

**CHAPTER VI**  
**RAILWAY STATION**

**ARTICLE 23**

**General**

In addition to the other infrastructures available at the TBP, there is also a railway line crossing the Park. By installing two additional parallel railway lines in the TBP, the standard Railway Station of the Park was formed.

To make sure that the railway station will function properly and without any hindrances, it will be governed by the provisions laid down herein. The applicable provisions of the Ministry of Transport relating to the operation of the railway network and the railway stations will supersede the provisions laid down herein. This chapter:

- sets out the operating framework of the railway station;
- specifies the types of rail cars to be used and the materials to be carried by each car;
- specifies the types of machinery required for carrying out product loading and unloading operations in the station;
- explains how to handle the goods concerned;
- specifies any safety issues relating to the protection of staff and goods;
- suggests maintenance methods for the facility, to keep it in good working order.

The railway station will be part of the TBP and will be included in its jointly-used areas. Its key mission is to provide the EUs with services in the TBP. However, services may be provided to any company, even those established outside the TBP, after a request is filed and the station officers are notified, in the context of a bilateral management agreement that must have been concluded by and between the party concerned and the BPM, always on condition that this will not prevent the services rendered by the railway station to the EUs operating in the TBP.

The relevant pricing policy will be determined by the BPM. The policy will, depending on the handling method, type and duration, specify the cost incurred for the EUs to receive railway station services and use the railway station. The cost incurred for undertakings established outside the TBP to receive railway station services and use the railway station may also be determined by bilateral agreements.

The railway station will be able to handle containers, large amounts of cargoes and goods on rail cars, whether arranged on pallets or not.

The railway station area is crossed by the Axios Connecting line, which is broken down into two auxiliary tracks, approximately 150m in length, in the Park. This allows for the simultaneous

loading/unloading of two trains - Point A in Figure 2. The trains may be loaded/unloaded onto/from a truck parked in the inner roads constructed next to the railway line – Points B in Figure 2. The area includes a storage lot where 36 40ft containers (12.19m x 2.44m) can be placed on the ground – Point C in Figure 2. The trucks will reach the unloading area via Aristotelous Avenue, i.e. the central road of the Park, and using a road that has been constructed – Point D in Figure 2.

The railway station will be capable of handling:

- (A) closed rail cars used to transport goods, whether arranged on pallets or not;
- (B) containers on rail cars;
- (C) goods which are cargo units in themselves, e.g. agricultural machinery.

**ARTICLE 24**

**Services rendered, types of rail cars that can be used**

Following are the services rendered using the railway station:

- (A) loading/unloading of cargoes arranged on pallets from a rail car to a truck;
- (B) loading/unloading of cargoes which are not arranged on pallets from a rail car;
- (C) loading/unloading of containers.

The railway station will not be capable of handling:

- hazardous cargoes e.g. explosives, toxic materials, chemicals, flammable materials, etc.);
- cargoes in bulk (except in exceptional cases, with consent from the BPM).

All the above must be transported on appropriate rail cars, as there is an appropriate type of rail car for each type of cargo. Table 2 below describes all types of rail cars. Only the first 3 of the 5 types of rail cars used to transport cargoes to the TBP railway station.

**Table 2** Types of rail cars

Type of rail car	Type of products transported	Examples
Boxcar	Materials that need protection from the environment and/or vandalism or theft	paper, electronic equipment, hospital materials
Flatcar	Materials that do not need protection from the environment Additional materials that do not fit in another transportation vehicle	vehicles, bulky cargoes, containers
Gondola car	Materials that do not need protection from the environment The sides of the car will only prevent the products from moving	metal bars, scrap
Hopper car	Materials that may be blown away by the wind and need protection from the environment	gravel, coal, sand, wheat
Tank	Liquids in bulk	water, chemicals, beer

**ARTICLE 25**

**Loading and unloading equipment and machinery**

The TBP will not make available cargo handling machinery for the management of the station. The customers or the company responsible for the management of the railway station must have the required machinery at their disposal. The machinery required for these operations are:

