

ATTACHMENT 5
SOCIOENVIRONMENTAL SPECIFICATIONS

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1. ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEM (ESMS)

1.1. The CONCESSIONAIRE is responsible for:

- i. Monitor ENVIRONMENTAL AND SOCIAL PROGRAMS, as well as identify and evaluate its risks and impacts;
- ii. Propose prevention, corrective, mitigating and control actions for compliance with ENVIRONMENTAL AND SOCIAL PROGRAMS;
- iii. Carry out a periodic ESMS evaluation, considering the adoption of "lessons learned" tools and the PDCA process (plan/do/check/act, which means Plan/Execute/Check/Act), ensuring control and continuous improvement of the System;
- iv. Develop and implement a Sustainability Policy, which aligns environmental considerations to social needs and attentions and is the focus of commitment of senior management.
- v. Develop and implement a Subcontracted Company Management Plan including the following aspects:
 - a. the process of selecting subcontractors should consider the existence of a multidisciplinary team, with one or more qualified environmental, social, health and safety professionals, responsible for meeting these issues, and with ESMS compatible with the services to be performed;
 - b. define the clear attribution of the responsibilities of each party;
 - c. ensure the inclusion in contracts of the guidelines of environmental and social PERFORMANCE STANDARDS applicable to the services to be performed, and ensure compliance with ENVIRONMENTAL AND SOCIAL PROGRAMS and health and safety measures of workers and the community;
 - d. to supervise and monitor compliance with contractual socio-environmental conditions and, eventually, the implementation of corrective actions.

ENVIRONMENTAL AND SOCIAL PROGRAMS (ESP)

2. STAKEHOLDERS' COMMUNICATION AND ENGAGEMENT PROGRAM

2.1. The Program targets Stakeholders, i.e. people or groups directly or indirectly affected by the CONCESSION, as well as those who may have diverse interests and/or ability to influence its outcome, either positively or negatively. It is included, therefore, but not limited to:

- i. The GRANTING AUTHORITY, CONCESSIONAIRE, INDEPENDENT VERIFER, ENERGY DISTRIBUTION COMPANY, RELATED PARTIES, State and Federal Government, leaders and class entities, supervisory bodies/ regulators, press and universities;
- ii. USERS and communities impacted by the CONCESSION, including Traditional Communities;
- iii. suppliers or subcontractors;
- iv. CONCESSIONAIRE team and its employees in integration with THE GRANTING AUTHORITY and its respective direct and indirect workers (subcontractors);
- v. secretariats of the MUNICIPALITY, institutional representatives and population of the neighborhoods benefited and their leaders and representatives;
- vi. drivers, traffic aids, potentially affected communities and public agencies responsible for managing public roads.

2.2. The CONCESSIONAIRE should conduct an analysis on what degree of interest and influence that the actors may have on the CONCESSION, in order to provide strategic bases of participation and engagement.

2.3. The collection of information and analysis of the stakeholders should be carried out in two stages, and the CONCESSIONAIRE is responsible for:

- i. carry out the survey of general information of localities, including existing infrastructure, demographic data, presence of traditional communities, available services, basic sanitation, social organization, living conditions, economic basis, among other topics, which allow an analysis of the global context, also allowing a clearer understanding of the vulnerability of the population and its susceptibility to the potential impacts of the CONCESSION;
- ii. identify and understand the characteristics of each Interested Party from the interactions performed.

2.4. The Stakeholder Matrix is different from the Risk Analysis Matrix related to each of the Stakeholders, as explained below:

2.4.1. For the Stakeholder Matrix, it is suggested the maintenance of a database containing only representatives of interest groups and stakeholders that are strategic for the development of activities by those responsible, provided that all interest groups of the CONCESSION are covered.

2.4.2. For the identification of the level of risk associated with each stakeholder, it is suggested the use of a tool of the type "Matrix of Influence / Interest", because, based on this, it is possible to define a strategy of action with the parties, through its classification in relation to the power and influence they exercise and how they are probably able to show interest in supporting or oppose to a specific strategy.

2.5. Stakeholder Engagement is one of the possible risk mitigation techniques involved in the CONCESSION.

2.5.1. This is the involvement of the community in the process of implementation of the CONCESSION, in order to provide understanding about the benefits of the strategy and ensure that this support is replicated in their communities and social groups.

2.5.2. Engagement assumes dialogue and openness, a place of active listening and speech between the parties. The dialogue creates an area of security and trust to build progress and achieve shared objectives. From the establishment of a trust relationship, there is likely to be less resistance in the course of the CONCESSION.

2.5.3. As effective strategies, it is proposed to:

- i. Engagement Strategy 01: Hold meetings with representatives of the public authorities (municipal and legislative government secretariats), control bodies and other actors (ENERGY DISTRIBUTION COMPANY, employment entities, community councils, city leaders and academics) to approach teams responsible for providing information and to collect perceptions about CONCESSION guidelines;
- ii. Engagement Strategy 02: Disseminate the main characteristics of the CONCESSION and benefits to be achieved with its implementation, clarification of questions presented, gather perceptions and contributions, understand and respond to the main concerns of stakeholders related to the CONCESSION, transmit the solidity of technical and legal studies and transmit the public interest and political will towards the CONCESSION;
- iii. Engagement Strategy 03: Commit to the SPECIAL LIGHTING of monuments and public spaces and their surroundings, which promote greater use of these spaces (squares, crosswalks, spaces of walking and permanence) and greater sense of security. This strategy aims to demonstrate the public and collective gains of the CONCESSION strategy, allowing lighting to be seen from the perspective of the appropriation of public spaces by users;
- iv. Engagement Strategy 04: Promote environmental and heritage education

actions, in order to, respectively: (i) promote understanding of the importance of public heritage; and (ii) promote the participation of society in the management of its archaeological, historical and cultural heritage, developing activities that enable the rescue and valorization of local history and cultural, raising people's reflection about its socio-environmental context.

2.5.4. Some information may also be disclosed by the GRANTING AUTHORITY through press conferences, publication of news in newspapers of great circulation, dissemination of news on the ONLINE PORTAL and social networks of the GRANTING AUTHORITY.

2.6. The Communication Program is composed of strategies that make it possible to expose and clarify the strategy defined by the CONCESSIONAIRE.

2.6.1. The Communication Program should take into account who are the recipients of the message and what is intended to communicate, including differentiated measures to allow the effective participation of people identified as disadvantaged or vulnerable, with special attention to traditional communities, so that the message sent is fully understood by the recipient.

2.6.2. In the age of mass information and through social networks and media, it is essential to have clear and objective strategies for the Programs to be implemented more effectively.

2.6.3. Communication should allow: (i) to establish links between the persons and groups involved; (ii) disseminate relevant ideas and information; and (iii) collect information for the development of the CONCESSION.

2.7. Communication Strategies are complementary to engagement strategies, and the combination of the two lines of action is expected to be able to mitigate the expected risks.

2.7.1. Communication Strategy 01: Develop digital material for dissemination in electronic media and social networks, such as photographs and short videos, as defined in the SERVICES AND INVESTMENTS SPECIFICATIONS. The possibility of replicating the material will be greater from the combination with engagement strategies. The material should clarify the benefits of PPP for the population as well as all communication actions that will be implemented by the CONCESSIONAIRE.

2.7.2. Communication Strategy 02: Implement SERVICE CHANNELS to provide information to users of the system, in accordance with the CADERNO DE ENCARGOS.

2.7.3. Communication Strategy 03: Maintain an ONLINE PORTAL that serves as a repository of CONCESSION information. In addition, the ONLINE PORTAL should also:

- i. Gather information about the benefits of the CONCESSION, as well as its risks and potential impacts;
- ii. Disseminate the other SERVICE CHANNELS of the CONCESSIONAIRE, in addition to maintaining a session of Frequently Asked Questions And Answers;

2.7.4. Communication Strategy 04: Provide face-to-face service, in a face-to-face counter at the CONCESSIONAIRE's headquarters, in the MUNICIPALITY, allowing interaction with USERS who, for any reason, prefer or have as their only option face-to-face interaction.

2.7.4.1. The survey of general information of localities (action of identification and analysis of stakeholders) will contribute to the identification of communities distant or inserted in specific sociocultural areas (such as, for example, traditional communities), which lack direct interaction, so that the content pertinent to the CONCESSION is absorbed effectively and appropriate to their own needs.

2.7.4.2. Thus, it will be up to the CONCESSIONAIRE to provide itinerant face-to-face care in this type of locations, with a semiannual periodicity, considering the employment of professionals, preferably local, able to interact with the different audiences and their respective characteristics.

2.7.5. Communication Strategy 05: Identify Traditional Communities and formulate a Specific Interaction Plan for these communities, in order to ensure that the SERVICES do not conflict with the ways of life and aspiration of these culturally differentiated groups.

2.7.5.1. Consult institutions responsible for the recognition and registration of traditional communities at the federal, state and municipal levels, as well as bibliographic research on culturally differentiated groups that recognize themselves as such in the MUNICIPALITY, having their own form of social organization and occupation and use of territories and natural resources as a condition for their cultural, social and religious reproduction, using knowledge, innovations and practices generated and transmitted by tradition.

2.7.5.2. Contact the representative bodies and leaders of traditional communities, in a manner appropriate to their sociocultural characteristics.

2.7.5.3. Inform traditional communities, in accessible language and culturally appropriate and understandable format, minimally: (i) the objective, nature and dimension of the CONCESSION; (ii) the duration of the proposed activities; (iii) any risks and potential impacts to such communities and relevant mitigation measures; (iv) planned process of stakeholder engagement; and (v) complaints mechanism.

Consultation with these communities should take place freely and voluntarily, and should allow access to relevant information on the CONCESSION.

