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# **EIFast Workshop for the European X-FEL Project 10.05.2006**

## **Surface Buildings**

**Per Dost, IG WTM-Amberg**

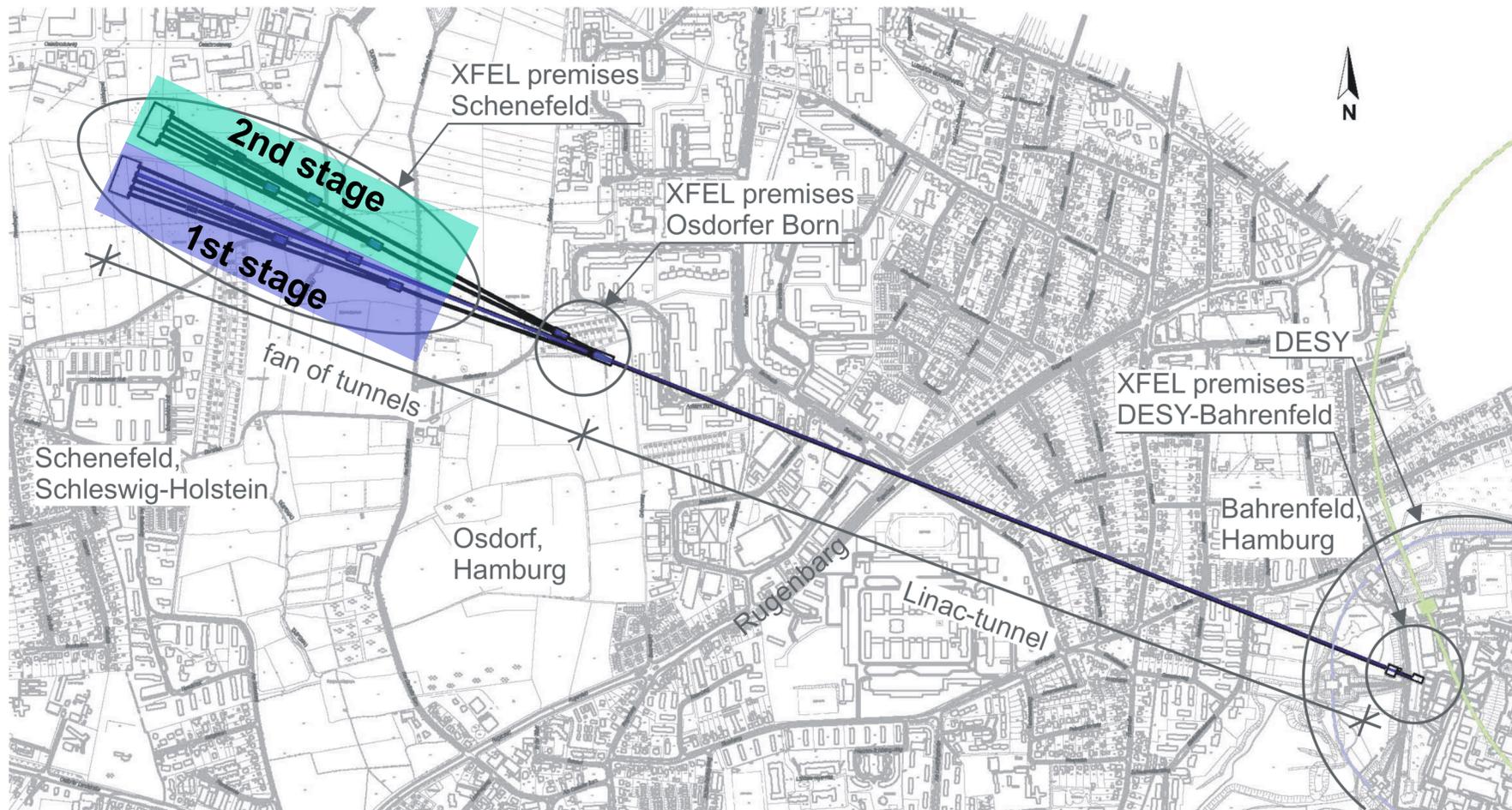


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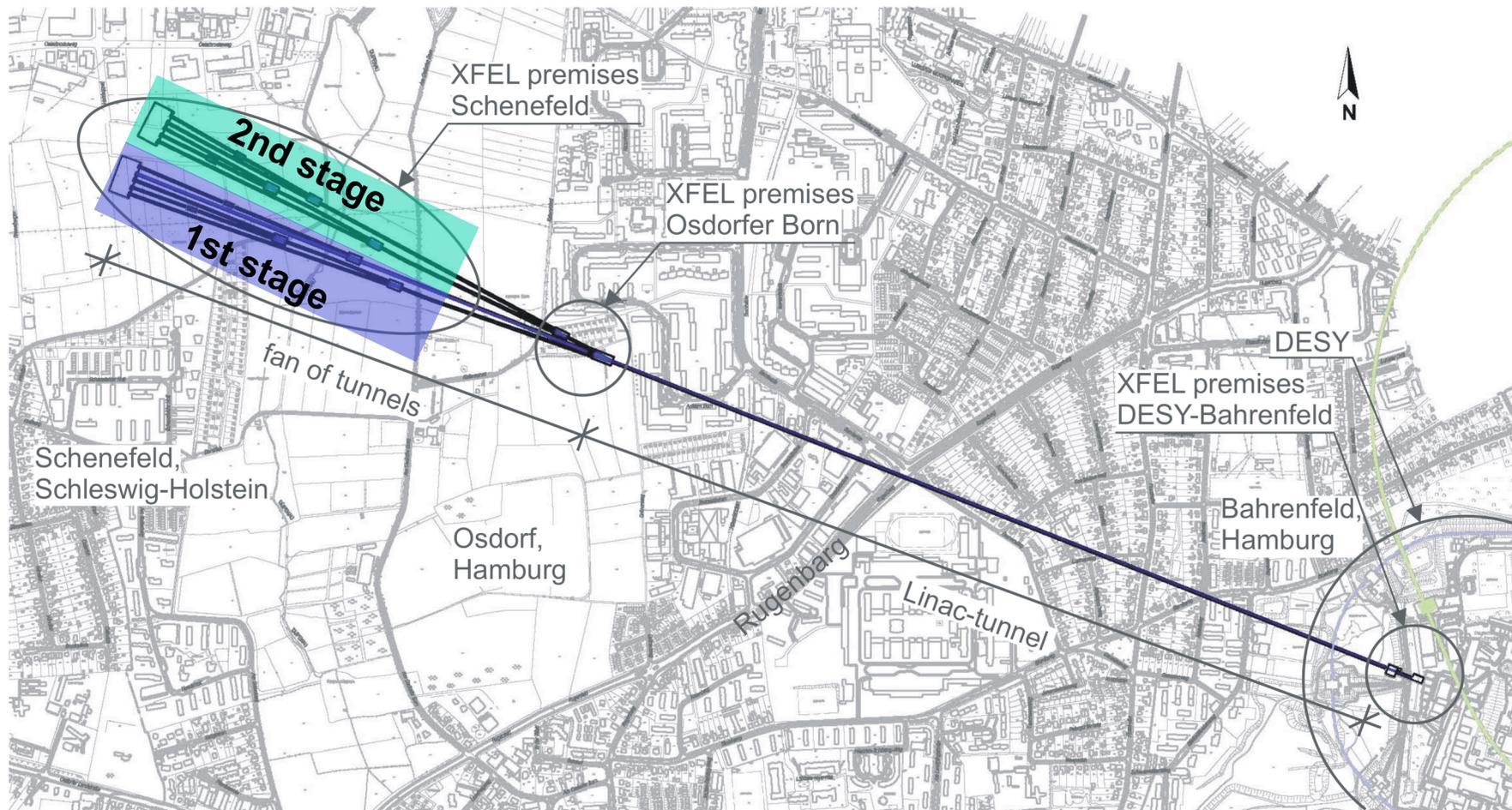
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# 1. introduction



