



Project Drawings House Demonstration Unit

Karlsruhe, 23rd March 2022

Deliverable #6





General (GE)

Karlsruhe, 23rd March 2022

Summary Of Changes

Title/Subtitle		Changes	Date	Title/Subtitle		Changes	Date
GE-0001	Cover Sheet	changed	2022-03-23	Interiors			
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Architecture				IN-1101	Reflected Ceiling	changed	2022-03-23
AR-0001	Conceptual Drawings	changed	2022-03-23	IN-1201	Elevation - Working Area	changed	2022-03-23
AR-0002	Conceptual Drawings	changed	2022-03-23	IN-1202	Isometric - Working Area	changed	2022-03-23
AR-0003	Conceptual Drawings	new	2022-03-23	IN-1203	Elevation - Sleeping Area	changed	2022-03-23
AR-0004	Conceptual Drawings	new	2022-03-23	IN-1204	Isometric - Sleeping Area	changed	2022-03-23
AR-1001	SDE21 Solar Campus Plan	changed	2022-03-23	IN-1205	Elevation - East Facade	new	2022-03-23
AR-2001	Floor Plan Level 0	changed	2022-03-23	IN-1206	Elevation - South Facade	new	2022-03-23
AR-2101	Floor Plan Level 1	changed	2022-03-23	IN-1207	Elevation - West Facade	new	2022-03-23
AR-2201	Roof Plan	changed	2022-03-23	IN-1208	Elevation - North Facade	new	2022-03-23
AR-2301	Building Elevation North	changed	2022-03-23	IN-2001	Kitchen Plan	changed	2022-03-23
AR-2302	Building Elevation East	changed	2022-03-23	IN-2101	Elevation - Kitchen Closed	changed	2022-03-23
AR-2303	Building Elevation South	changed	2022-03-23	IN-2102	Isometric - Kitchen Closed	changed	2022-03-23
AR-2304	Building Elevation West	changed	2022-03-23	IN-2103	Elevation - Kitchen Open	changed	2022-03-23
AR-2401	Longitudinal Section A-A	changed	2022-03-23	IN-2104	Isometric - Kitchen Open	changed	2022-03-23
AR-2402	Longitudinal Section B-B	changed	2022-03-23	IN-2201	Detail Plan - Kitchen	changed	2022-03-23
AR-2403	Transversal Section C-C	changed	2022-03-23	IN-2202	Detail Section - Kitchen	changed	2022-03-23
AR-2404	Transversal Section D-D	changed	2022-03-23	IN-3001	Bathroom Plan	changed	2022-03-23
AR-3001	Construction Detail	new	2022-03-23	IN-3101	Elevation - Bathroom Closed	changed	2022-03-23
AR-3002	Construction Detail	new	2022-03-23	IN-3102	Isometric - Bathroom Closed	changed	2022-03-23
AR-3003	Construction Detail	new	2022-03-23	IN-3103	Elevation - Bathroom Open	changed	2022-03-23
AR-3004	Construction Detail	new	2022-03-23	IN-3104	Isometric - Bathroom Open	changed	2022-03-23
AR-3005	Construction Detail	new	2022-03-23	IN-3201	Detail Plan - Bathroom	changed	2022-03-23
AR-3006	Construction Detail	new	2022-03-23	IN-3202	Detail Section - Bathroom	changed	2022-03-23
AR-3007	Construction Detail	new	2022-03-23	IN-4001	Furnishings	changed	2022-03-23
AR-3008	Construction Detail	new	2022-03-23	IN-5001	Interior Rendering	changed	2022-03-23
AR-3009	Construction Detail	new	2022-03-23	IN-5001	Interior Rendering	deleted	2022-03-23
AR-3010	Construction Detail	new	2022-03-23	Structural			
AR-3011	Construction Detail	new	2022-03-23	ST-0001	Conceptual Drawing	changed	2022-03-23
AR-3012	Construction Detail	new	2022-03-23	ST-0002	Conceptual Drawing	new	2022-03-23
AR-3013	Construction Detail	new	2022-03-23	ST-1001	Foundation Plan	changed	2022-03-23
AR-3103	Construction of Components	new	2022-03-23	ST-1101	Structural Floor Plan - Level 0	changed	2022-03-23
AR-3102	Constructive Floor Plan Level 1	new	2022-03-23	ST-1102	Structural Floor Plan - Level 1	changed	2022-03-23
AR-3103	Constructive Details Section A-A	new	2022-03-23	ST-1103	Structural Floor Plan - Level 1	new	2022-03-23
AR-3104	Constructive Details Section C-C	new	2022-03-23		Floor Elements		
AR-4001	Solar Envelope	changed	2022-03-23	ST-1201	Structural Floor Plan - Roof Plan	changed	2022-03-23
AR-4101	Measurable Area	changed	2022-03-23		Roof Elements		
AR-4301	Architectural Footprint	changed	2022-03-23	ST-1301	Structural Longitudinal Section A-A	changed	2022-03-23
AR-4401	Site Elevation North	changed	2022-03-23	ST-1302	Structural Transversal Section C-C	changed	2022-03-23
AR-4402	Site Elevation East	changed	2022-03-23	ST-2001	Structural Details - Section A-A	changed	2022-03-23
AR-4403	Site Elevation South	changed	2022-03-23	ST-2002	Structural Details - Section C-C	changed	2022-03-23
AR-4404	Site Elevation West	changed	2022-03-23	ST-2003	Structural Details - Section Windows	new	2022-03-23
AR-4501	Reconfigurable Features	changed	2022-03-23				
AR-5001	Exterior Rendering	new	22-03-23				

Summary Of Changes

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	Plumbing		ME-2306	Ventilation - Push-Pull + Exhaust - Isometric	new 2022-03-23
PL-0001	Conceptual Drawing	changed 2022-03-23	ME-3001	Mechanical Room Elevation	changed 2022-03-23
PL-1001	Plumbing Plan - Floor Plan Level 1 Concept	changed 2022-03-23	ME-4101	Heating Mode Schematic Drawing	changed 2022-03-23
PL-1002	Plumbing Plan - Floor Plan Level 1	changed 2022-03-23	ME-5001	Controls	new 2022-03-23
PL-1001	Plumbing Plan - Section Concept	new 2022-03-23	ME-6001	Distribution Isometric	changed 2022-03-23
PL-1002	Plumbing Plan - Section	new 2022-03-23		Electrical	
PL-2001	Greywater - Roof Plan	changed 2022-03-23	EL-0001	Conceptual Drawing	changed 2022-03-23
PL-3001	Drain / Waste / Vent - schematic - Floor Plan Level 1	changed 2022-03-23	EL-1001	Grid Interconnection	changed 2022-03-23
PL-3002	Drain / Waste / Vent - technical - Floor Plan Level 1	new 2022-03-23	EL-1002	Electrical House Connection Box Detail	new 2022-03-23
PL-3003	Drain / Waste / Vent - schematic - Section	new 2022-03-23	EL-2001	DC Wiring Diagram	changed 2022-03-23
PL-3004	Drain / Waste / Vent - technical - Section	new 2022-03-23	EL-3001	Power Plan - Floor Plan Level 1	changed 2022-03-23
PL-4001	Schematic Diagram	changed 2022-03-23	EL-3002	Power Plan - Floor Plan Level 0	changed 2022-03-23
PL-4002	Schematic Diagram Fresh Water	new 2022-03-23	EL-3003	Power Plan Conduits - Floor Plan Level 1	new 2022-03-23
PL-5001	Supply / Removal Isometric	changed 2022-03-23	EL-3004	Power Plan Sockets - Floor Plan Level 1	new 2022-03-23
PL-5101	Greywater Isometric	changed 2022-03-23	EL-3005	Power Plan appliances - Floor Plan Level 1	new 2022-03-23
PL-5201	Drain / Waste / Vent Isometric	changed 2022-03-23	EL-3006	Power Plan Sockets - Floor Plan Level 0	new 2022-03-23
	Solar Water Heating		EL-3007	Power Plan Sensors - Floor Plan Level 1	new 2022-03-23
SW-0001	Conceptual Drawing	changed 2022-03-23	EL-3008	Power Plan Conduits - Floor Plan Level 0	new 2022-03-23
SW-1001	Roof Plan	changed 2022-03-23	EL-3009	Power Plan Conduits - Roof Plan	new 2022-03-23
SW-1002	Section	new 2022-03-23	EL-4001	Lighting Plan - Floor Plan Level 1	changed 2022-03-23
SW-2001	Isometric	changed 2022-03-23	EL-4002	Lighting Plan - Floor Plan Level 0	changed 2022-03-23
	Mechanical		EL-4003	Lighting Plan - Situation - Floor Plan Level 1	changed 2022-03-23
ME-0001	Conceptual Drawing	changed 2022-03-23	EL-4004	Lighting Plan - Situation - Direct Light	changed 2022-03-23
ME-1001	HVAC Distribution - schematic - Floor Plan Level 1	changed 2022-03-23	EL-4005	Lighting Plan - Situation - Indirect Light	changed 2022-03-23
ME-1002	HVAC Distribution - technical - Floor Plan Level 1	new 2022-03-23	EL-4006	Lighting Plan - Situation - Elevation Core	new 2022-03-23
ME-1003	HVAC Distribution - schematic - Section	new 2022-03-23	EL-4007	Lighting Plan - Situation - Elevation Core	new 2022-03-23
ME-1004	HVAC Distribution - technical - Section	new 2022-03-23	EL-4008	Lighting Plan - Situation - Exterior Plan	new 2022-03-23
ME-1101	HVAC Equipment	changed 2022-03-23	EL-5001	One Line Diagram	changed 2022-03-23
ME-2001	Heating - schematic - Floor Plan Level 1	changed 2022-03-23	EL-6001	AC Circuit Layout	changed 2022-03-23
ME-2002	Heating - technical - Floor Plan Level 1	new 2022-03-23	EL-6002	AC Circuit Layout	new 2022-03-23
ME-2003	Heating - schematic - Section	new 2022-03-23	EL-6003	AC Circuit Layout	new 2022-03-23
ME-2004	Heating - technical - Section	new 2022-03-23	EL-6004	AC Circuit Layout	new 2022-03-23
ME-2301	Ventilation Summer	changed 2022-03-23	EL-6005	AC Circuit Layout	new 2022-03-23
ME-2302	Ventilation - Push-Pull Ventilation - Schematic Section	new 2022-03-23		Photovoltaic System	
ME-2303	Ventilation - Push-Pull Winter - Floor Plan Level 1	new 2022-03-23	PV-0001	Conceptual Drawing	changed 2022-03-23
ME-2304	Ventilation - Exhaust - Floor Plan Level 1	new 2022-03-23	PV-1001	Photovoltaic System: General	changed 2022-03-23
ME-2305	Ventilation - Exhaust - Section	new 2022-03-23	PV-2001	Photovoltaic System: DC Circuit	changed 2022-03-23
			PV-3001	Photovoltaic System: AC Circuit	changed 2022-03-23
			PV-4001	Photovoltaic System: Grounding System	changed 2022-03-23
				Teleco. & Building Management System	
			BMS-0001	Concept Diagram	changed 2022-03-23
			BMS-1001	Wiring Plan	new 2022-03-23

Summary Of Changes

Title/Subtitle		Changes	Date	Title/Subtitle		Changes	Date
BMS-1002	Wiring Plan	new	2022-03-23	Fire Protection			
BMS-1003	Wiring Plan	new	2022-03-23				
BMS-1004	Wiring Plan	new	2022-03-23	FP-0001	Fire Protection Plan	changed	2022-03-23
BMS-1005	Wiring Plan	new	2022-03-23	FP-1001	Fire Protection Concept	new	2022-03-23
BMS-1006	Wiring Plan	new	2022-03-23	Health & Safety			
BMS-1007	Wiring Plan	new	2022-03-23				
BMS-1008	Wiring Plan	new	2022-03-23				
BMS-2001	Schematic Diagram	changed	2022-03-23	HS-0001	General Coordination Plan	changed	2022-03-23
BMS-3001	Equipment	changed	2022-03-23	HS-0002	General Coordination Plan	new	2022-03-23
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ID-0001	Conceptual Draing	new	2022-03-23	HS-1002	Assembly Phase 2	changed	2022-03-23
ID-1001	General Monitoring - Floor Plan Level 1	changed	2022-03-23	HS-1003	Assembly Phase 3	changed	2022-03-23
ID-1002	General Monitoring - Section	new	2022-03-23	HS-1004	Assembly Phase 4	changed	2022-03-23
ID-2001	Monitoring Panel Room - Floor Plan Level 1	changed	2022-03-23	HS-1005	Assembly Phase 6	changed	2022-03-23
ID-2002	Monitoring Panel Room - Section	new	2022-03-23	HS-1007	Assembly Phase 7	changed	2022-03-23
ID-2003	Monitoring Panel Room - Section	new	2022-03-23	HS-1008	Assembly Phase 8	changed	2022-03-23
ID-3001	Electricity Meters' Typology	new	2022-03-23	HS-1009	Assembly Phase 9	changed	2022-03-23
ID-4001	Monitoring Meters' Connection	new	2022-03-23	HS-1010	Assembly Phase 10	changed	2022-03-23
ID-5001	House Applicances	new	2022-03-23	HS-2001	Evacuation Plan	new	2022-03-23
Site Operations				Public Tour			
SO-0001	Trucks Shipment - Truck 1	new	2022-03-23	PT-0001	Site Accessibility	changed	2022-03-23
SO-0002	Trucks Shipment - Truck 2	new	2022-03-23	PT-0002	Tour Level 0	new	2022-03-23
SO-0003	Trucks Shipment - Truck 3	new	2022-03-23	PT-1001	House Tour Floor Plan Level 1	changed	2022-03-23
SO-0004	Trucks Shipment - Truck 4	new	2022-03-23	PT-2001	House Tour General Information	new	2022-03-23
SO-0005	Trucks Shipment - Truck 5	new	2022-03-23	PT-2002	Flexible Furniture	new	2022-03-23
SO-0006	Trucks Shipment - Truck 6	new	2022-03-23	PT-2003	Additional Informations	new	2022-03-23
SO-0007	Trucks Shipment - Truck 7	new	2022-03-23				
SO-0008	Trucks Shipment - Truck 8	new	2022-03-23				
SO-0009	Trucks Shipment - Truck 9	new	2022-03-23				
SO-0010	Trucks Shipment - Truck 10	new	2022-03-23				
SO-0011	Trucks Shipment - Truck 11	new	2022-03-23				
SO-0012	Trucks Shipment - Truck 12	new	2022-03-23				
SO-0013	Trucks Shipment - Truck 13	new	2022-03-23				
SO-1001	SDE21/22 Solar Campus	changed	2022-03-23				
SO-2001	Lot Plan	changed	2022-03-23				
SO-3001	Phase 1	changed	2022-03-23				
SO-3002	Phase 2	changed	2022-03-23				
SO-3003	Phase 3	changed	2022-03-23				
SO-3004	Phase 4	changed	2022-03-23				
SO-3005	Phase 5	changed	2022-03-23				
SO-3006	Phase 6	changed	2022-03-23				
SO-3007	Phase 7	changed	2022-03-23				

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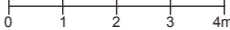





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

































General Symbols



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

-  North arrow
-  Scale
-  Entrance
-  Elevation marker
-  Elevation marker
-  Column Grid
-  Section

-  Generator
-  Socket
-  Double Socket
-  3 Phase Socket
-  Double Floor Socket
-  1 Way Switch
-  2 Way Switch
-  Spot Light
-  Inverter
-  Light
-  Network Socket
-  Oven/Stove Combination
-  Dish Washer
-  Fridge/Refrigerator
-  Heatpump
-  Washing Machine
-  Water Pump
-  Vent
-  Water pipe connection
-  Site Accessibility
-  Truck Route
-  Water Meter
-  Fresh Water connection
-  Waste Water drain
-  Fresh Water
-  Greywater
-  Blackwater
-  Hot Water
-  PV reference cell
-  Air Temperature sensor
-  Relative Humidity sensor
-  Air Quality CO2 sensor
-  Daylight, Illuminance sensor
-  Thermocouple sensor
-  Water meter
-  Highlights Tour HDU
-  Main Route
-  Optional Route
-  Information via QR code
-  Information via Television
-  Information via VR glasses
-  Information via Posters

Scale no scale Page No. 9

Drawing Content
General Symbols

GE-2001

General Abbreviations



WUPPERTAL GERMANY

CRI	Color Reendering Index
HDPE	High Density Polyethylene
lm	Lumen
lx	Lux
m	Meter
PV	Photovoltaic
PVT	Photovoltaic Thermal Hybrid Solar
W	Watt
m³/h	Cubic Meters per Hour
mm	Milimeters
l	liters
DHW	domestic hot water
DCW	domestic cold water

General	GE
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Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

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Drawing Content
General Abbreviations

GE-2101



Architecture (AR)

Karlsruhe, 23rd March 2022

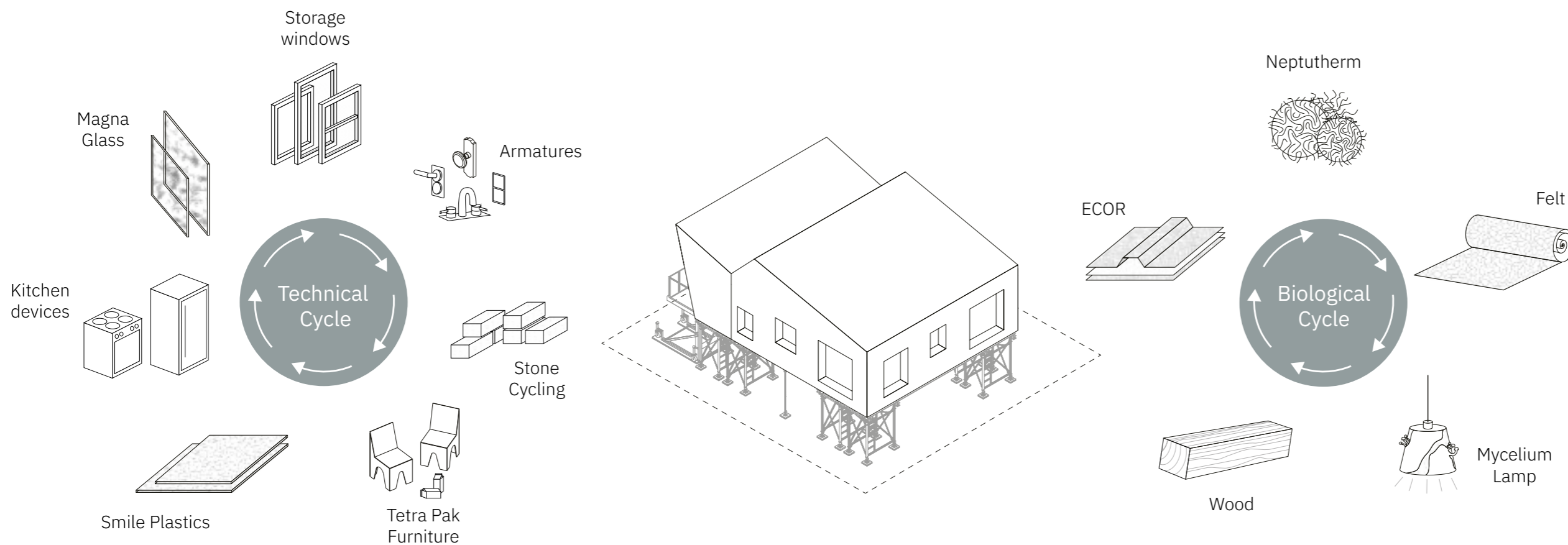


RoofKIT



WUPPERTAL GERMANY

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Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

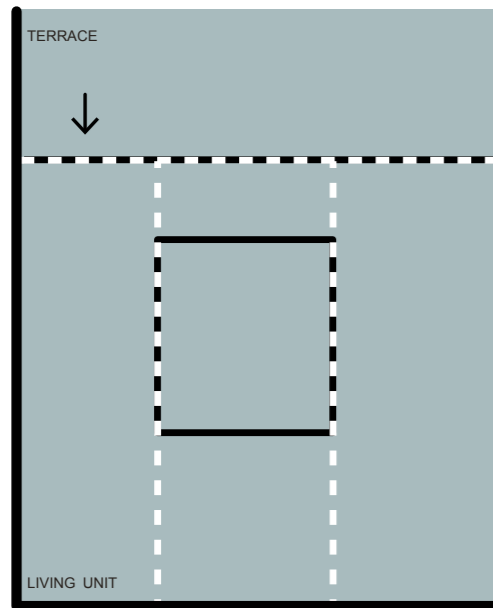


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Drawing Content Conceptual Drawings

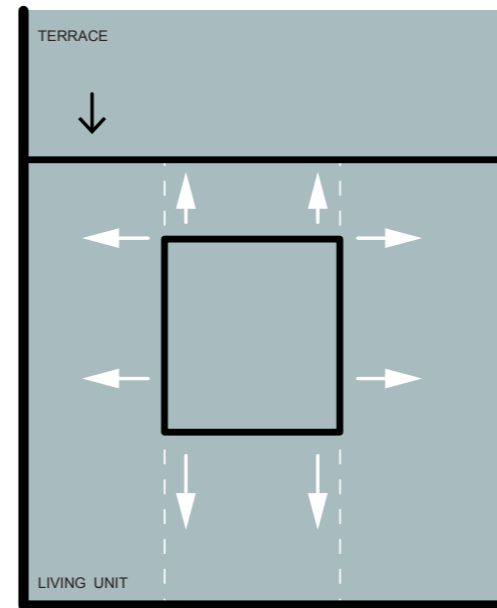
AR-0001

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Structural	ST
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Mechanical	ME
Electrical	EL
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Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



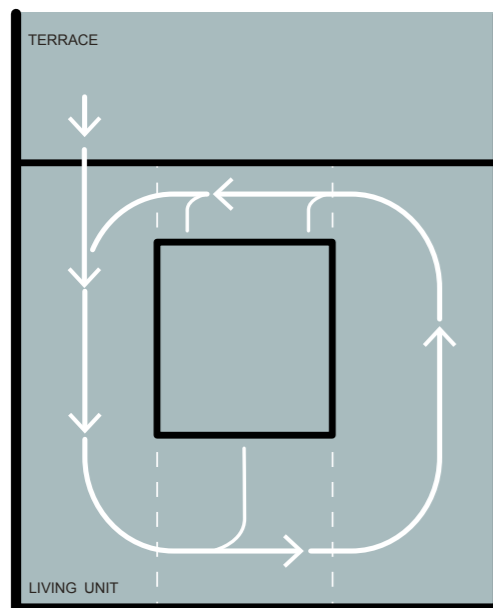
MODULES

The HDU will be separated into two main parts: the terrace will welcome our guests and represents the shared spaces within our building design. The actual living unit comprises three modules, which can be transported and quickly joined together on the operation site.



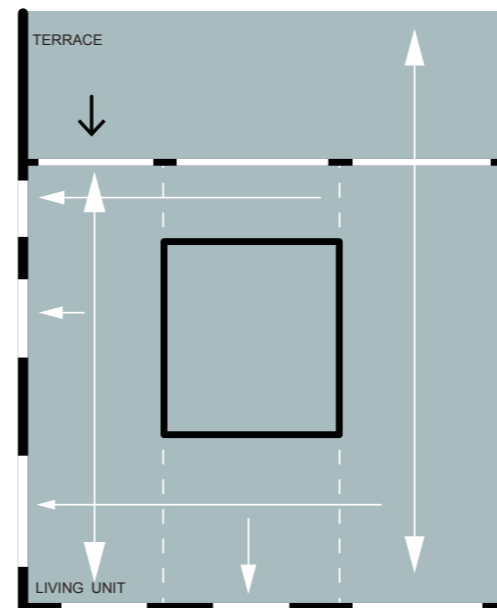
FUNCTIONAL CORE

Our living concept is based on an open floor plan that promotes communication. It contains customized folding furniture that can adapt to the unit's residents. All functional parts of the unit are stored within a multifunctional core that divides the floor plan into smaller subareas. That way, we create a space-saving yet appealing architecture.



PUBLIC TOUR

The placement of our core will further allow us to plan our tour route in a circular fashion. This way, we can easily present every aspect of our unit to our visitors without disrupting the flow of traffic.



VISUAL CONNECTION

Visual relations from the outside into our unit will present our building to the public in the best possible way. Therefore the northern wall will be constructed as a post-andbeam facade. In addition, the arrangement of the window openings inside the walls allows for grand vistas out of the unit and further flooding the interior with natural light

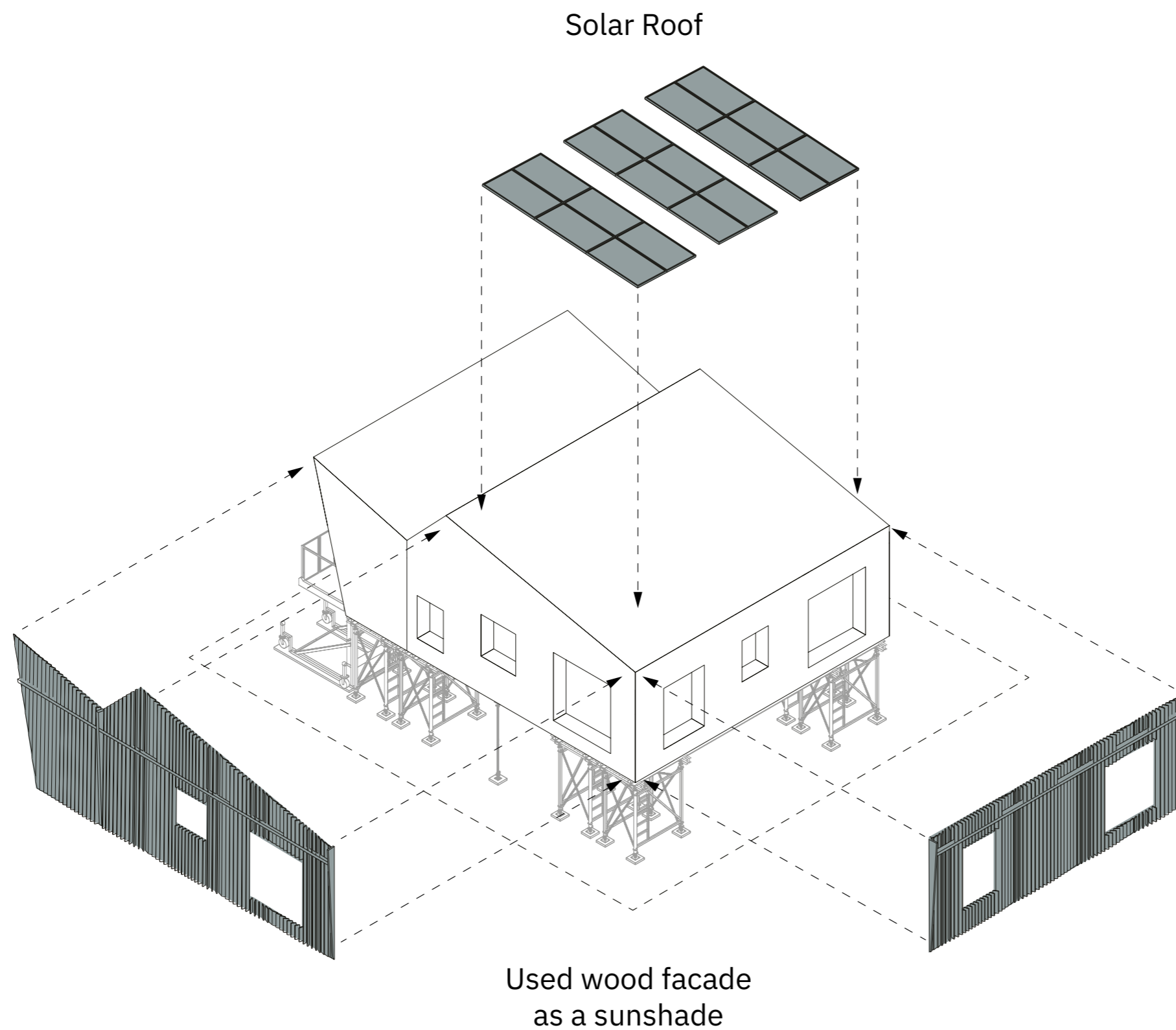


RoofKIT



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Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



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Drawing Content
Conceptual Drawings

AR-0003



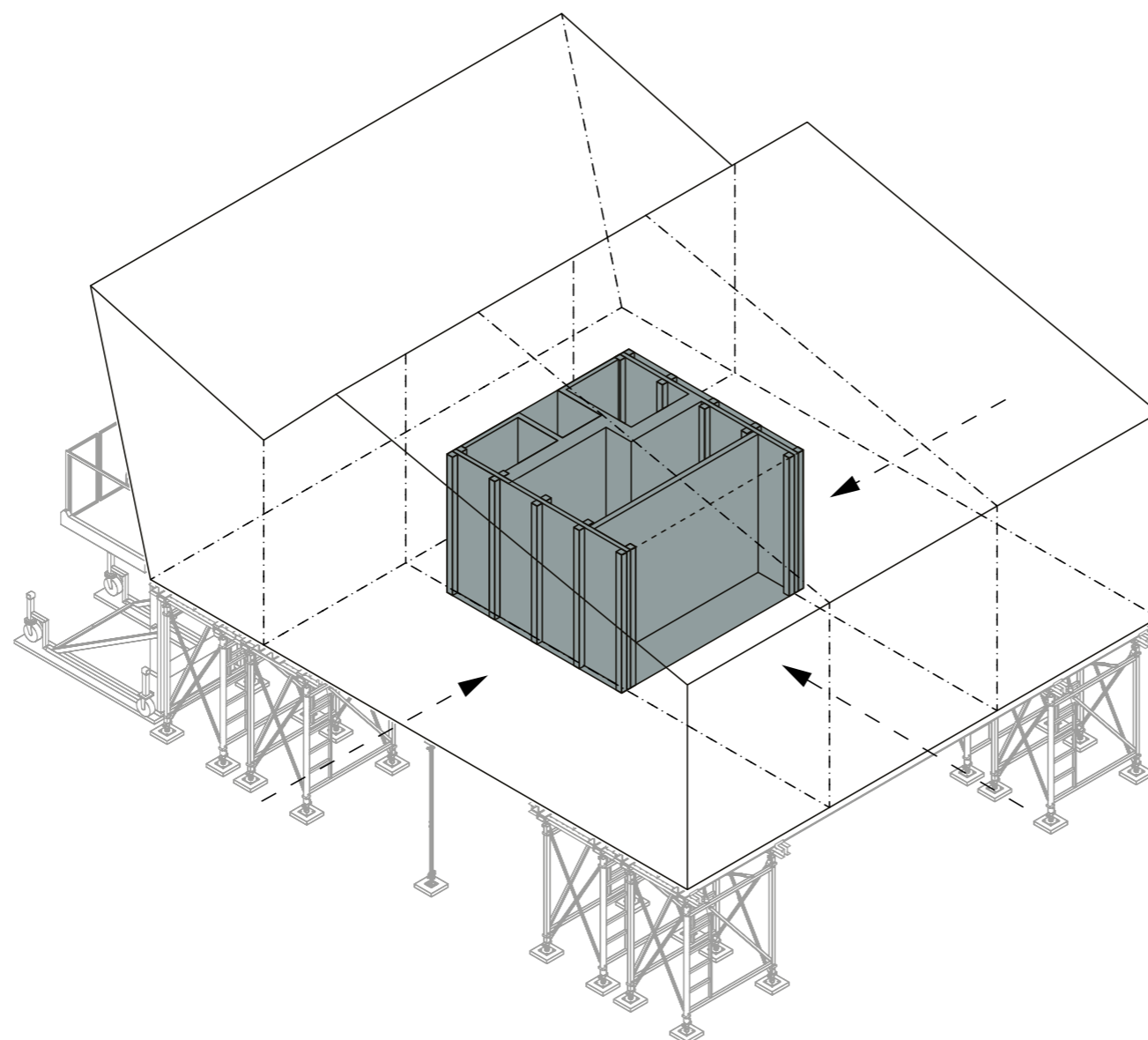
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WUPPERTAL GERMANY

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Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

central core



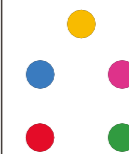
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Drawing Content
Conceptual Drawings

AR-0004



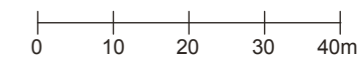
RoofKIT



solar decathlon europe 21»22

WUPPERTAL GERMANY

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Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
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Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
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Health & Safety	HS
Public Tour	PT

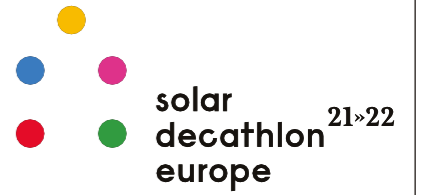


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Drawing Content
SDE21 Solar Campus Plan

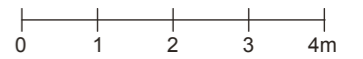
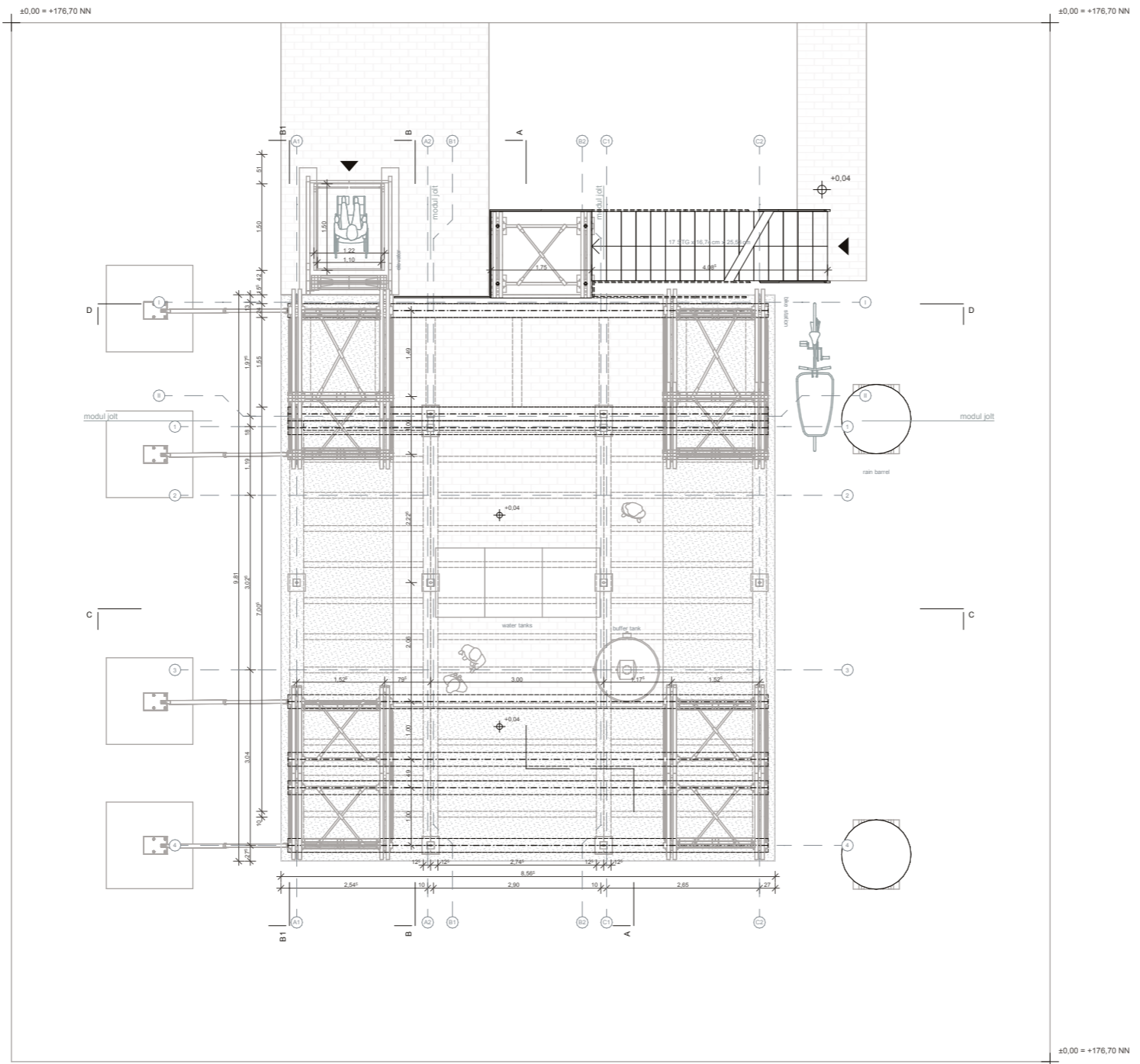
AR-1001





WUPPERTAL GERMANY

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Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



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Drawing Content
Floor Plan Level 0

AR-2001



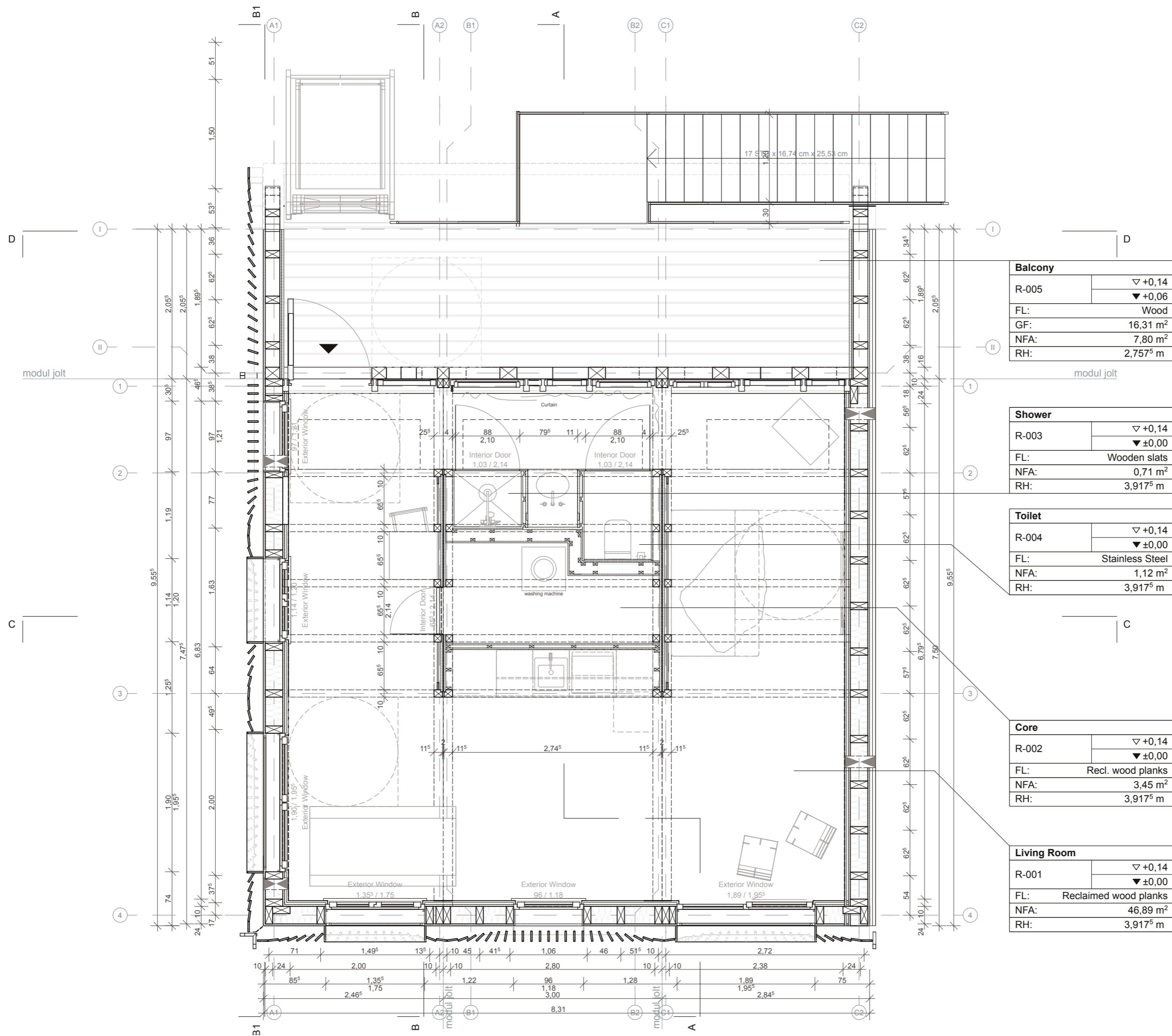


RoofKIT



WUPPERTAL GERMANY

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Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
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Site Operations	SO
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Health & Safety	HS
Public Tour	PT



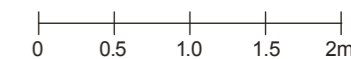
Balcony	
R-005	▽ +0,14 ▼ +0,06
FL:	Wood
GF:	16,31 m ²
NFA:	7,80 m ²
RH:	2,757 ⁵ m

Shower	
R-003	▽ +0,14 ▼ ±0,00
FL:	Wooden slats
NFA:	0,71 m ²
RH:	3,917 ⁵ m

Toilet	
R-004	▽ +0,14 ▼ ±0,00
FL:	Stainless Steel
NFA:	1,12 m ²
RH:	3,917 ⁵ m

Core	
R-002	▽ +0,14 ▼ ±0,00
FL:	Recl. wood planks
NFA:	3,45 m ²
RH:	3,917 ⁵ m

Living Room	
R-001	▽ +0,14 ▼ ±0,00
FL:	Reclaimed wood planks
NFA:	46,89 m ²
RH:	3,917 ⁵ m



Scale 1:50 Page No. 18

Drawing Content Floor Plan Level 1

AR-2101



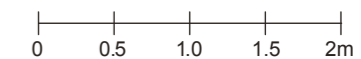
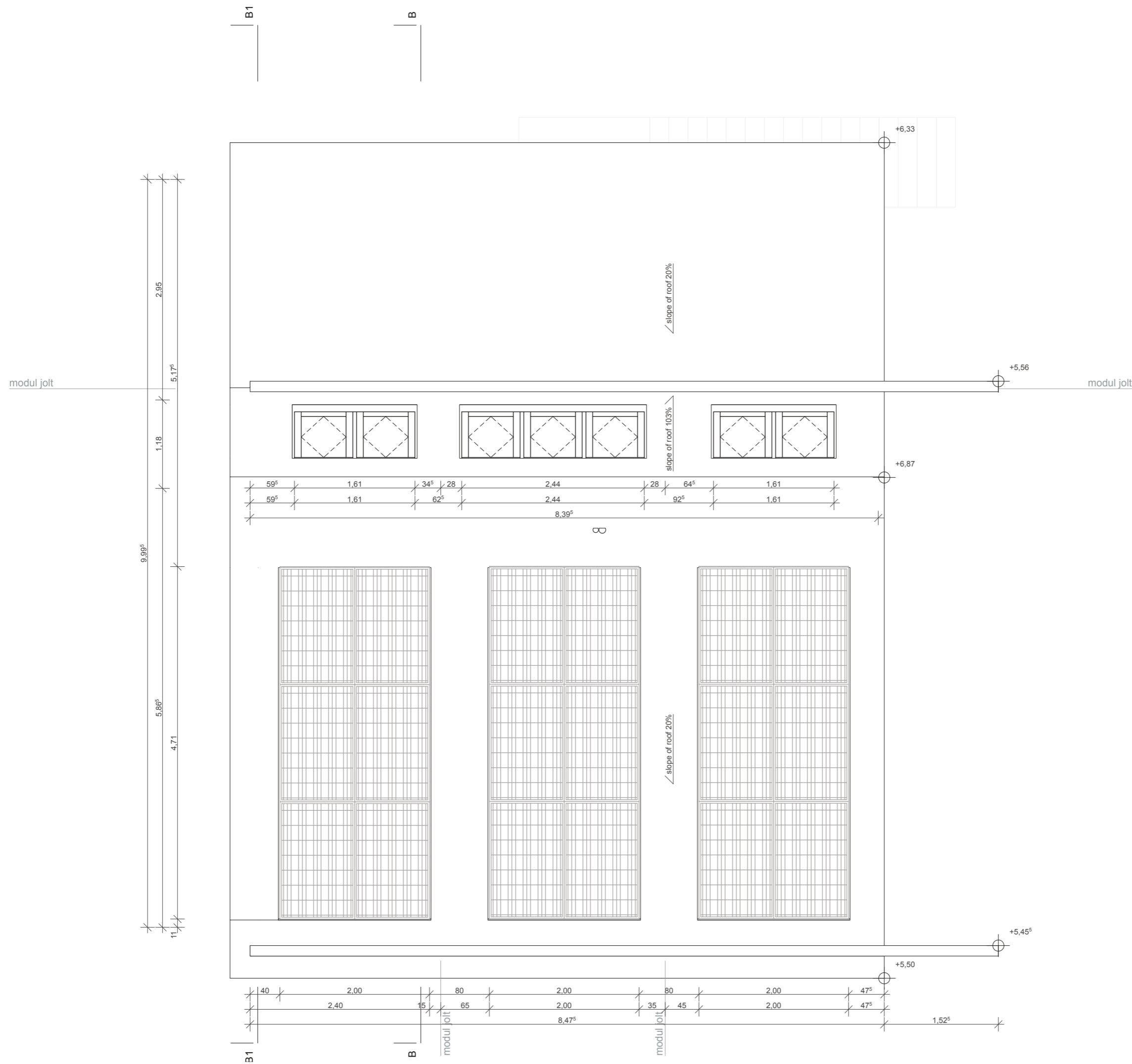


RoofKIT



WUPPERTAL GERMANY

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Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale 1:50 Page No. 19

Drawing Content
Roof Plan

AR-2201



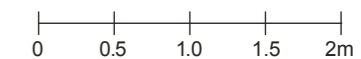
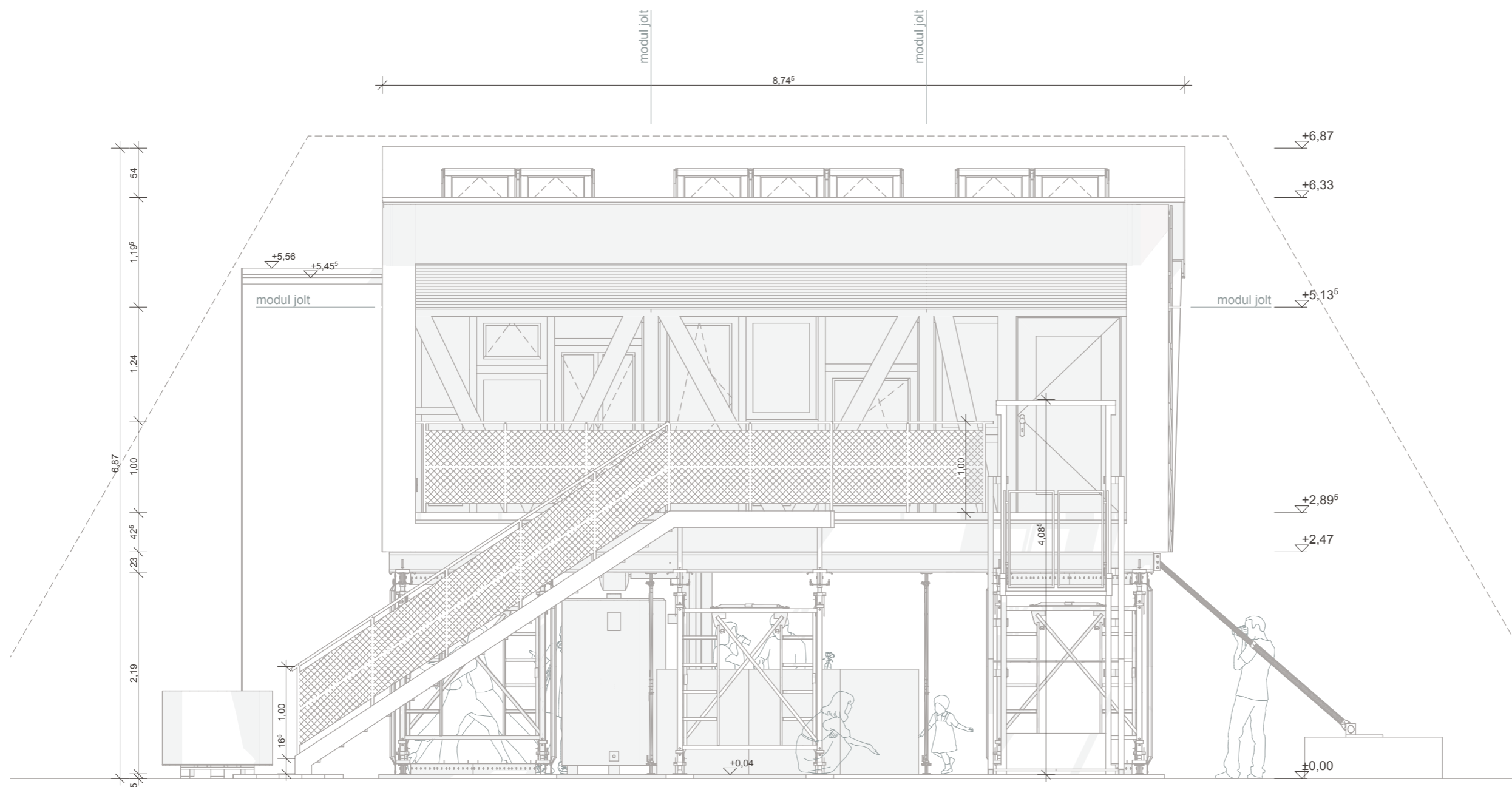


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



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Drawing Content Building Elevation North

AR-2301



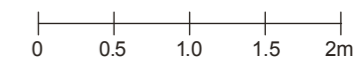
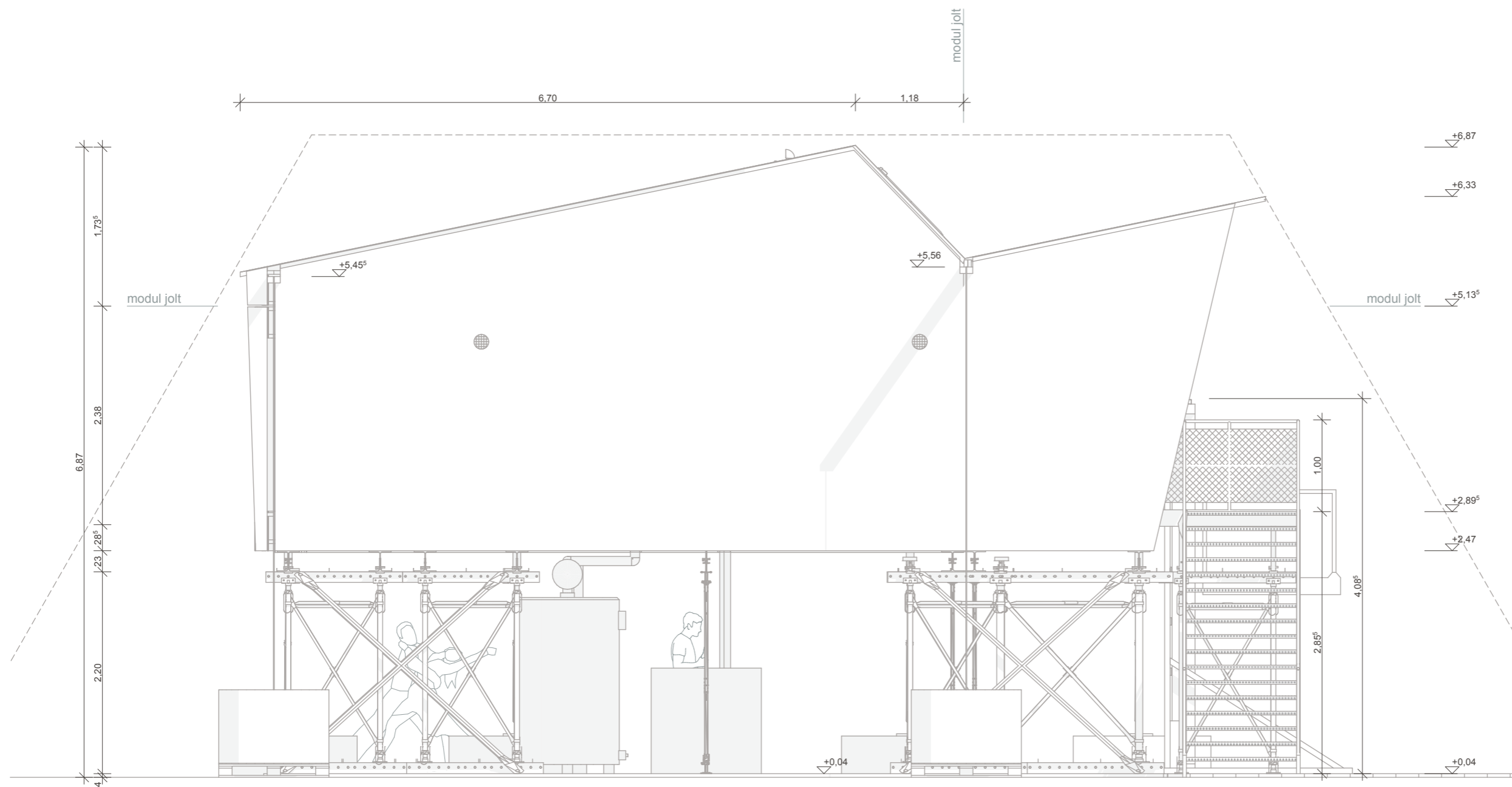


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



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Drawing Content Building Elevation East

AR-2302



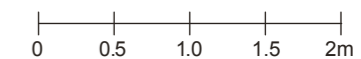


RoofKIT



WUPPERTAL GERMANY

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Interiors	IN
Structural	ST
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Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale 1:50 Page No. 22

Drawing Content
Building Elevation South

AR-2303



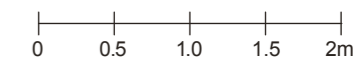
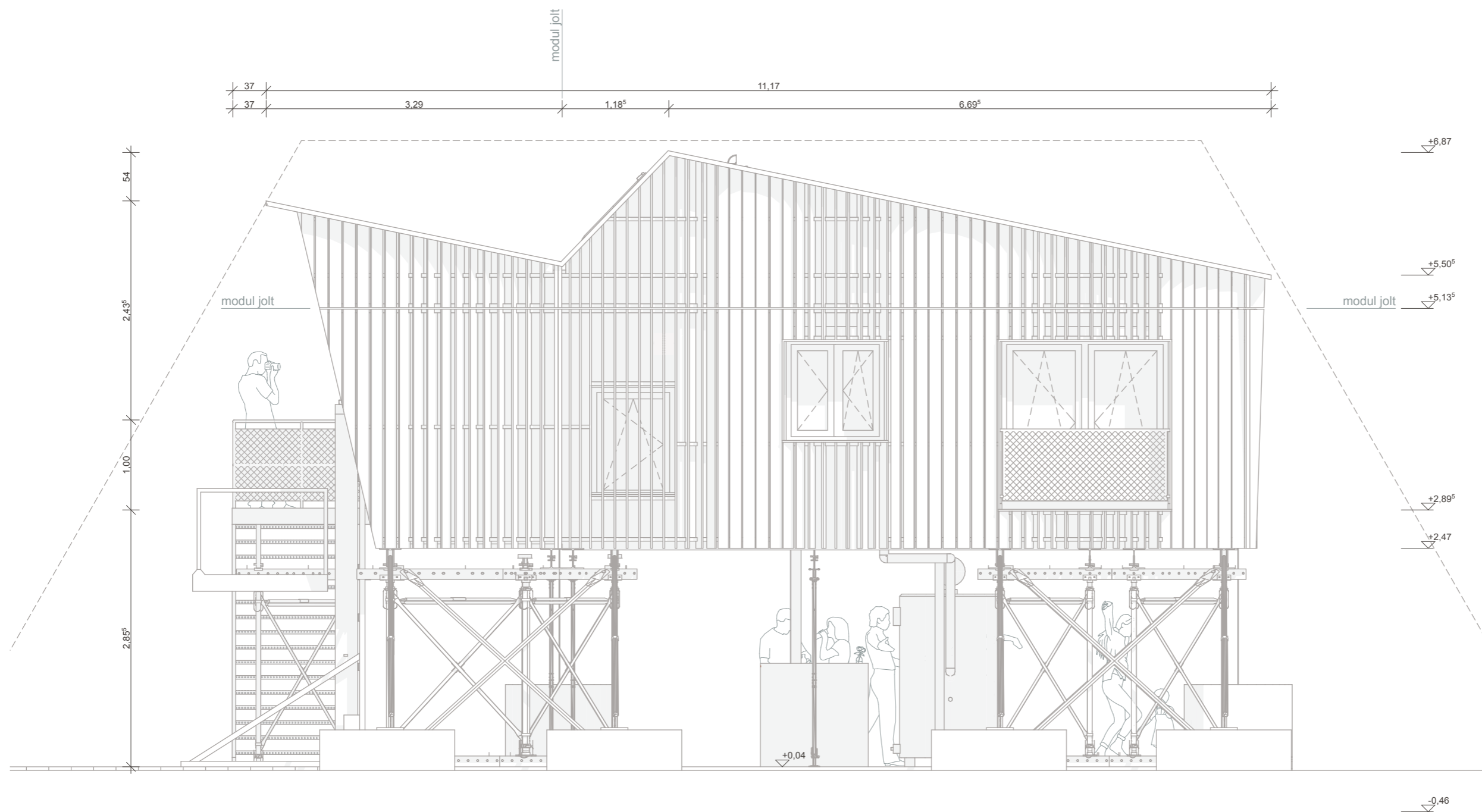


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



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Drawing Content
Building Elevation West

AR-2304



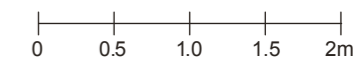
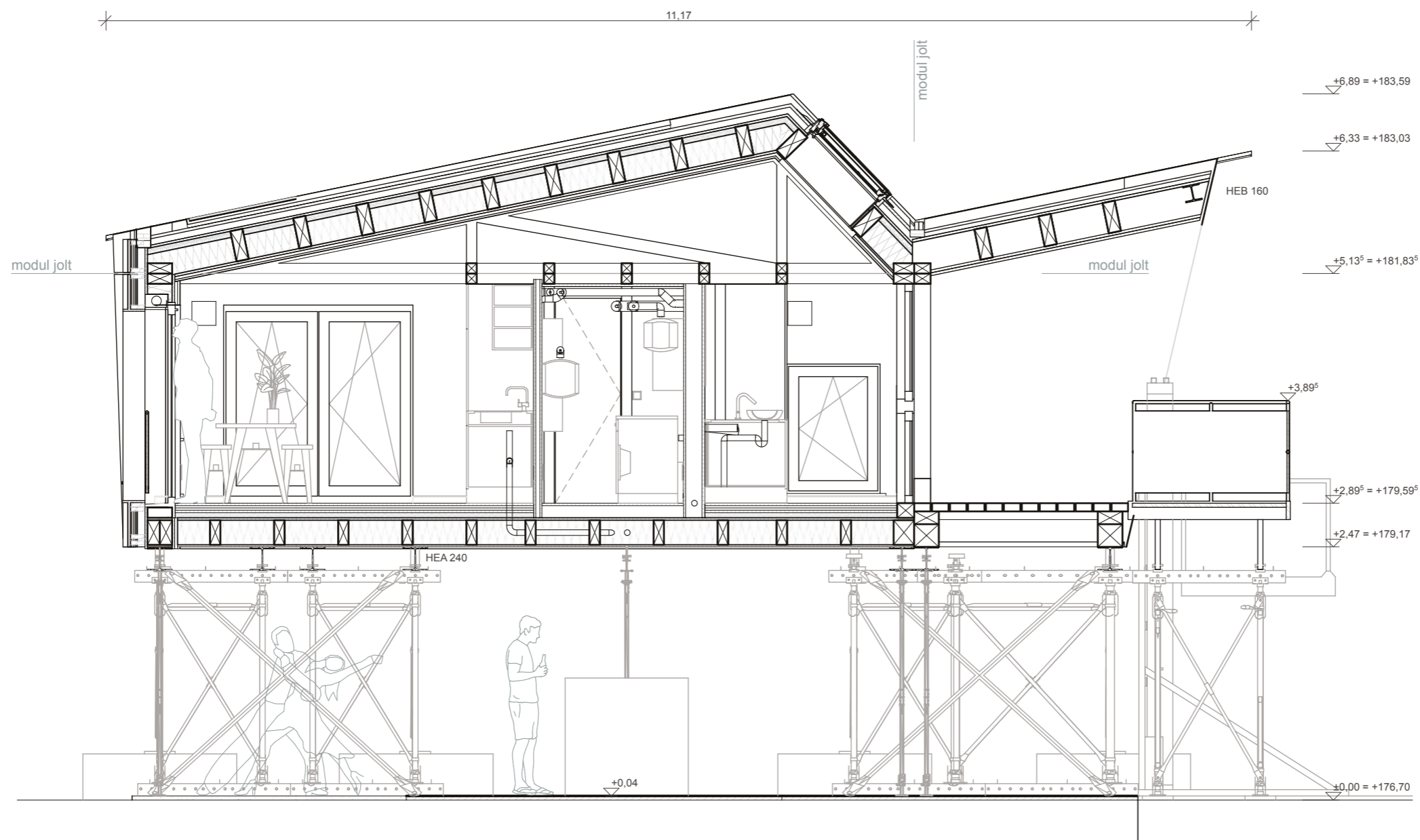


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale 1:50 Page No. 24

Drawing Content
Longitudinal Section A-A

AR-2401



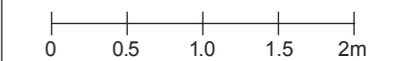
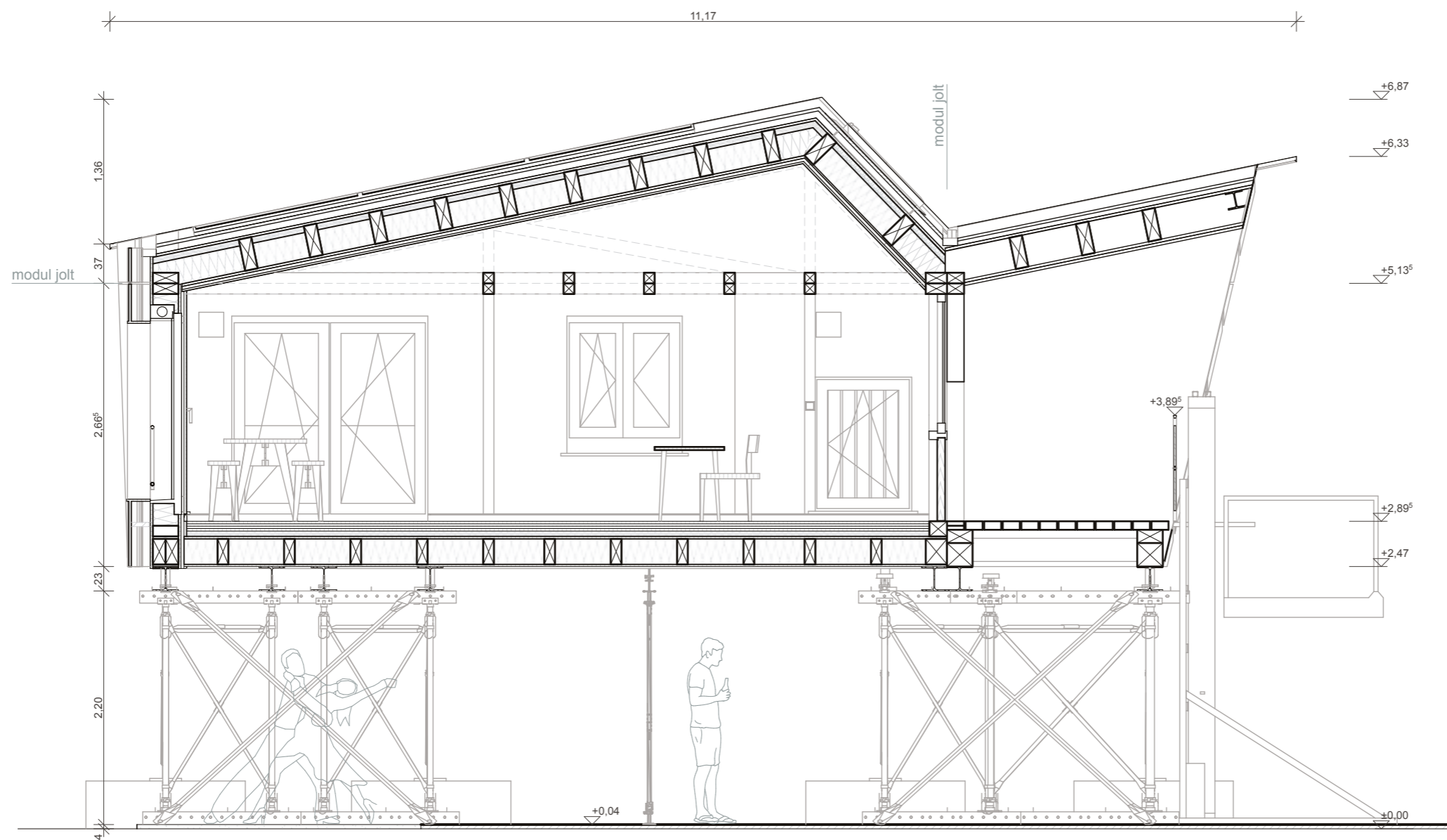


RoofKIT



WUPPERTAL GERMANY

General	GE
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Interiors	IN
Structural	ST
Plumbing	PL
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Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale 1:50 Page No. 25

Drawing Content
Longitudinal Section B-B

AR-2402



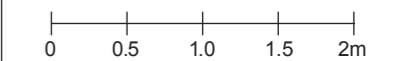
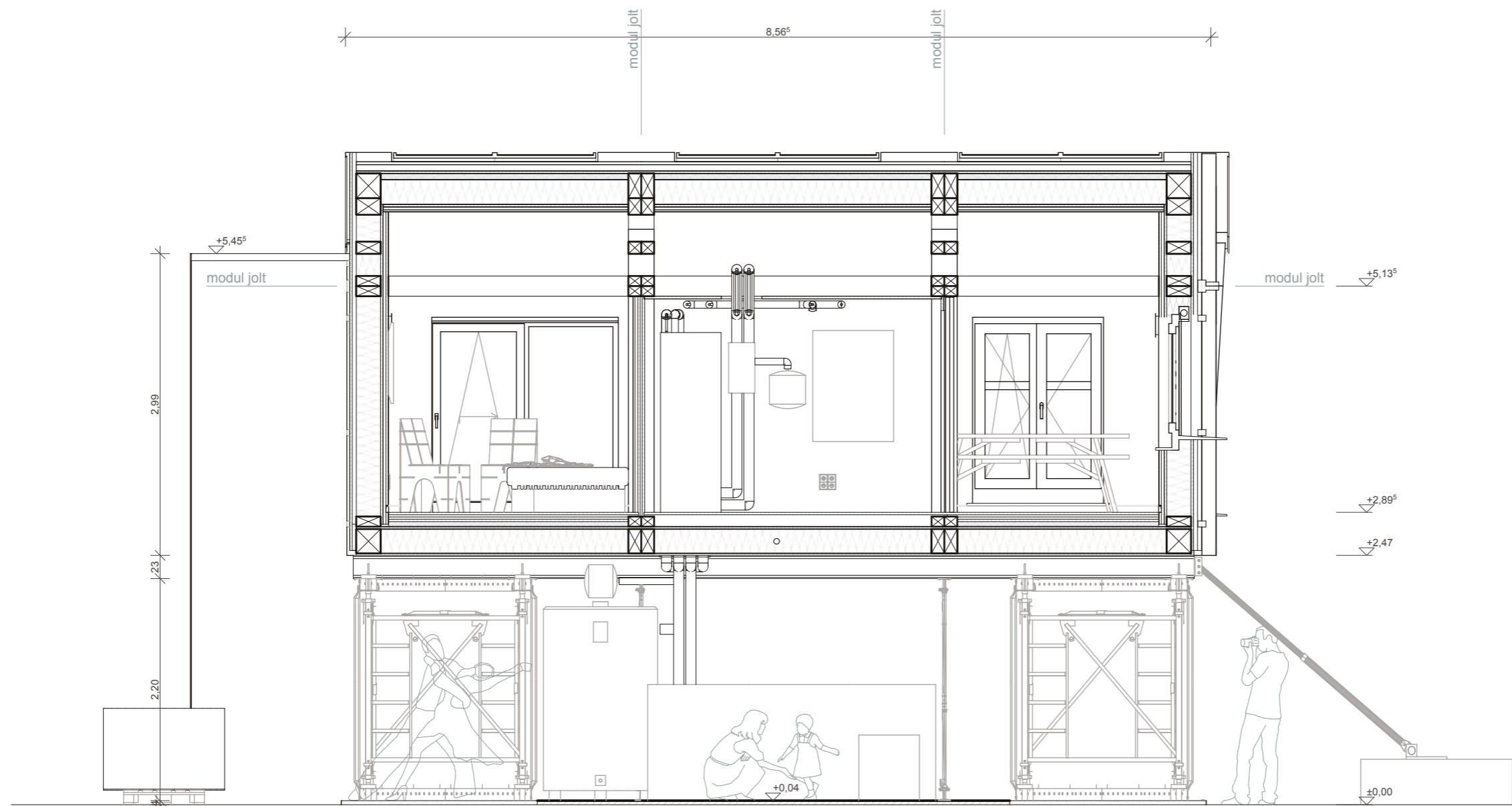


RoofKIT



WUPPERTAL GERMANY

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Interiors	IN
Structural	ST
Plumbing	PL
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Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



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Drawing Content Transversal Section C-C

AR-2403



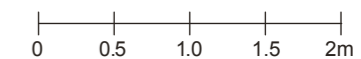
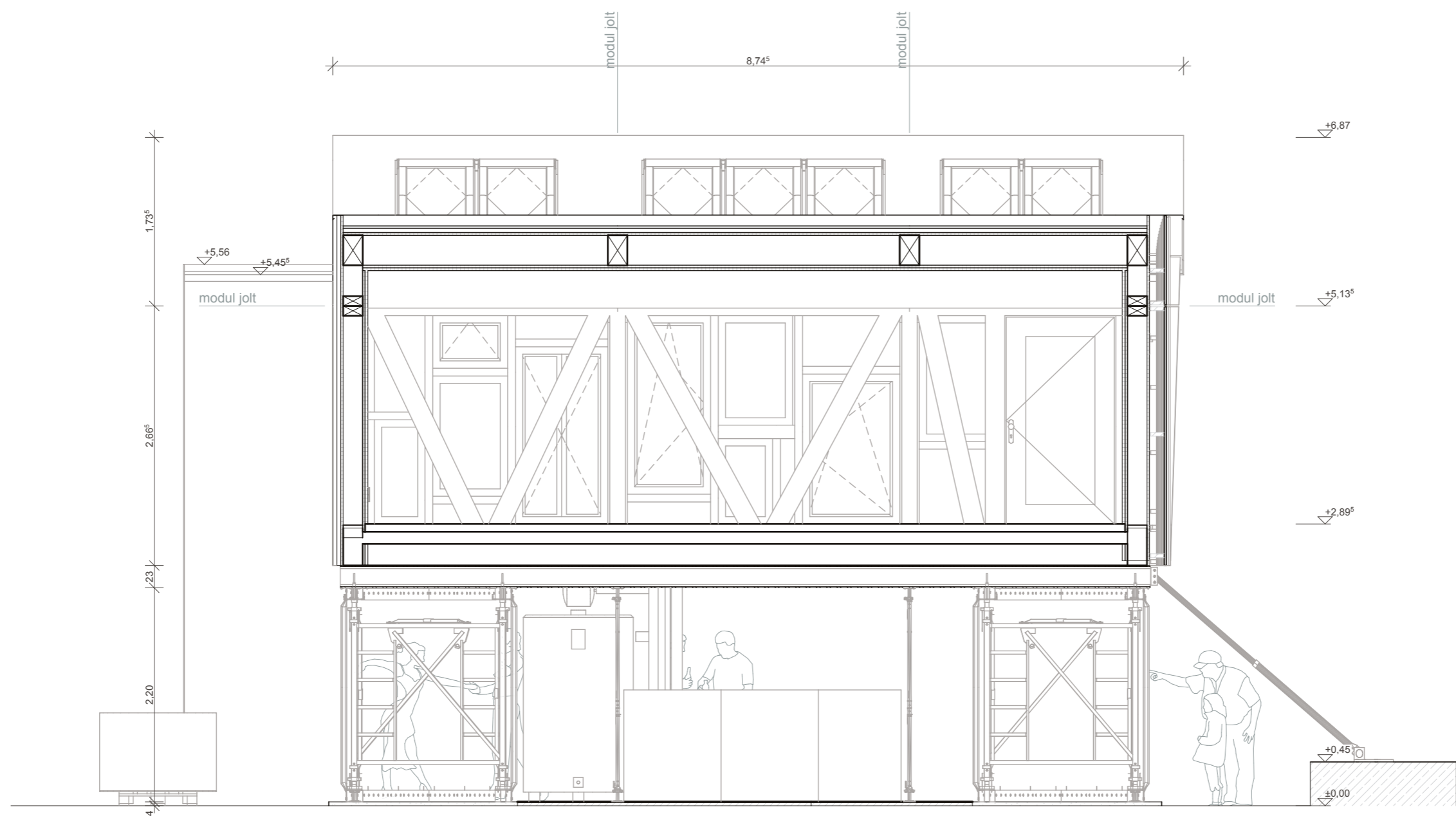


RoofKIT



WUPPERTAL GERMANY

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Interiors	IN
Structural	ST
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Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



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Drawing Content
Transversal Section D-D

AR-2404





RoofKIT

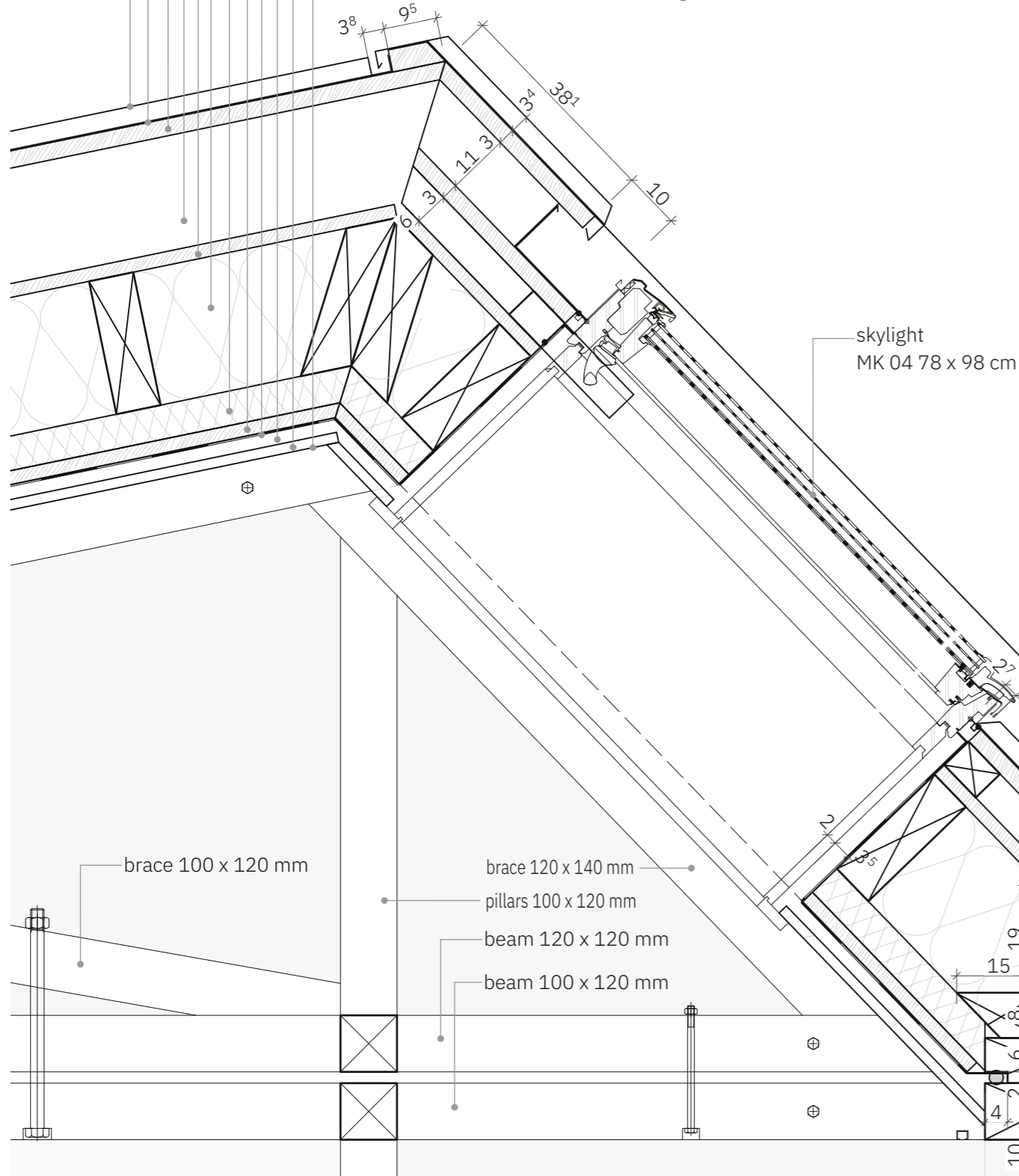


WUPPERTAL GERMANY

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Interiors	IN
Structural	ST
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Mechanical	ME
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Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

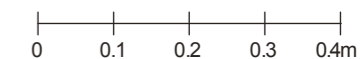
Roof

- 0,7 mm copper sheet covering
- 30 mm shuttering
- 60 mm counter battening
- underlay sucotecto 0.8
- 24 mm diagonal formwork
- 240 mm wooden beams with seaweed insulation Neptutherm
- 60 mm wooden battens with insulation Neptutherm
- 24 mm diagonal formwork
- PE vapour barrier ECOVAP blue
- 26 mm installation area
- 15 mm ceiling panelling ECOR lightcore
- 2 mm felt covering



Roof

- 0,7 mm copper sheet covering
- 30 mm shuttering
- 60 mm counter battening
- roof underlay sucotecto 0.8
- 24 mm diagonal formwork
- 240 mm construction wood, 80/240 mm
- 60 mm batten framework, 80/60 mm
- 20 mm diagonal formwork



