

ANNEX 7

SERVICES CORRESPONDING TO EXPANSION FUNCTIONS

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SERVICES CORRESPONDING TO ENLARGEMENT FUNCTIONS

INTERNATIONAL TENDER No 01/2019

CONCESSION TO PROVIDE PUBLIC SERVICES FOR OPERATION, MAINTENANCE AND MAKING OF INVESTMENTS REQUIRED FOR EXPLOITATION OF THE HIGHWAY SYSTEM CALLED THE PIRACICABA-PANORAMA LOT

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1. INTRODUCTION

This APPENDIX presents the rules pertaining to the extension functions and shall be observed by the CONCESSIONAIRE throughout the CONCESSION TERM. As a condition of signing the CONCESSION CONTRACT, the CONCESSIONAIRE shall present the POI, containing planned works and investments and the respective physical-executive schedules. The CONCESSIONAIRE shall implement the POI after its approval by ARTESP and from the date of signing of the INITIAL TRANSFER CONTRACT.

According to the relevant contract rules, the POI may be adjusted and the need for new investments may be reviewed during the ORDINARY REVIEWS, in accordance with the procedures and rules established in the CONCESSION CONTRACT.

Except for those not linked to fixed contractual milestones, the deadlines for the fulfillment of the obligations of this ANNEX are consolidated in the Time Frame provided for in item 5.

Digital systems shall be deployed by CONCESSIONAIRE within the time limits and terms set forth in APPENDIX H.

ANNEX 21 is binding for the following purposes: (i) total value of each investment item for imbalance measurement purposes; (ii) shoulder and end years for the presentation of the POI for each investment item; and (iii) description of each investment item related to the main extension, other extensions and improvements and special conservation, unless otherwise indicated in the APPENDICES and / or APPENDICES.

The distribution of the values in the years proposed in ANNEX 21 is purely referential and not binding, and the CONCESSIONAIRE must present in the POI the shoulder / end dates of the investments, within the shoulder and end period provided for in EVTE.

The POI must also observe the grouping of related investments, especially project and project and project certification funds, as well as working site implementation.

(a) General Provisions

The CONCESSIONAIRE is responsible for preparing and obtaining the approval of the FUNCTIONAL PROJECTS with ARTESP, which must be delivered within the deadlines and terms provided in APPENDIX J.

The preparation and presentation of EXECUTIVE PROJECTS, as well as their certification, shall follow the terms of APPENDIX J.

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

The geometrical parameters of the implementation of the new lanes and the adequacy of the existing lanes, in the case of stretches subject to duplication, shall be in accordance with the minimum parameters provided in the ANNEXES, as well as the DER-SP Geometrical Design Manual.

If the CONCESSIONAIRE opts for the implementation of an alternative solution that justifiably disregards the periodicity defined for special conservation as provided for in ANNEX 2, 12 and 21, it may submit for approval of ARTESP a separate program, without causing economic-financial rebalancing, without prejudice to the need compliance with the IQD and Performance Indicators provided for in Annex 3 and Annex 6 of the CONTRACT.

(b) Initial Cycle of Expected Extensions and Adjustment of Investment Schedule

The Initial Cycle of Expected Extensions contemplates interventions for capacity expansion and improvements to the ROAD SYSTEM. The investments specified in this APPENDIX shall be

contemplated in the POI to be presented by the Contractor and approved by ARTESP, as a condition for signing the CONCESSION CONTRACT, according to the rules established by the NOTICE.

The POI will be approved after the CONCESSIONAIRE 's submission of the document and ARTESP's analysis of the document until the date set for the signing of the CONTRACT, as per the RULES OF THE PUBLIC NOTICE. The conditions for its approval are: (i) the CONCESSIONAIRE shall consider all investments obligatory and (ii) the initial and final milestones set forth in this ANNEX and Annex 21 to the CONTRACT shall be respected, but the provision of the intermediate milestones shall be freely available of the CONCESSIONAIRE.

The POI, to be presented by the CONTRACTOR, shall contain details of the schedule of each of the planned investments, as well as the details of the expected date for the implementation of the equipment and operational buildings provided for in this period, respecting the initial and final terms presented in this ANNEX, and presenting each of the intermediate activities that must be undertaken by the CONCESSIONAIRE to complete each of the steps necessary to complete each Initial Investment and the expected physical progress. The milestones of each construction phase must be arranged in the schedule at least every six months. The POI will be binding on the CONCESSIONAIRE.

The Insurance Plan and the contractual guarantees provided by the CONCESSIONAIRE shall reflect, as a minimum, the need to ensure the fulfillment of the activities necessary for the completion of each investment presented in the POI, in accordance with the rules established in the CONTRACT.

The anticipation of the work defined in the current POI or INVESTMENT PLAN, by proposition of the CONCESSIONAIRE, shall be submitted to ARTESP, which shall decide if the implementation and the consequent economic-financial rebalancing will be performed in the ORDINARY REVIEW or EXTRAORDINARY REVIEW, if applicable.

In the case of anticipation of duplication work in areas adjacent to investments already in execution, as well as the anticipation of the respective device (s) of that section (s) that is essential The release of the road for safe operation, at the initiative of the CONCESSIONAIRE, will depend only on the prior consent of ARTESP. In these cases, the CONCESSIONAIRE may shoulder the works immediately after obtaining the prior consent and does not constitute EVIDENCE OF IMBALANCE.

In the cases provided for in the paragraph above, the request for prior consent shall be submitted to ARTESP in isolation, separately from any other request for anticipation or postponement of investment, and instructed with the identification of item (s) in the PHYSICAL SCHEDULE and documentation pertinent to the investment (s) to be anticipated, including the respective device (s), if there is any.

The CONCESSIONAIRE shall communicate in writing and justifiably the possible initial and final delays of the work (as well as the stages that constitute it, according to the INVESTMENT PLAN), without prejudice to the analysis and validation by ARTESP, regarding the merit, and the application of discounts by arrears, own penalties and the restoration of the economic and financial balance resulting from the delay.

(c) Road Instrumentation

It must be provided concomitantly with the implementation of the main extension, the full instrumentation (pavement instrumentation and climate data acquisition post) of three pavement sections of the new road, preferably in a location near commercial vehicle weighing stations. The instrumentation shall follow the specifications contained in the publication "Instrument Design for Pavement Deformation Measurement (DNIT, 2008). User / password pairs must be provided for ARTESP to access the automatic acquisition system and field data recording (necessarily on web platform) Integration with the ARTESP JRC and the other electronic CONCESSION management systems (especially SISGIS) must be defined. The schedule for the execution of this obligation shall comply with the deadlines set forth in Item 5 (Schedule) of this APPENDIX. The EXECUTIVE DRAFT of this obligation shall be presented at the time of its implementation, together with the EXECUTIVE DRAFT of the respective duplication section, under the terms and deadlines set out in APPENDIX J.

(d) Pre-requisites for shoulderting and continuing works

The works may only be shoulderted and their continuity fully guaranteed in accordance with APPENDIX J.

In the event of revocation or alteration of the status of any of the documents provided for in APPENDIX J, the CONCESSIONAIRE may be notified by the Agency to stop the works. In this case, the CONCESSIONAIRE shall take all measures to timely regularize the documentation and resume the works, under penalty of the penalties provided for in the CONTRACT, NOTICE and ANNEXES.

(e) Prerequisites to receive the works

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

(f) Minimum technical parameters

The minimum technical parameters to be met when preparing the projects are indicated in item 3.2.23 of this ANNEX.

1.1. FUNCTIONAL PROJECTS

(a) General Provisions

The presentation of the FUNCTIONAL PROJECT shall comply with the provisions of APPENDIX J.

(b) Environmental Licensing

Without prejudice to obtaining the prior consent of ARTESP, the CONCESSIONAIRE shall submit the FUNCTIONAL PROJECTS necessary to obtain the LP and LI, for all Expansion works, to the competent environmental authority, observing the deadlines that must be met in order to be possible. the due compliance with the deadlines set in the Physical Executive Schedule approved by ARTESP.

(c) Documentation Processing

The processing of the FUNCTIONAL PROJECTS shall follow the procedure provided for in APPENDIX J.

1.2. EXECUTIVE PROJECTS

(a) General Provisions

The EXECUTIVE PROJECTS for the implementation of the works will follow the terms set forth in APPENDIX J.

The EXECUTIVE PROJECT shall follow the premises, concepts and eventual caveats of the FUNCTIONAL PROJECT previously approved by ARTESP.

(b) EXECUTIVE PROJECT Quality Certification

The CONCESSIONAIRE shall obtain certification pursuant to APPENDIX J and shall use SISPROJ, from its implementation, to fully register all documentation regarding the processing of EXECUTIVE PROJECTS.

(c) Environmental Licensing

Without prejudice to obtaining the EXECUTIVE PROJECT Quality Certificate, the CONCESSIONAIRE SHALL submit the EXECUTIVE PROJECTS necessary to obtain the Installation License for all Expansion works to the competent environmental authority, observing the deadlines that must be met in order to be possible due compliance with the milestones (including intermediaries) and deadlines provided for in the Physical Executive Schedule of the POI approved by ARTESP.

1.3. Inspection

(a) General Provisions

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

The CONCESSIONAIRE SHALL justify, in writing, any delays in the beginning and end of the work, even if there is a delay in complying with intermediate milestones presented in the current INVESTMENT PLAN, without prejudice to the analysis and validation by ARTESP of the merits.

(b) Quality Certification of Works

The CONCESSIONAIRE shall obtain a Quality of Works Certificate for all works provided for in the CONCESSION, pursuant to the terms and conditions of APPENDIX J.

(c) Construction Quality Control Management

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

The quality control information must be fed into the system, concurrently with the progress of the works.

(d) Works Roothing with the use of BIM Technology

The CONCESSIONAIRE shall enter information regarding the monitoring of works in an appropriate BIM model, under the terms and deadlines contained in APPENDIX J.

1.4. Conclusion

Once approved the POI and the respective Physical Executive Schedules by ARTESP, the dates for completion of each service / investment item must be met by the CONCESSIONAIRE. Failure by the CONCESSIONAIRE to comply with the Physical-Executive Schedule, or delay in the fulfillment of these dates, stages, segments and milestones will subject the CONCESSIONAIRE to the penalties provided for in the PUBLIC NOTICE, the CONTRACT and its ANNEXES.

1.5. Documentation: “As Built”

(a) General Provisions

The CONCESSIONAIRE shall present documentation *As Built* for all works provided for in the CONCESSION, pursuant to the terms and conditions of APPENDIX J.

2. MAIN EXTENSIONS

The services related to the Major Expansions are described in APPENDICES 2, 12 and 21. The investments contemplated in APPENDIX 21, in the MAIN EXPANSION item, include, but are not limited to, adjustments to existing devices, as well as adjustment of regular ACCESSES.

2.1. Implementation of Major Extensions

FUNCTIONAL DESIGN. Geometric parameters: The geometrical parameters of the implementation of the new lanes and the adequacy of the existing lanes, in the case of stretches subject to duplication, shall be in accordance with the minimum parameters provided in the ANNEXES, as well as the DER / SP Geometric Design Manual.

3. OTHER ENLARGEMENTS AND IMPROVEMENTS

3.1. Basic Concepts

(a) General Provisions

The improvements aim to raise the level of service quality in terms of User comfort and safety and enable the provision of services corresponding to operational functions.

To this end, the CONCESSIONAIRE will be responsible for all measures related to the provision of services corresponding to operational functions, ie feasibility studies, environmental sizing and licensing, studies and projects in accordance with the requirements of environmental licensing, planning, execution of works, installations and implementation of compensation and environmental mitigation measures, assembly of equipment and operating systems and shouldert-up tests, when applicable.

All improvements described in this APPENDIX shall be implemented by CONCESSIONAIRE at its own expense and expense.

Each of these steps will be monitored by ARTESP, and the CONCESSIONAIRE shall maintain a permanent consultation and approval scheme, including digital availability through the implemented systems, observing the necessary environmental licensing processes, together with the competent agencies.

The CONCESSIONAIRE shall obtain, at its expense, the Quality of Works Certificate, as per the rules set forth in APPENDIX J. The CONCESSIONAIRE shall establish a program of supervision, monitoring of execution, technological control and quality of services. The costs of developing and implementing the inspection program will be borne by the CONCESSIONAIRE.

The legal and administrative provisions for the Declaration of Public Utility (DUP) for expropriation of the areas necessary for the implementation of any improvement will be the responsibility of the GRANTING POWER. The CONCESSIONAIRE will be responsible for the promotion of the necessary actions for the execution, in the administrative and judicial spheres, as well as to bear the burdens resulting from such procedures.

The identification of the minimum improvements, contained in this item, was developed based on the data, projections and the current situation of the ROAD SYSTEM, and is therefore subject to complementation after full analysis that the CONCESSIONAIRE shall make to present its Proposal during the BIDDING.

No FUNCTIONAL PROJECTS were made available in this Public Notice concerning works of other extensions and improvements in the SPAs. The extensions on these routes are set out in ANNEX 2, 21 and APPENDIX A.1. If the CONCESSIONAIRE identifies the need for additional investments in the SPAs, these must be proposed by SISDEMANDA.

During the CONCESSION, new improvements may be dimensioned, requested by ARTESP according to the needs or when the level of service requires. The POI and each investment plan in force may be reviewed, preferably, during the ORDINARY REVIEWS, observing the procedures and procedures described in the CONCESSION CONTRACT, at which time there may be readjustment of the planning for the execution of the works and / or assessment of the need for execution. of new investments.

The need for any extensions resulting from the maintenance of the service level shall be evaluated by the CONCESSIONAIRE and submitted to ARTESP's prior approval, including the presentation of EXECUTIVE PROJECT, according to the rules established in APPENDICES I and J, and respective budget, indicating the necessary costs. for implementation, operation and conservation of these extensions. The CONCESSIONAIRE shall indicate to ARTESP the exact measure of the eventual imbalance of the financial economic balance of the CONTRACT that may be generated by the expansion resulting from the need to maintain service levels and Performance Indicators.

(b) ORDINARY REVIEWS and SISDEMANDA Platform

According to the rules established in the CONCESSION CONTRACT, the eventual adjustment of the INVESTMENT PLAN and the need for new investments, extensions and improvements may be made during the ORDINARY REVIEWS.

