

**The Port Authority of New York and New Jersey  
Committee on Construction Meeting Transcripts  
May 25, 2011**

[Chair R. Pocino] Teterboro Airport Runway 24 Engineered Material Arresting System project authorization, and Susan, you're going to let us know all about that?

[S. Baer] I will, thank you. Thank you. Commissioners, I'm here to request your approval for both the project and respective contracts to install an engineered material arresting system at the end of Runway 24 at Teterboro Airport. The project is the next step in completion of Teterboro's Runway Safety Area program. The FAA established a program designed to improve runway safety areas at all federally-obligated airports and requires compliance by 2015. Generally, an RSA is rectangular in shape and extends 250 feet either side of the runway center line and 1,000 feet beyond each end of a runway. As an alternative for space-constrained airports, the FAA allows implementation of a technology called an EMAS. The EMAS is essentially a lightweight concrete located at the end of a runway intended to stop an aircraft overrun with no human injury and minimal, if any, aircraft damage. I have here a sample of the EMAS material, which I will pass around. I merely warn you that it is very dusty, but we talk about this--I'm passing napkins, too-- we talk about this a lot, but as you can see, it looks like concrete, but it weighs almost nothing and it's designed so that the wheels of an aircraft go into this and it breaks apart. We'll see some pictures of it.

[Chair A. Pocino] I thought you were going to show us the bubblewrap. (laughter)

[S. Baer] It's so dirty, I didn't want to just pass it like that. The bubblewrap is a very good technology, too.

[Chair A. Posino] It's not for airplanes, though.

[S. Baer] No. (laughs) In 2002, the FAA funded analyses to evaluate existing runway ends and established plans for upgrading runway safety areas which are identified EMAS as the most practical approach for each of the runway ends of Teterboro Runway 6-24. At Teterboro, as you can see from the image before you, this is Runway 6, it's already compliant with the EMAS installed. Runway 19 will have a compliant EMAS installed by the end of the year-- we're in construction--and Stage 2 design for Runway 1 overrun is presently underway with anticipated completion in 2013. We will not need an EMAS there; we will have to do some environmental mitigation. Currently, The Port Authority has 6 EMAS at our airports which are included in the 16 out of 26 runway ends that are already compliant with the runway safety area requirement. EMAS have collectively arrested 4 aircrafts successfully at our airports. The EMAS will be located at the west end of Runway 6-24. It'll be approximately 350 feet long and 200 feet wide. The work will be completed by a joint venture of Engineer Arresting Systems Corporation and Jacobs Engineering. Work will include the design and construction of an EMAS and associated work including computer modeling, site preparation, paving of the support surface, manufacturing and block installation, construction management, obtaining certain permits, and one year of quarterly inspections and maintenance. The contract with the joint venture is a negotiated contract due to the proprietary nature of the technology and an FAA requirement to use Engineer Arresting System Corporation, the sole approved contractor. Work related to this project will be performed during off-peak periods in order to minimize impacts of both airport operations and surrounding communities. The

project represents significant economic benefits for the region. The total economic impact of the projects as estimated include 110 jobs, \$6.6 million in wages and nearly \$28 million in economic activity over the life of the project, including indirect effects such as construction employment and materials purchase. The total project cost is estimated at \$27.1 million. \$17 million consists of the design build contract with the joint venture. Another \$4.5 million is allocated for various environmental permits and approvals and mitigation required for the project. In addition, we will also enter into an agreement with the FAA covering reimbursement of costs associated with this review of designs for the project, estimated at \$100,000. An application has been submitted to the FAA to recover 95 percent of eligible design and construction costs associated with this project through the federal AIP program. The joint venture will proceed with design this summer. Completion of substantial construction is expected by the end of 2012 with project completion anticipated in the summer of 2013. I ask that you recommend this item for approval to the full board. Thank you.

[Chair R. Pocino] Thanks, Sue. You said that 95 percent is reimbursable?

[S. Baer] 95 percent is allowed to be reimbursed by AIP, and we've made the application. We don't have the reply yet, but there's indications that it would be reimbursed.

[Chair R. Pocino] Would this be the first EMAS system at Teterboro?

[S. Baer] No. The other end of this runway--if we go back to the drawing of it-- the other end, which is along Route 46, that already has an EMAS in there and it's actually successfully arrested an aircraft at that end of the runway. And then, 1-19 down at on the left, down by Redneck Avenue, we actually had to relocate the road. We are putting in EMAS; it's right now under construction there. At the other end of 1-19, as you can see from there, we actually have enough land to do a 1000-foot Runway Safety Area. But because Teterboro is--so much of it is environmentally sensitive areas, we'll have to do some mitigation at that end, so we're working on that.