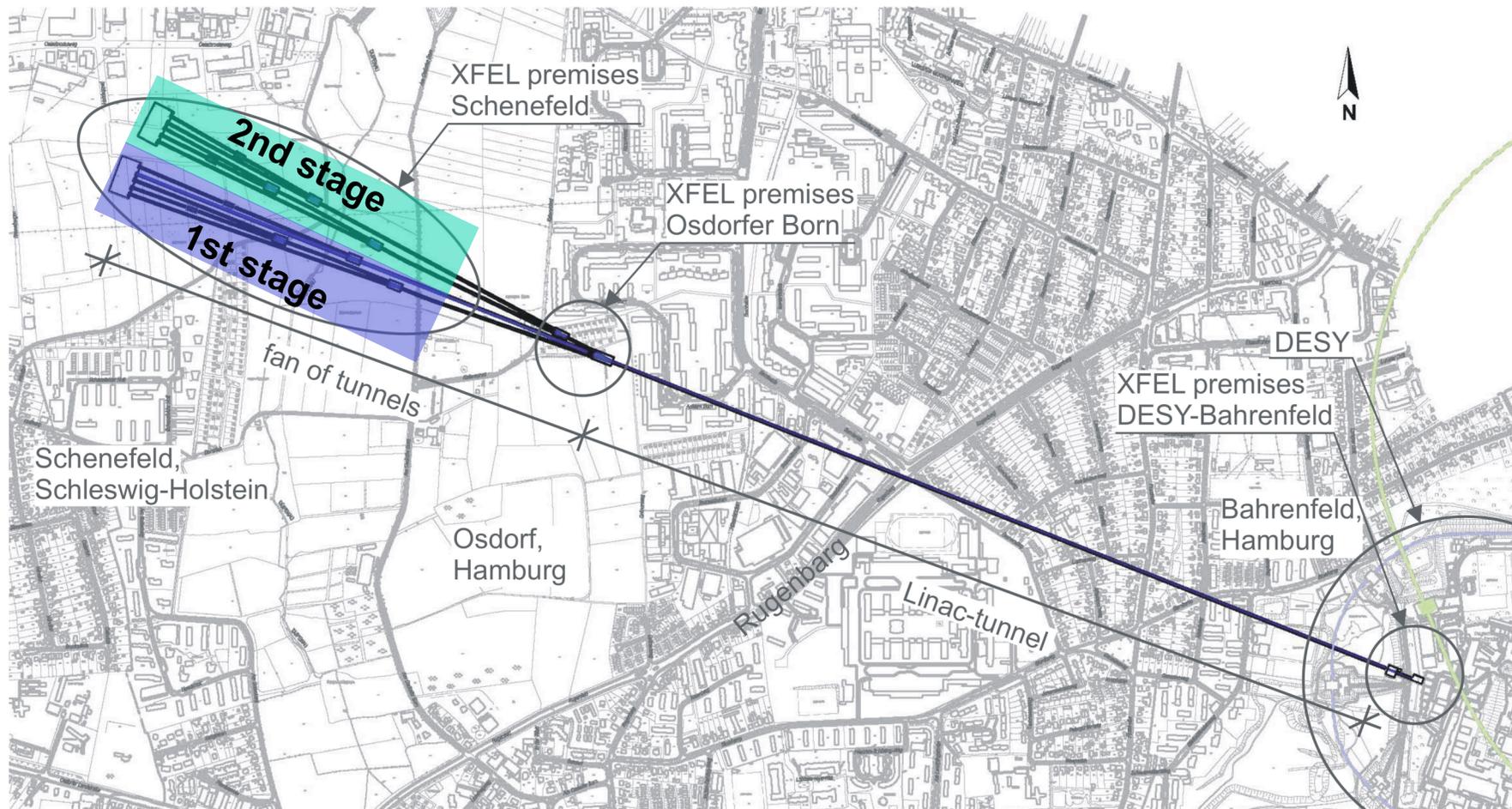










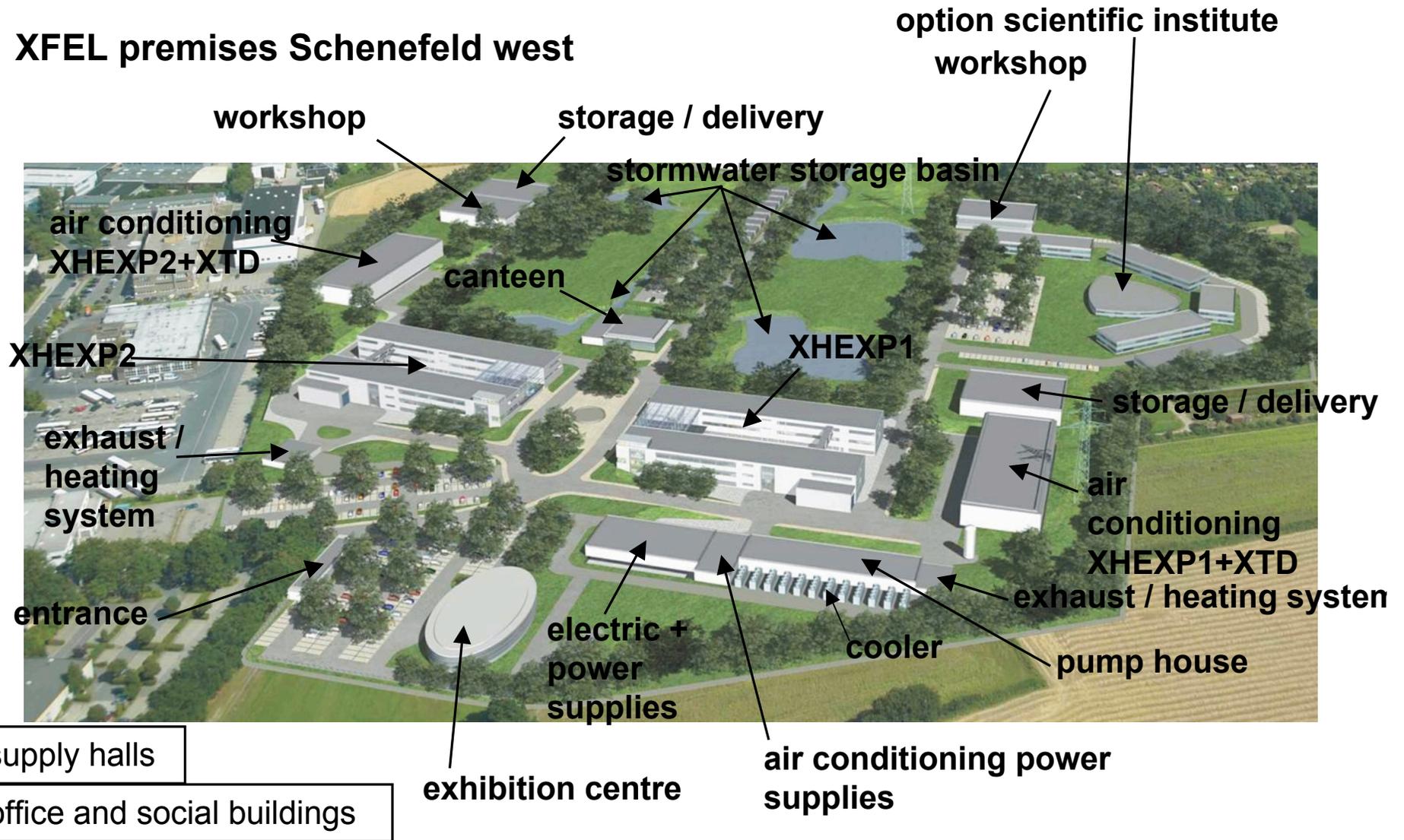




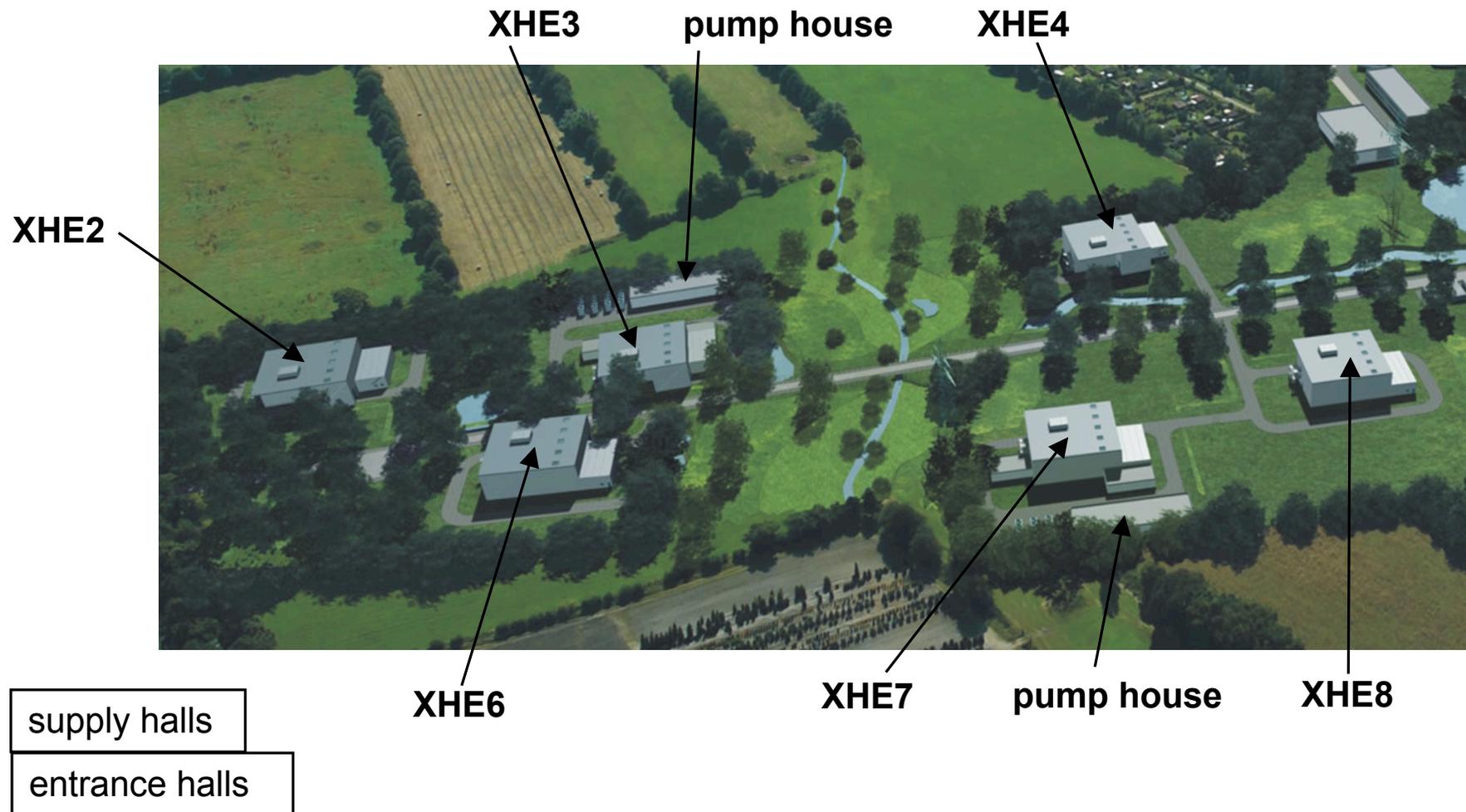




# XFEL premises Schenefeld west



## XFEL premises Schenefeld