In compliance with the provisions of the CONCESSION CONTRACT and the relevant ARTESP regulations, the Consolidation of Demands Document for ORDINARY REVIEW, provided for in APPENDIX H, shall be submitted to a public consultation and hearing process, conducted and coordinated by ARTESP in conjunction with the CONCESSIONAIRE, which must be completed and completed within the timeframe provided for in item 5 of the ANNEX (Schedule Table) prior to the accomplishment of each ORDINARY REVIEW.

With the conclusion of this process of public consultation and hearing, ARTESP will authorize the CONCESSIONAIRE to elaborate and present the EXECUTIVE PROJECTS for the selected investments, extensions and improvements, and the CONCESSIONAIRE shall, within the period provided for in item 5 of the ANNEX (Schedule of Deadlines) counted. of the authorization and in compliance with the specifications of EXECUTIVE PROJECTS presented in this ANNEX, APPENDIX J and ARTESP rules, conclude by presenting such EXECUTIVE PROJECTS, as well as the corresponding budgets. Following the approval process of EXECUTIVE PROJECTS and budgets, the INVESTMENT PLAN will be reviewed.

In the event of an event that triggers the economic-financial imbalance of the CONCESSION CONTRACT, due to the readjustment or redesign of the current INVESTMENT PLAN and / or identification of the need for new investments, when duly authorized by ARTESP, the Parties shall observe and follow the procedure for restoring the economic-financial balance described in the CONCESSION CONTRACT.

The unit cost values to be adopted must be based on TPU DER / SP or DNIT SICRO Table, most updated at the time of the investment in question, including for the installation of any extensions resulting from maintenance of the service level, except in the case of In cases where, upon justification and prior

authorization by ARTESP, it is necessary to use other national and international references for prices that may not be presented or not compatible with these reference bases.

All improvements of the ROAD SYSTEM must meet the standards specified by ARTESP as well as manuals and technical standards in force at the time of the intervention. In case of divergence in the content of the manuals, norms and specifications, those defined in the most current documents approved by ARTESP shall prevail, without this can be a reason for claiming the financial economic balance of the CONTRACT.

3.1.1. Criteria for Capacity Adequacy

From the beginning of operation of the traffic sensors and throughout the CONCESSION Term, the CONCESSIONAIRE shall perform semiannual controls of the operational performance observed in the last twelve consecutive months (regardless of the beginning or end of each fiscal or contractual year). To identify parts of the system over 50h / year operating at service levels “E” and “F”, or about to reach this limit, using the methodologies set out in IP-00.000.000-0-A23_001 and their reviews.

The CONCESSIONAIRE shall identify all sections that record more than three hundred (300) hours at service level “D” in the last twelve months, including sections of the road, access, interleaving and devices. Any investments that are necessary to expand the capacity of such sections must be the object of study (preparation of FUNCTIONAL PROJECT and referential budget).

The presentation of operational solutions to the capacity problems identified in these sections is independent of the prior approval of any claim of economic and financial balance, with the availability of documentation justifying and confirming its need for consultation and analysis by ARTESP.

In the case of control of the operational service level and compliance with the Performance Indicators presented in ANNEX 3 and APPENDIX C, the CONCESSIONAIRE shall indicate the occurrence of critical points or capacity problems (for any number of hours at service levels “E”) or “F”) and take appropriate operational measures, even provisional or transient, to minimize the effects of the detected problems, especially when the event endangers the System Users or the surrounding population.

When, every six months, it is identified that any homogeneous segment of the highway system, in the last 12 (twelve) consecutive months, has registered more than 50h / year in service levels “E” and “F”, the CONCESSIONAIRE shall, as a response upon prior provocation of ARTESP or on its own initiative, report for analysis and evaluation during the ORDINARY REVIEW, with the presentation of the following data:

- Traffic data collected in the field, aspects related to seasonality of traffic and the physical and operational characteristics of the road sections where the problem occurs;
- Capacity and service level calculations of all components of the road segment to be analyzed, and compliance with Performance Indicators, accompanied by a specific technical study of the problem;
- Operational and safety problems recorded in the stretch in the period considered;
- Identification of the cause of flow problems; and
- Possible solutions to the detected problems.

The CONCESSIONAIRE shall take initial actions and operational measures to mitigate the above problems, as well as prepare a technical opinion on the stretch in question, identifying:

- Reason that led the analyzed segment to exceed the service level limits established in the PUBLIC NOTICE and its ANNEXES;
- Proposals for solution (provisional and definitive);
- Schedule of actions to be taken until the issue is resolved.

Necessary capacity expansions, including, but not limited to, duplications, new bearing lanes, marginal lanes, OAEs, devices, walkways, among others, as assessed above, which were not originally provided for in this ANNEX and ANNEX 21 to the CONTRACT (EVTE), will be contemplated in the ORDINARY REVIEW or EXTRAORDINARY REVIEW, according to the solution and deadlines agreed with ARTESP, configuring EVALUATION OF IMBALANCE.

In cases where urban interference results in exceeding the service level standard, the CONCESSIONAIRE shall prepare, together with the surrounding municipalities, improvement proposals to be analyzed by ARTESP. Urban interference in the scope of the ROAD SYSTEM is considered the fluidity problem, observed in the homogeneous segment, which is the direct reflection of the road capacity restriction verified outside the DOMAIN RANGE. The CONCESSIONAIRE will be responsible for the costs involved in proposing alternatives to solve improvement problems. In proposing alternatives, the CONCESSIONAIRE must always consider the existing interferences (walkways, bus stops, level crossings, equipment, OAE, etc.), contemplating any need for expansion, relocation, remodeling etc.

3.2. Minimal Improvements: Description, Standards and Specifications

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Stations to be implemented

For the implementation of the TOLL STATIONS the CONCESSIONAIRE shall obey, in addition to the provisions of this ANNEX, the provisions of the CONCESSION CONTRACT and, especially, in ANNEX 04.

It will be up to the CONCESSIONAIRE to elaborate the complete projects, including the capacity study of TOLL STATIONS, and submit them to ARTESP's analysis.

The new TOLL STATIONS must be sized with a manual collection system and automatic and semi-automatic collection lanes and auxiliary in quantity necessary to meet the established service levels.

Any change in the configuration of the billing type or number of booths / runways must be preceded by approval of the responsible areas of ARTESP, by formal request.

In these TOLL STATIONS must be provided exclusive lanes for charging motorcycles, including manual, automatic and semi-automatic charging, with implementation of vertical / horizontal signaling guiding the places of passage.

Throughout the CONCESSION period, the CONCESSIONAIRE shall monitor the TOLL STATIONS so that, in the month in which there is detection of a maximum line exceeding 60 (sixty) meters (ITEMFP) lasting more than 30 (thirty) consecutive minutes or 6 (six) accumulated hours, it will be necessary to send information, within 15 (fifteen) days after the end of the reference month, regarding the reasons that led to such waiting time in queue:

- Capacity and service level calculations and compliance with Performance Indicators, accompanied by a specific technical study of the problem;
- Identification of the cause of flow problems; and
- Possible solutions to the detected problems.

From the moment the TOLL STATION, in the last 12 (twelve) consecutive months, records more than 50 (fifty) hours with queue detection exceeding 60 (sixty-five) meters (ITEMFP), the CONCESSIONAIRE shall answer prior to the provocation of ARTESP, or on its own initiative, report within 15 days:

- Reasons that led the TOLL STATION to exceed the service level limits set out in the Notice and its Annexes;
- Proposals for solution (provisional and definitive); and
- Schedule of actions to be taken until the issue is resolved.

The capacity adequacy will be made according to solutions and deadlines presented by the CONCESSIONAIRE and agreed with ARTESP, among them, according to the rules presented by the ANNEX 4 and the CONTRACT, the CONCESSIONAIRE may suggest the installation of a collection system based on the concept of *free flow*, or appropriate for differentiated or variable tariff regimes, and, with the appropriate approval of ARTESP, shall design appropriate projects corresponding to the necessary investments.

Standards and Specifications

The specific guidelines that the CONCESSIONAIRE must consider for the implementation of TOLL STATIONS are:

- (a) Preparation of the general arrangement of TOLL STATIONS
 - The effective location;
 - The existing interference;
 - The number of booths adopted;
 - The road layout of the highway that is part of the ROAD SYSTEM; and

- The toll operation and administration plan.
- (b) Preparation of the earthworks and drainage project;
- (c) Preparation of the pavement project for each of the areas that make up the STATION;
- (d) Preparation of the project of the buildings necessary for the operation and administration of the toll;
- (e) Dimensioning and determination of equipment required for toll operation and administration work.
- (f) Approval of the projects with the competent bodies, whether of any entity (s) within the scope of the Direct, Indirect, CONCESSIONAIRE (s), permissionaire (s) and / or authorizing public services, on a permanent or temporary basis, etc.

The TOLL STATIONS must have all the water and sanitary infrastructure, and wells, reservoirs, sewage system, fire fighting, lighting, telephony and communication must be installed, among others.

- Coverage of TOLL STATION with minimum free height of 5.5m (five meters and fifty centimeters), meeting the dimension rules for roads and minimum extension in the longitudinal direction of the STATION of 16 (sixteen) meters
- Runway on the side, by charging direction, without cover or any other obstacle, for occasional exceptional loads (9 (nine) meters wide free lane), always at the far right of the traffic direction, according to the rules from DER / SP. In these runways, all dedicated control equipment (sensors, cameras, etc.) equivalent to manual runway equipment, integrated with the CONCESSIONAIRE Collection System, must be deployed. All passages must be registered and the vehicle of any type unambiguously identified, with photographic records (plate, mark, number of axles and number of suspended axles).
- Cabs shall be protected with suitable road restraint devices (attenuator / shock absorber) meeting current standards with a wheelbase of 5.1m (five meters and ten centimeters). In existing STATIONS of the REMAINING SYSTEM, islands (work in island shape) must be adequate so that road containment devices are deployed.
- Concrete-framed concrete-block masonry cabins, pillars, beams and roof slab, cast on site, with external dimensions of 2.80m x 1.30m (two meters and eighty centimeters per one meter) and 30 centimeters), ventilation systems, ergonomic furniture, noise and heat control adequate to the preservation of workers health and safety.
- Illumination of TOLL STATIONS according to current ABNT (Brazilian Association of Technical Standards) and DER / SP rules.
- Cab and runway equipped with at least a microcontroller, monitor, printer, intercom, pneumatic mail system or similar, toll (and semi-automatic) readers, mass detectors, axis sensors (identifying the axes that touch the pavement and those who do not touch), *display* fare indicator, automatic OCR plate identifier, lane traffic lights (flashing yellow), marquee traffic light (open / closed lane - mandatory "arrow / X" model) and release traffic light (stop / release containment), audible signaling and visual, cameras for registration of the license plate, mark and all axes (of all types of vehicles) of the vehicles, cancels with the width of the road next to the cabin.
- Collection equipment with storage capacity and autonomous operation for at least fifteen (15) days.

- Automatic charging lane, with sunroom charging type nameplate, equipped with AVI reader, vehicle separation input and output sensors, axle sensors (identifying and recording ground and non-touching axes), mass detectors, *display* with billing device status, automatic OCR plate identifier, flashing yellow lane traffic lights, marquee traffic light (open / closed lane - compulsory "arrow / X" model) and stop / release containment traffic light, audible signaling and visual for actuation when detected irregularities, cameras for registration of the plate, mark and all axes of the vehicles, cancellation of the road width (after the exit sensors), AVI controller computer;
- Mixed billing road, with all equipment that integrates the manual and automatic billing lanes, as well as trihedron (or similar solution) in the marquee, to enable the identification of the billing mode;
- Numbering in the marquee of the manual, mixed and automatic collection lanes, and corresponding numbering in the cabins of the manual and mixed collection lanes;
- Marquee signage lighting of automatic, mixed or other lanes, if there is any;
- Implementation of pre-axis horizontal signage of the STATION in the automatic collection lanes;
- Implementation of post-axis horizontal signaling of the STATION, for the temporary stop of safe vehicles from any type of road;
- With regard to Automatic Collection, TOLL STATIONS shall be sized in such a way as to offer at least three (3) lanes with the possibility of automatic collection by direction of operation, with Automatic Collection Equipment (AVI), one of which of them exclusive AVI. From 9 (nine) collection lanes (including auxiliary and motorcycle), per traffic direction, at least one automatic collection lane (exclusive) and two mixed collection lanes (manual / automatic) shall be implemented at each end of the TOLL STATIONS.
- For the adequacy of the existing TOLL STATIONS on the SP 310 highway, the adequacy of the alternative configuration that foresees the adoption of automatic advance collection lanes in relation to the manual collection can be studied.
- Manual, mixed and automatic charging lanes shall include *display*, with the mandatory weighing information for vehicles that have been identified as overweight by the moving weighing selective scale, in cases where there is: (i) the installation of PGF after the TOLL STATION, exit carboy; and / or (ii) Selective weighing scale in motion before the TOLL STATION.

Each TOLL STATION will have an administrative building, where the activities of operation, administration and control of toll activities will be concentrated, observing the technical and occupational health and safety standards. The buildings must have minimal visibility of the central axis of the STATION, space for collection conference and financial supervision, office, pantry, toilets, staff changing rooms and spaces for 3 (three) vehicles.

In the STATIONS to be deployed, the access to the booths shall be made in such a way as to ensure the safe operation of the STATIONS, observing the applicable technical and safety standards (through tunnel or other secure exclusive passage solution).

Generator sets or equivalent solution (one in each TOLL STATION) shall be installed to supply any interruptions in the power supply by the public grid, as well as to provide uninterrupted power supply until the generator is shouldered for power supply. storage, emergency lights, as well as "flashing" traffic lights deployed at the beginning of the "islands".

The REMAINING SYSTEM TOLL STATIONS shall be adequate to the requirements contained in this ANNEX in accordance with the deadlines set forth in item 5 of this ANNEX (Schedule of Terms).

The collection system shall comply with the provisions of ANNEX 5 and its APPENDICES I and H.

In accordance with current legislation and regulations, and as long as authorized by ARTESP, the CONCESSIONAIRE may charge a fee related to the weight of the vehicle traveling through the TOLL STATION.