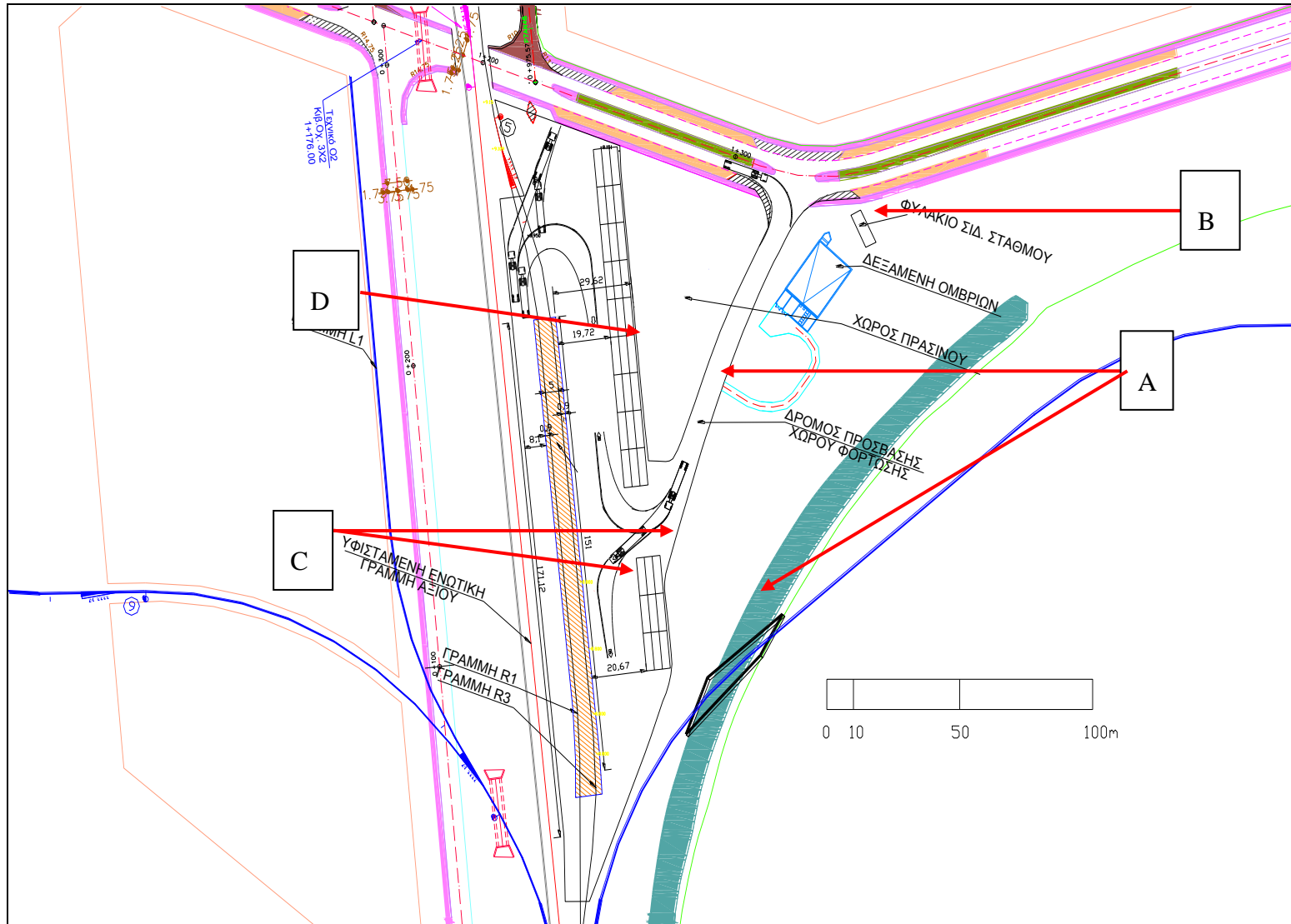


Figure 2 Plan view of the railway station

**(A) Diesel (or gas) forklift**

This type of machinery will be used for loading/unloading pallets onto/from the rail cars.

