HIKLU

Emergency access road planning and implementation instructions

Usage: For the use of external customers and rescue department personnel

Scope: The Helsinki City Rescue Department, the Eastern Uusimaa Emergency Services Department, the Länsi-Uusimaa Rescue Department and the Keski-Uusimaa Rescue Department

Approved:	**Authors:**	**Date:**	**Version:**
HIKLU OE Steering group	HIKLU structural fire safety	23 April 2020	1.1

Contents

Emergency access road planning and implementation 3
Emergency access road 3
Ensuring preconditions for rescue operations at the site 3
Emergency access road plan 3
Planning an emergency rescue road 4
Emergency access road dimensions 4
Things to consider when planning 5
Tram contact lines at hardstanding areas for lifting operations 6
Test drive of an emergency rescue road 6
Emergency access road during construction 7
Indication of an emergency access road 7
Boom on an emergency access road 8
Wayfinding signage 9
Staircase floor numbering 10
Residential apartment evacuation guide and staircase safety guide 10

Emergency access road planning and implementation

The purpose of these instructions is to set out the requirements for emergency access roads in the areas of the Helsinki City Rescue Department, the Länsi-Uusimaa Rescue Department, the Keski-Uusimaa Rescue Department and the Eastern Uusimaa Emergency Services Department.

Emergency access road

Emergency access roads are driveways or other means of access enabling emergency vehicles, in the event of a fire or other emergency, to come sufficiently close to the building and to the outlets for extinguishing water. The dimensions, location in relation to the building and load capacity of the emergency access road shall be dimensioned according to the rescue equipment that is appropriate for the site and typical at the time of construction. (Decree of the Ministry of the Environment on the Fire Safety of Buildings 848/2017, Section 40).

Ensuring preconditions for rescue operations at the site

Rescue units must normally be able to drive up to the immediate vicinity of the exits, meaning no further than 50 metres in residential areas. Rescue units must also be able to drive up to the fire water and fire water pipeline's supply and outlet points and fire alarm, sprinkler and smoke extraction panels.

Emergency medical service units must normally be able to drive up to the immediate vicinity of the exits, meaning no further than 25 metres in residential areas.

Emergency access road plan

The property's emergency access roads and planned hardstanding areas for lifting operations as well as what is required by these instructions are presented with the building permit documents in an emergency access road plan (1:200/1:500) or layout plan (see APPENDIX 1 Example of an emergency access road plan). The plan is presented and submitted for approval to the building supervision authority and, if necessary, to the rescue authorities and attached to the building's operating and maintenance instructions.

The emergency access road plan must include the following:

- driving route starting from the distributor street
- turning radii
- windows and balconies used as escape routes
- outreaches
- maximum evacuation heights
- load capacities, especially in deck areas

- the longitudinal and lateral gradient in percentage in the hardstanding areas for lifting operations and driving routes; curbs and height differences in street areas and the like must also be considered
- location of wayfinding signage and other traffic signs on the plot and in the public street areas.

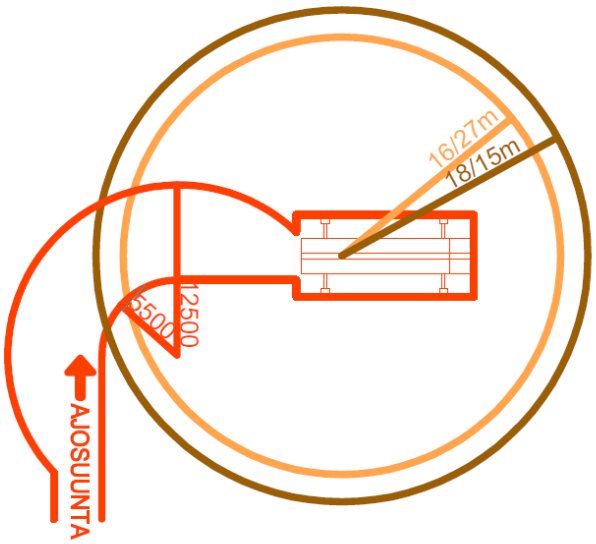
Planning an emergency rescue road

Driving routes to the hardstanding areas for lifting operations and the actual areas must be planned so that the rescue department's fire and rescue equipment can be driven front first to the target site.