The images and vehicle identification systems will generate data and information that must be collected by the CONCESSIONAIRE and shared with ARTESP, and the database with information collected from possible violators may be accessed at any time by the Transit Authority to enable the assessment of the vehicle that is traveling in violation of the applicable rules and legislation.

On the date of signing the Interim Receipt Contract, the equipment shall not have more than 5 (five) years of use, counted from the date of purchase by the CONCESSIONAIRE.

Return arrangements must be provided prior to the TOLL STATION, to avoid the mandatory payment of the fare for this movement.

3.2.1. Procedure for the validation of the operation of TOLL

The CONCESSIONAIRE may, at its own risk, deploy one or more TOLL STATIONS provided for in the CONTRACT at a place other than that provided for in ANNEX II, provided that the new location:

- (i) is within 5 (five) kilometers of the location provided for in ANNEX II;
- (ii) is not in a homogeneous traffic segment other than originally planned;
- (iii) has a slope equal to or less than 3% (three percent) and tangent sections;
- (iv) is not in urban areas;
- (v) complies with road transport safety standards;
- (vi) permits the CONCESSIONAIRE to endow the TOLL STATION with all applicable obligations;
- (vii) does not impact the performance of any other obligations assumed by the CONCESSIONAIRE, including the implementation of provisions provided for in the Investment Plans; and
- (viii) does not entail any additional burden on users over those that would already occur if the TOLL STATION were installed in the place originally provided for in ANNEX II.

The technical, financial or legal consequences arising from the CONCESSIONAIRE 's choice to install TOLL STATION in a place other than that provided for in ANNEX 2 and 12 may not be raised for economic and financial rebalancing, even in the case provided for in sub-clause 19.2 i of the CONTRACT.

Notwithstanding the above provisions, if you choose to change the location of the TOLL STATIONS, the CONCESSIONAIRE shall first install traffic sensors in the place originally intended for the implementation of the respective TOLL STATIONS. The TOLL STATION in a new location will not be operational without the full operation of the traffic sensors in the originally intended location.

The rules for the approval of the commencement of the trading operation of the TOLL STATIONS are provided for in ANNEX 4.

3.2.2. Inspection Control System

General Inspection Post (PGF)

The CONCESSIONAIRE shall implement and remodel, as applicable, the PGFs in accordance with the deadlines set forth in item 5 of this APPENDIX (Term Schedule) and the quantities provided for in EVTE.

The locations of the PGFs are suggested in APPENDIX 2, 12 and EVTE, but may be relocated as suggested by the CONCESSIONAIRE, with prior authorization from ARTESP.

The CONCESSIONAIRE will be responsible for preparing the complete PGF projects and submitting them for ARTESP's analysis. In the elaboration of the projects must be observed, besides the rules established in APPENDIX J, circulation norms, access, parking, among others, and all the infrastructure for the inspection.

In the REMAINING SYSTEM, the CONCESSIONAIRE shall implement, according to the deadlines established in item 5 of this ANNEX (Time Frame), the Selective Weighing System in road positioned before the existing PGF, adapting them to the proposed new PGF model, as described above. in ANNEX 5. Projects must be previously approved by ARTESP.

When implementing weighing scales in motion, the technical specification ET-DOP-GOE-C-TRA-RNS-01/02 - Methodology for Obtaining Traffic Parameters of ARTESP and its revisions shall be observed (or other revision that may replace or change it).

The pavement of the approach and departure areas shall be in accordance with the standards of the aforementioned specification.

Throughout the CONCESSION, vehicle weighing equipment must always be kept in a good state of repair and operation.

On the date of signing of the Interim Receipt Contract, as regulated in APPENDIX 10, the equipment must be at most 5 (five) years old.

For the elaboration of the PGF project, the CONCESSIONAIRE shall observe the following minimum premises:

Scale Module:

- Total length of roads: 500 (five hundred) meters, from access to PGF (end of deceleration range) to return to roads (beginning of acceleration range) after precision balance;
- Extension from the beginning of the PGF (end of the deceleration range) to the precision balance: 400 (four hundred) meters;
- Length between the precision balance and the beginning of the last runway handle (acceleration range): 100 (one hundred) meters plus the acceleration range;
- Parking capacity for overloaded vehicles: 12 (twelve) spaces of 5 (five) meters by 25 (twenty five) meters;
- Operating facilities: total area estimated at 190 m² (one hundred and ninety square meters), subdivided into the following facilities: reception and attendance, operating and filing room, coordination and control room, room for employees involved in any special operations, machinery, toilets and changing rooms, pantry and storage;
- User Facilities: estimated total area of 20 m² (twenty square meters), subdivided into the following facilities: rest room and toilets.

Dangerous Goods Transport Vehicle Inspection and Seizure Module

The CONCESSIONAIRE shall prepare the complete projects of the Inspection and Seizure Module for Dangerous Goods Transport Vehicles in accordance with the Brazilian Association of Technical Standards (ABNT) Project NBR 14095, or another that replaces it, and submit them to ARTESP approval.

Mobile Weighing

For the REMAINING SYSTEM, the CONCESSIONAIRE shall adapt and operate the six (6) existing Mobile Weighing bases.

Throughout the CONCESSION, the equipment “Movable Scales” may not be more than 10 (ten) years old and must always be kept in a good state of repair and operation.

On the date of signing the Interim Receipt Contract, the equipment shall not have more than 5 (five) years of use, counted from the date of purchase by the CONCESSIONAIRE.

Speed Control System

For sizing purposes, one (1) fixed speed control point must be considered every 10 (ten) kilometers of highway, for both single lane and double lane sections. Each fixed speed control point shall be made up of equipment enabling the speed monitoring and enforcement of all types of vehicles (light, heavy and motorcycles) on all on-site rolling lanes simultaneously.

In cases where the occurrence of vehicles using the shoulder to avoid the supervision is observed, the CONCESSIONAIRE shall implement speed control, including the shoulder.

The CONCESSIONAIRE will be responsible for the implementation, homologation, revitalization, operation and maintenance of the speed control system (fixed and static).

For the EXISTING SYSTEM, the CONCESSIONAIRE shall:

- (a) to implement, according to the deadlines established in item 5 of this ANNEX (Time Table) the fixed speed control points, in order to meet the sizing criteria already defined; and
- (b) to acquire, certify and approve from the GRANTING POWER, within the deadlines set forth in item 5 of this ANNEX (Time Table), 8 (eight) static type speed meters.

For the REMAINING SYSTEM, the CONCESSIONAIRE shall comply fully and simultaneously with all the requirements set forth in ANNEX 05, according to the deadlines set forth in item 5 of this ANNEX (Schedule Table):

- (a) Immediately adopt the necessary measures for the certification, maintenance and operation of pre-existing fixed speed control points, observing the service levels and quality standards set forth in ANNEX 5 to the CONTRACT. Adjustments for full and simultaneous compliance with all requirements must be completed, according to the deadlines set forth in item 5 of this ANNEX (Schedule of Terms).
- (b) Implement, according to the deadlines established in item 5 of this ANNEX (Time Table) the fixed speed control points, in order to meet, together with existing equipment, the sizing criteria

already defined. At this stage, the CONCESSIONAIRE shall analyze the possible need to relocate the pre-existing equipment to more critical locations.

To define the location of implementation of such equipment in the ROAD SYSTEM, the CONCESSIONAIRE shall prepare, at its expense, technical studies considering at least the geometric parameters, accident history, limit occupation and speed practiced, meeting established guidelines and technical specifications. from ARTESP.

To this end, the CONCESSIONAIRE shall comply with the following interim terms, based on the signature dates of INITIAL TRANSFER TERM and TRANSFER TERM OF THE REMAINING SYSTEM:

- to submit to ARTESP for analysis and manifestation in a maximum of 4 (four) months the technical study with the proposition of the place of installation of all fixed speed control equipment, duly justified; and
- If there is any need for revision of the technical study, it must be forwarded to ARTESP by the CONCESSIONAIRE within a maximum of 45 (forty-five) days.

The points considered in condition of approval by ARTESP will be forwarded for analysis and manifestation of the GRANTING POWER, and it is up to the CONCESSIONAIRE to meet any demands (signaling or location adjustments) that may eventually be made.

Any delays in the approval of the locations for the implantation of the equipment due to the absence of analysis of the minimum parameters in the study and the current legislation, which result in the non-compliance with the deadline for the implantation of the equipment, subject the CONCESSIONAIRE to the administrative sanctions provided for in ANNEX 11.

In the ROAD SYSTEM TOLL STATIONS, the CONCESSIONAIRE shall deploy one (1) “electronic barrier or speed bump” type equipment, according to the rules and guidelines defined in ANNEX 05 and until the deadline for the implementation and / or adequacy of the TOLLUS STATIONS. .

The implementation process of the speed control system equipment (fixed and static) will only be considered concluded by ARTESP after the approval of the speed control equipment by the GRANTING POWER, with the proper publication of the act in the Official Gazette of the State - DOE.

During the term of the CONCESSION, the CONCESSIONAIRE shall keep in operation, at least, the amount of equipment components of the speed control system (fixed and static) defined for implementation in this APPENDIX, under conditions of full and simultaneous attendance to all. the requirements set forth in ANNEX 05 of the Concession Contract.

On the date of signing of the Interim Receipt Contract, as set forth in APPENDIX 10, the equipment shall not have more than 5 (five) years of use, counted from the date of purchase by the CONCESSIONAIRE.

Road Policing Structures, Vehicles and Equipment

In addition to the provisions of the Contract with the Military Highway Police, the CONCESSIONAIRE shall comply with the following:

Structures: The CONCESSIONAIRE shall establish operational bases for road policing, as provided for in ANNEX 2, 12 and 21.

The operational road policing bases shall contain the following minimum specifications:

ANNEX 7 – Piracicaba – Panorama lot

- Dracena Operational Battalion: Building construction for Operational Base and Platoon Headquarters with 300 m² (three hundred square meters) and parking of 100 m² (one hundred square meters);
- Brotas Operational Battalion - Renovation or Construction of a building of 160 m² (one hundred and sixty square meters) and parking of 50 m² (fifty square meters);
- Jaú Operational Battalion - Renovation or construction of a building of 160 m² (one hundred and sixty square meters) and parking of 50 m² (fifty square meters);
- Garça Operational Battalion - Renovation or Construction of a 160 m² (one hundred and sixty square meters) building and a 50 m² (fifty square meters) parking lot;
- Tupã Operational Battalion - Renovation or construction of a building of 160 m² (one hundred and sixty square meters) and parking of 50 m² (fifty square meters);
- Adamantina Operational Battalion - Renovation or construction of a building of 160 m² (one hundred and sixty square meters) and parking of 50 m² (fifty square meters);
- São Pedro Operational Battalion - Building construction of 160 m² (one hundred and sixty square meters) and parking of 50 m² (fifty square meters);
- Corumbataí Operational Battalion- Renovation and improvement of the building; and
- São Carlos Operational Battalion - Building construction of 160 m² (one hundred and sixty square meters) and parking of 50 m² (fifty square meters).

Equipments. The CONCESSIONAIRE shall make available to the Highway Police 68 (sixty-eight) optical character recognition equipment (OCR cameras) to be installed in the ROAD SYSTEM, in locations previously defined by PMRv.

These equipment are intended for public safety image monitoring and must be deployed near municipalities with a population of 50,000 (fifty thousand) inhabitants or more, penitentiaries and relevant road junctions.

The deadline for installation must comply with the rule described in item 5 of this ANNEX (Schedule of Terms).

Please note that the CONCESSIONAIRE will be responsible for the implementation, homologation, revitalization and maintenance of the OCR system. If requested by ARTESP, such data shall be transmitted by the CONCESSIONAIRE to ARTESP and / or the GRANTING POWER, in real time. The way in which the data is delivered by the CONCESSIONAIRE and the form of integration with the GRANTING POWER and ARTESP systems shall be in full compliance with the procedures, technologies and interfaces formally defined by ARTESP.

Vehicles: The CONCESSIONAIRE shall make available to the Military Highway Police 38 (thirty-eight) duly characterized vehicles, within the deadline set forth in item 5 of this ANNEX (Term Table), as follows:

- 5 (five) command vehicles, medium sedan type;
- 28 (twenty-eight) patrol cars, compact sedan type; and
- 5 (five) ostensibly tactical vehicles - TOR, SUV type.

Please note that the CONCESSIONAIRE may choose to purchase, lease, outsource or lease these types of vehicles, and such vehicles may not have more than 2 (two) years of use during the term of the CONCESSION.

Standards and Specifications

PGF, speed control equipment and vehicles for road policing shall comply with the provisions of ANNEX 5 and its APPENDICES I, J and H.

3.2.3. Expansion / Deployment of Special Artworks

The CONCESSIONAIRE shall carry out, during the CONCESSION term, monthly controls of the operational performance observed in the last twelve consecutive months (regardless of the beginning or end of each fiscal or contractual year), aiming to identify the stretches of the system with more than 50 hours operating. at service levels “E” and “F”, or on the verge of reaching this limit, using the methodologies set out in IP-00.000.000-0-A23 and their revisions.

The execution of all necessary operational measures to ensure that the limit of 50h / year operating at service levels “E” and “F” is not exceeded will be the responsibility of the CONCESSIONAIRE, except where investments beyond provided for in the CONTRACT for the adequacy of the capacity of the ROAD SYSTEM.

The CONCESSIONAIRE shall consider, based on the relevant surveys and inspections, the quantities of services related to the compatibility of the OAEs' running platform width (including shoulders) in relation to the adjacent road segments and in accordance with the required road standard as per current DER / SP rules, also considering the standard described in ANNEX 6. These adjustments shall occur at the expense of the CONCESSIONAIRE and under its responsibility.

The CONCESSIONAIRE shall also consider, based on relevant surveys and inspections, the quantities of services relating to recoveries and adjustments of existing SOEs, as determined in ANNEX 6.

The need for any extensions resulting from the maintenance of the service level described above to meet and adjust the capacity of the ROAD SYSTEM must be assessed by the CONCESSIONAIRE and contemplated in the ORDINARY REVIEW or EXTRAORDINARY REVIEW.

For the implementation of special artworks, the Standards of the Brazilian Association of Technical Standards (ABNT) regarding projects and materials, in addition to the ARTESP Technical Specifications regarding this subject, must be observed.

