

DEPARTMENT OF TRANSPORTATION  
FEDERAL TRANSIT ADMINISTRATION

SUPPORTING STATEMENT  
**Bus Testing Program**  
(OMB Control No. 2132-0550)

Abstract:

The Federal Transit Administration (FTA) Bus Testing Program performs a series of tests on new transit bus models or existing bus models that have been previously tested, but have undergone significant/major changes to their design. Bus Testing is required by law, for any bus model that will be purchased using Chapter 53 FTA grant funds. Before FTA funds can be expended, the grantee must certify to FTA that the bus model being procured is compliant with 49 CFR 665 *Bus Testing*. In turn, FTA grantees delegate the burden of demonstrating compliance to the bus manufacturers. The Bus Testing Program provides assistance to transit bus manufacturers with achieving compliance with the testing requirement. A variety of information is collected from bus manufacturers during the bus testing request process.

Justification

This is a request for an extension of a currently-approved collection. This request reflects the increase in both respondents and burden hours. The respondent universe increased from 46 to 60 because of new requests from bus manufacturers. There was also an increase in burden hours because of innovations in the bus industry, resulting in new bus vehicle designs. The new designs, increased the amount of information needed to justify partial testing and ensure these new transit vehicles are in accordance with the existing bus testing requirements.

1. Circumstances that make the collection necessary.

Title 49 U.S.C. Section 5318(e) provides that federal funds appropriated or otherwise made available under 49 U.S.C. Chapter 53 [FTA funding] may not be obligated or expended for the acquisition of a new bus model unless a bus of that model has been tested for maintainability, reliability, safety, performance (including braking performance), structural integrity, fuel economy, emissions, and noise at a bus testing facility authorized under 49 U.S.C. Section 5318(a). In addition, Partial Testing is available for previously-tested bus models being produced with a major change that could produce significantly different data in one or more of the test procedures. Upon completion of the testing of the vehicle, a bus testing report is provided to the manufacturer. 49 CFR Part 665.7(a) states that a recipient of federal funds must certify that any new bus model acquired with FTA financial assistance has been tested in accordance with the requirements of Part 665 and received a passing test score before expenditure of any FTA funding on a bus.

Currently, there is one active Bus Testing Center operated by The Thomas D. Larson Pennsylvania Transportation Institute (LTI), an interdisciplinary research unit of The Pennsylvania State University in the College of Engineering. Founded in 1989, LTI operates the Bus Testing Center, conducts the tests, and documents the test results under a cooperative agreement with the Federal Transit Administration (FTA). Congress has authorized two additional bus testing facilities (limited to testing low and no-emission, or “LoNo” buses). FTA is working with Auburn University and The Ohio State University to establish those facilities, which are not yet operational. The nature and quantity of the information that must be collected to operate the Bus Testing Program is not expected to change significantly when these additional centers become operational.

The Bus Testing Program has proven to be valuable to the transit industry. As of March 31, 2019, testing had been completed on 484 buses with thousands of bus malfunctions identified, 46 of which could have resulted in injuries or property damage had they occurred in revenue service. Many of the other malfunctions would adversely impact transit service (e.g., resulting in road calls stranding passengers), and all would increase maintenance costs by requiring corrective maintenance actions. By testing new bus models before they are purchased, recipients and manufacturers can often address problems before the fleet is built, potentially saving the Federal Government and grant recipients considerable money and time and avoiding inconveniencing riders

## 2. How, by whom, and for what purpose the information is to be used.

The Bus Testing Program was created to provide transit agencies an independent source of bus performance results that could be used to improve their bus procurement decisions. Without the program, transit agencies would have to rely on either manufacturer-supplied information, information supplied by third parties, information from their own pilot bus demonstrations, or experiences other transit agencies choose to share regarding a particular bus model. Without a neutral testing program, it is likely that the market would be flooded with lower-quality bus models that would increase life-cycle costs and degrade bus service.

