

April 6, 2016

Ms. Catherine A. Batey, Division Administrator
Illinois Division
Federal Highway Administration
U.S. Department of Transportation
3250 Executive Park Drive
Springfield, Illinois 62703

Attention: Mr. Hassan Dastgir
Transportation Engineer
Illinois Division
Federal Highway Administration
U.S. Department of Transportation
3250 Executive Park Drive
Springfield, IL 62703

**SUBJECT: CHICAGO DEPARTMENT OF AVIATION BUY AMERICA WAIVER REQUEST
PROGRAM: ORD JUF AND ATS EXPANSION (TIFIA LOAN: TIFIA-2013-1006A)
PROJECT: ORD ATS EXPANSION AND MODERNIZATION
EQUIPMENT: ATS VEHICLES, GUIDEWAY SWITCHES, AND RUNNING RAIL**

Dear Ms. Batey:

The City of Chicago values its relationship with the U.S. Department of Transportation (DOT)'s Federal Highway Administration (FHWA) and Transportation Infrastructure Finance and Innovation Act (TIFIA) Offices and is committed to delivering the Joint Use Consolidated Rental Car/Parking Facility (JUF) and Chicago O'Hare Airport Transit System (ATS) Expansion and Modernization Program (Program) through its Department of Aviation (CDA) in a manner that adheres to FHWA's requirements and expectations in providing financing for the projects.

Consistent with the applicable Buy America statute (23 U.S.C. § 313) and regulations (23 C.F.R. § 635.410), the City of Chicago (the City), acting through CDA, requests that FHWA grant the City limited waivers based upon the public interest and the non-availability of certain manufactured components in the United States (i.e. ATS vehicles, guideway switches and running rail) that are to be incorporated into the Chicago O'Hare International Airport (ORD) ATS Expansion & Modernization Project (Project). Steel components of the ATS vehicles, guideway switches, and running rail are not produced in the United States in sufficient and reasonably available quantities.

Program Description – ORD JUF and ATS Expansion

The Airport Transit System (ATS) will be extended to a new Joint-Use Consolidated Rental Car/Parking Facility (JUF) which will serve as a major access point for O’Hare International Airport; the JUF will accommodate rental cars, public parking, bus services, off-airport hotel and other commercial shuttles, and provide connectivity to the adjacent O’Hare Metra station and the Chicago Transit Authority (CTA)’s Blue Line via the ATS. The JUF will feature an at-grade Bus Plaza that will support consolidation of all shuttles accessing the Airport (hotel, off-Airport rental car and off-Airport parking), regional bus operations, and shuttles serving other remote parking areas. The bus plaza is designed to assist in the elimination of Airport curb-front shuttle traffic, which will help to reduce air emissions.

This Program will be financed in significant part with TIFIA funds.

Project Description - ORD ATS Expansion and Modernization

A component of the Program described above is the ORD ATS Expansion and Modernization Project. The ATS is a driverless, 2.7-mile, dual-lane, fixed guideway transit system operating between the terminals and long term parking lots at ORD. As part of the Project, the ATS will be expanded approximately 2,000-feet north to a future new ATS station and Joint Use Consolidated Rental Car and Public Parking Facility. The ATS expansion to the new station and JUF will allow rental car customers to be transported on the ATS and thereby eliminate the numerous rental car buses circulating on the roadways today at ORD. This will not only reduce congestion on one of the most constrained assets of the Airport, the terminal curbside, but also will greatly improve the air quality in the core terminal area and throughout the Airport. In fact, this improvement in air quality due to reduction in emissions was the qualifying factor for this Program to be eligible for TIFIA funding under the Congestion Mitigation and Air Quality Improvement Program (CMAQ).

The ORD ATS is a one-of-a-kind driverless transit system in part comprised of unique rail vehicles, unique guideway trackwork, and a correspondingly unique vehicle-guideway interface. Because the Project involves expanding this existing unique ATS technology, certain steel or iron components required for the expansion are unavailable in sufficient and reasonably available quantities of a satisfactory quality in the United States. In particular, this includes the ATS Vehicles, guideway (trackwork) switches and running rail, which are the subject of this waiver request.