Scale 1:10 Page No. 28

Drawing Content
Construction Detail

AR-3001

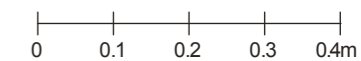
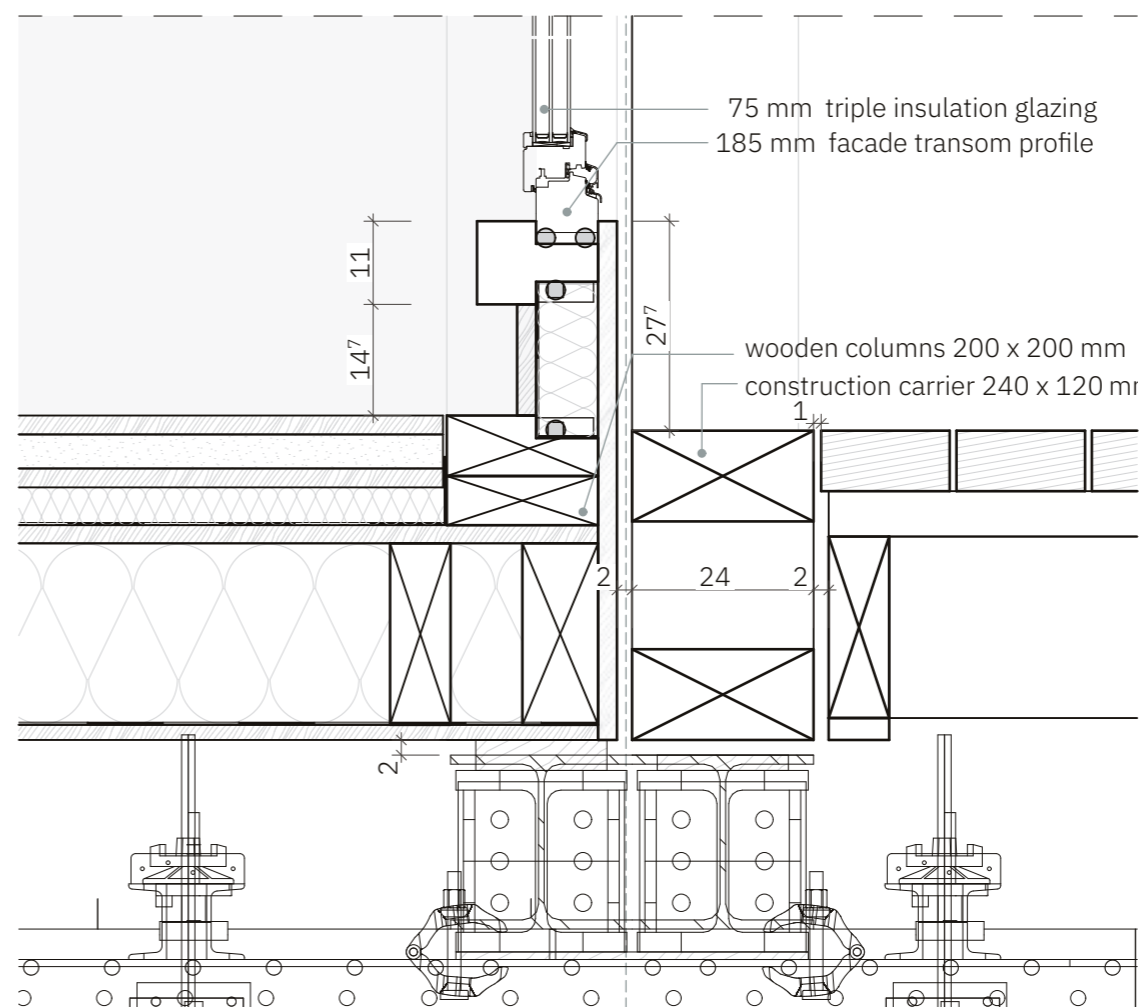
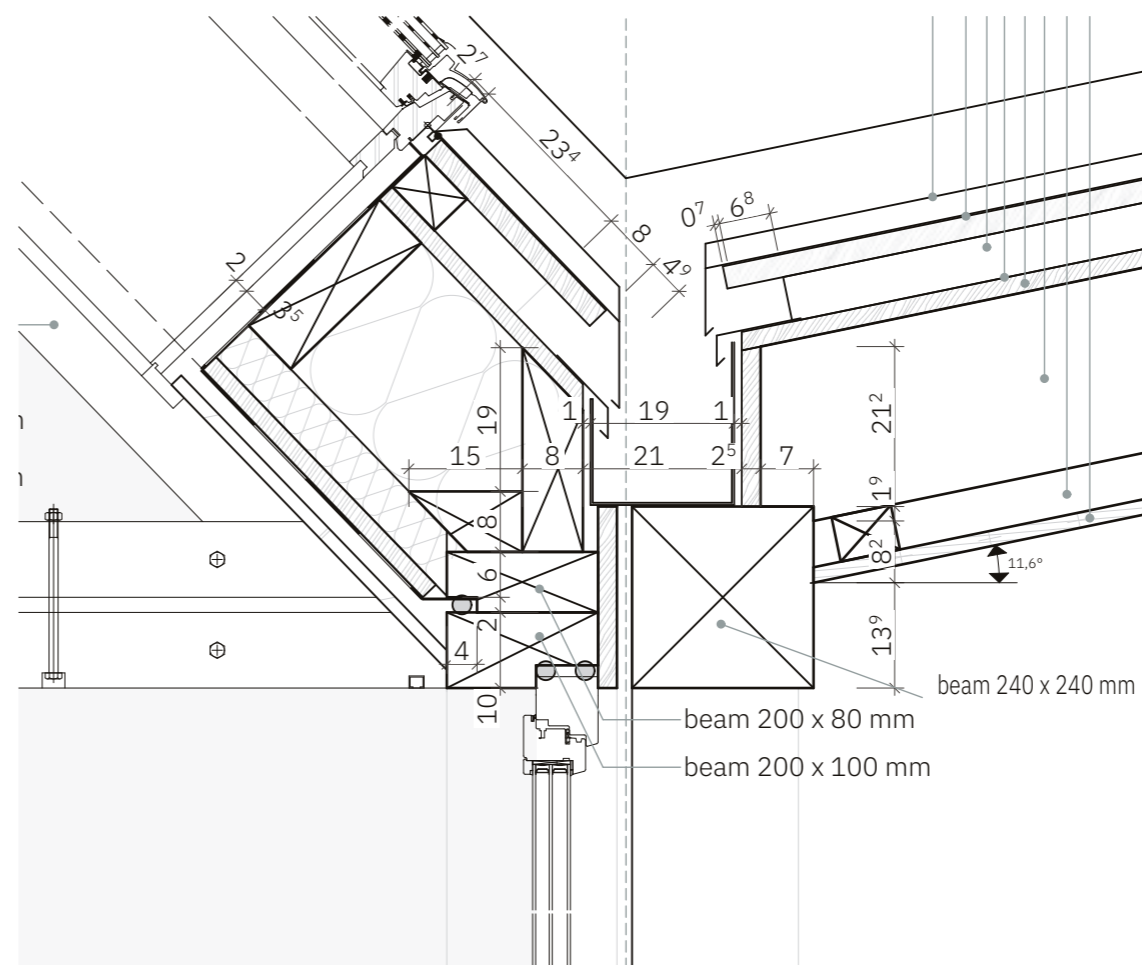
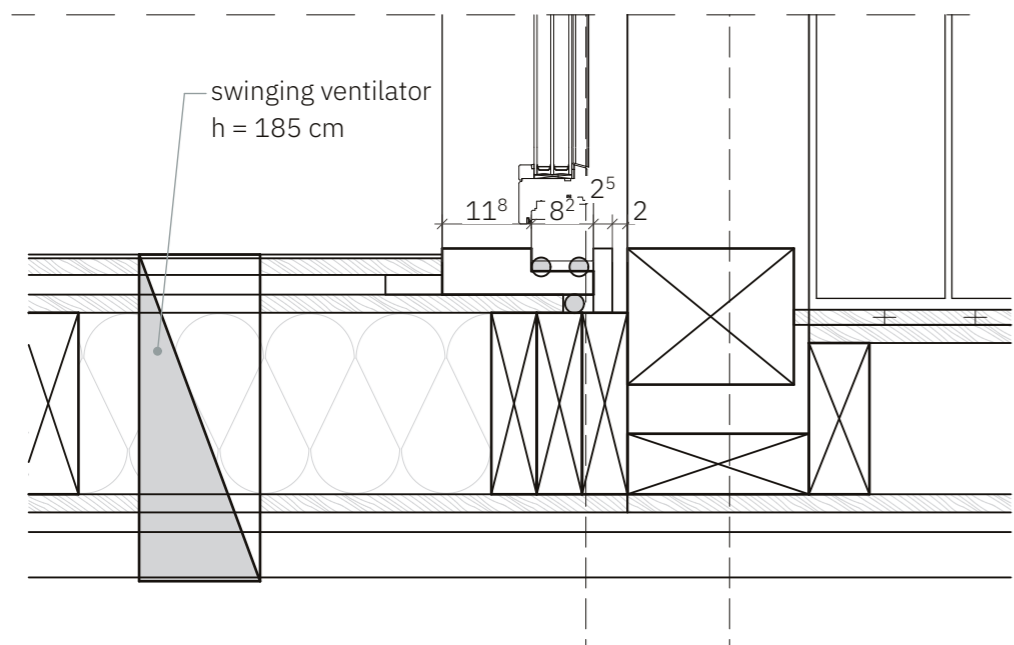
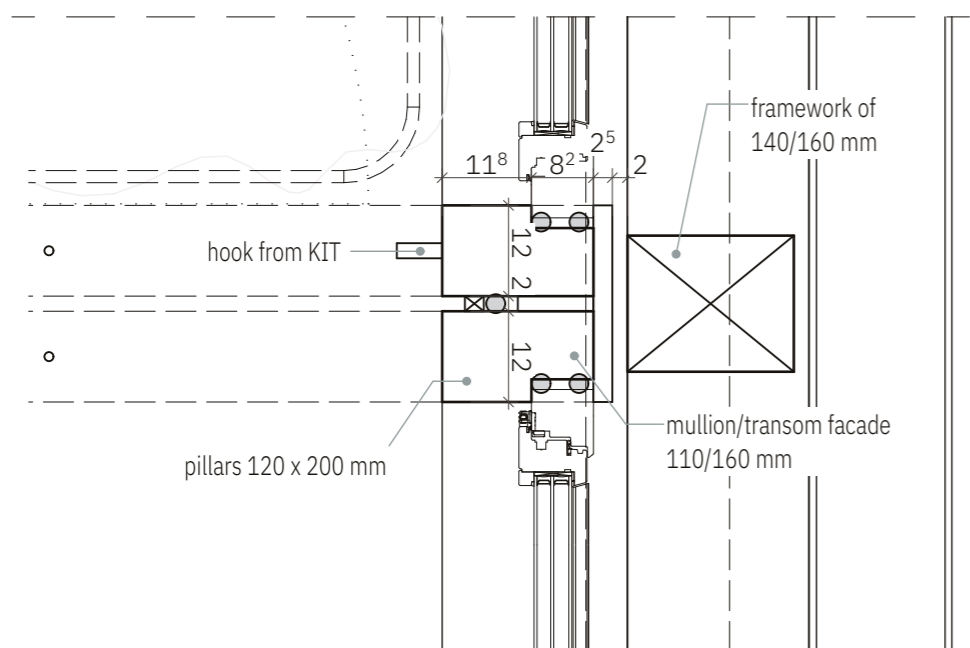
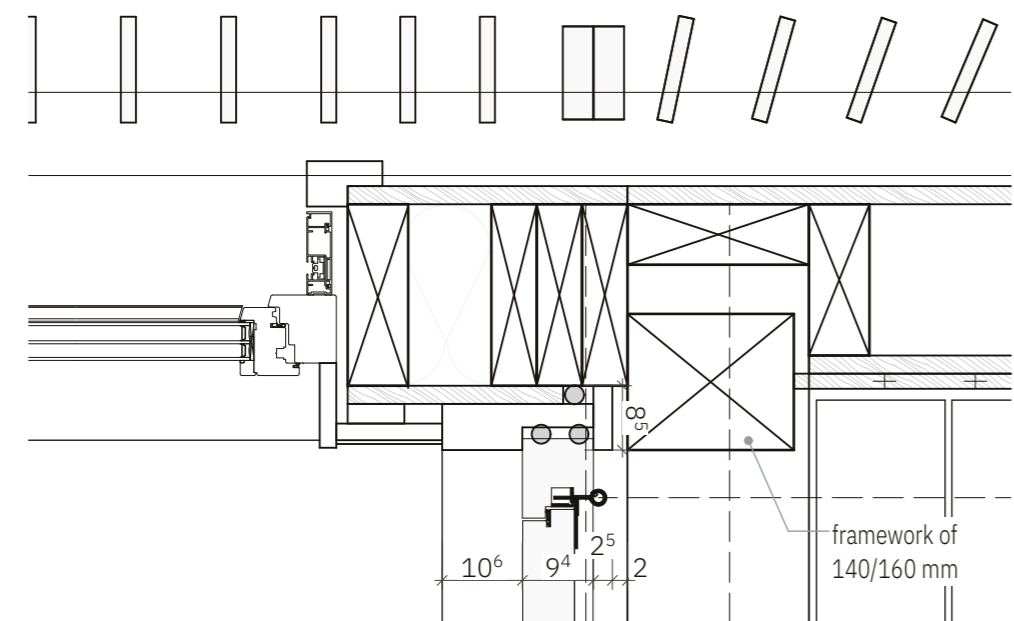


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale 1:10 Page No. 29

Drawing Content
Construction Detail

AR-3002

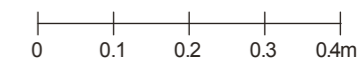
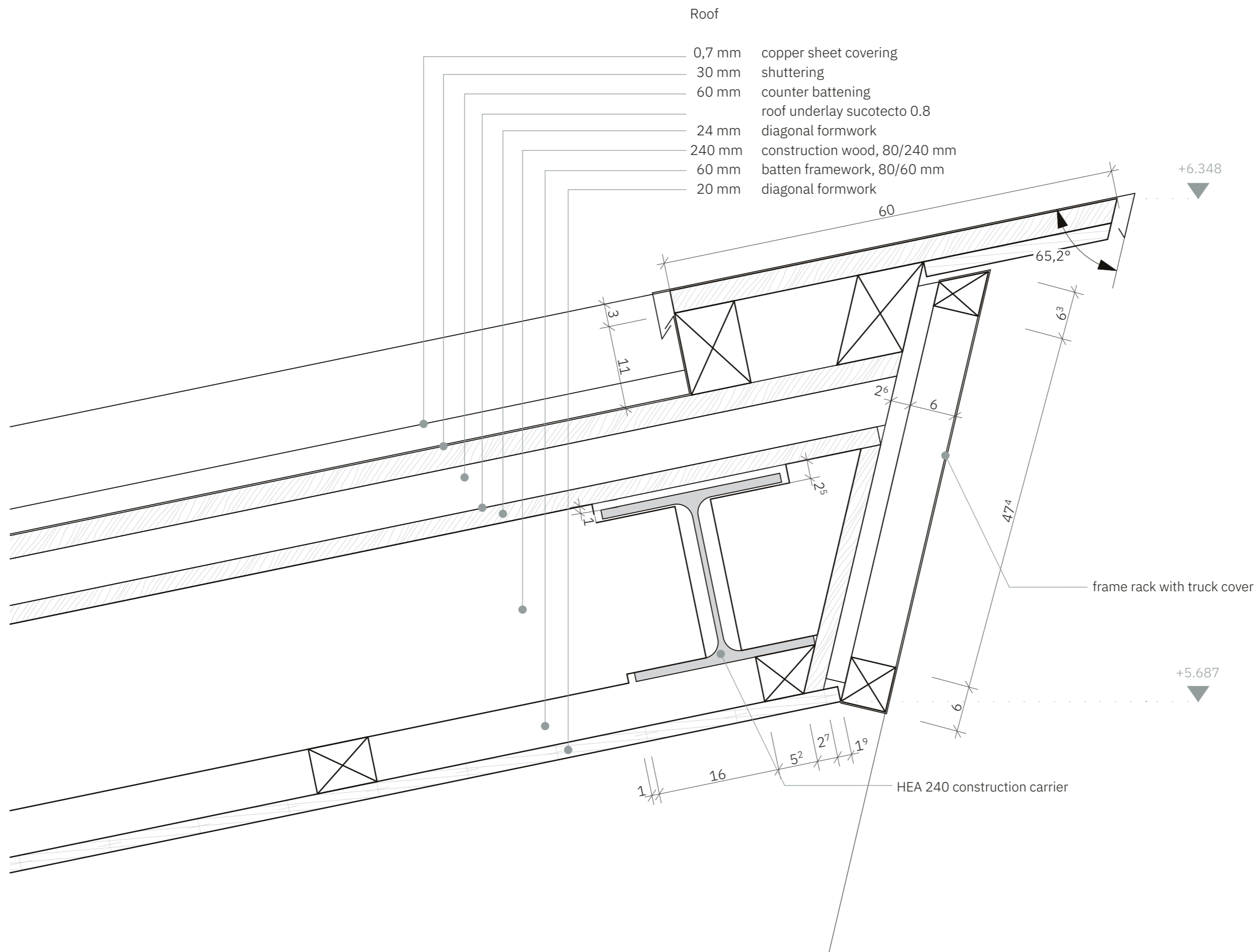


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale 1:10 Page No. 30

Drawing Content Construction Detail

AR-3003



RoofKIT

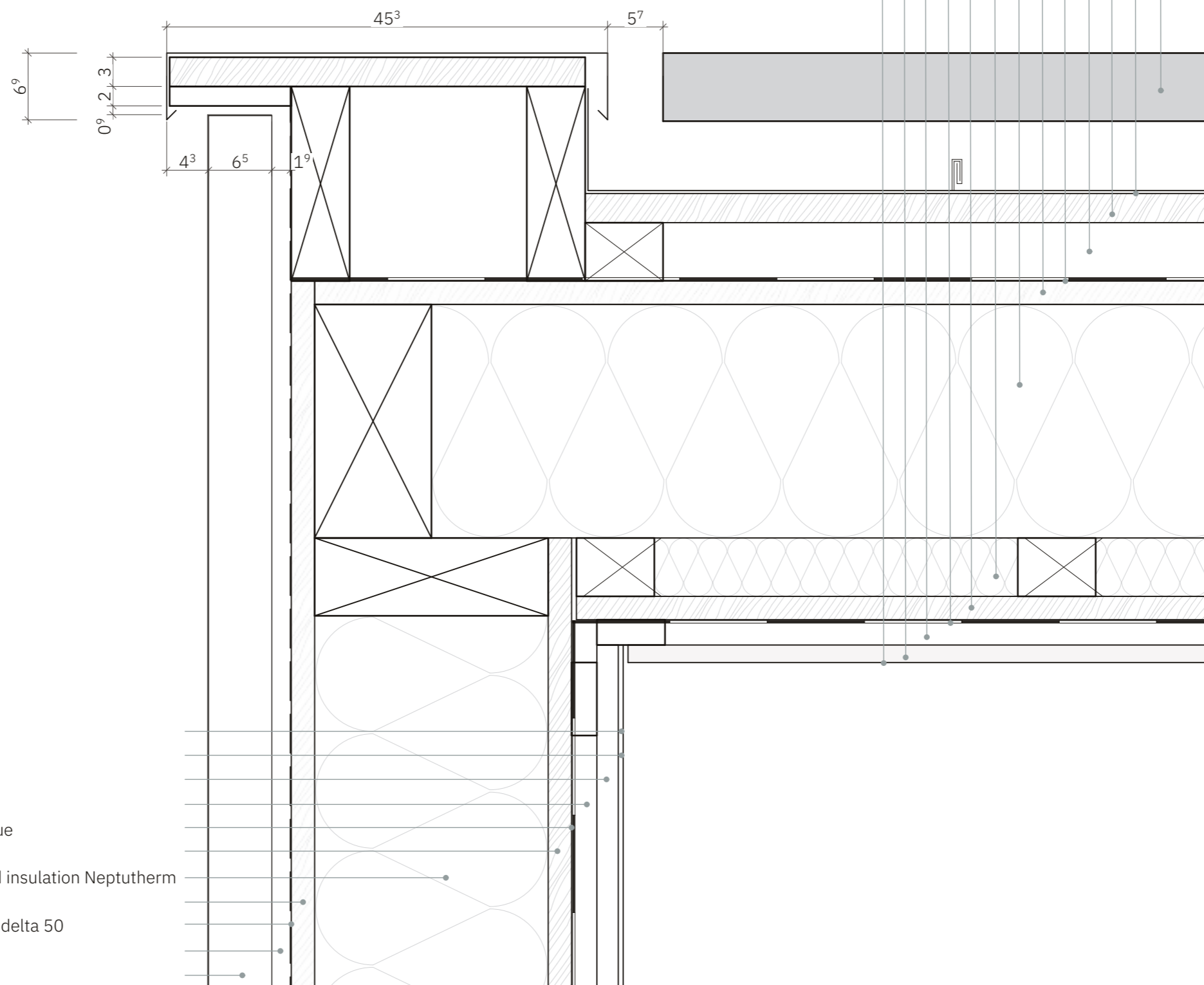


WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

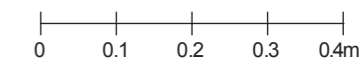
Roof

- 70 mm PV moduls 1665x1002mm
- 0,7 mm sheet metal roofin
- 30 mm shuttering
- 60 mm counter battening
- underlay sucotecto 0.8
- 24 mm diagonal formwork
- 240 mm wooden beams with seaweed insulation Neptutherm
- 60 mm wooden battens with insulation Neptutherm
- 24 mm diagonal formwork
- PE vapour barrier ECOVAP blue
- 26 mm installtion area
- 15 mm ceiling panelling ECOR lightcore
- 2 mm felt covering



Wall

- 2 mm clay finsih plaster
- 3 mm clay finsih plaster
- 22 mm clay panel CLAYTEC Lemix
- 26 mm installation area
- PE vapour barrier ECOVAP blue
- 24 mm diagonal formwork
- 240 mm wooden beams with seaweed insulation Neptutherm
- 24 mm diagonal formwork
- facade membrane DOERKEN delta 50
- 26 mm counter battens
- 60 mm frame rack with truck cover



Scale 1:10 Page No. 31

Drawing Content
Construction Detail

AR-3004



RoofKIT

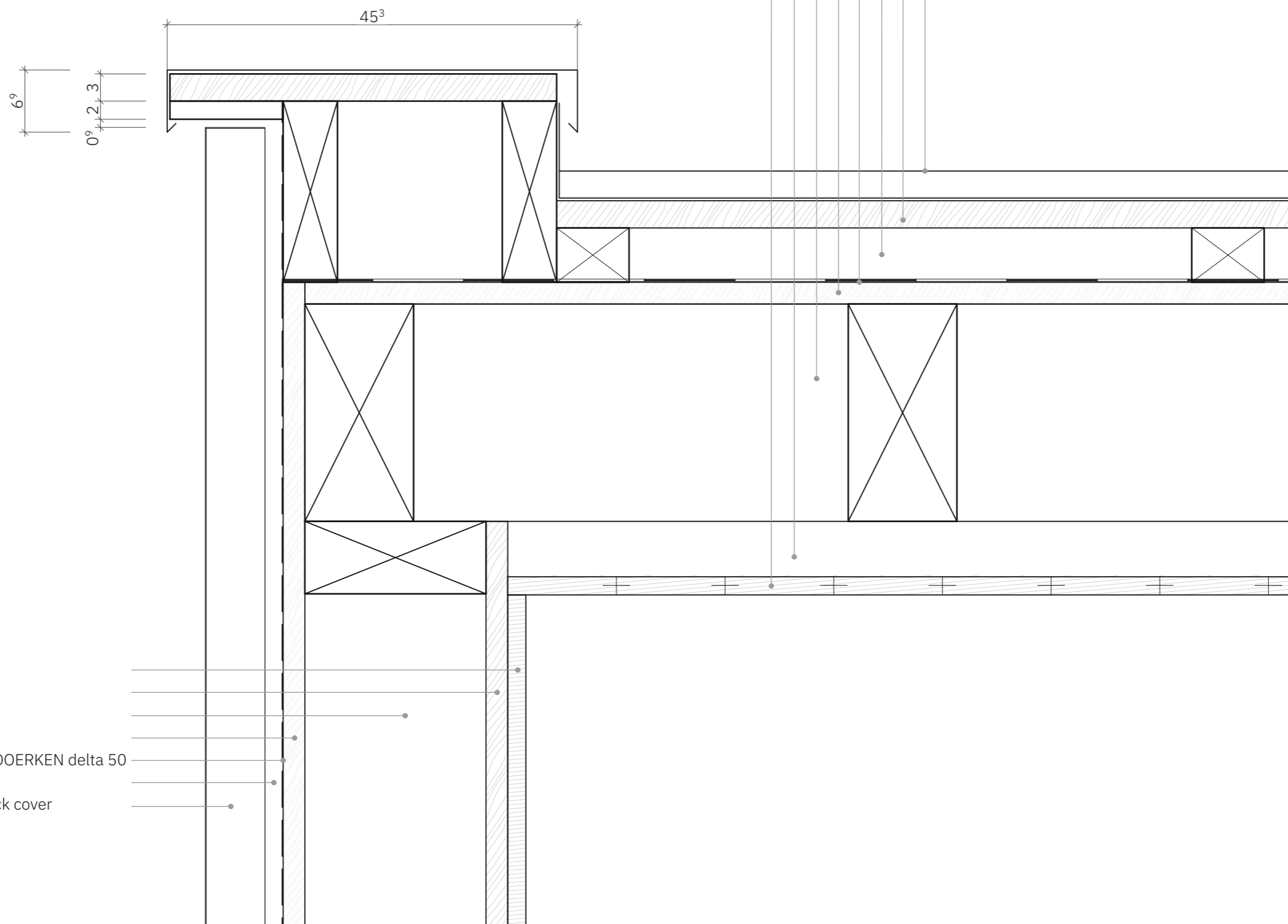


WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

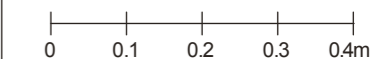
Roof

- 0,7 mm sheet metal roofin
- 30 mm shuttering
- 60 mm counter battening
- underlay sucotecto 0.8
- 24 mm diagonal formwork
- 240 mm wooden beams, 80/240 mm
- 60 mm wooden battens, 80/60 mm
- 20 mm diagonal formwork



Wall

- 20 mm matured timber
- 24 mm diagonal formwork
- 240 mm wooden beams
- 24 mm diagonal formwork
- facade membrane DOERKEN delta 50
- 26 mm counter battens
- 60 mm frame rack with truck cover



Scale 1:10 Page No. 32

Drawing Content
Construction Detail

AR-3005



RoofKIT

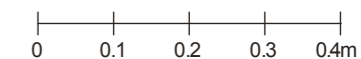
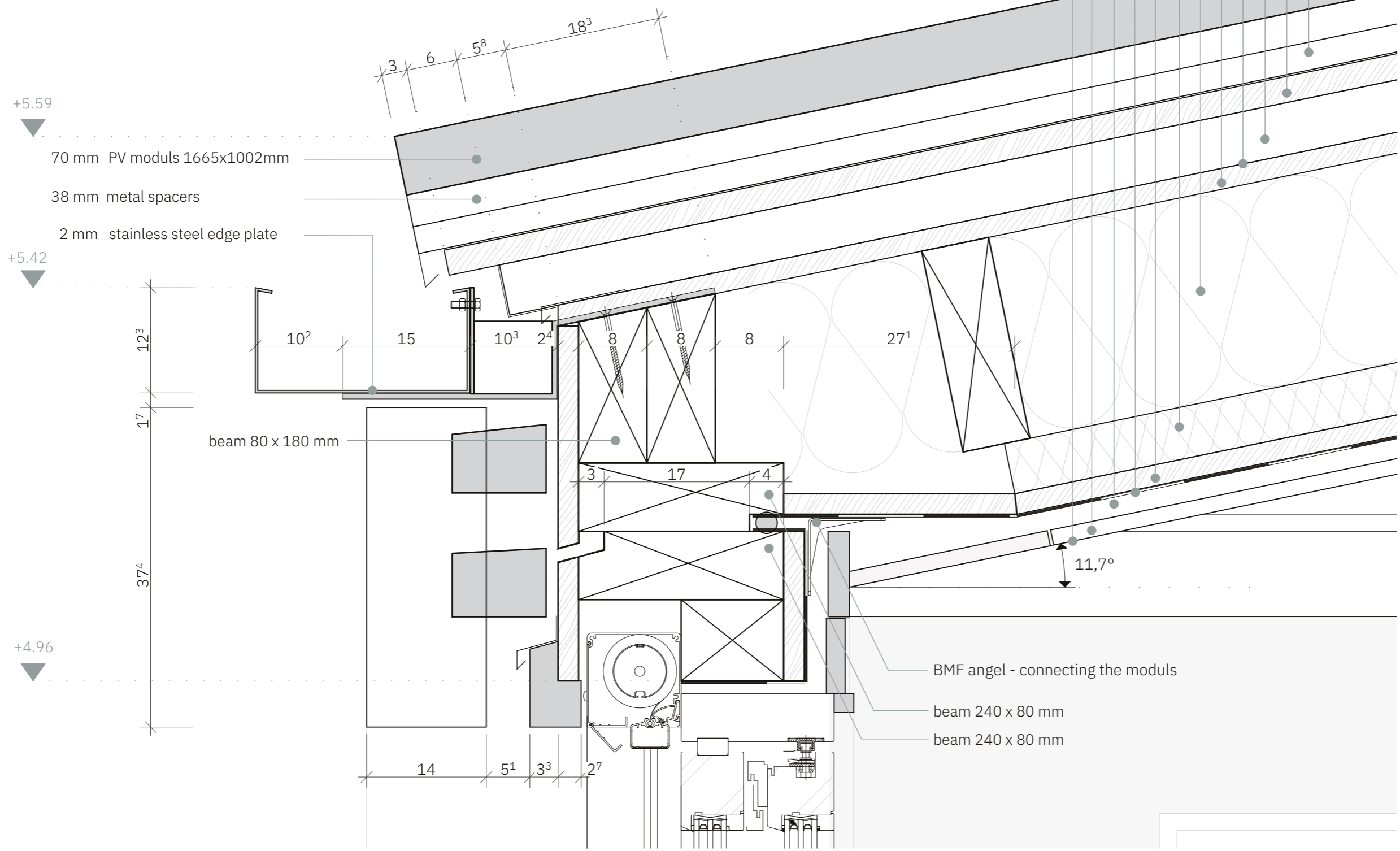


WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Roof

- 0,7 mm copper sheet covering
- 30 mm shuttering
- 60 mm counter battening
- underlay sucotecto 0.8
- 24 mm diagonal formwork
- 240 mm wooden beams with seaweed insulation Neptutherm
- 60 mm wooden battens with insulation Neptutherm
- 24 mm diagonal formwork
- PE vapour barrier ECOVAP blue
- 26 mm installation area
- 15 mm ceiling panelling ECOR lightcore
- 2 mm felt covering



Scale 1:10 Page No. 33

Drawing Content Construction Detail

AR-3006



RoofKIT

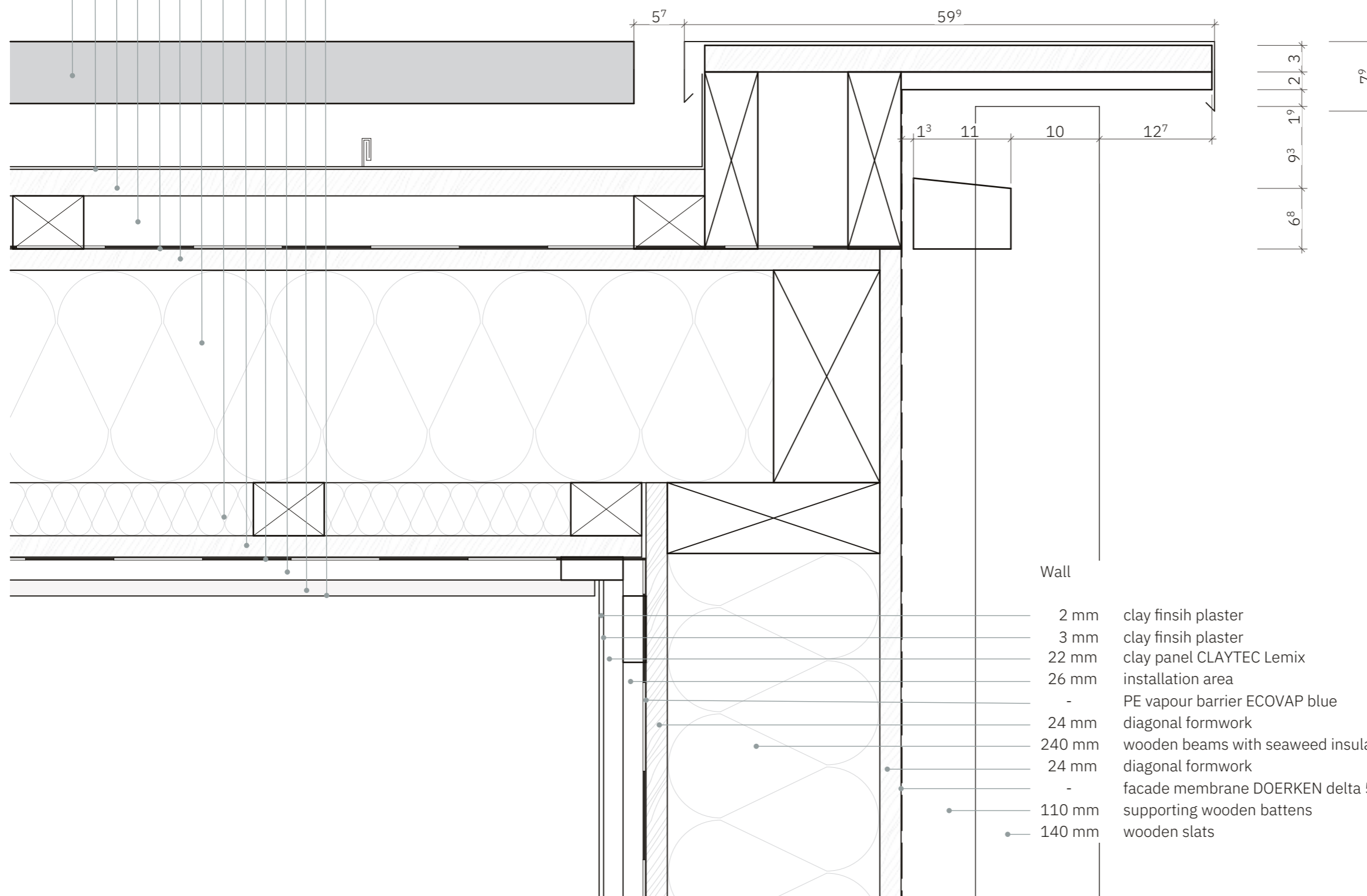


WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

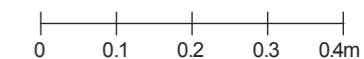
Roof

- 70 mm PV moduls 1665x1002mm
- 0,7 mm sheet metal roofin
- 30 mm shuttering
- 60 mm counter battening
- underlay sucotecto 0.8
- 24 mm diagonal formwork
- 240 mm wooden beams with seaweed insulation Neptutherm
- 60 mm wooden battens with insulation Neptutherm
- 24 mm diagonal formwork
- PE vapour barrier ECOVAP blue
- 26 mm installtion area
- 15 mm ceiling panelling ECOR lightcore
- 2 mm felt covering



Wall

- 2 mm clay finish plaster
- 3 mm clay finish plaster
- 22 mm clay panel CLAYTEC Lemix
- 26 mm installation area
- PE vapour barrier ECOVAP blue
- 24 mm diagonal formwork
- 240 mm wooden beams with seaweed insulation Neptutherm
- 24 mm diagonal formwork
- facade membrane DOERKEN delta 50
- 110 mm supporting wooden battens
- 140 mm wooden slats



Scale 1:10 Page No. 34

Drawing Content Construction Detail

AR-3007



RoofKIT

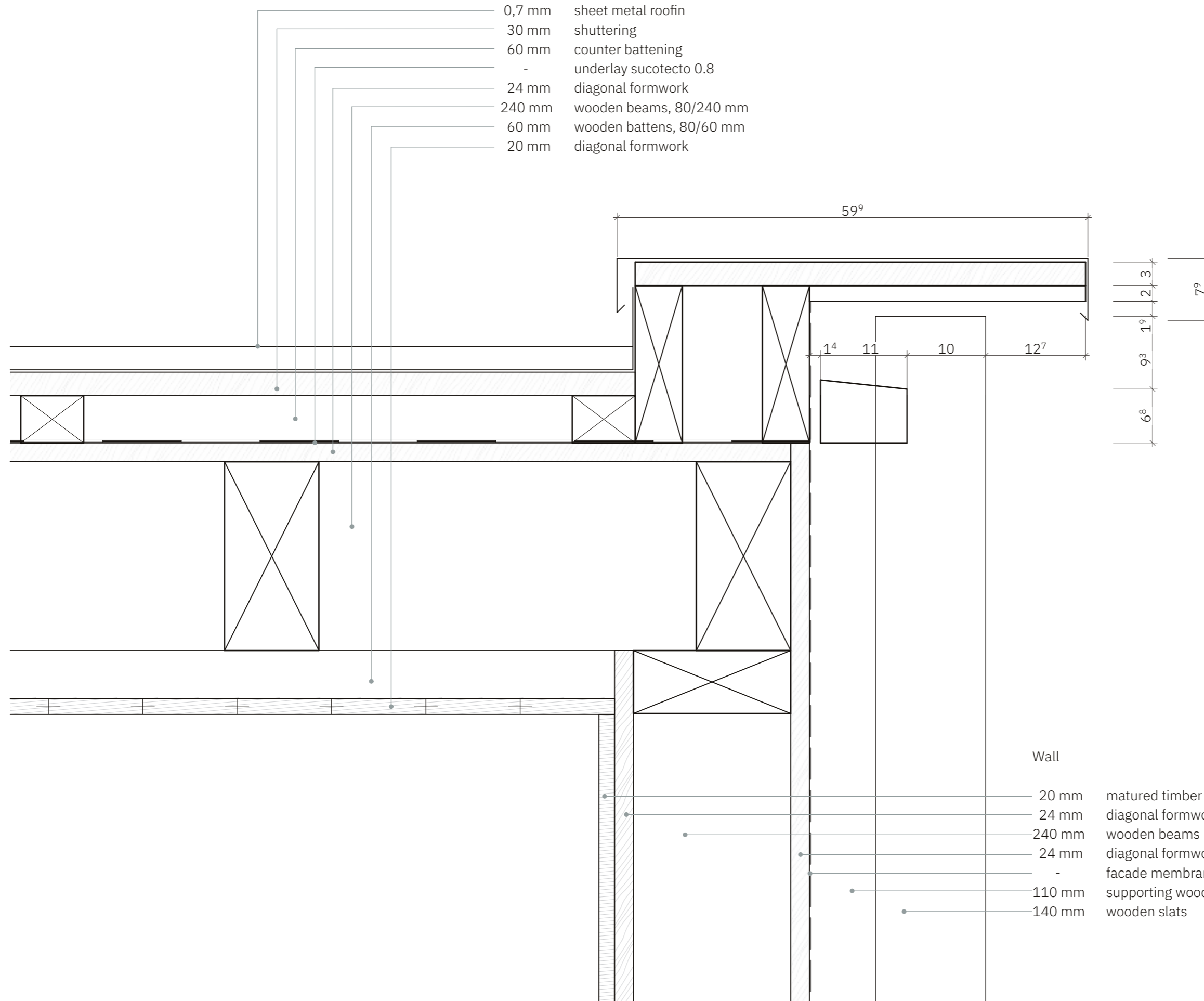


WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

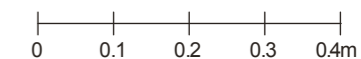
Roof

- 0,7 mm sheet metal roofin
- 30 mm shuttering
- 60 mm counter battening
- underlay sucotecto 0.8
- 24 mm diagonal formwork
- 240 mm wooden beams, 80/240 mm
- 60 mm wooden battens, 80/60 mm
- 20 mm diagonal formwork



Wall

- 20 mm matured timber
- 24 mm diagonal formwork
- 240 mm wooden beams
- 24 mm diagonal formwork
- facade membrane DOERKEN delta 5i
- 110 mm supporting wooden battens
- 140 mm wooden slats



Scale 1:10 Page No. 35

Drawing Content
Construction Detail

AR-3008

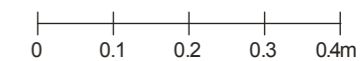
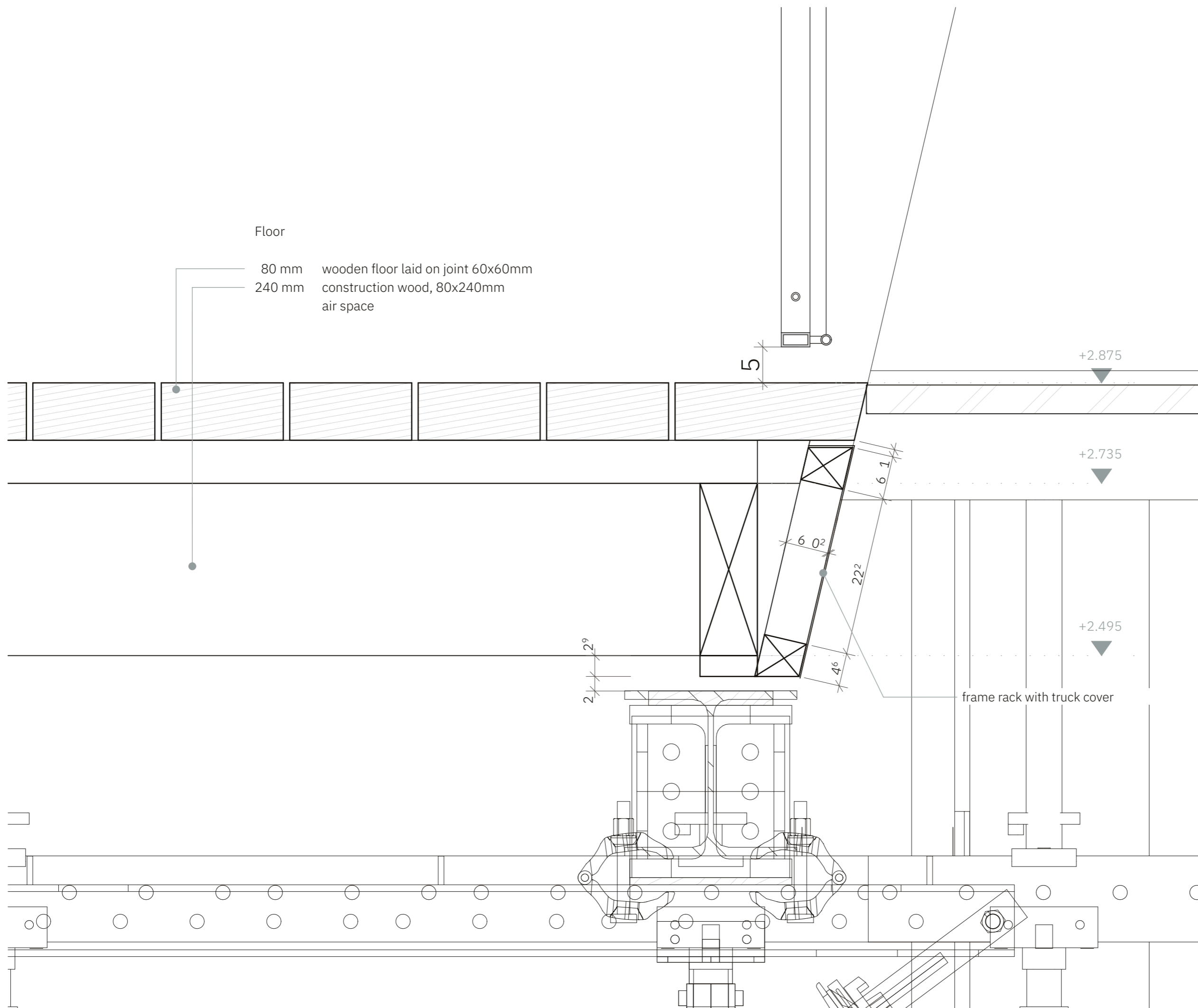


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



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Drawing Content
Construction Detail

AR-3009



RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Wall

- 2 mm clay finish plaster
- 3 mm clay finish plaster
- 22 mm clay panel CLAYTEC Lemix
- 26 mm installation area
- PE vapour barrier ECOVAP blue
- 24 mm diagonal formwork
- 240 mm wooden beams with seaweed insulation Neptutherm
- 24 mm diagonal formwork
- facade membrane DOERKEN delta 50
- 26 mm counter battens
- 60 mm frame rack with truck cover

Floor

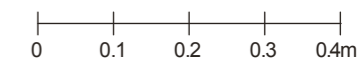
- 25 mm wooden floorboards
- 22 mm clay slab Lemix (heavy)
- 22 mm clay slab Lemix (heavy)
- 25 mm wooden formwork incl. floor heating
- 50 mm installation area
- PE vapour barrier ECOVAP blue
- 24 mm diagonal formwork
- 240 mm wooden beams with seaweed insulation
- wind sealing TYVEK soft
- 20 mm diagonal formwork

beam 120 x 240 mm

elastomeric bearing

systems carrier
SL 1 - 5,00m

yoke bolt
WS 10 - 3,00m



Scale 1:10 Page No. 37

Drawing Content
Construction Detail

AR-3010



RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Wall

- 20 mm matured timber
- 24 mm diagonal formwork
- 240 mm wooden beams
- 24 mm diagonal formwork
- facade membrane DOERKEN delta 50
- 26 mm counter battens
- 60 mm frame rack with truck cover

Floor

- 80 mm wooden floor laid on joint 60x60mm
- 240 mm construction wood, 80x240mm
- air space

beam 200 x 240 mm

elastomeric bearing

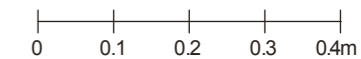
systems carrier

SL 1 - 5,00m

yoke bolt

WS 10 - 3,00m

2 2⁹



Scale 1:10 Page No. 38

Drawing Content Construction Detail

AR-3011



RoofKIT



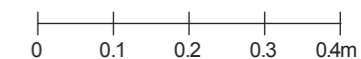
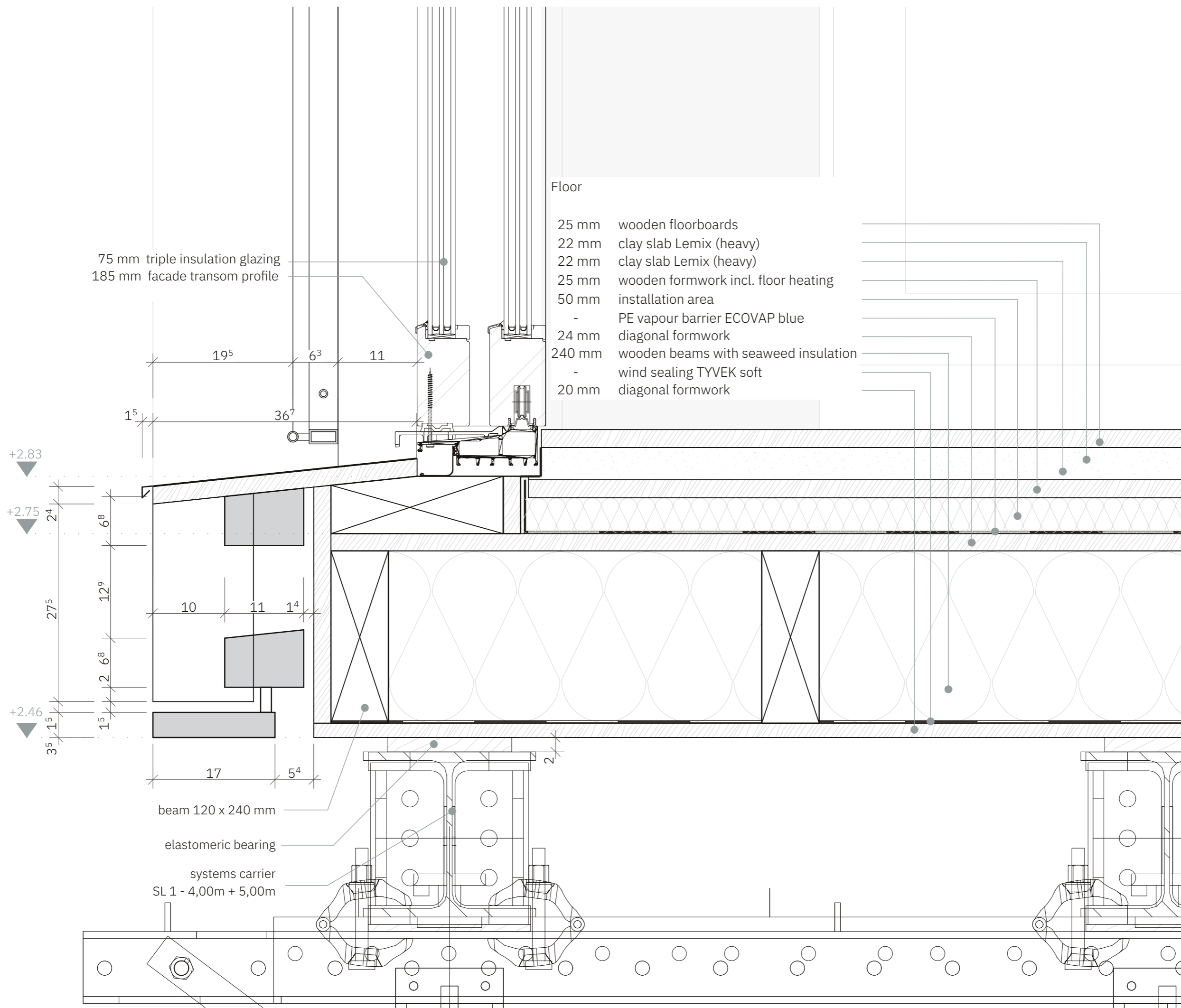
WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Floor

- 25 mm wooden floorboards
- 22 mm clay slab Lemix (heavy)
- 22 mm clay slab Lemix (heavy)
- 25 mm wooden formwork incl. floor heating
- 50 mm installation area
- PE vapour barrier ECOVAP blue
- 24 mm diagonal formwork
- 240 mm wooden beams with seaweed insulation
- wind sealing TYVEK soft
- 20 mm diagonal formwork

75 mm triple insulation glazing
185 mm facade transom profile



Scale 1:10 Page No. 39

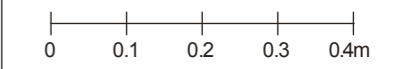
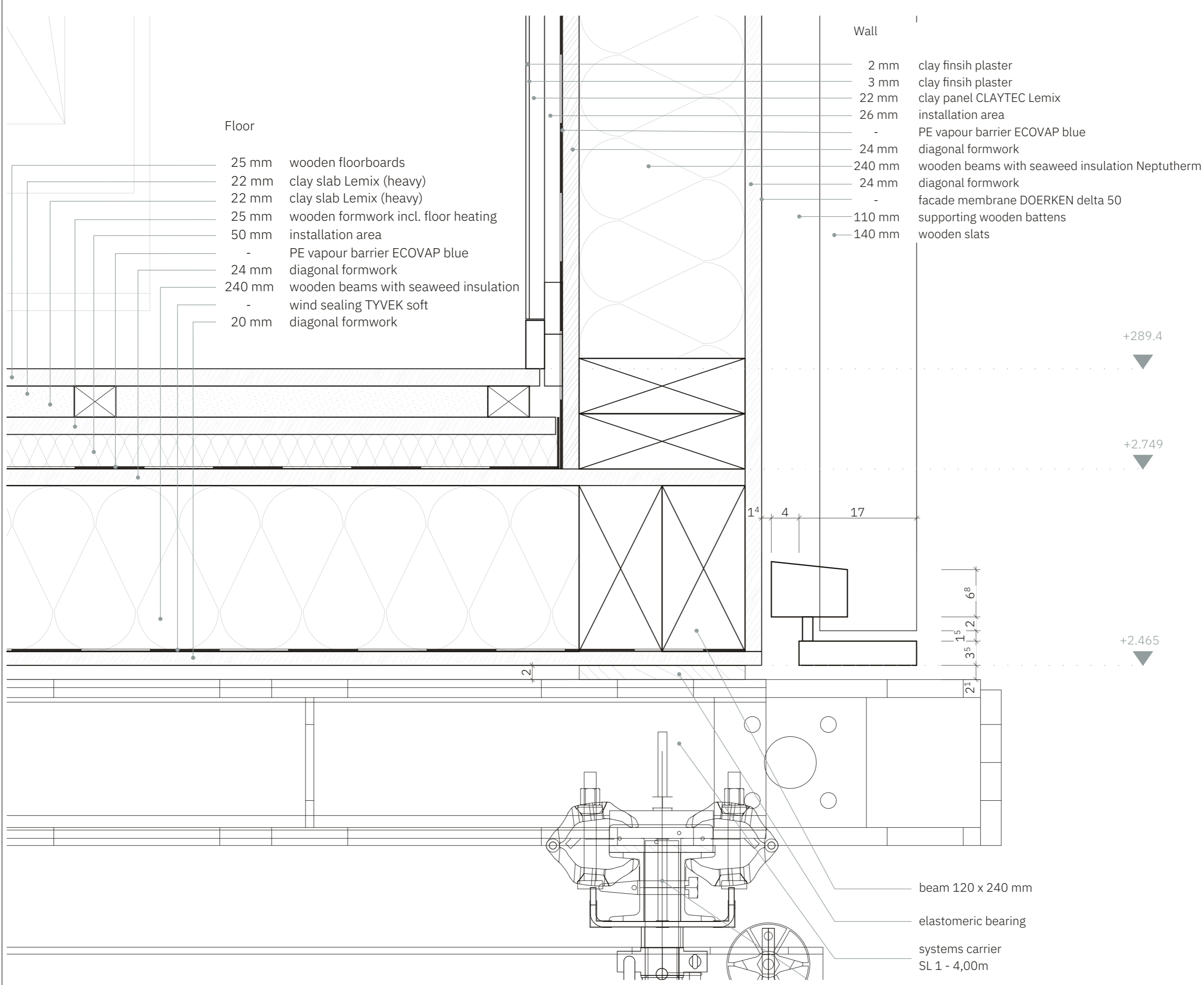
Drawing Content
Construction Detail

AR-3012



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



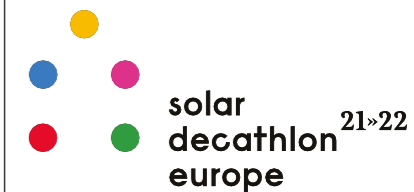
Scale 1:10 Page No. 40

Drawing Content Construction Detail

AR-3013

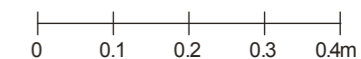
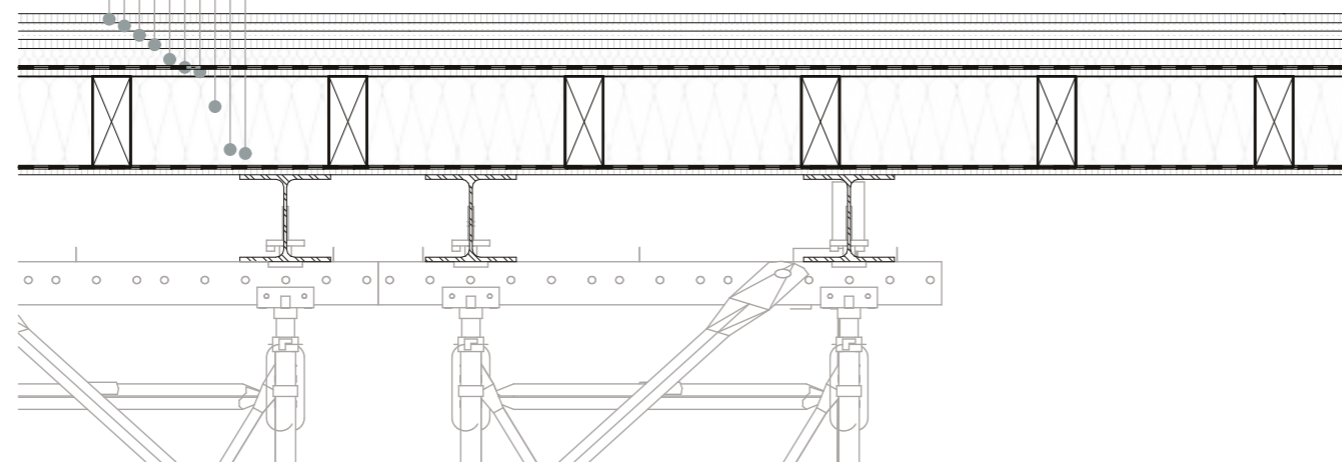
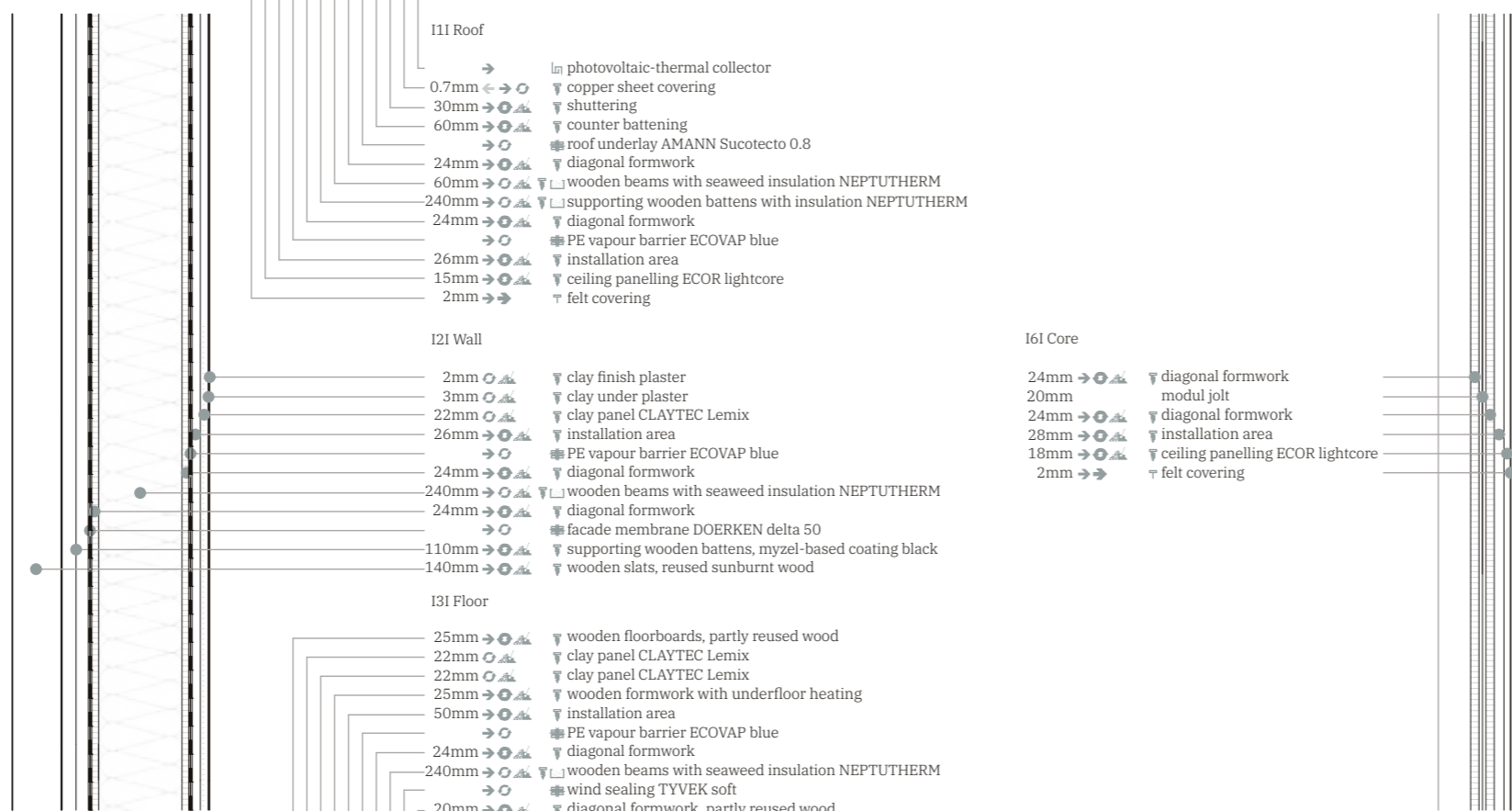
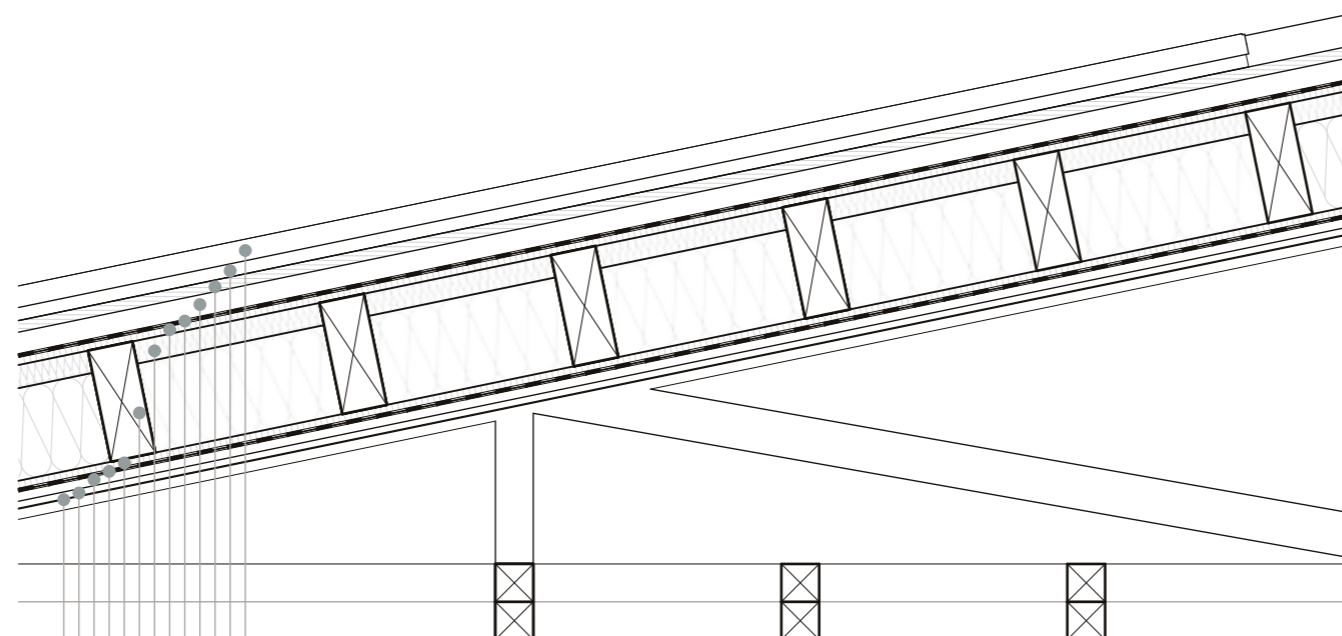


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale 1:10 Page No. 41

Drawing Content Construction of Components

AR-3101

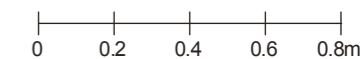
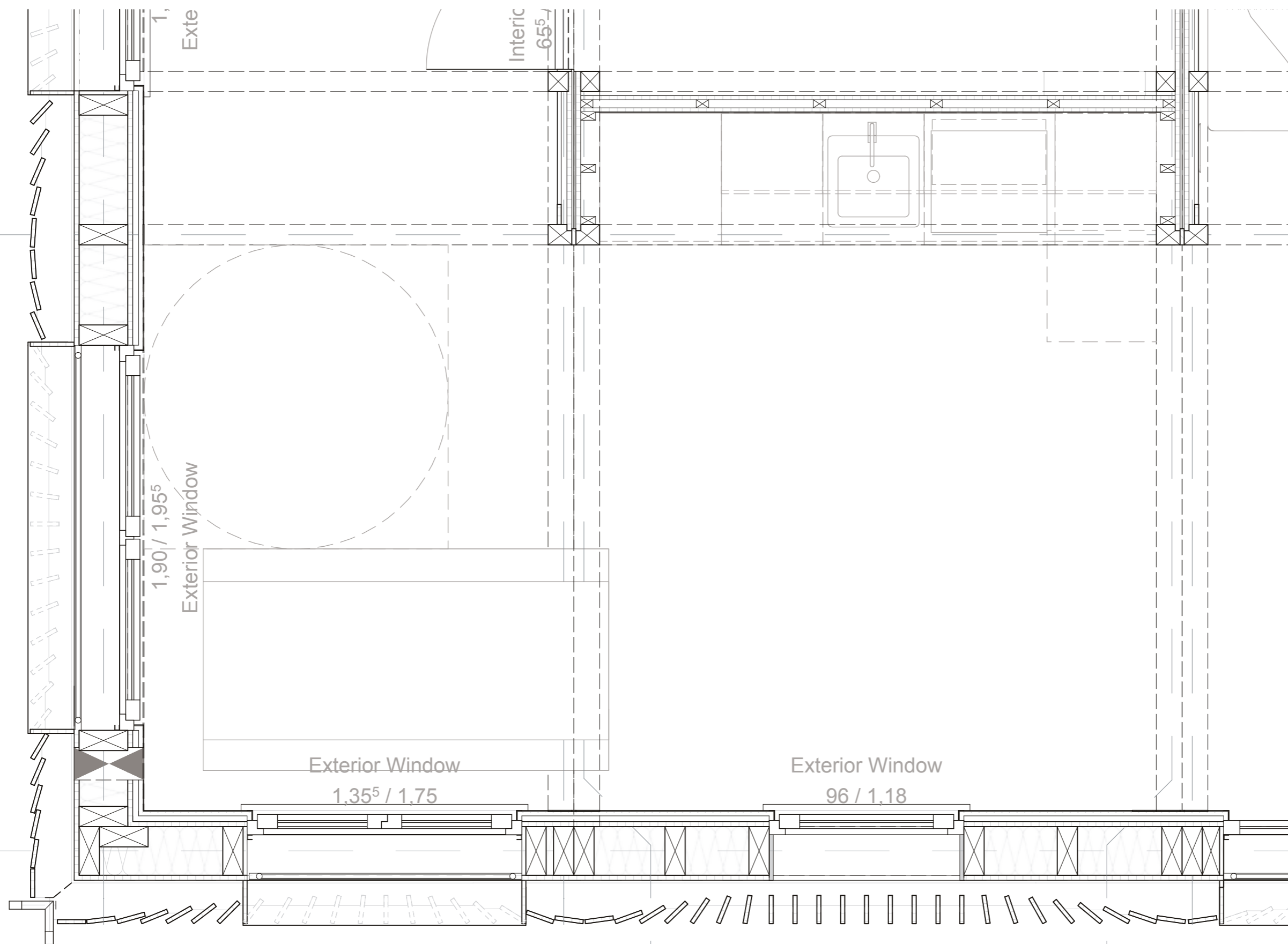


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



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Drawing Content
Constructive Floor Plan Level 1

AR-3102



General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

- |1| roof
- ☐ photovoltaic-thermal collector
 - 0,7mm ← → ☉ copper sheet covering
 - 30mm → ☉ shuttering
 - 60mm → ☉ counter battening
 - → ☉ roof underlay AMANN Sucotecto 0.8
 - 24mm → ☉ diagonal formwork
 - 240mm → ☉ wooden beams with seaweed insulation NEPTUTHERM
 - 60mm → ☉ supporting wooden battens with insulation NEPTUTHERM
 - 24mm → ☉ diagonal formwork
 - → ☉ PE vapour barrier ECOVAP blue
 - 26mm → ☉ installation area
 - 15mm → ☉ ceiling panelling ECOR lightcore
 - 2mm → → ☐ felt covering

|2| exterior wall and facade

- 2mm ☉ clay finish plaster
- 3mm ☉ clay under plaster
- 22mm ☉ clay panel CLAYTEC Lemix
- 26mm → ☉ installation area
- → ☉ PE vapour barrier ECOVAP blue
- 24mm → ☉ diagonal formwork
- 240mm → ☉ wooden beams with seaweed insulation NEPTUTHERM
- 24mm → ☉ diagonal formwork
- → ☉ facade membrane DOERKEN delta 50
- 110mm → ☉ supporting wooden battens, myzel-based coating black
- 140mm → ☉ wooden slats, reused sunburnt wood

|3| floor

- 25mm → ☉ wooden floorboards, partly reused wood
- 22mm ☉ clay panel CLAYTEC Lemix
- 22mm ☉ clay panel CLAYTEC Lemix
- 25mm → ☉ wooden formwork with underfloor heating
- 50mm → ☉ installation area
- → ☉ PE vapour barrier ECOVAP blue
- 24mm → ☉ diagonal formwork
- 240mm → ☉ wooden beams with seaweed insulation NEPTUTHERM
- → ☉ wind sealing TYVEK soft
- 20mm → ☉ diagonal formwork, partly reused wood

|4| scaffolding

- ← → ☐ scaffolding DOKA STAXO 100 towers, steel

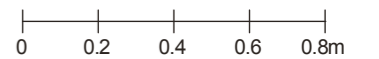
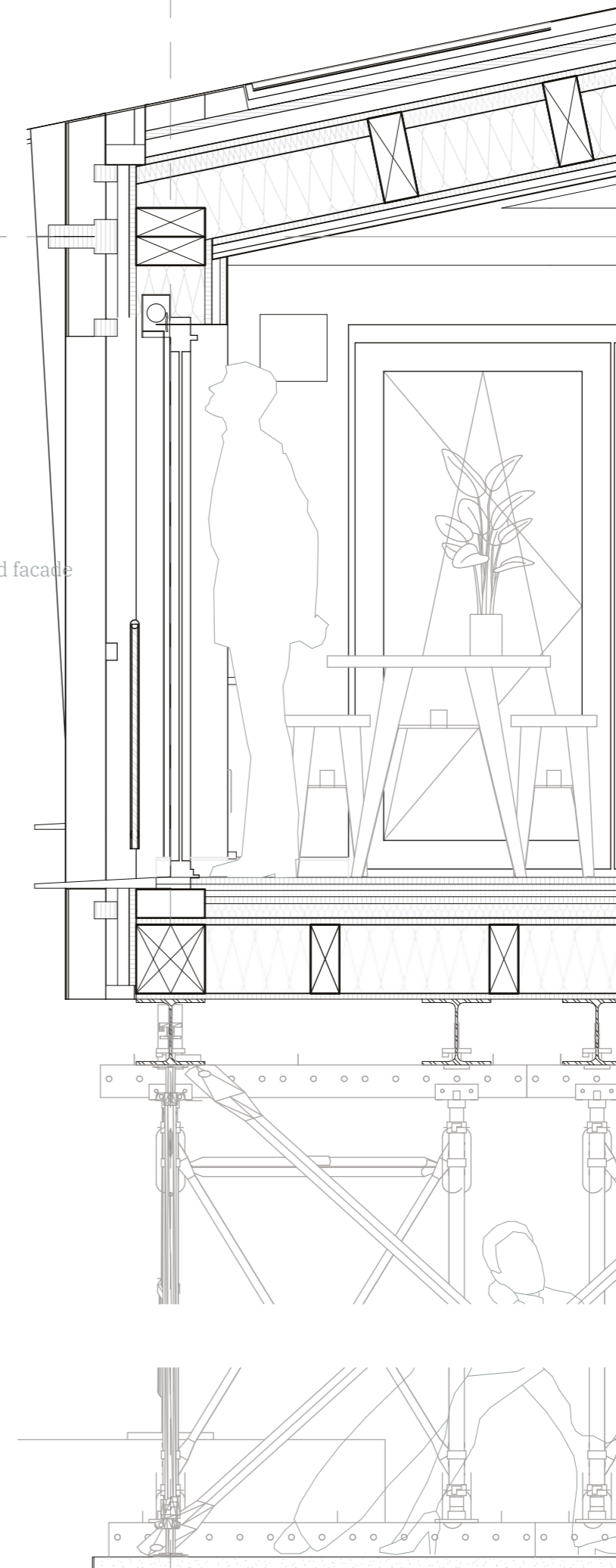
|1| roof

modul jolt

|2 | exterior wall and facade

|3| floor

|4| scaffolding



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Drawing Content
Constructive Details Section A-A



General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

- [1] roof
- ☐ photovoltaic-thermal collector
 - 0,7mm ← → ☉ ☒ copper sheet covering
 - 30mm → ☉ ☒ shuttering
 - 60mm → ☉ ☒ counter battening
 - → ☉ ☒ roof underlay AMANN Sucotecto 0.8
 - 24mm → ☉ ☒ diagonal formwork
 - 240mm → ☉ ☒ ☒ wooden beams with seaweed insulation NEPTUTHERM
 - 60mm → ☉ ☒ ☒ supporting wooden battens with insulation NEPTUTHERM
 - 24mm → ☉ ☒ diagonal formwork
 - → ☉ ☒ PE vapour barrier ECOVAP blue
 - 26mm → ☉ ☒ installation area
 - 15mm → ☉ ☒ ceiling panelling ECOR lightcore
 - 2mm → → ☒ felt covering

[2] exterior wall and facade

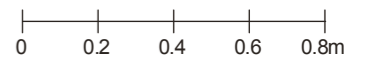
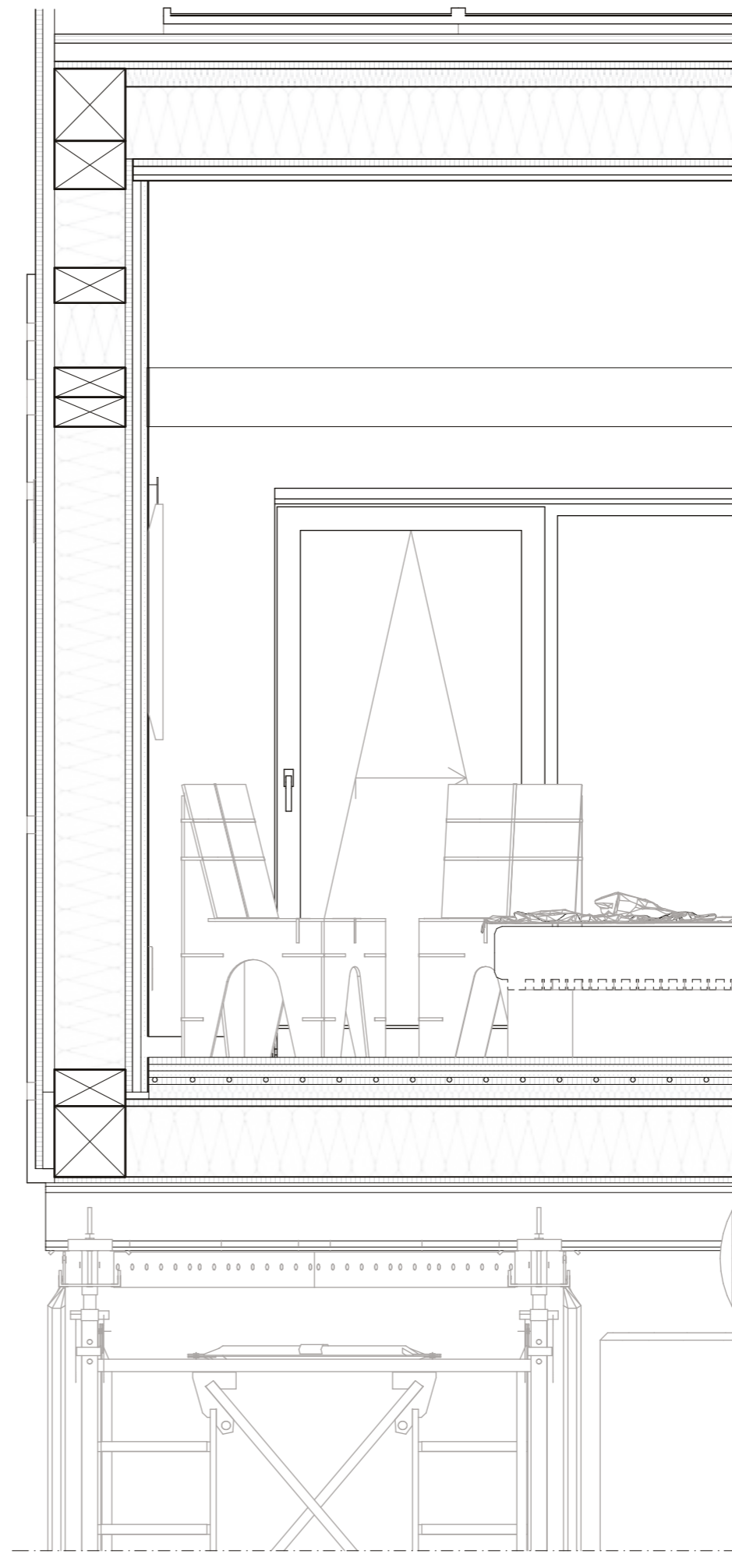
- 2mm ☉ ☒ ☒ clay finish plaster
- 3mm ☉ ☒ ☒ clay under plaster
- 22mm ☉ ☒ ☒ clay panel CLAYTEC Lemix
- 26mm → ☉ ☒ installation area
- → ☉ ☒ PE vapour barrier ECOVAP blue
- 24mm → ☉ ☒ diagonal formwork
- 240mm → ☉ ☒ ☒ wooden beams with seaweed insulation NEPTUTHERM
- 24mm → ☉ ☒ diagonal formwork
- → ☉ ☒ wind sealing TYVEK soft
- 26mm → ☉ ☒ shuttering
- 60mm → ☉ ☒ open wooden frames
- truck plane, reused

[3] floor

- 25mm → ☉ ☒ ☒ wooden floorboards, partly reused wood
- 22mm ☉ ☒ ☒ clay panel CLAYTEC Lemix
- 22mm ☉ ☒ ☒ clay panel CLAYTEC Lemix
- 25mm → ☉ ☒ ☒ wooden formwork with underfloor heating
- 50mm → ☉ ☒ installation area
- → ☉ ☒ PE vapour barrier ECOVAP blue
- 24mm → ☉ ☒ diagonal formwork
- 240mm → ☉ ☒ ☒ wooden beams with seaweed insulation NEPTUTHERM
- → ☉ ☒ wind sealing TYVEK soft
- 20mm → ☉ ☒ diagonal formwork, partly reused wood

[4] scaffolding

- ← → ☒ ☒ scaffolding DOKA STAXO 100 towers, steel



Scale 1:20 Page No. 44

Drawing Content
Constructive Details Section C-C



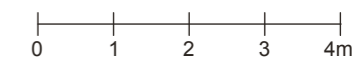
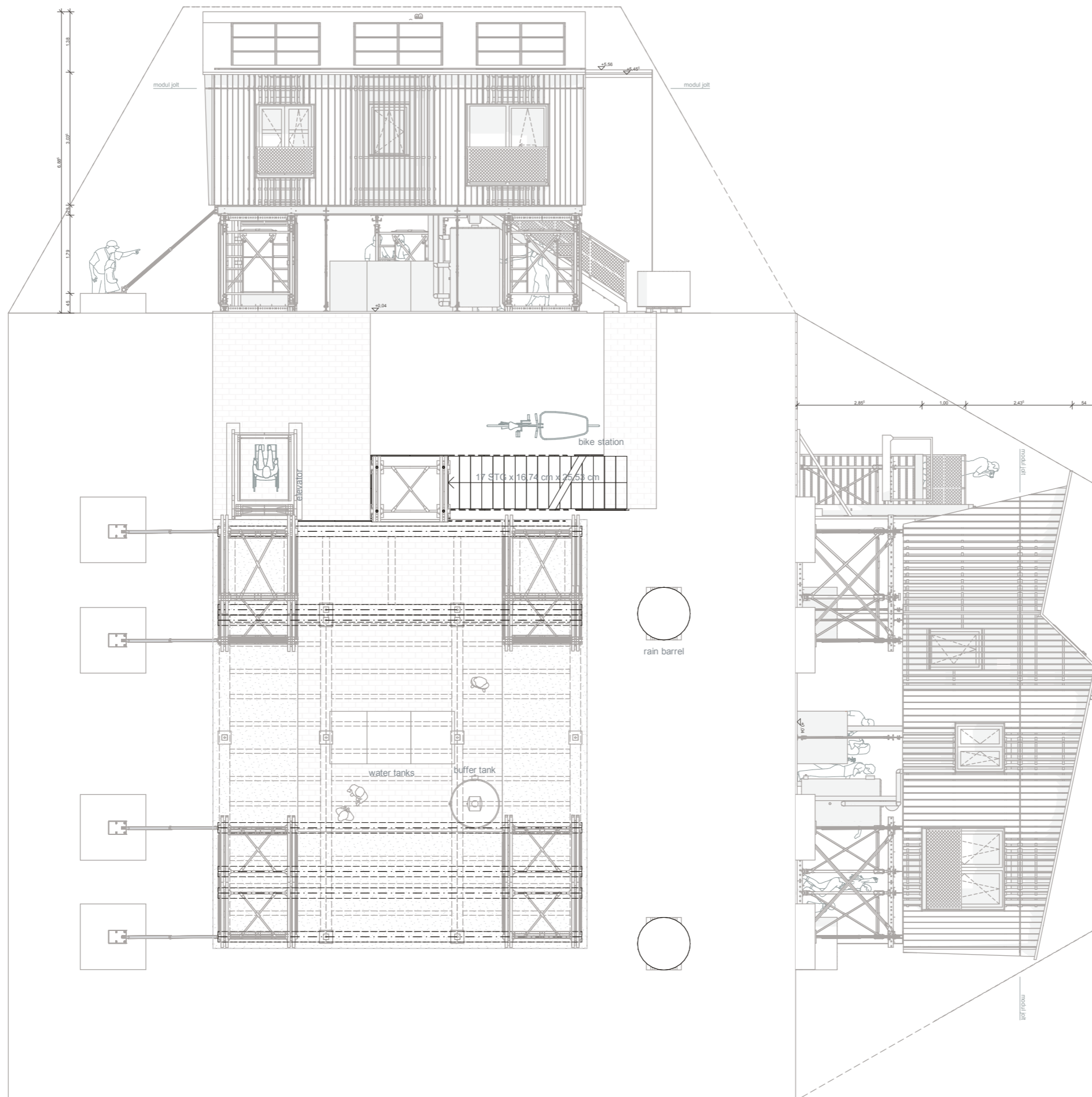


