

ANNEX 2 – TECHNICAL GUIDELINES AND LEASE PARAMETERS

AUCTION No. 01/2016-ANTAQ, FOR LEASING A PUBLIC AREA AND INFRASTRUCTURE FOR MOVEMENT AND STORAGE OF DRY BULK GRAIN LOCATED WITHIN THE TERMINAL OF OUTEIRO, IN THE STATE OF PARÁ, DESIGNATED OUT02

1. Introduction

1.1. The objective of this Annex – Technical Guidelines and Lease Parameters – is to address the following aspects of the Lease: (i) Area, Equipment and Edifications; (ii) Access to the Area; (iii) Activities; (iv) Performance Parameters; (v) Dimensioning and Operating Parameters; (vi) Technical Parameters; (vii) Deadline for Initiating Activities; and (viii) Minimum Requirements of the Basic Implementation Plan.

2. Definitions

2.1. The definitions applicable to this Annex are stated in the General Contract Conditions.

3. Area, equipment and edifications

3.1. The total area of the Lease Site – identification code OUT02 – encompasses approximately 35.000 m² (thirty five thousand square meters). The Lease site is composed of land areas on which the equipment and edifications to be utilized in unloading (unloading, internal movement, storage and dispatch) and loading operations (reception, storage, internal movement and loading) of bulk solids have already been and will be implemented according to the rules set down in the Contract and its Annexes. Annex 5 indicates the boundaries of the Lease areas.

3.2. All of the areas are located within the area of the Organized Port.

3.3. The Berths, the Berth equipment, the access bridge and the conveyor systems and common use transfer towers utilized by the Lessee should be shared with other lessees and port operators, according to rules defined by the Port Administration.

3.4. The Lessee will be responsible for all investments, additional improvements and unspecified services that may become necessary in order to achieve the Performance, Dimensioning and Operating Parameters. Projects and constructions must obey the Technical Parameters.

4. Access to the area

4.1. Highway access: through the Sotave Port road in the area of São João do Outeiro.

4.2. Maritime access: through the existent berths and the berths to be implemented.

5. Activities

5.1. The Lease site will be utilized exclusively for movement and storage of bulk solids as permitted by the Organized Port PDZ, both for offloading operations from barges and for loading and unloading ships.

5.2. The quantitative volumes of annual cargo movement indicated in the chart below are the minimum amounts guaranteed by the Lessee and must be achieved during the entire life of the Lease:

Effective Lease Contract Year	Minimum Required Movement (thousand tons)
Year 1 through 5	0
Year 6	800
Year 7 and following	900

5.2.1. For purposes of annual verification of Minimum Required Movement, only those cargoes unloaded from vessels docked at the Organized Port or cargoes loaded on such vessels in operations utilizing the Lease site will be calculated.

6. Performance Parameters

6.1. The Lessee must ensure that the facilities of the Lease site provide the following Levels of Service to Users:

Efficiency in the loading of vessels: minimum of 1,200 (one thousand, two hundred) tons per hour on average, during berth occupation time.

6.2. This calculation will be made by dividing total tonnage moved in the Berth by the total number of hours in which ships remain docked at the Berth. The movement and time spent with vessels docked for unloading purposes, as well as for any operations with barges will be excluded from this calculation.

6.3. Verification of Performance Parameters will be done on a quarterly basis within 30 (thirty) days of the end of each quarter, and will encompass the previous 12 (twelve) months including the most recent quarter.

7. Dimensioning and Operating Parameters

7.1. The projects and investments made by the Lessee in the loading/unloading systems utilized by it must at least consider the dimensions and requirements of the following types of ship:

7.1.1. Ships of the "Panamax" type with bulk solids:

- (i) Breadth of 32 (thirty two) meters
- (ii) Overall length (LOA) 280 (two hundred and eighty) meters
- (iii) Draught of 13 (thirteen) meters

7.1.2. For the barge loading/unloading system, waterway shipment barges:

- (i) Breadth of 12 (twelve) meters
- (ii) Overall length 60 (sixty) meters
- (iii) Draught of 3 (three) meters

7.2. The Lessee acting alone or together with the lessees of the areas corresponding to OUT01 and OUT03 , as indicated in this Annex, will be responsible for developing the projects needed to achieve the Dimensioning and Operating Parameters indicated below.

