Board of Executive Directors
Short Procedure
Expires on 24 August 2017*

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3 August 2017
Original: Spanish
Public
Simultaneous Disclosure

To: The Executive Directors

From: The Secretary

Subject: Argentina. Proposal for an individual loan for the "General San Martín Railroad Improvement Project: Retiro-Pilar Branch Line"

Inquiries to: Julieta Abad (telephone Country Office in Argentina 5411-4320-1851) or Alejandro Tadía (extension 3258)

Remarks: This is the fifth individual operation financed with resources from the Conditional Credit Line for Investment Projects (CCLIP) for the "Metropolitan Railroads Recovery Program" (document PR-4043), approved pursuant Resolution DE-101/13.

The Executive Directors are requested to inform the Secretary, in writing, no later than **24 August 2017**, if they wish to interrupt this procedure. If no such communication is received by that date, the attached resolution will be considered adopted by the Board of Executive Directors, and a record to that effect will be made in the minutes of a forthcoming meeting.

Reference: GN-1838-1(7/94), DR-398-17(1/15), CS-3953-3(6/17), GN-2246-1(7/03), DE-58/03, GN-2246-4(12/06), DE-10/07, GN-2246-7(11/07), DE-164/07, GN-2564-3(12/11), DE-225/11, PR-4043(8/13), DE-101/13

* This term is in accordance with the information contained in document CS-4145, concerning the interruption of advance-distribution periods for documents.

PUBLIC
SIMULTANEOUS DISCLOSURE

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

ARGENTINA

GENERAL SAN MARTÍN RAILROAD IMPROVEMENT PROJECT: RETIRO-PILAR BRANCH LINE (AR-L1267)

SECOND INDIVIDUAL OPERATION UNDER THE CONDITIONAL CREDIT LINE FOR INVESTMENT PROJECTS (CCLIP) (AR X1018)

LOAN PROPOSAL

This document was prepared by the project team consisting of: Julieta Abad (TSP/CAR), Project Team Leader; Alejandro Taddia (INE/TSP), Alternate Project Team Leader; Agustina Cocha and Manuel Pastor (INE/TSP); Carolina Benítez (TSP/CAR); Andrés Pereyra and Elias Rubinstein (TSP/CUR); Brenda Alvarez Junco and Juan Carlos Lazo (FMP/CAR); Krysia Avila (LEG/SGO); Óscar Came Zaldívar (ESG/CPR); and Benoit Lefevre (CSD/CCS).

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2. Monitoring and Evaluation Plan
3. Environmental and Social Management Report (ESMR)
4. Procurement plan

OPTIONAL

1. Strategic environmental and social assessment of the project
2. Demand study and economic evaluation
3. Institutional and financial assessment of the sector
4. Climate change annex
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ABBREVIATIONS

ADIFSE	Administración de Infraestructura Ferroviaria, Sociedad del Estado [State-owned rail infrastructure administration]
AMBA	Área Metropolitana de Buenos Aires [Buenos Aires Metropolitan Area]
CABA	Ciudad Autónoma de Buenos Aires [Autonomous City of Buenos Aires]
CCLIP	Conditional Credit Line for Investment Projects
CEU	Central Execution Unit
CNRT	Comisión Nacional de Regulación del Transporte [National Transportation Control Commission]
EIRR	Economic internal rate of return
ESA	Environmental and Social Assessment
ESMP	Environmental and social management plan
FCGR	General Roca Railroad
FCSM	General San Martín Railroad
INDEC	Instituto Nacional de Estadística y Censos [National Statistics and Census Institute]
MT	Ministry of Transportation
NDC	Nationally Determined Contribution
OEL	Optional electronic link
REL	Required electronic link
SOFSE	Sociedad Operadora Ferroviaria, Sociedad del Estado [State-owned railroad operating company]
UBN	Unmet basic needs

PROJECT SUMMARY

ARGENTINA
GENERAL SAN MARTÍN RAILROAD IMPROVEMENT PROJECT: RETIRO-PILAR BRANCH LINE (AR-L1267)

SECOND INDIVIDUAL OPERATION UNDER THE CONDITIONAL CREDIT LINE FOR INVESTMENT PROJECTS (CCLIP) (AR-X1018)

<table>
<tr><th colspan="5">Financial Terms and Conditions</th></tr>
<tr><td colspan="3" rowspan="2">Borrower: Argentina Republic</td><td colspan="2">Flexible Financing Facility[a]</td></tr>
<tr><td>Amortization period</td><td>25 years</td></tr>
<tr><td colspan="3" rowspan="2">Executing agency: Ministry of Transportation (MT), through its Central Execution Unit (CEU)</td><td>Original WAL</td><td>15.25 years</td></tr>
<tr><td>Disbursement period</td><td>5 years</td></tr>
<tr><td>Source</td><td>Amount (US$)</td><td>%</td><td>Grace period</td><td>5.5 years</td></tr>
<tr><td rowspan="2">IDB (OC)</td><td rowspan="2">400,000,000</td><td rowspan="2">77</td><td>Inspection and supervision fee</td><td>[b]</td></tr>
<tr><td>Interest rate</td><td>LIBOR-based</td></tr>
<tr><td>Local</td><td>122,000,000</td><td>23</td><td>Credit fee</td><td>[b]</td></tr>
<tr><td>Total</td><td>522,000,000</td><td>100</td><td>Currency of approval</td><td>U.S. dollars from the Ordinary Capital</td></tr>
<tr><th colspan="5">Project at a Glance</th></tr>
<tr><td colspan="5">Project objective: The general objectives of the project are to: (i) help increase productivity through the provision of rail infrastructure, thereby improving the quality and capacity of the public transportation service in the northwestern corridor of the Buenos Aires Metropolitan Area (AMBA); (ii) help mitigate the effects of climate change; and (iii) help reduce social inequality by providing quality transportation services to vulnerable groups.

The project's specific objective is to improve the quality of public transportation through the renovation and electrification of the passenger rail service of the General San Martín Railroad (FCSM) in the section between the Retiro and Pilar stations, which will reduce travel times, improve the reliability of service, and decrease greenhouse gas emissions.</td></tr>
<tr><td colspan="5">Special execution conditions: The special contractual execution conditions are as follows: prior to awarding the works contract, the borrower will submit evidence of the following to the Bank's satisfaction: (i) beginning of the procedure for contracting comprehensive supervision of the works, in keeping with the Terms of Reference approved by the Bank. However, until that contracting is completed, a team of professionals from the Ministry of Transportation will conduct provisional supervision using the management mechanisms and with the professional credentials agreed upon beforehand with the Bank. Contracting of comprehensive supervision for the works must be completed within six months of the signing of the works contract; (ii) execution of the cooperation agreement for project execution with the entity responsible for the operation and maintenance of the targeted branch line; (iii) launch of procedures for adding the electric rolling stock required to service the branch line; and (iv) execution of an agreement with the concessionaire supplying electric power in the area where the new electric substation will be constructed under the project (see paragraph 3.2).

The socioenvironmental conditions appear in Annex B of the Environmental and Social Management Report (ESMR) (REL#3).</td></tr>
<tr><td colspan="5">Exceptions to Bank policies: None</td></tr>
<tr><th colspan="5">Strategic Alignment</th></tr>
<tr><td>Challenges:[c]</td><td colspan="4">SI ☑ PI ☑ EI ☐</td></tr>
<tr><td>Crosscutting themes:[d]</td><td colspan="4">GD ☐ CC ☑ IC ☐</td></tr>
</table>

[a] Under the terms of the Flexible Financing Facility (FN-655-1), the borrower has the option of requesting changes in the amortization schedule as well as currency and interest rate conversions. The Bank will take operational and risk management considerations into account when reviewing such requests.

[b] The credit fee and the inspection and supervision fee will be established periodically by the Board of Executive Directors as part of its review of the Bank's lending charges, in accordance with relevant policies.

[c] SI (Social Inclusion and Equality); PI (Productivity and Innovation); and EI (Economic Integration).

[d] GD (Gender Equality and Diversity); CC (Climate Change and Environmental Sustainability); and IC (Institutional Capacity and Rule of Law).

I. PROJECT DESCRIPTION AND RESULTS MONITORING

A. Background, problem to be addressed, and rationale

1.1 **Buenos Aires Metropolitan Area (AMBA).** The AMBA area includes the Autonomous City of Buenos Aires (CABA) and the 24 "partidos" (districts) of the Province of Buenos Aires that surround the city. It covers an area of 2,590 km^2 and has a population of 12.8 million,[1] which represents approximately 32% of the country's total population. According to data of the Instituto Nacional de Estadística y Censo [National Statistics and Census Institute] (INDEC), this area contributes approximately 40% of the country's gross domestic product (GDP). Because of its economic and demographic weight, the AMBA is Argentina's main production and consumption center. However, it is also an area with social contrasts: while only 9.5% of the population in the CABA area is poor according to INDEC figures, the percentage rises to 35% in the AMBA metropolitan area.[2]

1.2 **Passenger transportation in the AMBA.** The public transportation system in the AMBA includes seven rail lines, six of which are underground, and more than 369 bus lines.[3] Economic growth in recent decades is reflected by an increase in the number of individual trips by motor vehicle, and by greater demand for mobility of people and goods: from 1996 to 2014, the number of trips rose from slightly more than 16 million/day to nearly 29 million. However, in this scenario mass transit systems were not able to increase their share of ridership, but instead only kept demand at around 9 million trips per day.[4]

1.3 **Metropolitan railroads.** The passenger railroad system in the AMBA is one of the largest in the western world. It covers more than 833 km spread out over seven lines[5] in a hub-and-spoke configuration, from five terminals located in the city of Buenos Aires out to the greater Buenos Areas area. The Sociedad Operadora Ferroviaria, Sociedad del Estado [State-owned railroad operating company] (SOFSE) operates five of the seven lines, and the remaining two are operated under private

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1 According to data from the 2010 population census conducted by the Instituto Nacional de Estadística y Censo [National Statistics and Census Institute] (INDEC), 77% of the AMBA's total population lives in the "partidos" located in the Province of Buenos Aires, with the remaining 23% in the CABA. The municipios that make up the AMBA are located in the following areas: northern area: Vicente López, San Isidro, San Fernando, Tigre, San Martín, San Miguel, José C. Paz, Malvinas Argentinas, and Pilar; western area: La Matanza, Merlo, Moreno, Morón, Marcos Paz, Hurlingham, Ituzaingó, and Tres de Febrero; and southern area: Avellaneda, Quilmes, Berazategui, Florencio Varela, Lanús, Lomas de Zamora, Almirante Brown, Esteban Echeverría, Ezeiza, Presidente Perón, and San Vicente.