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale 1:100 Page No. 45

Drawing Content
Solar Envelope

AR-4001



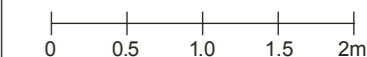
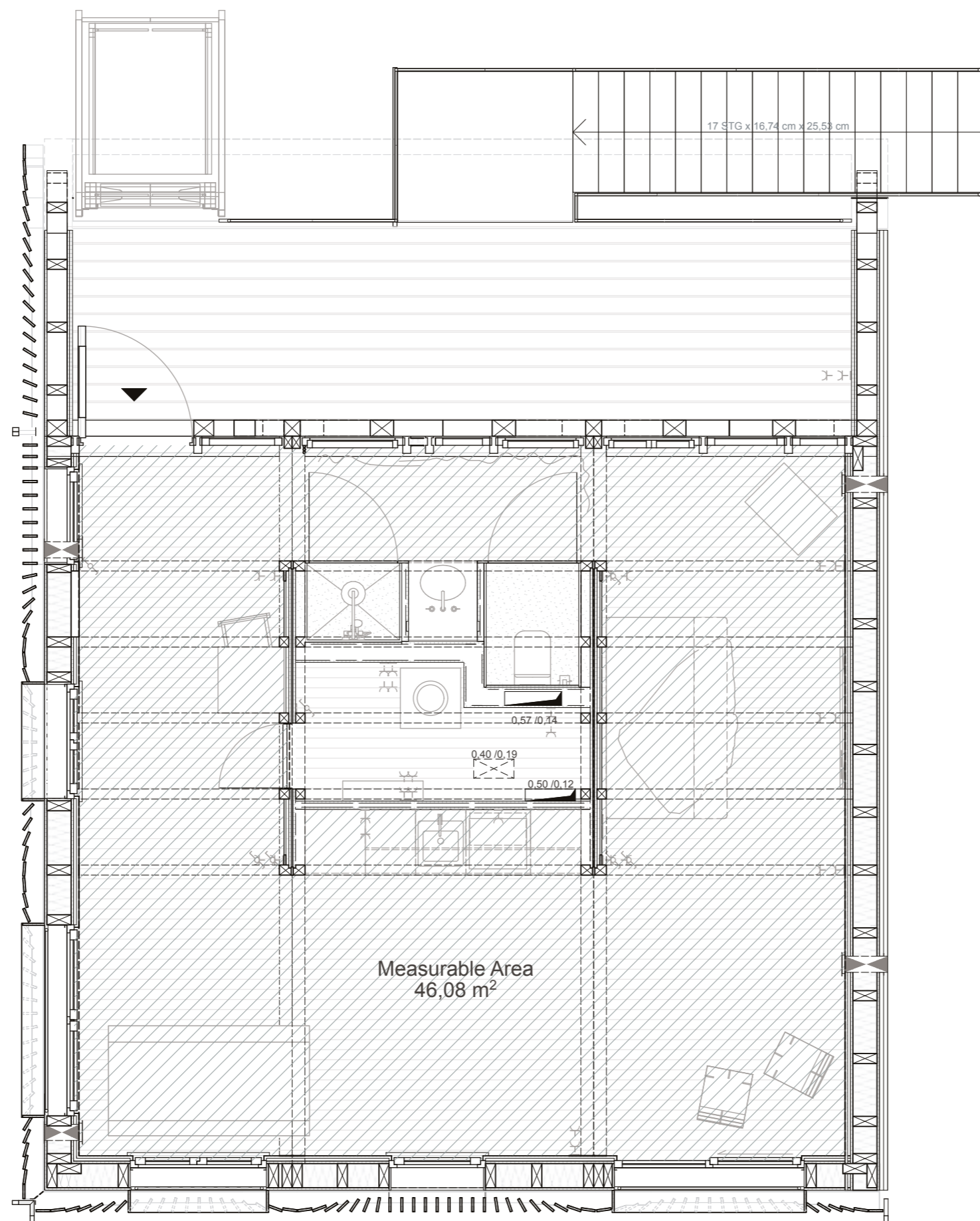


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
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Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
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Scale 1:50 Page No. 46

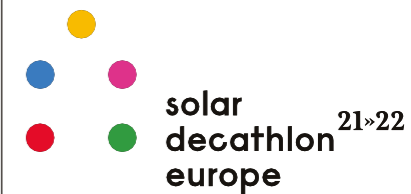
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Measurable Area

AR-4101



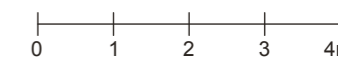
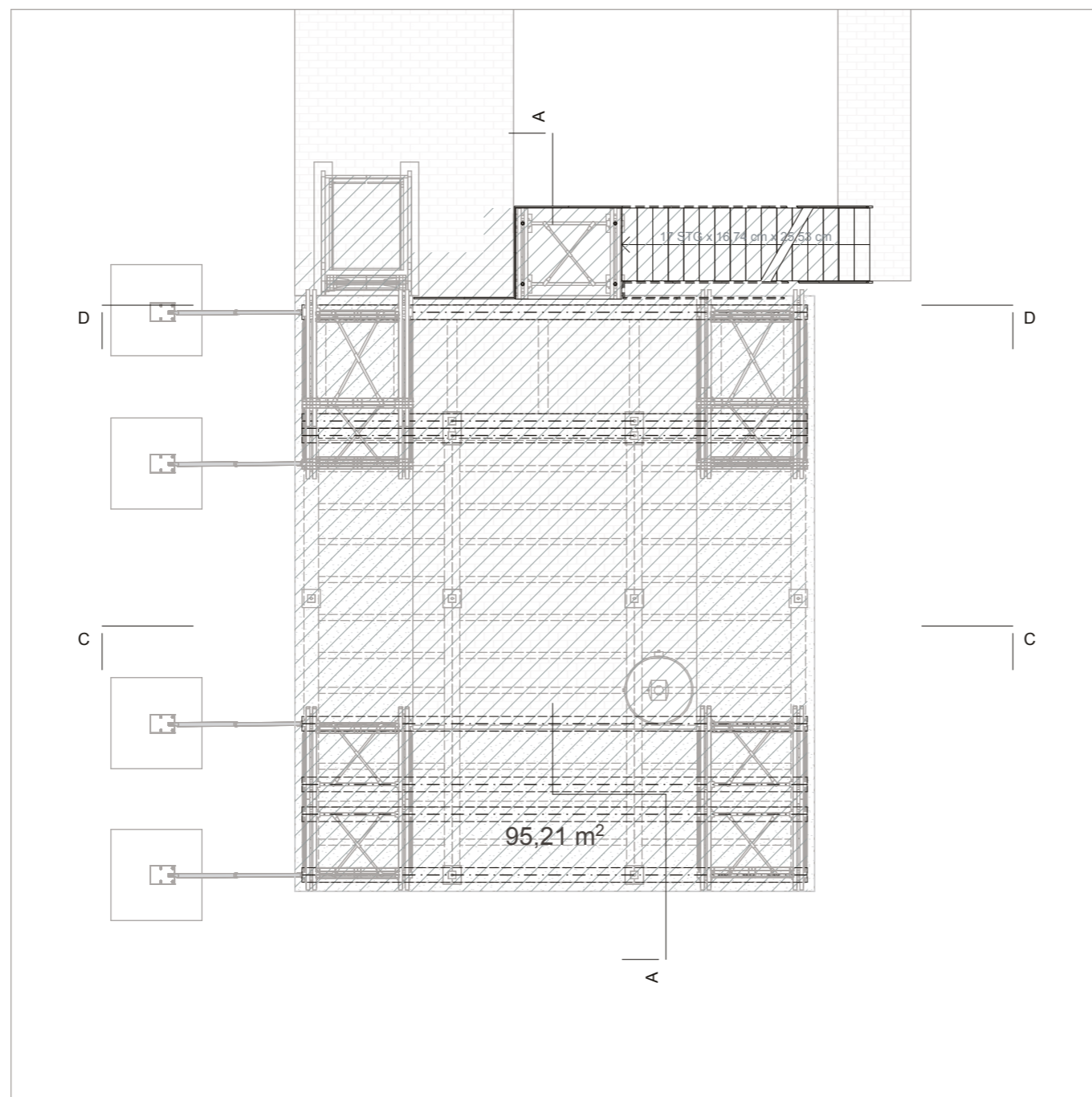


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale 1:100 Page No. 47

Drawing Content
Architectural Footprint

AR-4301



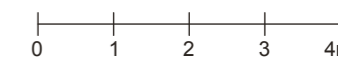
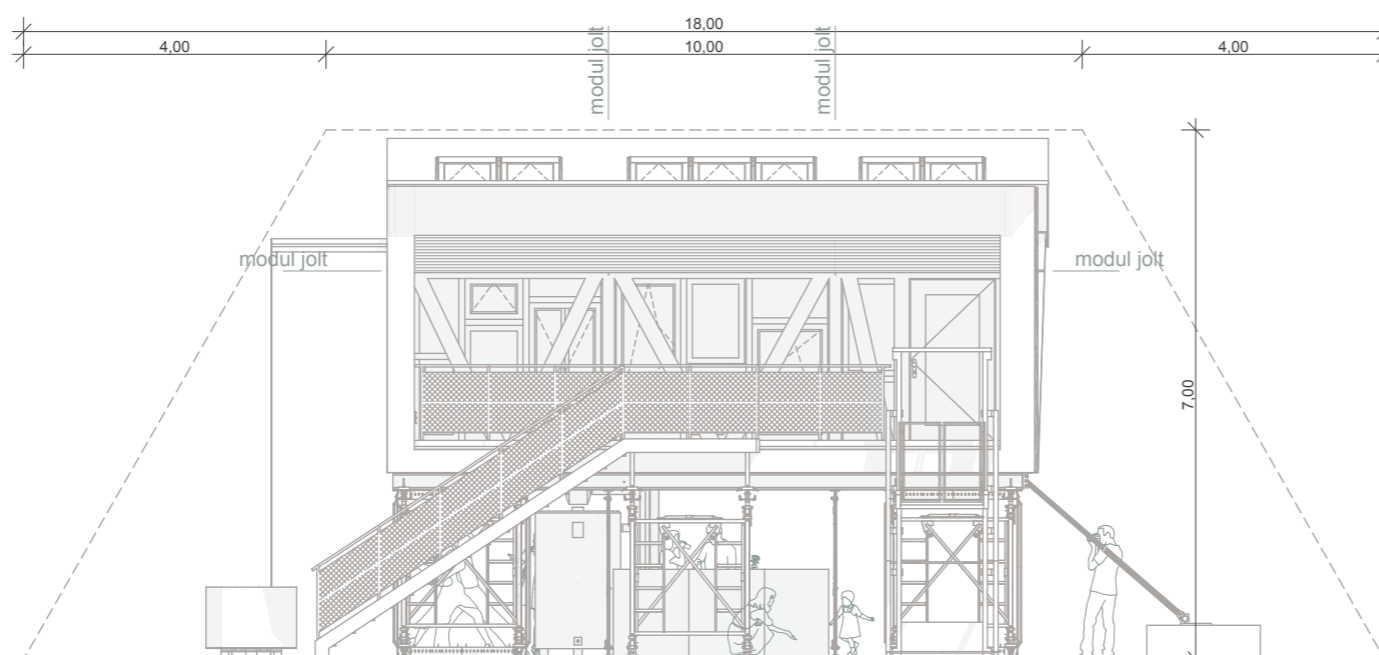


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
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Instrumentation Drawings	ID
Site Operations	SO
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Public Tour	PT



Scale 1:100 Page No. 48

Drawing Content
Site Elevation North

AR-4401



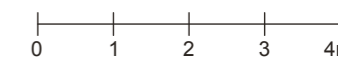
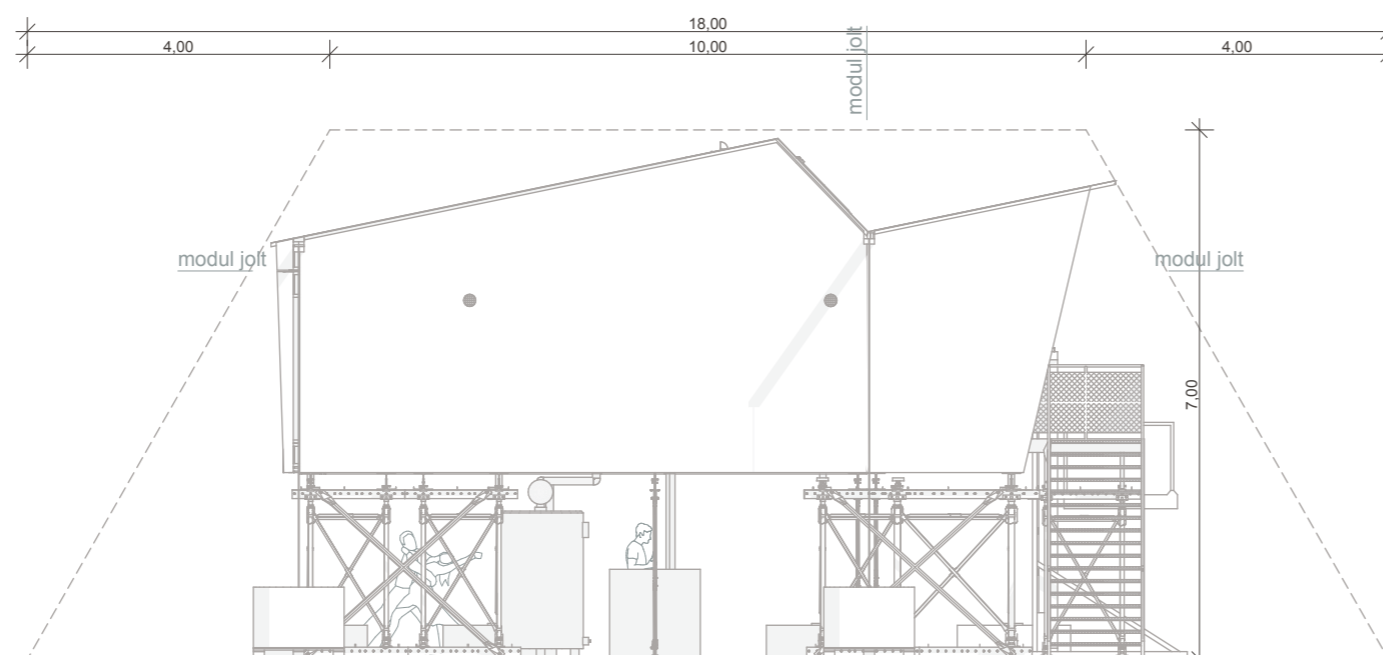


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
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Drawing Content
Site Elevation East

AR-4402



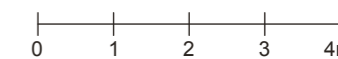


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
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Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
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Drawing Content
Site Elevation South

AR-4403



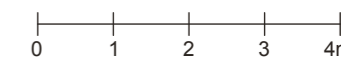
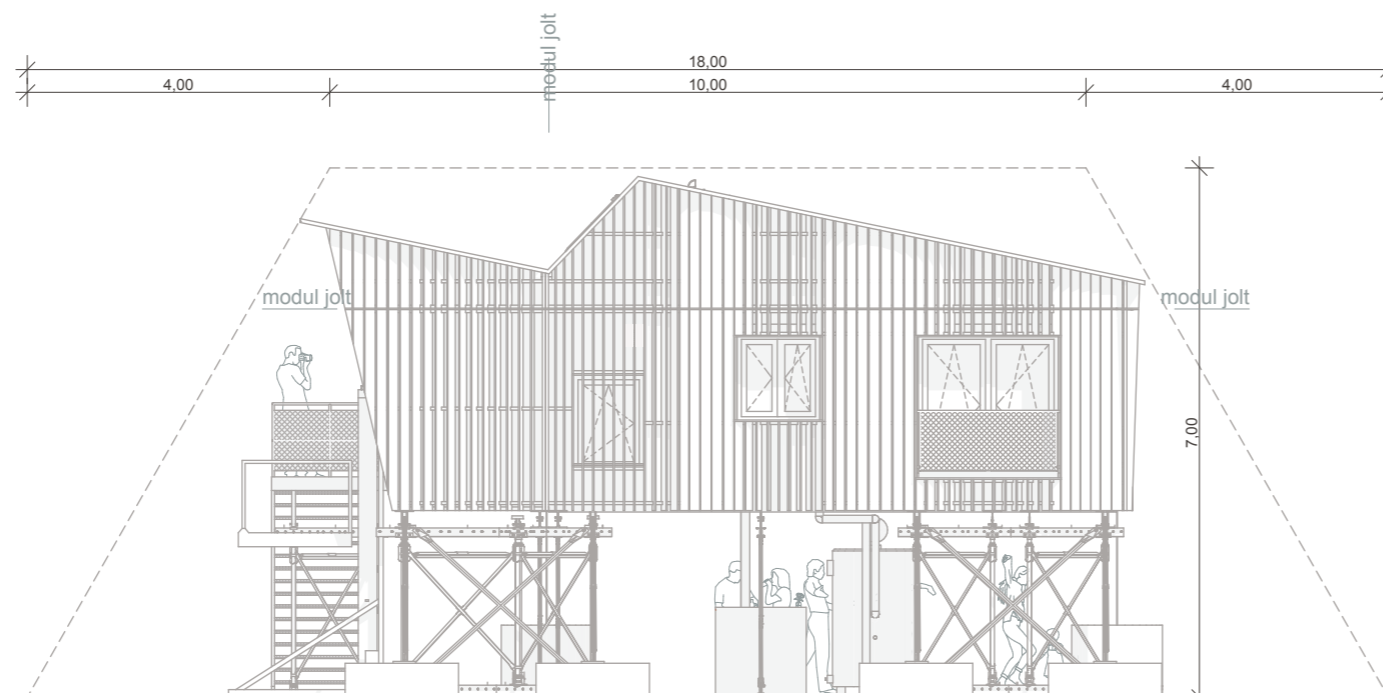


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
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Mechanical	ME
Electrical	EL
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Instrumentation Drawings	ID
Site Operations	SO
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Drawing Content
Site Elevation West

AR-4404



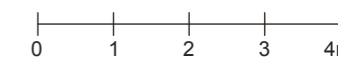
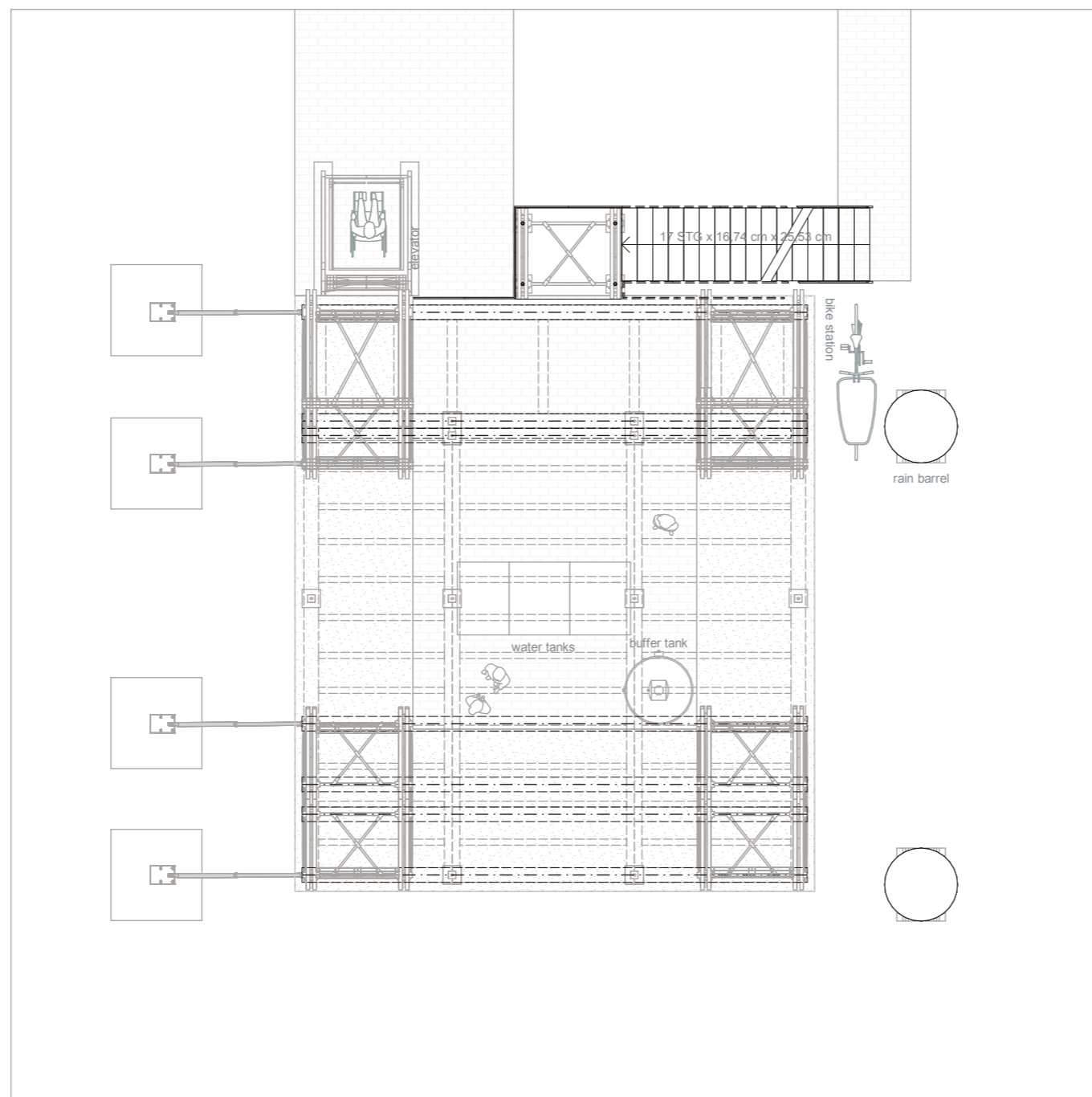


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
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Plumbing	PL
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Mechanical	ME
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Drawing Content
Reconfigurable Features

AR-4501





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no scale 53

Drawing Content
Exterior Rendering

AR-5001



RoofKIT

Interiors (IN)

Karlsruhe, 23rd March 2022

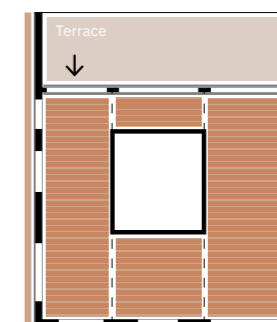
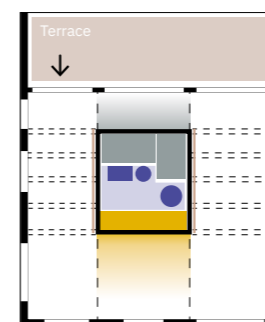
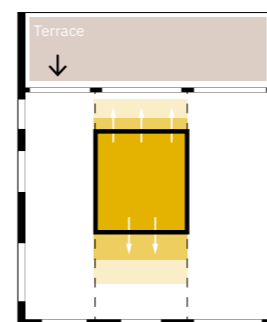
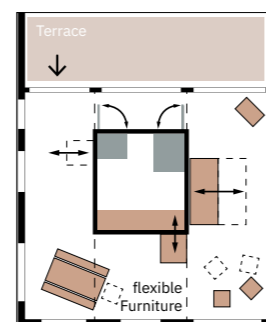
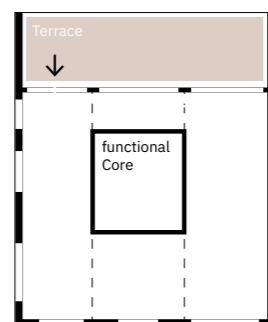
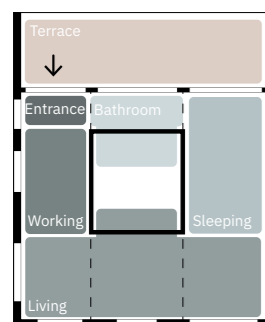
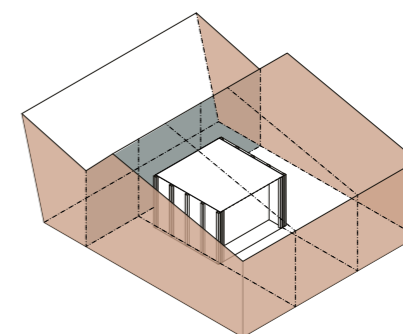
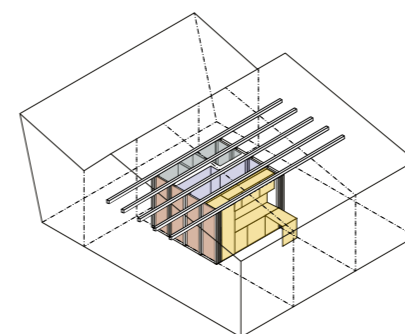
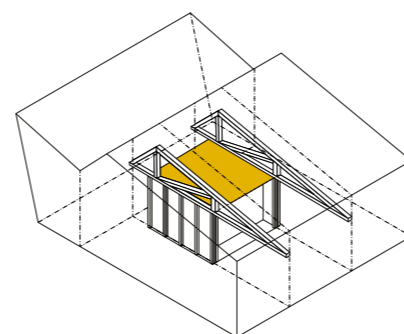
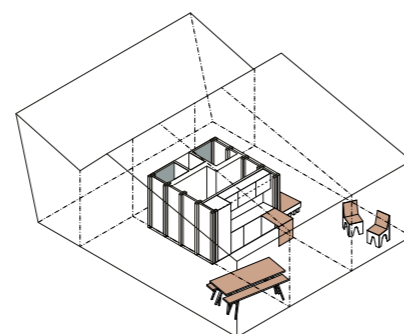
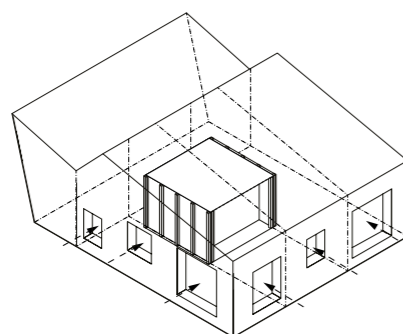
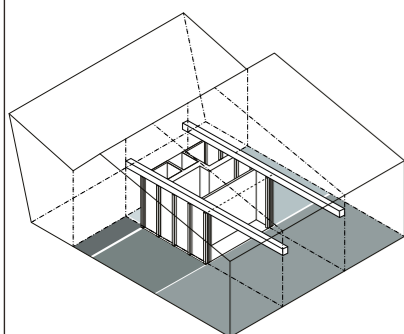


RoofKIT



WUPPERTAL GERMANY

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ZONING

The beams of our load-bearing structure separate the interior into different spaces. Through subtle deviations in ceiling height and the functional core, we create distinct zones for the resident.

PRIVACY

The room sequence of our unit arranges itself around the functional core from public to private, following the natural need for privacy in certain situations. Visual connections allow for a spacious experience and promote communication inside the unit.

FLEXIBLE FURNITURE

Through reconfigurable items, the unit enables a flexible and minimal living style. The furniture is designed with the 'more in one' mindset at heart, giving a second usage to familiar objects.

LIGHTING

Our lighting concept underlines the functional core as the epicenter for our unit. Lights placed on the volume illuminate the ceiling, making for a calm atmosphere. Flexible lamps can be adapted to the reconfigurable spaces, illuminating when needed, conserving energy when possible.

CORE

An open floating space is created around a central core holding the functions of the kitchen, the bathroom elements as well as a walkable technical and storage space. With this arrangement, we avoid unnecessary circulation space within the apartment, also looking at the economic performance of architecture and the effective use of space.

URBAN MINE

Used materials are borrowed from their technical or biological cycle for a certain period and later returned to these material cycles. RoofKIT is both – a temporary material depot and a material laboratory. For example, all windows used are coming from the urban mine.

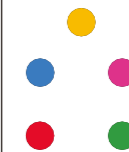
Scale no scale Page No. 55

Drawing Content Conceptual Drawings

IN-0001



RoofKIT



solar decathlon europe 21»22

WUPPERTAL GERMANY

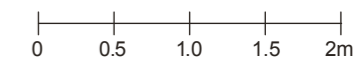
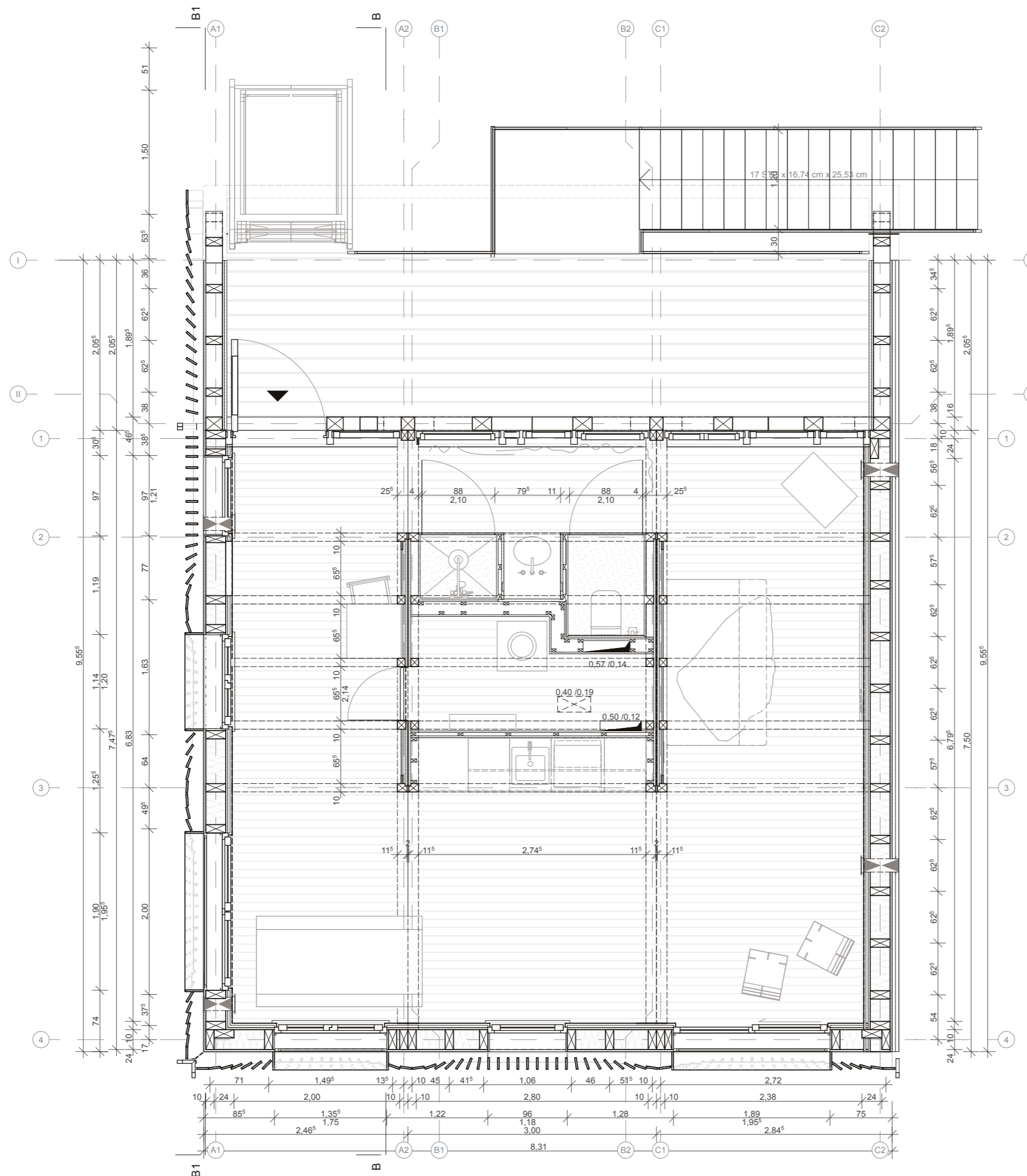
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Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
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stainless steel flooring



Reclaimed wood flooring



Scale
1:50

Page No.
56

Drawing Content
Floor Plan

IN-1001





RoofKIT



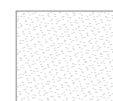
solar
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WUPPERTAL GERMANY

General	GE
Architecture	AR
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Structural	ST
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Solar Water Heating	SW
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Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
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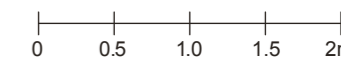
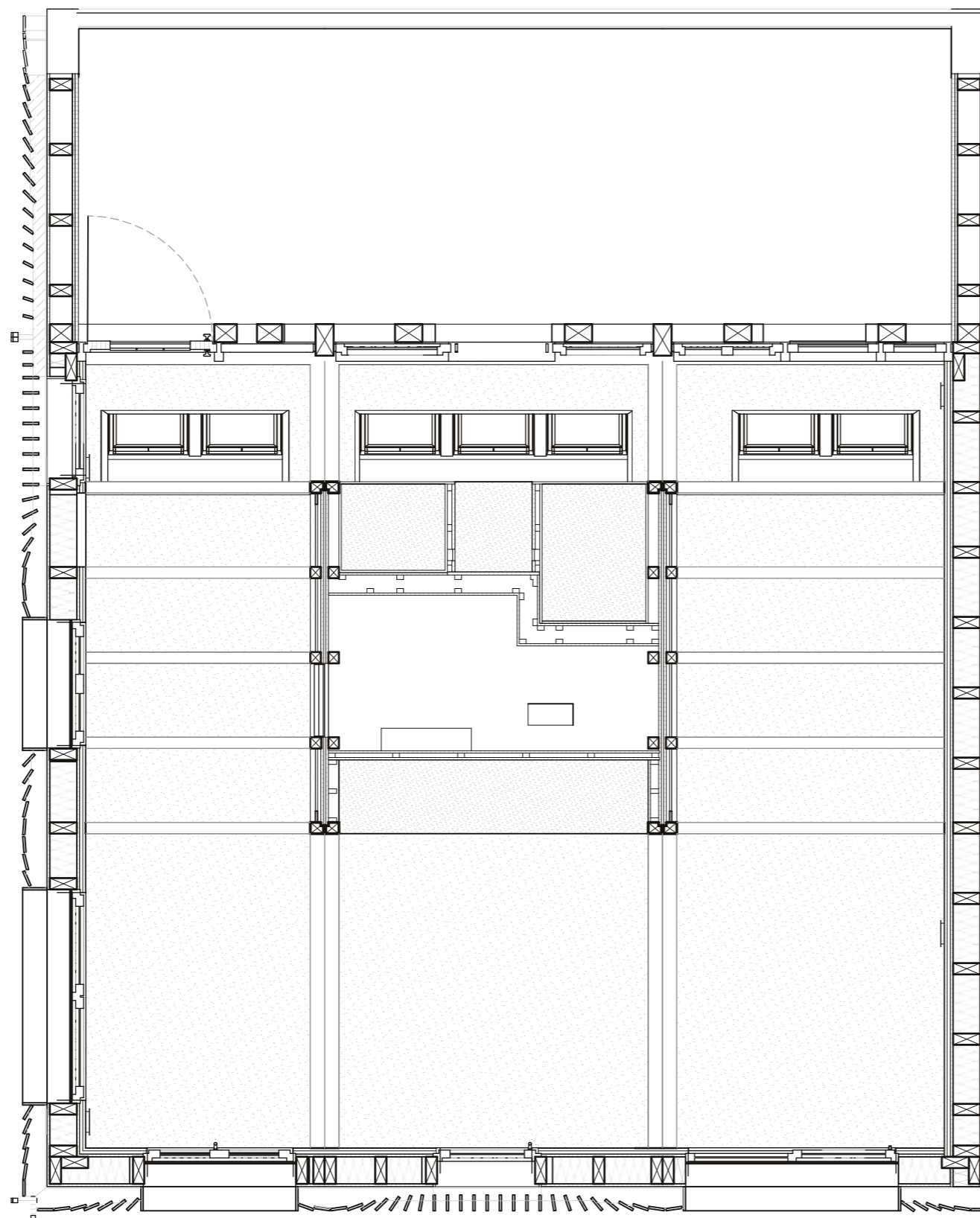
wooden
ceiling



stainless steel
ceiling



felt covering



Scale

1:50

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57

Drawing Content

Reflected ceiling

IN-1101



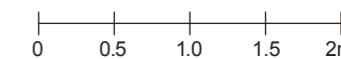
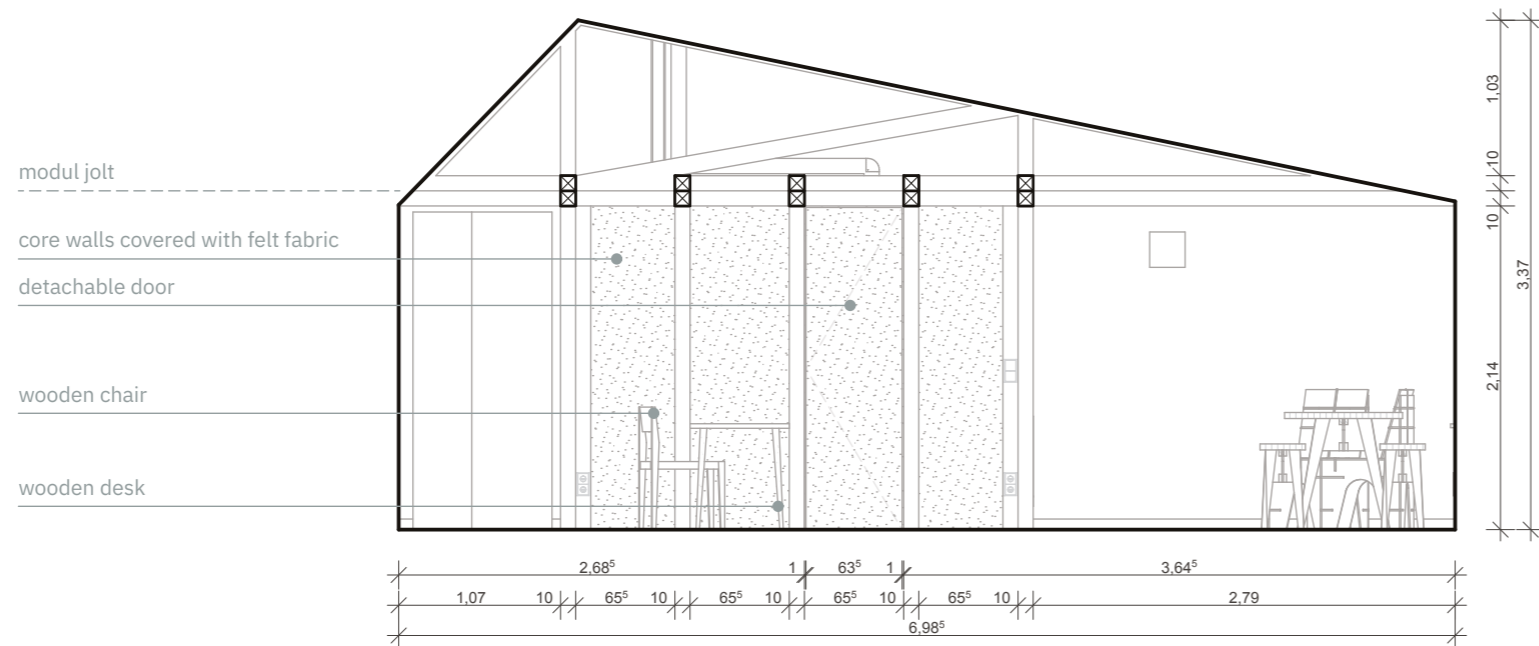


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
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Drawing Content
Elevation - Working Area

IN-1201



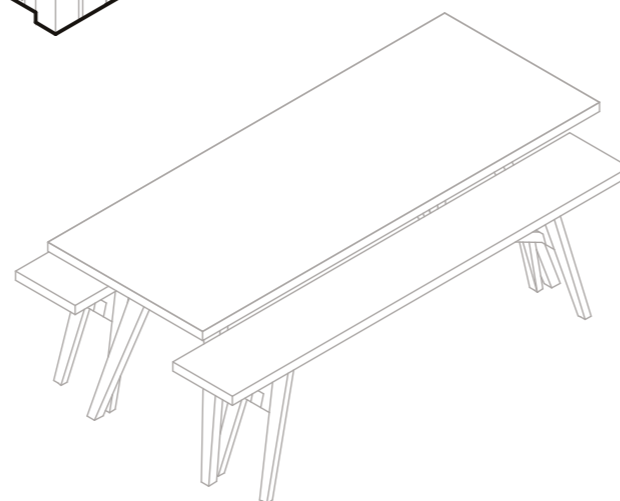
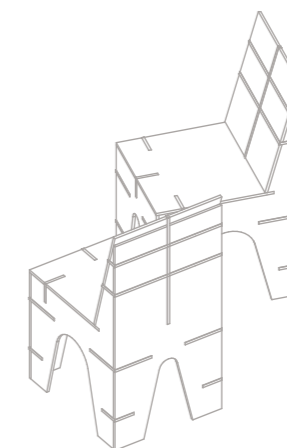
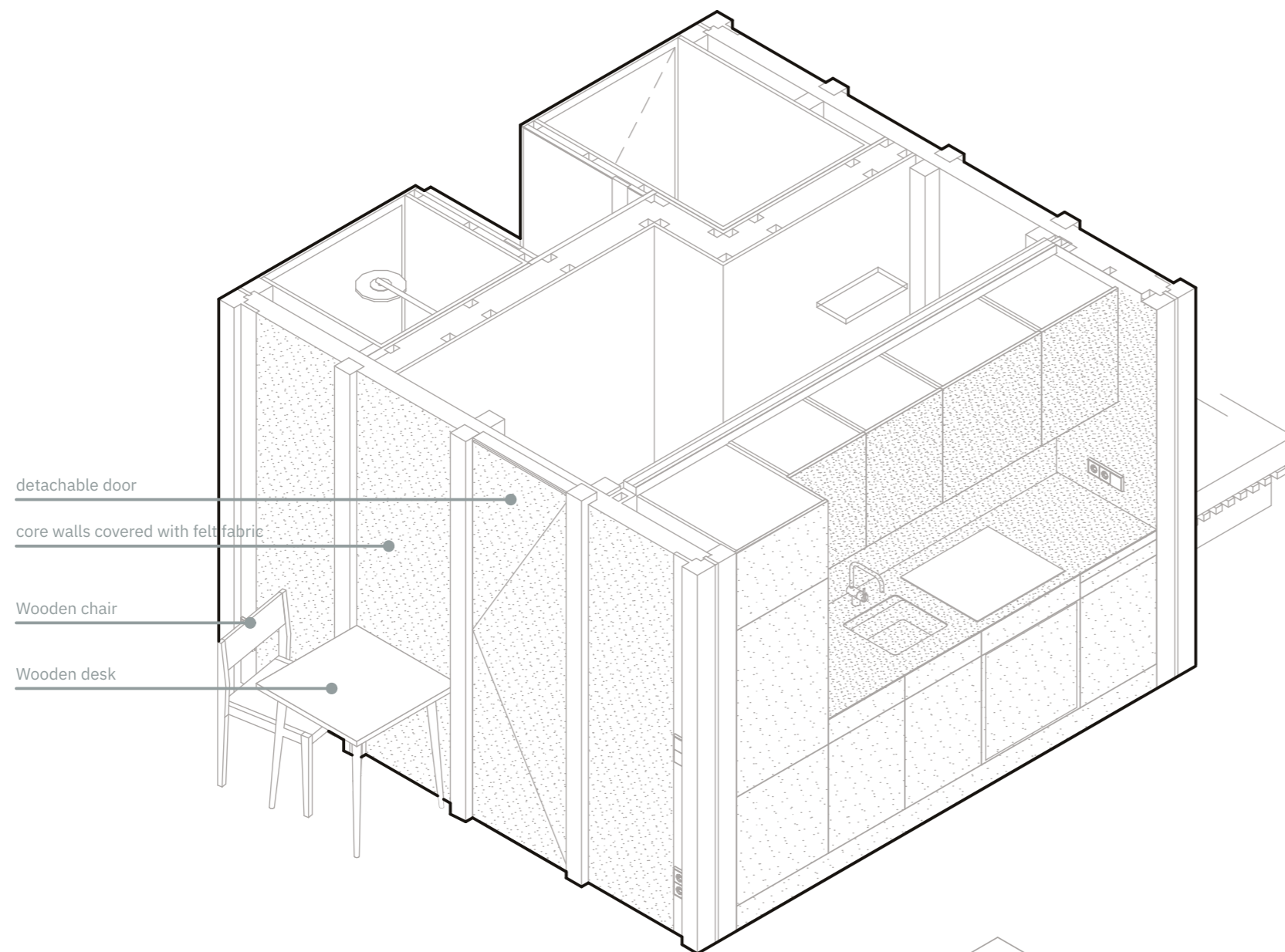


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
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Scale Page No.
no scale 59

Drawing Content
Isometric - Working Area

IN-1202



RoofKIT



WUPPERTAL GERMANY

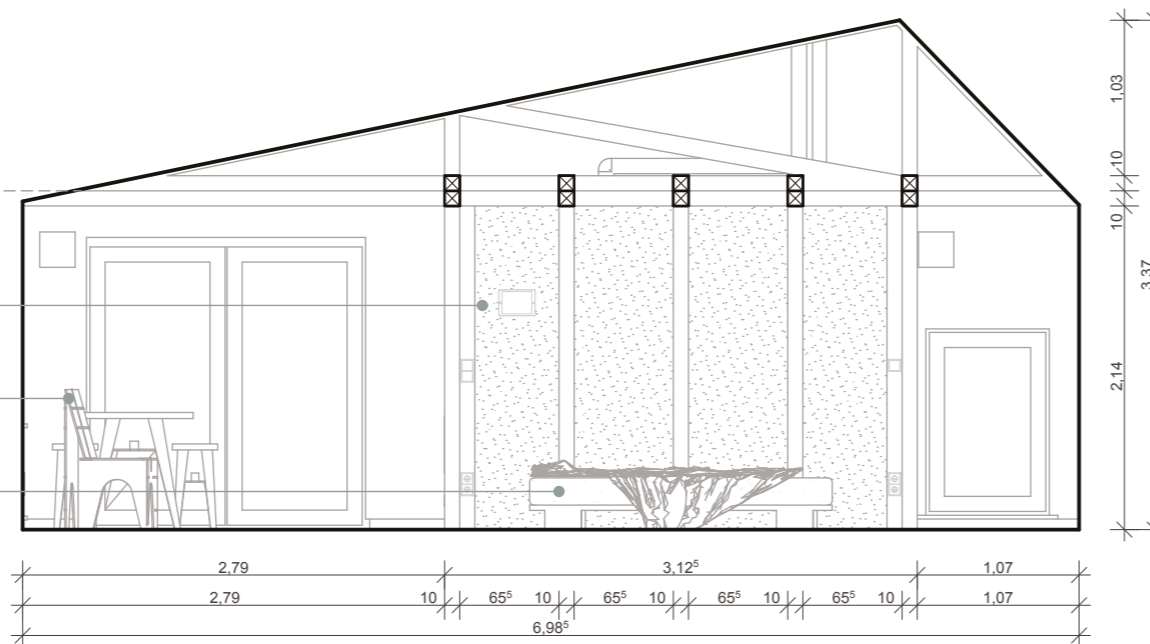
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Interiors	IN
Structural	ST
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Mechanical	ME
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Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
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Health & Safety	HS
Public Tour	PT

modul jolt

core walls covered with felt fabric

furniture made out of Rewall Naked Board

the pull-out bed is folded and uses as a couch during the day



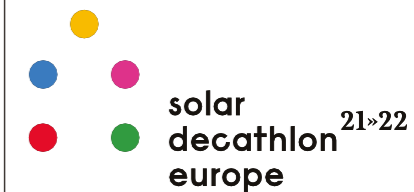
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Drawing Content Elevation - Sleeping Area

IN-1203

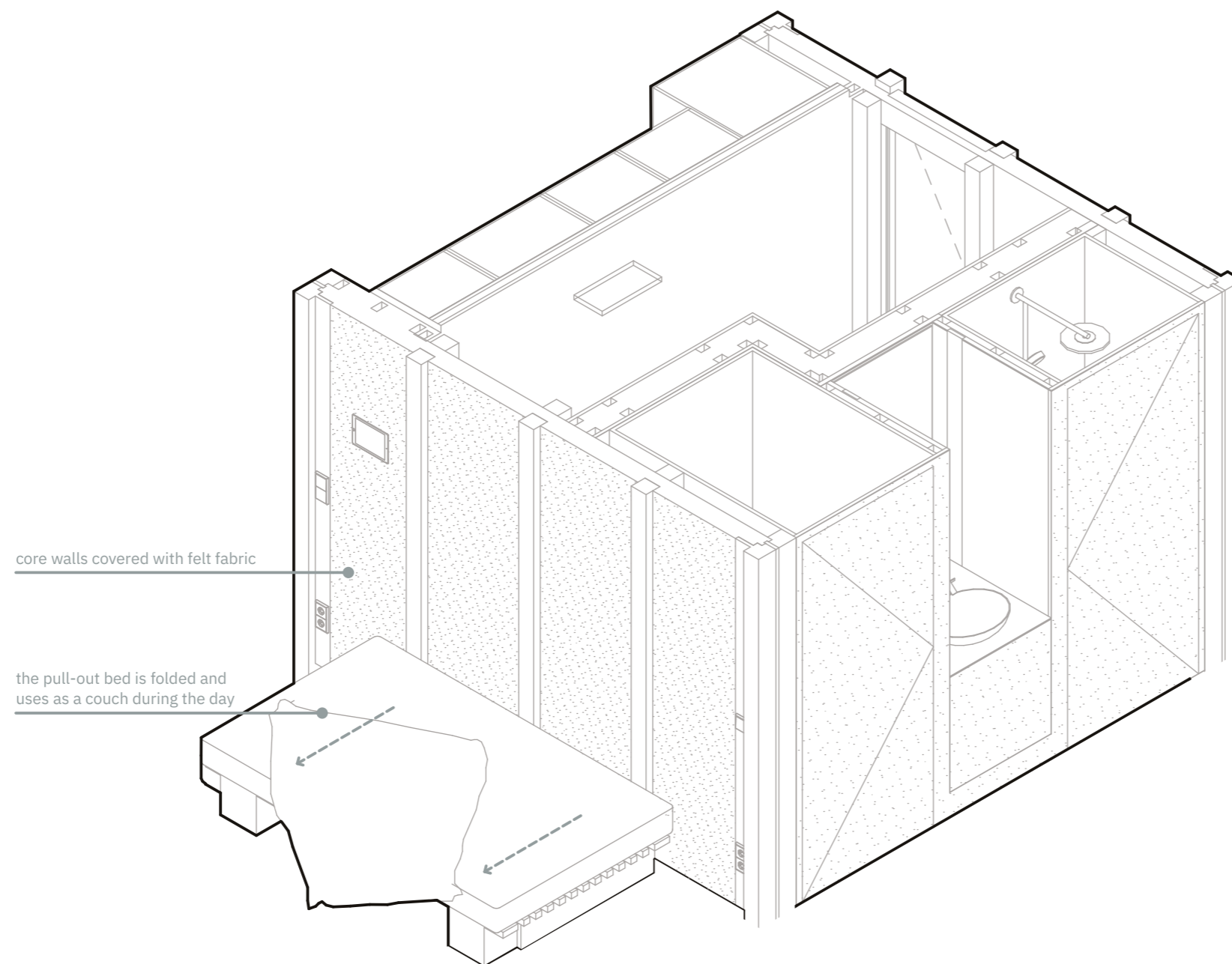


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
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Mechanical	ME
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core walls covered with felt fabric

the pull-out bed is folded and uses as a couch during the day

Scale Page No.
no scale 61

Drawing Content
Isometric Sleeping Area

IN-1204

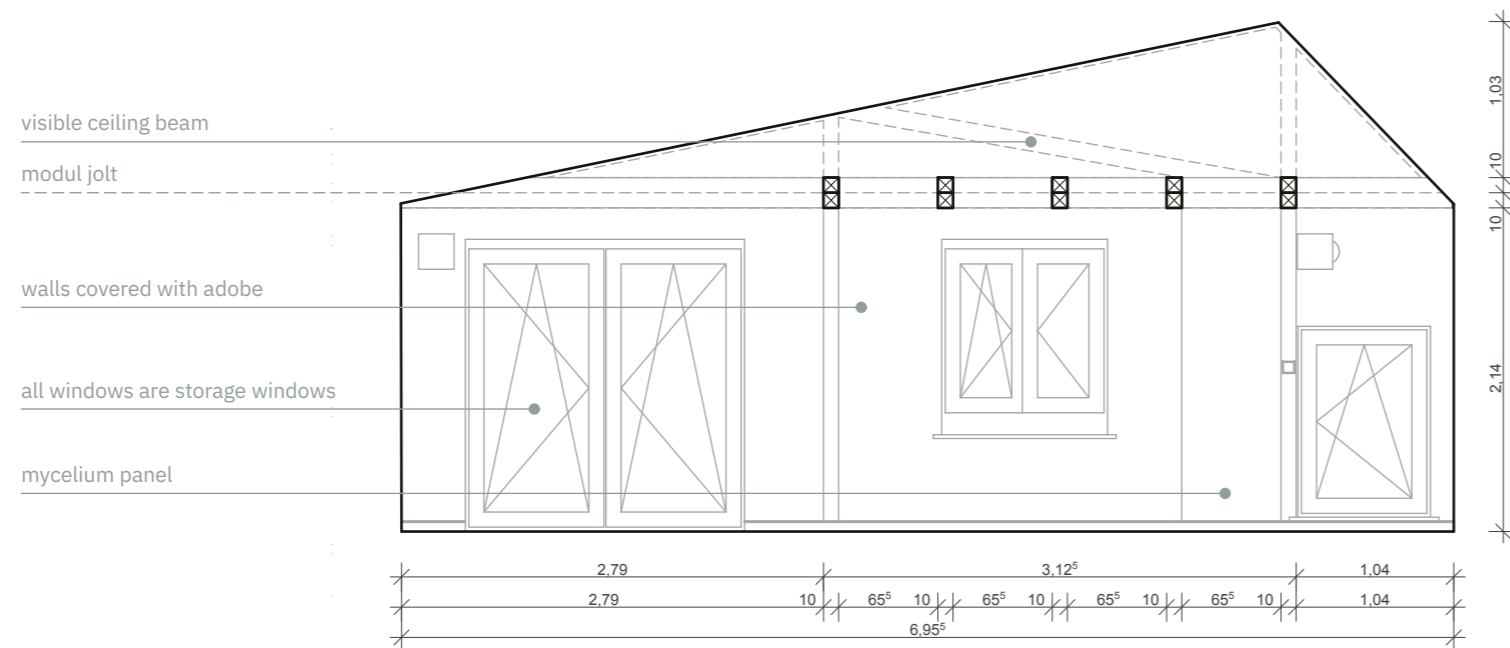


RoofKIT



WUPPERTAL GERMANY

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Scale no scale Page No. 62

Drawing Content
Elevation - East Facade

IN-1205

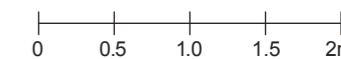
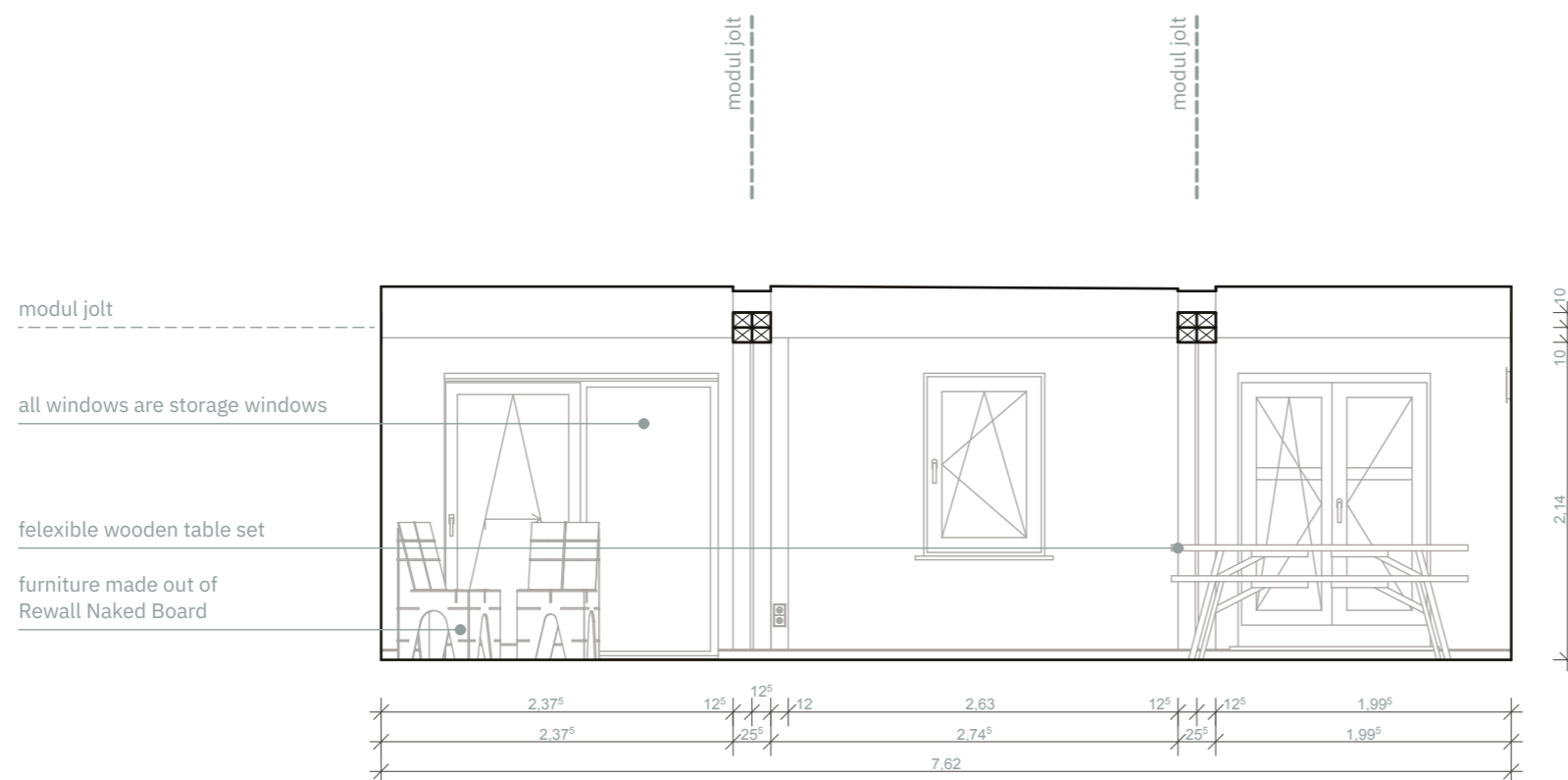


RoofKIT



WUPPERTAL GERMANY

General	GE
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Scale 1:50 Page No. 63

Drawing Content
Elevation - South Facade

IN-1206



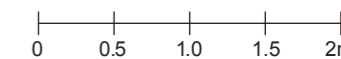
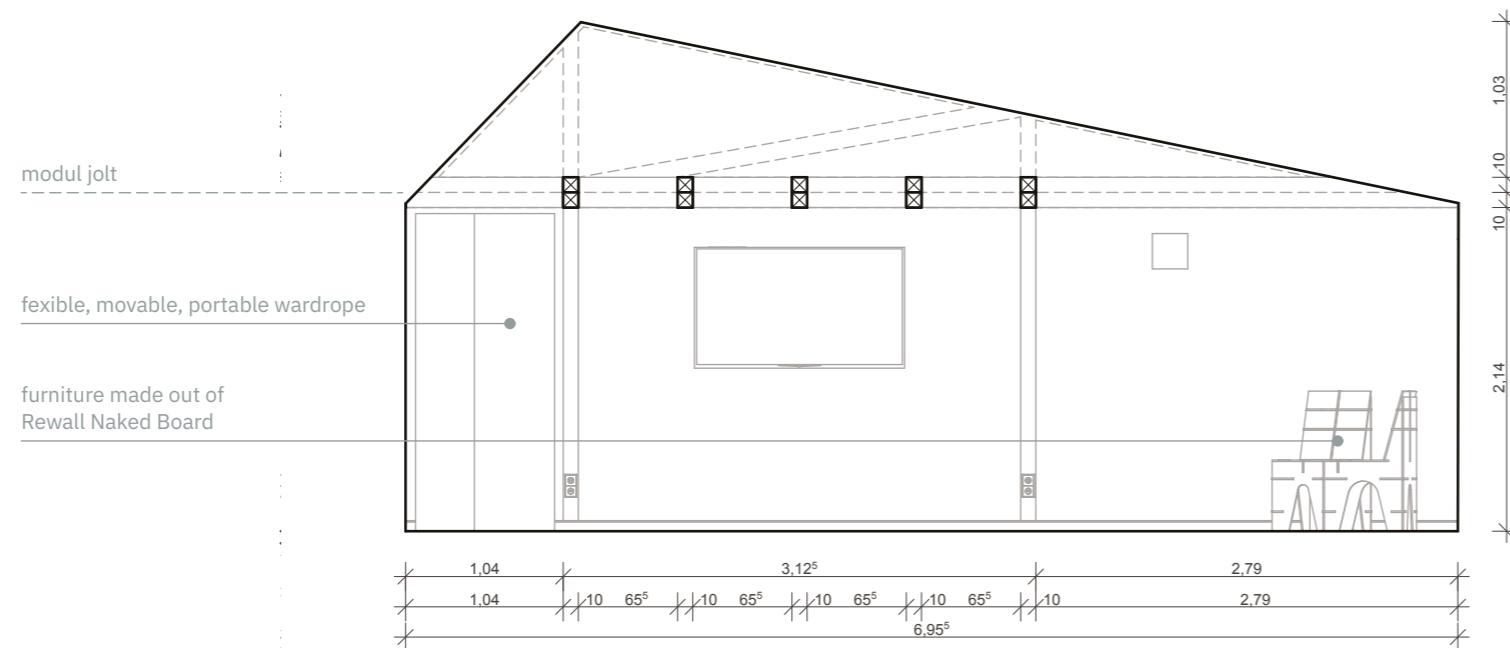


RoofKIT



WUPPERTAL GERMANY

General	GE
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Drawing Content
Elevation - East Facade

IN-1207



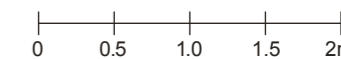
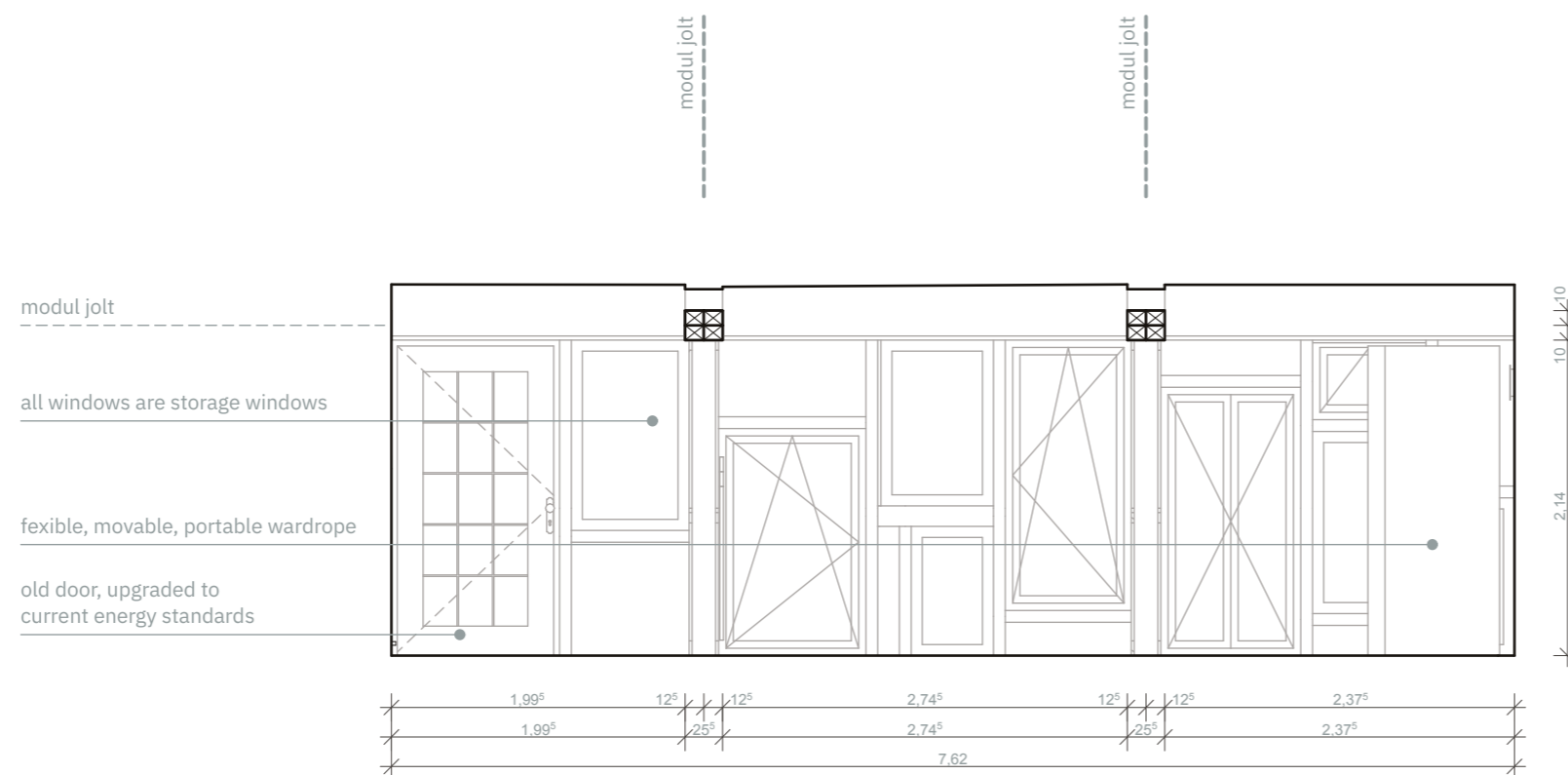


RoofKIT



WUPPERTAL GERMANY

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Drawing Content
Elevation - North Facade

IN-1208



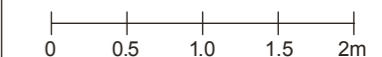
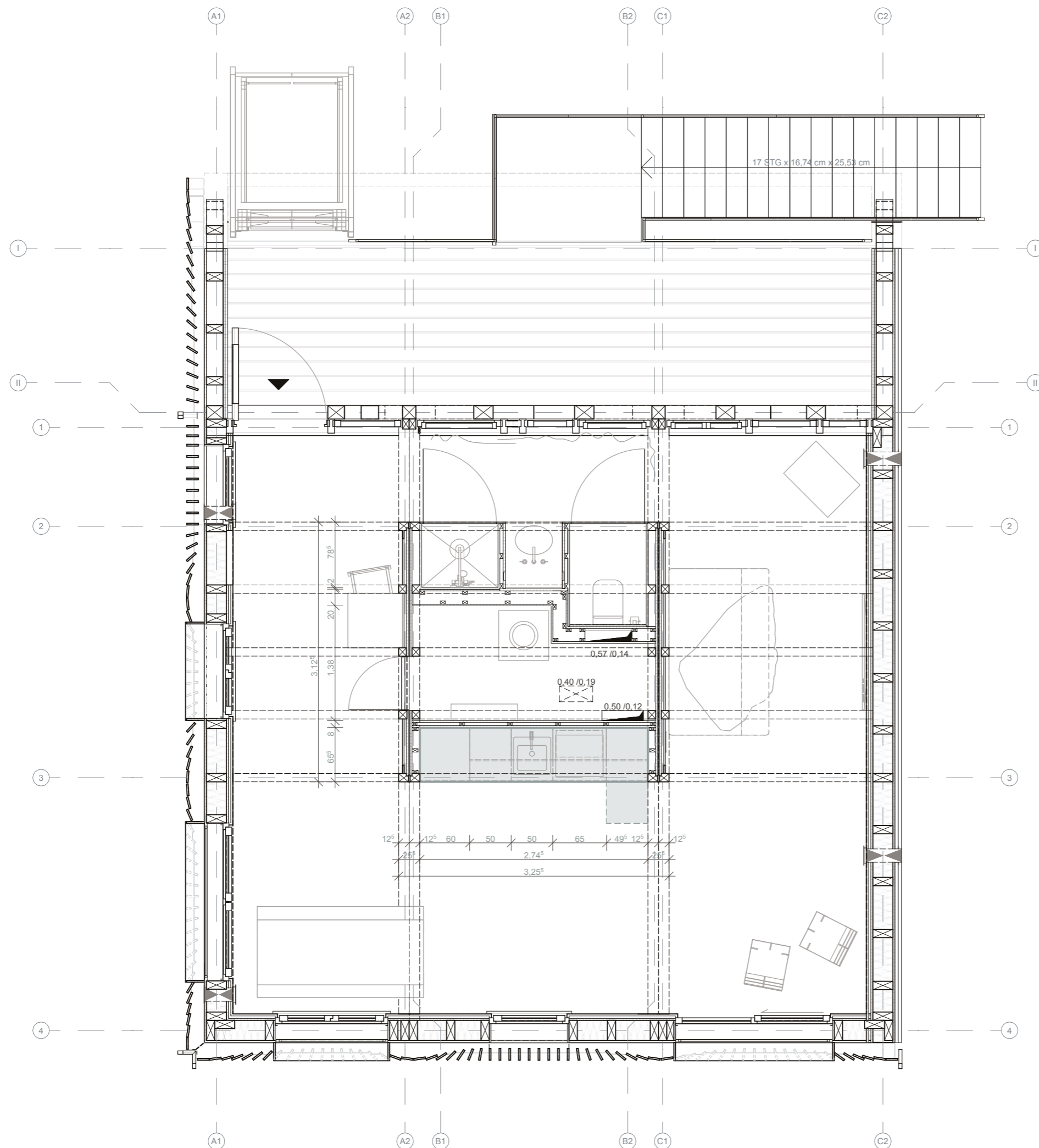


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale 1:50 Page No. 66

Drawing Content
Kitchen Plan

IN-2001



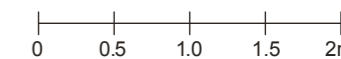
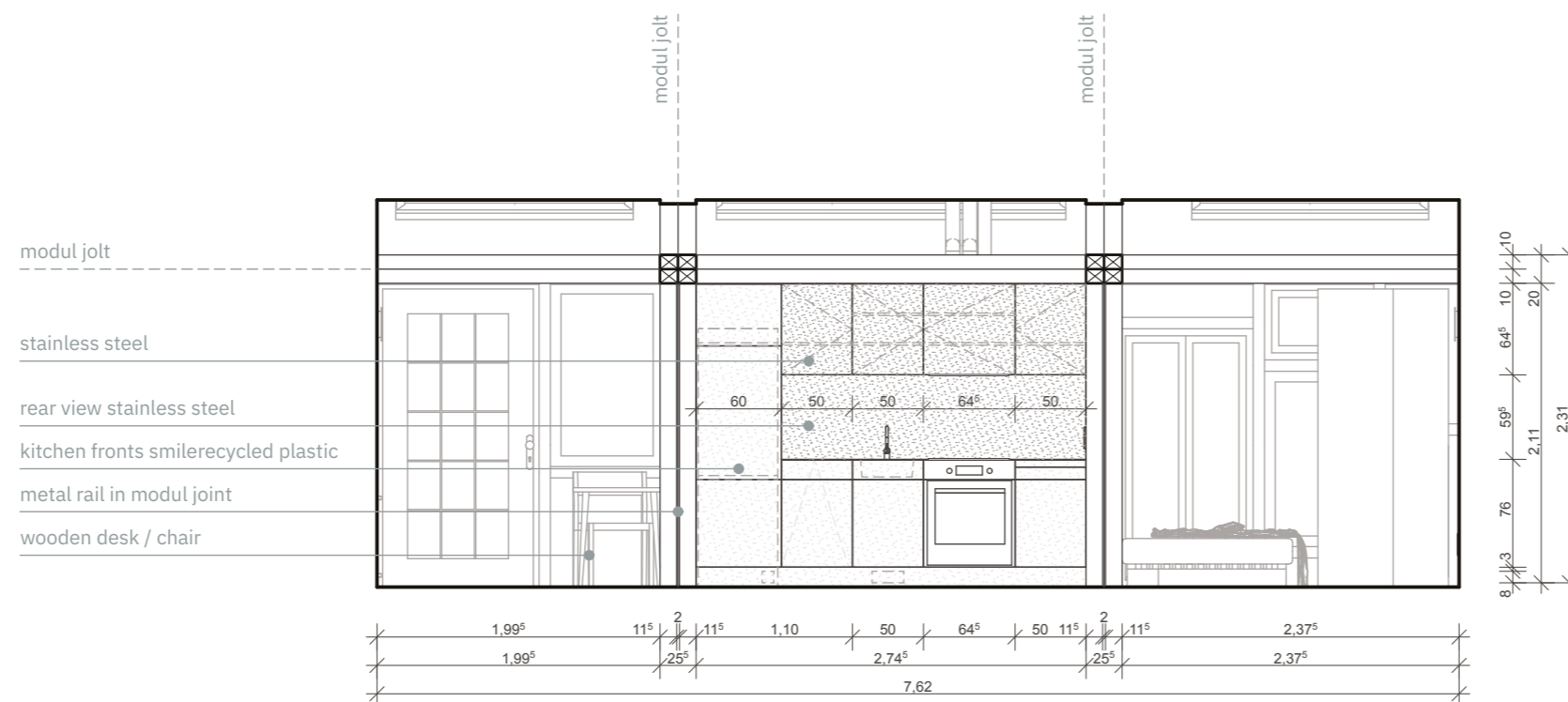


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale 1:50 Page No. 67

Drawing Content
Elevation - Kitchen Closed

IN-2101



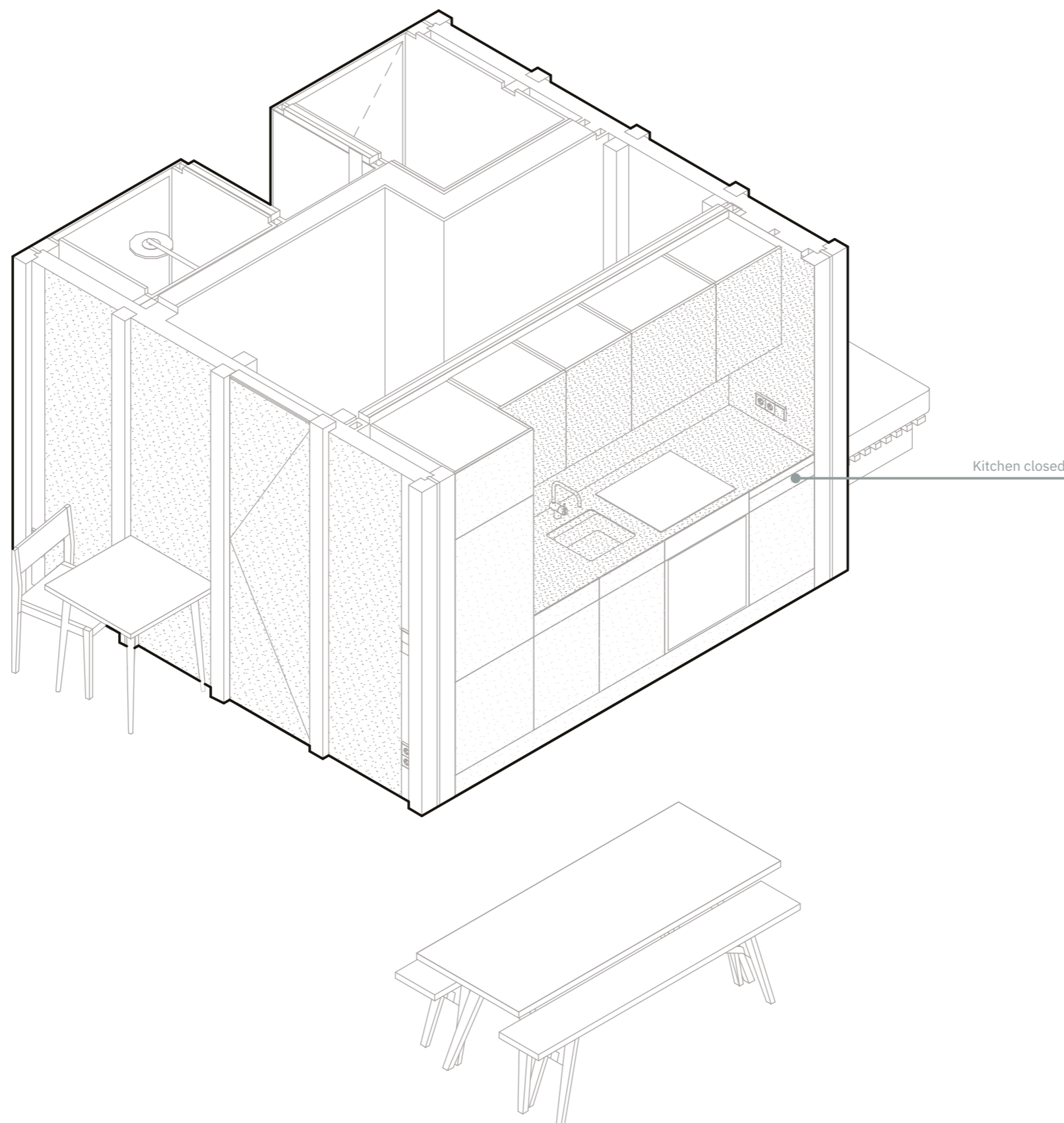


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale Page No.
no scale 68

Drawing Content
Isometric - Kitchen Closed

IN-2102

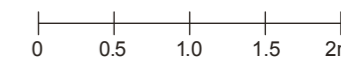
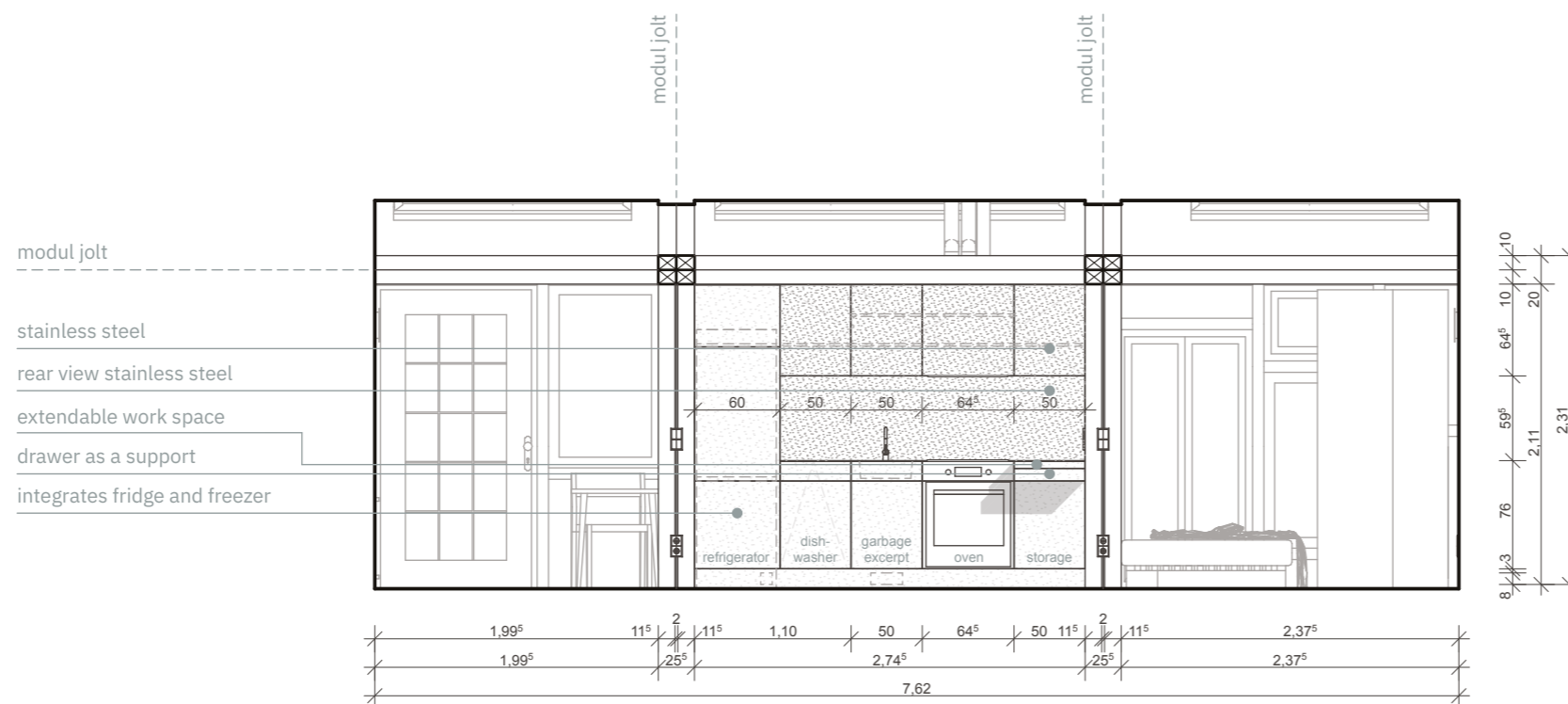


