Project Information Document (PID)

Appraisal Stage | Date Prepared/Updated: 21-Aug-2019 | Report No: PIDA27018
BASIC INFORMATION

A. Basic Project Data

<table>
<thead>
<tr>
<th>Country</th>
<th>Project ID</th>
<th>Project Name</th>
<th>Parent Project ID (if any)</th>
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<tbody>
<tr>
<td>Peru</td>
<td>P170595</td>
<td>Lima Metropolitano BRT North Extension</td>
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</table>

<table>
<thead>
<tr>
<th>Region</th>
<th>Estimated Appraisal Date</th>
<th>Estimated Board Date</th>
<th>Practice Area (Lead)</th>
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<table>
<thead>
<tr>
<th>Financing Instrument</th>
<th>Borrower(s)</th>
<th>Implementing Agency</th>
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<tbody>
<tr>
<td>Investment Project Financing</td>
<td>Ministerio de Economia y Finanzas</td>
<td>EMAPE, Metropolitan Municipality of Lima</td>
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</table>

Proposed Development Objective(s)

The Project Development Objective (PDO) is to improve urban mobility and accessibility to jobs in the area of influence of the Metropolitano BRT North Extension.

Components

Improving urban mobility and accessibility: goods and civil works
Project management and environmental and social management

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

<table>
<thead>
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<th>Total Project Cost</th>
<th>123.00</th>
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<tbody>
<tr>
<td>Total Financing</td>
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<tr>
<td>of which IBRD/IDA</td>
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<td>Financing Gap</td>
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DETAILS

World Bank Group Financing

International Bank for Reconstruction and Development (IBRD) | 87.00

Non-World Bank Group Financing

Counterpart Funding | 36.00
**B. Introduction and Context**

**Country Context**

1. **Peru has experienced sustained growth and significant poverty reduction in the last ten years. However, inequality remains a major challenge.** Gross domestic product (GDP) growth has been the primary driver of poverty reduction in Peru. Between 2008 and 2018, the average GDP rate was 4.4 percent, while the poverty rate decreased substantially from 37.2 to 20.5 percent. Economic growth is expected to level off close to 4 percent in 2019-21. Inequality (based on the Gini coefficient) modestly decreased from 0.50 to 0.43 between 2007 and 2017. This inequality is more pronounced for groups with combined vulnerabilities such as women in low-income areas.

2. **Peru is located in the Pacific “Ring of Fire,” an area where 90 percent of the world’s earthquakes occur.** High seismic risk is associated with potential tsunamis. The effects of these natural events have been exacerbated by climate change and lack of resilient infrastructure investment in a very complex Peruvian geography.

3. **Urbanization and internal migration rates in Peru have been high for several decades.** About 78 percent of Peru’s population of 32 million lives in urban areas with nearly 30 percent located in the Lima Metropolitan Area (LMA) (10.28 million in 2019)\(^1\). Since the 1950s, the LMA has attracted most of the migration. A recent wave of migration brought a significant number of Venezuelan immigrants to Peru, 500,000 of whom settled in the LMA.

4. **The LMA consists of 49 districts in five special development zones: Lima Norte (North Lima), Lima Este (East Lima), Constitutional Province of Callao, Lima Centro (Central Lima), and Lima Sur (South Lima) (See Annex 6).** The LMA stretches north to south for 80 kilometers along the Pacific Ocean, and from west to east for 40 kilometers from the Pacific Ocean to the Andean mountain range. The ocean and mountains channel the expansion of the city longitudinally, and further expansion is constrained. Lima districts cover a significant portion of the LMA—about 2,672 square kilometers—and has a population density of 3,000 people per square kilometer.

5. **Lima is Peru’s main center of trade, industry, and services, but prosperity has not reached all geographical areas equally and pockets of urban poverty persist.** The LMA accounts for 49 percent

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\(^1\) National Institute of Statistics (INEI).
of the national GDP and includes Peru’s leading facilities for international trade and domestic logistics. There are about 1.4 million jobs in the LMA which are concentrated in Central Lima. A significant percentage of the job market and economic activities is informal, with informal street vendors widespread across different districts of the LMA. Despite this remarkable concentration of economic activity in the LMA, urban poverty in the districts of North Lima is higher than national and Lima averages. With a total population of 1.4 million, North Lima has the highest population density in Lima, 1.6 times the overall population density in the city.

