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URUGUAY

PROGRAM TO IMPROVE ROAD CORRIDORS FOR AGROINDUSTRY AND FORESTRY II

(UR-L1182)

SECOND INDIVIDUAL OPERATION UNDER THE CONDITIONAL CREDIT LINE FOR INVESTMENT PROJECTS (CCLIP) FOR THE PROGRAM TO IMPROVE ROAD CORRIDORS FOR AGROINDUSTRY AND FORESTRY

(UR-O1155)

LOAN PROPOSAL

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REQUIRED

1. Multiyear execution plan/annual work plan
2. Monitoring and evaluation plan
3. Environmental and social management report
4. Procurement plan

OPTIONAL

1. Economic analysis of the project
2. Gender annex
3. Technical specifications for Route 6 – Section 1
4. Technical specifications for Route 6 – Section 2
5. Road safety annex
6. Socioeconomic description of the area of influence

ABBREVIATIONS

CCLIP	Conditional Credit Line for Investment Projects
CND	Corporación Nacional para el Desarrollo [National Development Corporation]
CVU	Corporación Vial del Uruguay
DNV	Dirección Nacional de Vialidad [National Highway Department]
GDP	Gross domestic product
ICAP	Institutional Capacity Assessment Platform
ICB	International competitive bidding
ISL	International short list
MEF	Ministry of Economy and Finance
MTOP	Ministry of Transportation and Public Works
PPP	Public-private partnership
QCBS	Quality- and cost-based selection

PROJECT SUMMARY

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<table>
<tr><th colspan="5">Financial Terms and Conditions</th></tr>
<tr><td colspan="3">Guarantor:</td><td colspan="2">Flexible Financing Facility[a]</td></tr>
<tr><td colspan="3">Eastern Republic of Uruguay</td><td>Amortization period:</td><td>14 years</td></tr>
<tr><td colspan="3">Borrower:</td><td>Disbursement period:</td><td>4 years</td></tr>
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<tr><td colspan="3">Executing agency:</td><td>Interest rate:</td><td>LIBOR-based[c]</td></tr>
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<tr><td>Source</td><td>Amount (US$)</td><td>%</td><td>Inspection and supervision fee:</td><td>[d]</td></tr>
<tr><td>IDB (Ordinary Capital):</td><td>65,000,000</td><td>83.6</td><td>Weighted average life:</td><td>9.71 years</td></tr>
<tr><td>Local:</td><td>12,774,000</td><td>16.4</td><td rowspan="2">Approval currency:</td><td rowspan="2">U.S. dollars</td></tr>
<tr><td>Total:</td><td>77,774,000</td><td>100.0</td></tr>
<tr><th colspan="5">Project at a Glance</th></tr>
<tr><td colspan="5">Project objective/description: The objective of this second operation under the Conditional Credit Line for Investment Projects (CCLIP) is to increase the competitiveness of the forestry and agroindustrial sectors related to Route 6. The specific objective of the program is to reduce the vehicle operating costs of freight transportation on Route 6.</td></tr>
<tr><td colspan="5">Special contractual conditions precedent to the first disbursement: A special contractual condition precedent to the first disbursement will be the signature and entry into effect of a specific agreement between the Ministry of Transportation and Public Works (MTOP), the Ministry of Economy and Finance (MEF), the National Development Corporation (CND), and the Corporación Vial del Uruguay (CVU), to include, among other things, the following: (i) the parties' commitment to fulfill the obligations set forth in the signed loan contract between the borrower and the Bank; (ii) the CND's commitment to transfer the loan proceeds to the CVU; (iii) the CVU's commitment to provide the local contribution resources committed by the CND; (iv) the CVU's commitment to use the proceeds from the loan and the local contribution in accordance with the terms of the loan contract; and (v) the specification of the MTOP's obligations with respect to the preparation and technical management, including socioenvironmental management, of the program works and activities, including in the event of termination of the concession contract.

Special contractual conditions for execution: (i) for use of the resources allocated for works under Component 1, the executing agency, acting through the National Highway Department (DNV), will present, before the corresponding award and to the Bank's satisfaction, a supervision protocol to include, among other things, the professional and technical team that will work on the different activities involved in supervision of the work, including socioenvironmental supervision; (ii) prior to the award(s) for the execution of works under Component 1, the resolution(s) of the Executive Branch qualifying the corresponding sections as a national route, when required, have been issued; and (iii) the borrower and the executing agency will obtain the Bank's no objection before signing any modification to the specific agreement between the MTOP, the MEF, the CND, and the CVU, as referred to in the special contractual condition precedent to the first disbursement. See also the special contractual conditions in Annex B to the Environmental and Social Management Report (required link 3).</td></tr>
<tr><td colspan="5">Exceptions to Bank policies: None.</td></tr>
</table>

Strategic Alignment			
Challenges:[e]	SI ☐	PI ☒	EI ☐
Crosscutting themes:[f]	GE ☒ and DI ☐	CC ☒ and ES ☒	IC ☒

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

(b) Under the flexible repayment options of the Flexible Financing Facility, changes to the grace period are permitted provided that they do not entail any extension of the original weighted average life or the last payment date as documented in the loan contract.

(c) In keeping with document FN-729 (Strategy and Operational Readiness for the Execution of the LIBOR Transition for the IDB Balance Sheet) and document CF-257-1 (Base Rate Replacement for Sovereign Guaranteed LIBOR-based Loans), this loan will be subject to the SOFR-based interest rate, upon notification to the borrower by the Bank or at the borrower's request, pursuant to the provisions of the loan contract.

(d) The credit fee and inspection and supervision fees 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.

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

(f) GE (Gender Equality) and DI (Diversity); CC (Climate Change) and ES (Environmental Sustainability); and IC (Institutional Capacity and Rule of Law).

I. Description and Results Monitoring

A. Background, problem addressed, and rationale

1.1 **Background.** On 11 March 2020, the World Health Organization (WHO) declared COVID-19 a pandemic. The health crisis it unleashed is hitting the global economy hard, with the greatest impact on developing countries. The lockdown measures adopted and the resulting reduction in demand have led to a widespread decline in global economic activity. In Uruguay, the drop in real gross domestic product (GDP) in 2020 was estimated at 4.5%. With respect to 2019, the year-on-year change for primary and industrial activities was -4% and -10.8%, respectively.[1] International trade was also heavily affected, with year-on-year drops of 16.8% for exports and 15.8% for imports. In 2021, the International Monetary Fund forecasts real GDP growth of 3%.[2]

1.2 **The crisis as an opportunity.** Tackling the economic crisis brought on by the COVID-19 pandemic will require governments to carefully choose the most effective tools to achieve multiple economic policy objectives. Investment in infrastructure and its associated services—transportation, energy, water, and sanitation—provide an attractive alternative since they simultaneously: (i) boost the demand for jobs and inputs, thereby enhancing the economic recovery; (ii) increase the productivity of the factors of production and, therefore, economic growth; and (iii) promote competitiveness and regional integration.[3] Against this backdrop, the Uruguayan government has identified the infrastructure and transportation services sector as one of the drivers of the country's economic recovery, with the main objective of reducing transportation costs, increasing export competitiveness, and leveraging the revitalization of the Uruguayan productive sector.

1.3 **State of the road network.** Uruguay's road network measures approximately 48,700 km. The National Highway Department (DNV) exercises jurisdiction over 8,777 km of this network, which connects the country's capital to the main border crossings and departmental capitals. This network sustains the flow of goods and people throughout the country. It includes: (i) 2,408 km of international corridors, connecting Montevideo with the main border crossings; (ii) 1,551 km of primary network, complementary to the foregoing, linking the departmental capitals to Montevideo and ensuring basic mobility in the country; (iii) 3,813 km of secondary network, connecting secondary towns to the departmental capitals and enabling regional mobility complementary to the main network; and (iv) 1,005 km of tertiary network for rural penetration. The remainder of the road network (approximately 40,000 km) falls under the jurisdiction of the departmental governments and corresponds basically to urban and rural roads. Of the 8,777 km of network over which it exercises jurisdiction, the DNV manages 6,177 km directly and 2,600 km

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1 Central Bank of Uruguay (2021), *Estadísticas y estudios*.

2 International Monetary Fund (2021), World Economic Outlook.

3 IDB (2020), Transportation Sector Framework Document (GN-2740-7). On infrastructure and employment, see Serebrisky et al. (2020), Sustainable and digital infrastructure for the post-COVID-19 economic recovery, IDB.

(nearly 30%) jointly with the Corporación Vial del Uruguay (CVU).[4] In the last five years, a public-private partnership (PPP) was arranged to develop the interconnecting network of highways that have the highest bulk and timber traffic. Execution of PPP contracts totaling US$692 million and corresponding to seven works on main arteries began in 2017, and the investments are expected to be completed over the next three years.