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale 1:50 Page No. 69

Drawing Content
Elevation - Kitchen Open

IN-2103



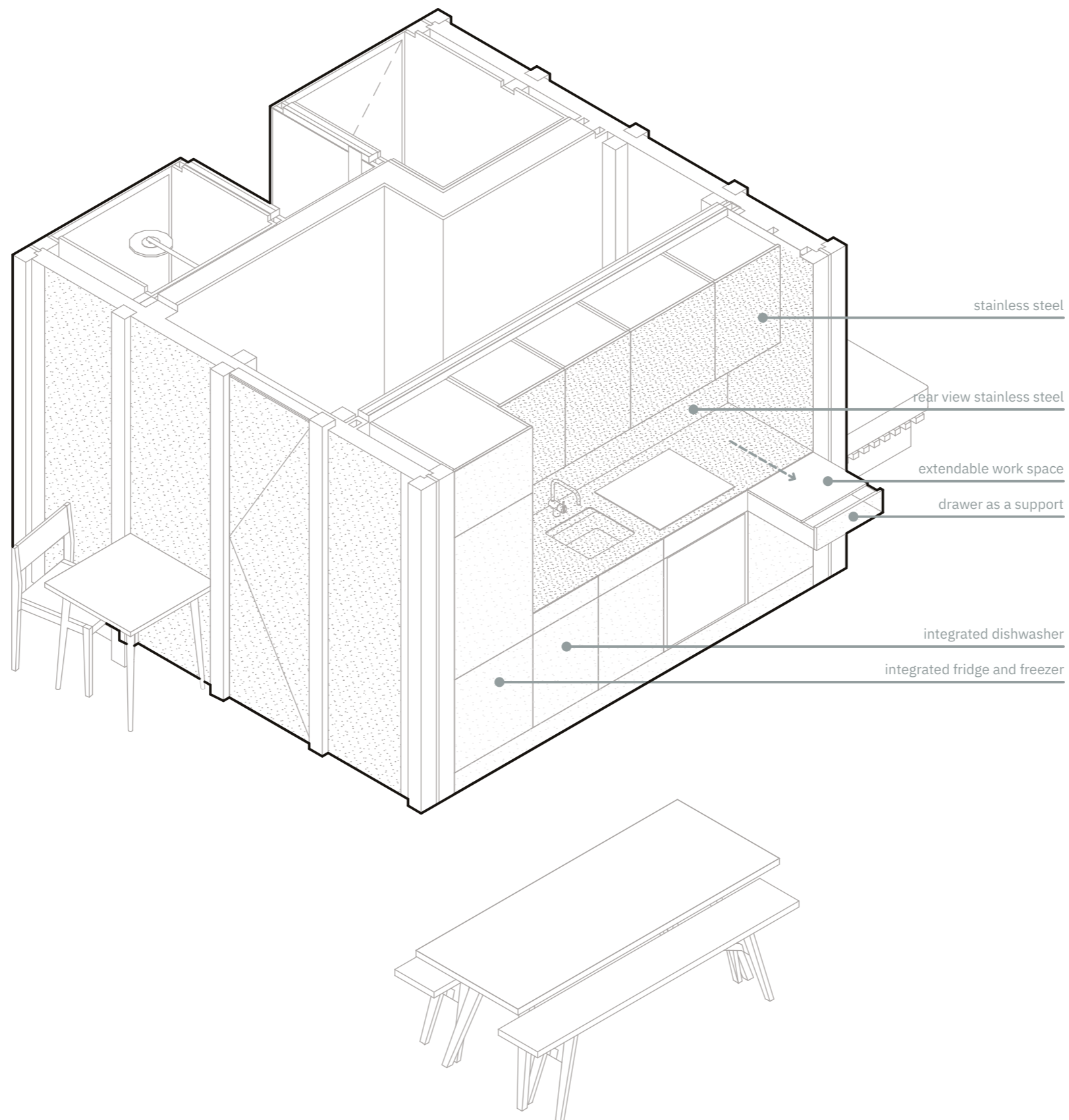


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale Page No.
no scale 70

Drawing Content
Isometric - Kitchen Open

IN-2104

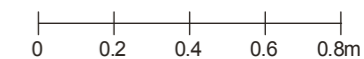
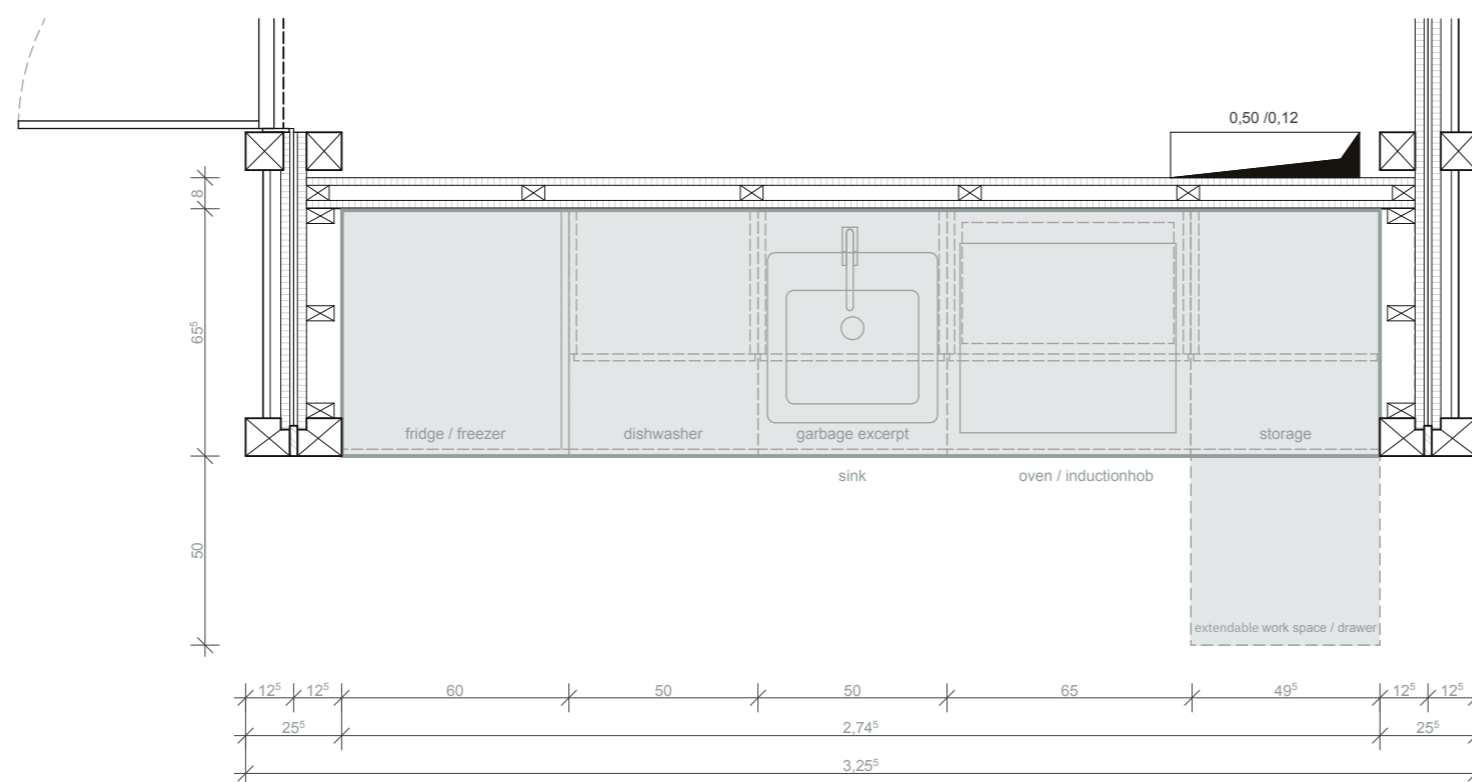


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale 1:20 Page No. 71

Drawing Content
Detail Plan - Kitchen

IN-2201



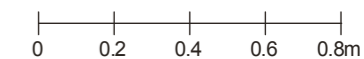
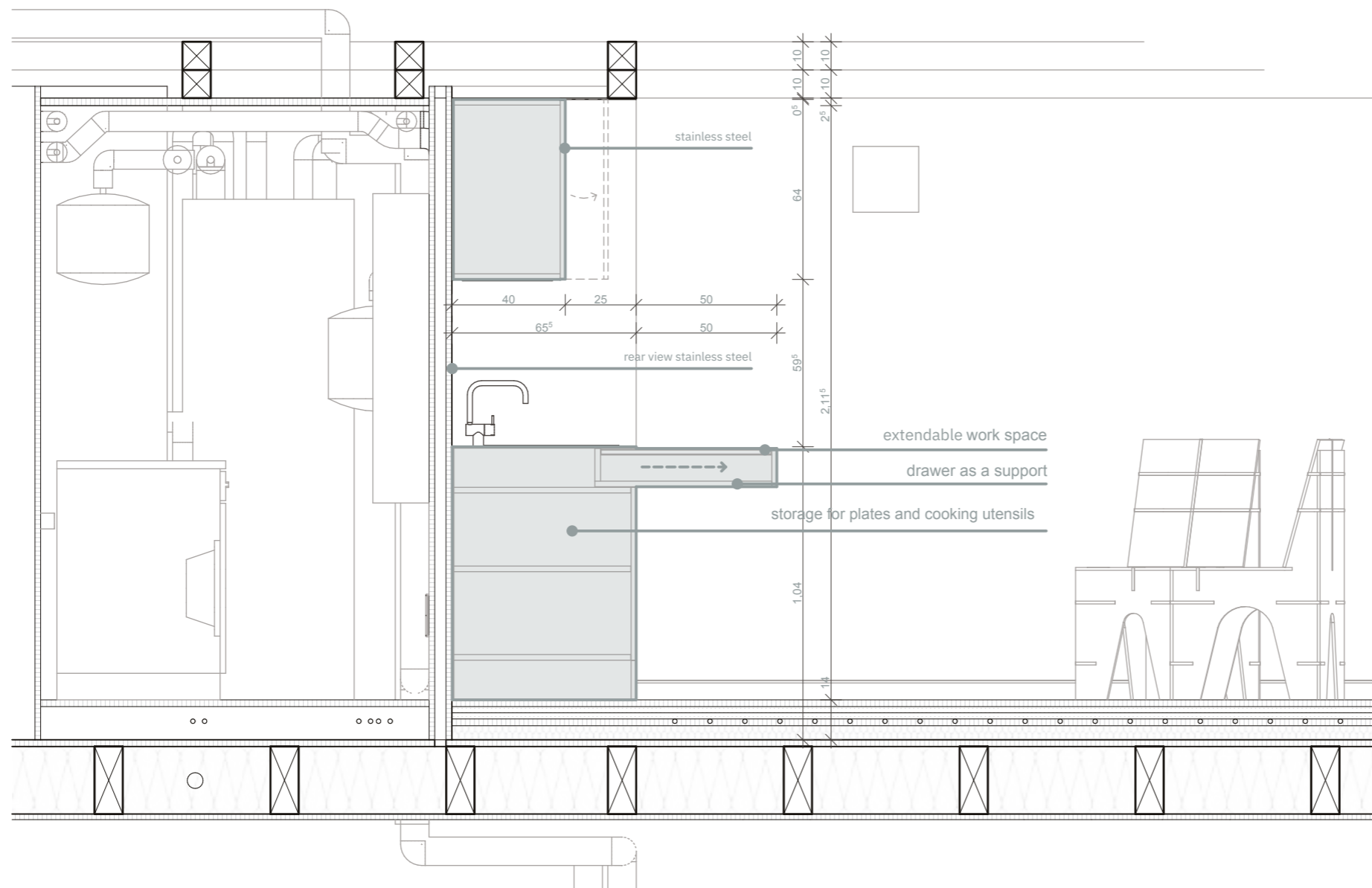


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale 1:20 Page No. 72

Drawing Content
Detail Section - Kitchen

IN-2202



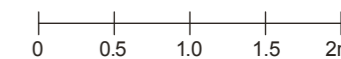
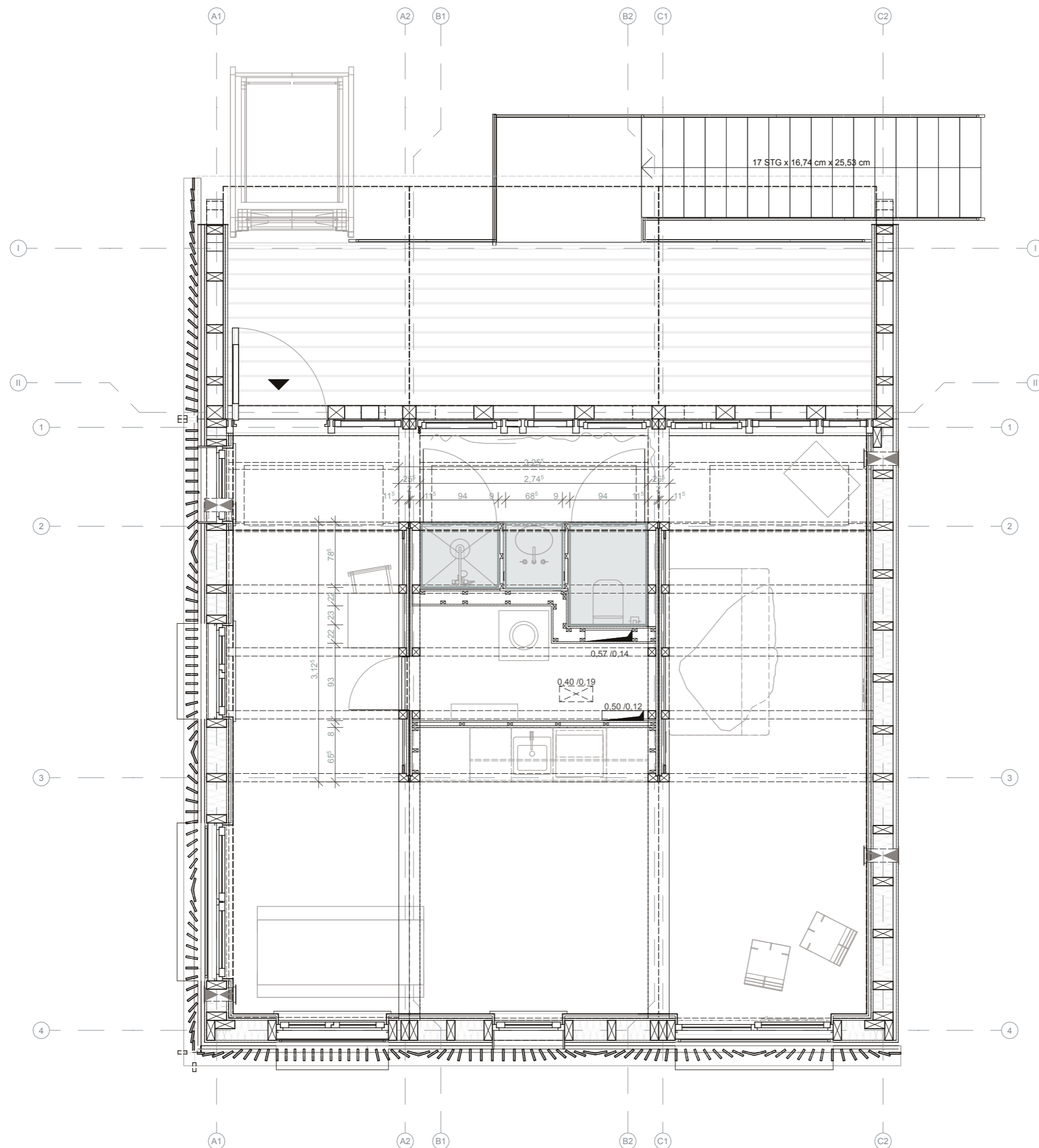


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale 1:50 Page No. 73

Drawing Content
Bathroom Plan

IN-3001



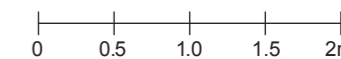
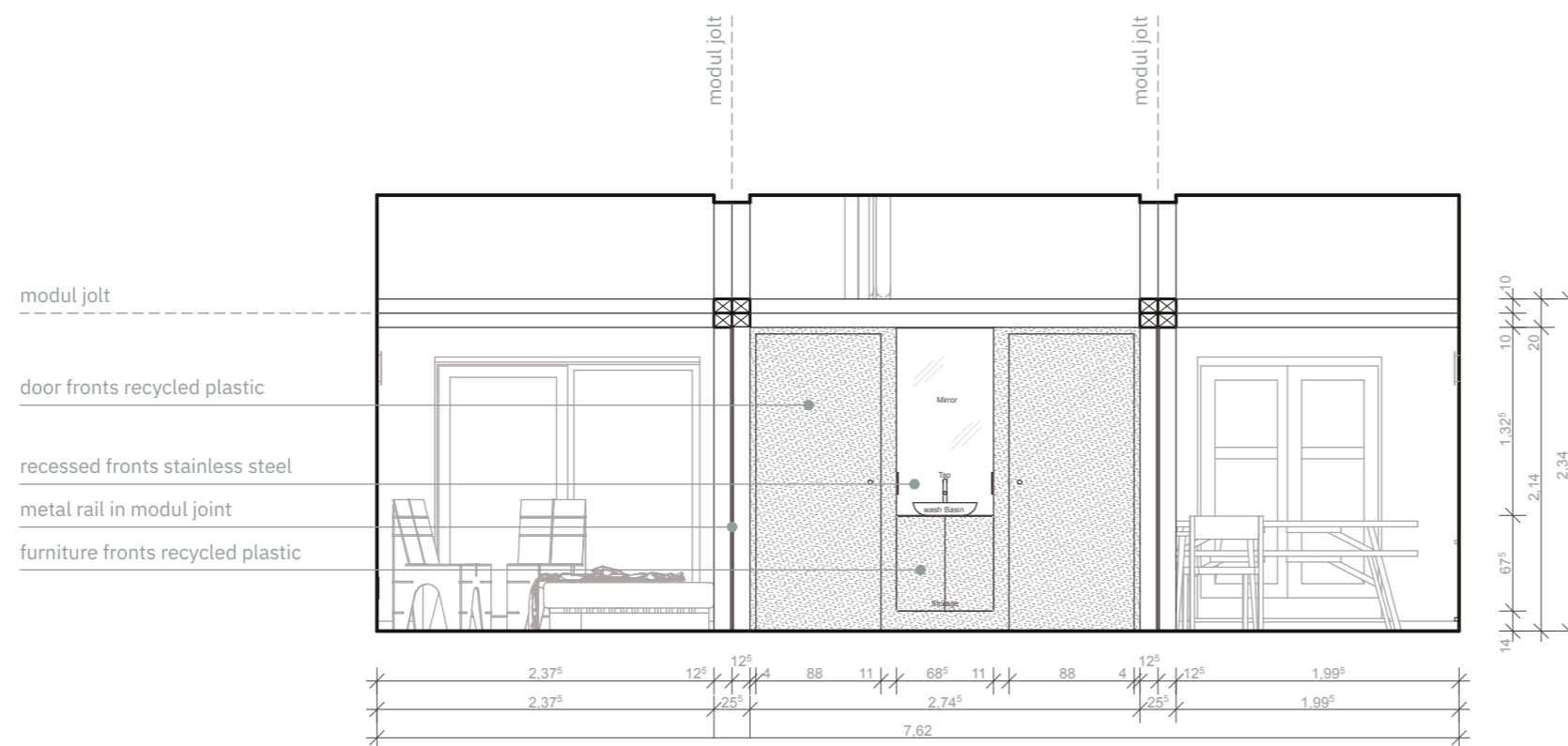


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale 1:50 Page No. 74

Drawing Content Bathroom Elevation - Closed

IN-3101



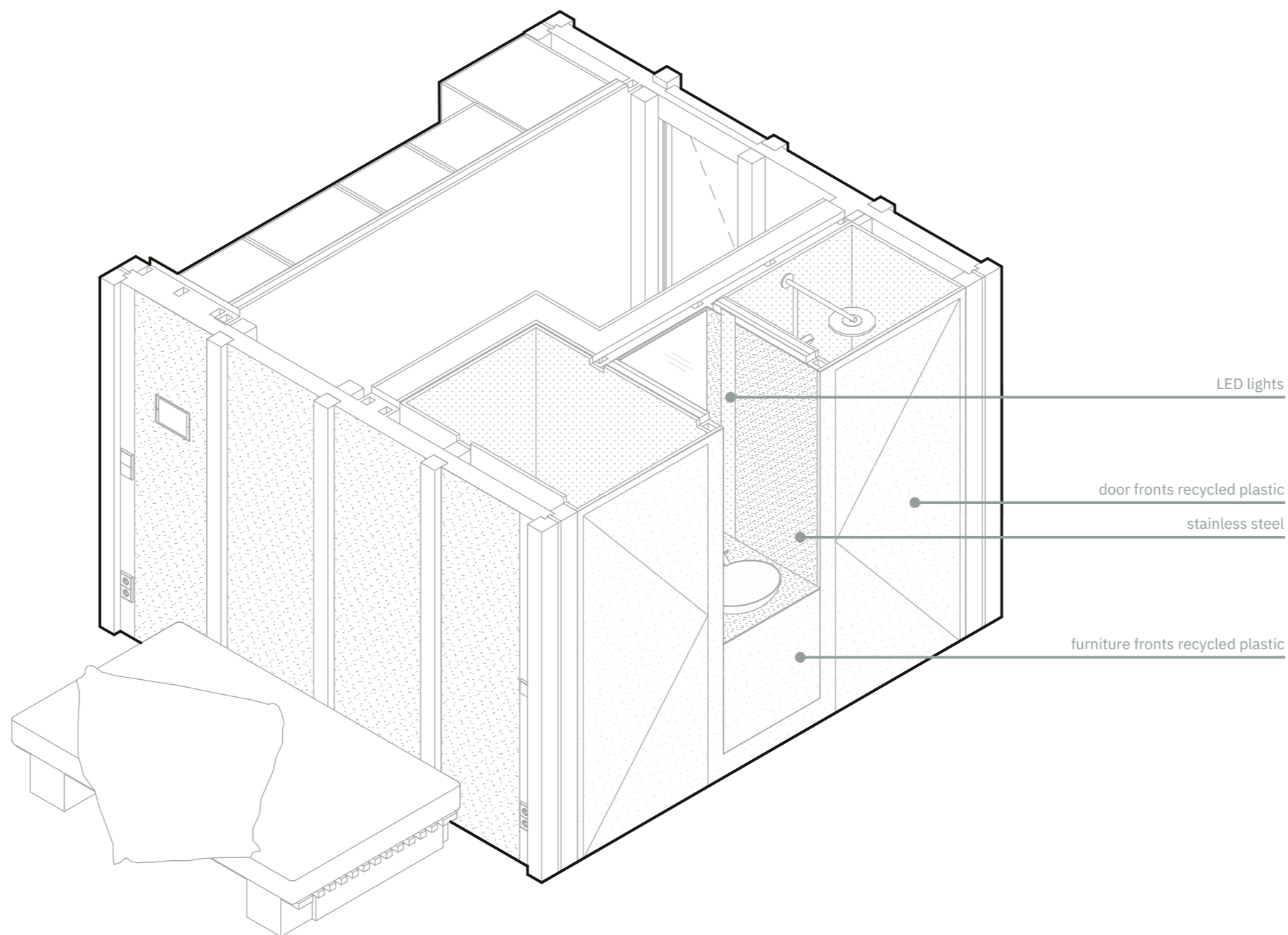


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

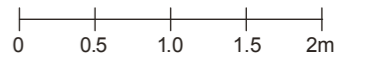
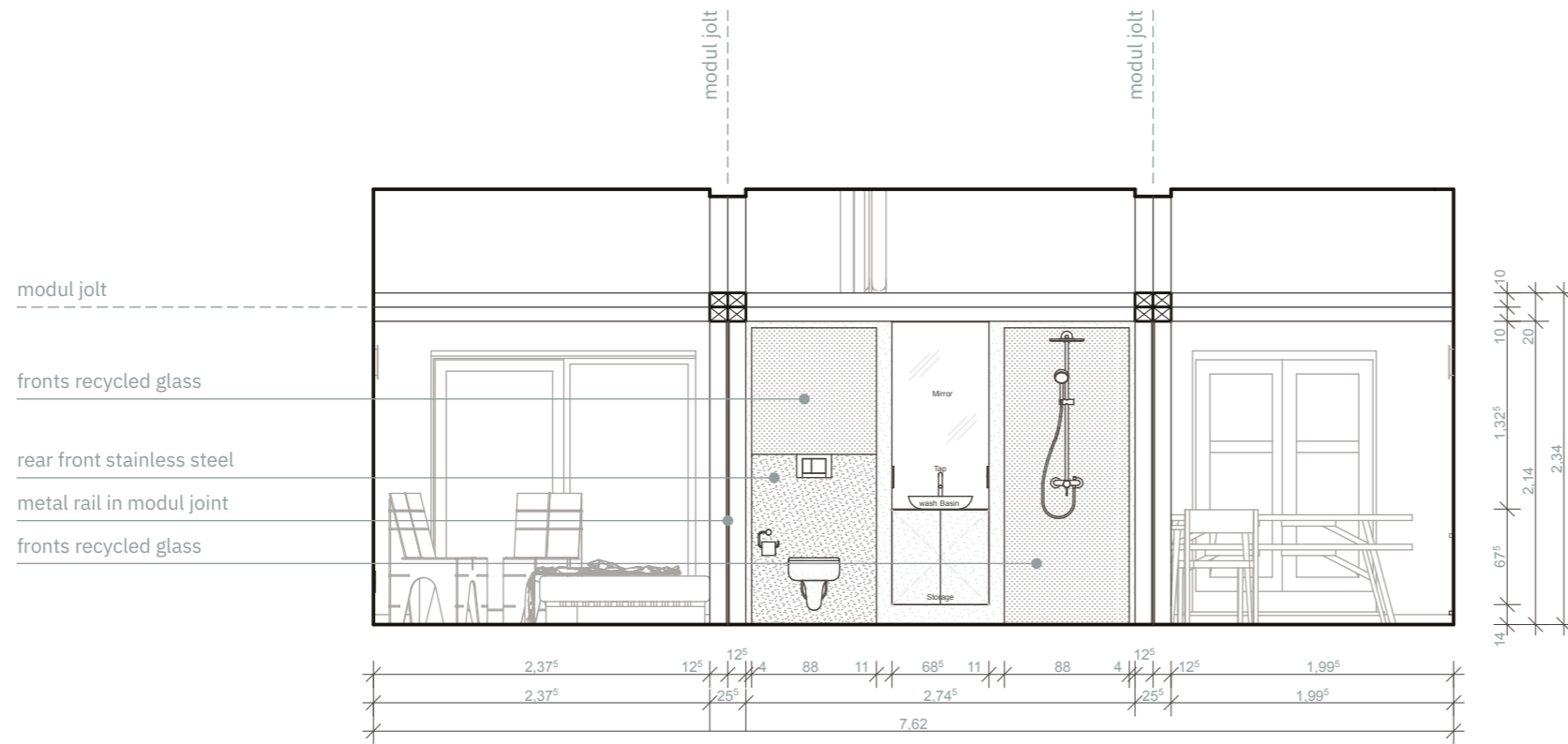


Scale Page No.
no scale 75

Drawing Content
Bathroom Isometric - Closed

IN-3102

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale 1:50 Page No. 76

Drawing Content
Bathroom Elevation - Open





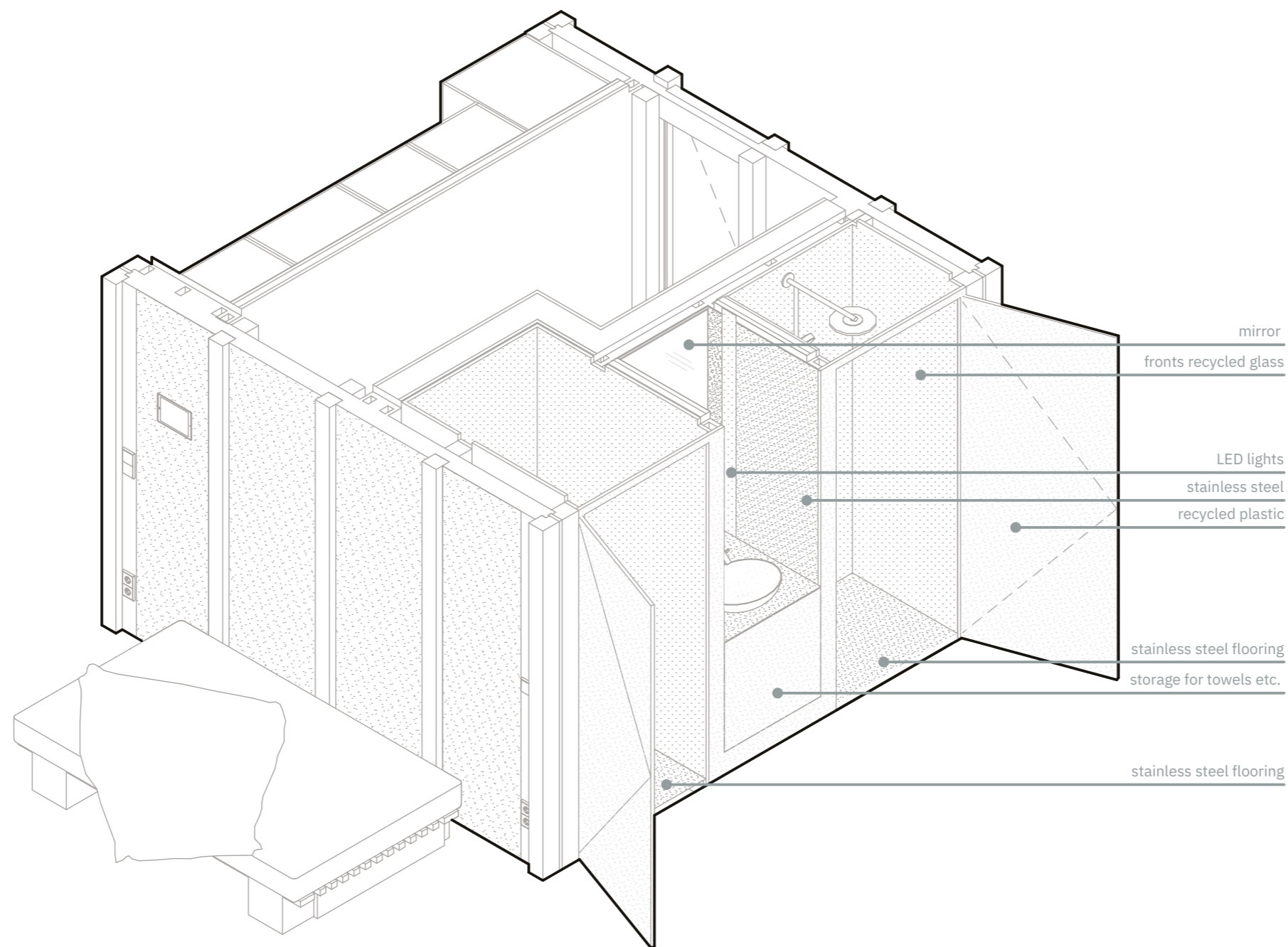
RoofKIT



solar
decathlon^{21»22}
europe

WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale Page No.
no scale 77

Drawing Content
Bathroom Isometric - Open

IN-3104

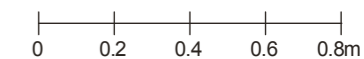
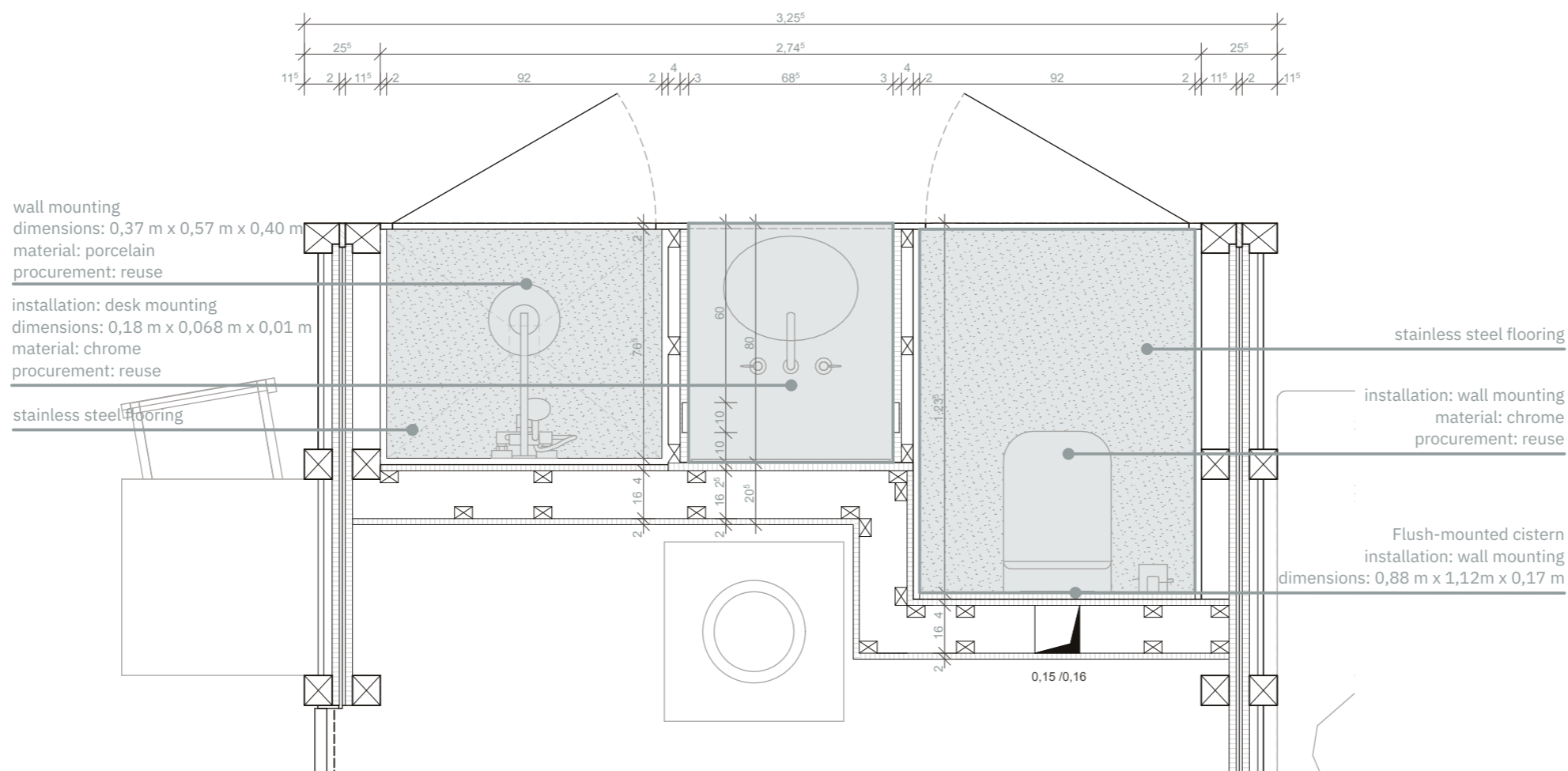


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale 1:20 Page No. 78

Drawing Content Bathroom Detail

IN-3201



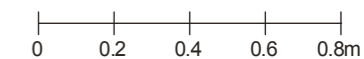
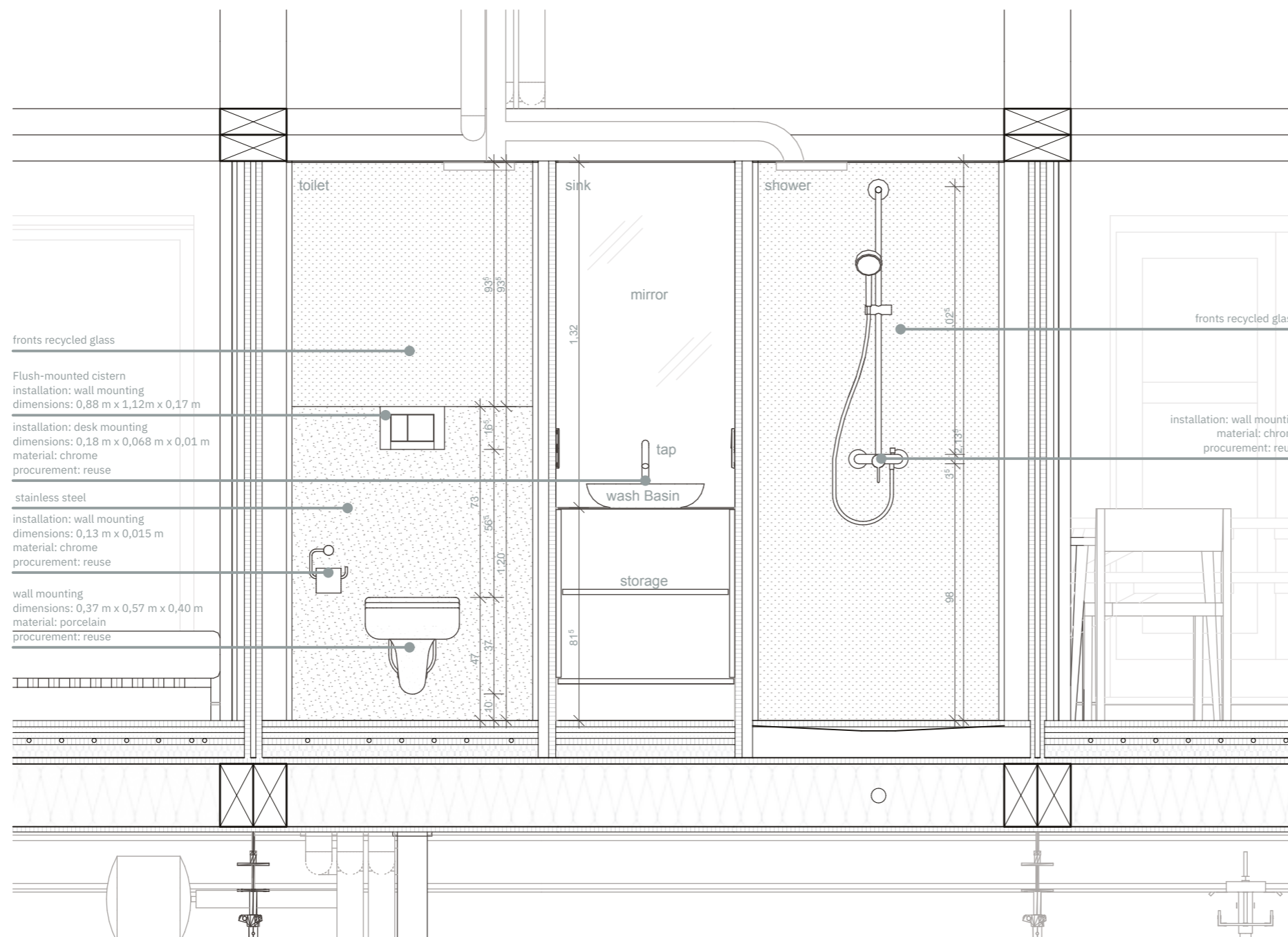


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale 1:20 Page No. 79

Drawing Content Bathroom Detail - Section

IN-3202



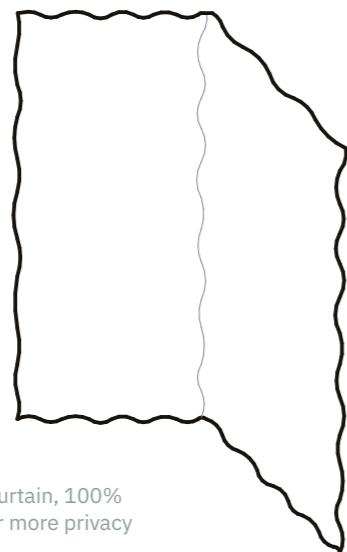


RoofKIT

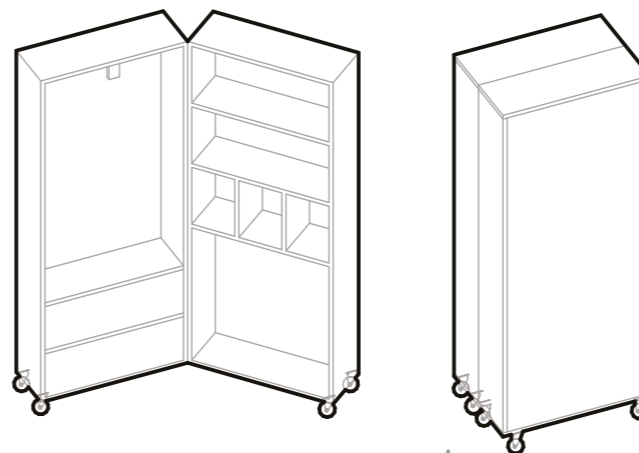


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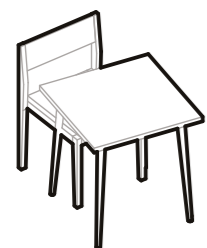
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Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



flexible curtain, 100% cotton for more privacy

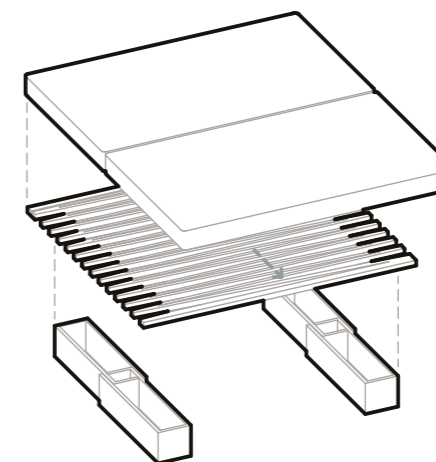
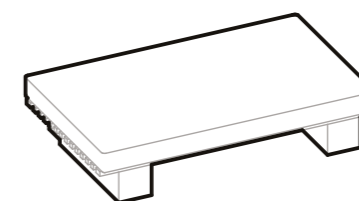


sliding wall cabinet, which can be moved around the room on rollers



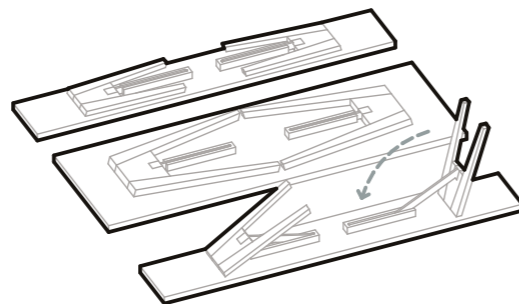
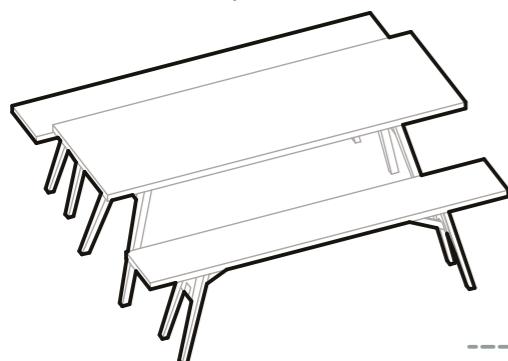
moveable working desk

flexible bed that serves as a couch when folded during the day

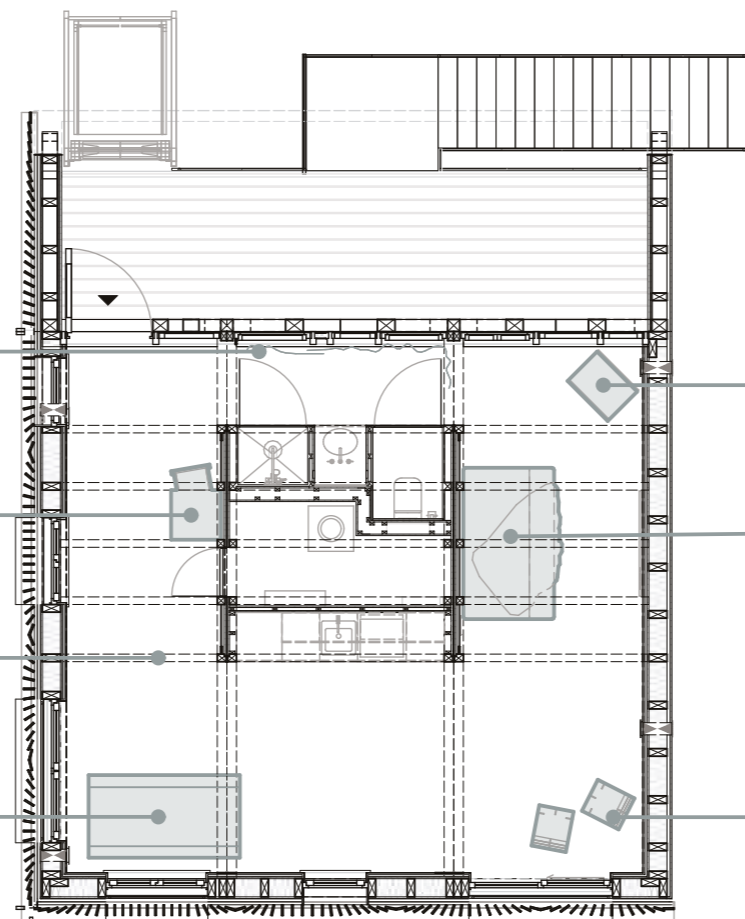
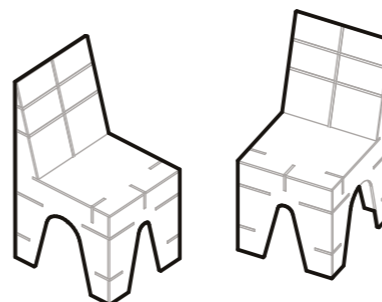


flexible, portable lighting products

flexible dinner table, space saving construction, locally produced in Austria



lounge furniture made out of recycled tetrapack milk cartons





WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Scale Page No.
no scale 81

Drawing Content
Interior Rendering - Core Closed

IN-5001



RoofKIT

Structural (ST)

Karlsruhe, 23rd March 2022



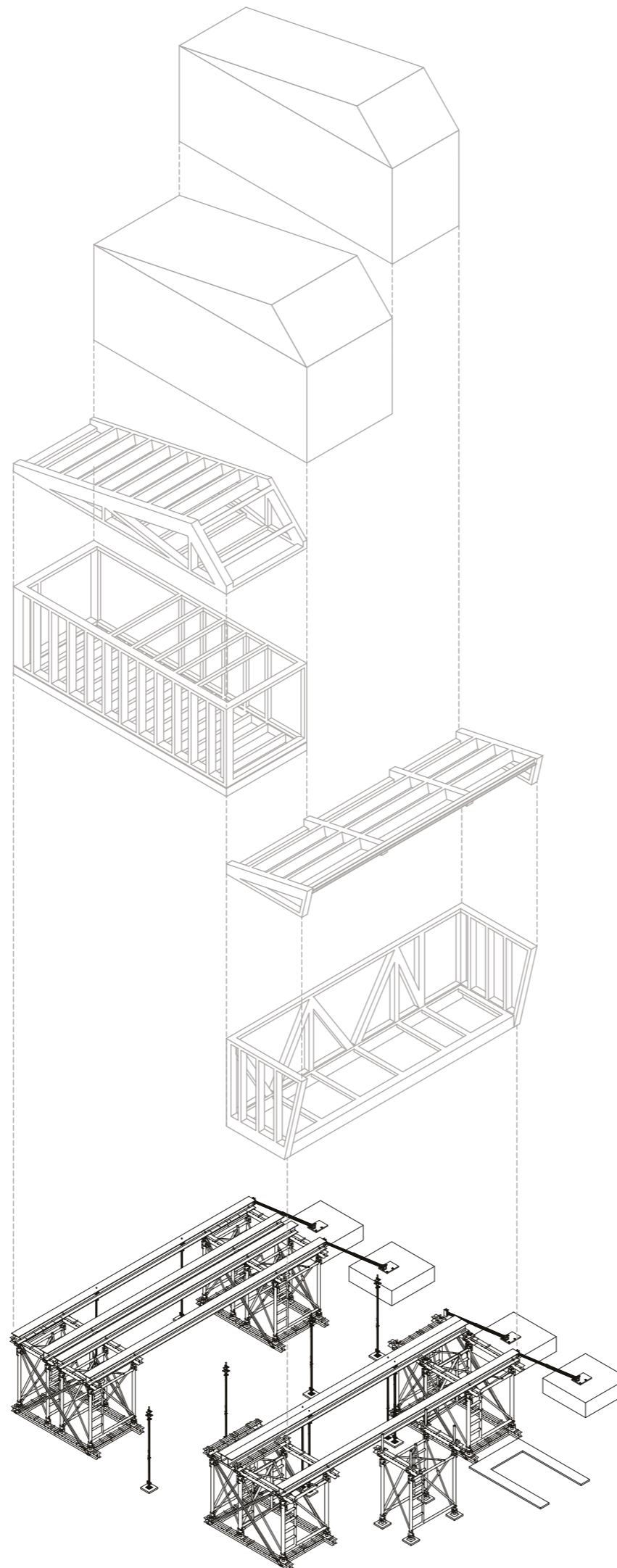
RoofKIT



solar
decathlon^{21»22}
europe

WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale Page No.
no scale 83

Drawing Content
Conceptual Drawing

ST-0001

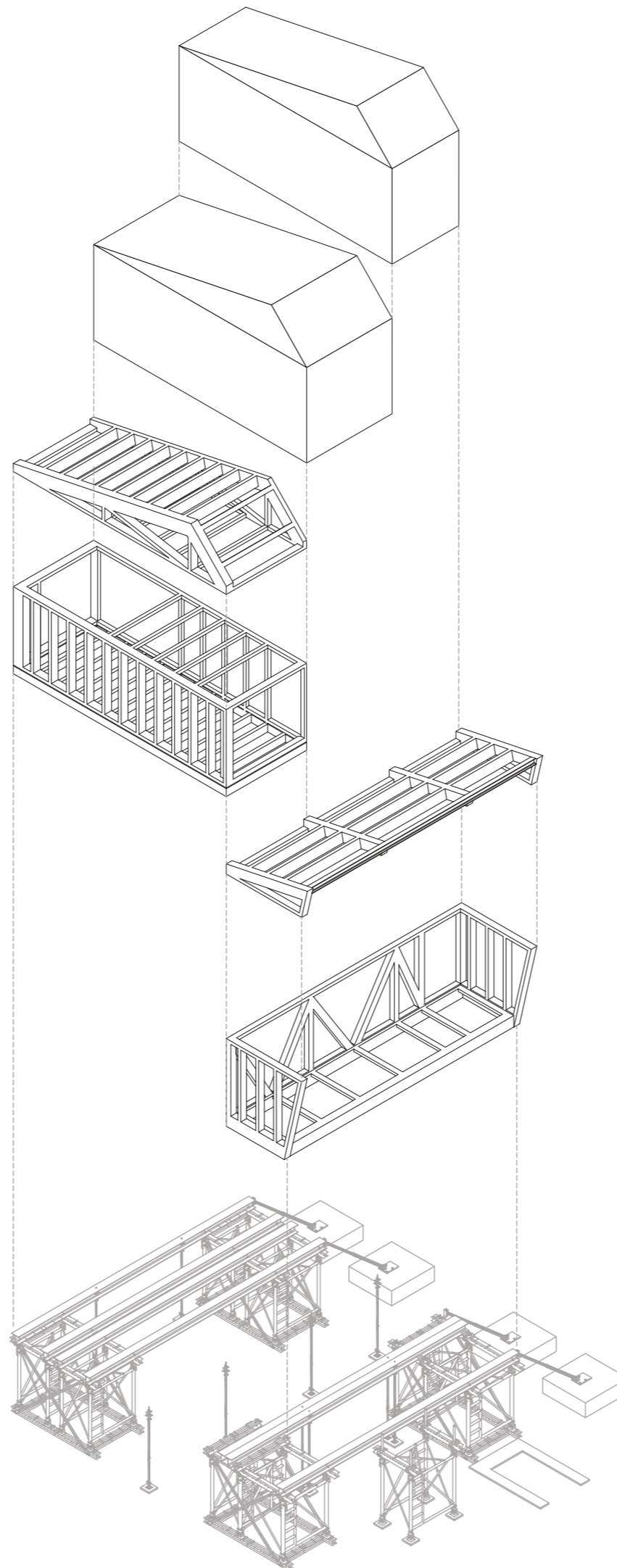


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale Page No.
no scale 84

Drawing Content
Conceptual Drawing

ST-0002

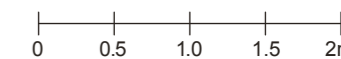
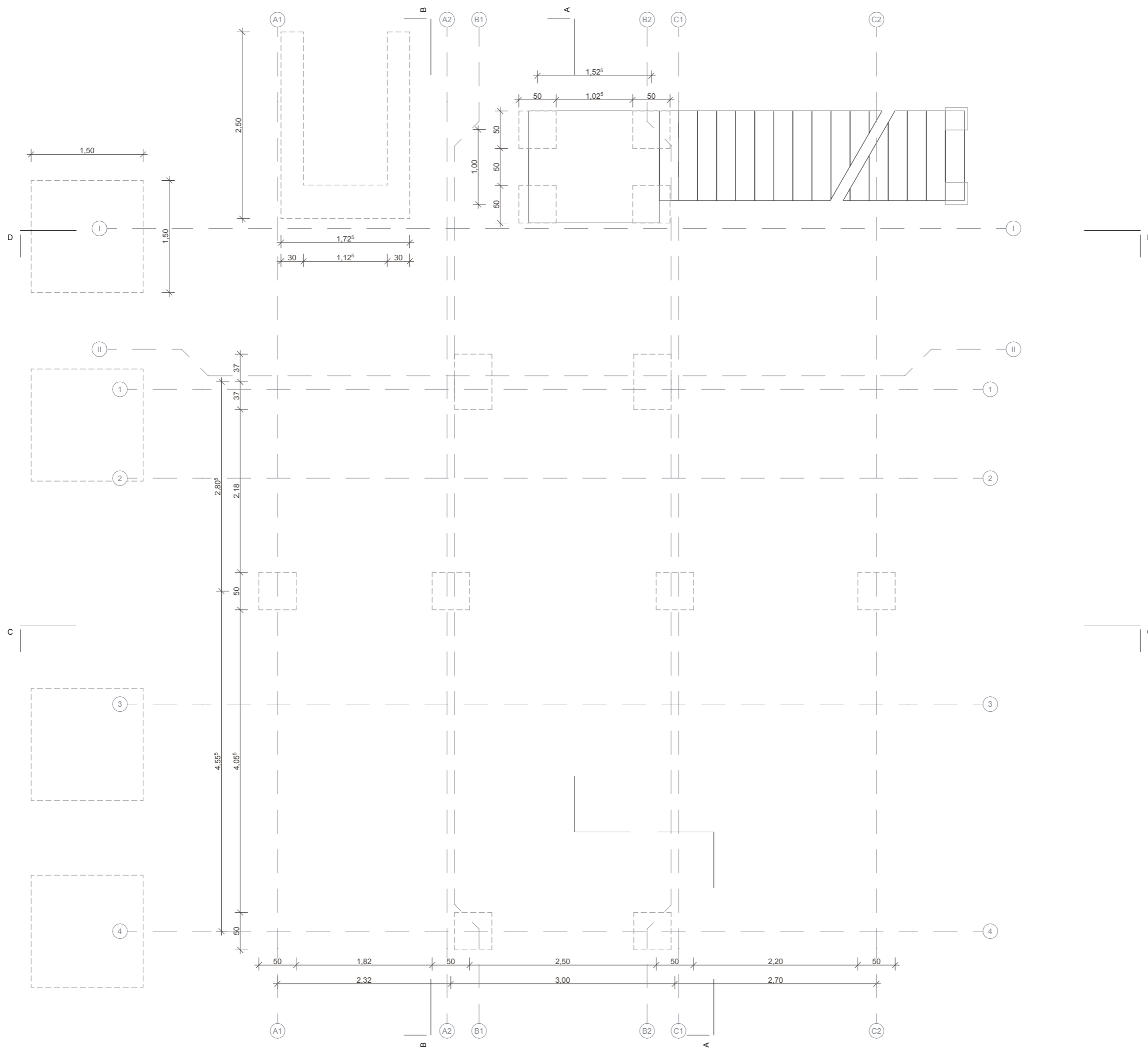


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale 1:50 Page No. 85

Drawing Content
Foundation Plan

ST-1001

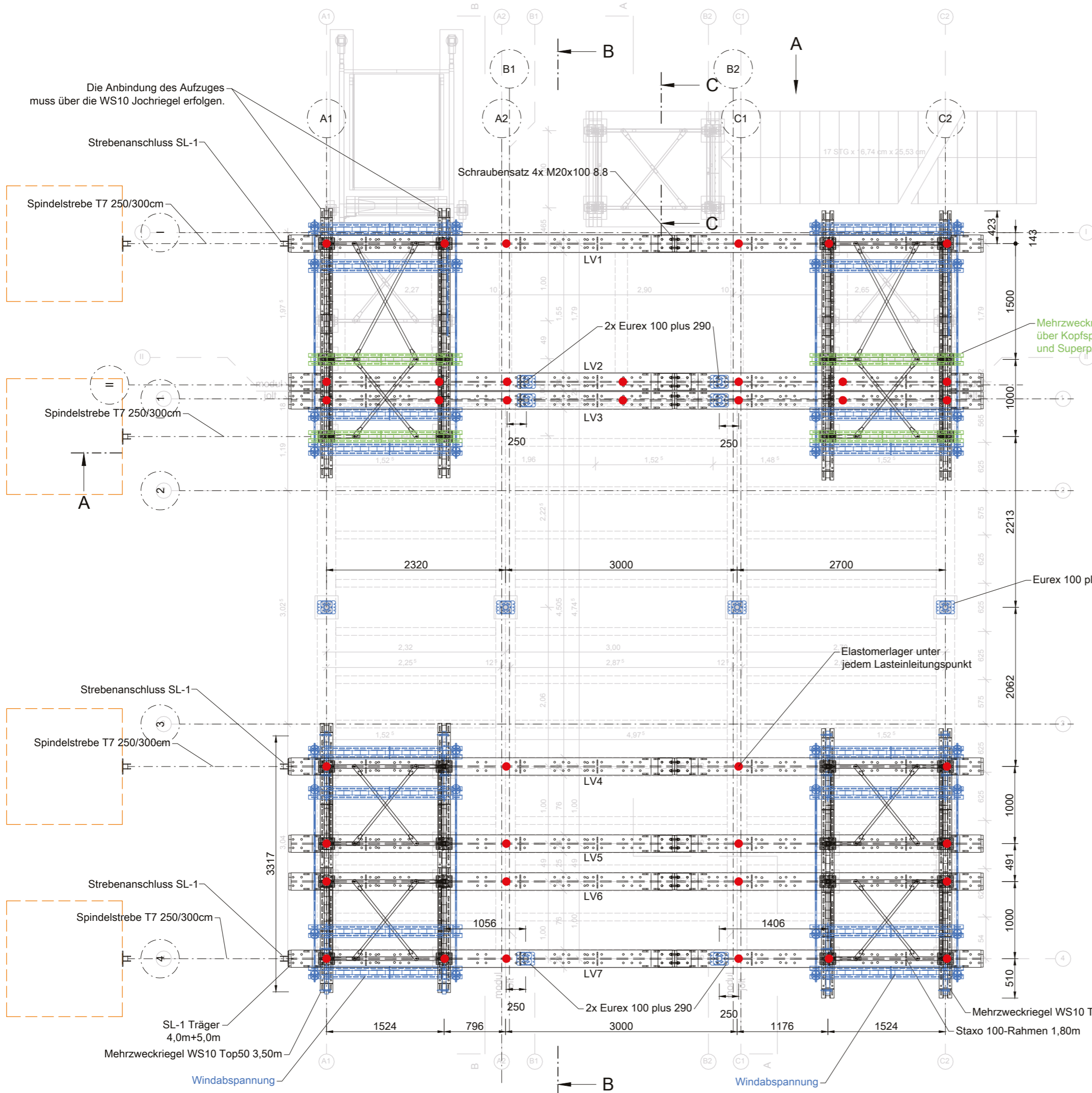


RoofKIT



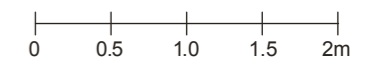
WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



● Lasteinleitung aus Oberkonstruktion. Elastomerlager zwischen SL1 Träger und Jochträger und SL1 Träger und Holzunterkonstruktion mit einem Mindestreibungswert von $m=0,31$

Hinweis:
Die maßg. Lasten für eine Ballastierung ist der statischen Bemessung zu entnehmen.



Scale 1:50 Page No. 86

Drawing Content
Structural Floor Plan Level 0

ST-1101

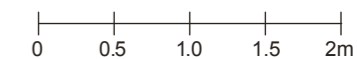
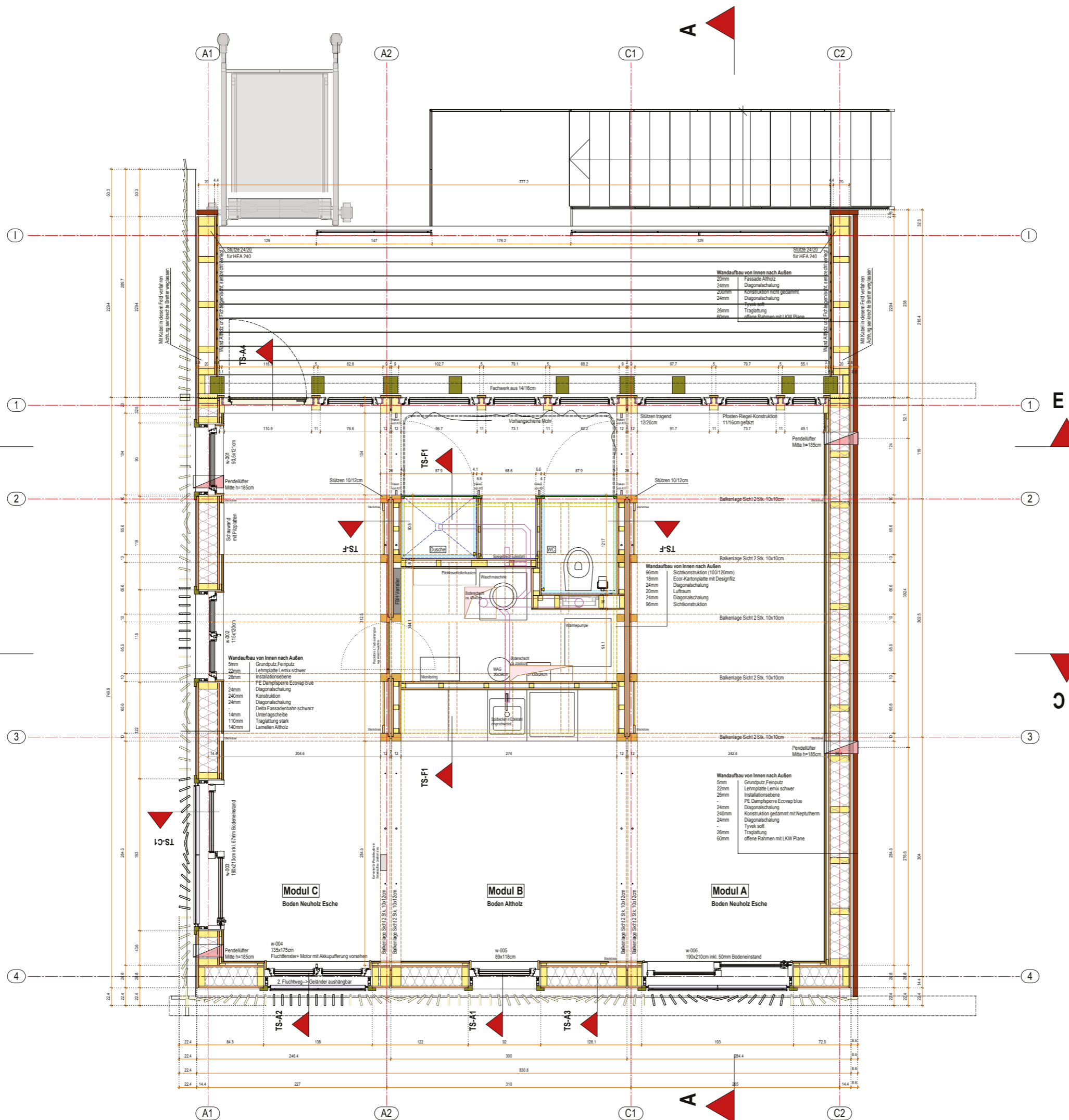


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale 1:50 Page No. 87

Drawing Content
Structural Floor Plan Level 1

ST-1102

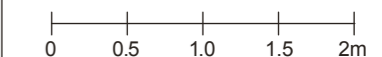
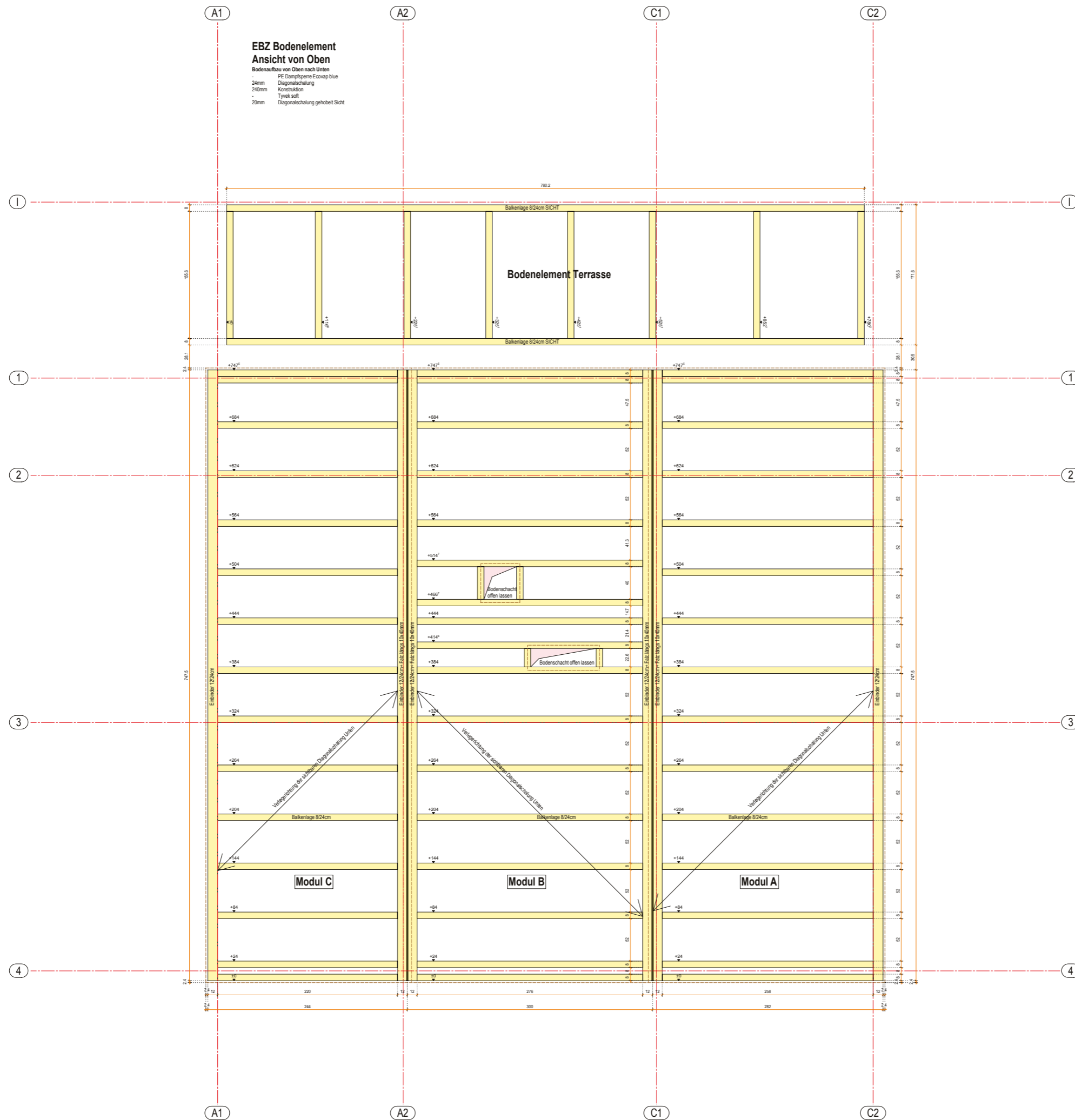


RoofKIT



WUPPERTAL GERMANY

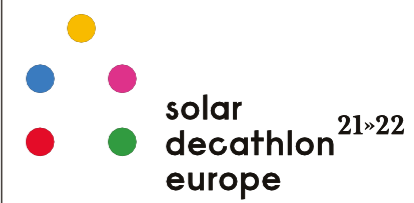
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Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale 1:50 Page No. 88

Drawing Content
Structural Floor Plan Level 1 Floor Elements

ST-1103



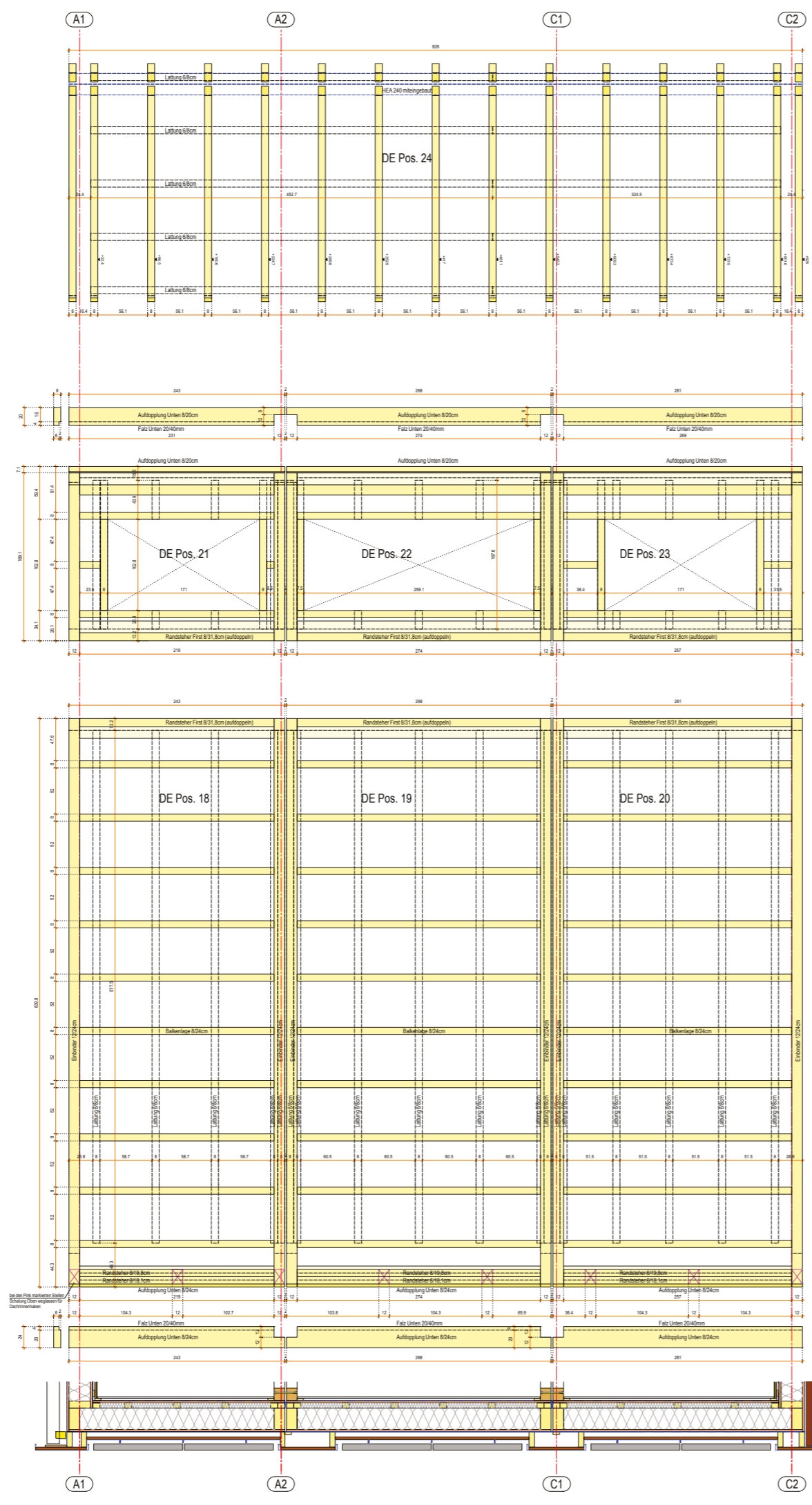
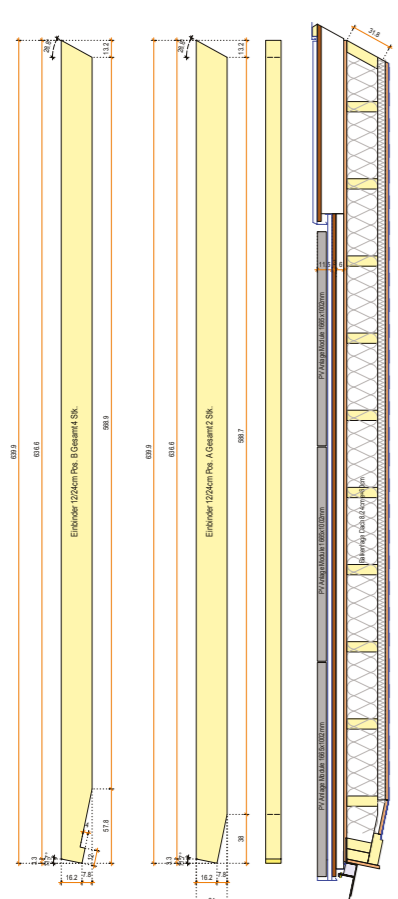
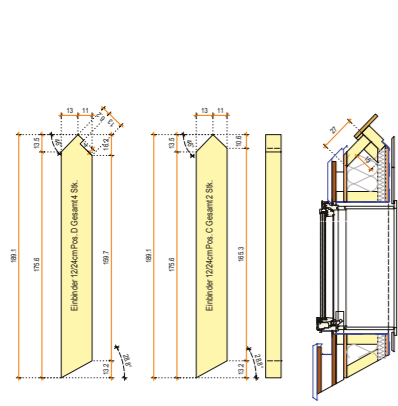
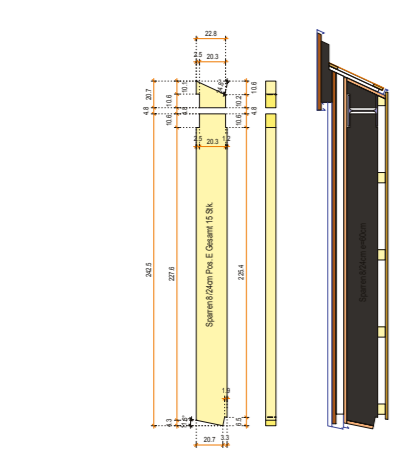
WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Scale no scale Page No. 89

Drawing Content Structural Roof Plan Roof Elements

ST-1201



**Dachelemente über Terrasse
Ansicht von Oben**

- Dachaufbau von Oben nach Unten
- 30mm Schalung
- 60mm Konterdämmung
- Unterdach Succecto 0.8
- 24mm Schalung
- 240mm Sparren ohne Dämmung
- 60mm Traglattung
- 20mm Untersicht Aluholz

**Dachelemente
Ansicht von Oben**

- Dachaufbau von Oben nach Unten
- 30mm Schalung
- 60mm Konterdämmung
- Unterdach Succecto 0.8
- 24mm Schalung
- 240mm Sparren mit Dämmung Nephtuerm
- 60mm Traglattung mit Dämmung Nephtuerm
- 24mm Schalung
- PE Dampfsperre Ecovap blue
- 28mm Traglattung
- 18mm Eco-Kartonplatte mit Designritz

**Dachelemente
Ansicht von Oben**

- Dachaufbau von Oben nach Unten
- 30mm Schalung
- 60mm Konterdämmung
- Unterdach Succecto 0.8
- 24mm Schalung
- 240mm Sparren mit Dämmung Nephtuerm
- 60mm Traglattung mit Dämmung Nephtuerm
- 24mm Schalung
- PE Dampfsperre Ecovap blue
- 28mm Traglattung
- 18mm Eco-Kartonplatte mit Designritz

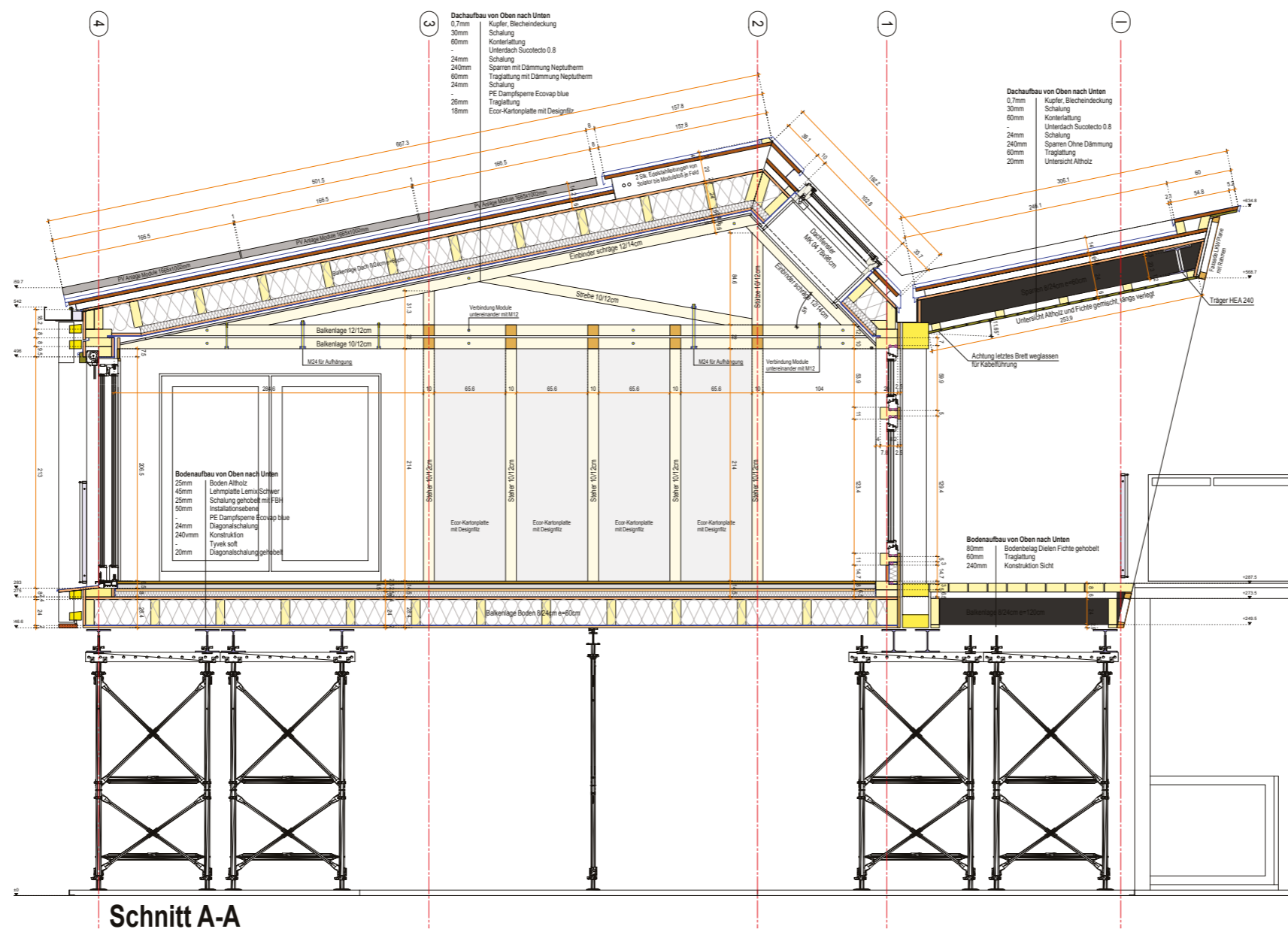


RoofKIT

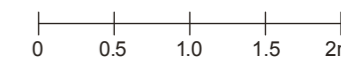


WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Schnitt A-A



Scale 1:50 Page No. 90

Drawing Content Structural Longitudinal Section A-A

ST-1301

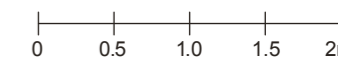
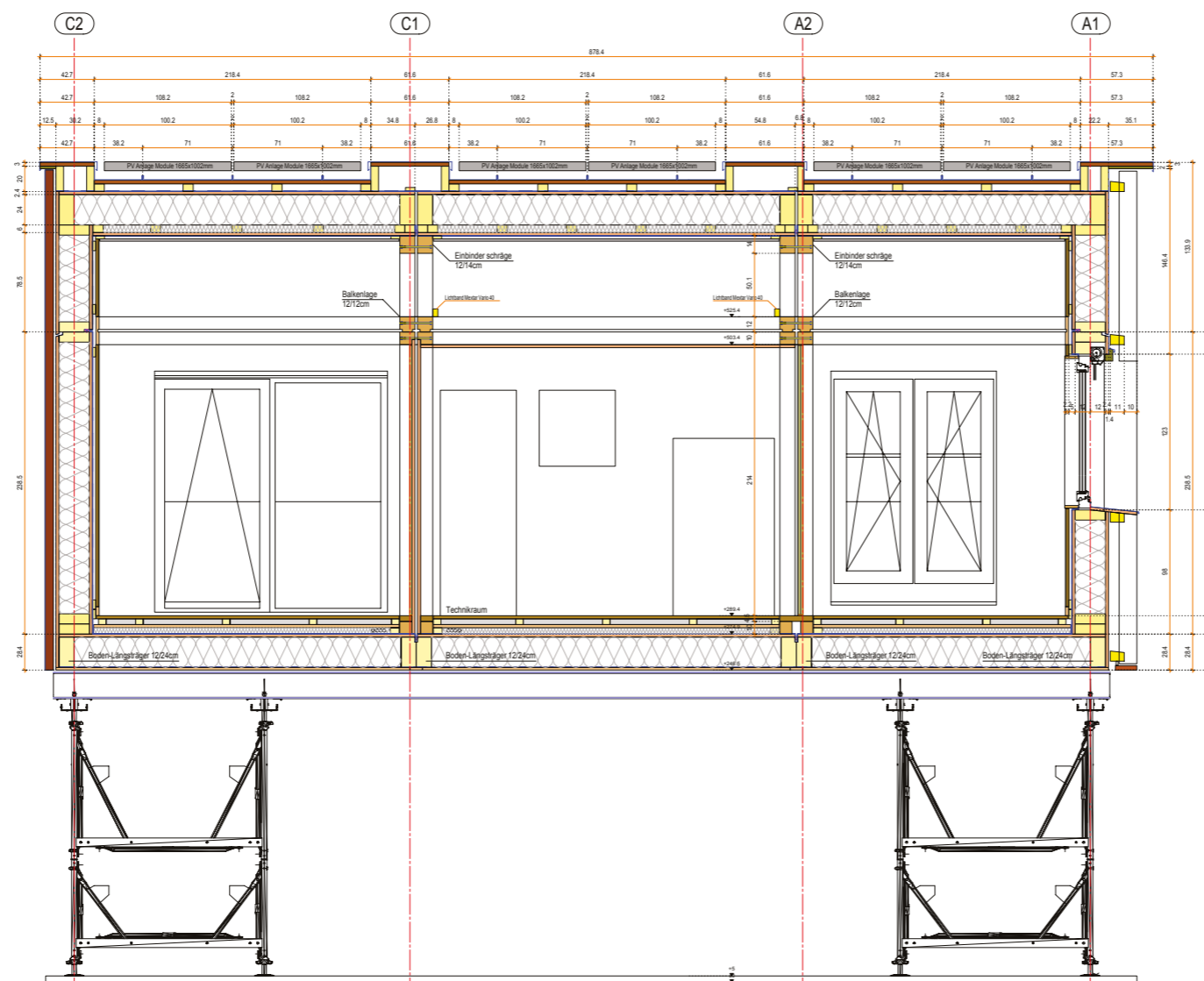