Sectoral and Institutional Context

1. The LMA spatial development zones and the inefficient and unaffordable urban transport services are the main factors hampering access of the poor to services, markets, and jobs. Low-income households live predominantly in North Lima (and other urban peripheric areas), with poor access to centers where jobs, education, health, and other services are concentrated. Consequently, they must make a considerable investment in terms of time and out-of-pocket expenses to reach these destinations. Almost 73 percent of the LMA’s population commutes by public transport, amounting to 12.1 million daily trips. The system includes 560 routes operated by some 32,000 buses, microbuses, and vans (combis). There is also a limited mass transit network. Nearly 91 percent of the commuters do not have access to safe, clean, and affordable public transport services. There is a lack of infrastructure and facilities such as priority lanes, terminals, or adequate stops are limited. Major transport corridors are severely congested and have lower travel speeds and higher negative externalities such as loss of productive time, higher Vehicle Operating Costs (VOC), higher local and GHG pollutant emissions, and road safety issues. Congestion costs are estimated at 1.8 percent of Peru’s GDP (El Comercio, 2019). The cost of road traffic injuries and fatalities is estimated at 4.5 percent of the GDP.

2. Limited coverage and lack of integration of the mass transit system and feeder services, as well as institutional fragmentation, negatively affect the LMA’s ability to realize the economic potential in a socially inclusive manner. The mass transit network includes: (a) the first Bus Rapid Transit (BRT) corridor (Metropolitano BRT) implemented through Protransporte (Instituto Metropolitano Protransporte de Lima, an agency of the Metropolitan Municipality of Lima; MML) between 2004 and 2010 with World Bank support, and (b) an elevated rail line implemented by the Ministry of Transport in 2010 (a Metro Line 1—ML 1—or Tren Eléctrico). Metropolitano BRT and ML 1 carry about one million trips of all public transport trips in the LMA (LMA (9 percent annually). The Metropolitano BRT line began commercial operations in 2011 with a 26-kilometer north-south

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2 INEI.
3 The INEI distinguishes the socio-economic levels by per capita income: A (upper class): S/.2,192.20 or more; B (upper middle class): S/.1,330.10 to S/.2,192.19; C (middle class): S/.899.00-S/.1,330.09; D (lower middle class): S/.575.70-S/.898.99; E (lower class): S/.575.69 or less (2017 definition). The terms “lower income population” and “lower socio-economic levels” are used to refer to the sum of population from socio-economic levels D and E.
4 Ibid.
5 See analyses by INRIX, TomTom, Moovit.
6 According to Transitemos (2019), 38 percent of the working class loses 90 minutes per day during commuting because of congestion.
7 Source: an unofficial GRSF estimate.
8 Peru Lima Transport Project (P035740).
corridor crossing the historic center of Lima. ML 1, a 34.6-kilometer, north-south elevated rail transit line (on a different alignment than Metropolitano BRT) began commercial operations in 2010. Since December 2010, the Government of Peru (GoP), seeking to expand the mass transit network, has an approved Metro Network Plan for Greater Lima and Callao (Supreme Decree N° 059-2010-MTC) which includes five new Metro lines increasing the proposed length of the total network to 168 kilometers. The Lima Metro Line 2 (ML 2) is under construction with support from International Financial Institutions (IFIs), including the World Bank [Peru Lima Metro Line 2 Project (P145610)]. Phase 1 of ML2 is expected to start operating in 2021, Phase 2 in 2023, and Phase 3 in 2024. Lima Metro Line 3 (ML 3) is projected to start operations in 2030 and Metro Line 4 (ML 4) is currently in early conceptual stages with plans to call for bids next year. (See Annex 6 for a map of Lima’s current and planned transit network.)

