

Project Paraguay Highways 2/7 ESRS

Original language of the document: Spanish

1. Overview and Scope of IDB Invest's Environmental and Social Review

The Ministry of Public Works and Communications of Paraguay (hereinafter "the MOPC"), through Call to Tender No. 156/2015, tendered the contract for the design, funding, construction, maintenance, and operation of National Highways No. 2 and No. 7 (hereinafter "RN-2" and "RN-7"). The consortium Rutas del Este S.A., comprising Sacyr Concesiones SL (60%), Mota-Engil Engenharia e Construção S.A. (20%), and Ocho-A S.A. (20%) (hereinafter, "the SOE") was awarded the contract. Public-Private Partnership Agreement No. 01/2017 (hereinafter the "PPP Agreement") was signed in March 2017 and amended in November 2018 through Bankability Addendum No. 1 (hereinafter "the Addendum").

The Preliminary Environmental Impact Assessment prepared by the SOE was approved on November 15, 2017, by the Directorate-General for the Control of Environmental Quality and Natural Resources (hereinafter "the DGCCARN", for its acronym in Spanish) of the Environmental Authority (hereinafter "the SEAM", for its acronym in Spanish), through Resolution 2039-2017, which approves the respective Environmental Impact Statement (hereinafter "the EIS"). This study specifies that, in order to mitigate the Project's environmental and social impacts, the SOE will implement the Social-Environmental Management Plan (hereinafter "the EMP"), in accordance with the requirements of the General Environmental Technical Specifications (hereinafter "the GETS") for Road Works of the MOPC. The EMP includes the Environmental and Social Management Plan (hereinafter "the ESMP") and the terms of reference of the Consultancy to develop the Land Registry and the Social Action Plan for the Release of the Right of Way (hereinafter "the SAPRDS"), whose implementation is currently in the final stage.

The project "Expansion and Twinning of National Highways RN-2 (Mariscal José Félix Estigarribia¹) and RN-7 (Dr. José Gaspar Rodríguez de Francia)"—henceforth, "the Project"—consists of expanding and twinning 149.3 km of highway between km 34 of Highway RN-2 in Ypacaraí and km 183 of Highway RN-7, the latter being where the highway run under concession by Tapé Porá S.A. begins. The Project—which also includes improving the road between San Lorenzo (km 13) and Ypacaraí² (km 34), and between km 39 and km 40.5, with a length of 22.5 km—has a concession term of thirty years and a construction period of 30 months.

The Project is located in three districts (Central, Cordillera and Caaguazú), benefiting 11 municipalities (San Lorenzo, Capiatá, Itauguá, Ypacaraí, Caacupé, Eusebio Ayala, Itacurubí de la Cordillera, San José de los Arroyos, Nueva Londres, Coronel Oviedo and Caaguazú). The works include building detours (hereinafter "variants") to the cities of Ypacaraí, Caacupé, Itacurubí de la

¹ National Highway RN-2 starts in San Lorenzo de Asunción (km 13) and ends at the intersection with RN-8 (entrance to Coronel Oviedo). From this point on, the road is renamed Highway RN-7, ending in Ciudad del Este (km 323).

² The section between San Lorenzo and Ypacaraí is the so-called Section 0, which was being completed when this assessment began.

Cordillera, San José de los Arroyos and Coronel Oviedo; an interchange with Highway 8 and viaduct in Coronel Oviedo; two viaducts in Caaguazú; and a trumpet-type grade-separated interchange in Caaguazú. In addition, in the access to the city of Caaguazú, side collector streets are foreseen on both sides of the highway, along with pedestrian sidewalks.

The width of the right of way (RoW) varies from 50 m in RN-2 to 100 m in RN-7. The expansion of Highway RN-2 will use the existing highway platform (two 3.25-meter roads plus two 2.50-meter shoulders), expanding the section to a 21-meter-wide highway platform (four 3.50-meter lanes, a 0.60-meter inner shoulder, a 2.50-meter outer shoulder, and a 0.80-meter central barrier). Where slopes are greater than 3% and in sections where there is a speed reduction for heavy vehicles, a third, slow-transit lane will be built, as noted in Paraguay's Highway Manual. The expansion of Highway RN-7 will consist of the construction of a new highway platform parallel to the existing one, with a 15-meter width consisting of a double 3.50-meter wide roadway, a 1-meter inner shoulder, a 2.50-meter-wide outer shoulder and a 6-meter central separator.

The Project's Direct Area of Influence (hereinafter "the DIA"), defined as a 4-km-wide strip expanded symmetrically along the highway axis, has been divided into five sections: Section 1: Ypacaraí - Eusebio Ayala (38.57 km); Section 2: Eusebio Ayala - San Jose de los Arroyos (31.20 km); Section 3: San José de los Arroyos - Coronel Oviedo (23.70 km); Section 4: Coronel Oviedo - Progressive 155 + 100 (27.90 km); and Section 5 (Progressive 155 + 100 - Caaguazú).

It is anticipated that a worker camp will be built between kilometers 107 and 109.5 for Section 3; a second one at kilometer 139, for Section 4; and a third one at kilometer 156, for Section 5. The construction of each camp shall include a specific EIA.

The Project includes the exploitation of several quarries for basalt extraction: i) Coronel Oviedo (whose environmental license is in process), Caaguazú, and Compañía Costa Jhú Pirayu (the latter two with environmental license); ii) Ecomipa, Talavera, and Ortellado for Section 1; and iii) Caacupé for the Section. Excess material will be disposed of in municipal domestic waste dumps, after evaluating their respective conditions.

The first phase of the Project's Environmental and Social Due Diligence (hereinafter "the ESDD"), performed by IDB Invest with the support of the environmental and social consultant, was carried out on February 19-21, 2018. The second phase was conducted on March 5-7, 2019. In both visits, meetings were held with representatives of the SOE, of the MOPC's Directorate of Social and Environmental Management (hereinafter "the DSEM"), the National Institute of Indigenous Peoples (hereinafter "the NIIP") and the SEAM, as well as with the mayors of the cities affected by the planned detours.