The new Special Artworks to be constructed shall be included in the Special Artwork Maintenance Management Plan which is described in ANNEX 6.

The Special Artwork extensions must not have longitudinal joints between the new part of the board and the old board.

Spaces must be provided for longitudinal and transverse pavements in the OAEs, according to item 3.2.17, respecting the norms and specifications in force at the time of implementation with reference to geometry, safety and accessibility. In existing OAEs, the space for paving shall be provided in accordance with the rules contained in ANNEX 6 of the CONTRACT.

3.2.4. Communication and User Relationship Systems

Radio system

For sizing purposes, the following assumptions must be observed:

Fixed Stations:

At least one (1) fixed station must be defined for each fixed operating point.

Fixed points of operation are structures used for coordination or that provide support to operational resources, such as: CCO, User Service Stations - SAU, PGF and TOLL STATIONS.

Mobile Stations:

A minimum of one (1) mobile station must be defined for each operating vehicle.

It must be equipped with mobile stations vehicles used to provide the services of winch, prehospital care service, traffic inspection service, animal seizure service in the DOMAIN ROAD, kite truck service and mechanical rescue service.

Portable Stations:

Portable stations must be provided in sufficient quantity for communication between employees at a distance from points where there are fixed or mobile stations.

Repeating Stations:

The CONCESSIONAIRE shall deploy repeater stations in sufficient quantity to ensure communication with all workstations, whether fixed or mobile, throughout the ROAD SYSTEM, without presenting any point with communication signal failure.

During the term of the CONCESSION, in case of faulty communication locations, the CONCESSIONAIRE undertakes to adapt the radio system and deploy more repeater stations, if necessary.

In the EXISTING SYSTEM, the CONCESSIONAIRE will be responsible for the implementation, revitalization, operation, maintenance and licensing of the radio system.

Immediately after signing the INITIAL TRANSFER CONTRACT, the CONCESSIONAIRE shall provide a provisional radio system for communication between the operating vehicles, the CCO and other fixed points of operation, in compliance with current legislation.

The CONCESSIONAIRE shall complete, according to the deadlines set forth in item 5 of this ANNEX (Time Frame), the implementation of the EXISTING SYSTEM radio system, fully and simultaneously meeting all the requirements set forth in ANNEX 5.

In the REMAINING SYSTEM, the CONCESSIONAIRE will be responsible for the implementation, complementation, adaptation, revitalization, operation, maintenance and licensing of the implanted radio system.

The CONCESSIONAIRE will receive the equipment that makes up the radio system implemented and operating in the REMAINING SYSTEM.

The CONCESSIONAIRE shall complete, according to the deadlines set forth in item 5 of this ANNEX (Schedule Table), the expansion and adequacy of the radio system in the REMAINING SYSTEM, fully and simultaneously meeting all the requirements set forth in ANNEX 5.

Throughout the term of the CONCESSION, the CONCESSIONAIRE shall keep in operation at least the amount of equipment defined for implementation in this APPENDIX.

On the Date of signature of the Interim Receipt Contract, the equipment shall not have more than 5 (five) years of use, counted from the date of purchase by the CONCESSIONAIRE.

Data Transmission System

In the EXISTING SYSTEM, the CONCESSIONAIRE will be responsible for the implementation, revitalization, operation and maintenance of the data transmission system.

The CONCESSIONAIRE shall conclude, according to the deadlines set forth in item 5 of this ANNEX (Time Table), the implementation of the data transmission system along the highways that make up the EXISTING SYSTEM, fully and simultaneously meeting all the requirements set forth in the ANNEX. 5

In the REMAINING SYSTEM, the CONCESSIONAIRE will be responsible for the implementation, complementation, adaptation, revitalization, operation and maintenance of the implemented data transmission system.

The CONCESSIONAIRE will receive the data transmission system implemented and in operation in the REMAINING SYSTEM.

The CONCESSIONAIRE shall complete, according to the deadlines set forth in item 5 of this ANNEX (Schedule Table), the expansion and adequacy of the data transmission system in the REMAINING SYSTEM, fully and simultaneously meeting all the requirements set forth in ANNEX 5.

Operational Support Facilities - CCO and SAU

Operational Support facilities include a central administration, the CCO and the Customer Service (SAU).

CCO

On the date of signing of the INITIAL TRANSFER CONTRACT, the CONCESSIONAIRE shall have a CCO, which shall comply with the obligations defined in ANNEX 05.

Operational coordination activities can be initiated in a provisional CCO and subsequently evolved into a definitive CCO to be deployed at a location of your choice.

Both the Existing SYSTEM interim CCO and the pre-existing CCO in the REMAINING SYSTEM must be appropriate to the definitive CCO standards, concentrating on coordinating the operation of the entire ROAD SYSTEM while fully and simultaneously meeting all the requirements set out in ANNEX 05.

The implementation of the definitive CCO shall be completed within 360 (three hundred and sixty) days from the date of signing of the INITIAL TRANSFER TERM. The synchronization of ROAD SYSTEM systems and information shall be performed within (i) 180 (one hundred and eighty) days from the date of signature of the REMAINING SYSTEM TRANSFER TERM and (ii) the final CCO implementation deadline.

Prior to the conclusion of the definitive CCO, without prejudice to the obligations set out in ANNEX 5, ARTESP may justifiably request modifications.

SAU

The quantity and location of the provisional and / or definitive SAUs shall be defined by the CONCESSIONAIRE, under its sole and exclusive responsibility, in order to guarantee the fulfillment of

the service levels required in ANNEX 05 and APPENDIX I. The quantity and location of the SAUs shall be distributed proportionally in both directions of the highway.

The variation in the quantities referring to SAU Posts provided for in this ANNEX and in ANNEX 2, 12 and 21 will not give rise to the EVENT OF IMBALANCE. Upon delivery of the POI, the CONCESSIONAIRE shall inform the measured amount of SAUs to meet the service levels. For the purpose of measuring imbalance due to work delay, the amount to be considered by SAU shall be equal to: (i) the sum of the estimated costs for each SATE post provided by EVTE divided by (ii) the number of SAUs provided for in POI

The implementation projects of these SAUs must be prepared by the CONCESSIONAIRE, taking into consideration that the SAUs cannot make the regularization of access to neighboring properties (commercial or not) or the municipal roads, nor the interference of the accesses can hinder the attendance to the levels of observing also the provisions of APPENDIX J.

The implementation and operation of the definitive SAUs shall occur in two (2) stages, and the first (first) stage shall comprise 50% (fifty percent) of the total SAUs that were sized by the CONCESSIONAIRE, and also those with the nearest location of TOLL STATIONS.

The 2nd (second) stage comprises the implementation and operation of the remaining SAUs dimensioned by the CONCESSIONAIRE within the deadlines set forth in item 5 of this APPENDIX (Term Table).

Throughout the term of the CONCESSION, the CONCESSIONAIRE shall maintain the equipment components of the operational support facilities in conditions of full and simultaneous compliance with all requirements set forth in ANNEX 5 of the CONCESSION CONTRACT.

On the date of signature of the Interim Receipt Contract, as regulated in ANNEX 10, all equipment of the Operational Support Facilities - CCO and SAU - shall not have more than 5 (five) years of use, from the date of purchase of the equipments by the CONCESSIONAIRE.

User Communication System

On the date of signing of the INITIAL TRANSFER CONTRACT, the CONCESSIONAIRE shall make available to the USERS a provisional 0800 telephone system for direct communication with the CCO.

The CONCESSIONAIRE shall constitute the definitive 0800 type telephone system, according to the deadlines set forth in item 5 of this ANNEX (Schedule Table), fully and simultaneously meeting all the requirements specified in ANNEX 5 (Initial Intensive Program - PII).

On the date of signing of the REMAINING SYSTEM TRANSFER TERM, the definitive 0800 type telephony system will also meet the users of the REMAINING SYSTEM, according to the deadlines established in item 5 of this ANNEX (Deadline), fully and simultaneously fulfilled all the requirements specified in ANNEX 5.

Communication system with User type: Emergency phone (Call box)

The CONCESSIONAIRE will receive the system of communication with the user type emergency telephone (*call box*) deployed and operating in REMAINING SYSTEM.

On the date of signing of the REMAINING SYSTEM TRANSFER TERM, the CONCESSIONAIRE shall take the necessary measures to maintain and operate the call box communication system, fully and simultaneously meeting all the requirements set forth in the ANNEX. 05 of the CONTRACT.

Upon completion of the implementation of the communication system with the user via wireless data network in the REMAINING SYSTEM, according to the deadlines stipulated in item 5 of this ANNEX

(Deadline Table), the system of communication with the emergency telephone type (*call box*). may be disabled.

The *call-box* communication system can only be deactivated in the REMAINING SYSTEM with the express authorization of ARTESP, which will be issued after the commissioning tests that will prove the completion of the communication system implementation with the via wireless data network and CCTV system.

Wireless Data Network User Communication System

Within 180 (one hundred and eighty) days from the signing of the INITIAL TRANSFER CONTRACT, the CONCESSIONAIRE shall submit to ARTESP the basic project for the implementation of the communication system with the user via wireless data network in the EXISTING SYSTEM. The project referred to in this paragraph will be subject to review and approval by ARTESP.

As a condition for analysis, the project shall clearly indicate the EXISTING SYSTEM sections related to the implementation steps defined below, having as a parameter the date of signing of the INITIAL TRANSFER TERM. The CONCESSIONAIRE shall complete the implementation of the communication system with the user via wireless data network, according to the deadlines set forth in item 5 of this ANNEX (Schedule Table).

In the REMAINING SYSTEM, the CONCESSIONAIRE will be responsible for the implementation, revitalization, operation and maintenance of the communication system with the USER via wireless data network, which must replace the call-box communication system, fully answering and simultaneously to all requirements set forth in ANNEX 5 of the CONTRACT and in the current technical specifications of ARTESP.

According to the deadline set forth in item 5 of this ANNEX (Time Table), the CONCESSIONAIRE shall complete the implementation of the communication system with the USER via wireless data network in 100% (one hundred percent) of the length of the highways that make up the REMAINING SYSTEM.

Upon completion of each of the implementation steps, the CONCESSIONAIRE shall notify ARTESP that it will perform commissioning tests to prove compliance with the requirements set forth in ANNEX 5 of the CONTRACT and ARTESP's current technical specifications.

At the date of signing the Interim Receipt Contract, the equipment shall not have more than 5 (five) years of use, counted from the date of purchase by the CONCESSIONAIRE.

Variable Message Board (Fixed and Mobile)

Fixed:

The CONCESSIONAIRE shall acquire 24 (twenty four) new fixed message variable message boards (PMV), which shall be deployed at strategic points of the ROAD SYSTEM. Of this amount, 20 (twenty) equipment will be dedicated to the EXISTING SYSTEM, and 4 (four) equipment may be deployed in both the EXISTING SYSTEM and the REMAINING SYSTEM.

The CONCESSIONAIRE shall present to ARTESP a list of the proposed locations for the implementation of 24 (twenty-four) fixed-type PMVs in the EXISTING SYSTEM and / or REMAINING SYSTEM, as well as the implementation schedule, subject to ARTESP's review and approval.

ARTESP may request changes to the locations and / or dates proposed by the CONCESSIONAIRE for the deployment of fixed message panels of the justified type.

On the date of signing of the REMAINING SYSTEM TRANSFER TERM, the CONCESSIONAIRE shall adopt the necessary measures for the maintenance and operation of the pre-existing fixed-type PMVs in the REMAINING SYSTEM, meeting the service levels and quality standards set forth in ANNEX 5 of the CONTRACT.

Pre-existing fixed-type PMVs in the REMAINING SYSTEM shall be suitable for full and simultaneous compliance with all requirements set out in ANNEX 5.

If the CONCESSIONAIRE concludes that a new fixed message variable panel (s) must be deployed in the REMAINING SYSTEM, the implementation and operation shall be completed in accordance with the deadlines set forth in item 5 of this APPENDIX (Time Frame).

Mobile:

The CONCESSIONAIRE shall acquire and make available to the operation, at least, 8 (eight) mobile variable message boards, according to the deadlines set forth in item 5 of this ANNEX (Schedule Table).

In addition to the mobile type PMVs that must be purchased, the CONCESSIONAIRE will receive the mobile type PMVs operating in the REMAINING SYSTEM.

On the date of signing of the REMAINING SYSTEM TRANSFER TERM, the CONCESSIONAIRE shall adopt the necessary measures for the maintenance and operation of the mobile type PMVs existing in the REMAINING SYSTEM, meeting the service levels and quality standards set forth in ANNEX 5 of the CONTRACT.

Pre-existing mobile type PMVs in the REMAINING SYSTEM shall be suitable for full and simultaneous compliance with all requirements set forth in the CONCESSION CONTRACT ANNEXES, according to the deadlines set forth in item 5 of this ANNEX (Schedule Table).

On the date of signing of the Interim Receipt Contract, the equipment shall not have more than 5 (five) years of use, counted from the date of purchase by the CONCESSIONAIRE.

3.2.5. Traffic Monitoring System**Traffic Sensing System**

For sizing purposes, one (1) homogeneous segment automatic traffic sensor defined in a homogeneous segmentation study shall be considered, monitoring all road directions and all bearing lanes.

In the EXISTING SYSTEM, the CONCESSIONAIRE will be responsible for the implementation and homologation of the Traffic Sensing System. Therefore, according to the deadlines established in item 5 of this ANNEX (Time Table), the CONCESSIONAIRE shall present the studies of homogeneous segmentation with the respective sensor implantation locations and implantation schedule.

In the REMAINING SYSTEM, the CONCESSIONAIRE will be responsible for the implementation, complementation, adaptation, homologation, revitalization, operation and maintenance of the traffic sensing system.

On the date of signing of the REMAINING SYSTEM TRANSFER TERM, the CONCESSIONAIRE shall adopt the necessary measures for the certification, maintenance and operation of pre-existing traffic sensors.

For the REMAINING SYSTEM, the CONCESSIONAIRE shall present the homogeneous segmentation studies with the respective implantation / relocation sites of the sensors and schedule.

Throughout the CONCESSION, the Traffic Sensing System equipment may not be more than 10 (ten) years old.