1.4 Although the country has made progress in improving the road network's condition (up from 50% in good and very good condition in 2010 to 56.6% in 2018),[5] one third of the main network (international corridors and primary network) requires prompt attention to meet the growing volumes of freight traffic (paragraph 1.5). Nearly 60% of the secondary and tertiary networks are in poor condition.[6] Accordingly, the country's road infrastructure shows performance gaps when compared with both advanced economies and the leading countries in the region. In 2019, Uruguay obtained an average score of 45.1/100 (86th out of the 141 countries evaluated) in the indicator on the quality of road infrastructure in the World Economic Forum's Global Competitiveness Index, behind Chile (70.1 points, 25th) and Panama (57.8 points, 49th), for example.

1.5 **Increase in freight volume and impact on road infrastructure.** In the last decade, demand for road transportation infrastructure has been heavy due to the heightened increase in the production and sale of agrifood and forestry products. Available studies show that between 2002 and 2015, the volume of freight transported on the road network rose by 10% cumulatively per year,[7] while truck traffic has increased significantly to more than 30 million tons moved annually. More than 60% is bulk farm products and round wood.[8] Between 2015 and 2018, exports by road increased by 10%.[9] In addition, the development of the forestry industry and the ongoing increase in bulk exports has given rise to new patterns in the origin and destination of heavy traffic from the rural inland area to the demand and export centers along the country's coast. This calls for the improvement of the related transportation

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4 Formally, the DNV granted the CVU a concession for 2,600 km of primary network and international corridors. The CVU is a private company owned by the National Development Corporation (CND), which is a public entity governed by private law (paragraphs 3.2 and 3.3). DNV continues to oversee technical management of the network under concession, while the CVU is responsible for administrative and financial management. The CVU network is maintained via service level agreements with third parties. From the financial point of view, the CVU/CND has had access to sovereign guaranteed multilateral financing (in particular from the IDB for US$180 million: loans 2041/OC-UR and 3578/OC-UR) and to nonsovereign guaranteed capital market financing. It should be noted that the CND is responsible for repaying the debt it incurs. The CND's revenue comes from toll charges and a public subsidy paid out of the DNV's regular budget. Link to legal documentation.

5 Pérez, M. and Pereyra, A. (2020), *Estimación del gasto necesario para la conservación del patrimonio vial*.

6 Ibid.

7 Asociación Uruguaya de Caminos [Uruguayan Road Association] (2017).

8 IDB (2020), Country Program Evaluation: Uruguay 2016-2020.

9 INE (2018), *Transporte y comunicaciones*.

infrastructure in order to support high freight volumes.[10] This new reality in the country's agroindustrial sector means that 56% of the national road network currently experiences heavy use from the main agricultural flows; approximately 40% relates to roadways that were previously classified as secondary. The geometric design of these roads and the heavily transited rural roads is not suitable for the volume and composition of current traffic flows.[11]

1.6 **Economic recovery, competitiveness, and infrastructure.** In a context of incentives for the post-COVID-19 economic recovery, improving transportation infrastructure is key to reducing transportation costs, increasing the competitiveness of exports, and leveraging the revitalization of the Uruguayan productive sector. The literature reports the following mechanism to transmit benefits: improved infrastructure cuts transportation costs and times, which in turn lowers trade costs and, consequently, increases the potential for market access.[12] In addition, investment in infrastructure provides incentives to draw investment from the now better-connected area, facilitating industrialization and the positive effects of economic agglomeration while stimulating economic growth in the area.[13] With special reference to the Uruguayan agricultural and forestry sectors, logistics costs represent 97% of the value of forestry products, 29% of the value of bulk products, and 5% of the value of meat products.[14] The quality of road infrastructure is thus fundamental to the competitiveness of these sectors.[15]

1.7 **Area of influence of Route 6.** Measuring 450 km long, Route 6 crosses the country from south to north, connecting the city of Montevideo to the Uruguay-Brazil border in the area known as Paso Real de San Luis in the department of Rivera, and crossing the departments of Montevideo, Canelones, Florida, Durazno, Cerro Largo, Tacuarembó, and Rivera. Along this route, freight linked to agroindustrial production is moved from the areas of influence, especially from the departments of Cerro Largo, Durazno, Tacuarembó, and Rivera,[16] to the processing and consumption centers in the south of the country. Nearly 22% of the trucks that travel to or from Montevideo enter and leave through Route 6 as one of the main routes to the capital. The freight moved is mainly agricultural, forestry, and dairy. This reflects the area's productive structure, where the weight of the primary sector in the gross

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[10] Four departments in the western coastal region (Soriano, Río Negro, Paysandú, and Colonia) account for 67% of the total grain harvest, which is industrialized and/or exported through the departments in the country's central and southern regions. Two cities on the southern coast (Fray Bentos and Punta Pereira) account for 75% of the demand for wood from the departments on the country's western coast and north-central region. See Souto, G., Tommasino, H., Errea, E., and Sáder, M. (2019), *Logística de las cuatro principales cadenas agroindustriales del Uruguay*, IDB.

[11] Ibid.

[12] In this connection, Ortega (2018) shows that investments in rural roads in Colombia increased productivity by 62% as a result of access to inputs for agricultural production, the probability of sales by 5%, and the value of production by 15%. For Peru, Volpe and Blyde (2013) find that a 10% decrease in transportation costs can increase exports by 30% and create more jobs at exporting companies (Volpe et al., 2013).

[13] See Vickerman et al. (1999) and Suk Park et al. (2019).

[14] Souto et al. (2019), Op. cit.

[15] Ibid.

[16] The four departments account for 7.6% of the country's GDP, 28.4% of its surface area, 10.2% of the Uruguayan population, and 17% of the population outside the capital. The average monthly per capita income of urban households in these departments is roughly 33% lower than the national average.

value added is more than double its weight in relation to the whole country (20% vs. 8.7%). The share of the secondary sector in the regional gross added value is also higher than national values (31% vs. 27%). The area thus constitutes a major hub of agroindustrial, livestock, and forestry activities for the country. In this regard, it represents 39% of the country's total area devoted to forestry and exports 49% of Uruguay's timber and wood products. Also, given the significance of the meat processing industry, it is the origin of 32% of Uruguayan beef exports. This demonstrates the relative importance of the area for both types of products. The average annual daily traffic generated by the primary and secondary sectors on Route 6 is currently estimated at 441 trucks. However, with the start-up of the UMP PULP OY pulp mill (estimated for the end of 2022)[17] and the projected increase in agricultural and forestry activities in the three departments, this traffic is expected to double by 2025 (optional link 1).

Figure 1. Route 6 and sections under intervention

Source: Economic evaluation of the project.

1.8 **Limited connectivity for the area of influence of Route 6.** The state of repair along Route 6 varies depending on the section in question: 11.8% is classified as "very good," 20.7% as "good," 15.7% as "fair," 38.8% as "poor," and the remaining 12.8% as "under construction" (optional link 3, optional link 4). Regarding the road surface, 13% is of inferior quality (rough). Consequently, the current connection is partial; although both ends of Route 6 are connected, the condition of certain sections that make up the route creates difficulties, and in many cases it is not used as the first option. Practically all of the sections classified as "fair" and "poor" are in the departments of Durazno, Tacuarembó, and Rivera. Of these, the section from

[17] Pulp mill located near the town of Paso de los Toros, with an annual capacity (measured on the drying machine) of between 1.9 million and 2.4 million tons, along with other associated facilities. The investment is expected to increase GDP by approximately 2 percentage points and will generate US$1 billion annually in new agroindustrial exports.

the intersection with Route 19 in the department of Durazno to the northern boundary with Tacuarembó is under departmental jurisdiction, while the remaining sections fall under the national domain and belong to the secondary road network up to Paso Hospital in Rivera and the tertiary network the rest of the way up to the national border. The sections under departmental jurisdiction are made up mainly of rough rural roads that are rutted and potholed and have scarce vertical signage. Maintenance of Bridge 329, which crosses the Negro River, is deficient. The section under national jurisdiction, in particular north of Route 16, has sharp curves and a deteriorated surface with potholes, which limits the speed of traffic, and there are stretches with speed limits of 30 km/h. Accordingly, Route 6's limited connectivity and greater risk to road safety mean that, when possible, much of the production is moved via other routes that are in better condition, mainly Routes 5 and 7 (optional link 1).

1.9 **Poor connectivity results in higher transportation costs for agricultural and forestry production in the area.** The data gathered for the program's economic evaluation indicate that the tractor-trailer vehicle operating costs using Route 6 currently stands at US$1.56 per km, which could be brought down by 15.38% upon program completion, resulting from the poor connectivity of Route 6 that limits the competitiveness of the agricultural and forestry sectors in the area.

