



Board of Executive Directors

For consideration

On or after 5 December 2016

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Simultaneous Disclosure

To: The Executive Directors
From: The Secretary
Subject: Argentina. Proposal for a loan for the "Program to Expand Capacity and Enhance Road Safety on Integration Road Corridors"

Basic Information: Loan type Specific Investment Operation (ESP)
Borrower Republic of Argentina
Amount up to US\$300,000,000
Source Ordinary Capital

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Remarks: This operation is included in Annex III of document GN-2849, "2016 Operational Program Report", approved by the Board of Executive Directors on 3 March 2016. However, the loan amount exceeds the ceiling established for Group A countries. Therefore, the operation does not qualify for approval by Simplified Procedure.

Reference: GN-1838-1(7/94), DR-398-17(1/15), GN-2849(3/16)

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

ARGENTINA

**PROGRAM TO EXPAND CAPACITY AND ENHANCE ROAD SAFETY ON
INTEGRATION ROAD CORRIDORS**

(AR-L1199)

LOAN PROPOSAL

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This document is being released to the public and distributed to the Bank's Board of Executive Directors simultaneously. This document has not been approved by the Board. Should the Board approve the document with amendments, a revised version will be made available to the public, thus superseding and replacing the original version.

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ELECTRONIC LINKS
REQUIRED
1. Multiyear Execution Plan and Annual Work Plan
2. Monitoring and Evaluation Plan
3. Environmental and Social Management Report
4. Procurement Plan
OPTIONAL
1. Program Economic Evaluation
2. Technical Analysis of the Argentine Road Sector
3. Institutional Capacity Assessment of the National Highway Administration
4. Works Supervision Plan
5. Federal Highway Plan
6. Environmental Impact Assessment
7. Land Release Plan for National Route 19

ABBREVIATIONS

AADT	Annual average daily traffic
AGN	Auditoría General de la Nación [Office of the Auditor General]
DNV	Dirección Nacional de Vialidad [National Highway Administration]
ESMP	Environmental and social management plan
HDM-4	Highway Development and Management Model, Version 4
ICAS	Institutional Capacity Assessment System
ICB	International competitive bidding
IMF	International Monetary Fund
IRR	Internal rate of return
Km	Kilometers
NCB	National competitive bidding
LIBOR	London interbank offered rate
MINTRA	Ministry of Transportation
NPV	Net present value
OCCOVI	Órgano de Control de Concesiones Viales [Road Concession Control Agency]
PCU	Program coordination unit
QCBS	Quality- and cost-based selection
RN	Ruta Nacional [National Route]
RVN	Red Vial Nacional [national road network]
VKT	Vehicle-kilometers traveled
vpd	Vehicles per day

PROJECT SUMMARY

ARGENTINA PROGRAM TO EXPAND CAPACITY AND ENHANCE ROAD SAFETY ON INTEGRATION ROAD CORRIDORS (AR-L1199)

Financial Terms and Conditions						
Borrower: Argentine Republic			Flexible Financing Facility^(a)			
			Amortization period:		25 years	
Executing agency: Ministry of Transportation (MINTRA), through the National Highway Administration (DNV)			Original weighted average life:		14.75 years	
			Disbursement period:		4 years	
			Grace period:		4.5 years	
Source	Amount (US\$)	%	Inspection and supervision fee:		(b)	
IDB (Ordinary Capital):	300,000,000	60	Interest rate:		LIBOR-based	
Local:	200,000,000	40	Credit fee:		(b)	
Total:	500,000,000	100	Approval currency: United States dollars from the Ordinary Capital			
Program at a Glance						
Program objective/description:						
<p>The program's objective is to help make the economy of Argentina's central region more productive by improving road infrastructure. The specific objectives are to: (i) improve the quality of traffic flow on National Route 19 (RN 19) by expanding road capacity on the Monte Cristo–San Francisco segment, which will decrease travel times and transportation costs, enhance road safety, and possibly prevent weather-related road closures; and (ii) enhance road safety on the national road network (RVN) by developing public capacity to design and implement a nationwide road safety improvement program, which will increase the number of kilometers of the RVN designed to modern road safety standards.</p>						
Special condition precedent to the first disbursement:						
<p>As a special condition precedent to the first disbursement, the borrower and MINTRA, through the DNV, will have signed a subsidiary agreement for the transfer of the loan proceeds and the execution of program activities (paragraph 3.4).</p>						
Special contractual conditions for execution:						
<p>Prior to the commencement of works on each segment of the route required for the program's execution, the DNV will have submitted evidence to the Bank of: (i) the release of 30% of the land for the corresponding segment; (ii) having obtained the occupancy permits or otherwise secured possession of the properties on which the works are to be built, as well as easements or other rights needed for construction and use; and (iii) an environmental and social management plan for the works (paragraph 3.3).</p>						
Strategic Alignment						
Challenges:^(c)						
	SI	<input type="checkbox"/>	PI	<input checked="" type="checkbox"/>	EI	<input type="checkbox"/>
Crosscutting themes:^(d)						
	GD	<input type="checkbox"/>	CC	<input checked="" type="checkbox"/>	IC	<input checked="" type="checkbox"/>

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

^(b) The credit fee and 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 applicable policies.

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

^(e) 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, problems addressed, and rationale

- 1.1 **Macroeconomic context.** Argentina's economy is going through a period of transition and challenges, both internally and externally. From 2003 to 2011, Argentina grew at an annual rate of 6.4% in aggregate terms,¹ driven by favorable external conditions, a positive productivity shock in the agriculture sector, and expansive macroeconomic and redistributive policies. However, when the economy reached full employment and external conditions deteriorated,² low levels of domestic and foreign investment combined with the country's limited integration in global trade ushered in a period of stagnation. Beginning in December 2015, the government adopted a series of measures to correct macroeconomic distortions and promote productive investment. According to the International Monetary Fund (IMF), Argentina's growth rate is projected at -1% in 2016 and approximately 2.8% in 2017.³ To meet the challenge of laying the foundations for sustainable long-term economic growth, Argentina needs to promote efficient public investment focused on removing obstacles to growth and fostering increased productivity.
- 1.2 **The transportation sector's impact on the economy.** The weight of agriculture and industry in the Argentine economy⁴ underscores the high relevance of the transportation sector, as it provides access to international markets and contributes to national integration. The volume of agricultural production grew at an average annual rate of 4% from 2009 to 2014,⁵ exerting intense pressure on the road network. The sector has faced multiple challenges in recent years, as evidenced by heavy congestion in nodes and corridors that are key to foreign trade and a 35% increase in logistics costs over the 2003-2013 period. This is a particularly tenuous scenario for the transport of agricultural freight, as transportation accounts for an estimated 40% of the cost structure associated with bringing products to market in this export-intensive value chain.⁶ Recent studies have found that exporting soybeans to Shanghai, China, is at least 35% more costly from Argentina than from the United States.⁷
- 1.3 **National road network (RVN).** The RVN is overseen by the DNV⁸ and consists of 40,290 kilometers of roads, 90% of which are paved (36,280 km with concrete, asphalt, or surface treatments), 6% are gravel (2,386.6 km), 2% are dirt and track

¹ IDB Country Development Challenges, Argentina, 2016. Draft version, publication pending.

² The drop in commodity prices and economic slowdown in China and the Mercosur (which together account for more than 30% of Argentina's exports).

³ IMF (2016), *Regional Economic Outlook – Western Hemisphere: Managing Transitions and Risks*, Washington, D.C.

⁴ According to 2013 data of the National Institute for Statistics and Census (national accounts), these two sectors accounted for 62% of value added in the goods-producing sectors (excluding services).

⁵ Internal calculations based on data of the National Institute for Statistics and Census.

⁶ Rosario Board of Trade.

⁷ Gauthier, Grégoire, Robin Carruthers, and Florencia Millán Placci, *Logística de la Soja: Argentina, Paraguay, Uruguay*, technical report series of the World Bank in Argentina, Paraguay, and Uruguay, number 4, World Bank Group, 2016, Washington, D.C.