The driving routes to the hardstanding areas for lifting operations and the actual area must be dimensioned as follows:

Emergency access road dimensions:

Load capacity:	32 t
Axle load:	9 t
Outrigger pressure, with a support plate: (min. 750 mm x 750 mm)	215 kN/outrigger
Driving route width:	3.5 m
Free height:	4.2 m
Turning radius, outer:	12.5 m
Turning radius, inner:	5.5 m
Max. gradient, lateral direction:	3%
Max. gradient, longitudinal direction:	8%

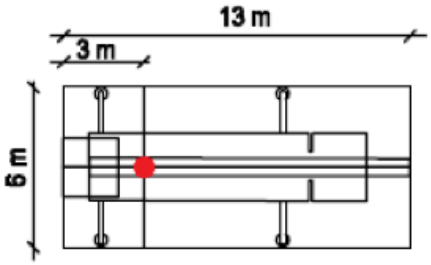


AJONSUUNTA	DIRECTION OF TRAVEL

Space and dimensions required for a hydraulic platform unit

Dimensions of a hardstanding

Minimum width:	6 m
Optimal width:	8 m
Length:	13 m
Optimum distance from the wall to centreline:	6 m
Max. gradient, lateral direction:	3%
Max. gradient, longitudinal direction	8%*



Nostopaikan mitat sekä ulottumien mitoituspiste

Nostopaikan mitat sekä ulottumien mitoituspiste	Dimensions of a hardstanding and outreach dimensioning point

*Note! Hardstanding may only slope downwards in the direction of travel.

Outreach up to max. 15 m:

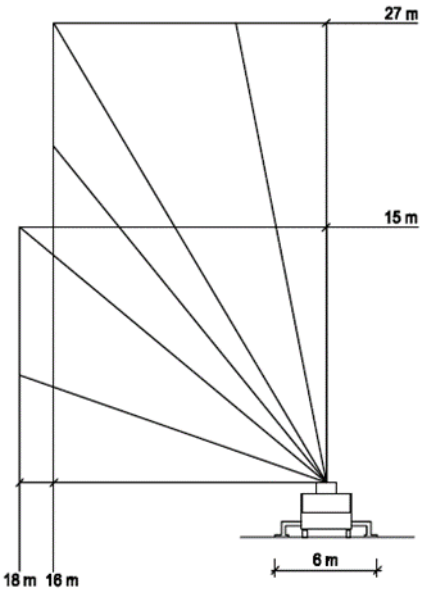
Outreach to the side:	18 m
Outreach up:	15 m

Outreach up to max. 27 m:

Outreach to the side:	16 m
Outreach up:	27 m

Dimensioning of the emergency medical service unit's route

Width:	3 m
Free passageway height:	3 m
Turning radius (inner)	5.2 m
Turning radius (outer):	7 m
Load capacity:	4 t



Things to consider when planning

The owner of the property is obliged to keep the emergency access roads serviceable and free of obstructions at all times of the year. The paving of the emergency access road and hardstanding can be stone, asphalt, concrete, grass stone or rock

dust. A reinforced lawn is not a suitable surface for an emergency access road or hardstanding.

Any ramps and archways on the emergency access road must also meet the requirements.

Emergency access roads must be kept clear of parked vehicles or other obstacles. Waste collection points, garages, planter boxes, snow collection points, fences, gates, bike racks, drying racks, lighting poles, traffic signs, etc., must be located such that the driving routes and emergency access roads remain serviceable for emergency vehicles. Wells or manhole covers should not be located on emergency access roads or at hardstandings. Hardstandings must be unobstructed over their entire area, as the sizes of the rescue units and, for example, the positions of the outriggers on the vehicles vary.

No ligneous vegetation shall be planted in hardstandings on an emergency access road or in the area between the hardstanding and the emergency exit balconies and windows that make it difficult or prevent the use of the emergency access road. The yard plan must also consider the effects of the future growth of plantations on the functionality of the emergency access road.

If the emergency access road or hardstanding is to be built on the area of another property, an easement agreement must be drawn up between the properties.

If the emergency access road or hardstanding is to be located in a public street or park area, it must be determined with the party owning the area whether the public area is suitable for the purpose.

Tram contact lines at hardstanding areas for lifting operations

There must be no tram contact lines, pendant street lighting cables or other obstructions to rescue operations above a hardstanding of 6 m x 13 m.

There must be no tram contact lines between the hardstanding and escape routes because the lifting cage cannot be taken over contact lines for safety reasons.