3. **The current Metropolitano BRT is a high-performance BRT system and even though it currently operates at capacity during peak hours, there are opportunities for more efficient use of the bus fleet.** The Metropolitano BRT’s infrastructure has met and exceeded its demand forecasts due to: (a) its higher level of service compared to conventional modes and (b) its alignment connecting the densely populated districts with the city’s jobs located mainly in Central and North Lima. The Metropolitano BRT has a capacity of nearly 700,000 trips per day, of which 500,000 trips are made on the trunk corridor. Thirty-one percent of the total users of the Metropolitano BRT fall under low-income categories. Currently, the Metropolitano BRT includes trunk and feeder buses [operations and maintenance (O&M) under PPP contracts], including 300 18-meter articulated natural gas buses deployed on eleven routes along the BRT corridor. The system also includes an extensive feeder bus network operated by 222 buses that connect peripheral neighborhoods around Naranjal Terminal in North Lima and Matellini Terminal in South Lima to the high-capacity trunk corridor. Operational indicators of the Metropolitano BRT reflect the system’s high capacity and high operational standards. Design levels of the Metropolitano BRT are to serve 1,935 passenger-bus-day (pbd) while its current average level of service remains under 1,700 bpd. Service operation ratios (i.e., trips completed/trips scheduled) are consistently above 97 percent, and the passenger-kilometer index is steady at 9.2. The passengers per hour per direction (pphpd) reaches 23,000. The entire fleet is at its mechanical midlife.

4. **Naranjal Terminal in North Lima is the most congested station on the Metropolitano BRT, originating 18 percent of the system’s daily trips with 42 percent of its users falling under low-income categories.** Around 35 percent of Naranjal Terminal’s passengers arrive at the station on any of the eight existing feeder routes, while the rest arrive by foot and other modes. Overall, the concentration of passengers at Naranjal Terminal exceeds the infrastructure capacity at peak hours. The system could increase coverage with the addition of new stations. The current constrained coverage impacts different groups of the population. For instance, surveys of female users of public transport who live in the periphery of Lima show that they disproportionately use informal services,

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9 Protransporte, June 2019.

10 In addition to the 522 natural gas buses, two electric buses are being tested as a pilot in a section of the current Metropolitano BRT.

11 PPP contract for transport provision.

12 In accordance with the Peruvian law, the maximum age of public service vehicles is 20 years.

13 Protransporte.
which have a larger coverage area and address an unsatisfied demand.

5. **Two key recent institutional reforms that provide the framework for urban transport development—in particular, integration and sustainability.** These include the creation in December 2018 of the ATU (Lima-Callao Urban Transport Authority; Autoridad de Transporte Urbano para Lima y Callao) and the approval of the National Urban Transport Policy (NUTP) in April 2019. Despite the recent approval, these reforms make significant strides towards urban transport integration. The ATU’s legal and institutional framework was approved to address urban transport planning, transport integration, infrastructure provision, service concession and permitting, and fare policy, including fare setting and adjustments. The ATU has an ambitious delivery schedule in the short term, including: (i) the operational, physical, and fare integration of the Metropolitano BRT, Metro lines, and two proposed urban cable car systems in San Juan de Lurigancho (SJL) integrating the Metropolitano BRT and ML 1 and El Agustino (EA) integrating ML 1 and ML 2; and (ii) the design and implementation of a financial sustainability strategy for the integrated transport network. The ATU is expected to take several years to achieve an increase in institutional capacity to manage these responsibilities.

6. **The proposed project will extend the Metropolitano BRT in North Lima to overcome the challenges related to mobility and access to jobs, especially for low-income residents in this area.** The proposed extension will connect the densely populated and predominantly low-income districts in North Lima with job centers in Central Lima. In addition, the proposed extension will integrate districts in Central and South Lima with North Lima that is an emerging economic center and expected to attract more jobs and people in the coming years.