2.7.6. Communication Strategy 06: Interact with relevant institutions to ensure proper planning and coordination in the execution of the Project. The CONCESSIONAIRE should develop the following actions:

2.7.6.1. Map the main plans and programs of economic development and infrastructure in the Municipality, identifying the actors to be involved in the development of the Program and elaborating an accountability matrix, together with the GRANTING AUTHORITY;

2.7.6.2. To proceed to the public hearings of the different institutional representatives, in order to determine demands and identify possible partnerships;

2.7.6.3. Incorporate, in what may be, the integration of tariffs in the Modernization Plan to improve the CONCESSION, taking advantage of the intersectionality already installed, the participation of representatives of existing civil society and the legitimacy of these bodies;

2.7.6.4. Participate in person as a listener of local council meetings relevant to STREET LIGHTING, facilitating the identification of opportunities for synergy between different actors active in local development;

3. HUMAN RESOURCES, EMPLOYMENT AND WORKING CONDITIONS PROGRAM

3.1. The Program targets direct and indirect workers (third parties, service providers and supply chain suppliers).

3.2. The CONCESSIONAIRE has the following responsibilities in relation to the workers:

- i. Develop, ensure the implementation and follow a Human Resources Policy and a Code of Conduct based on the objectives and goals of this Program, which should include HR procedures appropriate to its size and the workforce, which define its approach to the management of workers;
- ii. Include in the HR Policy and the Code of Conduct, to be followed by direct and indirect workers, explicit clauses on discrimination, inclusion, intimidation and/or exploitation, bullying, sexual harassment, gender-based violence and the like. To contemplate awareness of unacceptable behavior sprees towards workers in general and members of the local community, emphasizing the responsibility of reporting inappropriate

behavior, and the importance and freedom of each worker to report behaviors that they deem abusive in an anonymous way (and without risk of reprisals) through the COMPLAINTS CHANNEL;

- iii. Ensure periodic updating training on HR Policy and Procedures, Code of Conduct, local laws and labor union membership rights;
- iv. The employment relationship should be based on the principle of equal opportunities and fair treatment and should not discriminate against any aspect of the employment relationship, such as recruitment and employment, remuneration (including salaries and benefits), job assignment, promotion, working and employment conditions, access to training, termination of employment or retirement contracts, and disciplinary practices;
- v. Provide workers in the amount necessary for the provision of services, which are duly registered in a work permit;
- vi. Provide workers with individualized, documented, clear and understandable information about their rights in accordance with national labor and employment law and any applicable collective agreements, including their rights pertaining to working hours, wages, overtime, indemnification and benefits, at the beginning of the employment relationship and when any significant changes occur;
- vii. Ensure that employment decisions are not made on the basis of personal characteristics not related to the requirements inherent in the SERVICE;
- viii. The adoption of special protective measures or assistance to correct discrimination, or previous selection for a given work, based on the requirements inherent in the SERVICE, should not be considered discrimination, provided that they are compatible with national legislation;
- ix. Hire employees and providers of services, equipment, materials and insums according to current labor legislation, following the specific laws of labor, social security, tax, tax and labor safety charges, as well as agreement / convention / collective dissidia of the professional category.

3.2.1. Carry out communication actions with the workers of outsourced companies that provide IP services to the GRANTING AUTHORITY, eventually disconnected due to the CONCESSION, to present the channel and / or tool for application of the concessionaire's selection process; and disclose job vacancies opened by the CONCESSIONAIRE, granting, impartially, conditions for all those who want to participate in the process selective.

3.2.2. Before making any collective layoffs, the CONCESSIONAIRE must carry out a

prior analysis of alternatives for the reduction of personnel.

3.2.2.1. If the analysis does not identify viable alternatives to staff reduction, a reduction plan should be formulated and implemented to mitigate the adverse impacts of cutting workers, based on the principle of non-discrimination, reflect and consult the CONCESSIONAIRE, its workers, unions/organizations and comply with collective labor agreements, if any.

3.2.2.2. The CONCESSIONAIRE shall comply with all legal and contractual requirements related to the notification of public authorities, as well as the consultation and provision of information to workers and their unions.

3.2.3. The CONCESSIONAIRE should manage a COMPLAINTS CHANNEL in an appropriate manner, with an understandable, transparent and rapid approach to concerns, *offering pertinent feedback* to stakeholders.

3.2.3.1. Interested parties of the COMPLAINTS CHANNEL include directly hired workers and outsourced workers who have some mechanism of this kind within their respective companies.

3.2.3.2. The availability of the COMPLAINTS CHANNEL should be informed from the moment of recruitment, with easy access to workers.

3.2.3.3. THE COMPLAINTS CHANNEL must ensure the absence of retaliation to employees who use it, in addition to offering the possibility of complaints protocol in anonymous mode.

3.2.3.4. THE COMPLAINTS CHANNEL does not replace the validity or applicability of other judicial and administrative measures, including mechanisms established through collective agreements.

3.2.3.5. The shareholders of the CONCESSIONAIRE must have full access to the registered complaints being responsible for evaluating them and granting due treatment granting the right of return to the whistleblower, if the latter is identified.

3.2.4. Provide labor previously trained for the function, periodically promoting and at their expense, general and specific training of the entire work team, with record of evidence necessary to ensure the execution of the work within the desired quality levels.

3.2.5. Instruct workers on the need to comply with the guidelines of the GRANTING POWER, including compliance with internal standards and occupational safety and medicine.

3.2.6. Strictly comply with the standards of occupational safety and medicine engineering, in accordance with current legislation, and always aiming at the prevention of accidents at work.

3.2.7. Assume all responsibilities and take the necessary measures to serve your injured or sudden staff.

3.2.8. In case of accidents, the GRANTING AUTHORITY should be immediately notified by the CONCESSIONAIRE.

3.2.9. Exercise control over the attendance and punctuality of its staff.

3.2.10. Ensure that the team selected for the provision of the SERVICES subject to the CONCESSION CONTRACT meets the following requirements: qualification required for the function; compliance with legal requirements (licenses, certificates, legal authorizations, etc.), for the performance of the function; sufficient knowledge for the correct provision of the services subject to the contract.

3.2.11. The CONCESSIONAIRE shall make commercially reasonable efforts to ensure that, at the time of hiring outsourced workers, the chosen companies are reputable and legitimate, with appropriate ESMS and that allows the execution of their services in a manner compatible with the guidelines of THE PERFORMANCE STANDARD 2. Where feasible, these guidelines shall be included in the contractual agreements concluded between the parties.

3.2.11.1. It is up to the CONCESSIONAIRE to establish policies and procedures to manage and monitor the performance of outsourced employers in relation to the requirements of PERFORMANCE STANDARD 2.

3.2.12. Count on work safety technicians, who must lay down the guidelines necessary to comply with the current standards in this matter.

3.2.13. Provide medical examinations, required by current standards, every 12 months or in shorter periods for cases provided for in specific legislation of a particular category.

3.2.13.1. Control the health status of the personnel responsible for providing the SERVICES, and should provide replacement in case of illness that makes it impossible for the employee to perform the previous function.

3.2.13.2. Present, when requested, a copy of the Risk Management Program - PGR and Occupational Health Medical Control Program - PCMSO and, containing at least the items contained in NR 1 and 7.

3.2.13.3. Maintain admission exams, periodicals, dismissals, changes in function and return to work , as recommended by NR 7.

3.2.14. Ensure that all workers receive timely notice of dismissal and the rescission values determined by law and collective agreements.

3.2.15. All payments due, social security contributions and outstanding benefits must be paid (i) to workers at the time of termination of the working relationship or earlier; (ii) where appropriate, for the benefit of workers; or (iii) the payment will be made according to a guaranteed schedule through a collective agreement.

3.3. In order to meet EMERGENCY MAINTENANCE services, according to the Emergency Action Program provided for in the SERVICES AND INVESTMENTS SPECIFICATIONS , the CONCESSIONAIRE must define the minimum necessary human resources structure, its respective training, as well as the necessary collective protection material resources.

3.4. Establish "risk prevention operating protocols" sufficiently in advance for the start of the SERVICES.

3.4.1. The protocols shall incorporate instructions for the use of protective equipment appropriate to the activity to be carried out.

3.4.2. The CONCESSIONAIRE is responsible for the acquisition and use of such equipment, and is also responsible for training personnel with regard to the use of first aid equipment, evacuation systems and fire protection systems.

3.5. Maintain and support specialized services in safety engineering and occupational medicine - SESMT, according to NR 04 (in its entirety).

3.5.1. If it hires other companies to provide services in its establishment, the CONCESSIONAIRE may constitute a common SESMT to assist the employees of the contractors, under its own management, provided that provided for in the Convention or Collective Labor Agreement.

3.5.2. The SESMT of the contractors must have its operation evaluated every six months, by a Commission composed of representatives of the CONCESSIONAIRE, the workers' union and the Regional Labor Police, or in the form and periodicity provided in the Convention or Collective Labor Agreement.

3.6. Establish the Internal Commission for Accident Prevention - CIPA, according to NR 05 (in its entirety).

3.7. Implement a Program for the supply of personal protective equipment - PPE and collective

protection equipment - EPC, according to NR 06 (in its entirety), and other complementary NR.

3.8. Comply with the Regulatory Standards - NRs - chapter V, Title II, the Consolidation of Labor Laws, related to the Safety and Occupational Medicine of Ordinance MTB No. 3,214 of 08/06/1978 and updates.

3.9. Adopt the necessary measures to minimize the probabilities of accidents involving persons, property or property, the CONCESSIONAIRE, the GRANTING AUTHORITY or third parties, in compliance with the requirements of work instructions to be prepared by the CONCESSIONAIRE.

3.10. To have and keep updated a complete work safety program, which can be requested by the GRANTING AUTHORITY for analysis and proposition of recommendations and improvements.

3.11. Bear the costs related to the supervision of specialized entities indicated by the GRANTING AUTHORITY, in order to verify, *on the spot*, compliance with established safety determinations.

3.12. Keep all its employees able and prepared to develop their functions, through theoretical and practical training for the provision of first aid, as well as correct use of fire extinguishing agents and personal and collective protection equipment.

3.13. Maintain strict control of safety of work on the operations of loading, unloading and transportation of any nature, material or personnel.