When deploying traffic sensors, the technical specification ET-DOP-GOE-C-TRA-RNS-01/02 shall be observed. - ARTESP Traffic Parameter Methodology, its reviews or other technical standard that may replace or change it. The pavement of the approach and departure areas shall be in accordance with the standards of the aforementioned specification.

At the date of signing the Interim Receipt Contract, all equipment of the Traffic Sensing System shall have a useful life of 5 (five) years from the date of acquisition by CONCESSIONAIRE.

3.2.6. CCTV Traffic Monitoring System

The amount of surveillance cameras to be purchased and deployed by CONCESSIONAIRE shall be sufficient to ensure compliance with the coverage and intelligent video analysis requirements set forth in APPENDIX 05.

The CONCESSIONAIRE shall submit to ARTESP the project and / or basic plan for the implementation of the CCTV traffic monitoring system in the EXISTING SYSTEM. As a condition for review and approval by ARTESP, the project shall clearly indicate the EXISTING SYSTEM sections relating to the deployment and operation steps of the CCTV traffic monitoring system.

In the REMAINING SYSTEM, the CONCESSIONAIRE will be responsible for the implementation, adaptation, complementation, revitalization, operation and maintenance of the CCTV traffic monitoring system, fully and simultaneously meeting all requirements set forth in ANNEX 05 and the current ARTESP technical specifications.

The configuration and parameterization of the intelligent video analysis functionality shall be completed by the CONCESSIONAIRE within 90 (ninety) days after the completion of each CCTV traffic monitoring system implementation step in the granted ROAD SYSTEM.

Upon completion of each of the implementation steps, the CONCESSIONAIRE shall notify ARTESP that it will perform commissioning tests to prove compliance with the requirements set forth in ANNEX 05 and ARTESP's current technical specifications.

On the date of signing of the Interim Receipt Contract, the equipment shall not have more than 5 (five) years of use, counted from the date of purchase by the CONCESSIONAIRE.

3.2.7. Trucker Rest Areas

In the EXISTING SYSTEM, the CONCESSIONAIRE shall implement Trucker Rest Areas, as provided for in APPENDICES 2, 12 and 21, in different kilometers of the ROAD SYSTEM, with accessibility for both directions of traffic.

The location of these rest areas shall be defined in a study prepared by the CONCESSIONAIRE and submitted for ARTESP approval. The study will aim to predict the best location of trucker's rest areas, aiming to meet the USER and taking into account the trucker's workday (Federal Law number 13.103 / 2015). The mentioned study shall be submitted to ARTESP by the CONCESSIONAIRE within the period defined in item 5 of this ANNEX (Schedule of Terms).

From the study approved by ARTESP, it will be up to the CONCESSIONAIRE to elaborate the complete rest area projects and submit them for ARTESP's approval, observing the rules established in ANNEX 5.

3.2.8. Exceptional Cargo Stop Areas and Hazardous Products

In the EXISTING SYSTEM, the CONCESSIONAIRE shall implement Exceptional Load Stop Areas, as provided for in APPENDICES 2, 12 and 21, measuring 100 (one hundred) meters in the direction of the highway axis by seven (7) meters in width, in addition to the acceleration and deceleration roads.

The CONCESSIONAIRE shall prepare (i) study with the location of the stop areas and (ii) complete projects with execution schedule, both to be submitted for ARTESP's approval. The CONCESSIONAIRE will be responsible for the implementation and conservation of these areas.

3.2.9. Acceleration / Deceleration Ranges

These lanes shall have geometric characteristics consistent with the speed guidance of the highway system and its branches, and shall be sized in accordance with IP.DIN / 002, or other technical standard that replaces or changes it.

In the case of road equipment (SAUs, PGFs, Truckers' rest areas, exceptional load stops, etc.), the acceleration and deceleration ranges shall be sized following the criteria of item 5.4 - Roundabout and paved road intersections of the mentioned design instruction IP.DIN / 002, or other technical standard replacing or amending it.

The CONCESSIONAIRE will be responsible for the implementation of these roads at its expense and under its responsibility.

3.2.10. Additional Roads

The CONCESSIONAIRE will be responsible for the implementation of the additional ranges provided for in the Original Investment Plan, which shall include all investments specified in this ANNEX, at its expense and under its responsibility. During the implementation of the additional lanes, the CONCESSIONAIRE shall consider the adequacy of any existing structures and / or interferences (walkways, bus stops, regularized access, OAE's, level crossings, etc.).

The CONCESSIONAIRE shall ensure good conditions of operation and comfort of the road, according to the methodologies recommended in the current design instructions, or others that replace or alter them.

3.2.11. Marginal Roads / Trunking Devices

Marginal roads

The CONCESSIONAIRE will be responsible for the implementation of the Marginal Roads provided for in ANNEX 2, 12 and 21, which shall include all works and investments presented in this ANNEX, at its expense and under its responsibility.

During the implantation of the marginals, the CONCESSIONAIRE shall consider the adequacy of any existing structures and / or interferences (walkways, bus stops, regularized accesses, OAE's, buildings, etc.), as well as the implementation of pedestrian pavement and eventual continuity of bicycle paths, taking into account to the standards and specifications in force at the time of implementation.

Trunking Devices

The CONCESSIONAIRE will be responsible for the implementation / remodeling of the trunking devices provided for in ANNEX 2, 12 and 21, which shall include all works and investments presented in this ANNEX, at its expense and under its responsibility.

During the intervention the CONCESSIONAIRE must consider the adequacy of any existing structures and / or interferences (such as bus stops), as well as the implementation of pedestrian walkways in order to guide him to the safe crossing and possible continuation of cycle paths, meeting the standards and specifications in force at the time of implementation.

During the intervention the CONCESSIONAIRE shall take all reasonable measures to eliminate / regularize any borderline access that is irregular.

In the interventions that include the implantation of new OAEs or the structural intervention of existing OAEs, the project must include a template that meets the minimum widths of the road (roads and shoulder), pedestrian (longitudinal and transverse) pavement and eventual continuation of bike paths where there are the forecast / need for this structure.

In cases where the operating conditions so require, as indicated in item 3.1.1, the CONCESSIONAIRE shall implement, under its responsibility, marginal ways and / or trunking devices. The concepts of item 3.1, as well as IP-00.000.000-0-A24 / 001 Rev. 0, or any other technical standard that replaces or amends it must be followed.

The implementation of these marginals and devices shall be performed with the objective of preventing any stretch of the ROAD system from exceeding the "D" Service level by more than 50 h / year, according to the criteria established in IP-00.000. .000-0-A23 / 001 Rev.0. The need for any extensions arising from the maintenance of the service level described above shall be assessed by the CONCESSIONAIRE and submitted for prior approval by ARTESP, including the presentation of EXECUTIVE PROJECT and respective budget, indicating the costs necessary for implementation, operation and maintenance of this Extension. , pointing to ARTESP the exact measure of the eventual imbalance of the financial economic balance of the CONCESSION CONTRACT.

If an event that triggers the economic-financial imbalance of the CONCESSION CONTRACT is verified, due to the execution of the expansion to be implemented by the CONCESSIONAIRE, the CONCESSIONAIRE is subject to the rules established in the CONTRACT for the beginning of the procedure of recomposition of the economic-financial balance.

The unit costs to be adopted must be based on the TPU DER / SP or DNIT SICRO table, which is most up to date when the project is submitted for the investment in question. Modification of the location of the device in relation to that provided for in the FUNCTIONAL PROJECTS contained in ANNEX 12 shall be deemed authorized if the following conditions are met:

- to respect the conditions of access interfaces;
- when a change within a maximum radius of 500 meters;
- when a change is made so that all originally planned movements are met; and
- when public interest is demonstrated in the change to be made.

3.2.12. Shoulders

The CONCESSIONAIRE will be responsible for the implementation of paved shoulders as provided for in ANNEX 2, 12 and 21 and reference projects. It must be carried out in accordance with the safety standard required by current DER / SP and ARTESP regulations. These works must take place at CONCESSIONAIRE 's expense and under its responsibility, within the terms established in the EVTE, which shall include all works specified in this APPENDIX.

The CONCESSIONAIRE, based on the inspections performed, shall provide in its proposal resources for the execution of this item.

The obligation to implement shoulders will not be applicable on the SP 261 highway in the stretch corresponding to the Bariri Hydroelectric Power Plant.

3.2.13. Walkways and Level Crossings for Pedestrian Crossings

The design and implementation of these devices for pedestrian crossing are the responsibility of the CONCESSIONAIRE.

The technical instructions issued by ARTESP and / or ABNT (Brazilian Association of Technical Standards) (in force at the time of implementation), regarding all items involving project execution and parameters for demand verification must be observed.

The project for the implementation of walkways, in addition to the project involving the structure, shall provide for a minimum vertical jig of 5.5m (five meters and fifty centimeters), lighting system throughout the walkway and pedestrian walk until access, installation of closing screens on the road crossing, longitudinal locking device in the central site, of the fence type or concrete barrier with a minimum height of 2 (two) meters that covers the area of interest leading the pedestrian to use from the walkway (in rural areas and with no other drop-off devices nearby, the minimum length is 300 meters per side of the walkway).

The CONCESSIONAIRE will be responsible for the implementation of walkways in the quantities established in ANNEX 2, 12 and 21, and must analyze the most appropriate places, prioritizing points where:

- (i) the crossing flow (sum of both directions) exceeds 40 (forty) pedestrians at 1 (one) peak hour in the period from 5am to 11pm;
- (ii) the bordering occupation generates a constant pedestrian crossing flow of at least 5 (five) pedestrians per hour in 80% of the period from 5am to 11pm;
- (iii) the bordering occupation generates a crossing flow of at least 15 (pedestrian) in at least 4 (four) periods of 1 (hour) between 5am and 11pm;
- (iv) special circumstances, independent of the crossing flow, may cause serious risks to pedestrians and users, such as crossing extension and VDM that makes safe level breaches unfeasible;
- (v) the occurrence of 2 (two) run over (regardless of severity) in a 600 (six hundred) meter segment in the last 3 (three) years of analysis;
- (vi) unsafe condition for pedestrian crossing is detected, ARTESP may request the implementation of walkways, even if the conditions specified above are not in place.

When there is a need to implement level crossings (signposted, illuminated, controlled, etc.), the CONCESSIONAIRE shall submit a project for each crossing point, including the signaling, lighting, road restraint devices, etc., always complying with the rules in force at the time of deployment. The center site must have a safe (bullet-type) shelter area (including for the disabled) and protected for pedestrians to cross in two steps comfortably and safely.

The walkways to be deployed must be illuminated and meet NBR 5101 Class P1 or other that will replace and / or complement it. All footbridge implementation shall be in accordance with NBR 9050 - Accessibility, NBR 5101 - Street Lighting and NBR 14744 - Steel Lighting Poles, NBR 6971 - Traffic Safety - Metal Fenders - Implementation, NBR 14885 - Traffic Safety - Barriers of Concrete and NBR

15486 - Traffic Safety - Road Containment Devices - Guidelines, and other standards and specifications in force at the time of implementation.

In the project, priority must be given to the execution (projection) of the stacked ramps ('U'), stairway for access at both ends, and all infrastructure for walkway accessibility, lighting, bus stop and monitoring through CCTV system with CCO-centric images in real time.

The entire travel path of pedestrian walkways to bus stops or the local road access system must always be done by sidewalk and lighting.

The CONCESSIONAIRE shall map the entire ROAD SYSTEM and identify all places where there are pedestrian crossing, and carry out studies every 5 (five) years, with at least classified pedestrian count and research of origin and destination, indicating all establishments, border crossing centers (educational establishments, kindergartens, shopping centers, hospitals, health centers and others), in order to assess the existence / emergence of places that present the need for the establishment of a walkway or level crossing.

The first study (EXISTING AND REMAINING SYSTEM) must be performed within the timeframe provided for in item 5 of this ANNEX (Time Frame). The other studies must include the entire ROAD SYSTEM, with a deadline from the date of signing of the INITIAL TRANSFER TERM.

In addition to the mapping and study provided for in this item, the CONCESSIONAIRE shall, throughout the CONCESSION period, carry out, at its expense, studies (classified counting, origin and destination) at specific points when requested by ARTESP.

Any discrepancies regarding the number of walkways provided for in ANNEX 2, 12 and 21 shall be assessed by the CONCESSIONAIRE, following the rite of the ORDINARY REVIEWS, inserted in SISDEMANDA and submitted to ARTESP's approval.

The parameters for verifying the need for walkways throughout the CONCESSION period, beyond those provided in EVTE, are those defined in this item or determined by ARTESP through design instruction and / or technical specification.

Whenever interventions occur in the stretch granted as the main extensions defined in the PUBLIC NOTICE, the implantation of marginal roads, the adjustments related to the capacity extensions, or the implementation of additional lanes, among others, these extensions / improvements must be carried out together with the adequacy / improved walkway and crossings. If the above-mentioned intervention projects do not include improved walkways or crossings, the CONCESSIONAIRE shall carry out studies at its expense to verify the need for implementation of these improvements, at its expense studies to verify the need for implementation of these improvements, incorporating them into the project.

The CONCESSIONAIRE shall also provide for the inclusion of new level crossing points throughout the Term of the CONCESSION. The registration must be updated whenever there are new inclusions. The BIDDER, based on the inspections performed, shall provide resources for the execution of this item, and the implementation throughout the CONCESSION TERM is not limited to this value.

The CONCESSIONAIRE shall carry out at its expense studies for the implementation of pedestrian crossings when requested by ARTESP.

3.2.14. Bus Stop Points

The CONCESSIONAIRE shall present the register of all places where the public transport service is verified (regular or not) and update it whenever there are changes and that it must have at least the photographic record, location, georeferencing, characterization and counting of stops and embarkation / disembarkation. This study shall be developed within the deadlines set forth in item 5 of this APPENDIX, and updated (points already registered and identification of new points) every 5 (five) years from the date of signing of the INITIAL TRANSFER TERM.

The CONCESSIONAIRE will be responsible, at its expense, for the adequacy of existing bus stops, even after duplication, and the implementation of 238 (two hundred and thirty-eight) new bus stops provided for in ANNEX 2, 12 and 21. For each additional point that may be needed throughout the CONCESSION, the unit imbalance will be R \$ 81,000.00 (eighty one thousand reais - brazilian currency), on the CONTRACT base date.