### C. Proposed Development Objective(s)

**Development Objective(s) (From PAD)**

The Project Development Objective (PDO) is to improve urban mobility and accessibility to jobs, especially for low-income users living in the area of influence of the Metropolitano BRT North Extension.
Key Results

PDO Level Indicators

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Outcome Indicator</th>
</tr>
</thead>
</table>
| Improve mobility in the area of influence of the Metropolitano BRT North Extension | • Travel time for public transport users in the area of influence of the Metropolitano BRT North Extension, including transfer and access time (minutes)  
• Beneficiaries satisfied with the BRT transport services in the area of influence of the Metropolitano BRT North Extension (coverage, reliability, safety, personal security), differentiated by socio-economic level and gender (percentage)  
• Passengers’ trips per day in the Metropolitano BRT North Extension, differentiated by socio-economic levels and gender (number).  
• Share of trips in the Metropolitano BRT North Extension taken by low-income passengers (percentage) |
| Improve accessibility to jobs in the area of influence of the Metropolitano BRT North Extension | • Average number of jobs reachable by public transportation within a 60-minute, one-way commute in the area of influence of the Metropolitano BRT North Extension (sub-indicator: % change) |

D. Project Description

Project Components

7. The project will have two components: (See more details in Section II.D and Annex 2.)

Table 1. Summary of project costs and sources of financing

<table>
<thead>
<tr>
<th>Component</th>
<th>Contents</th>
<th>IBRD (US$ Million)</th>
<th>MML (US$ Million)</th>
<th>Total (US$ Million)</th>
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<tbody>
<tr>
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<td>Improving urban mobility and accessibility: goods and civil works</td>
<td>85</td>
<td>32</td>
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<tr>
<td>Component 2</td>
<td>Project management and environmental and social management</td>
<td>2</td>
<td>4</td>
<td>6</td>
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<tr>
<td>Total, US$ million</td>
<td></td>
<td>87</td>
<td>36</td>
<td>123</td>
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</table>

Project Beneficiaries

8. Project beneficiaries and focus. The proposed World Bank-financed project is expected to: (a) benefit 1,460,000 residents of four districts in North Lima (Los Olivos, Independencia, Comas, and Carabayllo); and (b) result in 150,653 trips per day in North Lima. Low-income users living in the area of influence of the Metropolitano BRT North Extension will be target beneficiaries.
Rationale for Bank Involvement and Role of Partners

9. The World Bank’s new Environmental and Social Framework (ESF) will be applied for the first time in an infrastructure project in Peru and will help the borrower mitigate the project’s environmental and social (ES) risks and impacts throughout the project’s life cycle under international standards, proportionate to the project’s nature and scale, and its potential risks and impacts. The proposed project will benefit from the ESF in terms of the inherent characteristics of this systematic, harmonized, and modern framework, which is expected to boost protection for people and the environment, promoting capacity, institution-building, and enhancing efficiency for both the borrower and the World Bank. The associated standards of the ESF will: (a) support the borrower in achieving best international practices to mitigate the main ES risks; (b) assist the borrower in fulfilling its national and international ES obligations; (c) enhance non-discrimination, transparency, participation, accountability, and governance; and (d) enhance the sustainable development outcomes of projects through ongoing stakeholder engagement.

10. As part of its ongoing engagement in the transport sector and in support of the GoP’s ambitious urban transport agenda, the World Bank is supporting capacity-building activities to establish the ATU. The World Bank has advocated the establishment of the ATU to reflect better global practices
to develop institutional capacity and manage institutional requirements of large urban transport operations, including the Lima ML 2 project (P145610). The World Bank is currently supporting the ATU’s establishment in three key areas: (i) governance of urban public transport integration; (ii) establishment of an urban transport authority with a clear mandate; and (iii) improvement of stakeholder communication. In addition to the proposed project, the GoP has requested World Bank financial support for a new mode of urban transport based on cable cars that connect to the Metropolitano and Metro, including the two urban cable cars in San Juan de Lurigancho (SJL) and El Agustino (EA) that will help better integrate urban public transport in Lima.