2. Environmental and Social Classification and Rationale

In accordance with IDB Invest's Environmental and Social Sustainability Policy, the Project has been classified as a Category A operation, given that it may generate, among others, the following risks and impacts during its construction works: i) the involuntary resettlement of people currently located on the right of way and at the sites where the variants will be constructed; ii) interference

with pedestrian and vehicular traffic caused by the works; iii) an increase in the probability of road accidents; iv) impacts on air quality due to particulate matter emissions; v) the generation of vibrations and noise; and vi) possible impacts on water, soil and biodiversity due to the exploitation of the quarries, the operation of worker camps, and accidental chemical spills during the construction processes. All these impacts are considered to be of high to medium magnitude and intensity.

The Project has triggered the following Performance Standards (PS): PS1: Environmental and Social Assessment and Management System; PS2: Labor and Working Conditions; PS3: Pollution Prevention and Abatement; PS4: Community Health, Safety, and Security; PS5: Land Acquisition and Involuntary Resettlement; PS6: Biodiversity Conservation and Sustainable Management of Natural Resources; PS8: Cultural Heritage.

3. Environmental and Social Context

National Highways RN-2 and RN-7 comprise a length of 326 km and constitute the main highways that connect the capital, Asunción (512,000 inhabitants according to the 2002 census), with the second-largest city in the country, Ciudad del Este (222,000 inhabitants according to 2002 census). From east to west, the highways reach from Brazil to Argentina, facilitating the connection of the Atlantic and Pacific Oceans. At the district level, the Project affects the Governorates of Central, Cordillera, and Caaguazú. At the municipal level, it involves the municipalities of Ypacaraí, Caacupé, Eusebio Ayala, Itacurubí de la Cordillera, Coronel Oviedo and Caaguazú.³

Both highways are located in an area with a mostly flat terrain, with altitudes ranging from 63 to 318 meters above sea level (masl). The region's average annual temperature is 22°C and its annual rainfall is 1,500 mm, well distributed throughout the year. The landscape of both highways is highly anthropized.

The margins of highways RN-2 and RN-7 are densely populated, with a large number of small and medium-sized businesses (shops, restaurants, grocery, handicrafts, and furniture stores, service stations, etc.), especially in areas close to the cities, such as Ypacaraí, Caacupé, Itacurubí, San José, Coronel Oviedo and Caaguazú.

The highways do not cross any protected areas or critical habitats.

³ The improvement works of the so-called Section 0 of Highway 2 are not considered in this report. These works were performed by the SOE prior to the production of this report, and benefited the municipalities of San Lorenzo, Capiatá, Itauguá and Ypacaraí.

4. Environmental Risks and Impacts and Proposed Mitigation and Compensation Measures

4.1 Assessment and Management of Environmental and Social Risks and Impacts

4.1.a Environmental and Social Management System

The SOE has adopted the Sacyr Group's environmental, social, and health and safety management system, which has been certified under international standards (ISO 9.001, ISO 14.001, OHSAS 18.001).

The SOE will prepare and implement an Integrated Environmental, Social, and Health and Safety Management System (hereinafter “the Integrated System” or the “IS”), which will be structured as per the requirements of PS1 and incorporate the Programs and Components of the Environmental and Social Management Plan included in the EIA to its operating procedures.⁴

In the event of a significant change in the Project design, the SOE shall modify the EMP and conduct a hydrogeological study to outrule any impacts on the two water upwellings located in the area of influence of the Itacurubí variant. To date, although the final design of the highway is not complete, the hydrogeological study has already been submitted to the DSEM for its review and approval.

The Integrated System will be headed by an Environmental, Social, and Health and Safety Manager dedicated exclusively to the Project, who will report directly to the SOE’s Management, and will represent the latter before the competent local authorities (the MOPC, the SEAM, the NIIP, the Supervision, the municipal authorities, etc.), financing entities, and third parties. The SOE has a Health and Safety professional dedicated exclusively to the Project who will lead the team of health and safety technicians and supervisors during the works⁵; the SOE has incorporated a social specialist with exclusive dedication to lead the social aspects of the Project. It shall also hire the services of an archaeologist in the event of chance finds.

4.1.b Policies

The SOE has adopted the following policies of the Sacyr Group as its own: i) Quality, Environment, and Energy Management; Prevention; Occupational Health and Safety; Road Safety; Prevention of Alcohol, Tobacco and Drug Use in the Workplace; Diversity and Inclusion.

Although the contents of these documents are in line with PS1, the SOE will define an Environmental, Social, and Health and Safety Management Policy specific to the Project that will be consistent with PS1 requirements.

⁴ In this regard, the SOE's Comprehensive Environmental, Social, and Health and Safety Management system would be equivalent to the ESAP (Environmental and Social Management Plan) or the Plan for the Implementation of the Social and Environmental Management Plan (ESMP - Component A - Program A2). The ESAP must be approved by the Project Supervision and by the DSEM of the MOPC.

⁵ At each work site, a health and safety technician, at least two health and safety supervisors and an environmental supervisor will be continuously available.

4.1.c Risk and Impact Identification

The SOE identifies and assesses health and safety risks through the Hazard Identification, Risk Assessment and Control Determination Matrix. In addition, before the start of a new task, it performs a Safe Work Analysis to detect the possible risks inherent to the task to be performed.

To streamline the collection and assessment of environmental and health and safety aspects, in accordance with PS1, the SOE will prepare a matrix to identify and assess environmental and social aspects, and a matrix to identify and assess occupational risks. Both matrices, which will cover all the facilities and activities of the SOE's personnel and its contractors, will also consider the specifications to identify and assess the aspects and risks stated in PS1.

The preliminary identification of environmental and social aspects takes into account the results of the Project's Environmental Impact Assessment, the conclusions of the SAPRDS and the requirements of the PSs applicable to the Project. The social aspects that refer to the communities located in the vicinity of the construction works will be included in the preparation of the respective matrix.

4.1.c.i Direct and indirect risks and impacts

The most relevant direct impacts are those of a social nature, which are associated with the involuntary resettlement of people required for the right of way easement and to build the variants. Likewise, the environmental and social impacts and health and safety risks associated with construction works (traffic interference, risk of road accidents, risk of soil and water contamination, noise generation, vibrations, suspended dust particles, etc.), are considered to be of medium intensity. The SOE will manage the direct risks and impacts as per the requirements of the EIA, by implementing the ESMP, performing the Land Registry, and implementing the SAPRDS and the Supplementary Resettlement Plan⁶ (hereinafter "the SRP").