Program and Project Cost

The total estimated Program cost for the JUF and ATS Expansion is \$817M. The Program is broken into two major procurement packages that have been competitively procured, and soft costs, as follows:

- The Joint Use Facility and all fixed facilities needed for the extension of the ATS system; this Construction Manager at Risk (CMR) Contract is \$405.5M
- The O’Hare ATS Expansion and Modernization Project, which includes the Operating System (vehicles, trackwork, automatic train control system, etc.); this Design-Build Contract is \$310M.
- Soft costs include program management, surveys, design, utilities, and permits, etc.; the total soft costs budget is \$101.5M.

ATS Project - Procurement History

As a requirement of the TIFIA Loan, the Chicago Department of Aviation (CDA) included all Federal Provisions within the procurement documents accepted by the FHWA and required to be included in any professional services or construction contracts, including provisions as related to FHWA’s Buy

America requirements. These provisions were required to be met by all proposers and became enforceable conditions in the respective executed contracts. The FHWA's Buy America requirements are reflective of the CDA's unwavering quest to meet these and all the other TIFIA loan commitments. Of the two main contracts awarded as part of the JUF and ATS projects, the contract for the extension and modernization of the ATS is the one where meeting all FHWA Buy America provisions requires special attention. This is primarily driven by the vehicles and systems being procured and installed; which extensively capitalize on infrastructure previously built for a unique transit complex.

The challenges of attracting systems suppliers and manufacturers of people mover technologies were at the forefront of the procurement strategies discussed during the development of the request for proposals for the extension of the ATS. The CDA realized that the pool of potential suppliers was limited and the likelihood of a wide response to the solicitation would be remote. Yet, CDA also understood that meeting all the TIFIA loan requirements ensured that the project would benefit from all the available and favorable funding offered by the U.S. Department of Transportation. We note that these challenges were assessed and, to a great extent, factored in the sizing of the loan by incorporating the potential risk of limited competition and/or costs associated with simply meeting the FHWA Buy America requirements.

While CDA has been coordinating closely with the TIFIA office and FHWA's Illinois Division Office from the outset of the Project, CDA would like to provide a brief overview of the lengthy negotiations with the Project's sole respondent.

The Request for Proposals for the Design Build Operate Maintain Services (DBOM) for the O'Hare ATS Expansion and Modernization was issued by the City of Chicago on January 27, 2014. Five (5) Addenda were issued in response to the 360 questions raised by potential respondents. The procurement was designed to ensure the receipt of the best possible proposals and adherence to the City and FHWA's expectations for the Project. Specifically, this formal RFP advertisement in numerous local and industry publications was the City's attempt to locate domestically manufactured products. On June 19, 2014, the CDA received a proposal from only one respondent, Parsons Construction Group, Inc. (Parsons), for the Project.

On July 17, 2014, CDA met with Parsons and its partners. Parsons initial proposal for the scope of the Project was \$572 million dollars. Included in their proposal, along with technical and commercial exceptions and qualifiers, the respondent also requested eight (8) separate categories of Buy America waivers with several components comprising each category.

CDA immediately communicated to Parsons that its price proposal and the Buy America waiver requests were wholly unacceptable. After much consideration and discussions with the Illinois Division office of FHWA and other City departments, CDA decided to begin consultations. Through consultation, CDA developed and issued a final addendum, and requested a final proposal. The final proposal was within the Project budget and more fully complied with the applicable Buy America requirements.

After nine months of extensive consultation, which included four full weeks of discussions on technical issues and the City's Buy America expectations, CDA was able to clarify, refine and curtail the scope of the Project, thus realizing greater than \$250 million dollars in cost reductions and reducing the Buy America waiver issues from eight (8) categories with various sub-parts, down to two (2) distinct

components. CDA and Parsons finally executed an agreement in May 2015 that was within the City's budget of \$310 million dollars, and eliminated the vast majority of the original Buy America waiver requests.

