyler Tubbs - Project Manager Construction Group Eagle County c/o Hensel Phelps Construction 12121 Grant Street Suite 410 Thornton, CO 80241 M: 320.287.1068 E: ttubbs@henselphelps.com	(4)PBB (1)Walkway (4)400Hz	May 18 – Sept 18
Lambert-St Louis Int'l Airport **St Louis, Missouri** RQ#3341 $1,740,215	**Southwest Airlines** PO Box 36611, HDQ-4FM 2702 Love Field Dr. Dallas, TX 75235-1611 Scott Chinnock O: 214-226-6084 E: Scott.Chinnock@wnco.com	(3)PBB (3)Walkways (3)400Hz (3)PCAir	April 18 – Aug 18
Juneau Int'l Airport **Juneau, Alaska** RQ#3317 $598,620	**Carver Construction** 1012 2nd St, Apt 1 Douglas, AK 99824-5468 James Malapanis, Project Mgr M: 907.321.9101 O: 907.664.3215 E: james.m@carverllc.com	(1)PBB (1)Walkway (1)400Hz (1)PCAir	April 18 – July 18

Theodore Francis Green Airport **Warwick, Rhode Island** RQ#3341 $1,246,182	**Southwest Airlines** PO Box 36611, HDQ-4FM 2702 Love Field Dr. Dallas, TX 75235-1611 Scott Chinnock O: 214-226-6084 E: Scott.Chinnock@wnco.com	(2)PBB (4)PCAir	April 18 – July 18
Dulles Int'l Airport **Washington, DC** RQ#3383 $991,713	**United Airlines** Richard R. Cloud O: 224-210-8431 E: Richard.R.Cloud@united.com	(2)PBB	April 18 – July 18
Sky Harbor Int'l Airport **Phoenix, Arizona** RQ# $821,985	**Southwest Airlines**	(2)PBB	April 18 – June 18
O'Hare Int'l Airport **Chicago, Illinois** RQ#3384 $7,830,869	**United Airlines** Richard R. Cloud O: 224-210-8431 E: Richard.R.Cloud@united.com	(30)PBB	Mar 18 – Mar 19
McGhee Tyson Airport **Knoxville, Tennessee** RQ#3397 $4,050,469	**Metropolitan Knoxville Airport Authority** 2701 Spence Pl # 1 Knoxville, TN 37920 O: 865.342.3000	(6)PBB (6)400Hz (6)PCAir	Mar 18 – Oct 18
Anchorage Int'l Airport **Anchorage, Alaska** RQ#3386 $501,075	**Roger Hickel Contracting, Inc.** 11001 CALASKA CIR Anchorage, AK 99515-2942 Brad Hall O: 907.279.1400	(1)PBB (1)400Hz	Mar 18 – May 18
Eppley Airfield **Omaha, Nebraska** RQ#3409 $1,204,503	**Omaha Airport Authority** 4501 Abbott Drive, Suite 2300 Eppley Airfield Omaha, NE 68110 O: 402-661-8000	(2)PBB (2)400Hz	Mar 18 – June 18
Snohomish County **Everett, Washington** RQ#3171 $1,140,516	**Fisher Construction, Inc.** 625 Fisher Lane, Burlington WA 98233 Brian St. Clair Project Manager O: 360.757.4094 M: 509.594.1595 E: bsc@fishercgi.com	(2)PBB (2)400Hz (2)PCAir	Feb 18 – May 18
Luis Munoz Marin Int'l Airport **San Juan, Puerto Rico** RQ#3363 $352,686	**Oversys LLC** 545 E John Carpenter, Suite 300 Irving TX 75062 Ricardo Najera O: 469-242-6200 469-242-6200 Mobile: 214-718-1963 214-718-1963 Email: r.najera@oversys-usa.com r.najera@oversys-usa.com	(1)PBB	Feb 18 – April 18

Northwest Arkansas Regional Airport **Bentonville, Arkansas** RQ#3357 $682,702	**Flynco, Inc.** 7711 Distribution Drive Little Rock, AR 72209-4356 John Christensen, Project Manager O: 501.565.1228 E: johnc@flynco.com	(1)PBB (1)400Hz (1)PCAir	Jan 18 – May 18
Honolulu Int'l Airport **Honolulu, Hawaii** RQ#3130 $3,434,787	**NAN Inc.** 636 Laumaka Street Honolulu, HI 96819 O: 808-842-4929	(2)PBB (5)Walkways	Dec 17 – June 18
McGhee Tyson **Knoxville, Tennessee** RQ#3342 $4,137,164	**Metropolitan Knoxville Airport Authority** 2701 Spence Pl # 1 Knoxville, TN 37920 O: 865.342.3000	(6)PBB's (6)PCA (6)400Hz	Dec 17 – Sept 18
Various Locations RQ#3245 $3,727,446	**Southwest Airlines**	(8)PBB's (3)Walkways (5)PCA (3)400Hz	Dec 17 – Dec 18
Hancock Int'l Airport **Syracuse, New York** RQ#3292 $501,296	**Bouley Associates, Inc.** 265 Genesee Street Auburn, NY 13021 Kim Fritz / Don Ward O: 315-253-4417 E: DWW@bouleyusa.com E: bouley@bouleyusa.com	(1)PBB	Dec 17 – Feb 18
San Luis Potosi Airport **San Luis Potosi, Mexico** PO#80240/RQ#3298 $370,597	**Oversys LLC** 545 E John Carpenter, Suite 300 Irving TX 75062 Ricardo Najera O: 469-242-6200 469-242-6200 Mobile: 214-718-1963 214-718-1963 Email: r.najera@oversys-usa.com r.najera@oversys-usa.com	(1)Glass PBB	Nov 17 – Feb 18
Outagamie County **Appleton, Wisconsin** PO#17070 /RQ#3300 $991,407	**SMA Construction Services** **201 W. Walnut Street** **Green Bay, WI 54303** **Kevin Winkler** **O: 920.438.3833** **E:** kevin@smaconstructionservices.com	(1)PBB (1)Walkway (1)400Hz (1)PCA	Oct 17 – Jan 18
Seattle Tacoma Int'l Airport **Seattle, Washington** RQ#3233 $13,739,627	**Port of Seattle** Robert McMartin, Sr. Buyer **PO BOX 1209** **Seattle, WA 98111** **O:** 206.787.3233 **E:** McMartin.R@portseattle.org	(28)PBB (20)Walkways (28)Bag Chutes	Oct 17 – Oct 18
San Francisco Int'l Airport **San Francisco, California** Agreement#1517JBT02/RQ#3227	**Austin Webcor Joint Venture** **207 King Street Suite 300** **San Francisco, CA 94107-5499**	(18)PBB's (33)Walkways (18)PCA	Sept 17 – Oct 19

$23,725,364	**Cristine McGeever** **O: 213-479-1156** **E: cmcgeever@webcor.com**	(33)400Hz	
International Jetport **Portland, Maine** PO#3234-2/RQ#3234 $791,809	**Vanderlande Industries, Inc.** 1975 West Oak Circle Marietta, GA 30062 Glenn Shaw O: 903-513-9400 E: Glenn.Shaw@vanderlande.com	(1)PBB (2)Walkways (1)400Hz	Sept 17 – Feb 18
Los Angeles Int'l Airport **Los Angeles, California** RQ#3216 $4,733,017	**Tom Bradley Int'l Terminal Equipment Company**	(4)PBB's (6)PCA (6)400Hz (4) Bag Chutes	Sept 17 – Feb 18
Myrtle Beach AFB **Myrtle Beach, South Carolina** RQ#3323 $427,843	**Vanderlande Industries** **Glenn Shaw** **E: Glenn.Shaw@vanderlande.com**	(1)PBB	Sept 17 – Dec 17
San Francisco Int'l Airport **San Francisco, California** RQ#3325 $22,330,872	**Skanska USA Building Inc.** **Thomas Evans** **O: 951-202-7116** **E: Thomas.Evans@skanska.com**	(23)PBB's (17)Walkways (16)PCAir (13)PWC	Sept 17 – Jan 19
Tulsa Int'l Airport **Tulsa, Oklahoma** RQ#3330 $630,507	**Tulsa Airport Improvement Trust** 7777 East Apache Street Tulsa, Oklahoma, 74115 John Horton	(1)PBB (2)400Hz (1)PCAir	Sept 17 – Jan 18
Albany County Airport **Albany, New York** RQ#3280 $677,843	**Oxford Airport Technical Services** Joe Ferraro VP, Operations - Oxford Airport Tech Services O: 516.326.6262 M: 516.807.1996 E: jferraro@oxford1.com	(1)PBB (1)400Hz (1)PCA	Aug 17 – Dec 17
Seattle Tacoma Int'l Airport **Seattle, Washington** RQ#3196 $2,016,013	**Airport Contractor's Services LLC** **Sherrie Wasley** **Phone: 407-722-1735** **407-722-1735** **Email: acsplanetservices@yahoo.com** **acsplanetservices@yahoo.com**	(2)PBB (11)Walkways (2)PCAir (2)Bag Chutes	Aug 17 – Jan 18
Bradenton Int'l Airport **Sarasota, Florida** RQ#3243 $11,026,987	**Sarasota Manatee Airport Authority** **6000 Airport Circle** **Sarasota, FL 34243** **941-359-2770 ext 4246**	(13)PBB's (1)Walkway (13)PCA (9)400Hz	Aug 17 – Sept 19
Salt Lake Int'l Airport **Salt Lake City, Utah** RQ#3251 $2,041,468	**Roger Smith** **Salt City Department of Airports** **PO Box 145550, Salt Lake City, UT 84114-5550** **O-801-575-2947 C-801209-9861** **E: roger.smith@slcgov.com**	(3)PBB's (3)PCA (3)400Hz	July 17 – Feb 18
Dane County Regional Airport **Madison, Wisconsin** RQ#3240 $3,578,809	**Aero PBB Works** **Jay Grantham, PE, LEED, CCM** AERO BridgeWorks | President **O:** 770.423.4200 x111	(5) PBB's (7) 400Hz (7) PCA	July 17 – July 18

	M: 919.796.2168 E: Jay.Grantham@aerobridgeworks.net W: www.TheAEROGroup.net		
Cedar Rapids Airport **Cedar Rapids, Iowa** Sub Contract#3703-9/RQ#3267 $1,791,258	**Kleiman Construction Inc.** 6205 Locust Road SW Cedar Rapids, IA 52404-4737 Steve Kleiman, President O: 319.364.8864 E: skleiman@kleimanconstruction.com	(2)PBB's (3)Walkways (2)400Hz (2)PCA	June 17 – June 18
Louis Armstrong Intl Airport **New Orleans, Louisiana** PO#51-2017/RQ#3225 $18,650,317	**Airport Contractor's Services LLC** **Sherrie Wasley** **Phone: 407-722-1735** **407-722-1735** **Email: acsplanetservices@yahoo.com**	(29)PBB's (19)Walkways (29)400Hz (29)PCA (29)Bag slides	May 17 – June 20
Boise Air Terminal **Boise, Idaho** Sub#141480-SU/RQ#3209 $597,748	**Layton Construction** **9090 S Sandy Pkwy** **Sandy, UT 84070** **Rick Thueson** **E: rthueson@laytonconstruction.com** **O: 801-563-3538**	(1)PBB (2)Walkways (1) 400Hz	May 17 – Oct 17
Newark Intl Airport **Newark, New Jersey** PO#2299240/RQ#3269 $1,138,548	**United Airlines** **Steve Huff** **Procurement – Airport Services** **Corporate Support Center** **233 S. Wacker Drive, 14th Floor** **Chicago, IL 60606** **Office: 871-825-2659** **E: stephen.w.huff@united.com**	(2)PBB's (2)Walkways	May 17 – Dec 17
Dulles Intl Airport **Washington Dist of Columbia** PO#2290307-09/RQ#3231 $1,291,179	**United Airlines** **Steve Huff** **Procurement – Airport Services** **Corporate Support Center** **233 S. Wacker Drive, 14th Floor** **Chicago, IL 60606** **Office: 871-825-2659** **E: stephen.w.huff@united.com**	(3)PBB's (3)Bag Slides	May 17 – Aug 17
Quetta Airport **Quetta, Pakistan** RQ#3166 $913,790	**Imperial Electric Co. Ltd.** **Mr Sajid Jamil** **National Towers, 28 Egerton Road** **Lahore 54000 Pakistan** **O: +92 (42) 3630 4861** **F: +92 (21) 3630 4866** **E: sjamil@iec.com.pk**	(2)PBB's	May 17 – July 17
Melbourne Intl Airport **Melbourne, Florida** RQ#3239	**Aero PBB Works** **Jay Grantham, PE, LEED, CCM** AERO BridgeWorks | President	(1)PBB (1)400Hz (1)PCA	April 17 – Dec 17

$640,393	**O:** 770.423.4200 x111 **M:** 919.796.2168 **E:** Jay.Grantham@aerobridgeworks.net **W:** www.TheAEROGroup.net		
Reina Beatrix **Aruba, Aruba** PO#38784/RQ#3229 $1,476,822	**Aruba Airport Authority** **Elgin F. Kock** **E: e.kock@airportaruba.com**	(2)PBB's (2)Bag Chutes	April 17 – May 18
Denver Intl Airport **Denver, Colorado** PO#20036/RQ#2957 $1,813,650	**City & County of Denver** **Dept of Aviation** **Denver International Airport** **8500 Pena Blvd.** **Denver, CO 80249** **Joseph Hall** **E: Joseph.Hall@flydenver.com**	(5)PBB's	April 17 – Dec 17
John F. Kennedy Intl Airport **New York, New York** PO#216347-6560/RQ#3101 $1,054,967	**Aero PBB Works** **Jay Grantham, PE, LEED, CCM** AERO BridgeWorks | President **O:** 770.423.4200 x111 **M:** 919.796.2168 **E:** Jay.Grantham@aerobridgeworks.net **W:** www.TheAEROGroup.net	(2)PBB's	Mar 17 – Dec 17
Dulles International Airport **District of Columbia** PO#2264621 / RQ#3228 $1,378,224	**United Airlines**	(3) PBB's	Feb 17 – Oct 17
Lambert-St. Louis International Airport **St. Louis, Missouri** Agreement / RQ#3212 $1,049,027	**Southwest Airlines**	(2) PBB's (2) Walkways (2) 400Hz (2) PCA	Jan 17 – Jan 18
Vancouver International Airport **Vancouver, BC, Canada** C213028 / RQ#3214 $616,221	**Vancouver International Airport Authority**	(1) PBB (1)PCA	Jan 17 – Jul 17
Sky Harbor International Airport **Phoenix, Arizona** #10800200-144 / RQ#3133 $14,948,472	**Hunt Austin JV**	(20) PBB's (12) Walkways (18) 400Hz (18) PCA	Dec 16 – Dec 18
Orlando International Airport **Orlando, Florida** PO#86694 / RQ#3182 $2,186,527	**Greater Orlando Aviation Authority**	(4) PBB's	Dec 16 – Dec 17
San Jose International Airport **San Jose, California** PO#79679 / RQ#3187 $1,594,977	**City of San Jose, CA**	(2) PBB's (2) 400Hz (2) PCA	Dec 16 – Nov 17
Hancock International Airport **Syracuse, New York** 3625-144010 / RQ#3125 $1,314,694	**Bouley Associates, Inc.**	(2) PBB's (1) Walkway	Dec 16 – May 17

Dane County Regional Airport **Madison, Wisconsin** PO#216358-6408 / RQ#3153 $704,800	**Aero PBB Works** **Jay Grantham, PE, LEED, CCM** AERO BridgeWorks | President **O:** 770.423.4200 x111 **M:** 919.796.2168 **E:** Jay.Grantham@aerobridgeworks.net **W:** www.TheAEROGroup.net	(1) PBB (1) 400Hz (1) PCA	Nov 16 – Jun 17
Seattle/Tacoma International Airport **Seattle, Washington** PO#216337-6388 / RQ#3115 $2,308,772	**Aero PBB Works** **Jay Grantham, PE, LEED, CCM** AERO BridgeWorks | President **O:** 770.423.4200 x111 **M:** 919.796.2168 **E:** Jay.Grantham@aerobridgeworks.net **W:** www.TheAEROGroup.net	(3) PBB's (2) Walkways	Nov 16 – Jul 17
Orlando International Airport **Orlando, Florida** PO#86250 / RQ#3146 $1,699,158	**Greater Orlando Aviation Authority**	(3) PBB's	Oct 16 – Aug 17
JFK International Airport **Jamaica, New York** P15KB2077-V2 / RQ#3013 $1,836,622	**British Airways**	(3) PBB's (3) PCA	Oct 16 – Sep 17
Houston Intercontinental **Houston, Texas** PO#IAH-33158-P-01/RQ#2969 $9,627,863	**United Airlines**	(14)PBB (9)Walkways (13)PCA	Oct 16 – Sept 17
Albany County Airport **Albany, New York** Agreement / RQ#3128 $1,950,073	**Oxford Airport Technical Services** Joe Ferraro VP, Operations - Oxford Airport Tech Services O: 516.326.6262 M: 516.807.1996 E: jferraro@oxford1.com	(3) PBB's (3) 400Hz (3) PCA	Oct 16 – Oct 17
Los Angeles International Airport **Los Angeles, California** PO#EP204374 / RQ#3151 $1,243,142	**Southwest Airlines**	(3) PBB's (3) 400Hz (3) PCA	Sep 16 – Apr 17
Utapao Airport **Utapao, Thailand** Agreement / RQ#3136 $545,123	**Dan-Thai Equipment Co. Ltd.**	(2) PBB's	Sep 16 – Apr 17
Biloxi Regional Airport **Gulfport, Mississippi** Agreement / RQ#2974 $793,807	**Gulfport-Biloxi Regional Airport Authority**	(1) PBB (1) 400Hz	Sep 16 – May 17
Salt Lake City International Airport **Salt Lake City, Utah** Agreement / RQ#2745 $25,530,265	**Holder-Big D**	(25) PBB's (2) Walkways (25) 400Hz (25) PCA	Sep 16 – July 20
Honolulu International Airport **Honolulu, Hawaii** Agreement / RQ#2976 $13,862,944	**Hensel-Phelps Construction**	(13) PBB's (11) Walkways (13) 400Hz	Aug 16 – Dec 17

La Crosse Municipal Airport **La Crosse, Wisconsin** PO#4513 / RQ#3129 $171,318	**AmeriPBB Services / American Steel**	(2) PCA	Jul 16 – Jan 17
Victoria International Airport **Victoria, BC, Canada** Agreement / RQ#3098 $577,387	**Victoria Airport Authority**	(1) PBB (1) 400Hz	Jul 16 – Jan 17
San Francisco International Airport **San Francisco, California** Project 160124 / RQ#3122 $1,566,661	**Turner Construction**	(1) PBB (3) Walkways (1) PCA	Jul 16 – May 17
Los Angeles International Airport **Los Angeles, California** PO#50-2016 / RQ#3116 $3,110,874	**Airport Contractor's Services LLC** **Sherrie Wasley** **Phone: 407-722-1735** **407-722-1735** **Email: acsplanetservices@yahoo.com**	(4) PBB's (3) Walkways (4) 400Hz (4) PCA	Jun 16 – Dec 17
Clinton National Airport **Little Rock, Arkansas** LIT140104 / RQ#3082 $3,777,518	**Little Rock Airport Authority**	(5) PBB's (5) 400Hz (5) PCA	Jul 16 – Jan 18
Dulles International Airport **Washington DC** PO2190382 / RQ#3112 $496,185	**United Airlines**	(1) PBB	Jun 16 – Mar 17
Los Angeles International Airport **Los Angeles, California** PO#48-2016 / RQ#3114 $3,768,371	**Airport Contractor's Services LLC** **Sherrie Wasley** **Phone: 407-722-1735** **407-722-1735** **Email: acsplanetservices@yahoo.com**	(5) PBB's (2) 400Hz (4) PCA	Jun 16 – Nov 17
Denver International Airport **Denver, Colorado** PLANE-18364 / RQ#2957 $5,993,309	**City & County of Denver**	(7) PBB's (16) Walkways	Jun 16 – Nov 17
Chicago O'Hare International Airport **Chicago, Illinois** PO#2189932 / RQ#3111 $481,058	**United Airlines**	(1) PBB	Jun 16 – Jan 17
Los Angeles International Airport **Los Angeles, California** PO#46-2016 / RQ#3121 $2,019,817	**Airport Contractor's Services LLC**	(3) PBB's (2) Walkways (2) 400Hz (2) PCA	Jun 16 – Nov 17
Guarani International Airport **Ciudad del Este, Paraguay** QT#3064-A / RQ#3064 $393,893	**A&M Asociados SA**	(1) Glass PBB	Jun 16 – Sep 17

Atlanta International Airport **Atlanta, Georgia** PO#215274-6154 / RQ#2951 $1,039,741	**Aero PBB Works** **Jay Grantham, PE, LEED, CCM** AERO BridgeWorks | President **O:** 770.423.4200 x111 **M:** 919.796.2168 **E:** Jay.Grantham@aerobridgeworks.net **W:** www.TheAEROGroup.net	(1) PBB (1) Walkway (1) 400Hz (1) PCA	May 16 – Mar 17
LaGuardia International Airport **New York, New York** PO#9100059340 / RQ#2915 $4,628,368	**Delta Air Lines**	(10) PBB's	May 16 – Apr 18
Chattanooga Metropolitan Airport **Chattanooga, Tennessee** NTP / RQ#2940 $1,283,964	**Chattanooga Metro Airport Authority**	(2) PBB's	May 16 – Jan 17
Seattle/Tacoma International Airport **Seattle, Washington** PO#A-0000277154 / RQ#3085 $479,491	**Port of Seattle**	(1) PBB (1) 400Hz	May 16 – Jan 17
Portland International Airport **Portland, Oregon** PO#129859 / RQ#3095 $2,418,557	**Port of Portland**	(4) PBB's (4) 400Hz (4) PCA	May 16 – Feb 17
Dublin Airport **Dublin, Ireland** Agreement / RQ#3080 $1,329,366	**Dublin Airport Authority**	(1) PBB (1) 400Hz	May 16 – Nov 16
Halifax International Airport **Halifax, Nova Scotia, Canada** RQ#3088 $881,426	**Halifax International Airport Authority**	(1) PBB	May 16 – Jan 17
Ft Lauderdale-Hollywood Intl Airport **Fort Lauderdale, Florida** 14870-13A / RQ#3076 $1,086,106	**The Whiting Turner Contracting Company**	(1) PBB (2) Walkways (1) 400Hz	Apr 16 – Jan 17
JFK International Airport **Jamaica, New York** PO#215304-6106 / RQ#3009 $1,746,725	**Aero PBB Works** **Jay Grantham, PE, LEED, CCM** AERO BridgeWorks | President **O:** 770.423.4200 x111 **M:** 919.796.2168 **E:** Jay.Grantham@aerobridgeworks.net **W:** www.TheAEROGroup.net	(3) PBB's	Mar 16 – Apr 17
William B. Hartsfield Int'l Airport **Atlanta, Georgia** PO#15-R-4182/RQ#3030 $56,662,697	**Atlanta Airlines Terminal Corporation**	(86)PBB's (84)400Hz (52)PCA	Mar 16 – Mar 20
Evansville Regional Airport **Evansville, Indiana** Agreement / RQ#3008 $1,556,216	**Evansville Vanderburgh Airport Authority**	(1) PBB (1) 400Hz (1) PCA	Mar 16 – Dec 16
Los Angeles International Airport **Los Angeles, California**	**Aero PBB Works** **Jay Grantham, PE, LEED, CCM**	(1) PBB (1) Walkway	Feb 16 – Jan 17

PO#215283-6085 / RQ#2970 $915,390	AERO BridgeWorks | President **O:** 770.423.4200 x111 **M:** 919.796.2168 **E:** Jay.Grantham@aerobridgeworks.net **W:** www.TheAEROGroup.net	(1) 400Hz (1) PCA	
Tri-Cities Regional Airport **Blountville, Tennessee** Agreement / RQ#3038 $1,090,083	**Tri-Cities Airport Authority**	(1) PBB (1) Walkway (1) 400Hz (1) PCA	Jan 16 – Nov 16
Ft Lauderdale-Hollywood Intl Airport **Ft Lauderdale, Florida** Agreement / RQ#2983 $1,951,746	**Hunt/Moss, A Joint Venture**	(1) PBB (1) 400Hz (1) PCA	Dec 15 – Jan 17
Nashville Int'l Airport **Nashville, Tennessee** PO#1649A/RQ#3029 $23,392,643	**Metro Nashville A/P Authority**	(36)PBB's (5)Walkways (36)400Hz (36)PCA	Dec 15 – Dec 18
St. Paul-Minneapolis Intl Airport **Minneapolis, Minnesota** Agreement / RQ#2926 $4,164,715	**Knutson Construction**	(4) PBB's (15) Walkways (4) PCA (4) 400Hz	Oct 15 – Dec 16
Los Angeles International Airport **Los Angeles, California** Agreement / RQ#2993 $4,708,547	**United Airlines**	(10) PBB's	Aug 15 – Jan 17
Los Angeles International Airport **Los Angeles, California** PO#EP134347 / RQ#2992 $1,700,341	**Southwest Airlines**	(4) PBB's (1) Walkway (4) PCA (4) 400Hz	Aug 15 – Nov 16
Washington National Airport & **JFK International Airport** NTP dated 7/29/15 / RQ#2949 $1,770,318	**American Airlines**	(4) PBB's (4) Walkways	Jul 15 – Oct 16
Douglas International Airport **Charlotte, North Carolina** Agreement / RQ#2952 $2,718,228	**City of Charlotte**	(3) PBB's (3) PCA (3) 400Hz	Jul 15 – Jan 17
LaGuardia International Airport **New York, New York** PO#LGA-33310-P-01 / RQ#2945 $523,948	**United Airlines**	(1) PBB (1) Walkway	Jun 15 – Feb 16
Philadelphia International Airport **Philadelphia, Pennsylvania** 945-1 / RQ#2901 $11,040,000	**Daniel J. Keating Company**	(13) PBB's (2) Walkways (13) PCA (13) 400Hz	Jun 15 – Oct 16
Denver International Airport **Denver, Colorado** Agreement / RQ#2957 $5,385,010	**City & County of Denver**	(12) PBB's (2) Walkways	Aug 15 – May 16
Atlantic City International Airport **Atlantic City, New Jersey** Signed QT#2911 / RQ#2911	**J. H. Williams Enterprises, Inc.**	(1) PBB (1) PCA (1) 400Hz	May 15 – Jul 16

$708,166			
JFK International Airport **Jamaica, New York** PO#16-2015 / RQ#2956 $275,069	**Airport Contractor's Services LLC** **Sherrie Wasley** **Phone: 407-722-1735** **407-722-1735** **Email:** acsplanetservices@yahoo.com	(2) PBB's (2) Walkways (2) 400hz	May 15 – Apr 16
Pearson International Airport **Toronto, Ontario, Canada** 2041146 / RQ#2893 $4,501,850	**Greater Toronto Airport Authority**	(4) PBB's (4) PCA (4) 400Hz	May 15 – Oct 16
Acapulco International Airport **Guerrero, Mexico** PO#80218 / RQ#2912 $842,386	**Oversys LLC**	(2) PBB's (1) Walkway	Apr 15 – May 16
Ft Lauderdale-Hollywood Intl Airport **Ft Lauderdale, Florida** PO#SC400AVC04 / RQ#2862 $13,657,122	**Broward County**	(16) PBB's (16) PCA (16) Potable Water (16) Bag Slides	Apr 15 – Aug 16
Minot International Airport **Minot, North Dakota** Agreement / RQ#2922 $2,747,026	**City of Minot**	(4) PBB's (4) Walkways (4) 400Hz (4) PCA (4) Bag Lifts	Apr 15 – Aug 16
Nashville International Airport **Nashville, Tennessee** PO#PO15-001166-3 / RQ#2928 $947,063	**Metro Nashville Airport Authority**	(2) PBB's (2) PCA (2) 400Hz	Mar 15 – Feb 16
Prudhoe Bay/Deadhorse Airport **Prudhoe Bay/Deadhorse, Alaska** QT#1198-C / RQ#1198 $597,642	**Fairweather Inc.**	(1) PBB (1) 400Hz	Mar 15 – Dec 15
O'Hare International Airport **Chicago, Illinois** PO#214243-5834 / RQ#2903 $727,247	**Aero PBB Works** **Jay Grantham, PE, LEED, CCM** AERO BridgeWorks | President **O:** 770.423.4200 x111 **M:** 919.796.2168 **E:** Jay.Grantham@aerobridgeworks.net **W:** www.TheAEROGroup.net	(1) PBB (1) Walkway (2) PCA (1) 400Hz (1) Potable Water	Mar 15 – Feb 16
San Francisco International Airport **San Francisco, California** Subcontract #5012084 / RQ#2875 $2,687,768	**Hensel-Phelps Construction**	(3) PBB's	Feb 15 – Jan 15
William P. Hobby Airport **Houston, Texas** FA-00447 / RQ#2892 $2,844,421	**Southwest Airlines**	(5) PBB's (8) Walkways	Jan 15 – Sep 16
Seattle/Tacoma International Airport **Seattle, Washington** PO#A-0000274166 / RQ#2883 $2,448,831	**Port of Seattle**	(5) PBB's (1) Walkway	Jan 15 – Aug 16
Fort Wayne International Airport	**Fort Wayne-Allen County Airport Authority**	(1) PBB	Dec 14 – Dec 15

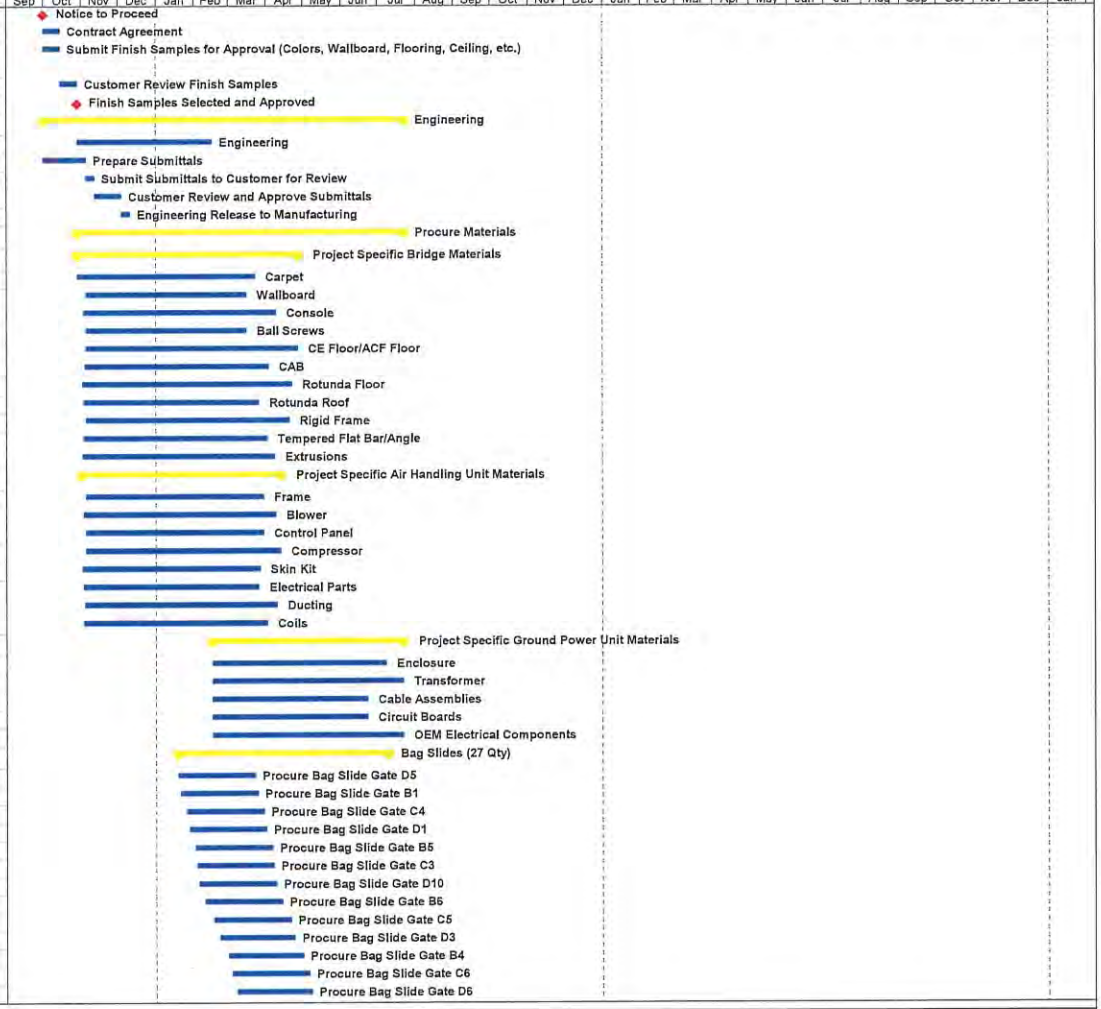
Fort Wayne, Indiana Agreement / RQ#2868 $823,177		(1) Walkway (1) 400Hz	
Fort Lauderdale/Hollywood Intl Airport **Fort Lauderdale, Florida** PO#SC400 / RQ#2887 $2,548,440	**Broward County**	(3) PBBs (3) PCA (3) 400Hz (3) Baggage slides (3) Potable water	Dec 14 – Feb 16
Cancun Airport **Cancun, Mexico** PO#80214 / RQ#2866 $9,258,342	**Oversys LLC**	(13) PBB's (26) Walkways (13) PCA (13) 400Hz	Nov 14 – Sep 16
Seattle/Tacoma International Airport **Seattle, Washington** Agreement / RQ#2791 $1,102,764	**Port of Seattle**	(1) PBB (5) Walkways	Nov 14 – Aug15
Dubuque Municipal Airport **Dubuque, Iowa** Agreement / RQ#2823 $804,844	**Dubuque Regional Airport Commission**	(1) PBB (1) Walkway (1) PCA (1) 400Hz	Nov 14 – Nov 15
JFK International Airport **Jamaica, New York** PO#9100051746 / RQ#2842 $799,076	**Delta Air Lines**	(1) PBB (3) PCA (3) 400Hz	Oct 14 – Mar 15
Los Angeles International Airport **Los Angeles, California** POEP84514 / RQ#2871 $2,269,425	**Southwest Airlines**	(5) PBB's (4) Walkways (5) PCA (5) 400Hz	Oct 14 – Jun 16
St. Paul-Minneapolis Intl Airport **Minneapolis, Minnesota** Subcontract / RQ#2865 $1,633,764	**Morcon Construction Co.**	(2) PBB's (3) Walkways (2) PCA (2) 400Hz	Oct 14 – Dec 15
JFK International Airport **Jamaica, New York** PO#214184-5635 / RQ#2721 $1,490,037	**Aero PBB Works** **Jay Grantham, PE, LEED, CCM** AERO BridgeWorks | President **O:** 770.423.4200 x111 **M:** 919.796.2168 **E:** Jay.Grantham@aerobridgeworks.net **W:** www.TheAEROGroup.net	(3) PBB's (3) 400Hz	Sep 14 – Dec 15
Albert J. Ellis Airport **Jacksonville, North Carolina** Agreement / RQ#2846 $1,902,662	**Onslow County Airport Commission**	(3) PBB's (3) PCA (3) 400Hz	Sep 14 – Sep 15
Cancun Airport **Cancun, Mexico** PO#80209 / RQ#2778 $4,142,409	**Oversys LLC**	(6) PBB's (13) Walkways (6) PCA (6) 400Hz	Sep 14 – Jan 16
Houston Intercontinental Airport **Houston, Texas** PO#IAH-33152-P-01 / RQ#2809 $2,047,268	**United Airlines**	(4) PBB's (4) PCA	Aug 14 – Mar 16
Pocatello Airport	**City of Pocatello**	(1) PBB	Aug 14 – Jul 16