west





## 2. tentative schedule/ contract lots/ award procedure

### tentative schedule

design and tender documents

autumn 2006 to autumn 2007

tender

spring 2008

start of work

autumn 2008

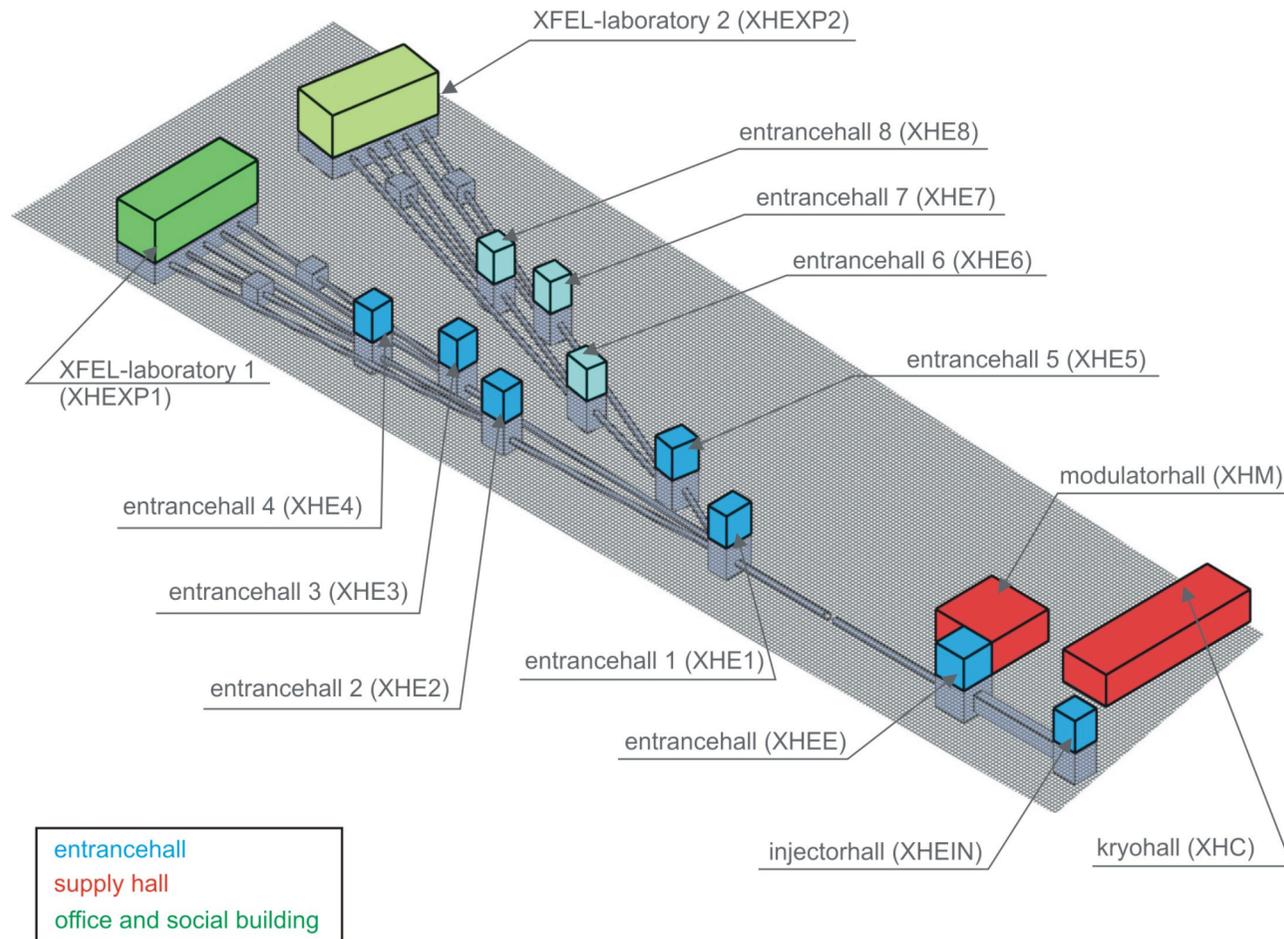
### contract lots

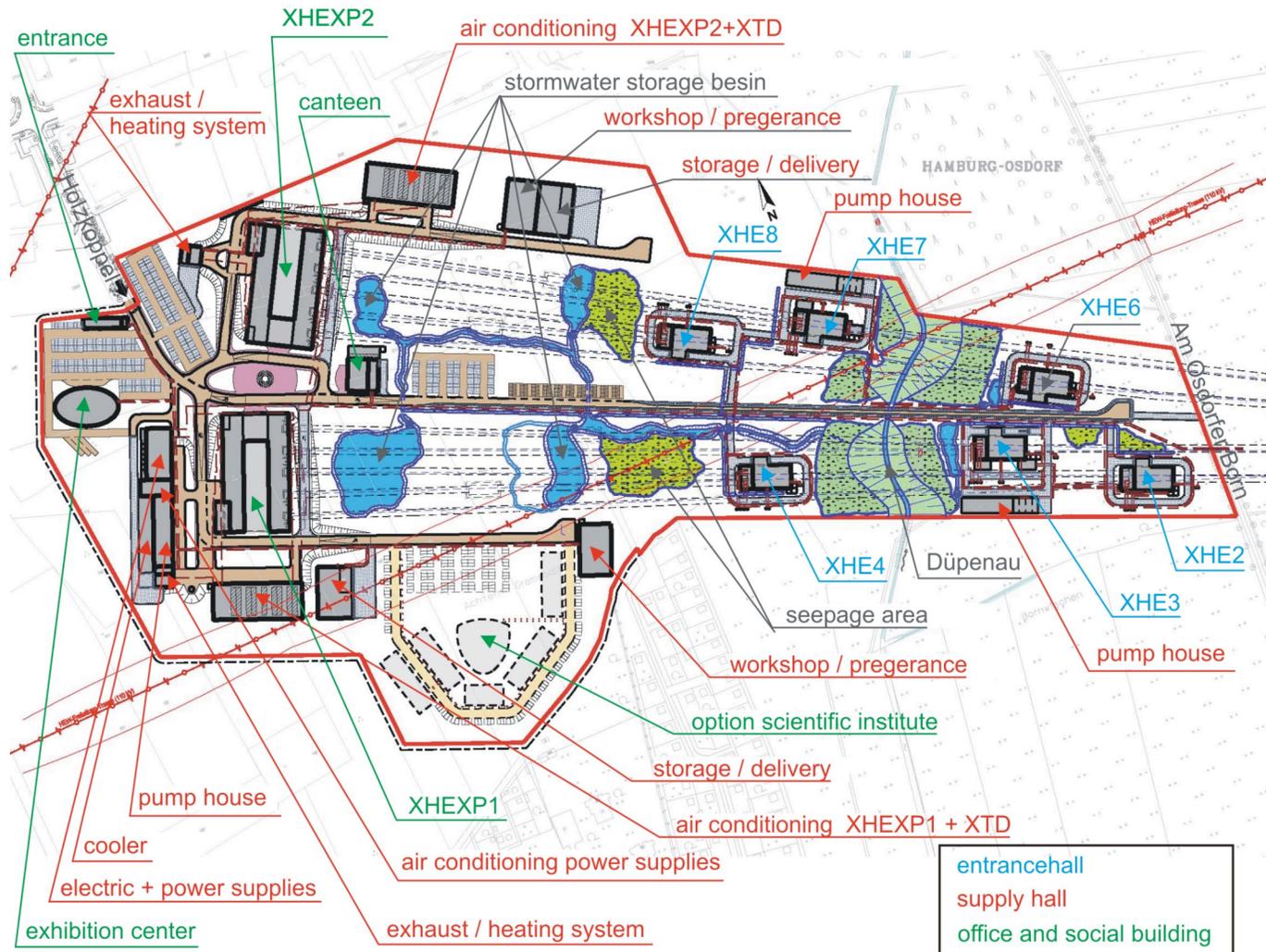
tendering for building contains the building and building services  
(crane and lift technology, sanitary engineering)