Since the Project includes the improvement of a highway within its original corridor, a Cumulative Impact Study has not been performed yet. For the same reason, it has no formal alternatives analysis study, except for the bypasses to Ypacaraí, Caacupé, Itacurubí of the Cordillera, San José de los Arroyos and Coronel Oviedo, where an analysis of different layouts has been carried out to the greatest possible extent for the purpose of reducing resettlement instances.

4.1.d Management Programs

The SOE's Integrated System includes operating procedures to manage the possible environmental impacts and health and safety risks inherent to infrastructure works, and to comply with the provisions of the Project's ESMP as set forth in the EIA. These programs will be incorporated to the Integrated system as operational procedures, so that their implementation, monitoring, control, and recording are carried out using the Integrated system's management tools. To mitigate the impacts associated with the construction works, the EMP sets out that the SOE should produce and implement the ESMP, whose content is summarized below:

⁶ Further details are found in Section 4.5 of this document.

- Component A: Socio-Environmental Management System: i) Structure of the Socio-Environmental Management System; ii) Implementation Plan of the ESMP or Socio-Environmental Action Plan (ESAP).
- Component B: Social Management Program: i) Information to the community; ii) Dissemination (communication and consultation); iii) Restitution of affected goods; iv) Grievance response and citizen participation; v) Employment of local labor; vi) Training of the construction personnel.
- Component C: Biodiversity Management (Plant cover and landscaping): i) Impact on Trees; ii) Forest Eco-Compensation; iii) Management of trees not affected by the works.
- Component D: Environmental Management of construction activities: i) Demolitions, debris, and surplus construction materials management; storage and handling of construction materials; ii) Worker camps and temporary facilities management; iii) Machinery, equipment, and transportation management; iv) Liquid waste, fuels, oils, and chemical substances management; v) Workplace cleanliness management; vi) Surface water management; vii) Atmospheric emissions and noise control; viii) Public service networks management.
- Component E: Industrial Safety and Occupational Health: i) Industrial Safety and Occupational Health; ii) Contingency Plan.
- Component F: Traffic Signage and Management.

4.1.e Organizational Capacities and Competences

The SOE has an adequate environmental and social management team to comply with the requirements of the EIA and with the Performance Standards applicable to the Project.

As determined by the SOE's Management System, during the construction works, workers will receive specific theoretical and practical training according to their job function and shall adapt to possible changes in safety conditions. The system also specifies that every worker, upon being hired, shall be given an induction course and receive specific training when their tasks must be performed in high-risk areas (lifting device operators, excavation, embankment and work at height personnel).

The SOE will define the contents of the Annual Training Program in environmental, social, and health and safety matters, considering the previously identified significant impacts and risks, the results of the oversight visits to the works, the possible changes in technology, and the requirements of the B6 Program of the ESMP. The program will include aspects relevant to the health and safety of the community potentially affected by the construction works. Particular focus shall be given to the safe driving of vehicles and machinery within and outside the scope of construction works by in-house and contracted personnel.

4.1.f Emergency Preparedness and Response

Emergency management is included as a component of the Preventive Management Plan (Integrated system document). Overall, its content is considered adequate; however, specific plans should be prepared according to the nature of the possible emergency scenarios.

The SOE will prepare an Emergency Prevention and Response Plan for each site or facility that conforms an operating unit (e.g. work site, quarry, large-scale civil works, etc.), which identifies: i) site-specific emergency scenarios (spills on the ground or water, explosions, fires, floods or landslides in the event of intense rains, rioting, etc.); ii) the corresponding actions to prevent and address the emergency; iii) the personnel's responsibilities in relation to the plan (including on holidays and weekends); iv) the identification of third parties that could become involved during an emergency (hospitals, fire fighters, police, civil defense, etc.); and v) the communications and decision-making flowchart. When appropriate, an evacuation plan will be prepared, with a sketch that indicates i) the meeting points; ii) the emergency exits; and iii) the fire extinguishing equipment and facilities, flammable material storage areas, power cut-off points, etc. The personnel's performance in the scenarios defined in the plans will be the subject of continuous and random drills.

The Occupational Health and Safety Management System of the SOE, which includes templates for recording accident investigations, establishes that incidents or quasi-accidents must be included in the monthly report, along with accident statistics, and that serious and fatal accidents must be communicated immediately to the Head of Health and Safety, who shall submit a preliminary report before 12 hours have elapsed. On the other hand, accident management is included as an emergency event (the actions to be followed in the Emergency Manual are specified).

The SOE will prepare and implement a specific personal and environmental Accident Management procedure, applicable to both its in-house and contracted personnel. Said procedure shall describe the actions to be taken immediately after an accident has occurred, how to record the nature and seriousness of the accident, the processing of the key legal aspects and the templates that must be used to prepare the accident investigation report, as well as to identify the necessary preventive or corrective measures to avoid any future recurrences.

As stated in the SOE's Prevention Management Plan, the management system includes a special regulation for contractors and subcontractors, which the SOE delivers to its collaborating companies. The regulation states that the SOE shall inform contractors about the risks inherent to the work front that could affect the activities they develop. The SOE will update the Special Regulation for Contractors and Subcontractors, including: i) the SOE's Environmental, Social, Health and Safety Policy and Human Resources Policy, prepared specifically for the Project; ii) Safe working procedures of the Integrated system; iv) water, power, and waste management, in accordance with the provisions of the ESMP; v) Requirements of the Road Safety Plan as per the requirements of the ESMP; vi) Training requirements, including ESMP requirements; vii) Rules of good coexistence with the community, in line with the requirements of the ESMP.

4.1.g Monitoring and Evaluation

Compliance with the execution of the components and programs of the ESMP will be subject to monitoring by the inspection authorities and the DSEM - MOPC, either directly or through periodic meetings of the Site Environmental Partner Committee (comprising the SOE, the inspection authorities, and the DSEM - MOPC). The authorities will transform the ESMP results into monthly reports and send them to the DSEM, while the SOE will prepare monthly reports on environmental and social compliance that it will send to the inspection authorities. Representatives of the Ministry of Environment and Sustainable Development (MADES, for its acronym in Spanish) will make random visits to the works in order to verify compliance with environmental legal requirements; The Directorate of Inspection and Oversight of the Ministry of Labor, Employment and Social Security will carry out unscheduled inspections of the work fronts.

In addition to regular oversight through on-site visits, IDB Invest will continuously monitor the implementation of the SAPRDS and the SRP by hiring a social expert who will act in coordination with the SOE's social team and who, among other functions, will assess the monthly progress reports on the implementation of the SRP and participate in the meetings of the Socio-Environmental Work Committee as much as possible.