Pocatello, Idaho Agreement / RQ#2804 $921,323		(2) Walkways (1) PCA (1) 400Hz	
Kahului Airport **Kahului, Hawaii** Agreement / RQ#2739 $7,858,081	**State of Hawaii**	(7) PBB's (1) Walkway (16) 400Hz	Aug 14 – Jul 16
Boston Logan International Airport **Boston, Massachusetts** Agreement / RQ#2844 $734,610	**Gilbane Building Company**	(4) PBB's (2) Walkways (3) PCA (3) 400Hz	Aug 14 – Sep 15
LaGuardia International Airport **New York, New York** PO#EP70976 / RQ#2837 $329,330	**Southwest Airlines**	(1) PBB	Aug 14 – Feb 15
Gen. Rafael Buelna Airport **Mazatlan, Mexico** PO#80207 / RQ#2711 $878,797	**Oversys LLC**	(2) PBB's (2) Walkways	Jul 14 – Mar 15
Tri-Cities Airport **Pasco, Washington** Subcontract / RQ#2829 $662,845	**Bouten Construction Company** **627 N Napa St, Spokane, WA 99202** **O: (509) 535-3531**	(1) PBB (1) PCA (1) 400Hz	Jul 14 – Feb 15
Thunder Bay Airport **Thunder Bay, Ontario, Canada** Contract TB14-100-11 / RQ#2820 $470,818	**Thunder Bay Airport Authority** **340 Hector Dougall Way** **Thunder Bay, Ontario P7E 6S2** **Canada** **Walter Turek, P. Eng., Facilities Manager** **E: turekw@tbairport.on.ca**	(1) PBB (1) 400Hz	Jul 14 – Jan 15
O'Hare International Airport **Chicago, Illinois** PO#ORD-33333-P-01 / RQ#2795 $2,117,335	**United Airlines** 233 S. Wacker Dr. –11th Floor HDQOU Chicago, IL 60606 Christine Strom O: 773.601.4847 M: 224.361.1593 E: christine.strom@united.com	(1) PBB (1) PCA (1) 400Hz	Jun 14 – Jan 15
New Quito Airport **Quito, Ecuador** Agreement / RQ#2693 $1,116,610	**Corporacion Quiport S.A.** **Quito Airport Center, Second Floor, MSIA** **Tababela, Quito, Ecuador** **Juan Patricio De la Torre** **O: 561-273-9442** **E: jpdelatorre@inmaquip.com**	(2) PBB's (2) 400Hz	Jun 14 – May 15
Eppley Airfield **Omaha, Nebraska** Agreement / RQ#2794 $589,318	**Omaha Airport Authority** **4501 Abbott Drive, Suite 2300** **Omaha, Nebraska 68110** **Trevor Tonniges, P.E.** **O: 402-661-8018**	(1) PBB (1) Walkway (2) 400Hz	Jun 14 – Jun 15

Product Information

Southwest Florida International Airport
Passenger Boarding Bridge (PBB) Replacement Project
Fort Myers, Florida

ID	Task Name	Duration	Start	Finish
1	Notice to Proceed	0 days	Thu 10/1/20	Thu 10/1/20
2	Contract Agreement	10 days	Thu 10/1/20	Wed 10/14/20
3	Submit Finish Samples for Approval (Colors, Wallboard, Flooring, Ceiling, etc.)	10 days	Thu 10/1/20	Wed 10/14/20
4	Customer Review Finish Samples	10 days	Thu 10/15/20	Wed 10/28/20
5	Finish Samples Selected and Approved	0 days	Wed 10/28/20	Wed 10/28/20
6	**Engineering**	**205 days**	**Thu 10/1/20**	**Wed 7/21/21**
7	Engineering	75 days	Thu 10/29/20	Mon 2/15/21
8	Prepare Submittals	25 days	Thu 10/1/20	Wed 11/4/20
9	Submit Submittals to Customer for Review	5 days	Thu 11/5/20	Wed 11/11/20
10	Customer Review and Approve Submittals	15 days	Thu 11/12/20	Thu 12/3/20
11	Engineering Release to Manufacturing	5 days	Fri 12/4/20	Thu 12/10/20
12	**Procure Materials**	**185 days**	**Thu 10/29/20**	**Wed 7/21/21**
13	**Project Specific Bridge Materials**	**125 days**	**Thu 10/29/20**	**Mon 4/26/21**
14	Carpet	100 days	Thu 10/29/20	Mon 3/22/21
15	Wallboard	90 days	Thu 11/5/20	Mon 3/15/21
16	Console	110 days	Tue 11/3/20	Thu 4/8/21
17	Ball Screws	90 days	Thu 11/5/20	Mon 3/15/21
18	CE Floor/ACF Floor	120 days	Thu 11/5/20	Mon 4/26/21
19	CAB	105 days	Wed 11/4/20	Fri 4/2/21
20	Rotunda Floor	120 days	Mon 11/2/20	Wed 4/21/21
21	Rotunda Roof	100 days	Tue 11/3/20	Thu 3/25/21
22	Rigid Frame	115 days	Thu 11/5/20	Mon 4/19/21
23	Tempered Flat Bar/Angle	105 days	Tue 11/3/20	Thu 4/1/21
24	Extrusions	110 days	Mon 11/2/20	Wed 4/7/21
25	**Project Specific Air Handling Unit Materials**	**113 days**	**Mon 11/2/20**	**Mon 4/12/21**
26	Frame	100 days	Thu 11/5/20	Mon 3/29/21
27	Blower	110 days	Tue 11/3/20	Thu 4/8/21
28	Control Panel	100 days	Thu 11/5/20	Mon 3/29/21
29	Compressor	110 days	Thu 11/5/20	Mon 4/12/21
30	Skin Kit	102 days	Mon 11/2/20	Fri 3/26/21
31	Electrical Parts	100 days	Tue 11/3/20	Thu 3/25/21
32	Ducting	110 days	Wed 11/4/20	Fri 4/9/21
33	Coils	105 days	Tue 11/3/20	Thu 4/1/21
34	**Project Specific Ground Power Unit Materials**	**110 days**	**Tue 2/16/21**	**Wed 7/21/21**
35	Enclosure	100 days	Tue 2/16/21	Wed 7/7/21
36	Transformer	110 days	Tue 2/16/21	Wed 7/21/21
37	Cable Assemblies	90 days	Tue 2/16/21	Tue 6/22/21
38	Circuit Boards	90 days	Tue 2/16/21	Tue 6/22/21
39	OEM Electrical Components	110 days	Tue 2/16/21	Wed 7/21/21
40	**Bag Slides (27 Qty)**	**122 days**	**Tue 1/19/21**	**Fri 7/9/21**
41	Procure Bag Slide Gate D5	45 days	Tue 1/19/21	Mon 3/22/21
42	Procure Bag Slide Gate B1	45 days	Thu 1/21/21	Wed 3/24/21
43	Procure Bag Slide Gate C4	45 days	Tue 1/26/21	Mon 3/29/21
44	Procure Bag Slide Gate D1	45 days	Thu 1/28/21	Wed 3/31/21
45	Procure Bag Slide Gate B5	45 days	Tue 2/2/21	Mon 4/5/21
46	Procure Bag Slide Gate C3	45 days	Wed 2/3/21	Tue 4/6/21
47	Procure Bag Slide Gate D10	45 days	Fri 2/5/21	Thu 4/8/21
48	Procure Bag Slide Gate B6	45 days	Wed 2/10/21	Tue 4/13/21
49	Procure Bag Slide Gate C5	45 days	Wed 2/17/21	Tue 4/20/21
50	Procure Bag Slide Gate D3	45 days	Mon 2/22/21	Fri 4/23/21
51	Procure Bag Slide Gate B4	45 days	Mon 3/1/21	Fri 4/30/21
52	Procure Bag Slide Gate C6	45 days	Thu 3/4/21	Wed 5/5/21
53	Procure Bag Slide Gate D6	45 days	Mon 3/8/21	Fri 5/7/21



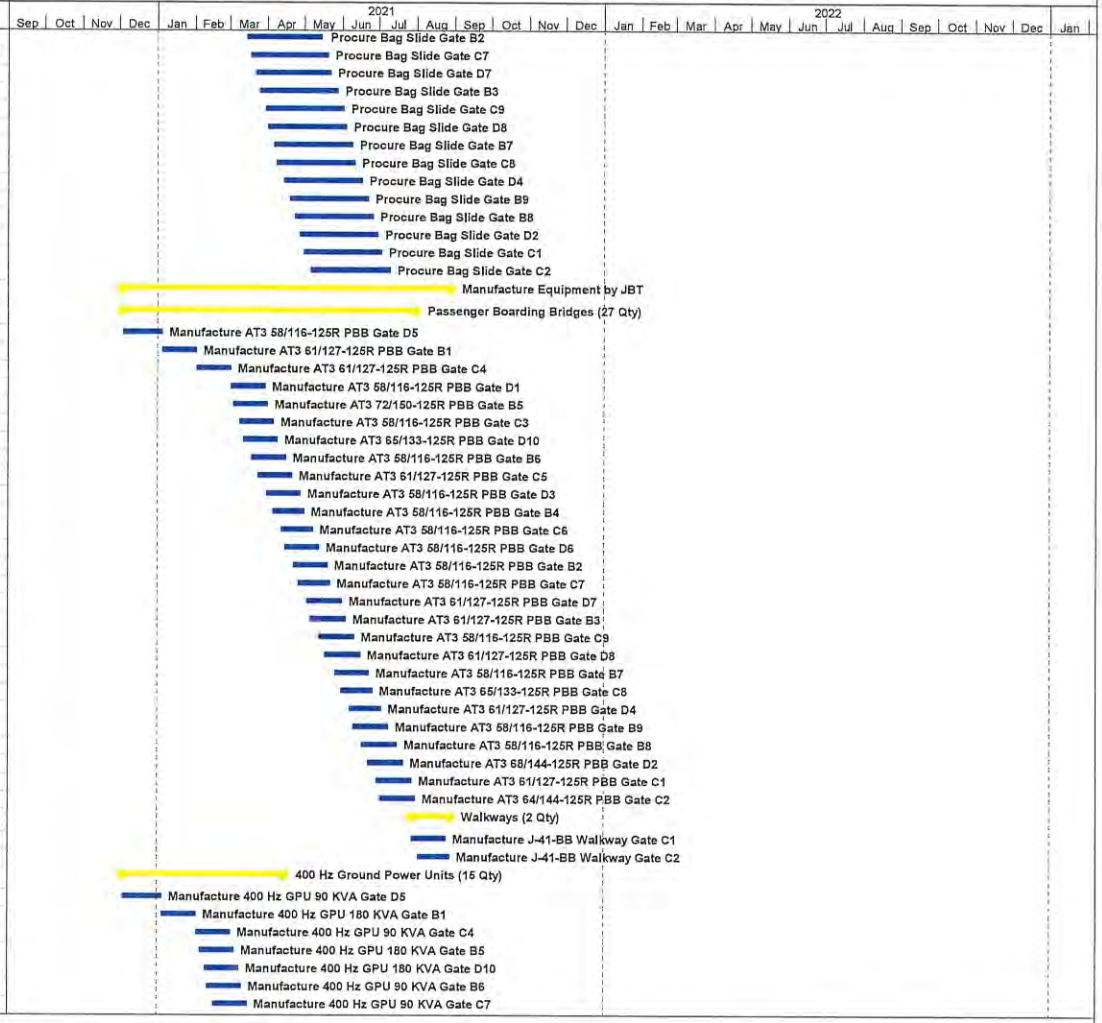
Date: Mon 6/1/20

Task Milestone Summary

Southwest Florida International Airport
Passenger Boarding Bridge (PBB) Replacement Project
Fort Myers, Florida

Project Bid Schedule

ID	Task Name	Duration	Start	Finish
54	Procure Bag Slide Gate B2	45 days	Mon 3/15/21	Fri 5/14/21
55	Procure Bag Slide Gate C7	45 days	Thu 3/18/21	Wed 5/19/21
56	Procure Bag Slide Gate D7	45 days	Mon 3/22/21	Fri 5/21/21
57	Procure Bag Slide Gate B3	45 days	Thu 3/25/21	Thu 5/27/21
58	Procure Bag Slide Gate C9	45 days	Tue 3/30/21	Tue 6/1/21
59	Procure Bag Slide Gate D8	45 days	Thu 4/1/21	Thu 6/3/21
60	Procure Bag Slide Gate B7	45 days	Tue 4/6/21	Tue 6/8/21
61	Procure Bag Slide Gate C8	45 days	Thu 4/8/21	Thu 6/10/21
62	Procure Bag Slide Gate D4	45 days	Wed 4/14/21	Wed 6/16/21
63	Procure Bag Slide Gate B9	45 days	Mon 4/19/21	Mon 6/21/21
64	Procure Bag Slide Gate B8	45 days	Fri 4/23/21	Fri 6/25/21
65	Procure Bag Slide Gate D2	45 days	Tue 4/27/21	Tue 6/29/21
66	Procure Bag Slide Gate C1	45 days	Fri 4/30/21	Fri 7/2/21
67	Procure Bag Slide Gate C2	45 days	Thu 5/6/21	Fri 7/9/21
68	**Manufacture Equipment by JBT**	**187 days**	**Fri 12/4/20**	**Fri 8/27/21**
69	**Passenger Boarding Bridges (27 Qty)**	**167 days**	**Fri 12/4/20**	**Fri 7/30/21**
70	Manufacture AT3 58/116-125R PBB Gate D5	20 days	Fri 12/4/20	Mon 1/4/21
71	Manufacture AT3 61/127-125R PBB Gate B1	20 days	Tue 1/5/21	Mon 2/1/21
72	Manufacture AT3 61/127-125R PBB Gate C4	20 days	Tue 2/2/21	Mon 3/1/21
73	Manufacture AT3 58/116-125R PBB Gate D1	20 days	Tue 3/2/21	Mon 3/29/21
74	Manufacture AT3 72/150-125R PBB Gate B5	20 days	Thu 3/4/21	Wed 3/31/21
75	Manufacture AT3 58/116-125R PBB Gate C3	20 days	Tue 3/9/21	Mon 4/5/21
76	Manufacture AT3 65/133-125R PBB Gate D10	20 days	Fri 3/12/21	Thu 4/8/21
77	Manufacture AT3 58/116-125R PBB Gate B6	20 days	Fri 3/19/21	Thu 4/15/21
78	Manufacture AT3 61/127-125R PBB Gate C5	20 days	Wed 3/24/21	Tue 4/20/21
79	Manufacture AT3 58/116-125R PBB Gate D3	20 days	Wed 3/31/21	Tue 4/27/21
80	Manufacture AT3 58/116-125R PBB Gate B4	20 days	Mon 4/5/21	Fri 4/30/21
81	Manufacture AT3 58/116-125R PBB Gate C6	20 days	Mon 4/12/21	Fri 5/7/21
82	Manufacture AT3 58/116-125R PBB Gate D6	20 days	Thu 4/15/21	Wed 5/12/21
83	Manufacture AT3 58/116-125R PBB Gate B2	20 days	Thu 4/22/21	Wed 5/19/21
84	Manufacture AT3 58/116-125R PBB Gate C7	20 days	Mon 4/26/21	Fri 5/21/21
85	Manufacture AT3 61/127-125R PBB Gate D7	20 days	Mon 5/3/21	Mon 5/31/21
86	Manufacture AT3 61/127-125R PBB Gate B3	20 days	Thu 5/6/21	Thu 6/3/21
87	Manufacture AT3 58/116-125R PBB Gate C9	20 days	Thu 5/13/21	Thu 6/10/21
88	Manufacture AT3 61/127-125R PBB Gate D8	20 days	Tue 5/18/21	Tue 6/15/21
89	Manufacture AT3 58/116-125R PBB Gate B7	20 days	Wed 5/26/21	Tue 6/22/21
90	Manufacture AT3 65/133-125R PBB Gate C8	20 days	Mon 5/31/21	Fri 6/25/21
91	Manufacture AT3 61/127-125R PBB Gate D4	20 days	Mon 6/7/21	Fri 7/2/21
92	Manufacture AT3 58/116-125R PBB Gate B9	20 days	Thu 6/10/21	Thu 7/8/21
93	Manufacture AT3 58/116-125R PBB Gate B8	20 days	Thu 6/17/21	Thu 7/15/21
94	Manufacture AT3 68/144-125R PBB Gate D2	20 days	Tue 6/22/21	Tue 7/20/21
95	Manufacture AT3 61/127-125R PBB Gate C1	20 days	Tue 6/29/21	Tue 7/27/21
96	Manufacture AT3 64/144-125R PBB Gate C2	20 days	Fri 7/2/21	Fri 7/30/21
97	**Walkways (2 Qty)**	**23 days**	**Wed 7/28/21**	**Fri 8/27/21**
98	Manufacture J-41-BB Walkway Gate C1	20 days	Wed 7/28/21	Tue 8/24/21
99	Manufacture J-41-BB Walkway Gate C2	20 days	Mon 8/2/21	Fri 8/27/21
100	**400 Hz Ground Power Units (15 Qty)**	**92 days**	**Fri 12/4/20**	**Wed 4/14/21**
101	Manufacture 400 Hz GPU 90 KVA Gate D5	20 days	Fri 12/4/20	Mon 1/4/21
102	Manufacture 400 Hz GPU 180 KVA Gate B1	20 days	Tue 1/5/21	Mon 2/1/21
103	Manufacture 400 Hz GPU 90 KVA Gate C4	20 days	Tue 2/2/21	Mon 3/1/21
104	Manufacture 400 Hz GPU 180 KVA Gate B5	20 days	Fri 2/5/21	Thu 3/4/21
105	Manufacture 400 Hz GPU 180 KVA Gate D10	20 days	Tue 2/9/21	Mon 3/8/21
106	Manufacture 400 Hz GPU 90 KVA Gate B6	20 days	Thu 2/11/21	Wed 3/10/21
107	Manufacture 400 Hz GPU 90 KVA Gate C7	20 days	Tue 2/16/21	Mon 3/15/21



Date: Mon 6/1/20

Task Milestone Summary

Southwest Florida International Airport
Passenger Boarding Bridge (PBB) Replacement Project
Fort Myers, Florida

Project Bid Schedule

ID	Task Name	Duration	Start	Finish
108	Manufacture 400 Hz GPU 90 KVA Gate D7	20 days	Fri 2/19/21	Thu 3/18/21
109	Manufacture 400 Hz GPU 180 KVA Gate B3	20 days	Tue 2/23/21	Mon 3/22/21
110	Manufacture 400 Hz GPU 90 KVA Gate C9	20 days	Fri 2/26/21	Thu 3/25/21
111	Manufacture 400 Hz GPU 90 KVA Gate B7	20 days	Wed 3/3/21	Tue 3/30/21
112	Manufacture 400 Hz GPU 180 KVA Gate C8	20 days	Mon 3/8/21	Fri 4/2/21
113	Manufacture 400 Hz GPU 90 KVA Gate D4	20 days	Wed 3/10/21	Tue 4/6/21
114	Manufacture 400 Hz GPU 90 KVA Gate B9	20 days	Mon 3/15/21	Fri 4/9/21
115	Manufacture 400 Hz GPU 90 KVA Gate C2	20 days	Thu 3/18/21	Wed 4/14/21
116	**PCA Units (21 Qty)**	**132 days**	**Fri 12/4/20**	**Thu 6/10/21**
117	Manufacture PCA 45T Gate D5	20 days	Fri 12/4/20	Mon 1/4/21
118	Manufacture PCA 90T Gate B1	20 days	Tue 1/5/21	Mon 2/1/21
119	Manufacture PCA 45T Gate D1	20 days	Tue 2/2/21	Mon 3/1/21
120	Manufacture PCA 90T Gate B5	20 days	Tue 3/2/21	Mon 3/29/21
121	Manufacture PCA 90T Gate B3	20 days	Fri 3/5/21	Thu 4/1/21
122	Manufacture PCA 90T Gate D10	20 days	Tue 3/9/21	Mon 4/5/21
123	Manufacture PCA 45T Gate B6	20 days	Fri 3/12/21	Thu 4/8/21
124	Manufacture PCA 45T Gate C5	20 days	Tue 3/16/21	Mon 4/12/21
125	Manufacture PCA 45T Gate D3	20 days	Fri 3/19/21	Thu 4/15/21
126	Manufacture PCA 45T Gate B4	20 days	Tue 3/23/21	Mon 4/19/21
127	Manufacture PCA 45T Gate C6	20 days	Fri 3/26/21	Thu 4/22/21
128	Manufacture PCA 45T Gate C7	20 days	Fri 4/2/21	Thu 4/29/21
129	Manufacture PCA 45T Gate D7	20 days	Wed 4/7/21	Tue 5/4/21
130	Manufacture PCA 45T Gate C9	20 days	Wed 4/14/21	Tue 5/11/21
131	Manufacture PCA 45T Gate D8	20 days	Mon 4/19/21	Fri 5/14/21
132	Manufacture PCA 45T Gate B7	20 days	Wed 4/21/21	Tue 5/18/21
133	Manufacture PCA 90T Gate C8	20 days	Mon 4/26/21	Fri 5/21/21
134	Manufacture PCA 45T Gate B8	20 days	Thu 4/29/21	Thu 5/27/21
135	Manufacture PCA 45T Gate D2	20 days	Thu 5/6/21	Thu 6/3/21
136	Manufacture PCA 45T Gate C1	20 days	Tue 5/11/21	Tue 6/8/21
137	Manufacture PCA 45T Gate C2	20 days	Thu 5/13/21	Thu 6/10/21
138	**Ship Equipment**	**265 days**	**Thu 10/1/20**	**Thu 10/14/21**
139	Ship AT3 58/116-125R PBB Gate D5	5 days	Mon 4/5/21	Fri 4/9/21
140	Ship Component Load Gate D5	5 days	Mon 4/5/21	Fri 4/9/21
141	Ship AT3 61/127-125R PBB Gate B1	5 days	Mon 4/5/21	Fri 4/9/21
142	Ship Component Load Gate B1	5 days	Mon 4/5/21	Fri 4/9/21
143	Ship AT3 61/127-125R PBB Gate C4	5 days	Mon 4/5/21	Fri 4/9/21
144	Ship Component Load Gate C4	5 days	Mon 4/5/21	Fri 4/9/21
145	Ship AT3 58/116-125R PBB Gate D1	5 days	Fri 4/30/21	Thu 5/6/21
146	Ship Component Load Gate D1	5 days	Fri 4/30/21	Thu 5/6/21
147	Ship AT3 72/150-125R PBB Gate B5	5 days	Fri 4/30/21	Thu 5/6/21
148	Ship Component Load Gate B5	5 days	Fri 4/30/21	Thu 5/6/21
149	Ship AT3 58/116-125R PBB Gate C3	5 days	Fri 4/30/21	Thu 5/6/21
150	Ship Component Load Gate C3	5 days	Fri 4/30/21	Thu 5/6/21
151	Ship AT3 65/133-125R PBB Gate D10	5 days	Tue 5/25/21	Mon 5/31/21
152	Ship Component Load Gate D10	5 days	Tue 5/25/21	Mon 5/31/21
153	Ship AT3 58/116-125R PBB Gate B6	5 days	Tue 5/25/21	Mon 5/31/21
154	Ship Component Load Gate B6	5 days	Tue 5/25/21	Mon 5/31/21
155	Ship AT3 61/127-125R PBB Gate C5	5 days	Tue 5/25/21	Mon 5/31/21
156	Ship Component Load Gate C5	5 days	Tue 5/25/21	Mon 5/31/21
157	Ship AT3 58/116-125R PBB Gate D3	5 days	Wed 6/16/21	Tue 6/22/21
158	Ship Component Load Gate D3	5 days	Wed 6/16/21	Tue 6/22/21
159	Ship AT3 58/116-125R PBB Gate B4	5 days	Wed 6/16/21	Tue 6/22/21
160	Ship Component Load Gate B4	5 days	Wed 6/16/21	Tue 6/22/21
161	Ship AT3 58/116-125R PBB Gate C6	5 days	Wed 6/16/21	Tue 6/22/21
162	Ship Component Load Gate C6	5 days	Wed 6/16/21	Tue 6/22/21

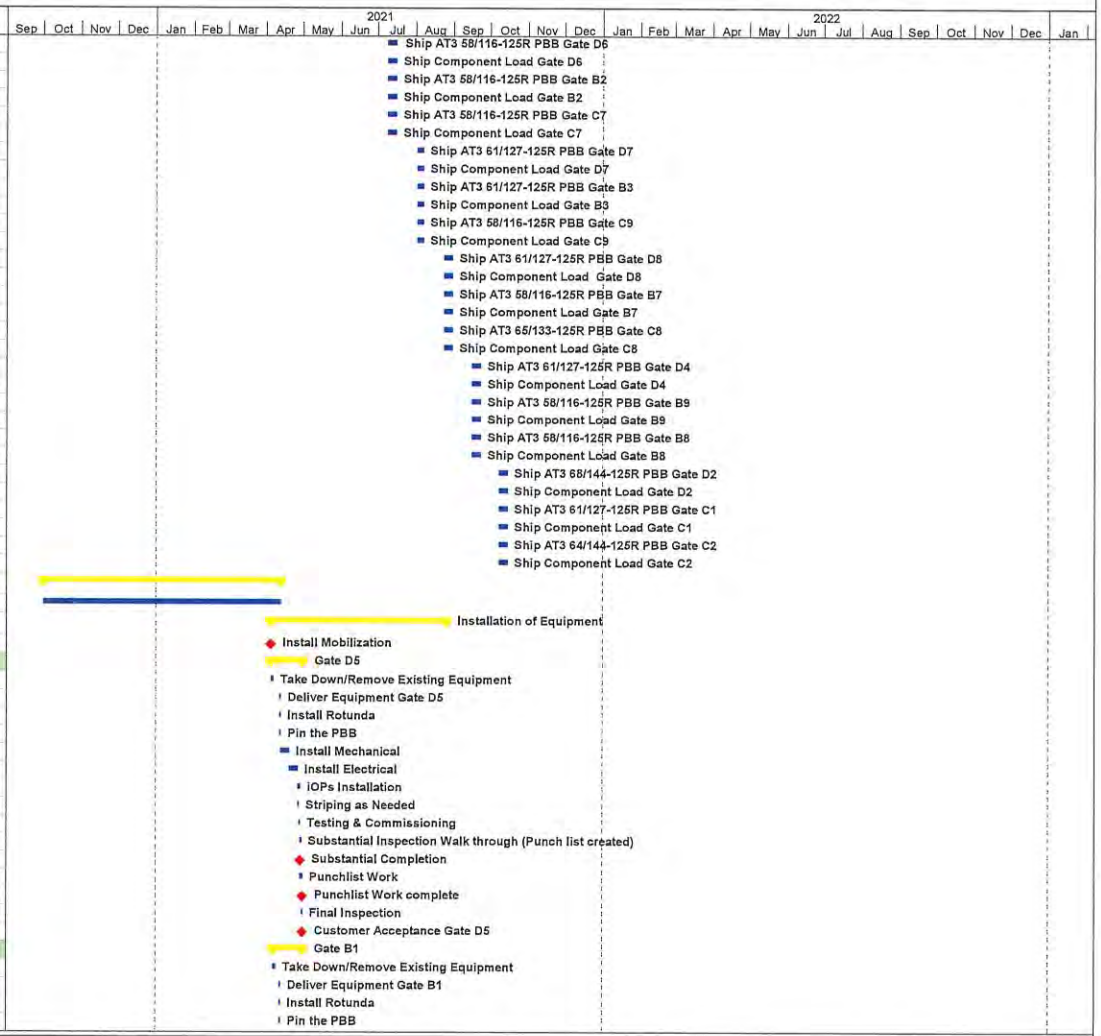
Date: Mon 6/1/20

Task Milestone Summary

Southwest Florida International Airport
Passenger Boarding Bridge (PBB) Replacement Project
Fort Myers, Florida

Project Bid Schedule

ID	Task Name	Duration	Start	Finish
163	Ship AT3 58/116-125R PBB Gate D6	5 days	Fri 7/9/21	Thu 7/15/21
164	Ship Component Load Gate D6	5 days	Fri 7/9/21	Thu 7/15/21
165	Ship AT3 58/116-125R PBB Gate B2	5 days	Fri 7/9/21	Thu 7/15/21
166	Ship Component Load Gate B2	5 days	Fri 7/9/21	Thu 7/15/21
167	Ship AT3 58/116-125R PBB Gate C7	5 days	Fri 7/9/21	Thu 7/15/21
168	Ship Component Load Gate C7	5 days	Fri 7/9/21	Thu 7/15/21
169	Ship AT3 61/127-125R PBB Gate D7	5 days	Mon 8/2/21	Fri 8/6/21
170	Ship Component Load Gate D7	5 days	Mon 8/2/21	Fri 8/6/21
171	Ship AT3 61/127-125R PBB Gate B3	5 days	Mon 8/2/21	Fri 8/6/21
172	Ship Component Load Gate B3	5 days	Mon 8/2/21	Fri 8/6/21
173	Ship AT3 58/116-125R PBB Gate C9	5 days	Mon 8/2/21	Fri 8/6/21
174	Ship Component Load Gate C9	5 days	Mon 8/2/21	Fri 8/6/21
175	Ship AT3 61/127-125R PBB Gate D8	5 days	Tue 8/24/21	Mon 8/30/21
176	Ship Component Load Gate D8	5 days	Tue 8/24/21	Mon 8/30/21
177	Ship AT3 58/116-125R PBB Gate B7	5 days	Tue 8/24/21	Mon 8/30/21
178	Ship Component Load Gate B7	5 days	Tue 8/24/21	Mon 8/30/21
179	Ship AT3 65/133-125R PBB Gate C8	5 days	Tue 8/24/21	Mon 8/30/21
180	Ship Component Load Gate C8	5 days	Tue 8/24/21	Mon 8/30/21
181	Ship AT3 61/127-125R PBB Gate D4	5 days	Thu 9/16/21	Wed 9/22/21
182	Ship Component Load Gate D4	5 days	Thu 9/16/21	Wed 9/22/21
183	Ship AT3 58/116-125R PBB Gate B9	5 days	Thu 9/16/21	Wed 9/22/21
184	Ship Component Load Gate B9	5 days	Thu 9/16/21	Wed 9/22/21
185	Ship AT3 58/116-125R PBB Gate B8	5 days	Thu 9/16/21	Wed 9/22/21
186	Ship Component Load Gate B8	5 days	Thu 9/16/21	Wed 9/22/21
187	Ship AT3 68/144-125R PBB Gate D2	5 days	Fri 10/8/21	Thu 10/14/21
188	Ship Component Load Gate D2	5 days	Fri 10/8/21	Thu 10/14/21
189	Ship AT3 61/127-125R PBB Gate C1	5 days	Fri 10/8/21	Thu 10/14/21
190	Ship Component Load Gate C1	5 days	Fri 10/8/21	Thu 10/14/21
191	Ship AT3 64/144-125R PBB Gate C2	5 days	Fri 10/8/21	Thu 10/14/21
192	Ship Component Load Gate C2	5 days	Fri 10/8/21	Thu 10/14/21
193	**Foundation Work**	**135 days**	**Thu 10/1/20**	**Mon 4/12/21**
194	Rework 25 Existing Foundations and provide 2 New Founda	135 days	Thu 10/1/20	Mon 4/12/21
195	**Installation of Equipment**	**101 days**	**Mon 4/5/21**	**Wed 8/25/21**
196	Install Mobilization	0 days	Mon 4/5/21	Mon 4/5/21
197	**Gate D5**	**20 days**	**Mon 4/6/21**	**Fri 4/30/21**
198	Take Down/Remove Existing Equipment	2 days	Mon 4/5/21	Tue 4/6/21
199	Deliver Equipment Gate D5	1 day	Mon 4/12/21	Mon 4/12/21
200	Install Rotunda	1 day	Mon 4/12/21	Mon 4/12/21
201	Pin the PBB	1 day	Mon 4/12/21	Mon 4/12/21
202	Install Mechanical	5 days	Tue 4/13/21	Mon 4/19/21
203	Install Electrical	5 days	Tue 4/20/21	Mon 4/26/21
204	iOPs Installation	2 days	Tue 4/27/21	Wed 4/28/21
205	Striping as Needed	1 day	Tue 4/27/21	Tue 4/27/21
206	Testing & Commissioning	1 day	Wed 4/28/21	Wed 4/28/21
207	Substantial Inspection Walk through (Punch list created)	1 day	Thu 4/29/21	Thu 4/29/21
208	Substantial Completion	0 days	Thu 4/29/21	Thu 4/29/21
209	Punchlist Work	2 days	Thu 4/29/21	Fri 4/30/21
210	Punchlist Work complete	0 days	Fri 4/30/21	Fri 4/30/21
211	Final Inspection	1 day	Fri 4/30/21	Fri 4/30/21
212	Customer Acceptance Gate D5	0 days	Fri 4/30/21	Fri 4/30/21
213	**Gate B1**	**18 days**	**Wed 4/7/21**	**Fri 4/30/21**
214	Take Down/Remove Existing Equipment	2 days	Wed 4/7/21	Thu 4/8/21
215	Deliver Equipment Gate B1	1 day	Mon 4/12/21	Mon 4/12/21
216	Install Rotunda	1 day	Mon 4/12/21	Mon 4/12/21
217	Pin the PBB	1 day	Mon 4/12/21	Mon 4/12/21



Date: Mon 6/1/20

Task Milestone Summary

Southwest Florida International Airport
Passenger Boarding Bridge (PBB) Replacement Project
Fort Myers, Florida

ID	Task Name	Duration	Start	Finish
218	Install Mechanical	5 days	Tue 4/13/21	Mon 4/19/21
219	Install Electrical	5 days	Tue 4/20/21	Mon 4/26/21
220	iOPs Installation	2 days	Tue 4/27/21	Wed 4/28/21
221	Striping as Needed	1 day	Tue 4/27/21	Tue 4/27/21
222	Testing & Commissioning	1 day	Wed 4/28/21	Wed 4/28/21
223	Substantial Inspection Walk through (Punch list created)	1 day	Wed 4/28/21	Wed 4/28/21
224	Substantial Completion	0 days	Wed 4/28/21	Wed 4/28/21
225	Punchlist Work	2 days	Thu 4/29/21	Fri 4/30/21
226	Punchlist Work complete	0 days	Fri 4/30/21	Fri 4/30/21
227	Final Inspection	1 day	Fri 4/30/21	Fri 4/30/21
228	Customer Acceptance Gate B1	0 days	Fri 4/30/21	Fri 4/30/21
229	**Gate C4**	**16 days**	**Fri 4/9/21**	**Fri 4/30/21**
230	Take Down/Remove Existing Equipment	2 days	Fri 4/9/21	Mon 4/12/21
231	Deliver Equipment Gate C4	1 day	Mon 4/12/21	Mon 4/12/21
232	Install Rotunda	1 day	Mon 4/12/21	Mon 4/12/21
233	Pin the PBB	1 day	Mon 4/12/21	Mon 4/12/21
234	Install Mechanical	5 days	Tue 4/13/21	Mon 4/19/21
235	Install Electrical	5 days	Tue 4/20/21	Mon 4/26/21
236	iOPs Installation	2 days	Tue 4/27/21	Wed 4/28/21
237	Striping as Needed	1 day	Tue 4/27/21	Tue 4/27/21
238	Testing & Commissioning	1 day	Wed 4/28/21	Wed 4/28/21
239	Substantial Inspection Walk through (Punch list created)	1 day	Thu 4/29/21	Thu 4/29/21
240	Substantial Completion	0 days	Thu 4/29/21	Thu 4/29/21
241	Punchlist Work	1 day	Fri 4/30/21	Fri 4/30/21
242	Punchlist Work complete	0 days	Fri 4/30/21	Fri 4/30/21
243	Final Inspection	1 day	Fri 4/30/21	Fri 4/30/21
244	Customer Acceptance Gate C4	0 days	Fri 4/30/21	Fri 4/30/21
245	**Gate D1**	**18 days**	**Mon 5/3/21**	**Thu 5/27/21**
246	Take Down/Remove Existing Equipment	2 days	Mon 5/3/21	Tue 5/4/21
247	Deliver Equipment Gate D1	1 day	Fri 5/7/21	Fri 5/7/21
248	Install Rotunda	1 day	Fri 5/7/21	Fri 5/7/21
249	Pin the PBB	1 day	Fri 5/7/21	Fri 5/7/21
250	Install Mechanical	5 days	Mon 5/10/21	Fri 5/14/21
251	Install Electrical	5 days	Thu 5/13/21	Wed 5/19/21
252	iOPs Installation	2 days	Thu 5/20/21	Fri 5/21/21
253	Striping as Needed	1 day	Thu 5/20/21	Thu 5/20/21
254	Testing & Commissioning	1 day	Fri 5/21/21	Fri 5/21/21
255	Substantial Inspection Walk through (Punch list created)	1 day	Tue 5/25/21	Tue 5/25/21
256	Substantial Completion	0 days	Tue 5/25/21	Tue 5/25/21
257	Punchlist Work	1 day	Wed 5/26/21	Wed 5/26/21
258	Punchlist Work complete	0 days	Wed 5/26/21	Wed 5/26/21
259	Final Inspection	1 day	Thu 5/27/21	Thu 5/27/21
260	Customer Acceptance Gate D1	0 days	Thu 5/27/21	Thu 5/27/21
261	**Gate B5**	**16 days**	**Wed 5/5/21**	**Thu 5/27/21**
262	Take Down/Remove Existing Equipment	2 days	Wed 5/5/21	Thu 5/6/21
263	Deliver Equipment Gate B5	1 day	Fri 5/7/21	Fri 5/7/21
264	Install Rotunda	1 day	Fri 5/7/21	Fri 5/7/21
265	Pin the PBB	1 day	Fri 5/7/21	Fri 5/7/21
266	Install Mechanical	4 days	Mon 5/10/21	Thu 5/13/21
267	Install Electrical	4 days	Fri 5/14/21	Wed 5/19/21
268	iOPs Installation	2 days	Thu 5/20/21	Fri 5/21/21
269	Striping as Needed	1 day	Thu 5/20/21	Thu 5/20/21
270	Testing & Commissioning	2 days	Fri 5/21/21	Tue 5/25/21
271	Substantial Inspection Walk through (Punch list created)	1 day	Wed 5/26/21	Wed 5/26/21
272	Substantial Completion	0 days	Wed 5/26/21	Wed 5/26/21