⁸ The DNV is a decentralized agency whose primary objective is to manage the national primary road network and, as part of this network, the federal highway system. As of 10 December 2015, it reports to MINTRA.

roads (824.1 km), and the remaining 2% are unclassified road segments (799.56 km). According to DNV data for 2015, 28% of the RVN was in poor condition and 29% was in fair condition.

- 1.4 On the basis of traffic measurements taken in 2014, and grouping the segments of the RVN by traffic intensity, (i) 7% of the RVN has traffic of more than 7,500 vehicles per day (vpd), which are the most heavily traveled parts of the road network, including access routes to Buenos Aires and controlled-access highways [*autopistas*] and expressways [*autovías*] (0.7% of RVN roads carry more than 50,000 vpd); (ii) 7.5% of RVN roads carry traffic of 5,000 to 7,500 vpd; and (iii) the remaining 85% carry less than 5,000 vpd, of which 29.6% carry annual average daily traffic (AADT) of between 3,000 and 5,000 vpd.
- 1.5 High-traffic road segments located on access routes to large cities and major ports have been heavily stressed by the substantial increase in agricultural freight, and not enough has been spent to update these segments accordingly.⁹ Road network expenditures in the past decade have instead focused on improving roads in relatively less developed and lower-traffic regions, resulting in increased congestion in the most heavily traveled areas and higher logistics costs for most freight.
- 1.6 **Road capacity and safety problems.** The national government has prepared a federal highway plan for RVN-related investment and development for the 2016-2019 period. This plan is based on an assessment of the main problems to be addressed in order to better manage road infrastructure assets and optimize costs. This assessment of transit conditions identified 3,600 km of roads (10% of the paved road network) with congestion problems that will require increasing their capacity, and 11,500 km of dangerous roads (30% of paved road network) that will need fixes in order to improve road safety and lower the risk of accidents ([optional electronic link 5](#)).
- 1.7 Due to its age, the configuration of a significant portion of the road network is ill-suited to current vehicle speeds (especially lane width and curve dimensions) and lacks paved shoulders,¹⁰ resulting in serious traffic quality and road safety problems. The postponement of building beltways around urban areas other than Buenos Aires also has a negative impact in this regard. With a mortality rate of 12 deaths per 100,000 population,¹¹ Argentina's road safety track record falls short of the standards of the high-income countries, which average 8.7 deaths per 100,000 population.
- 1.8 **The government's strategy.** The Federal Highway Plan calls for investments totaling US\$12.358 billion in the RVN over the 2016-2019 period. Works were prioritized and selected under the Plan based on (i) safety with consistency in design criteria suited to demand and excellence in road condition through use of new technologies; and (ii) integration of the RVN and efficiency in the main road network for freight and vehicle traffic, with criteria for primary corridors and solutions to

⁹ The average road condition index [Índice de Estado] value of the RVN in Córdoba province worsened from 5.45 in 2012 to 7.64 in 2015. This is a composite index reflecting the main types of pavement defects (e.g. longitudinal and transverse distortion, cracking, and disintegration) and assigns values on a scale of 1 to 10 (higher values indicate worse condition of pavement). Meanwhile, Córdoba province saw an increase in AADT from 3,455 vehicles in 2004 to 6,922 in 2015.

¹⁰ Only an estimated 1,100 km of roads in the RVN have paved shoulders.

¹¹ IDB, Road Safety Diagnostic Assessment 2013. Based on 2012 data from the National Road Safety Agency [ANSV].

specific bottleneck-related problems. The plan is structured into three programs. The first, the Road-widening program, calls for 2,800 km of expressways to be built on high-traffic segments carrying over 5,000 vpd. This program uses design criteria for controlled-access expressways, including: geometric designs for 7.3-meter-wide two-lane roads (doubling to four lanes); design speed of 130 km per hour; paved shoulders; controlled access; collector roads; grade-separated crossings and overpasses; road surface markings, and effective road signage. The second program, Safe Roads, aims to improve safety on thoroughfares with medium traffic levels in Buenos Aires province and in the northwest, northeast, Cuyo, and Patagonia regions.¹² This program includes construction of passing lanes, paving of shoulders, and building of collector roads and grade-separated overpasses and crossings. The third program entails the maintenance of the existing road system, including rehabilitation works, repaving, and special projects. The strategy also provides for strengthening the quality control of works, with improvements in the control environment, organizational changes, and an increase in dedicated technical and human resources.

- 1.9 **Central region.**¹³ With its flourishing economy, and as home to Argentina's main consumer markets and ports,¹⁴ the central region is at once the country's leading origin and destination of freight/cargo. In addition, freight flows originating in the Cuyo, northwest, and northeast regions move through the central region en route to the Buenos Aires metropolitan area and the country's major ports.
- 1.10 **RN 19 corridor.** RN 19 is one of the central region's main highway corridors. It connects three provincial capitals—Córdoba, Santa Fe, and Paraná—and provides access to the Rosario port complex for the region's agricultural exports, as well as to the ports of Reconquista, Santa Fe, and Diamante. It also connects Córdoba to northwest Argentina, Uruguay, and Brazil, as well as to Chile through the Agua Negra Pass.
- 1.11 The segment of RN 19 targeted in this intervention—between San Francisco and Monte Cristo—is a two-lane highway traversing eight cities and towns that have enjoyed sustained economic growth in recent years. Its area of influence is home to agriculture (soybean, corn, and wheat) and industry (including the automotive and food industries). Tourism also plays a significant role in the area. With an AADT of 5,700 vpd (27% of which are heavy-duty vehicles), this portion of the corridor is among the most heavily traveled in the RVN, and its widening is planned for under the Road-widening program of the DNV's Federal Highway Plan. This is currently the only segment of the corridor that is still a two-lane road: the segment between Santa Fe and San Francisco (125 km) was recently made into a partially controlled-access highway, as was the Monte Cristo–Córdoba segment (23 km). According to DNV data, the road condition index value for this segment in 2015 was 7.06,

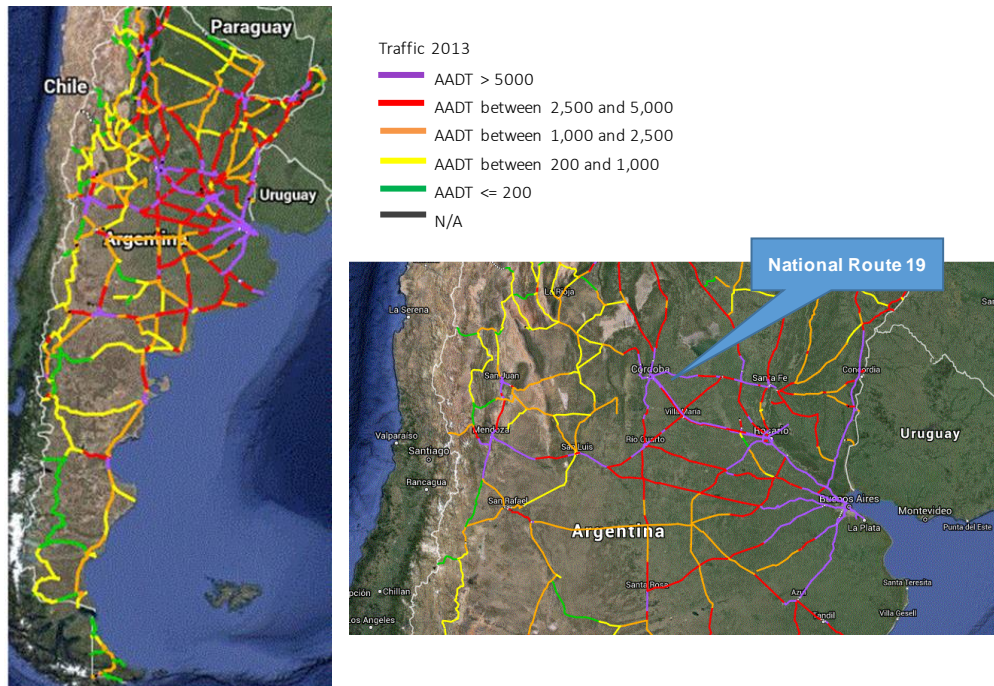
¹² See [optional electronic link 2](#).