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale 1:50 Page No. 91

Drawing Content
Structural Transversal Section C-C

ST-1302

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

- |1| roof
- ☐ photovoltaic-thermal collector
 - 0,7mm ← → ☉ copper sheet covering
 - 30mm → ☉ shuttering
 - 60mm → ☉ counter battening
 - → ☉ roof underlay AMANN Sucotecto 0.8
 - 24mm → ☉ diagonal formwork
 - 240mm → ☉ wooden beams with seaweed insulation NEPTUTHERM
 - 60mm → ☉ supporting wooden battens with insulation NEPTUTHERM
 - 24mm → ☉ diagonal formwork
 - → ☉ PE vapour barrier ECOVAP blue
 - 26mm → ☉ installation area
 - 15mm → ☉ ceiling panelling ECOR lightcore
 - 2mm → → ☐ felt covering

|2| exterior wall and facade

- 2mm ☉ clay finish plaster
- 3mm ☉ clay under plaster
- 22mm ☉ clay panel CLAYTEC Lemix
- 26mm → ☉ installation area
- → ☉ PE vapour barrier ECOVAP blue
- 24mm → ☉ diagonal formwork
- 240mm → ☉ wooden beams with seaweed insulation NEPTUTHERM
- 24mm → ☉ diagonal formwork
- → ☉ facade membrane DOERKEN delta 50
- 110mm → ☉ supporting wooden battens, myzel-based coating black
- 140mm → ☉ wooden slats, reused sunburnt wood

|3| floor

- 25mm → ☉ wooden floorboards, partly reused wood
- 22mm ☉ clay panel CLAYTEC Lemix
- 22mm ☉ clay panel CLAYTEC Lemix
- 25mm → ☉ wooden formwork with underfloor heating
- 50mm → ☉ installation area
- → ☉ PE vapour barrier ECOVAP blue
- 24mm → ☉ diagonal formwork
- 240mm → ☉ wooden beams with seaweed insulation NEPTUTHERM
- → ☉ wind sealing TYVEK soft
- 20mm → ☉ diagonal formwork, partly reused wood

|4| scaffolding

- ← → ☐ scaffolding DOKA STAXO 100 towers, steel

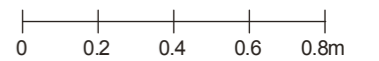
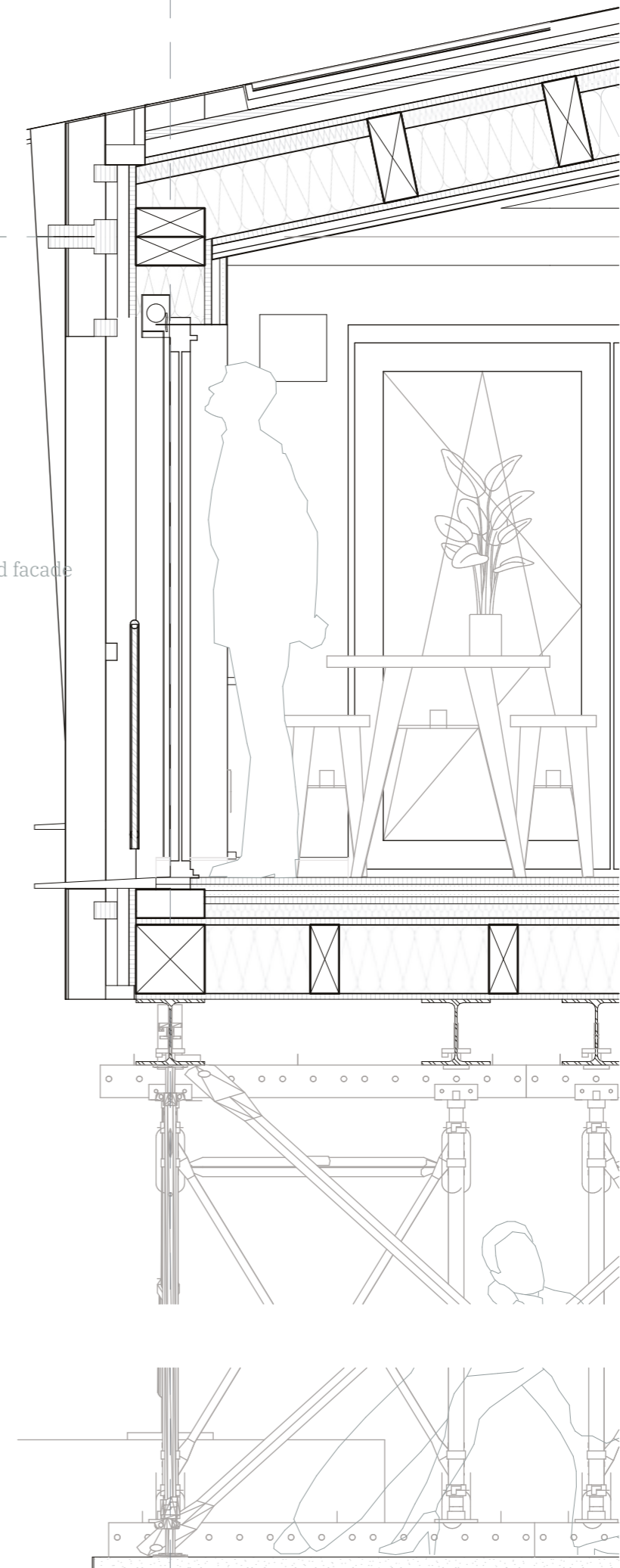
|1| roof

modul jolt

|2| exterior wall and facade

|3| floor

|4| scaffolding



Scale 1:20 Page No. 92

Drawing Content
Structural Details Section A-A

ST-2001

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

- [1] roof
- ☐ photovoltaic-thermal collector
 - 0,7mm ← → ○ ☐ copper sheet covering
 - 30mm → ○ ☐ shuttering
 - 60mm → ○ ☐ counter battening
 - → ○ ☐ roof underlay AMANN Sucotecto 0.8
 - 24mm → ○ ☐ diagonal formwork
 - 240mm → ○ ☐ wooden beams with seaweed insulation NEPTUTHERM
 - 60mm → ○ ☐ supporting wooden battens with insulation NEPTUTHERM
 - 24mm → ○ ☐ diagonal formwork
 - → ○ ☐ PE vapour barrier ECOVAP blue
 - 26mm → ○ ☐ installation area
 - 15mm → ○ ☐ ceiling panelling ECOR lightcore
 - 2mm → → ☐ felt covering

[2] exterior wall and facade

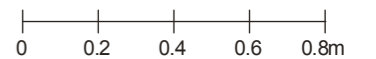
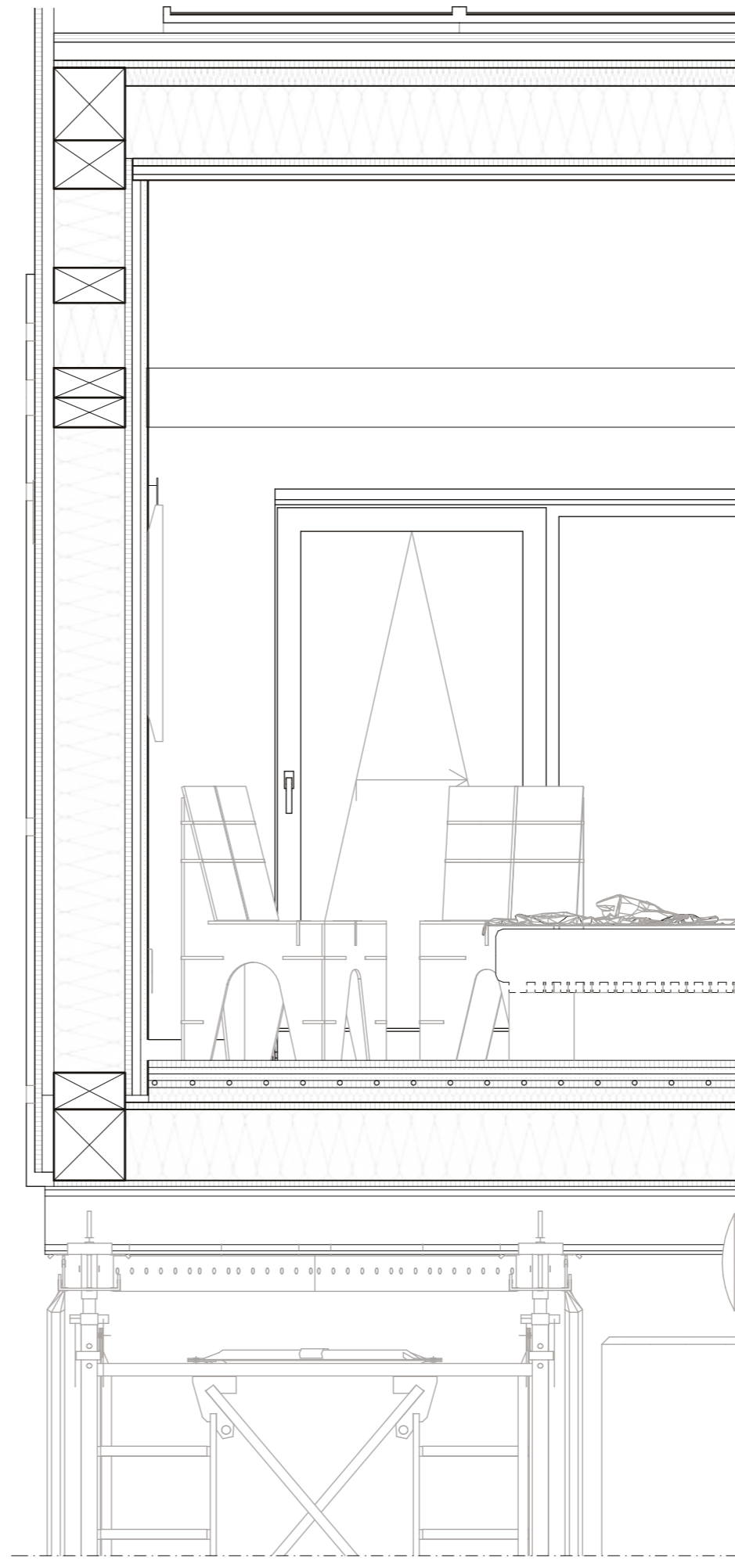
- 2mm ○ ☐ clay finish plaster
- 3mm ○ ☐ clay under plaster
- 22mm ○ ☐ clay panel CLAYTEC Lemix
- 26mm → ○ ☐ installation area
- → ○ ☐ PE vapour barrier ECOVAP blue
- 24mm → ○ ☐ diagonal formwork
- 240mm → ○ ☐ wooden beams with seaweed insulation NEPTUTHERM
- 24mm → ○ ☐ diagonal formwork
- → ○ ☐ wind sealing TYVEK soft
- 26mm → ○ ☐ shuttering
- 60mm → ○ ☐ open wooden frames
- truck plane, reused

[3] floor

- 25mm → ○ ☐ wooden floorboards, partly reused wood
- 22mm ○ ☐ clay panel CLAYTEC Lemix
- 22mm ○ ☐ clay panel CLAYTEC Lemix
- 25mm → ○ ☐ wooden formwork with underfloor heating
- 50mm → ○ ☐ installation area
- → ○ ☐ PE vapour barrier ECOVAP blue
- 24mm → ○ ☐ diagonal formwork
- 240mm → ○ ☐ wooden beams with seaweed insulation NEPTUTHERM
- → ○ ☐ wind sealing TYVEK soft
- 20mm → ○ ☐ diagonal formwork, partly reused wood

[4] scaffolding

- ← → ○ ☐ scaffolding DOKA STAXO 100 towers, steel



Scale 1:20 Page No. 93

Drawing Content
Structural Details Section C-C

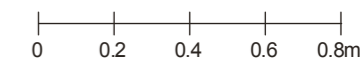
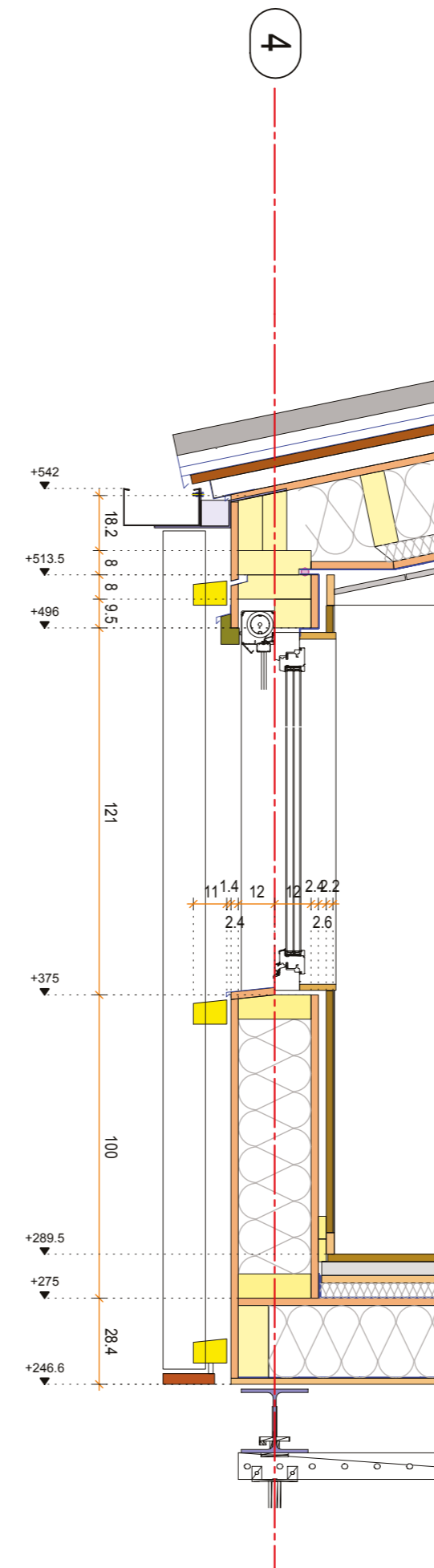
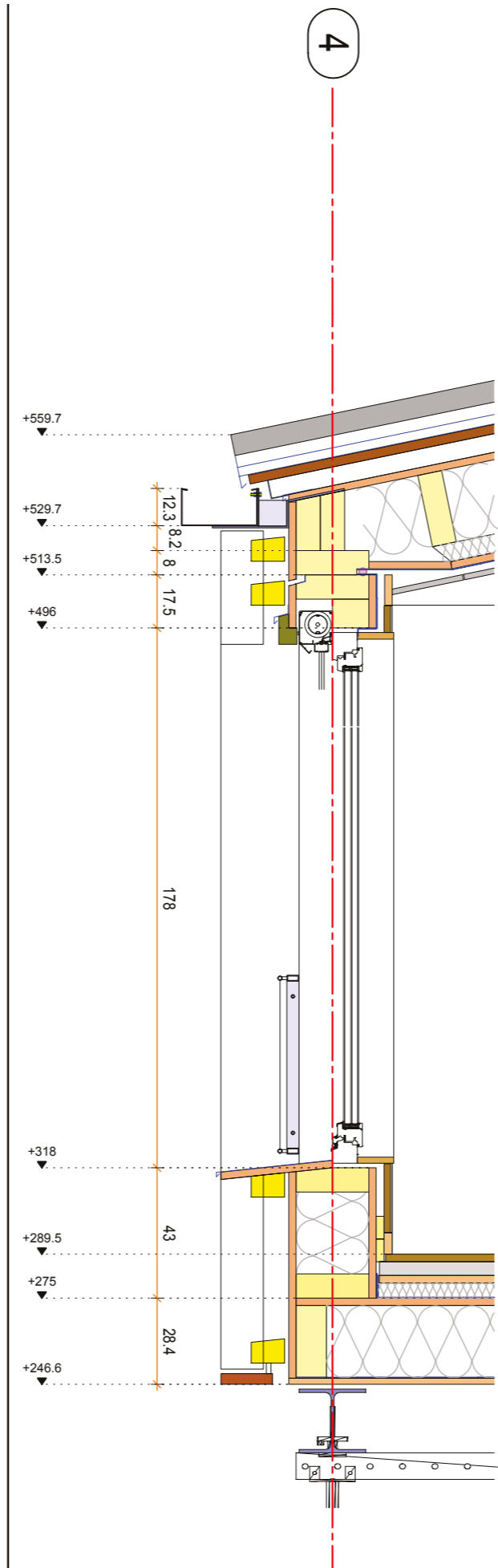
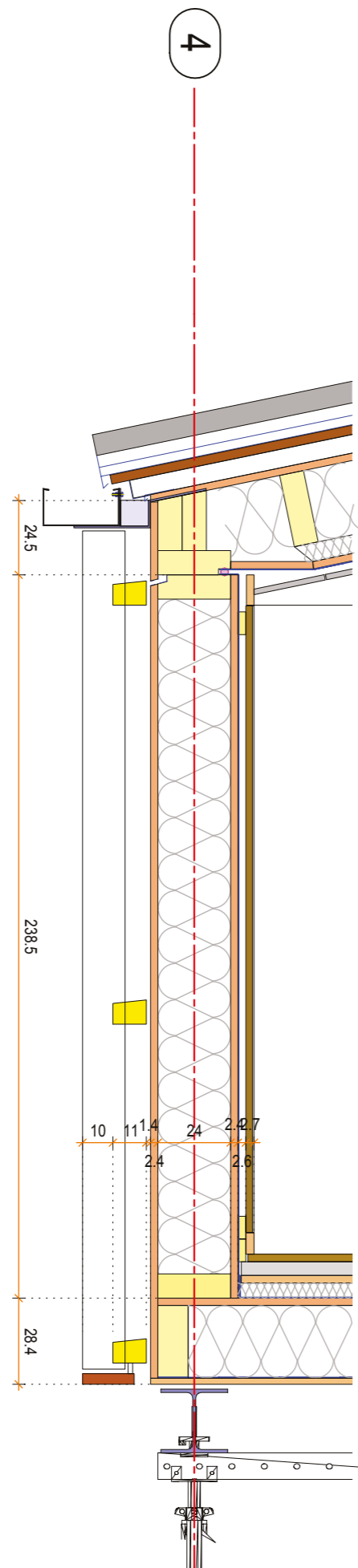


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale
1:20

Page No.
94

Drawing Content
Structural Details Windows

ST-2003



RoofKIT

Plumbing (PL)

Karlsruhe, 23rd March 2022

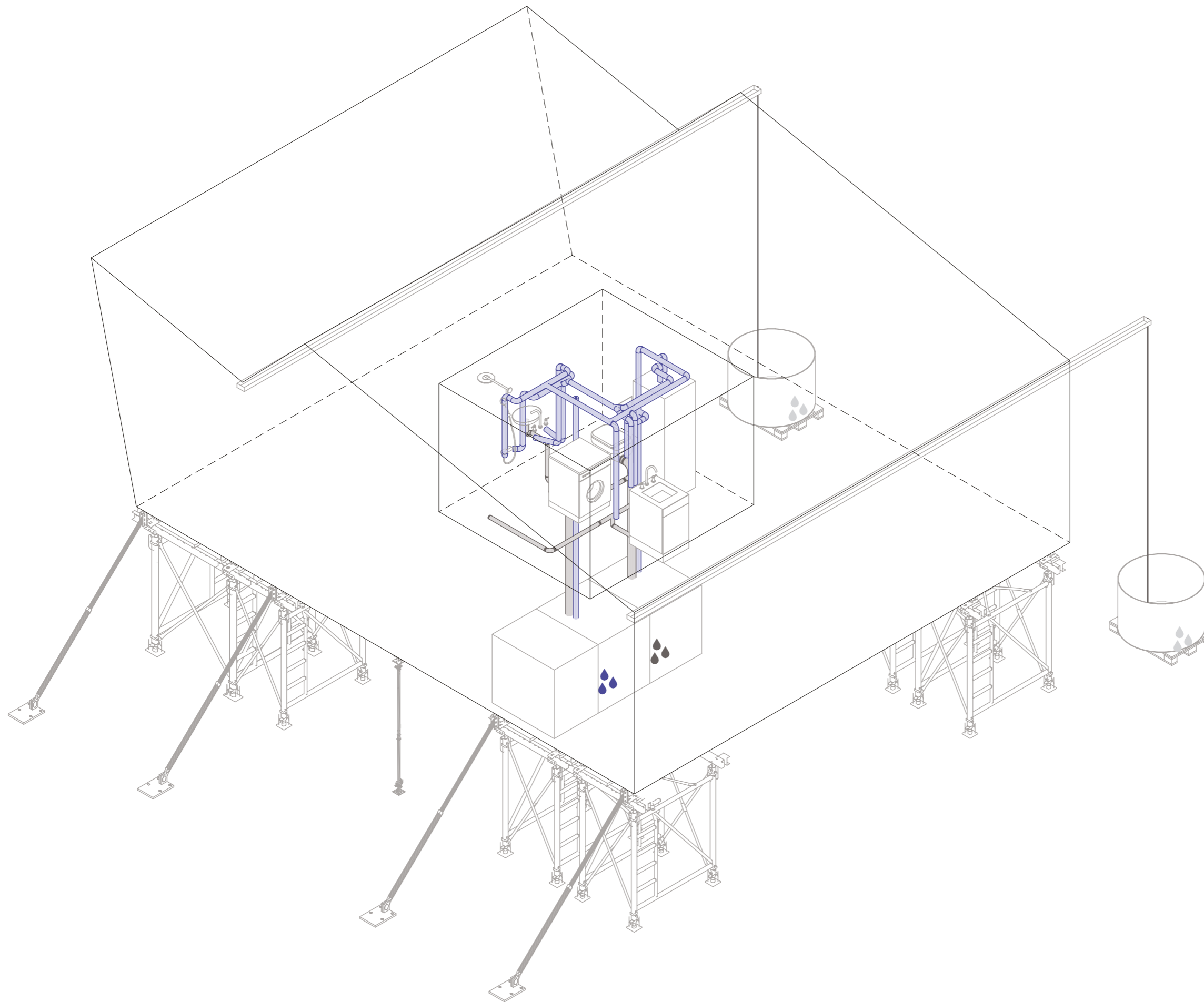


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale Page No.
no scale 96

Drawing Content
Conceptual Drawing

PL-0001

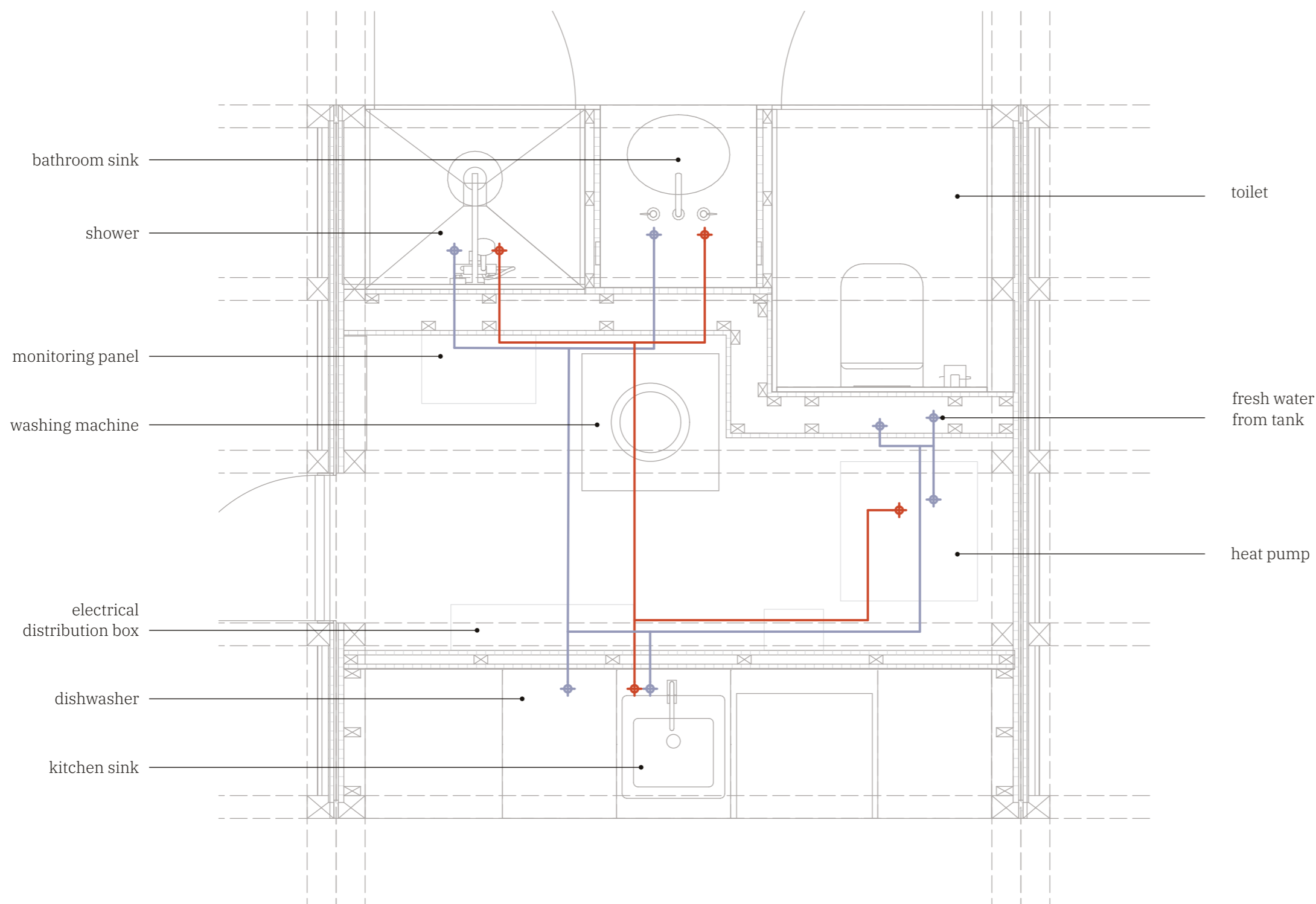


RoofKIT



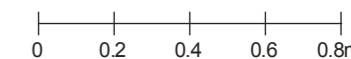
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General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Legend

- cold water
- hot water



Scale 1:20 Page No. 97

Drawing Content Plumbing Plan Floor Plan Level 1 Concept

PL-1001

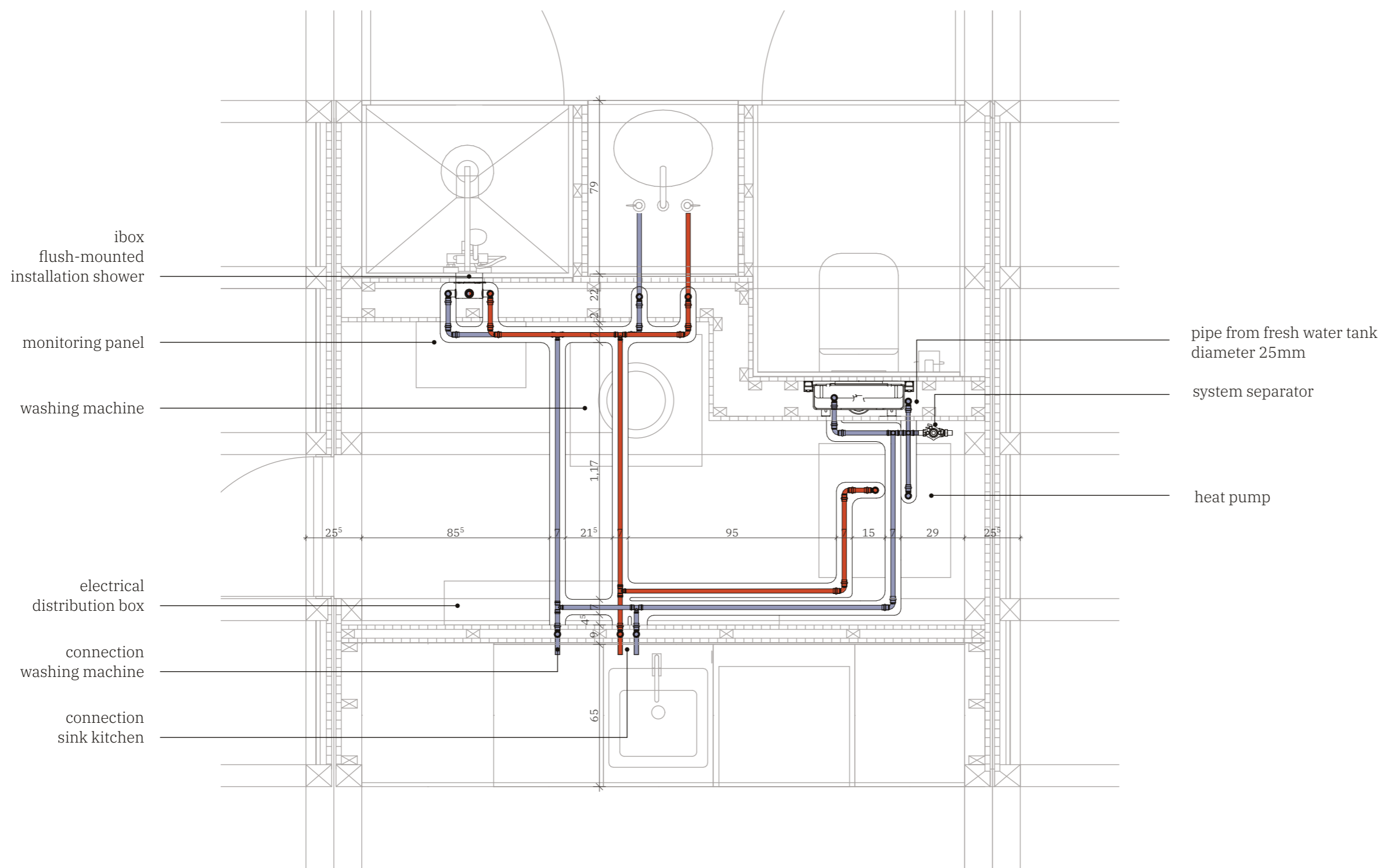


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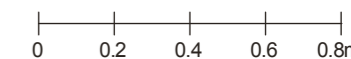
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General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
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Health & Safety	HS
Public Tour	PT



Legend

- cold water pipe
diameter 20mm
insulation 26mm
- hot water pipe
diameter 20mm
insulation 26mm



Scale 1:20 Page No. 98

Drawing Content
Plumbing Plan Floor Plan Level 1

PL-1002



RoofKIT

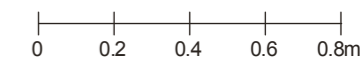


WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Legend

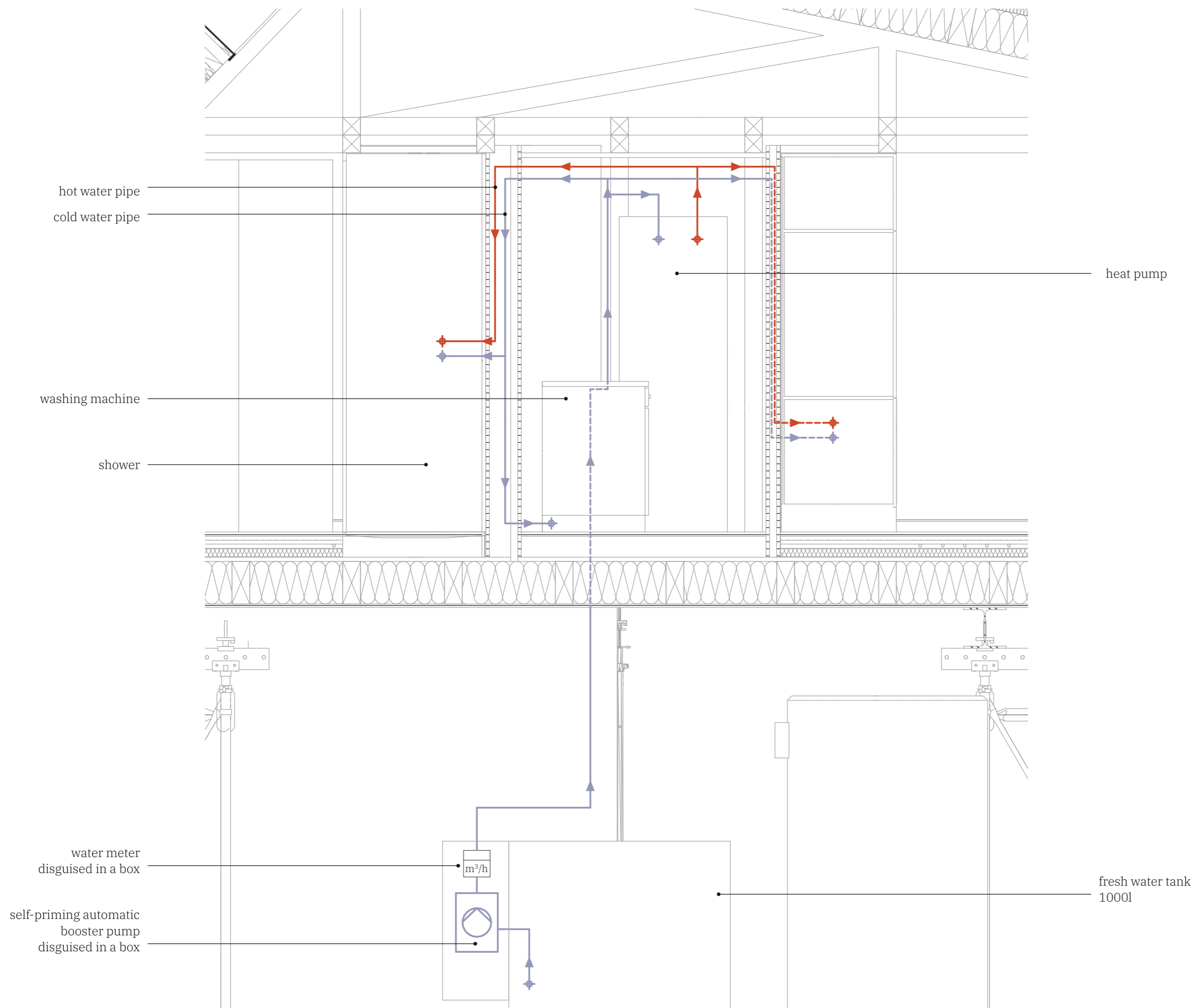
— cold water
 — hot water



Scale 1:20 Page No. 99

Drawing Content
 Plumbing Plan Section Concept

PL-1003






RoofKIT




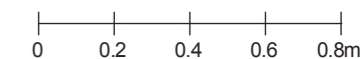
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General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Legend

 cold water pipe
diameter 20mm
insulation 26mm

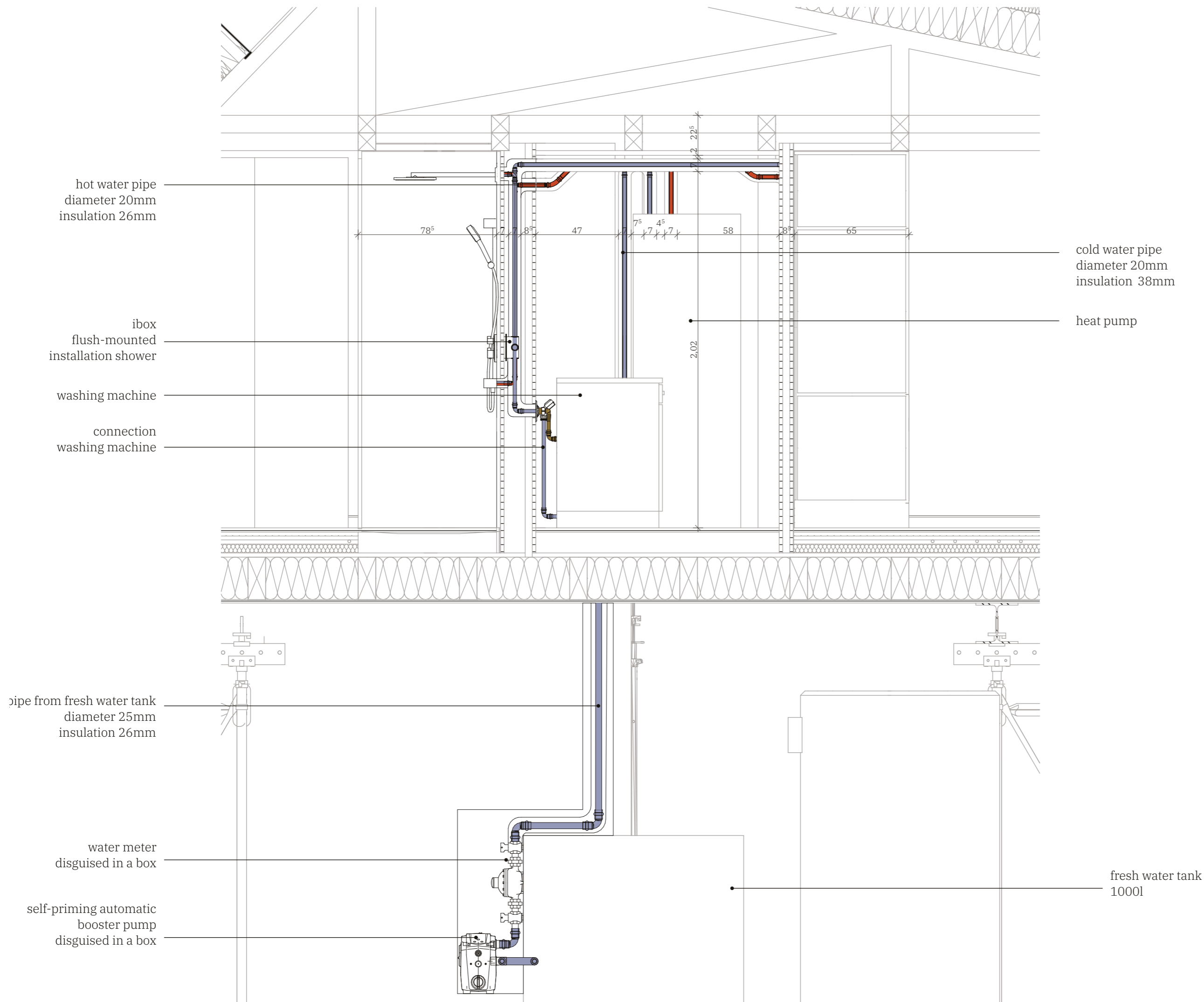
 hot water pipe
diameter 20mm
insulation 26mm



Scale 1:20 Page No. 100

Drawing Content
Plumbing Plan Section

PL-1004



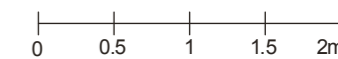
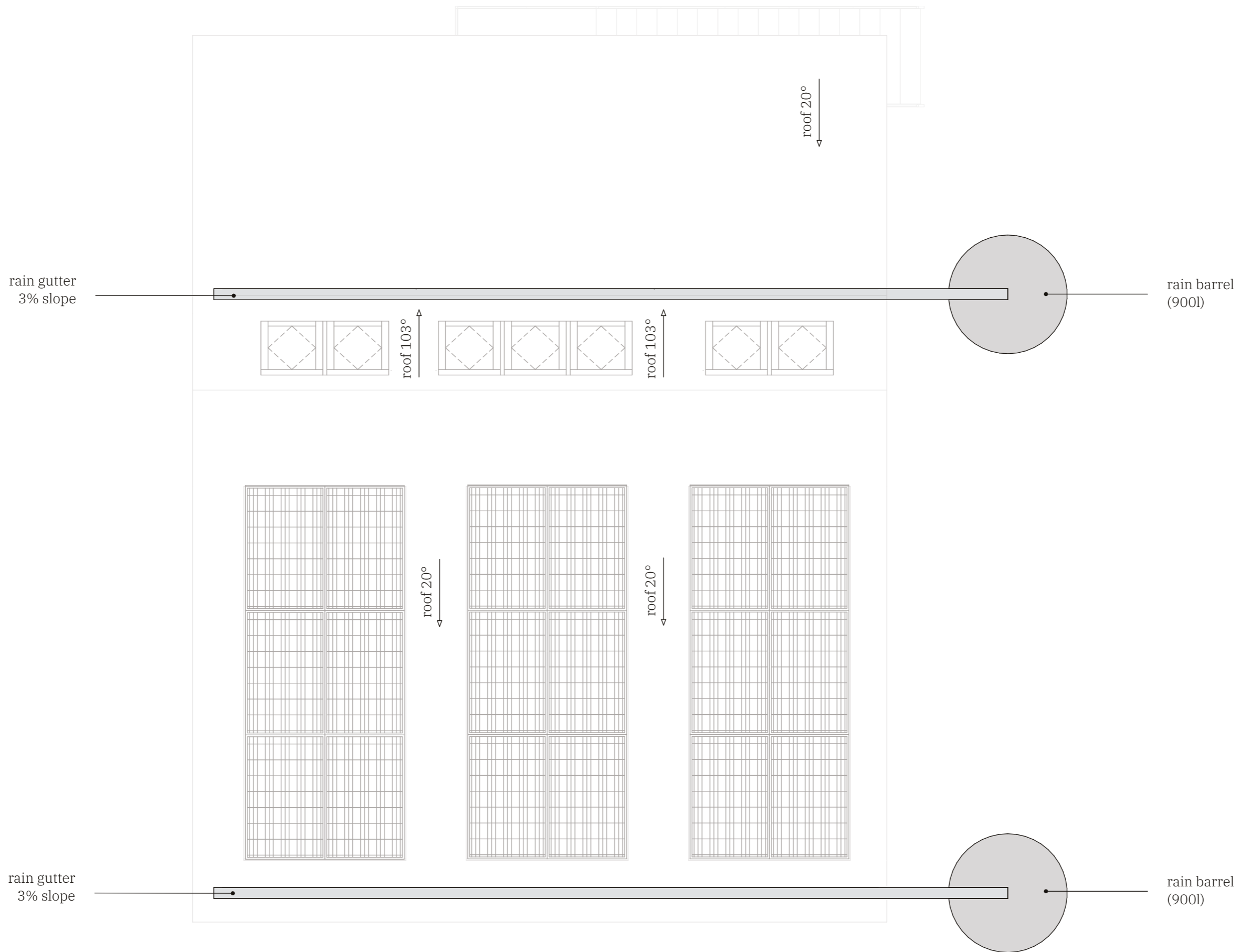


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale 1:50 Page No. 101

Drawing Content
Greywater - Roof Plan

PL-2001

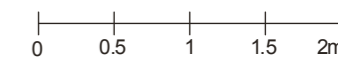
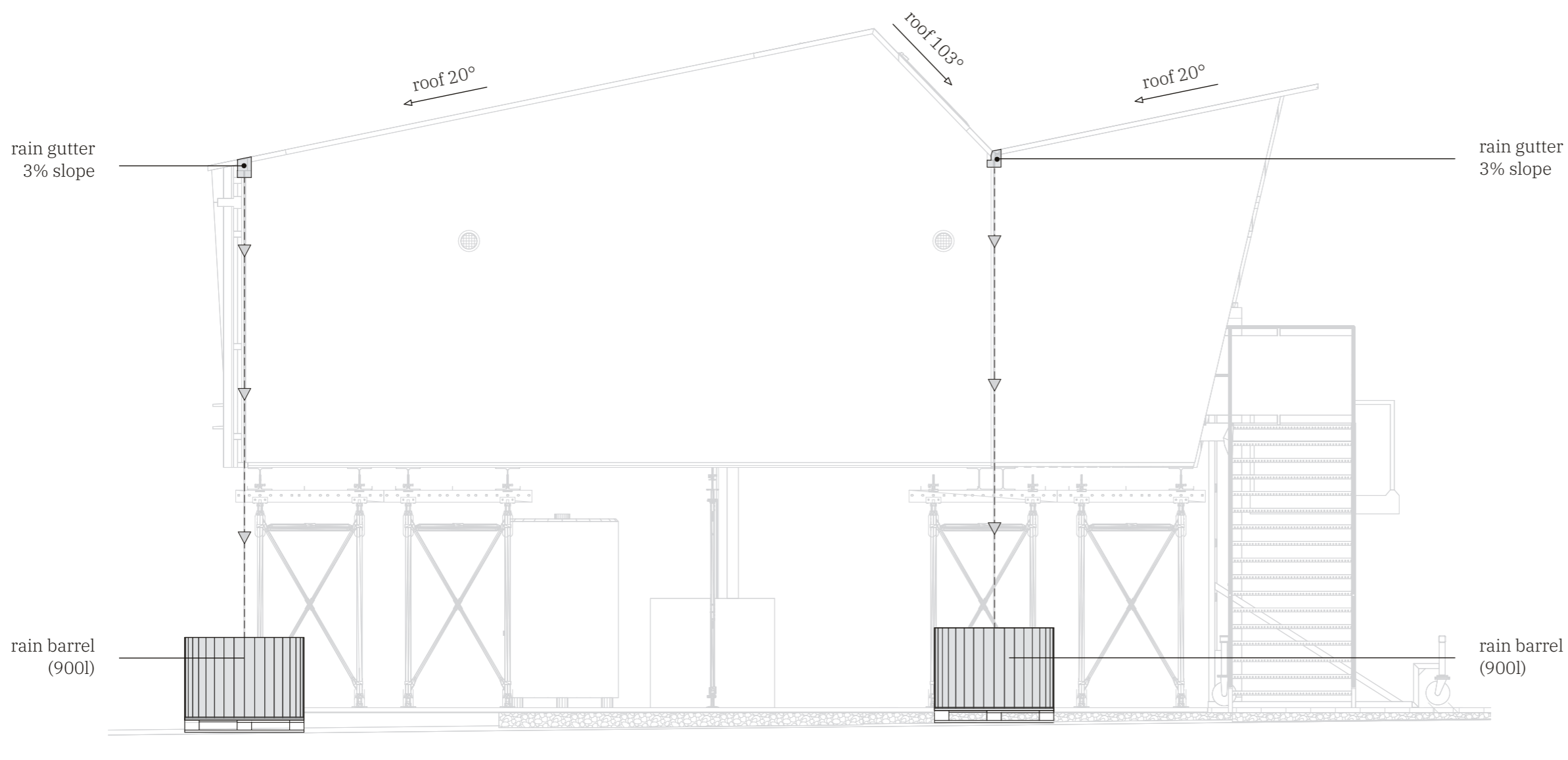


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale 1:50 Page No. 102

Drawing Content
Greywater - Section

PL-2002

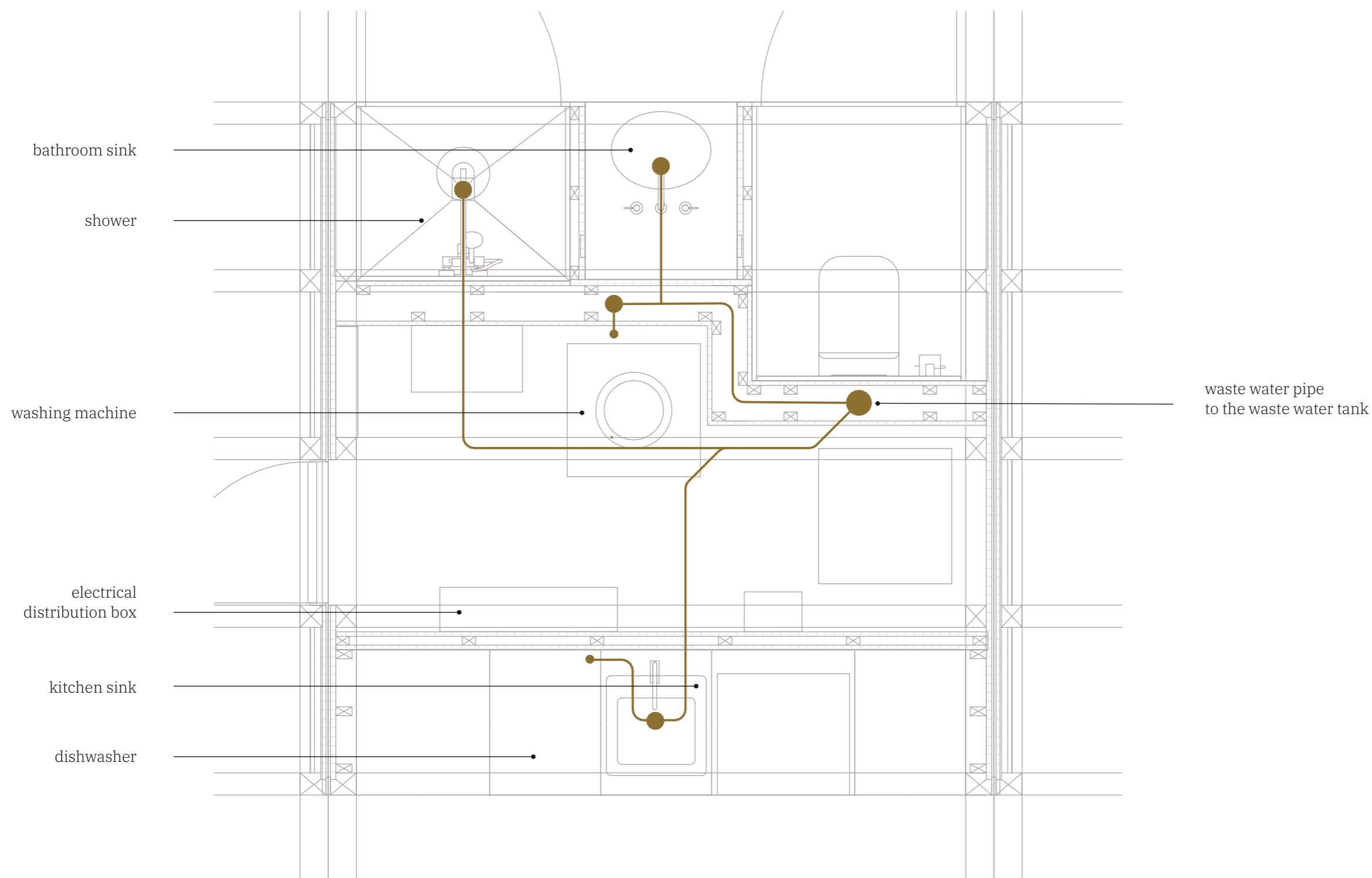


RoofKIT



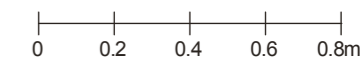
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General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Legend

— waste water pipe



Scale 1:20 Page No. 103

Drawing Content
Drain / Waste / Vent schematic - Floor
Plan Level 1

PL-3001

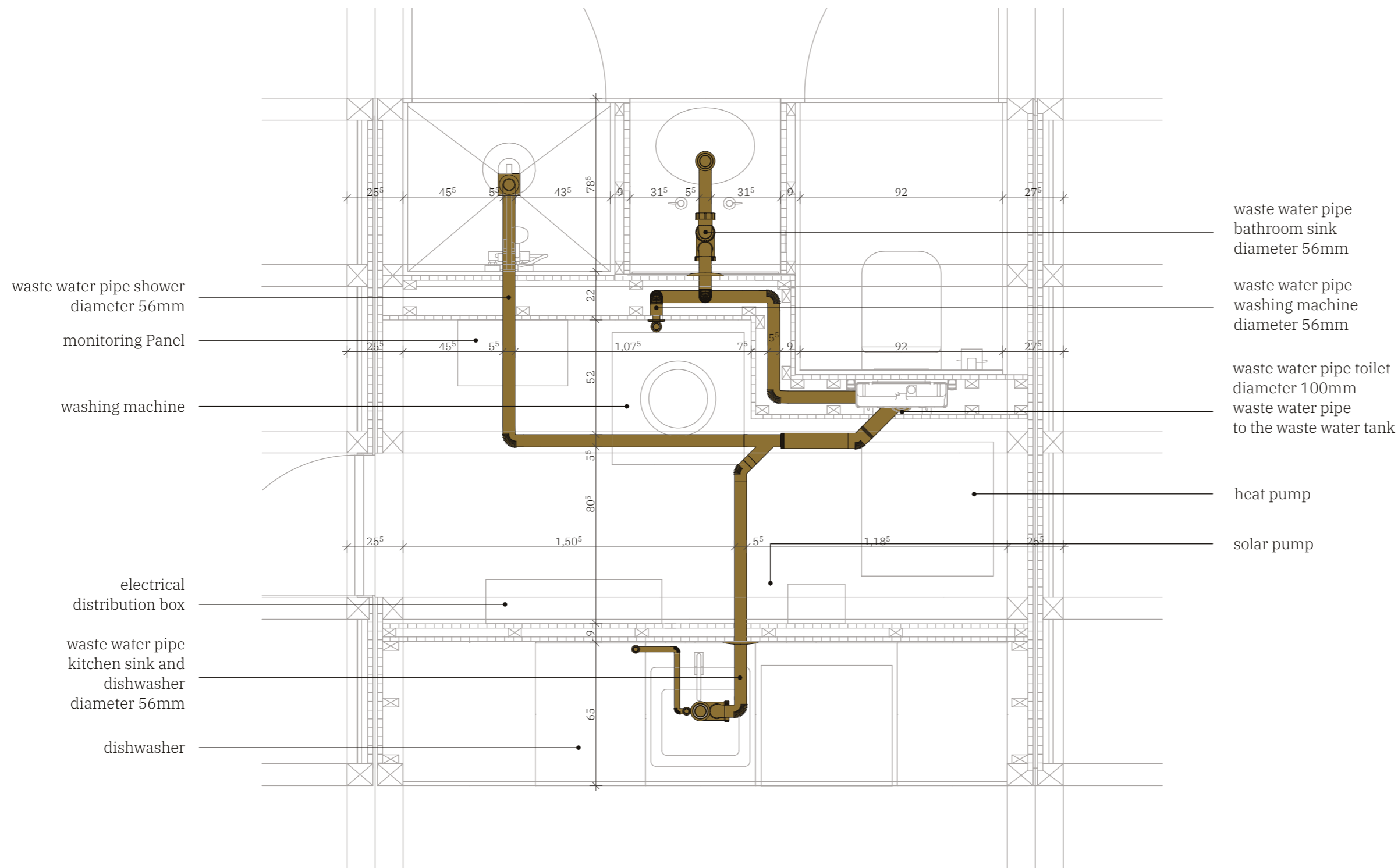


RoofKIT



WUPPERTAL GERMANY

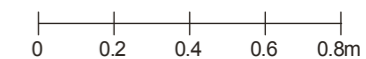
General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



- waste water pipe bathroom sink diameter 56mm
- waste water pipe washing machine diameter 56mm
- waste water pipe toilet diameter 100mm
- waste water pipe to the waste water tank
- heat pump
- solar pump

Legend

- waste water pipe diameter 56mm
- 90° fitting waste water pipe
- 45° fitting waste water pipe



Scale 1:20 Page No. 104

Drawing Content Drain / Waste / Vent technical - Floor Plan Level 1

PL-3002



RoofKIT

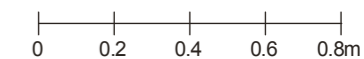


WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Legend

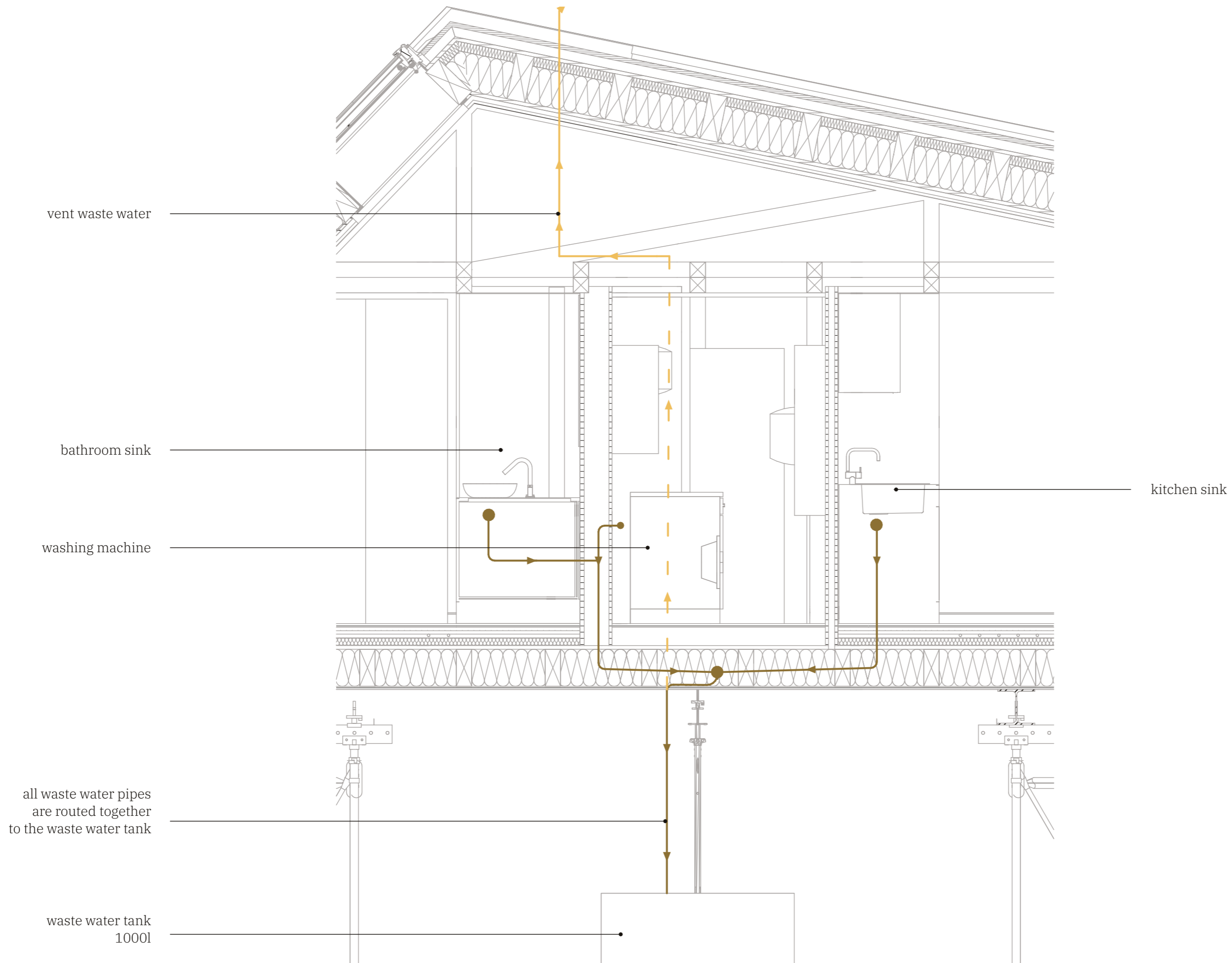
- waste water pipe
- vent waste water



Scale 1:20 Page No. 105

Drawing Content
Drain / Waste / Vent schematic Section
Concept

PL-3003



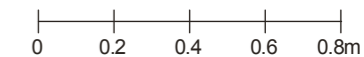
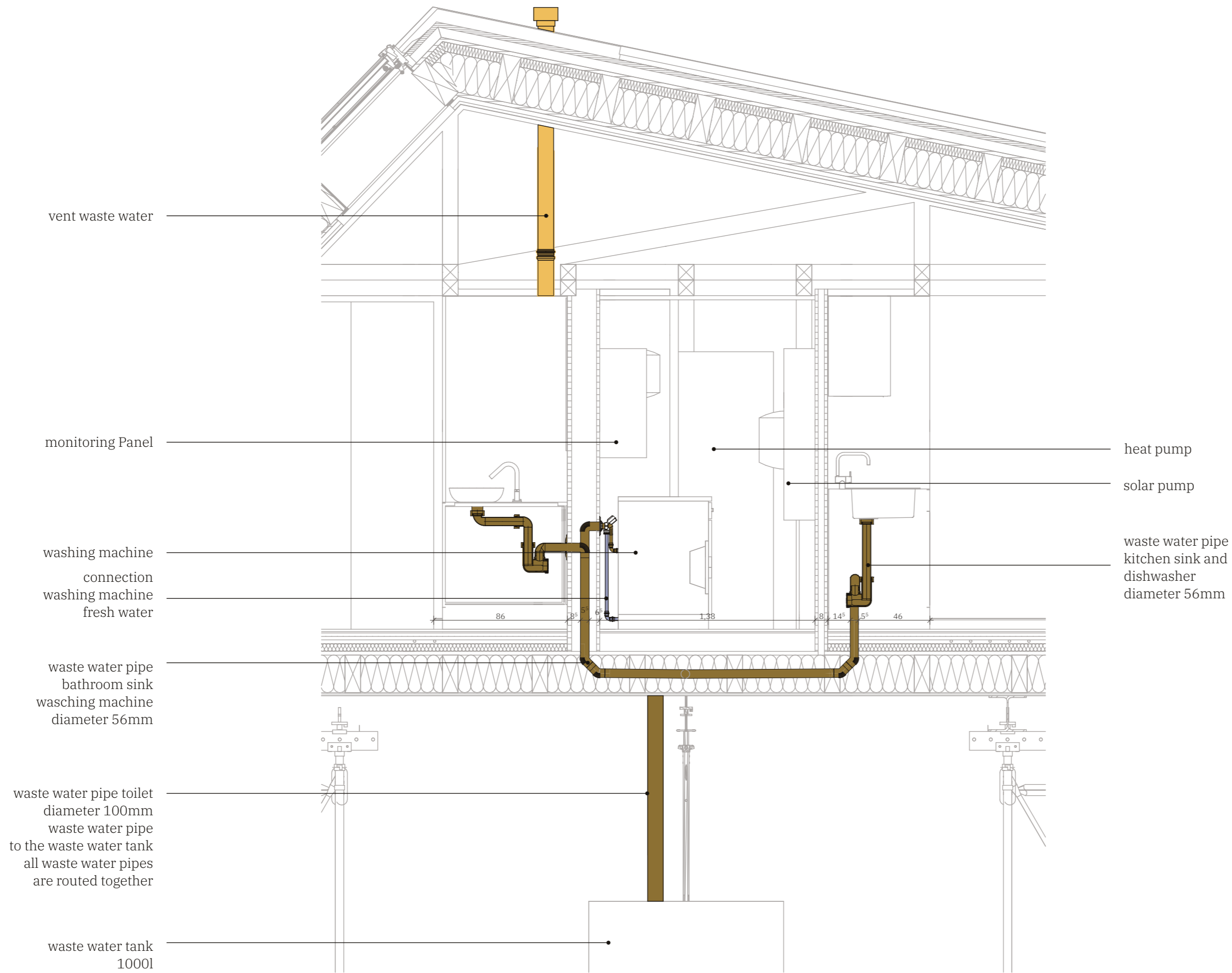


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale 1:20 Page No. 106

Drawing Content Drain / Waste / Vent technical - Section

PL-3004

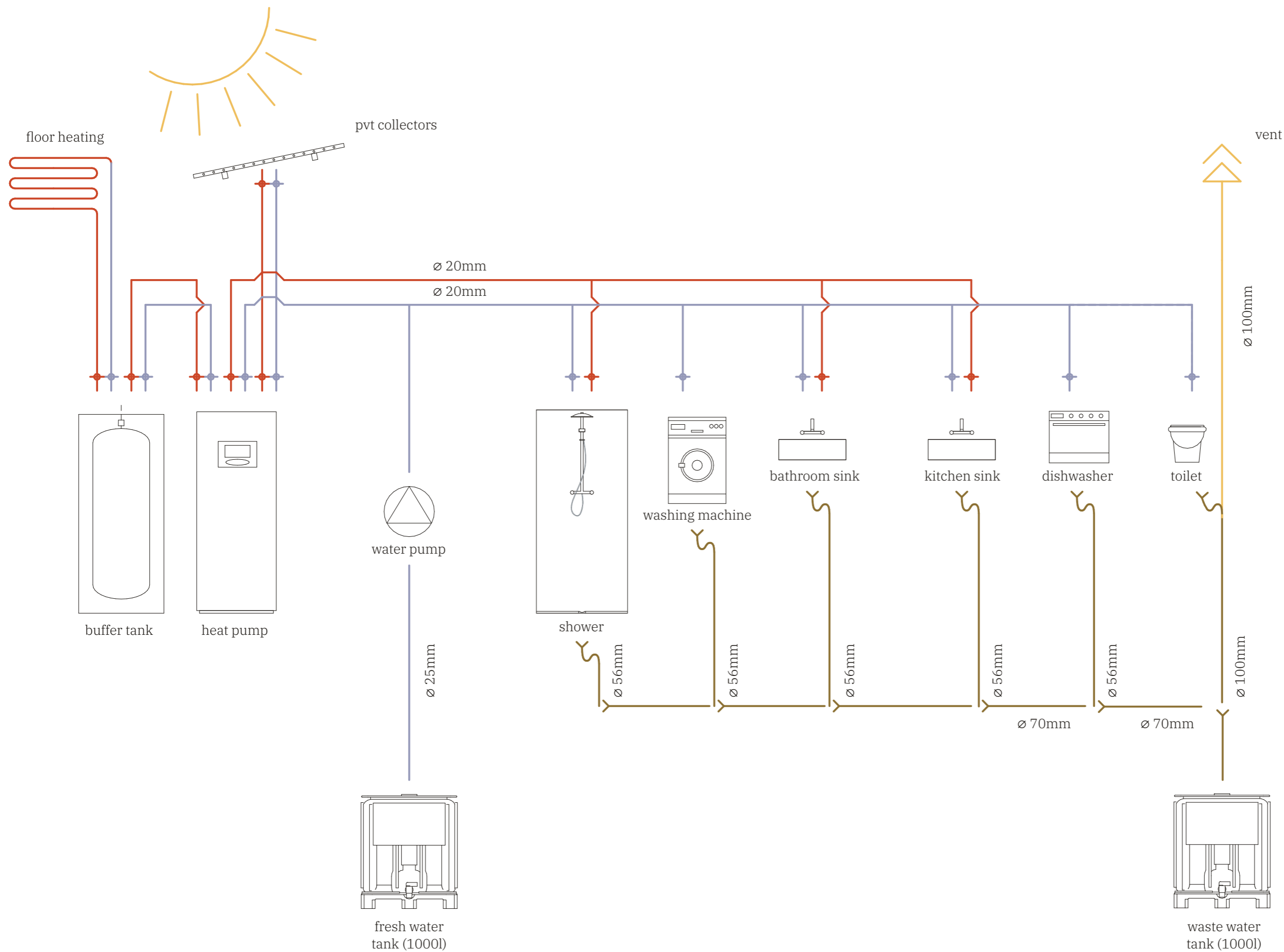


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
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Health & Safety	HS
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Scale Page No.
no scale 107

Drawing Content
Schematic diagram

PL-4001



RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

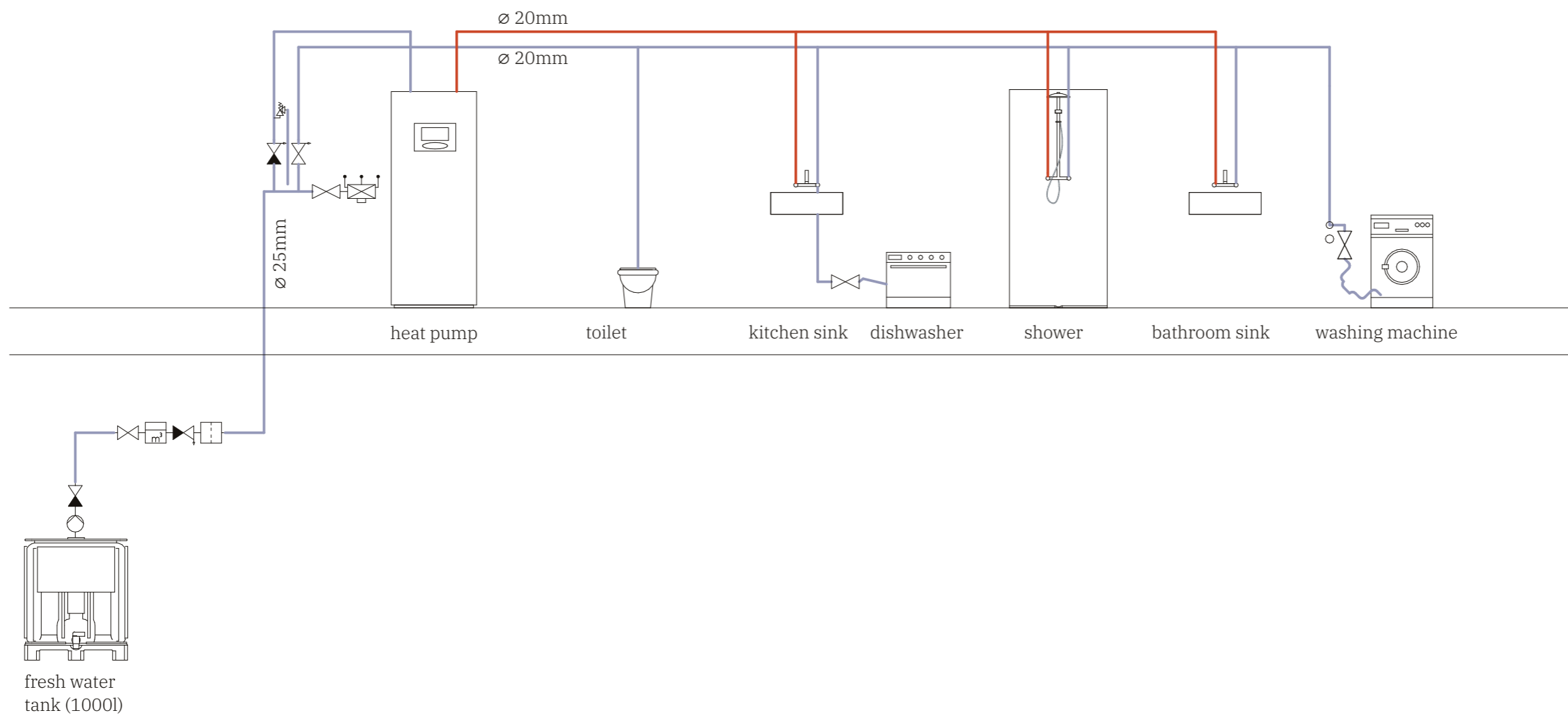
Legend

- cold water
- hot water
- valve with backflow preventer
- water pump
- inclined-seat valve
- water meter
- filter
- system separator

Scale Page No.
no scale 108

Drawing Content
Schematic diagram Fresh Water

PL-4002



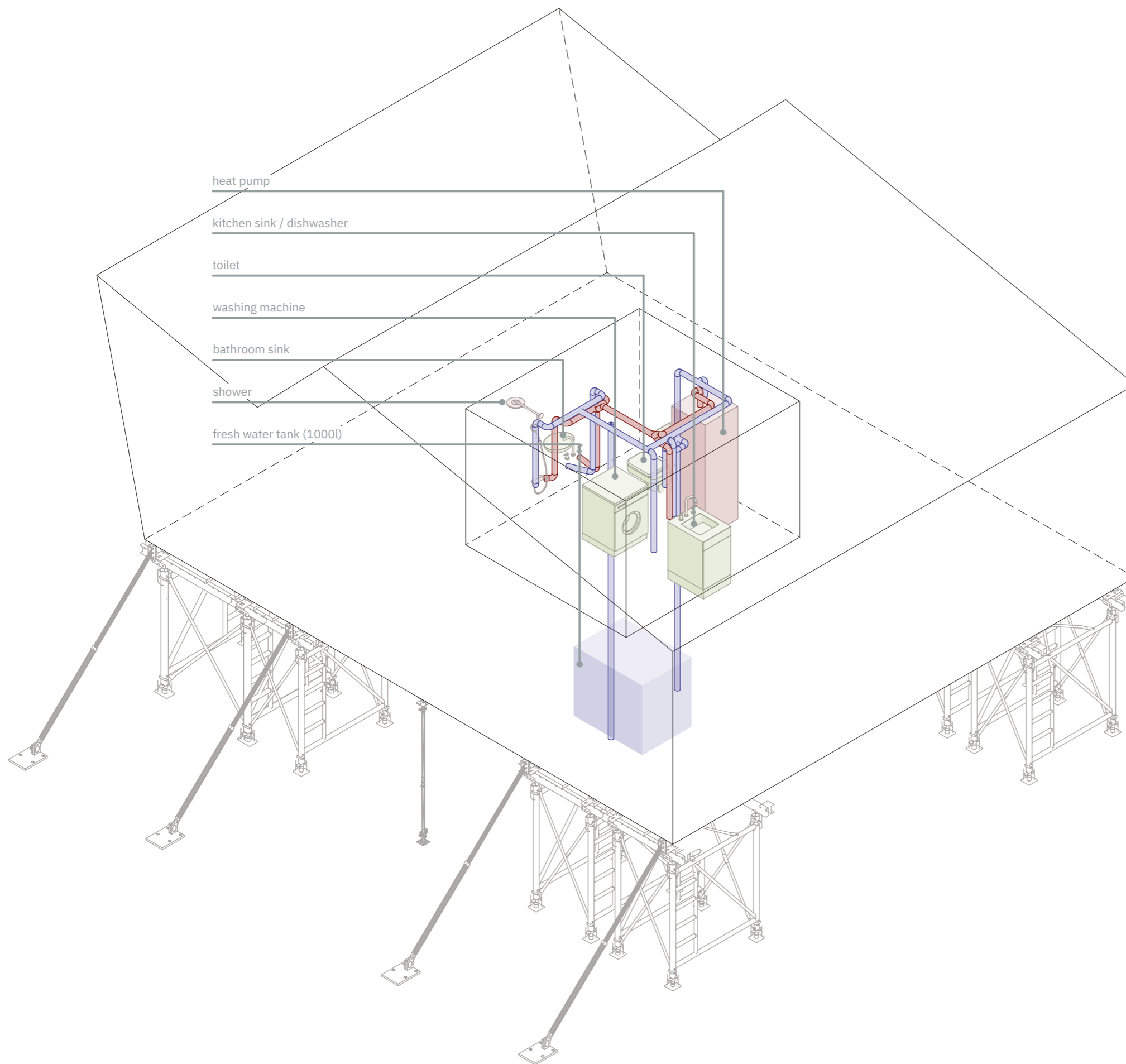


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale no scale Page No. 109

Drawing Content Supply and Removal Isometric

PL-5001

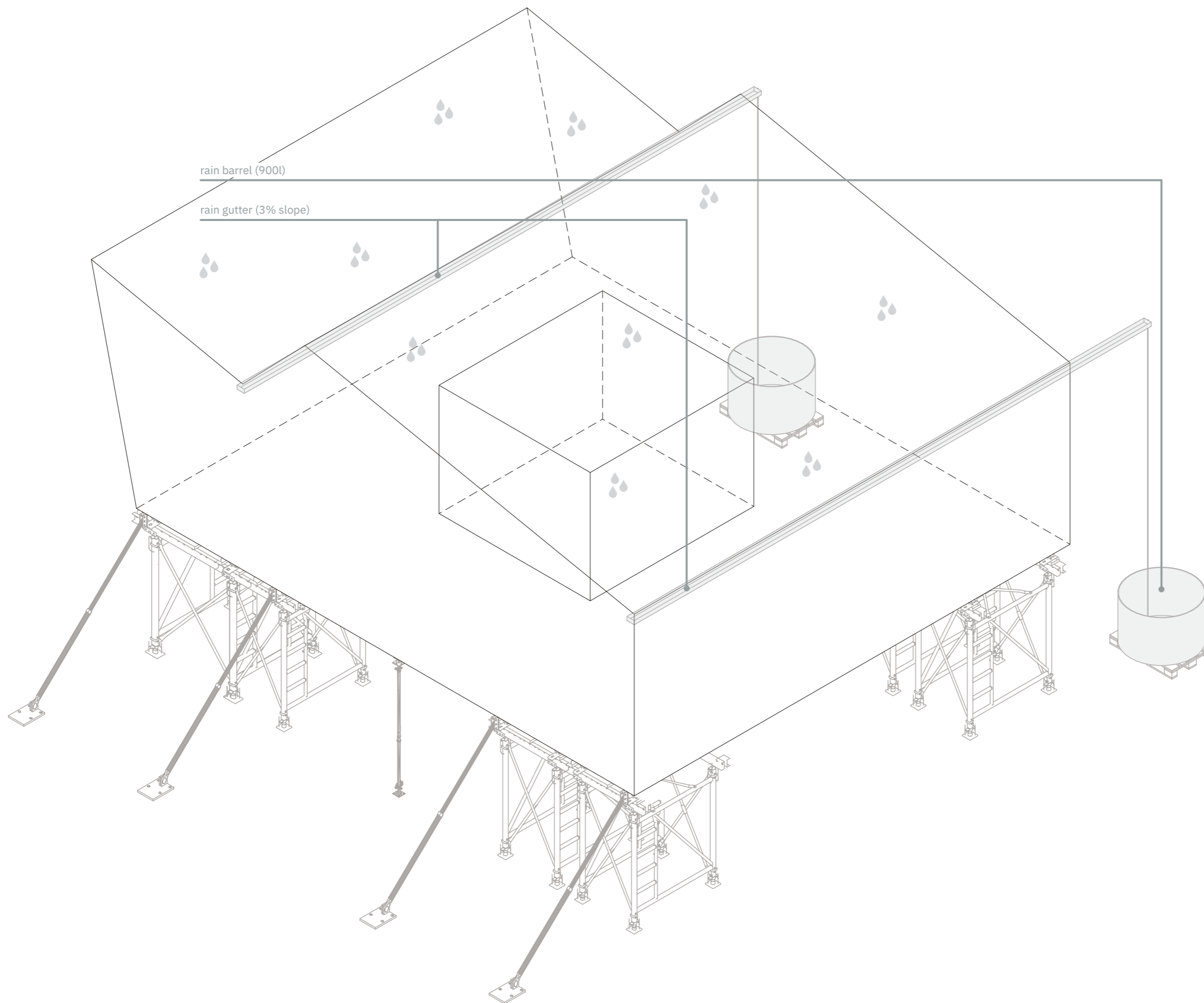


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale Page No.
no scale 110

Drawing Content
Greywater Isometric

PL-5101

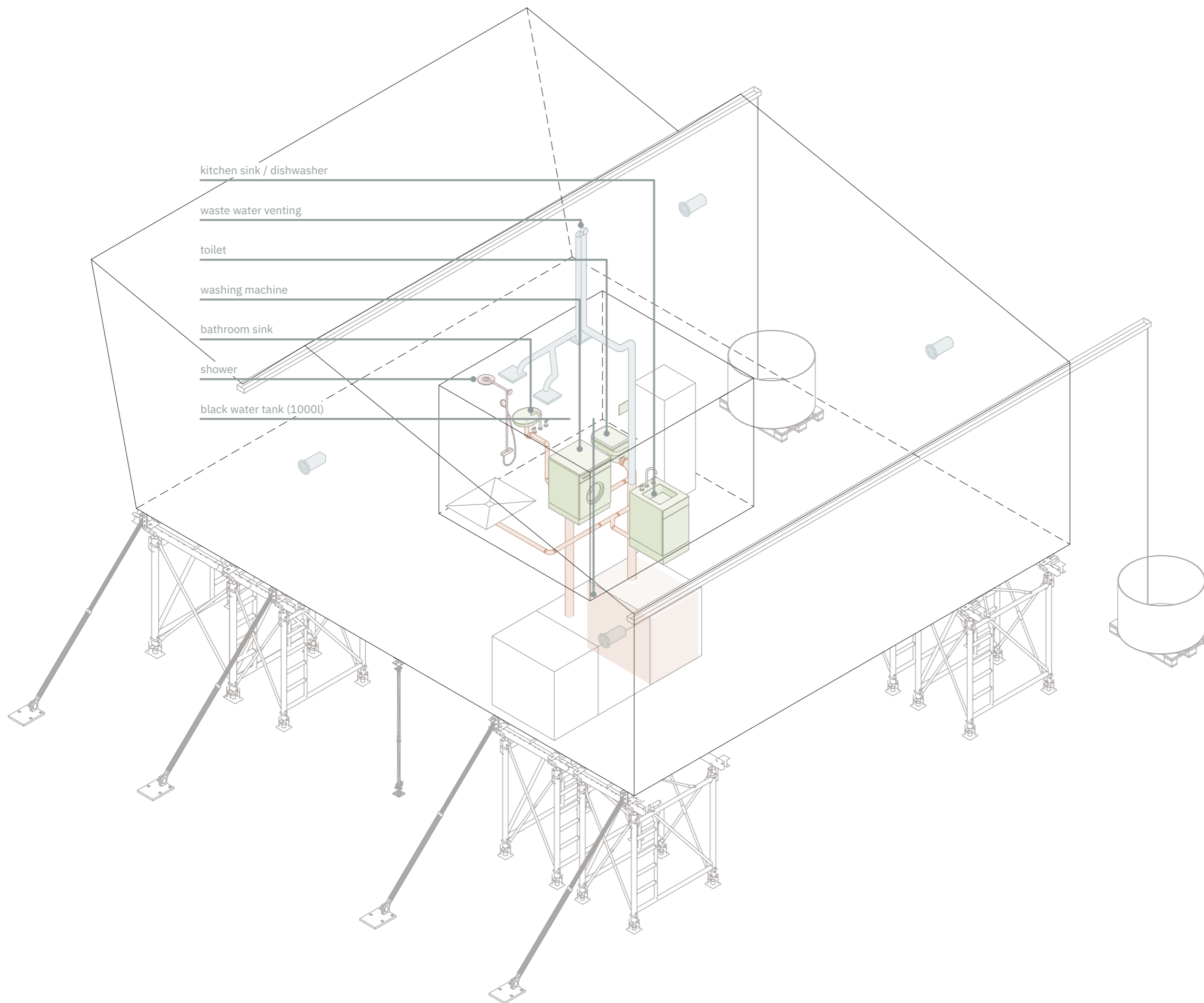


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale no scale Page No. 111

Drawing Content
Drain / Waste / Vent Isometric

PL-5201



Solar Water Heating (SW)