Date: Mon 6/1/20

Task — Milestone ◆ — Summary

Southwest Florida International Airport
Passenger Boarding Bridge (PBB) Replacement Project
Fort Myers, Florida

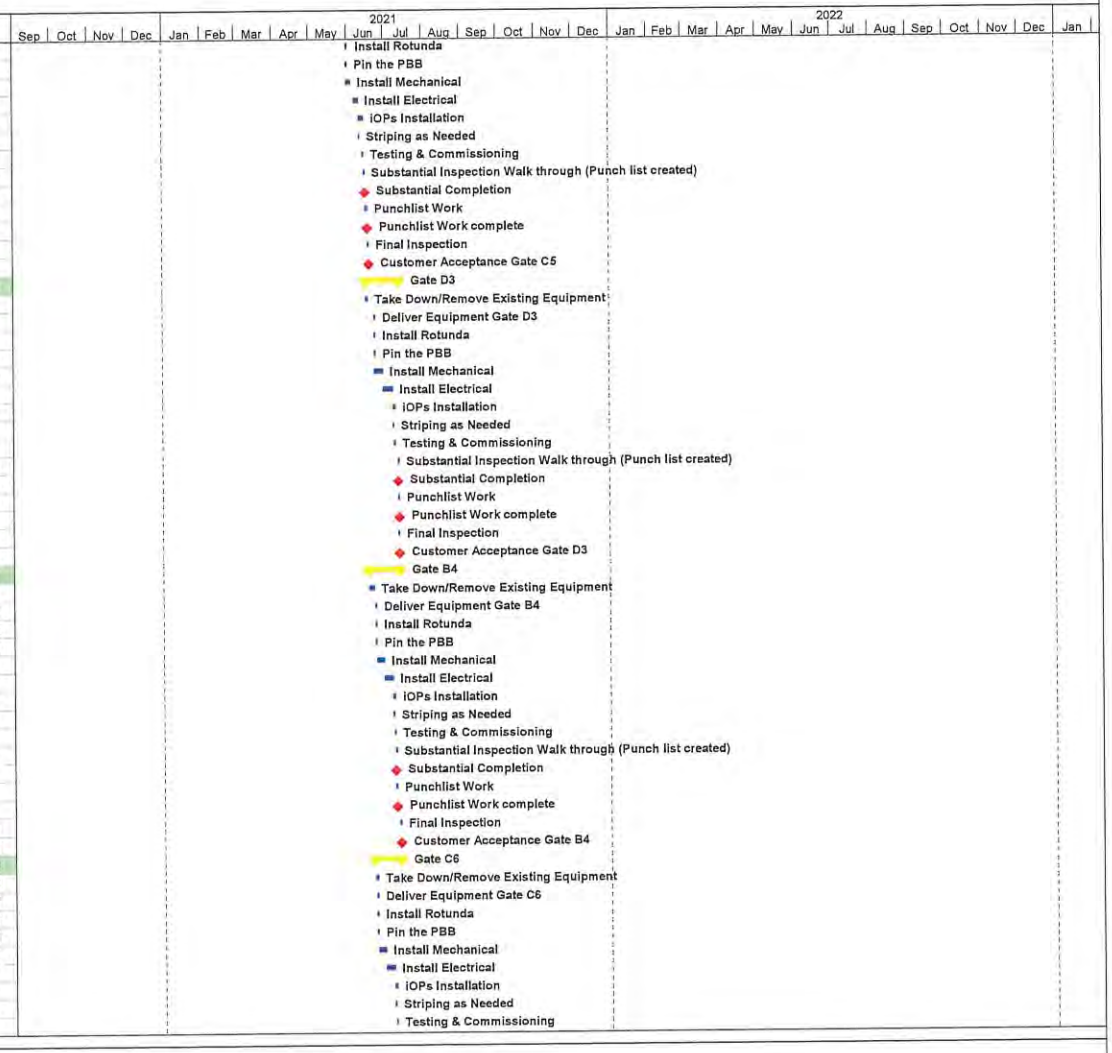
ID	Task Name	Duration	Start	Finish
273	Punchlist Work	1 day	Thu 5/27/21	Thu 5/27/21
274	Punchlist Work complete	0 days	Thu 5/27/21	Thu 5/27/21
275	Final Inspection	1 day	Thu 5/27/21	Thu 5/27/21
276	Customer Acceptance Gate B5	0 days	Thu 5/27/21	Thu 5/27/21
277	**Gate C3**	**16 days**	**Wed 5/5/21**	**Wed 5/26/21**
278	Take Down/Remove Existing Equipment	2 days	Wed 5/5/21	Thu 5/6/21
279	Deliver Equipment Gate C3	1 day	Fri 5/7/21	Fri 5/7/21
280	Install Rotunda	1 day	Fri 5/7/21	Fri 5/7/21
281	Pin the PBB	1 day	Fri 5/7/21	Fri 5/7/21
282	Install Mechanical	4 days	Mon 5/10/21	Thu 5/13/21
283	Install Electrical	4 days	Fri 5/14/21	Wed 5/19/21
284	iOPs Installation	2 days	Thu 5/20/21	Fri 5/21/21
285	Striping as Needed	1 day	Thu 5/20/21	Thu 5/20/21
286	Testing & Commissioning	1 day	Fri 5/21/21	Fri 5/21/21
287	Substantial Inspection Walk through (Punch list created)	1 day	Tue 5/25/21	Tue 5/25/21
288	Substantial Completion	0 days	Tue 5/25/21	Tue 5/25/21
289	Punchlist Work	1 day	Wed 5/26/21	Wed 5/26/21
290	Punchlist Work complete	0 days	Wed 5/26/21	Wed 5/26/21
291	Final Inspection	1 day	Wed 5/26/21	Wed 5/26/21
292	Customer Acceptance Gate C3	0 days	Wed 5/26/21	Wed 5/26/21
293	**Gate D10**	**18 days**	**Wed 5/26/21**	**Fri 6/18/21**
294	Take Down/Remove Existing Equipment	2 days	Wed 5/26/21	Thu 5/27/21
295	Deliver Equipment Gate D10	1 day	Tue 6/1/21	Tue 6/1/21
296	Install Rotunda	1 day	Tue 6/1/21	Tue 6/1/21
297	Pin the PBB	1 day	Tue 6/1/21	Tue 6/1/21
298	Install Mechanical	4 days	Wed 6/2/21	Mon 6/7/21
299	Install Electrical	4 days	Tue 6/8/21	Fri 6/11/21
300	iOPs Installation	2 days	Mon 6/14/21	Tue 6/15/21
301	Striping as Needed	1 day	Mon 6/14/21	Mon 6/14/21
302	Testing & Commissioning	1 day	Tue 6/15/21	Tue 6/15/21
303	Substantial Inspection Walk through (Punch list created)	1 day	Wed 6/16/21	Wed 6/16/21
304	Substantial Completion	0 days	Wed 6/16/21	Wed 6/16/21
305	Punchlist Work	1 day	Thu 6/17/21	Thu 6/17/21
306	Punchlist Work complete	0 days	Thu 6/17/21	Thu 6/17/21
307	Final Inspection	1 day	Fri 6/18/21	Fri 6/18/21
308	Customer Acceptance Gate D10	0 days	Fri 6/18/21	Fri 6/18/21
309	**Gate B6**	**16 days**	**Fri 5/28/21**	**Fri 6/18/21**
310	Take Down/Remove Existing Equipment	2 days	Fri 5/28/21	Mon 5/31/21
311	Deliver Equipment Gate B6	1 day	Tue 6/1/21	Tue 6/1/21
312	Install the Rotunda	1 day	Tue 6/1/21	Tue 6/1/21
313	Pin the PBB	1 day	Tue 6/1/21	Tue 6/1/21
314	Install Mechanical	4 days	Wed 6/2/21	Mon 6/7/21
315	Install Electrical	4 days	Tue 6/8/21	Fri 6/11/21
316	iOPs Installation	2 days	Mon 6/14/21	Tue 6/15/21
317	Striping as Needed	1 day	Mon 6/14/21	Mon 6/14/21
318	Testing & Commissioning	1 day	Tue 6/15/21	Tue 6/15/21
319	Substantial Inspection Walk through (Punch list created)	1 day	Wed 6/16/21	Wed 6/16/21
320	Substantial Completion	0 days	Wed 6/16/21	Wed 6/16/21
321	Punchlist Work	1 day	Thu 6/17/21	Thu 6/17/21
322	Punchlist Work complete	0 days	Thu 6/17/21	Thu 6/17/21
323	Final Inspection	1 day	Fri 6/18/21	Fri 6/18/21
324	Customer Acceptance Gate B6	0 days	Fri 6/18/21	Fri 6/18/21
325	**Gate C5**	**16 days**	**Fri 5/28/21**	**Fri 6/18/21**
326	Take Down/Remove Existing Equipment	2 days	Fri 5/28/21	Mon 5/31/21
327	Deliver Equipment Gate C5	1 day	Tue 6/1/21	Tue 6/1/21

Date: Mon 6/1/20

Task Milestone Summary

Southwest Florida International Airport
Passenger Boarding Bridge (PBB) Replacement Project
Fort Myers, Florida

ID	Task Name	Duration	Start	Finish
328	Install Rotunda	1 day	Tue 6/1/21	Tue 6/1/21
329	Pin the PBB	1 day	Tue 6/1/21	Tue 6/1/21
330	Install Mechanical	4 days	Tue 6/1/21	Fri 6/4/21
331	Install Electrical	4 days	Mon 6/7/21	Thu 6/10/21
332	iOPs Installation	2 days	Fri 6/11/21	Mon 6/14/21
333	Striping as Needed	1 day	Fri 6/11/21	Fri 6/11/21
334	Testing & Commissioning	1 day	Mon 6/14/21	Mon 6/14/21
335	Substantial Inspection Walk through (Punch list created)	1 day	Tue 6/15/21	Tue 6/15/21
336	Substantial Completion	0 days	Tue 6/15/21	Tue 6/15/21
337	Punchlist Work	2 days	Wed 6/16/21	Thu 6/17/21
338	Punchlist Work complete	0 days	Thu 6/17/21	Thu 6/17/21
339	Final Inspection	1 day	Fri 6/18/21	Fri 6/18/21
340	Customer Acceptance Gate C5	0 days	Fri 6/18/21	Fri 6/18/21
341	**Gate D3**	**18 days**	**Wed 6/16/21**	**Mon 7/12/21**
342	Take Down/Remove Existing Equipment	2 days	Wed 6/16/21	Thu 6/17/21
343	Deliver Equipment Gate D3	1 day	Wed 6/23/21	Wed 6/23/21
344	Install Rotunda	1 day	Wed 6/23/21	Wed 6/23/21
345	Pin the PBB	1 day	Wed 6/23/21	Wed 6/23/21
346	Install Mechanical	5 days	Wed 6/23/21	Tue 6/29/21
347	Install Electrical	5 days	Wed 6/30/21	Wed 7/7/21
348	iOPs Installation	2 days	Thu 7/8/21	Fri 7/9/21
349	Striping as Needed	1 day	Thu 7/8/21	Thu 7/8/21
350	Testing & Commissioning	1 day	Fri 7/9/21	Fri 7/9/21
351	Substantial Inspection Walk through (Punch list created)	1 day	Mon 7/12/21	Mon 7/12/21
352	Substantial Completion	0 days	Mon 7/12/21	Mon 7/12/21
353	Punchlist Work	1 day	Mon 7/12/21	Mon 7/12/21
354	Punchlist Work complete	0 days	Mon 7/12/21	Mon 7/12/21
355	Final Inspection	1 day	Mon 7/12/21	Mon 7/12/21
356	Customer Acceptance Gate D3	0 days	Mon 7/12/21	Mon 7/12/21
357	**Gate B4**	**16 days**	**Fri 6/18/21**	**Mon 7/12/21**
358	Take Down/Remove Existing Equipment	2 days	Fri 6/18/21	Mon 6/21/21
359	Deliver Equipment Gate B4	1 day	Wed 6/23/21	Wed 6/23/21
360	Install Rotunda	1 day	Wed 6/23/21	Wed 6/23/21
361	Pin the PBB	1 day	Wed 6/23/21	Wed 6/23/21
362	Install Mechanical	4 days	Thu 6/24/21	Tue 6/29/21
363	Install Electrical	4 days	Wed 6/30/21	Tue 7/6/21
364	iOPs Installation	2 days	Wed 7/7/21	Thu 7/8/21
365	Striping as Needed	1 day	Wed 7/7/21	Wed 7/7/21
366	Testing & Commissioning	1 day	Thu 7/8/21	Thu 7/8/21
367	Substantial Inspection Walk through (Punch list created)	1 day	Fri 7/9/21	Fri 7/9/21
368	Substantial Completion	0 days	Fri 7/9/21	Fri 7/9/21
369	Punchlist Work	1 day	Fri 7/9/21	Fri 7/9/21
370	Punchlist Work complete	0 days	Fri 7/9/21	Fri 7/9/21
371	Final Inspection	1 day	Mon 7/12/21	Mon 7/12/21
372	Customer Acceptance Gate B4	0 days	Mon 7/12/21	Mon 7/12/21
373	**Gate C6**	**14 days**	**Tue 6/22/21**	**Mon 7/12/21**
374	Take Down/Remove Existing Equipment	2 days	Tue 6/22/21	Wed 6/23/21
375	Deliver Equipment Gate C6	1 day	Wed 6/23/21	Wed 6/23/21
376	Install Rotunda	1 day	Wed 6/23/21	Wed 6/23/21
377	Pin the PBB	1 day	Wed 6/23/21	Wed 6/23/21
378	Install Mechanical	4 days	Thu 6/24/21	Tue 6/29/21
379	Install Electrical	4 days	Wed 6/30/21	Tue 7/6/21
380	iOPs Installation	2 days	Wed 7/7/21	Thu 7/8/21
381	Striping as Needed	1 day	Wed 7/7/21	Wed 7/7/21
382	Testing & Commissioning	1 day	Thu 7/8/21	Thu 7/8/21



Date: Mon 6/1/20

Task Milestone Summary

Southwest Florida International Airport
Passenger Boarding Bridge (PBB) Replacement Project
Fort Myers, Florida

ID	Task Name	Duration	Start	Finish
383	Substantial Inspection Walk through (Punch list created)	1 day	Fri 7/9/21	Fri 7/9/21
384	Substantial Completion	0 days	Fri 7/9/21	Fri 7/9/21
385	Punchlist Work	1 day	Fri 7/9/21	Fri 7/9/21
386	Punchlist Work complete	0 days	Fri 7/9/21	Fri 7/9/21
387	Final Inspection	1 day	Mon 7/12/21	Mon 7/12/21
388	Customer Acceptance Gate C6	0 days	Mon 7/12/21	Mon 7/12/21
389	**Gate D6**	**17 days**	**Mon 7/12/21**	**Tue 8/3/21**
390	Take Down/Remove Existing Equipment	2 days	Mon 7/12/21	Tue 7/13/21
391	Deliver Equipment Gate D6	1 day	Fri 7/16/21	Fri 7/16/21
392	Install Rotunda	1 day	Fri 7/16/21	Fri 7/16/21
393	Pin the PBB	1 day	Fri 7/16/21	Fri 7/16/21
394	Install Mechanical	4 days	Mon 7/19/21	Thu 7/22/21
395	Install Electrical	4 days	Fri 7/23/21	Wed 7/28/21
396	iOPs Installation	2 days	Thu 7/29/21	Fri 7/30/21
397	Striping as Needed	1 day	Thu 7/29/21	Thu 7/29/21
398	Testing & Commissioning	1 day	Fri 7/30/21	Fri 7/30/21
399	Substantial Inspection Walk through (Punch list created)	1 day	Mon 8/2/21	Mon 8/2/21
400	Substantial Completion	0 days	Mon 8/2/21	Mon 8/2/21
401	Punchlist Work	1 day	Mon 8/2/21	Mon 8/2/21
402	Punchlist Work complete	0 days	Mon 8/2/21	Mon 8/2/21
403	Final Inspection	1 day	Tue 8/3/21	Tue 8/3/21
404	Customer Acceptance Gate D6	0 days	Tue 8/3/21	Tue 8/3/21
405	**Gate B2**	**16 days**	**Wed 7/14/21**	**Tue 8/3/21**
406	Take Down/Remove Existing Equipment	2 days	Wed 7/14/21	Thu 7/15/21
407	Deliver Equipment Gate B2	1 day	Fri 7/16/21	Fri 7/16/21
408	Install Rotunda	1 day	Fri 7/16/21	Fri 7/16/21
409	Pin the PBB	1 day	Fri 7/16/21	Fri 7/16/21
410	Install Mechanical	4 days	Mon 7/19/21	Thu 7/22/21
411	Install Electrical	4 days	Fri 7/23/21	Wed 7/28/21
412	iOPs Installation	2 days	Thu 7/29/21	Fri 7/30/21
413	Striping as Needed	1 day	Thu 7/29/21	Thu 7/29/21
414	Testing & Commissioning	1 day	Fri 7/30/21	Fri 7/30/21
415	Substantial Inspection Walk through (Punch list created)	1 day	Mon 8/2/21	Mon 8/2/21
416	Substantial Completion	0 days	Mon 8/2/21	Mon 8/2/21
417	Punchlist Work	1 day	Mon 8/2/21	Mon 8/2/21
418	Punchlist Work complete	0 days	Mon 8/2/21	Mon 8/2/21
419	Final Inspection	1 day	Tue 8/3/21	Tue 8/3/21
420	Customer Acceptance Gate B2	0 days	Tue 8/3/21	Tue 8/3/21
421	**Gate C7**	**16 days**	**Wed 7/14/21**	**Tue 8/3/21**
422	Take Down/Remove Existing Equipment	2 days	Wed 7/14/21	Thu 7/15/21
423	Deliver Equipment Gate C7	1 day	Fri 7/16/21	Fri 7/16/21
424	Install Rotunda	1 day	Fri 7/16/21	Fri 7/16/21
425	Pin the PBB	1 day	Fri 7/16/21	Fri 7/16/21
426	Install Mechanical	4 days	Mon 7/19/21	Thu 7/22/21
427	Install Electrical	4 days	Fri 7/23/21	Wed 7/28/21
428	iOPs Installation	2 days	Thu 7/29/21	Fri 7/30/21
429	Striping as Needed	1 day	Thu 7/29/21	Thu 7/29/21
430	Testing & Commissioning	1 day	Fri 7/30/21	Fri 7/30/21
431	Substantial Inspection Walk through (Punch list created)	1 day	Mon 8/2/21	Mon 8/2/21
432	Substantial Completion	0 days	Mon 8/2/21	Mon 8/2/21
433	Punchlist Work	1 day	Mon 8/2/21	Mon 8/2/21
434	Punchlist Work complete	0 days	Mon 8/2/21	Mon 8/2/21
435	Final Inspection	1 day	Tue 8/3/21	Tue 8/3/21
436	Customer Acceptance Gate C7	0 days	Tue 8/3/21	Tue 8/3/21
437	**Gate D7**	**18 days**	**Mon 8/2/21**	**Wed 8/25/21**

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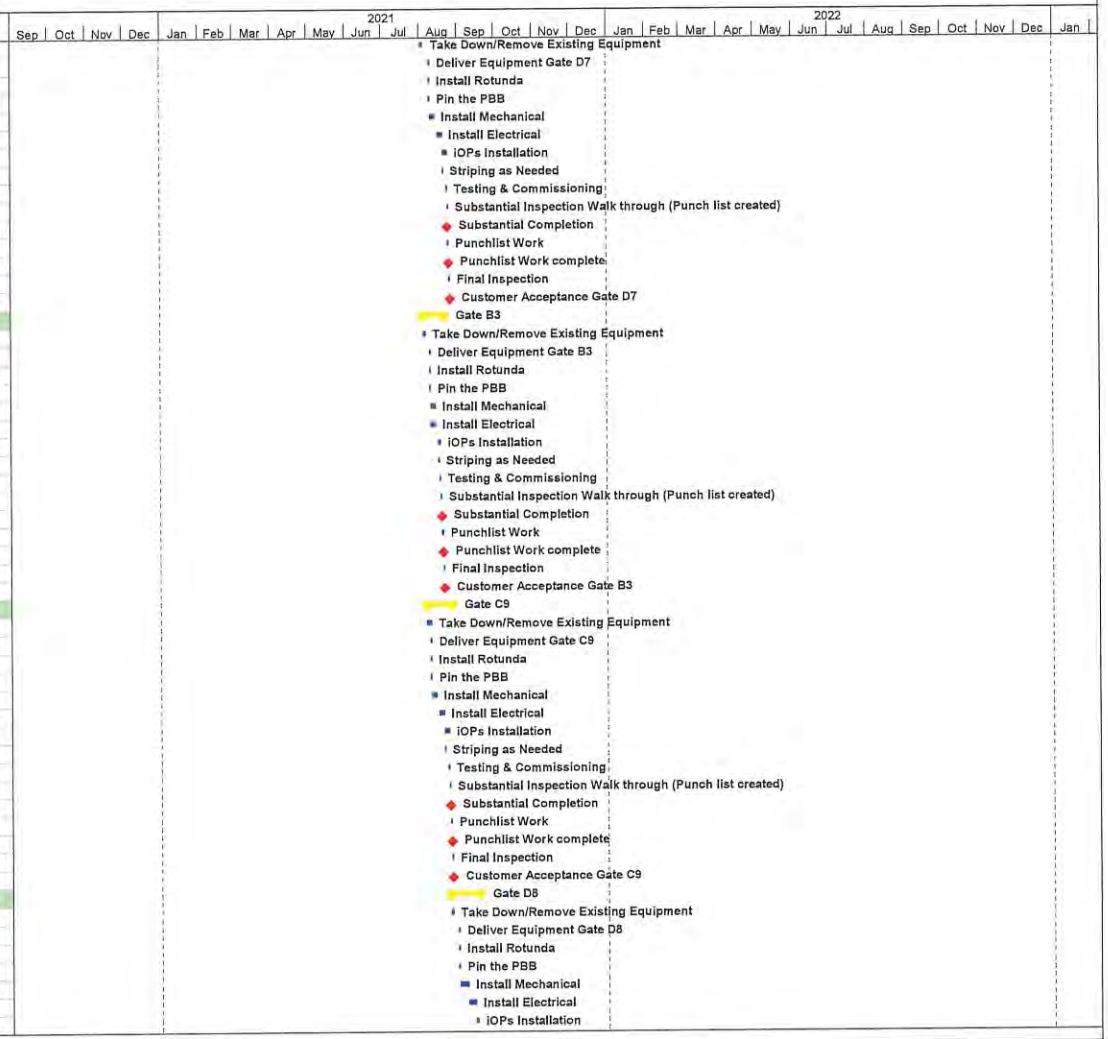
Task Milestone Summary

Southwest Florida International Airport
Passenger Boarding Bridge (PBB) Replacement Project
Fort Myers, Florida

ID	Task Name	Duration	Start	Finish
438	Take Down/Remove Existing Equipment	2 days	Mon 8/2/21	Tue 8/3/21
439	Deliver Equipment Gate D7	1 day	Mon 8/9/21	Mon 8/9/21
440	Install Rotunda	1 day	Mon 8/9/21	Mon 8/9/21
441	Pin the PBB	1 day	Mon 8/9/21	Mon 8/9/21
442	Install Mechanical	4 days	Tue 8/10/21	Fri 8/13/21
443	Install Electrical	4 days	Mon 8/16/21	Thu 8/19/21
444	iOPs Installation	2 days	Fri 8/20/21	Mon 8/23/21
445	Striping as Needed	1 day	Fri 8/20/21	Fri 8/20/21
446	Testing & Commissioning	1 day	Mon 8/23/21	Mon 8/23/21
447	Substantial Inspection Walk through (Punch list created)	1 day	Tue 8/24/21	Tue 8/24/21
448	Substantial Completion	0 days	Tue 8/24/21	Tue 8/24/21
449	Punchlist Work	1 day	Tue 8/24/21	Tue 8/24/21
450	Punchlist Work complete	0 days	Tue 8/24/21	Tue 8/24/21
451	Final Inspection	1 day	Wed 8/25/21	Wed 8/25/21
452	Customer Acceptance Gate D7	0 days	Wed 8/25/21	Wed 8/25/21
453	**Gate B3**	**13 days**	**Wed 8/4/21**	**Fri 8/20/21**
454	Take Down/Remove Existing Equipment	2 days	Wed 8/4/21	Thu 8/5/21
455	Deliver Equipment Gate B3	1 day	Mon 8/9/21	Mon 8/9/21
456	Install Rotunda	1 day	Mon 8/9/21	Mon 8/9/21
457	Pin the PBB	1 day	Mon 8/9/21	Mon 8/9/21
458	Install Mechanical	4 days	Tue 8/10/21	Fri 8/13/21
459	Install Electrical	4 days	Tue 8/10/21	Fri 8/13/21
460	iOPs Installation	2 days	Mon 8/16/21	Tue 8/17/21
461	Striping as Needed	1 day	Mon 8/16/21	Mon 8/16/21
462	Testing & Commissioning	1 day	Tue 8/17/21	Tue 8/17/21
463	Substantial Inspection Walk through (Punch list created)	1 day	Wed 8/18/21	Wed 8/18/21
464	Substantial Completion	0 days	Wed 8/18/21	Wed 8/18/21
465	Punchlist Work	1 day	Thu 8/19/21	Thu 8/19/21
466	Punchlist Work complete	0 days	Thu 8/19/21	Thu 8/19/21
467	Final Inspection	1 day	Fri 8/20/21	Fri 8/20/21
468	Customer Acceptance Gate B3	0 days	Fri 8/20/21	Fri 8/20/21
469	**Gate C9**	**16 days**	**Fri 8/6/21**	**Thu 8/26/21**
470	Take Down/Remove Existing Equipment	2 days	Fri 8/6/21	Mon 8/9/21
471	Deliver Equipment Gate C9	1 day	Mon 8/9/21	Mon 8/9/21
472	Install Rotunda	1 day	Mon 8/9/21	Mon 8/9/21
473	Pin the PBB	1 day	Mon 8/9/21	Mon 8/9/21
474	Install Mechanical	4 days	Tue 8/10/21	Fri 8/13/21
475	Install Electrical	4 days	Mon 8/16/21	Thu 8/19/21
476	iOPs Installation	2 days	Fri 8/20/21	Mon 8/23/21
477	Striping as Needed	1 day	Fri 8/20/21	Fri 8/20/21
478	Testing & Commissioning	1 day	Mon 8/23/21	Mon 8/23/21
479	Substantial Inspection Walk through (Punch list created)	1 day	Tue 8/24/21	Tue 8/24/21
480	Substantial Completion	0 days	Tue 8/24/21	Tue 8/24/21
481	Punchlist Work	1 day	Wed 8/25/21	Wed 8/25/21
482	Punchlist Work complete	0 days	Wed 8/25/21	Wed 8/25/21
483	Final Inspection	1 day	Thu 8/26/21	Thu 8/26/21
484	Customer Acceptance Gate C9	0 days	Thu 8/26/21	Thu 8/26/21
485	**Gate D8**	**17 days**	**Wed 8/25/21**	**Fri 9/17/21**
486	Take Down/Remove Existing Equipment	2 days	Wed 8/25/21	Thu 8/26/21
487	Deliver Equipment Gate D8	1 day	Tue 8/31/21	Tue 8/31/21
488	Install Rotunda	1 day	Tue 8/31/21	Tue 8/31/21
489	Pin the PBB	1 day	Tue 8/31/21	Tue 8/31/21
490	Install Mechanical	4 days	Wed 9/1/21	Tue 9/7/21
491	Install Electrical	4 days	Wed 9/8/21	Mon 9/13/21
492	iOPs Installation	2 days	Tue 9/14/21	Wed 9/15/21



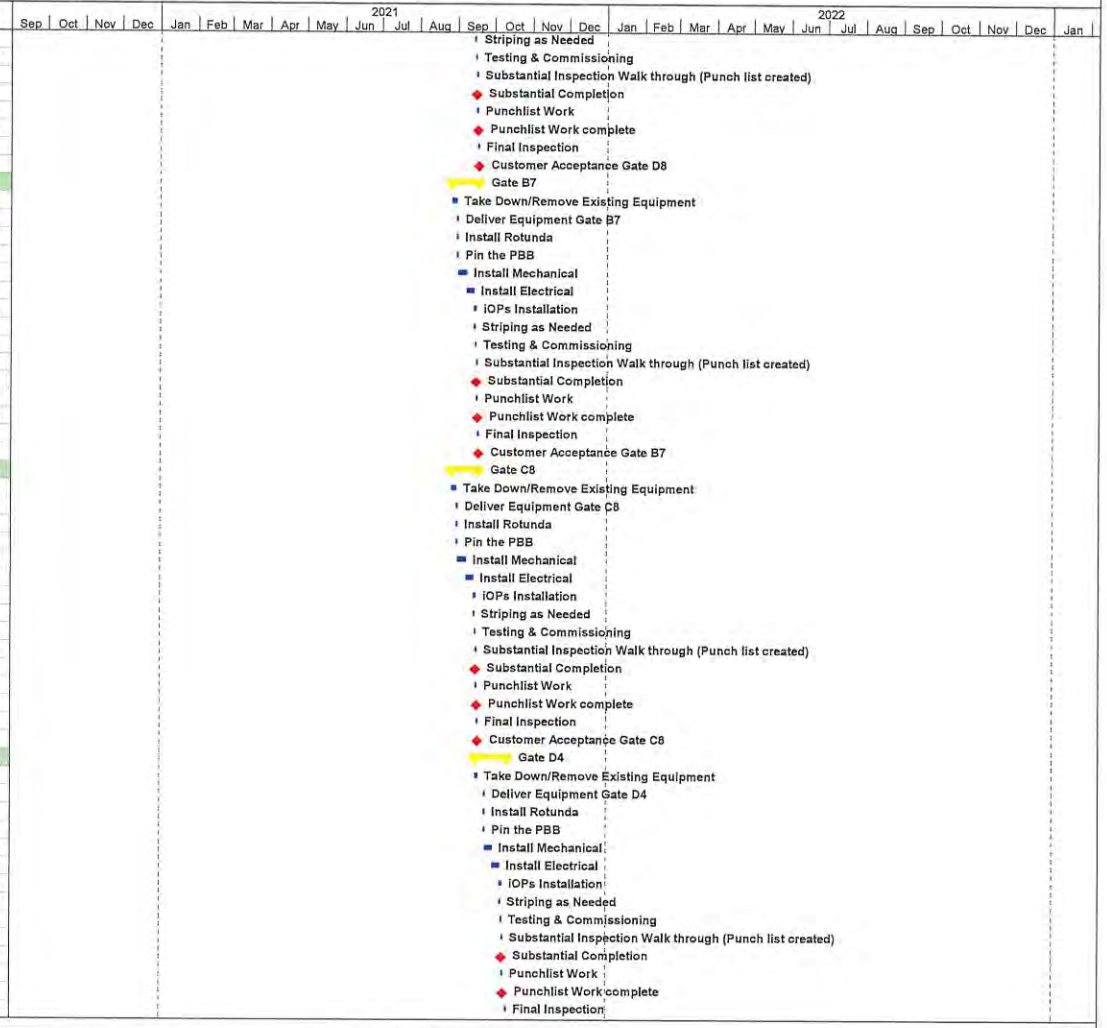
Date: Mon 6/1/20

Task Milestone Summary

Southwest Florida International Airport
Passenger Boarding Bridge (PBB) Replacement Project
Fort Myers, Florida

Project Bid Schedule

ID	Task Name	Duration	Start	Finish
493	Striping as Needed	1 day	Tue 9/14/21	Tue 9/14/21
494	Testing & Commissioning	1 day	Wed 9/15/21	Wed 9/15/21
495	Substantial Inspection Walk through (Punch list created)	1 day	Thu 9/16/21	Thu 9/16/21
496	Substantial Completion	0 days	Thu 9/16/21	Thu 9/16/21
497	Punchlist Work	1 day	Thu 9/16/21	Thu 9/16/21
498	Punchlist Work complete	0 days	Thu 9/16/21	Thu 9/16/21
499	Final Inspection	1 day	Fri 9/17/21	Fri 9/17/21
500	Customer Acceptance Gate D8	0 days	Fri 9/17/21	Fri 9/17/21
501	**Gate B7**	**15 days**	**Fri 8/27/21**	**Fri 9/17/21**
502	Take Down/Remove Existing Equipment	2 days	Fri 8/27/21	Mon 8/30/21
503	Deliver Equipment Gate B7	1 day	Tue 8/31/21	Tue 8/31/21
504	Install Rotunda	1 day	Tue 8/31/21	Tue 8/31/21
505	Pin the PBB	1 day	Tue 8/31/21	Tue 8/31/21
506	Install Mechanical	4 days	Wed 9/1/21	Tue 9/7/21
507	Install Electrical	4 days	Wed 9/8/21	Mon 9/13/21
508	iOPs Installation	2 days	Tue 9/14/21	Wed 9/15/21
509	Striping as Needed	1 day	Tue 9/14/21	Tue 9/14/21
510	Testing & Commissioning	1 day	Wed 9/15/21	Wed 9/15/21
511	Substantial Inspection Walk through (Punch list created)	1 day	Thu 9/16/21	Thu 9/16/21
512	Substantial Completion	0 days	Thu 9/16/21	Thu 9/16/21
513	Punchlist Work	1 day	Thu 9/16/21	Thu 9/16/21
514	Punchlist Work complete	0 days	Thu 9/16/21	Thu 9/16/21
515	Final Inspection	1 day	Fri 9/17/21	Fri 9/17/21
516	Customer Acceptance Gate B7	0 days	Fri 9/17/21	Fri 9/17/21
517	**Gate C8**	**15 days**	**Fri 8/27/21**	**Fri 9/17/21**
518	Take Down/Remove Existing Equipment	2 days	Fri 8/27/21	Mon 8/30/21
519	Deliver Equipment Gate C8	1 day	Tue 8/31/21	Tue 8/31/21
520	Install Rotunda	1 day	Tue 8/31/21	Tue 8/31/21
521	Pin the PBB	1 day	Tue 8/31/21	Tue 8/31/21
522	Install Mechanical	4 days	Wed 9/1/21	Tue 9/7/21
523	Install Electrical	4 days	Wed 9/8/21	Mon 9/13/21
524	iOPs Installation	2 days	Tue 9/14/21	Wed 9/15/21
525	Striping as Needed	1 day	Tue 9/14/21	Tue 9/14/21
526	Testing & Commissioning	1 day	Wed 9/15/21	Wed 9/15/21
527	Substantial Inspection Walk through (Punch list created)	1 day	Thu 9/16/21	Thu 9/16/21
528	Substantial Completion	0 days	Thu 9/16/21	Thu 9/16/21
529	Punchlist Work	1 day	Thu 9/16/21	Thu 9/16/21
530	Punchlist Work complete	0 days	Thu 9/16/21	Thu 9/16/21
531	Final Inspection	1 day	Fri 9/17/21	Fri 9/17/21
532	Customer Acceptance Gate C8	0 days	Fri 9/17/21	Fri 9/17/21
533	**Gate D4**	**18 days**	**Thu 9/16/21**	**Mon 10/11/21**
534	Take Down/Remove Existing Equipment	2 days	Thu 9/16/21	Fri 9/17/21
535	Deliver Equipment Gate D4	1 day	Thu 9/23/21	Thu 9/23/21
536	Install Rotunda	1 day	Thu 9/23/21	Thu 9/23/21
537	Pin the PBB	1 day	Thu 9/23/21	Thu 9/23/21
538	Install Mechanical	4 days	Fri 9/24/21	Wed 9/29/21
539	Install Electrical	4 days	Thu 9/30/21	Tue 10/5/21
540	iOPs Installation	2 days	Wed 10/6/21	Thu 10/7/21
541	Striping as Needed	1 day	Wed 10/6/21	Wed 10/6/21
542	Testing & Commissioning	1 day	Thu 10/7/21	Thu 10/7/21
543	Substantial Inspection Walk through (Punch list created)	1 day	Fri 10/8/21	Fri 10/8/21
544	Substantial Completion	0 days	Fri 10/8/21	Fri 10/8/21
545	Punchlist Work	1 day	Fri 10/8/21	Fri 10/8/21
546	Punchlist Work complete	0 days	Fri 10/8/21	Fri 10/8/21
547	Final Inspection	1 day	Mon 10/11/21	Mon 10/11/21