7.2.1. The lessees of Lease Sites OUT01, OUT02 and OUT03 will, in equal shares, be co-responsible for implementation and for the costs of the following investments and Activities, which should be concluded within the time periods determined in subitem 10.1 of this Annex

7.2.1.1. Loading/Unloading System

- (i) Adaptation of the existent ship pier, for purposes of implementation of a Berth capable of at least serving the operating needs of ships of the type defined in subitem 7.1.1 of this Annex.
- (ii) Adaptation of the existent barge pier, for purposes of implementation of at least two Berths capable of serving the operational needs of ships of the type defined in sub item 7.1.2 of this Annex;
- (iii) Implementation of a conveyor system, ship loaders and barge unloaders that will make it possible to connect the warehouses of the lessees and the existent piers, observing that:
 - a) The system should be capable of transporting dry bulk grain cargoes originating in the offloading operations of barges to the storage facilities of the lessees and, at the same time, allow for transportation of the cargoes from the storage facilities of the lessees to the ship loading systems.
- (iv) Dredging of the berth, of the evolution basin and of other segments of the surrounding area, in such a way as to allow for docking of the aforesaid ship type at the ship pier in low tide conditions (MLLW).

7.2.2. The lessees of the Lease Sites OUT01, OUT02 and OUT03 will, in equal shares, be co-responsible for implementation and for the costs of the following investments and Activities, which should be concluded within the time periods determined in subitem 10.2 of this Annex.

7.2.2.1. Loading/Unloading System

- (i) Implementation of a new ship pier with a Berth capable of at least meeting the needs of the ship type defined in subitem 7.1.1 of this Annex;
- (ii) Implementation of a new barge Berth with at least two Berths capable of meeting the needs of the vessel type defined under subitem 7.1.2 of this Annex;
- (iii) Implementation of a system of conveyors, ship loaders and barge unloaders making it possible to connect the warehouses of the lessees and the new piers, observing that:
 - a) The new system should be capable of transporting dry bulk grain cargoes originating in the offloading operations of barges to the storage facilities of the lessees and, at the same time, allow for transportation of the cargoes from the storage facilities of the lessees to the ship loading system.

- (iv) Dredging of the berth, of the evolution basin and of other segments of the surrounding area, in such a way as to allow for docking of the aforesaid ship type at the ship pier in low tide conditions (MLLW).

7.2.3. The Lessee will be exclusively responsible for implementation and for the costs of the following investments and Activities which should be concluded within the time period determined in subitem 10.1 of this Annex:

7.2.3.1. Storage System

- (i) The Lessee should implement a storage system with static capacity of at least 100,000 (one hundred thousand) tons.

7.2.4. The Lessee will be exclusively responsible for the implementation and costs of the following investments and Activities which should be concluded within the time period determined in subitem 10.2 of this Annex:

7.2.4.1. Storage System:

- (i) The Lessee should implement a storage system with an additional static capacity of at least 100,000 (one hundred thousand) tons.

8. Technical Parameters

8.1. Project Parameters

8.1.1. The Lessee will be exclusively responsible for all technical studies including, but not restricted to, field investigations, feasibility studies, conceptual and final projects, planning documents and documents involving improvements and additions required to achieve performance of the Activities at the Lease site.

8.1.2. Projects involving implantation of all improvements and construction works at the Lease site and in implementation of the new wharf will comply with all applicable municipal, state and federal codes and regulations, as well as the project standards indicated by the organizations listed below (should conflicts between the standards indicated below exist, the most restrictive code will be applied):

- ABNT
- ISO
- IMO
- MARPOL

8.1.3. Investments in construction works to be carried out by the Lessee for purposes of performing the Activities foreseen for the Lease site should consider a useful life of 50 (fifty) years.