¹³ The central region—which includes the provinces of Córdoba, Entre Ríos, Santa Fe, and Buenos Aires—is home to 65% of the country's population and accounts for 70% of GDP and exports.

¹⁴ The country's two leading port systems are the bulk terminals located on the Middle Paraná River, at Rosario, and the container terminals in the Buenos Aires metropolitan area.

indicating a road in fair condition; and seven people died in traffic accidents on this segment.¹⁵

Map 1. Annual average daily traffic in the RVN, 2013



Source: DNV, 2013.

- 1.12 **Technical development of the Safe Roads program.** The DNV plans to use the Safe Roads program standard for investments starting in 2017. This will call for design manuals and technical guidelines to help the DNV and its consultants develop uniform, state-of-the-art detailed designs. Moreover, the program's design should include criteria for selecting the most efficient technological alternatives for each project's needs and generate procedures and capacity for project supervision.
- 1.13 **Climate change.** There were four days in 2015 when part of RN 19 was flooded and vehicles could proceed only at low speeds. In the first five months of 2016, unusually heavy rainfall in the region resulted in nine days in which water covered the highway, and one day when the highway had to be closed.
- 1.14 **The problem.** High traffic volume on the segment in question, combined with the fact that it traverses multiple population centers¹⁶ and is currently a two-lane road with no shoulder, have led to a decline in traffic flow quality for passenger and freight vehicles. The heavy traffic also creates bottlenecks and road safety problems as it moves through population centers. These problems are

¹⁵ The segment in question connects the provincial capital city of Córdoba to San Francisco, passing through the towns of Río Primero, Santiago Temple, Tránsito, Arroyito, El Tío, La Francia, and Devoto. The departments in Córdoba province through which the segment passes are home to more than 1.5 million people.

¹⁶ RN 19 traverses the following population centers: Devoto, Arroyito, Tránsito, Santiago Temple, Río Primero, Malvinas Argentinas, and Monte Cristo.

exacerbated during harvest season for oilseed crops¹⁷ and compounded by the presence of agricultural machinery traveling on the road at very low speeds. During heavy rains, standing water on the road poses an additional challenge to the flow of traffic. Moreover, the lack of technical manuals to support the Safe Roads program presents a challenge to developing the public capacity needed to standardize and efficiently prioritize investments to enhance road safety in the RVN.

- 1.15 **The Bank’s work in the sector.** The Bank has played a significant role in the road sector in Argentina, having approved more than US\$1.2 billion in loan operations over the past seven years. These operations, mostly dealing with provincial road networks in the country’s northwest and northeast regions, have included paving, rehabilitation, and maintenance works. The project to build a partially controlled-access highway on RN 14 is of particular interest to this operation.
- 1.16 **Lessons learned.** The proposed program takes into account lessons learned in previous programs in Argentina and in similar Bank-financed operations in the region. These lessons and their respective impacts on this program are described in the table below.

Table 1: Lessons learned

Main lesson learned	Impact on the program’s design
In previous programs, project designs were updated as a result of onsite inspections by the DNV’s technical personnel to verify and adjust the quantity of works and corresponding budget, and this practice helped to avoid subsequent changes to works and delays in execution.	The program calls for the DNV’s technical teams to continue this practice.
The DNV’s supervision and monitoring of works was strengthened by assigning qualified technical teams, commissioning the independent outside support of specialized academic institutions, conducting periodic worksite visits, and meeting with the contracting companies; this helped to enhance the final quality of the works.	
The inclusion of a price-adjustment methodology in program-financed works contracts and the DNV’s efficient management of certificates help to facilitate competitive bids and the execution of works in due time and form.	
Similar projects in the region experienced success with the practice of dividing the project into multiple segments that were bid out simultaneously, where qualified bidders were allowed to submit bids for more than one segment and the DNV received discounts when bidders were awarded multiple contracts.	The program calls for the DNV to continue this practice.

- 1.17 **Rationale.** To improve traffic flow in the area and promote greater efficiency in freight transport to export nodes, the project calls for the construction of a new 120-kilometer two-lane road and widening RN 19 along a 35.4-kilometer segment. Considering the specifications of the segment, this intervention is aligned with the policy criteria established by the DNV in the Road-widening program and is prioritized for execution in that program’s first phase. In addition, recent precipitation levels in the region have been taken into account in designing the new road so that engineering works and storm drains may be correctly sized. This should help adapt

¹⁷ Between April and May.

infrastructure to the effects of climate change. The project will also include the studies needed for the technical design work and the intervention protocols of the Safe Roads program.

- 1.18 **Strategic alignment.** The program is aligned with the Bank’s Country Strategy with Argentina 2012-2015 (document GN-2687), as it will help improve the coverage, quality, and safety of national and provincial paved highway systems. It is also aligned with the new Country Strategy with Argentina 2016-2019 (approval pending), as it will enhance the quality of road infrastructure. The program is likewise consistent with the Update to the Institutional Strategy 2010-2020 (document AB-3008) and is aligned with the development challenge of productivity and innovation, under the criterion of reliable and affordable infrastructure and public services, since the intervention on the national route will improve accessibility and facilitate connectivity, thereby reducing transportation costs and travel times. Furthermore, the program is aligned with the crosscutting themes of: (i) Institutional Capacity and Rule of Law, under the criterion of institutional capacity, as it will help enhance the quality of public services, general government, and infrastructure design; and (ii) Climate Change and Environmental Sustainability, since the more frequent flooding in the highway’s area of influence will be taken into account in its design and construction. In addition, the program will contribute to the Corporate Results Framework 2016-2019 (document GN-2727-6), through the country development results indicators “Roads built or upgraded” and “Government agencies benefited by projects that strengthen technological and managerial tools to improve public service delivery.” Lastly, the program is included in the 2016 Operational Program Report (document GN-2849), approved on 30 March 2016.
- 1.19 The program is also consistent with the Bank strategy “Sustainable Infrastructure for Competitiveness and Inclusive Growth” (document GN-2710-5), and specifically with the strategic principles of: (i) financing and technical assistance for infrastructure that supports economic growth, provides access, and fosters regional and global integration; and (ii) planning, building, and maintaining infrastructure for the delivery of quality services that promote sustainable and inclusive growth. The program is likewise consistent with the Transportation Sector Framework Document (document GN-2740), which identifies the need to improve road network quality, coverage, and capacity, in order to support access to education and health services and boost competitiveness.
- B. Objectives, components, and cost**
- 1.20 **Objective and expected outcomes.** The program’s objective is to help make the economy of Argentina’s central region more productive by improving road infrastructure. The specific objectives are to: (i) improve the quality of traffic flow on RN 19 by expanding road capacity on the Monte Cristo–San Francisco segment, which will decrease travel times and transportation costs, enhance road safety, and possibly prevent weather-related road closures; and (ii) enhance road safety on the national road network (RVN) by developing public capacity to design and implement a nationwide road safety improvement program, which will increase the number of kilometers of the RVN designed to modern road safety standards. To fulfill these objectives, the projected is structured into the following three components.
- 1.21 **Component 1. Civil works (US\$494.1 million).** This component will finance the construction and supervision of works, mitigation of social and environmental

- concerns, and acquisition of land.¹⁸ The civil works include the construction of a new 120-kilometer two-lane road with grade-separated interchanges and access roads to population centers in the corridor's direct area of influence, and widening an existing 35.4-kilometer segment of RN 19 between San Francisco and Monte Cristo in Córdoba province.¹⁹ This component will also finance two consulting contracts. The first will be for an independent technical audit to monitor the DNV's supervision of the civil works.²⁰ The second consulting contract will be for a road safety audit of the existing RN 19, which will identify specific interventions to improve operating conditions.
- 1.22 **Component 2. Road safety (US\$3.5 million).** This component will finance the design of the Safe Roads program (paragraph 1.12), including preparation of technical documents, standards, and intervention protocols. The study will include preparation of detailed designs for one or two pilot road projects using the new Safe Roads standard. This component will also include the development of road design guidelines, which will take into account varying dimensions of projects and their presentation format.
- 1.23 **Component 3. Logistics and transportation studies (US\$1.4 million).** This component will include a logistics study to analyze current freight flows along the RN 19 corridor bound for the bulk cargo ports of Greater Rosario. This study will evaluate the alternative of creating a road-train corridor and assess the current state of land access to Rosario's port terminals. The component will also finance other transportation studies related to the program's objectives.
- 1.24 In addition to the aforementioned components, financing will be provided for expenses related to the program's administration, monitoring, evaluation, and auditing costs.