**Lessons Learned and Reflected in the Project Design**

11. Lessons learned from the first phase of the Metropolitano BRT and similar mass transit corridor projects in the LAC Region have been integrated into the project design as follows:

(a) **Improving mobility and accessibility for the poor through BRT systems requires an efficient alignment and effective integration of the main corridor with the feeder service and other public transport systems that are closer to passenger origins and destinations.** The demand study and engineering designs of the extended BRT approved by the GoP include: (a) 10.2 kilometers of alignment to serve low-income districts in North Lima; (b) a high-capacity feeder system that will be integrated with the trunk corridor; and (c) a new operational plan and reorganization of the feeder routes to be carried out by Protransporte. In addition, the project will finance pre-operational activities (including software, calibration of routes, tests, monitoring, and training) for running the Metropolitano North BRT Extension. As a result of the project, the share of low-income passengers is estimated to increase from 31 percent to 42 percent in North Lima.

(b) **Improved consultation is of paramount importance. Sufficient information, consultation, and engagement with key stakeholders (including residents and municipalities) mitigated the risks of conflict and delays.** The original Metropolitano BRT project reportedly provided insufficient information to residents of the Municipality of Barranco (one of the twelve municipalities involved in the project). This, combined with complaints about the traffic impact evaluation supported by the project and its derived traffic management strategy and mitigation mechanisms, resulted in a complaint and an Inspection Panel investigation in 2009, all of which delayed project implementation. The new proposed project is building on this experience and engaging and consulting stakeholders at an early stage, in particular, municipalities, communities, groups, and individuals affected by the proposed works, and will provide project-based grievance redress mechanisms (GRMs). Under the proposed project:

i. A stronger citizen engagement approach based on the ESF, which includes instruments such as the Stakeholder Engagement Plan (SEP), including consultations, GRMs, beneficiary engagement surveys, and institutional agreements with local municipalities, has been incorporated into the project design and the Environmental and Social

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14 Increasing the trunk services relative to feeder services will rebalance the incentive structure of the project. Metropolitano was criticized by allocating too little demand risk to feeder services (see Gomez Lobo and Briones, “Incentives in Bus Concession Contracts: A Review of Several Experiences in Latin America”, 2014). The extension of the trunk corridor will partially solve this.

15 Lima Transport Project (P035740).
Commitment Plan (ESCP). Based on the SEP, all the initial consultations will be completed before Appraisal aiming to integrate the feedback into risk-mitigation plans, including mandatory agreements with three of the four municipalities\textsuperscript{16}, a tree relocation\textsuperscript{17} and transplantation plan, and a plan for describing job opportunities for residents in the project area. The EMAPE\textsuperscript{18} has agreed to assign staff to work in the project area to interact with the residents and authorities and to disseminate information about the project. Surveys will be used to collect, record, and report on inputs received from beneficiaries about the coverage, safety, personal security, and reliability of the BRT transport services.

ii. The project will carry out regular consultation during preparation and implementation with key stakeholders. A plan for organizing targeted workshops, interviews, and events has been agreed with the client in the ESCP.

iii. The World Bank has prepared a guidance document for the borrower to prepare a comprehensive and robust traffic management plan for construction and operation based on the World Bank’s Environmental and Social Standards (ESS) and international best practice. The World Bank will finance a road safety audit of the engineering designs. The recommendations will be incorporated into the traffic management plan under the ESF and in the bidding documents in order to be implemented during construction.

iv. The stakeholder engagement plan includes grievance redress as a citizen engagement mechanism. The borrower agencies have existing mechanisms to receive complaints, but they will be strengthened under project implementation. It is proposed that the results framework will include as an indicator “Citizens reporting satisfaction with key aspects of the consultation process” (information available, facilities, facilitation, location, language, etc.)

(c) Street vendors need to be relocated based on a participatory approach that is beneficial to them. The proposed project will follow the best practice set by the original Metropolitano BRT project, going beyond the safeguard requirements at that time, in mitigating the project’s impact on merchants located in the project area. Under the original Metropolitano BRT project, merchants from the flower market located in the project area were compensated or relocated. Protransporte supported these vendors in finding a new place, obtaining credit and purchasing land, building the new market and capacity-building activities for small business management. The new flower market is fully operational and is generating income for vendors. It is estimated that about 800 streets vendors are located in the vicinity of the BRT extension in the municipality of Comas. The MML is expected to complete the following actions before Appraisal: (a) prepare a proposal of relocation options and implement a communications strategy to engage with the vendors, and (b) carry out a census of all the vendors, including their characteristics and expectations. During project implementation, the MML will monitor the vendors’ business to ensure that it generates income.

