EXHIBIT 06

SERVICES RELATED TO CONSERVATION FUNCTIONS

SPONSORED CONCESSION OF PUBLIC SERVICES FOR CONSTRUCTION, OPERATION, MAINTENANCE AND INVESTMENTS NECESSARY FOR THE EXPLORATION OF THE SANTOS-GUARUJÁ IMMERSED TUNNEL

For the execution of any services specified in this EXHIBIT that require the presentation of engineering projects, these shall be entered into SISPROJ. The specifications of this system are presented in APPENDIX C of the CONTRACT.

The inclusion of new investments and the details of the relevant activities, related to the functions specified in this EXHIBIT, shall be registered and made available in the SISDEMANDA system, according to the rules established in the CONTRACT and, especially in accordance with the processing described in APPENDIX C, observing the rules applicable to ORDINARY REVISIONS.

1. ROUTINE CONSERVATION

For services defined as routine maintenance, the deadlines and standards defined in this chapter shall be effective after the receipt of the IMPLEMENTATION WORKS by the REGULATORY AUTHORITY.

1.1. Basic Concepts

1.1.1. Conservation/routine maintenance

Set of services that are performed in the INTERCONNECTION SYSTEM, according to pre-established standards or levels, with the purpose of preserving investments, ensuring traffic safety and USER comfort, in addition to maintaining the rational and economic flow of vehicles.

1.1.2. Planning

Conservation/routine maintenance of the INTERCONNECTION SYSTEM is a basic function of its operation. Conservation/maintenance requires that, constantly, during the CONCESSION TERM, services are performed that require a wide range of labor resources, equipment, vehicles, materials and tools.

In order to manage conservation/maintenance efficiently and economically, the CONCESSIONAIRE shall have an information and management system, the essential components of which are highlighted below, as per APPENDIX C:

(a) road inventory, which identifies and quantifies all the essential elements of the INTERCONNECTION SYSTEM that generate conservation/maintenance services;

(b) conservation/maintenance standards;

(c) identification of the conservation/maintenance services required to maintain the elements at a level appropriate to the quality standards, reference tables, indexes and standards in force;

(d) annual work program; and

(e) computerized reports, for analysis of efficiency and costs at various management levels.

Ultimately, these components contribute to ensuring that conservation/maintenance activities punctually comply with the results of the best combination of planning and allocated resources.

1.1.3. Road inventory

The road inventory is the quantification, survey and registration of the INTERCONNECTION SYSTEM, including, but not limited to, the following elements: embankment and soil containment, pavement, specific special structures, current special structures, surface and deep drainage, vegetation covering, road containment devices, horizontal and vertical signaling (ground and aerial), safety and traffic control equipment, fences, road lighting, public utilities, operational and support buildings and yards.

The road inventory shall be delivered according to the deadline set out in the table in item 6 and shall be updated monthly and be available for consultation at any time, so as to allow its transfer through the communication channels established by the REGULATORY AUTHORITY whenever it deems it convenient and in accordance with APPENDIX C.

1.1.3.1 Georeferenced video-recording survey

The CONCESSIONAIRE shall make available to the GRANTING AUTHORITY a video-recording survey of the INTERCONNECTION SYSTEM, covering the pavement and other elements of the INTERCONNECTION SYSTEM, such as: geometry, signaling, drainage, slopes, OAEs, walkways, etc. One (1) copy on digital media of the results of the survey carried out shall be provided to the REGULATORY AUTHORITY.

1.1.3.2 Initial topographic survey of the INTERCONNECTION SYSTEM

In order to provide further detailing for the road inventory, a topographic survey of the INTERCONNECTION SYSTEM shall be carried out.

The topographic survey shall include:

- surveying and processing of the point cloud of the runway platform, so that it is possible to detail slopes, steps and drainage and safety elements;
- the surveys shall be processed using the UTM - Universal Transverse Mercator system, SIRGAS2000 base, as a reference;
- the current standards of the DER/SP and REGULATORY AUTHORITY design rules and instructions shall be observed;
- drawings in dwg format or equivalent shall be generated in the current standards of the DER/SP and REGULATORY AUTHORITY design rules and instructions, as well as a DTM (digital terrain model) in dwg format or equivalent;
- from this survey, a register of OAEs and OACs shall also be generated, containing, at least, the location, type and dimensions of each of the elements. This information shall be entered into the SIR. This register shall be updated when new devices are implemented;
- at the end of the deadlines established for the surveys, a copy of the products shall be made available to the REGULATORY AUTHORITY in digital format, preferably through SISPROJ, from its implementation by the CONCESSIONAIRE; and
- at the end of each intervention carried out by the CONCESSIONAIRE, or when requested by the REGULATORY AUTHORITY, the topographic surveys shall be duly updated when preparing the as-built documentation, in accordance with the rules contained in APPENDIX E.

1.1.3.3 Integrated Digital Model of the INTERCONNECTION SYSTEM

The CONCESSIONAIRE shall generate the integrated digital model based on BIM modeling/methodology concepts, in accordance with current standards and best practice manuals. This model shall contain a segregation of elements that allows the management of the CONCESSION's assets, as well as the management and visualization of the road registry and other elements of the INTERCONNECTION SYSTEM. The level of development (LOD) of the model to be generated will depend on the level of information required by the REGULATORY AUTHORITY for management purposes (network level) and will be defined by the technical teams of the REGULATORY AUTHORITY in a specific Ordinance.

The MDSR shall be used, as of its development, to manage the CONCESSION assets and integrate with other electronic management systems provided for in the CONCESSION, especially SISGIS.

To comply with this obligation, the CONCESSIONAIRE shall prepare and submit to the REGULATORY AUTHORITY an action plan, containing a schedule of the phases of preparation and implementation of the program.

The schedule shall include all phases of implementation of the program to be completed by the deadline defined in item 6 of this EXHIBIT.

The MDSR to be developed during the implementation phases of the program shall be updated and shared with the REGULATORY AUTHORITY, at least every 6 (six) months, and shall meet the technical specifications of current regulations and best practice guides.

Integration with other electronic management systems provided for in the CONCESSION, especially SISATIVOS, shall also be provided for.

1.1.3.4 Hydrological and drainage study

Based on the survey carried out, the CONCESSIONAIRE shall conduct a hydrological study of the entire INTERCONNECTION SYSTEM to verify the adequacy of each of the registered drainage devices to current standards and legislation, especially with regard to maximum flows, rainfall recurrence time, maximum slopes and runoff speed.

This study shall be updated with each new work implemented, together with the field cadastral surveys, and shall be partially delivered to the REGULATORY AUTHORITY every 6 (six) months, starting from the conclusion of the IMPLEMENTATION WORKS for the TUNNEL and URBAN ACCESSES.

The conclusive study of the need to adapt the drainage elements shall be submitted for analysis by the REGULATORY AUTHORITY and shall include a proposed schedule for adapting the elements, in which the CONCESSIONAIRE shall prioritize the locations that present the greatest risk to the safety of USERS.

If the conclusive study indicates the proven insufficiency of the drainage elements of the TUNNEL and URBAN ACCESSES, any necessary works will be the responsibility of the CONCESSIONAIRE.

1.1.4. Conservation/maintenance standards

Pre-established conservation/maintenance standards establish execution and quality criteria for services, since they define the appearance or function that the INTERCONNECTION SYSTEM shall present as a result of these works. These standards are understood as guidelines for the team involved in the CONCESSION, in addition to establishing budget values for the INTERCONNECTION SYSTEM.

The establishment of conservation/maintenance standards can be affected by numerous variables, such as type of road, topography, soil, climate conditions, volume and type of traffic, age of pavement and structures, geometric designs, signaling, safety elements, road containment devices, etc.

Conservation/maintenance standards can be established in several manners: by numerical value, by a description or by determining the frequency of execution of services, among other criteria.

The standards of conservation/maintenance services in the execution of the CONCESSIONAIRE's work shall comply with, at a minimum, the conditions below:

(a) the conservation/maintenance services shall be executed, taking as reference specifications, current standards, procedures existing at the time the services are performed and/or others that may be approved, modified or adopted by the REGULATORY AUTHORITY at the time the services are performed;

(b) in the event that the scopes of the services do not have specifications from the REGULATORY AUTHORITY, the standards issued by ABNT will prevail and, in the absence of these, the indications of the REGULATORY AUTHORITY will prevail in light of the applicable international standards; and

(c) the conservation/maintenance standards indicated in this item will apply to all elements and devices located within the INTERCONNECTION SYSTEM.

To ensure the established conservation standards, the CONCESSIONAIRE shall implement a process for identifying anomalies in the INTERCONNECTION SYSTEM or predicting the useful life of the elements therein and making the necessary adjustments, so that the standards do not fall below the minimum required.

This process shall be submitted to the REGULATORY AUTHORITY within the period provided for in this EXHIBIT and shall obtain the ISO 9001 certificate within 1 (one) year after its implementation.

1.1.5. Annual work program

To comply with the conservation/routine maintenance standards established in this EXHIBIT, the CONCESSIONAIRE shall prepare and submit to the REGULATORY AUTHORITY an annual work program that shall follow the structure established in this chapter. The information contained in the annual work schedule shall be based on the General Works and Services Spreadsheet, which includes the Service Code, Service Description, Section, Direction, Date, Time, Closed Lanes and the person responsible for execution.

The aforementioned program includes the preparation of computerized reports by the CONCESSIONAIRE for efficiency and cost analysis at various management levels, without prejudice to the updated provision of all information and data specified in this EXHIBIT, which shall be done through digital systems for managing conservation functions, so that the REGULATORY AUTHORITY can monitor the routine conservation/maintenance services performed by the CONCESSIONAIRE. The delivery of reports on the services performed to the REGULATORY AUTHORITY shall take place monthly and/or annually, depending on the provisions established in this EXHIBIT.

1.2. Program structuring

To organize and facilitate the routine conservation/maintenance of the INTERCONNECTION SYSTEM, the programs and subprograms were subdivided, as follows:

a. Pavement

   a.1. Flexible pavement;

   a.2. Rigid pavement.

b. Adaptation services

   b.1. Conservation of vegetation cover;

   b.2. Cleaning;

   b.3. Erosion;

b.4. Bus stops, monuments and public utilities;

b.5. Graffiti;

b.6. Lateral conformation;

c. Drainage

c.1. Surface drainage of the platform;

c.2. Surface drainage outside the platform;

c.3. Manholes, galleries and drains;

c.4. Catchment boxes;

c.5. Tunnel drainage;

c.6. Leak Retention Boxes;

d. Road containment device

d.1. Flexible devices (metal guardrails, cable guardrails and similar);

d.2. Rigid devices (concrete barriers and similar);

d.3. Anti-glare devices;

d.4. Guardrails and balusters.

e. Signaling and auxiliary devices

e.1. Horizontal Signaling;

e.2. Vertical Signaling;

e.3. Delimiting devices;

e.4. Channeling device;

e.5. Warning signaling devices;

e.6. Temporary use device;

e.7. Traffic light signaling.

f. Structures

f.1. Bridges, overpass and walkways;

f.2. Immersed tunnel.

g. Operational and support buildings and yards;

h. Collection Control System;

i. Traffic and transport inspection control system and support for non-delegated services

i.1. Speed Control System;

i.2. Vehicle License Plate Reading and Decoding System (OCR)

j. User Communication and Relation System

j.1. Radio System

j.2. 0800 service system;

j.3. Wireless data network communication system;

j.4. Data Transmission System;

j.5. Operational Control Center;

j.6. Variable message panel system (VMPs);

j.7. User Emergency Communication System;

j.8. Lane marking system;

j.9. Abandonment Signaling System;

j.10. Megaphones System;

j.11. Ombudsman and other channels for user relations.

k. Monitoring System;

k.1. Traffic Sensing System;

k.2. CCTV Traffic Monitoring System;

k.3. Fire Detection and Alarm System;

l. Lighting

l.1. Street lighting;

l.2. Building lighting;

l.3. Light signaling.

m. Ventilation

n. Electrification

n.1. High and medium voltage lines;

n.2. Low voltage lines;

n.3. Substations and primary cabins;

n.4. Motor generators;

n.5. No-break systems.

1.3. Description and standards for programs

Failure to comply with the activities provided for in this item will subject the CONCESSIONAIRE to the rules established by EXHIBIT 3 and to the application of the administrative sanctions provided for in EXHIBIT 11. The deadlines for correction/regularization of verified non-conformities shall be counted in consecutive days/hours.

a. Pavement

Description

This program includes the lanes, shoulders and shelters of the roads, as well as other paved surfaces, including access ramps, yards, areas around operational buildings and support buildings.

Standards

a.1. Flexible pavement;

a.1.1. pothole, hole or displacement: temporary emergency repair in a maximum of 24 (twenty-four) hours;

a.1.2. definitive repair with cut-out: execution within a maximum of 1 (one) month;

a.1.3. depression at the intersection of a special structure: repair in a maximum of 2 (two) weeks;

a.1.4. depression or small settlement: repair within a maximum of 1 (one) month;

a.1.5. compromised road surface when a section, in the same roadway, shoulder or shelter, presents surface wear, cracks in blocks (longitudinal, transversal or caused by fatigue – “alligator skin”), sinking of the wheel track, pumping of fines, lateral slippage, exudation, damaged or poorly executed patches, undulation or corrugation: replacement of the roadway, shoulder and/or shelter in their entire widths, respecting the same type of coating of the final layer used in the last special conservation intervention of the pavement carried out, even if not by the CONCESSIONAIRE, in a maximum of 1 (one) month;

a.1.6. moderately compromised road surface when any stretch of 50 (fifty) continuous meters in length presents 3 (three) or more repairs (temporary or definitive) to the pavement in the same roadway, shoulder or refuge: replacement of the roadway, shoulder or refuge, transversely across its full widths and longitudinally from the first to the last repair, restoring the original conditions of the executive project of the last special pavement conservation intervention carried out, even if not by the CONCESSIONAIRE, within a maximum of 1 (one) month. When the repair is located between two roadways, between the roadway and the shoulder, or between the roadway and the refuge, it will be counted for both sides and shall be regularized;

a.1.7. crack sealing: programmable for execution at least once a year; and

a.1.8. step between adjacent lanes: repair in a maximum of 1 (one) month.

a.2. Rigid pavement

a.2.1. potholes or holes in the roadway: temporary emergency repair

in a maximum of 24 (twenty-four) hours;

a.2.2. definitive repair with cut-out: execution in a maximum of 1 (one) month;

a.2.3. depression at the intersection of a special structure: repair in a maximum of 2 (two) weeks;

a.2.4. construction joints and cracks: cleaning and resealing can be scheduled for execution at least once a year;

a.2.5. broken edges or slabs: temporary emergency repair in a maximum of 24 (twenty-four) hours and permanent repair with cutting within a maximum of 1 (one) month.

b. Adaptation services

Description

This program includes manual and mechanized pruning of vegetation, cleaning and sweeping of road platforms, removal of common and construction waste, and maintenance of bus stops and monuments.

The material resulting from the pruning of the vegetation cover and cleaning shall be collected in a predetermined location that does not affect the road drainage system and natural drainage, as well as does not cause bad appearance to the USER.

The cleaning and/or sweeping of platforms and paved areas shall be carried out on the tracks, shoulders and shelters.

Waste, debris or plant remains existing within the INTERCONNECTION SYSTEM shall be removed, transported and disposed of in an appropriate location, as established in the legislation in force.

Dead animals shall be removed and disposed of in accordance with CETESB board decision no. 039/2024/I, of May 24, 2024, or legislation in force that may amend or replace it.

Bus stops and monuments within the INTERCONNECTION SYSTEM shall be cleaned and/or painted, with the corresponding coverings, when existing, checked and repaired, as well as sidewalks for pedestrian circulation properly maintained.

Standards

b.1. Conservation of vegetation cover

Manual and/or mechanized pruning of vegetation, which include thinning and removal of the resulting pruning mass, shall be performed in all locations of the INTERCONNECTION SYSTEM where vegetation was planted during the IMPLEMENTATION WORKS, even in inclined regions (inclined, for example, on slopes).

b.1.1. manual or mechanized pruning of vegetation: when the height of the vegetation reaches 30 (thirty) centimeters or 10 (ten) centimeters in the surroundings of operational and support facilities and in the vicinity of monuments and obelisks;

b.1.2. weeding: programmable for at least 4 (four) times per year;

b.1.3. resulting mass of pruning: removal in a maximum of 48 (forty-eight) hours;

b.1.4. thinning: execution in a maximum of 1 (one) week;

b.1.5. removal of pests: programmable execution for at least 2 (two) times a year in grassy areas surrounding buildings, courtyards, monuments and obelisks;

b.1.6. maintenance of trees and shrubs: fertilization, protection, crowning and placement of mulch, programmable for at least once a year;.

b.1.7. cutting and pruning of trees and shrubs: dead or infested trees and shrubs shall be cut and removed within a maximum of 1 (one) month;

b.1.8. cutting and pruning of trees and shrubs that represent a danger to road safety, whose roots compromise the drainage system or obstruct the visibility of signaling: they shall be cut and removed, or pruned (if applicable), within a maximum of 24 (twenty-four) hours;

in the event of a situation of suppression restricted by current legislation, the pertinent authorizations shall be obtained within the period stipulated by the competent body When removal is not authorized, single tree items shall be protected by road containment devices.

The following are considered situations that pose a risk to road safety: i) exposed trees, that is, within the free zone and without a road containment device between them and the roadway; ii) dead or plagued trees and shrubs with branches outside the vertical projection of the outer edge of the shoulder or shelter, within the radius of possible fall; and iii) trees and shrubs with branches within the vertical projection of the lanes, shoulders, shelters, at any height and branches that may hinder or prevent the visualization of vertical signaling from a safe distance; and

b.1.9. recovery of the vegetation cover in all locations of the INTERCONNECTION SYSTEM where vegetation was planted during the IMPLEMENTATION WORKS, including replacements in places with failures within a maximum of 1 (one) month.

In places where the EXECUTIVE PROJECT proves that there are no conditions for vegetation cover, adequate geotechnical treatment shall be provided to protect the site against erosion, in order to comply with the provisions of items “d’ and “e” of section 7.3.1 of NBR 11.682 or any other that may replace or alter it. In this case, the CONCESSIONAIRE shall submit a report and project prepared by a geotechnician, and, if necessary, shall have the support of a qualified professional (e.g. agricultural engineer) to justify the need for the proposed solutions and treatments;

b.2. Cleaning

Waste from cleaning services shall be disposed of in appropriate locations.

b.2.1. solid waste from operational and support facilities: removal at least once a day, with selective collection and priority disposal for recycling programs also recommended;

b.2.2. solid waste, rubble or plant remains (branches, trunks, etc.) within the INTERCONNECTION SYSTEM: removal within a maximum of 1 (one) week, including the entire length of the roads, with priority destination for recycling programs;

b.2.3. cleaning and sweeping of paved areas subject to the deposition of debris: execution within a maximum of 1 (one) week, including the eradication of all vegetation existing therein (for example, on a concrete barrier base, wall);

b.2.4. dead animals: removal within a maximum of 90 (ninety) minutes. The procedures for final disposal of carcasses shall comply with CETESB board decision no. 039/2024/I, on May 24, 2024, and/or legislation in force that may supplement or replace it;

b.2.5. dead animals, outside the traffic lanes: removal within a maximum of 12 (twelve) hours. The procedures for final disposal of the carcasses shall comply with CETESB board decision No. 039/2024/I, on May 24, 2024, and/or legislation in force that may supplement or replace it; and

b.2.6. cleaning of channels and river cuts: execution programmable for at least once a year, and this activity shall be completed by October 31 of each year.

b.3. Cut or fill erosion

b.3.1. emergency services: execution of platform cleaning, removal of eroded material, protection of the slope, diversion of water and signaling within a maximum of 24 (twenty-four) hours;

b.3.2. definitive correction or restoration, including with regard to drainage and vegetation cover: within a period proposed by the CONCESSIONAIRE, defined according to the magnitude or volume to be repaired and duly justified, to be approved by the REGULATORY AUTHORITY.

b.4. Bus stops and sidewalks

b.4.1 Damaged, broken or poorly maintained bus stops: correction/regulation within a maximum of 15 (fifteen) days. Longer periods may be permitted when technically necessary due to the magnitude or volume to be repaired, provided that they are duly justified. In case of damaged, broken or poorly maintained bus stops whose structure poses a risk to users, such structure shall be removed within 24 hours and the location shall be provisionally signaled within 48 hours;

b.4.2 Damaged or poorly maintained sidewalks for pedestrian circulation: correction/regulation within a maximum of 15 (fifteen) days. In case of damaged, broken or poorly maintained sidewalks whose structure poses a risk to users or presents accessibility problems, the location shall be provisionally signaled within 48 hours.

b.5. Graffiti

b.5.1 graffiti, with the exception of graffiti on vertical signs, shall be removed within a maximum of 1 (one) week.

b.6. Lateral conformation

b.6.1 removal of steps and regularization of the terrain (lower-level terrain) next to the side of the shoulder or on the side of the access ramps: correction/regularization within a maximum of 1 (one) month. Maximum permitted unevenness of 1 (one) centimeter.

b.7. Fences (fences, walls, wire fencing and screens)

The CONCESSIONAIRE shall, throughout the CONCESSION TERM, analyze the INTERCONNECTION SYSTEM in order to identify points that, due to any changes

(interventions, adjacent occupation, presence of pedestrians), require modification or addition of the type of fencing (fence, wall, wire mesh and screen).