¹⁸ The acquisition of land will be fully financed by local counterpart funds.

¹⁹ This route has been divided into four segments, and final engineering designs have been completed for each. The call for bids has been issued, and contracts are expected to be awarded in the last two months of 2016 and the first two months of 2017.

²⁰ The DNV will be responsible for supervising the construction works for the new road. See paragraph 3.5 for more details.

Table 2. Costs and components (US\$ million)

	Total amount	Bank	Local source	% Bank	% local source
1. Civil works	494.1	294.1	200.0	59.5	40.5
1.1 Works	473.4	293.4	180.0	62.0	38.0
1.2 Land	20.0	-	20.0	-	100.0
1.3 Independent technical quality audit	0.6	0.6	-	100.0	-
1.4 Road safety audit on existing route	0.1	0.1	-	100.0	-
2. Road safety	3.5	3.5	-	100.0	-
2.1 Consulting contract for the design of the Safe Roads program	2.5	2.5	-	100.0	-
2.2 Road design execution guidelines	1.0	1.0	-	100.0	-
3. Logistics and transportation studies	1.4	1.4	-	100.0	-
3.1 Logistics study on RN 19 corridor	0.4	0.4	-	100.0	-
3.2 Other studies	1.0	1.0	-	100.0	-
Auditing and evaluation	1.0	1.0	-	100.0	-
Program total	500.0	300.0	200.0	60.0	40.0

C. Key results indicators

- 1.25 The program's key results indicators are: (i) overall reduction in transportation costs (average vehicle operating costs and average travel time costs) on RN 19; (ii) fewer days of traffic interruption on RN 19; and (iii) increased number of kilometers on RN 19 designed to modern road safety standards (see Annex II).
- 1.26 **Technical and economic viability.** In terms of engineering, the technical design options have been analyzed and the most effective and efficient alternative has been selected. The selected "with program" alternative entails widening the existing road using the following design parameters for fully controlled-access expressways: design speed of 130 km per hour, 7.3-meter road width in both directions, paved shoulders, grade-separated crossings and overpasses, controlled access, hydraulic design, road safety considerations, and access roads to population centers. A program economic evaluation has also been conducted using the "with program" and "without program" alternatives over a 20-year horizon. The evaluation was conducted on a grouping of four segments (based on the lots of the works), using an efficient segmentation from a construction-related perspective to achieve economy of scale in the initial investment. The evaluation quantified the economic benefits attributable to: savings in overall transportation costs (vehicle operating and travel time costs); the decrease in the accident rate; and reduced costs due to rainfall-related road closures. To this end, the Highway Development and Management Model (HDM-4) was used.
- 1.27 **Program cost/benefit analysis.** The economic evaluation of the program yielded a combined internal rate of return (IRR) of 15.8% for all four road segments and net present value (NPV) of US\$90.44 million at a 12% discount rate. The combined IRR reflects the sum of net cash flows for all road segments and takes into account the aforementioned benefits, except those stemming from the prevention of flood-related road closures. Taking these latter benefits into account yields an IRR of 16.4% and NPV of \$104.7 million. The four segments were also evaluated individually, with an IRR ranging from 15% to 17.3%, while access roads to

population centers had an IRR of 14.4%. A sensitivity analysis was conducted on the indicators of economic return under five scenarios of varying costs and benefits. This analysis showed that, even under the least favorable scenario,²¹ NPV remained above zero and IRR exceeded 12%.

II. FINANCING STRUCTURE AND MAIN RISKS

A. Financing instruments

- 2.1 The Bank's financing will be in the form of an investment loan for specific projects, with a four-year disbursement period.²² The total cost is US\$500 million, of which the Bank will finance US\$300 million (60%) from Ordinary Capital resources, with the remaining US\$200 million (40%) to be financed by the local contribution.

Projected disbursements

Year	2017 ^(a)	2018	2019	2020	Total
US\$ million	90	60	149.3	0.7	300

^(a) Includes the first disbursement, scheduled for December 2016.

B. Environmental and social risks

- 2.2 In accordance with the Environment and Safeguards Compliance Policy (Operational Policy OP-703), the program has been classified as a category "A" operation, since it includes the construction of a new 120-kilometer road segment (a greenfield project). Because this segment will be built entirely on farmland, no population resettlement is anticipated. Likewise, no protected areas or indigenous communities have been identified in the project's direct or indirect area of influence. The most significant environmental and social impacts and risks associated with the program's execution are: (i) partial impact on some 250 properties with the resultant risk of conflicts with their owners, although they have not expressed opposition to the program at the public consultation meetings; (ii) risk of unusually high water levels in the water courses that intersect the route of the road segment during either

²¹ Sensitivity analyses were conducted under the following scenarios: (i) a 10% to 20% increase in costs; (ii) a 10% to 20% decrease in traffic; and (iii) a 10% cost increase combined with a 10% decrease in traffic. The scenario of decreased traffic is unlikely, as the annual increase in AADT is expected to be 1.8% initially and 2% by 2035, in the worst-case scenario, taking into account GDP growth projections (2.8% in 2017, according to the IMF). The scenarios of decreased traffic are therefore unlikely, and in no case would traffic decrease by more than 20%. In terms of costs, since final designs have been completed and the costs used in the evaluation are the same ones used in the reference budget for bidding purposes, 20% was taken as the maximum allowable percentage. An analysis was conducted of the difference between the official costs of works that either were put out for bid in 2015 or are being put out for bid this year, on the one hand, and the budgets submitted by the leading bids, on the other. It found that the best bid in 66% of the cases was 5% to 23% below the official budget. In the remaining 34% of cases, the best bid was only 4% to 12% above the official budget. On this basis, the probability that costs would exceed 20% was found to be low. Meanwhile, traffic levels analyzed for the 2004-2015 period show that the probability of decreased traffic volumes is 0%. Nonetheless, the economic return on the project has been calculated for this scenario.

²² The works for RN 19 are expected to be awarded in the last two months of 2016 and the first quarter of 2017. The projected execution period for this work is two years. Taking into account all potential delays and extensions, the program is expected to take an estimated four years to execute.

construction or operation, a risk that could be exacerbated in a scenario of climate change; (iii) potential impacts during the construction process on some of the existing wetlands in the program area, particularly in the vicinity of Cañada de Jeanmaire; and (iv) road safety risks and other impacts associated with the transport of materials during highway construction. The mitigation measures for these risks have been identified and are fully compliant with Bank policies: (i) the DNV has prepared a resettlement plan (Land Release Plan for National Route 19, [optional electronic link 7](#)) that will guide the process of securing the release of the land on which the highway is to be built, in accordance with the principles and procedures of Operational Policy OP-710, which has been presented at the public consultation processes together with the environmental impact assessment (paragraph 2.4); (ii) to mitigate the risk of unusually high water levels, a disaster risk analysis has been conducted in accordance with Operational Policy OP-704 and, at the Bank's request, the executing agency has reviewed the calculations related to hydraulic/hydrological considerations and the design flows for drainage structures, using statistics on recent precipitation and water flows in the project area; (iii) the program's environmental and social management plan (ESMP) includes guidelines for implementing mitigation and contingency plans during construction, with special emphasis on works involving wetlands and water courses in accordance with Operating Policy OP-703; and (iv) the ESMP includes guidelines for preparing a transportation plan to mitigate road safety and other risks associated with the transport of materials during construction, in accordance with Bank policies and international standards.