To identify the points that need to be regularized, the CONCESSIONAIRE shall follow the following criteria: minimum stop of 5 (five) vehicles at peak time and / or minimum boarding / disembarkation of 10 (ten) passengers per peak hour.

In cases where there is a need for regularization of bus stop points, the CONCESSIONAIRE SHALL present the schedule and the FUNCTIONAL PROJECT for evaluation and approval of ARTESP within the first two months following the period of the studies. The project must prioritize the implementation of bus stops always in places near uneven devices that enable safe pedestrian crossing. The design and execution of the bus stop to be regularized shall be based on Ordinance SUP-DER-030/2005 of the Department of Highways - DER, or other regulations that may replace it, to determine the size of the stall, platform and cover, depending on the type of highway. The design of bus stopping points shall also provide for their lighting as well as their accessibility, as determined by the current standards of the Brazilian Association of Technical Standards (ABNT) NBR 9050 - Accessibility and NBR 5101 - Public Lighting, NBR 6971 - Safety in Traffic - Metal Fenders - Implementation, NBR 14885 - Traffic Safety - Concrete Barriers and NBR 15486 - Traffic Safety - Road Containment Devices - Guidelines, DER / SP Signaling Manual, and other rules and specifications in force at the time of deployment.

The registration must be updated whenever there are new inclusions.

Whenever interventions are made on the stretch granted (major extensions, implementation of marginal roads, adjustments regarding capacity extensions and the implementation of additional lanes, among others), these extensions / improvements must be carried out together with the adjustment / implementation of bus stops. If the above mentioned intervention projects do not include bus stops, the CONCESSIONAIRE must carry out studies at its expense to verify the need to implement these improvements, incorporating them into the project.

In addition to the mapping and study provided for in this item, the CONCESSIONAIRE shall, throughout the CONCESSION period, carry out, at its expense, studies (counting, origin and destination) at specific points when requested by ARTESP.

3.2.15. Street lighting

The CONCESSIONAIRE shall implement the necessary infrastructure for public lighting, at its expense, on all stretches of highway that are part of the ROAD SYSTEM that cross the surrounding urban nuclei and sections in full range; level intersections; walkways, viaducts and underpasses, and the minimum lighting factor provided by the standard (currently lighting class P1) must be implemented at a minimum; pedestrian and cyclist crossings; bus stops and ACCESSES provided for in ANNEX 2, 12 and 21.

If any critical accident point is identified, even if it is outside an urban area or a mountain range, it must also be illuminated, as well as all OAEs that are also used by pedestrians to transpose the highway that is part of the ROAD SYSTEM. The current rules and standards of the Brazilian Association of Technical Standards (ABNT) NBR 5101 - Street Lighting and NBR 14744 - Steel Lighting Pole and other pertinent rules shall be followed.

The adequacy of the sections, where the illumination is nonexistent and / or with a different illumination class from that specified, shall be promoted by the CONCESSIONAIRE, according to the deadline set forth in item 5 of this APPENDIX.

3.2.16. Cycle paths

It is known as a cycle path, the specific area segregated from the flow of motor vehicles for the circulation of cyclists in two-way direction, paved, signposted and protected by concrete barriers and / or metal fenders. Segregated bike paths must be provided for pedestrian walks and sidewalks. If there is no physical space to deploy the bike lane and pavement for pedestrian circulation, the bike lane may have shared use. The CONCESSIONAIRE will be responsible for the implementation of bicycle lanes provided for in ANNEX 2, 12 and 21.

The CONCESSIONAIRE shall submit a survey of all sections where the circulation of cyclists is verified, observing the Decree No. 63.881 of December 3, 2018, or a rule that will change or replace it, regarding the implementation of bicycle lanes in the highways. State of Sao Paulo. The survey must contain at least (i) photographic record, (ii) location, (iii) stretch of the stretch (initial km and final km), (iv) characterization of the surroundings of this stretch, (v) count with origin and destination, (vi) identification of locations that contribute to improving mobility of the local population, (vii) identification of locations with 10 or more peak hour cyclists and / or locations that use the highway as a bicycle lane, and (viii) identification of where there is a risk of injury to users as identified by the ISR. The survey in the ROAD SYSTEM shall be carried out every 5 (five) years from the date of signature of the TERM OF INITIAL TRANSFER.

For each identified stretch the current conditions and expected expansions must be presented, that is, whether the bike lane will be on dual carriageway or single lane, whether or not there are marginal roads etc. For highways that are not planned for extension works, cycle paths must also be considered.

Any discrepancies regarding the number of bike lanes provided for in ANNEX 2, 12 and 21 shall be evaluated by the CONCESSIONAIRE, following the rite of the ORDINARY REVIEWS, inserted in SISDEMANDA and submitted to ARTESP's approval.

The design and execution of the cycle paths shall be based on the DENATRAN / CONTRAN Manual, the DER / SP Signaling Manual and the standards of the Brazilian Association of Technical Standards (ABNT) NBR 9050 - Accessibility and NBR 5101 - Public Lighting, NBR 6971 - Traffic Safety - Metal Fenders - Implementation, NBR 14885 - Traffic Safety - Concrete Barriers, NBR 15486 - Traffic Safety - Road Containment Devices - Guidelines, and other standards and specifications in force at the time of implementation and in Decree that was mentioned, decree number 63,881 of December 3, 2018.

In addition to the survey and study provided for in this item, the CONCESSIONAIRE shall, throughout the CONCESSION period, carry out, at its expense, studies (counting, origin and destination) at specific points, when it is requested by ARTESP.

3.2.17. Pavement for pedestrian circulation

The CONCESSIONAIRE will be responsible for the implementation of pedestrian circulation footwear provided for in ANNEX 2, 12 and 21 and in locations defined in the initial survey to be performed by the CONCESSIONAIRE, at its expense. The surveys must have at least photographic record, location, length of the stretch (initial km and final km), characterization of the surroundings of the stretch and counting with origin and destination.

The CONCESSIONAIRE shall obligatorily implement pavement in the works that provide marginal roads, as well as the entire pedestrian displacement path on level crossings, access to walkways, bus stops or the local road system.

For each identified stretch, the current conditions and expected extensions must also be presented, that is, whether the highway will be double lane or single lane, whether or not there are marginal roads or any other type of intervention.

The survey in the ROAD SYSTEM shall be performed every 5 (five) years from the date of signing of the Initial Transfer CONTRACT.

Any discrepancies regarding the provisions of ANNEX 2, 12 and 21 shall be evaluated by the CONCESSIONAIRE, following the rite of the ORDINARY REVIEWS, inserted in SISDEMANDA and submitted to ARTESP's approval.

For each identified stretch must be presented the current conditions and extensions provided for in CONTRACT, ie whether the highway will be double lane or single lane, whether or not there are marginal roads or any other type of intervention.

In the case of roads that will be extended with marginal roads, the pavement will only be on the marginal roads. For highways that are not expected to be extended, pavements must also be provided.

All pedestrian travel on level crossings, access to walkways, bus stops or the local road system must be provided with paving and lighting.

Whenever interventions occur in the granted stretch, such as: major extensions, implementation of marginal roads, adjustments regarding capacity extensions, implementation of additional lanes, among others; These must be done in conjunction with the pedestrian walkway.

The sidewalk shall be segregated from the flow of motor vehicles, for pedestrian circulation in two steering hands with protection by concrete barriers and / or metal fenders.

Rides must be planned at least 1.50 m (one meter and fifty centimeters) wide and ramps not exceeding 8% (eight percent).

The design and execution of footwear for pedestrian circulation must be based on the rules in force at the time of implementation.

Requirements for access by interested parties must consider the need for additional pavement, bus stops or other items that favor the safety of users and pedestrians, according to the study of traffic induction, and will be carried out at the expense of the interested company, as a necessary counterpart for the requested authorization.

The survey in the ROAD SYSTEM must be monitored / updated (already registered sections and identification of points sections) every 5 (five) years from the date of signing of the INITIAL TRANSFER TERM.

In addition to the survey and study provided for in this item, the CONCESSIONAIRE shall, throughout the CONCESSION period, carry out, at its expense, studies (counting, origin and destination) at specific points, when they are requested by ARTESP.

3.2.18. Trunking Devices, Operational Returns and Special Works of Art

The CONCESSIONAIRE will be responsible, at its expense and under its responsibility, for the implementation of improvements and adaptations of devices in accordance with APPENDICES 2, 12 and 21, and these items will be executed within the deadlines provided for in this APPENDIX.

The Brazilian Association of Technical Standards (ABNT) Standards regarding designs and materials, as well as the ARTESP Technical Specifications regarding this subject, must be observed.

3.2.19. Fences

The CONCESSIONAIRE shall implement fenders and fences in order to comply with the rules in force at the time of implementation and the provisions of ANNEX 06, at the CONCESSIONAIRE 's expense.

3.2.20. Road containment devices

The CONCESSIONAIRE shall estimate the quantities of necessary and sufficient services related to the implantation of flexible and rigid road containment devices (metal fenders, rigid concrete fenders, attenuating devices, damping devices and others) in order to comply with current regulations and relevant at the time of implementation and the provisions of ANNEX 06 of the CONTRACT.

In REMAINING SYSTEM, this item refers to the highways that were under DER / SP circumscription.

The CONCESSIONAIRE shall prepare and submit, pursuant to APPENDIX J, within the period provided for in item 5 of this APPENDIX, the projects of road containment devices (flexible and rigid), contemplating the implementations provided for in this item and observing the rules stipulated in, as well as the adjustments provided for in items 2.3 d.1.1 and d.2.1 of ANNEX 6.

In addition to the rules provided for in APPENDIX J, the project shall contain at least: topographic base covering all elements in the DOMAIN RANGE (trees, drainage, signaling, etc.) and the indication / definition of existing types of road restraint devices, adapt and deploy.

The CONCESSIONAIRE shall present a spreadsheet detailing for each element to be deployed its location (highway, km and direction), type of implementation, extension and date (month / year) for execution. The implementation must be completed within the timeframe provided for in item 5 of this ANNEX.

At the end of the implementation services, the CONCESSIONAIRE shall present a photographic report that proves the execution of the services.

Special care with surface drainage must be taken when rigid type road restraint devices are installed (eg concrete barriers).

3.2.21. Signaling and auxiliary devices

The CONCESSIONAIRE shall prepare, according to the deadline set forth in item 5 of this ANNEX, the complete project for the adequacy of vertical, horizontal and auxiliary signaling, in order to comply with the standards and specifications in force in the Brazilian Traffic Signal Manual - CONTRAN, in the Manual Road Signs - DER / SP and the relevant and current ABNT (Brazilian Association of Technical Standards) technical standards, in addition to the Institutional Signaling Manual and other ARTESP Technical Specifications.

In addition to meeting current standards and specifications, the signaling adequacy project shall include:

- (i) signaling for misty stretches;
- (ii) identification of marginals, devices and branches / handles according to the technical specification in ARTESP; and
- (iii) demarcation of horizontal staking along the roadside, access roads, marginal roads, branches / handles every 20 (twenty) meters, indicating with numbering every 100 (one hundred) meters.

The implementation must be completed within the timeframe provided for in item 5 of this ANNEX.

All vertical signs and pertinent auxiliary devices implemented by the CONCESSIONAIRE shall be covered, on the reverse side, with the ARTESP registration and date of manufacture of the signs according to Agency guidelines.

At the end of the adequacy services, the CONCESSIONAIRE shall present a photographic report that proves the execution of the services.

3.2.22. Other Improvements

The CONCESSIONAIRE based on inspections performed prior to the submission of the POI shall estimate the quantity of services related to improvements that do not fit into any of the previous topics, besides those listed below:

- Implementation and / or adaptation of current artwork;
- Adequacy of drainage system including the elimination of drainage elements that constitute a fixed obstacle in the safety-free area, such as manholes, gutters etc., implementation of new culverts and canals;
- Conservation of improvements to be implemented by the GRANTING POWER, in accordance with the standards set forth in ANNEX 6.
- Geometric fittings in the existing runway, as per the rules provided for in item 3.2.23 and APPENDIX K.

The improvements described in this subitem shall be implemented at the expense of the CONCESSIONAIRE and under its responsibility.

Projects for improvements and / or implementation of equipment or devices must be prepared by the CONCESSIONAIRE, in compliance with the standards of the current Brazilian Association of Technical Standards (ABNT) and which refer to projects and materials, in addition to ARTESP's Technical Specifications regarding improvements and / or implementation of equipment and devices.

3.2.23. General Design Guidelines for Upgrades and Enhancements

(a) To duplicate or double lane deployment flat and undulating road, trunk and interconnection roads (SP and SPI highways)- default for the new road:

- Minimum design speed: 100 km / h (Class I-A);
- Maximum ramp: 6%;
- Maximum superelevation: 8%;
- Minimum width of rolling range: 3.6 meters;
- Minimum shoulder width 3.0 meters;
- Minimum safety range width: 1.0 meter;
- New OAEs with minimum template that meet the widths defined in this item, as well as include pedestrian (longitudinal and transverse) pavement, meeting the technical standards in force at the time of implementation;

- In places where there is a forecast / need for the implementation of bicycle paths, the new OAEs must include in their pattern the continuation of this bicycle path, meeting the technical standards in force at the time of implementation.

(b) Duplications in flat and undulating relief, trunk and interconnecting roads (SP and SPI highways) - standard for existing runway:

- Minimum design speed: as defined in APPENDIX K (Class MI), including correction of vertical and horizontal curves.
- Minimum width of rolling range: 3.5 meters;
- Minimum shoulder width 2.5 meters;
- Minimum safety range width: 0.6 meters; and
- The cross slope of the crowned section may be maintained in sections where there is no intervention, provided that they meet the normative requirements of slope and superelevation.

(c) Duplication or deployment of double-lane mountainous relief, trunk and interconnection roads (SP and SPI highways) - standard for the new lane:

- Minimum design speed: defined in ANNEX 2, 12 and 21 (Class I-A);
- Maximum ramp: 6%;
- Maximum superelevation: 8%;
- Minimum width of rolling range: 3.6 meters;
- Minimum shoulder width 2.5 meters;
- Minimum safety range width: 0.6 meters;
- New OAEs with minimum template that meet the widths defined in this item, as well as include pedestrian (longitudinal and transverse) paving, meeting the technical standards in force at the time of implementation; and
- In places where there is a forecast / need to implement bicycle lanes, the new SOOs must include in their model, the continuity of this bike path, meeting the technical standards in force at the time of implementation.