In terms of health and safety, in compliance with Decree 14390/92, the SOE, as the main contractor company, shall form the Internal Commission for the Prevention of Accidents. It shall include a representative from Management, an occupational doctor, a safety and health engineer or technician, and a workers' representative. The members of the Commission shall meet on a monthly basis and summarize the results of the meetings and field tasks in a report that will be sent to the SOE's Management.

Notwithstanding any others that may become necessary due to the identification of possible risks and impacts during the works, the SOE will prepare and implement an Environmental, Social, and Health and Safety Monitoring Plan that will include the following parameters: i) environmental noise level; ii) liquid effluent quality; iii) number of received and resolved grievances; and iv) topics and number of training courses imparted (including number of people trained).

In terms of occupational health and safety, the following will be monitored: (i) noise at work levels; (ii) drinking water quality; (iii) Frequency and Severity rates of personal accidents for in-house and contracted personnel; (iv) ground resistance of electrical boards; and (v) records of incidents and unsafe working conditions detected during regular inspection visits to work fronts.

Follow-up will include an analysis of possible root causes and the preventive and/or mitigation measures proposed for events in which the measured values exceed the acceptable threshold values set forth in the legislation in force or the applicable IFC guidelines.

4.1.h Participation of Social Actors

The EIA was the subject of a public hearing on October 20, 2017, in the city of Caaguazú. However, the analysis of the minutes of this hearing allows us to conclude that the event in question did not describe the measures foreseen in the EIA to avoid or minimize the risks and adverse social impacts

that the Project could generate and that, therefore, it was not possible to fully gather the attendees' related concerns.

During the feasibility study and planning phases of the Project, the MOPC carried out dissemination and public consultation activities in the headquarters of the local authorities along the Project's alignment⁷, which included the participation of mayors, administrative officials, the local population, NGO representatives and representatives of the MOPC, among others.

As part of the implementation of the MOPC's SAPRDS, the consultant contracted for its design and implementation has proceeded to identify each of the communities directly affected by the works and inform them about the nature, scope and impacts of the Project, and about the need to release the right of way. The activities framed in the SAPRDS are preliminary to performing the Land Registry, and their results are essential for the MOPC to define compensation measures for the population directly affected by the Project.

In September and October 2017, the company contracted by the MOPC to perform the Land Registry and the design and implementation of the SAPRDS held events to disseminate and promote the Project in Ypacaraí, Caacupé, Eusebio Ayala, Itacurubí de la Cordillera, San José de los Arroyos, Coronel Oviedo and Caaguazú, where its objectives, scope and general design were explained. In addition, from December 2017 to February 2018, the company promoted the Project along the entire length of its layout, holding meetings with community leaders, representatives of local organizations, and members of the affected communities, to explain the Project's objectives.

4.1.h.i Dissemination of information

In faithful compliance with the provisions of the ESMP for the construction phase, the SOE will implement information and participation mechanisms for the affected communities, coordinate actions with local institutions to reduce the impacts and risks of the construction works, implement mechanisms to receive and resolve grievances, recognize the previous status of properties that could be affected by the construction works, and promote the employment of local labor. To this end, as of February 2019, it has opened a public assistance office in the city of Caaguazú, and has adopted a mechanism for addressing complaints and grievances whose content is considered relevant.

4.1.h.ii Responsibilities of the private sector as part of a government-led stakeholder participation process

The first phase of the ESDD identified certain aspects of the resettlement process designed by the MOPC that needed to be supplemented in order to comply with PS5. To this end, IDB Invest requested the SOE to supplement the SAPRDS with an SRP, which was accepted by the MOPC in November 2018 and included as part of Bankability Addendum No. 1 to the PPP Agreement, through the so-called Supplementary Agreement.

⁷ These activities took place in April 2013 (in the governorate of Caacupé and in the municipalities of Eusebio Ayala and Itacurubí) and in April 2014 (in the governorate of Coronel Oviedo and in the municipalities of San José de los Arroyos, Caaguazú and in the Juan M. Frutos University Campus).

4.2 Labor and Working conditions

4.2.a Working Conditions and Management of Labor Relations

For the start of construction of Sections 3, 4 and 5, Rutas del Este has 125 in-house employees, 319 indirect cost (administrative) employees, 669 direct cost (hired for the construction of each section) and 800 contracted employees (outsourced); it plans to employ 179 heavy machinery units and also install an asphalt plant, an aggregate crushing plant and a quarry excavator. The Rutas del Este Health and Safety Study and the Sacyr Prevention Management Plan, both of which were adopted by the SOE, define the activities to be executed by the latter as the Project Owner in terms of its duties toward its workers, in fulfillment of the legal requirements.⁸

The SOE has safe work instructions designed to achieve adequate occupational health and safety conditions at all times. By way of example, these instructions include: i) proper use of personal protective equipment; ii) control of the condition and operation of trucks and construction machinery; iii) safe working instructions for manual and electrical work; iv) traffic and pedestrian safety; v) traffic control at construction sites; vi) fuel storage; vii) lighting, noise, and vibration management; and viii) provisions for lifting loads, executing demolitions, handling loads, felling trees, handling machinery and trucks safely, and handling scaffolding and ladders, among others. The content of the documents is considered adequate. Likewise, the SOE will include the management measures specified in Program E1 of the ESMP (Industrial Safety and Occupational Health) in its management. The SOE will proceed to edit the work instructions to make them available in the executable procedures template (specifying the Purpose, Scope, Definitions, Responsibilities, Procedure itself and Preventive Measures).

4.2.a.i Human Resources Policies and Procedures

The SOE has adopted a Human Resources Policy that promotes equal opportunities, work-life balance, and non-discrimination. Notwithstanding the latter, and in accordance with the requirements of PS2, the SOE will adopt a specific Human Resources Policy for the Project that: i) meets all the requirements of PS2; ii) is applicable to in-house and contracted personnel; and iii) expressly prohibits child labor and forced labor.

4.2.a.ii Workforce reduction

Prior to the completion of the construction phase, SOE will conduct an analysis of alternatives to workforce reduction (such as employee skills development programs) and will develop and implement a workforce reduction plan to mitigate the adverse impacts of worker layoffs that fulfills all applicable legal and contractual requirements.