- 2.3 In preparing the operation, an integrated environmental impact assessment for the entire segment of road targeted in this intervention has been prepared and published, including an evaluation of climatic and hydrological factors in the program area against a backdrop of climate change, a program ESMP with mitigation measures to be used during construction and operation, and a land release plan for the route in accordance with Bank policy OP-710. Four public consultation events have been held in cities and towns accessible to the region's residents, and these events featured broad participation by the community and the local authorities. The residents' proposals and concerns, most of them related to the expropriation process and to flooding, were received during these events and were addressed and incorporated in designing the tools to be used in managing these concerns. Additional consultation processes will be carried out during the project, mainly in relation to securing the release of the land designated for the highway. Detailed environmental and social management information is available in the Environmental and Social Management Report ([required electronic link 3](#)).

C. Fiduciary risks

- 2.4 The program, deemed to have a low level of fiduciary risk (Annex III), will require minimal monitoring efforts to strengthen the control environment and ensure the efficient and effective administration of resources. The DNV has extensive proven experience in executing loans from international lending organizations in general, and from the IDB in particular, not only as an executing agency and coordinator but also as a subexecuting agency for other loans. While the DNV is in the process of modifying its organizational structure, the institutional capacity assessment found a low level of risk. No difficulties in execution are foreseen, in view of the executing agency's previous experience and organizational structure. During the July 2016 risk

workshop using the project risk management methodology, no significant fiduciary risks were identified (Annex III).

D. Other project risks

- 2.5 The analysis identified four medium-level risks: (i) the DNV's responsibility of supervising the works (paragraph 3.5); (ii) delays in acquiring land; (iii) opposition of landowners to land acquisition processes; and (iv) insufficient staffing of the DNV's environmental unit. The following mitigation measures were identified for these risks: (a) improving the supervision system by including an external technical audit, preparing a supervision procedures manual, and training all relevant personnel (paragraph 3.5); (b) conducting public hearings in the program area, and preparing a land release plan; (c) conducting visits to raise awareness among landowners adversely affected by expropriations; and (d) strengthening the environmental unit before the start of the program, to be financed with resources from road programs currently in execution.
- 2.6 **Maintenance.** To ensure the sustainability of the program investment, the DNV reported that the necessary maintenance work would be carried out in the framework of the concession²³ for the corridor of the road segment in question. The DNV, acting through its concessions department, is preparing a new concession contract for the RN 19 corridor that will be in effect by the time the works are completed.
- 2.7 The final engineering designs are in place for the construction of RN 19, thus reducing the risk of incurring further costs. Also in place is a mechanism for execution supervision, based on a combination of internal DNV and commissioned resources (paragraph 2.6), which is expected to help limit deviation from the estimated costs.

III. IMPLEMENTATION AND MANAGEMENT PLAN

A. Summary of implementation arrangements

- 3.1 **Borrower and executing agency.** The borrower will be the Argentine Republic, and the executing agency will be the DNV, which will execute program activities through its technical, administrative, and operational units in accordance with its organizational structure and the responsibilities assigned to each area under current rules and regulations. The executing agency has fiduciary experience in Bank-financed projects (e.g. AR-L1014, AR-L1133, AR-L1144, AR-L1045, and AR-L1131). The DNV, acting through the coordinators and/or directors of its various units, will conduct the program's strategic monitoring and ensure coordination between the units involved in its execution.
- 3.2 The program will be coordinated by a program coordination unit (PCU) that already exists in the DNV for the execution of Bank loan operations. The PCU is responsible for the following tasks, *inter alia*: (i) assisting in procurement processes for works, goods, and services; (ii) processing loan disbursements with the Bank; (iii) making arrangements for the external audit; (iv) submitting work plans to the Bank (including the financial plan, the procurement plan, and the

²³ In the event the concession system is terminated, the DNV will establish an equivalent management system to ensure similar results in terms of maintaining the corridor.

- annual work plan, among others); (v) submitting reports (including audit, progress, and evaluation reports) and other program documents to the Bank; (vi) assisting in supervision and monitoring of works and service contracts; and (vii) serving as liaison with the Bank.
- 3.3 **Special contractual conditions for execution.** Prior to the commencement of works on each segment of the route required for the program's execution, the DNV will have submitted evidence to the Bank of: (i) the release of 30% of the land for the corresponding segment; (ii) having obtained the occupancy permits or otherwise secured possession of the properties on which the works are to be built, as well as easements or other rights needed for construction and use; and (iii) an ESMP for the works.
- 3.4 **As a special condition precedent to the first disbursement, the borrower and MINTRA, through the DNV, will have signed a subsidiary agreement for the transfer of the loan proceeds and the execution of program activities.**
- 3.5 **Supervision of civil works.** The DNV will supervise the civil works for the construction of the new highway. The inspection team will report to two units of the DNV to safeguard against conflicts of interest; these units will be represented by a project engineer and a quality engineer. Supervision will be organized into three groups: one to monitor management of the works, another devoted to quality control, and a third assigned to environmental concerns (each group will have personnel assigned to the four road segments included in the program). In addition, the project will finance an independent technical audit of the supervision tasks to be carried out by the DNV as described in this paragraph.
- 3.6 **Procurement.** Works, goods, and consulting services will be procured in accordance with the Policies for the Procurement of Works and Goods Financed by the Inter-American Development Bank (document GN-2349-9) and the Policies for the Selection and Contracting of Consultants Financed by the Inter-American Development Bank (document GN-2350-9), both of March 2011. All procurement processes must be included in the procurement plan approved by the Bank through the Procurement Plan Execution System and adhere to the methods and ranges indicated therein, as described in the Fiduciary Agreements and Requirements (Annex III).
- 3.7 **Disbursements.** The program will disburse resources using the advances of funds modality, based on actual liquidity needs. The DNV may request a new advance of funds when justification has been provided for at least 80% of the total previous advance. Supervision will be on an ex post basis, as in previous loans to the same executing agency, which were free of qualifications by external auditors in their annual reviews.
- 3.8 **Advance procurement.** For procurement of road works (estimated at US\$473 million), the executing agency is advancing the procurement timetable in accordance with the Bank's procurement policies. The bidding process began in July 2016 and the call for bids took place on 27 September 2016. The process is currently in the evaluation of bids stage.
- 3.9 **Retroactive financing.** The Bank may retroactively finance, as a charge against the loan proceeds, up to US\$30 million (10% of the loan amount) in eligible expenditures incurred by the borrower prior to the date of loan approval for the procurement of

works or studies, provided that requirements substantially analogous to those established in the loan contract have been met. Such expenditures must have been incurred on or after 27 June 2016 (the project profile approval date), but in no case more than 18 months prior to the loan approval date.

- 3.10 **External audit.** The borrower will submit to the Bank, on an annual basis within 120 days after the end of each fiscal year, the project's financial statements duly audited by an independent auditing firm acceptable to the Bank. The cost of the audit will be financed with the loan proceeds.