1.10 **Reduced infrastructure sustainability.** The Inter-American Development Bank's (IDB) flagship report "Development in the Americas 2020 - From Structures to Services: The Path to Better Infrastructure in Latin America and the Caribbean" provides a full account of the impact that natural disasters and climate change can have on infrastructure.[18] In this regard, various analyses[19] show the effects in terms of reduced road surface life and a higher lifecycle cost of a road.[20] In recent years, Uruguay has been subjected to more frequent extreme weather events than in the past.[21] Specifically, a higher volume and concentration of precipitation in shorter periods has been observed, resulting in flooding and the immediate collapse of rural departmental roadways, occasionally even on national highways, with greater frequency and magnitude. This has resulted in greater demands on the performance of hydraulic works (storm sewers and bridges) and on pavement maintenance, as well as more prolonged periods during which roadways cannot be used to move people and merchandise.[22] As regards Route 6, there are already stretches with deficient drainage systems, clogged ditches, and a reduced number of culverts,

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18 See Chapter 6 in Development in the Americas 2020.

19 Quiao et al. (2015), Evaluating the Effects of Climate Change on Road Maintenance Intervention Strategies and Life-Cycle Costs, Transportation Research Part D: Transport and Environment, Volume 41, Pages 492-503.

20 The main risks are associated with: (i) higher temperatures (above 45ºC), which increase the risk of asphalt rutting, the flushing and bleeding of bituminous surfaces, and/or cracking; (ii) higher frequency of heavy rainfall, which increases road flooding, soil erosion, and saturation in culverts and drainage works; and (iii) rising sea levels with effects on coastal infrastructure.

21 In Uruguay, the average annual temperature has increased by 0.8ºC in the last 65 years. An increase of approximately 10% has been recorded in precipitation in spring, fall, and summer, and a decrease has been recorded in winter (see 4824/OC-UR).

22 4824/OC-UR.

which creates conditions leading to the deterioration of the road as water stagnates and vehicle tires carve deeper ruts into the road.

1.11 The social dimension of infrastructure sustainability highlights an additional challenge related to road safety. Although accident and fatality rates fell by 77% and 41.6%, respectively, in Uruguay in the 2011-2019 period, the current levels (78 accidents and 1.7 fatalities per 10,000 vehicles in 2019) have not yet reached the targets set by the country (optional link 5). In this regard, the National Road Safety Strategy 2011-2020 aimed to reduce fatalities by 50% by 2020. Overall, 52% of fatalities occur on national roads, while cities and departmental roads account for 48% of fatalities (optional link 5). For Route 6, the current route has poor vertical signage, sharp curves, and deteriorated pavement with the presence of potholes, which poses a significant risk to road safety, especially if traffic flow is expected to increase.

1.12 **Gender gaps in the road sector.** While women's participation in the road construction subsector (6%) is slightly higher than the construction section on the whole (4%), this figure is far from the average value for the economy at large (44%).[23] There is also inequality in the distribution of labor, with only 43.3% of women performing operational tasks, compared with 88.1% of men. Data for the construction sector on the whole show that women hold barely 15% of management and supervisory roles. Among the main obstacles to greater female inclusion in this sector are the lack of training in areas such as surveying and mechanics, as well as the perceived risk of behaviors relating to harassment and violence against women (optional link 2).

1.13 **Barriers to technological modernization and digitization in the road sector.** In line with the IDB's proposal in Development in the Americas 2020, recent studies have shown that digital infrastructure management can significantly improve the quality of services and the efficiency of the service provision.[24] In terms of road infrastructure, the use of technologies such as radar, video detection, artificial intelligence, the Internet of things, and cloud computing is gaining traction for road asset management. For instance, these technologies are used to understand traffic behavior and its conditioning factors (climatic, social, economic, etc.) with unprecedented granularity, make predictions about future behavior, and take operational and maintenance measures to ensure proper infrastructure performance based on such projections. Another example is the remote monitoring of the status of road works and assets, which enables the simultaneous processing of a massive amount of images in minimal time and at minimal cost. This makes it easier, for example, to measure construction progress, predict delays and cost overruns, identify and predict deterioration early, determine maintenance needs, and thus extend the useful life of assets. However, in order to take advantage of these benefits, the technical and technological capacities of the entities responsible for the

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[23] See *Estudio de Género en la Industria de la Construcción*, road subsector.

[24] See Development in the Americas 2020 on the potential for infrastructure efficiency gains through digital transformation. In particular, studies by the McKinsey Global Institute (2019) show that the digital transformation of construction can result in productivity gains of 15% and cost reductions of up to 6%. In road maintenance, for example, the automation of fault detection and analytics can reduce costs by up to 25%, partly due to monitoring and partly to early detection and preventive pavement maintenance (McKinsey, 2017).

road sector in Uruguay need to be updated, and the operational processes must reach a minimum level of digitization.[25]

1.14 Uruguay has seen a significant increase in the volume of resources earmarked for road infrastructure and maintenance in the last decade, thus presenting a challenge to the administrative structure responsible for both maintenance and supervision of construction work. The management systems used are antiquated, and an opportunity to upgrade them to others with greater capacity is identified so as to benefit from recent technological developments in collecting automated information based on image recognition techniques using artificial intelligence and sensors. This technology upgrade could make road institutions more effective, thus increasing the efficiency with which public resources are planned and executed in the road sector.

1.15 **Conditional Credit Line for Investment Projects (CCLIP) UR-O1155.** In 2019, the IDB Board of Executive Directors, through Resolution DE-65/19, approved the CCLIP UR-O1155 line with a total cost of US$238.5 million (of which US$200 million corresponded to the IDB) to support improved competitiveness through the construction, upgrade, and rehabilitation of the road network associated with forestry and agroindustrial flows. This was to be performed in such a way that the volume of investment above the historical average required to boost the agroforestry industry would be compatible with fiscal balances and other public policy challenges. With the CCLIP, Uruguay also sought to reaffirm the strategic nature of efforts to rehabilitate and improve the secondary roadway network, in line with its efforts on rural roadways and with the ongoing policy of improving and maintaining the primary network of the last 25 years. Against this backdrop, the sector CCLIP was presented as an appropriate instrument in that it facilitated the structuring of medium-term financing and supported the financial sustainability of the country's strategy to improve the roadway infrastructure relating to the country's agroforestry industry. Simultaneously, the first loan operation was approved under the CCLIP (4824/OC-UR) with a total cost of US$83.5 million (of which US$70 million was contributed by the IDB), which has financed the improvement of Routes 41, 43, 59, and 90 through works relating to paving, rehabilitation, capacity increase, and road safety. Paragraph 1.16 of the CCLIP proposal, "Rationale and Strategy for the CCLIP," stipulated that the second loan operation would target interventions similar to those planned under the first operation, but in other regions of the country facing similar problems, or interventions along the same routes targeted in the first operation to bring them up to the asphalt surface standard if the heavy traffic projections were confirmed (paragraph 1.26).

1.16 **First individual loan operation under the CCLIP (UR-O1155).** Approved in July 2019, the loan contract was signed in September 2019 and declared eligible in November 2019. The last disbursement is scheduled for September 2022. The most recent project monitoring report was submitted in March 2021 and obtained a satisfactory rating in terms of cumulative disbursement versus historical disbursement at country level. At 15 September 2021, 69% of the loan proceeds

[25] Given the possibility of future waves of COVID-19, public entities and companies involved in transportation infrastructure construction, maintenance, and supervision should consider ways to increase the automation of their processes and use emerging technology to minimize contact with their customers and the exposure of employees.

(US$47,605,178) had been disbursed. At present, 12 works relating to paving, rehabilitation, capacity increase, and/or road safety are underway on departmental roads and secondary highways in order to improve the east-west connectivity in the country, thereby reducing the vehicle operating costs of the freight transportation associated with the forestry and agroindustrial sectors.

1.17 **Proposed interventions.** In keeping with the Uruguayan government's post-COVID-19 recovery strategy, which has identified the infrastructure and transportation services sector as key to increasing the competitiveness of exports and leveraging the revitalization of the Uruguayan productive sector, and related to the diagnostic assessment conducted here, this second operation under the CCLIP will finance the improvement of the central section of Route 6 in the departments of Durazno and Tacuarembó. The section is mainly used by the agricultural and forestry sectors of the departments of Durazno, Tacuarembó, and Rivera, in the north-south direction, which move production to the processing centers in Durazno, Tacuarembó, and Montevideo for subsequent sale on the domestic and foreign markets.[26] The route overhaul and rehabilitation works included in this program cover planimetric and altimetric redesign, paving and repaving works, sewerage, and other masonry works in order to increase traffic speed on the road. These interventions will reduce vehicle operating costs and, consequently, the logistics costs of the agricultural and forestry sectors related to Route 6.[27]

1.18 **Safe infrastructure.** The program looks to inject social sustainability in the road infrastructure sector by supporting actions aimed at mitigating the negative effects of the increase in heavy traffic (increase in roadway accidents). Safe route design criteria will be followed, and compliance with appropriate safety standards and universal design will be enforced in urban settings (optional link 5). In particular, problems relating to dangerous curves and a lack of vertical and horizontal signage will be addressed by supporting the definition of the best forms of intervention to improve road safety on Route 6.