4.2.a.iii Grievance Mechanism

The SOE has a procedure to address its workers' grievances and claims. Although in general terms its content is adequate, it should specifically state its applicability to both in-house and contracted

⁸ Labor Code (Law 729/61) and General Technical Regulation on Occupational Safety, Hygiene and Medicine (Decree 14,390/92).

personnel and include the possibility of receiving grievances or claims anonymously. The procedure will define the allocation of responsibilities and evaluation and response times for employee communications.

4.2.b Workforce Protection

All workers employed by the Project shall undergo medical check-ups before joining the company and every 12 months thereafter; in the case of high-risk activities, the regular check-ups shall be specific and performed every 6 months. The SOE will provide an occupational health service that will be responsible, among other functions, for programming and implementing plans to protect workers' health, conducting health investigations in the work place, conducting mandatory regular medical examinations and those required for admission, caring for workers exposed to high occupational risks, as well as preparing and maintaining records of workers' health according to models provided by the Ministry of Public Health.

The SOE shall keep a monthly and a cumulative annual record of the Occupational Accident Rates (at least the Severity Rate and Frequency Rate) calculated for both in-house and contracted personnel. Meta values will be defined for selected indicators.

4.2.c Supply Chain

The SOE will extract materials from quarries with an approved EIA and their corresponding environmental clearance. Likewise, the extraction and transport operations of the materials sourced from the quarries, as well as the transport of the supplies required for the Project, will be carried out by duly authorized companies. In fulfillment of the ESMP, the SOE shall integrate the local workforce (living within the direct area of influence) to its staff of qualified and unqualified personnel, also incorporating women to the work teams.

4.3 Resource Efficiency and Pollution Prevention

The SOE will manage solid waste (generated by demolitions, construction waste and household waste), as well as all liquid waste by implementing the programs contained in the ESMP.

The SOE will implement awareness programs for in-house and contractor personnel to make rational use of water and electricity. It will incorporate waste management procedures using separation at source practices according to type, promoting recycling and reuse wherever possible.

The SOE will prepare a Greenhouse Gas Inventory for the construction stage and will submit annual emission estimates for the following year, as well as their calculation for the previous year.

In accordance with the legal requirements in force and the provisions of PS3, the SOE will produce a Hazardous Substance Management Procedure that will prohibit the Project from acquiring or using pesticides or agrochemicals that include any Class Ia (extremely hazardous) or Ib (highly hazardous) component as per the WHO classification.

4.4 Community Health and Safety

4.4.a Community Health and Safety

The SOE has developed a Grievance and Inquiry Response Manual whereby any third-party grievance or concern is systematically addressed, ensuring that the inquiry is properly analyzed and answered within a set timeframe. Its contents are considered adequate.

The ESMP foresees minimizing the effects on the population that could cause the interruption of public services (electricity, telephony, drinking water, etc.) due to the construction works.

The SOE will produce and implement a Road Safety Plan aimed at minimizing the effects of the works on the local communities, including: i) the identification, with the endorsement of the local authorities, of the routes and times when trucks and machinery required for the construction works may circulate, in order to minimize the possible impacts on the safety and quality of life of the population; ii) the allocation of SOE personnel to direct vehicular traffic in detours or roads with restricted circulation; iii) instructions to in-house and contracted truck drivers on the driving modality that should be applied when traveling through socially sensitive areas, and the permitted and prohibited actions; iv) the authorized manner of washing tires at the exit of workplaces or quarries, especially when mud is present, to avoid depositing mud on the streets or roads; and v) continuous control of the conservation and operational status of the vehicles required for the works and the application of corrective measures, if applicable

4.4.b Security personnel

The security companies that will be hired by the SOE to perform basic surveillance tasks will be trained and cleared by the relevant authorities. Such personnel will not be armed and will follow a Code of Conduct that will regulate their behavior with the surrounding communities.

4.5 Land Acquisition and Involuntary Resettlement

4.5.a General aspects

The Project will require the easement of the right of way, currently occupied by various facilities (fixed points of sale, family homes, unoccupied or abandoned buildings and various institutions such as public entities, religious, health, and education centers, among others). For this purpose, the MOPC has hired the services of a consulting firm⁹ and has designed a process based on the Expropriation Law (Law No. 5389/15) that comprises two phases: i) Phase A: conducting a census to prepare the land registry and value the properties that will be affected by the release of the right of way; and ii) Phase B: prepare and execute the SAPRDS.

⁹ As a result of an international public tender process, the MOPC has assigned the execution of the Land Registry and the preparation and implementation of the Social Action Plan for the Release of the Domain Strip (SAPRDS) to the consulting firm ICATECSI. The SAPRDS sets forth the actions to diminish and/or compensate the socioeconomic effects caused by the possible displacement and/or affectation of people or productive units located in the domain strip of highways 2 and 7 between PK 40+500 (detour from San Bernardino to the exit of the town of Ypacaraí) and 183+05 (at the exit of the town of Caaguazú and the beginning of the Tapé Porá concession).

Although the final number and socioeconomic characterization of the people who will be displaced by the easement of the Project's right of way (including its variants) are still being analyzed by the DSEM, the results of the census performed by the MOPC¹⁰ reveal the existence of 978 facilities in the right of ways of Sections 1 to 5. According to the DSEM (March 2019) there would be 330 additional facilities in variants 2 to 5, excluding the Ypacaraí bypass (Variant 1). These preliminary results also indicate that the greatest number of appropriations would take place in Section 1 and Section 5, and that more than half of the affected population is located in Section 1.

However, the MOPC's land acquisition schedule, included in the Addendum to the original PPP Agreement between the MOPC and the SOE, sets the deadlines for the release of land to the SOE as follows: i) for the construction of Sections 3, 4 and 5 on April 30, 2019; ii) for Section 2 (including the Caacupé Variant) on October 31, 2019¹¹; and iii) for Section 1 (including the Ypacaraí Variant) on February 29, 2020. That said, the start date of the works for Sections 3, 4 and 5 would be July 31, 2019.

4.5.a.i Project Design

The bypasses or variants for the cities of Ypacaraí, Caacupé, Itacurubí de la Cordillera, San José de los Arroyos and Coronel Oviedo are necessary to prevent the highways from passing through the center of these towns. The variants that will involve the greatest displacement of people are, due to population density, those of Ypacaraí (33% of the population identified in the variants) and Caaguazú (18%), both belonging to Section 1. Although the census of the variants' socioeconomic units has already been completed by the MOPC, its final results are still being processed and are as of yet unavailable.