(d) Duplications or implementation of double corrugated and flat relief dual carriageway access roads (SPA highways) - standard for the new runway:

- Minimum design speed: 70 km / h (Class II);
- Maximum ramp: 7%;
- Maximum superelevation: 8%;
- Minimum width of rolling range: 3.5 meters;

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- Minimum shoulder width 2.5 meters;
- Minimum safety range width: 0.6 meters;
- New OAEs with minimum template that meet the widths defined in this item, as well as include pedestrian (longitudinal and transverse) pavement, meeting the technical standards in force at the time of implementation; and
- In places where there is a forecast / need for the implementation of bicycle paths, the new OAEs must include in their pattern the continuation of this bicycle path, meeting the technical standards in force at the time of implementation.

(e) Duplication or implementation of double corrugated and flat relief dual carriageway access roads (SPA highways) - standard for existing runway:

- Minimum design speed: 60 km / h (Class MII);
- Minimum width of rolling range: 3.5 meters;
- Minimum shoulder width 2.5 meters;
- Minimum safety range width: 0.6 meters;
- Superelevation correction where there is a crowned section (trim to the outer edge of the road in tangent);
- New OAEs with minimum template that meet the widths defined in this item, as well as include pedestrian (longitudinal and transverse) paving, meeting the technical standards in force at the time of implementation; and
- In places where there is a forecast / need for the implementation of bicycle paths, the new OAEs must include in their pattern the continuation of this bicycle path, meeting the technical standards in force at the time of implementation.

(f) Duplication or deployment of dual mountainous relief lane, municipal access roads (SPA highways) - standard for new lane:

Minimum design speed: 50 km / h (Class II);

- Maximum ramp: 7%;
- Maximum superelevation: 8%;
- Minimum width of rolling range: 3.3 meters;
- Minimum shoulder width 2.0 meters;
- Minimum safety range width: 0.6 meters;
- New OAEs with minimum template that meet the widths defined in this item, as well as include pedestrian (longitudinal and transverse) paving, meeting the technical standards in force at the time of implementation; and
- In places where there is a forecast / need for the implementation of bicycle paths, the new OAEs must include in their pattern the continuation of this bicycle path, meeting the technical standards in force at the time of implementation.

(g) Adequacy of design speeds / consistency of single lane layout to be maintained (trunk highways except access highways / SPAs):

- Minimum design speed: as defined in APPENDIX K (Class MI), including correction of vertical and horizontal curves.

(h) Design speed adequacy / consistency of dual carriageway to be maintained (trunk highways except access highways / SPAs):

- Minimum design speed: as defined in APPENDIX K (Class MI), including correction of vertical and horizontal curves.

(i) Roundabouts:

- For rural roundabouts, scale to $V_p = 30$ km / h, which results in a minimum radius of 25 m (twenty five meters) on the central island. (work in island shape). In urban areas, where there are insurmountable technical restrictions (borderline occupation, APP, rock walls that require the use of explosives), smaller rays can be adopted. This reduction must necessarily be approved by ARTESP's technical team;
- Superelevation with trim to the outer edge;
- Minimum platform width of 10 meters;
- Input branch axes must be aligned to the center or left of the center island axis (work in island shape); and
- Maximum ramp of 3%.

(j) Device Branches:

- Device branch elements must be sized at least for the following design speeds:
- Loop: $V_p = 40$ km / h;
- Semi-directional: $V_p = 50$ km / h;
- Directional: $V_p = 60$ km / h.
- The absolute difference between the speeds of directly interconnected (sequential) branches must preferably be 10 km / h, with a difference of 20 km / h , that is acceptable;
- Maximum ramps of 8%;
- Maximum superelevation of 6%; and
- Minimum rolling road width of 6.5 meters.

(k) Marginal roads:

- Minimum speed of 80 km / h;
- Maximum ramp of 8%;
- Maximum superelevation of 6%;
- Minimum width of rolling range of 3,5m;

- No ride;
- With shoulder (minimum width of 2.5 meters);
- Mandatorily with a single direction of direction;
- New OAEs with minimum template that meet the widths defined in this item, as well as include pedestrian (longitudinal and transverse) paving, meeting the technical standards in force at the time of implementation; and
- In places where there is a forecast / need for the implementation of bicycle paths, the new OAEs must include in their pattern the continuation of this bicycle path, meeting the technical standards in force at the time of implementation.

(l) Marginal roads (collectors):

- Minimum speed of 60 km / h;
- Maximum ramp of 8%;
- Maximum superelevation of 6%;
- With sidewalk (minimum width of 2.1 meters);
- Preferably with one-way direction;
- Minimum platform width of 8.0m (in case of two-way: minimum width of 9.5 meters).
- New OAEs with minimum template that meet the widths defined in this item, as well as include pedestrian (longitudinal and transverse) paving, meeting the technical standards in force at the time of implementation; and
- In places where there is a forecast / need for the implementation of bicycle paths, the new OAEs must include in their pattern the continuation of this bicycle path, meeting the technical standards in force at the time of implementation.

(m) General provisions to change the typology / location of the devices when the FUNCTIONAL PROJECT is presented in relation to the reference studies of the bidding process.

The CONCESSIONAIRE may propose devices different from the types provided for in the Functional Reference and Retigraphic PROJECTS, provided that the other type of device proposed can meet the demands of users equally or better, maintaining or increasing the movements met and according to the following parameters:

- 1- The proposed solution must have at least the same functionality as provided for in the ANNEXES;
- 2- The proposed solution must facilitate user decision making, increasing security;
- 3- The proposed solution must be validated by traffic studies;
- 4- No movements must be suppressed;
- 5- It must not generate greater impact in relation to neighboring places;
- 6- It must not prevent future extensions of the highway;

7- It must meet all highway design vehicles; and

8- It must preferably generate equal or less environmental impact.

It is important to emphasize that any proposal to change the device type must be corroborated with a technical study for consideration and needs validation by the ARTESP technical team. The proposed amendment by CONCESSIONAIRE pursuant to this item will not give rise to the economic-financial rebalancing of the CONTRACT.

(n) Project Vehicles

- Design vehicles for the highway trunk must be defined based on traffic studies; and
- For checking radii of gyration on all devices and curves, WB-20, WB30T and WB-33D vehicles shall be used as design vehicles.

(o) Central Working sites

Central working sites of 8 (eight) meters or more shall be provided. When it is found unfeasible to be implanted in this dimension, such as neighboring relief or occupation, road containment devices must be provided.

p) Drainage channel outlets

- All drainage channel outlets must be protected by road containment devices.

q) Pedestrian waiting area

- Predict the geometric suitability of the road, whenever the need for a pedestrian waiting area between opposite directions (both for single and double lane without working site) is found.

In case of divergence between the parameters established in this item and the current rules applicable at the time the road elements were implemented, the most restrictive parameter must be adopted, ie, the one that represents the lowest risk of accidents and greater safety for users and pedestrians, without implying any burden to the GRANTING POWER.

3.3. About Implementing Road Rings

As a condition for the beginning of the implementation of the São Pedro and Pompeii - Paulópolis road rings, as defined in the ANNEXES 2, 12 and 21, by the CONCESSIONAIRE, a contract must be signed with the municipalities benefiting from the intervention, which shall include: at least the following information:

- (i) Identification of the implemented road ring, with the exact description of its dimensions and characteristics, as well as the existing road segments to be bypassed;
- (ii) Steps and stages of execution of the object of the contract;
- (iii) Obligations assumed by the parties; and
- (iv) Scope to be assumed by the municipality regarding the operation and maintenance of existing road segments to be bypassed.

The burden resulting from the non-execution of the contract or its termination, for reasons not attributable to the CONCESSIONAIRE, releases the CONCESSIONAIRE to make the investment of the respective CONTOUR, proceeding to the economic-financial rebalancing of the CONTRACT.

The schedule for the implementation of the contours may be changed as a result of the date of the contract s mentioned in this item, and the consequences shall be evaluated as to the responsibility for the alteration, in accordance with the obligations and risks assumed by the CONCESSIONAIRE and by the GRANTING POWER. Following the implementation of the transfer of the bypassed road stretch to the City Hall, any and all implications related to the interaction between the City Hall and the GRANTING POWER will be a risk assumed by the GRANTING POWER.

For the purpose of the operation of the Transfer of Bypassed Road to the City Hall, the CONCESSIONAIRE shall meet the following conditions:

(a) Implementation of the Contour in a satisfactory manner, as defined and accepted by ARTESP; and

(b) Execution of the works and arrangements for revitalization of the Municipalized Section, under the terms provided for in the CONTRACT corresponding, at a minimum, to the obligations / improvements provided for in the PII, PIC and PAI programs (in the first two years of CONCESSION); conducting at least one full cycle of special pavement maintenance (resurfacing) and horizontal signage - to be carried out prior to the transfer of the segment to City Hall (up to three years before the transfer); implantation or complementation of elements for full illumination of the road in the stretch in question; as well as all the services provided for in the CONTRACT regarding the obligations of: further extensions and improvements, routine conservation, emergency conservation, special pavement maintenance and special conservation of OAEs until the day before the expected date for the effective transfer of the stretch to City Hall.

3.4. POI Guidelines

According to studies made by ARTESP, based on data, projections and current situation, ANNEX 21 to the CONTRACT (EVTE) contemplates the minimum improvements that must be implemented by the CONCESSIONAIRE, and may be complemented, which are analyzed by the CONCESSIONAIRE for the purpose. Proposal and the formulation of its POI, presented as a condition for signing the CONTRACT. The INVESTMENT PLAN, pursuant to the CONCESSION CONTRACT, will be subject to adjustments and revisions, preferably in accordance with the ORDINARY REVIEW process.












As a condition for the signing of the CONTRACT, the CONCESSIONAIRE shall present the Original Investment Plan, detailed in the Physical-Executive Schedule regarding the ROAD SYSTEM, observing the pre-defined deadlines in ANNEX 2, 12 and 21. In this schedule, it shall be presented the details of the investments already planned for the entire CONCESSION period, including all the works of Major Expansion, Other Extensions and Improvements and Special Conservation of Pavement. According to the contractual rules, the Original Investment Plan may be periodically reviewed to identify the needs and demands for investments that were not initially defined.

The minimum improvements presented in the POI, based on ANNEX 2, 12 and 21, shall be executed by the CONCESSIONAIRE within the deadlines provided for in the initial Physical-Executive Schedule for the investments required for the entire ROAD SYSTEM, shoulderting with the Signature Date of the TERM OF INITIAL TRANSFER. In the event of non-compliance or untimely fulfillment of the services presented in the POI, including considering the milestones and deadlines of intermediate steps, the CONCESSIONAIRE will be subject to a factor related to the CONCESSIONAIRE 's compliance with the Performance Indicators and AD and the penalties established. in the CONTRACT and its ANNEXES, especially in ANNEX 11.

In the presentation of the POI, the CONCESSIONAIRE shall include the effective dates of commencement and completion of services related to the executive phase of the work, excluding the deadlines related to project activities, licensing, expropriations, budgets, hiring or other administrative activities.

To verify compliance with the shouldert dates of the works listed in the POI, the shouldert dates of the actual works at the sites (“on site”) will be considered. Accordingly, the deadlines related to project activities, licensing, expropriations, budgets, hiring or other administrative activities.

3.5. Device Classification

CLASSIFICATION		DESCRIPTION
	TIPO 1	COMPLETE ROUNDABOUT
	TIPO 2	TRUMPET WITHOUT TURNABOUT
	TIPO 3	TRUMPET WITH TURNABOUT
	TYPE 4	DIAMOND WITH ROTATORY
	TYPE 5	PARCLE WITH ROTATORY
	TYPE 6	STRETCH ROTATORY
	TYPE 7	TURNABOUT
	TYPE8	FULL ROUNDABOUT WITH COLLECTING ROADS
	TYPE 9	ROTATORY RETURN TUMBLE
	TYPE 10	EMPTY ROTATORY
	TYPE 11	ROTATORY

4. NEW INVESTMENTS

Due to the contractual revisions provided for in the CONCESSION CONTRACT, whether Ordinary or Extraordinary, new investments, not provided for in the POI, may be incorporated into the responsibilities of the CONCESSIONAIRE, pursuant to the rules set forth in the CONTRACT and its ANNEXES. At the end of the review process when deciding to implement new investments, these must be detailed in an INVESTMENT PLAN that will also include a Physical-Financial Schedule, which must present the shouldert and end deadlines of each work, as well as milestones of each construction phase, which must be arranged on the schedule at least every six months.

The CONCESSIONAIRE is responsible for obtaining the approval of the FUNCTIONAL PROJECTS from ARTESP (when requested) that must be delivered within the deadlines set by ARTESP when studying the New Investments.

EXECUTIVE PROJECTS for the implementation of the works may only be delivered to ARTESP after the approval of the FUNCTIONAL PROJECTS and shall be prepared by the CONCESSIONAIRE, pursuant to APPENDIX J.

The anticipation of the work defined in the current POI or INVESTMENT PLAN, by proposal of the CONCESSIONAIRE, shall be submitted to ARTESP, which shall, after consultation with the GRANTING POWER, decide on its authorization and whether the implementation and the consequent economic-financial rebalance will be held at the ORDINARY REVIEW or EXTRAORDINARY REVIEW, as the case may be.

In the case of anticipation of work (s) of capacity expansion in areas adjacent to investments already in progress, as well as the anticipation of the respective device (s) of that stretch (s) that are essential (s) for the release of the road for safe operation, at the initiative of the CONCESSIONAIRE, these will only depend on prior consent of ARTESP and do not constitute EVENT OF IMBALANCE. In these cases, the CONCESSIONAIRE may shouldert the works immediately after obtaining the prior consent.

In the cases provided for in the paragraph above, the request for prior consent shall be submitted to ARTESP in isolation, separately from any other request for anticipation or postponement of investment, and instructed with the identification of item (s) in the PHYSICAL SCHEDULE and documentation pertinent to the investment (s) to be anticipated, including the respective device (s), if tere is any.