1.19 **Sustainable and climate-proof infrastructure.** The program-financed works will follow the relevant codes for road infrastructure works in the country, which take a conservative view where tolerance parameters cover the risks of infrastructure collapse due to increased rainfall derived from the most pessimistic climate scenarios. The infrastructure works covered under this program will comply with climate proofing criteria. The program will also contribute to climate proofing transportation infrastructure by strengthening the capacities of the Ministry of Transportation and Public Works (MTOP) in disaster risk management via training on the use of freight rerouting models in the event of temporary disruptions to road infrastructure.

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[26] The country has a highway weight inspection system consisting of mobile scales and 34 weigh stations. These are installed at junction points with the corridors bearing the largest volume of freight and at the entry points to facilities that generate freight, thereby mitigating the risk of excessive weights on the sections of road to be financed.

[27] Evidence shows that investments to improve transportation infrastructure quality yield positive economic and social impacts by reducing logistics costs and travel times, thus facilitating producers' access to new markets and fostering economies' competitiveness (Taotao, 2013). Evidence also shows that investments to improve network quality have positive effects on exports (Volpe Martincus et al., 2017).

1.20 **Smart infrastructure.** The program will support technology modernization in road asset management by introducing digital tools to monitor traffic and improve the management tools of the CVU and the DNV.

1.21 **Gender actions.** The program will also contribute to bridging the gaps in women's labor force participation by: (i) designing and implementing a training program in certain works with an equal participation between men and women in nontraditional sectors (topography, drone piloting, road signs); (ii) designing and implementing a mentoring and paid internship program with equal participation for a segment of women and men who participated in the training program; and (iii) implementing measures to prevent and mitigate gender-based violence (optional link 2).

1.22 **Bank experience in the sector and lessons learned.** The Bank has solid experience in executing road infrastructure improvement programs through various loan operations and technical cooperation projects. Notable in this regard are: (i) CVU I (2041/OC-UR) and CVU II (3578/OC-UR) programs, through which the maintenance by standards of the road network under CVU administration was structured and financed, in addition to structuring the PPP road program and CVU's access to the capital market; (ii) Road Infrastructure Program II (2677/OC-UR, 2677/OC-UR-1, 2677/OC-UR-2, 2677/OC-UR-3), for the rehabilitation of road infrastructure and bridges and the strengthening of road asset management; (iii) Productive Rural Roads Improvement Program (3791/OC-UR); and (iv) Program to Improve Road Corridors for Agroindustry and Forestry (4824/OC-UR), which supports the rehabilitation of the secondary network under the jurisdiction of the MTOP in order to increase the competitiveness of the country's agricultural and forestry sectors. Notable among the achievements of the Bank's previous interventions are: (i) contributing to the strengthening of the road maintenance system by service levels, which has proven successful in achieving a contractual arrangement and execution system with efficient results; and (ii) ensuring that the country has a framework for the continuity of the road investment process (through the CCLIP line) to complement substantial private investment in the pulp industry in the country's central area. The main lessons learned in these programs include: (i) having a road works executing agency with a budget allocated over a long period of more than 10 years provides for a highly advantageous institutional framework, since it enables maintenance planning and thus hinders road surface destruction due to a lack of resources at the right time; (ii) stable resources in the medium term ensures maintenance is secured with long contracts, thus fomenting efficiency in maintenance expenditure; and (iii) including rehabilitation and maintenance in the same contract (road rehabilitation and maintenance contracts (CREMAs)) is a more efficient contractual arrangement than contracting the two activities separately, which facilitates the sustainability of the interventions.

1.23 **Coordination with other Bank projects.** This project will complement the interventions financed by the Program to Improve Road Corridors for Agroindustry and Forestry (4824/OC-UR) and the Productive Rural Road Improvement Program (3791/OC-UR), which finance the rehabilitation and maintenance of the secondary road network and rural roads for agroindustry and forestry under the jurisdiction of the departmental governments (paragraph 1.15). Together, these interventions are expected to contribute to reducing logistics costs in the country's major value chains.

1.24 **Strategic alignment.** The program aligns with the Second Update to the Institutional Strategy 2020-2024 (document AB-3190-2), particularly with the development challenge of productivity and innovation inasmuch as it will improve transportation infrastructure, reduce logistics costs, improve the competitiveness of Uruguay's agroindustrial sector, and foster digitization and the use of innovative technologies in the sector. The program is aligned with the crosscutting themes of: (i) environmental sustainability and climate change, by incorporating actions to improve institutional capacity for disaster risk management and identify measures to make transportation more resilient (paragraph 1.19); (ii) gender equality, by including actions to encourage women's greater participation in civil works, as well as measures to prevent and mitigate gender-based violence (paragraph 1.21); and (iii) institutional capacity and rule of law, by contributing to the technological modernization of the CVU and the CNV and improving their contract supervision capacities (paragraph 1.20). According to the joint methodology of the multilateral development banks, it is estimated that 1.04% of the operation's resources will be invested in climate change adaptation measures and items. These resources contribute to the IDB climate finance target (30% of the annual volume of approvals). The program will also contribute to the Corporate Results Framework 2020-2023 (document GN-2727-12) through the indicators on kilometers of highways built or improved.

1.25 The project aligns with the Sustainable Infrastructure for Competitiveness and Inclusive Growth Strategy (document GN-2710-5), in particular with the strategic principles of: (i) financing and technical assistance for infrastructure that contributes to economic growth, provides access, and fosters regional and global integration; and (ii) planning, building, and maintaining infrastructure to provide quality services to promote the sustainable and inclusive growth of the country. The operation is also in alignment with: (i) the Bank's Vision 2025. Reinvest in the Americas: A Decade of Opportunities through actions that promote women's greater inclusion in civil works, the digitization of infrastructure, and the inclusion of climate proofing in infrastructure planning and management; and (ii) the Bank's country strategy with Uruguay (document GN-2836), particularly with the priority area of boosting productivity and competitiveness by improving productive infrastructure. Lastly, it is consistent with the Transportation Sector Framework Document (GN-2740-7), the Climate Change Sector Framework Document (GN-2835-8), and the Integration and Trade Sector Framework Document (GN-2715-11) inasmuch as it will improve the quality and resilience of transportation infrastructure for key sectors of the country's external trade. The program is included in the Update of the Annex III of the 2021 Operational Program Report (document GN-3034-2).

1.26 **Alignment with the CCLIP and eligibility criteria.** The interventions included in the program and set out in the foregoing paragraphs are consistent with the CCLIP's objective of supporting the improved competitiveness of the forestry and agroindustrial sectors by upgrading and rehabilitating Route 6, which will reduce transportation costs for these sectors. The project meets all eligibility criteria for individual loan operations provided for in the policy applicable to this CCLIP (document GN-2246-9) and its respective agreement of 12 September 2019: (i) it is covered in at least one of the sectors and components of the credit line, specifically the roadway sector; (ii) it is included in the country program (UR-O1158); (iii) the CVU is an integral and sustainable part of the institution that manages the sector,

together with the DNV; (iv) the institutional analysis shows that it is expected to maintain satisfactory performance; (v) 50% of the proceeds of the first operation have been disbursed; and (vi) the borrower and the executing agency have complied with the terms of the loan contract and the Bank's disbursement and procurement policies, including the delivery of financial and operations reports.

B. Objectives, components, and cost

1.27 **Objective of the second operation under the CCLIP.** The general objective of the second operation under the CCLIP is to increase the competitiveness of the forestry and agroindustrial sectors related to Route 6. The specific objective of the program is to reduce the vehicle operating costs of freight transportation on Route 6. To achieve this objective, the program is structured as follows:

1.28 **Component 1. Infrastructure (US$73.7 million, of which US$12.3 million corresponds to the local counterpart contribution).** This component will finance: (i) technical studies and designs; (ii) geometric and structural modifications, complementary works, and masonry structures; (iii) structural rehabilitation of roads and masonry structures; and (iv) oversight of the works. This includes the following sections: (i) Route 6 between Route 43 and Camino La Cuchilla; (ii) Route 6 between Camino La Cuchilla and Bridge 329; (iii) Route 6 between Bridge 329 and Route 26; and (iv) Bridge 329.[28]

1.29 Interventions on Sections 1, 2, and 3 will consist of road rehabilitating and widening, using gravel fill material stabilized with Portland cement and paved with an asphalt layer on the roadway and bituminous surface treatment on the shoulders. It is complemented by vertical and horizontal signage of the work. In some cases the work may include planimetric modifications to adjust the geometric design to conform to circulation safety standards based on volume and traffic composition. These design modifications will be developed without affecting areas beyond the public use strip, except when straightening curves for road safety purposes, in accordance with national standards. The works on the bridge correspond to the repair and sealing of cracks. Climate and hydrological aspects consistent with the latest climate change forecasts were considered in designing the works, particularly in the design of hydraulic conduits (paragraph 1.19). The activities provided in Component 1 cover the complete project cycle, from the preinvestment studies to construction and supervision, in order to ensure the reduction in the agroindustry transportation costs in the area of influence of Route 6.