### award procedure

open award procedure

### 3. description





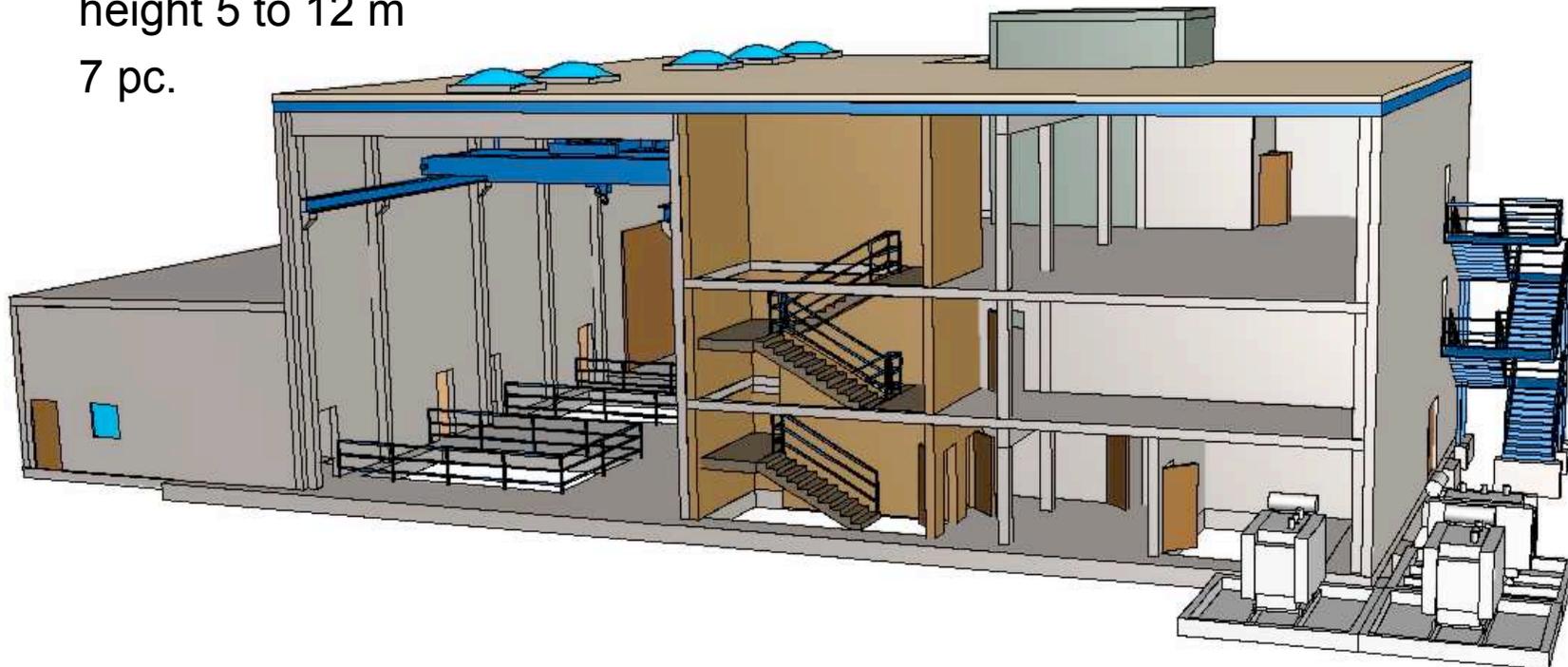
## 3.1. entrance halls

### 3.1.1. dimension

base area 400 to 1.200 m<sup>2</sup>

height 5 to 12 m

7 pc.