**Table 3** Technical characteristics of diesel (or gas) forklifts

<b>TECHNICAL CHARACTERISTICS</b>		
1.	Forklift lifting capacity with a 600mm center of load at a height of 3000mm:	1500kg (min)
2.	Maximum height of forks:	3000mm (min)
3.	Extended mast height when the pallet is placed at a height of 3000	3900 (max)
4.	Side movement of forks, right - left	+/- 50mm (min)
5.	Working aisle with 1000 or 800mm deep pallets, i.e. with the pallet on (europallet, 800*1200mm, or industrial pallet 1000*1200mm):	3600mm (max)
6.	Lower mast height (minimum door clearance height):	2200mm (max)
7.	Maximum gradeability, with a 1500kg load:	8% (min)
8.	Forward or backward movement - rotation of mast or forks	2/5 degrees (max)
9.	Length of forks	1150mm

**(B) Manual pallet lifts**

This type of machinery will be used to move the pallets inside the rail cars and closed trucks. They will have a lifting capacity of 2000kg.

**(C) Special container handler.**

Technical information and specifications are provided in Table 4 below:

**Table 4** Key characteristics of special container handlers

<b>KEY CHARACTERISTICS</b>	
1.	Working aisle: 15m (max)
2.	Maximum load handled: 42tn
3.	Maximum gradeability, with a 42tn load: 8% (min)
4.	Stacking height: 5 containers
5.	The containers will be handled from their upper part (with special lifting grabs)
6.	The machinery will be used to stack empty and laden containers
7.	The machinery will be used to unload and load containers from/onto trains

**ARTICLE 26**

**Work scheduling and “customer time” allocation procedure**

Due to the special handling of trains, the parties interested in using the Railway Station must follow a strictly specified procedure, to ensure that the station runs smoothly.

Firstly, the interested party must notify the railway station operating center, specifying:

1. The train arrival time

2. The type of rail car
3. The type of goods
4. The quantities involved
5. The station usage time
6. A request for placing the goods in the asphalt-coated area for a specific period of time, if it is impossible to load the goods onto a truck immediately.
7. A commitment that the machinery and staff required for loading/unloading will be made available.
8. A commitment that the number of trucks required for loading will be dispatched within such specific period of time as designated in accordance with the discretion granted.

Then, after the interested parties obtain approval from the Station, they must see to it that the train is dispatched, to arrive on the agreed time. They must provide in time the machinery required to carry out the works, as well as the staff and vehicles needed. The scheduling aims to book specific periods of time for each customer.

## **ARTICLE 27**

### **Cargo handling method**

#### **27.1 ENTRY-EXIT OF TRUCKS**

Given the layout of the area, the railway station area has one common point of entry and exit for trucks. The facility officers must manage the trucks in an orderly and smooth manner, to prevent traffic problems caused by trucks trying to enter and others trying to exit the station. The access road is wide enough, approximately 7.5m, for the trucks entering the station to wait until they are allowed to move on. There is an area where parking is permitted on the central road too (Aristotelous Avenue), before the entrance to the railway station, at the road side. As regards longer waiting times, there is also a dedicated truck park in the TBP (Figure 3).