1.30 **Component 2. Institutional strengthening (US$2.44 million, of which US$0.44 million corresponds to the local counterpart contribution).** This component will finance the procurement of: (i) studies; (ii) technological equipment; (iii) professional advisory services; and (iv) services leading to the completion of the following activities: (a) implementation of a new road asset management system; (b) design and implementation of a road transportation and infrastructure management center; (c) improvement of the instruments for climate proofing road

[28] The description of the sections is as follows: (i) Route 6 between Route 43 and Camino La Cuchilla, 45 km, for US$21.3 million; (ii) Route 6 between Camino La Cuchilla and Bridge 329, 37 km, for US$20.3 million; (iii) Route 6 between Bridge 329 and Route 26, 54 km, for US$27.1 million; and (iv) Bridge 329, 2.1 km, for US$4.4 million.

infrastructure, especially freight rerouting models in the event of temporary disruptions to road infrastructure; (d) support for the digitization of works supervision processes and the automated collection of information on the condition and use of road infrastructure; (e) provision of training and internship programs in activities related to road infrastructure, with a special focus on the equal participation of men and women therein;[29] (f) implementation of measures to prevent and mitigate gender-based violence, including support for contractor companies in developing or implementing codes of conduct, and workshops on harassment and violence against women for contractor companies (optional link 2); (g) regulatory update of procurement instruments to include the possible use of new construction techniques; and (h) training in the use of freight rerouting models in the event of temporary disruptions to road infrastructure.[30]

1.31 **Administration costs (US$1.4 million).** The CVU will receive 2.2% of program value for administration, which will be financed by the program.

1.32 **Audit, monitoring, and evaluation (US$0.24 million, of which US$0.04 million corresponds to the local counterpart contribution).** The program will finance external audits of the program, as well as monitoring and evaluation activities provided for in the corresponding plan.

C. Key results indicators

1.33 **Expected results.** The program's main results will be verified through the indicator relating to the tractor-trailer vehicle operating cost on Route 6, which is expected to fall by 15.38% from US$1.56 per vehicle/km in 2021 to US$1.32 in 2025. The program impact will be measured by the percentage of vehicle-km on the national road network that circulate on roads in very good and good condition. For more details, see the Results Matrix.

1.34 **Economic evaluation.** An economic evaluation (cost-benefit analysis) was carried out of the sample using the Highway Development and Management Model (HDM-4),[31] the standard model for the sector. The evaluation showed an economic internal rate of return of 14.34% for highway works. The results of the analysis are in the Program Economic Evaluation (optional link 1) and are summarized in the following table:

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[29] Future operations (successive operations under the CCLIP or within the transportation sector) will expand these activities to a larger number of beneficiaries.

[30] Component 2 activities as a whole will promote greater women's labor participation in the sector and the strengthening of the MTOP in disaster risk management, digitization, and the updating of processes throughout the life cycle of road infrastructure, especially in planning, road asset maintenance management, procurement, and works supervision. Accordingly, the program provides additionality for the necessary modernization process and greater efficiency of road-related agencies so that they have greater efficiency in public spending, thus resulting in lower logistics costs for agroindustrial production.

[31] HDM-4 is a project analysis tool used to study engineering feasibility and to estimate the economic value of investing in a roadway project, considering the full cycle of pavement performance, including strategy and maintenance costs, and identifying the benefits in user costs and the environmental effects of the improvements under the project. The model allows users to conduct a sensitivity analysis on key variables to investigate their impact on the results of the analysis.

Table 1. Economic cost-benefit analysis

Length (km)	Cost (US$)	Expected net present value (US$)	Base	Sensitivity analysis		
				Cost+10%	Benefit-20%	Cost +10% Benefit-20%
138.21	66,315,613	6,810,000	14.43	13.30	12.04	11.20

1.35 **Beneficiaries.** The second operation under the CCLIP calls for road infrastructure works in the departments of Durazno and Tacuarembó, through which Route 6 crosses. The primary beneficiaries of the program are agroindustrial and forestry production. Nearly 500,000 tons of wheat, barley, soy, corn, and sorghum are harvested annually in the abovementioned departments, which concentrate 30% of the country's cattle. Since 1987, approximately 1 million hectares have been planted in Uruguay, of which 39% are located in the departments benefitting from the program. The beneficiaries will be companies located in the four departments and related to agroindustrial and forestry activities. The beneficiaries located in the area directly adjacent to the sections included in this operation come to a total of 4,179 inhabitants and 119 companies (optional link 6).

II. Finance Structure and Main Risks

A. Financing instruments

2.1 **Type.** Bank financing will be provided through an investment loan for specific works, given that it will finance specific projects that are fully defined on loan approval (document PR-201). The consolidated budget by component is presented in Table 2, and the itemized budget is available in the multiyear execution plan and the annual work plan (required link 1). The disbursement period will be four years, as estimated following conservative criteria based on the duration of the planned works and on prior experience in similar works in the country.

2.2 **Cost and financing.** The total program cost is US$77.8 million, US$65 million of which will be financed by the Bank in U.S. dollars from the Ordinary Capital resources, and US$12.8 million will be financed from the local contribution. The amortization period does not exceed the concession term (paragraph 3.3), so the borrower will have revenue under the concession to service the loan, notwithstanding the sovereign guarantee.

Table 2. Estimated program costs and financing (US$ millions)*

Component	IDB	Local	Total	%
Component 1. Infrastructure	**61.4**	**12.3**	**73.7**	**94.7**
Section 1: Route 43 - Camino La Cuchilla	17.7	3.6	21.3	27.3
Section 2: Camino La Cuchilla - Bridge 329	16.9	3.4	20.3	26.1
Section 3: Bridge 329 (north access) - Route 26	22.6	4.5	27.1	34.8
Bridge 329 over the Negro River	3.7	0.7	4.4	5.7
Design of section 3, Bridge 329 (north access) - Route 26	0.5	0.1	0.6	0.8
Component 2. Institutional strengthening	**2.0**	**0.44**	**2.44**	**3.19**

Central information system for transportation planning and management	1.4	0.31	1.71	2.19
Road asset system	0.4	0.09	0.49	0.6
Improvement of the instruments for climate proofing road infrastructure	0.1	0.02	0.12	0.2
Implementation of gender plan	0.1	0.02	0.12	0.2
Administration	**1.4**	**0**	**1.4**	**1.8**
Auditing, monitoring, and evaluation	**0.2**	**0.04**	**0.24**	**0.31**
Total	**65.0**	**12.8**	**77.8**	**100**

*The costs per activity or work are indicative. The amounts have been rounded.

2.3 The operation's disbursement schedule is presented in Table 3.

Table 3. Disbursement schedule (US$ million)

Source/year	Year 1	Year 2	Year 3	Year 4	Total
IDB	15.0	25.0	18.0	7.0	65.0
% of total	23.1	38.5	27.7	10.8	100.0

B. Environmental and social risks

2.4 In accordance with the Bank's Environment and Safeguards Compliance Policy (OP-703), this program is classified as a category "B" operation; accordingly, an environmental and social analysis, including an environmental and social management plan, has been prepared. Both documents have been published in a version suitable for publication prior to the analysis mission in accordance with the Access to Information Policy (OP-102).

2.5 Road works under the program are smaller-scale works to repave primary rural roads and will cause primarily localized, short-term negative environmental and social impacts. Such impacts are typical for road construction projects of this scope and size and include dust, erosion, noise, waste, traffic disruption, occupational health and safety, and other impacts, for which there are already effective mitigation measures. Program works have an environmental and social management plan that defines the environmental management measures to be included in the bidding terms and respective contracts for the execution of such works. The environmental and social analysis includes an analysis of the socioenvironmental impacts and risks; it is confirmed that the works are not located in protected or ecologically sensitive areas, no populations will be relocated, and local communities' lives, uses, or customs and indigenous areas will not be changed. Following the environmental and social analysis, there is no economic displacement or related adverse impacts at this time. The works will be executed within the existing right of way. Consultations were convened in Cuchilla Ramírez, which is the area that will be most affected, and conducted in compliance with the country's COVID-19 health guidelines. The consultations were well attended, and a favorable response was received from the main actors. Local residents from the project areas and other stakeholders mentioned the need for a better road, since, in its current condition, the road

becomes impassable in certain areas during rainy periods, impeding access to health, education, and productive activities (required link 3).

2.6 The CVU is responsible for supervising the works through the DNV. The CVU has an appropriate capacity to ensure sustainable program implementation and the capacity necessary to supervise the works from a socioenvironmental point of view. It should be noted that the CVU already has favorable experience in socioenvironmental work with the Bank based on project 4838/OC-UR. Each construction site has a construction manager who duly enforces all matters related to the project, including socioenvironmental issues. All CVU road works follow the technical and socioenvironmental procedures and specifications contained in its Environmental Manual for Road Sector Works and Activities.