Test drive of an emergency rescue road

If necessary, the functionality of an emergency access road is tested using rescue departments' equipment before the commissioning inspection by the building supervision authority, usually in connection with the special fire inspection carried out by the rescue authority. If necessary, the functionality of an emergency access road may be tested using rescue departments' equipment also in case of property already in use.

Emergency access road during construction

If the building to be renovated is in normal use or alterations are being made on a plot of a building in use, the site plan during construction must consider the property's emergency access road arrangements. The functionality of the emergency access road and escape routes must always be ensured also for a building in normal use during the construction work.

Indication of an emergency access road

An emergency access road as referred to in Section 49(1) of the Land Use and Building Decree (895/1999) shall be indicated with a supplementary text sign in accordance with Section 21 of the Road Traffic Decree (182/1982) as follows: Pelastustie Räddningsväg (Emergency access road). (Ministry of the Interior Decree on Signposting Emergency Access Roads 1384/2003)

The sign is used alone or as a supplementary sign to a traffic sign. If necessary, the emergency access road sign shall be supplemented with no driving or parking signs. Only an emergency access road approved by the authorities and in compliance with the dimensional requirements may be indicated with an official sign. In addition, all decks with driving access shall be indicated with the appropriate weight limit signs.

Pelastustie	Emergency access road
NOSTOPAIKKA	HARDSTANDING

Emergency access roads must be maintained year-round. Winter maintenance shall also include any hardstanding. If necessary, the hardstanding shall be indicated with a sign attached to a traffic signpost. The sign reads ‘NOSTOPAIKKA’ and includes arrows indicating the direction in which the area extends. If necessary, the signs shall be supplemented with no driving or parking signs.

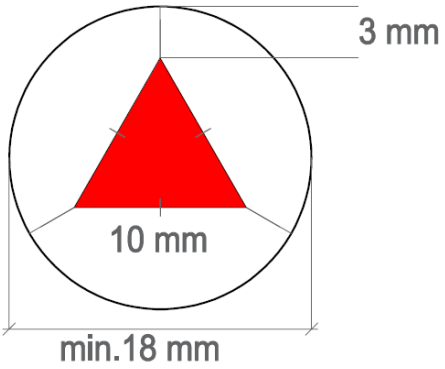
The design of the sign shall be based on the supplementary signs’ design principles set out in the Finnish Road Administration’s traffic sign dimensional drawings (TIEL 2131908). The signs installed by the access routes to the emergency access roads and other emergency access road indications must be in place during the commissioning inspection of the building or part thereof.

Driving routes that only meet the dimensional requirements for an emergency medical service unit shall not be indicated with an emergency access road sign. They are indicated on the wayfinding signage only.

Boom on an emergency access road

If it is necessary to have booms or other barriers to prevent pass-through traffic on the emergency access road, they must be designed and presented in the emergency access road plan in the design stage of the building. If there is a need to have a boom in accordance with these instructions on an emergency access road of a plot with an existing building in it, the owner of the property must ensure that the boom does not prevent or hinder the use of the emergency access road by, for example, making the road or turning space reserved for a hydraulic platform unit narrower. The installation of a boom on an emergency access road in accordance with the emergency access road instructions need not be separately notified to the rescue authorities.

Only a spring-loaded boom or an obstacle that can be opened with a triangle key may be located on an emergency access road (see below for an example of a boom on an emergency access road and a picture of the triangle key and its lock cylinder dimensions). Drive over-type barriers are not suitable for use on emergency access roads.



Min. 18 mm	min. 18 mm

Triangle key, sides 10 mm, with required lock cylinder dimensions.

An example of a boom on an emergency access road.

Wayfinding signage

The plot must have wayfinding signage if there are several buildings on the plot and not all buildings are limited to the street or its immediate vicinity. Also, the plot must have wayfinding signage if the plot's emergency road arrangements are exceptional or difficult to perceive. Wayfinding signage must be placed at the beginning of the access route to the plot, and it must be illuminated. If there are several access routes to the site, all of them must be equipped with signage. In the block, all buildings must be equipped with signage informing the arrangements in the whole block.

The signage must be large enough to see the main points without getting out of the vehicle, at minimum 700 mm x 700 mm. The size of the signage is affected by, for example, the placement of the board and the viewing distance from the roadway. The size of the letters on the signage must be at least 100 mm. The signage must be oriented according to the viewing direction, not according to points of the compass.