Date: Mon 6/1/20

Task Milestone Summary

Southwest Florida International Airport
Passenger Boarding Bridge (PBB) Replacement Project
Fort Myers, Florida

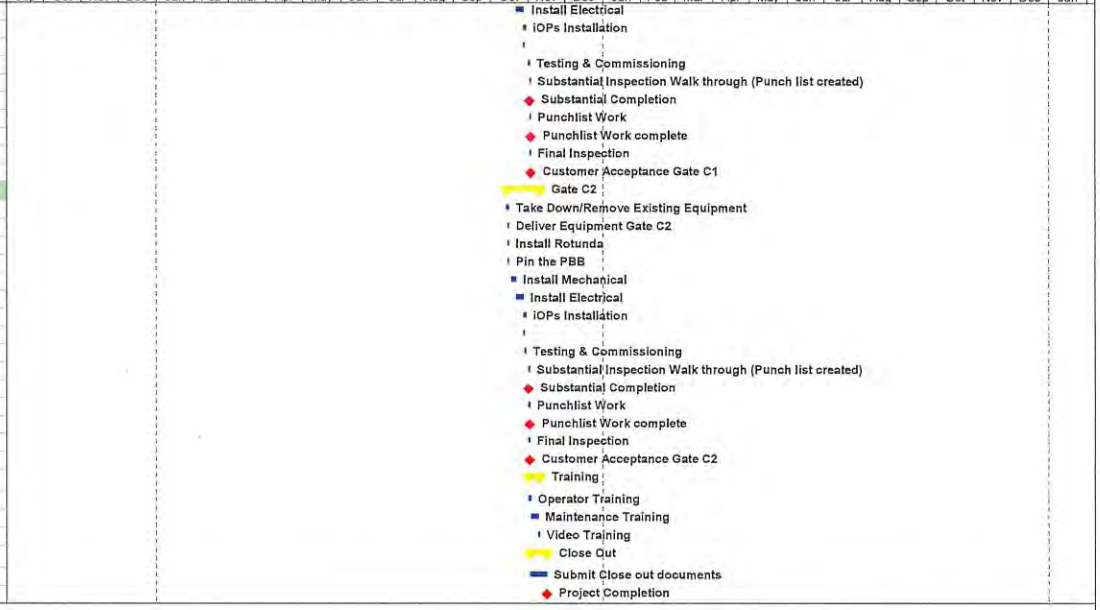
ID	Task Name	Duration	Start	Finish
548	Customer Acceptance Gate D4	0 days	Mon 10/11/21	Mon 10/11/21
549	**Gate B9**	**16 days**	**Mon 9/20/21**	**Mon 10/11/21**
550	Take Down/Remove Existing Equipment	2 days	Mon 9/20/21	Tue 9/21/21
551	Deliver Equipment Gate B9	1 day	Thu 9/23/21	Thu 9/23/21
552	Install Rotunda	1 day	Thu 9/23/21	Thu 9/23/21
553	Pin the PBB	1 day	Thu 9/23/21	Thu 9/23/21
554	Install Mechanical	4 days	Fri 9/24/21	Wed 9/29/21
555	Install Electrical	4 days	Thu 9/30/21	Tue 10/5/21
556	iOPs Installation	2 days	Wed 10/6/21	Thu 10/7/21
557	Striping as Needed	1 day	Wed 10/6/21	Wed 10/6/21
558	Testing & Commissioning	1 day	Thu 10/7/21	Thu 10/7/21
559	Substantial Inspection Walk through (Punch list created)	1 day	Fri 10/8/21	Fri 10/8/21
560	Substantial Completion	0 days	Fri 10/8/21	Fri 10/8/21
561	Punchlist Work	1 day	Fri 10/8/21	Fri 10/8/21
562	Punchlist Work complete	0 days	Fri 10/8/21	Fri 10/8/21
563	Final Inspection	1 day	Mon 10/11/21	Mon 10/11/21
564	Customer Acceptance Gate B9	0 days	Mon 10/11/21	Mon 10/11/21
565	**Gate B8**	**30 days**	**Wed 9/22/21**	**Tue 11/2/21**
566	Take Down/Remove Existing Equipment	2 days	Wed 9/22/21	Thu 9/23/21
567	Deliver Equipment Gate B8	1 day	Thu 9/23/21	Thu 9/23/21
568	Install Rotunda	1 day	Thu 9/23/21	Thu 9/23/21
569	Pin the PBB	1 day	Thu 9/23/21	Thu 9/23/21
570	Install Mechanical	4 days	Fri 9/24/21	Wed 9/29/21
571	Install Electrical	4 days	Thu 9/30/21	Tue 10/5/21
572	iOPs Installation	2 days	Wed 10/6/21	Thu 10/7/21
573	Striping as Needed	1 day	Wed 10/6/21	Wed 10/6/21
574	Testing & Commissioning	1 day	Thu 10/7/21	Thu 10/7/21
575	Substantial Inspection Walk through (Punch list created)	1 day	Fri 10/8/21	Fri 10/8/21
576	Substantial Completion	0 days	Fri 10/8/21	Fri 10/8/21
577	Punchlist Work	1 day	Fri 10/8/21	Fri 10/8/21
578	Punchlist Work complete	0 days	Fri 10/8/21	Fri 10/8/21
579	Final Inspection	1 day	Mon 10/11/21	Mon 10/11/21
580	Customer Acceptance Gate B8	0 days	Mon 10/11/21	Mon 10/11/21
581	**Gate D2**	**17 days**	**Fri 10/8/21**	**Mon 11/1/21**
582	Take Down/Remove Existing Equipment	2 days	Fri 10/8/21	Mon 10/11/21
583	Deliver Equipment Gate D2	1 day	Fri 10/15/21	Fri 10/15/21
584	Install Rotunda	1 day	Fri 10/15/21	Fri 10/15/21
585	Pin the PBB	1 day	Fri 10/15/21	Fri 10/15/21
586	Install Mechanical	4 days	Mon 10/18/21	Thu 10/21/21
587	Install Electrical	4 days	Fri 10/22/21	Wed 10/27/21
588	iOPs Installation	2 days	Thu 10/28/21	Fri 10/29/21
589	Striping as Needed	1 day	Thu 10/28/21	Thu 10/28/21
590	Testing & Commissioning	1 day	Fri 10/29/21	Fri 10/29/21
591	Substantial Inspection Walk through (Punch list created)	1 day	Mon 11/1/21	Mon 11/1/21
592	Substantial Completion	0 days	Mon 11/1/21	Mon 11/1/21
593	Punchlist Work	1 day	Mon 11/1/21	Mon 11/1/21
594	Punchlist Work complete	0 days	Mon 11/1/21	Mon 11/1/21
595	Final Inspection	1 day	Mon 11/1/21	Mon 11/1/21
596	Customer Acceptance Gate D2	0 days	Mon 11/1/21	Mon 11/1/21
597	**Gate C1**	**16 days**	**Tue 10/12/21**	**Tue 11/2/21**
598	Take Down/Remove Existing Equipment	2 days	Tue 10/12/21	Wed 10/13/21
599	Deliver Equipment Gate C1	1 day	Fri 10/15/21	Fri 10/15/21
600	Install Rotunda	1 day	Fri 10/15/21	Fri 10/15/21
601	Pin the PBB	1 day	Fri 10/15/21	Fri 10/15/21
602	Install Mechanical	4 days	Mon 10/18/21	Thu 10/21/21

Date: Mon 6/1/20

Task Milestone Summary

Southwest Florida International Airport
Passenger Boarding Bridge (PBB) Replacement Project
Fort Myers, Florida

ID	Task Name	Duration	Start	Finish
603	Install Electrical	4 days	Fri 10/22/21	Wed 10/27/21
604	iOPs Installation	2 days	Thu 10/28/21	Fri 10/29/21
605	Striping as Needed	1 day	Thu 10/28/21	Thu 10/28/21
606	Testing & Commissioning	1 day	Mon 11/1/21	Mon 11/1/21
607	Substantial Inspection Walk through (Punch list created)	1 day	Tue 11/2/21	Tue 11/2/21
608	Substantial Completion	0 days	Tue 11/2/21	Tue 11/2/21
609	Punchlist Work	1 day	Tue 11/2/21	Tue 11/2/21
610	Punchlist Work complete	0 days	Tue 11/2/21	Tue 11/2/21
611	Final Inspection	1 day	Tue 11/2/21	Tue 11/2/21
612	Customer Acceptance Gate C1	0 days	Tue 11/2/21	Tue 11/2/21
613	**Gate C2**	**19 days**	**Thu 10/14/21**	**Tue 11/9/21**
614	Take Down/Remove Existing Equipment	2 days	Thu 10/14/21	Fri 10/15/21
615	Deliver Equipment Gate C2	1 day	Fri 10/15/21	Fri 10/15/21
616	Install Rotunda	1 day	Fri 10/15/21	Fri 10/15/21
617	Pin the PBB	1 day	Fri 10/15/21	Fri 10/15/21
618	Install Mechanical	4 days	Mon 10/18/21	Thu 10/21/21
619	Install Electrical	4 days	Fri 10/22/21	Wed 10/27/21
620	iOPs Installation	2 days	Thu 10/28/21	Fri 10/29/21
621	Striping as Needed	1 day	Thu 10/28/21	Thu 10/28/21
622	Testing & Commissioning	1 day	Fri 10/29/21	Fri 10/29/21
623	Substantial Inspection Walk through (Punch list created)	1 day	Mon 11/1/21	Mon 11/1/21
624	Substantial Completion	0 days	Mon 11/1/21	Mon 11/1/21
625	Punchlist Work	1 day	Mon 11/1/21	Mon 11/1/21
626	Punchlist Work complete	0 days	Mon 11/1/21	Mon 11/1/21
627	Final Inspection	1 day	Mon 11/1/21	Mon 11/1/21
628	Customer Acceptance Gate C2	0 days	Mon 11/1/21	Mon 11/1/21
629	**Training**	**7 days**	**Mon 11/1/21**	**Tue 11/9/21**
630	Operator Training	2 days	Mon 11/1/21	Tue 11/2/21
631	Maintenance Training	4 days	Wed 11/3/21	Mon 11/8/21
632	Video Training	1 day	Tue 11/9/21	Tue 11/9/21
633	**Close Out**	**10 days**	**Tue 11/2/21**	**Mon 11/15/21**
634	Submit Close out documents	10 days	Tue 11/2/21	Mon 11/15/21
635	Project Completion	0 days	Mon 11/15/21	Mon 11/15/21

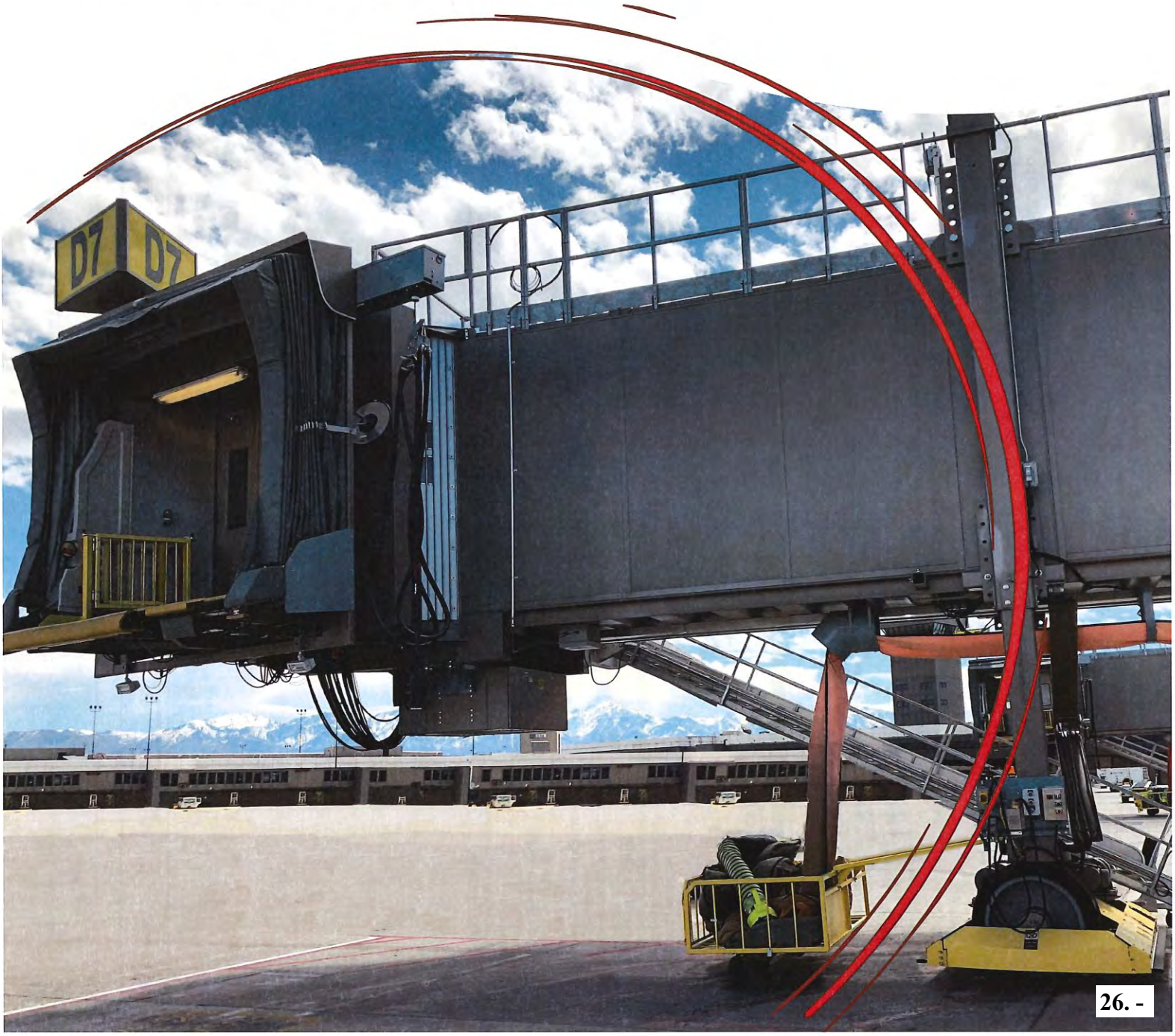


Date: Mon 6/1/20

Task Milestone Summary

Jetway® Glass & Steel Truss Passenger Boarding Bridges

JBT - FOR THE PERFECT TURN



Glass & Steel Truss Bridge Technical Specifications

General Arrangements

The JBT® Glass and Steel Truss Apron Drive Bridges are designed to extend from an elevated terminal departure lounge doorway to the aircraft boarding door enabling passengers to walk between the two protected from atmospheric conditions, aircraft engine blast, and blown dust.

The Apron Drive Bridge consists of the following (in order progressing from the terminal towards the aircraft):

A. Rotunda and Corridor B. Tunnel Sections C. Drive Column

D. Service Door, Landing E. Cab Bubble, Cab, and Aircraft Closure

Models

JBT ® offers a number of Glass and Steel Truss Apron Drive Bridge models. Models can be grouped into two categories:

A. Two-Tunnel B. Three-Tunnel

Bridge models can dock to any commercial jet aircraft in operation today. The elevation of the rotunda (to match the height of the terminal departure doorway) and other factors affect the ability of any one bridge model to most appropriately serve a desired aircraft mix. For this reason, we suggest you discuss this matter with your JBT® Representative.

Bridge models are determined by the measured length of the bridge from the center of the rotunda to the end of the cab spacer at full retraction and full extension. The AT2 46/65 model, for example, is a two tunnel Apron Drive measuring 46 feet at full retraction and 65 feet at full extension.

Two-Tunnel Models:

Model	Fully Extended	Fully Retracted	Travel	Operational Extension*	Operational Retraction*
AT2 41/55	55.000′ (16.764m)	40.104′ (12.224m)	14.496′ (4.418m)	40.236′ (12.264m)	32.302′ (9.846m)
AT2 46/65	65.000′ (19.812m)	45.104′ (13.748m)	19.496′ (5.942m)	50.236′ (15.312m)	37.302′ (11.370m)
AT2 51/75	75.000′ (22.860m)	50.104′ (15.272m)	24.496′ (7.467m)	60.236′ (18.360m)	42.302′ (12.894m)
AT2 56/85	85.000′ (25.908m)	55.104′ (16.796m)	29.496′ (8.990m)	70.236′ (21.408m)	47.302′ (14.418m)
AT2 61/95	95.000′ (28.956m)	60.104′ (18.320m)	34.496′ (10.514m)	80.236′ (24.456m)	52.302′ (15.942m)
AT2 66/105	105.000′ (32.004m)	65.104′ (19.844m)	39.496′ (12.038m)	90.236′ (27.504m)	57.302′ (17.466m)
AT2 72/116	116.000′ (35.357m)	71.104′ (21.673m)	44.496′ (13.562m)	101.236′ (30.857m)	63.302′ (19.294m)
AT2 77/126	126.000′ (38.405m)	76.104′ (23.197m)	49.496′ (15.086m)	111.236′ (33.905m)	68.302′ (20.818m)
AT2 82/136	136.000′ (41.453m)	81.104′ (24.721m)	54.496′ (16.610m)	121.236′ (36.953m)	73.302′ (22.342m)
AT2 88/147	147.000′ (44.806m)	87.104′ (26.549m)	59.496′ (18.134m)	132.236′ (40.306m)	79.302′ (24.171m)

Three-Tunnel Models:

Model	Fully Extended	Fully Retracted	Travel	Operational Extension*	Operational Retraction*
AT3 42/70	70.629′ (21.528m)	41.015′ (12.501m)	28.614′ (8.722m)	55.766′ (16.997m)	33.713′ (10.276m)
AT3 47/85	85.629′ (26.100m)	46.015′ (14.025m)	38.614′ (11.770m)	70.766′ (21.569m)	38.713′ (11.800m)
AT3 52/100	100.629′ (30.672m)	51.015′ (15.549m)	48.614′ (14.818m)	85.766′ (26.141m)	43.713′ (13.324m)
AT3 58/116	116.629′ (35.549m)	57.015′ (17.378m)	58.614′ (17.866m)	101.766′ (31.018m)	49.713′ (15.152m)
AT3 61/127	127.129′ (38.749m)	60.515′ (18.445m)	65.614′ (19.999m)	112.266′ (34.219m)	53.213′ (16.219m)
AT3 65/133	133.629′ (40.730m)	64.015′ (19.512m)	68.614′ (20.914m)	118.766′ (36.200m)	56.713′ (17.286m)
AT3 68/144	144.129′ (43.931m)	67.515′ (20.579m)	75.614′ (23.047m)	129.266′ (39.400m)	60.213′ (18.353m)
AT3 72/150	150.629′ (45.912m)	71.015′ (21.645m)	78.614′ (23.962m)	135.766′ (41.381m)	63.713′ (19.420m)

*Dimensions are measured from the center of the rotunda to the center of the cab pivot.

Design Parameters

Dimensional Characteristics: Minimum dimensions for all two-tunnel and three-tunnel Apron Drive Bridges:

Rotunda Interface	Width	4′4″	(1.32m)
	Height	7′7″	(2.31m)
Tunnels (Minimum "A" tunnel only)			
A. Floor Width		4′10″	(1.47m)
B. Interior Height		7′0″	(2.13m)
C. Interior Tunnel Ramp	Width	4′5″	(1.35m)
D. Interior Cab	Width	10′2″	(3.10m)
Cab Weather Door	Width	3′7″	(1.09m)
	Height	7′8″	(2.34m)

Service Door, Landing, and Stairs

A service door, landing, and stairs are situated at the end of the bridge to provide apron access. The right hand side of the cab bubble is standard. Other locations are available.

A. Right-hand side of cab bubble (standard)
B. Left-hand side of cab bubble
C. Right-hand side of outboard telescoping tunnel aft of cab bubble
D. Left-hand side of outboard telescoping tunnel aft of cab bubble

Self-Adjusting Stair Risers:			
Minimum Tread	Width	2′4″	(0.71m)
Minimum Tread	Depth	9.5″	(0.24m)
Clear Width Between Handrails:		2′8″	(0.81m)
Door Opening	Width	2′6″	(0.76m)
	Height	6′7″	(2.01m)
Landing Illumination		Outdoor Rated	

Operational Characteristics

Rotunda swing	175° (87.5° cw/87.5° ccw of centerline)	
Cab rotation	125° (92.5° cw/32.5° ccw) (optional 185° available)	
Cab rotation speed	145° /min.	
Vertical rate of travel/lift	3.5′ /min.	(1.09m /min.)
Horizontal rate of travel	0 to 90′ /min.	(0-27m/min.)

Environmental Characteristics

Bridge operations at temperatures from -40°F (-40°C) to 125°F (52°C) (May require selection of certain optional equipment.)

Interior Finish Characteristics (Standard)

Wall: Laminated phenolic plastic panels — 5'0" (1.52m) wide

Ceiling: Aluminum Planks — 0.032" (0.8mm) thick

Tunnel Floors: Carpeted and rubber flooring

Cab Floor: Ribbed Rubber — 0.188" (4.8mm) thick

Sub Floor: Marine Grade Plywood—0.75" (19mm) thick

Insulation: 1" (25mm) fiberglass above the ceiling (additional insulation available)

Interior Finish Options

- Steel Subfloors
- Aluminum Cab Floor
- Full Insulation R-14
- Floor Coverings

Exterior Finish Options

- Steel Panels
- Aluminum Panels
- Glass
- Galvannealed Panels
- 3 coat zinc prime system

Painting

Base: One coat, Sherwin Williams High Build Epoxy Primer 6 to 10 mils dry film thickness (DFT)

Finish: One coat, Sherwin Williams High Polane Polyurethane topcoat 2 to 3 mils DFT

Minimum total DFT: 8 mils

Electrical Characteristics/Power Requirements

Operates on 480VAC, 3-phase, 60Hz, 4 wire, 380VAC, 3-phase, 50Hz, 5 wire, and 600VAC, 3-phase, 60Hz, 4 wire. 480VAC and 600VAC transformed down to 240V/120VAC for lighting and control circuits. 380VAC systems use 240VAC for lighting and control circuits.

Interior Lighting: 6" x 4' Low Profile LED Light.

Exterior Lighting: Three floodlights illuminate the apron and wheel bogie areas. A sealed dual fluorescent tube 4'0" fixture illuminates the cab/aircraft interface area.

Communications

Quantity of 3, CAT-6, 4-pair, 24 AWG communication cables with one routed to the Phone J-Box located on the left side of the control console and a 12-pair, 22 AWG, twisted, shielded cable, all standard on a JBT® Passenger Boarding Bridge. Other communication cables installed as required.

Telephone, Ethernet, and Digital Output capable.

Additional Features

- Touch screen or push button control
- Point N' Go™ Steering
- PLC Control Based
- Fully welded roof seams
- Open Truss design (No wall board)
- Auto Positioning

Codes and Standards

The Glass and Steel Truss Apron Drive Bridge is designed to meet or exceed codes and regulations as adopted by the passenger boarding bridge industry. The JBT® Passenger Boarding Bridges have been ETL & cETL listed by a third party testing facility to meet NFPA 415, ANSI/UL-325, CAN/CSA C22.2 No. 247 and CE.

Structural:
American Institute of Steel Construction (AISC) and American Welding Society (AWS).

Material:

Structural Steel Plate and Shapes	ASTM-A36
T-1 Steel	ASTM-A514
Hinge Pins	AISI-C1018
Steel Tube	ASTM-A500
Bolts-Standard	SAE J429, Grade 5
Steel Pipe	ASTM-A53-GR.B
Bolts-Hi Strength	SAE J429, Grade 8
Steel Sheet	ASTM-A1011

Code Compliance: SAE, ASME, NFPA, AIA

JBT® is the leading provider of solutions to comfortably and safely transfer passengers between terminal building and aircraft.

Each Jetway® Glass and Steel Truss Apron Drive Bridge is customized and manufactured per our customer's specifications.

www.jbtc.com/aerotech

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Ogden, Utah 84401
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Rev.6. April 2019

Brochure Reference # 506

intertek
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AUTHORIZATION TO MARK

This authorizes the application of the Certification Mark(s) shown below to the models described in the Product(s) Covered section when made in accordance with the conditions set forth in the Certification Agreement and Listing Report. This authorization also applies to multiple listee model(s) identified on the correlation page of the Listing Report.

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Applicant:	John Bean Technologies Corporation	**Manufacturer:**	John Bean Technologies Corporation
Address:	1805 W. 2550 S. Ogden, UT 84401	**Address:**	3100 S. Pennsylvania Ave. Ogden, UT 84401
Country:	USA	**Country:**	USA
Contact:	Preston Murray Gordon Ferris	**Contact:**	Preston Murray Gordon Ferris
Phone:	(801) 629-3311 (801) 629-3267	**Phone:**	(801) 629-3311 (801) 629-3267
FAX:	(801) 629-3288	**FAX:**	(801) 629-3288
Email:	Preston.murray@jbtc.com Gordon.ferris@jbtc.com	**Email:**	Preston.murray@jbtc.com Gordon.ferris@jbtc.com

Party Authorized To Apply Mark: Same as Manufacturer
Report Issuing Office: Dallas, TX

Control Number: 70332 **Authorized by:** Jade Vladeson
for C. Matthew Snyder, Certification Manager

C ETL LISTED US
Intertek

This document supersedes all previous Authorizations to Mark for the noted Report Number.

Intertek Testing Services NA Inc.
545 East Algonquin Road, Arlington Heights, IL 60005
Telephone 800-345-3851 or 847-439-5667 Fax 312-283-1672

Standard(s):	Door, Drapery, Gate, Louver, And Window Operators And Systems [ANSI/CAN/UL 325:2017 Ed.7] CSA C22.2#247 Issued: 2014/07/01 Operators and Systems of Doors, Gates, Draperies, and Louvres
Product:	Apron-style Passenger Boarding Bridges
Models:	A2, A3, AT2, AT3

AUTHORIZATION TO MARK

This authorizes the application of the Certification Mark(s) shown below to the models described in the Product(s) Covered section when made in accordance with the conditions set forth in the Certification Agreement and Listing Report. This authorization also applies to multiple listee model(s) identified on the correlation page of the Listing Report.

This document is the property of Intertek Testing Services and is not transferable. The certification mark(s) may be applied only at the location of the Party Authorized To Apply Mark.

Applicant:	John Bean Technologies Corporation	**Manufacturer:**	John Bean Technologies Corporation
Address:	3100 Pennsylvania Ave Ogden, Utah 84401	**Address:**	3100 Pennsylvania Ave Ogden, Utah 84401
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Contact:	Gordon Ferris	**Contact:**	Gordon Ferris
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FAX:	(801) 629-3288	**FAX:**	(801) 629-3288
Email:	gordon.ferris@jbtc.com	**Email:**	gordon.ferris@jbtc.com

Party Authorized To Apply Mark: Same as Manufacturer
Report Issuing Office: Dallas, TX

Control Number: 70332 **Authorized by:** Edward Kelley Jr

for Dean Davidson, Certification Manager

C ETL LISTED US
Intertek

This document supersedes all previous Authorizations to Mark for the noted Report Number.

Intertek Testing Services NA Inc.
545 East Algonquin Road, Arlington Heights, IL 60005
Telephone 800-345-3851 or 847-439-5667 Fax 312-283-1672

Standard(s):	NFPA 70, Issued: 2013/08/21 Version: 2014 National Electrical Code; Err. 1: 2013, Err. 2: 2013, Err. 3: 2014, Err. 4: 2014 CSA C22.2#0, Issued: 2010/09/01 (R2015) General Requirements - Canadian Electrical Code, Part II; Gen. Inst. No. 1: 2011, Gen. Inst. No. 2:2014
Product:	Passenger Boarding Walkways
Brand Name:	Jetway® and Jetwalk®
Models:	J-25-BB (J-XX--YY) XX- represents centerline length in ft YY- represents the width and height (alphanumeric code)

AUTHORIZATION TO MARK

This authorizes the application of the Certification Mark(s) shown below to the models described in the Product(s) Covered section when made in accordance with the conditions set forth in the Certification Agreement and Listing Report. This authorization also applies to multiple listee model(s) identified on the correlation page of the Listing Report.

This document is the property of Intertek Testing Services and is not transferable. The certification mark(s) may be applied only at the location of the Party Authorized To Apply Mark.

Applicant:	JBT Corp dba JBT AeroTech, Jetway Systems	**Manufacturer:**	JBT Corp dba JBT AeroTech, Jetway Systems
Address:	3100 South Pennsylvania Avenue Ogden, UT 84401	**Address:**	3100 South Pennsylvania Avenue Ogden, UT 84401
Country:	USA	**Country:**	USA
Contact:	Mike Lewis	**Contact:**	Mike Lewis
Phone:	801-629-6600	**Phone:**	801-629-6600
FAX:	801-629-3288	**FAX:**	801-629-3288
Email:	mike.lewis@jbtc.com	**Email:**	mike.lewis@jbtc.com

Party Authorized To Apply Mark: Same as Manufacturer
Report Issuing Office: Portland, OR

Control Number: 70332 **Authorized by:** *for* Thomas J. Patterson, Certification Manager

C ETL LISTED US
Intertek

This document supersedes all previous Authorizations to Mark for the noted Report Number.

Intertek Testing Services NA Inc.
545 East Algonquin Road, Arlington Heights, IL 60005
Telephone 800-345-3851 or 847-439-5667 Fax 312-283-1672

Standard(s):	UL 508A Issued: 2013/12/20 Ed: 2 Rev: 2014/01/13 Industrial Control Panels CSA C22.2#14 Issued: 2013/03/01 Ed: 12 Industrial Control Equipment
Product:	Industrial Control Panels For General Use Industrial Control Panels For Industrial Machinery
Models:	Industrial Control Panels

Load Sheet Information

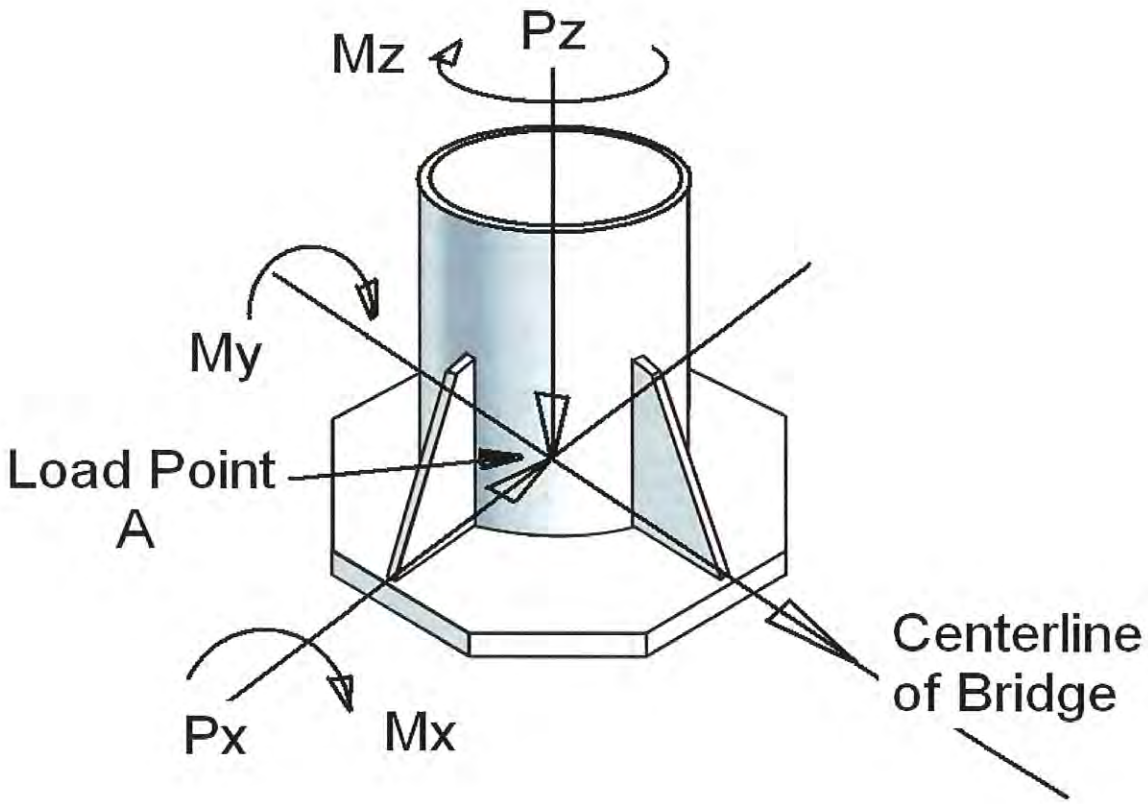
LS 5647	5/28/20	AT3 61/127 125R truss/steel clad	RSW (SW FL Int'l, Ft. Myers, FL), Gate B1, B3
LS 5648	5/28/20	AT3 58/116 125R truss/steel clad	RSW (SW FL Int'l, Ft. Myers, FL), Gate B2, B4, B6, B7, B8, B9, C3, C6, C7, C9, D1, D3, D5, D6
LS 5649	5/28/20	AT3 72/150 125R truss/steel clad	RSW (SW FL Int'l, Ft. Myers, FL), Gate B5
LS 5650	5/28/20	AT3 61/127 125R truss/steel clad ,JT-41-BB truss/steel w/RTU	RSW (SW FL Int'l, Ft. Myers, FL), Gate C1
LS 5651	5/28/20	AT3 68/144 125R truss/steel clad ,JT-41-BB truss/steel w/RTU	RSW (SW FL Int'l, Ft. Myers, FL), Gate C2
LS 5652	5/28/20	AT3 61/127 125R truss/steel clad	RSW (SW FL Int'l, Ft. Myers, FL), Gate C4, C5, D4, D7, D8
LS 5653	5/28/20	AT3 65/133 125R truss/steel clad	RSW (SW FL Int'l, Ft. Myers, FL), Gate C8, D10
LS 5654	5/28/20	AT3 68/144 125R truss/steel clad	RSW (SW FL Int'l, Ft. Myers, FL), Gate D2

JBT AEROTECH - JETWAY SYSTEMS

FOUNDATION LOADS FOR PASSENGER BOARDING BRIDGE

By: SKL 5/28/2020 JOB: RSW (SW FL Int'l, Ft. Myers, FL), Gate B1, B3 RQ: 3757 LS#: 5647 1 of 3

Model AT3-61/127 Apron Drive



Note: Px, Py, Mx, and My can be either (+) or (-)
Program Revision 1.8

Jetway Systems makes no representation nor provides any guarantee as to the suitability or conditions of any foundation that is intended to be used to support the passenger boarding bridge(s)

LOAD ANALYSIS FOR APRON DRIVE
ASSUMPTIONS

Description	
Code:	ASCE 7-10
Risk Category	II

Wind	
Analysis Method	Velocity pressure per 27.3.2
Exposure Category	C
Directionality Factor (K_d)	0.85
Topographic Factor (K_{zt})	1
Velocity pressure exposure coefficient (K_z)	0.9
Wind Pressure (Operational)	12.5 PSF (80 mph)
Wind Pressure (Stowed)	46.5 PSF (154 mph)

Seismic	
Seismic importance factor (Ie)	1
Analysis method	Equivalent lateral force (12.8)
Sds	0.058
Response modification factor	2

General Assumptions

1. Wind and seismic forces are applied perpendicular to the walkway.

2. Loads can be positive or negative.

3. The extended condition is when the bridge is operational.
   Higher winds than this and the airport closes and the bridges are retracted and stowed.
   The higher wind load is not applicable when the bridge is in service.