The information collected by the Bus Testing Program is needed to: 1) identify and describe the bus model in question, 2) determine the eligibility of a new bus model for testing as per 49 CFR 665.11; 3) determine the amount of testing necessary; 4) satisfy the legal and administrative requirements necessary to authorize the Bus Testing Facility to schedule the testing of a new bus model; 5) to collect new bus model design, and component information for inclusion in the Bus Testing Report; and 6) determine the maximum rated standee passenger capacity of a new bus model.

Information addressing the items above is currently sent to FTA by email in a format of the bus manufacturer's choosing. To simplify, streamline, and make the Bus Testing process more consistent, FTA has developed an interactive on-line dashboard on the FTA internet site and used by FTA and applicants/respondents to process the request for new bus model testing. The new interactive dashboard will be a checklist and template to provide the correct quantity and type of information that is already required.

Once they have incorporated all the necessary information into the dashboard, FTA will provide the testing determination results to the requester, and to the Bus Testing Facility operator if testing is required. If FTA determines that no testing is required, no additional information is collected for that request.

## 3. Consideration of improved information technology.

As part of this information request renewal, FTA has improved the use of information collection technology with the creation of the new Bus Testing on-line dashboard. This interactive tool was created as part of FTA's effort to reduce the time between application request and actual testing being done. A screenshot of the dashboard and the data collection fields is included in the submission of this information collection.

#### 4. Efforts to identify duplication.

There is no duplication. No other entity currently conducts and documents comparable data from the testing of bus models. Currently, the test report is produced by LTI, which is the only place where all the test reports are kept on file. In the future when there are three Bus Testing Facilities, FTA will implement processes to determine at which facility a given bus will complete its testing. In addition, 49 CFR Part 665 (the Bus Testing Regulation) seeks to minimize the burden on manufacturers by allowing, under certain circumstances, partial testing of previously-tested bus models that subsequently have major changes.

#### 5. Methods used to minimize burden on small businesses or other small entities.

All business entities follow the same process for the information collection. FTA and the Bus Testing Center only request the information required to meet statutory, regulatory, and business process requirements.

#### 6. Consequences to federal program or policy activities if collection were conducted less frequently.

It is not possible to collect the information less frequently, since it is required by statute if FTA funds are to be used in the procurement of a bus model and is only collected when testing of a new bus model is requested.

#### 7. Special circumstances that require the collection to be conducted in a manner inconsistent with 5 CFR 1320.6.

This information collection requirement is consistent with 5 CFR 1360.6.

#### 8. Efforts to consult with persons outside the Agency to obtain their views.

On July 2<sup>nd</sup>, 2019, FTA published a 60-day Federal Notice to review this information collection (Vol. 84, No. 127) pages 31657. One comment was received on that notice from the Michigan Department of Transportation (MDOT) Docket #FTA-0008-0001. The comment states: *“MDOT supports the continued collection of bus testing information by the Thomas D. Larson Pennsylvania Transportation Institute (LTI) with the following concerns; 1.) Timeliness of testing on new or updated bus bodies and OEM vehicle chassis, test completion can take up to a year or more in some instances; 2.) Communication of testing delays to recipients. Explanation of delays doesn’t seem to be provided to bus manufacturers or chassis OEMs; 3.) Increased testing capacity. With the increase in Federal emissions and fuel economy standards, OEMs are continually introducing new engine and transmission combinations that require new tests. Adding staff or opening additional test facilities may help alleviate this issue. The LoNo test facilities at Ohio State University and Auburn University may be an option to help assist in the testing of traditional buses if allowed, which would shorten test delays.”*

FTA’s Response:

In section 3 of this document, “Consideration of improved information technology”, FTA acknowledges that improvements can be made in the application response process. In an effort to address these issues, this information collection request includes a new web-based request form for bus testing determinations and approvals with the purpose of not only improving request turn arounds, but increasing transparency where submitters will be provided real-time updates with the status of their application request.

The purpose of the PRA is to provide an estimate of time burdens associated with the preparation of a determination and/or and approval request. The time burdens consider all the technical and legal advisors involved in the process of gathering information to prepare and submit an application. Unfortunately, addressing the duration of tests, how many tests are performed, and any modification to 49 CFR 665 is outside of the scope of this document. We appreciate MDOT’s comments and encourage to submit any suggestions and/or recommended amendments following applicable protocols established in 49 CFR 601, “Organization, Functions, and Procedures”.