The CONCESSIONAIRE shall monitor the OAEs of the INTERCONNECTION SYSTEM throughout the CONCESSION TERM, and in places where actions of throwing objects onto the road are identified, causing insecurity for users, it shall proceed with the installation of mesh in the OAEs.

The maintenance of fences, walls, wire mesh and screens include the replacement of posts, supports, wires and other elements that comprise these types of fencing, and that are damaged, deteriorated, in the process of corrosion or at the end of their useful life.

b.7.1 damaged, stolen, worn or vandalized fencing: repair or replacement within a maximum of 1 (one) week.

c. Drainage

Description

This program includes the unblocking and cleaning services of the entire surface drainage system, as well as building installations, leisure areas, bus stops, etc.

The drainage system is fundamentally composed of gutters, gutters, junction boxes, manholes, platform and deep manholes, galleries, sub-horizontal drains, etc.

This service also includes the replacement of grates and covers of collection boxes.

Standards

c.1. Surface drainage of the platform:

c.1.1. general cleaning: programmable for at least 4 (four) times per year;

c.1.2. damaged or broken drainage elements: repair or replacement within a maximum of 1 (one) month;

c.1.3. lateral conformation: whenever the unpaved side segment exceeds the height of the roadway: correction/regulation within a maximum of 1 (one) month; and

c.1.4. totally or partially obstructed drainage element: unblocking within a maximum of 1 (one) week, regardless of the general cleaning schedule. A drainage element is considered partially obstructed when the OAC does not allow the continuous total flow of runoff in the downstream direction, that is, when the OAC does not have 100% of the cross-sectional area unobstructed.

c.2. Surface drainage outside the platform:

c.2.1. cleaning for the system in general, programmable for at least once a

year, and this activity shall be completed by October 31 of each year;

c.2.2. damaged or broken drainage element: repair or replacement within a maximum of 1 (one) month; and

c.2.3. totally or partially obstructed drainage element: unblocking within a maximum of 1 (one) week.

c.3. Manholes, galleries and drains

c.3.1. general cleaning: can be scheduled for at least once a year, and this activity shall be completed by October 31 of each year; and

c.3.2. damaged or broken drainage element: repair or replacement within a maximum of 1 (one) month; and

c.3.3. totally or partially obstructed drainage element: unblocking within a maximum of 1 (one) week, regardless of the general cleaning schedule.

c.4. Catchment boxes

c.4.1. general cleaning: can be scheduled for at least once every 3 (three) months; and

c.4.2. damaged or broken drainage element: repair or replacement within a maximum of 1 (one) month; and

c.4.3. totally or partially obstructed drainage element: unblocking within a maximum of 1 (one) week, regardless of the general cleaning schedule.

c.5. Tunnel drainage

c.5.1. general cleaning: can be scheduled for at least every 3 (three) months;

c.5.2. occurrence of water on the track inside the tunnel: carry out repairs and adjustments, in order to eliminate the conditions that lead to it, within a maximum of 10 (ten) days; and

c.5.3. totally or partially obstructed drainage element: unblocking within a maximum of 1 (one) week, regardless of the general cleaning schedule.

c.6. Leak retention boxes

c.6.1. general cleaning: programmable for at least 4 (four) times per year;

c.6.2. Inspection: programmable for at least 1 (one) time a month;

c.6.3. general cleaning: immediately after any leak;

c.6.4. transportation of leaked materials to a qualified and duly licensed disposal site: immediately after any leak; and

c.6.5. totally or partially obstructed drainage element: unblocking within a maximum of 1 (one) week, regardless of the general cleaning schedule.

d. Road containment Device

Description

Road containment devices are used to restrain and redirect out-of-control vehicles when they leave the road, so that they do not hit fixed objects or dangerous areas. There is a safety risk to the USER in any situation in which the devices are absent, damaged, at the end of their useful life or compromised by corrosion and misaligned, and do not guarantee efficient operation in the event of a collision. The criteria are based on the functionality described in standards and/or manufacturing manuals.

Standards

d.1. Flexible devices (metal guardrails, cable guardrails and similar, shock absorbers/attenuators, absorbing terminals, transitions, connections, etc.)

d.1.1. the CONCESSIONAIRE shall, throughout the CONCESSION TERM, analyze the INTERCONNECTION SYSTEM to identify points that, due to any changes (interventions, VDM, incidence of accidents), no longer require the existing device or begin to require flexible road containment devices to meet the criteria and guidelines established in the ABNT technical standards and other relevant standards in force at the time.

In such cases, the CONCESSIONAIRE shall perform the intervention (removal, relocation, adaptation or implementation) on the devices, complying with the parameters established in said standards, taking into account the useful life of the element. If there is a need to implement new devices, the CONCESSIONAIRE shall include this in the ISR report, in accordance with EXHIBIT 5. The CONCESSIONAIRE shall send to the REGULATORY AUTHORITY, within a maximum period of 3 (three) days from the completion of the intervention, the updated registry of road containment devices;

d.1.2. damaged/broken devices, at the end of their useful life or compromised by corrosion and misaligned, which represent a risk to the safety of USERS: immediate signaling with cones, easels and tapes. Removal, repair and/or replacement and/or realignment, in compliance with the standards in force at the time of the intervention, within a maximum of 24 (twenty-four) hours;

d.1.3. damaged/broken devices, at the end of their useful life or compromised by corrosion and misaligned, which do not represent a risk to the safety of USERS: removal, repair and/or replacement and/or realignment, in compliance with the standards in force at the time of the intervention, within a maximum of 1 (one) week;

d.1.4. cleaning, washing or painting: programmable for at least 1 (one) time every 2 (two) years. If there is a state of dirt that impairs the visibility of the elements, cleaning shall be carried out within a maximum period of 1 (one) week;

d.1.5. The CONCESSIONAIRE shall provide the REGULATORY AUTHORITY with a digital file containing the schedule of services to be performed in the following year, by means of a document filed between November 1st and 10th of each year. The performance of the services presented in the annual schedule shall be confirmed through a monthly schedule, detailed by weeks and days, to be filed with the REGULATORY AUTHORITY, in a digital file, between the 1st and 10th of the months preceding the performance.

d.2. Rigid devices (concrete barriers and similar)

d.2.1. The CONCESSIONAIRE shall, throughout the CONCESSION TERM, analyze the INTERCONNECTION SYSTEM in order to identify points that, due to any changes (interventions, VDM, incidence of accidents), no longer require the existing device or start to require rigid road containment devices, in order to maintain compliance with the criteria and guidelines established in the ABNT technical standards and other relevant standards in force at the time. The CONCESSIONAIRE shall pay attention to corrections that may be necessary due to surface drainage problems.

In such cases, the CONCESSIONAIRE shall perform the intervention (removal, adaptation or installation) in the devices, complying with the parameters established in the aforementioned standards, taking into account the useful life of the element. If there is a need to implement new devices, the CONCESSIONAIRE shall include this in the ISR report, in accordance with EXHIBIT 5. The CONCESSIONAIRE shall send to the REGULATORY AUTHORITY, within a maximum period of 3 (three) days counting from the completion, the updated registry of road containment devices;

d.2.2. damaged device that represents a risk to the safety of USERS: immediate signaling with cones, easels and tapes. Removal within a maximum of 24 (twenty-four) hours, replacement with a temporary barrier, with a compatible containment level, and replacement, in compliance with the standards in force at the time of the intervention, within a maximum of 1 (one) week;

d.2.3. damaged device that does not pose a risk to the safety of USERS: repair or replacement, in compliance with the standards in force at the time of the intervention, within a maximum of 1 (one) week; and

d.2.4. cleaning, washing or painting: programmable for at least 2 (two) times per year. The CONCESSIONAIRE shall provide the REGULATORY AUTHORITY with a digital file, by means of a document filed between November 1st and 10th of each year, containing the schedule of the service to be performed in the following year. The execution of the services presented in the annual schedule shall be confirmed by means of a monthly schedule, detailed by weeks and days, to be filed with the REGULATORY AUTHORITY, in a digital file, between the 1st and the 10th of the months preceding the months of execution.

d.3. Anti-glare devices

d.3.1. The CONCESSIONAIRE shall, throughout the CONCESSION TERM, analyze the INTERCONNECTION SYSTEM in order to identify points that, due to any changes (interventions, VDM, incidence of accidents), require anti-glare devices.

In such cases, the CONCESSIONAIRE shall perform the intervention, meeting the parameters established in standards and specifications in force at the time of the intervention. If there is a need to implement new devices, the CONCESSIONAIRE shall include this in the ISR report, in accordance with EXHIBIT 5. The CONCESSIONAIRE shall forward the updated record to the REGULATORY AUTHORITY within a maximum period of 3 (three) days counting from the conclusion;

d.3.2. damaged/broken and/or deteriorated and/or stolen and/or vandalized and/or misaligned device that poses a risk to USER safety: immediate signaling with cones, easels and tape. Removal within a maximum of 24 (twenty-four) hours and replacement and/or substitution and/or realignment, in compliance with the standards and specifications in

force at the time of the intervention, within a maximum of 1 (one) week;

d.3.3. damaged/broken and/or deteriorated and/or stolen and/or vandalized and/or misaligned device that does not pose a risk to the safety of USERS: repair and/or replacement and/or realignment, in compliance with the standards and specifications in force at the time of the intervention, within a maximum of 1 (one) week; and

d.3.4. cleaning, washing or painting: programmable for at least 2 (two) times per year. The CONCESSIONAIRE shall provide the REGULATORY AUTHORITY with a digital file, through a document filed between November 1st and 10th of each year, containing the schedule of the service to be performed in the subsequent year. The execution of the services presented in the annual schedule shall be confirmed through a monthly schedule, detailed by weeks and days, to be filed with the REGULATORY AUTHORITY, in a digital file, between the 1st and the 10th of the months preceding the months of execution. The completion of the services performed shall also be inserted into the SIGECON with evidence of completion of the services and integration with MITS.

d.4. Guardrails and balusters

d.4.1. damaged device that represents a risk to the safety of USERS: immediate signaling with cones, easels and tapes. Removal within a maximum of 24 (twenty-four) hours and replacement, in compliance with the standards and specifications in force at the time of the intervention, within a maximum of 1 (one) week;

d.4.2. damaged device that does not pose a risk to USER safety: repair or replacement, in compliance with the standards and specifications in force at the time of the intervention, within a maximum of 1 (one) week; and

d.4.3. cleaning, washing or painting: programmable for at least 2 (two) times per year. The CONCESSIONAIRE shall provide the REGULATORY AUTHORITY with a digital file, through a document filed between November 1st and 10th of each year, containing the schedule of the service to be performed in the subsequent year. The execution of the services presented in the annual schedule shall be confirmed through a monthly schedule, detailed by weeks and days, to be filed with the REGULATORY AUTHORITY, in a digital file, between the 1st and the 10th of the months preceding the months of execution.

e. Signaling and auxiliary devices

Description

Road signs comprise a set of elements implemented for the purpose of regulating, warning, indicating and educating users regarding road use, as well as providing institutional information, contributing to the comfort and safety of drivers and road workers.

The elements include horizontal and vertical signaling (regulatory, warning, educational, indicative, institutional and service), temporary devices, channeling devices, delimiting devices, traffic light signaling systems and other elements provided for in the Brazilian Traffic Code (CTB), in the technical specifications issued by the REGULATORY AUTHORITY, DER/SP and CONTRAN signaling manuals.

The standards defined in this item shall be met throughout the INTERCONNECTION SYSTEM, always complying with the Brazilian Traffic Signaling Manual - Contran, the Road Signaling Manual - DER/SP, the Brazilian Traffic Code - CTB, technical standards and specifications in force at the time of the intervention.

Standards

e.4. Horizontal Signaling

e.4.1. Cleaning: horizontal signaling sections subject to debris deposition shall be cleaned by mechanical sweeping, washing or application of a jet of compressed air or water. This procedure shall be performed at least every 6 (six) months.

The CONCESSIONAIRE shall provide the REGULATORY AUTHORITY with a digital file, through a document filed between November 1st and 10th of each year, containing the schedule of the service to be performed in the subsequent year. The execution of the services presented in the annual schedule shall be confirmed through a monthly schedule, detailed by weeks and days, to be filed with the REGULATORY AUTHORITY, in a digital file, between the 1st and the 10th of the months preceding the months of execution. The completion of the services performed shall also be entered in SIGECON with evidence of completion of the services and integration with MITS.

If there is a state of dirt that impairs the visibility of the horizontal signaling, cleaning shall be carried out within a maximum period of 24 (twenty-four) hours;

e.4.2. Retroreflection: the CONCESSIONAIRE shall permanently maintain the retroreflection of all horizontal signaling within the parameters established below:

Road speed	Minimum retroreflection index	Paint color
≤ 80 km/h	120 mcd/lux.m²	White and Yellow
> 80 km/h	120 mcd/lux.m²	Yellow
	150 mcd/lux.m²	White

In sections where the road speed is reduced, the minimum retroreflection index shall be compatible with the highest speed established for the road.

Retroreflection assessment shall be performed using manual or dynamic measuring equipment, with a retroreflectometer with calibration certified by a competent authority, in accordance with the technical specifications and procedures established by the REGULATORY AUTHORITY and, in the absence of these, in accordance with the technical standards ABNT NBR 14723 and NBR 16410 or others that may replace or amend them, in force at the time of measurement. In the case of using dynamic measuring equipment, points with retroreflection below the minimum value shall be confirmed using manual measuring equipment.

To verify the quality standards and plan the maintenance of horizontal signaling, the CONCESSIONAIRE shall evaluate the retroreflection of all horizontal signaling (longitudinal lines, channeling marks, transverse marks and inscriptions on the pavement) throughout the INTERCONNECTION SYSTEM every six months by an individual or legal entity with proven expertise in this type of service.

The service of regular measurement of the retroreflection indexes of horizontal signaling may not be performed at intervals of less than 6 (six) months between one measurement and another. Due to the expected increase in traffic volume, this service may not be performed in the months of January, July and December.

The CONCESSIONAIRE shall provide the REGULATORY AUTHORITY with a digital file, by means of a document filed between November 1st and 10th of each year, containing the schedule of the service to be performed in the following year. The execution of the services presented in the annual schedule shall be confirmed by means of a monthly schedule, detailed by weeks and days, to be filed with the REGULATORY AUTHORITY, between the 1st and the 10th of the months preceding the months of execution. The completion of the

services performed shall also be inserted into SIGECON with evidence of completion of the services and integration with MITS.

The measurement reports of the retroreflection indexes of horizontal signaling shall be prepared by the CONCESSIONAIRE, in accordance with the templates defined by the REGULATORY AUTHORITY, and delivered, in digital copy, within 15 (fifteen) days from the date of the measurements.

The REGULATORY AUTHORITY may also, when the inspection carried out requires such action, request, at any time, the evaluation of the retroreflection index of the horizontal signaling in specific section(s) to confirm its quality, being the obligation of the CONCESSIONAIRE, within the deadlines defined by the REGULATORY AUTHORITY, to evaluate and present the results, following the same procedures as regular measurements;

e.4.3. painting or repainting: the painting or repainting service shall be provided, within a maximum period of 1 (one) week, of the section or subsection of horizontal signaling in which a retroreflection index lower than the limits established in this EXHIBIT is detected, or even where the signaling is non-existent. The CONCESSIONAIRE shall submit to the REGULATORY AUTHORITY a report on the retroreflection of the refurbished signaling proving that the services were carried out;

e.4.4. In sections with pavement recovery work, after resurfacing or localized repairs, the horizontal signaling damaged by the work shall be restored (painted or repainted), even if temporarily, before it is fully or partially released to traffic, in accordance with the provisions of article 88 of the CTB, CONTRAN's Brazilian signaling manual and DER/SP's signaling manual. The definitive signaling shall be installed within a maximum period of 30 (thirty) days after the completion of the work on site.

In sections where the pavement was restored at several nearby points (distance between them less than or equal to 100 (one hundred) meters), the horizontal signaling of the lanes (center and edges) shall be restored throughout the entire section, continuously, and not just at each point that underwent intervention.

When the horizontal signaling is re-installed, there should be no conflict between the new signaling and the previous signaling. The removal of horizontal signaling, when necessary, should be carried out using appropriate equipment for mechanical removal or similar equipment that preserves the pavement structure. The use of paint or other similar performance product to cover the signaling is prohibited. The inadequacies identified in the signaling provided for in this item shall be corrected within a maximum period of 24 (twenty-four) hours;

e.4.5. in sections, open to traffic, where the absence or deficiency of horizontal signaling is verified, the CONCESSIONAIRE shall paint and/or repaint the signaling within a maximum period of 1 (one) week. The longitudinal lines will be evaluated separately from the road markings.

e.5. Vertical Signaling

e.5.1. cleaning: all vertical signaling (ground and overhead) shall be cleaned every 4 (four) months by a properly trained team, using products, equipment and methods that ensure its perfect cleanliness, without damaging the materials used in its manufacture (films and substrates), ensuring perfect visibility and legibility of its messages daily, as established by traffic legislation.

In sections with a high level of dirt, cleaning shall be done every 2 (two) months. If the dirt jeopardizes the legibility of the signaling, cleaning shall be done within a maximum period of 24 (twenty-four) hours.

The CONCESSIONAIRE shall provide the REGULATORY AUTHORITY with a

digital file, by means of a document filed between November 1st and 10th of each year, containing the schedule of the service to be performed in the following year. The execution of the services presented in the annual schedule shall be confirmed by means of a monthly schedule, detailed by weeks and days, to be filed with the REGULATORY AUTHORITY between the 1st and the 10th of the months preceding the months of execution.

e.5.2. retroreflection: the CONCESSIONAIRE shall permanently maintain the retroreflection of all vertical signaling (aerial and ground) within the parameters defined by ABNT technical standards or similar technical specifications in force throughout the concession.

To verify the quality standards and plan the maintenance of vertical signaling, the CONCESSIONAIRE shall annually assess the retroreflection of all vertical signaling (aerial and ground) throughout the INTERCONNECTION SYSTEM, through an individual or legal entity with proven expertise in this type of service.

The retroreflection assessment shall be performed using retroreflectometer equipment with calibration no more than 1 (one) year, whose calibration certificate shall be issued in Portuguese by a competent authority. The service shall be performed in accordance with the specifications and procedures established by the REGULATORY AUTHORITY and, in the absence thereof, in accordance with the technical standards ABNT NBR 14644 and NBR 15426 or others that may replace or amend them and are in force at the time of measurement.

The CONCESSIONAIRE shall provide the REGULATORY AUTHORITY with a digital file, by means of a document filed between November 1st and 10th of each year, containing the schedule of the service to be performed in the following year. The execution of the services presented in the annual schedule shall be confirmed by means of a monthly schedule, detailed by weeks and days, to be filed with the REGULATORY AUTHORITY, in a digital file, between the 1st and the 10th of the months preceding the months of execution. The completion of the services performed shall also be inserted into the SIGECON with evidence of completion of the services and integration with MITS.

The measurement reports of the retroreflection indexes of vertical signaling (aerial and ground) shall be prepared by the CONCESSIONAIRE, according to templates defined by the REGULATORY AUTHORITY, and delivered within 15 (fifteen) days from the date of the measurements, in a digital copy.

The REGULATORY AUTHORITY may also, when the inspection carried out requires such action, request, at any time, the evaluation of the retroreflection index of the vertical signaling in specific section(s) to confirm its quality, being the obligation of the CONCESSIONAIRE, within the deadlines defined by the REGULATORY AUTHORITY, to evaluate and present the results, following the same procedures as regular measurements;

e.5.3. Regulatory and warning signs (aerial and ground) shall be replaced, repaired or replaced within a maximum period of 24 (twenty-four) hours whenever signs are found to be in disagreement with manuals and/or standards and/or specifications, absence of signs, retroreflection lower than that defined in the standard and/or specification, damage, depredation or vandalism.

For signs replaced due to retroreflectivity lower than that defined in the standard and/or specification, the CONCESSIONAIRE shall forward to the REGULATORY AUTHORITY a report on the retroreflection of the revitalized signaling proving that the service was performed;

e.5.4. other signs (aerial and ground) shall be replaced, repaired or replaced within a maximum period of 1 (one) week whenever signs are found to be in disagreement with manuals and/or standards and/or specifications, absence of signs, retroreflection lower than that defined in the standard and/or specification, damage, depredation or vandalism.