3.14. Implement the Occupational Equality Program without distinction of values, legally applicable.

3.15. Develop and implement legal training and training training / qualification for the activities of the CONCESSION, among them: admissions, periodicals, change of function, return to work, preparations to work according to each of the NR, or other predictive cases.

3.16. Identify and validate each PHASE the main risks (related to SSO) and controls of the SERVICES, considering, without restricting them:

- i. Risks from natural electrical discharges (work on cloudy or rainy days);
- ii. Risk of electric shock (risk of proximity to the high and/or low voltage network, risk of electrocution due to technical non-compliance);
- iii. Risk of exposure to hazardous products, especially from mercury lamps.
- iv. Risk of fall from height (by use of stairs, air baskets, hanging baskets and other classifications of NR 12; or risk of fall due to technical non-compliance);
- v. Risk of material fall (fall of installation, replacement, or modernization materials, as

well as tools);

- vi. Risk of traffic accident (through the mobility of modernization, expansion and/or maintenance teams during the CONCESSION in urban or rural areas);
- vii. Risk of travel accident;
- viii. Risk of conflict (such as during attempted theft and/or assault), especially in areas with high rates of violence.

3.17. Implement actions and training on exposure to diseases considering:

- i. Exposure to hazardous materials such as chemical herbicides, to avoid interference of vegetation in the lighting system, lubricating vehicular oils, etc.;
- ii. Risks related to the possible need for transformer replacement, considering the rules on the disposal of waste from Ascarel oil/PCBs, such as ABNT NBR 8371:2005;
- iii. Risks of mercury contamination.

3.18. Implement actions for the transport of materials, equipment, waste, chemicals, fuels and lubricating oil and diesel.

3.19. Implement, as necessary, support areas to the fronts of services for storage of equipment, materials and materials for administrative and operational services, in addition to sufficient sanitary installation for the number of people in service. During activities, this area should follow signaling and communication guidelines with employees and other authorized persons.

4. RESOURCE EFFICIENCY AND POLLUTION PREVENTION PROGRAM

4.1. The Program has as its target audience the CONCESSIONAIRE and its employees, any suppliers and the team responsible for monitoring the entire process of socioenvironmental management of the CONCESSION in its different phases, that is, for maintenance, modernization and expansion activities.

4.2. The CONCESSIONAIRE should establish an executive Environmental and Social Management Plan in PHASE 0, based on the details of concession projects, systematizing a set of procedures and management measures necessary to ensure, improve and expand the socio-environmental performance of the CONCESSION according to the risks and impacts identified by the ESMS, using established methodologies, considering *checklist*, surveys and field supervision, registration and consolidation of information in technical reports, among others.

4.3. The actions should be dimensioned according to the needs of the CONCESSION and its activities, considering the PHASES, in order to ensure the control of the risks and impacts envisaged,

as well as the execution of actions and associated measures.

4.4. Guidelines for Activity Support Areas

4.4.1. The need to install a concession support area should be evaluated when planning the activities.

4.4.1.1. The location of this facility cannot be established in areas where there are environmental liabilities related to STREET LIGHTING services provided until the beginning of PHASE I.

4.4.2. Such areas may be used for storage of equipment, materials, insums, parking vehicles, outpatient clinic and for administrative services.

4.4.3. It may also include sanitary facilities appropriate to applicable legal requirements sized according to the number of persons in service.

4.4.4. There are no areas of support for the preparation of meals and other services. For these cases, where applicable, specific services must be contracted according to PERFORMANCE STANDARDS.

4.4.5. During the execution of the SERVICES, the support area must follow the guidelines for signaling and communication with workers and other persons authorized to accompany the CONCESSION in order to:

- i. Flag the places of support;
- ii. Maintain communication with workers through notices, posters or the like;
- iii. Signal access, circulation of vehicles, machinery and equipment;
- iv. Alert and signal the speed limit of vehicles and machines;
- v. Identify places for movement and crossing of pedestrians, crossing of vehicles, escape routes and meeting points in case of emergencies;
- vi. Identify parking, loading and unloading locations of materials, among others.

4.4.6. For the living areas of workers and employees should be installed suitable locations in the squares of modernization and expansion of the STREET LIGHTING system containing areas intended for meals and personal hygiene, sanitary facilities, drinking and cold water, waste bins for selective collection, among other structures, as established in the Regulatory Standards (NR).

4.4.7. All solid waste generated in the support areas should be treated according to the

Solid Waste Management Program (PGRS).

4.4.8. Where necessary, for the storage of oil and fuels, appropriate reservoirs, isolated from the drainage network and with containment dams with adequate capacity, depending on the storage situation, should be used for the storage of one and a half times the volume of storage capacity, or if in a covered place, volume of the stored capacity.

- i. Storage devices may not have drains unless such devices flow into another containment area or reservoir where all spillage may be contained;
- ii. The support areas and/or service fronts should *also have mitigation kits* for oil spill accidents, which may occur during the maintenance of vehicles or activities involving heavy machinery, composed basically of absorbent materials (sawdust), plastic tray and canvas, gloves, brooms, hoe and shovels. These *kits* should be used for collection of oily waste to be packed in drum, in accordance with applicable legal requirements.

4.4.9. Effective noise reduction systems should be adopted in the noisiest equipment when necessary, such as enclosure, barriers, insulation, etc.

4.4.10. At the end of the activities, the support structures should be demobilized, observing the cleaning of the area in relation to solid waste, effluents, materials and substances, ensuring that there will be no liabilities left in the area resulting from the activity. To ensure that all environmental provisions have been properly complied with and appropriate controls and requirements have been implemented, a *checklist or checklist including all relevant environmental* aspects that need to be checked before the completion of activities in the area should be drawn up. Outstanding topics or requirements – if any – should be the subject of an action plan to resolve outstanding issues and may be discharged after their conclusion.

4.4.11. The maintenance of the area for the continuity of activities, in a later period, can be evaluated with the GRANTING AUTHORITY.

4.5. Guidelines for service front cleaning

4.5.1. When a service is completed, the entire work area should be cleaned properly and cannot be left in place: hazardous products; waste disposed of in the open; equipment devoid of protection; materials for general use; among other measures that ensure the safety and environmental quality of the site.

4.5.2. The areas served by a service should always be clean and adequate to the movement of workers who need to transit in the vicinity of the area, looking for the proper placement of the blocking signs of access to the spaces and the maintenance of the organization of the

spaces, using the compartments of the body of the vehicle for temporary storage of waste, equipment and other actions necessary for the control and organization of the service fronts.

4.6. Guidelines for Liquid Effluent Management

4.6.1. The CONCESSIONAIRE should point out, in the planning of activities, when there will be the generation of liquid effluents, and from there, specify how the treatment and destination will be, whether sanitary or industrial (washing areas of equipment, machinery and vehicles contaminated with oil and other chemicals). In the case of vehicle maintenance, specific and properly structured areas should be used for the activities.

4.6.2. Sanitary effluents originating from the service fronts should receive treatment prior to disposal, in compliance with current legislation.

4.6.3. The effluents generated in the chemical toilets, if used, should be succumbed and collected periodically in a vacuum truck, and then sent to a licensed sewage treatment plant. The service provider must have an environmental license according to the activities of collection, transportation and final launch.

4.6.4. As for the maintenance and washing of equipment, machinery and vehicles, they must necessarily be carried out in appropriate locations (duly licensed), which have waterproofed floors, with drainage directing the effluents to a water and oil separator box (Water and Oil Separator - SAO), in order to ensure the release of effluents generated within the standards defined by the applicable environmental legislation.

4.7. Guidelines for Atmospheric Emissions Management

4.7.1. During the performance of the CONCESSION activities, the movements of machinery and equipment may emit polluting material (dust and gases) into the atmosphere, including Greenhouse Gases (GHG), which are emitted by equipment powered by internal combustion engines resulting from the burning of fossil fuel.

4.7.2. For the issue of the emission of black smoke and gases from the burning gas of fossil fuels, periodic maintenance of vehicles should be carried out:

- i. The vehicles, machinery and equipment powered by diesel involved in the activities of the CONCESSION must strictly follow their individual maintenance plans, according to the manufacturers' manual;
- ii. There should be a responsible person in the control and monitoring of maintenance information, applying the methodology of the degree of blackening of smoke measured by the "Reduced Ringelmann Scale";

- iii. The CONCESSIONAIRE should know the number of vehicles used in each PHASE, detailing mileage, consumption and maintenance on a monthly basis (standardize the periodicity of the parameter), to enable the calculation of GHG emissions (check the emission forecast of more than 25,000 tons of CO₂ equivalent per year¹);
- iv. The Annual Inventory shall be carried out by the CONCESSIONAIRE in accordance with the methodologies and good practices recognized internationally as provided for in the ESMS.

4.7.3. For the suspension of particulate matter, effect resulting from the movement of equipment in places with exposed soil, the:

- i. Soil Humidification;
- ii. Coverage of Used Trucks for Transport of powdery material.

4.8. Guidelines for Noise Generation

4.8.1. The movement of machinery, vehicles and equipment tends to generate noise. It is noteworthy, however, that the activities of the IP system are small and temporary, at first.

4.8.2. It should be checked in the planning of activities the sources that can generate noise more extensively, and evaluate whether it will be pertinent to propose a monitoring of the activities. Proximity to sensitive recipients such as hospitals, schools, etc. should also be checked.

4.8.3. Noise monitoring, if necessary, should be carried out according to relevant legislation, technical standards and specific guidelines with appropriate methodology for the activities in question.

4.8.4. It is important to highlight that monitoring will be conditioned to specific situations where duration, type and workplace step up the generation of noise caused by CONCESSION activities and interfere with the well-being of communities. This assessment should be made in PHASE 0.

4.9. Guidelines for Land Movement and Foundations

4.9.1. They refer to general guidelines to minimize (or eliminate) the possibility of environmental degradation resulting from land movements (replacement of poles, implementation and uninstallation of poles, etc.), or even due to cuts in the ground for any

¹ The quantification of emissions should consider all significant sources of greenhouse gas emissions, including non-energy sources such as methane and nitrous oxide, among others.

intervention that is necessary to the activities of modernization, expansion, operation and maintenance of the STREET LIGHTING system.