2 INDEC data for the second half of 2016. The method used to calculate the poverty index is based on the price of the basic food basket and total basic basket, which is then compared with the incomes of households surveyed by the Permanent Household Survey.

3 Covers buses in three jurisdictions according to routes: national, provincial, and in the municipios in the Province of Buenos Aires.

4 The sources of the data used for each year surveyed are: "Diagnóstico y Objetivos" – Plan Urbano Ambiental [Environmental Urban Plan], Secretariat of Urban Planning – government of the city of Buenos Aires; "Estudio de Transporte y Circulación Urbana" [Urban Transportation and Traffic Study], Coordinator: Daniel Batalla – Environmental Urban Plan, December 1999; 2007 editions, Urban Mobility Observatory of the Latin American Development Bank (CAF); 2012 and 2014.

5 Only 24% of the system is electrified.

concessions.[6] In 2016 the entire metropolitan railway system met the demand of 358 million passengers, accounting for 16% of trips made in the AMBA.

1.4 **Condition of rail infrastructure and service quality.** Due to the metropolitan rail system's age and size, different technologies have been used and there are varying degrees of upkeep. In the last few decades, low investment levels[7] contributed to a gradual deterioration of the system, generating negative impacts on the quality of service and operational safety. According to data of the Comisión Nacional de Regulación del Transporte [National Transportation Control Commission] (CNRT) for the year 2016, 51% of the track is in fair or poor condition. Only 40% of the system has automatic signaling devices;[8] the rest still uses mechanical systems dating back to the early 20th century. Even the automatic systems have exceeded their useful life.[9] To reverse this situation, starting in 2012 the Government of Argentina implemented a plan to invest in rail infrastructure and new rolling stock.

1.5 Between 2005 and 2015, substantial changes in the management model,[10] including the termination of the concession contracts for five rail lines in the AMBA, the creation of the Administración de Infraestructura Ferroviaria, Sociedad del Estado [State-owned rail infrastructure administration] (ADIFSE) and SOFSE, and the transfer of the operation of those lines to SOFSE, as well as the tragic accident that occurred in the Plaza Once station,[11] all affected the performance of the metropolitan railroads. Ticket sales declined from 413 million in 2005 to 329.7 million in 2015, bottoming out at 236 million tickets sold in 2013. Service quality also deteriorated: in 2009, 2.8% of scheduled trains were cancelled, rising to 9% in 2015, with a maximum of 15% in 2013. If delayed trains are added to cancellations,[12] the absolute regularity rate fell from 86% in 2009 to 75% in 2015, with the lowest rate (63%) in 2013. All of these figures are well below the 95% rate internationally accepted for railroad services with efficient performance. The decline in these rates is due to multiple causes ranging from the poor condition of rolling stock and infrastructure to operations management challenges.

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6 SOFSE operates the Mitre, Roca, Sarmiento, San Martín, and Belgrano Sur lines. Metrovías S.A. operates the Urquiza line, and Ferrovías S.A. runs the Belgrano Norte line.

7 According to estimates of the Centro de Implementación de Políticas Públicas para la Equidad y el Crecimiento [Center for the Implementation of Public Equity and Growth Policies] (CIPPEC), between 2003 and 2010, US$50 million was invested annually in metropolitan railroads, but approximately US$450 million/year would be required to keep them in a good state of repair.

8 The Government of Argentina recently signed an agreement with the Japan International Cooperation Agency (JICA) to finance the purchase of automatic train stop (ATS) equipment to be installed throughout the metropolitan railroad system.

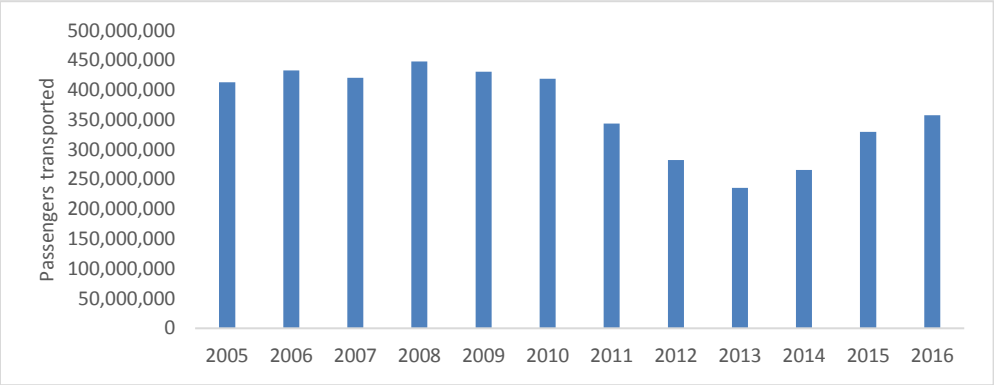
9 Most of these systems were installed between 1960 and 1985, and have a useful life of approximately 30 years.

10 Evolution of metropolitan railroad systems, financial and institutional considerations (OEL#3).

11 On 22 February 2012 a train on the Sarmiento line collided with the buffers at the Once Station. Fifty-one (51) people died and more than 700 were injured.

12 They arrive at the destination station more than four minutes past the scheduled time.

Graph 1. Passengers transported by the metropolitan rail system



Source: CNRT, 2016.

1.6 **Regulations and management.** The regulations that regulate railroad operations are decentralized, which impedes their enforcement and affects maintenance activities and operational safety. The National Railroad Act dates back to1891,[13] and the majority of technical standards for rolling stock, track and works, the operating regulations for AMBA passenger services,[14] and the regulation on level crossings[15] were approved between 1963 and 1980. Furthermore, the agencies involved in the sector lack modern rail planning and management tools. The current level of investment and complexity underscore the need to incorporate these tools to build the capacities of these agencies.

1.7 **The government's strategy.** Starting in 2012, the Argentine government launched an investment plan to modernize the rail passenger system in the AMBA. Between 2012 and 2016, approximately US$2.111 billion was invested in rail infrastructure and new rolling stock. In 2016, The Ministry of Transportation (MT) launched a Railroad Plan to ensure the continuity of investment efforts in the sector. This plan, which is already being implemented, includes an investment of US$14 billion between 2016 and 2023, and consists of two programs: (i) one for US$5.5 billion to purchase rolling stock and refurbish and modernize existing rail lines (installation of automatic train stops and modernization of signaling systems, renovation of tracks, repowering, new stations and repair shops); and (ii) another for US$8.5 billion which includes large flagship projects: the Regional Express System (RER),[16] the underground routing of the Sarmiento line, the construction of new viaducts and underpasses, and the electrification of diesel lines. The Bank has supported these investment efforts by approving the conditional credit line for investment projects (CCLIP) "Metropolitan Railroads Recovery Program" (AR-X1018) to modernize metropolitan railroads (see paragraph 1.17) and the execution of its first operation

13 National Railroads Act (Law No. 2873) passed on 18 November 1891.

14 General Regulations approved by Decree No. 90,325 of 12 September 1936.

15 Resolution of the Secretariat of Transportation and Public Works No. 7/81.

16 The Regional Express System is a public transportation system that will connect the main rail lines in the AMBA through 16 km of tunnels. The system includes the construction of a central station to be built below the Avenida 9 de Julio at the Obelisk, which will connect, in four levels, with the underground metro system, the minibus terminal, and the Metrobús and Ecobici [eco-bicycle] system.

"Comprehensive Improvement of the General Roca Railroad: Constitución-La Plata Branch Line" (FCGR) (2982/OC-AR; AR-L1158) (see paragraph 1.18).

1.8 **General San Martín Railroad (FCSM).** This railroad consists of a single 76.3 km-long line in the northwestern corridor of the AMBA, which connects the Retiro station in the CABA with the Cabred station in the Province of Buenos Aires.[17] This branch line operates with 21 diesel traction trains that offer 184 services on business days for the 55 km section[18] between Retiro and Pilar, transporting approximately 148,000 passengers per day. The section up to Cabred has limited services, primarily running during peak hours. Demand in 2016 was 51 million passengers, which is a unique case where a suburban rail line exceeds the historical peak demand recorded in 1999. The passenger load during peak hours in the busiest direction is approximately seven passengers per m^2 which exceeds the overcrowding standard of 4.2 passengers per m^2. According to CNRT data, in 2016, 57% of track was in fair condition, with 14% was in poor condition. Four percent (4%) of scheduled trains were cancelled, and the absolute regularity rate was 81%. The Retiro and José C. Paz sections have a mechanical signaling system that was installed around 1900, when the line was first constructed. The rest of the route has an automatic signaling system that was installed in 1965.