For signs that are replaced due to retroreflectivity lower than that defined in the standard and/or specification, the CONCESSIONAIRE shall submit a retroreflection report of the renovated signaling to the REGULATORY AUTHORITY, thus proving that the service was performed;

e.5.5. damaged gantries and semi-gantries that pose a risk to USERS shall be removed within 24 (twenty-four) hours and replaced within a maximum period of 30 (thirty) days. The signs contained therein shall be temporarily installed on the ground, complying with the following maximum deadlines: 24 (twenty-four) hours for regulatory or warning signs and 1 (one) week for other types of signs;

e.5.6. In construction sites, inadequacies in vertical signaling (ground and overhead) regarding cleanliness, retroreflection, signaling that does not comply with manuals and/or standards and/or specifications, lack of signaling, damage, depredation or vandalism shall be resolved within a maximum period of 24 (twenty-four) hours;

e.5.7. in signaling where the absence of REGULATORY AUTHORITY registration and/or date of manufacture is noted, the information shall be provided within a maximum of 1 (one) week;

e.5.8. vertical signaling, hazard markers or alignment markers shall not be installed in paved areas characterized as lanes, including islands and fictitious flowerbeds, even in neutral areas of paved areas.

e.6. Delimiting devices

e.6.1. cleaning: reflective studs or pins shall be cleaned quarterly, using products, equipment and methods that guarantee their perfect cleanliness, without damaging the materials used in their manufacture, ensuring perfect visibility, as established by traffic legislation.

The CONCESSIONAIRE shall provide the REGULATORY AUTHORITY with a digital file, by means of a document filed between November 1st and 10th of each year, containing the schedule of the service to be performed in the following year. The execution of the services presented in the annual schedule shall be confirmed by means of a monthly schedule, detailed by weeks and days, to be filed with the REGULATORY AUTHORITY, in a digital file, between the 1st and the 10th of the months preceding the months of execution;

e.6.2. cleaning: markers, delineators and delimiting cylinders shall be cleaned every 4 (four) months, using products, equipment and methods that guarantee their perfect cleanliness, without deteriorating the materials used in their manufacture, ensuring perfect visibility, as established by traffic legislation.

In sections with a high level of dirt, cleaning shall be done monthly. In cases where dirt jeopardizes the visibility and/or functionality of the devices, cleaning shall be done within a maximum of 24 (twenty-four) hours.

The CONCESSIONAIRE shall provide the REGULATORY AUTHORITY with a digital file, by means of a document filed between November 1st and 10th of each year, containing the schedule of the service to be performed in the following year. The execution of the services presented in the annual schedule shall be confirmed by means of a monthly schedule, detailed by weeks and days, to be filed with the REGULATORY AUTHORITY, in a digital file, between the 1st and the 10th of the months preceding the months of execution; The completion of the services performed shall also be inserted into the SIGECON with evidence of completion of the services and integration with MITS;

e.6.3. Studs shall be installed, supplemented or replaced within a maximum period of 1 (one) week whenever they are found to be missing, have a lower reflectivity than that defined in the standard and/or specification, or are damaged or have sunken in. The installation, supplementation or replacement shall be carried out in accordance with the recommendations of the Brazilian Traffic Signaling Manual — CONTRAN, the Road Signaling Manual — DER/SP and related technical standards or specifications.

In places where there is a repair and/or restoration of pavement with an extension of less than 100 (one hundred) meters, the reflective studs and/or studs shall be replaced and/or replaced within a maximum period of 30 (thirty) days from the completion of the service and the release for traffic.

For repairs and/or restoration of pavements with an extension of more than 100 (one hundred) meters, the completion of the service will be considered for each individual segment for counting the deadline for replacement and/or substitution of reflective studs and/or studs within a maximum period of 30 (thirty) days from the completion of the service with the release for traffic;

e.6.4. markers, delineators and delimiting cylinders shall be installed or replaced within a maximum period of 1 (one) week, whenever its absence, retroreflection lower than that defined in the standard and/or specification, damage or vandalism are veridied. The installation, supplementation or replacement shall be carried out in accordance with the recommendations of the Brazilian Traffic Signaling Manual — CONTRAN, the Road Signaling Manual — DER/SP and related technical standards or specifications.

e.7. Channeling device

e.7.1. cleaning or painting: shall be carried out every 6 (six) months. In sections with a high level of dirt, cleaning or painting shall be done monthly.

The CONCESSIONAIRE shall provide the REGULATORY AUTHORITY with a digital file, by means of a document filed between November 1st and 10th of each year, containing the schedule of the service to be performed in the following year. The execution of the services presented in the annual schedule shall be confirmed by means of a monthly schedule, detailed by weeks and days, to be filed with the REGULATORY AUTHORITY, in a digital file, between the 1st and the 10th of the months preceding the months of execution;

e.7.2. The replacement of damaged or missing devices shall be provided within 1 (one) week. The completion of the channeling devices shall be done based on the recommendations of the Brazilian Traffic Signaling Manual — CONTRAN and the Road Signaling Manual — DER/SP.

e.8. Warning signaling devices

e.8.1. Cleaning: warning signaling devices shall be cleaned every 04 (four) months by a properly trained team, using products, equipment and methods that ensure they are perfectly clean, without damaging the materials used in their manufacture (films and substrates), ensuring perfect visibility and legibility of their messages on a daily basis, as established by traffic legislation.

In cases where dirt jeopardizes the visibility and/or functionality of the devices, cleaning shall be done within a maximum of 24 (twenty-four) hours.

The CONCESSIONAIRE shall provide the REGULATORY AUTHORITY with a digital file, by means of a document filed between November 1st and 10th of each year, containing the schedule of the service to be performed in the following year. The execution of the services presented in the annual schedule shall be confirmed by means of a monthly schedule, detailed by weeks and days, to be filed with the REGULATORY AUTHORITY, in a digital file, between the 1st and the 10th of the months preceding the months of execution. The completion of the services performed shall also be inserted into the SIGECON with evidence of completion of the services and integration with MITS;

e.8.2. retroreflection: the CONCESSIONAIRE shall permanently maintain the retroreflection within the parameters defined by ABNT technical standards or similar technical specifications in force throughout the concession.

To verify quality standards and plan maintenance of warning signaling devices, the CONCESSIONAIRE shall annually assess the retroreflection of all devices in the INTERCONNECTION SYSTEM by means of an individual or legal entity with proven expertise in this type of service.

The retroreflection assessment shall be performed using retroreflectometer equipment with calibration no more than 1 (one) year, whose calibration certificate shall be issued in Portuguese by a competent authority. The service shall be performed in accordance with the specifications and procedures established in the technical standards ABNT NBR 14.644 and NBR 15.426 or others that may replace or amend them, in force at the time of measurement.

The CONCESSIONAIRE shall provide the REGULATORY AUTHORITY with a digital file, through a document filed between November 1st and 10th of each year, containing the schedule of the service to be performed in the subsequent year. The execution of the services presented in the annual schedule shall be confirmed by means of a monthly schedule, detailed by weeks and days, to be filed with the REGULATORY AUTHORITY, in a digital file, between the 1st and the 10th of the months preceding the months of execution. The completion of the services performed shall also be inserted into the SIGECON with evidence of completion of the services and integration with MITS.

The measurement reports of the retroreflection indexes of warning signaling devices shall be prepared by the CONCESSIONAIRE, according to templates defined by the REGULATORY AUTHORITY, and delivered within 15 (fifteen) days from the date of the measurements, in a digital copy.

The REGULATORY AUTHORITY may also, when the inspection carried out requires such action, request, at any time, the evaluation of the retroreflection index of the warning signaling devices in specific section(s) to confirm its quality, being the obligation of the CONCESSIONAIRE, within the deadlines defined by the REGULATORY AUTHORITY, to evaluate and present the results, following the same procedures as regular measurements;

e.8.3. warning signaling devices shall be replaced, repaired or substituted within a maximum period of 1 (one) week, whenever the absence of signaling, retroreflection lower than that defined in the standard and/or specification, damage, depredation or vandalism is verified.

For signs replaced due to retroreflectivity lower than that defined in the standard and/or specification, the CONCESSIONAIRE shall send to the REGULATORY AUTHORITY a report on the retroreflection of the revitalized signaling proving that the service was performed;

e.9. Temporary use device

e.9.1. cleaning: should be carried out whenever the level of dirt is jeopardizing the visibility and retroreflection of these devices. The maximum period for execution is 24 (twenty-four) hours;

e.9.2. the replacement or complementation of temporary use devices that do not comply with manuals and/or standards and/or specifications, with low retroreflection, deteriorated, vandalized, stolen, insufficient or non-existent shall be provided within 24 (twenty-four) hours. In case of complementary lighting elements, its permanent operation shall be guaranteed, through a stock of lamps or other components necessary for their corrective maintenance.

The complementation of temporary use devices shall be done in accordance with the recommendations of the Brazilian Traffic Signaling Manual — Contran and the Road Signaling Manual — DER/SP.

e.10. Traffic light signaling.

e.10.1. cleaning of focal groups shall be carried out every 4 (four) months.

If there is dirt that impairs the visibility of traffic lights, cleaning shall be carried out within a maximum period of 24 (twenty-four) hours.

The CONCESSIONAIRE shall provide the REGULATORY AUTHORITY with a digital file, by means of a document filed between November 1st and 10th of each year, containing the schedule of the service to be performed in the following year. The execution of the services presented in the annual schedule shall be confirmed by means of a monthly schedule, detailed by weeks and days, to be filed with the REGULATORY AUTHORITY, in a digital file, between the 1st and the 10th of the months preceding the months of execution;

e.10.2. in case of components that jeopardize the functionality of the traffic light signaling, corrective maintenance shall be carried out within a maximum period of 24 (twenty-four) hours. If the equipment is located at intersections or traffic light crossings, the CONCESSIONAIRE shall, until replacement/maintenance is carried out, provide, within 4 (four) hours, an alternative signaling solution to ensure road safety. For other components, within a maximum period of one week.

f. Structures

f.1. Bridges, overpass and walkways Description

This program includes cleaning the drainage devices of special works of art and containment structures, also providing for the replacement of deteriorated support devices and damaged expansion joints, as well as periodic assessments in addition to inspections of special works of art, according to the current Technical Specification for “Control of Special Works of Art” (ET-00.000.000-0-C21/002 and its updates, as defined by the REGULATORY AUTHORITY), which will serve as a basis for the progress of the maintenance management of the works. The painting or galvanization of metal guardrails and balusters is also contemplated.

Standards

f.1.1. general cleaning of internal drainage devices (horns in lost caissons): programmable for at least 2 (two) times per year;

f.1.2. general cleaning of external drainage devices (on the platform and accesses) programmable for at least 1 (one) time every 2 (two) months;

f.1.3. totally or partially obstructed drainage element: unblocking within a maximum of 1 (one) week, regardless of the general cleaning;

f.1.4. painting or galvanizing of metal guardrails and balusters: programmable for at least 1 (one) time every 2 (two) years;

f.1.5. cleaning or painting of surfaces exposed to traffic: programmable for at least 1 (one) time every 2 (two) years and, in the case of graffiti, comply with the provisions of subitem b.5 of item 1.3;

f.1.6. expansion joint: cleaning and sealing programmable for execution at least once a year;

f.1.7. broken or damaged expansion joint: temporary emergency repair, as applicable, in a maximum of 24 (twenty-four) hours;

f.1.8. broken or damaged expansion joint: definitive repair in a maximum of 1 (one) week;

f.1.9. replacement of support device: immediate whenever deteriorated or excessively deformed device is detected;

f.1.10. inspections according to the current Technical Specification for “Control of Special Works of Art” (ET-00.000.000-0-C21/002 and its updates, as defined by the REGULATORY AUTHORITY); and

f.1.11. specific inspections and conservation for works of art in metal structures.

f.2. Immersed tunnel

Description

This program includes regular activities for the maintenance of the concrete structure, joints and the interior of the TUNNEL.

f.2.1. Concrete structure:

- inspections of the internal structure for infiltrations, stains and chips in the concrete every 3 (three) months;
- mapping of cracks and fissures every 12 (twelve) months;
- carbonation test and ingress of chloride ions every 12 (twelve) months;

f.2.2. Immersion joints:

- inspections of infiltrations in the joints with the installation of inspection tubes every 3 (three) months;
- corrosion check with the installation of electrodes every 12 (twelve) months;

f.2.3. Internal side of the tunnel:

- general cleaning of drainage devices: programmable for at least 2 (two) times a year;
- totally or partially obstructed drainage element: unblocking within a maximum of 1 (one) week, regardless of the general cleaning;
- washing of the tunnel walls and ceiling every 3 (three) months;
- light test of the tunnel surface every 12 (twelve) months;

g. Operational and support buildings and yards

Description

The conservation/maintenance of buildings and yards includes the replacement and/or repair of the structures, waterproofing and coverings that comprise the operational and support buildings and yards, their masonry and coverings.

It also includes the replacement and/or repair of plumbing and sewage installations, maintenance of streets, gardens, garbage collection, maintenance of window frames, locks and glass, cleaning of septic tanks, maintenance of infiltration ditches, maintenance of painting and, eventually, of deep wells for supply, etc.

Standards

g.1. Preventive and corrective maintenance in operational and support buildings and yards shall be continuous, in order to keep them in full operating conditions. Any non-conformities identified will have a period of 30 (thirty) days for correction/regularization.

h. Collection control system

Description

This program provides for the conservation/maintenance of all components and equipment that comprise this system and its subsystems, ensuring operation as specified in EXHIBIT 05.

Standards

h.1. Collection system

All equipment/subsystems that comprise the collection control system shall present the operationality provided for in APPENDICES A and D and EXHIBIT 5.

For this purpose, the CONCESSIONAIRE shall have essential equipment or parts of the systems in reserve, which will allow immediate replacement.

i. Traffic and transport inspection control system and support for NON-DELEGATED SERVICES.

Description

This program provides for the conservation/maintenance of all components and equipment that comprise this system and its subsystems, ensuring operation as specified in EXHIBIT 5.

It is composed of the following subsystems:

i.1. Speed control system: fixed speed control points;

i.2. Vehicle License Plate Reading and Decoding System (OCR)

Standards

From the implementation of the systems and equipment, all equipment/subsystems that comprise the traffic and transport inspection control system and support for NON-DELEGATED SERVICES shall fully and simultaneously meet all the requirements established by EXHIBITS 5 and 6, with the CONCESSIONAIRE being solely responsible for the dimensioning and management of personnel, parts, spare components, stock and whatever else is necessary for the immediate correction of defects, malfunctions or nonconformities.

The CONCESSIONAIRE shall have a maintenance management system that shall allow, at a minimum, the opening, monitoring and management of service orders opened for the maintenance teams. It is essential that, at a minimum, the following information be recorded:

- Date and time of identification of the failure and opening of the service order;
- Type of defect identified;
- Action required for correction; and
- Date and time of completion of maintenance actions, with the reestablishment of operation of the equipment(s).

The CONCESSIONAIRE shall feed the REGULATORY AUTHORITY's systems with information related to equipment maintenance actions, enabling remote and real-time consultation by the CCI.

The form in which the CONCESSIONAIRE makes information about equipment maintenance available and the form in which it is integrated into the REGULATORY AUTHORITY's systems shall fully comply with the procedures, technologies and interfaces defined by the REGULATORY AUTHORITY.

At any time, the REGULATORY AUTHORITY may request that the CONCESSIONAIRE feeds its systems with additional information about equipment maintenance, in accordance with procedures and interfaces similar to those used by the CONCESSIONAIRE.

j. USER Communication and Relation System

Description

This program provides for the conservation/maintenance of all components and equipment that comprise this system and its subsystems, ensuring operation as specified in EXHIBIT 5.

It is composed of the following subsystems:

j.1. Radio System;

- Fixed Stations;
- Mobile Stations;
- Portable Stations;
- Repeater Stations;

j.2. 0800 service system;

j.3. Wireless data network communication system;

j.4. Data Transmission System;

j.5. Operational Control Center;

j.6. Variable message panel system– VMPs:

- fixed variable message panel;

j.7. User Emergency Communication System;

j.8. Lane marking system;

j.9. Abandonment Signaling System;

j.10. Megaphones System.

Standards

From the systems and equipment, all equipment/subsystems shall fully and simultaneously meet all the requirements established by EXHIBITS 5 and 6, with the CONCESSIONAIRE being responsible for dimensioning and managing personnel, parts, spare components, stock and whatever else is necessary for the immediate correction of defects, malfunctions or nonconformities.

The CONCESSIONAIRE shall have a maintenance management system that allows, at a minimum, the opening, monitoring and management of service orders opened for the maintenance teams. It is essential that, at a minimum, the following information be recorded:

- Date and time of identification of the failure and opening of the service order;
- Type of defect identified;
- Action required for correction;
- Date and time of completion of maintenance actions, with the reestablishment of operation of the equipment(s).

The CONCESSIONAIRE shall feed the REGULATORY AUTHORITY's systems with information related to equipment maintenance actions, enabling remote and real-time consultation by the CCI.

The form in which the CONCESSIONAIRE makes information about equipment maintenance available and the form in which it is integrated into the REGULATORY AUTHORITY's systems shall fully comply with the procedures, technologies and interfaces defined by the REGULATORY AUTHORITY.

At any time, the REGULATORY AUTHORITY may request that the CONCESSIONAIRE feeds its systems with additional information about equipment maintenance, in accordance with procedures and interfaces similar to those used by the CONCESSIONAIRE.

j.11. Ombudsman and other channels for USER relations

Description

The CONCESSIONAIRE shall keep the ombudsman's office and other channels for interacting with USERS fully operational and within the established standards, as set forth in the current legal and sub-legal standards, as well as in the regulatory standards and ordinances of the REGULATORY AUTHORITY and in accordance with the NOTICE and CONTRACT.

Standards:

j.11.1. maintenance, operation and dissemination of the 0800 telephone system: from the date of signing the INITIAL TRANSFER INSTRUMENT;

j.11.2. maintenance, operation and dissemination of the ombudsman's office: from the date of signing the INITIAL TRANSFER INSTRUMENT;

j.11.3. maintenance, operation and dissemination of other channels for interacting with users provided for in the current legislation: after 45 (forty-five) days from the date of signing the INITIAL TRANSFER INSTRUMENT;

j.11.4. compliance with requirements related to human, material and technological resources established in the current legislation regarding the ombudsman and other channels of relationship with the USER: after 90 (ninety) days from the date of signing the INITIAL TRANSFER INSTRUMENT;

j.11.5. compliance with operational, administrative and procedural requirements provided for in the current legislation regarding the ombudsman and other channels of relationship with the USER: after 90 (ninety) days from the date of signing the INITIAL TRANSFER INSTRUMENT;

j.11.6. compliance with requirements and quality indicators and deadlines provided for in the current legislation regarding the ombudsman and other channels of relationship with the user: after 90 (ninety) days from the date of signing the INITIAL TRANSFER INSTRUMENT.

k. Monitoring system

Description

This program includes the conservation/maintenance of all components and equipment that comprise this system and its subsystems, ensuring operation as specified in EXHIBIT 5.

It is composed of the following subsystems:

k.1. Traffic Sensing System

k.2. Travel Time Control System;

k.3. CCTV Traffic Monitoring System;

k.4. Fire Detection and Alarm System;

Standards

From the implementation of systems and equipment, all equipment/subsystems shall fully and simultaneously meet all the requirements established by EXHIBIT 5, with the CONCESSIONAIRE being responsible for dimensioning and managing personnel, parts, spare components, stock and whatever else is necessary for the immediate correction of defects, malfunctions or nonconformities.

The CONCESSIONAIRE shall have a maintenance management system that shall allow, at a minimum, the opening, monitoring and management of service orders opened for the maintenance teams. It is essential that, at a minimum, the following information be recorded:

- Date and time of identification of the failure and opening of the service order;

- Type of defect identified;
- Action required for correction;
- Date and time of completion of maintenance actions, with the reestablishment of operation of the equipment(s).

The CONCESSIONAIRE shall feed the REGULATORY AUTHORITY's systems with information related to equipment maintenance actions, enabling remote and real-time consultation by the CCI.

The form in which the CONCESSIONAIRE makes information about equipment maintenance available and the form in which it is integrated into the REGULATORY AUTHORITY's systems shall fully comply with the procedures, technologies and interfaces defined by the REGULATORY AUTHORITY.

At any time, the REGULATORY AUTHORITY may request that the CONCESSIONAIRE feeds its systems with additional information about equipment maintenance, in accordance with procedures and interfaces similar to those used by the CONCESSIONAIRE.

l. Lighting

Description

This program includes the conservation/maintenance of the lighting systems of the TUNNEL, URBAN ACCESSES and ACCESS BUILDINGS. The internal and external lighting systems shall offer a lighting standard compatible with the specific functions and weather conditions, during the required periods during the day or night and in accordance with the current ABNT standards for public lighting.

The maintenance/conservation and completion services of public lighting shall be started immediately after the OPERATION START DATE.

It is composed of the following subsystems:

l.1. Street lighting;

l.2. Building lighting; and

l.3. Light signaling.

Standards

The lighting conservation/maintenance services are basically the following:

- replacement of lamps or luminaires;
- replacement of ballasts and igniters;
- replacement of posts;
- replacement of circuit breakers or fuses;
- cleaning of luminaires; and
- recomposition/complementation of the electrical system.

The replacement, repair and cleaning of lamps and luminaires shall be carried out within a maximum of 48 (forty-eight) hours and the other elements within a maximum of 1 (one) week.