Karlsruhe, 23rd March 2022

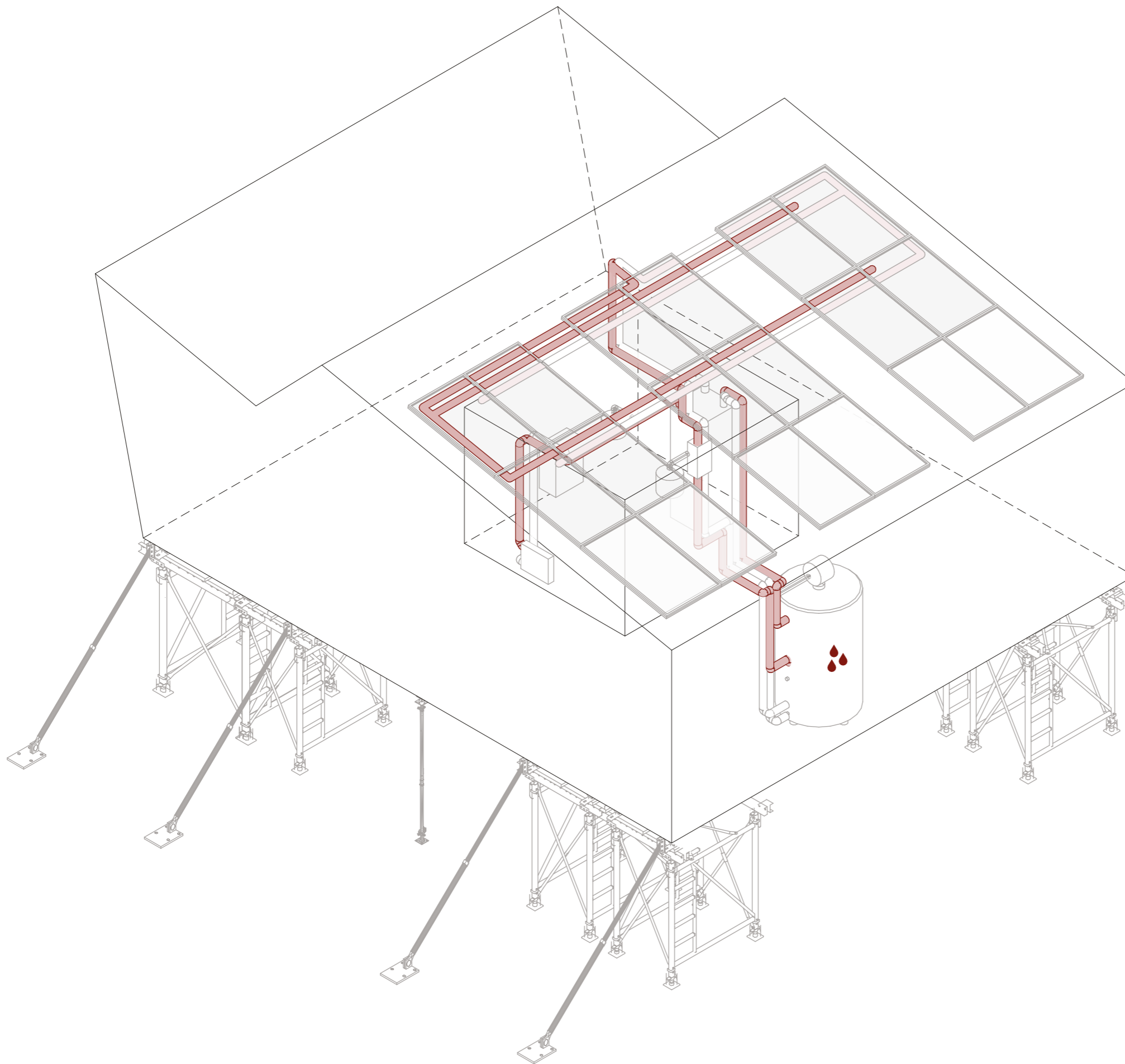


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
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Health & Safety	HS
Public Tour	PT



Scale Page No.
no scale 113

Drawing Content
Conceptual Drawing

SW-0001



RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

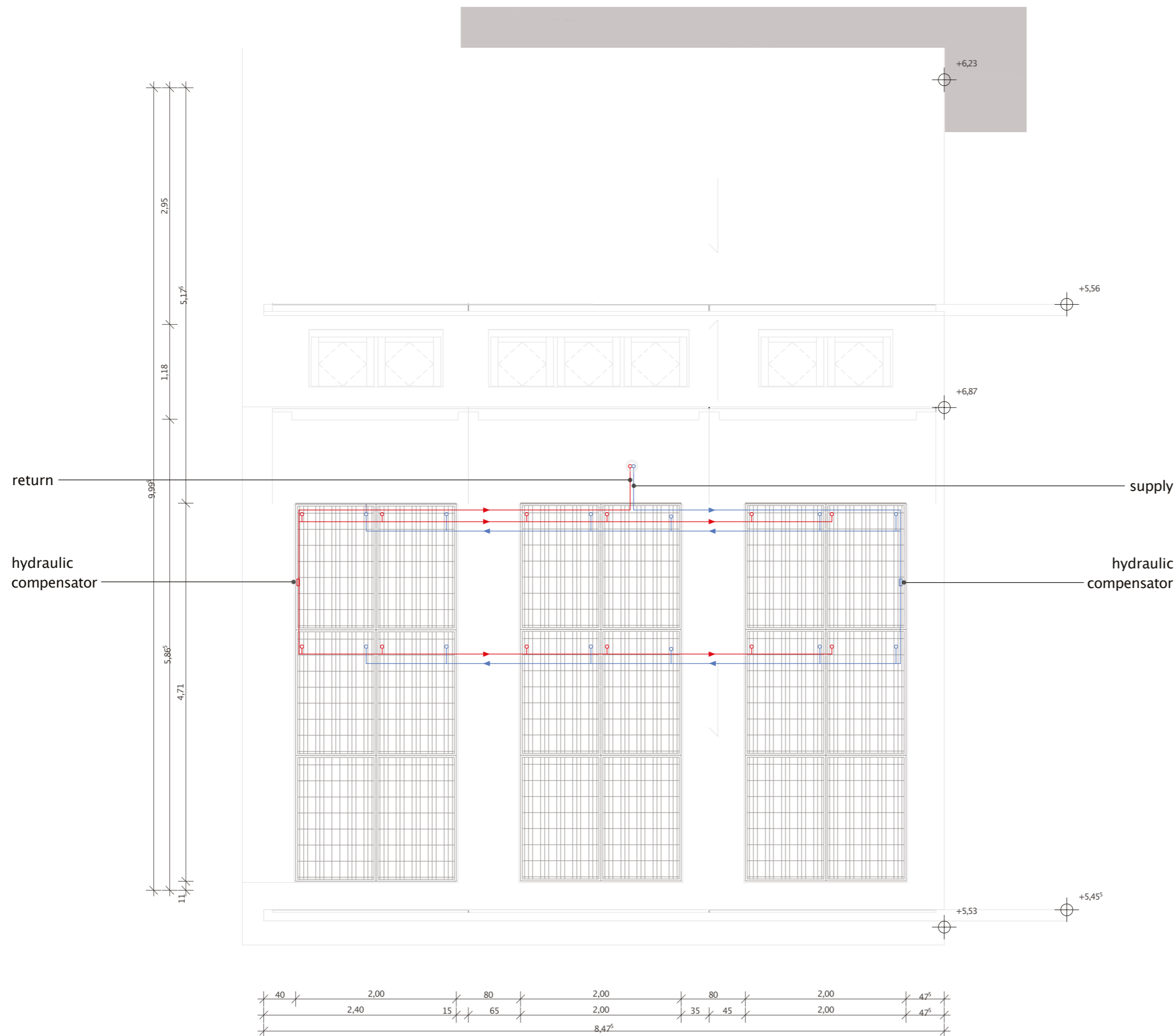
Legend

- cold water pipe
diameter 20mm
insulation 26mm
- hot water pipe
diameter 20mm
insulation 26mm

Scale no scale Page No. 114

Drawing Content
Plan - Roof

SW-1001







RoofKIT

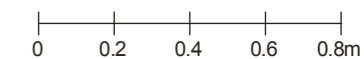


WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Legend

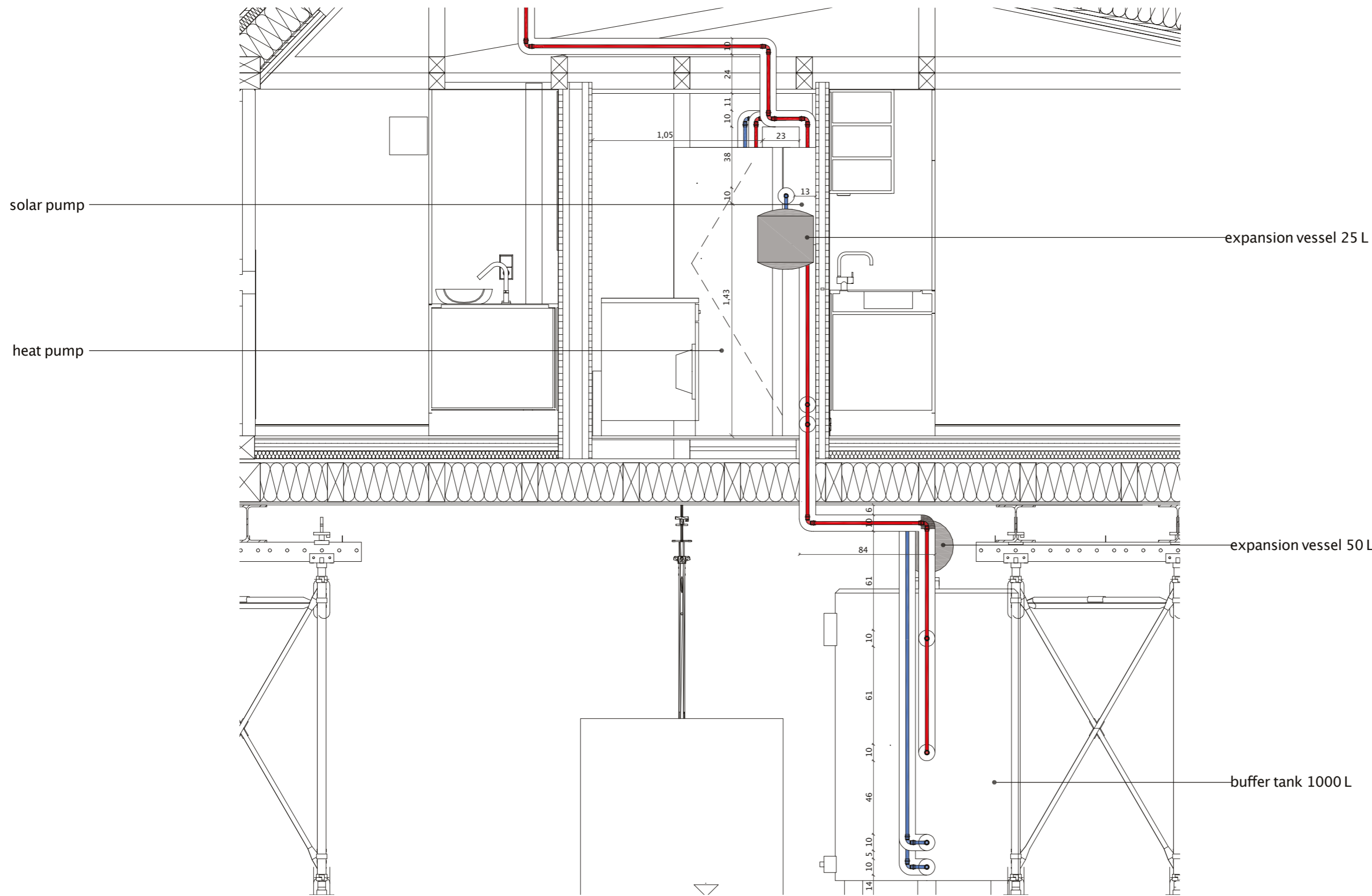
-  cold water pipe
diameter 20mm
insulation 26mm
-  hot water pipe
diameter 20mm
insulation 26mm



Scale 1:20 Page No. 115

Drawing Content
Plan - Section

SW-1002



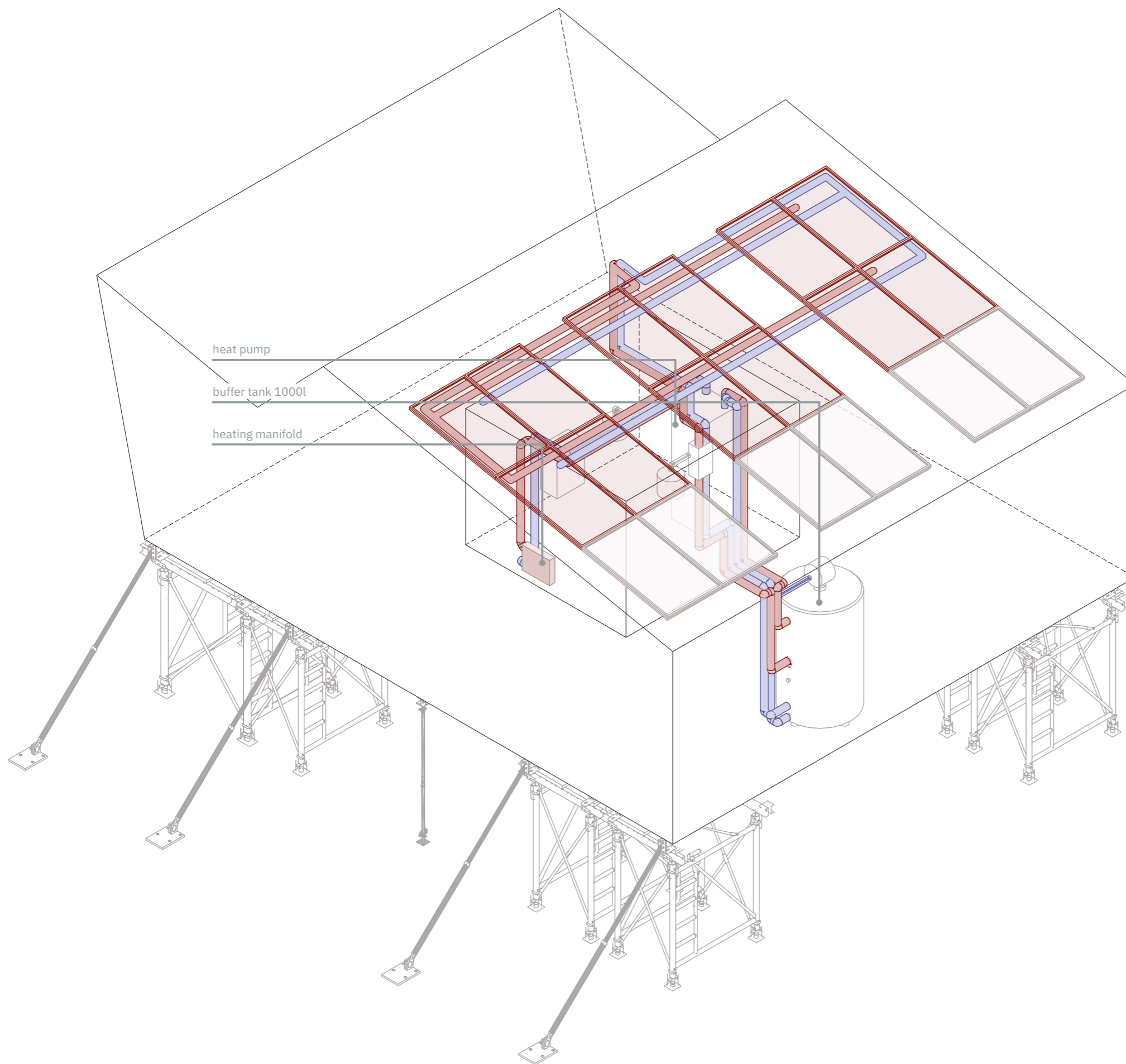


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale Page No.
no scale 116

Drawing Content
Isometric

SW-2001



Mechanical (ME)

Karlsruhe, 23rd March 2022

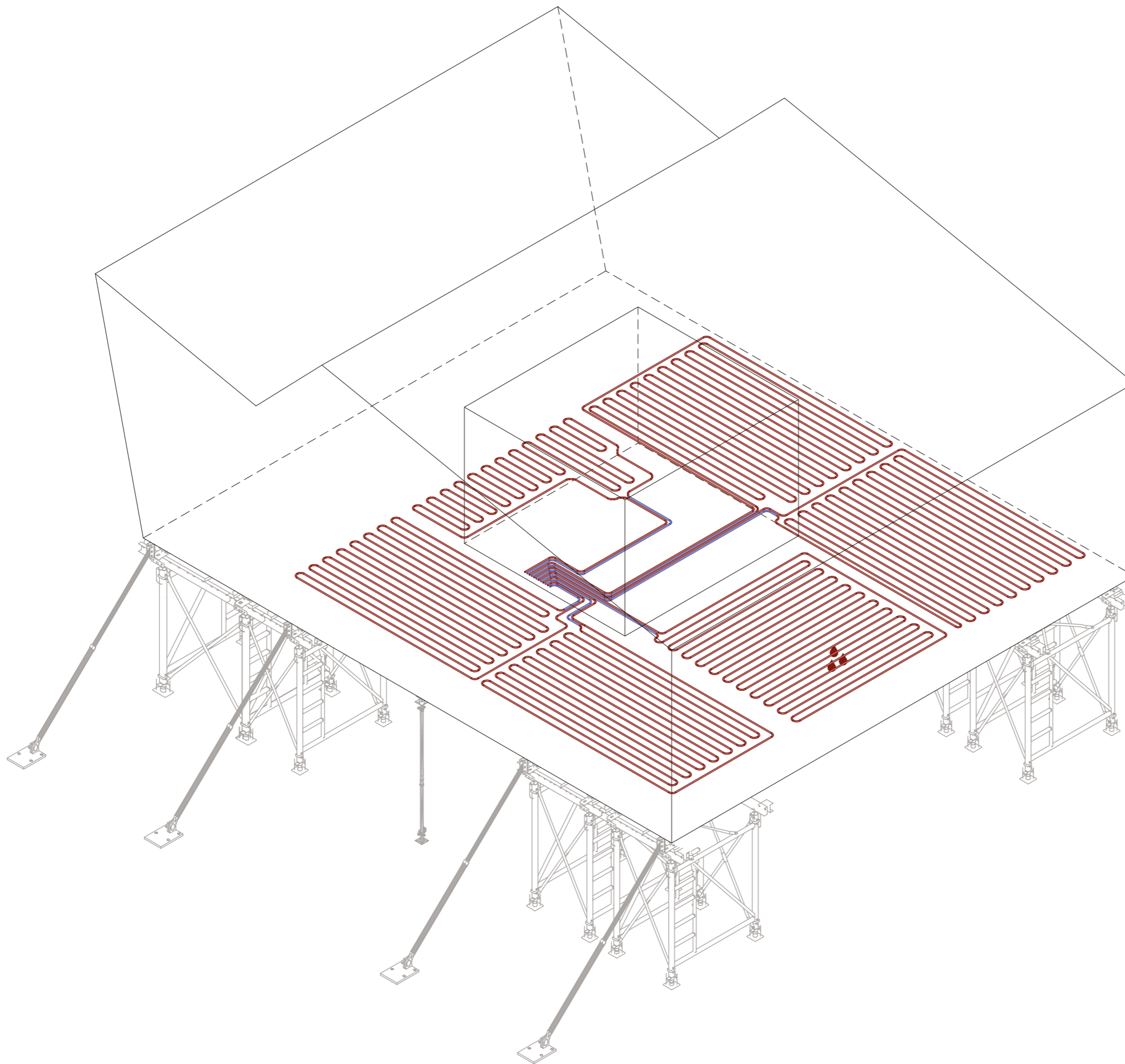


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale no scale Page No. 118

Drawing Content
Conceptual Drawing

ME-0001

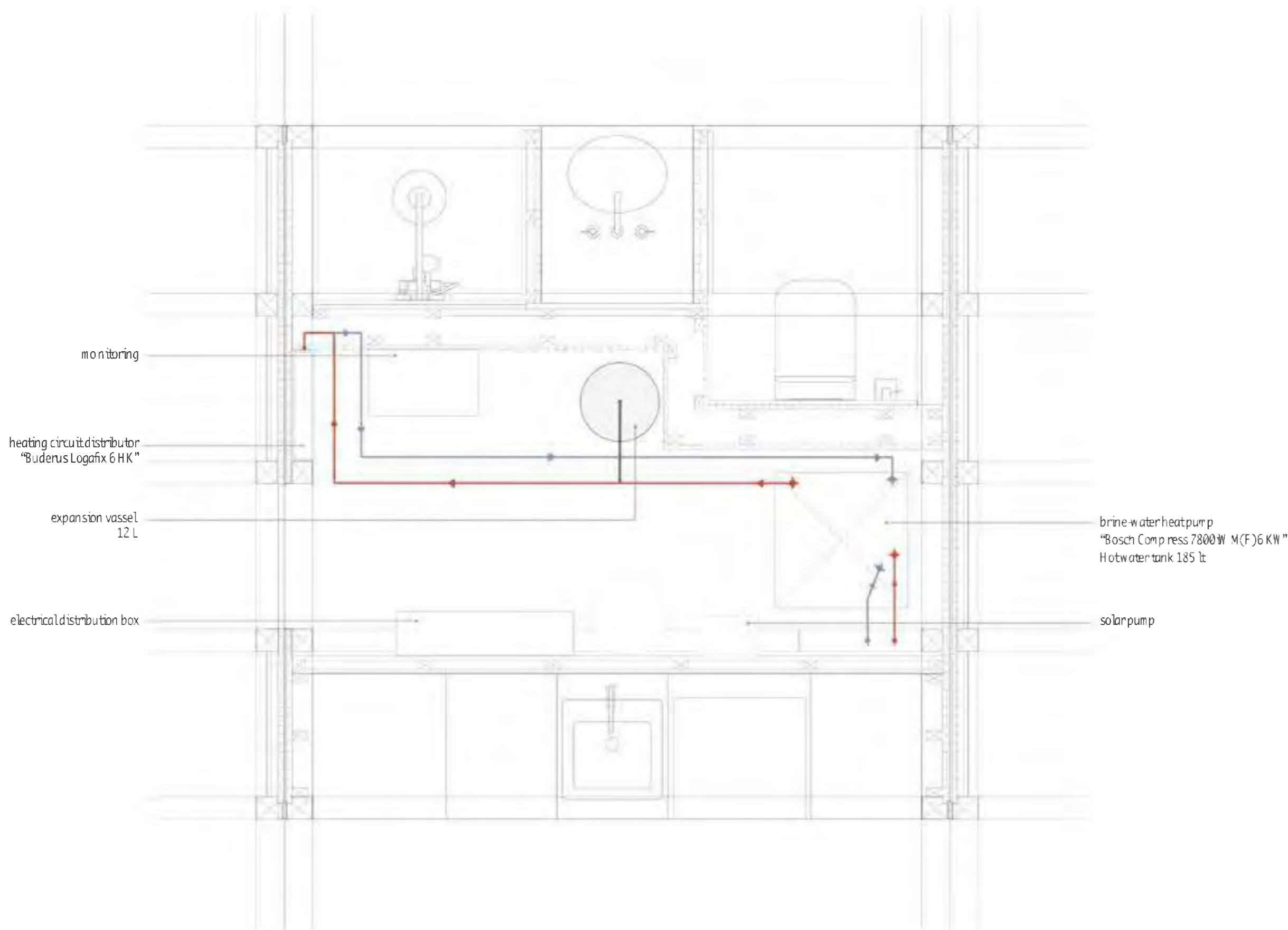


RoofKIT



WUPPERTAL GERMANY

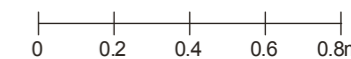
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Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Legend

— cold water pipe

— hot water pipe



Scale 1:20 Page No. 119

Drawing Content HVAC distribution schematic - Floor Plan Level 1

ME-1001



RoofKIT



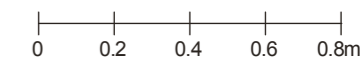
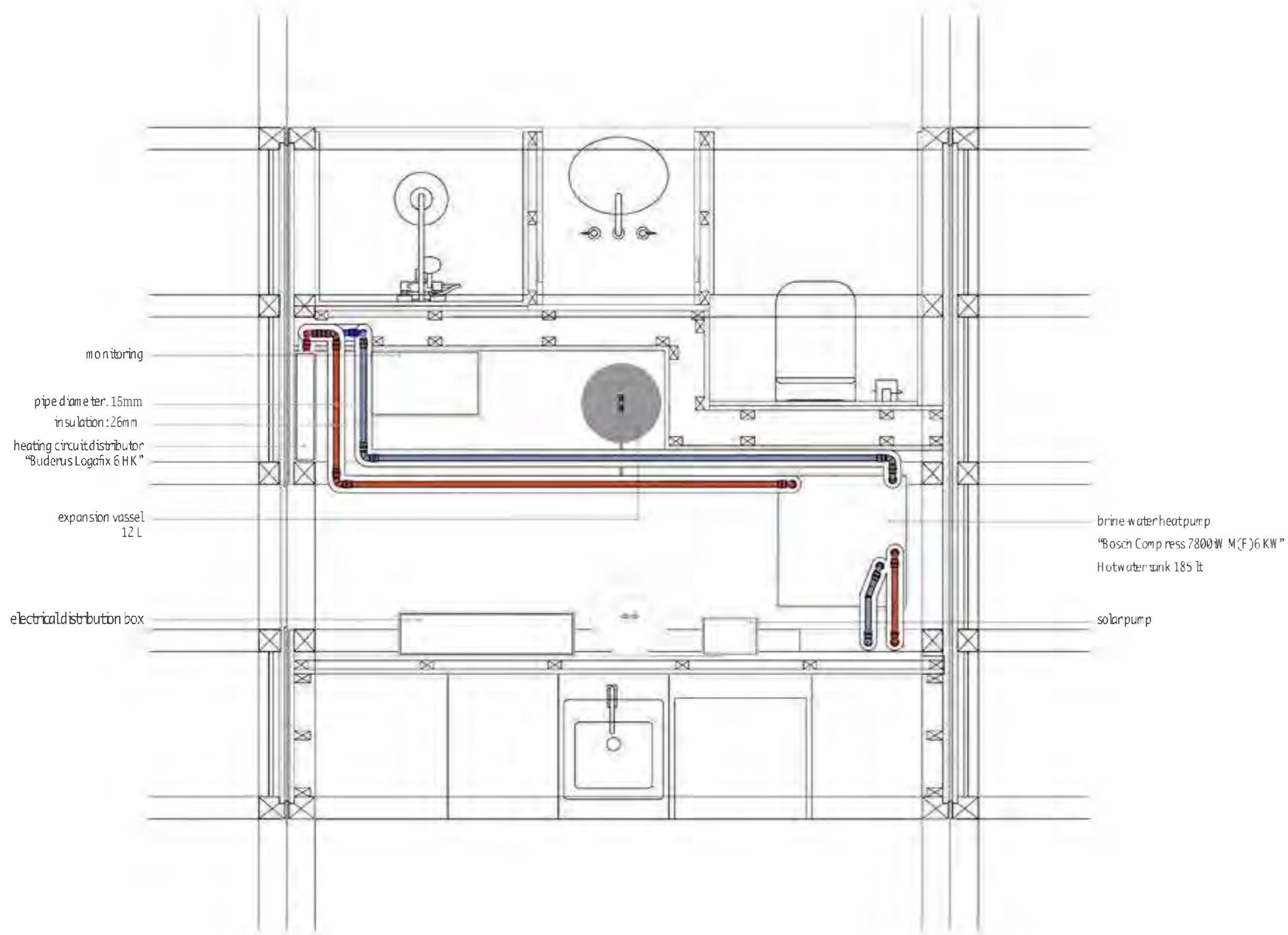
WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Legend

— cold water pipe

— hot water pipe



Scale 1:20 Page No. 120

Drawing Content HVAC distribution technical - Floor Plan Level 1

ME-1002



RoofKIT



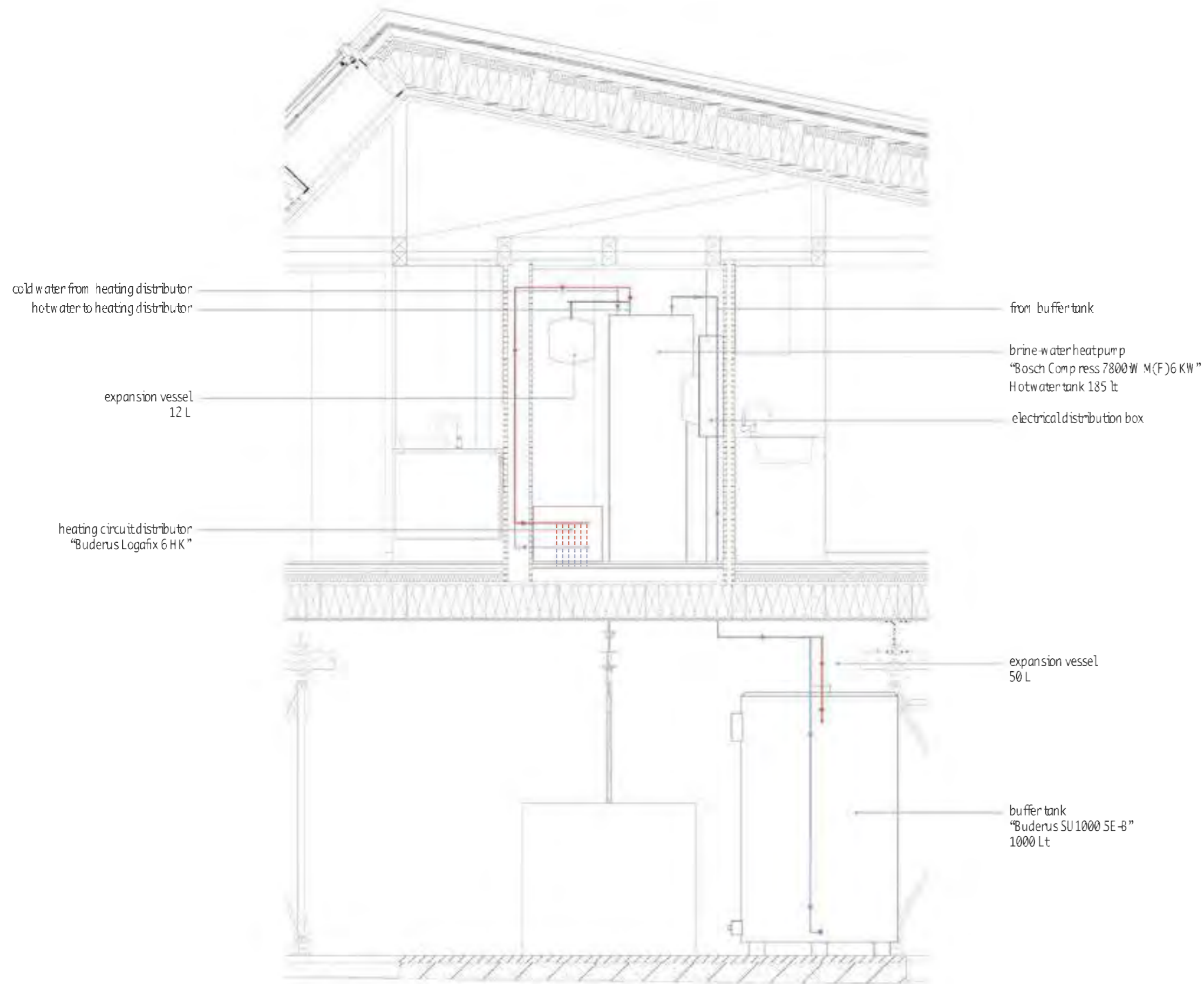
WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Legend

— cold water pipe

— hot water pipe



Scale no scale Page No. 121

Drawing Content HVAC distribuion schematic - Section

ME-1003



RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Legend

— cold water pipe

— hot water pipe

cold water from heating distributor
hot water to heating distributor

pipe diameter 15mm
pipe insulation : 26mm

expansion vessel
12L

heating circuit distributor
"Buderus Logafix 6 HK"

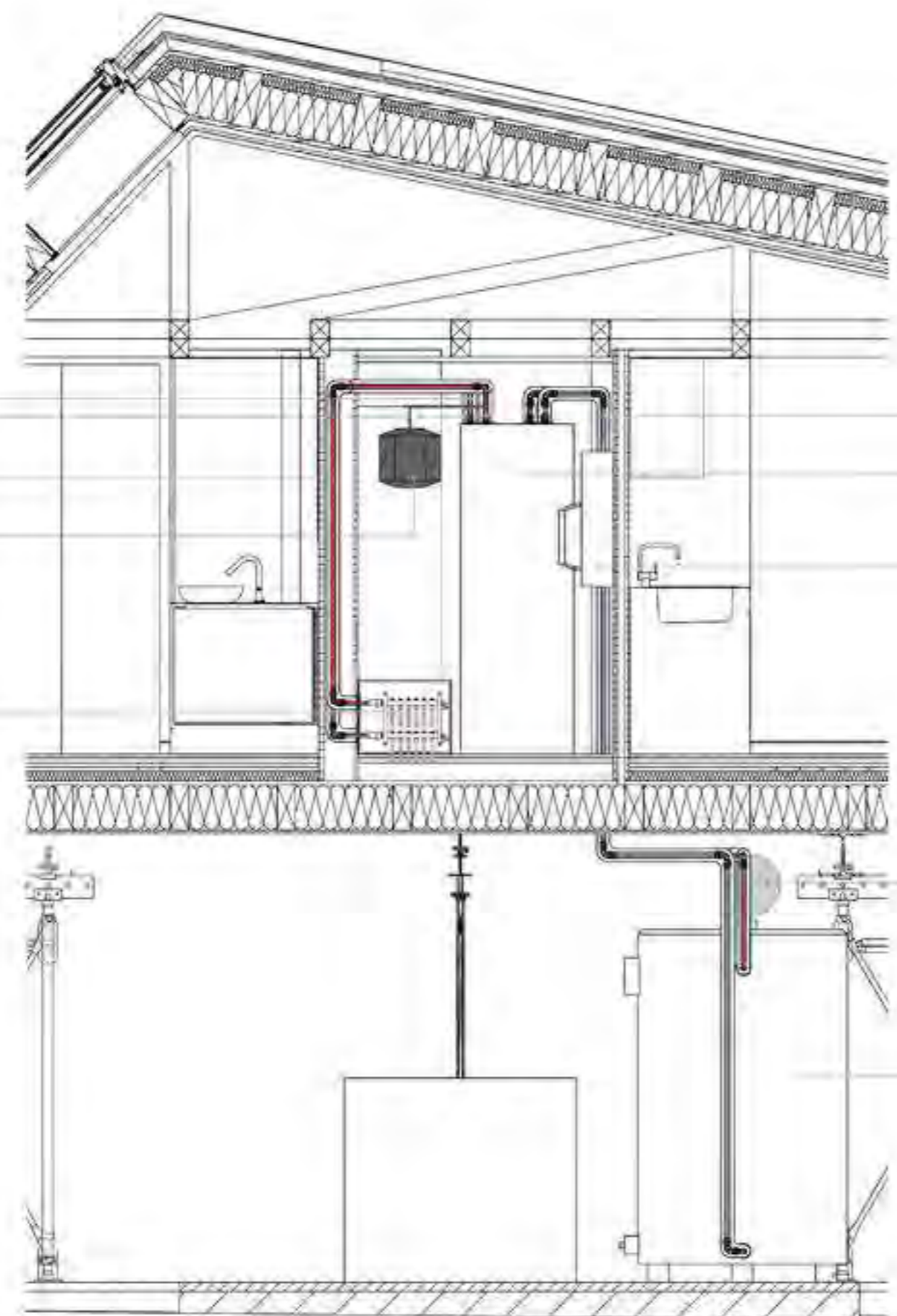
to buffer tank

brine water heat pump
"Bosch Comp ress 7800W M(F)6 KW"
Hot water tank 185 lt

electrical distribution box

expansion vessel
50 L

buffer tank
"Buderus SU 1000 SE-B"
1000 Lt



Scale
no scale

Page No.
122

Drawing Content
HVAC distribution technical - Section

ME-1004

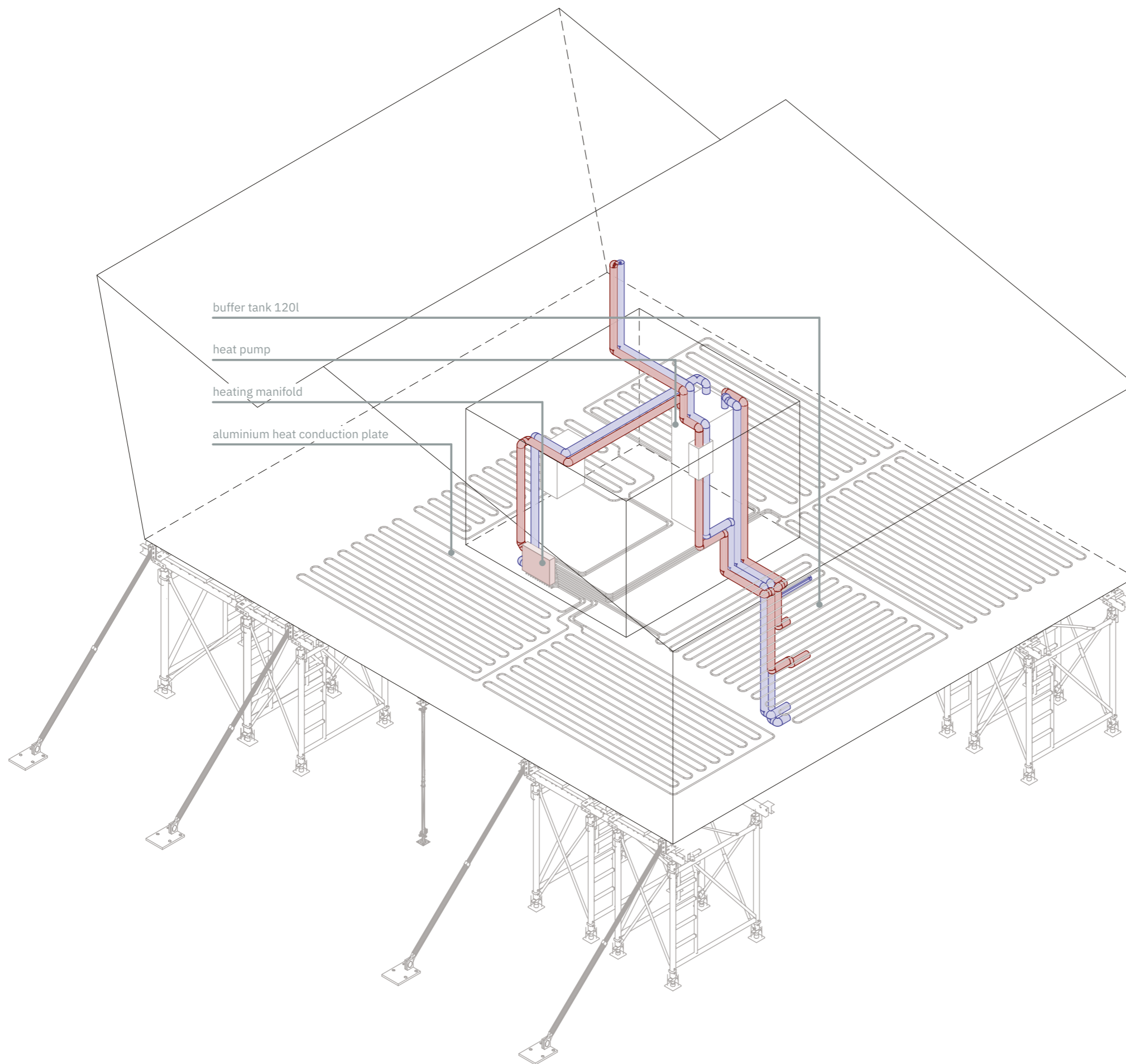


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale Page No.
no scale 123

Drawing Content
HVAC equipment

ME-1101



RoofKIT

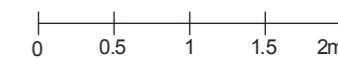


WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Legend

- cold water pipe
- hot water pipe



Scale 1:50 Page No. 124

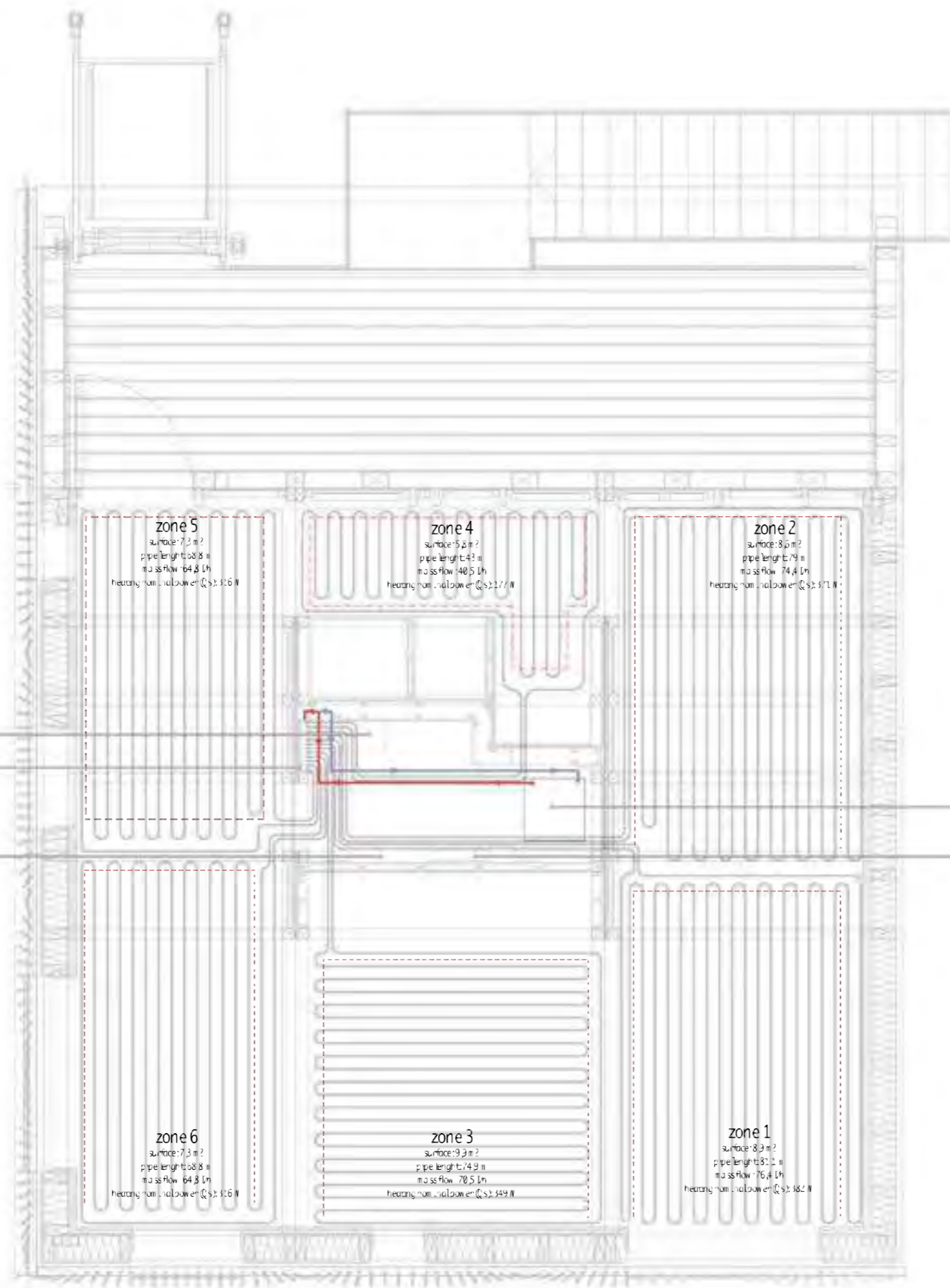
Drawing Content Heating schematic - Floor Plan Level 1

ME-2001

monitoring
 heating circuit distributor
 "Buderus Logafix 6 HK"
 electrical distribution box

brine water heat pump
 "Bosch Compress 7800 W M(F) 6 kW"
 Hot water tank 185 lt

solar pump





RoofKIT



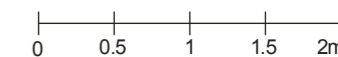
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General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Legend

— cold water pipe

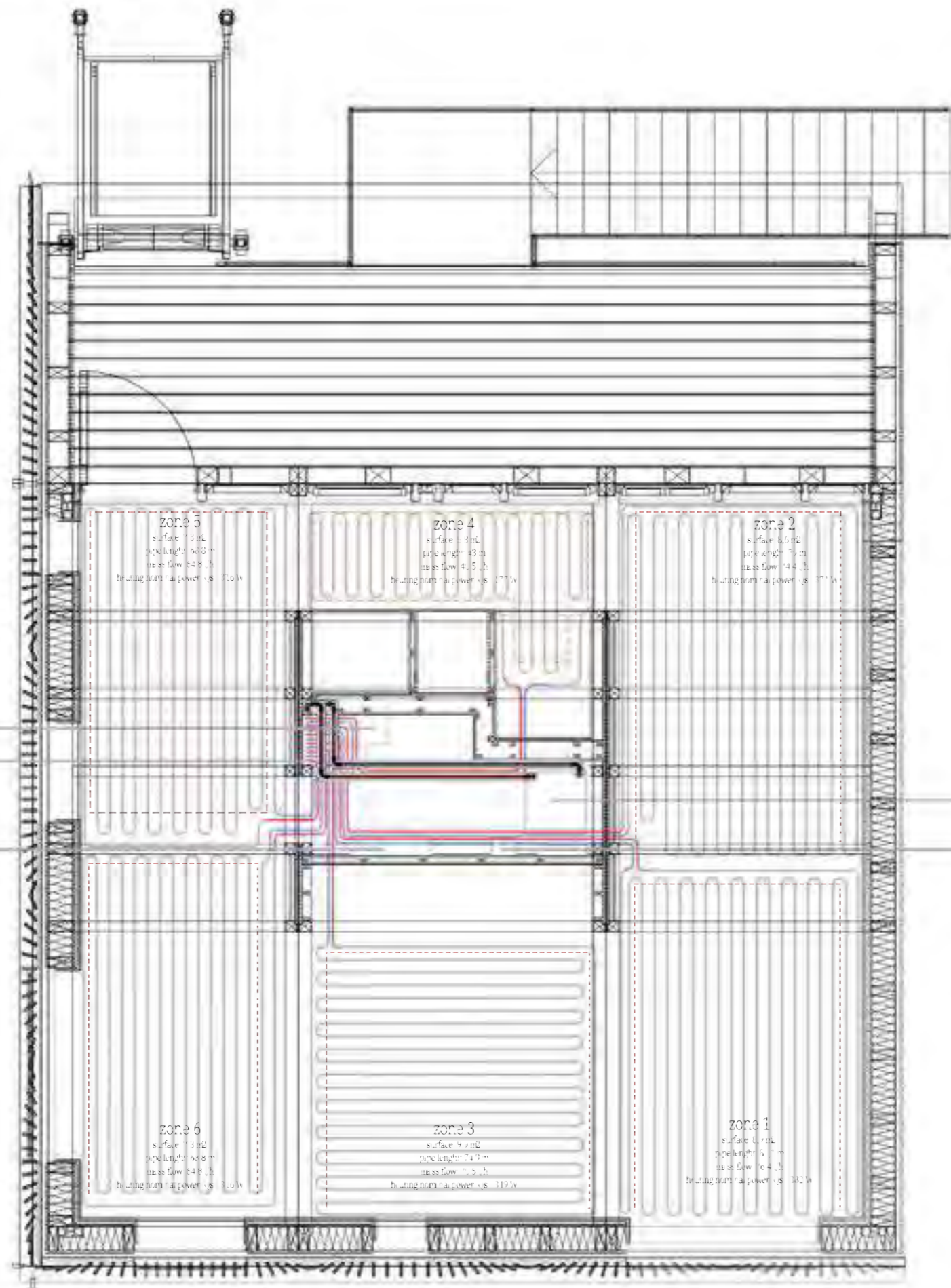
— hot water pipe



Scale 1:50 Page No. 125

Drawing Content Heating technical - Floor Plan Level 1

ME-2002



monitoring
heating circuit distributor
"Buderus Logafix 6 HK"
electrical distribution box

brine-water heat pump
"Bosch Compress 7800" W M (P) 6 kW
Hot water tank 135 lt

solar pump

zone 5
surface 13.0 m²
pipe length 64.0 m
mass flow 4.4 t/h
heating normal power 6.8 kW

zone 4
surface 13.3 m²
pipe length 43 m
mass flow 4.5 t/h
heating normal power 6.8 kW

zone 2
surface 6.5 m²
pipe length 7.5 m
mass flow 1.4 t/h
heating normal power 2.1 kW

zone 6
surface 13.0 m²
pipe length 64.0 m
mass flow 4.4 t/h
heating normal power 6.8 kW

zone 3
surface 9.2 m²
pipe length 71.0 m
mass flow 3.2 t/h
heating normal power 4.9 kW

zone 1
surface 6.0 m²
pipe length 6.7 m
mass flow 1.4 t/h
heating normal power 2.1 kW

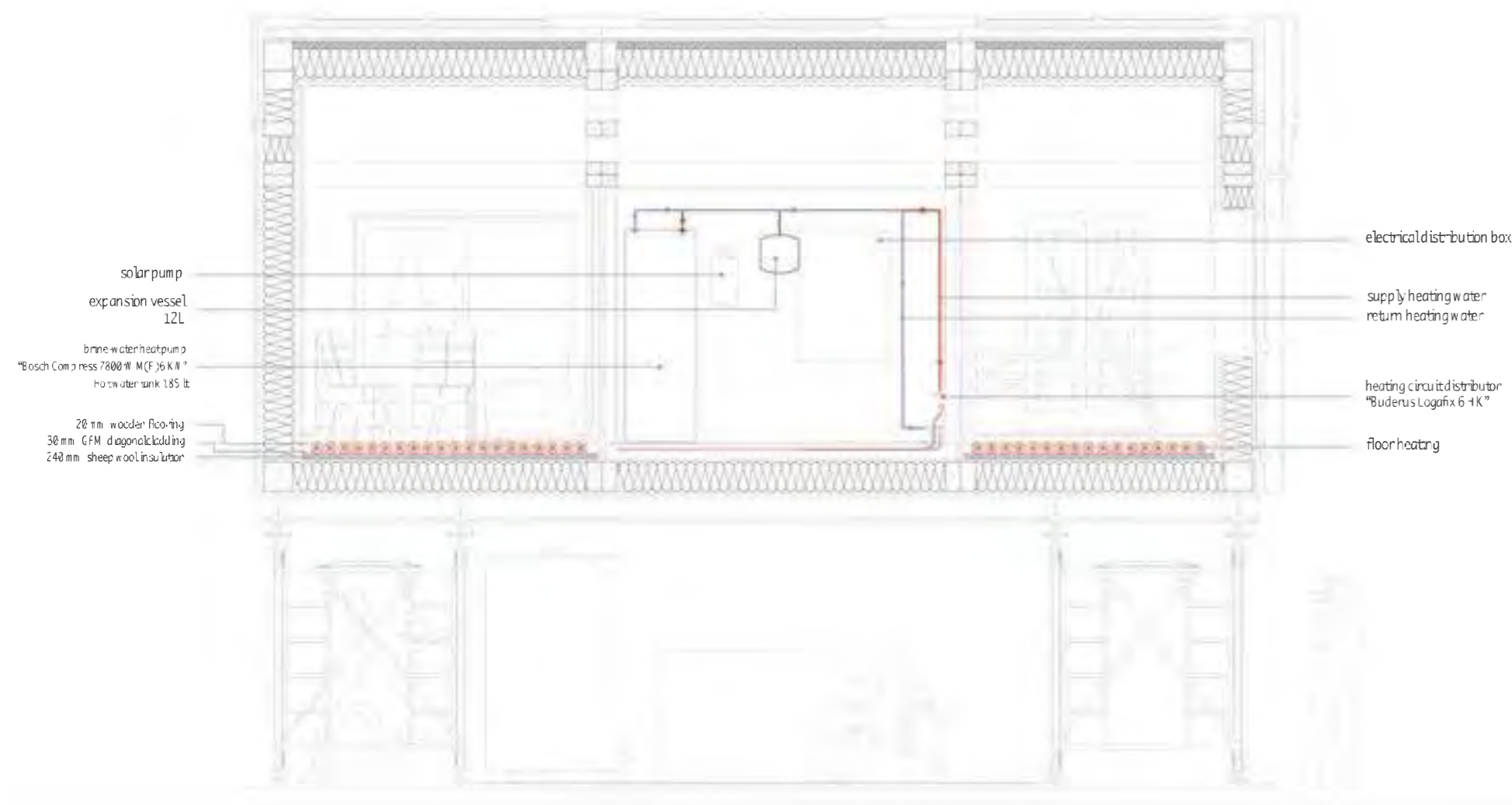


RoofKIT



WUPPERTAL GERMANY

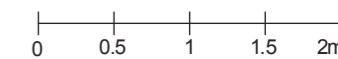
General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Legend

— cold water pipe

— hot water pipe



Scale 1:50 Page No. 126

Drawing Content Heating schematic - Section

ME-2003

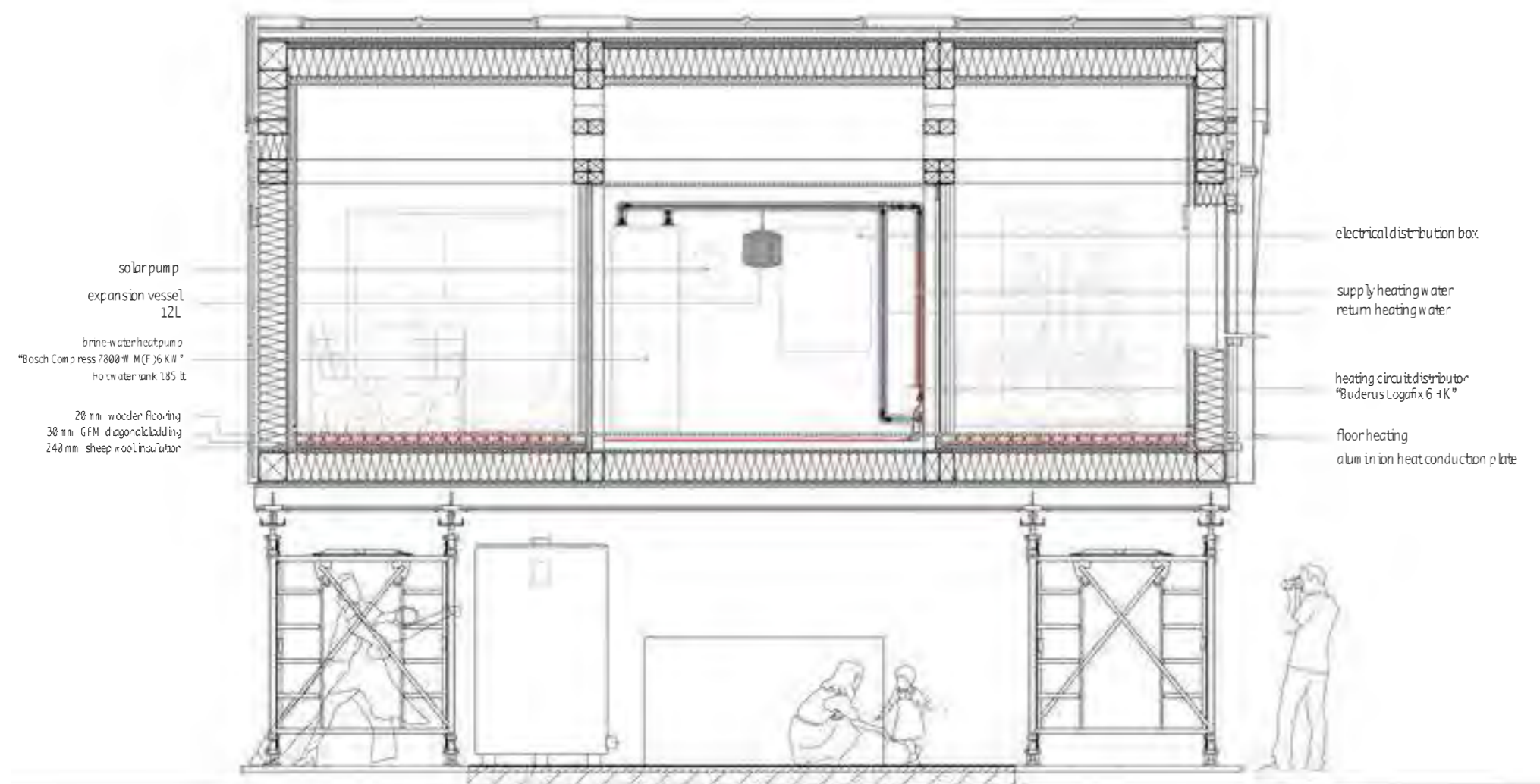


RoofKIT



WUPPERTAL GERMANY

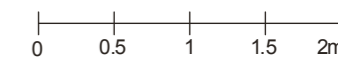
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Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Legend

— cold water pipe

— hot water pipe



Scale 1:50 Page No. 127

Drawing Content Heating technical - Section

ME-2004

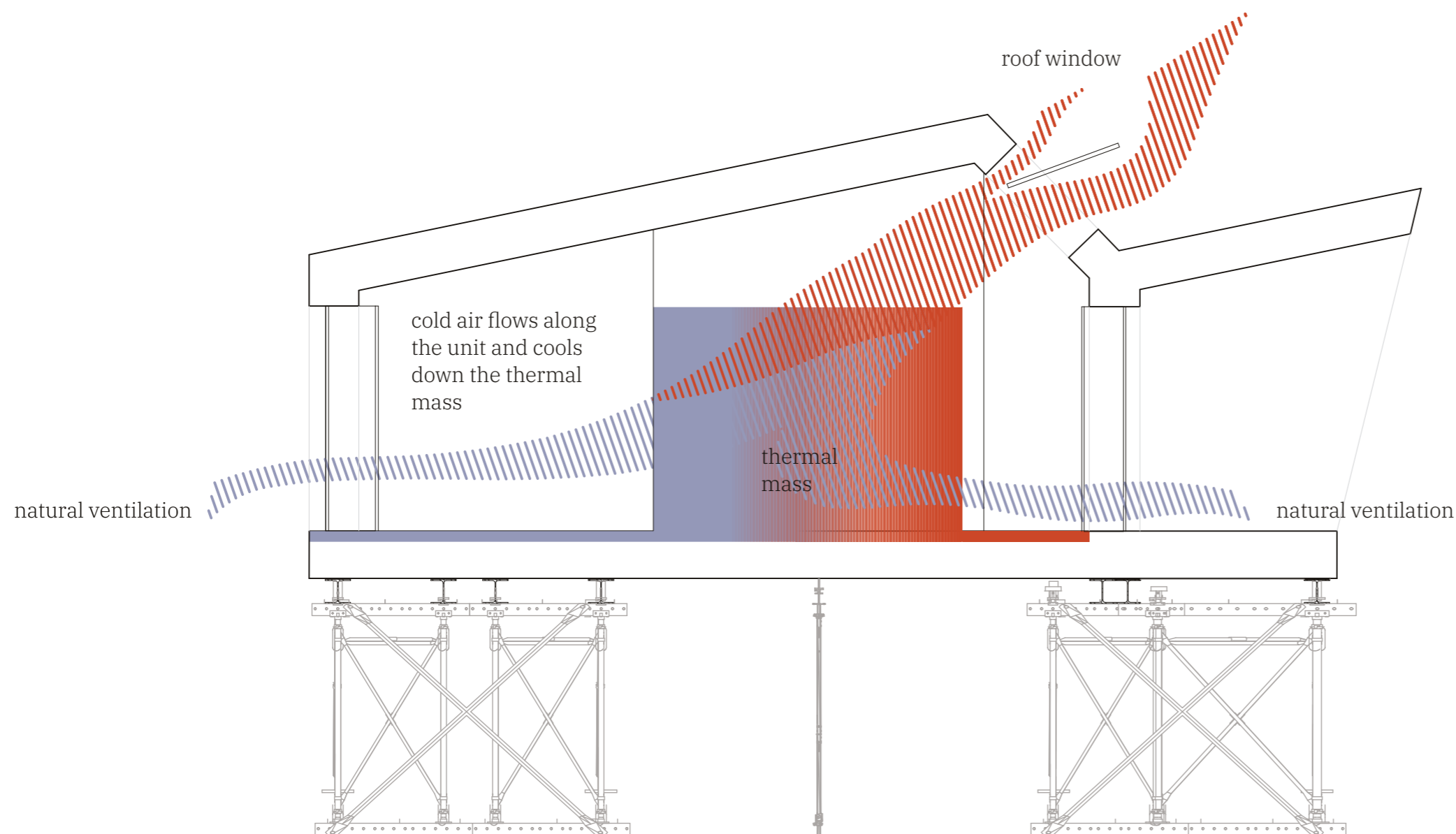


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale Page No.
no scale 128

Drawing Content
Ventilation - Summer

ME-2301

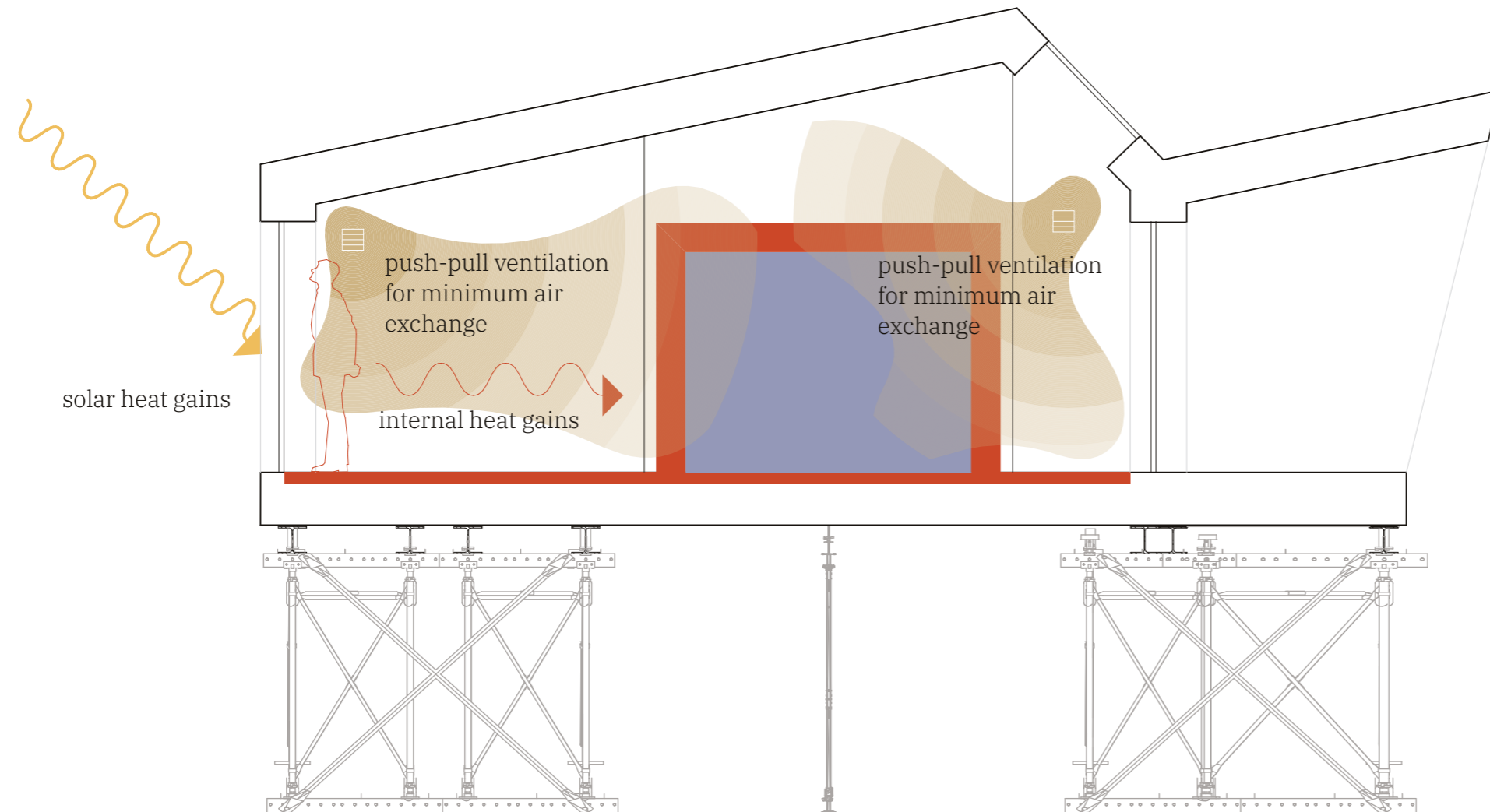


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale Page No.
no scale 129

Drawing Content
Ventilation - Push-Pull Ventilation -
Schematic Section

ME-2302



RoofKIT

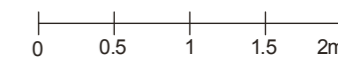


WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Legend

- supply air
- Room air
- outdoor air
- exhaust air



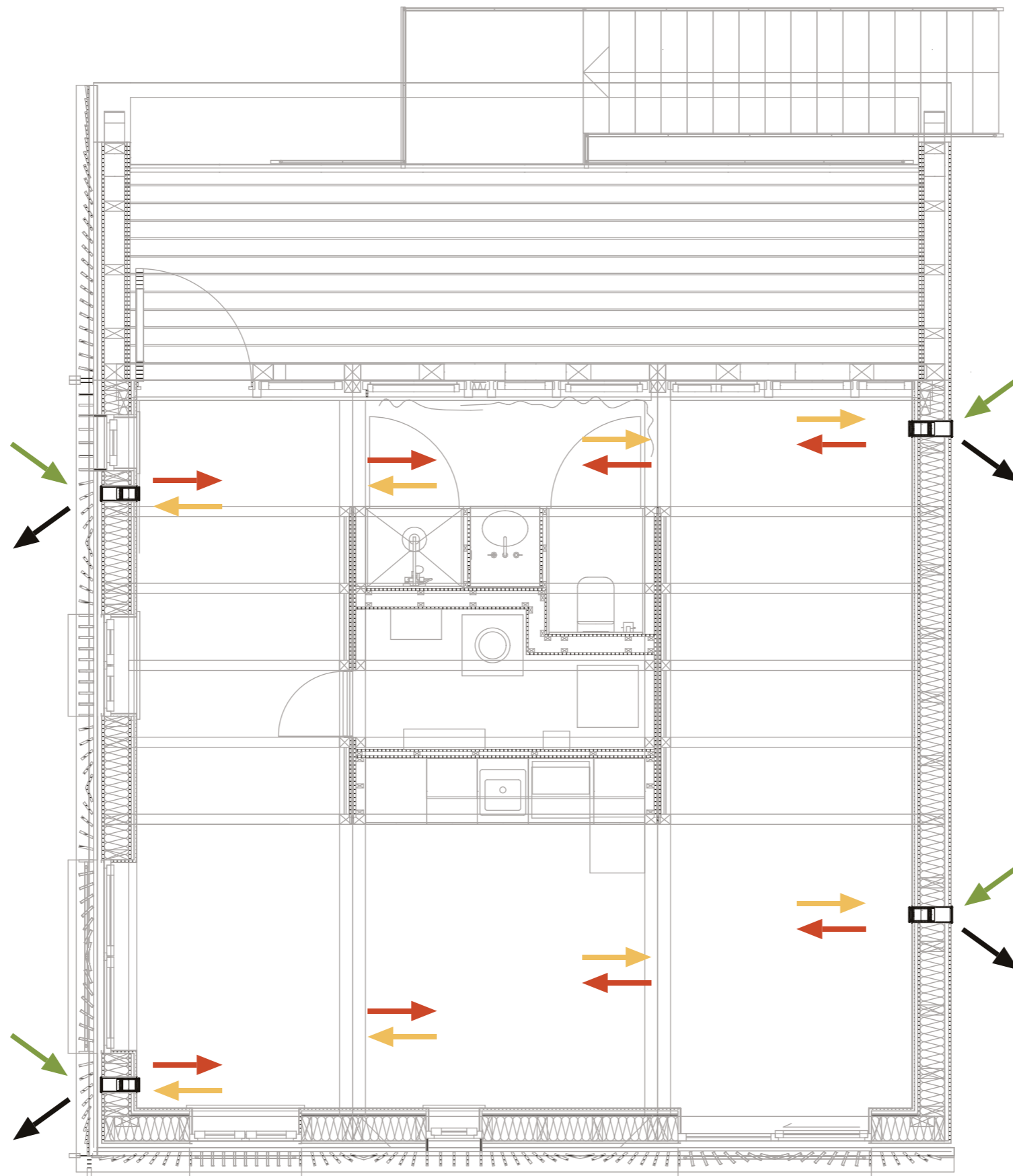
Scale 1:50 Page No. 130

Drawing Content
Ventilation - Push-Pull Winter - Floor Plan
Level 1

ME-2303

Reversible push-pull ventilation devices. The device operates 60 seconds in supply mode, and then switches for 60 seconds to exhaust mode

Push-pull ventilation: diameter 160mm volume flow rate 0-60m³/h



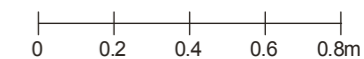
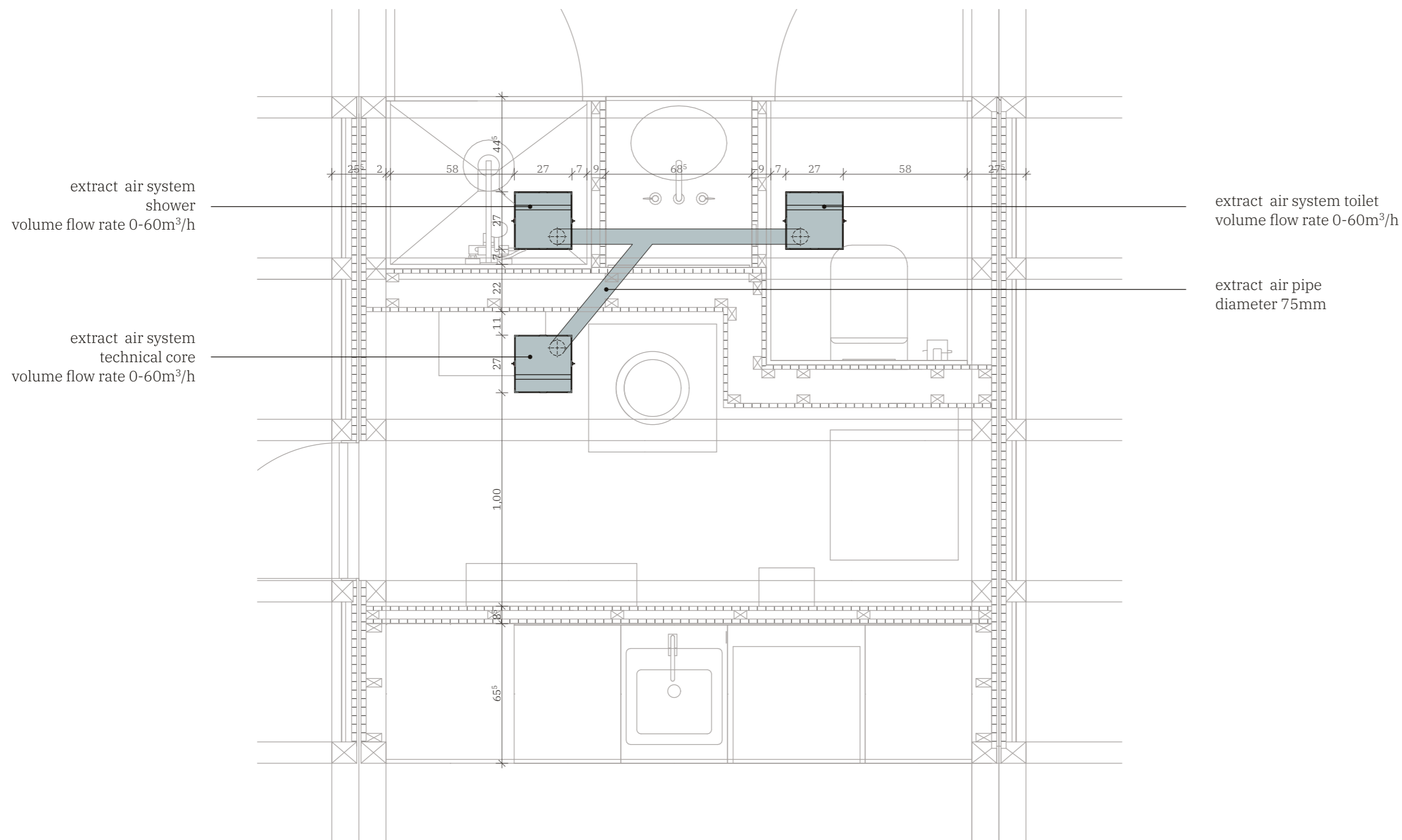


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale 1:20 Page No. 131

Drawing Content Ventilation - Exhaust - Floor Plan Level 1

ME-2304

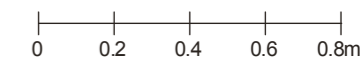
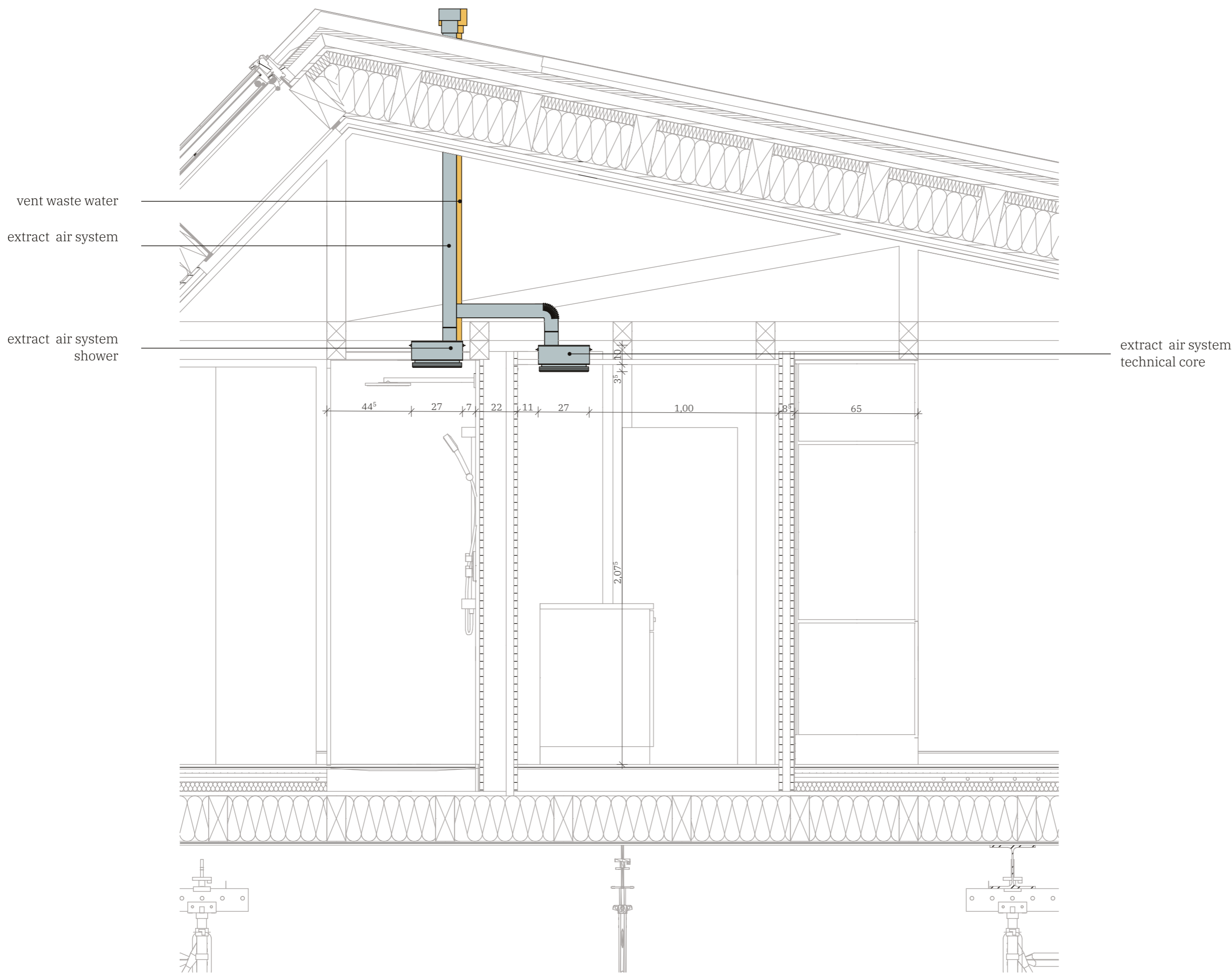


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale 1:20 Page No. 132

Drawing Content Ventilation - Exhaust - Section

ME-2305

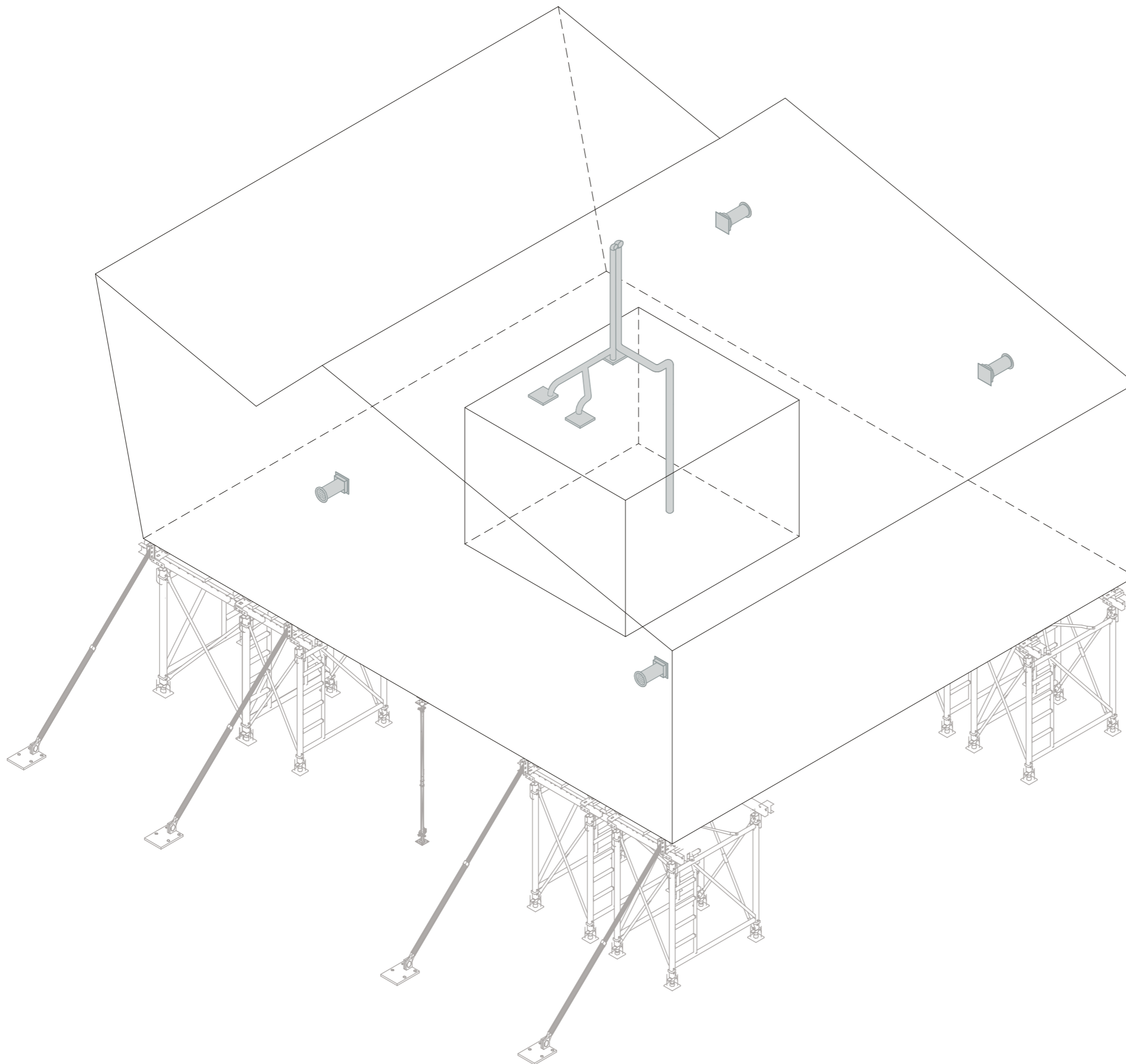


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale Page No.
no scale 133

Drawing Content
Ventilation - Push-Pull + Exhaust -
Isometric

ME-2306





RoofKIT

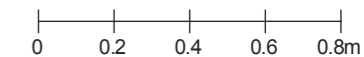


WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Legend

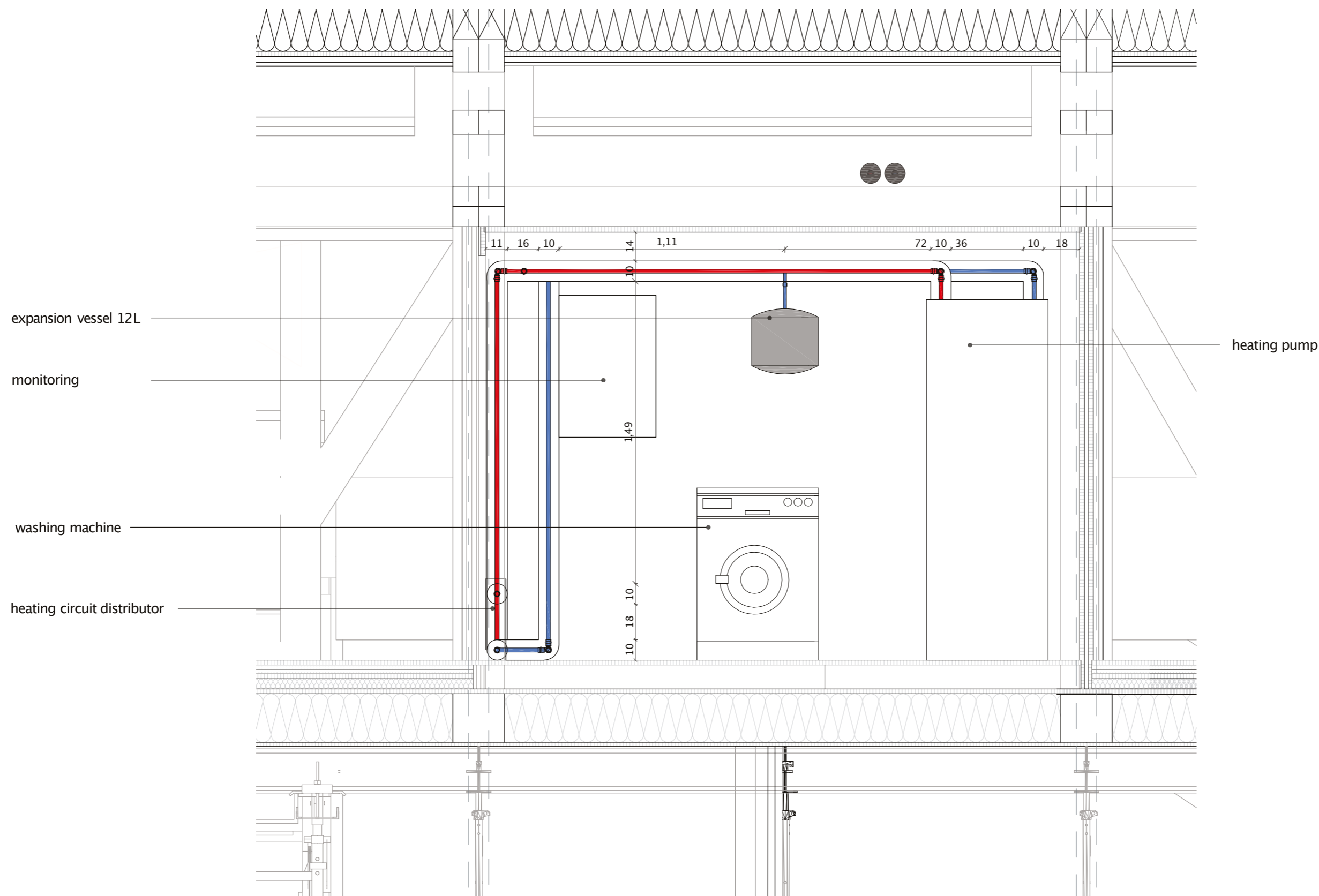
-  cold water pipe
diameter 15mm
insulation 26mm
-  hot water pipe
diameter 15mm
insulation 26mm



Scale 1:20 Page No. 134

Drawing Content
Mechanical Room Elevation

ME-3001





RoofKIT



WUPPERTAL GERMANY

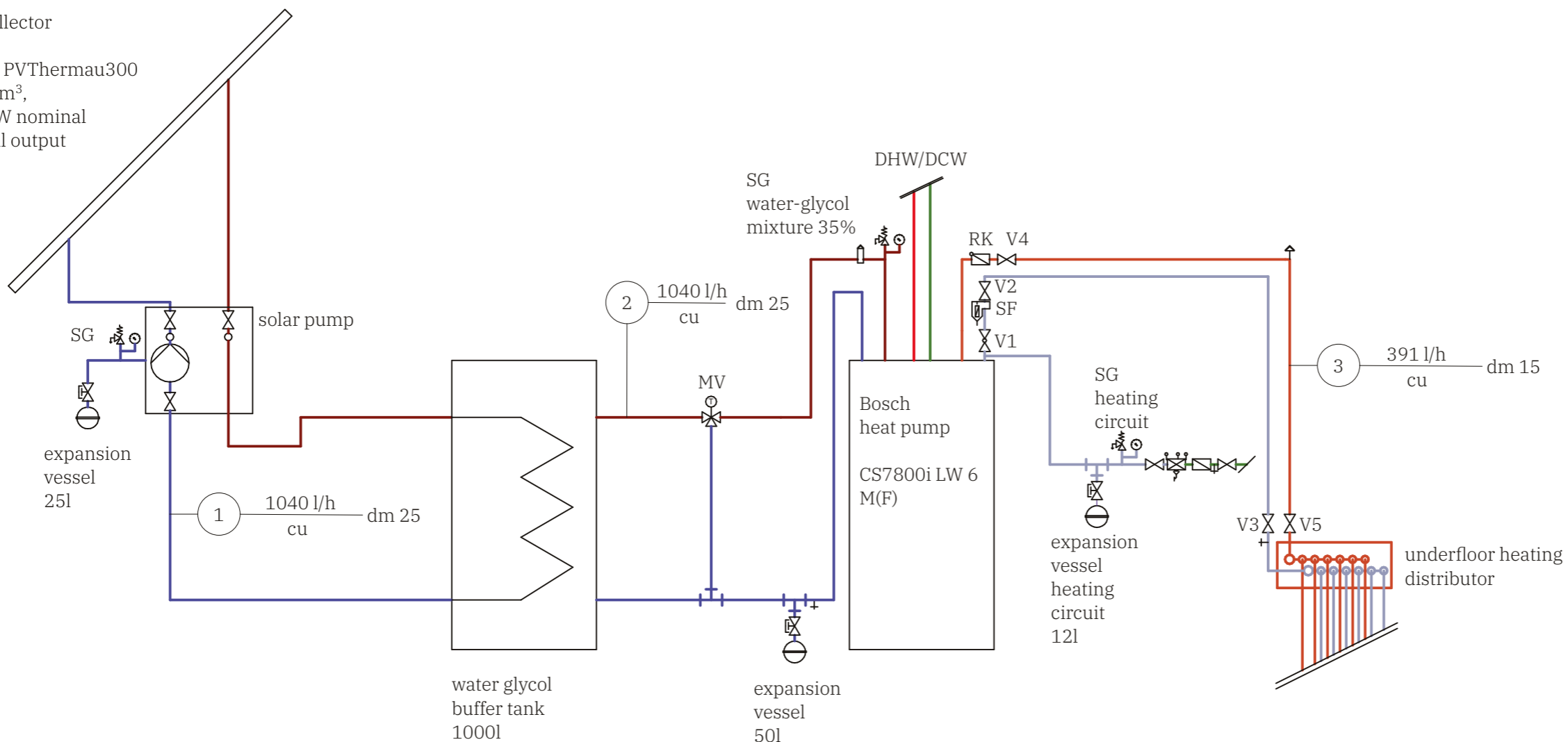
General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Legend

- water-glycol mixture 35% supply
- water-glycol mixture 35% return
- cold water pipe diameter 15mm insulation 26mm
- hot water pipe diameter 15mm insulation 26mm
- DHW
- DCW

PVT collector

Solator PVThermau300
12x1,6m³,
10,5 KW nominal
thermal output



- MV 3-way mixing valve
- SG security group (manometer, safety valve, vent)
- SF magnetic filter
- RK check valve
- V1 valve

- ① diameter 25mm + insulation
- ② diameter 25mm + insulation
- ③ diameter 15mm + insulation

underfloor heating:
6 heating circuits

No.	pipe length (m)	volume flow (l/h)	nominal heating power (W)
1:	81,1 m	76,4 l/h	382W
2:	79 m	74,4 l/h	371W
3:	74,9 m	70,5 l/h	349W
4:	43 m	40,5 l/h	177W
5:	68,8 m	64,8 l/h	316W
6:	68,8 m	64,8 l/h	316W

Scale no scale Page No. 135

Drawing Content Heating mode Schematic Drawing

ME-4101



RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
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Teleco. & Build. Man. System	BMS
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Health & Safety	HS
Public Tour	PT

Controlled variable	Control unit	Actuator	Set point set by	Control strategy
Buffer tank temperature	Heat pump	Heat pump	Central controller	storage of energy
Room temperature	Heat pump	Floor heating	Central controller /User	User can define desired temperature set point
Flow trough PVT collectors	Lovasol	Solar pump	Self-controlled	optimal usage of PVT elements
Air exchange living area	KNX Lunos control 4	Push-pull ventilation	Central controller /User	User can define ventilation level, otherwise CO2 controlled
Air exchange WC	Light switch	Extract ventilation WC	User	On/off + 15 Min run-on time
Air exchange shower	Lunos Silvento 5/EC-FK	Extract ventilation shower	Humidity in shower	45-75% Relative humidity target
Air exchange technical core	Lunos Silvento 5/EC-KE	Extract ventilation core	Humidity/temperature in core	18-22°C Room temperature target

Description of the central controller operation:

The energy consumption of the HDU is optimised by an energy management system, with a particular focus on energy efficiency and self-consumption. The following components are used as actively controllable components in the HDU: The battery, the heat pump, the fan and the skylights. All components are connected to the energy management system (Central controller – Raspberry Pi) via Modbus or KNX using central hardware abstraction software. The preferences of the users (especially setpoints for room temperature and CO2 levels for the ventilation system) of the HDU are recorded via a web-based dashboard on a touch screen. This also enables further information about the current status of other controlled devices, such as the battery charge level. Based on the user preferences, schedules for the active components are calculated using a model-based optimisation algorithm and then executed by these components.