Map 1. FCSM Railroad Route

1.9 **Climate change.** Transport accounts for 13% of the greenhouse gases produced by Argentina. The country submitted its revised Nationally Determined Contribution

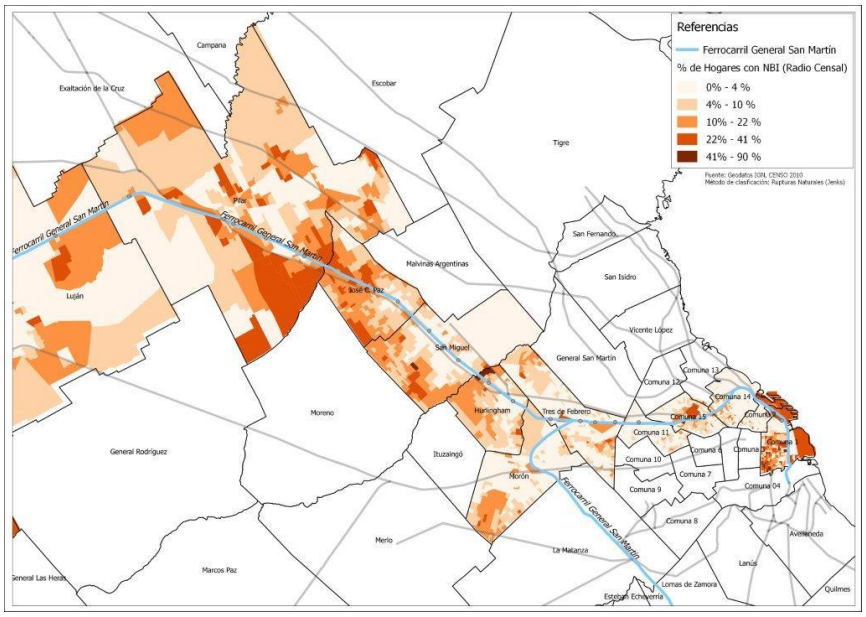
[17] The route crosses the CABA and the "partidos" (districts) of 3 de febrero, Morón, Hurlingham, San Miguel, Jose C. Paz, Pilar, and Luján. The rail service with the highest intensity of use is between the Retiro and Pilar stations, with more space in the Pilar-Cabred section.

[18] The San Martín line has a double track along most of its route, with quadruple-track in the Paternal-Sáenz Peña section, and triple track between Caseros and El Palomar.

(NDC)[19] at the twenty-second session of the Conference of the Parties (COP22) in 2016, when it took on more ambitious commitments to reduce emissions with respect to its commitments in 2015. The NDC proposes an unconditional emissions reduction target of 18% and a conditional target of 36%. Mitigation actions in the transportation sector are a key component for reaching the targets. The NDC stresses the impact that the modernization of metropolitan railroads would have, due to its benefits in terms of energy efficiency based on the electrification of services that currently use diesel traction, as well as the potential for driving change towards the use of mass means of transportation (REL#3).

1.10 **Poverty.** Seventeen percent (17%) of households along the FCSM route in the greater Buenos Aires metropolitan area have unmet basic needs[20] (UBN), nearly double the provincial average of 8%[21] and occuring primarily in the municipios of Hurlingham, Pilar, and José C. Paz. This latter municipio has the highest number of increases in the FCSM trip matrix. Furthermore, according to data from the ENMODO survey conducted by the Secretariat of Transportation in 2009,[22] 50% of FCSM users are in the two lowest-income quintiles.

Map 2. Percentage of households with UBNs along the FCSM route



19 Third National Communication of the Argentine Republic to the United Nations Framework Agreement on Climate Change. Consulted on 10 May at http://unfccc.int/resource/docs/natc/argnc3s.pdf.

20 Households with UBNs met at least one of the following conditions: (i) more than three people per habitable room; (ii) live in an inconvenient type of housing (rented room, substandard housing); (iii) households with no bathroom; (iv) households with a school-aged child (6 to 12 years) who does not attend school; and (v) households with four or more people per employed person, and whose head of household had a maximum of primary school education.

21 2010 Permanent Household Survey, INDEC.

22 A total of 70,300 people in the CABA and 27 “partidos” in the AMBA were surveyed.

1.11 **Problem to be addressed.** The fair condition of track infrastructure, old signaling systems, and low commercial speeds of diesel trains have led to a deterioration in the quality of passenger rail service, which is reflected by long travel times and low puntuality rates. The average commercial speed of the FCSM is 39 km/hour, which is below the 47 km/hour recorded in the electrified branch lines of the Roca line. This has negative impacts on all users of the FCSM in terms of access to services and markets, but is especially hard on low-income people who are unable to access other means of transportation. In addition, the age of the regulations on rail activity and the lack of modern management and planning tools limit the strengthening of public capacities needed to modernize and efficiently operate a complex railroad system such as the one operating in the AMBA.

1.12 **Proposed solution.** Under the project, the FCSM will be refurbished and electrified between the Retiro and Pilar stations. The program includes: the renovation of tracks and junctions between the Retiro-Palermo and Paternal-Pilar stations;[23] electrification through 25kV catenary lines and construction of a transformer substation and automatic transformer units; the installation of new signaling and communications systems; the procurement of machinery to install and maintain the catenary line; repurposing of the Alianza yard as a light repair and maintenance shop; and restructuring of the Pilar station.[24] By improving the condition of the track and facilitating the incorporation of electric trains[25] through electrification work, the project will result in higher speeds and shorter travel times. In addition, the new signaling and communications system will increase the efficiency of FCSM operation, improving the reliability of service and increasing the services offered. Reduced travel times, along with improved reliability of rail service will help enhance service quality. Replacement of the traction technology will help mitigate the effects of climate change, since the carbon emissions of the railroad services will be 20 and 35% less than emissions from diesel services, and 60% to 32% less than the emissions produced by private vehicles and buses, respectively.[26]

1.13 Because this is a comprehensive project that needs to be closely coordinated in the different stages and activities involved in the execution of the works, it will be carried out under a turnkey modality, with a single contractor in charge of engineering designs and construction. Through a separate procurement process, the Argentine government will purchase new rolling stock to be used in the line, which together with the investments included in the project will make it possible to achieve the expected outcomes. The project will also contribute to modernizing the regulatory framework for rail operations, by updating specific regulations with a focus on operational safety. Lastly, the project includes the procurement of rail planning

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[23] The renovation of track between the Palermo and Paternal stations will be done as part of the construction of the Palermo-Paternal viaduct (see paragraph 1.14).

[24] The current configuration of tracks and platforms will be modified so that the station can function as an electric rail service terminal and will allow transferring to the diesel service between Pilar and Cabred, given that this section is not included in the renovation and electrification project.

[25] The acceleration rate of electric equipment ranges from 0.5 to 1 meters/second^2, while the rate for diesel equipment is from 0.2 to 0.4 meters/second^2.

[26] In grams of CO^2 per passenger-kilometer. See Department for Transportation (UK). 2009. "*Britain's Transport Infrastructure Rail Electrification*" and Bertaud, A., B. Lefevre, and B. Yuen. 2011. "*GHG Emissions, Urban Mobility, and Morphology: A Hypothesis*." In Hoornweg, D., M. Freire, M. Lee, P. Bhada-Tata, and B. Yuen (editors), "*Cities and Climate Change*," p. 95. World Bank.

software and training for employees of the relevant agencies on the use of this software, for the purpose of building management capacities.

1.14 The government of the CABA has begun the construction of a 5 km-long viaduct between the Palermo and Paternal stations of the FCSM,[27] which will take 24 months to complete. This viaduct will eliminate the 11 level crossings between the two stations, thereby improving railroad safety, increasing overall connectivity, and decreasing environmental pollution. This viaduct is not financed by this operation, but is related to it.[28] From a socioenvironmental perspective, the viaduct has been addressed by the Bank in keeping with the risk evaulation guildelines established in the Environmental Safeguards and Compliance Policy (OP-703).[29] To give the CABA government sufficient time to complete the viaduct construction work, plans have been made to begin the electrification of FCSM from the Pilar station.

1.15 **Overpasses.** The FCSM route currently has 64 level crossings. Eleven of them will be eliminated once the Palermo-Paternal viaduct has been completed, and a new overpass is currently being constructed at the intersection with Nazca avenue in the CABA.[30] The Ministry of Transportation (MT) plans to continue the construction of overpasses along the rest of the FCSM route outside of this project, which will provide greater transportation safety and more frequent rail services.

1.16 **Institutional framework of the program.**[31] Under the existing legal framework, the MT and its Central Execution Unit (CEU) have the roles and responsibilities necessary to execute this operation. The MT has authority over the country's rail infrastructure and its services under national jurisdiction, which include planning and executing investments in this subsector. Other agencies associated with the execution of the project are the ADIFSE, the CNRT, and SOFSE, which all report to the MT. SOFSE currently operates, manages and maintains the branch for and on behalf of the State. The MT, through the CEU, will ensure the coordination of the activities performed by these agencies, through followup meetings held at all stages of the project, and in line with what was done during the execution of the project 2982/OC-AR.

1.17 **CCLIP.** Closing the investment gap for the rail system in the AMBA requires ongoing medium-term interventions in order to have a tangible impact on the population's quality of life. To this end, at the Argentine government's request, in December 2013 the Bank approved the CCLIP for the "Metropolitan Railroads Recovery Program" (AR-X1018). This program has a ten-year term for drawdown, and its total amount is US$1.5 billion, with US$1.2 billion financed by the Bank and US$300 million as the local counterpart. The present project is the second

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27 The viaduct project includes the raising of the Chacarita and Paternal stations, with are currently at street level (the Palermo station has already been raised).

28 According to paragraph 6.1 of OP-703, associated facilities are additional works and/or infrastructure, irrespective of the source of financing, essential for a Bank-financed project to function.

29 Specific actions have been taken during preparation of this operation to ensure compliance with good socioenvironmental management practices in the construction of associated infrastructure. They are described in the section on impacts, risks, and main mitigation measures of the project's ESMR (REL#3) and in paragraph 2.4.