Waiver Justification for ATS Vehicles

The ATS will be extended and a new ATS station constructed at the JUF. At that time, the ATS will permanently replace the rental car shuttle buses to/from the terminals. The replacement of these bus services with the ATS will immediately increase demand on the ATS. Therefore, the extension of the ATS will require expansion of the ATS vehicle fleet to maintain or reduce passenger wait times. The new ATS vehicles are anticipated to enhance customer service through reduced crowding. The new ATS vehicles will also operate more efficiently and reduce maintenance requirements. The 15 existing vehicles have exceeded their design life and will be replaced with 36 new vehicles (12 new married triplet vehicles). The City made every effort to locate domestically manufactured vehicles (refer to ATS Project - Procurement History above). These vehicles are one-of-a-kind within the APM (automated people mover) and rail transit industries throughout the world. Components and subcomponents of the ORD ATS vehicles are being procured from suppliers in the U.S.A. (and compliant with FHWA Buy America) and around the world, and then will be shipped to Bombardier's facility in Pittsburgh, PA for full assembly of each car there. Each car of a married triplet vehicle will then be shipped to Chicago via truck, where all three cars will be permanently married via drawbar connections before entering passenger service. Thus, most of the iron and steel on the ORD ATS vehicles will be FHWA Buy America compliant; however, all of the cars and vehicles on the ORD ATS project will be assembled domestically.

Although the waiver request is for the entire vehicle, it is noteworthy that the entire vehicle will be FHWA Buy America compliant with the exception of only two components, which are:

(1) vehicle brake system:

The vehicle brake system is specifically designed for the Bombardier Innovia 256 vehicles and unavailable domestically. Refer to Attachment A for additional information on procurement of the brake system.

(2) hydraulic gas buffers (a subcomponent of the vehicle couplers and drawbars):

The vehicle couplers and drawbars are designed to join the ATS cars together into married triplets, and the hydraulic gas buffers are subcomponents of the couplers and drawbars. These hydraulic gas buffers are not available domestically. Refer to Attachment B for additional information on procurement of the vehicle couplers and drawbars, and the hydraulic gas buffers therein.

The City understands the FHWA will only consider a Buy America waiver when the conditions of 23 CFR 635.410(c) have been met:

- (1) when the application of the provision would be inconsistent with the public interest; or
- (2) when steel and iron products are not produced in the United States in sufficient and reasonably available quantities, which are of a satisfactory quality.

The City believes that the second condition above has been met in its waiver justification for the ATS Vehicles required for the Project. In addition to this justification, the FHWA has found through its own investigations that;

“In today's global vehicle manufacturing industry, vehicle components are typically obtained from suppliers all over the world. Given the number of components and small subcomponents in vehicles, it is not practical for manufacturers in the current market to certify that a vehicle meets FHWA's regulatory requirement of 100-percent domestic iron and steel content. In order to maintain jobs and obtain the benefits intended in the Federal-aid highway program, such as improved air quality and bridge inspections, FHWA recognizes that it is in the public's interest to waive the Buy America requirement for vehicles or equipment on the condition that they are assembled domestically.”¹

In the Third Quarter of 2015, the FHWA proposed to grant 48 conditional waivers on the basis of the public's interest for vehicles from Buy America on the condition that the vehicles, equipment, or modifications are assembled in the United States.

Pursuant to 23 CFR 635.410(c) and the justifications set forth herein, the City requests a waiver of Buy America requirements for 36 ATS cars (12 married triplet vehicles) required for the Project.

The approximate cost of the two components for the cars which do not satisfy Buy America requirements for the Project is \$2.45M USD, or approximately 0.3% of the overall Program cost of \$817.0M USD.