On October 3, 2019, FTA published a 30-day Federal Notice (Vol. 84, No. 192) pages 52930. In an additional effort to engage our bus manufacturing stakeholders, FTA will be hosting a Bus Maintenance and Bus Testing Peer-to-Peer Exchange on October 10, 2019 at the USDOT Headquarters. The purpose of this event was to engage the vehicle manufacturers industry, encourage an open dialogue, and address areas of improvement within the Bus Testing Program.

9. Explain any decision to provide any payment or gift to respondents, other than remuneration of contractors or grantees.

No payment or gift is made to respondents.

10. Assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or agency policy.

49 CFR Part 665.13(b) states that upon completion of testing of a new bus model at the Bus Testing Center, the scored test results and resulting test report will be provided to the bus manufacturer or entity that entered into a contract with the Center. The test report will be available to recipients only after both the bus manufacturer and FTA have approved if for release. If the bus manufacturer declines to release the report, or if the bus did not achieve a passing test score, the vehicle will be ineligible for FTA financial assistance.

49 CFR Part 665.13(f) states that, “the test report is the only information or documentation that will be made available publicly regarding any bus model tested at the facility.” The bus testing database makes it possible to obtain the same information that appears in the official bus testing reports in an electronic format online at <http://apps.altoonabustest.psu.edu/>.

11. Additional information for questions of a sensitive nature.

No sensitive information is required.

12. Estimate of hour burden of the collection of information and annualized cost to respondents.

**Estimated Annual Number of Respondents:** 60

**Estimated Total Annual Burden:** 2131 hours

**Frequency:** Annually

The hourly burden and cost to respondents is driven by the information collected during the bus testing request process, the test scheduling request process, and the request for retesting for pass/fail compliance. The information collected helps facilitate the creation of a Bus Testing Report. In 2018, bus manufacturers submitted 40 requests for determinations of testing requirements on new and modified bus models, and 20 requests for authorizations to begin full or partial tests or retesting because of complications during the test. Thus, the total number of respondents is 60. The estimated hourly burden to respondents is calculated by information collected during the bus testing request process in the following categories:

*Test Determination*  $\wedge$  *Authorization Request* + *Test Scheduling Request* + *Request for Retesting*  $\wedge$  *Address a Failed P*

$$1920 \text{ hrs} + 160 \text{ hrs} + 51 \text{ hrs} = 2131 \text{ total burden hours}$$

### **Test Determination and Authorization Request**

The estimated hourly and cost burden related to test determination authorization request is presented in Table 1 (see below). As part of the launch for the new interactive dashboard tool, FTA reached out to seven bus manufacturers to discuss the new application request process and the time required to produce the information needed for submittal. The feedback on preparation time varied but the majority agreed that a good package containing only substantial data and thoroughly vetted through their internal processes would take at least a week. With this information, FTA believes it is appropriate to calculate the burden for Testing Requirements Determination and/or Authorization Request to no more than a week. In this week, we account for at most 16 hours for the engineers to prepare the package and 16 hours for the lawyers to review and give the concurrence.

TABLE 1: Estimated Burden of the Test Determination and Authorization Request

<b>Item</b>	<b>Labor Category (BLS code/title)</b>	<b>Labor Rate (\$/hr.)</b>	<b>Time (hrs.)</b>	<b>Annual Quantity of Requests</b>	<b>Total Annual Hours</b>	<b>Total Annual Cost (\$)</b>
Testing Requirements Determination and/or Authorization Request	17-2141 <sup>1</sup> Mechanical Engineer	53.76 <sup>2</sup>	16	60	960	\$51,609.60
	23-1011 <sup>3</sup> Lawyer	88.76 <sup>4</sup>	16	60	960	\$85,209.60
<b>Total Annual Test Determination and Authorization Request Burden</b>					<b>1,920</b>	<b>\$136,819.20</b>

<sup>1</sup> <https://www.bls.gov/oes/current/oes172141.htm>

<sup>2</sup> A 28% of fringe benefits was added to the \$42.00 engineer bls rate.