C. Other key issues and risks

2.7 **Public management and governance.** A risk management analysis identified two public management and governance risks that were classified as medium, for which mitigation measures are proposed. First, there is a risk of not having sufficient human resources to supervise the works, which is mitigated by the execution condition set out in paragraph 3.7, which establishes the supervision protocol, as well as the personnel to be assigned for each work. Second, there is a risk of not having the legal instruments needed to intervene in roadways under departmental jurisdiction, for which the anticipated implementation condition is to make such an instrument mandatory prior to project award.

2.8 **Institutional viability.** The institutional capacity assessment that was conducted using the methodology provided in the Institutional Capacity Assessment Platform (ICAP) found that the executing agency has satisfactory institutional capacity, with an equally satisfactory level of development and low risk. For this operation, the structure and execution mechanism defined by the CVU will be those currently in place for the execution of operation 4824/OC-UR, the performance of which is satisfactory, with annual audit reports that do not report any observations; accordingly, the fiduciary risk of the executing agency is considered to be low.

2.9 **Sustainability.** Maintenance of the routes selected for program intervention will be the responsibility of the DNV, which will take over responsibility for this activity once the CVU finalizes the implementation of the works. The DNV has a road maintenance policy with very positive results, whether implementing by contract or direct implementation through its regional offices.[32]

III. Implementation and Management Plan

A. Summary of implementation arrangements

3.1 **Borrower.** The borrower will be the National Development Corporation (CND), and the Eastern Republic of Uruguay will be the guarantor, pursuant to the policy of guarantees required from the borrower (document GP-104-2). The Corporación Vial del Uruguay (CVU) will be the executing agency (paragraph 2.6).

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[32] See the baseline indicator of program impact, which shows that currently 75% of the t-km circulating on the road system under DNV jurisdiction do so on routes in good or very good condition.

3.2 **The borrower.** The CND is a legal entity under nonstate public law on the basis of Law 15,785. This law authorizes the CND to contract loans in the country and internationally. Additionally, Article 34 of Law 18,602, provides that the CND may act as a concessionaire for public infrastructure projects in transportation, energy, telecommunications, and any other type intended for public use, in accordance with appointments by law, contracts, and/or agreements. To that effect, the CND may create or acquire commercial companies or participate in consortiums and/or specialized trusts, to develop concessions or projects granted to it.

3.3 **CVU.** The CVU is a stock corporation whose capital belongs entirely to the CND. The CVU's objective is to operate those public works necessary to implement the obligations undertaken by the CND as defined in the concession contract.[33] Under the provisions of the concession contract, the CND assigned execution of the concession to the CVU. The assignment contract was signed on 18 February 2003, and approved by Executive Resolution, following intervention by the Court of Auditors of the Republic, on 9 April 2003. In 2015 the concession term was extended for 20 years. The assignment contract establishes that the CVU will exercise the rights and fulfill the obligations of the concession contract, governed by all the applicable public works rules, and stipulations cited in the concession contract.

3.4 **Executing agency.** The CVU will have the following and other responsibilities: (i) implementation of all activities necessary to execute this component, in coordination with the MEF, the MTOP, and the CND, when appropriate; (ii) planning of the execution, including preparation of annual work plans and semiannual reports; (iii) preparation and updating of the procurement plan; (iv) preparation of the financial statements; (v) preparation of disbursement requests; (vi) preparation of the final report; (vii) review of the bidding terms to procure consulting services, works, and goods, and the presentation thereof to the Bank for its no objection, when applicable; (viii) support for and monitoring of the progress and execution of contracts relating to consulting, works, and goods procurement; and (ix) preparation and processing of payments under such contracts. The CND will open a bank account in the name of the program and will transfer the resources necessary for program execution to the CVU in a timely manner.

3.5 **Procurement.** Procurements will be carried out in accordance with the Policies for the Procurement of Goods and Works Financed by the IDB (document GN-2349-15), as updated; the Policies for the Selection and Contracting of Consultants Financed by the IDB (document GN-2350-15), as updated; and the terms set out in the loan contract and the procurement plan (required link 4), which sets the type of review, processes, and monitoring of procurement within the program. All procurement processes will be reviewed by the Bank on an ex ante basis.

3.6 **Special contractual conditions precedent to the first disbursement. A special contractual condition precedent to the first disbursement will be the signature and entry into effect of a specific agreement between the Ministry of Transportation and Public Works (MTOP), the Ministry of Economy and Finance (MEF), the National Development Corporation (CND), and the Corporación Vial del Uruguay (CVU), to include, among other things, the**

[33] See footnote 4 to review the legal documentation of the concession.

following: (i) the parties' commitment to fulfill the obligations set forth in the signed loan contract between the borrower and the Bank; (ii) the CND's commitment to transfer the loan proceeds to the CVU; (iii) the CVU's commitment to provide the local contribution resources committed by the CND; (iv) the CVU's commitment to use the proceeds from the loan and the local contribution in accordance with the terms of the loan contract; and (v) the specification of the MTOP's obligations with respect to the preparation and technical management, including socioenvironmental management, of the program works and activities, including in the event of termination of the concession contract. This specific agreement is necessary to legally bind all the parties involved in the fulfillment of the requirements necessary to execute the operation.

3.7 **Special contractual conditions for execution:** (i) for use of the resources allocated for works under Component 1, the executing agency, acting through the DNV, will present, before the corresponding award and to the Bank's satisfaction, a supervision protocol to include, among other things, the professional and technical team that will work on the different activities involved in supervision of the work, including socioenvironmental supervision; (ii) prior to the award(s) for the execution of works under Component 1, the resolution(s) of the Executive Branch qualifying the corresponding sections as a national route, when required, have been issued; and (iii) the borrower and the executing agency will obtain the Bank's no objection before signing any modification to the specific agreement between the MTOP, the MEF, the CND, and the CVU, as referred to in the special contractual condition precedent to the first disbursement. The first two conditions ensure the technical requirements for supervision and legal requirements for the implementation of works under Component 1, respectively. The third condition allows the Bank to validate any possible change proposed to a key agreement for program execution.

3.8 **Advance procurement, retroactive financing, and recognition of expenditures.** The Bank may retroactively finance from the proceeds of the loan up to US$15.2 million (20% of the proposed loan amount) and recognize from the local contribution up to US$2.2 million (17% of the estimated amount of the local contribution) in eligible expenditures incurred by the borrower prior to the approval date of the loan relating in both cases to consulting assignments, works, goods, and services for the program, provided that requirements substantially similar to those established in the loan contract have been met. Such expenditures will have been incurred on or after 13 October 2020 (the project registration date) but under no circumstances include expenditures incurred more than 18 months prior to the loan approval date.

3.9 **Disbursements.** Disbursements will be made as advances of funds based on actual liquidity needs supported by an adequate financial and disbursement projection. These advances will preferably be made semiannually, once at least 80% of the advanced amount has been substantiated, and the corresponding expense vouchers and financial planning spreadsheet will be required as documentation. Supervision will be conducted on an ex post basis.

3.10 **Operation and maintenance.** In the first quarter of each calendar year, starting in the year when the first program-financed work is completed and up to three years subsequent to the end of the disbursement period for the loan, the borrower, acting

through the executing agency, through the DNV, will deliver to the Bank the annual maintenance plan for works and goods financed by the operation and information about the operation and maintenance process used. If, on the basis of the Bank's inspections or the reports it receives, it is determined that maintenance is performed below the acceptable levels, the necessary steps must be taken to ensure that the deficiencies are fully remedied as specifically agreed by the MTOP, the MEF, the CND, and the CVU.

3.11 **Audits.** Through the executing agency, the borrower will submit a financial audit report during program execution within 120 days after the end of the fiscal year. It will also submit the last audit report of the program within 120 days after the date of the last disbursement. Both the terms of reference and the procurement process will follow the guidelines set out in document OP-273-12. The cost of the audit will be covered using loan proceeds. This audit must be conducted by an audit firm or the Court of Audit of the Republic, both of which must be Bank-eligible.

B. Summary of arrangements for monitoring results

3.12 **Monitoring.** Program execution will be monitored through the executing agency's semiannual progress reports submitted within 60 days after the end of each six-month period. The reports will take as a reference the reporting commitments included in the Results Matrix for each intervention. These reports will be reflected in the project monitoring reports.

3.13 **Evaluation.** The purpose of the monitoring plan is to support execution of the program, implementation of the proposed activities, and the physical and financial execution of the outputs. The plan incorporates three main monitoring elements: (i) administrative and program control; (ii) activities and outputs; and (iii) outcomes. Before-and-after methodologies, as well ex post cost-benefit analysis will be used to monitor and evaluate the expected results of the program. The evaluation is primarily based on the HDM-4 model. Ex post cost-benefit analysis of each of the program-financed works will replicate the model used ex ante, as part of the feasibility studies. This analysis is to be done in two scenarios: The first relates to updating the expected program benefits, with costs remaining constant, making it possible to measure whether, with the planned costs, the benefits achieved are sufficient to recover the investment. The second phase relates to updating benefits as well as costs, thereby obtaining a metric as to whether the project yielded a return on investment considering the costs and benefits achieved. Analysis in stages makes it possible to isolate the effect of a possible exogenous cost increase in the realized benefits. Ex post evaluation will use the traffic and highway condition measurement as surveyed, particularly at the time of the analysis. (required link 2).