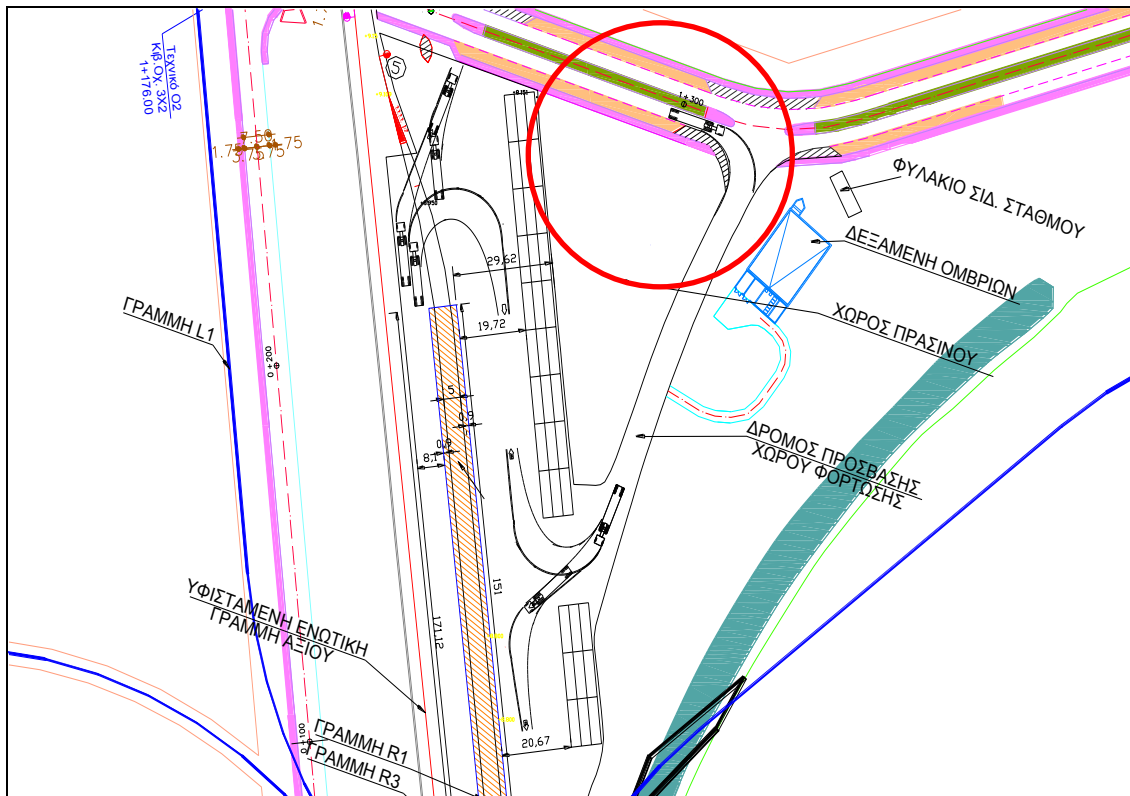


Figure 3 Entry-exit of trucks to/from the railway station

## 27.2 HANDLING CONTAINERS

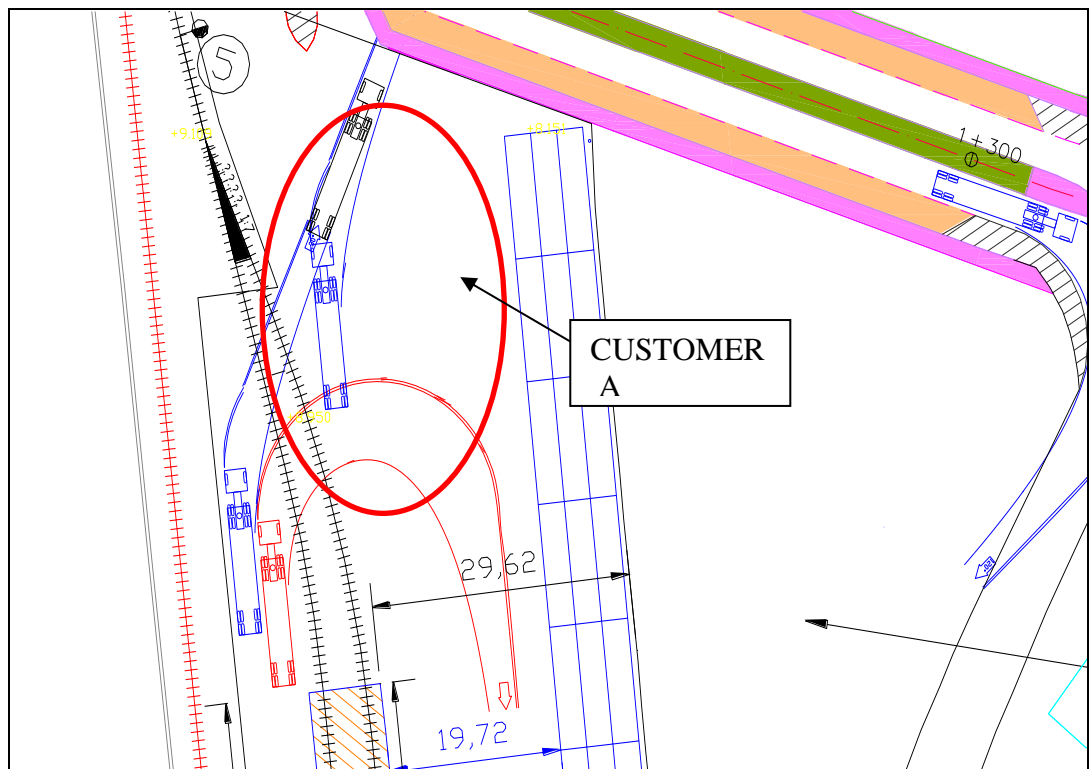
27.2.1 To ensure that the Station functions better, when there are two trains in the station, the one carrying containers must, if at all possible, be on the container stacking side, whereas trains with closed cars must park on the other side.