(d) Key lessons from the implementation of universal mobility projects in Lima have been

\textsuperscript{16} Independencia, Comas, and Carabayllo.

\textsuperscript{17} There are 3,000 trees along the planned BRT extension that will need to be removed by EMAPE before civil works start. Upon completion of the works, the constructor will plant new trees around the Metropolitano BRT North Extension. The project will finance a technified irrigation system and an upgrade of the current waste water plant.

\textsuperscript{18} Empresa Municipal Administradora de Peajes de Lima, EMAPE, created in 1986 to manage the urban toll roads of the MML and the development and maintenance of the urban transport infrastructure of the MML.
incorporated in the proposed project\(^{19}\). Since 2012, the World Bank has supported the universal mobility agenda and the capacity of the MML. One pilot BRT station, Dos de mayo, was designed and built with universal mobility/access considerations. Organizations for differently abled people were consulted on their specific needs. This station has become a model to be replicated. This project’s lessons were translated into practical recommendations for future BRT and Metro line project designs. In addition, capacity building of Protransporte and AATE has improved their knowledge of and commitment to the provision of inclusive urban transport. Peru’s Ministry of Housing, Construction and Sanitation has also strengthened regulations to ensure that urban transport infrastructure designs include universal mobility/access considerations. The project design of the Metropolitano BRT North Extension will include these lessons and comply with national regulations and international best practices. It will focus, in particular, on the design of pedestrian crossings, access to stations, elevators for people with disabilities, pedestrian bridges, appropriate signaling, fare collection infrastructure, and equipment to support people with disabilities (PWD) during emergencies.

(e) Insufficient implementation arrangements and limited capacity to implement BRT projects in other cities in Latin America caused implementation delays, contract disputes, and reputational risk to city administrations. The project design reflects these lessons in the following ways: (a) the World Bank supports the ATU in implementing activities in key areas to advance urban transport integration in accordance with the National Urban Transport Policy; (b) to avoid an overlap of responsibilities and reduce lack of coordination and ineffective decision-making, it has been agreed with the GoP that the Project Operations Manual (POM) will include the requirement of appointing a strong core team in the PIU, including ESS specialists, and of setting up a coordination committee that will include the MML, Protransporte, the ATU, EMAPE, and municipalities; (c) to ensure sufficient institutional capacity, the project will finance a contract for a construction supervisor to oversee the civil works contract.

<table>
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<th>Legal Operational Policies</th>
<th>Triggered?</th>
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<td>Projects on International Waterways OP 7.50</td>
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<tr>
<td>Projects in Disputed Areas OP 7.60</td>
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</table>

Summary of Assessment of Environmental and Social Risks and Impacts

12. Despite this project being brownfield and deploying technology that is well known, the ES risk classification is substantial under the ESF. The classification responds to risks and impacts across the project’s large geographic footprint and associated indirect area of influence along the corridors of

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\(^{19}\) A US$2.5 million PHRD grant (TF11295) under the project Mainstreaming Inclusive Design and Universal Mobility in Lima (P129561).
intervention and their various intersections. These risks derive from the complex institutional arrangements of project implementation, required interinstitutional coordination involving multiple agencies, and the PIU’s current inability to manage ES risks and impacts in accordance with the World Bank’s ESF.

13. To adequately address and mitigate project ES risks and impacts, the borrower is preparing specific ES instruments aligned with ESF requirements and relevant ES standards (ESS). A Category II semi-detailed Environmental Impact Assessment (EIAsd, a type of assessment required by national law for projects when expected adverse impacts are moderate in nature and can be readily mitigated) was developed in 2017 by an independent consultant on behalf of the borrower, following the requirements of Peruvian national law, and approved by the competent entity in 2018. The World Bank, together with the borrower, conducted a gap analysis of the EIAsd and identified specific areas that need to be addressed with the preparation of complementary instruments that supplement the EIAsd to achieve consistency with ESS\(^{20}\) requirements, ensure improvements in project construction and operation, and adequately mitigate adverse risks and impacts. These instruments include: (i) Complimentary Environmental and Social Impact Assessment (ESIA-C); (ii) Resettlement Action Plan (RAP); (iii) Labor Management Procedure (LMP); (iv) SEP, including a GRM; and (v) identification and assessment of associated facilities.