4. PBBs are considered an inverted pendulum structure because more than 50% of the weight of the structure is at the top of the column (ASCE 7-10, Section 11.2).
   Per ASCE 7-10, Table 15.4-2 (page 143), R=2 for inverted pendulum type structures.

STEEL SIDING

LOAD ANALYSIS FOR APRON DRIVE
(SPECIAL LOADS)
MODEL: AT3-61/127

HEIGHT FROM APRON TO ROTUNDA FLOOR (FT) 13.08

LOADING CONDITIONS AT ROTUNDA COLUMN BASE	LOAD POINT A Pz KIPS	Mx FT-KIPS	My FT-KIPS	Px KIPS	Mz FT-KIPS
EXTENDED (OPERATIONAL)					
1. DEAD LOAD (SEE NOTE)	30.0	74.7	65.9	0.0	0.0
2. FLOOR LOAD (40 PSF)	9.0	30.1	13.9	0.0	0.0
3. ROOF LOAD (25 PSF)	7.4	25.7	4.8	0.0	0.0
4. ROOF LOAD/2	3.7	12.8	2.4	0.0	0.0
5. WIND LOAD (12.5 PSF)	0.0	0.0	284.6	5.3	0.0
6. SEISMIC LOAD (Sds = 0.058)	0.0	0.0	49.0	0.8	0.0
RETRACTED (STOWED)					
7. DEAD LOAD (SEE NOTE)	10.1	-14.9	65.9	0.0	0.0
8. ROOF LOAD (25 PSF)	-0.2	-8.4	4.8	0.0	0.0
9. WIND LOAD (46.5 PSF)	0.0	0.0	435.7	2.7	0.0
ASD Load Combinations for Foundation Design per ASCE 7-10					
1. D	30.0	74.7	65.9	0.0	0.0
2. D + FL	39.0	104.8	79.8	0.0	0.0
3. D + RL	37.4	100.4	70.7	0.0	0.0
4. D + 0.75FL + 0.75RL	42.3	116.5	79.9	0.0	0.0
5a. D + 0.6W	30.0	74.7	327.3	3.2	0.0
5b. D + 0.7SL	30.0	74.7	100.3	0.6	0.0
6a. D + 0.75FL + 0.75*0.6W + 0.75RL	42.3	116.5	208.0	2.4	0.0
6b. D + 0.75FL + 0.75*0.7SL + 0.75RL	42.3	116.5	105.7	0.4	0.0
7. 0.6D + 0.6W	18.0	44.8	210.3	3.2	0.0
8. 0.6D + 0.7SL	18.0	44.8	73.9	0.6	0.0

NOTE: Px, Mx AND My CAN BE EITHER (+) OR (-)

NOTE: Additional Dead Loads: A Tun = 50 Lbs/ft; B Tun = 50 Lbs/ft; C Tun = 50 Lbs/ft

**HURRICANE TIE DOWN LOAD = 41.1 KIPS - DOUBLE STRAP REQUIRED

**ROTUNDA REQUIRES ROCKET FINS

** MAX TIRE LOAD EXTENDED = 108.8 KIPS MAX TIRE LOAD RETRACTED = 120.3 KIPS

JOB DESCRIPTION: RSW (SW FL Int'l, Ft. Myers, FL), Gate B1, B3 5/28/2020

CONCENTRATED LOADS

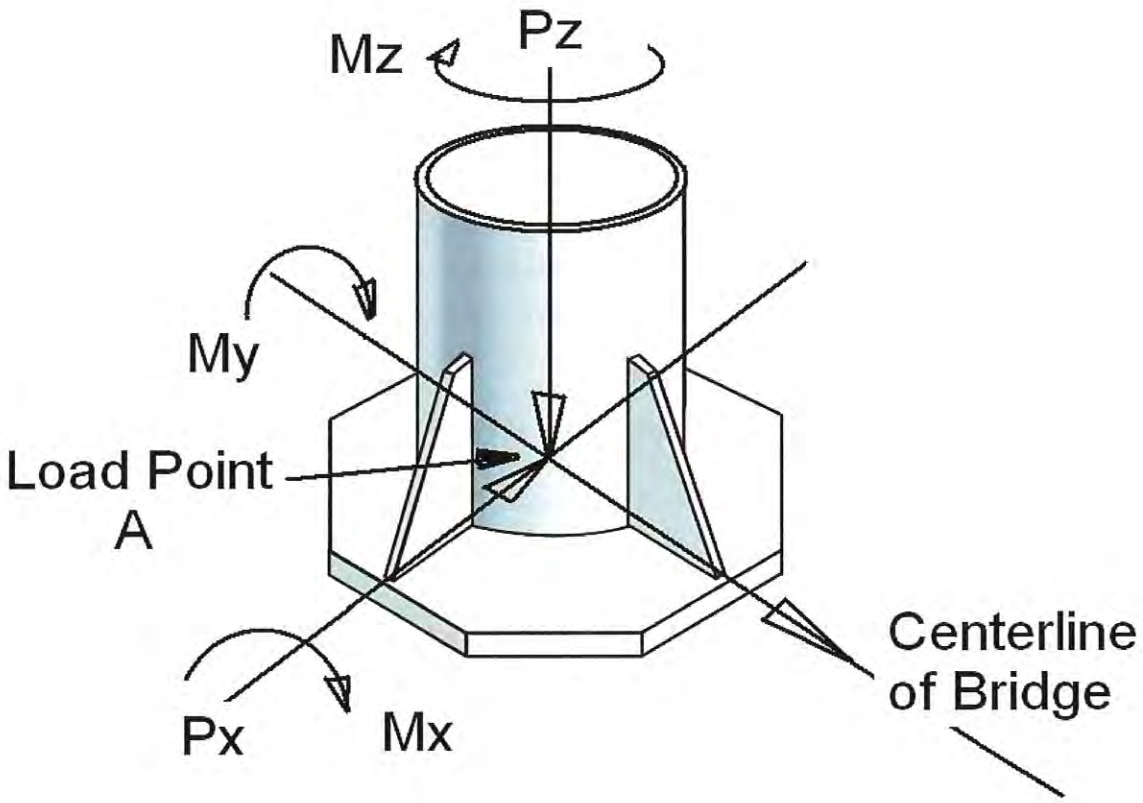
LOAD (KIPS)	X FT	Y FT	Z FT	
8.80	0.00	-11.50	-3.00	90T POU Hobart PCA
3.10	0.00	5.00	-3.00	180kva Hobart Power Coil
1.50	-9.00	13.00	0.00	Bag-slide
0.60	4.00	5.00	10.00	Cable Hoist

JBT AEROTECH - JETWAY SYSTEMS

FOUNDATION LOADS FOR PASSENGER BOARDING BRIDGE

By: SKL 5/28/2020 JOB: RSW, Gate B2, B4, B6, B7, B8, B9, C3, C6, C7, C9, D1, D3, D5, D6 RQ: 3757 LS#: 5648

Model AT3-58/116 Apron Drive



Note: Px, Py, Mx, and My can be either (+) or (-)
Program Revision 1.8

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LOAD ANALYSIS FOR APRON DRIVE
ASSUMPTIONS

Description	
Code:	ASCE 7-10
Risk Category	II

Wind	
Analysis Method	Velocity pressure per 27.3.2
Exposure Category	C
Directionality Factor (K_d)	0.85
Topographic Factor (K_{zt})	1
Velocity pressure exposure coefficient (K_z)	0.9
Wind Pressure (Operational)	12.5 PSF (80 mph)
Wind Pressure (Stowed)	46.5 PSF (154 mph)

Seismic	
Seismic importance factor (Ie)	1
Analysis method	Equivalent lateral force (12.8)
Sds	0.058
Response modification factor	2

General Assumptions

1. Wind and seismic forces are applied perpendicular to the walkway.

2. Loads can be positive or negative.

3. The extended condition is when the bridge is operational.
   Higher winds than this and the airport closes and the bridges are retracted and stowed.
   The higher wind load is not applicable when the bridge is in service.

4. PBBs are considered an inverted pendulum structure because more than 50% of the weight of the structure is at the top of the column (ASCE 7-10, Section 11.2).
   Per ASCE 7-10, Table 15.4-2 (page 143), R=2 for inverted pendulum type structures.

STEEL SIDING

LOAD ANALYSIS FOR APRON DRIVE
(SPECIAL LOADS)
MODEL: AT3-58/116

HEIGHT FROM APRON TO ROTUNDA FLOOR (FT) 13.17

LOADING CONDITIONS AT ROTUNDA COLUMN BASE	Pz KIPS	Mx FT-KIPS	LOAD POINT A My FT-KIPS	Px KIPS	Mz FT-KIPS
EXTENDED (OPERATIONAL)					
1. DEAD LOAD (SEE NOTE)	29.1	70.5	65.9	0.0	0.0
2. FLOOR LOAD (40 PSF)	8.6	28.3	13.9	0.0	0.0
3. ROOF LOAD (25 PSF)	7.1	24.2	4.8	0.0	0.0
4. ROOF LOAD/2	3.5	12.1	2.4	0.0	0.0
5. WIND LOAD (12.5 PSF)	0.0	0.0	263.1	5.1	0.0
6. SEISMIC LOAD (Sds = 0.058)	0.0	0.0	46.2	0.8	0.0
RETRACTED (STOWED)					
7. DEAD LOAD (SEE NOTE)	13.6	0.9	65.9	0.0	0.0
8. ROOF LOAD (25 PSF)	0.7	-4.3	4.8	0.0	0.0
9. WIND LOAD (46.5 PSF)	0.0	0.0	420.5	4.3	0.0
ASD Load Combinations for Foundation Design per ASCE 7-10					
1. D	29.1	70.5	65.9	0.0	0.0
2. D + FL	37.7	98.8	79.8	0.0	0.0
3. D + RL	36.1	94.7	70.7	0.0	0.0
4. D + 0.75FL + 0.75RL	40.8	109.9	79.9	0.0	0.0
5a. D + 0.6W	29.1	70.5	318.2	3.0	0.0
5b. D + 0.7SL	29.1	70.5	98.3	0.5	0.0
6a. D + 0.75FL + 0.75*0.6W + 0.75RL	40.8	109.9	198.3	2.3	0.0
6b. D + 0.75FL + 0.75*0.7SL + 0.75RL	40.8	109.9	104.2	0.4	0.0
7. 0.6D + 0.6W	17.4	42.3	197.4	3.0	0.0
8. 0.6D + 0.7SL	17.4	42.3	71.9	0.5	0.0

NOTE: Px, Mx AND My CAN BE EITHER (+) OR (-)

NOTE: Additional Dead Loads: A Tun = 50 Lbs/ft; B Tun = 50 Lbs/ft; C Tun = 50 Lbs/ft

**HURRICANE TIE DOWN LOAD = 36.5 KIPS - DOUBLE STRAP REQUIRED

**ROTUNDA REQUIRES ROCKET FINS

** MAX TIRE LOAD EXTENDED = 100.7 KIPS MAX TIRE LOAD RETRACTED = 107.6 KIPS

JOB DESCRIPTION: RSW, Gate B2, B4, B6, B7, B8, B9, C3, C6, C7, C9, D1, D3, D5, D6 5/28/2020

CONCENTRATED LOADS

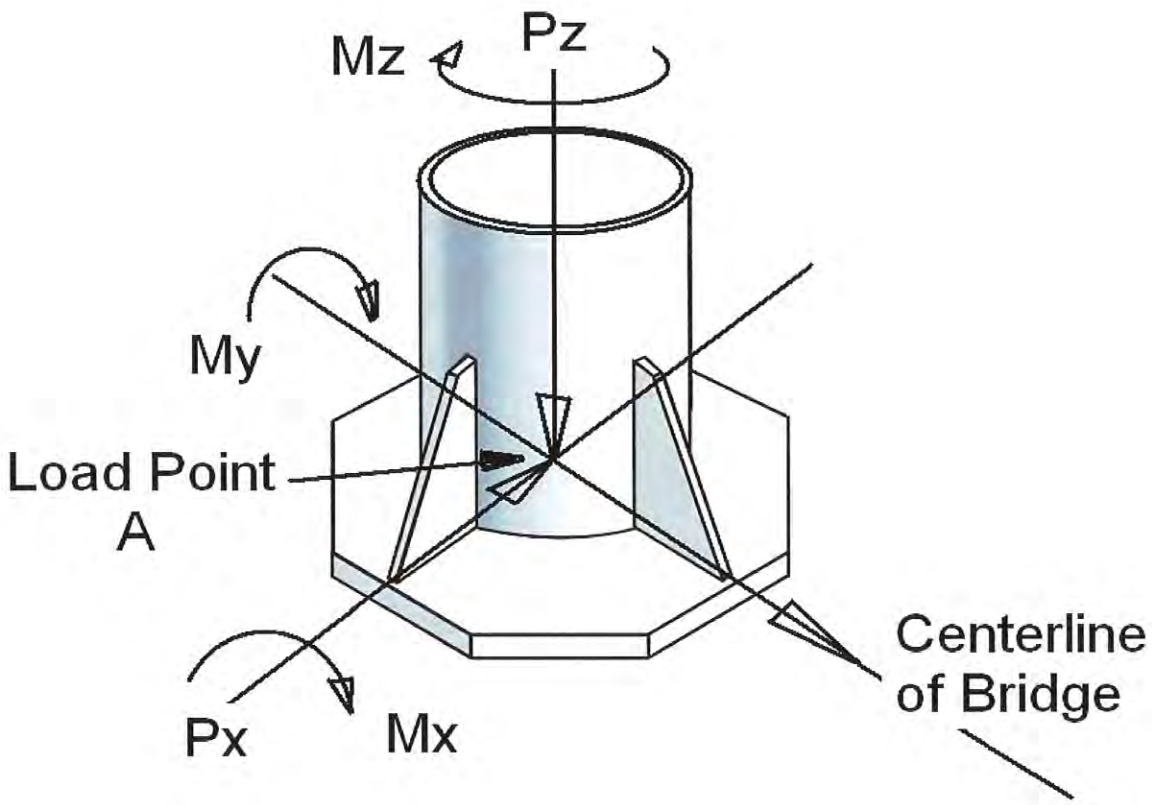
LOAD (KIPS)	X FT	Y FT	Z FT	
7.00	0.00	-11.40	-3.00	45T POU Hobart PCA
3.10	0.00	5.00	-3.00	90kva Hobart Power Coil
1.50	-9.00	13.00	0.00	Bag-slide
0.60	4.00	5.00	10.00	Cable Hoist

JBT AEROTECH - JETWAY SYSTEMS

FOUNDATION LOADS FOR PASSENGER BOARDING BRIDGE

By: SKL 5/28/2020 JOB: RSW (SW FL Int'l, Ft. Myers, FL), Gate B5 RQ: 3757 LS#: 5649

Model AT3-72/150 Apron Drive



Note: Px, Py, Mx, and My can be either (+) or (-)
Program Revision 1.8

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LOAD ANALYSIS FOR APRON DRIVE
ASSUMPTIONS

Description	
Code:	ASCE 7-10
Risk Category	II

Wind	
Analysis Method	Velocity pressure per 27.3.2
Exposure Category	C
Directionality Factor (K_d)	0.85
Topographic Factor (K_{zt})	1
Velocity pressure exposure coefficient (K_z)	0.9
Wind Pressure (Operational)	12.5 PSF (80 mph)
Wind Pressure (Stowed)	46.5 PSF (154 mph)

Seismic	
Seismic importance factor (Ie)	1
Analysis method	Equivalent lateral force (12.8)
Sds	0.058
Response modification factor	2

General Assumptions

1. Wind and seismic forces are applied perpendicular to the walkway.

2. Loads can be positive or negative.

3. The extended condition is when the bridge is operational.
   Higher winds than this and the airport closes and the bridges are retracted and stowed.
   The higher wind load is not applicable when the bridge is in service.

4. PBBs are considered an inverted pendulum structure because more than 50% of the weight of the structure is at the top of the column (ASCE 7-10, Section 11.2).
   Per ASCE 7-10, Table 15.4-2 (page 143), R=2 for inverted pendulum type structures.

STEEL SIDING

LOAD ANALYSIS FOR APRON DRIVE
(SPECIAL LOADS)
MODEL: AT3-72/150

HEIGHT FROM APRON TO ROTUNDA FLOOR (FT) 13.09

LOADING CONDITIONS AT ROTUNDA COLUMN BASE	LOAD POINT A Pz KIPS	Mx FT-KIPS	My FT-KIPS	Px KIPS	Mz FT-KIPS
EXTENDED (OPERATIONAL)					
1. DEAD LOAD (SEE NOTE)	33.4	90.1	65.9	0.0	0.0
2. FLOOR LOAD (40 PSF)	10.2	35.7	13.9	0.0	0.0
3. ROOF LOAD (25 PSF)	8.4	30.2	4.8	0.0	0.0
4. ROOF LOAD/2	4.2	15.1	2.4	0.0	0.0
5. WIND LOAD (12.5 PSF)	0.0	0.0	335.3	6.1	0.0
6. SEISMIC LOAD (Sds = 0.058)	0.0	0.0	55.9	0.9	0.0
RETRACTED (STOWED)					
7. DEAD LOAD (SEE NOTE)	9.8	-15.9	65.9	0.0	0.0
8. ROOF LOAD (25 PSF)	-0.2	-8.6	4.8	0.0	0.0
9. WIND LOAD (46.5 PSF)	0.0	0.0	496.2	2.7	0.0
ASD Load Combinations for Foundation Design per ASCE 7-10					
1. D	33.4	90.1	65.9	0.0	0.0
2. D + FL	43.7	125.9	79.8	0.0	0.0
3. D + RL	41.8	120.3	70.7	0.0	0.0
4. D + 0.75FL + 0.75RL	47.4	139.6	79.9	0.0	0.0
5a. D + 0.6W	33.4	90.1	363.7	3.6	0.0
5b. D + 0.7SL	33.4	90.1	105.0	0.6	0.0
6a. D + 0.75FL + 0.75*0.6W + 0.75RL	47.4	139.6	230.8	2.7	0.0
6b. D + 0.75FL + 0.75*0.7SL + 0.75RL	47.4	139.6	109.2	0.5	0.0
7. 0.6D + 0.6W	20.0	54.1	240.7	3.6	0.0
8. 0.6D + 0.7SL	20.0	54.1	78.7	0.6	0.0

NOTE: Px, Mx AND My CAN BE EITHER (+) OR (-)

NOTE: Additional Dead Loads: A Tun = 50 Lbs/ft; B Tun = 50 Lbs/ft; C Tun = 50 Lbs/ft

**HURRICANE TIE DOWN LOAD = 49.5 KIPS - DOUBLE STRAP REQUIRED

**ROTUNDA REQUIRES ROCKET FINS

** MAX TIRE LOAD EXTENDED = 124.1 KIPS MAX TIRE LOAD RETRACTED = 137.3 KIPS

JOB DESCRIPTION: RSW (SW FL Int'l, Ft. Myers, FL), Gate B5 5/28/2020

CONCENTRATED LOADS

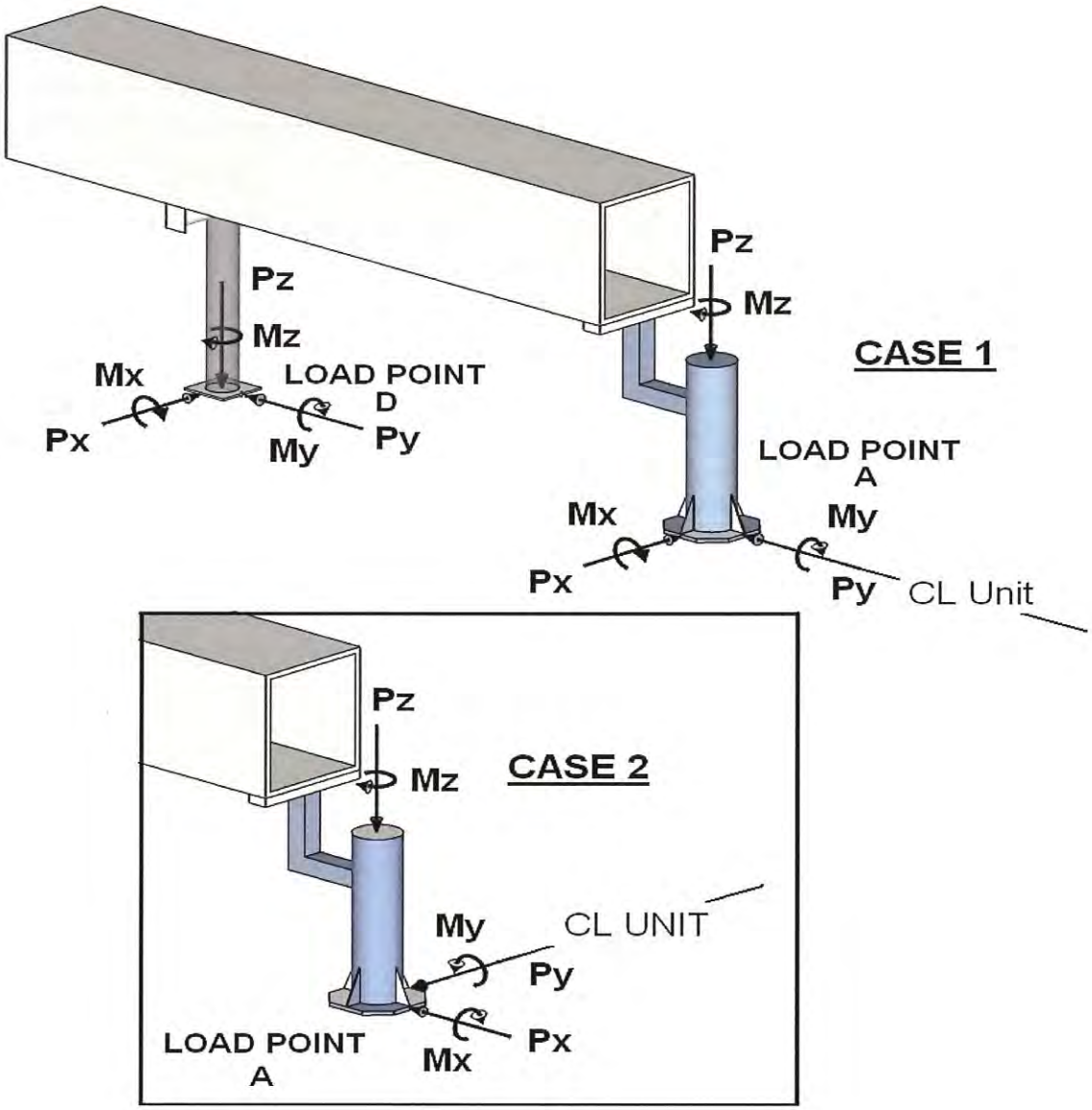
LOAD (KIPS)	X FT	Y FT	Z FT	
8.80	0.00	-11.50	-3.00	90T POU Hobart PCA
3.10	0.00	5.00	-3.00	180kva Hobart Power Coil
1.50	-9.00	13.00	0.00	Bag-slide
0.60	4.00	5.00	10.00	Cable Hoist

JBT AEROTECH - JETWAY SYSTEMS

FOUNDATION LOADS FOR PASSENGER BOARDING BRIDGE

By: SKL 5/28/2020 JOB: RSW (SW FL Int'l, Ft. Myers, FL), Gate C1 RQ: 3757 LS#: 5650

Model AT3-61/127 With 41 (FT) Walkway



Note: Px, Py, Mx, and My can be either (+) or (-)
Program Revision 1.8

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LOAD ANALYSIS FOR APRON DRIVE
ASSUMPTIONS

Description	
Code:	ASCE 7-10
Risk Category	II

Wind	
Analysis Method	Velocity pressure per 27.3.2
Exposure Category	C
Directionality Factor (K_d)	0.85
Topographic Factor (K_{zt})	1
Velocity pressure exposure coefficient (K_z)	0.9
Wind Pressure (Operational)	12.5 PSF (80 mph)
Wind Pressure (Stowed)	46.5 PSF (154 mph)

Seismic	
Seismic importance factor (Ie)	1
Analysis method	Equivalent lateral force (12.8)
Sds	0.058
Response modification factor	2

General Assumptions

1. Wind and seismic forces are applied perpendicular to the walkway.

2. Loads can be positive or negative.

3. The extended condition is when the bridge is operational.
   Higher winds than this and the airport closes and the bridges are retracted and stowed.
   The higher wind load is not applicable when the bridge is in service.

4. PBBs are considered an inverted pendulum structure because more than 50% of the weight of the structure is at the top of the column (ASCE 7-10, Section 11.2).
   Per ASCE 7-10, Table 15.4-2 (page 143), R=2 for inverted pendulum type structures.

STEEL SIDING

LOAD ANALYSIS FOR APRON DRIVE
(SPECIAL LOADS)
MODEL: AT3-61/127
WITH 41 (FT) WALKWAY (BB)

CASE #1: WALKWAY AND UNIT CENTERLINES PARALLEL

HEIGHT FROM APRON TO ROTUNDA FLOOR (FT) 13.17

LOADING CONDITIONS AT ROTUNDA COLUMN BASE	Pz KIPS	Mx FT-KIPS	LOAD POINT A My FT-KIPS	Px KIPS	Mz FT-KIPS
EXTENDED (OPERATIONAL)					
1. DEAD LOAD (SEE NOTE)	35.2	43.3	65.9	0.0	0.0
2. FLOOR LOAD (40 PSF)	19.6	-28.8	13.9	0.0	0.0
3. ROOF LOAD (25 PSF)	10.4	9.0	4.8	0.0	0.0
4. ROOF LOAD/2	5.2	4.5	2.4	0.0	0.0
5. WIND LOAD (12.5 PSF)	0.0	0.0	320.0	7.3	11.1
6. SEISMIC LOAD (Sds = 0.058)	0.0	0.0	51.2	1.0	0.9
RETRACTED (STOWED)					
7. DEAD LOAD (SEE NOTE)	14.7	-49.0	65.9	0.0	0.0
8. ROOF LOAD (25 PSF)	2.8	-25.0	4.8	0.0	0.0
9. WIND LOAD (46.5 PSF)	0.0	0.0	567.5	10.1	41.2
ASD Load Combinations for Foundation Design per ASCE 7-10					
1. D	35.2	43.3	65.9	0.0	0.0
2. D + FL	54.8	14.5	79.8	0.0	0.0
3. D + RL	45.6	52.4	70.7	0.0	0.0
4. D + 0.75FL + 0.75RL	57.7	28.5	79.9	0.0	0.0
5a. D + 0.6W	35.2	43.3	406.5	6.0	24.7
5b. D + 0.7SL	35.2	43.3	101.8	0.7	0.6
6a. D + 0.75FL + 0.75*0.6W + 0.75RL	57.7	28.5	223.9	3.3	5.0
6b. D + 0.75FL + 0.75*0.7SL + 0.75RL	57.7	28.5	106.8	0.5	0.5
7. 0.6D + 0.6W	21.1	26.0	231.6	4.4	6.6
8. 0.6D + 0.7SL	21.1	26.0	75.4	0.7	0.6

NOTE: Px, Mx AND My CAN BE EITHER (+) OR (-)
NOTE: Additional Dead Loads: A Tun = 50 Lbs/ft; B Tun = 50 Lbs/ft; C Tun = 50 Lbs/ft
**HURRICANE TIE DOWN LOAD = 41.1 KIPS - DOUBLE STRAP REQUIRED
**ROTUNDA REQUIRES ROCKET FINS
** MAX TIRE LOAD EXTENDED = 107.2 KIPS MAX TIRE LOAD RETRACTED = 119.4 KIPS
JOB DESCRIPTION: RSW (SW FL Int'l, Ft. Myers, FL), Gate C1 5/28/2020

CONCENTRATED LOADS

LOAD (KIPS)	X FT	Y FT	Z FT	
7.00	0.00	-11.40	-3.00	45T POU Hobart PCA
3.10	0.00	5.00	-3.00	90kva Hobart Power Coil
1.50	-9.00	13.00	0.00	Bag-slide
0.60	4.00	5.00	10.00	Cable Hoist

LOAD ANALYSIS FOR APRON DRIVE
(SPECIAL LOADS)
MODEL: AT3-61/127
WITH 41 (FT) WALKWAY (BB)
(COLUMN SUPPORTED)

CASE #2: WALKWAY AND UNIT CENTERLINES PERPENDICULAR

HEIGHT FROM APRON TO ROTUNDA FLOOR (FT) 13.17

LOADING CONDITIONS AT ROTUNDA COLUMN BASE	LOAD POINT A Pz KIPS	Mx FT-KIPS	My FT-KIPS	Px KIPS	Mz FT-KIPS
EXTENDED (OPERATIONAL)					
1. DEAD LOAD (SEE NOTE)	35.2	73.6	96.2	0.0	0.0
2. FLOOR LOAD (40 PSF)	19.6	30.1	72.8	0.0	0.0
3. ROOF LOAD (25 PSF)	10.4	25.7	21.4	0.0	0.0
4. ROOF LOAD/2	5.2	12.8	10.7	0.0	0.0
5. WIND LOAD (12.5 PSF)	0.0	0.0	285.3	5.3	0.0
6. SEISMIC LOAD (Sds = 0.058)	0.0	0.0	50.6	1.0	0.9
RETRACTED (STOWED)					
7. DEAD LOAD (SEE NOTE)	14.7	-18.6	96.2	0.0	0.0
8. ROOF LOAD (25 PSF)	2.8	-8.4	21.4	0.0	0.0
9. WIND LOAD (46.5 PSF)	0.0	0.0	438.5	2.7	0.0
ASD Load Combinations for Foundation Design per ASCE 7-10					
1. D	35.2	73.6	96.2	0.0	0.0
2. D + FL	54.8	103.7	169.1	0.0	0.0
3. D + RL	45.6	99.3	117.7	0.0	0.0
4. D + 0.75FL + 0.75RL	57.7	115.5	166.9	0.0	0.0
5a. D + 0.6W	35.2	73.6	359.4	3.2	0.0
5b. D + 0.7SL	35.2	73.6	131.6	0.7	0.6
6a. D + 0.75FL + 0.75*0.6W + 0.75RL	57.7	115.5	295.3	2.4	0.0
6b. D + 0.75FL + 0.75*0.7SL + 0.75RL	57.7	115.5	193.4	0.5	0.5
7. 0.6D + 0.6W	21.1	44.2	228.9	3.2	0.0
8. 0.6D + 0.7SL	21.1	44.2	93.1	0.7	0.6

NOTE: Px, Mx AND My CAN BE EITHER (+) OR (-)

**ROTUNDA REQUIRES ROCKET FINS

JOB DESCRIPTION: RSW (SW FL Int'l, Ft. Myers, FL), Gate C1
5/28/2020

WALKWAY DISCRIPTION (BB)
SPECIAL LOADS - COLUMN SUPPORTED

LENGTH OF JETWALK	40.20 FT
HEIGHT AT TERMINAL END	13.67 FT
HEIGHT AT AIRCRAFT END	13.17 FT
TERMINAL END OF WALKWAY TO COLUMN D	4.25 FT
DISTANCE BETWEEN COLUMN & HAUNCH SUPPORT	34.95 FT

	LOAD POINT D				
LOADING CONDITIONS	Pz KIPS	Px KIPS	Py KIPS	My FT-KIPS	Mx FT-KIPS
1. DL	8.2	0.0	0.0	0.0	0.0
2. FL (100 PSF)	12.9	0.0	0.0	0.0	0.0
3. RL (25 PSF)	3.6	0.0	0.0	0.0	0.0
4. RL/2	1.8	0.0	0.0	0.0	0.0
5. WL (12.5 PSF Operational)	0.0	2.4	0.0	42.1	0.0
6. WL (46.5 PSF Stowed)	0.0	9.0	0.0	156.5	0.0
7. SEISMIC LOAD (Sds = 0.058)	0.0	0.2	0.0	3.4	0.0
ASD Load Combinations for Foundation Design per ASCE 7-10					
1. D	8.2	0.0	0.0	0.0	0.0
2. D + FL	21.1	0.0	0.0	0.0	0.0
3. D + RL	11.8	0.0	0.0	0.0	0.0
4. D + 0.75FL + 0.75RL	20.6	0.0	0.0	0.0	0.0
5a. D + 0.6W	8.2	5.4	0.0	93.9	0.0
5b. D + 0.7E	8.2	0.2	0.0	2.4	0.0
6a. D + 0.75FL + 0.75*0.6W + 0.75RL	20.6	4.0	0.0	70.4	0.0
6b. D + 0.75FL + 0.75*0.7SL + 0.75RL	20.6	0.1	0.0	1.8	0.0
7. 0.6D + 0.6W	4.9	5.4	0.0	93.9	0.0
8. 0.6D + 0.7SL	4.9	0.2	0.0	2.4	0.0

NOTE: Px, Mx AND My CAN BE EITHER (+) OR (-)

ANCHOR BOLT PATTERN FOR WALKWAY COLUMN IS #127 OR EQUIVALENT
MAX HAUNCH LOAD = 19 KIPS STANDARD HAUNCH OK
** STANDARD U-BOLT SPACING INADEQUATE. SPACING MUST BE 18.3 INCHES

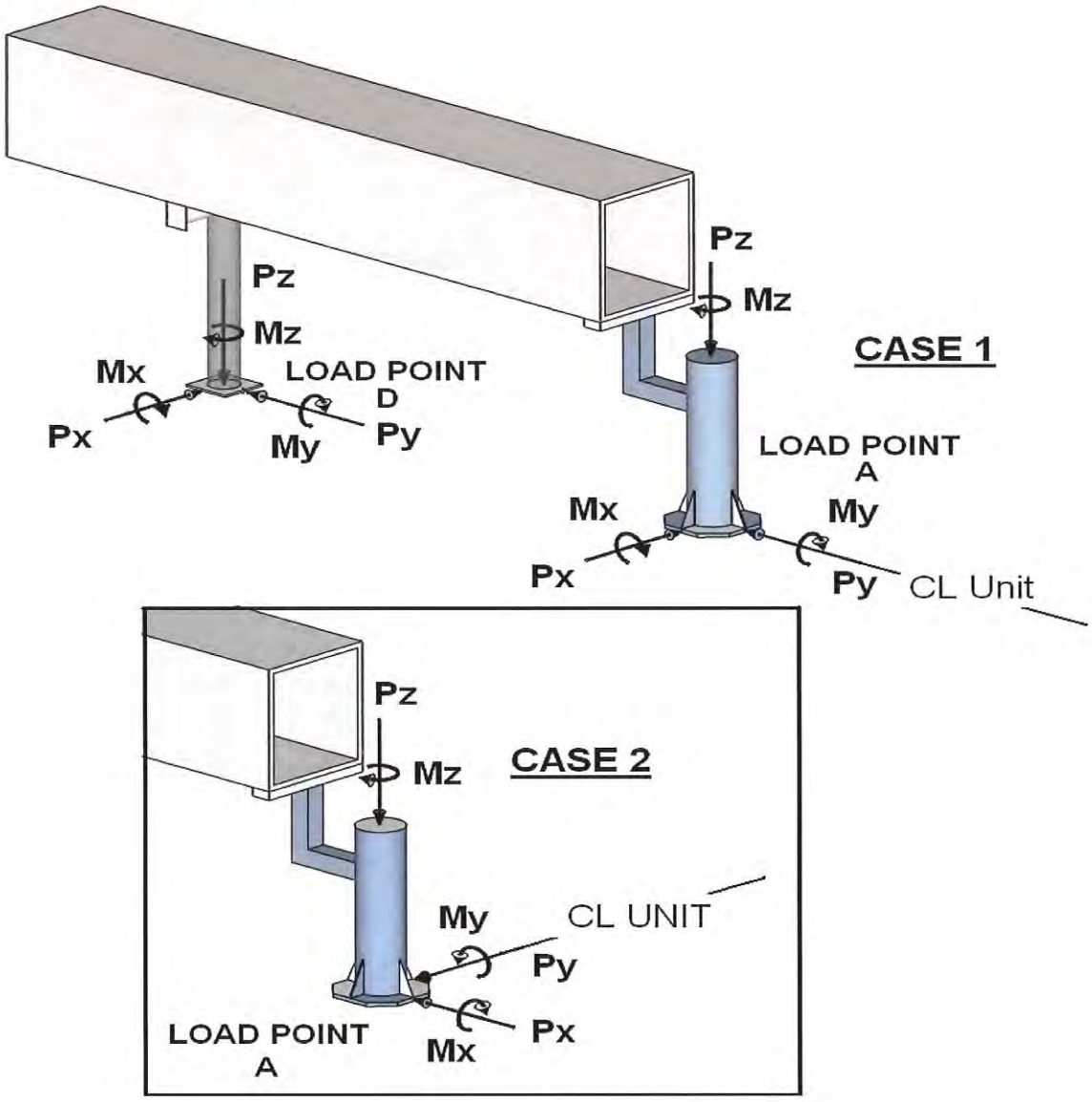
JOB DESCRIPTION: RSW (SW FL Int'l, Ft. Myers, FL), Gate C1
5/28/2020

JBT AEROTECH - JETWAY SYSTEMS

FOUNDATION LOADS FOR PASSENGER BOARDING BRIDGE

By: SKL 5/28/2020 JOB: RSW (SW FL Int'l, Ft. Myers, FL), Gate C2 RQ: 3757 LS#: 5651

Model AT3-68/144 With 40.2 (FT) Walkway



Note: Px, Py, Mx, and My can be either (+) or (-)
Program Revision 1.8

Jetway Systems makes no representation nor provides any guarantee as to the suitability or conditions of any foundation that is intended to be used to support the passenger boarding bridge(s)

LOAD ANALYSIS FOR APRON DRIVE
ASSUMPTIONS

Description	
Code:	ASCE 7-10
Risk Category	II

Wind	
Analysis Method	Velocity pressure per 27.3.2
Exposure Category	C
Directionality Factor (K_d)	0.85
Topographic Factor (K_{zt})	1
Velocity pressure exposure coefficient (K_z)	0.9
Wind Pressure (Operational)	12.5 PSF (80 mph)
Wind Pressure (Stowed)	46.5 PSF (154 mph)

Seismic	
Seismic importance factor (Ie)	1
Analysis method	Equivalent lateral force (12.8)
Sds	0.058
Response modification factor	2

General Assumptions

1. Wind and seismic forces are applied perpendicular to the walkway.

2. Loads can be positive or negative.

3. The extended condition is when the bridge is operational.
   Higher winds than this and the airport closes and the bridges are retracted and stowed.
   The higher wind load is not applicable when the bridge is in service.