4.9.2. For all areas:

- i. All land movement services should be planned in order to avoid triggering erosive processes;
- ii. Proceed with the correct disposal of unused material from excavations, transporting it to duly authorized locations;
- i. Keep protected and under appropriate conditions the circulation areas of the service fronts and signaled all excavated areas;
- ii. Keep protected and signaled all the steps of cuts and / or landfills that require interventions for the activities of the CONCESSION;
- iii. Restrict the movement of land to the performance of the activities necessary for the CONCESSION.

4.9.3. In the case of foundations for the installation of poles held by the MUNICIPALITY, the best structure should be defined according to the type of land, investigating the type of soil for geotechnical identification and definition of engineering solutions, aiming at the stability and safety of the installation, having as general reference:

- i. Foundations for normal soils: clay, sandy, silt or mixed soils (clay-siltose, sandy-clay, clay-clay, clayey, etc.) with or without the presence of water and rock below the base level of the foundation excavation are considered normal;
- ii. Foundations for special soils: in very weak soils, with or without the presence of water at low depth. In this case it is recommended to install metal or reinforced concrete piles crowned by independent reinforced concrete blocks or interconnected by horizontal beams, or other appropriate technology that ensures the stability and safety of the structure.

4.9.4. For the foundation of the poles, if their replacement is necessary, the environmental procedures and recommendations to be adopted are presented below:

- i. All measures should be taken to prevent the initiation of erosion processes in the preparation and cleaning of the sites of execution of the foundations;
- ii. Special precautions should be taken in the execution of the foundations of the poles in the vicinity of watercourse crossings in order not to cause any change or interruption in the natural drainage system;

- iii. In rainy season, the already open ditches should be protected with waterproof material;
- iv. Adequate protections and signs should be provided to prevent accidents in the execution of such services in the vicinity of inhabited areas;
- v. Where necessary, foundations will receive erosion protection by implementing devices for this purpose;
- vi. At the end of all foundation works, the land around it must be recomposed, coated, compacted, drained and protected against the formation of erosive processes.

4.9.5. For excavations of the foundations of the poles, the following criteria should be observed:

- i. The excavated material that may be used as a backfill of the foundations must be packed in order to minimize the impacts in the vicinity;
- ii. The excavated and unused material must be treated properly, and no accumulation of soil is left;
- iii. All excavated and unused material, mainly from the surface layer rich in organic matter, should be treated adequately, both in its storage, as in the transport and final destination;
- iv. All excavation areas should be properly marked, surrounded and buffered with material resistant at the end of the day in order to avoid fall and accidents.

4.10. Guidelines for Erosion and Silting Control

4.10.1. During the concession activities, procedures should be adopted aimed at the prevention, control, mitigation and recovery of erosive processes, silting and others of superficial dynamics, which can be triggered, for example, in the following cases:

- i. Movements in the bases of the poles;
- ii. Various excavations;
- iii. Movements on the service fronts, accesses, roads and other places of support used.

4.10.2. The basic guidelines of this Program are:

- i. Consider interventions, schedule and rainy season in operational planning;

- ii. Identify critical areas for erosion, siltation and geotechnical instability;
- iii. Indicate the measures and devices of erosion control, sediment transport, silting of water bodies and containment and stabilization of the slats.

4.11. Contaminated Areas

4.11.1. Throughout the CONCESSION TERM, if the CONCESSIONAIRE wishes to use the warehouse areas that have been used by the MUNICIPALITY or by third parties for the storage of materials used for the provision of STREET LIGHTING services, it will be up to the CONCESSIONAIRE to identify the existence of environmental liabilities.

4.11.2. The preliminary environmental assessment should follow the legal guidelines for identifying the potential for local contamination, where some activities will be required, namely:

- i. Survey of existing documentation on the areas of interest, notified that available in the locality, in the administrative processes of the state environmental agency and in the Municipal Halls referring to the unit of environmental interest previously mapped;;
- ii. Collection of data and information related to the history of occupation of the areas and activities developed therein, considering the previous uses;
- iii. Survey of the use of groundwater, with the location of water supply wells, based on the information provided by the company and the public agency responsible, considering a radius of 500 m from the limits of the area subject to the Preliminary Environmental Assessment;
- iv. Temporal aero photogrammetric survey in order to characterize changes in land use and occupation in the area and its surroundings, considering a radius of 500 meters from the boundaries of the area under evaluation, and to raise evidence related to the existence of potential sources of contamination;
- v. Survey of information collected in field recognition inspections in line with the requirements specified by environmental agencies, such as the procedures suggested by CETESB, in the State of São Paulo;
- vi. Survey of information collected in interviews with owners, employees and/or residents around the area;
- vii. Survey of regional geology, pedology and hydrogeology;

- viii. Survey of local geology and pedology data available in companies and areas of previously mapped environmental interest, as well as those resulting from past geotechnical investigations carried out in these areas;
- ix. Survey of information on investigations and / or stages of Management of Contaminated Areas already carried out in the areas of interest;
- x. Preparation of Updated Conceptual Models of selected areas;
- xi. Preparation of the Confirmatory and/or Complementary Environmental Research Plan for each area of previously mapped environmental interest (if applicable).

4.11.2.1. If the CONCESSIONAIRE detects environmental liabilities in these storage areas and still wishes to use them, the CONCESSIONAIRE must, at its expense, develop and implement the remediation plan in accordance with national and international legislation on the subject, that is, proceed with Phase II (Contaminated Areas Management) of the studies, be it: Confirmatory Investigation. In case of confirmation of contamination, follow, successively, with the management steps arranged in the current legislation. Where relevant, prepare, approve and implement the Intervention Plan for the site based on Remediation measures; Engineering Control and Institutional Control.

4.11.3. In the event of contamination of the soil and/or water, which is generated from the beginning of PHASE I and that has been due to the action of the CONCESSIONAIRE related to the SERVICES, the CONCESSIONAIRE shall carry out environmental investigation with the purpose of verifying the type of contamination, as well as the degree and scope, in accordance with the technical references and current legislation.

4.11.4. Once contamination is identified, the CONCESSIONAIRE should develop and implement the remediation plan in accordance with national and international legislation on the subject.

4.12. Storage and Transport of Hazardous Substances

4.12.1. The same storage and transport instructions of the Solid Waste Management Program should be followed for hazardous substances, including chemicals, paints, solvents, among others.

4.13. On the efficiency of resources, during the life cycle of the CONCESSION, the CONCESSIONAIRE should consider environmental conditions and apply the principles and techniques viable from technical and financial points of view, which promote the efficiency of

resources (consumption of energy, water and other resources and material inputs, GHG emissions) and the prevention of pollution and that are more appropriate to avoid adverse impacts on human health and the environment and, if it is not possible, to minimize them.

4.13.1. The principles and techniques applied during the project life cycle should be adapted to the risks and impacts associated with the nature of the activities and compatible with the best practices of the sector.

4.13.2. The CONCESSIONAIRE should consider in the planning of activities, quantitative resources and technical solutions and suppliers, the best options that meet the reduction of consumption and minimization of pollution, within an adequate production chain, setting goals for the other phases of the CONCESSION, according to the type of activity provided (maintenance, modernization or expansion).

4.13.3. When reference data is available, the CONCESSIONAIRE may evaluate the targets set to verify the relative level of efficiency.

5. SOLID WASTE MANAGEMENT PROGRAM

5.1. The Program has as its target audience the CONCESSIONAIRE, its employees, outsourced and contracted workers (if applicable), as well as companies that will be hired for the transportation, treatment and final disposal of waste.

5.2. Solid waste management should have as a priority the proposal of solutions for non-generation of solid waste, and methodologies for reduction, reuse, recycling and, finally, final destination should be considered.

5.3. The CONCESSIONAIRE shall structure the Solid Waste Management Program in detail, including the survey of the treatment infrastructure and final disposal of hazardous and non-hazardous waste.

5.4. The CONCESSIONAIRE shall ensure, through a contractual clause and the supervision of the activities, that the subcontractor(s) company(s) will take the procedures prescribed in this Program.

5.5. The generator must ensure the containment of waste after generation, until the stage of collection and transport, ensuring, in all possible cases, the conditions of reuse and shipping for recycling.

5.6. Materials that are liable to recycling which have any kind of contamination should not be sent to recycling companies unless a decontamination process is previously applied to them.

5.7. Waste recycling should be encouraged and facilitated to reduce the consumption of raw

materials, non-renewable natural resources, energy and water.

5.8. Particular attention should be paid to Class I waste, such as mercury lamps, which should be treated and addressed in particular.

5.9. The CONCESSIONAIRE should carry out training and training to workers, including as topics all the issues addressed by the Program.

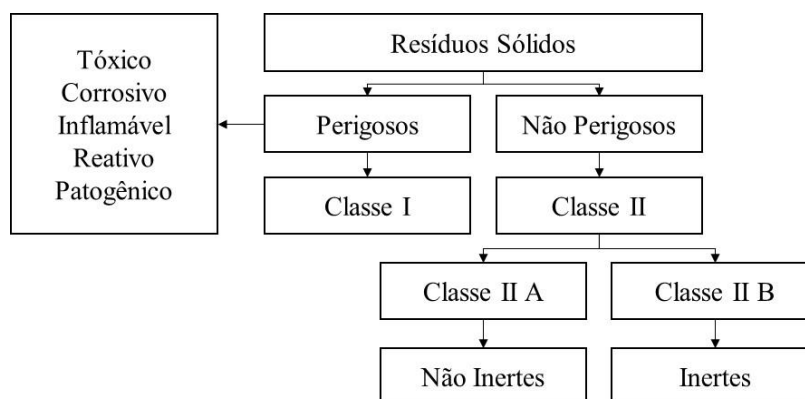
5.10. It should also be adopted procedure of order, storage, cleaning, maintenance and hygiene of support areas, service fronts, vehicles and other facilities, specifying and qualifying the team dedicated exclusively to these activities, in addition to implementing a routine of minimizing the generation of waste.