The CONCESSIONAIRE shall communicate in writing and justifiably any possible initial and final delays, including delays in the milestones presented in the New Investment Investment Plan, without prejudice to ARTESP's analysis and validation of the merits.

Prior to the definitive approval of the projects, ARTESP may issue recommendations and guide the CONCESSIONAIRE during the project development and elaboration process, including based on information, data and documents of its knowledge through access to SISPROJ, always following the systematic provided for in APPENDIX J.

5. DEADLINE TABLE

ACTIVITY	ANNEX ITEM	DEADLINE
Presentation of BIM Modeling Project Development and Implementation Plan for ARTESP approval	1.1(a)	Up to six (6) months from the date of signing of the Initial Transfer CONTRACT
Schedule of Road Instrumentation	1.1(c)	Up to six (6) months from the date of signing of the Initial Transfer CONTRACT
Consolidation Document of demands for ORDINARY REVIEW	3.1(b)	Up to 9 (nine) months before the ORDINARY REVIEW
Presentation of EXECUTIVE PROJECTS for the investments, extensions and improvements selected by ARTESP to compose ORDINARY REVIEW	3.1(b)	Up to one hundred and eighty (180) days before the date scheduled for the ORDINARY REVIEW.
Adequacy of TOLL STATIONS of the REMAINING SYSTEM	3.2.1(ii)	Up to six (6) months from the date of signature of the REMAINING SYSTEM TRANSFER TERM
Implementation and operation of the Selective Weighing System in Motion in the EXISTING SYSTEM	3.2.2(i)	Within 24 (twenty four) months from the date of signature of the INITIAL TRANSFER TERM
Implementation, adaptation and operation of Selective Moving Weighing System in REMAINING SYSTEM	3.2.2(i)	Up to twelve (12) months from the date of signature of the REMAINING SYSTEM TRANSFER TERM
Implementation and operation of fixed speed meters in the EXISTING SYSTEM	3.2.2(ii)	Up to eighteen (18) months from the date of signature of the INITIAL TRANSFER TERM
Acquisition and operation of static type speed meters in the EXISTING SYSTEM	3.2.2(ii)	Up to twelve (12) months from the date of signature of the INITIAL TRANSFER TERM
Suitability and Operation of Pre-existing Fixed Type Speed Meters in REMAINING SYSTEM	3.2.2(ii)	Up to twelve (12) months from the date of signature of the REMAINING SYSTEM TRANSFER TERM
Implementation and operation of fixed type speed meters in automatic and mixed collection lanes in the Toll Stations in REMAINING SYSTEM	3.2.2(ii)	Up to eighteen (18) months from the date of signature of the REMAINING SYSTEM TRANSFER TERM
Implementation and operation of fixed type speed meters in REMAINING SYSTEM	3.2.2(ii)	Up to ninety (90) days from the date of signature of the REMAINING SYSTEM TRANSFER TERM
Supply of vehicles to PMRv	3.2.2(iv).	Up to sixty (60) days from the date of signature of the INITIAL TRANSFER TERM
Installation of 10 (ten) optical character recognition (OCR) equipment for PMRv	3.2.2.(iv).	Within 24 (twenty four) months from the date of signature of the INITIAL TRANSFER TERM
Installation of 13 (thirteen) optical character recognition (OCR) equipment for PMRv	3.2.2(iv).	Up to thirty six (36) months from the date of signature of the INITIAL TRANSFER TERM

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ACTIVITY	ANNEX ITEM	DEADLINE
Installation of 15 (ten) optical character recognition (OCR) equipment for PMRv	3.2.2.(iv).	Within 48 (forty-eight) months from the date of signature of the INITIAL TRANSFER TERM
Installation of 15 (fifteen) optical character recognition (OCR) equipment for PMRv	3.2.2.(iv).	Up to sixty (60) months from the date of signature of the INITIAL TRANSFER TERM
Installation of 15 (fifteen) optical character recognition (OCR) equipment for PMRv	3.2.2.(iv).	Within seventy-two (72) months from the date of signature of the INITIAL TRANSFER TERM
Implementation and operation of the definitive radio system in the existing system	3.2.4.(i)	Up to twelve (12) months from the date of signature of the INITIAL TRANSFER TERM
Expansion, adaptation and operation of the radio system in the REMAINING SYSTEM	3.2.4.(i)	Up to twelve (12) months from the date of signature of the REMAINING SYSTEM TRANSFER TERM
Implementation and operation of the Data Transmission System in the EXISTING SYSTEM	3.2.4.(ii)	Up to twelve (12) months from the date of signature of the INITIAL TRANSFER TERM
Expansion, adaptation and operation of the Data Transmission System in REMAINING SYSTEM	3.2.4.(ii)	Up to twelve (12) months from the date of signature of the REMAINING SYSTEM TRANSFER TERM
Suitability of interim CCO located in EXISTING SYSTEM	3.2.4.(iii)	Up to twelve (12) months from the date of signature of the INITIAL TRANSFER TERM
Implementation and operation of the 1st stage of definitive SAUs	3.2.4.(iii)	Up to twelve (12) months from the date of signature of the INITIAL TRANSFER TERM
Implementation and operation of the 2nd stage of definitive SAUs	3.2.4.(iii)	Within 24 (twenty four) months from the date of signature of the INITIAL TRANSFER TERM
Definitive telephone system type 0800 in the EXISTING SYSTEM	3.2.4.(iv)	Up to one hundred and eighty (180) days from the date of signature of the INITIAL TRANSFER TERM
Adjustments and operation of the definitive 0800 telephone system in the REMAINING SYSTEM	3.2.4.(iv)	Up to sixty (60) days from the date of signature of the REMAINING SYSTEM TRANSFER TERM
To introduce basic project of implementation of the system of communication with the user via wireless data network in the EXISTING SYSTEM	3.2.4.(vi)	Up to 180 (one hundred and eighty) days from the signature of the TERM OF INITIAL TRANSFER.
User communication system via wireless data network in EXISTING SYSTEM	3.2.4.(vi)	30% of the extension of the highways within 12 (twelve) months from the date of signing of the INITIAL TRANSFER TERM 65% of the length of the highways within 18 (eighteen) months from the date of signing of the INITIAL TRANSFER TERM 100% of the length of the highways within 24 (twenty-four) months from the date of signing of the INITIAL TRANSFER TERM

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ACTIVITY	ANNEX ITEM	DEADLINE
User communication system via wireless data network in REMAINING SYSTEM	3.2.4.(vi)	Up to twelve (12) months from the date of signature of the REMAINING SYSTEM TRANSFER TERM
List of locations and deployment schedule of electronic panels for fixed-type variable messages	3.2.4.(vii)	Up to one hundred and eighty (180) days from the date of signature of the INITIAL TRANSFER TERM
Implementation and operation of electronic panels for fixed type variable messages in the existing system	3.2.4.(vii)	Up to twelve (12) months from the date of signature of the INITIAL TRANSFER TERM
Suitability and Operation of Pre-existing Fixed-Type Electronic Message Boards in the REMAINING SYSTEM	3.2.4.(vii)	Up to twelve (12) months from the date of signature of the REMAINING SYSTEM TRANSFER TERM
Deployment and Operation of Fixed-Type Electronic Message Boards in the REMAINING SYSTEM	3.2.4.(vii)	Up to twelve (12) months from the date of signature of the REMAINING SYSTEM TRANSFER TERM
Acquisition and Operation of Mobile Variable Message Panels	3.2.4.(vii)	Up to twelve (12) months from the date of signature of the INITIAL TRANSFER TERM
Pre-existing Mobile Variable Message Panels Suitability and Operation REMAINING SYSTEM	3.2.4.(vii)	Up to twelve (12) months from the date of signature of the REMAINING SYSTEM TRANSFER TERM
Homogeneous segmentation studies with proposed locations for SAT deployment and deployment schedule in the EXISTING SYSTEM	3.2.5.(i)	Up to six (6) months from the date of signature of the INITIAL TRANSFER TERM
Suitability and operation of pre-existing SATs in REMAINING SYSTEM	3.2.5.(i)	Up to three (3) months from the date of signature of the REMAINING SYSTEM TRANSFER TERM
Homogeneous segmentation studies with proposed sites for SATs implantation and implementation schedule in REMAINING SYSTEM	3.2.5.(i)	Up to six (6) months from the date of signature of the REMAINING SYSTEM TRANSFER TERM
Implementation and operation of the Traffic Sensing System in the EXISTING SYSTEM	3.2.5.(i)	Up to twelve (12) months from the date of signature of the INITIAL TRANSFER TERM
Deployment, replacement or readjustment and operation of the Traffic Sensing System installed in REMAINING SYSTEM	3.2.5.(i)	Up to twelve (12) months from the date of signature of the REMAINING SYSTEM TRANSFER TERM
Basic project to implement the CCTV traffic monitoring system in the EXISTING SYSTEM	3.2.6	Up to one hundred and eighty (180) days from the date of signature of the INITIAL TRANSFER TERM

ACTIVITY	ANNEX ITEM	DEADLINE
Implementation and operation of CCTV Traffic Monitoring System in EXISTING SYSTEM	3.2.6	30% of the extension of the highways within 12 (twelve) months from the date of signing of the INITIAL TRANSFER TERM 65% of the extension of the highways within 18 (eighteen) months from the date of signature of the INITIAL TRANSFER TERM 100% of the length of the highways within 24 (twenty-four) months from the date of signing of the INITIAL TRANSFER TERM
Complementation and adequacy of CCTV Traffic Monitoring System in REMAINING SYSTEM	3.2.6	Up to twelve (12) months from the date of signature of the REMAINING SYSTEM TRANSFER TERM
Studies for the definition of places for truck drivers' rest areas	3.2.7	Within six (6) months from the date of signature of the TERM OF INITIAL TRANSFER.
Complete project for deployment of trucker rest areas	3.2.7	Up to 9 (nine) months from the date of signature of the TERM OF INITIAL TRANSFER.
Implementation of trucker rest areas	3.2.7	Within 24 (twenty four) months from the date of signature of the INITIAL TRANSFER TERM
Studies for the definition of locations for the implementation of Exceptional Cargo Stop Areas and Hazardous Products in the EXISTING SYSTEM	3.2.8	Within six (6) months from the date of signature of the TERM OF INITIAL TRANSFER.
Complete project to implement Exceptional Cargo Stop Areas and Hazardous Products in the EXISTING SYSTEM	3.2.8	Up to 9 (nine) months from the date of signature of the TERM OF INITIAL TRANSFER.
Implementation of Exceptional Cargo Stop Areas and Hazardous Products in the EXISTING SYSTEM	3.2.8	Within 24 (twenty four) months from the date of signature of the INITIAL TRANSFER TERM
Mapping and study of crossings in the EXISTING SYSTEM	3.2.13	Up to twelve (12) months from the date of signature of the INITIAL TRANSFER TERM
Mapping and study of crossings in REMAINING SYSTEM	3.2.13	Up to twelve (12) months from the date of signature of the REMAINING SYSTEM TRANSFER TERM
Registration and study of public transport service locations in the EXISTING SYSTEM	3.2.14	Up to twelve (12) months from the date of signature of the INITIAL TRANSFER TERM
Registration and study of public transport service locations in the REMAINING SYSTEM	3.2.14	Up to twelve (12) months from the date of signature of the REMAINING SYSTEM TRANSFER TERM
Lighting regularization in the EXISTING SYSTEM	3.2.15	Within 24 (twenty four) months from the date of signature of the INITIAL TRANSFER TERM

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ACTIVITY	ANNEX ITEM	DEADLINE
Lighting regularization IN THE REMAINING SYSTEM	3.2.15	Within 24 (twenty four) months from the date of signature of the REMAINING SYSTEM TRANSFER TERM
Survey about the movement of cyclists in the EXISTING SYSTEM	3.2.16	Up to twelve (12) months from the date of signature of the INITIAL TRANSFER TERM
Survey about the movement of cyclists in the REMAINING SYSTEM	3.2.16	Up to twelve (12) months from the date of signature of the REMAINING SYSTEM TRANSFER TERM
Survey where pedestrians circulate in the EXISTING SYSTEM	3.2.17	Up to twelve (12) months from the date of signature of the INITIAL TRANSFER TERM
Survey where pedestrians circulate in the REMAINING SYSTEM	3.2.17	Up to twelve (12) months from the date of signature of the REMAINING SYSTEM TRANSFER TERM
FUNCTIONAL DESIGN and Schedule for implementation of pedestrian circulation paving for the EXISTING SYSTEM	3.2.17	Within 14 (fourteen) months from the date of signature of the INITIAL TRANSFER TERM
FUNCTIONAL PROJECT and Schedule for implementation of pedestrian circulation paving for REMAINING SYSTEM	3.2.17	Within 14 (fourteen) months from the date of signature of the REMAINING SYSTEM TRANSFER TERM
Complete project (implementation and adaptation) of road containment devices in the EXISTING SYSTEM	3.2.20	Up to one hundred and eighty (180) days from the date of signature of the INITIAL TRANSFER TERM
Complete project (implementation and adaptation) of road restraint devices in REMAINING SYSTEM	3.2.20	Up to one hundred and eighty (180) days from the date of signature of the REMAINING SYSTEM TRANSFER TERM
Implementation of road containment devices in the EXISTING SYSTEM	3.2.20	Within 48 (forty-eight) months from the date of signature of the INITIAL TRANSFER TERM
Implementation of road restraint devices in REMAINING SYSTEM	3.2.20	Within 24 (twenty-four) months from the date of signing of the REMAINING SYSTEM TRANSFER TERM
Signaling adequacy project in the EXISTING SYSTEM	3.2.21	Up to twelve (12) months from the date of signature of the INITIAL TRANSFER TERM
Signaling adequacy project in REMAINING SYSTEM	3.2.21	Up to twelve (12) months from the date of signature of the REMAINING SYSTEM TRANSFER TERM
Implementation of signaling adaptations in the EXISTING SYSTEM	3.2.21	Up to thirty-six (36) months from the date of signature of the Initial Transfer CONTRACT
Implementation of signaling adaptations in REMAINING SYSTEM	3.2.21	Within 24 (twenty-four) months from the date of signing of the REMAINING SYSTEM TRANSFER TERM