The main reason for this is that the container handler needs a minimum maneuvering space. The space needed for the handler to make a complete turning circle is 15m. The free space in the railway station between the dedicated container stacking area and the train is approximately 19m. This allows for using the handler and having a truck temporarily parked, to load the container onto the truck trailer or unload it therefrom.

27.2.2 Management of the container stacking area:

1. Three (3) containers will be placed one behind the other, and the rest will be stacked one on top of the other, depending on the needs and their weight. Figure 4 below shows how to handle the containers using the handler. The handler will load and unload containers from two rail cars and will then place them at their appropriate locations. It will also be possible to rotate the containers if the space available is limited.

2. The key idea concerning the loading/unloading of containers is to use 9 container locations per customer, which means 3 rows with 3 containers each.

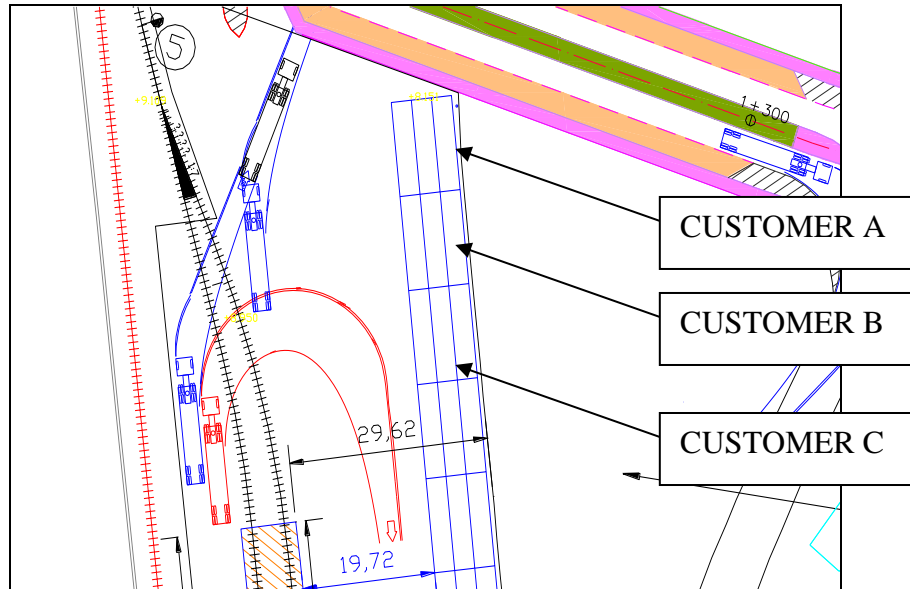


**Figure 4** Container placement per customer

It is possible to place 3 containers, one behind the other, in each space.