3.14 **Information for program monitoring and evaluation.** The executing agency will be responsible for maintaining data collection and monitoring systems (required link 2). The executing agency commits to maintaining a monitoring and evaluation system for all subcomponents, on the basis of which it will prepare reports and data to be submitted to the Bank. For evaluation purposes, the executing agency will collect, store, and keep all information, indicators, and parameters, including annual plans, and the final evaluation, necessary for preparation of the project completion report (PCR).

Development Effectiveness Matrix		
Summary	UR-L1182	
I. Corporate and Country Priorities		
Section 1. IDB Group Strategic Priorities and CRF Indicators		
Development Challenges & Cross-cutting Issues	**-Productivity and Innovation -Gender Equality and Diversity -Climate Change -Institutional Capacity and the Rule of Law**	
CRF Level 2 Indicators: IDB Group Contributions to Development Results	**-Roads built or upgraded (km)**	
2. Country Development Objectives		
Country Strategy Results Matrix	**GN-2836**	**Reduce Infrastructure Gaps**
Country Program Results Matrix	**GN-3034-2**	**The intervention is included in the 2021 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	**9.7**	
3.1 Program Diagnosis	**2.5**	
3.2 Proposed Interventions or Solutions	**3.2**	
3.3 Results Matrix Quality	**4.0**	
4. Ex ante Economic Analysis	**10.0**	
4.1 Program has an ERR/NPV, or key outcomes identified for CEA	**1.5**	
4.2 Identified and Quantified Benefits and Costs	**3.0**	
4.3 Reasonable Assumptions	**2.5**	
4.4 Sensitivity Analysis	**2.0**	
4.5 Consistency with results matrix	**1.0**	
5. Monitoring and Evaluation	**9.5**	
5.1 Monitoring Mechanisms	**4.0**	
5.2 Evaluation Plan	**5.5**	
III. Risks & Mitigation Monitoring Matrix		
Overall risks rate = magnitude of risks*likelihood	**Medium Low**	
Environmental & social risk classification	**B**	
IV. IDB´s Role - Additionality		
The project relies on the use of country systems		
Fiduciary (VPC/FMP Criteria)	**Yes**	**Financial Management: Budget, Treasury, 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:		
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		

Evaluability Assessment Note: *The second operation under the CCLIP for an amount of US $ 65 million, with a local counterpart of US $ 11 million, aims to increase the competitiveness of the forestry and agro-industrial sectors related to Route 6 of Uruguay. The specific objective of the program is to reduce vehicle operating costs related to cargo transportation that circulates through Route 6. Corporación Vial del Uruguay S.A. (CVU) will oversee the operation's execution and monitoring.*

The loan proposal presents a solid diagnosis. The proposed solutions are appropriate to address the identified problems and their contributing factors. The results matrix is consistent with the vertical logic of the project, presenting adequate indicators at the level of results and impacts. The outcome indicators are appropriately defined to measure the achievements of the program and the fulfillment of its specific objectives. The impact indicator reflects the contribution to the economic objective consistent with the improvement of the competitiveness of the forestry and agro-industrial sectors of Uruguay.

The ex-ante economic analysis indicated an internal economic rate of return of 14.3% for the roads work. The economic rate of return remains above 11.2% after a sensitivity analysis that considers a 10% increase in costs and a 20% reduction in benefits. The monitoring and evaluation plan is clear in defining the relevant questions for the project evaluation and the methodology to be used for an effectiveness analysis. The main risks identified are related to public management (insufficient human resources) and governance (possible conflicts with the departmental jurisdiction). Appropriate measures are indicated to mitigate this and other mapped risks.

RESULTS MATRIX

Project objective:	The general objective of the CCLIP is to support improved competitiveness through the construction, improvement, and rehabilitation of roadways associated with forestry and agroindustrial vehicular flows. The general objective of the second operation under the CCLIP is to increase the competitiveness of the forestry and agroindustrial sectors related to Route 6. The specific objective of the program is to reduce the vehicle operating costs of freight transportation on Route 6.

EXPECTED IMPACT
GENERAL DEVELOPMENT OBJECTIVE

Indicators	Measurement unit	Baseline	Baseline year	Final target	Means of verification	Comments
Impact 1: To increase the competitiveness of the forestry and agroindustrial sectors						
Percentage of vehicle/km on the national road network that circulate on roads in very good and good condition[1]	% of veh/km	75		75[2]	Report by the CVU/DNV based on the annual survey of the state of comfort, traffic survey, and weight information carried out by the MTOP.	

[1] A paved surface with a Pavement Condition Index score greater than 85 is considered to be in very good condition; a value from 70-85 is good; 50-70 is fair; and a paved surface scored below 50 is considered to be in poor condition. The methodology is described in a DNV-published manual on visual paved surface assessment based on the Pavement Condition Index (ASTM D6433-11), adapted and calibrated to local conditions.

[2] The investment schedule and types of projects established in the DNV Strategic Plan for works for the 2020-2024 period will have to be implemented in order to meet the 2022 target. The baseline value is particularly high and maintaining it over time is a positive outcome; if the planned interventions are not carried out (including those financed under the program), a deterioration in the value of the impact indicator may be observed.

EXPECTED OUTCOMES
SPECIFIC DEVELOPMENT OBJECTIVE

Indicators	Measurement unit	Baseline	Baseline year	Final target	Means of verification
Specific development objective 1:					
Tractor-trailer vehicle operating cost on Route 6[3]	Constant US$ per veh/km	1.56	2021	1.32	Estimated using the HDM-4 model, using as inputs the average roughness value of roadway segments in the program, which are surveyed annually by the DNV Maintenance Division, and fleet composition of tractor-trailers, surveyed annually by DNV Transit Department traffic counts. CVU/DNV report.

OUTPUTS

Outputs	Measurement unit	Baseline	Baseline year	Year					Final target	Means of verification	Comments
				2021	2022	2023	2024	2025			
Component 1: Civil works											
Km of roads on Route 6 rehabilitated by the program	km	0	2021				83	54	137	Technical and environmental audit reports	
Linear meters of bridge maintained by the program	Ml	0	2021				2,100		2,100	Technical and environmental audit reports	
Component 2: Institutional strengthening											
Road transportation and infrastructure management center designed and implemented	Number	0	2021					1	1	Semiannual progress reports	
Road asset management system implemented	Number	0	2021					1	1	Semiannual progress reports	

[3] The values will be normalized to constant prices.

Outputs	Measurement unit	Baseline	Baseline year	Year					Final target	Means of verification	Comments
				2021	2022	2023	2024	2025			
Instruments created for climate proofing road infrastructure	Number	0	2021					1	1	Semiannual progress reports	
Women trained in tasks relating to road work[4]	Number	0	2021		7	23			30	Semiannual progress reports	
Women who have participated in the internship program for nontraditional jobs in road works[5]	Number	0	2021			15			15	Semiannual progress reports	
Workshops conducted on harassment and violence against women for contractor companies	Number	0	2021			3			3	Semiannual progress reports	

4 Although the training program will benefit an equal proportion of men and women, this indicator will only measure the number of women who participated in these programs.

5 Although the internship program will benefit an equal proportion of men and women who participated in the training program, this indicator will only measure the number of women who participated in these programs.

Country: Uruguay **Division:** TSP **Operation:** UR-L1182 **Year:** 2021

FIDUCIARY AGREEMENTS AND REQUIREMENTS

Executing agency: Corporación Vial del Uruguay (CVU)

Operation name: CVU Road Infrastructure Program III

I. FIDUCIARY CONTEXT OF THE EXECUTING AGENCY

1. **Use of the country system in the operation**[1]

☒ Budget	☐ Reports	☒ Information system	☐ National competitive bidding (NCB)
☒ Treasury	☐ Internal audit	☐ Shopping	☐ Other
☒ Accounting	☒ External control	☐ Individual consultants	☐ Other

2. **Fiduciary execution mechanism**

☐	**Considerations for fiduciary execution**	The borrower will be the National Development Corporation (CND), acting through Corporación Vial del Uruguay (CVU), which will be the executing agency for the program, which will be executed under the same structure and mechanism as the present operation 4824/OC-UR (first individual operation under the CCLIP).

