**Annex – Technical Guidelines and Lease Parameters**

**AUCTION No. 04/2016-ANTAQ, FOR LEASING A PUBLIC AREA AND INFRASTRUCTURES FOR MOVEMENT AND STORAGE OF BULK MINERAL SOLIDS LOCATED WITHIN THE ORGANIZED PORT OF SANTARÉM, IN THE STATE OF PARÁ, DESIGNATED STM02.**

## 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.

### Area, equipment and edifications

2.2. The total area of the Lease – identification code STM02 – encompasses approximately 26,600 m² (twenty six thousand, six hundred 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 mineral solids compatible with these facilities and equipment 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 area.

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

2.4. During the life of the Contract, Berth 101 of Pier 100 of the Santarém Port will be subject to the following system of docking priority:

2.4.1. First priority is passenger loading and unloading operations;
2.4.2. Second priority is bulk mineral solids unloading operations destined to the Lease Site;
2.4.3. Subsequent priorities according to rules defined by the Port Administration.

2.5. Other conditions and rules on access to the public Berths are defined by the Port Administration.

2.6. 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.

## 3. Access to the area

3.1. Highway access: through Rua Vera Paz, Rua Vinte e Cinco de Julho and Rua da Juventude, which connect to Highway BR-163.

3.2. Maritime access: through the public Santarém Port Berths.

## 4. Activities

4.1. The Lease site will be utilized for movement and storage of bulk mineral solids.

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

| Lease Contract Execution Year | Minimum Required Movement (thousand tons) |
|---|---|
| Year 1 and 2 | 0 |
| Year 3 | 300 |
| Year 4 and 5 | 400 |
| Year 6 and the following | 500 |

4.2.1. For purposes of annual verification of Minimum Required Movement, only the movement of bulk mineral solids will be considered and only those cargoes unloaded from vessels docked at the Organized Port in operations that utilize the Lease Site.

4.2.2. For purposes of annual verification of Minimum Required Movement, the movement of cargoes other than bulk mineral solids and loading of bulk mineral solids will not be included, though such operations may be authorized by the terms of the Contract and its Annexes.

## 5. Performance Parameters

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

Efficiency in the unloading of vessels: minimum of 230 (two hundred and thirty) tons per hour on average, during berth occupation time.

5.2. 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.

5.3. 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.

## 6. Dimensioning and Operating Parameters

6.1. The Lessee should make the investments and perform the Activities in such a way as to comply with the Dimensioning and Operating Parameters indicated below.

6.1.1. Loading and Unloading System

6.1.1.1. It will be the task of the Lessee to adapt Berth 101 of Pier 100 in such a way as to allow for docking of ships of at least 200 m in overall length (LOA) whether through expansion of Pier 100 or through implementation of docking dolphins or equipment and solutions.

6.1.1.2. The adaptation proposal put forward by the Lessee should consider that a new access bridge will be implemented at the western extremity of Pier 100, requiring that vessels docked at Berth 101 the maintained at a secured distance.

6.1.1.3. The adaptation propose the by the Lessee, as well as the equipment installed by it should not make it unfeasible to operate with other cargoes in Berths 101 and 202 of Pier 100

6.1.2. Storage System

6.1.2.1. The Lessee should implement storage facilities for bulk mineral solids with static capacity of at least 75,000 (seventy-five thousand) tons.

## 7. Technical Parameters

7.1. Project Parameters

7.1.1. 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 bidding/construction documents referring to improvements and additions required to achieve performance of the Activities at the Lease site.

7.1.2. Projects involving implantation of all improvements and construction works at the Lease site and in implementation of the new pier 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

7.1.3. 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.

7.1.4. 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.

7.2. Construction Parameters

7.2.1. 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 7.1.2 of this Annex;
- National, state and municipal building and construction codes.

## 8. Environmental Parameters

8.1. 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.

8.2. 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.

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

## 9. Deadline for Initiating Activities

9.1. The Lessee will have a maximum of 2 (two) years as of the **Assumption Date** to make the area, infrastructure, port facilities and Activities available according to the terms of the Performance, Dimensioning, Operating and Technical Parameters, as required in the Contract and its Annexes.

9.2. The quantitative volumes of annual movement of cargoes indicated in item 4.2.of this Annex should be ensured by the Lessee within the time periods indicated therein, while the maximum time allotted as foreseen in this item will not be applicable for this purpose.

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

10.1. 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 georeferencing 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 unloading of vessels 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 and railway compositions in the surrounding area, including:

a) Estimate of the 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.

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.