These internal and external lighting systems shall offer a standard compatible with the specific functions and local climate conditions. The level of illumination at any point on a

surface shall not be less than 75% (seventy-five percent) of the level foreseen in the project, in accordance with current and applicable regulations.

m. Ventilation

This program foresees the conservation/maintenance of the TUNNEL ventilation system, in order to maintain the functions foreseen in EXHIBIT 5. Sensors, ducts and jet fans and other components that affect the functionality of the system shall be repaired or replaced.

n. Electrification

Description

This program includes the conservation/maintenance of power transmission lines, repair and replacement of substations and transformers, repair of motor generator sets, control panels, replacement of connectors, circuit breakers and fuses, repairs to control panels, battery banks, conservation of lightning protection systems, etc.

It is composed of the following subsystems:

n.1. High and medium voltage lines;

n.2. Low voltage lines;

n.3. Substations and primary cabins;

n.4. Motor generators; and

n.5. No-break systems.

Standards

The conservation standard for power transmission lines, substations, transformers, motor generators and no-break systems shall be compatible with the standard of the local electricity CONCESSIONAIRE.

1.4. Maintenance reports and schedule

1.4.1. Monthly Report of Activities Performed

All routine maintenance/conservation services performed by the CONCESSIONAIRE will be recorded daily. These records shall include the location and type of service performed. The schedule and execution of the services performed shall be inserted into the SIGECON with evidence of completion of the services and integration with MITS.

For the purpose of rationalization, compilation and future analysis, routine conservation services should be indicated according to the following program:

a Program – pavement

a.1. Subprogram – flexible pavement

a.1.1. Activity – pothole, hole or displacement

a.1.2. Activity – definitive repair with cut-out

a.1.3. Activity – depression at the connection with OAE

a.1.4. Activity – depression or small settlement

a.1.5. Activity – compromised road surface

a.1.6. Activity – moderately compromised road surface

a.1.7. Activity – sealing of cracks

a.1.8. Activity – step between roadway and shoulder

a.2. Subprogram – rigid pavement

a.2.1. Activity – pothole or hole

a.2.2. Activity – definitive repair with cut-out

a.2.3. Activity – depression at the connection with OAE

a.2.4. Activity – construction joints and cracks

a.2.5. Activity – broken edges and/or slabs b

Program – Adjustment services

b.1. Subprogram – conservation of vegetation cover

b.1.1. Activity – manual or mechanized pruning

b.1.2. Activity – weeding

b.1.3. Activity – mass resulting from pruning

b.1.4. Activity – trimming

b.1.5. Activity – firebreaks

b.1.6. Activity – removal of pests

b.1.7. Activity – maintenance of trees and shrubs

b.1.8. Activity – cutting and pruning of trees and shrubs

b.1.9. Activity – cutting and pruning of trees and shrubs that pose a danger to road safety

b.1.10. Activity – restoration of vegetation cover

b.2. Subprogram – cleaning

b.2.1. Activity – solid waste from operational and support facilities

b.2.2. Activity – waste, rubble or plant remains

b.2.3. Activity – cleaning and sweeping of paved areas subject to the deposition of debris or growth of vegetation

b.2.4. Activity – cleaning of paved central flowerbed

b.2.5. Activity – dead animals within the traffic lanes

b.2.6. Activity – dead animals within the INTERCONNECTION SYSTEM, but outside the traffic lanes

b.2.7. Activity - channel and cut-off river

b.3. Subprogram – erosion from cutting or filling

b.3.1. Activity – emergency services

b.3.2. Activity – definitive correction or restoration

b.4. Subprogram – bus stops, monuments and public utilities

b.4.1. Activity – bus stops, monuments and public utilities that are damaged, broken or in poor condition

b.4.2. Activity – damaged, broken or poorly maintained sidewalks

b.5. Subprogram – graffiti

b.5.1. Activity – graffiti within the INTERCONNECTION SYSTEM, with the exception of graffiti on vertical signaling

b.6. Subprogram – lateral conformation

b.6.1. Activity – removal of steps and regularization of the terrain

b.7. Subprogram – fences – fences, walls, wire mesh and screens

b.7.1. Activity – damaged, stolen, worn or vandalized fences

c. Program – drainage

c.1. Subprogram – surface drainage of platform

c.1.1. Activity – general cleaning

c.1.2. Activity – damaged or broken drainage element

c.1.3. Activity – lateral conformation

c.1.4. Activity – drainage element totally or partially obstructed

c.2. Subprogram – surface drainage outside the platform

c.2.1. Activity – cleaning for the system in general

c.2.2. Activity – cleaning in mountainous areas

c.2.3. Activity – damaged or broken drainage element

c.2.4. Activity – drainage element totally or partially obstructed

c.3. Subprogram – Manholes, galleries and drains

c.3.1. Activity – general cleaning

c.3.2. Activity – damaged or broken drainage element

c.3.3. Activity – drainage element totally or partially obstructed

c.4. Subprogram – catchment boxes

c.4.1. Activity – general cleaning

c.4.2. Activity – damaged or broken drainage element

c.4.3. Activity – drainage element totally or partially obstructed

c.5. Subprogram – tunnel drainage

c.5.1. Activity – general cleaning

c.5.2. Activity – occurrence of water on the road

c.5.3. Activity – drainage element totally or partially obstructed

c.6. Subprogram – retention boxes and leakage of hazardous products

c.6.1. Activity – general cleaning

c.6.2. Activity – inspection

c.6.3. Activity – general cleaning after any leakage

c.6.4. Activity – transportation of leaked materials

c.6.5. Activity – drainage element totally or partially obstructed

d. Program – road containment devices

d.1. Subprogram – flexible devices

d.1.1. Activity – standardization

d.1.2. Activity – removal, relocation, adaptation or implementation

d.1.3. Activity – damaged/broken devices that pose a risk to USER safety

d.1.4. Activity – damaged/broken devices that do not pose a risk to USER safety

d.1.5. Activity – cleaning, washing or painting

d.2. Subprogram – rigid devices

d.2.1. Activity – standardization

d.2.2. Activity – removal, adaptation or implementation

d.2.3. Activity – damaged device that poses a risk to USER safety

d.2.4. Activity – damaged device that does not pose a risk to USER safety

d.2.5. Activity- cleaning, washing or painting

d.3. Subprogram – anti-glare devices

d.3.1. Activity – standardization

d.3.2. Activity – damaged/broken and/or deteriorated and/or stolen and/or vandalized and/or misaligned device that poses a risk to USER safety

d.3.3. Activity – damaged/broken and/or deteriorated and/or stolen and/or vandalized and/or misaligned device that does not pose a risk to USER safety

d.3.4. Activity– cleaning, washing or painting

d.4. Subprogram - Guardrails and balusters

d.4.1. Activity – damaged device that poses a risk to USER safety

d.4.2. Activity – damaged device that does not pose a risk to USER safety

d.4.3. Activity– cleaning, washing or painting

e Program - signaling and auxiliary devices

e.1. Subprogram – horizontal signaling

e.1.1. Activity – cleaning

e.1.2. Activity – retroreflection

e.1.3. Activity – painting or repainting

e.1.4. Activity – recomposition

e.1.5. Activity – repainting or manual reapplication

e.2. Subprogram – vertical signaling

e.2.1. Activity – cleaning (ground/aerial)

e.2.2. Activity – retroreflection (ground/aerial)

e.2.3. Activity – repair or replacement of regulatory signaling (ground/aerial)

e.2.4. Activity – repair or replacement of other signaling (ground/aerial)

e.2.5. Activity – damaged gantries and semi-gantries

e.2.6. Activity – inadequacies in vertical signaling

e.2.7. Activity – measurement of retroreflection

e.3. Subprogram – delimiting devices

e.3.1. Activity – cleaning of logs or studs

e.3.2. Activity – cleaning of markers, delineators and delimiting cylinders

e.3.3. Activity – installation of logs and studs

e.3.4. Activity – installation of markers, delineators and delimiting cylinders

e.4. Subprogram – channeling device

e.4.1. Activity – cleaning / painting

e.4.2. Activity – scheduled cleaning

e.5. Subprogram – Warning signaling devices

e.5.1. Activity – cleaning

e.5.2. Activity – retroreflection

e.5.3. Activity – repair and replacement

e.6. Subprogram – Temporary use device

e.6.1. Activity – cleaning

e.6.2. Activity – replacement

e.7. Subprogram – traffic light signaling

e.7.1. Activity – cleaning

e.7.2. Activity – maintenance

f Structures

f.1. Subprogram – bridges,overpass and walkways

f.1.1. Activity – general cleaning of internal drainage devices

f.1.2. Activity – general cleaning ofexternal drainage devices

f.1.3. Activity – drainage element totally or partially obstructed

f.1.4. Activity – painting / galvanizing of metal guardrails and balusters

f.1.5. Activity – cleaning / painting of surfaces exposed to traffic

f.1.6. Activity – damaged or broken expansion joint (temporary repair)

f.1.7. Activity – damaged or broken expansion joint (definitive repair)

f.1.8. Activity – replacement of support device

f.1.9. Activity – inspections according to Technical Specifications

f.1.10. Activity – specific inspections and conservation

f.1.11. Activity – specific inspections and conservation

f.2. Subprogram – Immersed tunnel

f.2.1. Activity – inspections of the internal structure

f.2.2. Activity – mapping of cracks

f.2.3. Activity – carbonation test

f.2.4. Activity – inspections of infiltration in joints

f.2.5. Activity – corrosion verification

f.2.6. Activity – general cleaning of drainage devices drainage

f.2.7. Activity – unclogging of drainage elements

f.2.8. Activity – washing walls and ceilings

f.2.9. Activity – surface brightness test

g Program – operational and support buildings and yards

g.1. Subprogram – each operational or support building or yard represents a specific subprogram

g.1.1. Activity – preventive and corrective conservation

h Program – collection control system

h.1. Subprogram – collection system

h.1.1. Activity – each GANTRY of the system represents an activity of this subprogram

i Program – inspection control system

i.1. Subprogram – speed control system

i.1.1. Within this subprogram, the activity detailing is not required.

i.2. Subprogram – vehicle license plate reading and decoding system (OCR)

i.2.1. Within this subprogram, the activity detailing is not required

j Program – communication and user relationship system

j.1. Subprogram – radio system

j.1.1. Within this subprogram, the activity detailing is not required.

j.2. Subprogram – commercial telephone system and 0800

j.2.1. Within this subprogram, the activity detailing is not required.

j.3. Subprogram – wireless data network communication system

j.3.1. Within this subprogram, the activity detailing is not required.

j.4. Subprogram – data transmission system

j.4.1. Within this subprogram, the activity detailing is not required.

j.5. Subprogram – operational control center

j.5.1. Within this subprogram, the activity detailing is not required.

j.6. Subprogram – variable message panel – PMV

j.6.1. Within this subprogram, the activity detailing is not required.

j.7. Subprogram – User Emergency Communication System

j.7.1. Within this subprogram, the activity detailing is not required.

j.8. Subprogram – Lane marking system

j.8.1. Within this subprogram, the activity detailing is not required.

j.9. Subprogram – Abandonment Signaling System

j.9.1. Within this subprogram, the activity detailing is not required.

j.10. Subprogram – Megaphone System

j.10.1. Within this subprogram, the activity detailing is not required.

j.11. Subprogram – Ombudsman and other channels for user relations

j.11.1. Within this subprogram, the activity detailing is not required

k Program – monitoring system

k.1. Subprogram – Traffic Sensing System

k.1.1. Activity – each system used for this purpose corresponds to an activity within this subprogram

k.2. Subprogram – CCTV Traffic Monitoring System

k.2.1. Activity – each system used for this purpose corresponds to an activity within this subprogram

k.3. Subprogram – Fire Detection and Alarm System;

k.3.1. Activity – each system used for this purpose corresponds to an activity within this subprogram

l Program – lighting

l.1. Subprogram – street lighting

l.1.1. Activity – absence of lamp, lamp off, burned out or malfunctioning

l.2. Subprogram – building lighting

l.2.1. Activity – absence of lamp, lamp off, burned out or malfunctioning

l.3. Subprogram – light signaling

l.3.1. Within this subprogram, the activity detailing is not required.

m Program – ventilation

n Program – electrification

n.1. Subprogram – High and medium voltage lines

n.1.1. Within this subprogram, the activity detailing is not required.

n.2. Subprogram – Low voltage lines

n.2.1. Within this subprogram, the activity detailing is not required.

n.3. Subprogram – Substations and primary cabins

n.3.1. Within this subprogram, the activity detailing is not required.

n.4. Subprogram – motor generators

n.4.1. Within this subprogram, the activity detailing is not required.

n.5. Subprogram – no-break systems

n.5.1. Within this subprogram, the activity detailing is not required.

The CONCESSIONAIRE shall insert into the SIGECON based on the daily service records and, from the system, generate the “monthly report of routine maintenance services” which will be made available digitally in a system with online access by the REGULATORY AUTHORITY.

The monthly reports of routine maintenance services will be formally delivered by the CONCESSIONAIRE to the REGULATORY AUTHORITY, in 1 (one) digital copy, by the 10th (tenth) business day of the month following the subject of the report.

This system shall be adopted from the OPERATION START DATE and shall be continuous until the end of the CONCESSION TERM.

If the information provided is not satisfactory, the REGULATORY AUTHORITY may request data collections and reports to enable specific analyses.

1.4.2. Annual drainage report

The CONCESSIONAIRE shall prepare a report on drainage and conservation conditions based on the drainage inventory, as well as a photographic report, which will be formally delivered to the REGULATORY AUTHORITY in a digital copy, annually, on a date to be defined by the REGULATORY AUTHORITY. These activities will begin after the OPERATION START DATE for the TUNNEL and URBAN ACCESSES.

The identified issues shall be fully resolved within the deadlines established in item 1.3 – Description and standards for programs, Program “c” – drainage, of this EXHIBIT.

1.4.3. Annual and monthly schedules for conservation services

The CONCESSIONAIRE shall prepare annual and monthly schedules for routine

conservation/maintenance services, which shall comply with the same programmatic criteria used in the "monthly report on routine conservation/maintenance services".

The CONCESSIONAIRE shall provide the REGULATORY AUTHORITY with a digital file of the annual schedule of routine maintenance/conservation services, by means of a document filed by November 10th of each year, containing the schedule of services to be performed in the subsequent year. The performance of the services presented in the annual schedule shall be confirmed by means of the monthly schedules, to be filed with the REGULATORY AUTHORITY, in a digital file, by the 10th day of the months preceding the months of performance.

The annual schedule of maintenance/conservation services shall be detailed by location, program, subprogram and activity, with monthly time intervals.

The monthly schedule of maintenance/conservation services to be performed shall be detailed by location, program, subprogram and activity, with weekly time intervals, always consistent with the periods and cycles indicated in the annual schedule by activity. These activities will begin after the OPERATION START DATE for the TUNNEL, URBAN ACCESSES and ACCESS BUILDINGS.

The annual and monthly schedules shall be prepared in accordance with the templates defined by the REGULATORY AUTHORITY.

1.5. Inspection

All activities of the CONCESSIONAIRE will be inspected by the REGULATORY AUTHORITY or its technical agent, in accordance with the "operational procedure – PO.DIN/041" in its latest revision or any other procedure that may replace it.

All data collected, generated and updated shall be updated in the SIGECON digital system, in accordance with the deadlines required in the notice

2. SPECIAL MAINTENANCE/CONSERVATION

2.1. Basic Concepts

2.1.1. General Provisions

Special maintenance/conservation is the set of works and services necessary to preserve the initial investment and adjustment of the INTERCONNECTION SYSTEM to the standards established by the technical specifications and standards and parameters of the REGULATORY AUTHORITY.

Therefore, it is a set of interventions, including adaptations to new technologies, which constitute works and services of greater size or technical complexity, necessary due to the end of the useful life of the component parts of the road system. Through these activities and services, the useful life of the road component is restored, ensuring compliance with the standards established in the NOTICE.

For this purpose, the CONCESSIONAIRE will be responsible for all tasks related to maintenance/conservation with regard to:

(a) periodic surveys of the surface, structural, comfort and safety conditions of the pavements for purposes of controlling the minimum parameters required in the NOTICE;

(b) sizing of the special conservation project;

(c) studies and projects, which shall be developed in accordance with environmental licensing requirements; and

(d) planning and execution of works and installation.

Each of these stages will be monitored by the REGULATORY AUTHORITY, and the CONCESSIONAIRE shall maintain a permanent consultation and approval system, observing the necessary environmental licensing processes with the competent agencies.

Any work may only begin after delivery of the certified executive projects and presentation of the respective environmental installation license or document proving negotiations with the environmental agency, in accordance with the legislation in force.

The EXECUTIVE PROJECTS for special conservation and their respective QUALITY CERTIFICATES shall be sent to the REGULATORY AUTHORITY in accordance with APPENDIX E.

The identification of the services related to special conservation/maintenance will be the responsibility of the CONCESSIONAIRE, with the exception of those already described in this EXHIBIT. Throughout the CONCESSION, new recoveries may be planned according to the needs of the special conservation program, including improvements and new technologies that may be introduced by the CONCESSIONAIRE itself or required by law.

Certification will occur in accordance with APPENDIX E.

The CONCESSIONAIRE shall submit a BIM Modeling Project Implementation and Development Plan (PD-BIM) in accordance with the terms and deadlines set out in APPENDIX E.

2.1.2. Adaptation of Investment Schedule

It shall follow the recommendations set out in APPENDIX 7.

2.1.3. Prerequisites for starting and continuing the Works

The works may only be started and their continuity fully guaranteed in accordance with the terms and deadlines set out in APPENDIX E.

In the event of revocation or change in the status of any of the documents set forth in APPENDIX E, the CONCESSIONAIRE may be notified by the Authority to halt the works. In this case, the CONCESSIONAIRE shall take all necessary steps to timely regularize the documentation and resume the works, under penalty of the sanctions set out in the contract, notice and its EXHIBITS.

2.1.4. Prerequisites for receiving the works

The works may only be considered fully completed if the CONCESSIONAIRE proves compliance with the requirements set forth in APPENDIX E.

2.1.5. Executive Projects

(a) General Provisions

The EXECUTIVE PROJECTS for implementing the works shall follow the terms and deadlines set forth in APPENDIX E.

The EXECUTIVE PROJECT shall follow the premises, concepts and any reservations of the FUNCTIONAL PROJECT previously approved by the REGULATORY AUTHORITY.

(b) Quality Certification of Executive Projects

The CONCESSIONAIRE shall obtain certification under the terms and deadlines of APPENDIX E and shall use SISPROJ, from its implementation, to fully register all documentation related to the processing of EXECUTIVE PROJECTS.

(c) Environmental Licensing

Without prejudice to obtaining the Executive Project Quality Certificate, the CONCESSIONAIRE shall submit the EXECUTIVE PROJECTS required to obtain the Installation License for the IMPLEMENTATION WORKS to the competent Environmental Authority, observing the deadlines, which shall be met in order to ensure due compliance with the deadlines set forth in the Physical and Executive Schedule of the POI approved by the REGULATORY AUTHORITY.

2.2. Description and standards of services

2.2.1. Pavement

Description

The CONCESSIONAIRE shall prepare a program in accordance with the provisions of its POI and other INVESTMENT PLANS, which shall contain detailed studies and executive projects. In said program, the deadlines for the execution of special conservation interventions of the various segments of the INTERCONNECTION SYSTEM shall be established in order to meet the standards and specifications required in the CONTRACT throughout the CONCESSION.

The EXECUTIVE PROJECTS for special pavement conservation are the responsibility of the CONCESSIONAIRE. The CONCESSIONAIRE shall implement the SISSOND – DIGITAL INTEGRATED SYSTEM FOR SURVEYS AND TESTS, as defined in APPENDIX C.

On the date of delivery of the project to the REGULATORY AUTHORITY, the CONCESSIONAIRE's SGP database shall be updated with the new values from the surveys of the surface, structural, comfort and safety conditions of the pavements, as well as with any new traffic volume counts, results of additional geotechnical tests and mechanical properties of the materials constituting the pavement structures and, finally, with the solutions proposed for special conservation. Any revisions to the projects may be submitted for analysis by the REGULATORY AUTHORITY during the progress of the special conservation works, but with the necessary advance notice, in order not to jeopardize the deadline set for the execution of the service corresponding to that revision.

The minimum interval between special conservation interventions shall comply with the levels set forth in APPENDIX A and APPENDIX E, without prejudice to the need for full compliance with the IQD and Performance Indicators set forth in APPENDIX 3 and APPENDIX 6.

Standards

Surface Conditions

The conditions of surface defects may be assessed in accordance with the methodologies and procedures adopted by the National Department of Transportation Infrastructure - DNIT and DER/SP in the highway standards indicated below or others that may replace or change them during the concession:

- DNIT 006/2003-PRO – “objective assessment of the surface of flexible and semi-rigid pavements”;
- DNIT 062/2004-PRO – “rigid pavement – objective assessment”;
- DNIT 007/2003-PRO – “survey to assess the surface condition of homogeneous subsections of flexible and semi-rigid pavement highways for

pavement management and studies and projects";

- Rigid pavement manual – DNIT 2005 for Portland cement concrete pavements; and
- USDA TM 5-626 / 1995 – "Unsurfaced Road Maintenance Management" for dirt roads or primary pavement within the limits of the RIGHT-OF-WAY of the system's highways.