The signage includes the location of the buildings, street addresses, driveways in the area, an ‘You are here’ indication: staircases, attack routes to the basement facilities, routes for the emergency medical service unit and emergency access roads and the associated hardstandings. Any weight restrictions on the driveways must also be indicated. (See APPENDIX 2 Example of wayfinding signage)

The wayfinding signage plan shall be presented to the rescue authority before it is put into production.

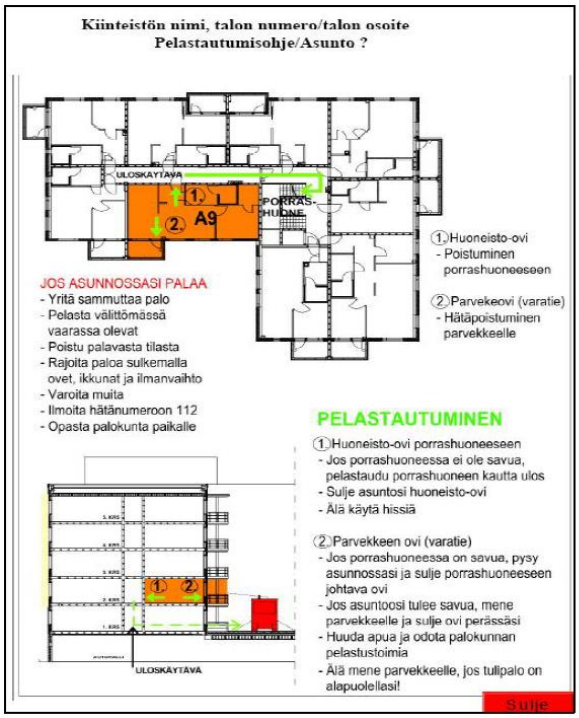
Staircase floor numbering

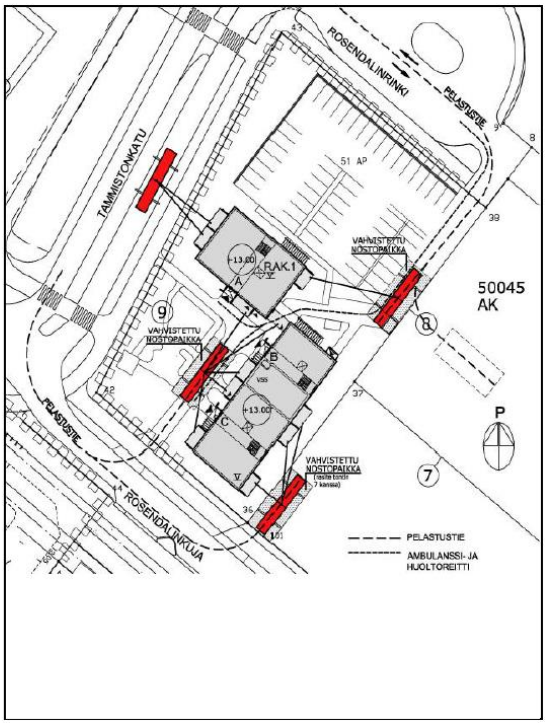
Landing floor numbering must be added to stairwells in buildings with more than three (3) storeys. The size of the number shall be at least 200 mm, and it shall be placed on the wall opposite the stair flight at the height of approximately one metre. Photoluminescent background material is recommended for the number, and the number must be clearly visible.

Residential apartment evacuation guide and staircase safety guide

Residential apartments should be equipped with a residential apartment evacuation guide. An evacuation guide is particularly recommended if the escape route arrangements for the dwelling deviate from the normal arrangements. An evacuation guide shall be affixed to each dwelling in such a place that it is easily accessible in case of an accident or incident. The guide can also be appended, for example, to the dwelling’s resident folder.