14. The borrower, with the support of qualified ES specialists, is working on the preparation and delivery of the five mentioned instruments, with close supervision, guidance, and support from the World Bank. Table 2 details the milestones for when draft fit-for-disclosure versions of these instruments, deemed acceptable to the World Bank, will be disclosed on the World Bank’s website, as well as on EMAPE’s and Protransporte’s websites [This information will be updated once the draft instruments are finalized and disclosed, indicating specific disclosure dates and sites], in line with project needs and timeline. The World Bank has been closely monitoring the development of these instruments to ensure both quality of the analysis and on-time delivery, as well foster client capacity building. Technical and economic requirements derived from these plans will be incorporated into the procurement documents for the contractor and supervision firm, as necessary.

<table>
<thead>
<tr>
<th>Table 2 Disclosure of World Bank ES Documents</th>
<th>Prior to Appraisal</th>
<th>Prior to Board Approval</th>
<th>Before Construction Contract Start Date</th>
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<tr>
<td>1. ESIA-C, including the following elements for impact and risk mitigation:</td>
<td>ESIA-C, including the following additional elements for impact and risk mitigation:</td>
<td>ESIA-C, including the following additional elements for impact and risk mitigation:</td>
<td></td>
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<tr>
<td>• Security, Health and Safety Management Plan for Construction</td>
<td>• ESMP for the sourcing and transportation of construction material</td>
<td>• ESMP for the scrapping of old BRT buses</td>
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<tr>
<td>• Chance Finds Procedure</td>
<td>• ESMP for tree relocation and transplantation</td>
<td>• Traffic Management Plan and updated detour plans for construction and operation</td>
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<tr>
<td>• EMP for Environmental Liabilities</td>
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<td>• Labor-related Grievance Redress Mechanism (GRM) and a worker’s code of conduct</td>
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<tr>
<td>• EMP for Waste Management</td>
<td></td>
<td>• Security, Health and Safety Management Plan for Operation</td>
<td></td>
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<tr>
<td>• Management measures for project-related activities and components, including expansion of waste treatment plant, relocation of a sewage canal, relocation of existing small informal dumps located within the project’s footprint, removal of a dump located within the area proposed for expansion of the bus depot (including a 7m</td>
<td></td>
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</tbody>
</table>

\(^{20}\) Assessment and Management of Environmental and Social Risks and Impacts.
excavation), rehabilitation of auxiliary roads for detours, and the replacement of traffic lights.

2. Identification and assessment of associated facilities
3. RAP
4. LMP
5. SEP + GRM

15. Regarding EMAPE’s capacity to adequately manage the project’s ES risks and impacts, the PIU will be responsible for overall project implementation, including compliance with the World Bank’s ESS. The PIU’s organizational chart includes an Environmental and Social Management Area (See organizational structure in Annex 1) comprised of (a) a lead environmental specialist, (b) an environmental specialist, (c) a social specialist, and (d) a health and safety specialist. This team will be strengthened with additional environmental and social staff during pre-construction in order to better mitigate potential ES risks during this phase. To strengthen the PIU’s capacity to manage ES aspects, the ESCP will include specific actionable capacity-building measures, together with the corresponding budget. Furthermore, given the complexity of and the lessons learned from the current Metropolitano BRT, a strong supervisory firm will be hired to control the quality of works and progress, including the supervision of project ES aspects. For further details on project ES aspects refer to the ESRS Appraisal Stage.