Waiver Justification for Guideway Switches

FHWA's Buy America policies require steel or iron incorporated into Federal-aid projects to be domestically manufactured. The Project requires seven (7) track switches (including but not limited to manganese steel castings), each of which is comprised of a cradle and point, corresponding central guidance and running rails, and switch control, detection, and locking equipment. ORD ATS track switches are unique within the APM/rail transit industries in the United States, are a critical safety component in the safe transport of passengers on the ATS, and are service proven in the ORD ATS since 1993. The ATS System Supplier made attempts to locate domestically manufactured switches (see following paragraphs); the only known supplier (formerly Cogifer, now, Vossloh-Cogifer) of this type and quantity of switches, and the sole owner of the switch designs, is located in France. Vossloh-Cogifer has elected to manufacture the switches for the Project in France (the existing ATS track switches were also manufactured in France). After delivery from France and prior to being installed in the project, the switches must be assembled domestically. This switch assembly process will take place in Cleveland, OH at Cleveland Track Material (CTM). There, CTM will weld running rail sections to the switches prior to shipping the completed switch product to the project in Chicago. This welding and assembly brings value to the manufacturing process, because without it, the switches would be wholly unusable.

¹ Notice of Buy America Waiver Request, USDOT FHWA website, Website path: Home/Programs/Construction/Contract Administration/Notice of Buy America Waiver Request/Request, webpage URL address: <http://www.fhwa.dot.gov/construction/contracts/waivers.cfm?id=117> accessed February 8, 2016.

Based on CDA's System Supplier inquiries, one domestic manufacturer has been identified who can obtain a license from Cogifer. However, the only known U.S.-based licensed manufacturer of the switches will not provide the small quantity of switches required for the Project. These enquiries were posed during the System's Supplier development of the response to the City's solicitation and, in particular, in developing the cost proposal.

Since there is no domestic demand for these switches, aside from the ones required for CDA's ATS Project, the potential US based manufacturer does not have an existing inventory and only manufactures these unique switches in response to a specific order, which must be minimum order quantity of twenty (20) switches, nearly three hundred percent (300%) the amount needed for the Project. These 13 additional switches would require the Project to incur at least \$12 million in unnecessary additional costs. The purchase of these excess switches, while potentially satisfying the FHWA Buy-America requirements, would not be the best use of public funds as it would result in the Project taking on unplanned costs for attic stock that will go unused.

The City understands the FHWA will only consider a Buy America waiver when the conditions of 23 CFR 635.410(c) have been met:

- (1) when the application of the provision would be inconsistent with the public interest; or
- (2) when steel and iron products are not produced in the United States in sufficient and reasonably available quantities, which are of a satisfactory quality.

The City believes that both of the above conditions have been met in its waiver justification for guideway switches:

- (i) that incurring at least \$12,000,000.00 in additional costs and procuring unnecessary equipment for the sole purpose of satisfying FHWA Buy America requirements is not in the public interest; and
- (ii) that the number of guideway switches required for the Project are not produced or available in the United States in reasonable quantities.

However, in addition to the above justifications, the FHWA through its own investigation has determined on three separate occurrences in 2008, 2009, and most recently in 2015 that manganese switch castings for other rail/fixed guideway projects in the state of Illinois were not available domestically and therefore granted waivers for such equipment. The City agrees with the FHWA that manganese switch castings are generally not available in the U.S. and thus must be procured using foreign steel and/or iron.

Pursuant to 23 CFR 635.410(c) and the justifications set forth herein, the City requests a waiver of Buy America requirements for the seven (7) guideway switches required for the Project.

The approximate cost of the seven (7) switches within the project is \$5.0M USD, or approximately 0.6% of the overall Program cost of \$817.0M USD.

Waiver Justification for Running Rail

FHWA's Buy America policies require steel or iron incorporated into Federal-aid projects to be domestically manufactured. The Project requires approximately 11,000 linear feet of running rail for the

guideway extension to the JUF, for the guideway expansion at the maintenance and storage facility, and for the supplemental pieces used to make up the guideway switches described in the section above.