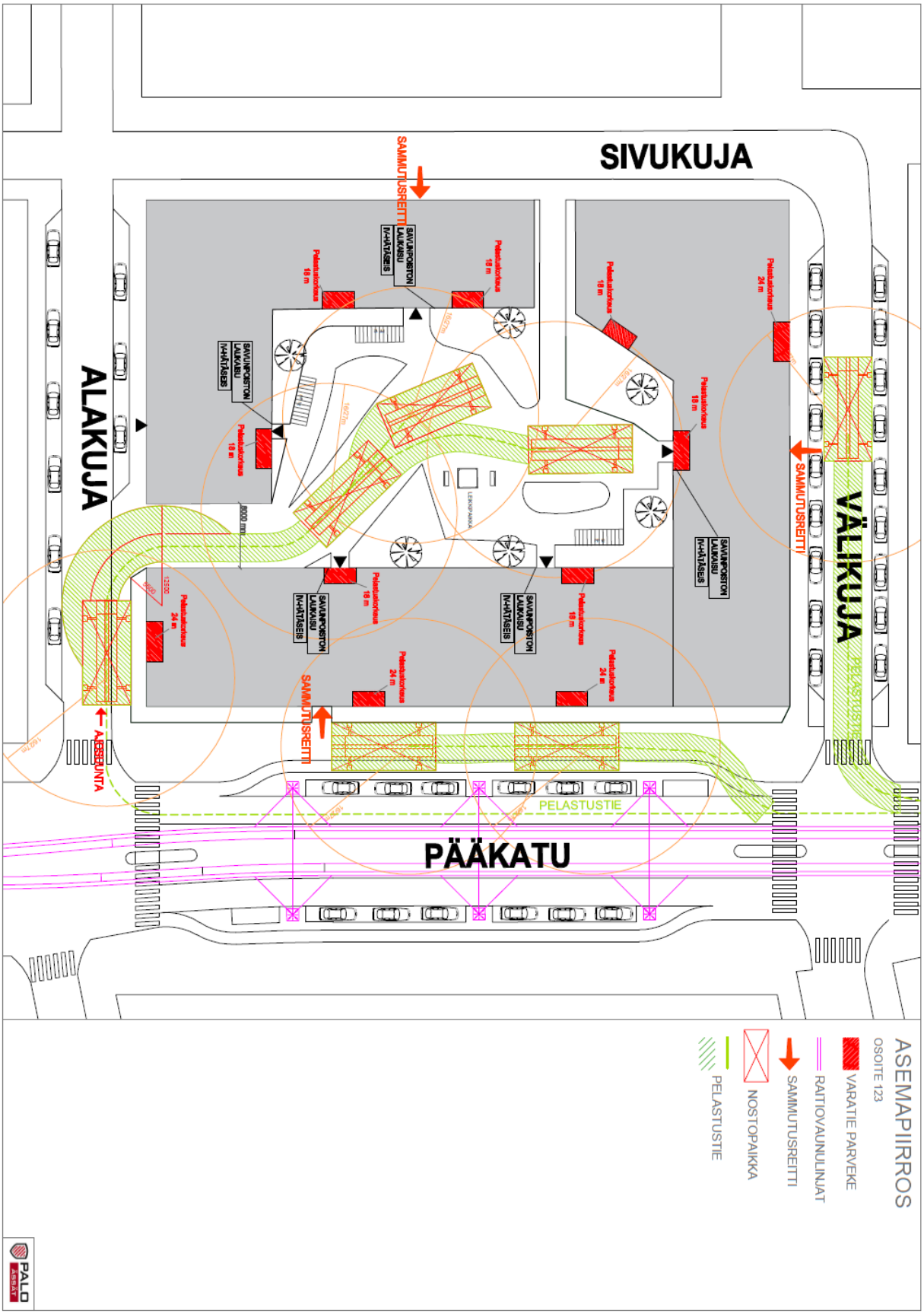
Staircases are recommended to be equipped with a stair-specific safety sign indicating, for example, the property’s emergency access roads and escape route arrangements. The laminated safety sign shall be affixed in a visible place near the external door.





