Program of Requirements for demarcations around job sites in the Terminal

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Approval

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ABBREVIATIONS

A	Aviation
AAS	Amsterdam Airport Schiphol
ISM	Infrastructure & Systems Management (A/TRE/ISM)
SE	Structural Engineering
TRE	Terminal Real Estate, Terminal Manager (A/TRE)

1 Introduction

General
Schiphol is constantly changing to implement new concepts and integrate new construction and expansion. These changes often involve construction work in the existing Terminal or at the boundary zones between new and existing structures. During execution, the primary process cannot and may not be disrupted by the construction activities. The job site must therefore be separated from the primary processes. Schiphol places certain requirements on demarcations around job sites.

Purpose of this document
The purpose of this document is to describe demarcations that may be used in relation to the scope of the construction activities and their location.

Note!
This document provides guidance, and readers may recognize situations in which supplementary requirements can and/or must be set.

Demarcation
This document covers the use of demarcations in the Terminal complex or at the boundary zone between new and existing structures. Demarcations within new construction zones are not covered by this document.

Document management
Management of this Program of Requirements and monitoring compliance with the PoR in construction and renovation projects is carried out by A/TRE/ISM. The responsible department is Structural Engineering.

2 Execution

2.1 Glossary of terms and definitions

Glossary of terms

Demarcation
A demarcation is a temporary partition or boundary of a job site in an operational and/or commercial area.

Job site
A job site is an area in which activities are executed and where materials and tools are used.

Definitions

Operational areas
- Clean Area: areas bordered and controlled by the Royal Netherlands Marechaussee.
- Non Clean Area: areas outside the control of the Royal Netherlands Marechaussee.
- Protected Area: areas outside the control of the Royal Netherlands Marechaussee, but under the control of others, such as reclaim halls, BASS, platforms, and the like.
- Unprotected Area: areas intended for personnel, suppliers, warehouses, and the like.
- Public Areas: areas accessible to the public and under the control of AAS.
- Job site: areas within the demarcations and where third parties are working.

Demarcations
- Poles and webbing (Tensabarriers): does not form a physical barrier for people or animals.
- Hoardings: partitions which form a physical boundary around the job site.
- Anti-dust partition: partitions that provide not only a physical barrier, but also serve an anti-dust and anti-noise function.
- Scissor fences: low expandable fences that do not form a physical barrier to people and animals.

Work areas
- Job site in a Clean Area
- Job site at the edge of a Clean Area
- Job site in a Protected Area
- Job site at the edge of a Protected Area
- Job site in an Unprotected Area
- Job site in a Public Area

2.2 Information transfer

The execution of a demarcation plan and the related phasing must be made known to stakeholders, departments, services and/or users of areas such as:
- Airport Fire Department
- Haarlemmermeer Fire Department
- Manager and/or coordinator of files such as: emergency exits and emergency plans, operating permit drawings
- Project organizations for new construction, renovations and conversions
- Airport departments such as: Service Center, Passenger Services, Security, Consumers, SRE rentals (via the reference group where necessary)
- Structural Engineers
- Users of areas where a demarcation is placed

The information must be made known via the consultation structures established by AAS, such as the procedure for Work Permits via ITRIS and the WOT (Terminal work consultation process).

2.3 Information to be provided

An overview will have to be drawn up where the demarcations are to be placed. Coordination will then have to take place regarding:

- The type of demarcation necessary depending on the nature of the work.
- Where the demarcation(s) must be placed.
- Extra facilities needed in relation to the location and type of work.
- Drawing up a map of the placing of demarcation(s) in relation to emergency plans, flow of operational process, fire department plan of action.
- Update the operational permit drawings to the latest situation, in relation to the fire-alarm system and any changes to it.
- Fit the demarcations with information signs if necessary.
- Coordination regarding decoration, atmosphere-improving resources and/or advertising that may be applied to barriers that are erected for longer periods.

2.4 Revised drawings

If the fire-alarm system is modified owing to demarcations, all details of the revision must be submitted to the manager. The content of the revision details are checked by the manager. After approval, these revision details are entered into the central database (incl. Terminal Viewer), including the revision details of the fire-alarm system (stamp diagrams) for the duration of the work. The fire department may also submit any omissions detected in the fire-alarm system or details considered necessary (these details must then be entered into the database).