8.1.4. The Lessee should carry out preventive maintenance routines on the equipment as recommended in the technical documentation provided by the respective manufacturers or, should such documentation not exist, based on the best international practices.

8.2. Construction Parameters

8.2.1. Any facilities to be constructed will comply with the standards and codes below:

- The standards produced by the ABNT, or when such are not available, appropriate and internationally recognized standards, including those listed in subitem 8.1.2 of this Annex;
- National, state and municipal building and construction codes.

9. Environmental Parameters

9.1. From the very start of Activities, the Lessee must guarantee the air quality standard for Total Solid Particles as determined in CONAMA Resolution no. 003/90, or in any norm that may replace it.

9.2. Samplings for this parameter should be taken through utilization of duly calibrated large-volume samplers (Hi-Vol), following the method specified in ABNR NBR 9547, or in any that may replace it.

9.3. The samplers must be installed prior to the start of Activities. Location and specification of the equipment will be subject to ANTAQ approval.

10. Deadline for Initiating Activities

10.1. The Lessee will have a maximum of 5 (five) years as of the Assumption Date to make the area, infrastructure, port facilities and Activities described under subitems 7.2.1 and 7.2.3 of this Annex available according to the terms of the Performance, Dimensioning, Operating and Technical Parameters, as required in the Contract and its Annexes.

10.2. Within the maximum time period of up to the start of the year 2034, the Lessee will make the infrastructure, port facilities and Activities described under subitems 7.2.2 and 7.2.4 of this Annex available according to the terms of the Performance, Dimensioning, Operating and Technical Parameters, as required in the Contract and its Annexes.

11. Minimum Requirements of the Basic Implementation Plan ("PBI")

11.1. Without prejudice to compliance with applicable legal and regulatory provisions, as well as other provisions of the Contract and its Annexes related to the theme, the Basic Implementation Plan to be submitted by the Lessee according to the terms of the Contract should contain the requirements of Appendix A.

Appendix A

Requirements of the Basic Implementation Plan

With an adequate level of precision, the Basic Implementation Plan (“PBI”) should include those necessary and sufficient elements required to inform the Grantor Authority of the stages and strategies to be followed in implementation of the Activities by the Lessee. The PBI should also ensure that the Lessee possesses the conditions and plans required to implement the structures necessary for performing all of the Activities that are the object of the Contract, without generating unnecessary interference in the port system and the surrounding area of the Organized Port. More specifically, the PBI should clearly and precisely demonstrate that the Lessee possesses all of the conditions required to comply with all of the Technical Guidelines and Lease Parameters indicated in the Contract and its Annexes.

The PBI should also characterize the port facilities to be used by the Lessee, including those located both in and outside the Lease site, that already exist or that will be implemented, as well as their adequacy for the requirements specified in this Annex and their consistency with the services to be rendered.

The following items determine the content to be submitted in the PBI.

A.1. Introductory Documentation:

- A.1.1. Description of the Lease site and the localities in which the Activities will be performed, including a georeferenced survey of the area, with identification of physical and/or operational interferences with surrounding lease sites and public areas and proposals for mitigating such, when required;
- A.1.2. Preliminary listing of leased assets and evaluation of the physical state and use conditions of such;
- A.1.3. Description of the operational flow and material flow chart of the Activities to be performed, indicating the equipment, major infrastructural elements and their main technical characteristics, including static storage capacity and nominal movement capacity.
 - a) In the case of multiple stages of development of the Lease site, the description above should be submitted for each stage.

A.2. Commercial Plan of the Lease Site:

- A.2.1. Description of the services to be rendered at the Lease site;
- A.2.2. Projections of cargo movement over the entire period of the Lease and underlying premises utilized.