Comfort Conditions

The comfort conditions will be determined by measuring the irregularity in all traffic lanes, including rigid pavements. For this purpose, the "irregularity quotient – IQ" will be controlled, measured by "response-type" equipment or by "longitudinal profilometers" (preferably using laser profilometers).

Irregularity surveys shall comply with, at least, the procedures and specifications of the highway standards indicated below, or others that may replace or complement them during the concession:

- DNER PRO-159/85 – project for the restoration of flexible and semi-rigid pavements, chapters referring to procedures for evaluating irregularities;
- DNER PRO-164/94 – calibration and control of pavement surface irregularity measuring systems (IPR/USP and Maysmeter integrating systems). The calibration sections shall be approved by the REGULATORY AUTHORITY;
- DNER ES-173/86 – level and aiming method for calibrating response-type irregularity measuring systems; and
- DNER PRO-182/94 – measurement of irregularities pavement surface with IPR/USP and Maysmeter integrating systems.

Deflectometric conditions

Recoverable deflections shall be determined in case of a single lane every 20 (twenty) meters of lane, that is, every 40 (forty) meters of lane. In case of a double lane, recoverable deflections shall be determined every 40 (forty) meters in the heavy traffic lane and every 80 (eighty) meters in the other lanes.

To determine recoverable deflections, Benkelman beams, electronic beams or impact deflectometers of the Falling Weight Deflectometer type may be used, and shall comply with the DNIT standards indicated below, or others that may replace or change them during the concession:

- DNER ME 024/94 – Pavement – determination of deflections using the Benkelman Beam;
- DNER ME 061/94 – Pavement – delineation of the longitudinal influence line of the deformation basin using the Benkelman Beam;
- DNER ME 039/94 – Pavement – determination of deflections using the Dynaflect;
- DNER PRO 175/94 – Benkelman Beam Calibration; and
- DNER PRO 273/96 – Determination of deflections using the "Falling Weight Deflectometer – FWD" type impact deflectometer.

In addition to determining the recoverable deflections at all the locations mentioned above, the longitudinal influence line of the elastic deformation basin shall be delineated every 400 (four hundred) meters of roadway in the case of using the Benkelman beam.

When performing the deflectometric survey, the temperatures of the asphalt coating layer shall be measured every 60 (sixty) minutes. If a temperature divergence is observed in relation to the reference temperature of 21 ºC, the temperature adjustment factors indicated in the DNER ME-024/94 test method shall be used.

In addition to the deflectometric survey campaign, a rotary sounding campaign shall be carried out on the pavement with a 10 (ten) centimeter diameter "hole saw" type equipment. The soundings will be

carried out close to the kilometer markers for location reference, with an average frequency of one sounding every 500 meters of roadway. The points should be alternated in each campaign. The materials and component thicknesses of the coating and base layers should be recognized, and a cumulative record should be kept, in order to provide a gradual mapping of the existing pavement structures that will be used in studies and projects, as well as in the SGP.

The procedures for calculating structural reinforcements assume the use of a Benkelman beam to survey recoverable deflections. If other equipment is used, it is essential to perform a deflectometric survey with the Benkelman beam over a minimum length of 5,000 (five thousand) meters to determine the correlation coefficient between the equipment.

Notes:

- the equipment to be used in the deflectometric survey shall be calibrated at the beginning of the work;
- the certificate of weighing of the rear axle of the truck used in the survey with the Benkelman beam or with the electronic beam shall be sent to the REGULATORY AUTHORITY, together with the survey results; and
- In the case of FWD and electronic beams, digital copies of the field data acquisition files shall be sent to the REGULATORY AUTHORITY.

Safety conditions

To determine the safety conditions of pavements, methods and equipment for measuring texture and slip resistance are used.

To correctly assess the macrotexture of the pavement, surface scanning equipment (laser technology) shall be used, capable of acquiring 3D and 2D image data of the surface with a minimum resolution of 1 (one) millimeter over a minimum width of 4 (four) meters on a track with speeds of up to 100 (one hundred) km/h. The minimum measurement interval shall be two points (internal and external tracks) every 100 (one hundred) meters of lane length. All lanes shall be assessed.

Sand spot tests may be used for possible calibration/confirmation of the results obtained with surface scanning equipment.

In addition to the pavement macrotexture data, the following track geometry data shall be collected using surface scanning equipment: longitudinal slope (i), superelevation or transverse slope (e), horizontal curvature radius (R). The same 100 (one hundred) meter interval shall be used in each lane.

Based on the macrotexture data and wet road accident rates, the segments for assessing the coefficient of friction shall be defined (minimum sampling of 20% (twenty percent) in at least one segment in each lane).

Grip Tester (or similar) equipment shall be used to assess the coefficient of friction of pavement coatings, and British pendulum equipment shall be used for any calibrations and measurements. For the Grip Tester test, the water depth shall be at least 0.50 mm.

The Grip Tester evaluation segments shall be 100 (one hundred) meters long (individual values determined every 100 (one hundred) meters of evaluation length). It is also recommended to schedule surveys in continuous sections with a length of no less than 200 (two hundred) meters.

The adhesion values of a pavement, that is, the macrotexture and microtexture, will be quantified using the HS (sand height), VRD (skid resistance value), GN (Grip Number) and IFI (International Friction Index) indexes.

Rolling noise conditions

A popular vehicle representative of the current fleet of passenger vehicles shall be used for the measurements to be performed, with less than 15,000 (fifteen thousand) kilometers driven and tires in good condition (new).

The surveys shall be performed by measuring the noise inside the vehicle using a digital decibel meter, which shall be properly calibrated.

The vehicle shall maintain the maximum speed regulated for the road segment under study. The vehicle windows shall be completely closed and the measuring device positioned on the driver's left shoulder.

The driver shall be careful not to cause additional noise that may interfere with the measurement, in addition to that caused by the act of driving itself (steering wheel, gear shifting, etc.). Other sources of noise inside the vehicle shall also be turned off (radio, cell phones, air conditioning, etc.).

Whenever there are external elements and/or random events that interfere with the noise measurements, with the exception of those related to the condition of the pavement surface, these shall be disregarded and redone, so that a faithful picture of the average condition of auditory comfort/safety in free flow conditions due to tire-pavement interaction can be obtained.

The procedure described above may be changed or updated upon the publication of new standards and instructions by the REGULATORY AUTHORITY during the concession.

Minimum Required Parameters

The pavements that make up the INTERCONNECTION SYSTEM (including access ramps and safety strips) shall be analyzed for their surface conditions, comfort, deformability, remaining life and safety. After the first scheduled intervention, the pavement acceptability parameters for these conditions shall be fully complied with throughout the CONCESSION TERM., namely:

(a) surface conditions

For a minimum assessment length of 100 (one hundred) meters and a maximum of 300 (three hundred) meters;

(b) comfort conditions.

For a minimum assessment length of 100 (one hundred) meters and a maximum of 300 (three hundred) meters;

The value to be considered will be the average of the individual values (of the homogeneous segments with a minimum length of 100 (one hundred) meters and a maximum of 300 (three hundred) meters) of irregularity measurement, with no individual values being greater than 15% (fifteen percent) of the average If there are individual values greater than 15% (fifteen percent) of the average, the CONCESSIONAIRE shall work on the sections in order to make the kilometer compatible to the standards established in this EXHIBIT;

(c) deformability conditions and remaining life

- recoverable deflections

  The characteristic recoverable deflections (Dc) for a minimum assessment length of 100 (one hundred) meters and a maximum of 300 (three hundred) meters per lane will be represented by the sum of the arithmetic mean of the individual deflections, measured with the standard deviation of the sample.

(d) safety conditions / macrotexture

- macrotexture

  The individual values and the average per kilometer of the HS parameter shall be evaluated. The measurement shall be carried out on the internal and external wheel tracks, in all lanes, with a maximum spacing of 100 (one hundred) meters.

(e) Sand height (HS), measured with surface scanning equipment (laser) and/or sand spot test, according to the Summary Tables of pavement performance parameters.

- Coefficient of friction

(f) The individual values of the measured segments (extension of 100 (one hundred) meters) and the average per kilometer of the VRD index and GN index shall be evaluated, according to the Summary Tables of pavement performance parameters:

- Skid resistance value measured by testing with the British pendulum and/or Grip Tester type equipment (preferred), according to the tables in item (e).

- skid resistance value measured by Grip Tester type equipment, according to the tables in item(e)

  In addition to the individual control of the macrotexture, measured by means of the sand stain test and the friction coefficient, obtained through the skid resistance test, measured by the British pendulum or by means of any of the equipment included in the ASTM E-1960 (2001) standard, the international friction index IFI (International Friction Index) shall be determined.

  The minimum IFI values recommended for new and restored roads are those presented in the table in item i.

(g) rolling noise conditions

- criteria for roads implemented by the CONCESSIONAIRE:

  During measurements on the lanes, none of the segments may present noise levels predominantly higher than 75 (seventy-five) dBA (decibel) for more than 10 (ten) uninterrupted seconds of measurement (50% (fifty percent) or more of the individual values measured during the period shall be lower than 75 (seventy-five) dBA).

  On the lanes, the average value per homogeneous evaluation segment (maximum length of 200 (two hundred) meters) may also not be higher than the value of 75 (seventy-five) dBA.

  All lanes shall be evaluated, except for shoulders.

(h) Summary tables of pavement performance parameters:

Pavement Performance Parameters - INTERCONNECTION SYSTEM		
Parameters	**Validity: From the completion of the IMPLEMENTATION WORKS onwards**	**The entire system on the date of delivery of the concession**
Maximum percentage of area with potholes and disintegration	0%	0%
Percentage of area with class 3 cracks	FC-3 ≤ 2%	FC-3 ≤ 2%
Percentage of area with class 2 cracks	FC-2 ≤ 15%	FC-2 ≤ 15%
Wheel track sinking (F)	F ≤ 7 mm	F ≤ 7 mm
Maximum difference in level between the roadway and the shoulder	12 mm	12 mm
Maximum number of patches in good condition (low severity level)	20 patches. Above 20 patches over a length of 1,000 meters and above 4 patches over a length of 100 meters, it is essential to carry out continuous surface intervention	20 patches. Above 20 patches over a length of 1,000 meters and above 4 patches over a length of 100 meters, it is essential to carry out continuous surface intervention
Maximum number of patches in poor condition (high severity level)	0	0
Global Severity Index (1)	IGG ≤ 30	IGG ≤ 30
Pavement Condition Index (2)	ICP ≥ 75	ICP ≥ 75
Unsurfaced Road Condition Index (3)	URCI ≥ 75	URCI ≥ 75
	Q.I. ≤ 32 counts/km or IRI ≤ 2.46 m/km for paved roads	Q.I. ≤ 32 counts/km or IRI ≤ 2.46 m/km for paved roads

Roughness Quotient (I.Q.) or International Roughness Index (IRI) (4)	Q.I. ≤ 78 counts/km or IRI ≤ 6 m/km for non-paved roads	Q.I. ≤ 78 counts/km or IRI ≤ 6 m/km for non-paved roads
Characteristic Recoverable Deflections (Dc)	Allowable Deflection (Dadm) as a function of the demanding traffic (number N estimated until the next scheduled intervention or until the end of the Concession)	Allowable Deflection (Dadm) as a function of the demanding traffic (number N estimated since the design of the last intervention until the end of the Concession)
Macrotexture, sand height (HS)	0.6mm < HS < 1.2mm	0.6mm < HS < 1.2mm
Skid Resistance Value	VRD > 55	VRD > 55
International Friction Index IFI	IFI ≥ 0.22 new road works IFI ≥ 0.15 for restored pavements	IFI ≥ 0.22 new road works IFI ≥ 0.15 for restored pavements

*Surface and comfort conditions for minimum assessment extension of 200 m (two hundred meters) and a maximum of 1,000 m (one thousand meters), per lane

(1) obtained by means of a survey using DNIT 006/2003-PRO procedures – “Objective assessment of the surface of flexible and semi-rigid pavements”

(2) pavements with Portland cement concrete coating

(3) Non-paved roads

(4) The value to be considered will be the average of the individual values of Irregularity measurement in the homogeneous segment, and there may not be individual values greater than 15% (fifteen percent) of the average. If there are individual values greater than 15% (fifteen percent) of the average, the CONCESSIONAIRE will act in the sections in order to fit the kilometer into these standards.

Frequency of control of minimum required parameters	From the 1st to the 20th	From the 21st to the 30th
Deflectometric control	Annual	Annual
Surface inventoryl	Annual	Semi-annual
Comfort conditions control	Semi-annual	Quarterly
Safety conditions control	Annual	Semi-annual
Rolling noise conditions control	Annual	Annual
Pavement monitoring reports shall be submitted no later than 45 days after the field surveys are completed. This deadline shall also be met for updating data in the SGP. The delivery dates for the reports will be based on the contractual anniversary date. Failure to submit these reports will result in a fine, as per EXHIBIT 11.		

Note: There are specific parameters for the stretch that is part of the so-called “area of influence” (approach and departure areas) of the traffic counters (SATs). These parameters are included in the technical specification ***ET-DOP-GOE-C-TRA-RNS-01/02 - Methodology for Obtaining Traffic Parameters of the REGULATORY AUTHORITY*** (or may be included in another technical standard of the REGULATORY AUTHORITY that replaces or changes it during the concession) and, for all purposes, shall supersede the obligations established in this item.

(i) Performance curves

Based on the periodic surveys required to control the minimum parameters, a document containing the pavement performance curves expected for the remaining years of the Concession shall be submitted to the REGULATORY AUTHORITY.

Control of the minimum required parameters

The CONCESSIONAIRE shall present the frequency of the control of the minimum required parameters that it proposes during the CONCESSION TERM, but shall comply with the deadlines in the table “Frequency of the control of the minimum required parameters”.

Pavement monitoring reports shall be delivered within a maximum of 45 (forty-five) days after the field surveys are carried out. This deadline shall also be met for updating data in the SGP. The delivery dates for the annual or semi-annual reports will be based on the anniversary date of the contract.

The CONCESSIONAIRE shall submit the reports, in digital format, in accordance with the standard established by the REGULATORY AUTHORITY, and shall feed this data into the pavement management system.

Failure to comply with the above-mentioned indices will result in the CONCESSIONAIRE being fined in accordance with the provisions of EXHIBIT 11, and the CONCESSIONAIRE will be required to correct the sections where the pavement indices are not in accordance with the requirements, within a period established by the REGULATORY AUTHORITY. Within 15 (fifteen) days after this period, the CONCESSIONAIRE will conduct a new survey to verify the pavement indices and, if there is no agreement, an administrative sanctioning process will be instituted.

In order to verify the compliance of the services with the minimum required parameters, the REGULATORY AUTHORITY will request, at the CONCESSIONAIRE's expense, regular or extraordinary audits in order to determine any discrepancies in compliance with the established standards.

Methodologies to be applied (pavement)

The premises to be applied in the special pavement conservation are:

- compliance with the minimum required parameters indicated throughout the Concession period;

- The pavement surface shall be covered with a bituminous layer at each intervention (except for concrete pavements).

The procedures and tests mentioned may be replaced by other equivalent ones during the CONCESSION TERM, in accordance with the most updated specifications of the REGULATORY AUTHORITY at the time.

Special attention shall be given to the surface drainage of the lanes, mainly due to the interaction with the concrete barriers, during the pavement recovery services. Pavement drains will be part of the special pavement conservation project, and shall include the location of their application, cross-section and hydraulic calculation report. Pavement drains shall be installed in the areas where they have not been built, in a manner compatible with the progress of the pavement recovery, conservation or maintenance services. In the sections where they have already been installed, the CONCESSIONAIRE shall assess their sufficiency and, if they are deficient, replace or resize them. Special attention will also be given to the slopes (transverse and longitudinal) of the track, which, eventually, shall be corrected and adapted, in order to meet the minimum standards provided for in the regulations in force during the CONCESSION.

2.2.2. Recovery of Specific Special Structures, chains and walkways

Description

The CONCESSIONAIRE shall comply with the current technical specification for CONTROL OF SPECIFIC SPECIAL STRUCTURES “ET-00.000.000-0-C21/002” and its updates, as defined by the REGULATORY AUTHORITY, when carrying out special conservation interventions on OAEs and walkways throughout the CONCESSION TERM and the costs of recovering these works will be fully borne by the CONCESSIONAIRE.

The CONCESSIONAIRE shall submit a monitoring and management program containing all Specific Special Structures and walkways within 6 (six) months from the conclusion of the IMPLEMENTATION WORKS for the TUNNEL and URBAN ACCESSES, to be applied throughout the CONCESSION TERM, ensuring the maintenance and adequacy of the safety and functionality required in accordance with the technical specification for maintenance and management of OAEs “control of Specific Special Structures – ET-00.000.000-0-C21/002 – Rev. 1” and its updates, as defined by the REGULATORY AUTHORITY. Failure to submit this program will result in the application of a penalty, as provided for in EXHIBIT 11.

The CONCESSIONAIRE shall comply with current ABNT standards for structural projects, including in recovery works.

The CONCESSIONAIRE shall implement the SISOAES according to APPENDIX C.

The monitoring and management program shall be available and updated. Its database shall contain, immediately after the execution of the recovery of OAEs and/or walkways, photos identifying the pathologies and respective therapies performed, dated and with the specification of methodology and materials used.

The updated conditions of the OAEs and walkways shall also be presented in the monitoring and management program, with the classifications of their structural, functional and durability aspects, with electronic files containing the reports of the special inspections and projects that were used.

The CONCESSIONAIRE shall always present complete electronic files of the inspections of all OAEs with photos, including the recoveries, identifying the services and the dates of execution.

The CONCESSIONAIRE shall periodically conduct inspections using drones every 5 years, starting from the 6th month after the completion of the IMPLEMENTATION WORKS, of the OAEs, OACs and walkways of the INTERCONNECTION SYSTEM. The images shall be capable of being transmitted in real time to the Concessionaire's CCO, and subsequently integrated into the CCI of the REGULATORY AUTHORITY. The drones shall have an onboard camera system or LIDAR system or equivalent technology in such a way as to allow the 3D restitution of the non-submerged elements of the OAEs. The 3D model restored from the OAEs shall have a resolution that allows the identification of pathologies in the structures such as cracks, fissures, etc. The photos shall record the date, time and geographic positioning (latitude and longitude in decimal degrees). It shall also allow the measurement of the dimensions of all elements with centimetric precision, including apparent pathologies. The Concessionaire shall feed the collected information (photos and restored 3D model) into the Concession's electronic SIR system. The system provided shall include 3D visualization features of the elements and the possibility of measuring the dimensions of the elements in the images. The REGULATORY AUTHORITY may request, up to twelve times per year, an extraordinary inspection, with recording of images and storage and provision of the images in the Concession's electronic SIR system, and possibly 3D restitution of the elements, in addition to the ordinary inspections mentioned, of any elements of the system, in addition to OAEs, OACs and walkways. In this case, the route and the elements to be inspected may be defined by the REGULATORY AUTHORITY itself. The technology to be implemented for drones shall enable automatic image recognition, so that elements that may pose a risk to user safety can be automatically identified, as well as elements of interest to the REGULATORY AUTHORITY or the CONCESSIONAIRE itself, to be agreed upon by mutual agreement between the CONCESSIONAIRE and the REGULATORY AUTHORITY. The images shall be made available in the SIR system no later than 5 days after collection, and may preferably be in real time.

(a) pavement

The recovery of existing pavements over the OAEs may be included in the overall pavement recovery program, provided that structurally the damage does not indicate a compromise to the safety of the work.

(b) surface drainage

The installation or replacement of water drains shall be planned to ensure rainwater drainage from the track, as well as drainage upstream of the OAEs, with adequate water downspouts and concrete gutters.

(c) support devices and expansion joints

The CONCESSIONAIRE shall ensure compliance with the design parameters applicable to these parts, replacing expansion joints whenever they are broken and/or crushed and/or blocked, and supporting devices that are broken and/or crushed and/or distorted and relocated if they are outside the design positions. These elements shall comply with the guiding parameters defined by ABNT.

Repairs and replacements to ensure compliance with these parameters shall comply with the monitoring and management plan.

(d) concrete and/or steel and/or mixed structures

The CONCESSIONAIRE shall identify all problems presented by concrete and/or steel and/or mixed structures, respecting the current technical specification for “CONTROL OF- SPECIFIC SPECIAL STRUCTURES - ET-00.000.000-0-C21/002” (or another technical standard of the REGULATORY AUTHORITY that may change or replace it during the concession), applying it to OAEs, OACs and walkways, as well as quantifying the services necessary to recover these elements, which include, among others:

- treatment of cracks;
- combating the action of chlorides and carbonation;
- treatment of exposed and/or corroded reinforcement;.

- treatment of disaggregated or disintegrated concrete;
- rehabilitation of the work to acceptable levels of deformation and displacement, according to ABNT standards;
- internal drainage (in lost caissons) and external drainage (in decks and accesses);
- complete lighting of walkways, according to the specifications of this EXHIBIT and EXHIBIT 7;
- heading of the OAEs;
- elimination of steps near the OAE junctions;
- maintenance restoration;
- slope reinforcement;
- jacking of the OAEs;
- instrumentation of the OAEs;
- protective painting; and
- access to the OAEs for inspections/evaluations.