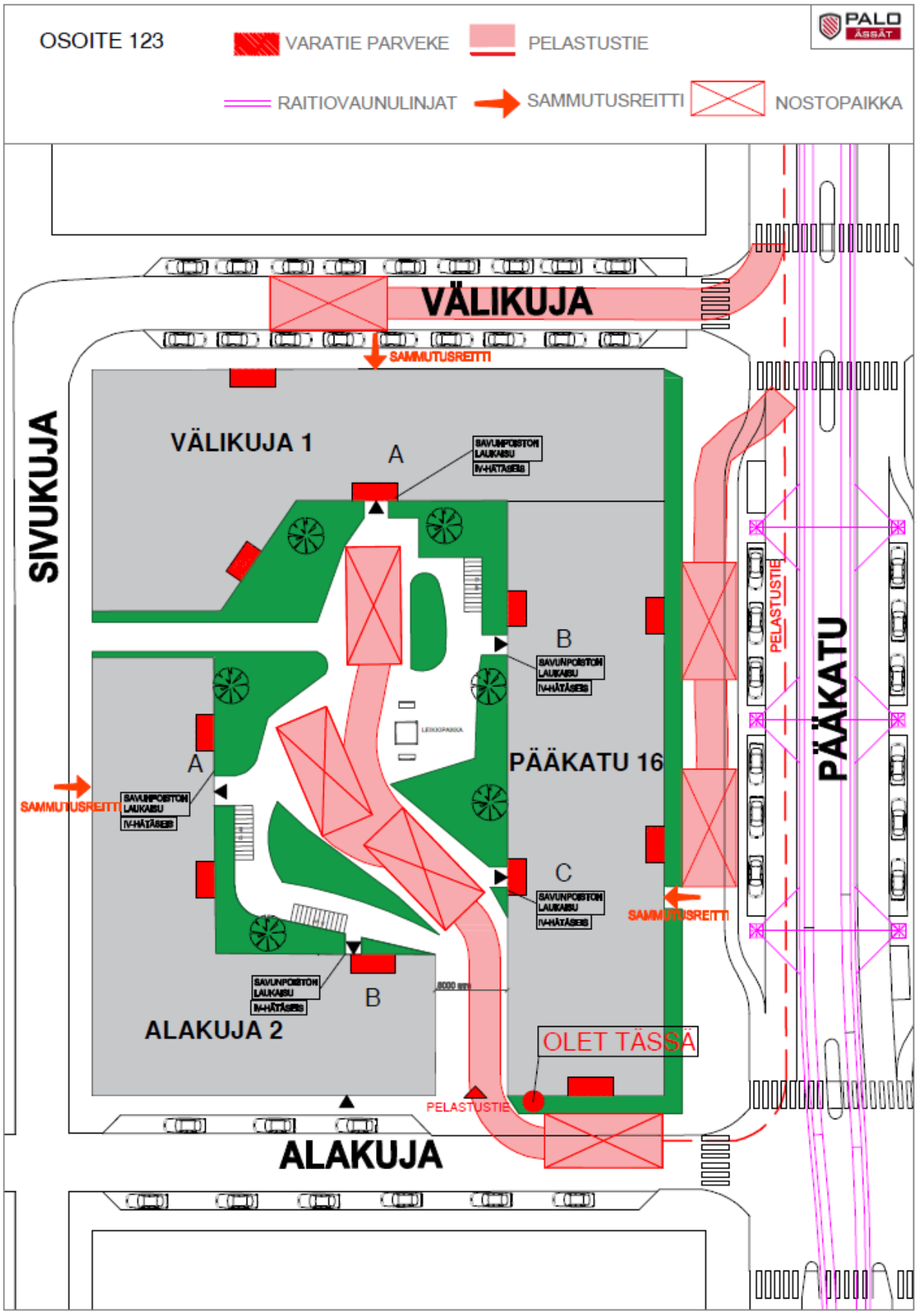
Examples of a residential apartment evacuation guide (left) and staircase safety guide (right)

APPENDIX 1 Example of an emergency access road plan



SIVUKUJA	BACK ALLEY
VÄLIKUJA	FEEDER ALLEY
PÄÄKATU	MAIN STREET
ALAKUJA	LOWER ALLEY
ASEMAPIIRROS	LAYOUT PLAN
OSOITE 123	ADDRESS 123
VARATIE PARVEKE	ESCAPE ROUTE BALCONY
RAITIOVAUNULINJAT	TRAM LINES
SAMMUTUSREITTI	ATTACK ROUTE
NOSTOPAIKKA	HARDSTANDING
PELATUSTIE	EMERGENCY ACCESS ROAD

APPENDIX 2 Example of a wayfinding signage



SIVUKUJA	BACK ALLEY
VÄLIKUJA	FEEDER ALLEY
PÄÄKATU	MAIN STREET
ALAKUJA	LOWER ALLEY
ASEMAPIIRROS	LAYOUT PLAN
OSOITE 123	ADDRESS 123
VARATIE PARVEKE	ESCAPE ROUTE BALCONY
RAITIOVAUNULINJAT	TRAM LINES
SAMMUTUSREITTI	ATTACK ROUTE
NOSTOPAIKKA	HARDSTANDING
PELATUSTIE	EMERGENCY ACCESS ROAD
NOSTOPAIKKA	HARDSTANDING