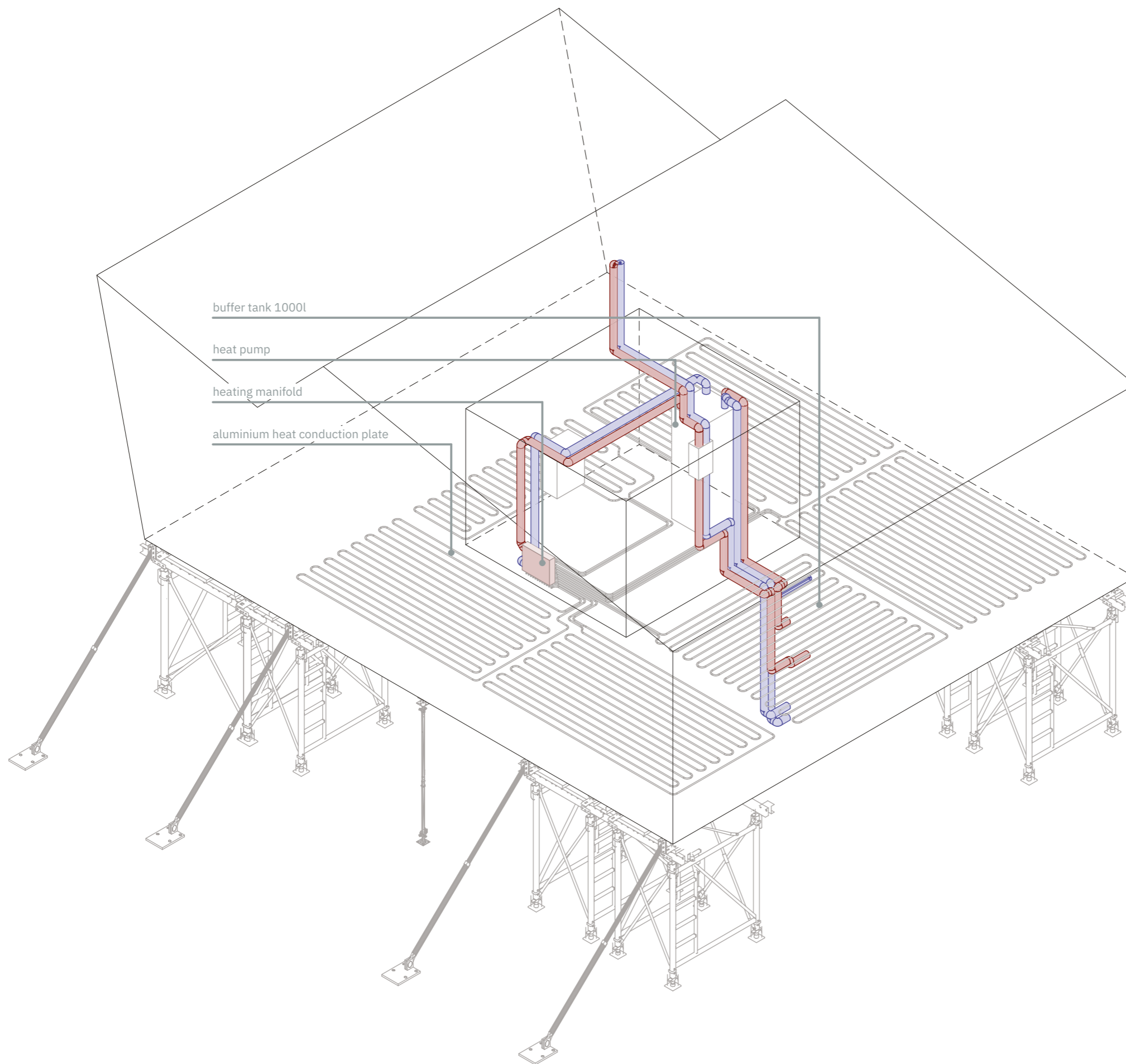


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale no scale Page No. 137

Drawing Content
Isometric Distribution

ME-6001



RoofKIT

Electrical (EL)

Karlsruhe, 23rd March 2022

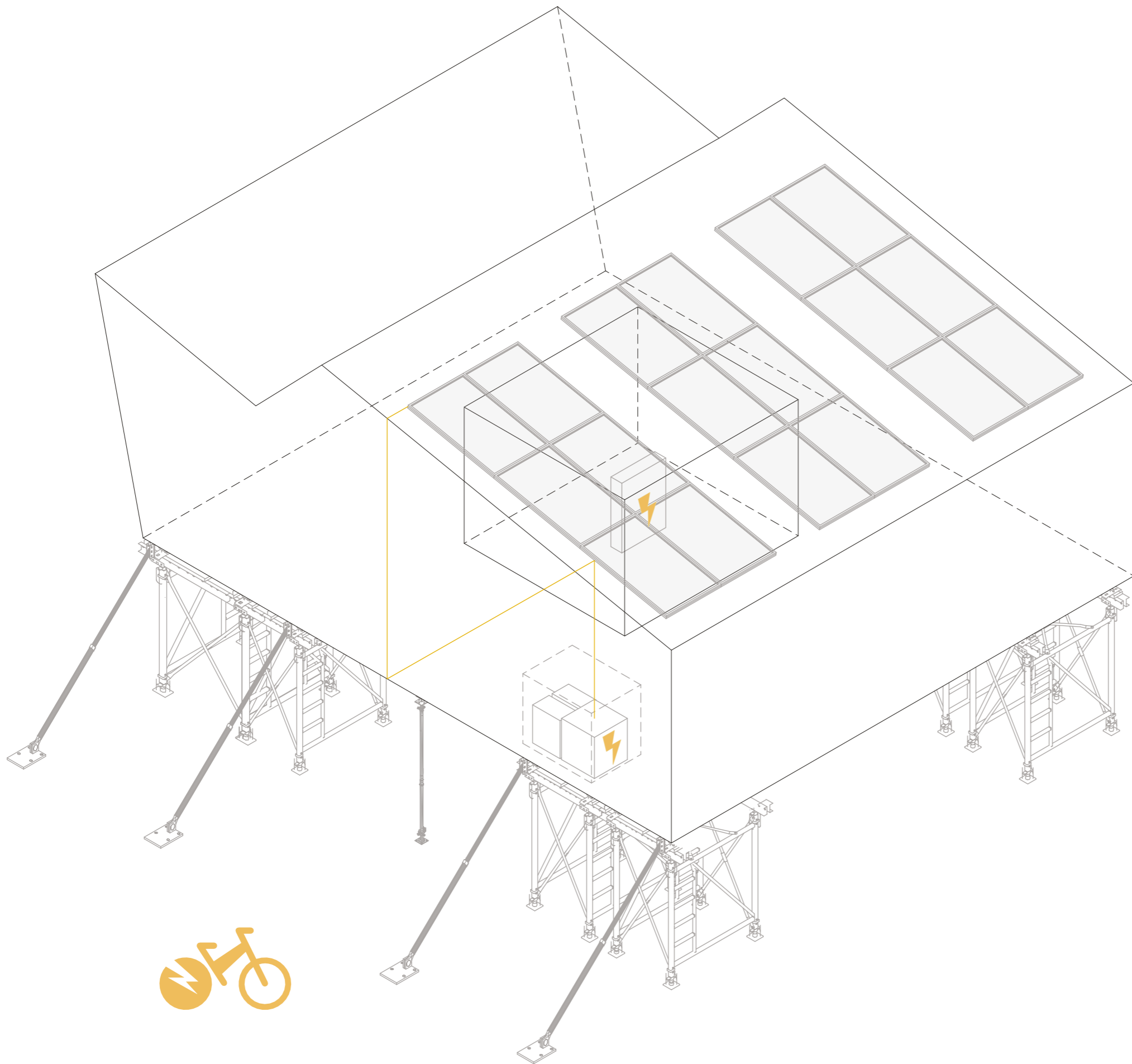


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
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Health & Safety	HS
Public Tour	PT



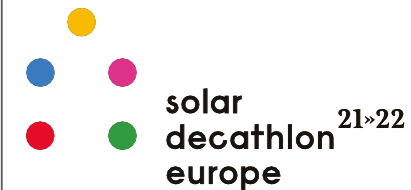
Scale Page No.
no scale 139

Drawing Content
Conceptual Drawing

EL-0001



RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Legend:

Cable conduits in floor structure:

Cable conduits in wall structure:

Cable conduits in ceiling structure:

Cable for Sensor:

Conduit for solar connection :

Conduit for protective earthing :

Conduit for direct grid connection :

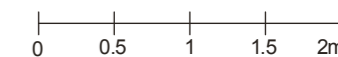
Conduits opening/ connection box:

Height 30 cm above floor:

Height 105 cm above floor:

Height 150 cm above floor:

Ceiling height:



Scale

1:50

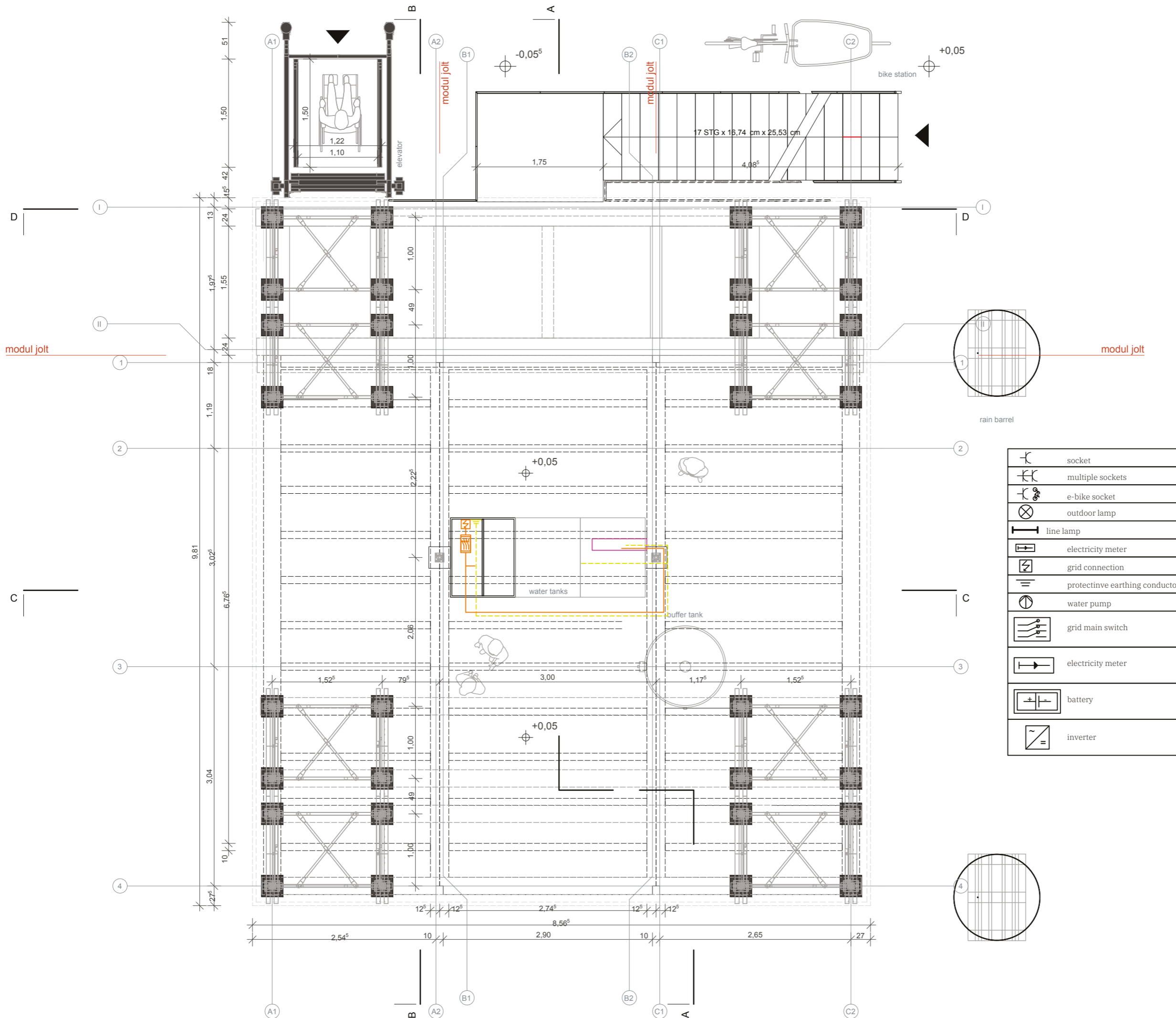
Page No.

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Drawing Content

Grid Interconnection

EL-1001





RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Legend:

Cable conduits from main distribution box:

Conduit for solar connection :

Conduit for protective earthing :

Conduit for direct grid connection :

Conduits opening/ connection box:

Height 30 cm above floor:



Scale

no scale

Page No.

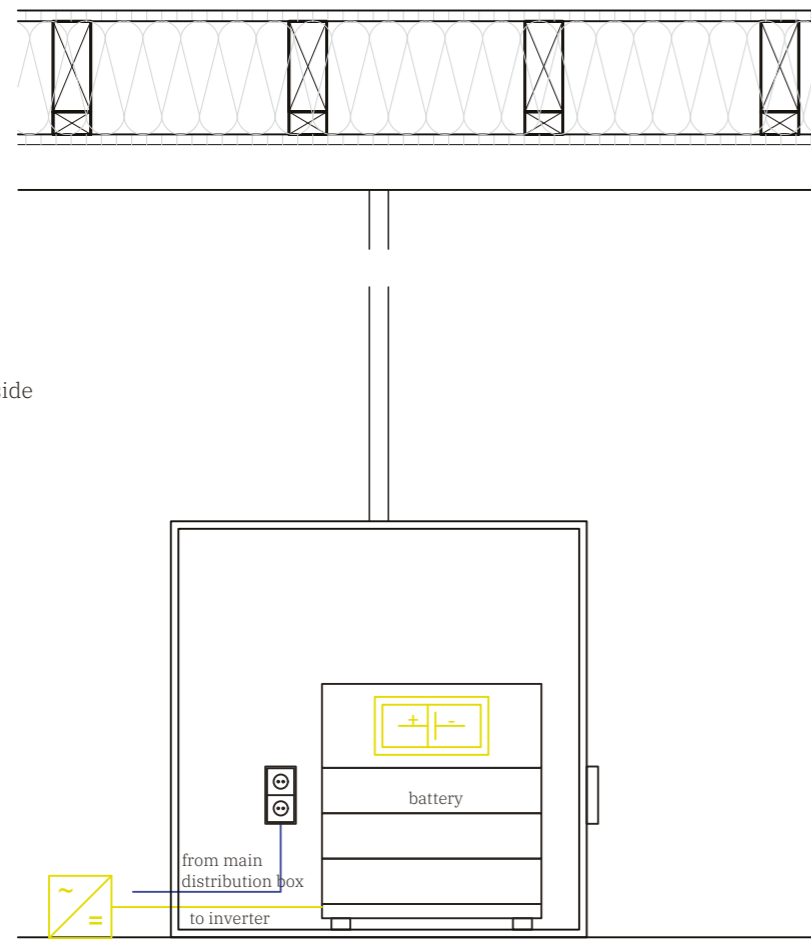
141

Drawing Content

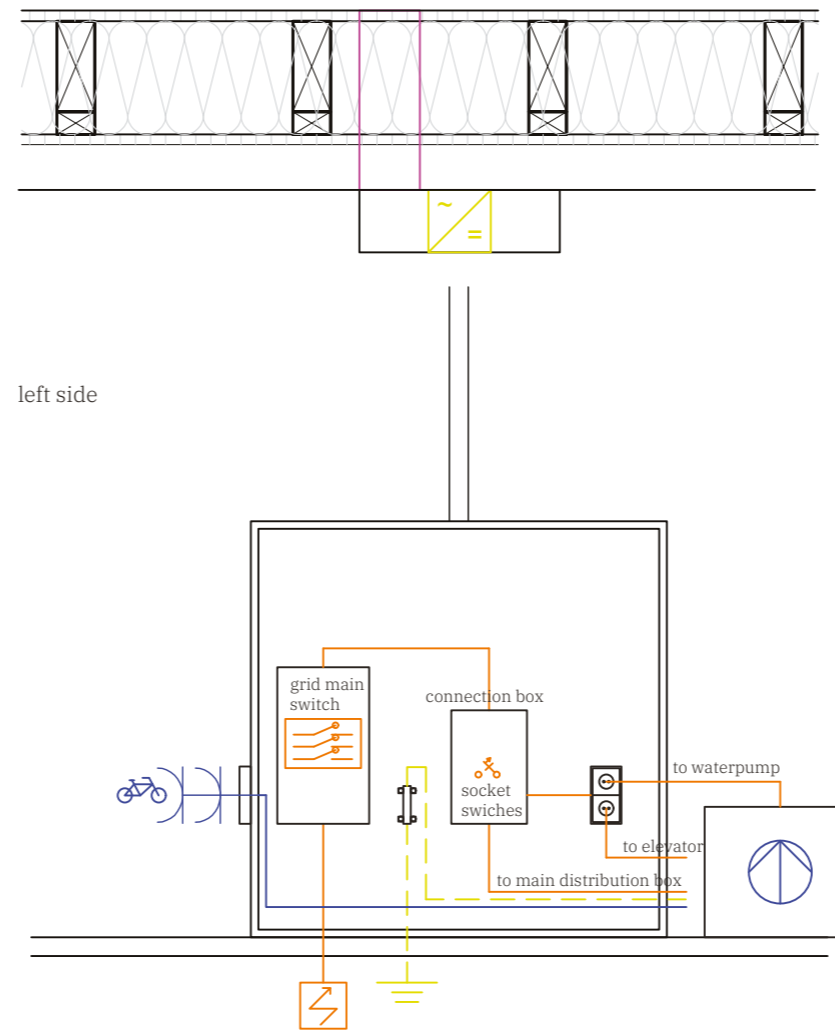
Electrical House Connection Box Detail

EL-1002

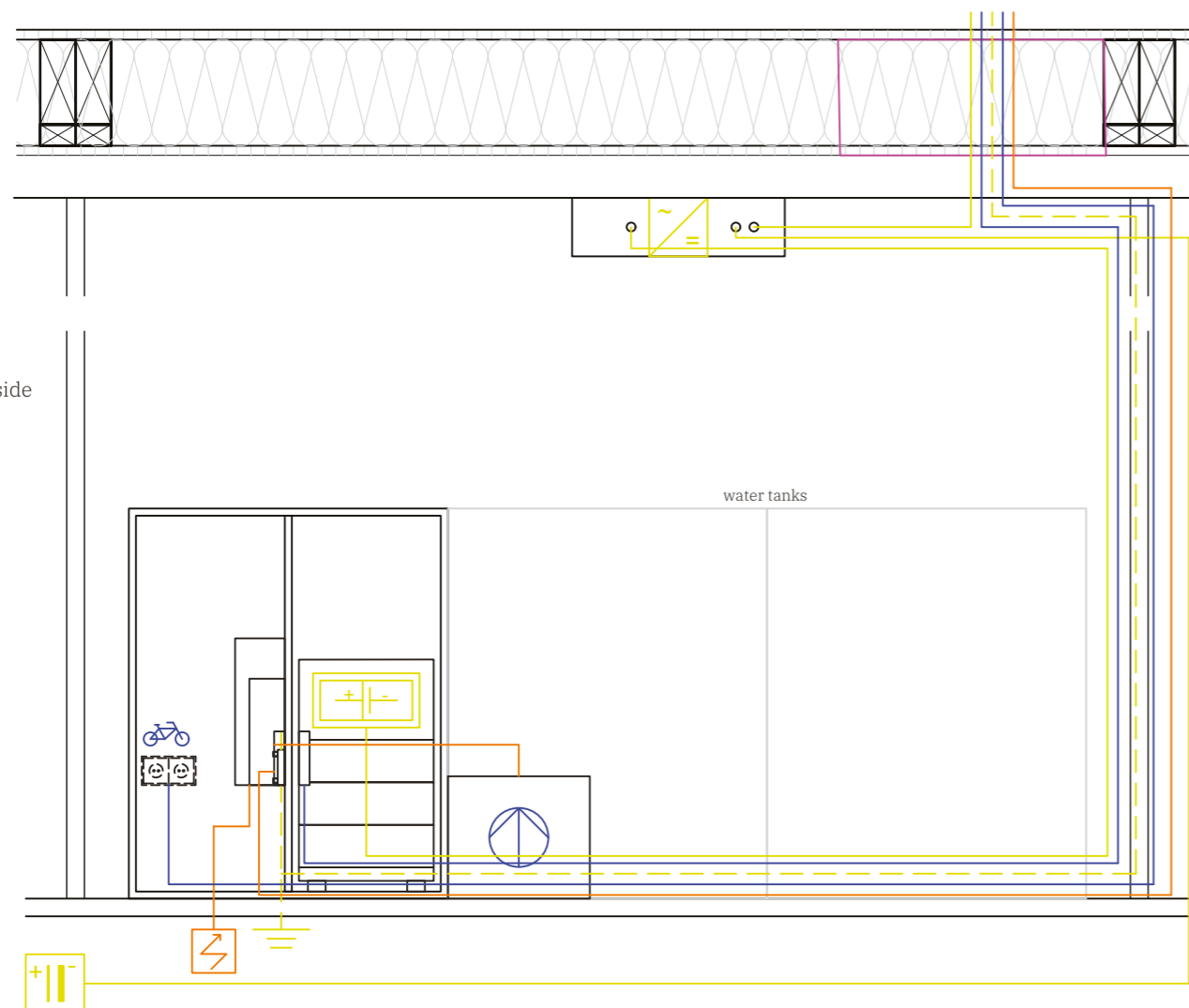
right side



left side



front side



	socket
	multiple sockets
	e-bike socket
	outdoor lamp
	line lamp
	electricity meter
	grid connection
	protective earthing conductor
	water pump
	grid main switch
	electricity meter
	battery
	inverter

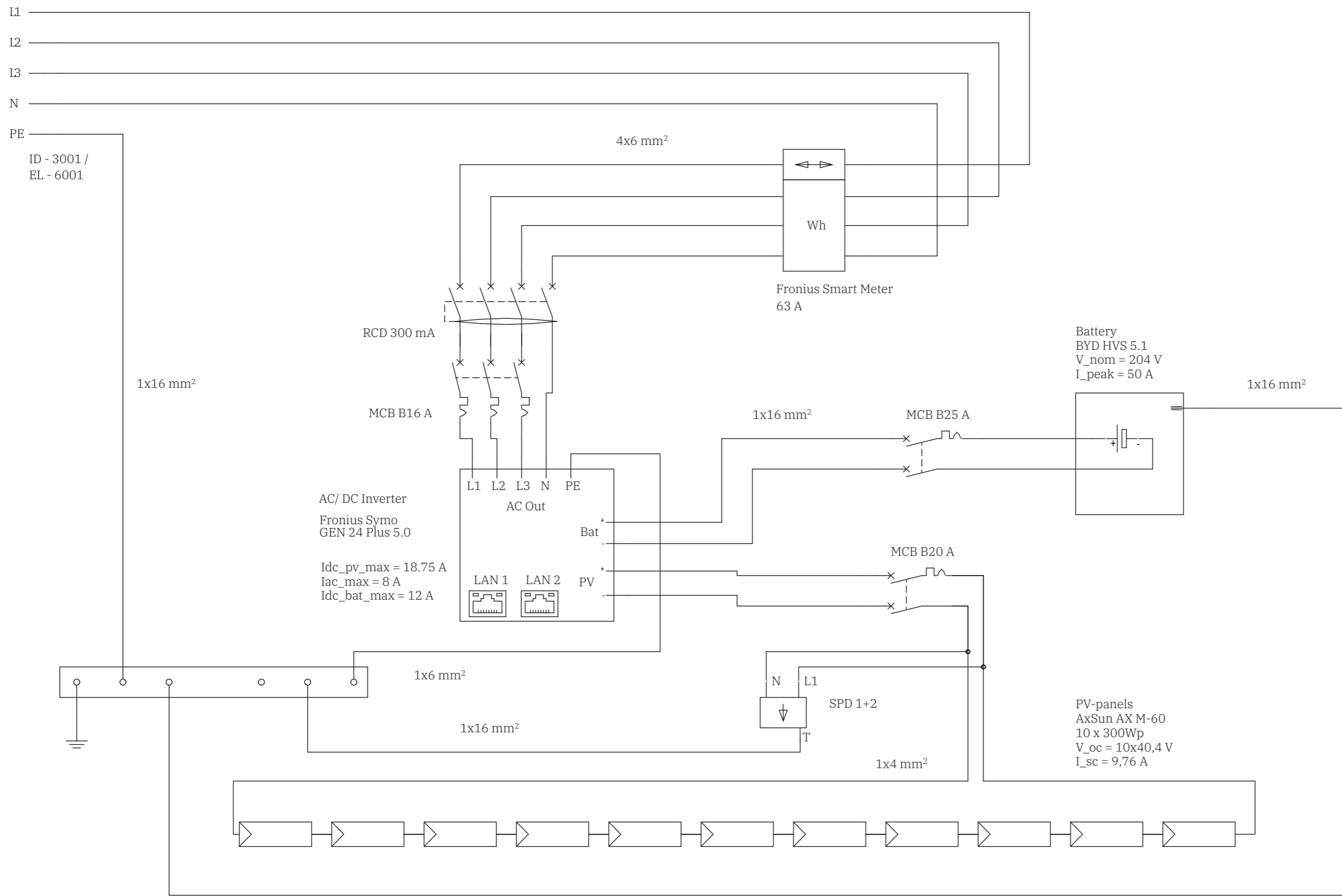


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale no scale Page No. 142

Drawing Content DC Wiring Diagram

EL-2001



RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Legend:

Cable conduits in floor structure:

Cable conduits in wall structure:

Cable conduits in ceiling structure:

Cable for sensor on floor surface:

Conduit for solar connection :

Conduit for protective earthing :

Conduit for direct grid connection :

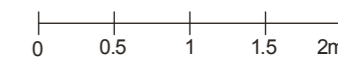
Conduits opening/ connection box:

Height 30 cm above floor:

Height 105 cm above floor:

Height 150 cm above floor:

Ceiling height:



Scale

1:50

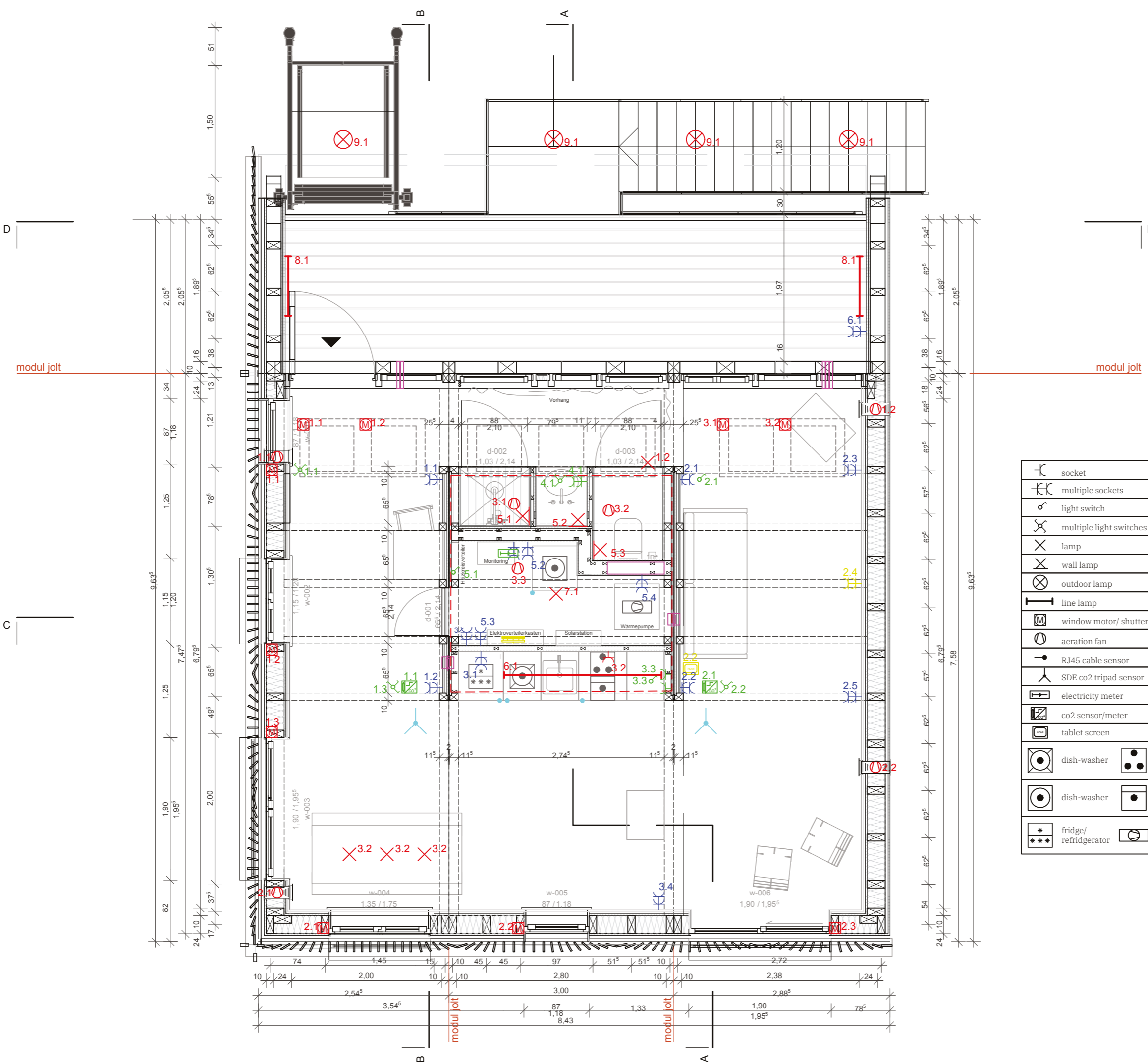
Page No.

143

Drawing Content

Power plan - Floor Plan Level 1

EL-3001



	socket
	multiple sockets
	light switch
	multiple light switches
	lamp
	wall lamp
	outdoor lamp
	line lamp
	window motor/ shutter
	aeration fan
	RJ45 cable sensor
	SDE co2 tripod sensor
	electricity meter
	co2 sensor/meter
	tablet screen
	dish-washer
	stove
	dish-washer
	oven
	fridge/ refrigerator
	heat-pump



RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
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Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
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Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Legend:

Cable conduits in floor structure:

Cable conduits in wall structure:

Cable conduits in ceiling structure:

Cable for Sensor:

Conduit for solar connection :

Conduit for protective earthing :

Conduit for direct grid connection :

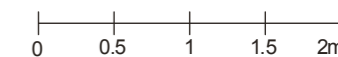
Conduits opening/ connection box:

Height 30 cm above floor:

Height 105 cm above floor:

Height 150 cm above floor:

Ceiling height:



Scale

1:50

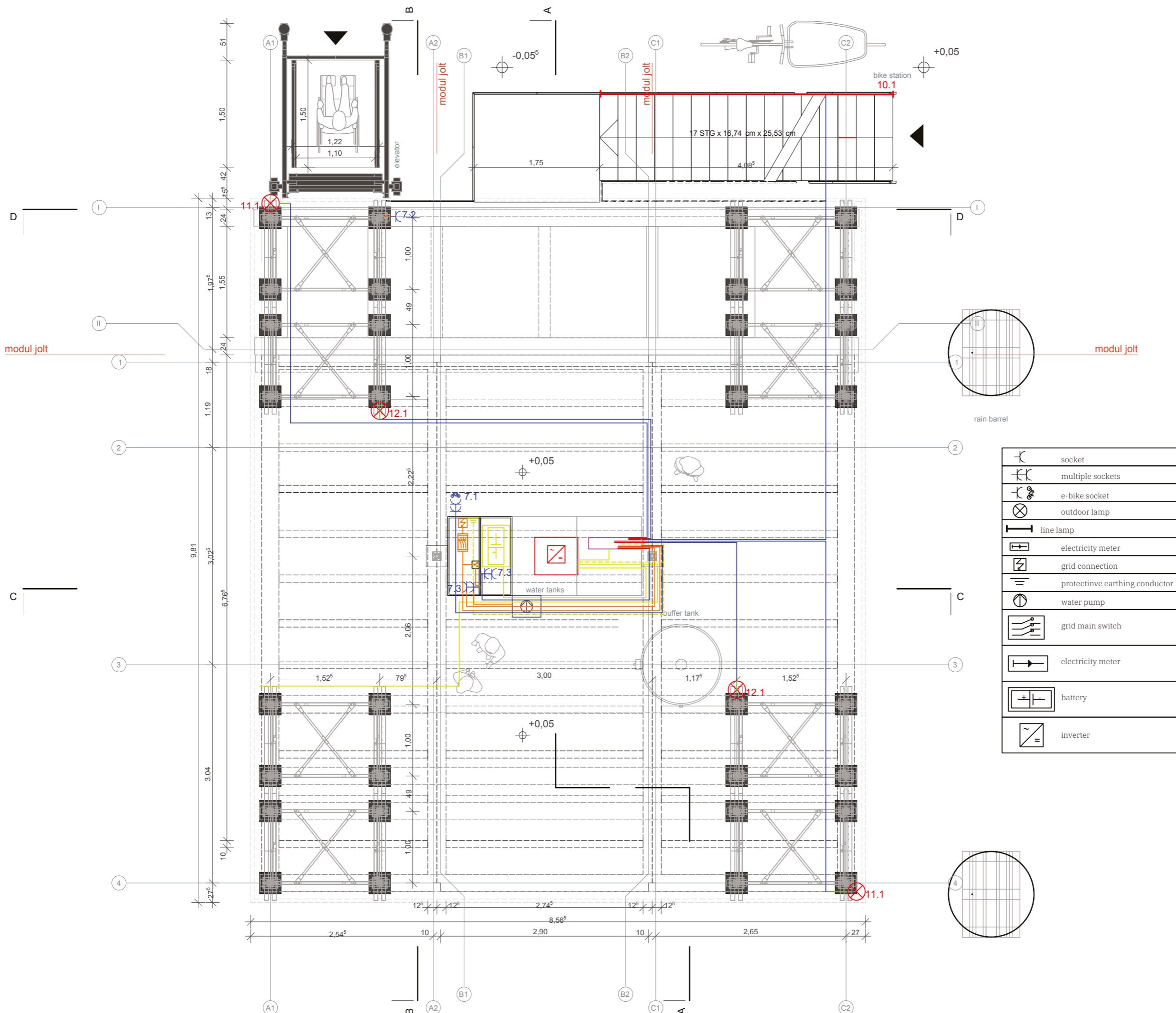
Page No.

144

Drawing Content

Power plan - Floor Plan Level 0

EL-3002



	socket
	multiple sockets
	e-bike socket
	outdoor lamp
	line lamp
	electricity meter
	grid connection
	protective earthing conductor
	water pump
	grid main switch
	electricity meter
	battery
	inverter



RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Legend:

Cable conduits in floor structure:

Cable conduits in wall structure:

Cable conduits in ceiling structure:

Cable for sensor on floor surface:

Conduit for solar connection :

Conduit for protective earthing :

Conduit for direct grid connection :

Conduits opening/ connection box:

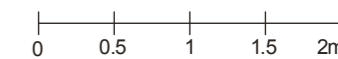
Height 30 cm above floor:

Height 105 cm above floor:

Height 150 cm above floor:

Ceiling height:

	socket
	multiple sockets
	light switch
	multiple light switches
	lamp
	wall lamp
	outdoor lamp
	line lamp
	window motor/ shutter
	aeration fan
	RJ45 cable sensor
	SDE co2 tripod sensor
	electricity meter
	co2 sensor/meter
	tablet screen
	dish-washer
	stove
	dish-washer
	oven
	fridge/ refrigerator
	heat-pump



Scale

1:50

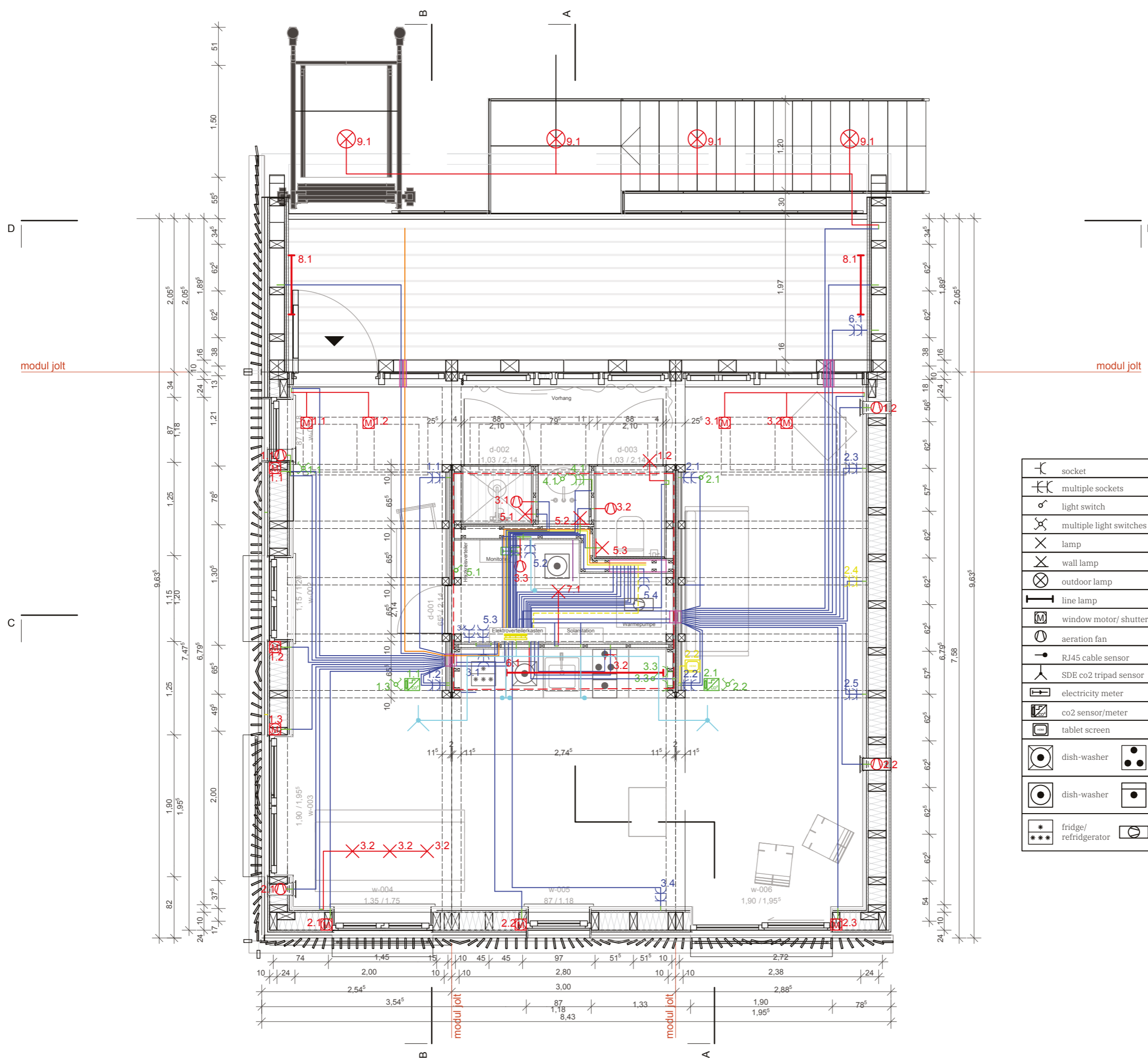
Page No.

145

Drawing Content

Power plan conduits - Floor Plan Level 1

EL-3003





RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Legend:

Cable conduits in floor structure:

Cable conduits in wall structure:

Cable conduits in ceiling structure:

Cable for sensor on floor surface:

Conduit for solar connection :

Conduit for protective earthing :

Conduit for direct grid connection :

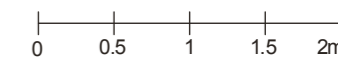
Conduits opening/ connection box:

Height 30 cm above floor:

Height 105 cm above floor:

Height 150 cm above floor:

Ceiling height:



Scale

1:50

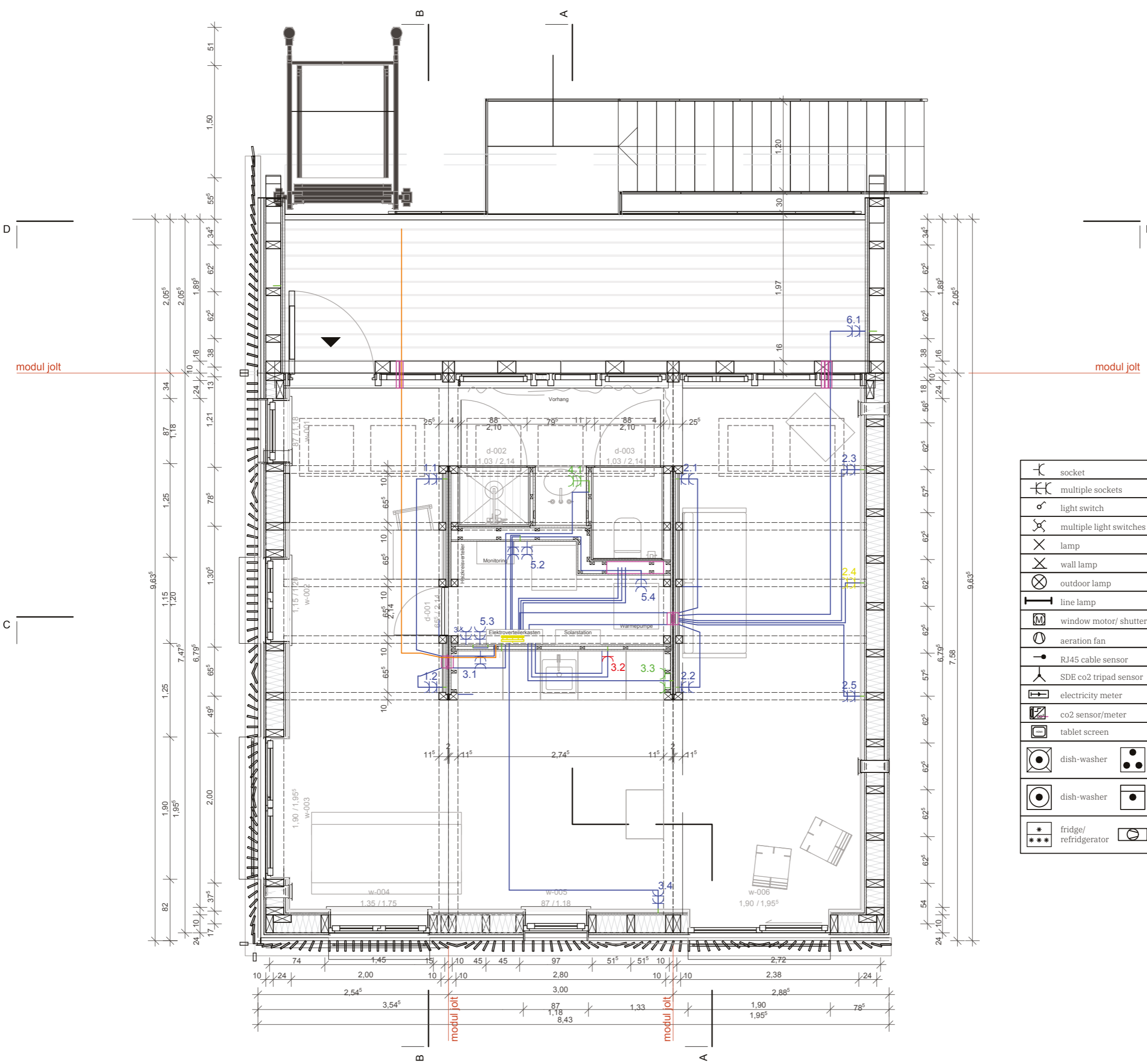
Page No.

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Drawing Content

Power plan sockets - Floor Plan Level 1

EL-3004



	socket
	multiple sockets
	light switch
	multiple light switches
	lamp
	wall lamp
	outdoor lamp
	line lamp
	window motor/ shutter
	aeration fan
	RJ45 cable sensor
	SDE co2 tripod sensor
	electricity meter
	co2 sensor/meter
	tablet screen
	dish-washer
	stove
	dish-washer
	oven
	fridge/ refrigerator
	heat-pump



RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Legend:

Cable conduits in floor structure:

Cable conduits in wall structure:

Cable conduits in ceiling structure:

Cable for sensor on floor surface:

Conduit for solar connection :

Conduit for protective earthing :

Conduit for direct grid connection :

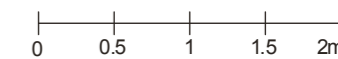
Conduits opening/ connection box:

Height 30 cm above floor:

Height 105 cm above floor:

Height 150 cm above floor:

Ceiling height:



Scale

1:50

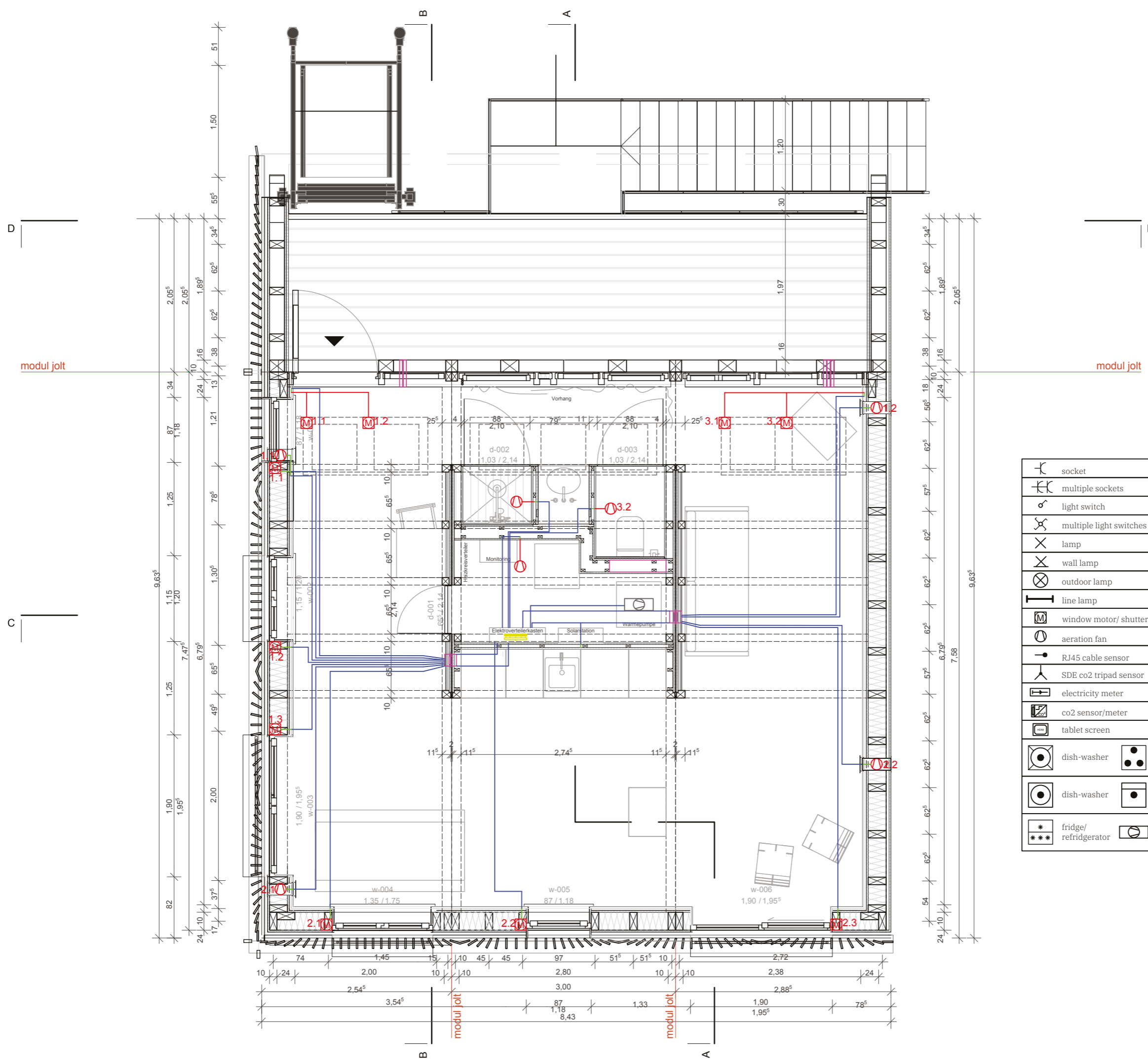
Page No.

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Drawing Content

Power plan appliances - Floor Plan Level 1

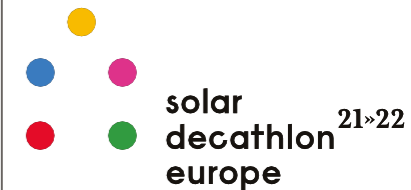
EL-3005



	socket
	multiple sockets
	light switch
	multiple light switches
	lamp
	wall lamp
	outdoor lamp
	line lamp
	window motor/ shutter
	aeration fan
	RJ45 cable sensor
	SDE co2 tripod sensor
	electricity meter
	co2 sensor/meter
	tablet screen
	dish-washer
	stove
	dish-washer
	oven
	fridge/ refrigerator
	heat-pump



RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Legend:

Cable conduits in floor structure:

Cable conduits in wall structure:

Cable conduits in ceiling structure:

Cable for Sensor:

Conduit for solar connection :

Conduit for protective earthing :

Conduit for direct grid connection :

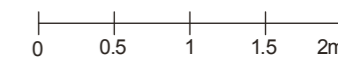
Conduits opening/ connection box:

Height 30 cm above floor:

Height 105 cm above floor:

Height 150 cm above floor:

Ceiling height:



Scale

1:50

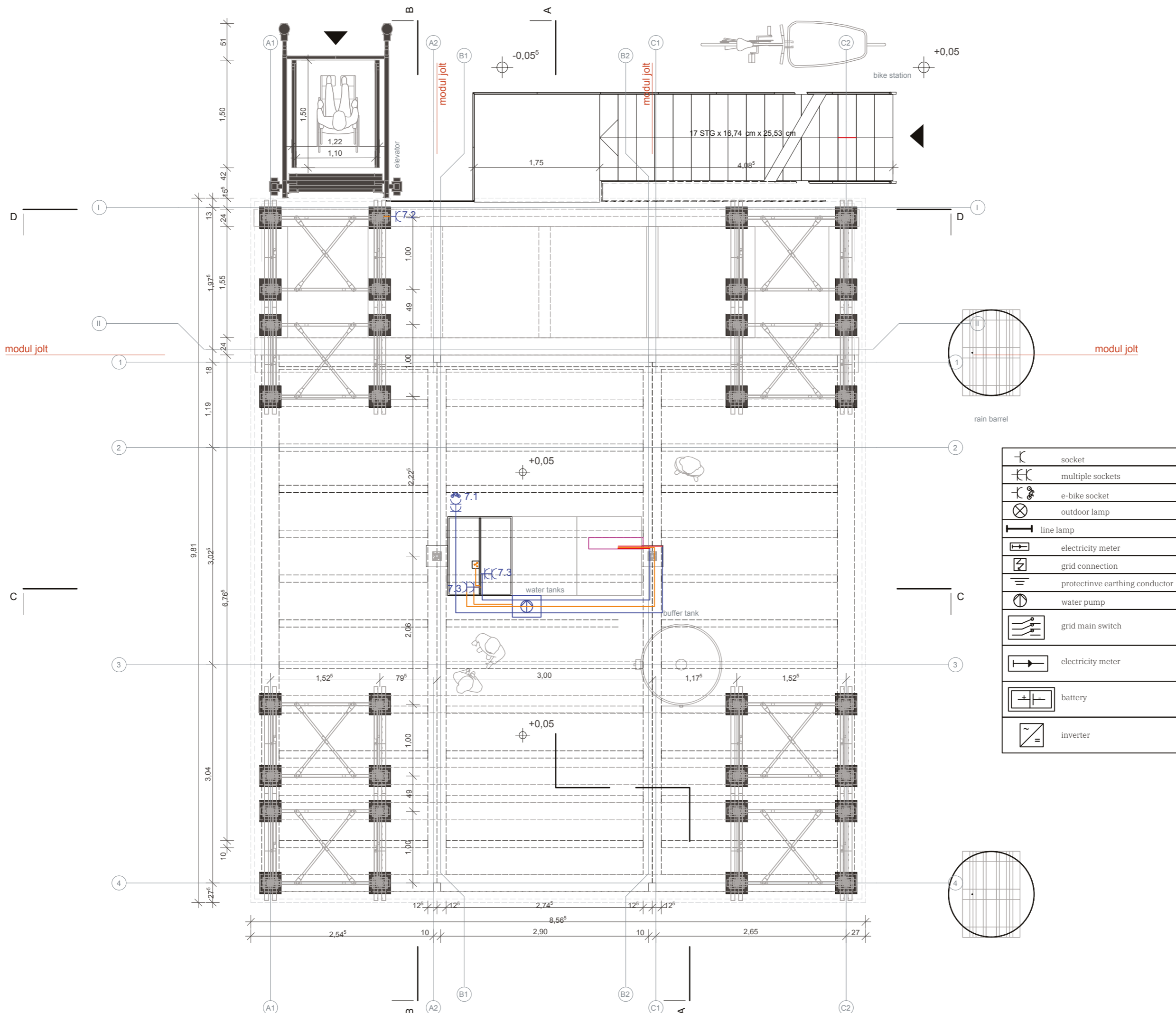
Page No.

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Drawing Content

Power plan sockets - Floor Plan Level 0

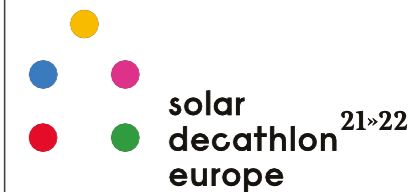
EL-3006



	socket
	multiple sockets
	e-bike socket
	outdoor lamp
	line lamp
	electricity meter
	grid connection
	protective earthing conductor
	water pump
	grid main switch
	electricity meter
	battery
	inverter



RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Legend:

Cable conduits in floor structure:

Cable conduits in wall structure:

Cable conduits in ceiling structure:

Cable for Sensor on floor surface:

Conduit for solar connection :

Conduit for protective earthing :

Conduit for direct grid connection :

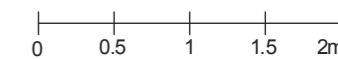
Conduits opening/ connection box:

Height 30 cm above floor:

Height 105 cm above floor:

Height 150 cm above floor:

Ceiling height:



Scale

Page No.

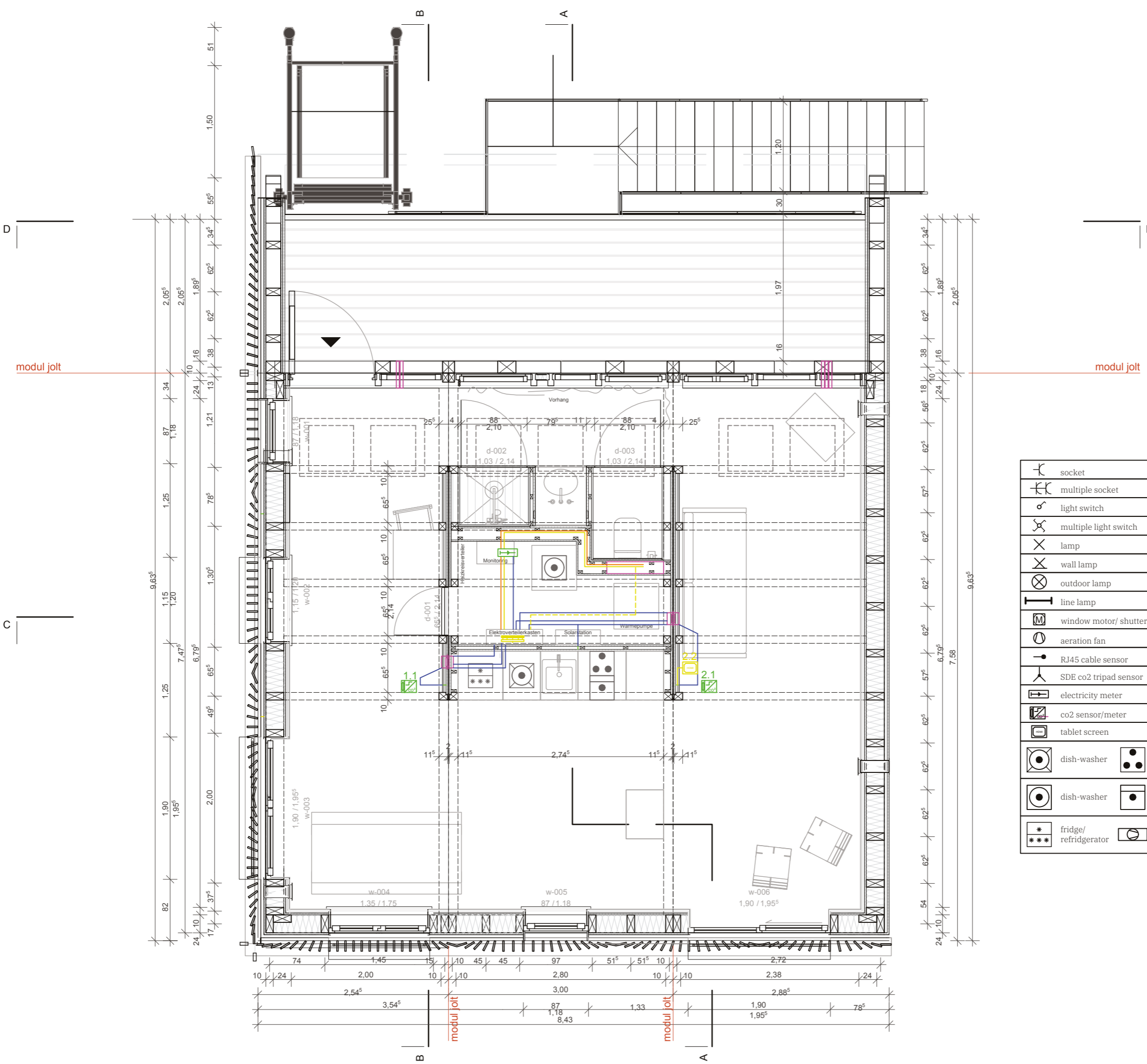
1:50

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Drawing Content

Power plan sensors - Floor Plan Level 1

EL-3007



	socket
	multiple socket
	light switch
	multiple light switch
	lamp
	wall lamp
	outdoor lamp
	line lamp
	window motor/ shutter
	aeration fan
	RJ45 cable sensor
	SDE co2 tripod sensor
	electricity meter
	co2 sensor/meter
	tablet screen
	dish-washer
	stove
	dish-washer
	oven
	fridge/ refrigerator
	heat-pump



RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Legend:

Cable conduits in floor structure:

Cable conduits in wall structure:

Cable conduits in ceiling structure:

Cable for Sensor:

Conduit for solar connection :

Conduit for direct grid connection :

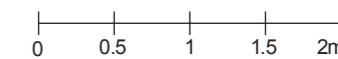
Conduits opening/ connection box:

Height 30 cm above floor:

Height 105 cm above floor:

Height 150 cm above floor:

Ceiling height:



Scale

Page No.

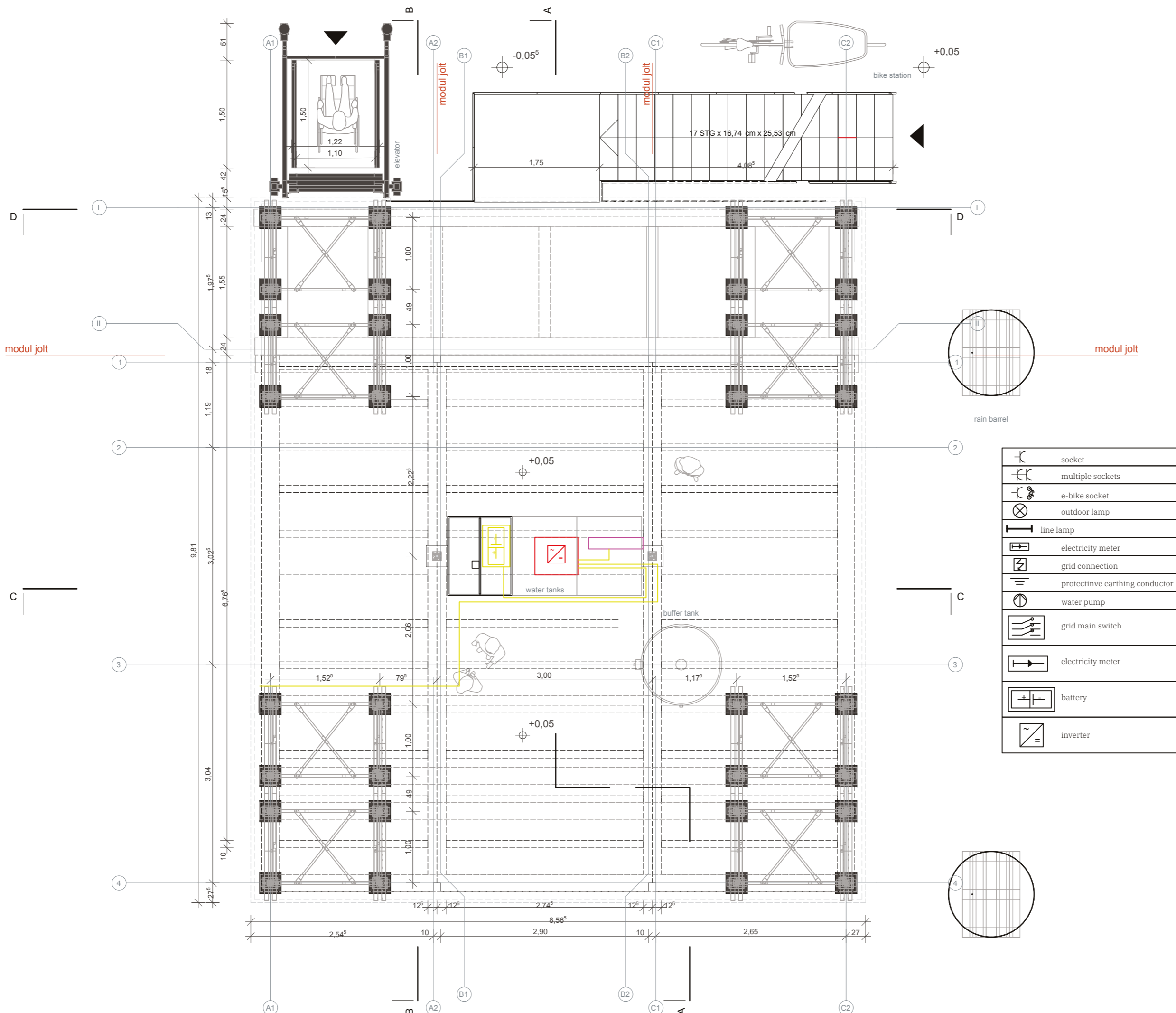
1:50

150

Drawing Content

Power plan conduits - Floor Plan Level 0

EL-3008



	socket
	multiple sockets
	e-bike socket
	outdoor lamp
	line lamp
	electricity meter
	grid connection
	protective earthing conductor
	water pump
	grid main switch
	electricity meter
	battery
	inverter



RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
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Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Legend:

Cable conduits in floor structure:

Cable conduits in wall structure:

Cable conduits in ceiling structure:

Cable for Sensor:

Conduit for solar connection :

Conduit for direct grid connection :

Conduits opening/ connection box:

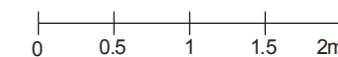


Height 30 cm above floor:

Height 105 cm above floor:

Height 150 cm above floor:

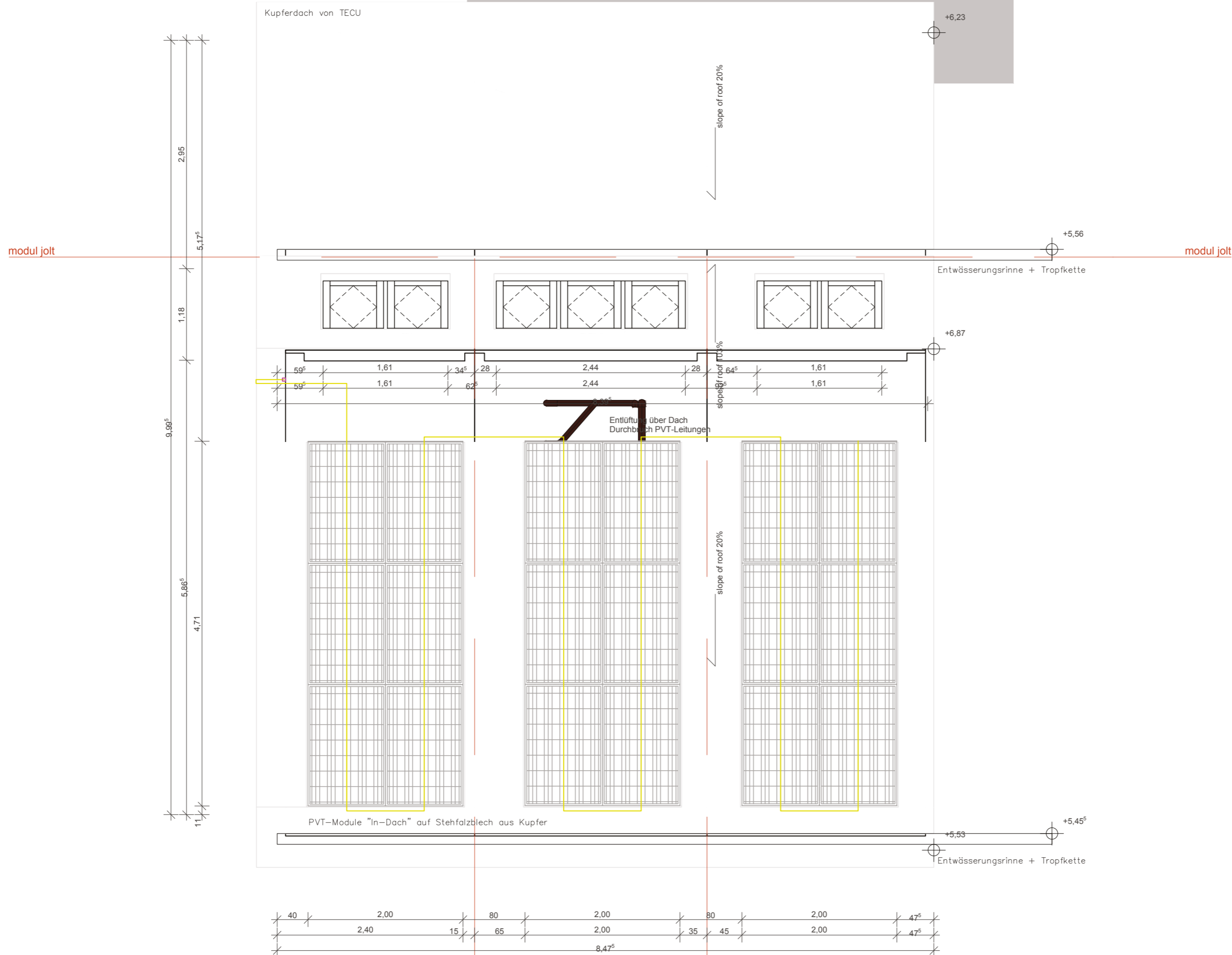
Ceiling height:



Scale 1:50 Page No. 151

Drawing Content Power plan conduits - Roof Plan

EL-3009





RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Legend:

Cable conduits in floor structure:

Cable conduits in wall structure:

Cable conduits in ceiling structure:

Cable for Sensor on floor surface:

Conduit for solar connection :

Conduit for protective earthing :

Conduit for direct grid connection :

Conduits opening/ connection box:

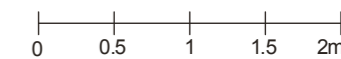
Height 30 cm above floor:

Height 105 cm above floor:

Height 150 cm above floor:

Ceiling height:

	socket
	multiple sockets
	light switch
	multiple light switches
	lamp
	wall lamp
	outdoor lamp
	line lamp
	window motor/ shutter
	aeration fan
	RJ45 cable sensor
	SDE co2 tripod sensor
	electricity meter
	co2 sensor/meter
	tablet screen
	dish-washer
	stove
	dish-washer
	oven
	fridge/ refrigerator
	heat-pump



Scale

1:50

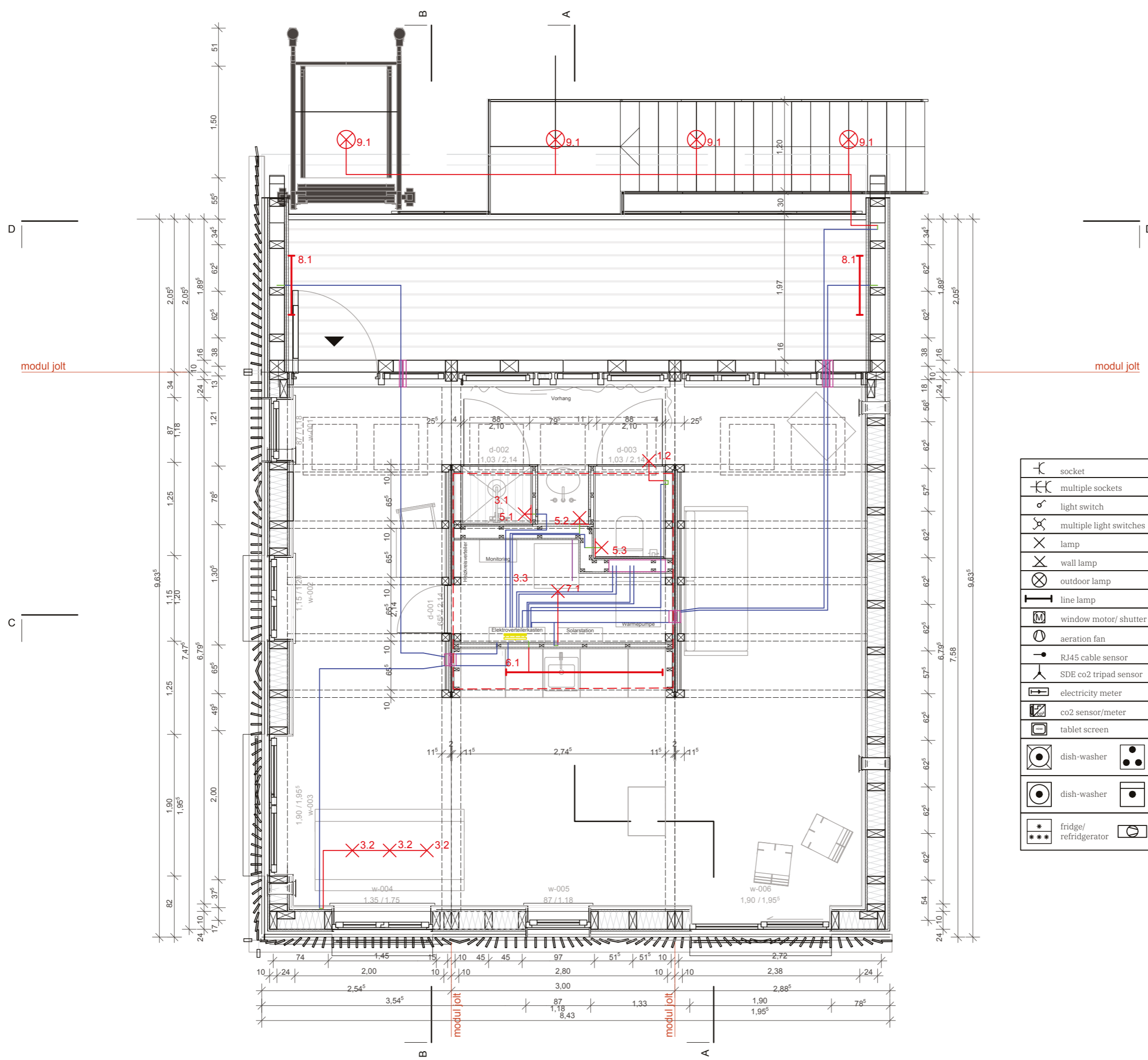
Page No.