### 3.1.2 fundamental configuration

a.) entrance area

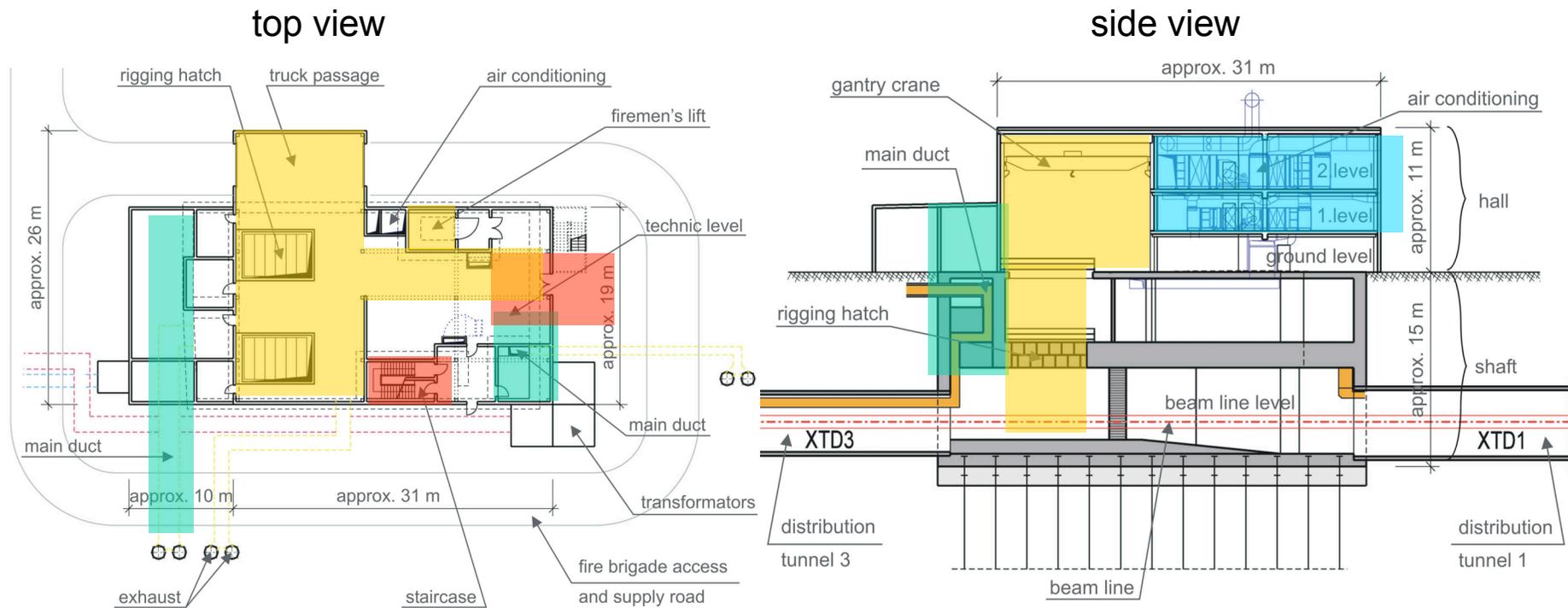
c.) mains duct

e.) sanitary works

b.) transport area (transportation hatch, truck passage, goods lift)