<sup>3</sup> <https://www.bls.gov/oes/current/oes231011.htm>

<sup>4</sup> A 28% of fringe benefits was added to the \$69.34 lawyer bls rate.

## Test Scheduling Request

The estimated hourly and cost burden related to scheduling a bus for testing is presented in Table 2 (see below). FTA estimates that a lawyer, an accountant, a mechanical engineer, and administrative personnel will be involved in the preparation of the request. In 2018, a total of 13 tests were scheduled. The quantity of buses tested in each year varies by the transit market demand for new bus model features or capabilities. FTA believes that the scheduling of 13 tests is at the lower end of the range; with 16 tests scheduled annually being more typical. Labor categories and 2018 rates from the Bureau of Labor Statistics (<http://www.bls.gov/oes/current/>) were used to estimate annual costs.

TABLE 2: Estimated Labor Burden and Cost for the Test Scheduling Request

Item	Labor Category (BLS code/title)	Labor Rate (\$/hr.) (May 2018 BLS Statistic)	Preparation Time (hrs.)	Cost (\$)
Testing Contract	23-1011 Lawyer	88.76	1.0	\$88.76
Proof of Insurance	23-1011 Lawyer	88.76	1.0	\$88.76
Payment Check	13-2011 <sup>5</sup> Accountant	48.50 <sup>6</sup>	1.0	\$48.50
Spare Parts Inventory List	17-2141 Mechanical Engineer	53.76	3.0	\$161.28
Bus Design Characteristics Information	17-2141 Mechanical Engineer	53.76	2.5	\$134.40
Assembling/Mailing of Test Scheduling Package	43-000 <sup>7</sup> Office/Admin Support	24.00 <sup>8</sup>	1.5	\$43.20
Postage for package				\$8.63
Total burden per test request			10.0	\$ 573.53
<b>Total Annual Burden (16 tests a year)</b>			<b>160.0</b>	<b>\$ 9,176.48</b>

## Request for Retesting to Address a Failed Performance Standard

The estimated hourly and cost burden related to retesting a bus to address a failed performance standard is presented in Table 3 (see below). There is an additional paperwork burden associated with submitting information to FTA and the Bus Testing Facility operator for the retesting of a failed performance standard. Bus manufacturers will need to provide documentation to FTA on the failure analysis and provide a proposed corrective action report for bus models that fail to meet one or more of the proposed performance standards. FTA estimates that an average of three bus models will submit a request for retesting annually.

<sup>5</sup> <https://www.bls.gov/oes/current/oes132011.htm>

<sup>6</sup> A 28% of fringe benefits was added to the \$37.89 Accountant bls rate.

<sup>7</sup> <https://www.bls.gov/oes/current/oes430000.htm>

<sup>8</sup> A 28% of fringe benefits was added to the \$18.75 Office/Admin Support bls rate.

TABLE 3: Estimated Burden and Cost for the Request of Retesting to Address a Failed Performance Standard

Item	Labor Category (BLS code/title)	Labor Rate (\$/hr.)	Preparation Time (hrs.)	Cost (\$)
Payment Check for Retesting Fees	13-2011 Accountant	48.50	0.5	\$24.25
Check Mailing	43-000 Office/Admin Support	24.00	0.5	\$12.00
Postage for package				\$5.60
Preparation of Failure Analysis and Modification Proposal	17-2141 Mechanical Engineer	53.76	16.0	\$860.16
Total burden per retest request			17.0	\$896.41
<b>Total Annual Burden (3 retest requests a year)</b>			<b>51.0</b>	<b>\$2,689.23</b>

The total burden and cost is summarized in Table 4. FTA estimates the total annual burden and cost of the information collections resulting from the increased number of requests and additional information because of new vehicle designs as 2131 hours and \$148,684.91.