(e) road containment devices

Services related to safety devices in the OAEs, including the restoration of existing guardrails and the installation of wheel guards (current ABNT standard), shall be included in the recovery services.

All OAEs with a length greater than or equal to 5.0 (five) meters shall have rigid road containment devices or equivalent, provided that the relevant technical standards are complied with.

The rigid road containment device shall be installed to function as a guardrail and provide protection for pedestrians in the event of OAEs with sidewalks.

At the exit of the OAEs, the rigid road containment devices shall be continuous with the flexible road containment devices (for approaching OAEs), and the transition shall comply with the standards in force at the time of the intervention.

(f) technical inspections of the OAEs

The CONCESSIONAIRE shall carry out inspections of the OAEs with specialists, identifying the interventions necessary to adapt to the classifications of ET-00.000.000-0-C21/002 revision 1, (control of special works of art) or another technical standard of the REGULATORY AUTHORITY that may change or replace it during the concession, in terms of structural, functional and durability aspects, and the current ABNT standards. Photographs representing the pathological manifestations and other anomalies of the works shall be presented.

The CONCESSIONAIRE shall plan for interventions and special maintenance in the OAEs and footbridges for the entire CONCESSION TERM.

The CONCESSIONAIRE shall submit a recovery schedule identifying all OAEs and footbridges, focusing on the classifications according to the aforementioned ET (technical specification) or technical standard of the REGULATORY AUTHORITY that may alter or replace it during the concession, under the structural, functional and durability aspects, with the breakdown of the pathological manifestations and intervention services necessary to adapt the works.

(g) ducts for effluent collectors in the OAEs

The CONCESSIONAIRE shall maintain the effluent collection system supported by the superstructures of the OAEs in adequate operational conditions.

2.2.3. Road containment devices

Description

It is the elements or systems designed to reduce the severity of accidents, prevent the passage of vehicles, pedestrians or both in dangerous areas or locations, as well as reduce noise levels. These include: metal guardrails, rigid concrete guardrails, anti-glare devices, impact-absorbing devices, acoustic barriers and others.

The CONCESSIONAIRE, throughout the CONCESSION TERM, shall assess the need to install, modify or remove these road containment devices in other locations.

Execution Standards

The projects, installation, replacement, restoration, recovery and reinforcement of road containment devices shall comply with the relevant technical standards in force at the time of the intervention.

Special care with surface drainage shall be taken in cases of installation of rigid road containment devices (e.g. concrete barriers).

In sections under construction, the construction area shall be protected with road containment devices, to be installed in accordance with the technical standards in force at the time of the intervention.

2.2.4. Signaling and auxiliary devices

Description

It is the set of traffic signs and other elements placed on public roads with the aim of ensuring their proper use, enabling better traffic flow and greater safety for vehicles and pedestrians traveling on them.

Traffic signs are road signaling elements, among which the following can be mentioned: signs, road markings, light control equipment, auxiliary devices, whistles and gestures intended exclusively to order or direct the traffic of vehicles and pedestrians.

Auxiliary devices, for purposes of this CONCESSION, are the elements applied to the road surface or next to it, in order to make the operation safer. These are: delimiting devices (studs, markers, delimiting cylinders and delineators), channeling devices (prisms and segregators), warning signaling devices (obstacle markers, danger markers and alignment markers) and temporary use devices (cones, cylinders, mobile bollards, drums, zebra tape, easels, fixed and mobile barriers, hoardings, railings, complementary lighting elements, flags, banners).

Execution Standards

The defined standards shall be complied with throughout the CONCESSION TERM.

(a) Horizontal Signaling, delimiting devices and channeling devices

The Horizontal Signaling of delimiting devices and channeling devices shall comply with the standards and specifications in force in the Brazilian traffic signaling manual — CONTRAN, in the road signaling manual — DER/SP and in the pertinent and current ABNT technical standards, in addition to the institutional signaling manual and other technical specifications of the REGULATORY AUTHORITY in force and/or issued during the concession.

In sections undergoing pavement repair work, immediately after intervention on the pavement of the subsections of the work and before releasing it to traffic, provisional horizontal signaling that meets safety standards shall be maintained, in accordance with the DER/SP road signaling manual or another that replaces or complements it. According to the provisions of Article 88 of the Brazilian Traffic Code, after 30 (thirty) days of intervention on the pavement, the subsections of the work shall be signaled with definitive horizontal signaling – painting of stripes and placement of reflective studs –, in compliance with the provisions of the EXECUTIVE PROJECT for signaling of the location.

(b) vertical signaling (ground and overhead) and warning signaling devices

Vertical signaling and warning signaling devices shall comply with the standards and specifications in force in the Brazilian traffic signaling manual — CONTRAN, in the road signaling manual — DER/SP, in the institutional signaling manual and other technical specifications of the REGULATORY AUTHORITY and in the relevant ABNT technical standards in force during the CONCESSION TERM.

(c) Temporary Use Devices

The use of temporary devices is mainly intended to complement the signaling of works and emergency traffic diversions. Due to their importance in ensuring traffic safety, their use shall comply with the standards, standards and specifications in force in the Brazilian traffic signaling manual — Contran, in the road signaling manual — DER/SP, technical specifications of the REGULATORY AUTHORITY and in the relevant ABNT technical standards in force during the concession. The preparation and presentation of executive projects for road signs and traffic diversions shall comply with the provisions of APPENDIX E.

For sections under construction, the signs (vertical signs, warning signs and temporary use devices) shall be installed in accordance with the Brazilian traffic sign manual — Contran, the road sign manual — DER/SP, technical specifications of the REGULATORY AUTHORITY and those contained in the Brazilian traffic code – CTB.

For routine maintenance works, it is not mandatory to present a certified EXECUTIVE PROJECT, and it is the CONCESSIONAIRE's responsibility to submit the relevant documentation for analysis by the REGULATORY AUTHORITY up to 30 (thirty) days before the start of the work.

2.3. Inspection

(a) General Provisions

Each special maintenance/conservation service will be the contemplated by a specific project, which shall be submitted for approval by the REGULATORY AUTHORITY.

The CONCESSIONAIRE shall establish an inspection program, for monitoring the execution, technological control and quality of services. The costs of developing and implementing the inspection program shall be borne by the CONCESSIONAIRE.

The inspection will conduct acceptance inspections of the services performed by the CONCESSIONAIRE in recoveries, reinforcements, modifications and/or replacements of OAEs, as well as supervise their management.

In the event of a discrepancy in compliance with the required parameters, the REGULATORY AUTHORITY will request, at the CONCESSIONAIRE's expense, regular or extraordinary audits, including tests provided for in the current technical specification for "CONTROL OF SPECIFIC SPECIAL SCTRUTURE - ET-00.000.000-0-C21/002" (or technical standard of the REGULATORY AUTHORITY that may change or replace it during the concession), to supplement data for assessments of the condition of the work, in order to determine any disparities in compliance with the established requirements.

(b) Quality Certification of Works

The CONCESSIONAIRE shall obtain a QUALITY CERTIFICATE for all Special Conservation works provided for in the CONCESSION, under the terms and deadlines of APPENDIX E.

(c) Quality Control Management of Works

The CONCESSIONAIRE shall implement and operate an Integrated Digital Management System for Technological Control and Quality of Works (SISQUALI), under the terms and deadlines of APPENDIX C.

Quality control information shall be entered into the system simultaneously with the progress of the works.

(d) Monitoring of Works Using BIM Technology

The CONCESSIONAIRE shall include information related to the monitoring of the works in an appropriate BIM model, under the terms and deadlines set forth in APPENDIX E.

(e) Conclusion

Once the POI and the respective Physical and Executive Schedules have been approved by the REGULATORY AUTHORITY, the dates for completion of each service/investment item shall be met by the CONCESSIONAIRE. The CONCESSIONAIRE shall issue a COMPLETION NOTIFICATION, according to the terms and deadlines set out in APPENDIX E.

(f) "As Built" Documentation

The CONCESSIONAIRE shall present As Built documentation for all works provided for in the CONCESSION, under the terms and deadlines of APPENDIX E.

3. EMERGENCY MAINTENANCE/CONSERVATION

3.1. Basic Concepts

Emergency conservation/maintenance is defined as the services or works required to repair, replace, rebuild or restore sections or structures that have been broken, obstructed or damaged by an extraordinary event, a public calamity, causing partial or total interruption of traffic on the road.

Such an event may be a landslide, landfill slippage, flood, fire, major accident, damage to a specific special structure, etc.

The need to present EXECUTIVE PROJECTS for this item will remain at the discretion of the REGULATORY AUTHORITY. If the Authority determines the need to present EXECUTIVE PROJECTS for these items, the standards to be followed will be the same standards defined in APPENDIX E, except in cases where there is express authorization from the REGULATORY AUTHORITY for exemption from one or more contractual obligations.

3.2. Procedures

In the event of an emergency event, the CONCESSIONAIRE shall, as a priority:

- install appropriate traffic signs at the location, in accordance with the provisions of the DER/SP signaling manual or other manuals that may be adopted by the REGULATORY AUTHORITY (in force at the time of the occurrence);
- when there is a need to implement a traffic diversion, this shall be adequately signposted in its entirety, in accordance with the provisions of the DER/SP signaling manual or other manuals that may be adopted by the REGULATORY AUTHORITY (in force at the time of the occurrence);
- immediately mobilize resources for the necessary corrective action;
- immediately report the event to the REGULATORY AUTHORITY; and
- in the case of immediate technical actions in OAEs, OACs and walkways, the current technical specification for "CONTROL OF SPECIFIC SPECIAL SCTRUTURE - ET- 00.000.000-0-C21/002" shall be followed (or any technical standard of the REGULATORY AUTHORITY that may amend or replace it during the concession).

3.3. Inspection

Emergency conservation/maintenance services will be subject to specific reports by the CONCESSIONAIRE and shall contain at least the following:

- the precise location of the emergency event;
- the date and time of the event;
- the type of emergency occurrence;
- the type of closure (total, partial, shoulder);
- the emergency measures adopted (signaling of the location, detours implemented, including a map, sketch of the detour route, resources mobilized, etc.);
- preliminary assessment of the causes of the event;
- the preliminary planning for repairing the damage, including the expected date for reestablishing normal traffic on the road;
- the future schedule within the routine or special maintenance programs; and
- a photographic report of the emergency event, diversions and signaling, etc.

This emergency report shall be submitted to the REGULATORY AUTHORITY within a maximum of 24 (twenty-four) hours after the occurrence of the event, electronically, and shall be updated weekly until the (total or partial) traffic ban is released, with the remaining services being monitored by means of special or routine maintenance, as the case may be.

4. SERVICES RELATING TO THE ENVIRONMENT, HEALTH AND SAFETY AT WORK

4.1. Initial program

The CONCESSIONAIRE shall design, build, operate and maintain the INTERCONNECTION SYSTEM, in accordance with: (i) the requirements of applicable federal, state and municipal legislation; (ii) the Performance Standards (PD) of the International Finance Corporation – IFC; (iii) with the World Bank Group (WBG)/IFC General Environmental, Health and Safety Guidelines ("WBG/IFC Guidelines"), and the WBG/IFC Specific Environmental, Health and Safety Guidelines for Highway Projects.

The required environmental and social studies shall be conducted by competent Environmental, Social and Health (EHS) professionals with relevant experience in conducting impact assessments for similar projects and with appropriate experience in applying the IFC AS Requirements.

The applicable IFC and WBG environmental and social requirements are herein referred to as PERFORMANCE STANDARDS.

4.1.1. With respect to the services corresponding to the Environment, the REGULATORY AUTHORITY:

- shall provide assistance, upon request, in reaching agreements with the competent agencies on matters related to environmental licensing and other approvals and authorizations that may be necessary, pursuant to Clause 17.1, item iii, of the CONTRACT;

- will assess: a) the mandatory environmental audit report, carried out at least annually in the environmental management system (SGAS) and in the occupational health and safety system of the CONCESSIONAIRE. The contracting of the mandatory environmental audit and its respective costs are the responsibility of the CONCESSIONAIRE; and b) the mandatory external environmental audit report, carried out at least annually, regarding the obligations set forth in item 5.1.2, a.1 of this EXHIBIT; and c) monthly, the environmental performance of the CONCESSIONAIRE through the ADA – Environmental and Social Performance Assessment or methodology that replaces it; and

- shall notify the CONCESSIONAIRE of any failure to comply with the obligations of any recommendations set forth in the reports, subject to the application of the penalties set forth in EXHIBIT 11.

4.1.2. In addition to the obligations set forth in this EXHIBIT and in the applicable legislation, the CONCESSIONAIRE shall:

a when providing information,

a.1. prepare and submit to the REGULATORY AUTHORITY in the manner and frequency it deems appropriate:

- A complete copy of all environmental licenses and authorizations, including the respective technical opinions, and other documents that may be requested by the GRANTING AUTHORITY and/or REGULATORY AUTHORITY;

- A copy of all notifications of environmental and administrative infractions, as well as any fines resulting from these infractions, pursuant to Clause 37.4, item vii, of the CONTRACT;

- Copy of all notifications of health and safety violations and administrative violations, as well as any fines resulting from these violations, pursuant to Clause 37.4, item vii, of the CONTRACT;

- Annual report on health, safety and environmental performance assessment – RADA, structured based on NBR ISO 14.031 and 45.001;

- Monthly information in accordance with ADA – Environmental and Social Performance Assessment, or methodology that may replace it during the concession;

- Copy of the Certificates of implementation/renewal of Environmental and Social Management Systems (ESMS) based on ISO 14.001 and ISO 45.001;

- External environmental audit report, evidencing compliance with the requirements set forth in the IFC Performance Standards dated of January 1, 2012, on an annual basis;

- Copy of civil inquiry and/or civil lawsuit.

a.2. provide the reports and information set forth in the previous subitem available electronically, in real time and with unrestricted access to the REGULATORY AUTHORITY.

a.3. provide immediate notice: (i) of any and all events of an environmental nature that may harm or prevent the punctual and timely fulfillment of contractual obligations and that may constitute a cause for intervention or expiration of the CONCESSION or termination of the CONTRACT; and (ii) of any and all situations that correspond to facts of an environmental nature that significantly alter the normal development of the services or the operation of the CONCESSION, presenting, in writing, and within the minimum period necessary, a detailed report on these facts, including, if applicable, contributions from technicians or specialized entities, external to the CONCESSIONAIRE, with the measures taken or in progress to overcome or remedy the aforementioned facts.

b in the performance of services,

b.1. maintain, throughout the term of the CONCESSION, conditions and methodology of Adequate Service that guarantee environmental preservation and avoid environmental impacts for all services under its responsibility; it is also its responsibility to mitigate environmental impacts and/or environmental liabilities, without prejudice to the allocation of risks contractually provided for.

b.2. the CONCESSIONAIRE may provide for the study of technological alternatives for engineering projects in order to support the environmental licensing processes for the works. The aspects of minimizing impacts and consideration of traffic studies, including safety issues, shall be addressed in these alternative studies.

b.3. As applicable, environmental licensing shall guarantee consultation procedures with the National Indigenous Foundation – Funai, if the presence of Indigenous Lands is verified in the area of influence of the projects, as established in Funai Normative Instruction No. 002/2015, as well as with INCRA regarding the presence of Quilombola Communities.

b.4. Meet the criteria and requirements defined through the ADA – Environmental and Social Performance Evaluation, or methodology that may replace it during the concession.

b.5. Ensure compliance with the requirements set forth in the IFC Performance Standards, dated as of January 1, 2012, listed below and available in the Data Room:

- Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts

- Performance Standard 2: Conditions of Labor and Employment

- Performance Standard 3: Resource Efficiency and Pollution Prevention

- Performance Standard 4: Community Health and Safety
- Performance Standard 5: Land Acquisition and Involuntary Resettlement
- Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources
- Performance Standard 7: Indigenous Peoples
- Performance Standard 8: Cultural Heritage

b.5.1. The CONCESSION's compliance assessment, both in relation to Brazilian legislation and in relation to the REGULATORY AUTHORITY's contractual requirements, demonstrated compatibility with most of the requirements of the Performance Standards referenced above, however there are gaps that shall be remedied by the CONCESSIONAIRE and highlighted to the REGULATORY AUTHORITY, through the External Environmental Audit Reports.

b.6. Within 24 (twenty-four) months from the date of signing of the INITIAL TRANSFER INSTRUMENT, the CONCESSIONAIRE shall implement an INTEGRATED DIGITAL ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEM (SGAS), as defined in APPENDIX C and described below:

- The Environmental and Social Management System (SGAS) shall comply with the requirements of PD 01, that is, an integrated management system in accordance with the standards NBR ISO 9.001:2015 (Quality Management System), NBR ISO 14.001:2015 (Environmental Management System) and NBR ISO 45.001: 2018 (Occupational Health and Safety Management System) – It is additionally recommended that the proposed system adopt: (i) robust and comprehensive stakeholder engagement processes, (ii) have an adequate organizational structure, (iii) health and safety and social appropriate to the complexity of the project. project, (iv) conduct socio-environmental audits to identify and monitor the risks and impacts of the project, (v) have a comprehensive policy that defines the environmental and social objectives and principles that guide the project to achieve solid socio-environmental performance, (vi) risk and impact identification process, (vii) management programs; (viii) monitoring and analysis processes; and (vii) emergency preparedness and response plan.

- Develop and implement a training and implementation schedule for the Environmental and Social Management System (ESMS), in order to achieve its operationalization within 24 (twenty-four) months from the date of signing the INITIAL TRANSFER INSTRUMENT.

b.6.1. The ESMS shall include in its scope the service providers and suppliers that perform activities in the INTERCONNECTION SYSTEM.

b.6.2. The CONCESSIONAIRE shall implement a preliminary ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEM, including all procedures necessary for environmental and social management of service execution activities, which shall be in operation before the start of such activities and until the INTEGRATED DIGITAL ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEM (SGAS) is fully operational.

b.7. Within 30 (thirty) months from the date of signature of the INITIAL TRANSFER INSTRUMENT, the CONCESSIONAIRE shall obtain the NBR ISO 14.001 and 45.001 certificates.

b.8. In conjunction with the scope already defined for the environmental licensing

process, in accordance with the applicable legislation:

- Prepare within 18 (eighteen) months the Socio-Environmental Impact Study(s) (ESIA) consistent with the PDs for the INTERCONNECTION SYSTEM.

- The ESIA shall include an analysis of environmental and social risks to identify the current impacts of operations that are not being mitigated, particularly in sections that have not undergone an environmental licensing process, covering the entire INTERCONNECTION SYSTEM to identify potential cumulative impacts, including significant impacts on indigenous and quilombola peoples.

    - In addition to the Environmental Risk and Impact Assessment considering the attributes of cumulativeness and synergy, the future concessionaire shall prepare a Rapid Assessment of Cumulative Impacts (ARIC) study, in accordance with the guidelines contained in the Good Practice Handbook on Cumulative Impact Assessment and Management: Guidance for the Private Sector in Emerging Markets to map the significant cumulative impacts that could arise from the development of the project as a whole.

- Reassess the mitigating measures being implemented in order to address, if necessary, additional measures to minimize socio-environmental risks and impacts in compliance with the PDs and the IFC General HSE Guidelines and the HSE Guidelines for Highways, and considering the impacts in the planning, implementation and operation phases established by the CETESB Manual for the Preparation of Environmental Studies with EIA (CETESB, 2019).

b.9. Develop and implement, among other plans and programs that are necessary and in line with the PERFORMANCE STANDARDS, including during the operation stage: Environmental Management Program / Environmental Control Program for the Works; Social Communication Program, integrated with the Stakeholder Engagement Plan; Environmental Education Program; Contaminated Areas Management Program; Erosive Processes Prevention, Control and Monitoring Program; Water Quality Monitoring Program; Noise Level Monitoring Program; Climate Action Plan; Emissions Management Plan, including a Program for Monitoring Impacts on Buildings Due to Vibrations, Noise Level Monitoring Program, Atmospheric Emissions Control and Reduction Program; Waste and Effluent Management Plan; Hazardous Materials Management Program; Emergency Plan; Health and Safety Management Plan, including a specific Occupational Health and Safety Monitoring Program and Hearing Conservation Program; Road Repair Management Plan; Resettlement Action Plan (PAR) and Livelihood Recovery Plan (PRMS); Prevention Plan against Gender-Based Violence and Violence against Children; Wildlife Monitoring and Conservation Plan, including Wildlife Roadkill Monitoring Program and Wildlife Rescue and Repelling Control Program; Vegetation Suppression Control Program; Flora Rescue and Plant Germplasm Transplantation Program; Compensatory Planting Monitoring Program; Biodiversity Action Plan; Workforce Training and Qualification Program; Contractor Management Plan; Environmental Planning and Control Program for the Deactivation and/or Temporary Interruption of Construction Fronts; Demobilization Plan for Civil Construction Workers; Integrated Vegetation Management and Pest Management Plan; Archaeological Prospecting, Rescue and Preservation Program for Archaeological, Historical and Cultural Heritage.

b.9.1. Some of the programs mentioned above are detailed in the following clauses.

b.10. Prepare and implement, within 12 (twelve) months, a Stakeholder Engagement Plan, which includes the identification, analysis of interested parties and planning, disclosure and dissemination of information about the project and future works (when applicable), consultation and participation, the complaint mechanism and continuous reporting to the affected communities, including during the operational stage.

b.10.1. The Stakeholder Engagement Plan shall include (at least) the following activities:

- Identify potential stakeholders and obtain relevant information about them, such as their interests, expectations, level of acceptance and rejection of the project by the population, influence and impact on the project. This step should be carried out at the beginning of the project and whenever there are significant changes in the scope, objectives or risks of the project.