4.5.a.ii Compensation and benefits for displaced persons

The strategy adopted through the SAPRDS consists of considering each appropriation on a case-by-case basis, taking into account the socioeconomic conditions of each person, family or group and applying preset vulnerability criteria, in order to allocate fair monetary compensation.

At the request of IDB Invest, the SOE has contracted an independent social consulting service to identify and evaluate possible social impacts not included or not adequately assessed in the SAPRDS, and to elaborate the complementary measures that will enable fulfilling the requirements of PS5.

As a result of this effort, the SOE has prepared and proposed to the MOPC the so-called Supplementary Resettlement Plan (hereinafter SRP), which was accepted by the MOPC and incorporated into the Addendum through the document titled Supplementary Agreement.

The mitigation and compensation measures of the SRP complement those provided in the SAPRDS (MOPC) for the stage prior to the works, as well as the social management measures foreseen in the Environmental and Social Management Plan (ESMP) that the SOE should prepare for the

¹⁰ Published in March 2018.

¹¹ The order to start the works for this section of the highway will be finalized on July 31, 2019.

construction phase.¹² The SRP provides that the MOPC will lead the easement of the right of way, while the SOE will coordinate and execute specific and supplementary actions¹³ to the SAPRDS, whose expenses shall be borne by the Project.

The incorporation of the SRP to the PPP Agreement has allowed the traders affected by the Project to choose the relocation of their economic units instead of opting for compensation. As provided for in the Supplementary Agreement, during the phase prior to the release of the right of way, the SOE is responsible for: i) the design, construction, conditioning, and urbanization of the areas under municipal management¹⁴ of affected traders; ii) the relocation of fixed points of sale, providing logistical support during the relocation process for vulnerable social or economic units, and iii) the preparation and implementation of a grievance and claims response mechanism. For its part, the MOPC will be responsible for: i) entering into agreements with intendants and affected parties to define the location of areas under municipal management; ii) releasing land for construction and quantifying the affected parties who will be displaced, in order to allow the SOE to design the areas under municipal management; and iii) agree on and quantify the affected parties who should be displaced.¹⁵

During the construction phase, the SOE will also be responsible for: i) implementing an assistance program for vulnerable social or economic units that, while not located on the right of way, may suffer some effects during the construction or operation phases; and ii) provide support to relocated units. To this end, it will design a support and assistance program to ensure the restoration of livelihoods; provide technical and business training to the affected population so that they may access new employment opportunities both in the affected area and in the construction sites; and implement a communications (dissemination, consultation, grievance and complaints reception and resolution) plan.

Given the census results and the socioeconomic characterization of the population affected by the construction of variants are currently being processed by the MOPC, the SRP determines actions to be implemented when such information becomes available. These actions include: i) characterizing and assessing the impacts on the population to be displaced due to the variants; ii) characterizing and assessing the impacts on the population that has been isolated due to the construction of the variants (this has been scheduled to take place up to 1 year before each variant becomes operational); and iii) characterizing and assessing the impacts on the population located in the immediate vicinity of the highways but outside the right of way (scheduled to take place up to 1 year before the highway becomes operational).

¹² The structure and content of the ESMP for the construction phase are specified in Section 8.1 of the Project's EIA.

¹³ The compensation measures considered in the SAPRDS shall be adopted accordingly with the degree of vulnerability of the affected persons: i) for the highly vulnerable, monetary compensation for their losses, support for relocation in the event of displacement, legal support and support for registration certification procedures, as well as advice for investing the compensation; for moderately vulnerable people, monetary compensation for their losses, legal support and registration certification procedures, as well as advice for investing the compensation; for people with low vulnerability, monetary compensation for their losses and advice for investing the compensation.

¹⁴ The areas under municipal management are owned by the State and are under municipal control. In order to identify the service area and execute the pre-design and construction of the facilities intended for the traders of Sections 3, 4 and 5 (mainly furniture traders), in December 2018 the SOE signed an agreement with the MOPC and the Municipality of Caaguazú. An analogous agreement for design and construction was signed between the parties in March 2019. These service areas are located on both sides of the highway between kilometers 173 and 174 of Highway 7.

¹⁵ As on March 22, 2019, the MOPC had accounted for 74 relocation cases and 80 compensation cases.

4.6 Biodiversity Conservation and Management of Natural Resources

The Project does not cross protected natural areas or those in the process of becoming so; nor does it affect critical habitats or endemic species. However, in order to preserve the vegetation and prevent unnecessary deforestation, the SOE, following the guidelines set forth in the ESMP and in accordance with the legislation in force, will proceed to remove (and subsequently relocate) trees; it shall also make maximum use of the wood and timber products resulting from this activity. It will also plant trees of adequate species to compensate for the specimens extracted as a result of the Project and ensure that the construction activities do not affect the integrity or phytosanitary status of the specimens that are not extracted.

Also, in compliance with the GETS, the SOE will implement the Environmental Restoration Program for Loan Areas defined in the Project's ESMP. To this end, it will erect forest screens in loan areas in order to mitigate the visual impact and compensate for the affected vegetation, adjust slopes to minimize the possibility of landslides and erosive effects, and install perimeter safety wiring.

4.7 Indigenous Peoples

The Project layout does not cross the lands of indigenous communities. Consequently, there is no need for prior, free and informed consultation under Law 904/81 and NIIP Resolution 2019/10 (both provisions consistent with ILO Convention 169).

The results of the census conducted by the MOPC identify the following indigenous communities in the vicinity of the layout of Highway No. 7: i) the Indigenous community Mandu'ara, located in the district of Caaguazú, in the Walter Insfran Colony at kilometer 174 (23 families); ii) the "El Refugio" Community, located in the Walter Insfran Community of the District of Caaguazú at kilometer 173 (9 families); iii) the Mbya Guaraní Community of the Guayaki Park, located at kilometer 159 (25 families); and iv) the San Isidro Community of Arroyo Guazú, located at kilometer 154 on 101 hectares of land (53 families).