3. **Fiduciary capacity**

Fiduciary capacity of the executing agency	The institutional capacity assessment that was conducted using the methodology provided in the Institutional Capacity Assessment Platform (ICAP) found that the executing agency has satisfactory institutional capacity, with an equally satisfactory level of development and low risk. For this operation, the structure and execution mechanism defined by the CVU will be those currently in place for the execution of operation 4824/OC-UR, the performance of which is satisfactory, with annual audit reports that do not report any observations; accordingly, the fiduciary risk of the executing agency is considered to be low.

[1] Any system or subsystem that is subsequently approved may be applicable to the operation, in accordance with the terms of the Bank's validation.

4. **Fiduciary risks and risk response:** None.
5. **Policies and guidelines applicable to the operation:** Documents GN-2349-15, GN-2350-15.
6. **Exceptions to policies and guidelines:** No exceptions to Bank policies are anticipated.

II. CONSIDERATIONS FOR THE SPECIAL PROVISIONS OF THE LOAN CONTRACT

1.	**Exchange rate.** Applicable to justify expenditures incurred in the local currency of the borrower's country as set out in paragraph (b)(ii) of Article 4.10 of the General Conditions of the loan contract.
2.	**Audit.** Through the executing agency, the borrower will submit a financial audit report during program execution within 120 days after the end of the fiscal year. It will also submit the last audit report of the program within 120 days after the date of the last disbursement. Both the terms of reference and the audit will follow the guidelines set out in document OP-273-12. The program will be audited by either the Court of Audit of the Republic or an independent auditing firm acceptable to the Bank.

III. AGREEMENTS AND REQUIREMENTS FOR PROCUREMENT EXECUTION

☒	**Bidding documents**	For the procurement of works, goods, and nonconsulting services executed in accordance with the procurement policies (document GN-2349-15), subject to international competitive bidding, the Bank's standard bidding documents or those agreed between the executing agency and the Bank for the procurement in question will be used. Also, the selection and contracting of consulting services will be carried out in accordance with the policies for the selection of consultants (document GN-2350-15) and the standard request for proposals issued by the Bank or agreed between the executing agency and the Bank for the selection in question will be used. All documents must include the IDB's mandatory eligibility and prohibited practices clauses. The project's sector specialist is responsible for reviewing the technical specifications and terms of reference for procurement during preparation of the selection processes. This technical review may be ex ante and is independent of the procurement review method.

<table>
<tr><td>☒</td><td>Advance procurement – Retroactive financing</td><td>The executing agency plans to make a number of strategic procurements prior to program approval in order to advance program execution in line with paragraph 1.14 of document GN-2350-15, which states that “in certain circumstances, such as accelerating the execution of a project, the borrower may initiate, with the Bank's consent, the selection of consultants prior to the signing of the corresponding loan contract.” Also, as reflected in the procurement plan, advance procurement is anticipated for three consulting services for an estimated total amount of US$1.7 million to procure road asset system services, capacity-building in works supervision, and the implementation of a gender and inclusion plan. Pursuant to the procurement policies, the Bank will review the process to ensure that it follows applicable regulations. Using the loan proceeds, the Bank may retroactively finance eligible expenditure for consulting services, works, goods, and services for the program up to US$15.2 million (20% of the proposed loan amount), provided that they have been carried out on terms substantially similar to those set out in the loan contract and that the procurement procedures abide by the basic procurement principles. The Bank may recognize expenditures incurred by the borrower prior to the date of loan approval, for up to the amount of US$500,000 (0.67% of the total loan amount), provided they are deemed eligible, of satisfactory quality, and consistent with the program, are delivered or completed in a timely manner, and are priced so as not to adversely affect the program’s economic and financial feasibility. In both cases, such expenditures will have been incurred on or after 13 October 2020 but under no circumstances include expenditures incurred more than 18 months prior to the loan approval date. (See document GN-2349-15, document GN-2350-15, and the policy on recognition of expenditures, retroactive financing, and advance procurement (document GN-2259-1).)</td></tr>
<tr><td>☒</td><td>Procurement supervision</td><td>The method of supervision as identified in the corresponding procurement plan is ex ante in all international competitive bidding processes and processes performed in advance (see paragraph 1.14 of document GN-2350-15). The processes subject to ex post supervision will be identified in the operation’s procurement plan. Ex post reviews will be conducted every 12 months in accordance with the project supervision plan, subject to change during execution. Ex post review reports will include at least one visit. The thresholds for the ex post review are as follows:
<table>
<tr><th>Works</th><th>Goods/services</th><th>Consulting services</th></tr>
<tr><td>ICB > US$5,000,000</td><td>ICB > US$500,000</td><td>ISL > US$200,000</td></tr>
</table></td></tr>
<tr><td>☒</td><td>Records and files</td><td>Project reports should be prepared and filed using agreed upon formats or procedures, which are described in the project Operating Regulations, and should be consistent with relevant policy requirements.</td></tr>
</table>

Main procurement items

Description of the procurement	Selection method	Estimated date	Estimated amount in US$
Works			
Upgrade of road network Section 3 – Route 6	ICB	Q2/2022	27,100,000
Upgrade of road network Section 1 – Route 6	ICB	Q2/2022	21,300,000
Upgrade of road network Section 2 – Route 6	ICB	Q2/2022	20,300,000
Consulting firms			
Road asset system	QCBS	Q1/2022	1,400,000

The following link is provided to access the procurement plan.

IV. FINANCIAL MANAGEMENT AGREEMENTS AND REQUIREMENTS

☒	**Programming and budget**	The CVU's financial programming is established in Annex I of the framework of the concession contract, dated 23 October 2015, which establishes the concession's revenue-expense flow through 2035. Annual programming is defined according to the MTOP investment plan. The program's local contribution counterpart will be the value added tax of the works foreseen in the program.
☒	**Treasury and disbursements**	Bank financing will be disbursed to a special account at the Central Bank of Uruguay. From there it will be transferred to a program-exclusive account at Banco de la República Oriental del Uruguay, from which the CVU will make payments to the respective suppliers and contractors. Disbursements will be made as advances of funds based on actual liquidity needs supported by a financial and disbursement projection. Preferably, these advances will be half-yearly. Online disbursement requests will be used to process disbursement requests. To minimize the risk of slowdown of program execution, and taking into account the internal authorization process, the minimum percentage of expenditure justification to process a new disbursement will be 70%. The exchange rate for converting payments made in local currency into the currency of the loan will be that of the payment date. For program execution, the CVU will be allowed an administrative cost of 2.2% of the budget allocated to infrastructure and institutional strengthening components. To that effect, to the extent the CVU uses resources chargeable to those components, it will apply resources for administrative costs. The amount for this purpose will be withdrawn from the program bank account whenever an expense voucher request is prepared and will be reported to the Bank on a single line on the expend statement, without need to detail the items it covers.

☒	**Accounting, information systems, and report generation**	Program accounting will be carried out in accordance with international financial reporting standards in the GIA accounting system. Specific program accounts will be established to receive funds disbursed by the Bank, as well as resources applied to eligible program costs. The financial statements to be issued periodically will be the statement of cash received and disbursements made and the statement of cumulative investments, in addition to the respective notes to such financial statements. The CVU will prepare program financial statements in accordance with the IDB guidelines contained in the Audited Financial Reports and External Audit Management Manual.
☒	**Internal control and internal auditing**	The CVU maintains a control environment focused on systematizing its processes and defining formalized internal control procedures, available on its intranet portal. The CND Internal Audit Unit also carries out periodic reviews of CVU processes, which may look into Bank-financed processes if done on the basis of sampling.
☒	**External control and financial reporting**	The CVU will select and procure external audit services in accordance with the terms of reference previously agreed with the Bank. These shall provide for annual financial audits in accordance with international auditing standards to be submitted by 30 April of the year following the review. The program's final audit will be submitted within 120 days after the date of the last disbursement. The audit will be run in accordance with the guidelines set out in the Financial Management Guidelines (document OP-273-12). Audit costs may be covered using loan resources. The audit may be conducted by the Court of Audit of the Republic or an independent audit firm.
☒	**Financial supervision of the operation**	Annual on-site visits are planned to verify compliance with the fiduciary arrangements. Participation is also expected in kick-off and follow-up workshops for the annual planning to be coordinated with the team leader.

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-___/21

Uruguay. Loan ____/OC-UR to the Corporación Nacional para el Desarrollo. Program to Improve Road Corridors for Agroindustry and Forestry II. Second Individual Operation under the Conditional Credit Line for Investment Projects (CCLIP) (UR-O1155) for the Program to Improve Road Corridors for Agroindustry and Forestry

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 Corporación Nacional para el Desarrollo, as borrower, and with the Eastern Republic of Uruguay, as guarantor, for the purpose of granting the former a financing aimed at cooperating in the execution of the Program to Improve Road Corridors for Agroindustry and Forestry II, which constitutes the second individual operation under the Conditional Credit Line for Investment Projects (CCLIP) for the Program to Improve Road Corridors for Agroindustry and Forestry approved by Resolution DE-65/19 on 2 of July of 2021. Such financing will be in the amount of up to US$65,000,000, 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 __ _____ 2021)

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