[Chair R. Pocino] Any other Commissioners have comments or questions? Jeff? Go ahead, Jeff.

[Comm. J. Moerdler] I saw the photo of the plane and I was there on my tour shortly after, one of the planes; I don't know if that was--?

[S. Baer] That was the only one. Thank you. (laughs)

[Comm. J. Moerdler] --that landed there. It looks like it only sinks in 6 inches or something. Is the material substantially deeper so that if there's--?

[S. Baer] It ramps up. It starts at about 2 inches at the end of the runway and goes up to about 6 to 8 inches as the blocks get bigger and there's been ample tests done on this to show how fast a plane would likely be traveling there and what you need to be able to stop the plane, and so it's designed that way. It's also in blocks, and so when you have to replace them, you can pull out blocks and replace the blocks.

[Comm. J. Moerdler] Which leads to my second question, which is do we stock replacement blocks, or how do we--?

[S. Baer] We do have replacement blocks on hand. This company is also a local company and they're very responsive to coming in to replace them, but we do keep blocks on hand.

[Comm. J. Moerdler] How quickly did-?

[S. Baer] Very quickly. I think that was done within a week. It was completed within a week.

[Comm. J. Moerdler] And does the system still have enough capabilities so that if there's a second problem during that week-

[S. Baer] Yes, there's still enough capability if there were a second problem and we worked very hard to get it replaced very quickly. And then, to recover the costs from whomever--whoever's insurance company.

[Chair R. Pocino] Tony?

[Comm. A. Sartor] Yeah, I just wanted to talk a little bit about the \$27.1 million.

[S. Baer] Uh-huh. (affirmative)

[Comm. A. Sartor] The breakdown--I'd like to see a breakdown of the \$27.1 million.

[S. Baer] Sure. It's \$17.1 million is for the joint venture, \$4.6 has been allocated for the FAA wetland mitigation. Financial expense is \$1.3, contingency at 5 percent is \$1 million, administrative and general is \$.6, and planning and engineering is \$.8.

[Comm. A. Sartor] What was the engineer's estimate for this job?

[S. Baer] It was approximately the same. I think it was like-.

[P. Zipf] It's \$14.7; that included \$7.7 for site work to prepare the site and \$7 million for the EMAS system itself.

[Chair A. Sartor] And the bid came in at \$17?

[P. Zipf] It's quite frankly, it's a sole-

[S. Baer] It's a negotiate settlement, so \$17 came in, about. Staff will work very hard to--we got the price actually down-- working with purchasing we managed to get the price down because it is a sole source, but it's very important to us to try to get the best cost. We advertised that it was the sole source. Again, the FAA has only approved one company to do this work.

[Comm. A. Sartor] And that locks you in.

[S. Baer] It sure does.

[Chair R. Pocino] It makes it really tough, but at least you did get a chance to negotiate it.

[S. Baer] Yeah, we did negotiate and did improve the price over what was originally submitted.

[Comm. J. Moerdler] Any competitors out there that are going through the-?

[S. Baer] Just this morning, one of my staff was telling me about a company in Scandinavia that is developing their own system. They need to have a U.S. partner and they're working on that, so they're probably not close to getting approval. We have actually spent some time and energy trying to come up with our own material but we'll be doing more testing. We had some promising tests last summer. We're doing more testing this summer with it.

[Comm. J. Moerdler] Because I would think that on our own or in partnership with other airport authorities, it would be a good idea to encourage that Scandinavian company so we could create competition.

[S. Baer] Yeah. We told them we were very interested in their product, but the FAA requirement that Congress imposed is that it must be U.S. companies, so they're looking for--from what I understand--they're looking for a U.S. partner so that they can proceed.

[P. Zipf] Our concrete lab is looking to replicate the product and work with the FAA and see if we can get a product ourselves.

[Comm. J. Moerdler] Without a patent infringement.

[P. Zipf] And then we'll ask for a patent.

[S. Baer] And then we would ask for a patent for it. Yeah.

[Comm. A. Sartor] Just a suggestion on future presentations: I'd like to see a breakdown presented to the board.

[S. Baer] Okay. All right.

[Comm. A. Sartor] Just as we've discussed, and we'd come back with many other projects-- most of the other projects, as a matter of fact. So it would just be easier to understand what the presentation--for the public to understand where the numbers are.