5.10.1. The main points foreseen for the generation of solid waste during concession activities are identified as sweeping, offices and warehouses, maintenance, support areas and service fronts.

5.11. Classification of solid waste

5.11.1. It should be carried out in accordance with the specific standards related to CONAMA and ABNT.

5.11.2. Observe the inclusion of other Standards, Resolutions and Guidelines that are necessary to comply with the PGRS. Of these standards, the following classification is indicated, as shown in the following illustration:



5.12. Segregation of Solid Waste

5.12.1. It consists of the separation of waste taking into account the chemical compatibility between them, in order to avoid undesirable reactions that result in adverse consequences to man, such as heat generation, fire or explosion, generation of fumes and toxic gases, generation of flammable gases and volatilization of toxic or flammable substances.

5.12.2. Waste generated on service fronts and support areas should be collected daily and segregated according to the classes to which they belong.

5.13. Collection of solid waste

5.13.1. Waste collection should be performed appropriately, according to ABNT NBR Standard No. 13,463/1995 - Solid Waste Collection, in order to facilitate the processes of storage, treatment and final disposal of waste.

5.13.2. The collection should be done daily with the waste generating areas, which are arranged in appropriate collectors, made available in order to provide convenience to the user and ease in the removal of its content.

5.13.3. Collectors arranged in the support areas and service fronts shall comply with the color code recommended in conama resolution, using devices such as plastic drums, metal drums, *big-bags*, wooden stalls and stationary buckets, coated with bags of raphy or simple garbage, properly labeled and identified as guidelines indicated in the following illustration:

COLLECTOR COLOR	TYPE OF RESIDUE
BLUE	Paper and cardboard
RED	Plastic
GREEN	Glass
YELLOW	Metal
BLACK	Wood
ORANGE	Dangerous
WHITE	Outpatient and health services
PURPLE	Radioactive
BROWN	Organic
GREY	Non-recyclable or mixed, or contaminated not unbreakable.

5.13.3.1. Construction waste classified as A, B and C should be collected in appropriate, clearly identified containers located in the support areas and service fronts, from which they must be removed daily for disposal in larger containers, arranged in an appropriate location, pending removal for transport.

5.14. Temporary storage of solid waste

5.14.1. The storage of waste has as definition its temporary containment in an area authorized by the environmental control agency, waiting for recycling, treatment or final disposal.

5.14.2. It should be carried out in places previously approved by the concession manager,

suitable for class I, II-A and II-B waste, consisting of covered area, waterproofed, duly signaled as to the risks and physical limits, away from surface waters and with adequate containment system, lighting system, fire systems, internal and external communication, PIs and safety equipment necessary for the types of emergency and respective operation record (reports movement and storage of waste).

5.14.3. The storage of waste with reactive and/or incompatible characteristics must be carried out separately, protected by means of dikes, berms or walls. Class II-A and II-B waste shall not be stored together with Class I waste in view of the possibility that the resulting mixture may be characterized as hazardous waste.

5.15. Transport of solid waste

5.15.1. All waste transport should only be carried out with prior knowledge of the risks and handling characteristics of the same.

5.15.1.1. Any waste that has to be disposed outside the place where it was generated will have to be transported following safety standards and by companies duly licensed and authorized for this purpose, ensuring the protection of the environment and public health.

5.15.1.2. All companies contracted to transport the waste must be with their situation regularized with the competent environmental agency. The logistic companies must be able to meet ABNT NBR No. 13,221, and those that carry hazardous waste (Class I, according to ABNT NBR No. 10,004) must also meet NBR 14,064 and the Regulation for the Road Transport of Hazardous Products, approved by Federal Decree No. 96,044/1988.

5.16. Treatment of solid waste

5.16.1. Waste that, due to technical unfeasibility, cannot be recycled or recovered, may be sent for appropriate treatment before being disposed (if necessary), and the choice of treatment should take into account what causes the least impact to the environment, according to the following order of priority: a) procedures that promote energy treatment, b) other treatments and c) final disposal in regularized landfills.

5.16.2. The types of treatments most commonly used in the management of industrial solid waste refer to: incineration, composting, co-processing, autoclaving, neutralization and final storage.

5.16.3. Companies contracted for waste treatment should be duly licensed by the competent environmental body.

5.17. Final disposal of solid waste

5.17.1. The most commonly given destinations for treated waste are:

5.17.1.1. Class I and IIB Industrial Waste Landfill: disposal of hazardous and inert industrial waste in the soil, without causing damage or risks to public health, minimizing environmental impacts. This method uses engineering principles to confine hazardous waste in the smallest possible area and reduce it to the smallest permissible volume.

5.17.1.2. Construction waste may not be disposed of in household waste landfills, in "boot outside" areas, on hillsides, water bodies, vacant lots and in areas protected by law, as established by the legislation in force. They may be reused or recycled in the form of aggregates, or sent to construction waste landfill areas, and are arranged in such a way as to allow their future use or recycling (where applicable).

5.17.1.3. Recyclable waste should be sent to specific units in the region. Recycling companies commonly collect waste.

5.17.1.4. Common waste may be sent to local landfill or for composting (properly segregated organic).

5.17.1.5. The companies receiving the waste, responsible for its final disposal or treatment, shall provide the waste management officer with the Certificate of Receipt, Treatment or Final Destination given to the waste, as well as a copy of the authorization to receive the waste, issued by the competent environmental agency, when destined for other States.

5.17.1.6. The collection for final disposal of waste should follow the following periodicity:

- i. Quarterly collection during PHASES I and PHASE II;
- ii. Annual collection throughout PHASE III;
- iii. For common waste, the collection should be periodic, planned according to the generation demand and the respective collection system.

5.17.1.7. The contractor must have the necessary licenses and/or authorization for the proper final disposal of construction waste, presenting the evidence of this in its periodic reports and keeping the record updated and available.

5.18. Hazardous Waste

5.18.1. According to applicable regulations, there is the probable generation of hazardous waste, of which the following are listed items:

- i. Lamps (fluorescent, Sodium vapor lamps, Mercury vapor, metallic vapor) are composed of polluting materials, as well as toxic to the environment and living beings;
- ii. LED modules can be classified as hazardous waste according to specifications related to the quantities of heavy metals in their compositions.
- iii. Photoelectric relays may contain hazardous materials, such as heavy metals in their composition;
- iv. Batteries and batteries;
- v. Ascarel oil eventually identified in old design networks and systems;
- vi. Tires, oils, packaging and waste from these materials;
- vii. For all of the above, the guidelines already presented in this Program must be followed. In PHASE 0, the entire management methodology should be established, from its separation and temporary packaging to the transport or collection, treatment and final disposal by duly licensed companies.

5.18.2. Identification and codification of hazardous waste

5.18.2.1. They should be made in accordance with the specificities of each product by consulting the annexes of the technical standards and specific resolutions.

5.18.3. Handling and EPIs

5.18.3.1. It is understood by handling any and all handling and movement, from its place of origin to the place of its treatment or final disposal.

5.18.3.2. In order to provide safety in the handling process, the Appropriate EPIs should be used for each type of residue. All handling involving waste must be carried out by personnel duly trained and qualified according to the function developed, being necessary the use of some EPIs appropriate to the tasks performed.

5.18.3.3. In the case of lamps, the following recommendations should be followed, without being restricted to them.

- i. STREET LIGHTING lamps containing Mercury are at risk of contamination only if they have a broken discharge pipe ("ampoule");

- ii. Broken lamps (bearings), in all phases of movement, removal, storage and transport - should be handled with appropriate EPIs such as gloves, apron and plastic boots;
- iii. When there is accidental breakage of a lamp in an enclosed place, the first step should be to open doors and windows to the circular air. The site should be cleaned, preferably by aspiration. The shards should be collected in such a way as not to injure those who manipulate them and should be placed in watertight packaging, with the possibility of being sealed, in order to avoid the continuous evaporation of the mercury released;
- iv. People should be prevented from eating and smoking during operations involving the handling of lamp residues and should undergo periodic medical examinations, including determination of the amount of Mercury and neurological assessment for exposed persons repeatedly.

5.18.3.4. In general, mandatory EPIs consist of at least:

- i. PVC gloves, waterproof, resistant, non-slip, preferably long-barreled and in light colors;
- ii. PVC boots, waterproof, resistant, with non-slip, short barrel, light-colored,
- iii. Anti-scratch and anti-emycist goggles;
- iv. Respiratory mask for handling residues with particulate generation potential - types PFF1 and PFF2.

5.18.4. Packaging and storage of hazardous waste

5.18.4.1. The packaging form should be compatible with storage, transport and final disposal in order to prevent leaks and emanation of vapours harmful to people and the environment.

5.18.4.2. All waste should be packaged in a safe and properly identified manner as to its nature, degree of risk, volume, origin and other specific guidelines.

5.18.4.3. Packages used for the packaging of hazardous chemical waste should be properly labelled and contain at least information such as waste name, characteristics, generating area, handling form, emergency procedures.

5.18.4.4. The forms used in the packaging of waste should be dimensioned and

defined according to the estimated quantity for each type, being commonly used: metal drums, plastic drums, *plastic big-bags* and plastic containers.

5.18.4.5. Containers, barrels and/or barrels intended for the waste's packaging must comply with the criteria established in the technical standards related to the type of constituent material, resistance, compatibility with the type of waste and its transport, be in good condition of use, with adequate buffering and properly identified.

5.18.4.6. The storage of hazardous waste must follow the standards and technical guidelines already specified in this Program.

5.18.4.7. Its disposal should be carried out in well-ventilated covered areas, and containers placed on concrete base, in a contained area, in order to prevent leaching and percolating of substances into soil and groundwater.

5.18.4.8. For the specific case of lamps, storage must be granted from the temporary containment in an area authorized by the environmental control body, waiting for recycling, treatment or appropriate final disposal, provided that it meets the basic safety conditions as described in the ABNT.

