

Request for Waiver of FHWA Buy America Act Requirements for Storm Drainage Pumps
November 7, 2024

In accordance with Federal Highway Administration ("FHWA") Title 23 CFR 635.410(c), the Texas Department of Transportation (TxDOT) requests a waiver from FHWA of the Buy America Act requirements as they apply to the Storm Drainage Pumps needed for the following projects. The waiver is necessary due to the domestic non-availability of the pumps required by these project designs.

Waiver Item Description:

Combined Buy America waiver requests for submersible pumps					
	STATE DOT	No of PUMP	SUBMERSIBLE PUMP SPECIFICATIONS	FEDERAL-AID PROJECT	DOT Contact
4	Texas	3	(2) 4,500 gpm (1) Sludge pump	Lift station at IH 45 NB Frontage Road at Cullen Blvd (CSJ 0500-03-644, Harris County, Texas)	Grady B. Mapes, P.E. (713) 866-7040 Grady.Mapes@txdot.gov
5	Texas	3	(2) 6,000 gpm, 45 horsepower (HP) (1) Sludge Pump	Station Location: SH 6 at Burlington Northern Santa Fe (BNSF) Railroad Brazoria County, Texas (CSJ: 0192-02-060)	Grady B. Mapes, P.E. (713) 866-7040 Grady.Mapes@txdot.gov
6	Texas	3	(2) 6,000 gpm, 70 horsepower (HP) (1) Sludge pump	pump station at UA 90 and Griggs Road (CSJ 0027-09-111, Harris County, Texas)	Grady B. Mapes, P.E. (713) 866-7040 Grady.Mapes@txdot.gov
7	Texas	3	(3) 6,500 gpm, 869 CFM	Pump Station at IH 45 at SH 242 in Montgomery County, TX CSJ: 0110-04-202, -205	Grady B. Mapes, P.E. (713) 866-7040 Grady.Mapes@txdot.gov
8	Texas	5	(4) 4 Stormwater Pumps 10,600 gpm, flow rate 42,400 gpm.	Pump Station at Beltway 8	Grady B. Mapes, P.E. (713) 866-7040 Grady.Mapes@txdot.gov

			(1) Sludge pump	(SL 8) at US 90A CSJ: 3256-04-080	
9	Texas	12	(8) Submersible pumps (16,000 gpm @56.5 ft TDH) (2) Submersible pumps (8,000 gpm @58.0 ft TDH) (2) Submersible pumps (1,000 gpm @ 63.8 ft TDH)	Pump Station at I-45 and I-69 CSJ: 0027-13-200	Grady B. Mapes, P.E. (713) 866-7040 Grady.Mapes@txdot.gov

Waiver Item Cost:

The combined cost of the items (stormwater pumps) for which TxDOT is seeking a waiver is estimated to be \$5.6 million.

Country of Origin:

Sweden (for FLYGT pumps)

Germany and France (for KSB pumps)

Denmark and Hungary (for Grundfos)

Reason for Waiver Request:

After an extensive search of pumps available in the market, by multiple TxDOT staff and design teams, the only pumps that satisfy the Technical Requirements of the project plans and specifications are manufactured by FLYGT/XYLEM, KSB, Grundfos, or ABS Sulzer. None of these manufacturers can produce a Buy America compliant pump, because the pumps are cast and machined overseas. However, it may be possible for the pumps to be assembled and tested in the United States.

From the available technically compliant options, TxDOT will utilize the Xylem Flygt pumps or KSB pumps. Xylem Flygt pumps and KSB pumps are nearly identical in physical size, and thus are generally interchangeable. Both pump manufacturers make a pump that meets project requirements for the stormwater pumping station.

TxDOT believes a waiver is necessary because the pumps are manufactured products, predominantly comprised of iron and steel, for which the manufacturing process does not occur entirely within the United States. TxDOT therefore requests a waiver from FHWA to permit use of the Xylem Flygt pumps or KSB pumps on the Project.

Description of Efforts to Locate a Domestic Equivalent:

TxDOT contacted at least six (6) different pump manufacturers to try to find Buy America compliant submersible pumps for the Projects. Of the manufacturers contacted, none can produce a Buy America-compliant pump, and only four (4) manufacturers confirmed they can produce a pump that complies with the Project design requirements.

The responses received from each manufacturer contacted are summarized in the following table.

Pump Manufacturer	Pump Compliant with Technical Requirements	Pump Compliant with Buy America
Flygt/Xylem	Yes	No
KSB	Yes	No
Grundfos	Yes	No
ABS Sulzer	Yes	No
Morrison Pump	No	No
MWI Pumps	No	No

Xylem Flygt is working to produce a BABA compliant pump. They have been able to manufacture BABA compliant pumps for certain sizes and styles of pumps. Xylem Flygt currently has not done this with the large submersible pumps required for these projects.

KSB stated that none of its pump components are BABA compliant. They make different components in different parts of the world, but none of those parts are manufactured in the United States. KSB is aware of their BABA non-compliance and as a company they are working to resolve it, but there are no concrete plans in place at the moment.

Regarding the Grundfos pump, Pumps of Houston, Inc. stated that Grundfos KPL pumps are built out of Korea, so they will not comply with BABA.

Precision Powered Products, Inc. (PPP) stated they can supply the ABS Sulzer stormwater pumps required for the project. They all are manufactured overseas.

Analysis of Re-Design Using a Domestic Equivalent:

TxDOT considered a variety of pump alternatives for these Pump Station designs. The type of pumps often used by hydraulic design engineers fall into two classifications, positive displacement pumps, and kinetic pumps. For stormwater applications, two different types of pumps are frequently used, the Archimedes screw pump, which is a positive displacement pump, and the axial or mixed-flow pump, which is a kinetic pump. The pump types commonly used for stormwater highway applications and considered for these projects' Pump Stations are listed below.

Positive Displacement Pumps

- Open Flight Screw Pumps (OFSP)

- Enclosed Flight Screw Pumps (EFSP)

Kinetic Pumps

- Submersible Pump (SP)
- Vertical Column Submersible Pump (VCP)
- Vertical Turbine Pumps (VT)
- VT Pumps with Formed Suction Inlets (FSI)
- Concrete Volute Pumps (CVP)

Communications with manufacturers indicate that if domestic iron and steel elements are required in accordance with Buy America Act, they are unable to manufacture stormwater pumps of these types and sizes required for this project which comprise 99.9% domestic steel in all components.

Redesign to avoid non-domestic pumps for new construction projects would require total redesign of the projects to avoid depressed roadways and the need for mechanical lifting of stormwater. Doing so would be inconsistent with the project requirements previously recommended in the schematic, evaluated in the environmental documents, coordinated with the public, and approved by TxDOT and FHWA. For the pump station rehabilitation projects in this request, avoiding non-domestic pumps would result in continued reliance on aging pump infrastructure and increasing flood risks to roadway users.

Conclusion:

TxDOT has determined it is not possible to adhere to both the project design requirements and Buy America requirements with respect to procurement of these Drainage Pumps. In the best interests of the Projects and to ensure public access to transportation improvements in a timely manner, TxDOT hereby requests a waiver of the Buy America Act requirements (FHWA Title 23 CFR 635.410), as they apply to the projects listed above so that the proposed FLYGT or KSB pumps can be used.