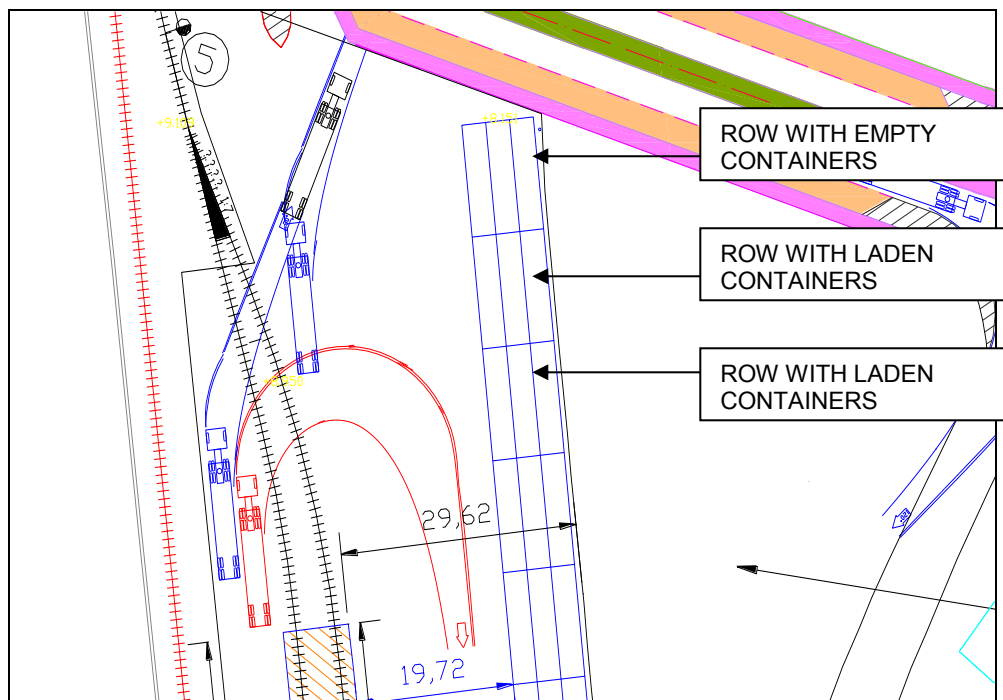
Furthermore, two auxiliary lines have been drawn in front of the storage area, to demarcate the area and help the forklifts during placement.

In emergencies or in the case of “small-size customers” as regards the number of containers handled, it is possible to define a row consisting of 3 containers relating to one (1) particular customer. Another row may be defined for another customer, etc. Figure 5 below shows an example.



**Figure 5** Alternative container placement per customer

3. **One of the rows (facade) must be used for placing empty containers**, and the other two (2) rows must be used for placing laden containers. In this way, the same customer will always be able to use the same space allocated to him, to place empty or laden containers.



**Figure 6** Detail of a container placement arrangement

4. If third parties are allowed to use the railway station area, allocating each storage area to a different customer will contribute towards better management and control.

5. Where containers are to be loaded directly onto a truck, this will be made possible by having the truck approach the road used for movement and then using the handler to grab the container off the train and place it onto the truck trailer.

There are two key container types in terms of dimensions: 20ft containers and 40ft containers Table 5 below shows the technical characteristics of these containers.

**Table 5** Container dimensions and technical characteristics

	20ft		40ft	
SPECIFICATIONS				
INTERNAL CAPACITY	32.8m <sup>3</sup>		67.2m <sup>3</sup>	
CARGO WEIGHT	21,640kg		26,500kg	
TARE WEIGHT	2,360kg		3,980kg	
DIMENSIONS	EXTERNAL	INTERNAL	EXTERNAL	INTERNAL
Length	6.05m	5.90m	12.19m	12.01m
Width	2.44m	2.35m	2.44m	2.35m
Height	2.59m	2.38m	2.59m	2.38m
DOOR DIMENSIONS				
Height	2.28m		2.28m	
Width	2.33		2.33	

The maximum number of laden containers that can be stacked one on top of the other must be approved in consultation with the Station administrator, taking into account the specifications relating to the maximum permissible pressure applied on the station floor. Account must be taken of the fact that a full 40ft container applies a pressure of approximately 1000 kg/m<sup>2</sup> on the ground.