d.) room for technical components

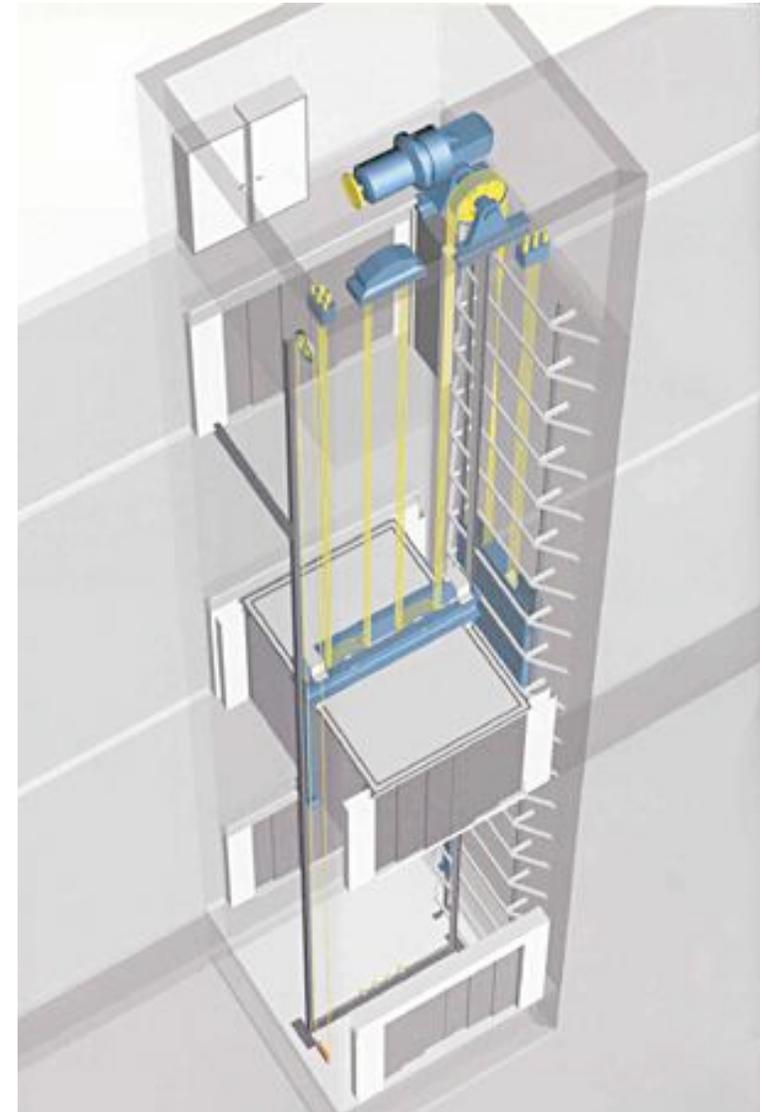
f.) structural fire protection



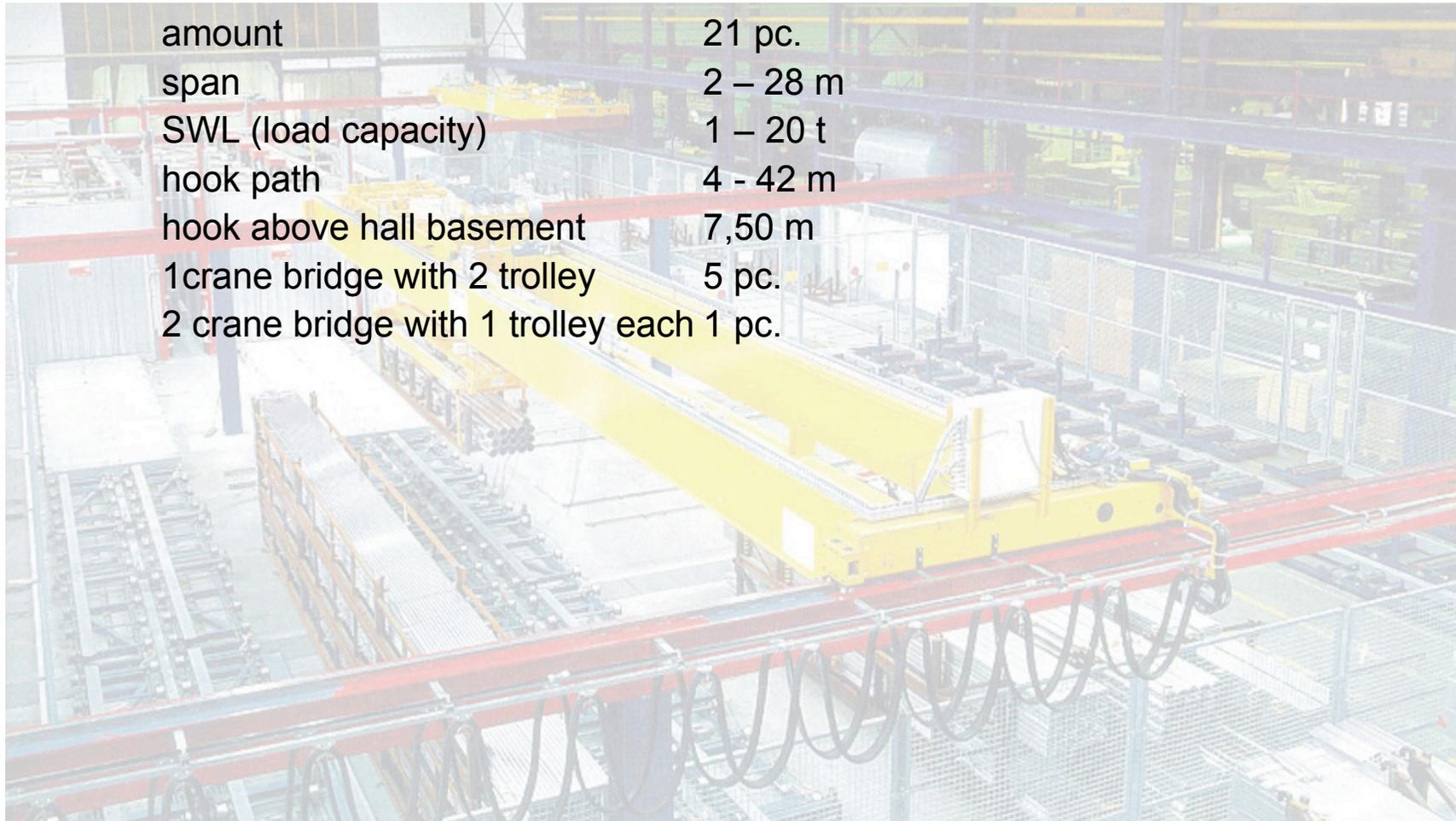
- goods lift

(9 building)

amount	10 pc.
firemen's lift	7 of 9
width	1,10 – 2,10 m
depth	2,40 - 4,00 m
height	2,30 – 3,10 m
load height	5,80 – 37,41 m
load capacity	600 – 3500 kg
speed	0,50 – 1,00 m/s



- gantry crane



e.) sanitary works

- 180 permanent workstation men
- 180 permanent workstation women
- 9 tea kitchen
- 4 common room
- 37 toilets men
- 37 urinal men
- 49 toilets women
- 9 toilets for handicapped people
- 4 shower men
- 2 shower women
- 20 changing room men
- 10 changing room women
- 30 tap
- 36 sanitary gullies

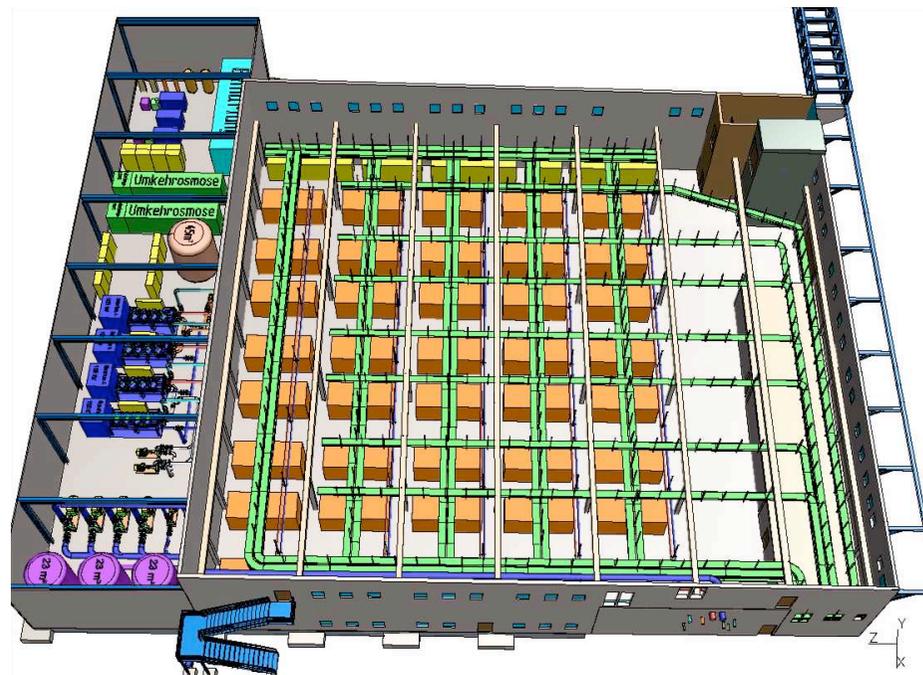


## 3.2. supply halls

### 3.2.1. dimension

cryogenic hall	$l \times w \times h = 32 \times 65 \times 14 \text{ m}$
cryogenic hall extension	$l \times w \times h = 23 \times 7 \times 10 \text{ m}$
modulator hall	$l \times w \times h = 41 \times 45 \times 10 \text{ m}$