4. PBBs are considered an inverted pendulum structure because more than 50% of the weight of the structure is at the top of the column (ASCE 7-10, Section 11.2).
   Per ASCE 7-10, Table 15.4-2 (page 143), R=2 for inverted pendulum type structures.

STEEL SIDING

LOAD ANALYSIS FOR APRON DRIVE
(SPECIAL LOADS)
MODEL: AT3-68/144
WITH 41 (FT) WALKWAY (BB)

CASE #1: WALKWAY AND UNIT CENTERLINES PARALLEL

HEIGHT FROM APRON TO ROTUNDA FLOOR (FT) 12.54

LOADING CONDITIONS AT ROTUNDA COLUMN BASE	LOAD POINT A Pz KIPS	Mx FT-KIPS	My FT-KIPS	Px KIPS	Mz FT-KIPS
EXTENDED (OPERATIONAL)					
1. DEAD LOAD (SEE NOTE)	37.2	52.7	65.9	0.0	0.0
2. FLOOR LOAD (40 PSF)	20.4	-25.1	13.9	0.0	0.0
3. ROOF LOAD (25 PSF)	11.1	12.0	4.8	0.0	0.0
4. ROOF LOAD/2	5.5	6.0	2.4	0.0	0.0
5. WIND LOAD (12.5 PSF)	0.0	0.0	350.2	7.8	11.1
6. SEISMIC LOAD (Sds = 0.058)	0.0	0.0	54.9	1.0	0.9
RETRACTED (STOWED)					
7. DEAD LOAD (SEE NOTE)	10.4	-68.0	65.9	0.0	0.0
8. ROOF LOAD (25 PSF)	2.0	-28.9	4.8	0.0	0.0
9. WIND LOAD (46.5 PSF)	0.0	0.0	577.6	8.5	41.2
ASD Load Combinations for Foundation Design per ASCE 7-10					
1. D	37.2	52.7	65.9	0.0	0.0
2. D + FL	57.6	27.6	79.8	0.0	0.0
3. D + RL	48.3	64.8	70.7	0.0	0.0
4. D + 0.75FL + 0.75RL	60.8	42.9	79.9	0.0	0.0
5a. D + 0.6W	37.2	52.7	412.5	5.1	24.7
5b. D + 0.7SL	37.2	52.7	104.3	0.7	0.6
6a. D + 0.75FL + 0.75*0.6W + 0.75RL	60.8	42.9	237.5	3.5	5.0
6b. D + 0.75FL + 0.75*0.7SL + 0.75RL	60.8	42.9	108.7	0.5	0.5
7. 0.6D + 0.6W	22.3	31.6	249.7	4.7	6.6
8. 0.6D + 0.7SL	22.3	31.6	78.0	0.7	0.6

NOTE: Px, Mx AND My CAN BE EITHER (+) OR (-)
NOTE: Additional Dead Loads: A Tun = 50 Lbs/ft; B Tun = 50 Lbs/ft; C Tun = 50 Lbs/ft
**HURRICANE TIE DOWN LOAD = 47.8 KIPS - DOUBLE STRAP REQUIRED
**ROTUNDA REQUIRES ROCKET FINS
** MAX TIRE LOAD EXTENDED = 118.1 KIPS MAX TIRE LOAD RETRACTED = 136.1 KIPS
JOB DESCRIPTION: RSW (SW FL Int'l, Ft. Myers, FL), Gate C2 5/28/2020

CONCENTRATED LOADS

LOAD (KIPS)	X FT	Y FT	Z FT	
7.00	0.00	-11.40	-3.00	45T POU Hobart PCA
3.10	0.00	5.00	-3.00	90kva Hobart Power Coil
1.50	-9.00	13.00	0.00	Bag-slide
0.60	4.00	5.00	10.00	Cable Hoist

LOAD ANALYSIS FOR APRON DRIVE
(SPECIAL LOADS)
MODEL: AT3-68/144
WITH 41 (FT) WALKWAY (BB)
(COLUMN SUPPORTED)

CASE #2: WALKWAY AND UNIT CENTERLINES PERPENDICULAR

HEIGHT FROM APRON TO ROTUNDA FLOOR (FT) 12.54

LOADING CONDITIONS AT ROTUNDA COLUMN BASE	LOAD POINT A Pz KIPS	Mx FT-KIPS	My FT-KIPS	Px KIPS	Mz FT-KIPS
EXTENDED (OPERATIONAL)					
1. DEAD LOAD (SEE NOTE)	37.2	83.1	96.2	0.0	0.0
2. FLOOR LOAD (40 PSF)	20.4	33.8	72.8	0.0	0.0
3. ROOF LOAD (25 PSF)	11.1	28.7	21.4	0.0	0.0
4. ROOF LOAD/2	5.5	14.3	10.7	0.0	0.0
5. WIND LOAD (12.5 PSF)	0.0	0.0	316.2	5.8	0.0
6. SEISMIC LOAD (Sds = 0.058)	0.0	0.0	54.1	1.0	0.9
RETRACTED (STOWED)					
7. DEAD LOAD (SEE NOTE)	10.4	-37.7	96.2	0.0	0.0
8. ROOF LOAD (25 PSF)	2.0	-12.3	21.4	0.0	0.0
9. WIND LOAD (46.5 PSF)	0.0	0.0	450.9	1.1	0.0
ASD Load Combinations for Foundation Design per ASCE 7-10					
1. D	37.2	83.1	96.2	0.0	0.0
2. D + FL	57.6	116.9	169.1	0.0	0.0
3. D + RL	48.3	111.7	117.7	0.0	0.0
4. D + 0.75FL + 0.75RL	60.8	129.9	166.9	0.0	0.0
5a. D + 0.6W	37.2	83.1	366.8	3.5	0.0
5b. D + 0.7SL	37.2	83.1	134.1	0.7	0.6
6a. D + 0.75FL + 0.75*0.6W + 0.75RL	60.8	129.9	309.2	2.6	0.0
6b. D + 0.75FL + 0.75*0.7SL + 0.75RL	60.8	129.9	195.3	0.5	0.5
7. 0.6D + 0.6W	22.3	49.8	247.4	3.5	0.0
8. 0.6D + 0.7SL	22.3	49.8	95.6	0.7	0.6

NOTE: Px, Mx AND My CAN BE EITHER (+) OR (-)

**ROTUNDA REQUIRES ROCKET FINS

JOB DESCRIPTION: RSW (SW FL Int'l, Ft. Myers, FL), Gate C2
5/28/2020

WALKWAY DISCRIPTION (BB)
SPECIAL LOADS - COLUMN SUPPORTED

LENGTH OF JETWALK	40.20 FT
HEIGHT AT TERMINAL END	13.67 FT
HEIGHT AT AIRCRAFT END	12.54 FT
TERMINAL END OF WALKWAY TO COLUMN D	4.25 FT
DISTANCE BETWEEN COLUMN & HAUNCH SUPPORT	34.95 FT

	LOAD POINT D				
LOADING CONDITIONS	Pz KIPS	Px KIPS	Py KIPS	My FT-KIPS	Mx FT-KIPS
1. DL	8.2	0.0	0.0	0.0	0.0
2. FL (100 PSF)	12.9	0.0	0.0	0.0	0.0
3. RL (25 PSF)	3.6	0.0	0.0	0.0	0.0
4. RL/2	1.8	0.0	0.0	0.0	0.0
5. WL (12.5 PSF Operational)	0.0	2.4	0.0	41.3	0.0
6. WL (46.5 PSF Stowed)	0.0	9.0	0.0	153.7	0.0
7. SEISMIC LOAD (Sds = 0.058)	0.0	0.2	0.0	3.3	0.0
ASD Load Combinations for Foundation Design per ASCE 7-10					
1. D	8.2	0.0	0.0	0.0	0.0
2. D + FL	21.1	0.0	0.0	0.0	0.0
3. D + RL	11.8	0.0	0.0	0.0	0.0
4. D + 0.75FL + 0.75RL	20.6	0.0	0.0	0.0	0.0
5a. D + 0.6W	8.2	5.4	0.0	92.2	0.0
5b. D + 0.7E	8.2	0.2	0.0	2.3	0.0
6a. D + 0.75FL + 0.75*0.6W + 0.75RL	20.6	4.0	0.0	69.2	0.0
6b. D + 0.75FL + 0.75*0.7SL + 0.75RL	20.6	0.1	0.0	1.7	0.0
7. 0.6D + 0.6W	4.9	5.4	0.0	92.2	0.0
8. 0.6D + 0.7SL	4.9	0.2	0.0	2.3	0.0

NOTE: Px, Mx AND My CAN BE EITHER (+) OR (-)

ANCHOR BOLT PATTERN FOR WALKWAY COLUMN IS #127 OR EQUIVALENT
MAX HAUNCH LOAD = 19 KIPS STANDARD HAUNCH OK
** STANDARD U-BOLT SPACING INADEQUATE. SPACING MUST BE 18.3 INCHES

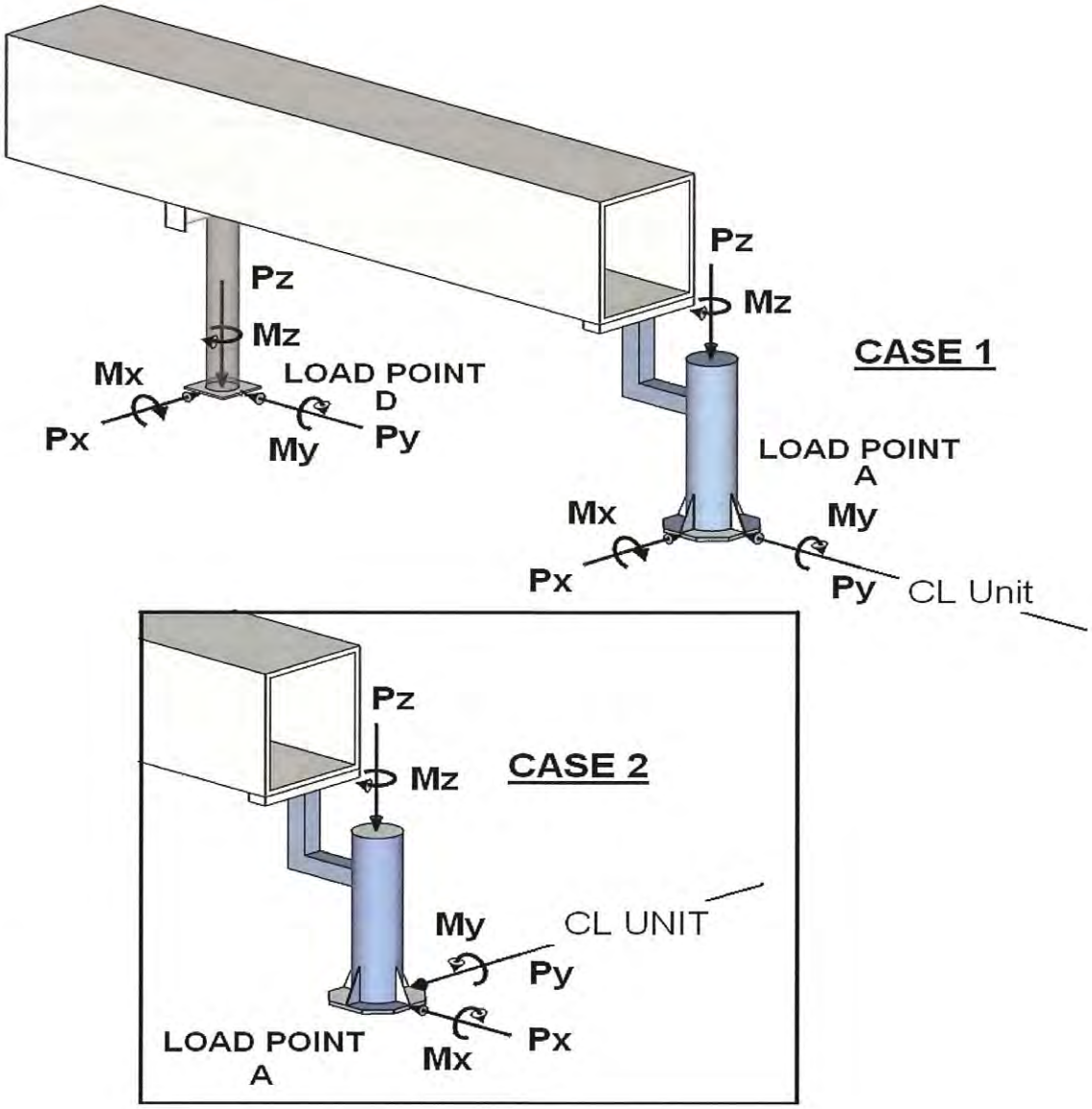
JOB DESCRIPTION: RSW (SW FL Int'l, Ft. Myers, FL), Gate C2
5/28/2020

JBT AEROTECH - JETWAY SYSTEMS

FOUNDATION LOADS FOR PASSENGER BOARDING BRIDGE

By: SKL 5/28/2020 JOB: RSW (SW FL Int'l, Ft. Myers, FL), Gate C2 RQ: 3757 LS#: 5651

Model AT3-68/144 With 40.2 (FT) Walkway



Note: Px, Py, Mx, and My can be either (+) or (-)
Program Revision 1.8

Jetway Systems makes no representation nor provides any guarantee as to the suitability or conditions of any foundation that is intended to be used to support the passenger boarding bridge(s)

LOAD ANALYSIS FOR APRON DRIVE
ASSUMPTIONS

Description	
Code:	ASCE 7-10
Risk Category	II

Wind	
Analysis Method	Velocity pressure per 27.3.2
Exposure Category	C
Directionality Factor (K_d)	0.85
Topographic Factor (K_{zt})	1
Velocity pressure exposure coefficient (K_z)	0.9
Wind Pressure (Operational)	12.5 PSF (80 mph)
Wind Pressure (Stowed)	46.5 PSF (154 mph)

Seismic	
Seismic importance factor (Ie)	1
Analysis method	Equivalent lateral force (12.8)
Sds	0.058
Response modification factor	2

General Assumptions

1. Wind and seismic forces are applied perpendicular to the walkway.

2. Loads can be positive or negative.

3. The extended condition is when the bridge is operational.
   Higher winds than this and the airport closes and the bridges are retracted and stowed.
   The higher wind load is not applicable when the bridge is in service.

4. PBBs are considered an inverted pendulum structure because more than 50% of the weight of the structure is at the top of the column (ASCE 7-10, Section 11.2).
   Per ASCE 7-10, Table 15.4-2 (page 143), R=2 for inverted pendulum type structures.

STEEL SIDING

LOAD ANALYSIS FOR APRON DRIVE
(SPECIAL LOADS)
MODEL: AT3-68/144
WITH 41 (FT) WALKWAY (BB)

CASE #1: WALKWAY AND UNIT CENTERLINES PARALLEL

HEIGHT FROM APRON TO ROTUNDA FLOOR (FT) 12.54

LOADING CONDITIONS AT ROTUNDA COLUMN BASE	Pz KIPS	Mx FT-KIPS	LOAD POINT A My FT-KIPS	Px KIPS	Mz FT-KIPS
EXTENDED (OPERATIONAL)					
1. DEAD LOAD (SEE NOTE)	37.2	52.7	65.9	0.0	0.0
2. FLOOR LOAD (40 PSF)	20.4	-25.1	13.9	0.0	0.0
3. ROOF LOAD (25 PSF)	11.1	12.0	4.8	0.0	0.0
4. ROOF LOAD/2	5.5	6.0	2.4	0.0	0.0
5. WIND LOAD (12.5 PSF)	0.0	0.0	350.2	7.8	11.1
6. SEISMIC LOAD (Sds = 0.058)	0.0	0.0	54.9	1.0	0.9
RETRACTED (STOWED)					
7. DEAD LOAD (SEE NOTE)	10.4	-68.0	65.9	0.0	0.0
8. ROOF LOAD (25 PSF)	2.0	-28.9	4.8	0.0	0.0
9. WIND LOAD (46.5 PSF)	0.0	0.0	577.6	8.5	41.2
ASD Load Combinations for Foundation Design per ASCE 7-10					
1. D	37.2	52.7	65.9	0.0	0.0
2. D + FL	57.6	27.6	79.8	0.0	0.0
3. D + RL	48.3	64.8	70.7	0.0	0.0
4. D + 0.75FL + 0.75RL	60.8	42.9	79.9	0.0	0.0
5a. D + 0.6W	37.2	52.7	412.5	5.1	24.7
5b. D + 0.7SL	37.2	52.7	104.3	0.7	0.6
6a. D + 0.75FL + 0.75*0.6W + 0.75RL	60.8	42.9	237.5	3.5	5.0
6b. D + 0.75FL + 0.75*0.7SL + 0.75RL	60.8	42.9	108.7	0.5	0.5
7. 0.6D + 0.6W	22.3	31.6	249.7	4.7	6.6
8. 0.6D + 0.7SL	22.3	31.6	78.0	0.7	0.6

NOTE: Px, Mx AND My CAN BE EITHER (+) OR (-)
NOTE: Additional Dead Loads: A Tun = 50 Lbs/ft; B Tun = 50 Lbs/ft; C Tun = 50 Lbs/ft
**HURRICANE TIE DOWN LOAD = 47.8 KIPS - DOUBLE STRAP REQUIRED
**ROTUNDA REQUIRES ROCKET FINS
** MAX TIRE LOAD EXTENDED = 118.1 KIPS MAX TIRE LOAD RETRACTED = 136.1 KIPS
JOB DESCRIPTION: RSW (SW FL Int'l, Ft. Myers, FL), Gate C2 5/28/2020

CONCENTRATED LOADS

LOAD (KIPS)	X FT	Y FT	Z FT	
7.00	0.00	-11.40	-3.00	45T POU Hobart PCA
3.10	0.00	5.00	-3.00	90kva Hobart Power Coil
1.50	-9.00	13.00	0.00	Bag-slide
0.60	4.00	5.00	10.00	Cable Hoist

LOAD ANALYSIS FOR APRON DRIVE
(SPECIAL LOADS)
MODEL: AT3-68/144
WITH 41 (FT) WALKWAY (BB)
(COLUMN SUPPORTED)

CASE #2: WALKWAY AND UNIT CENTERLINES PERPENDICULAR

HEIGHT FROM APRON TO ROTUNDA FLOOR (FT) 12.54

LOADING CONDITIONS AT ROTUNDA COLUMN BASE	LOAD POINT A Pz KIPS	Mx FT-KIPS	My FT-KIPS	Px KIPS	Mz FT-KIPS
EXTENDED (OPERATIONAL)					
1. DEAD LOAD (SEE NOTE)	37.2	83.1	96.2	0.0	0.0
2. FLOOR LOAD (40 PSF)	20.4	33.8	72.8	0.0	0.0
3. ROOF LOAD (25 PSF)	11.1	28.7	21.4	0.0	0.0
4. ROOF LOAD/2	5.5	14.3	10.7	0.0	0.0
5. WIND LOAD (12.5 PSF)	0.0	0.0	316.2	5.8	0.0
6. SEISMIC LOAD (Sds = 0.058)	0.0	0.0	54.1	1.0	0.9
RETRACTED (STOWED)					
7. DEAD LOAD (SEE NOTE)	10.4	-37.7	96.2	0.0	0.0
8. ROOF LOAD (25 PSF)	2.0	-12.3	21.4	0.0	0.0
9. WIND LOAD (46.5 PSF)	0.0	0.0	450.9	1.1	0.0
ASD Load Combinations for Foundation Design per ASCE 7-10					
1. D	37.2	83.1	96.2	0.0	0.0
2. D + FL	57.6	116.9	169.1	0.0	0.0
3. D + RL	48.3	111.7	117.7	0.0	0.0
4. D + 0.75FL + 0.75RL	60.8	129.9	166.9	0.0	0.0
5a. D + 0.6W	37.2	83.1	366.8	3.5	0.0
5b. D + 0.7SL	37.2	83.1	134.1	0.7	0.6
6a. D + 0.75FL + 0.75*0.6W + 0.75RL	60.8	129.9	309.2	2.6	0.0
6b. D + 0.75FL + 0.75*0.7SL + 0.75RL	60.8	129.9	195.3	0.5	0.5
7. 0.6D + 0.6W	22.3	49.8	247.4	3.5	0.0
8. 0.6D + 0.7SL	22.3	49.8	95.6	0.7	0.6

NOTE: Px, Mx AND My CAN BE EITHER (+) OR (-)

**ROTUNDA REQUIRES ROCKET FINS

JOB DESCRIPTION: RSW (SW FL Int'l, Ft. Myers, FL), Gate C2
5/28/2020

WALKWAY DISCRIPTION (BB)
SPECIAL LOADS - COLUMN SUPPORTED

LENGTH OF JETWALK	40.20 FT
HEIGHT AT TERMINAL END	13.67 FT
HEIGHT AT AIRCRAFT END	12.54 FT
TERMINAL END OF WALKWAY TO COLUMN D	4.25 FT
DISTANCE BETWEEN COLUMN & HAUNCH SUPPORT	34.95 FT

	LOAD POINT D				
LOADING CONDITIONS	Pz KIPS	Px KIPS	Py KIPS	My FT-KIPS	Mx FT-KIPS
1. DL	8.2	0.0	0.0	0.0	0.0
2. FL (100 PSF)	12.9	0.0	0.0	0.0	0.0
3. RL (25 PSF)	3.6	0.0	0.0	0.0	0.0
4. RL/2	1.8	0.0	0.0	0.0	0.0
5. WL (12.5 PSF Operational)	0.0	2.4	0.0	41.3	0.0
6. WL (46.5 PSF Stowed)	0.0	9.0	0.0	153.7	0.0
7. SEISMIC LOAD (Sds = 0.058)	0.0	0.2	0.0	3.3	0.0
ASD Load Combinations for Foundation Design per ASCE 7-10					
1. D	8.2	0.0	0.0	0.0	0.0
2. D + FL	21.1	0.0	0.0	0.0	0.0
3. D + RL	11.8	0.0	0.0	0.0	0.0
4. D + 0.75FL + 0.75RL	20.6	0.0	0.0	0.0	0.0
5a. D + 0.6W	8.2	5.4	0.0	92.2	0.0
5b. D + 0.7E	8.2	0.2	0.0	2.3	0.0
6a. D + 0.75FL + 0.75*0.6W + 0.75RL	20.6	4.0	0.0	69.2	0.0
6b. D + 0.75FL + 0.75*0.7SL + 0.75RL	20.6	0.1	0.0	1.7	0.0
7. 0.6D + 0.6W	4.9	5.4	0.0	92.2	0.0
8. 0.6D + 0.7SL	4.9	0.2	0.0	2.3	0.0

NOTE: Px, Mx AND My CAN BE EITHER (+) OR (-)

ANCHOR BOLT PATTERN FOR WALKWAY COLUMN IS #127 OR EQUIVALENT
MAX HAUNCH LOAD = 19 KIPS STANDARD HAUNCH OK
** STANDARD U-BOLT SPACING INADEQUATE. SPACING MUST BE 18.3 INCHES

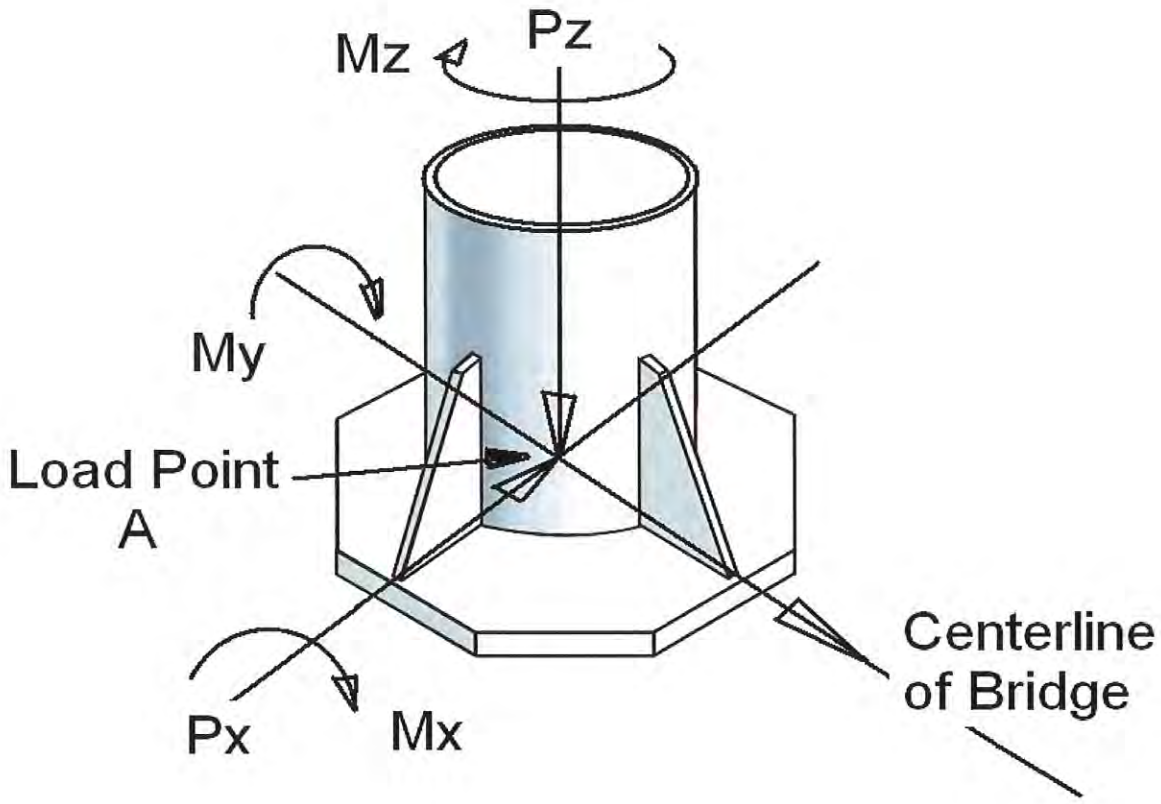
JOB DESCRIPTION: RSW (SW FL Int'l, Ft. Myers, FL), Gate C2
5/28/2020

JBT AEROTECH - JETWAY SYSTEMS

FOUNDATION LOADS FOR PASSENGER BOARDING BRIDGE

By: SKL 5/28/2020 JOB: RSW (SW FL Int'l, Ft. Myers, FL), Gate C4, C5, D4, D7, D8 RQ: 3757 LS#: 5652 1 of 3

Model AT3-61/127 Apron Drive



Note: Px, Py, Mx, and My can be either (+) or (-)
Program Revision 1.8

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LOAD ANALYSIS FOR APRON DRIVE
ASSUMPTIONS

Description	
Code:	ASCE 7-10
Risk Category	II

Wind	
Analysis Method	Velocity pressure per 27.3.2
Exposure Category	C
Directionality Factor (K_d)	0.85
Topographic Factor (K_{zt})	1
Velocity pressure exposure coefficient (K_z)	0.9
Wind Pressure (Operational)	12.5 PSF (80 mph)
Wind Pressure (Stowed)	46.5 PSF (154 mph)

Seismic	
Seismic importance factor (Ie)	1
Analysis method	Equivalent lateral force (12.8)
Sds	0.058
Response modification factor	2

General Assumptions

1. Wind and seismic forces are applied perpendicular to the walkway.

2. Loads can be positive or negative.

3. The extended condition is when the bridge is operational.
   Higher winds than this and the airport closes and the bridges are retracted and stowed.
   The higher wind load is not applicable when the bridge is in service.

4. PBBs are considered an inverted pendulum structure because more than 50% of the weight of the structure is at the top of the column (ASCE 7-10, Section 11.2).
   Per ASCE 7-10, Table 15.4-2 (page 143), R=2 for inverted pendulum type structures.

STEEL SIDING

LOAD ANALYSIS FOR APRON DRIVE
(SPECIAL LOADS)
MODEL: AT3-61/127

HEIGHT FROM APRON TO ROTUNDA FLOOR (FT) 13.09

LOADING CONDITIONS AT ROTUNDA COLUMN BASE	LOAD POINT A Pz KIPS	Mx FT-KIPS	My FT-KIPS	Px KIPS	Mz FT-KIPS
EXTENDED (OPERATIONAL)					
1. DEAD LOAD (SEE NOTE)	29.7	73.6	65.9	0.0	0.0
2. FLOOR LOAD (40 PSF)	9.0	30.1	13.9	0.0	0.0
3. ROOF LOAD (25 PSF)	7.4	25.7	4.8	0.0	0.0
4. ROOF LOAD/2	3.7	12.8	2.4	0.0	0.0
5. WIND LOAD (12.5 PSF)	0.0	0.0	284.7	5.3	0.0
6. SEISMIC LOAD (Sds = 0.058)	0.0	0.0	48.4	0.8	0.0
RETRACTED (STOWED)					
7. DEAD LOAD (SEE NOTE)	9.2	-18.6	65.9	0.0	0.0
8. ROOF LOAD (25 PSF)	-0.2	-8.4	4.8	0.0	0.0
9. WIND LOAD (46.5 PSF)	0.0	0.0	436.0	2.7	0.0
ASD Load Combinations for Foundation Design per ASCE 7-10					
1. D	29.7	73.6	65.9	0.0	0.0
2. D + FL	38.7	103.7	79.8	0.0	0.0
3. D + RL	37.2	99.3	70.7	0.0	0.0
4. D + 0.75FL + 0.75RL	42.0	115.5	79.9	0.0	0.0
5a. D + 0.6W	29.7	73.6	327.5	3.2	0.0
5b. D + 0.7SL	29.7	73.6	99.8	0.6	0.0
6a. D + 0.75FL + 0.75*0.6W + 0.75RL	42.0	115.5	208.0	2.4	0.0
6b. D + 0.75FL + 0.75*0.7SL + 0.75RL	42.0	115.5	105.3	0.4	0.0
7. 0.6D + 0.6W	17.8	44.2	210.4	3.2	0.0
8. 0.6D + 0.7SL	17.8	44.2	73.4	0.6	0.0

NOTE: Px, Mx AND My CAN BE EITHER (+) OR (-)

NOTE: Additional Dead Loads: A Tun = 50 Lbs/ft; B Tun = 50 Lbs/ft; C Tun = 50 Lbs/ft

**HURRICANE TIE DOWN LOAD = 41.1 KIPS - DOUBLE STRAP REQUIRED

**ROTUNDA REQUIRES ROCKET FINS

** MAX TIRE LOAD EXTENDED = 107.2 KIPS MAX TIRE LOAD RETRACTED = 119.4 KIPS

JOB DESCRIPTION: RSW (SW FL Int'l, Ft. Myers, FL), Gate C4, C5, D4, D7, D8 5/28/2020

CONCENTRATED LOADS

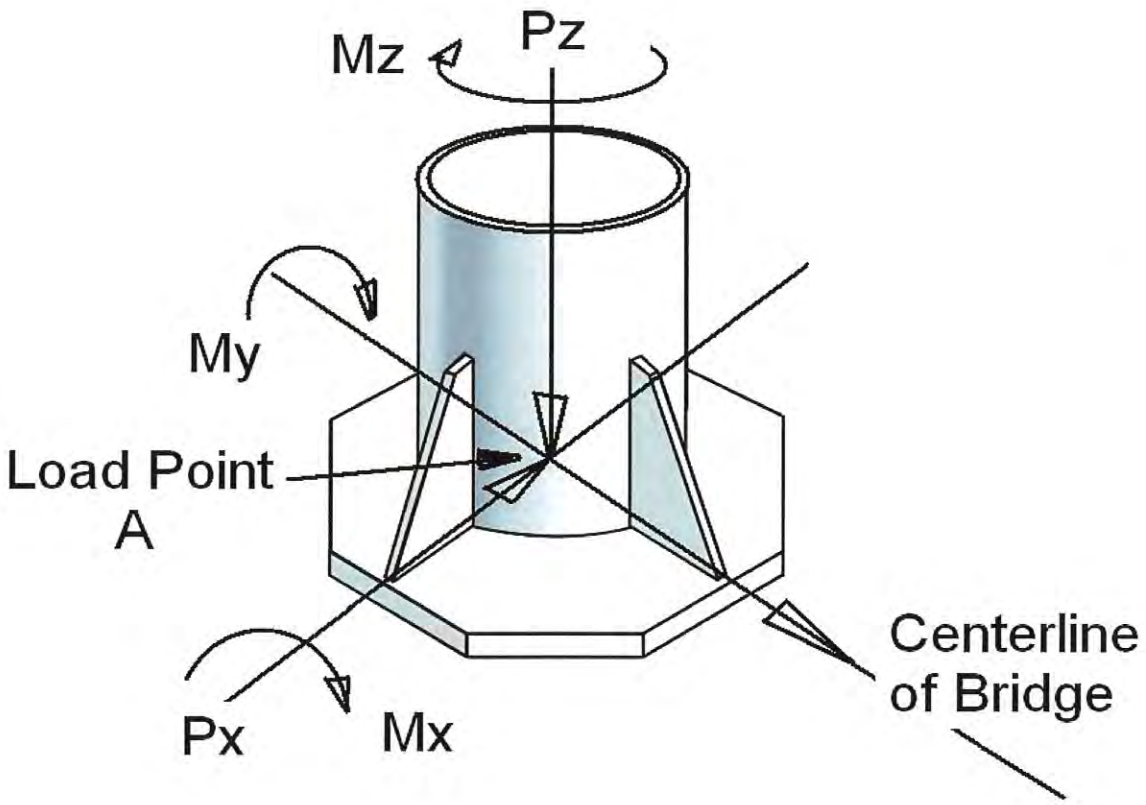
LOAD (KIPS)	X FT	Y FT	Z FT	
7.00	0.00	-11.40	-3.00	45T POU Hobart PCA
3.10	0.00	5.00	-3.00	90kva Hobart Power Coil
1.50	-9.00	13.00	0.00	Bag-slide
0.60	4.00	5.00	10.00	Cable Hoist

JBT AEROTECH - JETWAY SYSTEMS

FOUNDATION LOADS FOR PASSENGER BOARDING BRIDGE

By: SKL 5/28/2020 JOB: RSW (SW FL Int'l, Ft. Myers, FL), Gate C8, D10 RQ: 3757 LS#: 5653

Model AT3-65/133 Apron Drive



Note: Px, Py, Mx, and My can be either (+) or (-)
Program Revision 1.8

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LOAD ANALYSIS FOR APRON DRIVE
ASSUMPTIONS

Description	
Code:	ASCE 7-10
Risk Category	II

Wind	
Analysis Method	Velocity pressure per 27.3.2
Exposure Category	C
Directionality Factor (K_d)	0.85
Topographic Factor (K_{zt})	1
Velocity pressure exposure coefficient (K_z)	0.9
Wind Pressure (Operational)	12.5 PSF (80 mph)
Wind Pressure (Stowed)	46.5 PSF (154 mph)

Seismic	
Seismic importance factor (Ie)	1
Analysis method	Equivalent lateral force (12.8)
Sds	0.058
Response modification factor	2

General Assumptions

1. Wind and seismic forces are applied perpendicular to the walkway.

2. Loads can be positive or negative.

3. The extended condition is when the bridge is operational.
   Higher winds than this and the airport closes and the bridges are retracted and stowed.
   The higher wind load is not applicable when the bridge is in service.