5.18.4.9. In order to provide safety in the storage process of the lamps, the following recommendations should be followed, without being restricted to:

- i. Storage should be in a separate and demarcated area, according to the principle of waste segregation;
- ii. Under no circumstances should lamps be broken to be stored, due to the risk of environmental contamination and human health;
- iii. Burned or unusable lamps should be kept intact, preferably packed in their original packaging, protected against any mechanical shocks that may cause their rupture, and stored in a dry place;
- iv. Packaging with burned intact lamps shall be packed in any portable container in which the waste may be stored, transported, or otherwise handled in such a way as to avoid leaks in the event of lamp breakage, or in boxes suitable for transport (containers) supplied by recycling companies;
- v. If it is not possible to reuse the original packaging, packaging made of reused cardboard, cut and glued in the shape compatible with the lamps should be provided. Or, it is recommended to use old newspaper to wrap the lamps, protecting them mechanical countershocks;

- vi. Broken lamps (bearings) must be packed in a barrel (portable container), hermetically sealed, made with sheet metal or plastic material internally coated with special plastic bag to avoid its contamination;
- vii. Each container shall be identified as to its contents, and such identification is made in such a way as to resist manipulation, as well as the conditions of the storage area in relation to any weather;
- viii. The storage location must comply with the conditions laid down by environmental agencies, as well as be properly flagged to prevent unauthorized persons from accessing. It is recommended to flag the area with the words "Lamps for Recycling";
- ix. Containers and/or barrels should be in a covered, dry and well-ventilated area, and containers should be placed on concrete or other material (pallets) that prevent the percolating of substances into soil and groundwater. It is recommended that the area also has a drainage and uptake system of contaminated liquids;
- x. At the time of the closure of the activities, the remaining containers and/or barrels, as well as any contaminated bases and soil, should be properly treated and/or cleaned.

5.18.5. Transport of hazardous solid waste

5.18.5.1. All waste transport should only be carried out with prior knowledge of the risks and handling characteristics of the same. Class I waste must be transported together with the Emergency Form.

5.18.5.2. Among the requirements to be met in relation to the transport of hazardous waste, it should include the documentation that will accompany the waste to the place of its destination, as follows:

- i. MTR (Waste Transport Manifest) / DMR (Declaration of Waste Movement) - federal legal documentation for certification of the movement of waste of environmental interest;
- ii. Emergency Form and Risk Label;
- iii. Generator/Recipient Label;
- iv. Envelope to contain the boarding documents;
- v. Emergency Kit;

- vi. Emergency Action Plan - PAE;
- vii. Compliance with State and/or Municipal Laws, if applicable.

5.18.5.3. In addition to complying with these standards, the activities involved in the transport of dangerous products should cover:

- i. Monitoring of waste shipment operations;
- ii. Verification of the conditions of conservation of the vehicle;
- iii. Verification of the driver's training of the vehicle.

5.18.5.4. Filling out Waste Transport Registration Forms, containing the requirements of the relevant technical standards and other information, with emphasis on the following information:

- i. Name, address and number of the Environmental License (if appropriate) of the carrier and the recipient of the waste;
- ii. Characterization of the residue (quality, quantity, type of packaging, condition of the packaging, etc.);
- iii. Planned route, with estimated time required;
- iv. *Checklist* to check compliance with the standards related to color coding and symbols, EPIs, forms of communication in case of accidents etc;
- v. Conference of the waste receipt authorization document issued by the competent environmental body in the case of shipment of waste to other States, including verification of the validity of the licenses.

5.18.5.5. All companies contracted to transport waste must be with their situation regularized with the competent environmental agency and be able to meet the current technical standards.

5.18.5.6. In order to provide safety in the process of transporting lamps, the following recommendations for external transport should be presented:

- i. Identify the load (container, barrel, and boxes) with the following information:
 - a. Date of loading;
 - b. Number of lamps;

- c. Location of where the lamps were removed (origin);
- d. Loading destination;
- ii. Transport in accordance with the segregation criteria, which state that such materials may not be transported together with food products, medicinal products or products intended for human or animal use and/or consumption, or with packaging intended for these purposes;
- iii. Protect against bad weather and do not tip over the containers to prevent the implosion of the lamps from occurring;
- iv. Provide vehicles with closed body work so that the transported waste is not exposed;
- v. Present, on the three sides of the bodies of the vehicles, information on the type of waste transported and identification of the company or GRANTING AUTHORITY responsible for the vehicle;
- vi. Identify the load as "Toxic Substances";
- vii. Fill out the Waste Transport Manifest - MTR (where applicable), as established by the responsible body;
- viii. Provide environmental control document provided by the competent body, and must inform the type of packaging.

5.18.5.7. When the final destination is recycling, the transport in general is carried out by the recycling company and, therefore, the responsibility becomes of this company, except when there are joint and several liability agreements.

5.18.6. Final Destination of Lamps

5.18.6.1. In the case of lamps, recycling is the most environmentally friendly option for disposal.

5.18.6.2. In the recycling of lamps, the main objective is the recovery of Mercury and other elements contained therein for further reuse, avoiding soil contamination.

5.18.6.3. Aluminum, glass and phosphorus powder can be reused both in the manufacture of new lamps and in the production of other products. The rest of the decontaminated material, which cannot be recycled, may be disposed of in a common waste dump.

5.18.6.4. After the correct final destination of the lamps, the responsible company must issue a Certificate of Receipt and Responsibility that informs the correct final destination.

5.18.6.5. It is noted that by the Environmental Crimes Law the CONCESSIONAIRE may be co-responsible in case of environmental damage, which is why it should have proof scans on the treatment of waste.

6. COMMUNITY HEALTH AND SAFETY PROGRAM

6.1. The target audience of this Program is within the criteria of beneficiaries/ impacted by the CONCESSION (community / territory) in interface with the work involved.

6.2. The CONCESSIONAIRE shall define the area of direct influence of the Project, identify the Communities potentially affected, evaluate the risks and impacts on the health and safety of them, and establish prevention and control measures in accordance with the Good International Practices of the Sector (BPIS).

6.3. The CONCESSIONAIRE shall propose mitigation measures that are compatible with the nature and magnitude of the impacts and risks previously identified.

6.4. These measures will give priority to prevention and, if not feasible, to minimizing risks and impacts. Eventually, the CONCESSIONAIRE will also have to compensate for irreversible risks and negative impacts.

6.5. The following activities may contribute to the triggering of accidents (including fatalities) in the interface with the community/territory:

- i. Risks due to natural electrical discharges (work on cloudy or rainy days): bad weather can generate accidents (including fatalities): scenarios should be identified in the Emergency Action Program, provided for in the OPERATION AND MAINTENANCE PLAN, according to the SERVICES AND INVESTMENTS SPECIFICATIONS;
- ii. Risks due to electric shock (risk of proximity to the high and/or low voltage network, risk of electrocution due to technical non-compliance): workers must strictly follow the operational procedures on the service fronts; do not leave hazardous products and/or waste disposed of in the open at the places of activity; not allow the operation of equipment devoid of protection; install physical barriers to protection of electrifying systems; among other measures that ensure the safety and environmental health of the site;
- iii. Risks of falls from heights for workers, materials and equipment (such as tools): may affect passers-by and cause accidents (including fatalities); workers should strictly

follow safety procedures and use the EPIs and EPCs necessary to prevent NR12 risks;

- iv. Risks of traffic accidents (due to the mobility of field teams during the CONCESSION in urban or rural areas): workers must strictly follow the procedures related to traffic safety and preventive maintenance of vehicles;
- v. Transportation of materials, equipment, waste, chemicals, fuels and lubricating oil and diesel: can lead to leaks and dispersion in areas without containment, with potential contamination and risks associated with the health of communities or ways of life if ecosystem services impact; workers should strictly follow traffic safety procedures.

6.6. As regards the Community's exposure to diseases, the following should be considered:

- i. Exposure to hazardous materials such as chemical herbicides, lubricating vehicular oils, fuels;
- ii. Attraction of vectors of diseases by luminosity;
- iii. Risks related to the possible need to replace transformers without regard to the rules on the disposal of waste from Ascarel oil, such as ABNT NBR 8371:2005;
- iv. Risks of contamination of workers, communities and the environment by Mercury, and the requirements of the Solid Waste Management Program should be strictly followed.

6.7. Through the possibility of using chemical control as a measure of control of the vector fauna, if applicable:

- i. Avoid or minimize the use of hazardous materials and substances;
- ii. The CONCESSIONAIRE should adopt technologies and products of the ecological line, instead of the use of Persistent Organic Pollutants (POPs) existing in pesticide formulations;
- iii. The CONCESSIONAIRE must ensure compliance with local standards and international requirements, always adopting the most restrictive;
- iv. Implement the pest control system for the various phases of the CONCESSION, through the rationalization of the use of chemicals, preservation of labor and application of preventive control techniques, depending on the knowledge of biology;
- v. Define those responsible, schedule, products and their dosages, techniques, values, sequential statistics;
- vi. The Operational Procedures should be defined and strictly implemented and should include information regarding the techniques and products used, as well as the ways to

record the control activities carried out and the results obtained.

6.8. Specifically as to the Community's exposure to accident risks, especially in areas of high violence, account should be taken of property security.

6.8.1. Risks arising from the use by the CONCESSION of government officials responsible for security assistance to provide security services should be included. When establishing safety agreements, the CONCESSIONAIRE should be based on the principles of proportionality and good international practice with respect to hiring, standards of conduct, training, equipment and monitoring of these workers and comply with applicable legislation.

6.8.2. You should also ensure that security service providers have received appropriate training in the use of force (and, where applicable, in the use of firearms) and how to behave appropriately to affected workers and Communities, requiring such service providers to act within applicable law.

6.8.3. Use of force should not be permitted unless it is used for preventive and defensive purposes and to a degree proportional to the nature and extent of the threat.

6.9. In addition to the above, the CONCESSIONAIRE should hire only certified companies to exercise asset security, with strict legal application of the theme.

6.9.1. In addition, the security personnel, whether own, outsourced or employee of a contracted company, must strictly follow the Concessionaire's Code of Conduct.