[S. Baer] Sure.

[Chair R. Pocino] Yeah, good point, Tony. No other comments or questions? I have a motion to move it on to the board?

[Comm. J. Moerdler] So moved.

[A. Sartor] Second.

[Chair R. Pocino] All in favor?

[affirmative] All right.

[S. Baer] Thank you.

[Chair R. Pocino] The next item we have is design, implementation and maintenance of a replacement toll collection and audit system. The award of the contract. Cedrick?

[C. Fulton, Director Bridges and Tunnels] Good morning, Commissioners. I'm here today to discuss with you an item on the May report of actions to discuss approval for the approval of two contracts for the design, implementation, and maintenance of a Replacement Toll Collections System and Audit System on Port Authority property. You will recall in February of 2010, the Board authorized a project for the new toll collection system at a total estimated cost of \$175 million. The Port Authority's toll facilities are comprised of 4 bridges at George Washington, Goethals, and Bayonne bridges and Outerbridge Crossing and 2 tunnels: the Lincoln and Holland tunnels. The George Washington Bridge has 3 toll plazas: one on the upper level, one on the lower level and one serving the Palisades Interstate Parkway. Each of the other facilities has 1 toll plaza to a total of 8 throughout the system. The 8 toll plazas include a total of 72 toll lanes, some of which accept only E-ZPass tags and some of which accept E-ZPass or cash. In 2010, 242 million vehicles used the Port Authority's tunnels and bridges generating \$960 million in revenue. The current Tolls System was installed in 1997 and is close to 14 years old. Other agencies in our region have installed their system between 1995 and 2000 and have either upgraded or have entirely replaced their systems by now. Our system is past its useful life. Many components are obsolete and no longer available through the original manufacturers and our software can no longer be updated. As a result of this obsolescence, maintenance costs are increasing significantly. With the New Toll System, The Port Authority will benefit from the latest available technologies in toll collection. The new system will provide The Authority with more audit capabilities to ensure this important revenue stream is protected. There will be an improvement in transaction reporting, ensuring that correct tolls are charged to the correct vehicles. Further, camera systems will more accurately capture violation images so the authority can pursue those who don't pay. The new system will also provide for lower maintenance costs than we currently pay. The new system components are expected to have a longer life cycle because there's swappable components. This will reduce the number and duration of unplanned closures. In addition, the system builds for the future has the capacity for All-Electronic Tolling operation-- cashless operations when it is approved by the board without having to reinvest in the whole system itself. Subsequent to February 2010, Board authorization request for Pre-Qualifications publicly advertised in March 2010 for design, implementation and maintenance of a new toll system. A total of seven firms were pre-qualified to receive proposals based on their responses. Those seven firms were sent a request for proposal in November 2010. Five of the seven firms responded with proposals. The five proposals were evaluated by a selection committee based on technical plan and work approach, maintenance plan and approach, and their management approach and firm experience. The top proposals were invited to provide oral presentations. Afterwards, the selection committee rescored the proposers on the technical, maintenance, and management criteria and locked in the scores. Calls for proposals were opened for review and added to the rankings. Electronic Transaction Consultants Corporations scored the highest among the firms both technically and overall. We have made a great deal of progress since project authorization. Here you can see several key milestones moving forward. During the first year after award, the system infrastructure

and software will be designed and tested. Once successful completion of the factory acceptance tests, the work in our toll lines will begin. That is scheduled to take place between the fourth quarter of 2012 through the first quarter of 2015. When the last lane is converted to the new system, all construction in field will be completed and a 30-day systems operational test will take place. With successful completion of the operational tests, close out of the design build contract will take place and the maintenance contract enters into effect. Commissioners, it is my recommendation that we award the 2 contracts to Electronic Transaction Consultants Corporation at a total cost of \$81.9 million. The first is the Design/Build Contract to design and implement a replacement toll collection and audit system; the second to the maintenance contract to maintain that system once installed to protect an important Port Authority revenue source. The maintenance contract also provides for three 2-year renewal options. Including this authorization, we remain within our authorized budget of \$175 million for the project. Commissioners, I request your concurrence on the award of these contracts.

[Chair R. Pocino] Cedrick, would this system be considered to be the most updated, modern technical system available to us?

[C. Fulton] Yes, sir. We were very pleased with the system that ETC proposed with regard to their ability to recognize and differentiate between the different vehicles as well as to capture license plates so that at the end, we will have a better accuracy of the vehicles that pass through our plaza, therefore collect all of the revenue, or as much revenue as we can.