The dimensions of the running rail for the guideway extension must match the existing system in order for the new vehicles to run on both the extension and existing guideways. The ATS running rails are non-standard steel I-beams that, to safely interface with the driverless passenger vehicles, are required to be shaped into a unique section not used in any other industry or application. Further, this rail is required to be comprised of a specific content of steel, iron, and other metals. The small size of the order also inhibits the engagement of any U.S. steel manufacturers. Because of these reasons, these rails are unavailable as an off-the-shelf product from all steel manufacturers, domestic or foreign.

Over the past 10 years, the City has attempted to procure running rail from U.S.-based steel manufacturers for the purpose of replacing the existing running rail within the ATS. These manufacturers repeatedly declined. In 2013, the City again attempted to procure running rail from U.S.-based steel manufacturers for the purpose of replacing the existing running rails within the ATS. Again, no U.S.-based steel manufacturers would provide the rails because the 60,000+ linear foot order was too small and the section and material composition unique. As a result, the City procured running rail for its replacement project from a Taiwan-based steel manufacturer, one of only two steel manufacturers that provided bids for the work, both of which were foreign based. The RFP, proposals and bid evaluation documents from the 2013 procurement process are provided in Attachment C. The City currently has spare running rail available from the 2013 order in attic stock, and proposes to use approximately 11,000 linear feet of this spare running rail manufactured in Taiwan for the Project.

The City understands the FHWA will only consider a Buy America waiver when the conditions of 23 CFR 635.410(c) have been met:

- (1) when the application of the provision would be inconsistent with the public interest; or
- (2) when steel and iron products are not produced in the United States in sufficient and reasonably available quantities, which are of a satisfactory quality.

The City believes that the second condition above has been met in its waiver justification for using its attic stock running rail for the Project; specifically, the running rail required for the Project is not otherwise available in the United States.

Pursuant to 23 CFR 635.410(c) and the justifications set forth herein, the City requests a waiver of Buy America requirements for approximately 11,000 linear feet of running rail required for the Project.

The approximate cost of the running rail within the project is \$2.0M USD, or approximately 0.2% of the overall Program cost of \$817.0M USD.

Analysis of Re-Design

Throughout planning and procurement, the City has analyzed re-design of the Project (expanding a one-of-a-kind driverless transit system) using alternate or approved equal domestic product in lieu of the waiver items requested above. The City has concluded from this analysis that the only potential option for using domestic running rail would be to replace the entire ATS Operating and Guideway System. This would require extensive reconstruction of the existing guideway, 5 existing stations, the power and automated train control systems, and the maintenance and storage facility. The system would be out of

service during a lengthy reconstruction period requiring busing services, which would add to congestion and environmental concerns. Conceptual cost estimates for this option (roughly \$1B USD above current costs) are not feasible. Furthermore, this re-design option would not guarantee that a domestic manufacturer of vehicles and/or track switch equipment could be secured. In fact, it is likely that for these two items (vehicles and track switches), a FHWA Buy America waiver request would still be needed.

Conclusion

Thank you for consideration of these requests. The City will continue to coordinate with DOT's FHWA and TIFIA offices on this most important Program, including as related to FHWA Buy America requirements, and will deliver its JUF and ATS Expansion Program in a manner that adheres to FHWA's requirements.

Should you have any questions or need additional information, please do not hesitate to contact me at (773) 462-8570 and jonathan.leach@cityofchicago.org

Sincerely,

Jonathan Leach
Chief Operating Officer

cc: Ginger Evans, Commissioner of Aviation
Jessica Sampson, CDA General Counsel
Frank Grimaldi, CDA Assistant Commissioner
Andres Garcia, Program Manager
Scott McGuire, FHWA

Attachments:

- A. Brake Equipment Letter from Bombardier dated 10/02/2015
- B. Vehicle Couplers Letter from Bombardier dated 12/09/2015
- C. Running Rail Procurement Documents