- Group stakeholders by category, according to criteria such as level of involvement, attitude, priority and engagement strategy;

- Prioritize and position stakeholders in an analysis matrix, according to the degree of influence and interest they have in the project;

- Develop a Socio-Environmental Perception Survey to assess expectations and the level of acceptance and rejection of the project by the population, especially with regard to the socio-environmental impacts and risks of future works, which is part of the Stakeholder Engagement Plan and the Social Communication Program.

b.11. Develop a Social Communication Program integrated with the Stakeholder Engagement Plan, which includes actions to disseminate information and clarifications about the project, through various communication channels, from the planning stage, in the case of future works, including during the operation stage.

b.11.1. It is important to note that the actions of the Stakeholder Engagement Plan and the Social Communication Program shall ensure that all engagement and information dissemination processes throughout the project are disseminated in a transparent and accessible manner; it shall be ensured that all information materials made available are easy to understand and in a culturally appropriate format that is understandable to the affected communities.

b.11.2. Among other topics, the Social Communication Program shall include actions related to the topic of road safety.

b.12. Implement a Consultation and/or Informed Consultation and Participation (CIP) process, when the affected communities are subject to significant risks and impacts of the project and whenever indigenous peoples, quilombolas and other vulnerable groups are present.

b.13. Develop, implement and disseminate consultation, complaint and reporting mechanisms for affected communities that guarantee broad access (including for vulnerable or disadvantaged groups and individuals) and anonymity, with specific procedures for cases of gender-based violence perpetrated by a direct or indirect

employee of the Concessionaire, in line with IFC guidelines. The mechanism shall have procedures for recording, analyzing and responding to the complainant until the issue is resolved. Submit an annual Report to the Affected Communities, addressing aspects of the CONCESSIONAIRE's Action Plan on issues involving ongoing risks or impacts on these communities, in accordance with paragraphs 34 to 36 of Performance Standard 1, including during the operational stage.

b.14. Preparation, implementation and maintenance of a Human Resources Policy throughout the term of the CONCESSION compatible with paragraphs 8, 9 and 15 of Performance Standard 2, the additional content of which to that required by Brazilian legislation consists of establishing formal guidelines and implementing (i) a code of conduct for workers and outsourced workers, without prejudice to the provisions of Clause 26.14. of the CONTRACT, based on ethical principles, including the promotion of diversity, inclusion and awareness of discriminatory or violent practices among workers and the community, including but not limited to issues related to violence, physical or sexual harassment, including when based on gender, (ii) training and qualification of the workforce, including outsourced workers, including information programs and actions on diversity and inclusion issues, in line with the code of conduct, (iii) human resources management procedures for assessing participation in the workforce, including that related to gender, in addition to valuing diversity and promoting equal opportunities and (iv) consultation, complaint and reporting mechanisms for workers, including outsourced workers, duly disclosed and that guarantee broad access and anonymity, including, but not limited to, practices of discrimination, violence, moral, physical or sexual harassment, including when based on gender;

b.15. Carry out a mapping of the supply chain involved in the implementation and operation of the project, including the identification of suppliers, possible risks and significant adverse impacts and prioritization of suppliers by risk levels, including relevant safety issues;

b.16. Implement a procedure for evaluating suppliers and verifying the existence of child or forced labor throughout the term of the CONCESSION. If so, corrective measures shall be taken. If they are not viable, suppliers shall be replaced. If a supplier has been found to have a relationship with child and/or forced labor prior to hiring, it is recommended that they be excluded prior to hiring, in compliance with national legislation and human rights.

b.17. Incorporate supplier monitoring into the management system, ensuring that this is carried out continuously, including in the operation stage described in item c below.

b.17.1. In cases where the CONCESSIONAIRE provides housing for workers, including contractors, the living conditions shall comply with the requirements of Performance Standard 2, including in relation to standards and processes.

b.17.2. Establish and implement a Demobilization Plan for Construction Workers at the end of the works, including timely and adequate communication about the end of the construction phase.

b.18. Have an Occupational Health and Safety System integrated with the SGAS and aligned with the ISO 45001 standard, which provides workers with a safe and healthy work environment, with risk prevention actions, such as exposure to weather elements, noise, work in confined spaces, trenches, contact with overhead power lines, falling machines or structures and risk of falling objects, etc.

b.19. Develop and implement a Health and Safety Implementation Plan covering procedures for working at height and overhead, work in confined spaces, control measures for workers potentially exposed to high noise levels, programs and measures for protecting machines, and measuring air quality in toll booths. Specifically for noise, it is recommended to develop and implement the Hearing Conservation program, with the aim of protecting the health of employees exposed to high levels of sound pressure.

b.20. Implementation of a specific Occupational Health and Safety Monitoring Program, which shall be designed and implemented by accredited professionals, have a training matrix related to occupational health and safety, medical control of occupational health, analysis of activities performed, statistical indicators and mechanisms for tracking and monitoring preventive and corrective actions related to the topic.

b.21. Develop and implement a Management Plan for Road Repairs, which considers measures to ensure the safety of the work zone for construction workers and the population, in accordance with the Environmental, Health and Safety Guidelines for Toll Roads (IFC, 2007). It is recommended to create work zones that separate workers from traffic and equipment.

b.22. The maximum term for recovery and/or fulfillment of liabilities is that established in the licensing processes, in the legislation and in the determination of the competent environmental agencies, which may not exceed 5 (five) years.

b.23. All responsibility related to the mitigation of ENVIRONMENTAL LIABILITIES and/or environmental compensation (Federal Law No. 9,985, of July 18, 2000 and CONAMA Resolution 371/2006 or others that may alter, complement or replace them during the concession), existing and/or generated throughout the CONCESSION TERM, as well as the implementation and execution of all environmental programs during the operation stage, will be the responsibility of the CONCESSIONAIRE, which shall perform, at its own expense, the necessary activities, in compliance with the CONTRACT's risk matrix.

b.24. The CONCESSIONAIRE shall prepare and update annually the CLIMATE RISK MONITORING REPORT, consisting of a climate risk study, considering all approaches associated with acute and chronic physical risks and a Climate Action Plan. After the physical risks have been duly identified and analyzed, the CLIMATE RISK MONITORING REPORT shall be updated annually. This study aims to: monitor the evolution (or not) of the materialization of physical climate risks associated with the operation/management of the INTERCONNECTION SYSTEM, as well as to identify the need for adjustments in the climate adaptation measures in progress. The calibration of the Climate Action Plan (to be an integral part of the CLIMATE RISK MONITORING REPORT) shall be carried out considering not only the materialized climate events, but also changes in the territory that may increase the occurrence of the previously mapped physical risks and/or the potential occurrence of additional risks. For the analysis of physical climate risks, the climate scenarios projected by the Shared Socioeconomic Pathway (SSP) 4.5 and 8.5 should be considered at least, considering the time windows for 15 and 30 years of projection. Based on the characteristics of the operation, the following are examples of potential physical risks:

Climate Event	**Potential associated physical risk***	**Possible adaptation measure**
Increased precipitation	Flooding/ inundation	- Drainage systems designed to operate with extreme rainfall levels, predicted by pessimistic climate scenarios, such as SSP 8.5; - Map sections with greater potential for flooding/swales and, for these locations, design and implement containment systems to block/absorb excess water and/or structures to protect the roadway in the event of extreme rainfall events.

	Soil movement (erosion/slides)	- Map existing erosion focal points for stabilization. - Stabilization activities for these locations should include, for example, protecting the headwaters of erosion focal points to correctly direct drainage in the area; restoring surface vegetation to reduce the impact of rain on the soil/slope surface.
Storms and/or incidence of strong winds/ cyclones	Electric discharges (lightning)	- Design, install and provide adequate maintenance for the grounding systems of the facilities.
	Infrastructure collapse	- Perform stability analysis of bridges, walkways, etc. to check the resilience of these structures to the incidence of strong winds/cyclones.
	Collapse of trees	- Map the existence of trees adjacent to the roadways that have the potential to fall and consequently cause physical damage/blockage to the flow of users. - Perform proper maintenance of existing trees to reduce the threat associated with the risk of falling.

* The physical risks and adaptation measures indicated are not exhaustive and do not represent all those that can be correlated with the operation of the roads.

b.25. Check the potential for the occurrence of other gases that are part of the *Kyoto Protocol to the United Nations Framework Convention on Climate Change*.

b.26. Carry out an annual inventory of greenhouse gas emissions and prove the neutralization of emissions resulting from the INTERCONNECTION SYSTEM operating services, in accordance with the provisions of EXHIBIT 5.

b.26.1. The quantification and monitoring of GHG emissions shall be carried out annually in accordance with internationally recognized methodologies, such as the IPCC.

b.27. When the concessionaire implements and operates the project, actions shall be adopted to control and improve the efficiency of water use, especially in areas of greater demand.

b.28. Present precautionary reports on the structures located around the works that may be affected by geotechnical problems, including a survey of the current situation of the structures and measures to be adopted in the event of damage being detected.

b.29. Develop the Noise Level Monitoring Program, which, in addition to complying with the scope defined in the applicable legislation, shall include the following action:

b.29.1. Implement acoustic barriers in locations considered critical, which may be natural barriers (trees) or artificial barriers, among other structural mitigation measures proposed in the IFC EHS Guideline and always considering native species, according to the Integrated Vegetation Management and Pest Management Plan (Performance Standard 3) and the Prevention and Control Program for Exotic and Invasive Species (Performance Standard 6).

b.30. Develop the Impact Monitoring Program for Buildings due to Earthquakes and Vibrations: assesses the levels of vibrations induced by the project and the respective possible damage to neighboring buildings.

b.31. Develop and Implement the Atmospheric Emissions Control and Reduction Program throughout the CONCESSION term, based on the requirements of Brazilian regulations, approved environmental impact studies, local regulations and the relevant provisions of the IFC General EHS Guidelines and specific EHS Guidelines for highways, following the recommendations below.

b.31.1. Establish actions to avoid or minimize adverse impacts on human health and the environment, avoiding or minimizing pollution from project activities, considering the control and prevention measures described in the IFC EHS Guideline and the provisions of CONAMA Resolutions No. 03/1990 and No. 05/1989, and State Decree No. 59,113/2013. Especially in locations classified as Potentially Critical Receptors (PCRs) along the roads.

b.31.2. Establish schedules for implementing dust control and prevention measures.

b.32. Establish actions to avoid or minimize adverse impacts on human health and the environment, avoiding or minimizing pollution from project activities by reducing the waste generated (Waste and Effluent Management Plan) and consider the guidelines on waste collection, disposal and recycling from the IFC EHS Guideline, including during the operation stage.

b.32.1. Ensure that the Solid Waste Management Plan meets the provisions set forth in the IFC EHS Guidelines specific to IFC Highways, with regard to Performance Standard 3.

b.32.2. Establish and implement procedures for monitoring and analyzing deviations, so that any observations by the supervising entity regarding possible inadequate waste conditions are duly reported and corrected.

b.32.3. Management of excavation materials at the construction site in accordance with the recommendations of the IFC EHS Guideline.

b.32.4. Identify opportunities to prevent or reduce wastewater pollution through measures such as recycling/reuse within its facilities, replacement of inputs or modification of processes (e.g., change of technology or operating conditions/modes).

b.33. Develop and implement a Hazardous Materials Management Plan that, in addition to complying with the scope defined in the applicable legislation, shall consider the following actions:

b.33.1. Avoid the use of hazardous materials;

b.33.2. In cleaning and maintenance activities, give preference to the use of cleaning solutions with aqueous detergent or steam cleaning, or even the use and recycling of aliphatic cleaning solvents.

b.33.3. Ensure that the Emergency Plan is always updated considering the storage and/or handling scenarios of hazardous products.

b.34. Implement an Integrated Vegetation Management and Pest Management Plan, during the CONCESSION TERM, based on the respective provisions of the General EHS Guidelines.

b.35. Conduct a Health Impact Assessment (HIA), monitor indicators and implement mitigation measures, if necessary.

b.36. Preparation of a Rotogram for the works.

b.37. Develop and implement an Environmental Education and Communication Program, aimed at workers, users, such as truck drivers, and communities, for the diagnosis, treatment and prevention of sexually transmitted diseases, in order to contribute to the dissemination of information on the subject and the importance of preventing transmission and care. Add actions in relation to campaigns against sexual abuse and exploitation, in partnership with the government.

b.37.1. Identify and map points of contact between drivers and communities to prioritize the program's efforts.

b.38. The CONCESSIONAIRE shall prepare a Security Risk Assessment Study, based on the guidelines of Performance Standard 4. If the study identifies the need, the CONCESSIONAIRE shall present a Security Management Plan compatible with Performance Standard 4 (paragraphs 12 to 14) and with the guidelines provided for in the documents of the United Nations “Code of Conduct for Law Enforcement Officials” (UN Resolution 34/169, on December 17, 1979), in the “Basic Principles on the Use of Force and Firearms by Law Enforcement Officials” (adopted by the Eighth United Nations Congress on the Prevention of Crime and the Treatment of Offenders), in the “Guiding Principles for the Effective Application of the Code of Conduct for Law Enforcement Officials” (UN Resolution 1989/61, on May 24, 1989) and in the “Convention Against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment” (adopted by the United Nations General Assembly at its 40th Session, held in New York on December 10, 1984 and promulgated by Decree No. 40 on February 15, 1991)” and the guidelines of the “Manual of Good Practices - Use of Security Forces: Assessment and Management of Risks and Impacts - Guidance for the Private Sector in Emerging Markets” of the International Finance Corporation (2017).

b.38.1. Within the scope of the Security Management Plan, specific measures shall be observed, in line with the aforementioned references, to guarantee the security of neighboring

communities and especially of vulnerable populations, in order to mitigate occurrences of discrimination, harassment, violence, among others, of these populations, including when based on gender;

b.39. In case of land acquisition and release of areas necessary for construction, that is, the eventual need to conduct involuntary resettlement processes (physical and/or economic displacement), comply with the legal requirements and international standards on Human Rights, as well as the provisions of IFC Performance Standard 5 (IFC, 2012) and corresponding guidance notes. In this case, the CONCESSIONAIRE shall:

b.39.1. Avoid, and when not possible, minimize displacement (physical or economic) by exploring alternatives;

b.39.2. Determine a cut-off date for studies that will support land acquisition and involuntary resettlement, including for precise mapping of areas, with description of uses, census, inventory of assets, socioeconomic study, among others.

b.39.3. Anticipate and avoid or, where this is not possible, minimize adverse environmental and social impacts arising from land acquisition or restrictions on its use, ensuring that resettlement activities are carried out after appropriate disclosure of information, consultation and informed participation of affected parties;

b.39.4. Develop and implement a Resettlement Action Plan (RAP) to manage adverse impacts caused by physical and/or economic displacement, as well as a Livelihood Recovery Plan (LRRP).

- The RAP should include provisions to fill gaps between PS5 and local regulations (on depreciation, informal settlers, tenure security, livelihood restoration, mitigation measures for employees of affected companies) and mitigations for all current users of acquired/yet-to-be-acquired land who should be compensated in accordance with PS5.

- For affected persons who have been deemed eligible for compensation and other benefits/rights or who have already been compensated but continue to occupy acquired land, the CONCESSIONAIRE shall provide: relocation assistance; (ii) sufficient time to harvest existing crops; and (iii) access and the right to salvage materials and property. This group also includes legal holders who have taken legal or administrative action to request increased compensation and other rights.

b.39.5. Develop an adequate process for engaging stakeholders in decision-making related to resettlement and livelihood recovery.

b.39.6. Develop and implement accessible and culturally appropriate complaints mechanisms to record and address potential complaints about the impacts generated by physical and economic displacement, including people affected in the past by involuntary displacement resulting from interventions on concession roads. Anonymity shall be guaranteed for complainants and a specialized social technical team shall be made available to respond to complaints submitted by affected people, directly in the area.

b.39.7. Consider fair and full compensation for the costs of replacing goods and properties affected by the activities covered by the CONTRACT, in accordance with the provisions of Clause 19.1, item xxxviii, of the CONTRACT. Regardless of the number of people, compensation for the full cost of replacing lost land and other assets, as well as the provision of necessary assistance, as prescribed by Performance Standard 5, should be considered.

b.39.8. Identify and define appropriate measures for vulnerable people, as well as identify and address gender-related specificities.

b.39.9. In the case of complaints about past land acquisition and/or resettlement, indicate them to the CONCESSION AUTHORITY for possible mitigation measures in line with PS5.

b.40. The Resettlement Action Plan and Livelihood Recovery Plan should be developed based on:

b.40.1. The objective of maintaining or improving the living conditions of physically displaced people by providing adequate housing with security of tenure in the resettlement sites.

b.40.2. Prior and informed consultations with the affected people, considering the results of these in the decision-making process for involuntary resettlement and in the preparation of such plans.

b.40.3. Detailed socioeconomic census of affected people, including identification of vulnerable groups and mapping of vulnerabilities (social, economic, territorial, marginalization and exclusion, health, etc.), inventory of affected lands and assets, uses of areas to be released, among other information relevant to the plans.

b.40.4. Definition of eligibility criteria considering formal and informal rights of those affected, for compensation, indemnity and/or other measures (e.g. assistance) in line with PD5.

b.41. The Resettlement Action Plan (RAP) and the Livelihood Recovery Plan (PRMS) should be supported by:

b.41.1. Information separated by gender and identification of vulnerabilities.

b.41.2. Identification and adequate classification of adverse impacts on their livelihoods associated with the acquisition of land required for the release of areas.

b.41.3. Thematic maps that identify features such as population settlements, infrastructure and social services, cultural heritage, soil composition, areas of natural vegetation, water resources, occurrence of other environmental resources and land use patterns, which should be prepared containing detailed information on the affected areas, separated by types of current and potential uses, where possible. The maps support planning and provide a spatial reference or baseline to protect the Project from complaints from people moving to the affected area after the cut-off date.

b.41.4. Census of affected people and registration of them according to their location. It has five interrelated functions: enumeration and

collection of basic information on the affected population; registration of the affected population by residence or location; establishment of a list of legitimate beneficiaries in terms of eligibility, before the start of the Project to prevent people who are not entitled to claim benefits; subsidize socioeconomic studies that support the determination of compensation measures for the recovery of livelihoods; and provide a baseline for monitoring, assessment and evaluation.

b.41.5. Inventory of affected assets: This inventory should cover both loss of physical assets and loss of income. Communally held assets such as water sources, livestock grazing areas, irrigation systems and community structures should be considered. It is essential that planners consult with affected people during this step to develop a reasonable consensus on methods and formulas for assigning value to assets affected or lost due to involuntary resettlement.

b.41.6. Socioeconomic studies of all affected people (including seasonal, migrant and host populations) as needed, and should collect and assess quantitative information supplementary to the census and inventory, as well as qualitative information in (supported) two important domains: (i) household-level income flows and livelihood strategies that may not be identified in the census and asset inventories; and (ii) structure, organization and economic interdependencies identified in the affected communities. The analysis of the data obtained will support the identification of households at greater risk or with a greater degree of impact due to involuntary resettlement. The analysis of data and information obtained in the census, asset inventory, and socioeconomic studies should be carried out considering three objectives: (i) to provide the information necessary to determine the eligibility and rights matrix containing compensation measures, assistance, etc.; (ii) to support the definition of appropriate interventions for the recovery of livelihoods; and (iii) to provide quantifiable demographic, economic, educational, professional and health data and indicators for the control, monitoring and evaluation of the implementation of the Plans.

b.41.7. In addition to the consultations required to obtain data and information for the preceding steps, informed consultations should be held to share strategies for livelihood restoration in the Resettlement Action Plan and Livelihood Recovery Plan, and other essential components.

b.41.8. Development of a matrix of rights, based on the methodology for assessing losses, to determine their replacement cost; a description of the types and levels of compensation proposed in accordance with local legislation, and the requirements of PS5; and the supplementary measures required to enable affected people to restore or improve their living conditions and livelihoods.

b.41.9. Provide compensation for the full replacement cost of lost land and improvements, identify development opportunities, establish eligibility criteria and a framework for compensation for all affected people (including host communities). Provision should also be made for adequate housing, with security of tenure, with special attention to meeting the needs of people classified as vulnerable, and gender-related issues.

b.42. The Resettlement Action Plan (PAR) and the Livelihood Recovery Plan (PRMS) shall be submitted by the CONCESSIONAIRE and validated by the REGULATORY

AUTHORITY, before the beginning of any displacement process (physical or economic).

b.42.1. The implementation of the PAR/PRMS shall be monitored and audited by the Environmental Audit, and the CONCESSIONAIRE is responsible for executing corrective actions, if necessary, in accordance with item c of clause 5.1.1 of this EXHIBIT.