[Chair R. Pocino] Commissioners? Jeff?

[Comm. J. Moerdler] A couple of questions. First, is--and I remember we had talked about this at one point but I don't recall the answer or if you knew at that point. Will this technology permit the acceptance of multiple systems so the Florida SunPass and the other technologies that aren't E-ZPass technology--will there be an ability to accept those technologies?

[C. Fulton] The issue with interoperability of really the back-office issue-- the equipment that is installed in the lane can recognize various types of RFI technology but it's really the interchange of money behind the scenes that provides for true interoperability.

[Comm. J. Moerdler] Okay, but this technology that we're installing in the plazas will have the ability, so if we can get the back office to work with it later on, we don't have to go and retrofit the lanes.

[C. Fulton] There are different types of components that can be installed to lanes that aren't necessarily compatible. One of the issues that we are working on right now amongst the various E-ZPass agencies is a replacement procurement to buy the lane equipment that will read tags amongst all of those various agencies. One of the other initiatives that we're working on, though, is to try to find compatibility outside of the E-ZPass, so I guess the direct answer to your question, sir, is with the lane controllers that we'll be putting in place, on day one, there may not be the ability to read a tag from a different agency, such as from Florida or from Texas or from California.

[Comm. J. Moerdler] Okay. Is the technology that we're going to be installing--can you just go back to that slide that showed the bar--yes, that one. Is this very new technology that it's a year's worth of system design before we even start deploying it? What is it that requires so much lead time?

[C. Fulton] The elements themselves--we liken it to building a PC in that you buy a power source, you buy a hard drive and you put it together. What takes time is the installation at each one of our various toll plazas, how they have to be set up, how they have to be tuned to take advantage of the different geometries coming into each one of the plazas. So that's really what's happening. You're having work sessions where the team members, which include Port Authority as well as the system designers are working together to understand all of the intricacies of each plaza and they're compiling that information.

[Comm. J. Moerdler] That's during that red phase in the system design that you're doing the actual physical layouts--okay. That's--I thought--

[C. Fulton] A series of workshops where people are really understanding the environment in which they're going to be working.

[Comm. J. Moerdler] Okay. And the testing and operation doesn't occur until after you've deployed at all 8 plazas?

[C. Fulton] Each--

[Comm. J. Moerdler] In other words, it doesn't make sense to deploy one plaza if you do Lincoln Tunnel first, to turn that on and actually use it. You wait until you finish the process?

[C. Fulton] Well, no. The systems at the conclusion of each plaza-- at each plaza there will be a couple of lanes taken out at a time. Then, that plaza will be completed and then those lanes will be available for revenue service and it will proceed that way, from plaza to plaza to plaza. Then, at the conclusion at all plazas, then we would enter into what we consider that system acceptance period, where the entire system is now--

[Comm. J. Moerdler] Okay, so you're starting to turn it on as you segment.

[C. Fulton] We need to bring the lanes back because we need the lanes.

[Comm. J. Moerdler] Right. Okay. And does the contract include--you talked about the cost of buying a maintenance contract. Are we getting a 1-year warranty with this system from final system acceptance or from each plaza going on? There's a manufacturer's warranty associated with all the elements that are being installed into the lane, and it's at the conclusion of the systems acceptance--period-- which will be the third quarter of 2015 where the actual maintenance comes in.

[Comm. J. Moerdler] That's when we start paying the maintenance contract.

[Comm. A. Sartor] What happens in year two, Cedrick, for the costs? I see you say the proposed costs for the first year are maintenance of the new system is \$2.7 million. What about year two, and beyond?

[C. Fulton] It's pretty much the same. We just wanted to provide an example of the relative costs; our annual maintenance costs today are about \$3.8 and we're saying that we'd save approximately \$1 million when we move into the June maintenance contract.

[Comm. A. Sartor] I see that the number is significantly above the engineer's estimate, but I understand from your explanation as to why that happened and I see that the BAFO saved us a lot of money, so congratulations, to you and Procurement on that one.

[Chair R. Pocino] Okay, Commissioners, do we have a motion to approve this?

[Comm. A. Sartor] So moved.

[Comm. J. Moerdler] Seconded.

[Chair R. Pocino] All in favor? Aye?

[affirmative] That concludes our agenda. Thank you very much for all of your input and assistance, and a motion to adjourn?

[Comm. A. Sartor] So moved.

[Comm. J. Moerdler] Seconded.

[Chair R. Pocino] Meeting adjourned. Thank you.