B. Summary of results monitoring arrangements

- 3.11 The objective of the monitoring and evaluation plan is to track program execution, implementing the proposed activities, and physically and financially executing the outputs. The plan consists of three principal areas of monitoring: (i) program administration and control, (ii) activities and outputs, and (iii) program outcomes; see [required electronic link 2](#).
- 3.12 Ex ante and ex post methodologies, and ex post cost/benefit analysis will be used to monitor and evaluate expected program outcomes. The evaluation is based primarily on use of HDM-4. The ex post cost/benefit analysis of the program-financed intervention in RN 19 will mirror the ex ante model used for the intervention's eligibility and feasibility studies. This analysis is expected to be conducted for two scenarios. First, the program's expected benefits will be updated, holding costs at a constant, to determine whether the benefits will be sufficient to recoup the investment in view of planned costs. In the second phase, both benefits and costs will be updated to determine whether the project entailed a positive return on investment in view of actual costs and benefits. This phase-based analysis will isolate the effect of a potential exogenous increase in costs from the effect of changes in actual benefits.

Development Effectiveness Matrix			
Summary			
I. Strategic Alignment			
1. IDB Strategic Development Objectives	Aligned		
Development Challenges & Cross-cutting Themes	-Productivity and Innovation -Climate Change and Environmental Sustainability -Institutional Capacity and the Rule of Law		
Regional Context Indicators			
Country Development Results Indicators	-Roads built or upgraded (km)* -Government agencies benefited by projects that strengthen technological and managerial tools to improve public service delivery (#)		
2. Country Strategy Development Objectives	Aligned		
Country Strategy Results Matrix	GN-2687	Improve the coverage, quality and security of National and Provincial Paved Highways System.	
Country Program Results Matrix	GN-2849	The intervention is included in the 2016 Operational Program.	
Relevance of this project to country development challenges (if not aligned to country strategy or country program)			
II. Development Outcomes - Evaluability	Evaluable	Weight	Maximum Score
	8.3		10
3. Evidence-based Assessment & Solution	8.4	33.33%	10
3.1 Program Diagnosis	3.0		
3.2 Proposed interventions or Solutions	2.4		
3.3 Results Matrix Quality	3.0		
4. Ex ante Economic Analysis	10.0	33.33%	10
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	1.5		
4.5 Sensitivity Analysis	1.5		
5. Monitoring and Evaluation	6.6	33.33%	10
5.1 Monitoring Mechanisms	2.5		
5.2 Evaluation Plan	4.1		
III. Risks & Mitigation Monitoring Matrix			
Overall risks rate = magnitude of risks*likelihood	Low		
Identified risks have been rated for magnitude and likelihood	Yes		
Mitigation measures have been identified for major risks			
Mitigation measures have indicators for tracking their implementation			
Environmental & social risk classification	A		
IV. IDB's Role - Additionality			
The project relies on the use of country systems			
Fiduciary (VPC/FMP Criteria)	Yes	Financial Management: Budget, Accounting and Reporting, External control. Procurement: Information System.	
Non-Fiduciary			
The IDB's involvement promotes additional improvements of the intended beneficiaries and/or public sector entity in the following dimensions:			
Gender Equality			
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 project's objective is to contribute to the increase in productivity of the Central Region economy in Argentina through improvements in road infrastructure. The specific objectives are: (i) improving the quality of circulation in the corridor of the 19 National Road (RN), in the section between Montecristo and San Francisco, by expanding the capacity of the road; and (ii) improving road safety in the National Road Network, by strengthening public capacities to design and implement a nationwide program of safe roads.

The project presents a complete diagnosis; however, it lacks empirical evidence on the basis of causal studies to justify its effectiveness regarding the impacts proposed. The results matrix has a clear vertical logic; all indicators presented are SMART and contain means of verification. It is noteworthy that the target value for the outcome indicator of average vehicle operating costs in the private car category is greater than the baseline value, while for other vehicles there is a reduction.

The economic analysis is complete and the results suggest that the project is economically viable under various sensitivity scenarios. There is, however, a difference between the total program costs reported in the POD and the cost amounts used in the economic analysis (10 million dollars higher in the POD), because of different timings in the preparation of both documents. It would have been good to make both values consistent to ensure that there are no changes in the profitability of the project. Also, the DEM presents a detailed justification on the probability of occurrence of the sensitivity values tested. It would have been advisable to incorporate this clarification in the economic analysis to make it a self-contained document that could guide future assessments.

The monitoring and evaluation plan is solid, and proposes the use of an ex post economic analysis and a before-and-after method. Given that these methods have been extensively used in the respective sector, it is not considered that the evaluation of this project will help to reduce knowledge gaps. The risk matrix of the operation could have been strengthened, in particular specifying some mitigation measures and defining monitoring indicators.

RESULTS MATRIX

Program objective	The program's objective is to help make the economy of Argentina's central region more productive by improving road infrastructure. The specific objectives are to: (i) improve the quality of traffic flow on National Route 19 (RN 19) by expanding road capacity on the Monte Cristo–San Francisco segment, which will decrease travel times and transportation costs, enhance road safety, and possibly prevent weather-related road closures; and (ii) enhance road safety on the national road network (RVN) by developing public capacity to design and implement a nationwide road safety improvement program, which will increase the number of kilometers of the RVN designed to modern road safety standards.
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EXPECTED OUTCOMES

Results indicators	Baseline (2016)	Target (2020)	Means of verification/comments
Outcome: Overall reduction in transportation costs			
Average vehicle operating cost on RN 19 (US\$/VKT)	Car	0.12	Program ex post evaluation report; Baseline values and targets are based on the RN 19 project economic evaluation using HDM-4
	Bus	1.21	
	Light truck	0.75	
	Heavy truck	1.22	
Average travel-time cost on RN 19 (US\$/VKT)	Car	0.29	Program ex post evaluation report; Baseline values and targets are based on the RN 19 project economic evaluation using HDM-4
	Bus	1.85	
	Light truck	0.54	
	Heavy truck	0.55	
Outcome: Fewer days of traffic interruption on RN 19			
Annual traffic interruption on RN 19 ¹ (in days)	2	0	DNV report
Outcome: Increased number of kilometers of the RNV designed to modern road safety standards			
Kilometers of roadway requiring designs to improve road safety ²	33,000	30,000	DNV report on calls for bids (completed and under preparation with engineering designs) for the Safe Roads program

¹ Days of total traffic interruption at one or more points on RN 19's San Francisco–Monte Cristo segment.

² Roads that the DNV has not identified for expansion of capacity, but where traffic levels call for interventions to improve road safety. These interventions are focused on paving shoulders, road signage, at-grade and grade-separated crossings, and passage through urban areas. As an output of program AR-L1199, part of these interventions will be designed in accordance with technical standards (also to be financed). The baseline value for the indicator refers only to the presence of paved shoulders, while the outcome refers to all of the aforementioned road safety features.

OUTPUTS

Output indicators	Cost (US\$ million)	Unit	Baseline 2016	2017	2018	2019	2020	Target	Means of verification
Component 1: Civil works									
Kilometers of widened roads built to highway standards ³	494.1	km	0		100.0	153.9	0	153.9	Semiannual report on work certificates approved by DNV for kilometers of roadway built with finished asphalt bed
Kilometers of the future road path subject to expropriation in the DNV's possession	20	km	0	120				120	DNV Legal Department reports
Independent technical audit reports ⁴ submitted to DNV	0.24	units	0	6	6	3		15	DNV semiannual report
Audit of operational road safety on existing route approved	0.1	report	0		1			1	DNV approval reported in semiannual report
Component 2: Road safety									
Design of Safe Roads program approved ⁵	2.5	units	0	1				1	DNV approval of Safe Roads program and Safe Roads Design Guidelines
Detailed engineering designs for Safe Roads approved ⁶	1	units	0	2				2	DNV approval of detailed engineering designs
Component 3: Logistics and transportation studies									
Logistics study of RN 19 corridor completed	0.4		0		1			1	DNV approval of study
Other supplementary studies approved	1		0			2	1	3	DNV approval of studies

³ Equivalent to the Corporate Results Framework indicator "Roads built or upgraded."

⁴ An independent technical audit will be conducted of the works to complement the DNV's supervision system for construction works.