30 This work is being done by Autopistas Urbanas de Buenos Aires, a CABA government entity, and is being financed by the IDB Group's Inter-American Investment Corporation (IIC).

31 Evolution of metropolitan railroad systems, financial and institutional considerations (OEL#3).

operation of that CCLIP, under which the first operation, (2982/OC-AR; AR-L1158) for a total amount of US$500 (US$300 million financed by the Bank and US$200 million as the local counterpart), is currently in execution.

1.18 **Progress in the execution of the first operation under the CCLIP.** The project to improve the General Roca Railroad, La Plata branch line, includes renovation and electrification works, and to date has demonstrated satisfactory progress. The installation of catenary lines is nearly complete, and electric train service is already operating between the Plaza Constitución and City Bell stations in the vicinity of La Plata. The work to raise station platforms and build a new repair shop in Tolosa is already in progress and the renovation of tracks and junctions and the modernization of signaling and communications systems will begin in the next few months. Given the nature of the work and because rail service is already in operation, the execution of the project must be coordinated between the CEU, the SOFSE, and ADIFSE, through periodic followup meetings.

1.19 The results of a survey[32] of users of the FCGR La Plata branch line revealed that 87% of them feel that travel is better than in 2015, prior to the operation of electric trains, compared to 64% for the control group of users of other selected branch lines. There is also evidence of a significant improvement in user satisfaction with respect to the speed, frequency, comfort, and punctuality of service. Users perceive a 20% reduction in average travel time, compared to practically no change reported by users of the control branch lines.

1.20 The current status of the FCGR project shows that progress has been made toward achieving the expected outcomes included in the design stage. The actual travel time between Plaza Constitución and Berazategui, the section with the heaviest passenger load, fell from 40 to 35 minutes[33] after the catenary installation work was completed and the electric rolling stock entered into operation. Between Plaza Constitución and City Bell in the vicinity of La Plata, this indicator dropped from 63 to 56 minutes. Travel times can be expected to further decline when the track and signaling renovation work is completed and operation of the new Quilmes electric substation begins.

1.21 **Lessons learned.** This project's design incorporates the lessons learned from the execution of the first operation under the CCLIP and other relevant projects currently being implemented with the Bank's support.[34] These lessons appear in the following table:

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[32] The survey is part of the project's impact evaluation and took place in December 2016. Interviews were conducted with users of the targeted branch line and others who use the three selected branch lines as the control group. The survey includes information from 2016 and has retrospective questions on perceptions about train travel prior to the intervention, in March-June 2015.

[33] Data provided by the SOFSE's Management Office. The travel time is an annual average for the years 2012 and 2017, and considers rail services running in both directions for the origin-destination pairs listed.

[34] Quito Metropolitan Urban Transport System (EC-L1111); Line 2 and 4, Lima Metro (PE-L1147); Lima Metro, Line 2 and Line 4 PPP (PE-L1160); and São Paulo Metro 5 (Purple Line) Extension Project (BR-L1227).

Table 1. Lessons learned in the first CCLIP program and other relevant Bank projects

Lesson Learned	Impact on the Program Design
The different works included in the renovation and electrification of a passenger railroad must be closely coordinated, from the design through the construction phases, in order minimize interferences and prevent delays early on.	Competitive bidding for the comprehensive FCSM electrification project will be under the turnkey modality, with a single contractor responsible for the design and construction of the entire project.
Proper supervision helps to identify challenges or technical inconsistencies between the different components of a railroad renovation project.	The project will have a single entity that will provide for comprehensive supervision for all works included in the project.
Satisfactory progress in the electrification of a railroad currently in operation requires coordination mechanisms that are conducive to a dialogue between the different actors involved.	The MT, through the CEU, will hold periodic coordination meetings with the ADIFSE, the SOFSE, the CNRT, the management of the San Martín line, and the contractor firm in order to monitor progress in the works.

1.22 **Strategic alignment.** The project is aligned with the Update to the Institutional Strategy (UIS) 2010-2020 (document AB-3008) and will contribute to the Corporate Results Framework (CRF) 2016-2019 (document GN-2727-6) through the indicator on rail kilometers renovated/improved. The project is strategically aligned with the productivity and innovation development challenge, by providing adequate, reliable, and affordable infrastructure and public services. The project is also strategically consistent with the challenge of reducing social exclusion and inequality, since according to official statistics (OEL#5) at least 40% of its beneficiaries are in the two lowest-income quintiles. Finally, there is strategic alignment with the crosscutting theme of climate change, since electrification will help reduce the CO_2 emissions produced by the FCSM by 23%. The project's additionality stems from the crosscutting theme of institutional capacity and rule of law under the institutional capacity criteria, given that it will help improve the quality of public administration as well as the quality of the infrastructure designed.

1.23 Based on the joint methodology used by Multilateral Development Banks for estimating climate financing, and according to the technical guidelines of the Bank's 2016-2019 Corporate Results Framework, 100% of this operation's financing is for climate change mitigation.

1.24 In addition, the project is aligned with the IDB Group's Country Strategy with Argentina 2016-2019 (document GN-2870-1) by contributing to its strategic objective of improving infrastructure for investment and inclusion. The project is consistent with the Sustainable Infrastructure Strategy for Competitiveness and Inclusive Growth (document GN-2710-7) by focusing on the construction and maintenance of socially and environmentally sustainable infrastructure. It is also consistent with the Transport Sector Framework (document GN-2740-7) in two dimensions: (i) capacity, quality, coverage, and connectivity of transportation systems; and (ii) accessible, sustainable, efficient, and safe urban transportation. The program is aligned with the strategic areas of urban transportation and large-scale projects due to the scope and magnitude of the investments to be made. It is also consistent with the strategic area of transportation safety, since the new signaling system to be installed on the line, the new viaduct, and the new level crossings will contribute to the operational safety of the FCSM and transportation in general in its area of influence. Finally, it is aligned

with the strategic area of intelligent transportation systems since the signaling and communications component incorporates technology that will result in service improvements.

1.25 **Gender additionality.** The agencies participating in this project are members of the "Transport Gender Lab" (RG-T2864; ATN/OC-15847-RG), a Regional Public Good (RPG) of the Bank, whose objective is to collect information and promote good practices for providing transportation services adapted to the mobility needs of women. The studies to be financed by the RPG are expected to produce relevant information, technical guides, and institutional proposals aimed at improving the quality of train transportion services by incorporating the gender perspective.

B. Objectives, components, and cost

1.26 The objective of the CCLIP is to support the Government of Argentina in the recovery of metropolitan railroads, contributing to the improvement of public passenger transportation services in the AMBA and the quality of life of the population.

1.27 The general objectives of the project are to: (i) help increase productivity through the provision of rail infrastructure, thereby improving the quality and capacity of the public transportation service in the northwestern corridor of the Buenos Aires Metropolitan Area (AMBA); (ii) help mitigate the effects of climate change; and (iii) help reduce social inequality by providing quality transportation services to vulnerable groups.

1.28 The project's specific objective is to improve the quality of public transportation through the renovation and electrification of the passenger rail service of the General San Martín Railroad (FCSM) in the section between the Retiro and Pilar stations, which will reduce travel times, improve the reliability of service, and decrease greenhouse gas emissions.

1.29 To this end, the program is structured as follows:

1.30 **Component 1. Electromechanical and civil works and equipment (US$515,600,000).** This component will include the following works: (i) comprehensive renovation and improvement of tracks and junctions between the Pilar-Paternal and Retiro-Palermo stations, in a 55 km-long section.[35] The project calls for 54E1 R260 rails to be used for straight track and R350 HT for curves (UNE-EN standard 13674) subjected to prestressed concrete railroad ties with double elastic fasteners. The axle load will be 22 tons, and the maximum speed on straight track will be 120km/hour; (ii) catenary installation and electrical power supply: electrification of the line through a 25kV catenary system and construction of a transformer substation with an installed power for two traction transformers of 60 MV. The system was designed for a three-minute interval under normal operating conditions, with eight-car formations. The installation of catenary lines in this first stage will power the currently operational tracks, with electrification of the entire length of the route scheduled in the second stage of the project; (iii) new signaling, control, and communications system: includes the installation of an operations control center in the Caseros station. The new signaling system has electromechanical or electrohydraulic switch actuators, train detection through track circuits and electronic interlocking systems programmed with 2x3 microprocessors as a minimum. Trains

[35] 55 km of double track will be renovated, for a total of 110 kilometers to be targeted by the project.

will be automatically protected through the use of Japanese-made Automatic Train Stop (ATS) equipment, the procurement of which is not included in this operation; (iv) procurement of catenary installation and maintenance equipment; (v) repurposing of the Pilar station as an electric rail service terminal: this involves the construction of two new platforms, the extension and widening of the existing ascending platform, which will enable transfers to the diesel service up to the Cabred station; and (vi) restructuring of the Alianza yard-light workshop: a new shop for the maintenance of electric multiple unit trains (EMUs) will be constructed. The component will also finance the comprehensive supervision of the works.

1.31 **Component 2. Institutional strengthening (US$1,400,000).** This component will include: (i) studies and preinvestment of new railroad projects in the AMBA; (ii) the procurement of OpenTrack and OpenPowerNet railroad planning software and training on the use of this software for employees of the relevant agencies; and (iii) a study that will evaluate the regulatory framework for railroad operations and the updating of two specific regulations that will be prioritized depending on their impact on operational safety.

1.32 In addition to the two components described above, expenses related to the management, monitoring, and evaluation of the program will be financed, as well as auditing costs.