6.9.2. Where applicable, the CONCESSIONAIRE shall investigate all allegations of illegal or abusive acts committed by security personnel, taking measures (or request that the parties concerned take them) to prevent such acts from being repeated and notify the public authorities of illegal and abusive acts, in addition to any compensatory and indemnification actions that are necessary.

6.10. The complaint mechanism for affected communities should be periodically disclosed so that they express their concerns about the safety agreements and actions of security personnel, as well as their complaints regarding the CONCESSION and its impacts and/or actions of its workers. The management of this mechanism should follow the guidelines and procedures defined in the Communication and Engagement with Stakeholders Program.

7. MITIGATION NUISANCE TO THE POPULATION PROGRAM

7.1. The actions of the Program of Mitigation of Discomfort to the Population mainly cover residents, merchants and people linked to institutions located throughout the STREET LIGHTING system and in their areas of influence. In addition, they involve the workers responsible for all services, the management and administration team of the CONCESSIONAIRE.

7.2. Nuisance Control and Schedule Restrictions

7.2.1. The use of equipment for the SERVICES may emit noise, gases from combustion in engines (CO₂, NO₃, N₂O₄, CH₄), in addition to, eventually, suspension of particulate matter (dust), caused by the movement of vehicles and machines.

7.2.2. In addition, activities may temporarily restrict access and movement of vehicles on some stretches of roads or impact the travel times and mobility of the local population, in addition to temporarily disrupting the supply of energy and/or other services.

7.2.3. To avoid discomfort for the population, especially in the most densely occupied areas, activities should take place according to alignments between the main Stakeholders and the CONCESSIONAIRE.

7.2.4. Mitigating measures aimed at ensuring the well-being and comfort of people in the community should include:

- i. Protection against falling tree or part of vegetation, when maintenance activities;
- ii. Safety measures to avoid electric shock, such as exposed electrical wiring;
- iii. Restriction of activities that generate noise and traffic at night;
- iv. Implementation of signaling of activities, when relevant, in stretches of roads and in the vicinity of work squares;
- v. Adequacy of the number of machines and equipment in order to meet the standards recommended by the current legislation regarding particulate emissions, noise and vibration in the vicinity of residential areas;
- vi. When necessary, water sprucing in localities that have been identified as potential for suspension of particulate matter during activities, so that establishments that are at least 200 meters away from these generating sources have the least impact of this nuisance, primarily in the dry season;
- vii. Maintenance and regulation of machinery and equipment: should be monitored in the field through the application of the Ringelmann Scale and through documentary proof of maintenance and regulation records;
- viii. Noise monitoring of activities: it may be necessary and when it is necessary, it should be executed according to specific guidelines and appropriate methodology for the activities in question. It will be conditioned for specific situations where the duration, type and workplace step up the generation of

noise caused by concession activities and interfere with the well-being of communities. This assessment should be made in PHASE 0 of the CONCESSION.

7.3. Contact with the Government and the general population

7.3.1. To alert the Government responsible for the road system or locality, and the general population about the activities, the following actions are proposed, in line with actions described in the Communication and Engagement with Stakeholders Program (PCEPI):

- i. Communication to local authorities on the start and duration of activities, requesting support for any interventions that impact access, services and local traffic;
- ii. Communication with residents and users of buildings in the area to be impacted, according to the degree and duration of the activity.

7.3.2. Possibly, for more impactful and/or long-term activities, also provide for:

- i. Publication on the ONLINE PORTAL of the investment schedule;
- ii. Publication in a local newspaper of great circulation indicating the beginning and expected duration of the activities;
- iii. Distribution of information in all establishments highlighted throughout the IP system to be impacted;
- iv. Passage of sound car and radio chain dissemination about the performance of the activity in advance and during the activities, if these are necessary in view of its duration, respecting local legislation.

7.3.3. Depending on the type of activity to be carried out, the CONCESSIONAIRE should agree with the authorities the minimum period required for communication in case of blocking access to buildings or temporary interruption of roads and services.

7.3.4. In the case of activities that do not require such interruptions, the CONCESSIONAIRE may define the best form of communication about the activity.

7.3.5. The board with information on activities and other signs should be kept fixed until its end, being immediately replaced when identified its natural wear, vandalism or other problem that impairs the understanding of the information.

7.4. Contact affected Communities

7.4.1. The team responsible for the implementation of this Program, as provided for in the

Program of Communication and Engagement with Stakeholders (PCEPI), must have several communication tools to make the proper contact with the population, including a CALL CENTER, an ONLINE PORTAL and a face-to-face service desk at the concessionaire's headquarters in the MUNICIPALITY, in addition to the installation of information boards and dissemination of information in radio and folders, providing information about the CONCESSION, its risks and impacts, importance, motivation, clarify doubts and gather suggestions, channels of complaint, among others.

7.5. *Folders/Flyers and Information Boards*

7.5.1. In the case of activities with greater potential for *impact*, *folders*, pamphlets, information boards and advertisements on the ONLINE PORTAL with information about the specific activities of the CONCESSION, its basic characteristics and its importance for the region can be prepared and intended for stakeholders and impacted by the CONCESSION.

7.5.2. The information material may also provide clarification about the care that stakeholders and impacted by the CONCESSION will need to have in relation to the inherent risks of any activities developed in the vicinity of the lighting system. In addition, they should point out the occurrence of possible deviations and interdictions on public roads or temporary interruption of some service during the execution of activities.

7.5.3. The material must be sent in advance to all residences, institutions and establishments in the vicinity of the areas with the greatest potential impact activities, containing minimally the following content:

- i. CONCESSION data and responsible;
- ii. Characteristics of the CONCESSION and, when necessary, detail the specific activity to be carried out;
- iii. Restricted and risky activities;
- iv. SERVICE CHANNELS.

7.6. *Employee Integration Meeting*

7.6.1. An integration meeting should be held with the workers who will participate in the activities, with an appropriate deadline for all to prepare adequately in the face of the specificities that should be addressed there.

7.6.2. At this meeting, workers should be guided on the following topics, among others established for the work routine:

- i. ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEM (ESMS);

- ii. Relationship with third parties and community;
- iii. HR Policy and Code of Conduct;
- iv. Security arrangements in line with the relevant principles of human rights, especially in areas with high rates of violence;
- v. Main standards and procedures to be followed;
- vi. Records in case of observations, non-conformities and suggestion of improvements;
- vii. Communication tools;
- viii. Emergency Action Program, foreseen in the OPERATION AND MAINTENANCE PLAN , according to the SERVICES AND INVESTMENTS SPECIFICATIONS .

7.6.3. As evidence of execution, a attendance list and minutes of the meeting should be made, which should be properly archived.

7.7. SERVICE CHANNELS

7.7.1. To answer questions, complaints and suggestions, communication channels provided for by the Communication and Engagement Program with Stakeholders should be made available.

7.7.2. These should have wide dissemination, such as *in the information folders* , signs, stickers on the vehicles used by workers, during presentations and face-to-face meetings, etc. and are periodically disclosed in field actions of the team responsible for Social Communication.

7.7.3. The complete detailed records of the calls and contacts made will be included in the monthly reports that will serve as a subsidy to the decision-making of managers, including review of procedures aimed at improving the actions developed.

8. TRAFFIC MANAGEMENT PROGRAM

8.1. The Traffic Management Program applies to the CONCESSIONAIRE and its third-party employees.

8.2. According to the executive projects and the respective dimensioning of the activities, it is necessary to organize the activities of travel and traffic recording the schedule in the form of a rotogram that should be updated periodically. To this end, the measures listed below should be

followed, without being restricted to them:

- i. Definition of routes, pre-established and local times for the entry and exit of vehicles and transportation of personnel, materials, equipment etc. to the support areas and service fronts;
- ii. Planning of relocations and redefinitions of local traffic, if necessary;
- iii. Implementation and operation of traffic support process, with communication with vehicles in service to identify situations that may require interventions;
- iv. Verification system and authorization for entry into service for drivers;
- v. use of vehicles suitable for load conditions and transport routes, in terms of weight, capacity, power and other characteristics; in addition to its proper conservation and maintenance of good working conditions, with the aim of avoiding damage to the roads used (by excess axle weight, for example), as well as undue interference with traffic (excessively reduced speed, insufficient braking, smoke, breakdowns, tire pickling and other incidents that may be caused);
- vi. Use of vehicles provided with signs and equipment for action in case of accidents and other emergency scenarios, such as equipment and materials to assist other vehicles in service that show a breakdown.

8.3. Implement and operate the process of support and control of traffic through information collected and passed on by drivers at the service of the CONCESSION, to identify situations that may require interventions and perform the following actions:

- i. Monitoring the traffic conditions of local roads before and during the displacement of the concessionaire's vehicles;
- ii. Traffic planning considering times of greater flow of the road, avoiding them whenever possible;
- iii. Provide, if necessary, traffic control support with barriers, traffic lights and traffic operators, as provided for in the relevant technical standards.

8.4. The CONCESSIONAIRE should evaluate the adoption of electronic control equipment of routes and speeds, to be integrated with the management system and other control mechanisms.

8.5. Promote training and qualifications continuously for drivers and traffic auxiliaries in relation to the equipment and routes to be used, the operating procedures and adopted ones based on other measures provided for traffic control, relevant traffic regulations and safe driving.

8.6. In order to minimize interference with third parties, the Program should include a procedure for the use of vehicles in good condition, maintenance and operation appropriate for the conditions of loading and transport travel.

8.6.1. The CONCESSIONAIRE and its subcontractors must carry out periodic inspections of the state of conservation and maintenance of vehicles, keeping an updated record (*checklist*) of these procedures;

8.6.2. Containment and sealing processes should also be adopted for loads carried by vehicles in order to prevent them from spilling over persons or other vehicles on the road;

8.6.3. Avoid damage to used roads (for excessive weight or speed, for example), as well as undue interference such as excessively reduced speed, insufficient braking, black smoke emission, dust emission, vehicle breakdown and road blockage, tyre pickling and other incidents that may be caused.