3 Functional requirements

3.1 Poles and webbing (Tensabarriers)

Only to be used to demarcate for less than 2 hours. Machines may not be used behind these poles and webbing owing to noise, dust, and the like.

3.2 Scissor fences

To be used to demarcate job sites and engine rooms of fixed installations, whereby the rotating parts are under continual oversight. Machines may not be used behind these scissor fences owing to noise, dust, and the like.

3.3 Hoardings

Hoardings come in different heights:

Medium-high hoardings
These are not desirable. These may only be used as a physical barrier to be erected and moved quickly after consultation with Operational Services (Floor Managers) and Technical Management (A/TRE/ISM).

High hoardings
To be used for prolonged demarcation of the job site and equipped with a lockable access door (that opens to the inside) that the Fire Department has a key for. If there are installations within the job site, for which access by the Breakdown Service and Technical Management must be assured, the hoardings must be equipped with a construction cylinder from the Technical Spaces locking plan and equipped with a door closer.

While work is being carried out, the hoardings and anti-dust partitions must be maintained by the project's (chief) engineering contractor, to ensure that they continue to comply with the prescribed quality requirements. They must remain clean and straight throughout the entire project. If the hoardings are moved during the project, it is important that the quality of the partitions remains the same and that the required Security standards are guaranteed. This also applies to any information signs, advertising, decoration and ornamental images secured to these partitions.

If an anti-dust partition is also given a fire-resistant function, this is easily solved by using a fire blanket, type OW51 (Hi Temp).

3.4 High anti-dust partitions

Use as demarcation of the job site if there is a high probability of dust and noise. If the high anti-dust partitions do not reach to the underside of the floor above, a closed ceiling must be added to these partitions. The access door complies with the hoarding described above.

For larger job sites (> 20 m2), the demarcation must be equipped with one (or more) emergency exit(s) that can be opened from the inside. Emergency doors may not be used for access to the job site.

3.5 Job site in a Clean Area

The demarcation using high anti-dust partitions and hoardings equipped with a lockable access door from the Technical Spaces locking plan, for which the Fire Department and the Royal Netherlands Marechaussee have their own key. Contractor(s) may be issued with their own key.

3.6 Job site at the edge of a Clean Area

This demarcation may only be of the high hoarding or anti-dust partition types. This demarcation must be equipped with a lockable access door from the Technical Spaces locking plan, for which the Fire Department and the Royal Netherlands Marechaussee have their own key. Contractor(s) may be issued with their own key.

Depending on the nature of the work and the passageway, a second door that connects with the other side of the boundary divide will be equipped with a lock from the Technical Spaces locking plan, for which only the Fire Department and the Royal Netherlands Marechaussee have a key. Any emergency door(s) that use(s) an emergency route through the boundary divide must be equipped with an emergency door system connected to Access Management. See the requirements of A/TRE/ISM/FSE (Fire Safety Engineering) and A/SEC (Security)

3.7 Job site at the edge of a Protected Area

See job site at the edge of a Clean Area.

4 Operational requirements

4.1 Poles and webbing, scissor fences, low hoardings

Signage
In case of blocked entrances, passageways and emergency exits, temporary signs must be put in place at the demarcation. These signs must comply with the guidelines to be determined by AAS.

Materials and tools
Materials and tools may not be accessible to the public. These must be stored immediately after use. Immediately after use, electrical (manual) tools must be disconnected from the mains power, and battery charged tools must be stored.

Unattended job sites
If the job site is unattended, materials and tools must be stored in a lockable chest. These tool chests must be kept presentable and feature a company logo and telephone number.

Electrical cables and hoses
Cables and hoses that have to be laid outside the job site may not form an obstacle to the public. Cables and hoses may not be under voltage or pressure any longer than is absolutely necessary.

4.2 High anti-dust partitions and hoardings

Signage
In case of blocked entrances, passageways and emergency exits, temporary signs must be put in place at the demarcation. These signs must comply with the guidelines to be determined by AAS.