Table 3. Costs and Components (in US$ millions)

	IDB	Local Source	Total Amount	% IDB	% Local
Component 1. Electromechanical and civil works, equipment, and technical supervision	**394,500,000**	**121,100,000**	**515,600,000**	**77**	**23**
Electromechanical and civil works, equipment	383,000,000	117,600,000	500,600,000	77	23
Comprehensive technical supervision	11,500,000	3,500,000	15,000,000	77	23
Component 2. Institutional strengthening	**1,000,000**	**400,000**	**1,400,000**	**71**	**29**
Studies and preinvestment	115,000	35,000	150,000	77	23
Procurement of OpenTrack and OpenPowerNet software and training for employees of the relevant agencies	185,000	65,000	250,000	74	26
Study on the updating of regulations on rail operations	700,000	300,000	1,000,000	70	30
Administration, management, and audit	**4,500,000**	**500,000**	**5,000,000**	**90**	**10**
Total program cost	**400,000,000**	**122,000,000**	**522,000,000**	**77**	**23**

C. Key results indicators

1.33 **Program impact and results.** The program's key results indicators are: (i) reduce travel times for FCSM users on the section between Retiro and Pilar; (ii) increase the reliability of rail service, measured by: the increase in the degree of compliance with the train schedule and reduction in delays; (iii) provide quality transportation to

low-income users of the FCSM; and (iv) reduce CO_2 emissions in the northwestern corridor of the AMBA.

1.34 **Technical and economic viability.** In terms of engineering, an analysis of design alternatives was conducted with respect to the type of signaling system and power supply. The "with project" alternative that was selected consists of the renovation of all track infrastructure and the electrification of the line, which will increase the capacity and speed of the service. In addition, an economic evaluation of the project was prepared, which considers the "with" as well as the "without" project, with a time horizon of 35 years. Under this evaluation, the project beneficiaries are the current users of the FCSM, who, according to CNRT data, totaled 53,693,224 in 2015, a figure that will increase to 74,763,800 in 2025 at the end of the evaluation period.[36] The analysis calculates the benefits derived from reducing the railroad's operating and maintenance costs, the time saved by users, and an increase in demand. The increase in demand considers the time saved and lower private transportation costs for users of rail service. The estimated economic internal rate of return (EIRR) for the project was 16.4%, with a net present value (NPV) of US$174 million (discounted at 12%). The sensitivity analysis shows that the project is robust against more unfavorable scenarios: a 35% increase in investment costs would yield an EIRR of 12.1%, whereas scenarios with decreased benefits from reducing travel times by up to 50% would maintain an EIRR of 12.6%. Furthermore, if the benefits gained from passengers switching from other means of transportation are not taken into account, the project's EIRR would increase to 13.3%.

II. Financing Structure and Main Risks

A. Financing instruments

2.1 The Bank's financing will be provided through an investment loan for specific projects under the CCLIP modality (see paragraph 1.17), with a five-year disbursement period. The total cost of the project is US$522 million, of which US$400 million (77%) will be financed by the Bank from Ordinary Capital (OC), with the remaining US$122 million (23%) financed by the local counterpart.

2.2 **CCLIP eligibility.** Under the provisions of the Proposed Modifications to the Conditional Credit Line for Investment Projects (CCLIP): Strengthening of the Multisectoral Modality (document GN-2246-9), this operation fulfills the CCLIP eligibility requirements, since: (i) the project's components and sectors are included in the CCLIP framework; (ii) it is included in the 2017 Country Program Document (CPD) and in the 2017 Operations Program Report (OPR); (iii) the CEU is an integral part of the Ministry of Transportation, and its performance as the executing agency for the first operation has been satisfactory. Moreover, the first operation: (iv) demonstrates satisfactory progress; (v) has disbursed 60% of its total amount; (vi) the borrower and the executing agency have met the terms and conditions of the loan contract and the Bank's disbursement and procurement policies; and (vii) the

[36] The evaluation assumes that the number of annual passengers remains constant based on official 2015 data, whereas incremental demand is based on the number of passengers who switch from other means of transportation (buses and private automobiles).

quality of the financial and operations reports is acceptable in terms of the financial administration and operational control of the project.

Table 4. Projected Disbursement Schedule (US$ millions)

Source	2018	2019	2020	2021	2022	Total
IDB	80.0	100.0	100.0	80.0	40.0	400.0
Local contribution	24.4	30.5	30.5	24.4	12.2	122.0
Total	104.4	130.5	130.5	104.4	52.2	522.0

B. Environmental and social risks

2.3 The project has been classified as a Category “B” operation due to the fact that it will have primarily localized and short-term negative environmental impacts, including social impacts. Effective measures have been established to mitigate these risks, including those implemented during the first operation under the CCLIP (2982/OC-AR; AR-L1158). As part of the second operation’s preparation, an environmental and social management assessment of the first operation was performed, which included an environmental and social management framework (ESMF), from which various lessons learned were extracted (primarily related to the usefulness of implementing actions for training and close supervision of the works), which were incorporated into the design of this operation.

2.4 **Socioenvironmental risks.** During the construction phase, the most relevant risks and impacts are associated with the fact that project will be executed in an urban setting, and include the following: (i) the execution of works and the presence of contractors in vulnerable environments, which will be mitigated through the implementation of a work site management plan and codes of conduct for the contractor’s employees; (ii) traffic interruptions and the risk of accidents due to the materials and equipment being transported in the area, which will be mitigated through a materials and equipment transport plan; (iii) increased noise, dust, and vibrations, which will be mitigated by the measures included in the environmental and social management plan (ESMP), for example, the use of movable noise barriers wherever warranted; (iv) potential omissions in compliance with the project’s good socioenvironmental management practices or associated infrastructure, to be mitigated by establishing a dialogue between the Ministry of Transportation and the CABA to monitor the evolution of these activities; and (v) risks associated with the refurbishment of the Pilar station, which are typical in these types of works, to be mitigated by the measures included in the environmental management plan for such works.

2.5 As part of the project’s preparation process, an Environmental and Social assessment (ESA) that includes an ESMP with the mitigation measures to be implemented during the construction and operation of the works was prepared and published. In addition, a public consultation process was conducted in the city of San Miguel, located approximately at the center of the project area. During this consultation, the executing agency provided information about the project and addressed participants’ questions, suggestions, and comments. The project’s relationship to current urban mobility plans as well as the environmental and social impacts and mitigations measures were stressed. The consultation process conducted complied with the requirements of OP-703 and was duly documented.

The minutes of this process were included as an annex to the ESA, and were published on the Bank's and executing agency's websites in accordance with OP-102 requirements.

C. Fiduciary risks

2.6 The CEU, which was responsible for the execution of the first operation under the CCLIP, has the internal capacity to manage resources and sufficient experience to conduct procurement, disbursement, and the respective supporting documentation processes. The following medium risks were identified: (i) the funds allocated to the project may not be sufficient to finance all of the anticipated works. To mitigate this risk in this stage of the project, recent budgets for works of a similar nature were reviewed; and (ii) there may be delays in the main procurement processes. To mitigate this risk, the project provides for working closely with the MT's procurement teams and CEU in order to formulate an appropriate timeline for the competitive bidding process and monitor the activities in the project's Multiyear Execution Plan and Annual Work Plan agreed upon with the authorities.

D. Other project risks

2.7 A medium risk that was identified is the risk of the electrification project being contracted under the design and build modality, based on preliminary engineering designs with a general scope. To mitigate this risk, technical meetings will be held with the teams of the relevant agencies to review the detailed designs. Detailed steps for the approval of engineering designs by the owner of the works will be spelled out in the bidding documentation and will be incorporated into the technical specifications for each work, along with the lessons learned from the execution of the project 2982/OC-AR; AR-L1158.

2.8 **Sustainability of investments.** After the last disbursement, the executing agency will submit an annual maintenance plan to the Bank for the investments financed by the program, covering a five-year period beginning the year after the works are completed, as well as the subsequent respective maintenance reports.

III. Implementation and Management Plan

A. Summary of implementation arrangements

3.1 **Borrower and executing agency.** The borrower will be the Argentine Republic. The executing agency will be the Ministry of Transportation through its Central Execution Unit (CEU).

3.2 The following special contractual execution conditions have been defined: prior to awarding the works contract, the borrower will submit evidence of the following, to the Bank's satisfaction: (i) beginning of the procedure for contracting comprehensive supervision of the works, in keeping with the Terms of Reference approved by the Bank. However, until that contracting is completed, a team of professionals from the Ministry of Transportation will conduct provisional supervision using the management mechanisms and with the professional credentials agreed upon beforehand with the Bank. Contracting of comprehensive supervision for the works must be completed within six months of the signing of the works contract. This is because supervision is key for ensuring the quality of the work, given the magnitude and complexity of the project; (ii) signing of a cooperation agreement for project

execution with the entity responsible for the operation and maintenance of the targeted branch line since the operator is the party with the detailed information on the infrastructure subject to the intervention and will schedule the work with the contractor responsible for the works; (iii) launch of procedures for adding the electric rolling stock required to service the branch line since equipment delivery will be the responsibility of the Argentine government outside the scope of this operation; and (iv) signing of an agreement with the concessionaire supplying electric power in the area where the new electric substation will be constructed under the project, since there must be a connection to the high voltage network in order for the substation to be operational.

3.3 **Execution mechanism.** The executing agency will delegate project execution and management duties to the CEU, which was created by Decree 202/1991 and whose structure was updated through Decree 547/2016. Since it was created, the CEU has been executing projects financed by the IDB and the World Bank.[37] Its specific responsibilities will include the following: (i) prepare the multiyear execution project (MEP) and corresponding annual work plans (AWPs) (REL#1); (ii) prepare and update the procurement plan (REL#4); (iii) prepare and review the bidding documents for the procurement of consulting services, goods, and works, in accordance with the Bank's procurement policies; (iv) conduct technical, administrative, and financial monitoring of contracts for consulting services, goods, and works; (v) prepare the projects technical files; (vi) keep accounting and financial records on the sources and uses of program resources, pursuant to the loan contract, and submit supporting documentation for expenditures; (vii) prepare financial statements and disbursement requests; (viii) monitor and evaluate program execution; and (ix) monitor output and outcome indicators.