4. PBBs are considered an inverted pendulum structure because more than 50% of the weight of the structure is at the top of the column (ASCE 7-10, Section 11.2).
   Per ASCE 7-10, Table 15.4-2 (page 143), R=2 for inverted pendulum type structures.

STEEL SIDING

LOAD ANALYSIS FOR APRON DRIVE
(SPECIAL LOADS)
MODEL: AT3-65/133

HEIGHT FROM APRON TO ROTUNDA FLOOR (FT) 13.21

LOADING CONDITIONS AT ROTUNDA COLUMN BASE	LOAD POINT A Pz KIPS	Mx FT-KIPS	My FT-KIPS	Px KIPS	Mz FT-KIPS
EXTENDED (OPERATIONAL)					
1. DEAD LOAD (SEE NOTE)	31.3	80.7	68.3	0.0	0.0
2. FLOOR LOAD (40 PSF)	9.4	32.0	13.9	0.0	0.0
3. ROOF LOAD (25 PSF)	7.8	27.2	4.8	0.0	0.0
4. ROOF LOAD/2	3.9	13.6	2.4	0.0	0.0
5. WIND LOAD (12.5 PSF)	0.0	0.0	299.9	5.6	0.0
6. SEISMIC LOAD (Sds = 0.058)	0.0	0.0	51.9	0.8	0.0
RETRACTED (STOWED)					
7. DEAD LOAD (SEE NOTE)	10.5	-13.1	68.3	0.0	0.0
8. ROOF LOAD (25 PSF)	-0.1	-7.9	4.8	0.0	0.0
9. WIND LOAD (46.5 PSF)	0.0	0.0	457.3	2.9	0.0
ASD Load Combinations for Foundation Design per ASCE 7-10					
1. D	31.3	80.7	68.3	0.0	0.0
2. D + FL	40.7	112.6	82.2	0.0	0.0
3. D + RL	39.1	107.9	73.1	0.0	0.0
4. D + 0.75FL + 0.75RL	44.2	125.0	82.3	0.0	0.0
5a. D + 0.6W	31.3	80.7	342.7	3.3	0.0
5b. D + 0.7SL	31.3	80.7	104.7	0.6	0.0
6a. D + 0.75FL + 0.75*0.6W + 0.75RL	44.2	125.0	217.3	2.5	0.0
6b. D + 0.75FL + 0.75*0.7SL + 0.75RL	44.2	125.0	109.6	0.4	0.0
7. 0.6D + 0.6W	18.8	48.4	220.9	3.3	0.0
8. 0.6D + 0.7SL	18.8	48.4	77.4	0.6	0.0

NOTE: Px, Mx AND My CAN BE EITHER (+) OR (-)

NOTE: Additional Dead Loads: A Tun = 50 Lbs/ft; B Tun = 50 Lbs/ft; C Tun = 50 Lbs/ft

**HURRICANE TIE DOWN LOAD = 43 KIPS - DOUBLE STRAP REQUIRED

**ROTUNDA REQUIRES ROCKET FINS

** MAX TIRE LOAD EXTENDED = 113.9 KIPS MAX TIRE LOAD RETRACTED = 125.4 KIPS

JOB DESCRIPTION: RSW (SW FL Int'l, Ft. Myers, FL), Gate C8, D10 5/28/2020

CONCENTRATED LOADS

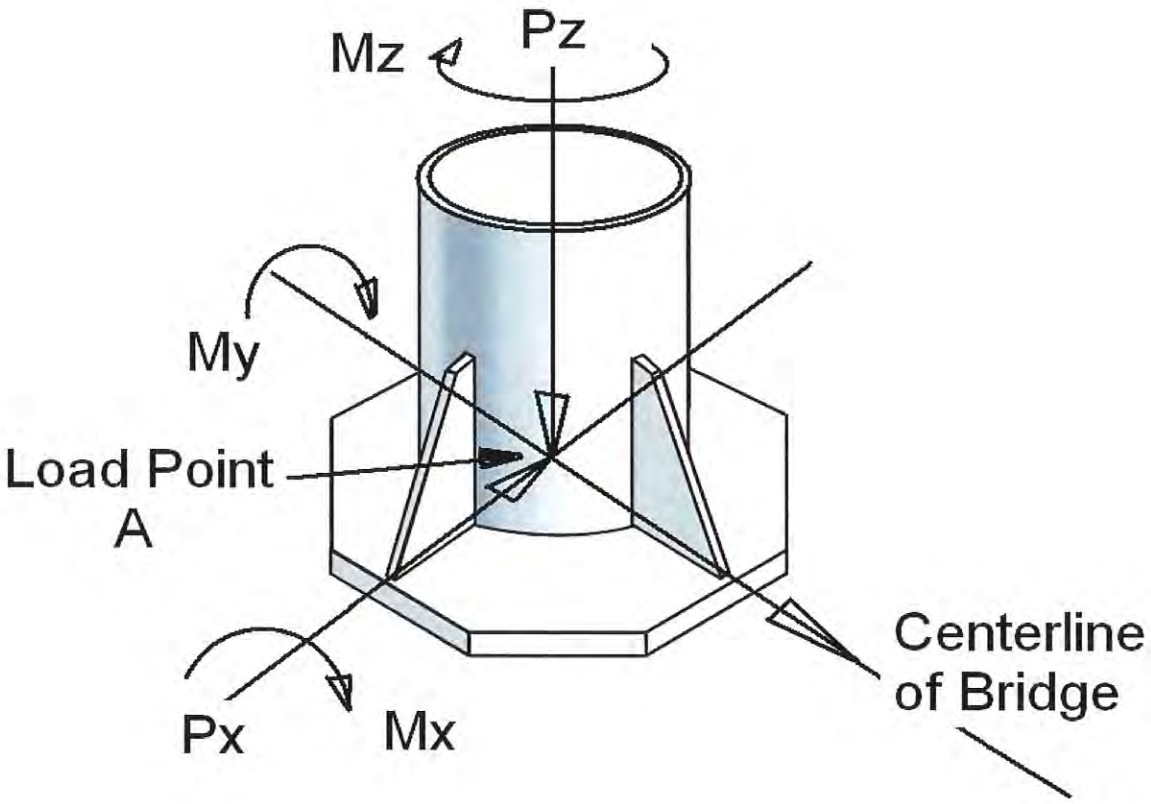
LOAD (KIPS)	X FT	Y FT	Z FT	
8.80	0.00	-11.50	-3.00	90T POU Hobart PCA
3.10	0.00	5.00	-3.00	180kva Hobart Power Coil
1.50	-9.00	13.00	0.00	Bag-slide
1.20	4.00	5.00	10.00	Cable Hoist

JBT AEROTECH - JETWAY SYSTEMS

FOUNDATION LOADS FOR PASSENGER BOARDING BRIDGE

By: SKL 5/28/2020 JOB: RSW (SW FL Int'l, Ft. Myers, FL), Gate D2 RQ: 3757 LS#: 5654 1 of 3

Model AT3-68/144 Apron Drive



Note: Px, Py, Mx, and My can be either (+) or (-)
Program Revision 1.8

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LOAD ANALYSIS FOR APRON DRIVE
ASSUMPTIONS

Description	
Code:	ASCE 7-10
Risk Category	II

Wind	
Analysis Method	Velocity pressure per 27.3.2
Exposure Category	C
Directionality Factor (K_d)	0.85
Topographic Factor (K_{zt})	1
Velocity pressure exposure coefficient (K_z)	0.9
Wind Pressure (Operational)	12.5 PSF (80 mph)
Wind Pressure (Stowed)	46.5 PSF (154 mph)

Seismic	
Seismic importance factor (Ie)	1
Analysis method	Equivalent lateral force (12.8)
Sds	0.058
Response modification factor	2

General Assumptions

1. Wind and seismic forces are applied perpendicular to the walkway.

2. Loads can be positive or negative.

3. The extended condition is when the bridge is operational.
   Higher winds than this and the airport closes and the bridges are retracted and stowed.
   The higher wind load is not applicable when the bridge is in service.

4. PBBs are considered an inverted pendulum structure because more than 50% of the weight of the structure is at the top of the column (ASCE 7-10, Section 11.2).
   Per ASCE 7-10, Table 15.4-2 (page 143), R=2 for inverted pendulum type structures.

STEEL SIDING

LOAD ANALYSIS FOR APRON DRIVE
(SPECIAL LOADS)
MODEL: AT3-68/144

HEIGHT FROM APRON TO ROTUNDA FLOOR (FT) 13.09

LOADING CONDITIONS AT ROTUNDA COLUMN BASE	LOAD POINT A Pz KIPS	Mx FT-KIPS	My FT-KIPS	Px KIPS	Mz FT-KIPS
EXTENDED (OPERATIONAL)					
1. DEAD LOAD (SEE NOTE)	31.8	83.1	65.9	0.0	0.0
2. FLOOR LOAD (40 PSF)	9.8	33.8	13.9	0.0	0.0
3. ROOF LOAD (25 PSF)	8.1	28.7	4.8	0.0	0.0
4. ROOF LOAD/2	4.0	14.3	2.4	0.0	0.0
5. WIND LOAD (12.5 PSF)	0.0	0.0	321.1	5.8	0.0
6. SEISMIC LOAD (Sds = 0.058)	0.0	0.0	52.9	0.9	0.0
RETRACTED (STOWED)					
7. DEAD LOAD (SEE NOTE)	5.0	-37.7	65.9	0.0	0.0
8. ROOF LOAD (25 PSF)	-1.0	-12.3	4.8	0.0	0.0
9. WIND LOAD (46.5 PSF)	0.0	0.0	470.1	1.1	0.0
ASD Load Combinations for Foundation Design per ASCE 7-10					
1. D	31.8	83.1	65.9	0.0	0.0
2. D + FL	41.7	116.9	79.8	0.0	0.0
3. D + RL	39.9	111.7	70.7	0.0	0.0
4. D + 0.75FL + 0.75RL	45.3	129.9	79.9	0.0	0.0
5a. D + 0.6W	31.8	83.1	348.0	3.5	0.0
5b. D + 0.7SL	31.8	83.1	103.0	0.6	0.0
6a. D + 0.75FL + 0.75*0.6W + 0.75RL	45.3	129.9	224.4	2.6	0.0
6b. D + 0.75FL + 0.75*0.7SL + 0.75RL	45.3	129.9	107.7	0.5	0.0
7. 0.6D + 0.6W	19.1	49.8	232.2	3.5	0.0
8. 0.6D + 0.7SL	19.1	49.8	76.6	0.6	0.0

NOTE: Px, Mx AND My CAN BE EITHER (+) OR (-)
NOTE: Additional Dead Loads: A Tun = 50 Lbs/ft; B Tun = 50 Lbs/ft; C Tun = 50 Lbs/ft
**HURRICANE TIE DOWN LOAD = 47.8 KIPS - DOUBLE STRAP REQUIRED
**ROTUNDA REQUIRES ROCKET FINS
** MAX TIRE LOAD EXTENDED = 118.1 KIPS MAX TIRE LOAD RETRACTED = 136.1 KIPS
JOB DESCRIPTION: RSW (SW FL Int'l, Ft. Myers, FL), Gate D2 5/28/2020

CONCENTRATED LOADS

LOAD (KIPS)	X FT	Y FT	Z FT	
7.00	0.00	-11.40	-3.00	45T POU Hobart PCA
3.10	0.00	5.00	-3.00	90kva Hobart Power Coil
1.50	-9.00	13.00	0.00	Bag-slide
0.60	4.00	5.00	10.00	Cable Hoist

JetPower® III 400Hz Ground Power System

"JBT for the Perfect Turn"

JetPower® III Technical Specifications

Maximum Input Current

Input Volts	45 kVA	90 kVA	140 kVA	180 kVA
380 V.	63 Amps	126 Amps	196 Amps	252 Amps
400 V.	60 Amps	120 Amps	186 Amps	239 Amps
415 V.	58 Amps	116 Amps	179 Amps	232 Amps
480 V.	50 Amps	100 Amps	155 Amps	200 Amps

Dimensions (all point of use units)

Width	60" (1.53 m)	
Height	24" (.61 m)	180 kVA Unit only 30" (.76 m)
Depth	50" (1.27 m)	

Weight (approximate)

45 kVA	90 kVA	140 kVA	180 kVA
900 lbs. (409 kg)	1,100 lbs. (500 kg)	1,700 lbs. (773 kg)	2,000 lbs. (910 kg)

Housing

Electronic sections in NEMA 4 (IP55) enclosure with an aluminum case and structural members. Custom colors are available.

Environmental Conditions

Capable of normal operation from -40°C to +55°C (-40°F to +131°F).

Noise

Not greater than 65 dBA at 1.5 m height, 1 m distance.

Maintenance

No preventative maintenance required. Mean Time To Repair (MTTR) 30 minutes at module level. Reduced part count and increased circuit and component protection enhance reliability.

Input

- AC Power: 380-480 Volt, 3 phase, 50/60 Hertz, at -15% to +10% of nominal voltage rating. Unit is phase rotation independent.
- Starting Current: Starting inrush not to exceed 100% current required when operating at rated output.
- Power Factor: From 25% to 100% rated load, input power factor is greater than 0.95.
- Efficiency: Greater than 92% at any load above 50% of rated load.

Output Voltage, Frequency, and Phase

- Voltage Drift: Less than 1% at constant load (ambient temperature change 55°C in 8 hours).
- Voltage Regulation: Better than 1%.
- Total Harmonic Distortion: Less than 3% (line-to-line/line-to-neutral). Individual harmonics less than 2%.
- DC Content: Less than 100 mV.
- Voltage modulation: Less than 0.5% as measured from the peak of one waveform to the peak of another adjacent waveform under steady rated load conditions.
- Transient Performance: Output voltage recovery less than 50ms at 100% load change.
- Voltage Operating Range: +/- 10% of rated voltage
- Output Frequency Regulation: 400 Hz +/- 0.1%
- Phase Displacement: 120" +/- 1.5"

Overloads and System Protection

- Overload Capacity: 125% for 10 minutes, 150% for 30 seconds, 200% for 10 seconds.
- Protection: Input & Output Over or Under Voltage, Output Overload, Loss of E/F, E/F Over Voltage, Bus Discharge Fault, Heat Sink Over Temperature, Output Frequency Fault, and an IGBT Fault.

Internal Controls and Indicators

- Auto/manual Switch–Voltage Control
- 28 Volt E/F Interlock Bypass Switch
- Start/Stop Control
- Line Drop Compensation
- DC Bus Voltage Adjustment
- LCD Display Contrast Adjustment
- Voltage Adjustment (+/- 10%)
- Hour Meter (99,999 hrs.)

External Front Panel Lights

- Solid Red Light–Internal or External Fault
- Solid Yellow–Input Power Applied
- Flashing Yellow–28 Volt in Bypass
- Solid Green–400 Hz Power Present
- Flashing Green–28 Volt not available

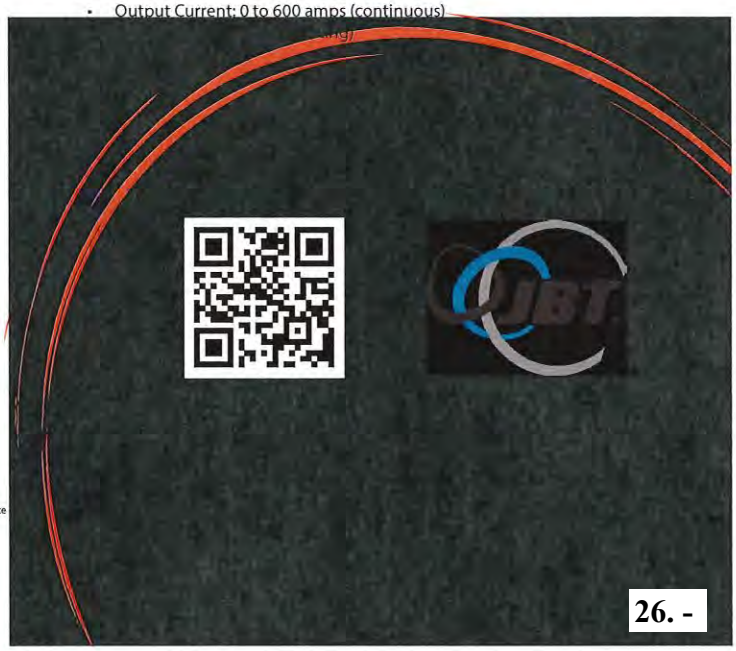
LCD Display Plain English Indicators

- Input Voltage Phase A
- Input Voltage Phase B
- Input Voltage Phase C
- Input Voltage Average (3 Phase Avg.)
- Input Current (3 Phase Avg.)
- Output Voltage Phase A
- Output Voltage Phase B
- Output Voltage Phase C
- Output Voltage Average (3 Phase Avg.)
- Phase A Output Current
- Phase B Output Current
- Phase C Output Current
- Output Current Average (3 Phase Avg.)
- Output kVA (total)
- Accumulated Kilowatt hours
- Output Frequency
- +5 VDC
- +15 VDC
- +24 VDC
- Event History, 490 events [(start/stop) and (fault/reset)]

All current operating readings and event history are available on optional RS321485 Data Port.

Options

- 12-Step Input Rectifier
- Additional Input Distortion Filter
- 28 VDC Unit (only available on the 90 kVA size)
  - Output Current: 0 to 600 amps (continuous)



AUTHORIZATION TO MARK

This authorizes the application of the Certification Mark(s) shown below to the models described in the Product(s) Covered section when made in accordance with the conditions set forth in the Certification Agreement and Listing Report. This authorization also applies to multiple listee model(s) identified on the correlation page of the Listing Report.

This document is the property of Intertek Testing Services and is not transferable. The certification mark(s) may be applied only at the location of the Party Authorized To Apply Mark.

Applicant:	JBT Corp dba JBT AeroTech, Jetway Systems	**Manufacturer:**	JBT AeroTech, Jetway Division
Address:	3100 South Pennsylvania Avenue Ogden, UT 84401	**Address:**	3100 South Pennsylvania Avenue Ogden, UT 84401
Country:	USA	**Country:**	USA
Contact:	Mr. Mike Fullmer	**Contact:**	Mr. Mike Fullmer
Phone:	(801) 629-3345	**Phone:**	(801) 629-3345
FAX:	(801) 629-3373	**FAX:**	(801) 629-3373
Email:	thomas.brace@jbtc.com	**Email:**	thomas.brace@jbtc.com

Party Authorized To Apply Mark: Same as Manufacturer
Report Issuing Office: Portalnd, OR

Catherine Dwyer

Control Number: 70332 **Authorized by:** _____
for Thomas J. Patterson, Certification Manager

C ETL LISTED US
Intertek

This document supersedes all previous Authorizations to Mark for the noted Report Number.

Intertek Testing Services NA Inc.
545 East Algonquin Road, Arlington Heights, IL 60005
Telephone 800-345-3851 or 847-439-5667 Fax 312-283-1672

Standard(s):	UL Standard for Safety for Power Units Other Than Class 2, ANSI/UL 1012-2010, Ed: 8, Issued: 2010/11/09, Rev: 2014/04/14 CSA Standard for General Use Power Supplies, CAN/CSA C22.2 No. 107.1-01, Issued: 2001/09, Reaffirmed: 2006
Product:	Ground Power Unit JTP3 Series
Brand Name:	JETPOWER
Models:	JTP3s-45KVA, JTP3s-45KVA/28VDC, JTP3-90KVA, JTP3s-90KVA, JTP3 PLUS-90KVA, JTP3-90KVA/28VDC, JTP3 PLUS-120KVA, JTP3 PLUS-150KVA, JTP3-180KVA, JTP3-180KW, JTP3 PLUS-180KVA, JTP3 PLUS-180KVA/575V, JTP3 PLUS-270VDC, JTP3 PLUS-270VDC/400HZ, JTP 28VDC, GATEBOX-90KVA and GATEBOX-180KVA

Aircraft Ground Power 400Hz Cable Assemblies

The solution for reduced aircraft receptacle wear and longer connector service life

One JBT: Driving for customer success!

JBT Aircraft Ground Power 400Hz Cable Assemblies Specifications

Operational Envelope and Performance

- Full-load operation from -70 F to 140 F
- Meets SAE AS7974 20 ft-lbs impact at -55 C
- 260 & 300 amp six-around-one configurations
- Mates with As90362 & An3114 receptacles
- UL Listed (six around one)
- 1/0 and 2/0 banded cable configurations

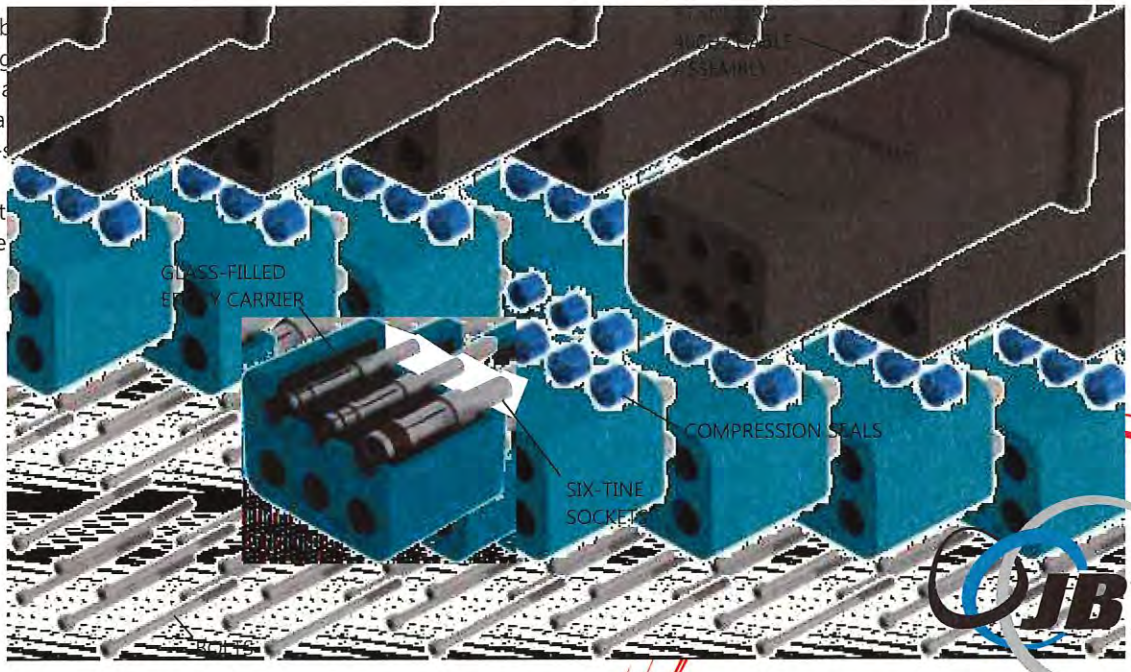
Design Elements

JBT 400Hz ground power cable assemblies significantly reduce aircraft receptacle wear and provide longer connector service life. Our optional replaceable contact section provides rigid internal features with precisely aligned and floated sockets. The glass-filled epoxy carrier precisely positions socket/pin assemblies to reduce insertion forces and protects against impact to extend service life. Six-tine sockets contribute to consistent insertion forces and outperform industry standards for electrical performance. Compression seals protect adapter pins and connector sockets.

OPTION
CONTA
(LOW FORCE DESIGN)

The EPDM b
carrier desig
The carrier a
the bolts ca
by ground-s

The contact
without spe



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Hong Kong
852-3966-1360

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www.jbtaerotech.com

Rev.2 June 2015

Brochure Reference # 401

Intertek

3933 US Route 11
Cortland, NY. 13045
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Facsimile: 1-607-758-6595
www.intertek.com

29-December-2016

Letter Report No. 102643851CRT-002
Project No. G102643851

Mr. Jeremy Gustitus
Draka Cableteq USA
One Tamaqua Blvd.
Schuylkill Haven, PA 17972-1133

Phone: (570) 385-9241
email: Jeremy.Gustitus@prysmiangroup.com

Subject: ETL Verification / Final Qualification Testing of 400 Hz Jetway Cable – PN 032820
1x1 AWG, 6x4 AWG, 4xTwisted Triads (18AWG), 2xTwisted Pairs (18AWG)
Polypropylene (1AWG Insulation, 18AWG Insulation), EPR (4AWG Insulation), Neoprene (Jacket)

Dear Mr. Gustitus:

This letter represents the results of final qualification testing for ETL Verification as performed on the above referenced cable to the requirements contained in the Draka Cableteq-prepared test plan outlined in Table One on pages three and four.

The following standards were used during testing:

Draka Cableteq USA Laboratory Standard 032820, dated 9/22/16

Draka Cableteq USA Cable Specification 032820, dated 5/31/16, revised 10/7/16

SAE AS5756A, *Cable, Power, Electrical, Portable General Specification For*, Issued 2004-06, Revised 2011-10

ASTM B174-10 (Reapproved 2015), *Standard Specification for Bunch-Stranded Copper Conductors for Electrical Conductors*

ASTM B172-10 (Reapproved 2015), *Standard Specification for Rope-Lay-Stranded Copper Conductors Having Bunch-Stranded Members, for Electrical Conductors*

MIL-DTL-915G, Detail Specification, *Cable, Electrical, For Shipboard Use, General Specification For*, 22 August 2002

ICEA S-95-658, *Power Cables Rated 2000 Volts Or Less For The Distribution of Electrical Energy*, 2009

ICEA T27-581, Standard Test Methods For Extruded Dielectric Power, Control, Instrumentation, and Portable Cables, 2008

UL 2556, *Standard for Safety for Wire and Cable Test Methods*, Fourth Edition, December 15, 2015

FED. Test Method STD 228, *Test Methods For Cables and Wire, Insulated*, April 14, 1967

MIL-DTL-13777L, Detail Specification, *Cable, Special Purpose, Electrical, General Specification For*, 12 September 2014

MIL-DTL-24643C, Detail Specification, *Cables, Electric, Low Smoke Halogen-Free, For Shipboard Use*, General Specification For, 1 October 2009

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Facsimile: 1-607-758-6595
www.intertek.com

29-December-2016

Letter Report No. 102643851CRT-002
Project No. G102643851

UL 44, *Standard for Safety for Thermoset-Insulated Wires and Cable, Eighteenth Edition*, March 28, 2014, Revised February 9, 2015

Purchasing Specification For Draka Cableteq USA, 18AWG Bunched Bare Copper Conductor, Specification Number B00180-0041-1, Revised 4/18/2000

Purchasing Specification For Draka Cableteq USA, 4AWG Rope-Bunched Bare Copper Conductor, Specification Number B00040-1064-1, Revised 6/23/2009

Purchasing Specification For Draka Cableteq USA, 1AWG Rope-Bunched Bare Copper Conductor, Specification Number B00010-2107-1, Revised 8/15/2016

This investigation was authorized by signed proposal number Qu-00703921 dated 23-June-2016. Testing was performed as indicated below in Table One, at Draka Cableteq's North Dighton, MA laboratory, from 14-December-2016 to 22-December-2016 under the Intertek Satellite Laboratory Program.

A summary of test results is provided in Table Two. Test data sheets follow this letter.

This report concludes the final qualification testing and ETL verification of the subject cable under this project. If there are any questions regarding the results contained in this report, or any of the other services offered by Intertek, please do not hesitate to contact the undersigned.

Completed by:	Kenneth Riedl	Reviewed by:	Joshua O'Connor Engineering Team Lead –
Title:	Senior Project Engineer	Title:	Wire and Cable
Signature:		Signature	

Please note: This Letter Report does not represent authorization for the use of any Intertek certification marks.

AUTHORIZATION TO MARK

This authorizes the application of the Certification Mark(s) shown below to the models described in the Product(s) Covered section when made in accordance with the conditions set forth in the Certification Agreement and Listing Report. This authorization also applies to multiple listee model(s) identified on the correlation page of the Listing Report.

This document is the property of Intertek Testing Services and is not transferable. The certification mark(s) may be applied only at the location of the Party Authorized To Apply Mark.

Applicant:	JBT Corp dba JBT AeroTech, Jetway Systems	**Manufacturer:**	JBT Corp dba JBT AeroTech, Jetway Systems
Address:	3100 South Pennsylvania Avenue Ogden, Utah 84401-3328	**Address:**	3100 South Pennsylvania Avenue Ogden, Utah 84401-3328
Country:	United States	**Country:**	United States
Contact:	Gordon Ferris	**Contact:**	Gordon Ferris
Phone:	801-629-3267	**Phone:**	801-629-3267
FAX:	801-629-3373	**FAX:**	801-629-3373
Email:	Gordon.Ferris@jbtc.com	**Email:**	Gordon.Ferris@jbtc.com

Party Authorized To Apply Mark: Same as Manufacturer
Report Issuing Office: Plano, TX

Control Number: 70332 **Authorized by:** Catherine Dwyer

for Thomas J. Patterson, Certification Manager

ETL LISTED US
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This document supersedes all previous Authorizations to Mark for the noted Report Number.

Intertek Testing Services NA Inc.
545 East Algonquin Road, Arlington Heights, IL 60005
Telephone 800-345-3851 or 847-439-5667 Fax 312-283-1672

Standard(s):	Standard(s) for Safety Motor-Operated Apliances (UL 73, 10th Ed., dated March 02, 2011 including revisions through September 18, 2012)
Product:	400 Hz Cable Hoist
Brand Name:	JBT AeroTech
Models:	2952963.04, 2952963.05, 2952963.06

JetAire® SJ-70, SJ-90, and SJ-115 Point-of-Use PCAir Units

JBT - FOR THE PERFECT TURN

JetAire® SJ-70, SJ-90, and SJ-115 Point-Of-Use Technical Specifications

Design Elements

JetAire® SJ units are ideal for most narrow to mid-body sized aircraft. The units all fit in the same frame size and share many common components. They can be bridge or stand-mounted and benefit the user through reduced pollution, fuel savings and less equipment on the ramp.

Features / Benefits

- Energy Efficiency
- Consistent Temperature
- Reliability
- Reduced Noise
- Human Machine Interface (HMI) Screen with Intuitive Operating Controls
- Remote Wireless Data Access for convenient Operations and Maintenance monitoring

Electrical

Unit	SJ-70	SJ-90	SJ-115
Voltage	480/60/3	480/60/3	480/60/3
Blower Size	25 HP/18.6 kW	30 HP/22.4 kW	40 HP/29.8 kW
Heater Size	36 kW	54 kW	72 kW
*RLA	91 Amps	128 Amps	173 Amps
*Unit Breaker	125 Amps (100 Amps**)	150 Amps	200 Amps

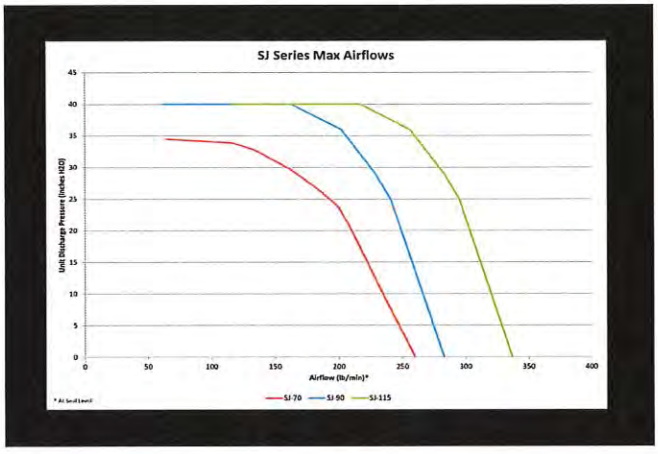
*Values are calculated using ARI conditions and are not to be used for construction. Values are for reference purposes only.
** 100% Load rated unit breaker available for gates with supply power limitations

Dimensions/Weight

Unit	SJ-70	SJ-90	SJ-115
Length	167 in (424 cm)	167 in (424 cm)	167 in (424 cm)
Width	88 in (225 cm)	88 in (225 cm)	88 in (225 cm)
Height	43 in (109 cm)	43 in (109 cm)	43 in (109 cm)
Weight	4500 lb	5000 lb	5500 lb
Sound Level	84 dBA @ 15 ft (4.6 m)	84 dBA @ 15 ft (4.6 m)	84 dBA @ 15 ft (4.6 m)

Design Ambient

Unit	SJ-70 / SJ-90 / SJ-115
Humid - Dry Bulb	95° F (35° C)
Humid - Wet Bulb	76° F (24.4° C)
Dry - Dry Bulb	110° F (43.3° C)
Dry - Wet Bulb	70° F (21.1° C)



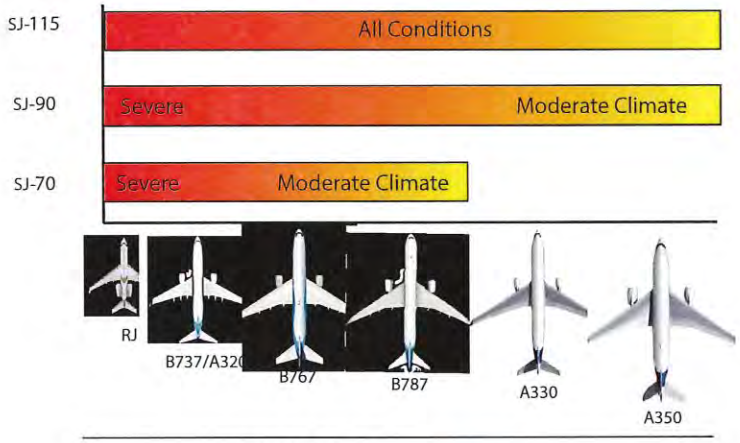
Operational Performance

- Standard Airflow:
  - SJ-70: 180 lb/min @ 20" H2O
  - SJ-90: 240 lb/min @ 22" H2O
  - SJ-115: 300 lb/min @ 22" H2O
- Max Airflow: 340 lb/min
- Max Pressure: 40" H2O
- Cooling Temperature: 25° F (-3.8° C) to 60° F (15.6° C)
- Heating Temperature: 80° F (26.7° C) to 130° F (54.4° C)

Optional Equipment

- Apron Management System (AMS) Interface (Modbus TCP standard, other optional)
- Single or Dual Hose Outlets
- Heating (36/54/72kW for 480Volts)
- Aircraft Cabin and / or Bridge Temperature Probes
- Boarding Bridge Cooling and Heating capability and controls
- Hose Storage/Deployment Systems
- Delivery Hose (style and/or length) and Aircraft Couplings
- Severe Weather (SJ-X) models available with improved corrosion protection in extreme environmental conditions including Stainless Steel hardware, hot dip galvanized and powder coated steel parts, severe duty and extra protected components
- Configuration to service regional jets, narrow, and wide body aircraft

Operating Capabilities (SJ Series Air- Conditioner) for various ambient conditions



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Brochure Reference # 115

1805 West 2550 South • Ogden, UT, United States • 801-627-6600
www.jbtaerotech.com

AUTHORIZATION TO MARK

This authorizes the application of the Certification Mark(s) shown below to the models described in the Product(s) Covered section when made in accordance with the conditions set forth in the Certification Agreement and Listing Report. This authorization also applies to multiple listee model(s) identified on the correlation page of the Listing Report.

This document is the property of Intertek Testing Services and is not transferable. The certification mark(s) may be applied only at the location of the Party Authorized To Apply Mark.