Although these communities will not be directly affected by the planned works, the existence of an improved road could generate some indirect impacts. In this sense, representatives of the MOPC have held informative meetings with these communities to disseminate the nature and scope of the construction activities and to listen to their needs, so that, during the construction phase, the SOE can collaborate, to the extent possible and on a voluntary basis, in addressing some of them. The SOE will also prepare and implement a specific procedure to manage potential impacts caused by the works as well as the personnel's behavior towards indigenous communities, which will include the following measures: i) an exclusive grievance and claims response mechanism for indigenous communities; ii) the appointment of a social expert who will be continuously available to answer any verbal concerns or grievances, and who will follow up on the social aspects involving indigenous communities; iii) the installation of screens to mitigate noise and dust propagation during the construction activities to be developed in areas adjacent to the homes of indigenous populations; and iv) training of in-house and contracted employees on the rules of behavior when interacting with members of indigenous communities.

4.8 Cultural Heritage

The SOE has prepared a guide on how to proceed in the event of chance archaeological finds; however, it does not adequately cover the proper management of the find itself. For this reason, the SOE will prepare a protocol (in the form of a procedure) that will determine the preventive actions and response to possible archaeological finds during the execution of the works, in accordance with the legal requirements in force and consistent with PS8. Such procedure will be mandatory for in-house and contracted personnel.

This way, all personnel working in construction fronts that involve excavations or earthworks shall be regularly trained in the implementation of the procedure. In the event of a chance find, the professional (archaeologist) hired by the SOE will proceed immediately to the site to collaborate with the authorities regarding the actions to be implemented.

With the exception of archaeological chance finds, no cultural heritage components that could be affected by the Project's construction works have been identified.

5. Local Access to Project Documentation

The documentation related to the Project can be accessed at the following link:

<http://www.rutasdeleste.com.py>

6. Environmental and Social Action Plan

6.1 The Project's Environmental and Social Action Plan (ESAP) is summarized below:

PROJECT HIGHWAY 2/7
Environmental and Social Action Plan (ESAP)

No.	Aspect	Action	Product	Due date
PS 1: Assessment and Management of Environmental and Social Risks and Impacts				
1.1	Integrated Environmental, Social, and Health and Safety Management System	1. Prepare and implement a Comprehensive Environmental, Social, and Health and Safety Management System (hereinafter "the Integrated system") that fulfills the requirements of PS1 and that incorporates, in the form of operating procedures, the Components and Programs of the EIA's ESMP	1. Integrated Environmental, Social, and Health and Safety Management System	1. Prior to first disbursement.
1.2	Integrated Environmental, Social, and Health and Safety Management System	1. Hire or appoint an Environmental, Social, and Health and Safety Manager dedicated exclusively to the Project 2. Hire or appoint a Health and Safety professional dedicated exclusively to the Project. 3. Hire or appoint a social specialist dedicated exclusively to the Project to head its social aspects. 4. Hire or appoint safety and environmental supervisors 5. Hire an archaeologist in the event of chance finds	1. Copy of the contract or memorandum appointing the Environmental, Social, and Health and Safety Manager 2. Copy of the contract or memorandum appointing the Health and Safety professional 3. Copy of the contract or memorandum appointing the social specialist 4. Copy of the contracts or memorandums appointing the safety and environmental supervisors 5. Copy of the contract	1. Prior to Financial Closure. 2. Prior to Financial Closure. 3. Prior to Financial Closure. 4. Prior to Financial Closure. 5. Prior to Financial Closure.
1.3	Risk and Impact Identification	1. Prepare a matrix to identify and assess the environmental and social aspects of all the SOE's facilities and the activities of its in-house and contracted personnel. 2. Prepare an occupational risk identification and assessment matrix. Both matrices shall be valid for all the SOE's facilities and the activities of its in-house and contracted personnel. These matrices shall consider the specifications for identifying and assessing the aspects and risks set out in PS1.	1. Environmental and social aspects identification and assessment matrix. 2. Occupational risks identification and assessment matrix.	1. Three months after Financial Closure. 2. Three months after Financial Closure.
1.4	Management Programs	1. Incorporate the ESMP's programs to the Integrated system in the form of operating procedures, so that their implementation, monitoring, control, and recording are carried out by using the Integrated system's management tools.	1. ESMP programs in the form of operating procedures of the Integrated system	1. Four months after the first disbursement.
1.5	Annual Training Program	1. Define the content of the Annual Training Program in environmental, social, and health and safety matters, taking into account the previously identified significant impacts and risks, the results of the work oversight visits, and possible changes in technology. The program will include aspects pertaining to the health and safety of the communities possibly affected by the construction works. Particular focus should be given to the safe driving of vehicles and machinery within and outside the scope of the construction works by both in-house and contracted personnel	1. Annual Training Program	1. Three months after Financial Closure.