⁵ Equivalent to the Corporate Results Framework indicator "Government agencies benefited by projects that strengthen technological and managerial tools to improve public service delivery." The design includes intervention guidelines regarding technical specifications for highway safety features, such as shoulders, road surface markings and signage, and conditions related to passage through urban areas.

⁶ The program will finance two pilot designs to be prepared in accordance with the standards of the Safe Roads program.

FIDUCIARY AGREEMENTS AND REQUIREMENTS

Country:	Argentina
Project number:	AR-L1199
Name:	Program to Expand Capacity and Enhance Road Safety on Integration Road Corridors
Executing agency:	Ministry of Transportation (MINTRA), through the Dirección Nacional de Vialidad [National Highway Administration] (DNV)
Fiduciary team:	David Ochoa and Brenda Álvarez (FMP/CAR)

I. EXECUTIVE SUMMARY

- 1.1 This will be the sixth operation for which the DNV has acted as a subexecuting agency (the previous five were AR-L1014, AR-L1133, AR-L1144, AR-L1045, and AR-L1131). This program's area of influence encompasses National Route 19 (RN 19), one of the main highway corridors that connects the provincial capitals of Córdoba, Santa Fe, and Paraná, and provides access to the Rosario port complex and the ports of Reconquista, Santa Fe, and Diamante. RN 19 also connects northern Argentina to the Buenos Aires metropolitan area, Uruguay, and Brazil, as well as to Chile through the Agua Negra Pass.
- 1.2 During program preparation, the Bank conducted an institutional capacity assessment for the program using the Institutional Capacity Assessment System (ICAS) methodology. Accordingly, the DNV's institutional capacity was evaluated, covering the following systems: activities and component programming; administrative organization; personnel management; goods and services management; financial management, and internal and external control. The evaluation indicates that the DNV's institutional capacity and development level are satisfactory and the risk level is low for program execution and subsequent management of the works.
- 1.3 The program does not include financing from other multilateral institutions.

II. FIDUCIARY CONTEXT OF THE EXECUTING AGENCY

- 2.1 The DNV has extensive proven experience in executing loans from international lending organizations in general, and from the IDB in particular, not only as an executing agency and coordinator but also as a subexecuting agency for other loans to the former Ministry of Federal Planning, Public Investment, and Services. In late 2015, as a result of changes made by the executive branch, the DNV was made an autonomous agency under MINTRA. While the DNV is in the process of modifying its organizational structure, including primary responsibilities and activities, its

execution capacity was scored at 90%, and its total score on all evaluated systems was 83.94%, indicating a low level of risk.

III. FIDUCIARY RISK EVALUATION AND MITIGATION ACTIONS

- 3.1 The institutional capacity assessment of the program coordination unit conducted using the ICAS tool yielded a low level of risk related to MINTRA's institutional capacity, through the DNV, for the program's execution. The most significant opportunities for improvement identified in the ICAS were as follows: (i) formalize monitoring mechanisms or procedures for identifying compliance with plans and programs; (ii) the organization and its organizational chart have been validated by a resolution of the General Administrator, and the decree of approval should be obtained in accordance with the rules of public administration; (iii) as part of the formal annual work plan, include outcome indicators and means of verification, identify parties responsible for executing or coordinating activities, and include risks associated with the programming process; (iv) personnel orientation has not been included in the code of conduct; and (v) formalize internal procedures for administration of external auditing services. Moreover, the project risk management analysis identified no medium- or high-level financial risks.

IV. CONSIDERATIONS FOR THE SPECIAL PROVISIONS OF THE CONTRACTS

- 4.1 To streamline contract negotiations by the program team and, in particular, by the Legal Department, below are the agreements and requirements to be considered in the special provisions:
- (i) No special financial conditions precedent to the first disbursement are anticipated.
 - (ii) To determine the equivalent amount in the disbursement or approval currency of an eligible expenditure incurred in the borrower's local currency, the exchange rate to be used for purposes rendering accounts and justifying expenditures will be the exchange rate in effect on the date of conversion from the approval currency or disbursement currency to the borrower's local currency.
 - (iii) In order to have flexibility and the ability to adjust the loan portfolio to reflect the auditing capacity of the Office of the Auditor General (AGN) at any given time, it is recommended that both the AGN and independent firms be contractually eligible to perform program audits.

V. AGREEMENTS AND REQUIREMENTS FOR PROCUREMENT EXECUTION

- 5.1 The fiduciary agreements and requirements for procurement processes establish the applicable provisions for carrying out all procurement processes planned under the operation.

A. Procurement execution

- 5.2 The Policies for the Procurement of Works and Goods Financed by the Inter-American Development Bank (document GN-2349-9) and the Policies for the

Selection and Contracting of Consultants Financed by the Inter-American Development Bank (document GN-2350-9), both of March 2011, will apply.

- 5.3 Of the country systems approved by the Bank, the information system will be used.
- (i) **Procurement of works, goods, and nonconsulting services.** Works, goods, and nonconsulting services¹ arising under the program and subject to international competitive bidding (ICB) will be procured using the standard bidding documents issued by the Bank. Bidding processes subject to national competitive bidding (NCB) will be executed using national bidding documents agreed upon with the Bank. The program sector specialist is responsible for reviewing the technical specifications for procurement during the preparation of selection processes. No single-source contracting is anticipated in this program.
 - (ii) **Selection and contracting of consultants.** Consulting service contracts arising under the program will be executed using the standard request for proposals issued by or agreed upon with the Bank. The program sector specialist is responsible for reviewing the terms of reference for the contracting of consulting services. No single-source contracting is anticipated in this program.
 - (iii) **Selection of individual consultants.** Individual consultants will be selected on the basis of their qualifications to do the work, based on a comparison of the qualifications of at least three candidates. The program sector specialist is responsible for reviewing the terms of reference for the contracting of consulting services. No single-source contracting of individual consultants is anticipated in this program.
 - (iv) **Advance procurement/retroactive financing.** Advance procurement in the approximate amount of US\$473 million is expected to be used for the road works, in accordance with the Bank's procurement policies. Moreover, the Bank may retroactively finance, as a charge against the loan proceeds, up to US\$30 million (10% of the loan amount) in eligible expenditures incurred by the borrower prior to the date of loan approval for the procurement of works or studies, provided that requirements substantially analogous to those established in the loan contract have been met. Such expenditures must have been incurred on or after 27 June 2016 (the project profile approval date), but in no case more than 18 months prior to the loan approval date.
 - (v) **Other.** Component 1 of this operation calls for the acquisition of land, to be fully financed with local counterpart funds, in accordance with national laws.

¹ Policies for the procurement of works and goods financed by the Inter-American Development Bank (document [GN-2349-9](#)), paragraph 1.1: Nonconsulting services are treated as goods.

Table 1. Threshold amounts for international competitive bidding and international shortlists (US\$ thousands)

Works			Goods			Consulting services	
ICB	NCB	Shopping	ICB	NCB	Shopping	International publicity	Shortlist 100% national
≥ 5,000,000	< 5,000,000 ≥ 350,000	< 350,000	≥ 500,000	< 500,000 ≥ 100,000	< 100,000	> 200,000	< 500,000

Table 2. Main procurement items

Activity	Type	Estimated date	Estimated amount (US\$)
Works			
Works on NR 19 (four lots)	ICB	07/2016	473,400,000
Consulting services			
Design of Safe Roads Program	QCBS	2016	2,500,000
Road design execution guide	QCBS	2016	1,000,000
Logistics study of RN 19 corridor; Ituzaingó – Sewer system stage 2 – Los Cardales and others	QCBS	2016	400,000

- (vi) **Procurement planning.** For procurement planning and subsequent updates to the procurement plan, the Bank will determine the procurement plan execution and monitoring system to be used.