A.3. Technical and Operational Feasibility of the Lease:

- A.3.1. Utilization of technical drawings in blueprints and cross-sections on an adequate scale, with captions and quotas, duly undersigned by a qualified professional, for purposes of presenting the overall arrangement of the proposed facility, encompassing:
 - a) Map of the location within the Organized Port;
 - b) Elements of infrastructure, superstructure and major equipment, including that already existent and to be installed;
 - c) Highway, railway, waterway and pipeline access already existent and to be installed, utilizing a unifilar diagram, as required;

- d) Proposed environmental prevention systems (gases, dust removal, trash removal, noise, among others) that already exist and/or are to be implemented, with the respective descriptions;
- e) Items “b” to “d” above should be presented for each stage, in cases involving multiple stages of development of the Lease site.

A.3.2. General description of the leased equipment or that to be acquired by the Lessee, including, in the case of equipment to be acquired, type, model, main dimensions, nominal capacity, expected efficiency, range;

A.3.3. Based on the calculation log, corroboration that the port facilities and already existent equipment and/or that to be implemented at the Lease site are sufficient to meet projected demand, as determined in the accompanying material flow chart. With this in mind, an evaluation of the dynamic capacity of the following systems should be submitted for the entire period of the Lease, including expansions planned by the Lessee:

- a) Loading and unloading systems;
- b) Storage system;
- c) Land-based reception and dispatch systems.

A.3.4. Based on utilization of the calculation log, corroboration that the port facilities and equipment already existent and/or to be installed in the Lease site are sufficient to meet the Performance Parameters.

- a) Corroboration of compliance with efficiency parameters during loading and unloading should consider estimates of the availability of berths and equipment, nominal capacities and the efficiency of the equipment, pre- and post operational time lapses and stoppages during operations, caused by a variety of reasons;
- b) The values adopted for the items above should be compatible with those normally observed in analogous terminals and situations or good international practices. Should the contrary occur, the differences should be justified and explained in the calculation log;
- c) The corroboration referred to in this item should be presented for each stage in those cases in which there are multiple stages of development of the Lease site.

A.3.5. Based on the detailed description log, corroboration that port facilities and equipment already existent and/or to be installed by the Lessee are sufficient to meet the Dimensioning and Operating Parameters.

- a) The corroboration referred to in this item should be presented for each stage in those cases in which there are multiple stages of development of the Lease site.

A.3.6. In the case of expansion of the maritime infrastructure (piers, berths, dolphins, etc.), preliminary evaluation that the works in question are feasible from the viewpoint of maneuverability and that they do not interfere with waterway access to the other port facilities in the region;

- A.3.7. Presentation of the physical and financial schedule of the undertaking, duly respecting the maximum deadlines indicated in the Contract and its Annexes, particularly the Technical Guidelines and Lease Parameters Annex;
- A.3.8. Description of the facilities utilized by the Federal Revenue Service and other inspection entities at the Organized Port, as required.

A.4. Environmental Feasibility of the Lease Site:

- A.4.1. Utilizing the detailed descriptive log, evaluation of the impacts of the Lease on land traffic of trucks in the surrounding area, including:
 - a) Estimate of the highway vehicle flow involving the terminal as required to achieve forecast movement;
 - b) Description of the actions to be implemented by the Lessee with the objective of avoiding formation of waiting lines of vehicles, including constitution or utilization of regulating patios aimed at minimizing these impacts;
- A.4.2. Utilization of the detailed descriptive log for purposes of evaluation of the environmental impacts of performance of the Activities, together with mitigating measures to be adopted, such as engineering solutions and management measures aimed at controlling emissions of particulates, treatment of effluents and solid waste, among others. Furthermore, the PBI should foresee a system (state-of-the-art technology) capable of ensuring confinement, filtering, separation and exhaustion of particulate material, including:
 - (i) Transfer points between shipping companies, equipped with aspiration systems;
 - (ii) Dust aspiration of the area utilized for operation of trucks and/or railcars and utilization of baghouse filters, centrifugal exhaust systems, discharge valves, pipeline network with captors and flaps for adjusting discharge and chimney for discharging clean air;
 - (iii) Installation of platforms around the manifolds for purposes of maintenance in the solenoids, as well as compact filters with internal filtering hoses.
- A.4.3 Attestation of the efficacy of the measures to be implemented based on a comparison with analogous terminals and situations, as well as adoption of best international practices.