No.	Aspect	Action	Product	Due date
1.6	Emergency Prevention and Response Plan	<ol style="list-style-type: none"> 1. Prepare an Emergency Prevention and Response Plan for each site or facility that comprises an operating unit (e.g., work site, quarry, large-scale civil works, etc.), which identifies: i) site-specific emergency scenarios (spills on land or water, explosions, fires, floods, or landslides in the event of heavy rains, rioting, etc.); ii) the corresponding actions to prevent and address the emergency; iii) the responsibilities of the people who will manage the emergency (including during holidays and weekends); iv) external actors possibly involved during an emergency (hospital, fire fighters, police, civil defense, etc.); iv) the communications and decision-making flowchart—when appropriate, an evacuation plan that includes a sketch indicating the meeting points will be prepared; and vi) the location of the emergency exits, fire extinguishing equipment and facilities, flammable tanks, and power cutoff switches, among the most important items. The actions to be taken by the staff in the face of specific scenarios will be the subject of drills that will be carried out every six months. 2. Evaluation of the implementation of the Emergency Prevention and Response Plan for each site or facility that comprises an operating unit 	<ol style="list-style-type: none"> 1. Emergency Prevention and Response Plan. 2. Plan Assessment Reports. 	<ol style="list-style-type: none"> 1. Up to one month after the start of site operations. 2. Semiannually.
1.7	Accident Management	<ol style="list-style-type: none"> 1. Prepare and implement a specific personal and environmental Accident Management procedure, applicable to both in-house and contracted personnel, that includes i) the details of the actions to be taken immediately after an accident has occurred; the recording of the nature and seriousness of the accident; iii) the processing of the fundamental legal aspects; iv) the templates to be used to prepare the accident investigation report and identify the preventive and/or corrective measures to avoid recurrence. 	<ol style="list-style-type: none"> 1. Accident Management procedure 	<ol style="list-style-type: none"> 1. Up to two months after Financial Closure.
1.8	Contractor and Subcontractor Management	<ol style="list-style-type: none"> 1. Update the Special Regulations for Contractor and Subcontractor Companies so that it includes provisions in order for them to align with: i) the Environmental, Social, Health and Safety, and Human Resources policies of the SOE prepared specifically for the Project; ii) the safe working procedures of the Integrated system; iii) the water, power, and waste management procedures, as specified by the ESMP; iv) the requirements of the Road Safety Plan defined in the ESMP; v) the training requirements considered in the ESMP; and vi) the rules of good coexistence with the community in the context of the Social Management Program of the ESMP. 	<ol style="list-style-type: none"> 1. Special Regulations for Contractor and Subcontractor Companies 	<ol style="list-style-type: none"> 1. Up to three months after Financial Closure.
1.9	Prepare and implement an Environmental, Social, and Health and Safety Monitoring	<ol style="list-style-type: none"> 2. Prepare and implement an Environmental, Social, and Health and Safety Monitoring Plan that will include monitoring the following parameters: i) the environmental noise level according to the modality and frequency defined in the ESMP; ii) liquid effluents quality; iii) number of grievances received and resolved; iv) topics and number of training courses imparted (including number of people trained); v) noise at work levels; vi) drinking water quality; vii) monthly and cumulative annual Frequency and Severity Rates (of personal accidents for in-house and contracted personnel), ground resistance of electrical panels, records of incidents and unsafe working conditions detected in the regular oversight visits to the work fronts 	<ol style="list-style-type: none"> 1. Environmental, Social, and Health and Safety Monitoring Plan 	<ol style="list-style-type: none"> 1. Up to four months after Financial Closure.
PS 2: Labor and Working conditions				

No.	Aspect	Action	Product	Due date
2.1	Workplace risk management	1. Adapt the work instructions to make them available in the executable procedures template (specifying the Purpose, Scope, Definitions, Responsibilities, Procedure itself and Preventive Measures).	1. Workplace risk management Procedures	1. Up to five months after Financial Closure.
2.2	Human Resources Principles	1. Prepare a Project-specific Human Resources Policy to be applied to in-house and contracted personnel, in accordance with PS2.	1. Human Resources Policy	1. Up to three months after Financial Closure.
2.3	Workforce reduction	1. Develop and implement a workforce reduction plan to mitigate the adverse impacts of worker layoffs that complies with all applicable legal and contractual requirements.	1. Workforce reduction Plan	1. 6 months prior to finalizing the construction phase of the Project.
2.4	Grievance mechanism	1. Prepare and adopt a procedure that includes a mechanism to receive and resolve the grievances, claims or suggestions of any in-house or contracted employee, allowing for an anonymous modality. The procedure will define the allocation of responsibilities and evaluation and response times for employee communications.	1. Grievance mechanism Procedure.	1. Up to two months after Financial Closure.
PS 3: Resource Efficiency and Pollution Prevention				
3.1	Resource Efficiency	1. Implement awareness programs for in-house and contractor personnel to make rational use of water and electricity. 2. Incorporate waste management procedures using separation at source practices according to type, promoting recycling and reuse wherever possible.	1. Awareness programs on the rational use of water and electricity 2. Procedures for separating waste at source. Promotion of recycling and reuse.	1. Up to four months after Financial Closure. 2. Up to four months after Financial Closure.
3.2	Greenhouse gases	1. Submit greenhouse gas emissions calculations for the past year. 2. Estimate greenhouse gas emissions for the coming year.	1. Greenhouse gas emissions calculations. 2. Estimation of Greenhouse gas emissions.	1. Up to 2 months following the end of the year in question. 2. Up to 2 months prior to the end of the year in question.
3.3	Harmful substances management	1. Prepare a Hazardous Substances Management Procedure in accordance with the legal requirements in force and those arising from PS3 that includes prohibiting the purchase or use in the Project of pesticides or agrochemicals that include any Class Ia (extremely hazardous) or Ib (highly hazardous) component as per the WHO classification.	1. Hazardous materials management procedure	1. Up to four months after Financial Closure.
PS 4: Community Health and Safety				
4.1	Road Safety	1. Produce and implement a Road Safety Plan in line with the provisions of the ESMP aimed at minimizing the impacts of the works on the local community, which includes: i) the identification, with the endorsement of the local authorities, of the routes and times when trucks and machinery required for the construction works may circulate, in order to minimize the possible impacts on the safety and quality of life of the population; ii) the allocation of SOE personnel to direct vehicular traffic in detours or roads with restricted circulation; iii) instructions to in-house and contracted truck drivers on the driving modality that should be applied when traveling through socially sensitive areas, and the permitted and prohibited actions; iv) provisions for	1. Road Safety Plan	1. Up to four months after Financial Closure.

No.	Aspect	Action	Product	Due date
		washing tires at the exit of workplaces or quarries, especially when mud is present, to avoid depositing mud on the streets or roads; and v) the continuous control of the conservation and operational status of the vehicles required for the works and the application of corrective measures, if applicable		
PS 7: Indigenous Peoples				
7.1	Relationship processes with Indigenous communities	1. Prepare and implement a specific procedure to manage possible impacts caused by the works and the personnel's behavior towards indigenous communities, which contains: i) an exclusive grievance and claims response mechanism for indigenous communities; ii) the appointment of a dedicated social expert to follow up on the social aspects involving indigenous communities, who will be continuously available to answer any verbal concerns or grievances; iii) if necessary, the installation of screens to mitigate noise and dust propagation during construction activities in areas adjacent to the homes of indigenous populations; and iv) training of in-house and contracted employees on the rules of behavior when interacting with members of indigenous communities.	1. Management Procedure to manage possible impacts towards indigenous communities.	1. Up to two months after Financial Closure.
PS 8: Cultural Heritage				
8.1	Archaeological chance find	1. Prepare a chance find protocol whose fulfillment will be mandatory for all in-house and contracted personnel, in line with the provisions of the legislation in force and PS8. 2. Develop and implement a training plan for managing chance finds for all personnel working in construction fronts that involve excavations or earthworks.	1. Archaeological chance-find management procedure. 2. Chance find training program.	1. Up to five months after Financial Closure. 2. Up to five months after Financial Closure.