B. Procurement supervision

- 5.4 Procurement will be supervised on an ex post basis, with the exception of ICB, contracting of consulting firms, and single-source selection, if any, which will be supervised ex ante. Ex post review visits will be made every 12 months. Ex post review reports will include at least one physical inspection visit, selected from procurement processes subject to ex post review. At least 10% of the reviewed contracts will be physically inspected during the program.

Table 3. Thresholds for ex post review

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

Note: The thresholds for ex post review reflect the executing agency's fiduciary capacity for execution and may be modified by the Bank in the event of any changes in such capacity.

C. Special provisions

- 5.5 **Measures to reduce the likelihood of corruption.** The provisions of documents GN-2349-9 and GN-2350-9 concerning prohibited practices (lists by multilateral organizations of ineligible firms and individuals) will apply.

D. Records and files

- 5.6 The documentation of procurement processes will be kept in the offices of the DNV, as the agency responsible for program procurement. For ex post reviews, records

and files will be kept duly collated, organized, and updated for all documentation generated by procurement processes.

E. Financial management

1. Programming and budget

- 5.7 The Office of the General Coordinator of Administration and Finance is responsible for budgeting and payments. Expenditure commitments will be made by the corresponding financial units under the responsibility of the Financial Coordinator, who reports to the General Administration Coordinator.
- 5.8 As the need arises to expand or reallocate budget items, the executing agency will request the changes and facilitate the process for their approval. Budgetary credits will be executed through quarterly commitment and monthly accrual amounts, which are allocated by the National Budget Office (Ministry of Treasury and Public Finance).
- 5.9 No problems are anticipated in terms of budget management, timeliness of local counterpart contribution, or system delays affecting execution.

2. Treasury and disbursement management

- 5.10 Since this program is cofinanced with Bank resources, the national treasury will transfer the local counterpart funds to the executing agency by depositing them in an account opened for the program to be used exclusively for this loan.
- 5.11 Disbursements will be made on the basis of a detailed financial plan, a template of which has been agreed upon with the Ministry of Treasury and Public Finance and the Cabinet Office.

3. Accounting, information systems, and reporting

- 5.12 The DNV uses the Integrated Financial Information System's virtual interphase (e-SIDIF) and the Unified Local System (SLU) as its financial administration systems, as do all government agencies in Argentina. These systems help to identify program funds and sources of financing. The DNV also uses the UEPEX system, albeit as an information system and not as a management system. The UEPEX system, in accordance with the list of accounts approved by the Bank, classifies project investments by expenditure category, both for loan proceeds and local contribution funds. Reconciliation between the aforementioned systems is not automatic, and therefore manual reconciliations are performed periodically.
- 5.13 Cash-basis accounting will be used and the International Financial Reporting Standards will be followed when applicable in accordance with established national criteria. The following financial reports will be required: (i) financial execution plan for up to 180 days following a request for an advance of funds; (ii) audited annual financial statements for the program; and (iii) other reports as required by the fiduciary specialists.

4. Internal control and external audits

- 5.14 The Internal Audit Office, which is under the jurisdiction of the DNV and reports on technical matters to the Office of the National Comptroller, is responsible for the program's internal audits.

5. External control and reports

- 5.15 In 2011, the Bank completed a diagnostic assessment of government audit practices by the AGN. This assessment, performed in accordance with Bank guidelines to determine the degree of development of the public finance management systems, concluded by validating the AGN as project auditor.
- 5.16 The programs for which the DNV currently serves as subexecuting agency are audited by independent auditing firms. Because the AGN currently lacks the capacity to expand its loan portfolio, and in order to have flexibility and the ability to adjust the loan portfolio to reflect the auditing capacity of the AGN at any given time, it is recommended that both the AGN and Level 1 independent firms be contractually eligible to conduct program audits.
- 5.17 Audits will be based on the new terms of reference prepared by the Bank, version 2014.

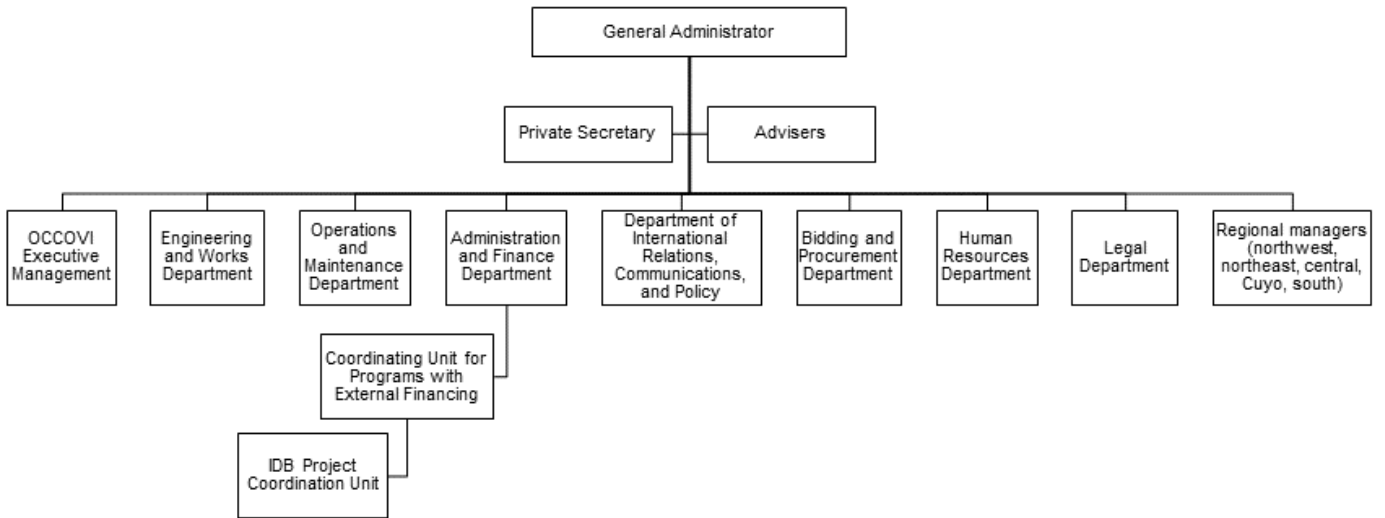
F. Financial supervision

- 5.18 The initial financial supervision plan is based on risk and fiduciary capacity assessments conducted on the basis of on-site and desk reviews scheduled for the program and includes the scope of operational, financial, and accounting activities; compliance and legal considerations; frequency; and identification of responsible parties.

G. Execution mechanism

- 5.19 The execution of this loan will be centralized in MINTRA, through the DNV. No coexecuting agencies or managing entities are anticipated. A hybrid arrangement will be used in the sense that technical and financial aspects of execution will be handled by MINTRA, through the DNV, and particularly through the Office of the General Coordinator of Administration and Finance and the Office of the General Coordinator of Engineering and Works, while the DNV's IDB Program Coordination Unit (PCU) will be responsible for matters pertaining to interactions with the Bank in processing authorizations, requests, and financial statements for the loan, as well as for the relationship with the aforementioned units.
- 5.20 The aforementioned PCU is being strengthened as part of the changes to the DNV's organizational structure, and the process of staffing the PCU is nearing completion, with the coordinator and some assistants already designated (primarily in the financial unit). The PCU is in the process of formalizing its structure, with the rest of its members still to be integrated, especially the technical personnel (11 in all, each with extensive experience in administering the various aspects of loan management). Some of its future members will be transferred from the Coordinating Unit for Loans with External Financing, which is currently under the Ministry of the Interior.
- 5.21 The DNV's new organizational structure, which should be approved in the coming months, is as follows:

Figure 1. Organizational structure of the DNV



DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-___/16

Argentina. Loan ___/OC-AR to the Argentine Republic. Program to Expand Capacity and Enhance Road Safety on Integration Road Corridors

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 to cooperate in the execution of the Program to Expand Capacity and Enhance Road Safety on Integration Road Corridors. Such financing will be for an amount of up to US\$300,000,000 from the Ordinary Capital resources of the Bank, 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 ___ _____ 2016)

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