3.4 To properly execute the components of the project, the CEU will coordinate activities with the three main actors, although others may become involved for specific aspects of the project. First, it will sign a cooperation agreement with the SOFSE (see paragraph 3.2), under the terms of which SOFSE will provide any technical and operational assistance required for the execution of the works. This coordination involves submitting written requests for information and the relevant permits needed to perform the work and approval of engineering designs for the components falling within its sphere of competence. In addition, the CEU will ask the Secretariat of Transport Planning and the ADIF to comment on and approve the designs and progress reports as applicable based on their respective spheres of competence.

3.5 **Procurement.** Project procurement processes will be conducted in accordance with the "Policies for the procurement of works and goods financed by the IDB" (document GN-2349-9) and the "Policies for the selection and contracting of consultants financed by the IDB" (document GN-2350-9), both of March 2011. All procurements will be included in the procurement plan approved by the Bank through the Procurement Plan Execution System and the methods and ranges specified therein, as described in the Fiduciary Agreements and Requirements. The project calls for the direct procurement of two railroad planning software packages: OpenTrack and Open PowerNet as well as training on their use, in accordance with the provisions of subparagraph (c) of paragraph 3.6 of document GN-2349-9. The aforementioned software packages are recognized railroad operations simulation

[37] The CEU has been executing the project Urban Transport in Metropolitan Areas (P095485) since 2010.

tools that will be essential for monitoring the projects to be carried out and for prioritizing new investments.

3.6 **Disbursements.** The program will disburse the loan proceeds under the advance of funds modality, based on the actual liquidity needs of the project. The frequency of such advances will be determined based on the project's financial programming. The CEU will periodically update its financial plan, in accordance with its budget, work plan, and commitments. The Bank may disburse a new advance of funds when supporting documentation has been provided for at least 80% of the total accumulated funds to be substantiated. Disbursement requests will be subject to ex post financial review.

3.7 **Audited financial reports.** For purposes of ensuring flexibility in the process of contracting the auditing firm for the project, the option of using different institutions eligible to audit IDB-financed operations will be kept open. When the time comes to begin the contracting process, the executing agency will ask the Bank to provide the short list of institutions that may be invited to participate.

B. Summary of arrangements for monitoring results

3.8 The purpose of the monitoring and evaluation plan (REL#2) is to track the execution of the program and the proposed activities, as well as the physical and financial execution of the outputs. The plan monitors activities in three main areas: (i) program management and control; (ii) activities and outputs; and (iii) outcomes (REL#1). The Bank will monitor the program through inspection visits and management missions. The monitoring and evaluation plan will be coordinated by the CEU, which will maintain effective systems for compiling periodic information on physical and financial progress, and keep up-to-date, relevant information available for project execution.

3.9 To monitor and evaluate the program's expected outcomes, before and after methodologies will be used, along with an ex post cost-benefit analysis. The before and after analysis will focus on monitoring the effective fulfillment of travel time and punctuality indicators. With respect to travel time, the average time of an actual trip in trains running in both directions will be monitored, based on data to be provided by the SOFSE's Operations Management Office. For punctuality indicators, secondary information compiled annually by the CNRT will be used. The ex post cost-benefit analysis of the intervention financed by the program will be a replica of what was used ex ante as part of the intervention's eligibility and feasibility studies. This analysis will be conducted in two scenarios: (1) the expected benefits of the program will be updated, keeping costs constant, which will make it possible to assess whether the planned costs and benefits obtained are sufficient to recover the investment; and (2) benefits as well as costs will be updated to see if the project turned out to be a profitable investment given the costs and benefits that actually occurred. This staged analysis will make it possible to isolate the effect of a potential exogenous increase in costs from the effect of changes in the benefits obtained.

Development Effectiveness Matrix		
Summary		
I. Corporate and Country Priorities		
1. IDB Development Objectives	**Yes**	
Development Challenges & Cross-cutting Themes	**-Social Inclusion and Equality -Productivity and Innovation -Climate Change and Environmental Sustainability**	
Country Development Results Indicators	**-Reduction of emissions with support of IDBG financing (annual million tons CO2 e)* -Urban rail and bus mass transit systems built or upgraded (km)***	
2. Country Development Objectives	**Yes**	
Country Strategy Results Matrix	**GN-2870-1**	**Improving infrastructure for investment and inclusion.**
Country Program Results Matrix	**GN-2884**	**The intervention is included in the 2017 Operational Program.**
Relevance of this project to country development challenges (If not aligned to country strategy or country program)		
II. Development Outcomes - Evaluability	**Evaluable**	
3. Evidence-based Assessment & Solution	**8.2**	
3.1 Program Diagnosis	**3.0**	
3.2 Proposed Interventions or Solutions	**2.4**	
3.3 Results Matrix Quality	**2.8**	
4. Ex ante Economic Analysis	**8.5**	
4.1 The program has an ERR/NPV, a Cost-Effectiveness Analysis or a General Economic Analysis	**4.0**	
4.2 Identified and Quantified Benefits	**1.5**	
4.3 Identified and Quantified Costs	**1.5**	
4.4 Reasonable Assumptions	**0.0**	
4.5 Sensitivity Analysis	**1.5**	
5. Monitoring and Evaluation	**6.1**	
5.1 Monitoring Mechanisms	**2.0**	
5.2 Evaluation Plan	**4.1**	
III. Risks & Mitigation Monitoring Matrix		
Overall risks rate = magnitude of risks*likelihood	**Medium**	
Identified risks have been rated for magnitude and likelihood	**Yes**	
Mitigation measures have been identified for major risks	**Yes**	
Mitigation measures have indicators for tracking their implementation	**Yes**	
Environmental & social risk classification	**B**	
IV. IDB´s Role - Additionality		
The project relies on the use of country systems		
Fiduciary (VPC/FMP Criteria)		
Non-Fiduciary		
The IDB's involvement promotes additional improvements of the intended beneficiaries and/or public sector entity in the following dimensions:		
Gender Equality	**Yes**	**The participating agencies of the present project are members of the Bank's "RG-T2864", a regional public good (BPR), whose objective is to collect information and promote good practices for the provision of transport services that are adapted to the Women's mobility needs. Through the studies that will be financed by the BPR, it is expected to obtain relevant information to design actions to respond to the needs of railway users.**
Labor		
Environment		
Additional (to project preparation) technical assistance was provided to the public sector entity prior to approval to increase the likelihood of success of the project		
The ex-post impact evaluation of the project will produce evidence to close knowledge gaps in the sector that were identified in the project document and/or in the evaluation plan		

Note: (*) Indicates contribution to the corresponding CRF's Country Development Results Indicator.

The general objectives of the project are to contribute to: (i) the increase in productivity through the provision of railway infrastructure, improving the quality and capacity of the public transport service in the northwest corridor of the Metropolitan Area of Buenos Aires (AMBA); (ii) the mitigation of the effects of climate change; and (iii) the reduction of social inequality by providing quality transportation services to vulnerable groups. The specific objective of the project is to improve the quality of public transport through the readjustment and electrification of the railway service of the General San Martín Railway (FCSM) in the section between the Retiro and Pilar stations, which will result in a reduction of the travel times, improving service reliability and reducing greenhouse gas emissions.

The project presents a complete diagnosis of the problems and their determinants. While there are no impact evaluations for this type of interventions (electrification of an existing operating train), the team presents empirical data from a similar project in the Province of Buenos Aires. The proposed interventions are linked to the problems identified, and the potential beneficiaries of the interventions are adequately identified (train users between Retiro and Pilar).

The diagnosis is consistent with the results matrix, which has a clear vertical logic. The outcome and output indicators presented are SMART and have a specific means of verification. The program does not include impact indicators.

The economic analysis is complete and the results suggest that the project is economically viable in several sensitivity scenarios (with an estimated IRR of 16.4%). The main economic benefits quantified are savings in travel times, savings in vehicle operating costs and reduction of maintenance costs.

The monitoring and evaluation plan is complies with DEM guidelines and will use a before and after methodologies, as well as an ex post cost-benefit analysis.

The risks identified are reasonable and include mitigation measures and metrics for monitoring.

RESULTS MATRIX

Project Objective	The general objectives of the project are to: (i) help increase productivity through the provision of rail infrastructure, thereby improving the quality and capacity of the public transportation service in the northwestern corridor of the Buenos Aires Metropolitan Area (AMBA); (ii) help mitigate the effects of climate change; and (iii) help reduce social inequality by providing quality transportation services to vulnerable groups. The project's specific objective is to improve the quality of public transportation through the renovation and electrification of the passenger rail service of the General San Martín Railroad (FCSM) in the section between the Retiro and Pilar stations, which will reduce travel times, improve the reliability of service, and decrease greenhouse gas emissions.

EXPECTED OUTCOMES

Outcome	Indicator	Baseline	Target	Means of Verification/Comments
Reduced travel time on the Retiro-Pilar section	Actual travel time on the Retiro-Pilar branch line.	88 minutes	68 minutes	Reports of the Operations Management Office of the Sociedad Operadora Ferroviaria, Sociedad del Estado (SOFSE) and the Central Execution Unit (CEU) of the Ministry of Transportation. Average actual annual travel time of trains running in both directions.
Improved reliability of service	Compliance with train schedule / scheduled trains.	95.7%	98%	Reports of SOFSE's Operations Management Office, CNRT, and the Ministry of Transportation's CEU.
	Delays – on-time trains/trains running.	85.3%	95%	Reports of SOFSE's Operations Management Office, CNRT, and the Ministry of Transportation's CEU.
Quality transportation services provided to low-income users	Reduction in annual travel time accumulated by low-income users of the FCSM.	11,149 hours/year	8,032 hours/year	Reports of the SOFSE and the Ministry of Transportation's CEU.
Reduced CO_2 emissions along the northwestern corridor of the AMBA	Tons of CO_2 produced by the FCSM/year.	33,332 T CO_2/year	25,737 T CO_2/year	Estimate calculated by the Bank's transportation and climate change divisions, considering the reduced emissions from replacing the traction system in the rail service. Based on trains-km in situations with and without the project described in the economic evaluation.