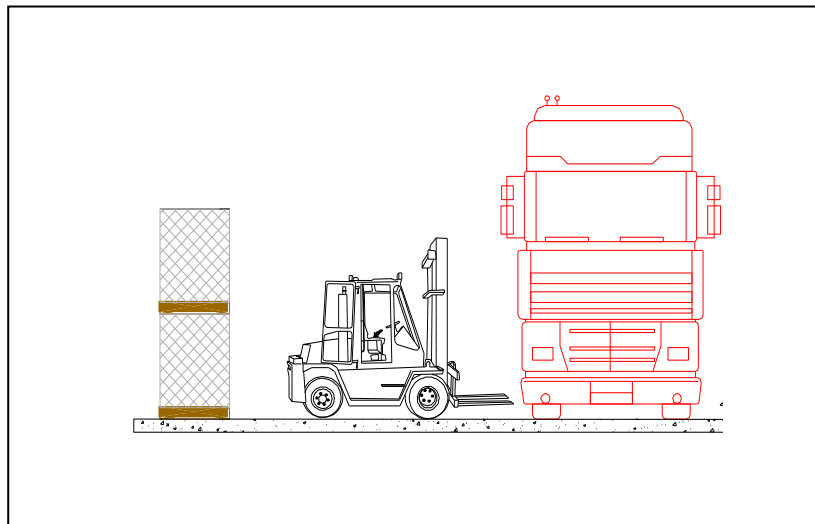
**27.3 HANDLING CARGOES ON RAIL CARS**

Where the handling needs to take place in a **closed rail car**, there are two alternatives depending on the type of cargo.

27.3.1 If the cargo is **not arranged on pallets**, workers need to enter the rail car. The truck must park right next to the rail car and the goods must be taken manually from the car to the truck. To ensure better handling and for safety reasons, metal ramps must be used to fill the gap between the car and the truck.

27.3.2 This is what needs to be done if the cargo is **arranged on pallets**. In this case, workers will take the goods up to the rail car door using a manual pallet lift and will then use a diesel (or gas) forklift to lift and place them onto the truck.

Figure 7 below shows how to load/unload goods from the side.



**Figure 7** Loading trucks from the side

27.3.3 Finally, if the cargo on a rail track is a **large piece of machinery or a bulky material** which cannot be moved by a forklift, the recipient must have a special type of machinery brought in to unload it.

#### **27.4 RECORDING THE DETAILS OF TRUCKS - TRAINS**

To ensure that the railway station functions properly and to be able to provide information to any interested party, the railway station administrator must keep a file of all the customers served, the types of products moved, the rail cars that entered in the railway station, the trucks used to bring the products in or out and the containers placed on the ground.

The above information must be arranged in tables. It is suggested that these tables should have at least the following fields to be completed:

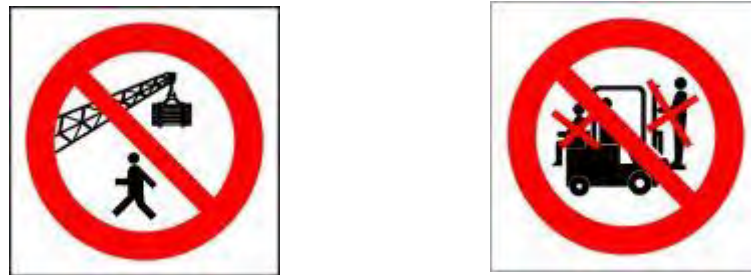
- The following information must be included concerning the movement of trains: No, Date, Customer, Rail Car Type, Entry Time, Exit Time, Platform Number, Comments.
- The following information must be included concerning the containers stored: No, Customer's Name, Container Number, Container Location, Entry Date & Time, Exit Date & Time, Comments.
- The following information must be included concerning the trucks that entered the station: No, Date, Truck Registration Number, Driver's Name, Name of the Customer for whom the transportation took place, Entry Time, Exit Time.