The access door to the job site must state that the job site is only accessible for authorized persons. Emergency exits must be clearly marked as such, and equipped with stickers on the outside, as required for emergency exit doors.

Locking the job site
The access door must be locked using a padlock or cylinder lock, for which only the authorized contractor has a key. The Fire Department must always have access to the job site. Access doors must be equipped on the inside with a door closer and some form of locking mechanism to prevent unauthorized persons from entering. During the construction activities, the access door must be kept closed.

Releasing the job site
Job sites in Clean Areas, Protected Areas and job sites at the edges of these are released for use after having been checked by Security or the Royal Netherlands Marechaussee. Every change to the demarcation must be requested in advance, then re-checked and re-released.

5 Technical requirements

5.1 Structure and materials

The partition must be made of fire-resistant materials. The material may not contribute to fire propagation and/or smoke production. Furthermore, the materials must be free of toxic substances and must not form droplets in a fire. Materials must comply with the requirements as stated in the document *Brandtechnische eigenschappen van materialen Terminalcomplex* [Fire-specific properties of materials in the Terminal Complex], under the management of A/TRE/ISM/FSE (Fire Safety Engineering).

If necessary, the partition must also be fire-resistant for 30 or 60 minutes.

Demarcations erected in place of a spatial partition (such as facades, fire-resistant walls, function-dividing walls, and the like) must have the same physical properties as the original partition. These include:

- Acoustic insulation
- Thermal insulation
- Fire-resistance (30 or 60 minutes WBDBO)
- Water-repellent, moisture-resistant and/or damp-proof
- Dust-resistant (seams must be sealed!)
- Protection of open ceilings with fire blanket, type OW51 (Hi Temp)
- Sun blinds on outside facades
- Air permeability of outside facades

5.2 Hoardings

Dimensions

- Partition: depending on the nature and scope of the construction activities: varying from 2.40 meters high to ceiling height.
- Windows:
  - 0.90 m to 2.10 m (from the floor) at locations where there are seats
  - 1.20 m to 2.10 m (from the floor) at locations where there are no seats

Material

- Aesthetically responsible (white melamine on the side of operational areas)
- Shockproof and impact resistant
- Resistant to chemicals
- Anti-static
- Paintable
- Water-repellent
- Can be cleaned with water and simple domestic cleaning agents

NOTE: no plastic construction foil may be used above or in the partitions for fire safety reasons. If a dividing layer is required, use fire blanket type OW51 (Hi Temp).

Accessories

- Fasteners
- White tape along the seams (PVC-free)
- Door equipped with proper hinges and locks (class 2 key)

5.3 Hoardings as indoor partition wall

When connecting a new structure to an existing one that remains in use by the client:

Dimensions
- Partition: up to the underside of the floor above. If this is not possible (due for instance to a mezzanine floor), a roof must be fitted to the partitions, so that the job site can be fully sealed off from the operational area.
- Windows:
  - 0.90 m to 2.10 m (from the floor) at locations where there are seats
  - 1.20 m to 2.10 m (from the floor) at locations where there are no seats

Material
In compliance with hoardings.

Accessories
- Connection options for dust-proofing
- Fasteners
- White plastic seal strips along the seams (PVC-free)
- Double door equipped with proper hinges and locks (class 2 key)

When connecting a new structure to an existing one that is not in use by the client:

Dimensions
- Partition: up to the underside of the floor above.
- No windows.

Material
In compliance with hoardings.

Accessories
- Connection options for dust-proofing
- Fasteners
- White tape along the seams (PVC-free)
- Door equipped with proper hinges and locks (class 2 key)

A solution in the form of a metal stud wall is permitted, as long as it is of equal quality.