OUTPUTS

Output Indicators									
Output	**Unit**	**Base-line**	**2018**	**2019**	**2020**	**2021**	**2022**	**Target**	**Observations/ Means of Verification**
Component 1. Electromechanical and civil works and equipment									
1. Tracks and junctions									Execution will be verified through progress reports prepared by the supervision team and approved by the executing agency. The targets will be verified in the final works acceptance report. These figures will be fine-tuned and adjusted based on the detailed engineering designs.
Track renovation	km	0	25	35	35	15	0	110	
Junction renovation	unit	0	0	45	85	74	0	204	
2. Electrification									
Installation of the substation and switching stations	Global (gl)	0	0	1	0	0	0	1	Execution will be verified through progress reports prepared by the supervision team and approved by the executing agency. The targets will be verified in the final works acceptance report. These figures will be fine-tuned and adjusted based on the detailed engineering designs.
Installation of 25kV catenary lines 13.2 kV power lines	km	0	0	8	20	20	6	54	
3. Signaling									
Signaling – Retiro station	gl	0	0	1	0	0	0	1	Execution will be verified through progress reports prepared by the supervision team and approved by the executing agency. The targets will be verified in the final works acceptance report. These figures will be fine-tuned and adjusted based on the detailed engineering designs.
Signaling – Pilar station	gl	0	0	1	0	0	0	1	
Installation of new signaling system - Retiro - Pilar	Km	0	0	15	25	18	0	58	
Installation of new communications system	gl	0	0	0	1	0	0	1	
4. Procurement of catenary installation and maintenance equipment									
Catenary installation and maintenance equipment	gl	0	0	1	1	0	0	2	Execution will be verified through progress reports prepared by the supervision team and approved by the executing agency. The targets will be verified in the final works acceptance report. These figures will be fine-tuned and adjusted based on the detailed engineering designs.

Output	Unit	Base-line	2018	2019	2020	2021	2022	Target	Observations/ Means of Verification
5. Pilar station									
Restructuring of the Pilar station for electric trains	gl	0	0	1	0	0	0	1	Execution will be verified through progress reports prepared by the supervision team and approved by the executing agency. The targets will be verified in the final works acceptance report. These figures will be fine-tuned and adjusted based on the detailed engineering designs.
6. Repurposing of the Alianza Yard – Light Workshop									
Maintenance and light workshop for electric cars	m^2	0	0	6,000	10,000	4,000	0	20,000	Execution will be verified through progress reports prepared by the supervision team and approved by the executing agency. The targets will be verified in the final works acceptance report. These figures will be fine-tuned and adjusted based on the detailed engineering designs.
7. Comprehensive supervision of the works									
Comprehensive supervision contract	Years of current contract	0	1	1	1	1	1	5	Will be verified through the semiannual reports prepared by the CEU.
Component 2. Institutional strengthening									
Studies and preinvestment	No. of reports	0			1	1	1	3	Will be verified through the semiannual reports prepared by the CEU.
Railroad planning software (*Open Track* and *Open Power Net*) and training	Software packages purchased	2		1	1			2	Will be verified through the semiannual reports prepared by the CEU.
	Staff trained in the use of the software	0				10		10	Will be verified through the semiannual reports prepared by the CEU.
Study on updating of regulatory framework for rail operations	No. of reports	0				1	2	3	Will be verified through the semiannual reports prepared by the CEU.

FIDUCIARY AGREEMENTS AND REQUIREMENT

Country:	Argentina
Project number:	AR-L1267
Name:	General San Martín Railroad Improvement Project: Retiro-Pilar Branch Line
Executing agency:	Ministry of Transportation (MT)
Prepared by:	Brenda Álvarez and Juan Carlos Lazo (FMP/CAR)

I. EXECUTIVE SUMMARY

1.1 The General San Martín Railroad Improvement Project: Retiro-Pilar Branch Line will be executed by the Ministry of Transportation (MT) through the Secretariat of Transportation Works, Central Execution Unit (CEU).

1.2 This is the second operation of the Conditional Credit Line for Investment Projects (CCLIP) AR-X1018, under which the program "Comprehensive Improvement of the General Roca Railroad: Constitución-La Plata Branch Line" (2982/OC-AR; AR-L1158) is currently being executed in a satisfactory manner.

1.3 The program does not include financing from other multilateral agencies.

II. FIDUCIARY CONTEXT OF THE EXECUTING AGENCY

2.1 The fiduciary systems of the executing agency are considered satisfactory, since in practice it has the internal capacity to manage resources and sufficient experience to conduct procurement, disbursement, and the respective supporting documentation processes.

2.2 The borrower, through the executing agency, will be responsible for ensuring that the executing agency's CEU retains the specialized personnel previously agreed upon with the Bank.

III. FIDUCIARY RISK EVALUATION AND MITIGATION MEASURES

3.1 The risk assessment was conducted taking into consideration the capacity of the CEU, which has been executing projects financed by the Inter-American Development Bank and the World Bank since it was created by means of Decree 202/1991. The CEU will be responsible for coordinating the project's activities, taking all actions required for due execution of the project components, the required procurement processes, financial management, monitoring of progress, and the evaluation of project outcomes.

3.2 The risk assessment (including fiduciary risks) was conducted taking into account Project Risk Management (PRM). Based on this assessment, a medium level of risk was identified in the financial fiduciary and procurement areas, as shown in the following table:

Table 1. Institutional Capacity and Fiduciary Risk

Institutional Capacity:		Satisfactory	**Tool:**	PRM
Fiduciary Risk:		Medium	**Tool:**	PRM
Risk Type	**Risk**	**Rating**	**Mitigation Measures**	
FM	The estimated budget for the project is not sufficient to finance all of the anticipated works.	Medium	Prepare the budget based on recent competitive bidding processes for works of a similar nature.	
P	Delays in the project's main procurement processes.	Medium	Formulate a timeline for contracting the works with the participation of the procurement teams of the Bank, the CEU, and the MT.	

Financial Management (FM); Procurement (P).

IV. Considerations for the Special Conditions of the Contract

A. Conditions precedent to the first disbursement

4.1 There are no fiduciary conditions precedent to the first disbursement.

B. Disbursement management

4.2 The advance of funds modality will be used based on the financial plan covering a maximum of 180 days. In order to receive a new advance of funds, supporting documentation must be provided to the Bank for at least 80% of the balance of the most recent advance and the remaining balance of any previous advances received.

4.3 The exchange rate to be used for reporting purposes will be the rate stipulated in Article 4.10(b) (i) of the Loan Contract. To determine the equivalency of expenses incurred in local currency chargeable to the local contribution or the reimbursement of expenses chargeable to the loan, the agreed exchange rate will be the rate in effect on the first business day of the month of payment. Given the limitations of the UEPEX system [External Loan Execution Units], the exchange rate applied for conversion of disbursements into local currency will be used for expenditures made with IDB funds and with local counterpart funds ("pesificación").

C. Financial supervision

4.4 For purposes of ensuring flexibility in the process of contracting the auditing firm for the project, the option of using different institutions eligible to audit IDB-financed operations will be kept open. When the time comes to begin the contracting process, the executing agency will ask the Bank to provide the short list of institutions that may be invited to participate.

V. AGREEMENTS AND REQUIREMENTS FOR PROCUREMENT EXECUTION

5.1 The Fiduciary Agreements and Requirements for procurement process establish the provisions applicable to the execution of all procurement processes included in the project.

5.2 Procurement execution:

5.3 Procurement processes will be conducted in accordance with the "Policies for the procurement of works and goods financed by the IDB" (document GN-2349-9) and the "Policies for the selection and contracting of consultants financed by the IDB" (document GN-2350-9), both of March 2011.

5.4 Of the country subsystems approved by the Bank, the information system will be used.

a. **Procurement of works, goods, and nonconsulting services:** Contracts for works, goods, and nonconsulting services under the project that are subject to international competitive bidding (ICB) will be executed using the standard bidding documents (SBDs) issued by the Bank. Those subject to national competitive bidding (NCB) will be executed using country bidding documents agreed upon with the Bank. The project sector specialist will be responsible for reviewing the technical specifications of procurements during the preparation of selection processes. The procurement plan submitted by the executing agency identified the need to directly purchase the OpenTrack and OpenPowerNet software, in accordance with the provisions of paragraph 3.6(c) of document GN-2349-9.

b. **Selection and contracting of consultants:** Consulting services contracts arising from the project will be executed using the standard request for proposals (SRPs) issued by or agreed upon with the Bank. The project sector specialist will be responsible for reviewing the terms of reference for the contracting of consulting services.

c. **Selection of individual consultants:** Individual consultants will be selected based on their qualifications for performing the work, comparing the qualifications of at least three candidates in accordance with the terms of document GN-2350-9, Section V, paragraphs 5.1 to 5.4. The service contracts of consultants that will be part of the Execution Unit will be renewed if they receive at least a satisfactory rating in their performance review by the project's general coordinator. The executing agency will submit to the Bank the list of consultants who have been providing services and will continue to perform the activities in this project, for which the single-source selection method may be used in accordance with the provisions of Section V, paragraph 5.4(a) of the aforementioned policies. The project sector specialist will be responsible for reviewing the terms of reference for the contracting of consulting services.

d. **Recurring expenses:** Recurring expenses or operating and maintenance costs required during the program will be: office lease, car lease for supervision activities, utilities and communication expenses, translations, bank charges, office supplies, photocopies, postage, and minor expenses required for the CEU to function, which will be financed by the program, for an amount up to US$4,500,000 using the IDB contribution, and up to US$500,000 using the

local contribution, and will be paid following the executing agency's administrative procedures. Recurring expenses also include the costs of the consultants contracted to assist the executing agency for the duration of this operation. However, they do not include the wages of civil servants.