**ARTICLE 28**

**Safety rules**

To ensure the unhindered operation of the station, safety rules must be adhered to.

- (1) The railway tracks must be handled by qualified and properly licensed staff only.
- (2) There must be a steady flow of trucks, which should move towards the loading/unloading area only after being instructed to do so by the station officers. All trucks must stop at the entrance to the station to state the purpose of their arrival. The employee stationed at the entrance must then decide and direct the trucks, as to how and where they will be moving.
- (3) Where containers are to be stacked one on top of the other, the pressure applied on the ground must not exceed the floor strength specified by its manufacturer, which has been calculated at 100 kN/m<sup>2</sup>.
- (4) There must be no non-workers moving in the station area, e.g. visitors and waiting drivers.
- (5) Any people moving in the area must not be under suspended cargoes. Signs must be put up to remind them of this prohibition (Figure 8).
- (6) Machinery operators must have obtained the required operator licenses from the competent authorities. Forklifts must not be used to carry any people other than the driver. Signs must be put up to remind them of this prohibition (Figure 8).



**Figure 8** Warning signs

(7) Employees must wear a work uniform bearing the mark “Railway Station - Cargo terminal” and the required protective equipment, e.g. hard hats, safety boots, reflective vests, gloves. Otherwise, the TBP’s BPM may prevent them from entering the station.

Signs must be put up in the station to denote that using the above protective equipment is mandatory (Figure 9).



**Figure 9** Signs concerning the mandatory use of protective equipment

- (8) No works will be carried out after expiry of the time specified by the facility officers.
- (9) The (road and rail) signs and the lines, as put up and drawn in the railway station area, must be strictly obeyed, to prevent risks.
- (10) The fire-fighting equipment, as specified and installed by the manufacturing company, must be checked regularly and must be accessible, to be used as necessary. Some of these items of equipment are: dry powder fire extinguisher, carbon dioxide fire extinguisher, wheeled fire extinguisher, fire station, fire cabinet, fire hydrant.
- (11) Garbage needs be collected and removed from the surroundings, to reduce the risk of fire, which could pose risks to the facilities, machinery and stored containers.
- (12) If there is a diesel or gas tank installed to supply the forklift with fuel, it must comply with all the safety specifications, and it must be sheltered and checked regularly to detect any problems. The surroundings must be clean and fitted with the necessary fire-fighting material.
- (13) All moving machinery must be fitted with amber signal lights and the required back-up beepers.
- (14) Any trucks exceeding the 40 km/h speed limit, as specified for the traffic carried out in all TBP roads, will not be allowed to enter the Station area.
- (15) All staff, visitors, operators and drivers must be able to use the jointly-used host and sanitary areas and the AC of the TBP.
- (16) Whether trucks and machinery can park in the controlled Truck Park will be decided on the basis of an agreement reached with the BPM.
- (17) An agreement must be reached with the BPM concerning the security of equipment, vehicles or containers in the railway station area.

## **ARTICLE 29**

### **Maintenance of facilities**

To make sure that the railway station functions properly, particular care needs to be taken for its maintenance aiming to ensure the smooth operation of the facility.

The term "Maintenance" includes the following:

1. To carry out checks and preventive maintenance aiming to ensure the ongoing and proper operation of the facility.
2. To implement the required corrections and improvements and to restore failures, to ensure that the facility functions properly.
3. Upon completion of any preventive or emergency maintenance operation, the competent technician will record the maintenance works carried out in a special form.
4. Maintenance will be carried out in accordance with the relevant instructions and the technical manuals provided by the equipment manufacturers, with the relevant regulations and standards (Technical Guidelines from the Technical Chamber of Greece, ELOT, etc.), as well as with the various provisions and guidelines included in the project construction designs/studies.
5. To maintain the fire-fighting equipment, which falls under the responsibility of the station administrator.
6. To redraw the lines, whenever it is found that they are no longer clearly noticeable.
7. To make sure that the road deck is always kept in good condition.
8. To have the rail track maintained in accordance with the Hellenic Railway Organization's specifications.