Applicant:	JBT Aerotech, Jetway Systems	**Manufacturer:**	JBT Aerotech, Jetway Systems
Address:	3100 Pennsylvania Ave Ogden, Utah 74401	**Address:**	3100 Pennsylvania Ave Ogden, Utah 74401
Country:	USA	**Country:**	USA
Contact:	Matthew Stallard	**Contact:**	Matthew Stallard
Phone:	(801) 629-3248	**Phone:**	(801) 629-3248
FAX:	NA	**FAX:**	NA
Email:	matthew.stallard@jbtc.com	**Email:**	matthew.stallard@jbtc.com

Party Authorized To Apply Mark: Same as Manufacturer
Report Issuing Office: Dallas, TX

Control Number: 70332 **Authorized by:** Rebecca Martinez
for Dean Davidson, Certification Manager

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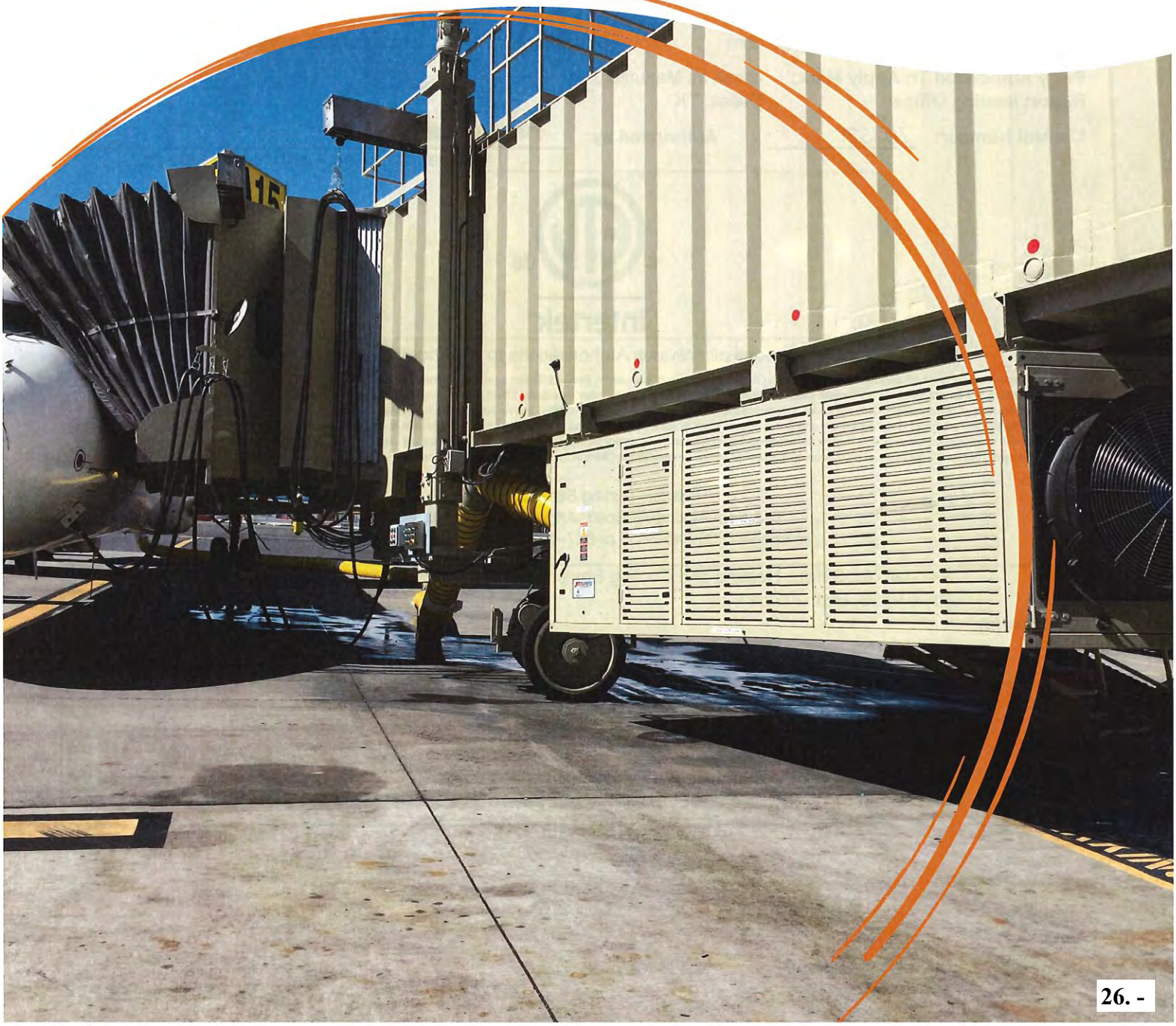
This document supersedes all previous Authorizations to Mark for the noted Report Number.

Intertek Testing Services NA Inc.
545 East Algonquin Road, Arlington Heights, IL 60005
Telephone 800-345-3851 or 847-439-5667 Fax 312-283-1672

Standard(s):	Standard for Safety, Heating and Cooling Equipment UL 1995 Ed. 4, issued 2011/10/14, revised 2014/10/03, Exp. 2022/11/30 Standard for Safety, Heating and Cooling Equipment CSA C22.2 #236 Ed.4, issued 2011/10/14, Exp. 2022/11/30
Product:	Packaged cooling unit with electric heat
Brand Name:	JetAire
Models:	SJ, followed by 70, 90, or 115; followed by 2, 3, or 4; followed by TP or O; followed by 410; followed by BE or JC; followed by V or NV; followed by MC or FT; followed by NVB or VB; followed by S or B; followed by NH; 36, 54, or 72; followed by 460/60; followed by 1, 1B, 2, 2B, or 3; followed by D or B

Jetaire® LJ-170, LJ-210, and LJ-222 Point-of-Use PCAir Units

JBT - FOR THE PERFECT TURN



Jetaire® LJ-170, LJ-210, and LJ-222 Point-Of-Use Technical Specifications

Design Elements

Jetaire® LJ units are ideal for most narrow to jumbo sized aircraft. The LJ units all fit in the same frame size and share many common components. They can be bridge or stand-mounted and benefit the user through reduced pollution, fuel savings and less equipment on the ramp. The "on-demand" technology allows for long continuous operating periods without defrost requirements in most climates while reducing power consumption.

Features / Benefits

- Energy Efficiency
- Consistent Temperature
- Reliability
- Reduced Noise
- Human Machine Interface (MHMI) Screen with Intuitive Operating Controls
- Remote Wireless Data Access
- Heat Mode: Reverse cycle system, which is more efficient then electrical heater element, is used to create enough heat. During the coldest day, the reverse cycle is supported by heating element.

Electrical

Unit	LJ-170-5	LJ-170-6	LJ 210-5	LJ 210-6	LJ 222-6
Voltage	480/60/3	480/60/3	480/60/3	480/60/3	480/60/3
Blower Size	60 HP	60 HP	75 HP	75 HP	75 HP
Heater Size	108/72 kW	144/108/72 kW	108/72 kW	144/108/72 kW	144/108/72 kW
*RLA	205 Amps	245 Amps	223 Amps	263 Amps	285 Amps
*Unit Breaker	250 Amps	350 Amps	350 Amps	350 Amps	350 Amps

*Values are calculated using ARI conditions and are not to be used for construction. Values are for reference purposes only.

*Values for 400 Volt/50 Hertz/3 Phase and 380 Volt/60 Hertz/3 Phase are available. Please contact JBT Sales Representative.

Operational Performance

- Standard Airflow:
  - LJ-170: 390 lb/min @ 22"WC
  - LJ-210: 550 lb/min @ 35"WC
  - LJ-222: 587 lb/min @ 35"WC
- Max Airflow: 650 lb/min
- Max Pressure: 35"
- Cooling Temperature: 25° F (-3.8° C) to 60° F (15.6° C)
- Heating Temperature: 80° F (26.7° C) to 130° F (54.4° C)

Optional Equipment

- Apron Management System (AMS) Interface (Modbus TCP standard, other optional)
- Single or Dual Hose Outlets
- Aircraft Cabin and / or Bridge Temperature Probes
- Boarding Bridge Cooling and Heating capability and controls
- Hose Storage/Deployment Systems
- Delivery Hose (style and/or length) and Aircraft Couplings
- Configuration to service regional jets, narrow, wide body, and jumbo aircraft

Dimensions/Weight

Unit	LJ-170	LJ-210	LJ-222
Length*	205 in (521 cm)	205 in (521 cm)	205 in (521 cm)
Width*	88 in (225 cm)	88 in (225 cm)	88 in (225 cm)
Height	59 in (149.9 cm)	59 in (149.9 cm)	59 in (149.9 cm)
Weight	8750 - lbm	9250 - lbm	9500 - lbm
Sound Level	85 dBA @ 15 ft (4.57 m)	85 dBA @ 15 ft (4.57 m)	85 dBA @ 15 ft (4.57 m)

* Doesn't include condenser fan and outlet tube.

Design Ambient

Unit	LJ-170 / LJ-210 / LJ-222
Humid - Dry Bulb	97° F (36° C)
Humid - Wet Bulb	77° F (25° C)
Dry - Dry Bulb	110° F (43.3° C)
Dry - Wet Bulb	68° F (20° C)

United Kingdom +44-208-587-0666

Hong Kong +852-9016-0194

U.S.A. +1 (801)-627-6600

Rev. 1. December 2019

LIMITED PRODUCTION AUTHORIZATION TO MARK

This authorizes Intertek Engineering to apply the Certification Mark(s) shown below to the models described in the Product(s) section and Product(s) Labeled Section when made in accordance with the Limited Production Certification Report. This document is not valid until signed and dated by an Intertek Engineer and Certification Manager.

This document is the property of Intertek Testing Services and is not transferable.

Applicant:	John Bean Technologies Corporation	**Manufacturer:**	John Bean Technologies Corporation
Address:	3100 Pennsylvania Ave Ogden, Utah 74401	**Address:**	3100 Pennsylvania Ave Ogden, Utah 74401
Country:	USA	**Country:**	USA
Contact:	Erkan Selimoglu	**Contact:**	Erkan Selimoglu
Phone:	(801) 629-3447	**Phone:**	(801) 629-3447
FAX:	NA	**FAX:**	NA
Email:	Erkan.Selimoglu@JBTC.com	**Email:**	Erkan.Selimoglu@JBTC.com

Report Issuing Office:
Reference Report No.:

Authorized Intertek Engineer: _____ **Date:** 15-Nov-2019
Hristomir Guenov, Engineer

Authorized By: _____ **Date:** 27-Nov-2019
For L. Matthew Snyder, Certification Manager

This document supersedes all previous Authorizations to Mark for the noted Report Number.

Intertek Testing Services NA Inc.
545 East Algonquin Road, Arlington Heights, IL 60005, USA
Telephone 800-345-3851 or 847-439-5667 Fax 312-283-1672

Standard(s):	Heating And Cooling Equipment <Expires: 01JAN2024> [UL 1995:2011 Ed.4 +R:03Oct2014] Heating And Cooling Equipment <Expires: 01JAN2024> [CSA C22.2#236:2011 Ed.4]
Product:	Packaged cooling unit
Models:	**See Attached Page(s) for Model(s), Serial Number(s), and LPC Number(s)**

intertek
Total Quality. Assured.

LIMITED PRODUCTION AUTHORIZATION TO MARK

Reference Report No.: 104140679PRT-002

Product(s) Labeled:

Model	Serial Number	LPC Number
LJX-222-6	65759	1022542
LJX-222-6	65758	1022543
LJX-222-6	65761	1022544
LJX-222-6	65760	1022545

RQ3757

JETWAY SYSTEMS
TYPICAL RECOMMENDED SPARE PARTS LIST
SJ-90 PRE-CONDITION AIR SYSTEM

PART NUMBER	DESCRIPTION	RECOMMENDED QTY	LIST PRICE	EXT PRICE
3710461	VFD 30HP ABB 380/480V ACS550 R3	3	$3,200.00	$9,600.00
520098	SNSR PRESS DIFF 0-5" H2O 0-10V M12	3	$595.00	$1,785.00
3708920	SW LIMIT LINEAR 260 DEG 36"	3	$103.00	$309.00
3714374	SNSR TEMP RTD AVG 1K 12"	3	$264.00	$792.00
3718397	DISC THERMO CLOSE 200 DEG	3	$34.00	$102.00
3720460	DET SMOKE PCA AP-C SL-2000-N	3	$309.00	$927.00
3720463	DET SMOKE PCA TB SL-2000-N=3'-5'	3	$16.00	$48.00
3727922	SNSR TEMP RTD 1000 -58 TO 482	3	$175.00	$525.00
3730915	SNSR PRESS 0-750 PSIG 0.25-10.25 VDC	3	$103.00	$309.00
3732391	COMP REFG 15T DANFOSS R410A SH184-4	3	$3,307.00	$9,921.00
3733179	HTR CRANKCASE 460V/65W DANFOSS	3	$40.00	$120.00
L100997	SNSR PRESS DIFF 0-5" H2O 0-10V	3	$502.00	$1,506.00
L101237	SNSR PRESS 0-2PSIG	3	$360.00	$1,080.00
500022	FLTR DRIER SEALED 7/8	3	$47.00	$141.00
500024	SIGHT GLASS 7/8	3	$33.00	$99.00
516672	VALVE DISCH BYPASS ELEC 5/8 M12	3	$338.00	$1,014.00
3731450	VALVE EXPANSION ELEK SERI-F 7/8X1 1/8	3	$263.00	$789.00
516362	ACTR ELEK CONT DAMPER 0-10VDC M12	3	$851.00	$2,553.00
3653986	FILTER AIR PERMANENT 20X28X2	3	$78.00	$234.00
520097	DET SMOKE PCA AP-C SL-2000-N M12	3	$329.00	$987.00
TOTAL				$32,841.00

NOTE: PARTS AND PART NUMBERS ARE SUBJECT TO CHANGE WITHOUT NOTICE
DUE TO NEW PRODUCT DESIGNS AND PART VENDORS ADJUSTING THEIR PRODUCT LINE.

RQ3757

JETWAY SYSTEMS
TYPICAL RECOMMENDED SPARE PARTS LIST
JETPOWER 90KVA

PART NUMBER	DESCRIPTION	RECOMMENDED QTY	LIST PRICE	EXT PRICE
2910016.02	CKT BD KEYPAD PWM2 BMS	2	$267.00	$534.00
2912277.02	CKT BD BUS DISCH PWM 2	2	$196.00	$392.00
2912510	CKT BOARD LV MOV PWM2	2	$69.00	$138.00
2912768	CAPA POLYPROP 120UFD X 3 120V	2	$265.00	$530.00
3732981	PWR SPLY 24VDC 30W 120/240 INPUT	2	$81.00	$162.00
2912855	RLY E&F ASSY PWM2	2	$87.00	$174.00
2913643	CKT BD PWM	2	$1,198.00	$2,396.00
2913013.05	CKT DIAG HOUSTON	2	$1,268.00	$2,536.00
2913016	CKT BD IV SENSE	2	$456.00	$912.00
2913025	CKT BD IGBT SEMIKRON JTP3	2	$683.00	$1,366.00
2913041	CKT BD SCR INTERFACE JTP3	2	$565.00	$1,130.00
2913055	CKT BD MOTHER JTP3	2	$488.00	$976.00
2912427	CKT BD START/STOP PWM2	2	$176.00	$352.00
2913278	CKT BD PWR SUPPLY PWM2	2	$267.00	$534.00
2913635	CKT CONTROL BD	2	$317.00	$634.00
3645952	RLY SPDT 5A 24VDC TERM BLOCK	2	$54.00	$108.00
3647064	FU 5AMP 250V SLO BLOW 5X20 MM	10	$1.84	$18.40
3648222	CMPD HT SK NON SILICONE	2	$2.47	$4.94
3718048	XSTR IGBT 400A 1200V SEMIKRON	2	$239.00	$478.00
3724885	FAN 24VDC 170CFM POTTED	2	$91.00	$182.00
4502240	FU .5 AMP FAST 5 X 20 MM	2	$1.00	$2.00
4502264	SCRECT 150A 1400V	2	$63.00	$126.00
4503331	LAMP LED RED 24 VDC	2	$11.00	$22.00
4503332	LAMP, LED GRN 24VDC	2	$14.00	$28.00
4503333	LAMP, LED YEL 24 VDC	2	$11.00	$22.00
2910016.02	CKT BD KEYPAD PWM2 DIAG	1	$267.00	$267.00
3646629	PWR SPLY 120VAC/15VDC 4A	1	$221.00	$221.00
TOTAL				$14,245.34

NOTE: PARTS AND PART NUMBERS ARE SUBJECT TO CHANGE WITHOUT NOTICE DUE TO NEW PRODUCT DESIGNS AND PART VENDORS ADJUSTING THEIR PRODUCT LINE.

RQ3757

JETWAY SYSTEMS
TYPICAL RECOMMENDED SPARE PARTS LIST
LJ-210 PRE-CONDITION AIR SYSTEM

PART NUMBER	DESCRIPTION	RECOMMENDED QTY	LIST PRICE	EXT PRICE
500022	FLTR DRIER SEALED 7/8	1	$47.00	$47.00
3731449	FLTR DRIER SEALED 7/8 BI-FLOW	1	$38.00	$38.00
500024	SIGHT GLASS 7/8	1	$33.00	$33.00
3703408	VALVE DISCH BYPASS ELEC SDR-4	1	$367.00	$367.00
3740966	PROGRAMMED HMI 4.3" LJ 222-6 PRM816	1	$873.00	$873.00
516750	SNSR PRESS 0-2 PSIG M12 ASSY	1	$646.00	$646.00
3740516	PROGRAMMED PLC CX8050 SJ 222-6 PRP309	1	$1,588.00	$1,588.00
3740448	PROGRAMMED DRIVE VFD 75HP LJ PRM815	1	$8,965.00	$8,965.00
3737381	HEATER ELEMENT 12KW/480V TB	1	$365.00	$365.00
3740428	STARTER MANUAL MOTOR 37-50A	1	$365.00	$365.00
3714374	SNSR TEMP RTD AVG 1K 12"	1	$264.00	$264.00
3652889	DISC THERMO CLOSE 180 DEG	1	$38.00	$38.00
3718623	PUSH BUTTON 30MM NO-NC RED EXT SHROUD ID	1	$115.00	$792.00
3718624	PUSH BUTTON 30MM NO-NC BLU EXT SHROUD ID	1	$128.00	$128.00
3719120	PUSH BUTTON 30MM NO-NC GRN EXT SHROUD	1	$114.00	$114.00
3719127	PUSH BUTTON 30MM EMER STOP NO-NC ILLUM I	1	$182.00	$182.00
3719128	OPER SEL SW 22MM 4 POS	1	$100.00	$100.00
3720460	DET SMOKE PCA AP-C SL-2000-N	1	$309.00	$309.00
3720463	DET SMOKE PCA TB SL-2000-N=3'-5'	1	$16.00	$16.00
515144	SNSR TEMP RTD 1K -40 TO 220 M12	1	$144.00	$144.00
3730915	SNSR PRESS 0-750 PSIG 0.25-10.25 VDC	1	$103.00	$103.00
3731450	VALVE EXPANSION ELEK SERI-F 7/8X1 1/8	1	$263.00	$263.00
3740555	COMPRESSOR REFG 15T DANFOSS R410A DSH184	1	$2,015.00	$2,015.00
3740556	COMPRESSOR REFG DANFOSS R410A DSH368-4	1	$6,083.00	$6,083.00
3736285	COMPRESSOR REFG 40TON DSH482E-4	1	$8,112.00	$8,112.00
3725306	SNSR TEMP RTD 1K AVG 8.25"	1	$28.00	$28.00
3714374	SNSR TEMP RTD AVG 1K 12"	1	$264.00	$264.00
3733179	HTR CRANKCASE 460V/65W DANFOSS	1	$40.00	$40.00
L101237	SNSR PRESS 0-2PSIG	1	$360.00	$360.00
3739937	SENSOR PRESSURE DIFFERENTIAL 1,2,3,5 IN	1	$122.00	$122.00
			TOTAL	$32,764.00

NOTE: PARTS AND PART NUMBERS ARE SUBJECT TO CHANGE WITHOUT NOTICE DUE TO NEW PRODUCT DESIGNS AND PART VENDORS ADJUSTING THEIR PRODUCT LINE.

RQ3757

TYPICAL RECOMMENDED SPARE PARTS LIST
JETPOWER 180KVA

PART NUMBER	DESCRIPTION	RECOMMENDED QTY	LIST PRICE	EXT PRICE
2910016.02	CKT BD KEYPAD PWM2 DIAG	1	$267.00	$267.00
2912277.02	CKT BD BUS DISCH PWM 2	1	$196.00	$196.00
2912427	CKT BD START/STOP PWM2	1	$176.00	$176.00
2912476	CKT BD CURRENT MON	1	$717.00	$717.00
2912510	CKT BD LV MOV PWM2	1	$69.00	$69.00
2912768	CAPA POLYPROP 120UFD X 3 120V	1	$265.00	$265.00
2913011	CKT BD PWM	1	$1,075.00	$1,075.00
2913016	CKT BD IV SENSE	1	$456.00	$456.00
2913025	CKT BD IGBT DRIVE JTP3	3	$683.00	$2,049.00
2913041	CKT BD SCR INTERFACE JTP3	1	$565.00	$565.00
2913055	CKT BD MOTHER JTP3	1	$488.00	$488.00
2913278	CKT BD PWR SUPPLY PWM2	1	$267.00	$267.00
2913542	CKT BD CONTACTOR 2	1	$506.00	$506.00
2913635	CKT BD CONTROL	1	$317.00	$317.00
2913643	CKT BD PWM	1	$1,198.00	$1,198.00
3645952	RLY SPDT 5A 24VDC TERM BLOCK	1	$54.00	$54.00
3647064	FU 5AMP 250V SLO BLOW 5X20 MM	5	$1.84	$9.20
3648222	CMPD HT SK NON SILICONE SGL	3	$2.47	$7.41
3652375	CNTOR 3 POLE 350A 240V 400HZAC	1	$719.00	$719.00
3709242	FAN 24VDC 170CFM	1	$105.00	$105.00
3709387	CAPA POLYPROP 1UFD 1200V	1	$55.00	$55.00
3718048	XSTR IGBT 400A 1200V SEMIKRON	3	$239.00	$717.00
4501023	SCRECT 250A 1400V	2	$211.00	$422.00
4501842	PAD THERMO KD221 XSTR	1	$6.07	$6.07
4502240	FU .5 AMP FAST 5X20 MM	5	$1.00	$5.00
4503331	LAMP LED RED 24 VDC	1	$11.00	$11.00
4503332	LAMP LED GRN 24 VDC	1	$14.00	$14.00
4503333	LAMP LED YEL 24 VDC	1	$11.00	$11.00
TOTAL				$10,746.68

NOTE: PARTS AND PART NUMBERS ARE SUBJECT TO CHANGE WITHOUT NOTICE DUE TO NEW PRODUCT DESIGNS AND PART VENDORS ADJUSTING THEIR PRODUCT LINE.

RQ3757

JETWAY SYSTEMS
TYPICAL RECOMMENDED SPARE PARTS LIST
APRON DRIVE 2&3 TUNNEL UNIT
PROGRAMMABLE LOGIC CONTROL (PLC)

PART NUMBER	DESCRIPTION	RECOMMENDED QTY	LIST PRICE	EXT PRICE
2964160	PRGMD INV AC 10HP HORZ HITACHI	5	$1,865.00	$9,325.00
2964161	PRGMD INV AC 1HP CAB HITACHI	5	$717.00	$3,585.00
2964737.01	MDL ACF DIGITAL PLC W/3' CA	5	$2,075.00	$10,375.00
3613462	BELL GONG 10 DIA	5	$164.00	820.00
3613463	BELL VIBRATING MECHANISM 120V	5	$150.00	$750.00
3618029	HTR STRIP 240V 250W 60" LEADS	5	$68.00	$340.00
3623768	BLOCK CNTOR 1N/O 10AMP	25	$24.00	$600.00
3643395	RLY SSR 24VDC 480V / 20A	5	$88.00	$440.00
3645952	RLY SPDT 5A 24VDC TERM BLOCK	5	$54.00	$270.00
3650110	SW TAPE 1'0 TS-46 15' LEADS	5	$238.00	$1,190.00
3650139	PLC AB MDL INPUT 16 PT	5	$759.00	$3,795.00
3650141	PLC AB MDL OUTPUT 16 PT	5	$981.00	$4,905.00
3650143	PLC AB MDL OUTPUT ANALOG 2 CHAN	5	$1,085.00	$5,425.00
3706605	SW TAPE 1'0 TS-46 15' LEADS	5	$235.00	$1,175.00
3718287	PWR SPLY 115-230VAC/24VDC 10A	5	$314.00	$1,570.00
3724701	JOYSTICK DUAL AXIS PROP 4-20MA TRG	5	$839.00	$4,195.00
3726240	CNTOR XT 3P 40A IND/60A RES	5	$279.00	$1,395.00
3726241	CNTOR XT 3P 12A IND/22A RES	5	$157.00	$785.00
3726242	CNTOR RVSG XT 3P 32A FRAME C	5	$536.00	$2,680.00
3726244	CNTOR AUX 4NO 16AMP XT (3726240)	10	$44.00	$440.00
3728007	PWR SPLY 120-240VAC/12VDC 15W	5	$125.00	$625.00
3728180	MONITOR LCD 5"	5	$387.00	$1,935.00
3729950	DISPLAY LCD W/TCH 10.4 ETHERNET GTO	5	$6,029.00	$30,145.00
3736680	SNSR POSN ROTG 4-20 MA 1 TURN IP67	10	$906.00	$9,060.00
3736681	SNSR POSN ROTG 4-20 MA 16 TURN IP67	5	$850.00	$4,250.00
4100210	SW LIMIT CW/CCW W/3/4 ENTRY	5	$140.00	$700.00
4100211	SW LIMIT DPDT W/3/4 ENTRY	5	$157.00	$785.00
4100212	SW LIMIT SPDT	5	$118.00	$590.00
4100213	SW LIMIT 2 STEP	5	$140.00	$700.00
4100214	SW LIMIT PLUNGER 90 DEG SPDT	5	$187.00	$935.00
4100215	SW LIMIT EXTD PLUNGER 90DEG	5	$197.00	$985.00
4100217	SW LIMIT CW/CCW W/CA	5	$187.00	$935.00
4100218	SW LIMIT CW/CCW W/4' CA	5	$223.00	$1,115.00
4140141	RES 250 OHM 225W 1% MTL FILM	5	$42.00	$210.00
4140220	SW LIMIT RLR PRECISION 15AMP	5	$91.00	$455.00
4140272	DIO 600V 3A 1N5406	5	$0.73	$3.65
4140404	OPER PB SGL BTN	5	$33.00	$165.00
4140412	OPER PB TWO BTN 120V	5	$126.00	$630.00
4140593	CAPA 30-36 MFD 330VAC	10	$21.00	$210.00
4142641	OPER PUSH/PULL 24V	5	$142.00	$710.00
4570480	MOV AC 480V	10	$3.65	$36.50
4960596	ACTR LINEAR 4 STRK 115 VAC	5	$671.00	$3,355.00
4960699	ACTR LINEAR 1'0 STRK 115VAC	5	$1,132.00	$5,660.00
			TOTAL	$118,255.15

NOTE: PARTS AND PART NUMBERS ARE SUBJECT TO CHANGE WITHOUT NOTICE DUE TO NEW PRODUCT DESIGNS AND PART VENDORS ADJUSTING THEIR PRODUCT LINE.
PLEASE NOTE 3729950 WILL NEED A PROGRAM

Example of Warranty

Passenger Boarding Bridges and Walkways
Two Year Product Warranty
Beginning XXXXXX XX, XXXX

XXXXXXX XXXXXXXXXXXX AIRPORT
Bridge OG# XXXXX
Walkway OG# XXXXX

A. JBT AeroTech, for and on behalf of its business unit Jetway Systems ("SELLER") warrants that products when shipped and work when performed are (1) free from defects in material and workmanship, (2) conform to all design and manufacturing requirements contained in the contract, and (3) meet or exceed the performance requirements specified in the contract. All claims under this warranty must be made in writing immediately upon discovery and, in any event, within two (2) years from acceptance of the product or from completion of the applicable work if work is involved. Any product repaired or provided as a replacement hereunder shall be warranted for the remainder of the applicable warranty period. Defective and nonconforming items must be held for SELLER's inspection and promptly returned to the original f.o.b. point upon request. **THE FOREGOING IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES WHATSOEVER, EXPRESSED, IMPLIED, AND STATUTORY, INCLUDING WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

B. Upon SELLER's inspection and confirmation of the claimed non-conformity, and provided that the product has not been subjected to misuse, or repair or alteration not performed or authorized by SELLER, or damaged by neglect, accident or improper installation (by someone other than SELLER), and further that BUYER has performed all required service and preventive maintenance on the product in accordance with SELLER's maintenance manual and can demonstrate such performance through maintenance records, the SELLER shall at its option either (1) repair or replace its product or work at the final delivery point, or (2) refund an equitable portion of the purchase price.

C. SELLER's obligation hereunder is expressly limited to repair or replacement or an agreed adjustment in price, and in lieu of any other obligation or responsibility for damages. **IN NO EVENT SHALL SELLER BE RESPONSIBLE FOR INCIDENTAL, SPECIAL, CONSEQUENTIAL OR ANY OTHER INDIRECT DAMAGES HEREUNDER. THE FOREGOING STATES SELLER'S ENTIRE LIABILITY AND BUYER'S EXCLUSINVE AND SOLE REMEDY UNDER THIS WARRANTY.** Any action by BUYER arising hereunder, or relating hereto whether based on breach of contract, tort (including negligence and strict liability) or other theories must be discovered within the warranty period or it shall be barred.

JBT AeroTech

Passenger Boarding Bridges and Walkways
Two Year Product Warranty
Beginning XXXXXX XX, XXXX

XXXXXXX XXXXXXXXXXXX AIRPORT
Bridge OG# XXXXX
Walkway OG# XXXXX

D. Failure caused by: (a) BUYER's abuse and (b) acts of God, which shall include but not be limited to hurricanes, earthquakes, and natural disasters, are specifically excluded from the coverage of this warranty.

E. SELLER disclaims any warranty responsibility in the event of any modification of its product without prior written consent of SELLER.

F. The foregoing warranty provisions are applicable only if the BUYER has performed preventive maintenance in accordance with SELLER's maintenance manual. The required maintenance must be performed, and records maintained for SELLER's review and inspection if requested.

G. Due to the inherent design and operational use of the canopy curtain, tires (when required), lights and fuses, they are considered expendable parts and are not covered by any warranty other than that of workmanship and quality.

In addition, the following after installation adjustments are considered a part of standard boarding bridge maintenance and therefore are not covered by any warranty:

1. Vertical travel limits
2. Horizontal travel limits
3. Swing tunnel warning and limit
4. Steer rate
5. Adjustment of motor brakes and timer
6. Column fault limit
7. Steer and over-steer limits
8. Tire pressure
9. Cable adjustment, electrical and mechanical
10. Tunnel roller adjustments

H. Non-Assignability: This warranty extends only to the original BUYER of each product and is not assignable to any other entity without the prior written approval of SELLER

I. No agreement or understanding bearing upon or extending the warranty or remedies set forth herein will be binding upon SELLER unless SELLER has agreed thereto in writing.

Example of Warranty

"JETPOWER®"
Two Year Product Warranty
Beginning at Substantial Completion

XXXXXXX INTERNATIONAL AIRPORT
OG# XXXXX (Gate XXX)

A. SELLER warrants only that its products when shipped and its work when performed will meet all applicable specifications and other specific product and work requirements (including those of performance, if any) of this agreement and will be free from defects in material and workmanship. All claims under this warranty must be made in writing immediately upon discovery and, in any event, within two (2) years from acceptance of the applicable product or two (2) years from completion of the applicable work if work is involved. Defective and nonconforming items must be held for SELLER's inspection and returned to the SELLER. **THE FOREGOING IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES WHATSOEVER, EXPRESSED, IMPLIED, AND STATUTORY, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS.**

B. Upon BUYER's submission of a claim as provided above and following its substantiation, SELLER shall at its option either (1) repair or replace its product or work at the final delivery point or (2) refund an equitable portion of the purchase price.

C. The foregoing is SELLER's only obligation and BUYER's exclusive remedy for breach of warranty against SELLER for claims arising hereunder or relating hereto. In no event shall BUYER be entitled to incidental or consequential damages. Any action by BUYER arising hereunder, or relating hereto whether based on breach of contract, tort (including negligence and strict liability) or other theories must be discovered within one (1) year after the cause of action occurs or it shall be barred.

D. The foregoing warranty provisions are applicable only if the BUYER has performed preventive maintenance in accordance with SELLER's maintenance manual. The required maintenance must be performed and records maintained for SELLER's review and inspection if requested.

E. Non-assignability: This warranty extends only to the original BUYER of each product and is not assignable to any other entity without the prior written consent of the SELLER.

F. SELLER disclaims any warranty responsibility as to its products in the event of any modification of such product without prior written consent of SELLER.

G. Due to the inherent design and operational use of the input and aircraft cables, light bulbs, light lenses and fuses, they are considered expendable parts and are not covered by any warranty other than that of workmanship and quality.

EXAMPLE OF WARRANTY

Preconditioned Air Equipment
Two-Year Product Warranty
Beginning at Substantial Completion

XXXXX INTERNATIONAL AIRPORT
OG# XXXXX (Gate XXX)

A. JBT AeroTech, for and on behalf of its business unit Jetway Systems ("SELLER") warrants that products when shipped and work when performed are (1) free from defects in material and workmanship, (2) conform to all design and manufacturing requirements contained in the contract, and (3) meet or exceed the performance requirements specified in the contract. All claims under this warranty must be made in writing immediately upon discovery and, in any event, within two (2) years from acceptance, owner's beneficial use of the product or from completion of the applicable work, if work is involved, whichever is earlier. Any product repaired or provided as a replacement hereunder shall be warranted for the remainder of the applicable warranty period. Defective and nonconforming items must be held for SELLER's inspection and promptly returned to the original f.o.b. point upon request. **THE FOREGOING IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES WHATSOEVER, EXPRESSED, IMPLIED, AND STATUTORY, INCLUDING WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

B. Upon SELLER's inspection and confirmation of the claimed non-conformity, and provided that the product has not been subjected to misuse, or repair or alteration not performed or authorized by SELLER, or damaged by neglect, accident or improper installation (by someone other than SELLER), and further that BUYER has performed all required service and preventive maintenance on the product in accordance with SELLER's maintenance manual and can demonstrate such performance through maintenance records, the SELLER shall at its option either (1) provide replacement parts for its product at the final delivery point, or (2) refund an equitable portion of the purchase price.

C. SELLER's obligation hereunder is expressly limited to replacement or an agreed adjustment in price, and in lieu of any other obligation or responsibility for damages. **IN NO EVENT SHALL SELLER BE RESPONSIBLE FOR INCIDENTAL, SPECIAL, CONSEQUENTIAL OR ANY OTHER INDIRECT DAMAGES HEREUNDER. THE FOREGONG STATES SELLER'S ENTIRE LIABILITY AND BUYER'S EXCLUSIVE AND SOLE REMEDY UNDER THIS WARRANTY.** Any action by BUYER arising hereunder, or relating hereto whether based on breach of contract, tort (including negligence and strict liability) or other theories must be discovered within the warranty period or it shall be barred.

D. Failure caused by: (1) BUYER's abuse and (2) acts of God, which shall include but not be limited to hurricanes, earthquakes, and natural disasters, are specifically excluded from the coverage of this warranty.

Preconditioned Air Equipment
Limited Product Warranty
(continued)

E. SELLER disclaims any warranty responsibility in the event of any modification of its product without prior written consent of SELLER.

F. The foregoing warranty provisions are applicable only if the BUYER has performed preventive maintenance in accordance with SELLER's maintenance manual. The required maintenance must be performed and records maintained for SELLER's review and inspection if requested.

G. Due to the inherent design and operational use of the aircraft supply hose, hose storage basket, lights, lenses and fuses, they are considered expendable parts and are not covered by any warranty other than that of workmanship and quality.

H. Non-assignability: This warranty extends only to the original BUYER of each product and is not assignable to any other entity without the prior written approval of SELLER.

I. No agreement or understanding bearing upon or extending the warranty or remedies set forth herein will be binding upon SELLER unless SLLER has agreed thereto in writing.

Rev 8/21/2020

ESTIMATED TOTAL PROJECT BUDGET

ASMC Approved: _____

Board Approved: _____

Project Name: RSW Passenger Boarding Bridge Replacement

Project Description:

Replacement of 27 Pasenger Boarding Bridges including foundation modifications, air condidtioning/HVAC systems, ground power, APUs, lightning protection, signage, ramp and building/structural work.

BUDGET SUMMARY:

Design/Permitting:		
A&E/Design & Permitting	$ 1,326,720.60	
CM/GC Pre-construction	$ 103,386	
TOTAL DESIGN/PERMITTING		$ 1,430,107
Construction:		
A&E/Construction Administration	$ 334,274	
Construction Management & CEI	$ 4,076,000	
Construction	$ 25,654,552	
IT Equipment costs - LCPA IT dept purchase	$ 1,198,000	
Construction Contingency	$ 3,585,219	
TOTAL CONSTRUCTION		$ 34,848,045
Total Project Budget *		**$ 36,278,152**

* All project costs shall be expanded below the Board approved Total Project Budget. Any costs over the Board approved Total Project Budget must be approved by the Board.