TABLE 4: Total Estimated Annual Burden and Cost of the Bus Testing Program

Information Collection	Annual Burden (hr.)	Annual Cost (\$)
Test Determination and Authorization Request Process	1920	\$136,819.20
Test Scheduling Request Process	160	\$9,176.48
Request of Retesting to Address a Failed Performance Standard	51	\$2,689.23
<b>Total</b>	<b>2131</b>	<b>\$148,684.91</b>

13. Estimate of total annual cost burden to respondents or record keepers resulting from the collection of information (not including the cost of any hour burden shown in Items 12 and 14).

There are no additional costs beyond that shown in Items 12 and 14.

14. Estimate of annualized cost to the federal government.

The information collected by LTI to set-up an individual bus model test program requires approximately 4 hours of Office/Administrative Support per test at a burdened rate of \$32.03 per hour as stated in the contract. For 16 tests a year, this equates to 2,049.92 annually. FTA pays 80 percent of this cost resulting in an annual cost to the federal government of \$1,639.94.

The time needed for FTA to review and respond to a request for a determination of testing requirements varies widely. Some requests are straightforward and can be answered relatively

quickly. Other requests require research, deliberations, policy considerations, and/or iterative requests for additional information. Table 5 presents FTA’s estimate of the average time and cost required to respond to a request for a determination of Bus Testing requirements, and Table 6 presents FTA’s estimate of the average time and cost required to respond to request for an authorization to begin testing of a bus. FTA expects these burdens to decrease with the introduction of the interactive dashboard.

Table 5: Annual Burden for FTA Testing Requirements Determinations

<b>Item</b>	<b>Labor Category</b>	<b>Labor Rate (mid-point)</b>	<b>Time</b>	<b>Cost</b>
Review and Analysis	General Engineer, GS-14 – Step 5	\$63.64	6	\$381.84
Drafting Response	General Engineer, GS-14 – Step 5	\$63.64	3	\$190.92
Legal Review	Attorney-Advisor, GS-14 – Step 5	\$63.64	3	\$190.92
Revision	General Engineer, GS-14 – Step 5	\$63.64	1	\$63.64
Formatting and Sending	General Engineer, GS-14 – Step 5	\$63.64	0.5	\$31.82
Record Keeping	General Engineer, GS-14 – Step 5	\$63.64	0.25	\$15.91
Total burden per determination request			13.75	\$875.05
<b>Total annual burden (40 determination requests)</b>			<b>550</b>	<b>\$35,002.00</b>

Table 6: Annual Burden for FTA Testing Authorization Requests

<b>Item</b>	<b>Labor Category</b>	<b>Labor Rate (mid-point)</b>	<b>Time</b>	<b>Cost</b>
Review and Analysis	General Engineer, GS-14 – Step 5	\$63.64	2	\$127.28
Drafting Response	General Engineer, GS-14 – Step 5	\$63.64	1	\$63.64
Formatting and Sending	General Engineer, GS-14 – Step 5	\$63.64	0.5	\$31.82
Record Keeping	General Engineer, GS-14 – Step 5	\$63.64	0.25	\$15.91
Total burden per authorization request			3.75	\$238.65
<b>Total annual burden (20 authorization requests)</b>			<b>75</b>	<b>\$4,773.00</b>

The estimated total federal cost of the Bus Testing Program information collections is \$39,775.



15. Explain the reason for any program changes or adjustments reported in Items 13 or 14 of OMB Form 83-I.

The change in this collection reflects the increase in burden hours because of the additional requests and introduction of new bus vehicle designs. The additional requests increased the respondent universe from 46 to 60. Because of the modernization in the bus industry, new bus designs increased the amount of information needed to justify partial testing and ensure that they are in accordance with the existing bus testing requirements.

16. Plans for tabulation and publication for collections of information whose results will be published.

The database of bus resting reports is available on LTI's website at <http://altoonabustest.com/>.

17. If seeking approval not to display the expiration date for OMB approval, explain the reasons.

There is no reason not to display the expiration date of OMB approval.

18. Explain any exception to the certification statement identified in Item 19 of OMB Form 83-I.

There are no exceptions.

B. Collections of information employing statistical methods.

FTA does not utilize statistical methods to collect the bus testing program information.