example: modulator hall



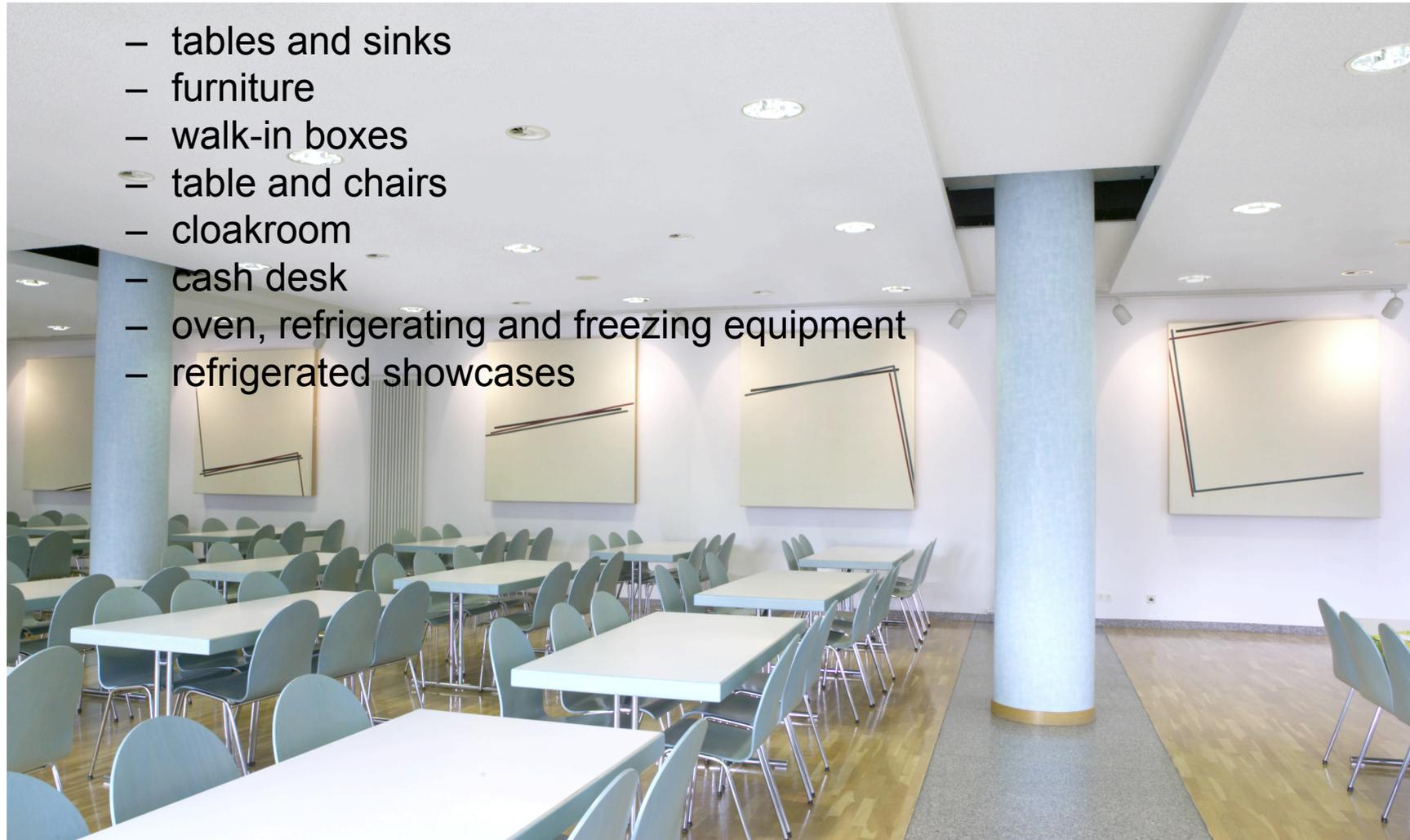


### 3.3. office and social buildings

#### 3.3.1. examples

- |                               |  |
|-------------------------------|--|
| a) canteen                    | base area 800 m <sup>2</sup> ; 300 meals per day |
| b) exhibition centre          | base area 1000 m <sup>2</sup>                    |
| c) XFEL-laboratory 1 (XHEXP1) | l x w x h = 92 x 52 x 9-12 m;                    |

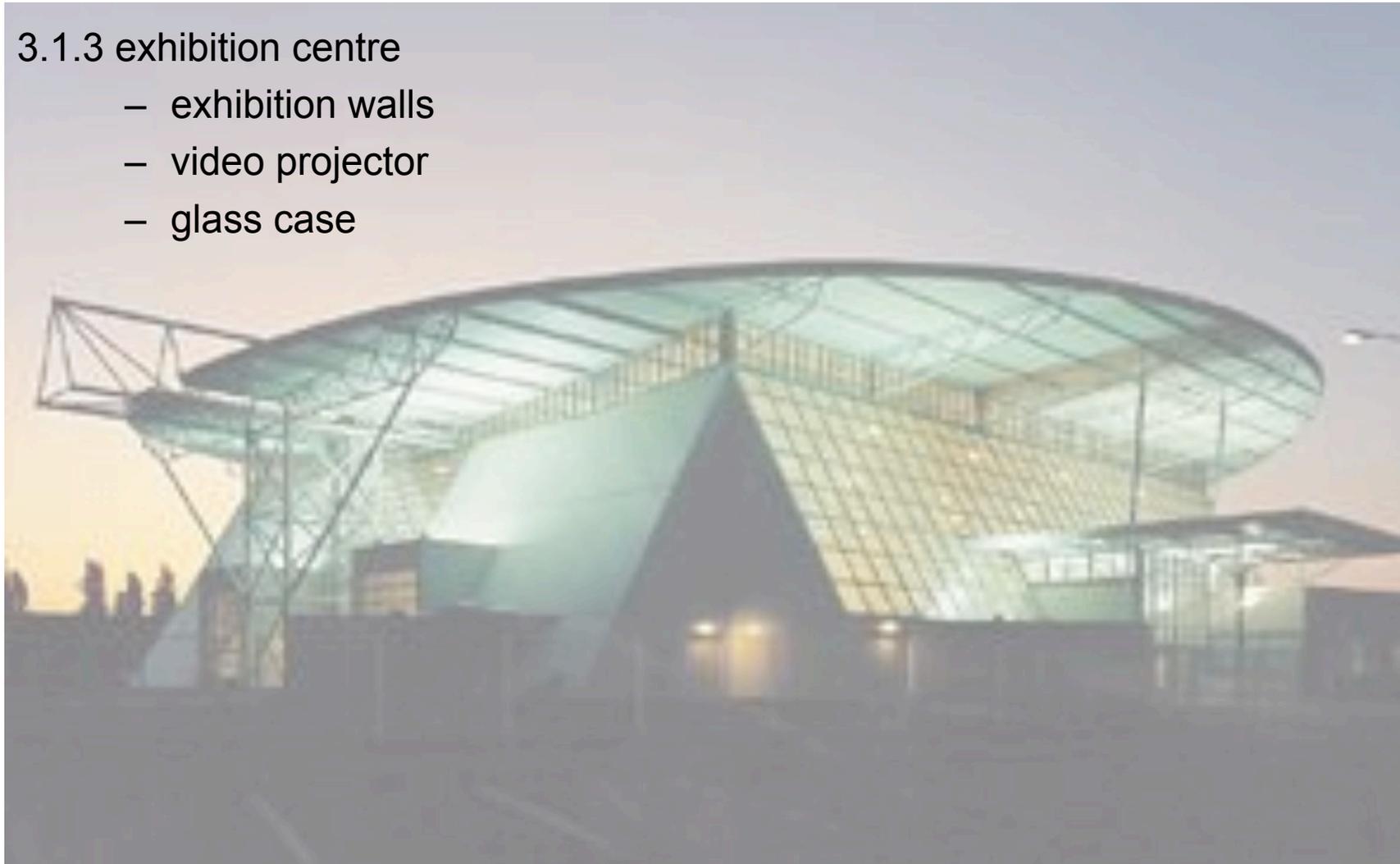
### 3.1.2 canteen



- tables and sinks
- furniture
- walk-in boxes
- table and chairs
- cloakroom
- cash desk
- oven, refrigerating and freezing equipment
- refrigerated showcases

### 3.1.3 exhibition centre

- exhibition walls
- video projector
- glass case



### 3.3.3 XHEXP1

#### configuration:

- offices
- laboratories
- auditorium (for 200 people)
- conference room
- library

- Foyer
- cafeteria
- common rooms
- tea kitchens
- sanitary works
- halls

for 350 people

#### equipment:

- cafeteria
- furniture
- beamer
- loudspeakers and microphones
- silver screen
- laboratory equipment

Thank you for your attention



Bildmontage mit Architekturbeispiel für das Hauptgebäude, Planungsstand April 2005, © DESY