Table 1. Thresholds for International Competitive Bidding and International Short List (US$ thousands)

Works			Goods			Consulting services	
International competitive bidding	National competitive bidding	Shopping	International competitive bidding	National competitive bidding	Shopping	International publicity	Short list 100% national
≥25,000,000	< 25,000,000 ≥350,000	< 350,000	≥ 1,500,000	< 1,500,000 ≥100,000	< 100,000	>200,000	≤1,000,000

A. Main procurement items

Activity	Type of bidding	Estimated date	Estimated amount (US$)
Works			
Refurbishing and electrification of the FCSM, Retiro-Pilar section	ICB	2017	500,600,000
Goods			
Procurement of OpenTrack and OpenPowerNet software and training for relevant agency staff	DC	2017	500,000
Consulting services			
Comprehensive supervision of the works	QCBS	2017	15,000,000
Study: Updating of regulations on rail operations	QCBS	2017	1,000,000
Administration and management	QCBS	2017	1,500,000

B. Procurement supervision

5.5 The ex ante supervision method will be used for procurement processes, with the exception of shopping and individual consultants, which will be conducted ex post. Ex post reviews will be performed every 12 months. Ex post review reports will include at least one physical inspection visit, selected from the procurement processes subject to ex post review. At least 10% of the reviewed contracts will be physically inspected during the program.

Table 2. Ex post review thresholds[1] (US$)

Works	Goods	Consulting services	Individual consultants
< 5,000,000	< 500,000	< 500,000	<50,000

[1] The thresholds established for ex post review are applied on the basis of the executing agency's fiduciary execution capacity and may be modified by the Bank to the extent this capacity changes.

C. Special provisions

5.6 **Measures to reduce the likelihood of corruption.** Compliance with documents GN-2349-9 and GN-2350-9 with respect to prohibited practices (multilateral agency lists of ineligible firms and individuals).

D. Records and files

5.7 Procurement documentation will be kept in the offices of the CEU as the entity responsible for the project's procurement processes. In the case of ex post reviews, records and files will be kept properly organized, categorized and updated with all documentation generated by the procurement processes.

VI. FINANCIAL MANAGEMENT

6.1 The Financial Management Policy for IDB-financed Projects (OP-273-6) and the Financial Management Guidelines for IDB-financed Projects (OP-274-1) will apply.

A. Programming and budget

6.2 The executing agency's budget contains programmatic categories and other classifications by object of expenditure (sections): personnel costs, consumption goods, nonpersonnel services, capital goods, transfers, financial assets, debt service and reduction of other liabilities, and other expenses. Depending on their financial nature, the items may be current expenditures, capital expenditures, or financial applications. Internal sources of financing may include the national treasury, own funds, specific allocations, and internal transfers. External financing includes external transfers and external loans.

6.3 The CEU is responsible for formulating and programming the annual budget for the program, and handles all procedures aimed at consolidating the annual budget for approval purposes. As the need arises for additions or reallocations of budget line items, the CEU requests the respective revisions and is responsible for handling their approval. Budgetary appropriations are executed through accrued quarterly and monthly commitment installments, which are allocated by the National Budget Office of the Ministry of Finance.

6.4 The source of the local contribution will be identified and the timeliness of such funds will be ensured.

B. Cash flow and management of disbursements

6.5 The National Treasury transfers the local counterpart funds to the CEU, crediting an account opened by the program for the exclusive use of this loan, as this is a program cofinanced with Bank funds.

6.6 Disbursements will be based on a detailed financial plan, the format of which has been agreed upon with the officials of the Ministry of Transportation, the Ministry of Finance, and the Office of the Cabinet Chief, and will be shared with CEU staff.

6.7 The IDB website's e-Disbursement modality will be used, which will enable the executing agency to prepare and electronically send disbursement requests to the Bank. This reduces transaction costs and gives the Bank the ability to review and process requests submitted remotely.

C. Accounting, information systems, and reporting

6.8 The executing agency will use the UEPEX system as the financial management system. Accounting will be recorded on a cash basis, following International Financial Reporting Standards when applicable, in accordance with established national criteria. The required financial reports will be: (i) financial execution plan for up to 180 days following the request for an advance; and (ii) audited annual financial statements, as stipulated in Article 7.03(a) of the General Conditions of the Loan Contract. These reports will be prepared at the close of each fiscal year and at the end of the project, and within 120 days after the aforementioned cutoff dates.

6.9 For purposes of accounting for the loan proceeds, the exchange rate in effect on the date of conversion of the currency of approval or disbursement currency to the borrowing country's local currency will be used, in accordance with subsection (b) (i) of Article 4.10.

6.10 For disbursements in a currency other than the U.S. dollar and Argentine peso: in the case of direct payments and the reimbursement of credit card guarantees, the equivalence with the currency of the loan will be established based on the amount effectively disbursed by the IDB.

D. Internal control and internal audit

6.11 The national internal control body is the Sindicatura General de la Nación [General Accounting Office] (SIGEN). The internal audit of each executing agency is conducted through the Unidad de Auditoría Interna [Internal Audit Unit] (UAI). The UAI, which reports directly to the Minister, is responsible for conducting audits and making recommendations in accordance with the powers conferred under Law 24,156 (Financial Administration Act).

E. External control: external financial audit and project reports

6.12 In 2011 the Bank concluded a diagnostic assessment of the governmental audit practices of the Office of the Auditor General (AGN), in accordance with the Bank's guide for determining the level of development of public financial management systems. The evaluation concluded by validating the AGN as the auditor for Bank projects.

6.13 The AGN reports to the National Congress and assists it in overseeing the status of public sector accounts. Its creation and operations are regulated in Title VII, Chapter I of Law 24,156, the Financial Administration and External Control Systems Act. It specifies that the AGN has its own legal personality and operational independence, and therefore also has financial independence, since its capital consists of assets allocated to it by the national government, those that previously belonged to the Tribunal de Cuentas de la Nación [National Audit Tribunal], and those transferred by court order.

6.14 However, in October 2014, in light of the AGN's record of submitting audited financial statements on a timely basis in recent years, an agreement was reached with Argentina to reduce the AGN's portfolio based on its actual performance capabilities.

6.15 For purposes of ensuring flexibility in the process of contracting the auditing firm for the project, the option of using different institutions eligible to audit IDB-financed

operations will be kept open. When the time comes to begin the contracting process, the executing agency will ask the Bank to provide the short list of institutions that may be invited to participate.

F. Financial supervision plan

6.16 The initial financial supervision plan reflects the risk and fiduciary capacity assessments that were performed on the basis of onsite and desk reviews planned for the project, and includes the scope of the operational, financial, and accounting activities, compliance and legality, frequency, and identification of the parties responsible for them. An annual financial inspection visit is planned. The ex post review modality will be adopted for disbursements.

G. Execution mechanism

6.17 The executing agency will delegate project execution and management duties to the CEU, which was created by Decree 202/1991. Since it was created, the CEU has been executing projects financed by the IDB and the World Bank. The CEU will be in charge of coordinating the project activities, taking all actions required for proper execution of the project's components, the required procurement processes, financial administration, monitoring of progress, and the evaluation of project outcomes. Given the nature of the activities included in the project, the participation of other actors with political and territorial jurisdiction will be required. Accordingly, joint work will be done with the Subsecretaría de Transporte Ferroviario [Office of the Deputy Secretary of Railroad Transportation] (STF), which, as part of the national government is responsible for executing and monitoring public policies related to the railroad transportation system with the Sociedad Operadora Ferroviaria, Sociedad del Estado [state-owned railroad operating company] (SOFSE), which is in charge of the operation and maintenance of the branch line, for and on behalf of the State, and with the Administración de Infraestructura Ferroviaria, Sociedad del Estado [State-owned rail infrastructure administration] (ADIFSE), which is responsible for public investments in rail infrastructure.

H. Management of disbursements

6.18 The advance of funds modality will be used based on the financial plan covering a maximum of 180 days, and supporting documentation must be submitted when a minimum of 80% of the advanced funds have been spent. Disbursement requests will use the disbursement request form and include the execution status and a financial plan for the next 180 days. Accounting records will not need to be accompanied by supporting documentation for expenses incurred or payments made, although this does not mean they are approved by the Bank. Original supporting documentation for expenses will be available for review by the Bank upon request.

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-___/17

Argentina. Loan ____/OC-AR to the Argentine Republic. General San Martín Railroad Improvement Project: Retiro-Pilar Branch Line. Second Individual Operation under the Conditional Credit Line for Investment Projects (CCLIP) AR-X1018

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such contract or contracts as may be necessary with the Argentine Republic, as Borrower, for the purpose of granting it a financing aimed at cooperating in the execution of the General San Martín Railroad Improvement Project: Retiro-Pilar Branch Line, which constitutes the second individual operation under the Conditional Credit Line for Investment Projects (CCLIP) AR-X1018 approved on 12 September 2013 by Resolution DE-101/13. Such financing will be in the amount of up to US$400,000,000, from the resources of the Bank's Ordinary Capital, and will be subject to the Financial Terms and Conditions and the Special Contractual Conditions of the Project Summary of the Loan Proposal.

(Adopted on ___ _____ 2017)

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