b.42.2. The CONCESSIONAIRE's access to the acquired lands is subject to confirmation by the Environmental Audit of the implementation of the measures established in the PAR/PRMS for this phase or of the corrective actions, if applicable, as per the item above.

b.43. Develop, by the end of the 2nd year of the CONCESSION, the Biodiversity Baseline, the Critical Habitat Assessment (AHC), the Application of metrics for assessing biodiversity loss and identifying residual impacts, Impact Assessment in the Context of UNESCO World Heritage and the Preparation of a Biodiversity Action Plan (PAB), in accordance with the requirements of paragraphs 13 to 19 of PD6, respective guidelines of the Guidance Notes set out between items 63 and 97 of IFC PD6

b.43.1. The Critical Habitat Assessment (AHC) shall include the mapping, quantification (ha) and categorization/qualification of modified, natural and critical Habitats lost or to be lost due to the implementation of capacity increase works.

b.43.2. In addition to the Critical Habitat Assessment (CHA), the study shall use appropriate metrics to calculate, according to the mitigation hierarchy, all impacts generated, planned and applied measures, and residual impacts and respective forms of compensation, considering the Programs planned by the state environmental agency (including the adjustments necessary to improve the efficiency of existing Programs and recovery of part of the liabilities).

b.43.3. Based on the results of the application of the metric and identification of residual impacts, new (additional) impact minimization measures shall be structured and implemented, as well as biodiversity compensation measures (offset) with the objective of achieving and demonstrating the neutralization (No Net Loss) of the impacts (in the case of natural habitats) or the net biodiversity gain (Net Gain, in the case of impacts on critical habitats) of the project on biodiversity.

b.43.4. These steps will allow the structuring of a Biodiversity Strategy to be presented in detail in a Biodiversity Action Plan (BAP), which shall contain all significant mitigation and compensation measures, according to the mitigation hierarchy, to conduct and demonstrate the achievement of No Net Loss or Net Gain, as appropriate.

b.43.5. The BAP shall also present its implementation plan, that is, its Biodiversity Management and Monitoring Plan (BMP) with a schedule, necessary financial resources, a matrix of functions and responsibilities, and internal and external stakeholders to be involved in the different actions. The BMP shall also contain BAP monitoring measures and indicators to ensure the implementation of the actions and the assessment of the effectiveness of the proposed measures, whether mitigation or compensation, in an adaptive process, with necessary course adjustments.

b.44. Submit a complementary study assessing the impacts on ecosystem services,

in accordance with PD6 (Guidance Notes 135 to 142 and paragraphs 7 to 12 of PD1), which may be carried out in conjunction with the environmental and social impact assessment studies provided for in the licensing of the works provided for in the Investment Plan. If the study identifies an impact on ecosystem services, if applicable, the affected communities or managers of Key Biodiversity Areas shall be consulted to support the process of determining legally acceptable measures that are consistent with the management plans to be implemented.

b.45. In relation to areas of recognized relevance for biodiversity, if the project is located in a Legally Protected Area or Internationally Recognized Area, the provisions of paragraph 20 of PD6 shall be observed. Specifically in relation to the UNESCO World Natural Heritage Site Atlantic Forest Southeast Reserves and its Buffer Zone, according to NR55 of PD6, it should be noted that, without prejudice to meeting the other requirements of PD6, the Concessionaire shall:

b.45.1. Avoid any new construction and any additional intervention within the boundaries of UNESCO World Natural Heritage Sites and in their Buffer Zone, beyond those provided for in EXHIBIT 21;

b.45.2. Avoid adverse impacts on the Outstanding Universal Values for which the site has been designated as a Natural World Heritage Site.

b.45.3. Consult with the competent national authority responsible for implementing the World Heritage Convention and with the UNESCO Secretariat for the World Heritage Convention.

b.45.4. It should be noted that biodiversity offsets are not considered acceptable forms of mitigation in UNESCO World Heritage Sites. To assess the impacts of the project, the future concessionaire will have to follow the Guide and Toolkit for Impact Assessments in the Context of UNESCO World Heritage (2022).

b.46. The CONCESSIONAIRE will be responsible for implementing and paying for all studies, construction and adaptation of structures for wildlife crossings (lower and upper) set forth and made available in EXHIBIT 21. In accordance with the management plan, and provided that there is no harm to the functioning of the drainage system, elements and textures may be allowed to encourage the use of wildlife crossings.

b.47. Annual studies to identify hotspots for wildlife roadkill shall be carried out and paid for by the CONCESSIONAIRE throughout the INTERCONNECTION SYSTEM, and measures to mitigate roadkill shall be implemented. The studies carried out by the CONCESSIONAIRE will be submitted for approval by the REGULATORY AUTHORITY, through their inclusion in SISDEMANDA, in order to enable their processing in the context of ORDINARY or EXTRAORDINARY REVIEWS, as the case may be. In conjunction with the studies, the CONCESSIONAIRE shall submit projects and respective budget, containing an indication of the costs required for the implementation, operation and maintenance of this expansion, indicating the exact extent of any imbalance in the economic-financial balance of the CONTRACT. The requirements related to the management of wild and domestic fauna may be adjusted upon approval by CETESB or DEFAU/SEMIL.

b.48. The guidelines and procedures defined by CETESB and DEFAU/SEMIL shall be adopted and, in their absence, the methodology of IBAMA Normative Instruction No. 13/2013 may be used. These “hotspot” surveys shall consider the results of the survey of roadkill (an action provided for in the Roadkill Monitoring Program to be implemented) and as requested by CETESB (CETESB board decision no. 039/2024/I, dated May 24, 2024, or any subsequent legislation). The annual period refers to the need to cover all seasonal cycles.

b.49. Annual studies to identify roadkill of domestic animals shall be carried out and

paid for by the CONCESSIONAIRE throughout the INTERCONNECTION SYSTEM, and measures to mitigate roadkill shall be implemented. At critical points in rural areas, mitigating measures shall include the installation of fences, gates, cattle guards, cattle crossings, and raising awareness among owners about responsible ownership. The CONCESSIONAIRE shall develop, annually, educational and awareness campaigns with USERS, employees, service providers and neighbors regarding the need to safeguard animal life. Such actions shall be carried out through the Wildlife Roadkill Monitoring Program.

b.50. All impermeable areas, already deactivated or to be deactivated, such as sections of road, access ramps, third-party access (determined by the REGULATORY AUTHORITY), etc., shall be removed and recovered by the CONCESSIONAIRE, which will bear all costs arising from this activity. The recovery of these areas shall reach, at least, the depth of the layer with drainage material, and then be leveled with soil and finished with the restoration of the vegetation cover. The CONCESSIONAIRE shall carry out a survey of the pre-existing areas and present it to the REGULATORY AUTHORITY within 24 months after signing the INITIAL TRANSFER INSTRUMENT. Areas that are subsequently deactivated shall be removed within 6 (six) months or until the respective schedule of works or other services is completed, except in cases where the sections continue to be used or if there is a future operational function. All works shall consider the recommendations and good practices listed in the IFC EHS Guidelines for Roads.

b.51. The CONCESSIONAIRE shall ensure that, during the preparation of the engineering project, engineering solutions are studied to reduce damage (erosion and silting) at points where the storm drainage outlet has the potential to affect adjacent properties and bodies of water. All works shall consider the recommendations and good practices listed in the IFC EHS Guidelines for Roads.

b.52. If, during the preparation of impact assessment studies as required in paragraphs 7 to 12 of Performance Standard 1, impacts on Indigenous Peoples and Quilombola Communities are identified, the requirements of Performance Standard 7 shall be considered, including:

b.52.1. Identification and assessment of the positive and negative impacts of the project on Indigenous Peoples and Quilombola Communities located within the project's ADI;

b.52.2. Consultation and Informed Participation (CPI) Process, in accordance with the guidelines for the Stakeholder Engagement Plan and results of the Environmental and Social Impact Study (ESIA). The IPC process should:

- Begin at the beginning of the process of identifying environmental and social risks and impacts and be implemented on an ongoing basis as new risks and impacts are identified;
- Be based on the prior disclosure and dissemination of relevant, transparent, objective, meaningful and easily accessible information, in culturally appropriate language(s) and format;
- Focus on inclusive engagement;
- Be free from external manipulation, interference, coercion or intimidation;
- Allow meaningful participation, where applicable;

- Be documented

b.53. Obtain Free, Prior and Informed Consent (FPIC) in cases where the studies identify circumstances that require it, as per paragraphs 13 to 17 of IFC Performance Standard 7.

b.54. In the event of interference, suppression, damage and loss of unknown Cultural Heritage, a data survey should be carried out regarding possible studies carried out prior to the implementation of the roads.

b.55. In the event of interference, suppression, damage and loss of protected Cultural Heritage, systematic studies should be carried out in order to diagnose the tangible, intangible and natural cultural assets, whether protected or not, in the areas of influence, through consultation with national, state and municipal government agencies and non-governmental organizations related to cultural heritage, as well as through consultations with the communities.

b.56. In the event of implementation of inherent works, an environmental licensing process focused on the theme of cultural heritage should be initiated with IPHAN, regulated by Normative Instruction No. 001/2015 and other current legislation, and a Procedure for Chance Findings should be adopted.

b.57. In the event of loss of community access to cultural assets, map the accesses used by the Affected Communities to existing cultural assets in order to verify whether there will be any impediment or other adverse impact on access to these assets due to the installation of new devices and/or works inherent to the nature of the project

c in the operation of the system,

c.1. Maintain, throughout the term of the CONCESSION, conditions and methodology of Adequate Service that guarantee environmental preservation and avoid environmental impacts for all services under its responsibility.

c.2. Meet the criteria and requirements defined through the ADA – Environmental Performance Evaluation, or methodology that may replace it during the concession.

c.3. Ensure compliance with the requirements set forth in the IFC Performance Standards, as already described in item 6.1.2, paragraph b.5.

c.4. Maintain an INTEGRATED DIGITAL ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEM
(SGAS), as defined in APPENDIX C.

- The CONCESSIONAIRE shall maintain a training and implementation schedule for the Environmental and Social Management System (SGAS) throughout the operation, as well as maintain certification, with proof of hiring the certifying company.

c.5. Manage potential risks during the operation of the INTERCONNECTION SYSTEM. To this end, it shall previously develop a Risk Analysis Study in order to identify, analyze and evaluate the risks involved, knowing the different types of adverse events that may occur, as well as their possible associated consequences, which may cause harm to people (employees, users, neighbors, service providers, road operators, etc.), assets (private and public) and the environment.

c.5.1. This stage, prior to risk management, called risk analysis and assessment, shall include, at least:

identification of hazards (accidents that may occur); estimating the frequency of occurrence of hazards (accidents); estimating the potential consequences of possible accidents and estimating the different levels of risk (combination of the frequencies of occurrence and the different levels of severity resulting from the consequences); considering the hazard or existing control systems/measures and possible recommendations to be implemented to reduce or control the risk.

c.5.2. It is recommended that, for the development of this activity, the Preliminary Hazards Analysis (PHA) technique be used, which is a technique widely used in Risk Analysis Studies (EARs). Furthermore, when identifying hazards, hypotheses of accidents that have the potential to paralyze the operation, even partially (limited time), of material damage to equipment, facilities or public or third-party assets, of damage to the physical integrity of employees, traffic operators or third parties and of environmental impacts (acute or chronic), including accidental events that imply pollution of water, air and/or soil, should be considered when identifying hazards.

c.5.3. The events should consider, among others, undesirable situations on the highway and in operational and administrative facilities, such as: traffic accidents; accidents involving dangerous products; spills or leaks of products into bodies of water; Extreme weather events (fog, heavy rain, floods, strong winds, etc.); Landslides/slippage/falls of barriers; Soil and groundwater contamination; Explosions; Fires.

- The findings of this analysis regarding EXTREME WEATHER EVENTS shall be reflected in the CLIMATE RISK MONITORING REPORT.

c.5.4. The final report of the Risk Analysis Study shall be submitted to the REGULATORY AUTHORITY within 12 (twelve) months from the date of signature of the INITIAL TRANSFER INSTRUMENT and, based on the results of the risk analysis and assessment, thematic Programs and Plans shall be prepared or the risks incorporated into the existing programs provided for in the EXHIBITS.

c.6. Maintain a specific social management team (community relations, institutional relations and social communication), with experience in engagement during highway operations.

c.7. Implementation of a specific Occupational Health and Safety Monitoring Program for the operational stage.

c.7.1. The program shall have knowledge of, promote, comply with and enforce legal and regulatory requirements regarding occupational health and safety, as well as technical standards, REGULATORY AUTHORITY procedures and road safety for all workers, contractors, subcontractors or outsourced workers who carry out activities in the INTERCONNECTION SYSTEM,

including training and all accident prevention measures, implementation of collective protection equipment (EPCs), supply and guarantee of the use of personal protective equipment (PPEs), provision of adequate and sanitized sanitary facilities, adequate areas and shelters for food and rest, adequate means of transportation, preparation for responses in emergency situations, etc.

c.8. Develop, implement and ensure the effectiveness of the Erosion and Silting Control Program and/or Environmental Control Actions to mitigate environmental impacts during the operation stage.

c.9. Develop the Noise Level Monitoring Program for the operation stage, which shall include, at a minimum:

c.9.1. The future concessionaire's noise and vibration management and monitoring plan shall include the recommendations of the IFC EHS Guidelines and, if necessary, measures shall be implemented to mitigate noise at critical points.

c.10. Establish actions to avoid or minimize adverse impacts on human health and the environment during the operation stage, based on the guidelines on collection, disposal and recycling of waste from the IFC EHS Guideline, adopting, at a minimum, the following actions:

c.10.1. Manage the generation and disposal of pavement milling waste, which may be stored in a holding cell, provided it is stored in an environmentally appropriate manner, for a maximum of 90 (ninety) days, with a view to its reuse and recycling, on site or forwarded to asphalt recycling plants. After this period, it shall be disposed of in accordance with the legislation in force. It is recommended that the milled material be covered (with a tarpaulin, for example), to minimize the incidence of rain and sunlight, in order to reduce the potential for leaching and solubilization of organic compounds from asphalt into the soil and groundwater.

c.10.2. Remove common solid waste from the operational facilities, as established in the CONTRACT, to a suitable location, understood as that indicated in the legislation in force. Priority should be given to programs to reduce generation, reuse and recycling.

c.11. Proactively carry out periodic inspections to detect environmental and occupational health and safety non-conformities and correct them immediately, in compliance with contractual and legal requirements.

c.12. Develop and implement a Hazardous Materials Management Plan for the operation stage, which shall, in addition to complying with applicable legislation, ensure the proper disposal of oils and greases from equipment and vehicles intended for the operation of the system.

c.13. Submit, within 24 (twenty-four) months from the date of signing the INITIAL TRANSFER INSTRUMENT, the Fire Action Plan, including:

- Mapping of areas at risk of fires, based on the characteristics of land use and occupation and the history of occurrences, and other complementary information, with the objective of identifying points with a high potential for fire occurrence, as well as high vulnerability. This mapping should help the CONCESSIONAIRE to prioritize fire prevention and fighting actions, minimizing these risks.

- The establishment of procedures that allow the CONCESSIONAIRE to reduce the response time between the call and the start of the fight and increase the proportion of service in relation to the total number of fires that have occurred;

- Prevention can also be worked on through educational campaigns for users and adequate maintenance.

c.14. report to the competent bodies and the REGULATORY AUTHORITY the occurrence

of environmental damage caused by third parties in the INTERCONNECTION SYSTEM, as well as adopt all legal measures to eliminate them;

c.15. record all fire outbreaks (probable origin, size, etc.) that occur, as well as the running over and disposal of all domestic and wild animals, in accordance with CETESB board decision no. 039/2024/I, on May 24, 2024, or any legislation that may succeed it, throughout the Concession period.

c.16. promote and/or participate in government environmental awareness programs regarding fire outbreaks and wildlife run over. Additionally, the CONCESSIONAIRE shall indicate and register in the SISGIS and maintain an updated record of institutions existing in the vicinity of the INTERCONNECTION SYSTEM to be used as support for the forwarding of captured or run over wild/domestic fauna. All wildlife management shall comply with the guidelines and procedures defined by the competent authorities.

c.17. Refer domestic animals captured alive to specialized partner institutions for treatment (feeding, zoonosis control), depending on the type of animal. A police report or equivalent shall be filed to identify the animal and its owner, in order to create a registry of seized animals and their respective owners;

c.18. Mandatory control of pests such as termites, ants, ticks, invasive plants and ensure proper management when bats, etc., are identified, considering the guidelines contained in the IFC EHS Guidelines for Roads, implemented in integrated pest management (IPM) and/or with the integrated vector management approach (IVM). If the growth of trees is observed in undesirable places, such as slopes and drainage systems, the CONCESSIONAIRE shall eliminate them in accordance with current legislation;

d in the maintenance of the system,

d.1. remove waste from cleaning, sweeping and drainage activities to a suitable location, as defined in current legislation.

d.2. remove solid waste and construction waste as provided for in the CONTRACT, to a suitable location, as defined in current legislation. Recycling programs should be prioritized. The CONCESSIONAIRE shall be required to monitor in order to prevent the dumping of solid waste and debris from third-party activities in the INTERCONNECTION SYSTEM. In places where waste is frequently dumping irregularly, the CONCESSIONAIRE shall work with the Mayor's Office and/or neighboring areas to install suitable trash cans or containers.

d.3. immediately eliminate the affected areas and restore all phenomena that may occur, such as erosion, subsidence, landslides, silting, spillage of hazardous products, oils and greases, etc., which are causing environmental damage, or according to the schedule approved by the REGULATORY AUTHORITY or competent authorities;

d.4. consider using only native species to recover degraded areas, landscaping and mitigation structures where there is no vegetation cover, with the exception of paved areas and areas with rocky outcrops and altered rocks, prioritizing areas susceptible to erosion processes. Locations with poor soils should be subject to the application of appropriate techniques, including fertilization and specific corrections, and technologies available on the market for these situations. When it is not possible to carry out the vegetation covering, the CONCESSIONAIRE shall prove the situation by means of a Technical Report signed by a duly qualified professional, as well as indicate to the REGULATORY AUTHORITY additional actions to protect the soil on site, in order to avoid the risk of erosion, to comply with the provisions of section 7.3.1 of section 7.3.2 of NBR 11682 or another standard that may replace it;

d.5. recover the support areas (borrowing boxes, dumps, construction sites and other support areas) within a maximum of 30 (thirty) days after their use and/or deactivation;

d.6. recover all non-conformities and degraded areas within the deadlines established in the CONTRACT or within a maximum of 15 (fifteen) days. In the event that a longer period of time is required for recovery, an official request shall be made to the REGULATORY AUTHORITY;

d.7. do not use herbicide to weed the vegetation of the INTERCONNECTION SYSTEM. In the case of using other inhibitors of growth of competing vegetation, the CONCESSIONAIRE shall follow the current legislation and the guidelines contained in the IFC EHS Guidelines for Roads and submit the application plan for prior approval by the REGULATORY AUTHORITY. If herbicide is applied by third parties, the CONCESSIONAIRE shall immediately recover the area and take all legal measures against the offender;

d.8. immediately remove dead animals found on the roadways within a maximum of 18 (eighteen) hours for animals run over at night and within 6 (six) hours for animals run over during the day. The registration of run over animals and disposal of carcasses shall comply with the provisions of CETESB board decision No. 039/2024/I, on May 24, 2024, or any legislation that may succeed it, adding information regarding the size of the animals. As a preliminary matter, the Concessionaire shall submit to the REGULATORY AUTHORITY a list of all institutions existing in the surrounding municipalities that may receive run over animals, and the CONCESSIONAIRE is obliged to update this list whenever there is a change.

For the external audit, the CONCESSIONAIRE shall, in addition to the other obligations provided for in the CONTRACT, EXHIBITS and APPENDICES, hire a company with a renowned technical reputation, to be verified in a manner analogous to the rules provided for in APPENDIX E.

5. DEADLINES TABLE

ACTIVITY	ITEM OF THE EXHIBIT	TERM
Proof of submission of documentation for the purpose of obtaining a license, environmental authorization, grant or approval from the competent authority	2	Up to 90 (ninety) days from the date of signing the INITIAL TRANSFER INSTRUMENT.
Inventory	2.1.3	Up to 6 (six) months from the conclusion of the IMPLEMENTATION WORKS for the TUNNEL and URBAN ACCESSES
Initial topographic survey of the INTERCONNECTION SYSTEM	2.1.3.2	Up to 6 (six) months from the conclusion of the IMPLEMENTATION WORKS for the TUNNEL and URBAN ACCESSES
Integrated Digital Model of the INTERCONNECTION SYSTEM	2.1.3.3	Up to 12 (twelve) months from the conclusion of the IMPLEMENTATION WORKS for the TUNNEL and URBAN ACCESSES
Hydrological study of the INTERCONNECTION SYSTEM	2.1.3.4	Up to 12 (twelve) months from the conclusion of the IMPLEMENTATION WORKS for the TUNNEL and URBAN ACCESSES
Monitoring and management program	3.2.2	Up to 6 (six) months prior to the OPERATION START DATE.
Obtain NBR ISO 14.001 and 45.001 certificates	5.1.	Within 30 (thirty) months from the date of signing the INITIAL TRANSFER INSTRUMENT.