5.4 Hoardings as outside wall

Dimensions
- Partition: up to the underside of the floor above.
- Windows:
  - 0.90 m to 2.10 m (from the floor) at locations where there are seats
  - 1.20 m to 2.10 m (from the floor) at locations where there are no seats

Material
- In compliance with hoardings
- Meets physical requirements

Accessories:
- Connection options for dust, wind and water proofing (seal underside if there is a risk of rain ingress)
- Fasteners
- White plastic seal strips along the seams (PVC-free)
- Double door equipped with proper hinges and locks (class 2 key)

6 Fitting out partitions

The manager of a (construction) project must ensure the correct operational fit-out of the anti-dust partitions and hoardings. The fit-out of the partitions can be divided into three types of information provided. This subdivision also relates to a division concerning responsibilities:

1. Routing and wayfinding (A/PS/PBI)
2. Communication (D/CC/CT)
3. Consumer marketing and atmosphere (R/CM)

The project manager must coordinate the fit-out of the partitions with the above-mentioned responsible departments and arrange approval with them. Fitting out partitions requires prior permission and approval.

Routing and wayfinding
The information on the partitions is first of all intended to inform passengers about the changed situation relating to routing and wayfinding (signage).

Temporary signage is used in the following situations:

- If the original signage is blocked by the erection of the demarcation. In that case, the existing illuminated signs are moved and modified where necessary (with a different arrow, for instance). It is also possible that additional illuminated sings may be required.
- If auxiliary signage is required to clarify the situation, this is placed non-illuminated on the demarcations.

Temporary signage (illuminated and non-illuminated) is applied by the project manager, or a person assigned to this task by the project manager in consultation with A/PS/PBI. A proposal for this purpose must be submitted. After approval of the proposal, the signs and/or stickers are ordered and placed by the project manager and charged to the project.

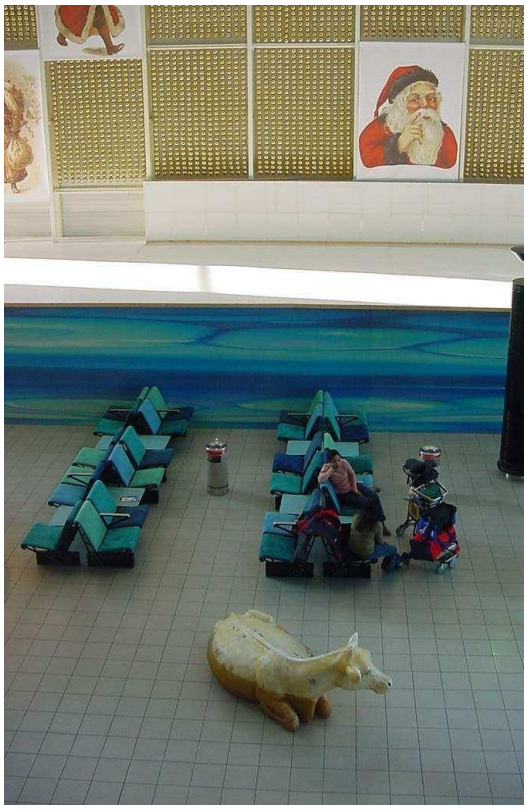
Information and communication
In addition to information about routing and wayfinding, passengers can also be informed about the work taking place behind the partitions. By informing passengers as fully as possible, they will have a greater understanding of any inconvenience. This kind of information can be given using information panels. This information provision is initiated, in consultation with the Communication Team, by the project's communications officer and is only realized after approval by the project manager.

Consumer marketing and atmosphere
In addition to the information provision described above, advertising and atmospheric expressions may also be placed on the partitions. These are initiated by or submitted to Consumer Marketing and are only realized after approval by this department. The possibilities for this additional fit-out are given below in order of importance:

- Replacement of existing advertisements that are blocked by the erection of partitions
- Ambience, for example photos and art
- New advertising. These are subordinate to all other expressions mentioned above.

7 Examples

Examples of anti-dust partitions and hoardings



Anti-dust partition as outside wall
Windproof and heat-insulating

Anti-dust partitions with roof

Hoardings to ceiling ± 2.40 meters high

Hoardings 1.20 meter high = not desirable!

Examples of scissor fences

Scissor fence with demarcation webbing, but a Tensabarrier or multiple scissor fences are better.

Examples of fit-outs

Left: hoarding with advertising.
Right: separate parts behind an easily opened screen = not good!

Example of a lockable tool chest or box

Unsupervised materials. How not to do it!