16. The borrower will conduct one additional round of meaningful consultations during the project preparation stage. The evidence will be reflected in the corresponding consultation document, prepared and disclosed in draft format prior to appraisal, as an annex of the SEP. The borrower is also preparing the ESCP as a stand-alone document, which will detail the agreed measures and actions in line with the complementary studies listed above. An environmental and social capacity assessment of EMAPE was conducted by the World Bank and will be disclosed in draft format prior to appraisal. Relevant measures of the assessment will be included in the project’s ESCP. The borrower will also prepare gender plans based on the project’s gender strategy outlined in the ESIA-C, including measures to address gender-based violence and sexual harassment.

Gender

17. The project is aligned with the World Bank Gender Strategy and the Transport Gender Action Plan. The activities designed by the project contribute to reducing gender gaps under two of pillars of the World Bank Group’s Gender Strategy: (a) enhancing women’s mobility and access to more and better jobs and (b) contributing to enhancing women’s personal security in public transport and thus increasing women’s voice and agency. The project’s gender strategy is outlined in the ESIA-C.

18. Women and men are impacted by public transport differently, and it is shown that women tend to use slower and more unsafe modes of public transport, which reduces their access to economic opportunities. Recent studies show that women mostly take public transport, trips are related to the economy of care, and women usually take slower and unsafe transport modes. Moreover, a

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22 IDB, 2016; Lima Como Vamos, 2017 and 2018; and IZA-Institute of Labor Economics, April 2019.
study conducted by the German Corporation for International Cooperation\(^{23}\) shows that more men than women use the Metropolitano BRT, and more women use taxis as they find it safer and comfortable. Public transport is qualified as not safe for women. Around 32 percent of female residents in Lima have been victims of sexual harassment on public transport.\(^{24}\) However, the latest report published by Sustainability-MDPI\(^{25}\) about the role of public transport in promoting employment of women in Lima found that women who use the Metropolitano BRT or Metro are more satisfied with safety in public transport and experience less harassment.

19. **The project will contribute to women’s mobility and access to economic opportunities by providing accessible and safer public transport options.** The project will incorporate features in the design of the passenger stations, bridges, and bus terminals that will address women’s needs based on their mobility patterns (traveling accompanied, with bags, or transferring to other transport modes) and personal security. These features will contribute to enhancing aspects such as access, security, and physical integration with pedestrian infrastructure. The project’s results framework will track project benefits for women (among others)—passengers’ trips on the extended Metropolitano BRT corridor; women’s satisfaction with coverage, safety, personal security, and reliability of the BRT; and women’s satisfaction with key aspects of consultation processes under the project.

**E. Implementation**

**Institutional and Implementation Arrangements**

20. The GoP has approved the National Urban Transport Policy and is preparing additional regulations to support the unification of the MML’s urban transport responsibilities under the ATU. Despite these efforts, in the short term, considering the institutional capacity of the existing agencies, the construction and operation of urban transport, including the expansion of the BRT system, will remain the responsibility of EMAPE (the Lima Toll Road Municipal Management Agency, Empresa Municipal Administradora de Peajes de Lima) and Protransporte, respectively. Transition from the current institutional arrangements and building capacity in the ATU is expected to occur during a ramping-up period over the coming years.

21. **Given this context, the MML has agreed to delegate the implementation of this proposed project to its infrastructure agency, EMAPE, while retaining a fiduciary (financial) role.** Peru’s Ministry of Economy and Finance (Ministerio de Economía y Finanzas; MEF) and the MML will sign an implementation agreement. The MML, under a second agreement, will delegate the implementation of works and supervision to EMAPE, including procurement, budgeting, and technical supervision of works. (See organogram and detailed roles in Annex 1.)

22. **EMAPE will hire a project coordinator and the PIU’s core team to lead the implementation of the project.** EMAPE will hire key senior staff, including qualified environmental and social (ES) specialists, to support pre-construction and construction activities, the implementation of the ESCP, the compliance of the ES standards, and facilitate the participation of municipalities and communities. The construction and supervision firms will be required to have ES specialists.

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\(^{23}\) Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), [month/year].


\(^{25}\) Connecting to Economic Opportunity: The Role of Public Transport in Promoting Women’s Employment in Lima.
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