8.6.4. In addition, it should also be implemented:

- i. In all urban areas and intersections of public roads, as well as in the vicinity of highways, appropriate procedures should be adopted to control traffic with traffic signs and traffic safety measures with a view also to safeguarding any passers-by and other vehicles not involved with concession services;
- ii. To minimize any discomfort with neighboring communities, the use of access routes at peak times should be avoided whenever possible;
- iii. If necessary, disclosure of relocations and redefinitions of local traffic and the definition of pre-established and local times for the entry and exit of vehicles from the CONCESSION;
- iv. Inclusion of speed reducers in trucks for areas with the highest pedestrian flow, such as shopping centers and locations near schools and hospitals;
- v. Prior communication to road users, affected by interventions in local traffic;
- vi. Signage in vehicles at the service of the enterprise clearly presenting the information of the CONCESSIONAIRE (logo) and free contact phone, for communication and alert of the community regarding accidents and dangerous driving.

8.7. For road signs, for access to the sites of CONCESSION activities, existing road infrastructure should be used and, where applicable, appropriate signaling (according to relevant technical standards) should be used by:

- i. Traffic signs with speed control signs, intersections, indication of the work, schools, pedestrian crossings, among others. The signs for traffic should be made with reflective ink, according to the standards set by the Brazilian Signaling Manual of CONTRAN;
- ii. Signaling of support sites: service fronts and other points used to carry out the activities;
- iii. Signaling access, movement of vehicles, machinery and equipment;
- iv. Identify locations for pedestrian crossing and vehicle crossings;
- v. Identify parking, loading and unloading of materials;
- vi. Maintain communication through notices, posters or similar;
- vii. Contact information must be maintained in all signaling structures.

8.8. The CONCESSIONAIRE shall provide and maintain at the sites of the works related to the execution of the SERVICES, plates, identification easels and other types of appropriate signs, with dimensions, words and logos in the standard of the GRANTING AUTHORITY

8.9. Special attention should be paid to activities located in parks, monuments with special lighting and tree environments, considering the issues of safety and discomfort to the community, special care with biodiversity and public heritage. If necessary, actions should be articulated with the respective management bodies.

8.10. The transportation of materials, equipment, waste, chemicals, fuels and lubricating oil and diesel must follow the following guidelines:

- i. Any utility vehicle, cargo transport, machine or equipment operating in reverse must be equipped with an audible alarm coupled to the gear system and with rear-view mirrors in good condition;
- ii. The vehicles must be equipped with radio or mobile phone for the driver, and will have speed control with tachograph, thus proving compliance with speed limits on public roads and the established on the service fronts;
- iii. Adopt processes of containment / sealing of cargoes transported by vehicles in the service of the CONCESSION, in order to prevent them from spilling on the road, onto people or other vehicles;
- iv. When transporting materials and equipment, trucks with bodywork must be used to prevent accidental falls, which may cause environmental and safety problems for the surrounding community.

8.11. Heavy vehicles must have a hydraulic system using the Type A safety system (composed of primary and secondary safety devices) or Type B (primary and tertiary safety devices).

9. BIODIVERSITY MANAGEMENT AND MONITORING PROGRAM

9.1. Areas of importance for biodiversity in the Project area should be identified and evaluated, including:

- i. Internationally Recognized Areas, defined as the Man and Biodiversity Program - MAB UNESCO and the Biosphere Reserves, Main Biodiversity Areas (including Priority Areas for Avifauna and Biodiversity), and designated wetlands under the Convention on Wetlands of International Importance (Ramsar Convention);
- ii. Legally Protected Areas (international, federal, state and municipal level);
- iii. Areas of the Brazilian Alliance for Zero Extinction (BAZE);
- iv. Areas that are potentially important for priority species that are particularly sensitive to lighting should also be considered (for example, nesting areas for turtles, Biodiversity Conservation Priority Areas, defined by the MMA, priority areas defined within the Municipal Plan for Conservation and Recovery of the Atlantic Forest, etc.).
- v. UNESCO Natural World Heritage Sites (and its official buffer zones); and
- vi. Areas of the Alliance for Zero Extinction (AZE).

9.2. In case of change/modernization of lighting with increased luminosity, and in case of installation of new lighting points with emphasis in non-urban areas where biodiversity values may be present, the following procedures should be carried out:

9.2.1. In non-urban areas where priority Biodiversity Values may be present and may be affected by changes in lighting, including the areas mentioned in the items 47., the following actions should be taken:

- i. Assess potential impacts on relevant biodiversity values when installing new lighting points or in the event of an expected increase in light intensity. The evaluation should involve biodiversity experts and consult stakeholders (protected area managers, species specialists) and definition of specific prevention and mitigation measures, such as: avoiding certain areas, reducing disturbance potential (illuminance, uniformity, correlated color temperature, luminous flow direction), and performing recovery and compensation if necessary.
- ii. Develop additional conservation programs for the relevant biodiversity values,

when within the areas referred to in the items 9.1.i. and 9.1.ii.,

- iii. Develop and implement, within the ESMS, a Biodiversity Management and Monitoring Plan to ensure the implementation and effectiveness of mitigation measures.

9.2.2. In non-urban areas within the 9.1.v. and 9.1.vi., the following actions should be taken:

- i. Avoid any change or interference and, when not possible, conduct formal consultation with representatives of UNESCO Natural Heritage or with the AZE secretariat before the start of any activity.
- ii. Evaluate and avoid the impacts (direct and indirect) on the biodiversity values of these sites. The evaluation should involve biodiversity experts and be agreed with relevant stakeholders (UNESCO or AZE).
- iii. Develop and implement, within the ESMS, Biodiversity Management and Monitoring Plan to ensure the implementation and effectiveness of mitigation measures, if there is any change, previously agreed with the entities indicated in the item ii.i., and according to biodiversity experts
- iv. Implement additional conservation programs for the relevant biodiversity values, previously agreed with the entities indicated in the item ii.i., and according to biodiversity experts.

9.2.3. For the preparation of the Biodiversity Management and Monitoring Plan, at least:

- i. Brief description of the project;
- ii. Description of relevant priority diversity values;
- iii. Summary of all consultations with stakeholders carried out;
- iv. Summary of expected impact;
- v. Definition of mitigation actions, with schedule, budget and responsibilities;
- vi. Identification of residual impacts that may require compensation (if necessary, a compensation plan should also be developed);
- vii. Monitoring plan (related to the effectiveness of the proposed mitigation measures on biodiversity priority values); and
- viii. Adaptive management plan.

9.3. When applicable, the CONCESSIONAIRE should consult the competent agencies, such as ICMBIO, State, Municipal and other Departments, in order to validate the need for adequacy of the SERVICES to technical services. In addition, the relevant legislation and, eventually, consultation with SISNAMA bodies should be considered for alignments of legal and technical requirements for authorization of monitoring/surveying of biodiversity.

10. PRUNING ACTIVITIES PROGRAM

10.1. This program is aimed at the CONCESSIONAIRE, the managers and workers of the STREET LIGHTING system.

10.2. Map critical stretches of urban afforestation that may require periodic maintenance (pruning, support on sloping trees, etc.).

10.3. Establish measures to avoid interference in the critical sections identified, such as adaptation of the height of poles and LAMPS, use of compact network or protected cables (ecological), according to the characteristics of the areas, with respective schedules.

10.4. Establish negotiations with the municipal agency responsible for the area of environment and afforestation in the case of pruning procedures, meeting the guidelines established by the managing body.

10.5. Attention to the current environmental legislation, necessary for the procedures of pruning, suppression and interference in natural areas.

10.6. Monitor the activities related to tree pruning among other services related to the theme, in order to ensure compliance with the following premises:

- i. Pruning will be carried out by interference with the luminous flux, risk of fall or significant damage to street lighting equipment;
- ii. Pruning must be carried out by a competent certified company in order to be carried out with the appropriate techniques, avoiding unnecessary damage to plant tissues, which may compromise plant health and survival;
- iii. Evaluate the stage of development of the plant in order to propose the best pruning technique;
- iv. Consider the phenology of the species for decision on the best period for pruning;
- v. Consider possible interactions of the tree individual with the local native fauna;
- vi. Monitor the healthy development of the plant after pruning;

- vii. Properly allocate pruning waste, integrating into the procedures of the Solid Waste Management Program. Prioritize using pruning residues for composting, available in specific locations and prepared for the activity.

11. HISTORICAL, CULTURAL AND ARCHAEOLOGICAL HERITAGE PROGRAM

11.1. The CONCESSIONAIRE shall consult heritage sites recognized by heritage organizations at different levels: supranational (UNESCO), federal (IPHAN), state (state secretariat or other relevant body) and municipal (municipal secretariat or other relevant body), as well as bibliographic research on monuments, works of art, parties, music, dances, foods, knowledge, doing, speaking, among other manifestations pointed out by technical or scientific literature as socio-cultural importance within the MUNICIPALITY.

11.2. Such data collection should support the elaboration of an archaeological, historical and cultural municipal diagnosis, so that material assets and public areas of relevance to intangible sociocultural manifestations are identified beforehand, ensuring that the CONCESSION SERVICES meet the specific needs of heritage enhancement, according to the guidelines of heritage organizations, which should be notified about the STREET LIGHTING project.

11.3. The information of the material and immaterial assets protected in the area of influence of the CONCESSION OF STREET LIGHTING must be included in the Activity Characterization Form (FCA) forwarded by the CONCESSIONAIRE to the National Institute of Historical and Artistic Heritage (IPHAN), along with the other requirements of Normative Instruction 01/2015 of said body. It should be included in this FCA: company data and personal data of the legal guardian of the enterprise; detailed characterization of the enterprise; survey of material and immaterial goods researched according to previously listed items; *shapefile file* or KML containing the area of the enterprise; the cultural assets taken care of by IPHAN - including areas and/or locations used or references for the production and cultural reproduction of the Registered Cultural Goods - as well as the Indigenous Lands, quilombola Lands and Underground Natural Cavities; indication of existing processes in IPHAN; indication of existing Processes in Municipal Agencies, Existing processes in State Environmental Agencies - OEMA and Existing Processes in Federal Agencies; a Technical Responsibility Note - ART; map and possible Environmental Studies.