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Drawing Content

Lighting Plan - Floor Plan Level 1

EL-4001





RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
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Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Legend:

Cable conduits in floor structure:

Cable conduits in wall structure:

Cable conduits in ceiling structure:

Cable for Sensor:

Conduit for solar connection :

Conduit for direct grid connection :

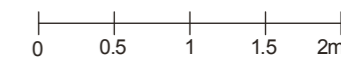
Conduits opening/ connection box:

Height 30 cm above floor:

Height 105 cm above floor:

Height 150 cm above floor:

Ceiling height:



Scale

Page No.

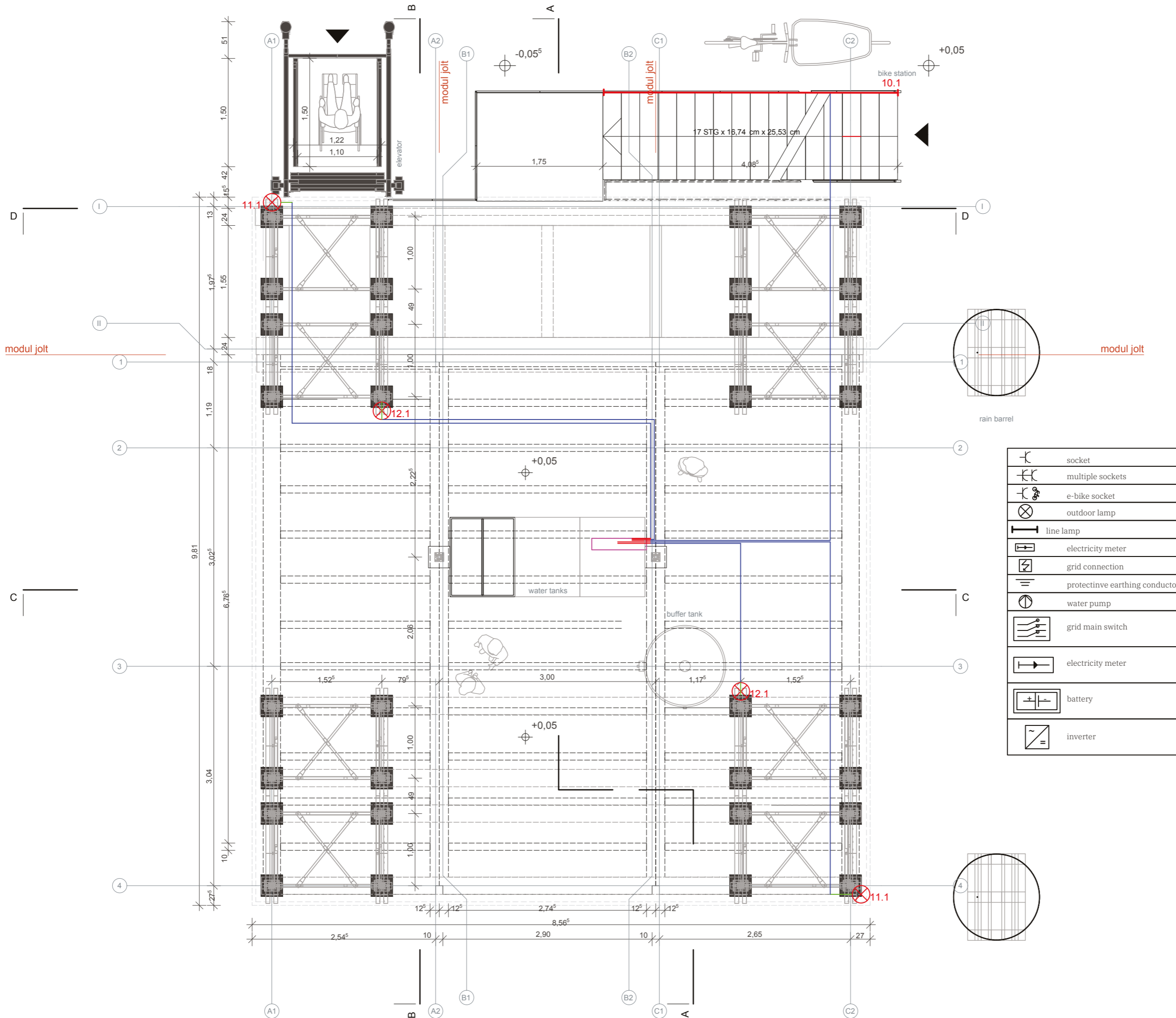
1:50

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Drawing Content

Lighting Plan - Floor Plan Level 0

EL-4002



	socket
	multiple sockets
	e-bike socket
	outdoor lamp
	line lamp
	electricity meter
	grid connection
	protective earthing conductor
	water pump
	grid main switch
	electricity meter
	battery
	inverter

Scale 1:50 Page No. 153

lighting effect

POS. 10.1
outdoor lighting, security and visibility

POS. 9.1
outdoor lighting, security and visibility

POS. 8.1
outdoor lighting, vertical graze lighting, on wall

POS. 1.2
indirect lighting, central

POS. 5.1 | 5.2 | 5.3
general lighting

POS. 2.1 + 2.2
accent lighting, spread around space + magnetic

POS. 4.2
task lighting, working

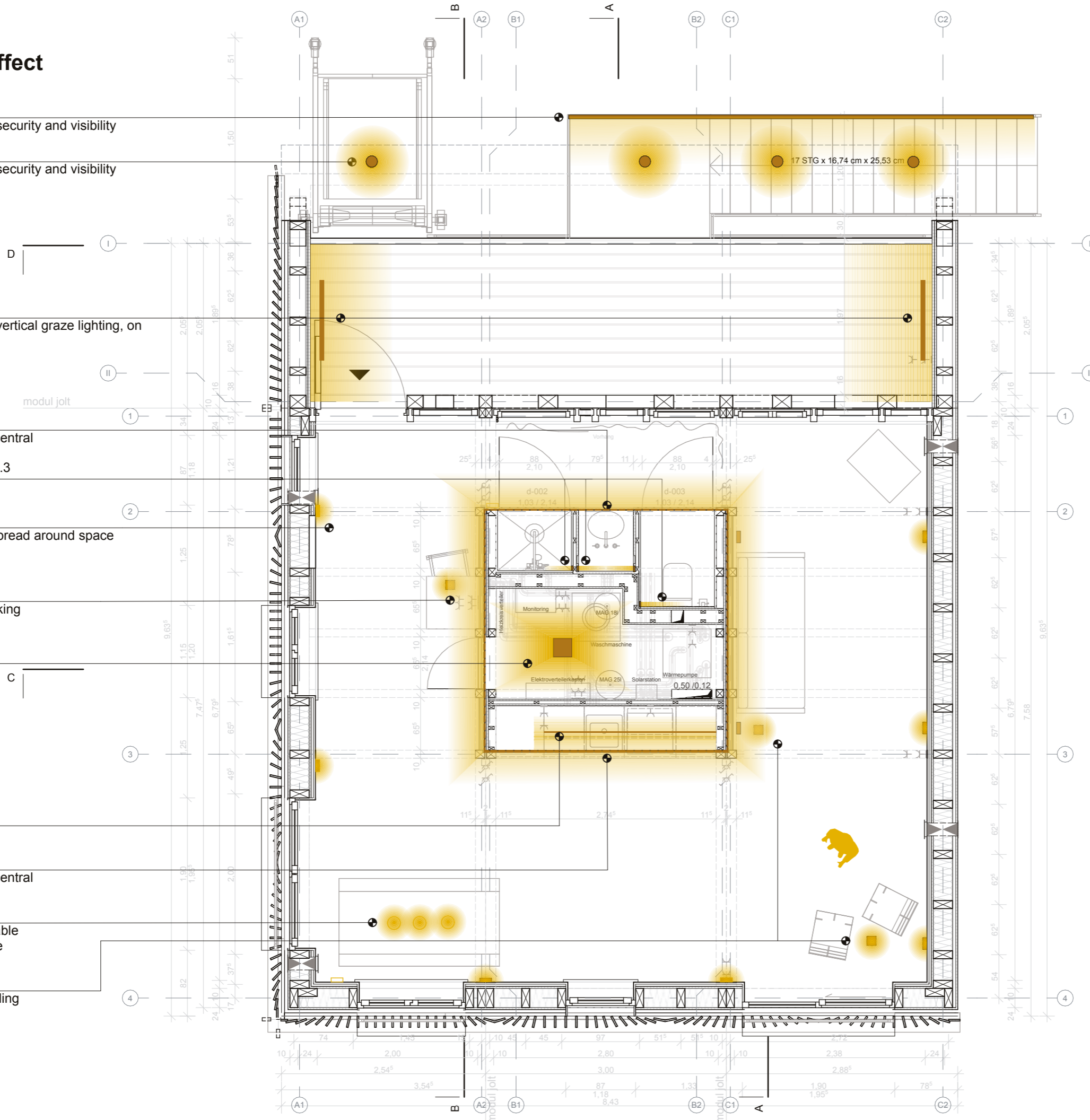
POS. 7.1
task lighting

POS. 6.1
task lighting

POS. 1.1
indirect lighting, central

POS. 3.1 + 3.2
task lighting on table + luminaire shade

POS. 4.1
task lighting, reading



WUPPERTAL GERMANY

General	GE
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Mechanical	ME
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Instrumentation Drawings	ID
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Public Tour	PT

legend

Pos. 1.1	linear light profile
Pos. 1.2	linear light profile
Pos. 2.1	wall luminaire
Pos. 2.2	mounting access
Pos. 3.1	pendant luminaire
Pos. 3.2	luminaire shade
Pos. 4.1	free standing luminaire
Pos. 4.2	desk light
Pos. 5.1	linear light profile
Pos. 5.2	linear light profile
Pos. 5.3	linear light profile
Pos. 6.1	linear light profile
Pos. 7.1	flat ceiling luminaire
Pos. 8.1	linear wallwasher
Pos. 9.1	adjustable spot
Pos. 10.1	accent light
Pos. 11.1	ceiling washer
Pos. 12.1	adjustable spot

0 0.5 1 1.5 2m

Scale 1:50 Page No. 154

Drawing Content
Lighting Plan - Situation Floor Plan Level 1

EL-4003

direct light

POS. 9.1
outdoor lighting, security and visibility

POS. 2.1 + 2.2
accent lighting, spread around space
+ magnetic

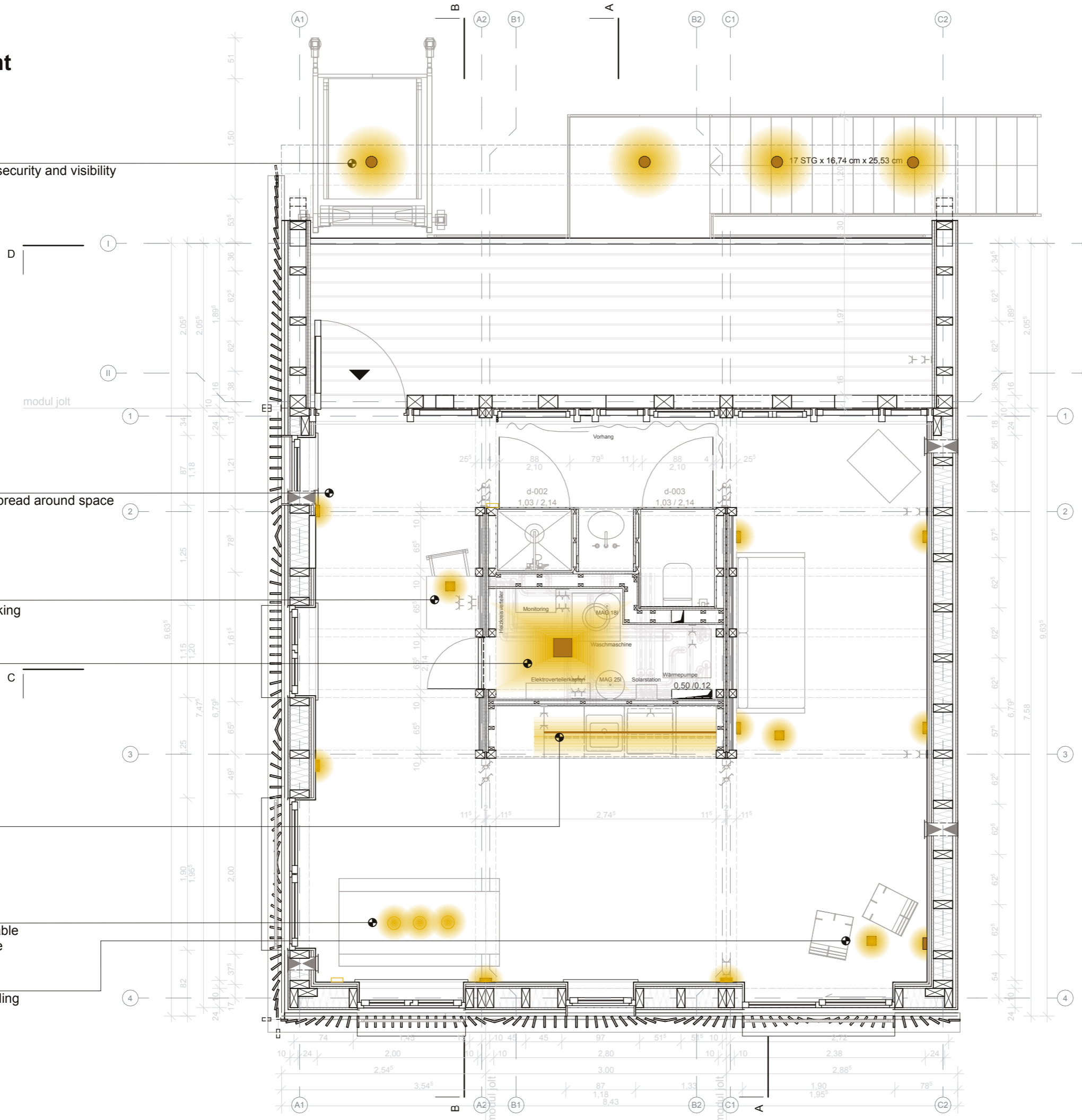
POS. 4.2
task lighting, working

POS. 7.1
task lighting

POS. 6.1
task lighting

POS. 3.1 + 3.2
task lighting on table
+ luminaire shade

POS. 4.1
task lighting, reading

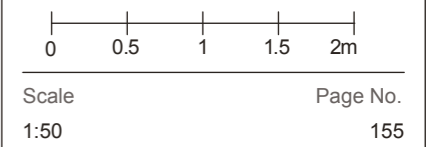


WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

legend

Pos. 1.1	linear light profile
Pos. 1.2	linear light profile
Pos. 2.1	wall luminaire
Pos. 2.2	mounting access
Pos. 3.1	pendant luminaire
Pos. 3.2	luminaire shade
Pos. 4.1	free standing luminaire
Pos. 4.2	desk light
Pos. 5.1	linear light profile
Pos. 5.2	linear light profile
Pos. 5.3	linear light profile
Pos. 6.1	linear light profile
Pos. 7.1	flat ceiling luminaire
Pos. 8.1	linear wallwasher
Pos. 9.1	adjustable spot
Pos. 10.1	accent light
Pos. 11.1	ceiling washer
Pos. 12.1	adjustable spot



Drawing Content
Lighting Plan - Situation Direct Light

EL-4004

indirect light

POS. 10.1
outdoor lighting, security and visibility

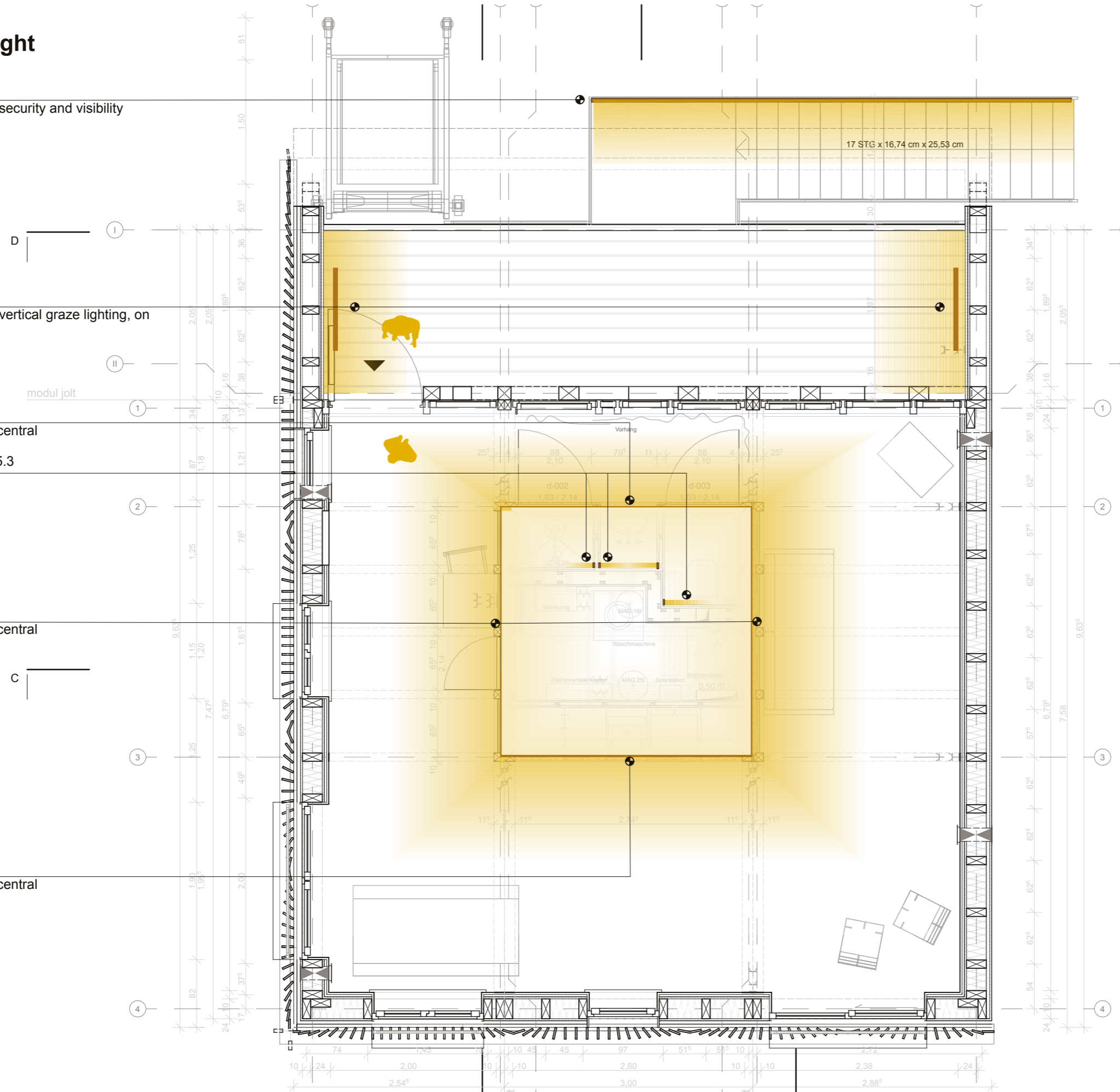
POS. 8.1
outdoor lighting, vertical graze lighting, on wall

POS. 1.2
indirect lighting, central

POS. 5.1 | 5.2 | 5.3
general lighting

POS. 1.2
indirect lighting, central

POS. 1.1
indirect lighting, central



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
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Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

legend

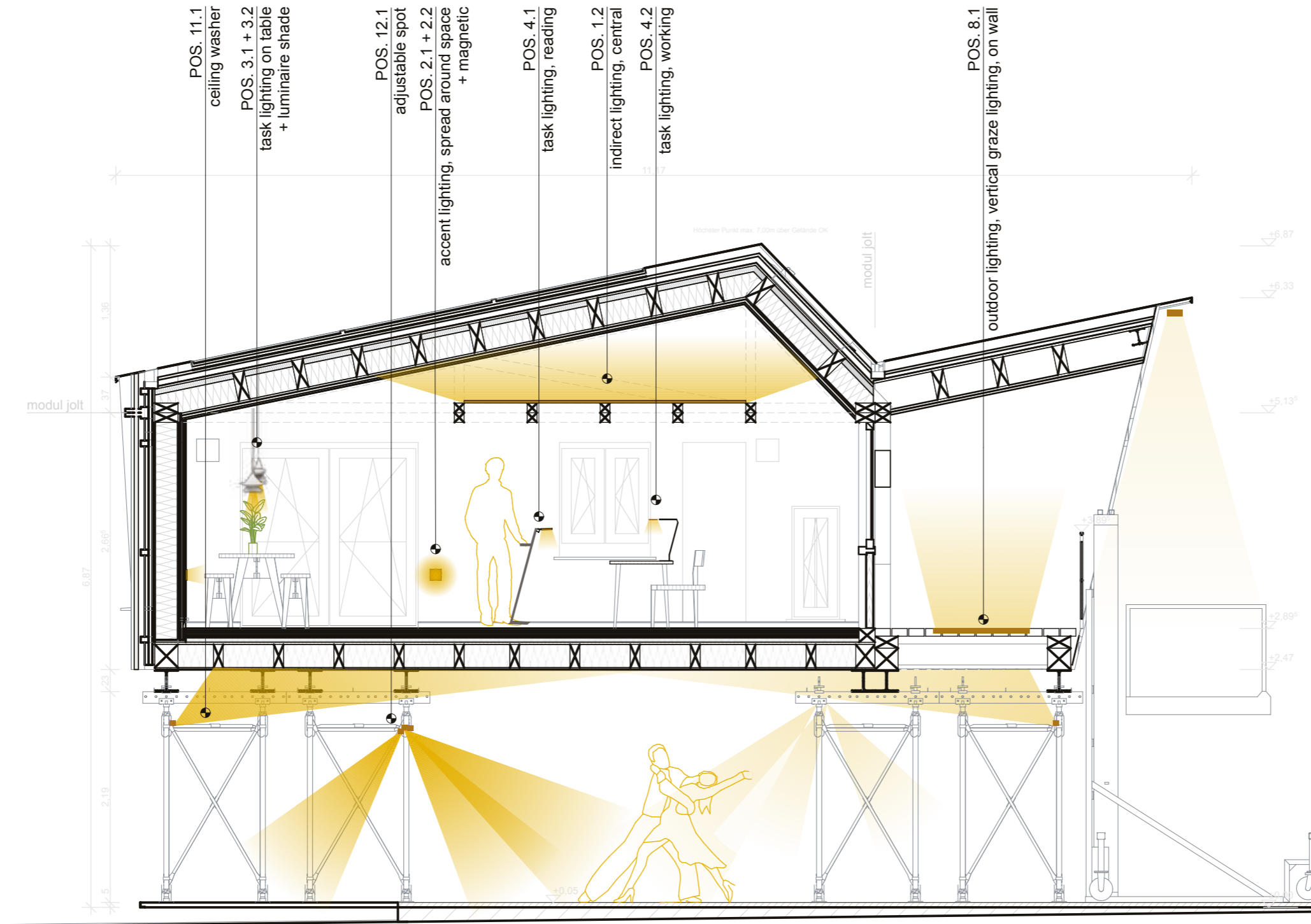
Pos. 1.1	linear light profile
Pos. 1.2	linear light profile
Pos. 2.1	wall luminaire
Pos. 2.2	mounting access
Pos. 3.1	pendant luminaire
Pos. 3.2	luminaire shade
Pos. 4.1	free standing luminaire
Pos. 4.2	desk light
Pos. 5.1	linear light profile
Pos. 5.2	linear light profile
Pos. 5.3	linear light profile
Pos. 6.1	linear light profile
Pos. 7.1	flat ceiling luminaire
Pos. 8.1	linear wallwasher
Pos. 9.1	adjustable spot
Pos. 10.1	accent light
Pos. 11.1	ceiling washer
Pos. 12.1	adjustable spot

Scale 1:50 Page No. 156

Drawing Content
Lighting Plan - Situation Indirect Light

EL-4005

section core

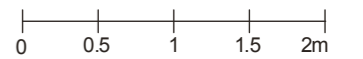


WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

legend

Pos. 1.1	linear light profile
Pos. 1.2	linear light profile
Pos. 2.1	wall luminaire
Pos. 2.2	mounting access
Pos. 3.1	pendant luminaire
Pos. 3.2	luminaire shade
Pos. 4.1	free standing luminaire
Pos. 4.2	desk light
Pos. 5.1	linear light profile
Pos. 5.2	linear light profile
Pos. 5.3	linear light profile
Pos. 6.1	linear light profile
Pos. 7.1	flat ceiling luminaire
Pos. 8.1	linear wallwasher
Pos. 9.1	adjustable spot
Pos. 10.1	accent light
Pos. 11.1	ceiling washer
Pos. 12.1	adjustable spot



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Drawing Content
Lighting Plan - Situation Section

EL-4006

elevation core

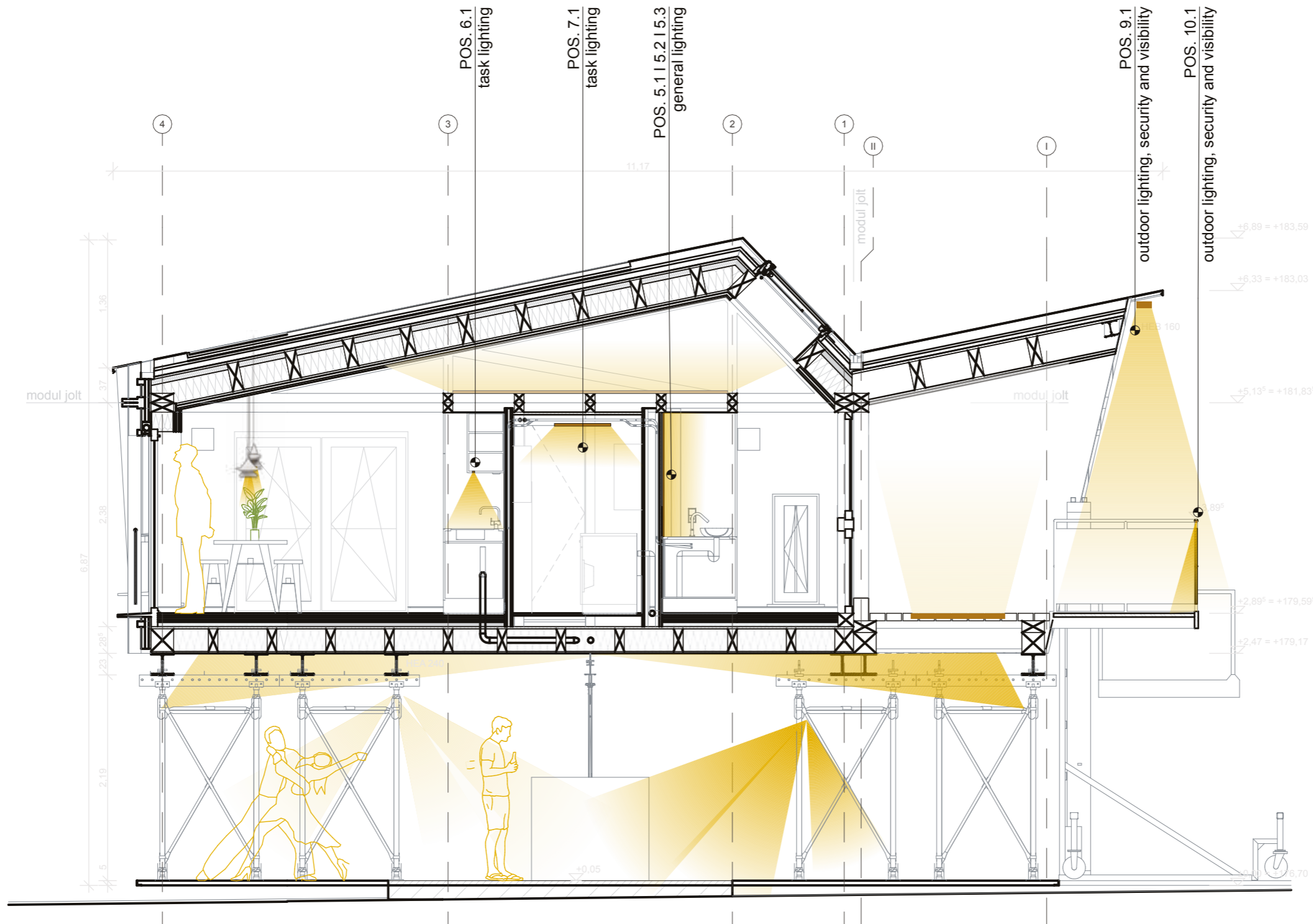


WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

legend

Pos. 1.1	linear light profile
Pos. 1.2	linear light profile
Pos. 2.1	wall luminaire
Pos. 2.2	mounting access
Pos. 3.1	pendant luminaire
Pos. 3.2	luminaire shade
Pos. 4.1	free standing luminaire
Pos. 4.2	desk light
Pos. 5.1	linear light profile
Pos. 5.2	linear light profile
Pos. 5.3	linear light profile
Pos. 6.1	linear light profile
Pos. 7.1	flat ceiling luminaire
Pos. 8.1	linear wallwasher
Pos. 9.1	adjustable spot
Pos. 10.1	accent light
Pos. 11.1	ceiling washer
Pos. 12.1	adjustable spot

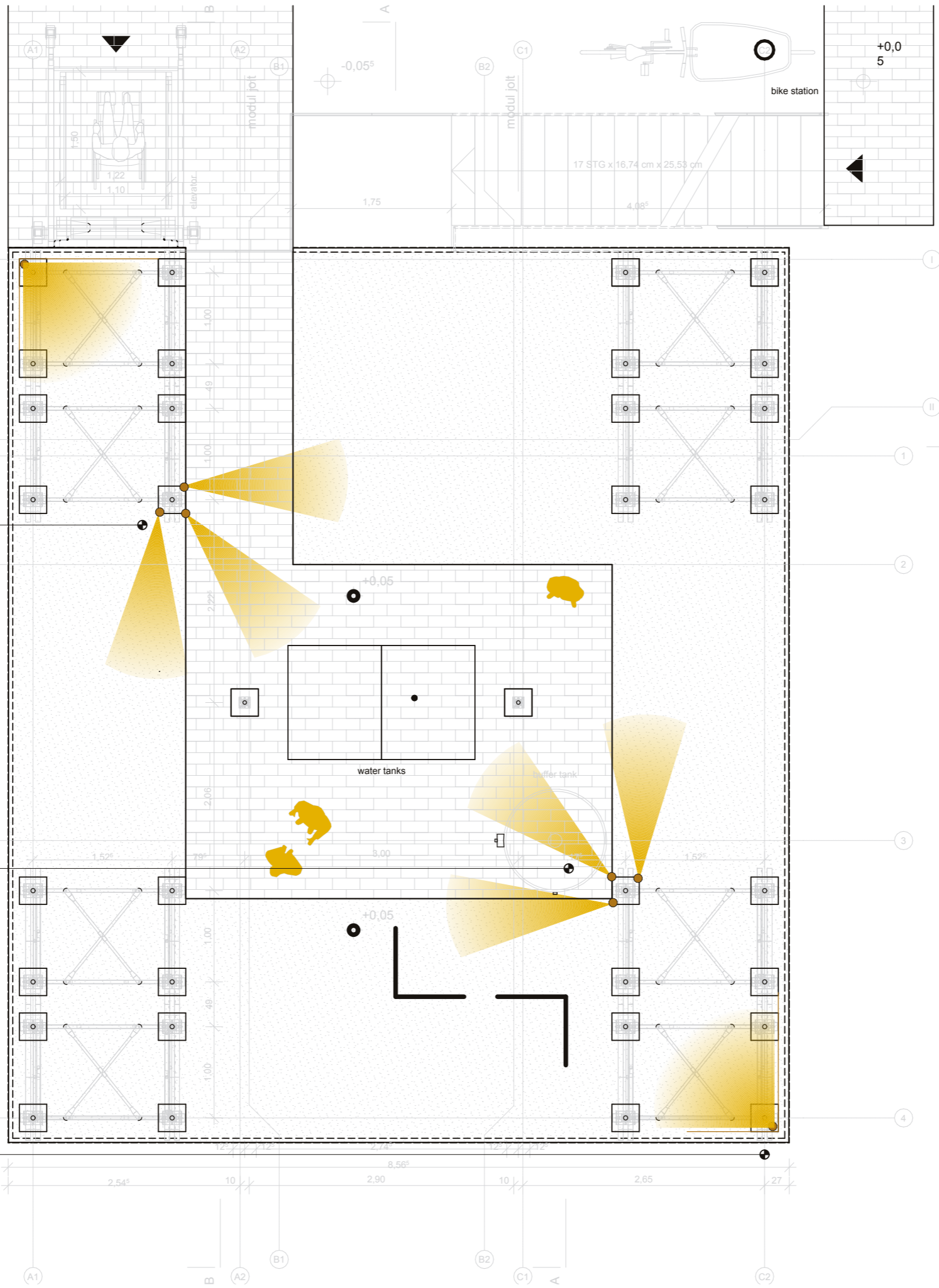


Scale no scale Page No. 158

Drawing Content Lighting Plan - Situation Elevation Core

EL-4007

lighting effect

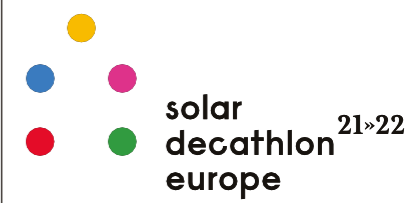


POS. 11.1
ceiling washer

POS. 12.1
adjustable spot

POS. 12.1
adjustable spot

POS. 11.1
ceiling washer

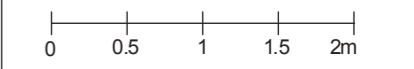


WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

legend

Pos. 1.1	linear light profile
Pos. 1.2	linear light profile
Pos. 2.1	wall luminaire
Pos. 2.2	mounting access
Pos. 3.1	pendant luminaire
Pos. 3.2	luminaire shade
Pos. 4.1	free standing luminaire
Pos. 4.2	desk light
Pos. 5.1	linear light profile
Pos. 5.2	linear light profile
Pos. 5.3	linear light profile
Pos. 6.1	linear light profile
Pos. 7.1	flat ceiling luminaire
Pos. 8.1	linear wallwasher
Pos. 9.1	adjustable spot
Pos. 10.1	accent light
Pos. 11.1	ceiling washer
Pos. 12.1	adjustable spot



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Drawing Content
Lighting Plan -Situation Exterior Plan

EL-4008

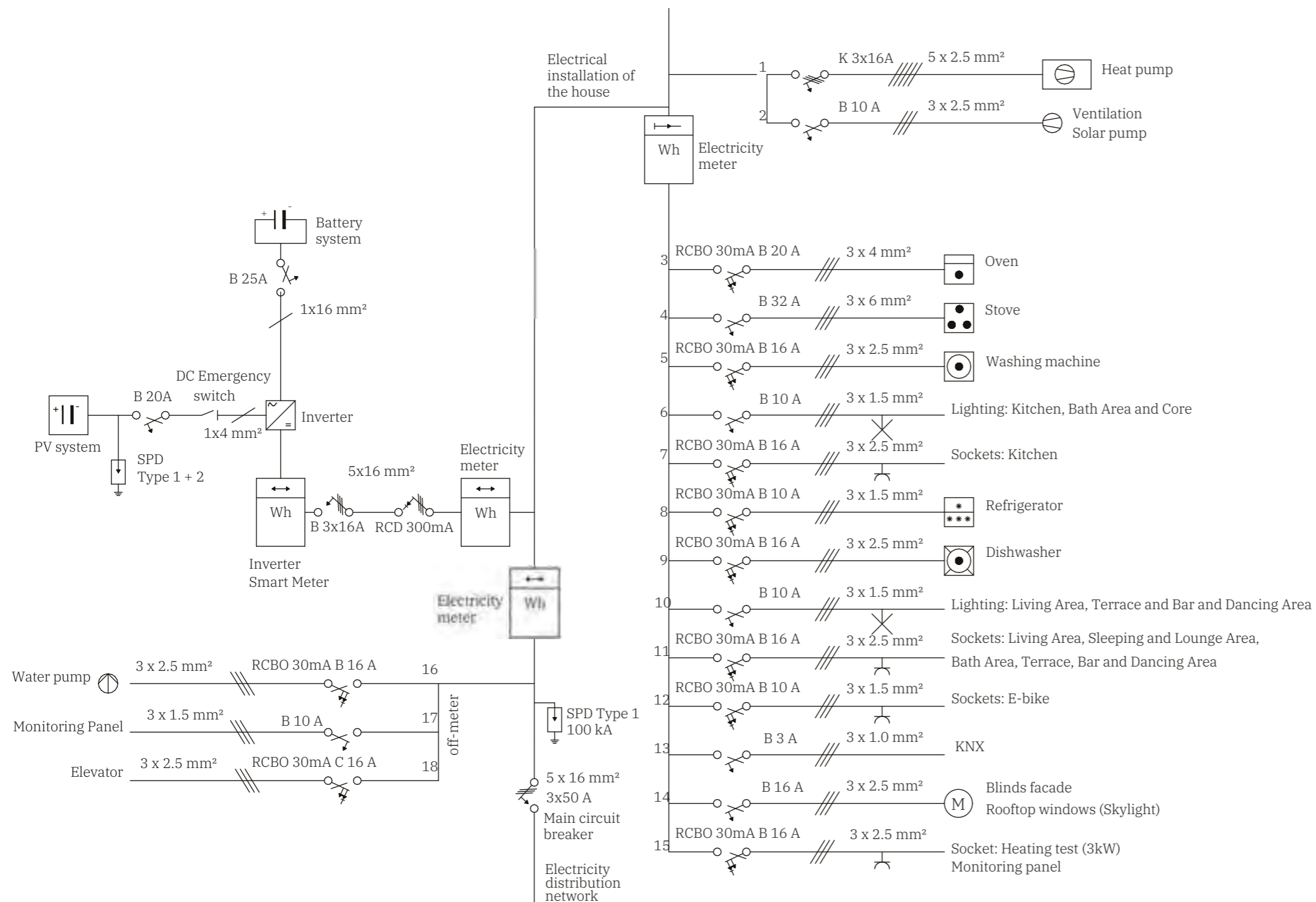


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
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Health & Safety	HS
Public Tour	PT



RCBO PROTECTION	
RCD PROTECTION	
MCB PROTECTION	
GENERATOR	
BATTERY	
SOCKET	
LIGHT	
MOTOR	
VENTILATION	
SOLAR PUMP	
HEAT PUMP	
INVERTER	
WATER PUMP	
OVEN	
STOVE	
WASHING MACHINE	
REFRIGERATOR	
DISHWASHER	



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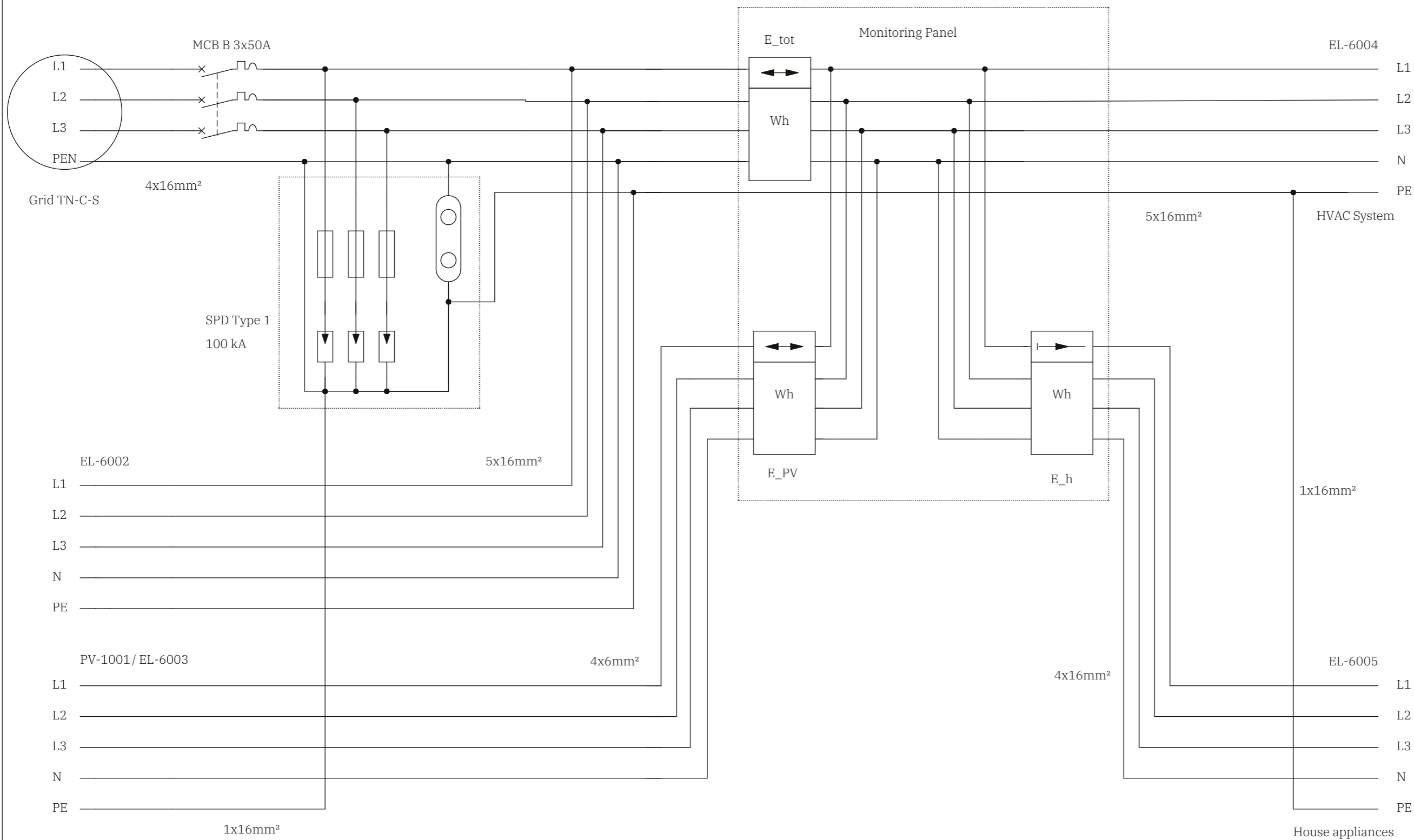


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
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Health & Safety	HS
Public Tour	PT



Scale no scale Page No. 161

Drawing Content AC Circuit Layout

EL-6001

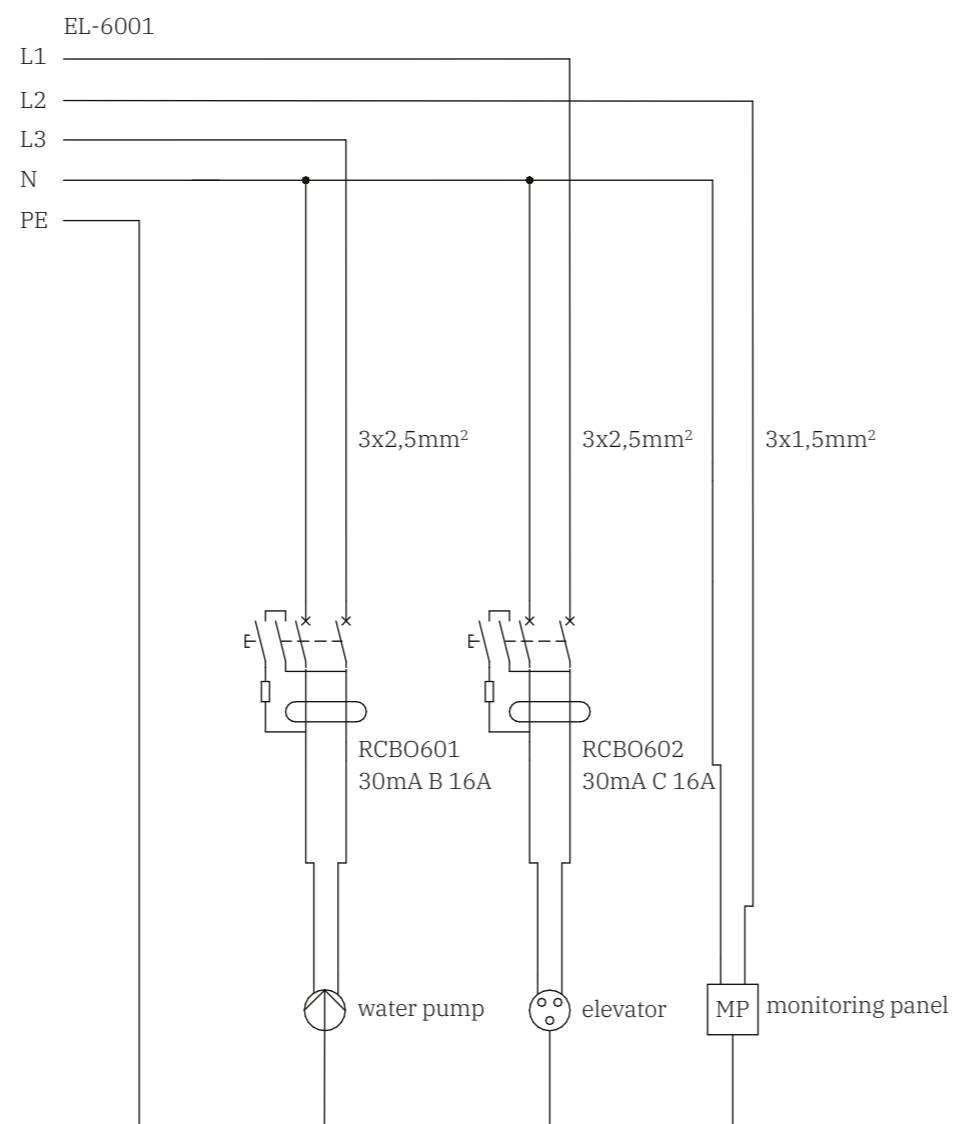


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
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WATER PUMP	
ELEVATOR	
MONITORING PANEL	

Scale: no scale
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Drawing Content:
AC Circuit Layout

EL-6002

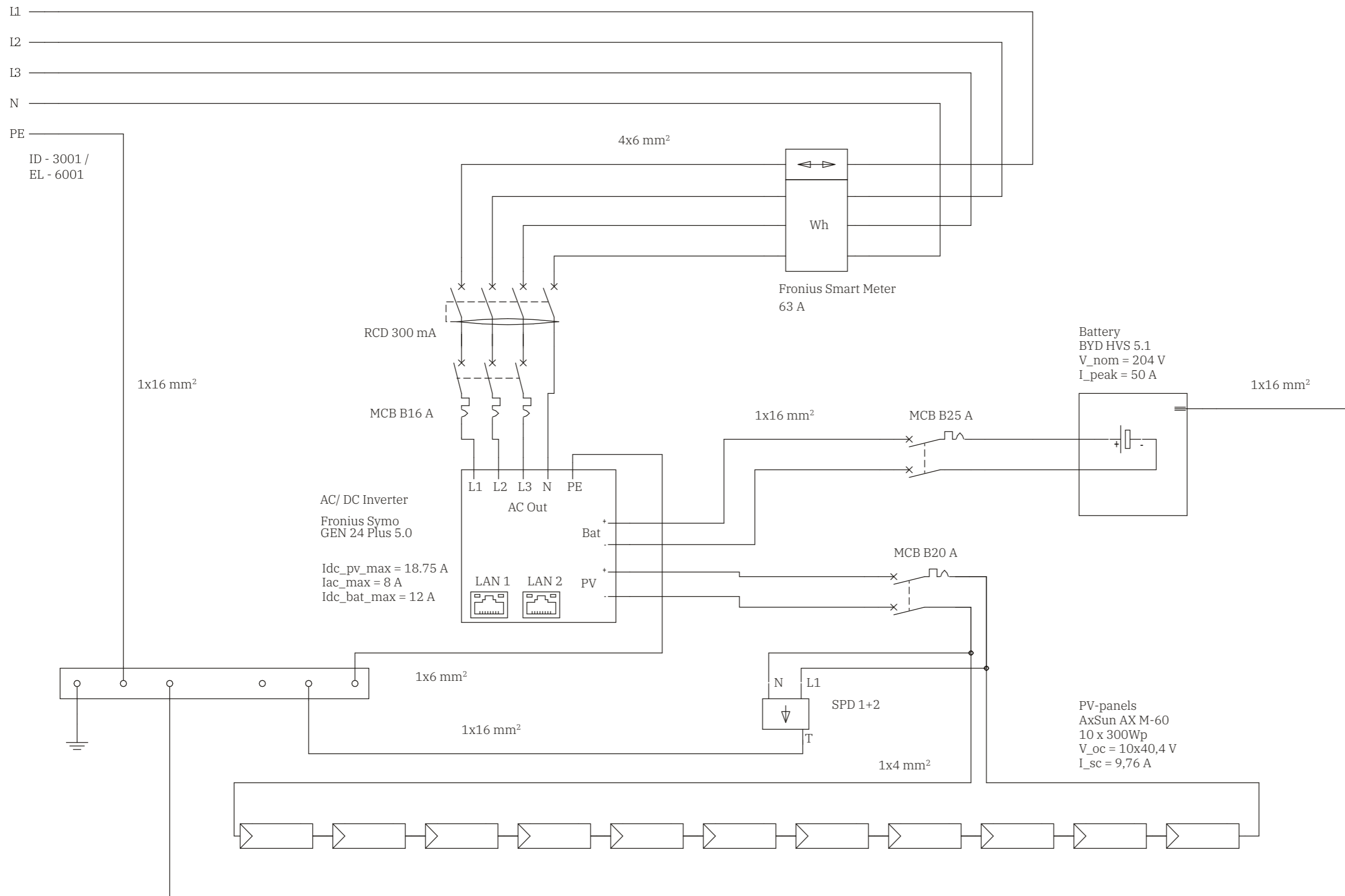


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
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Drawing Content
 AC Circuit Layout

EL-6003

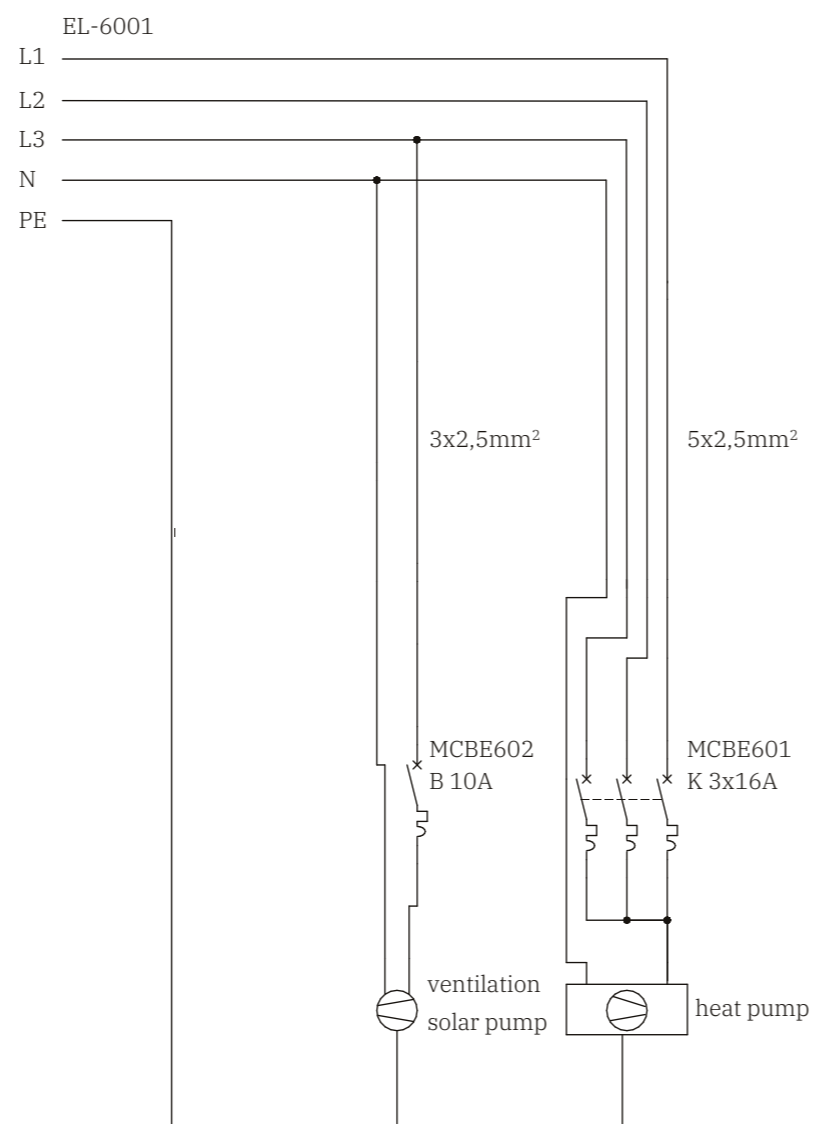


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
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Public Tour	PT



VENTILATION	
SOLAR PUMP	
HEAT PUMP	

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Drawing Content
AC Circuit Layout

EL-6004

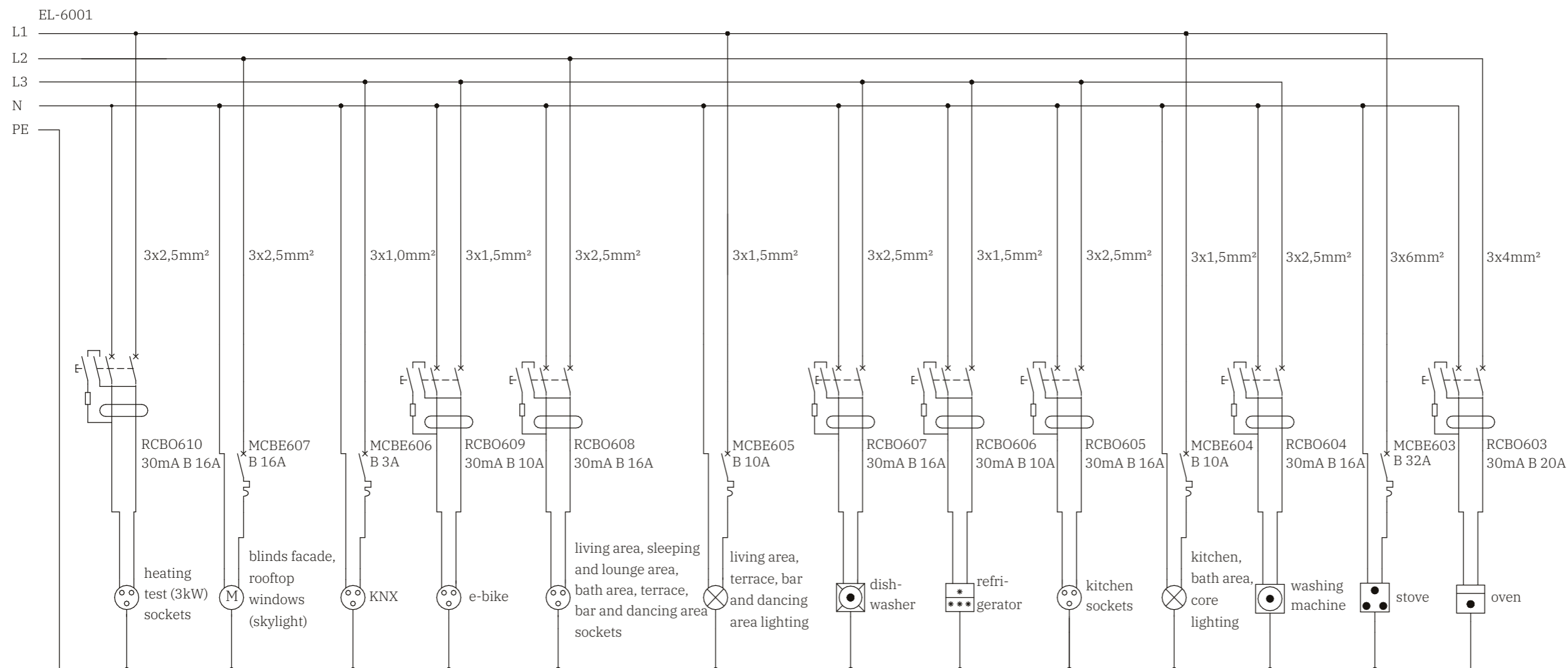


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
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SOCKET		STOVE	
LIGHT		WASHING MACHINE	
MOTOR		REFRIGERATOR	
OVEN		DISHWASHER	

Scale no scale Page No. 165

Drawing Content
AC Circuit Layout

EL-6005



Photovoltaic System (PV)

Karlsruhe, 23rd March 2022



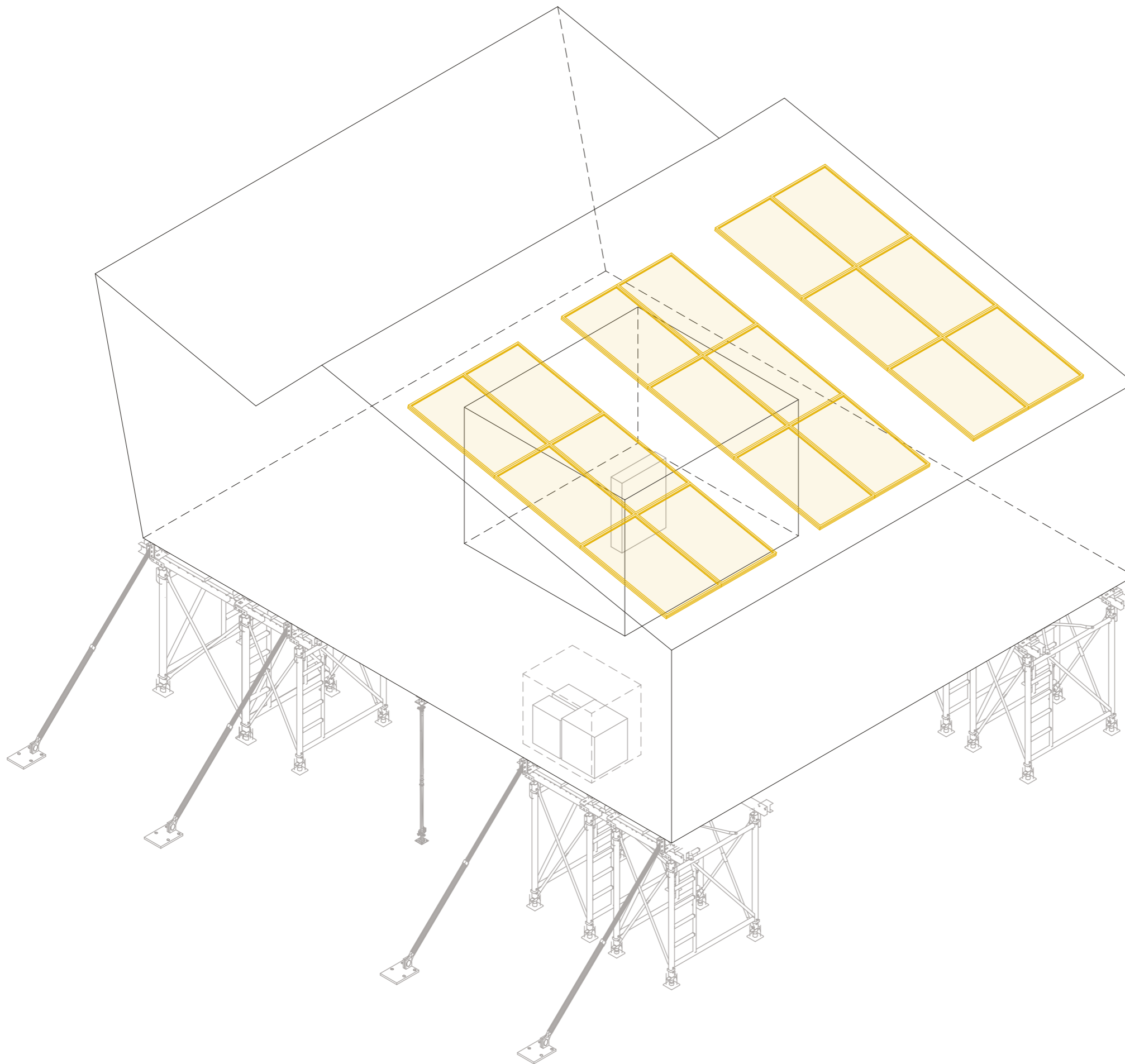
RoofKIT



solar
decaathlon^{21»22}
europe

WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale

no scale

Page No.

167

Drawing Content

Conceptual Drawing

PV-0001

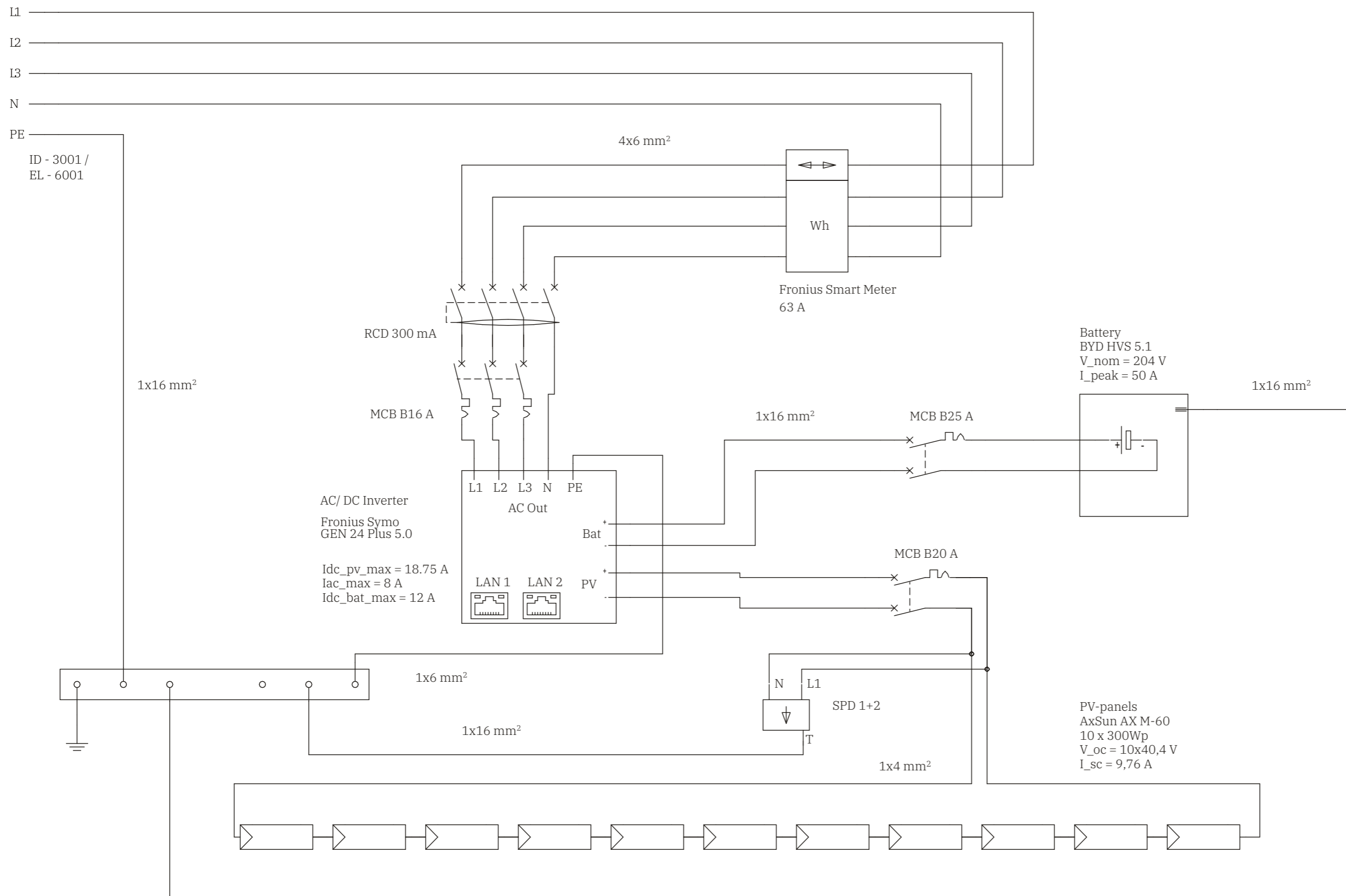


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



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Scale no scale Page No. 168

Drawing Content Photovoltaic system: general

PV-1001

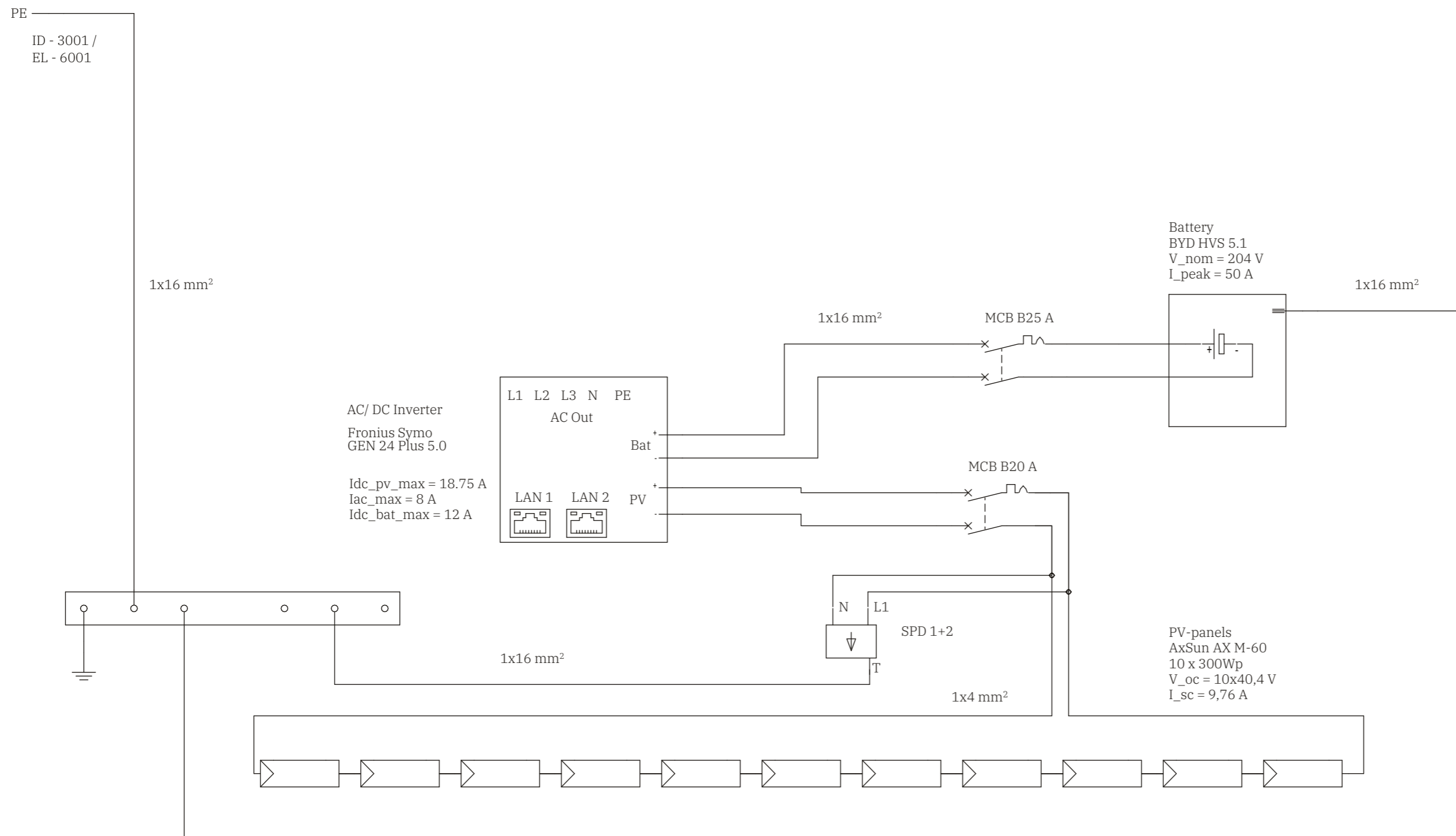


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



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Drawing Content Photovoltaic System: DC Circuit

PV-2001

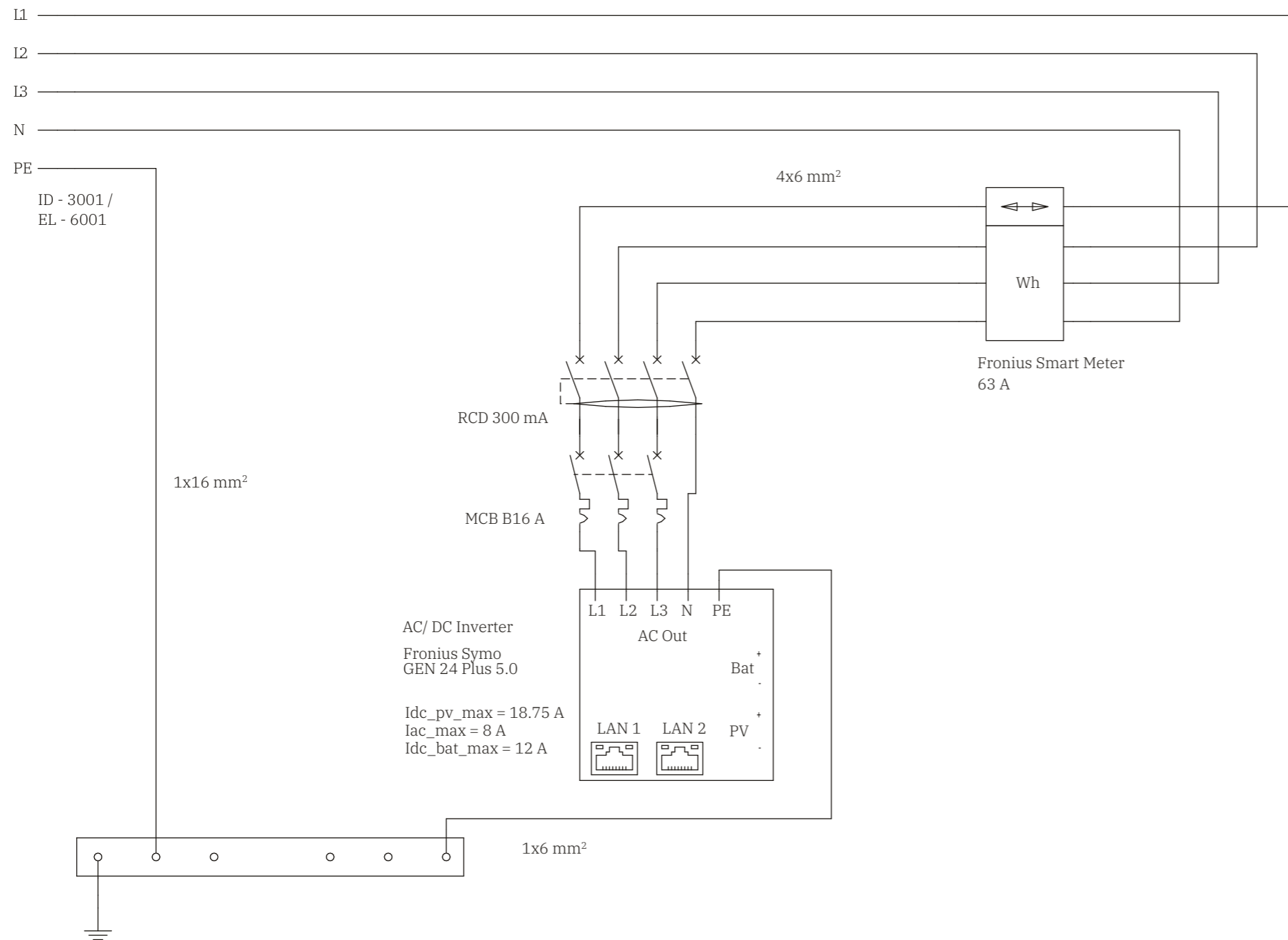


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



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 no scale 170

Drawing Content
 Photovoltaic System: AC Circuit

PV-3001

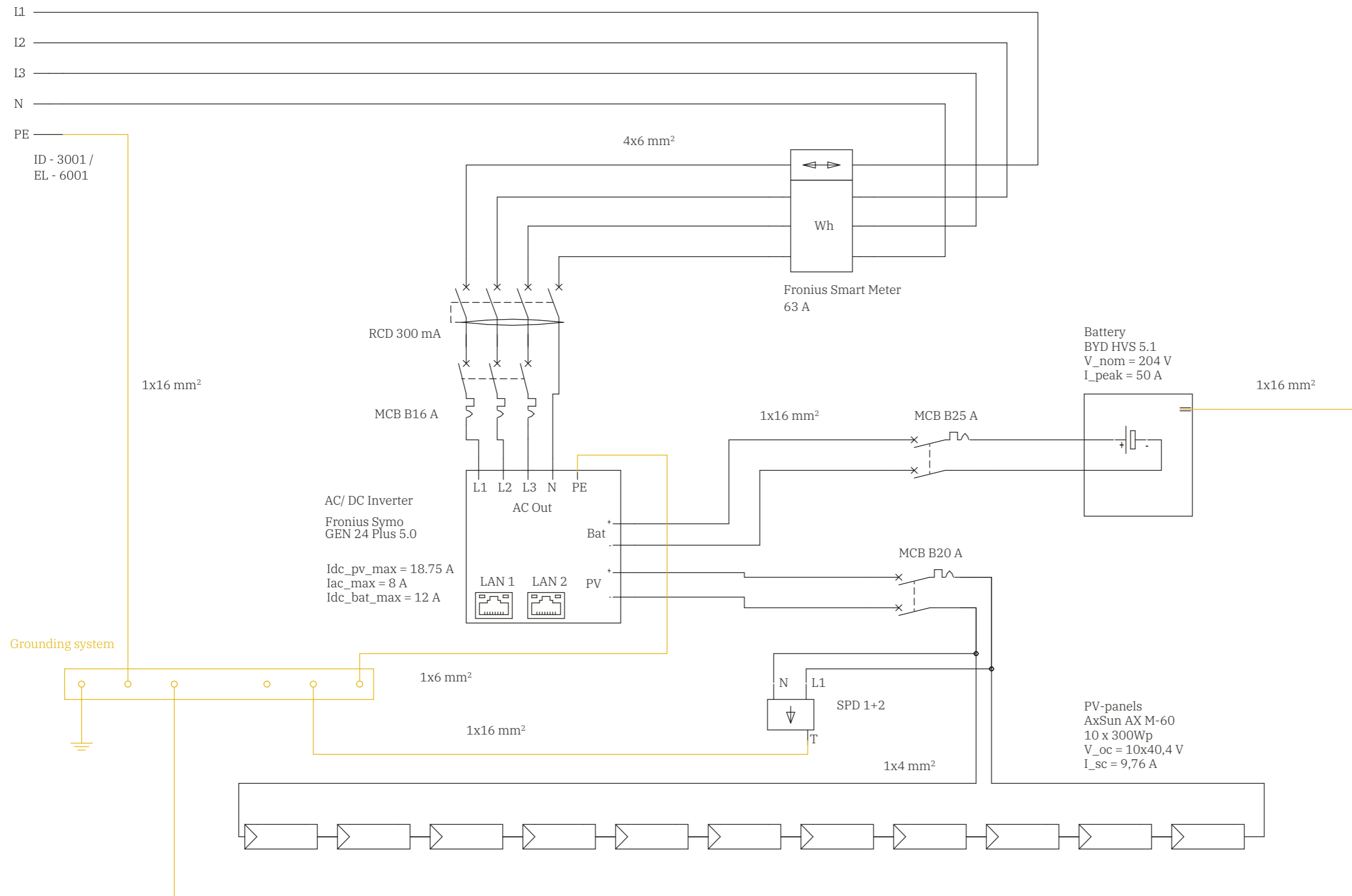


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
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Fire Protection	FP
Health & Safety	HS
Public Tour	PT



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Drawing Content Photovoltaic System: Grounding System

PV-4001



Telecommunication & Building Management System (BMS)

Karlsruhe, 23rd March 2022

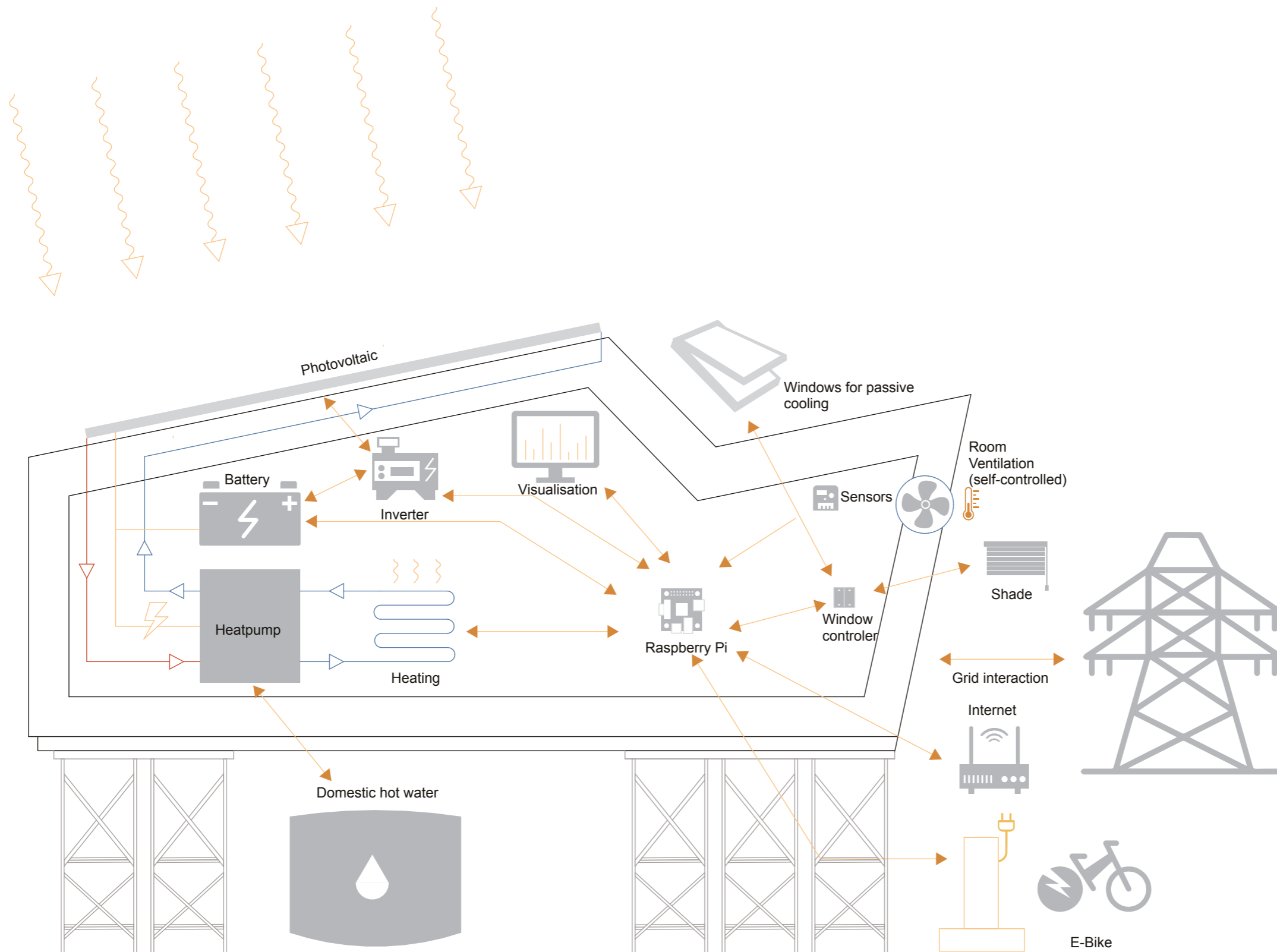


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
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Health & Safety	HS
Public Tour	PT



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Drawing Content
Conceptual Drawing

BMS-0001

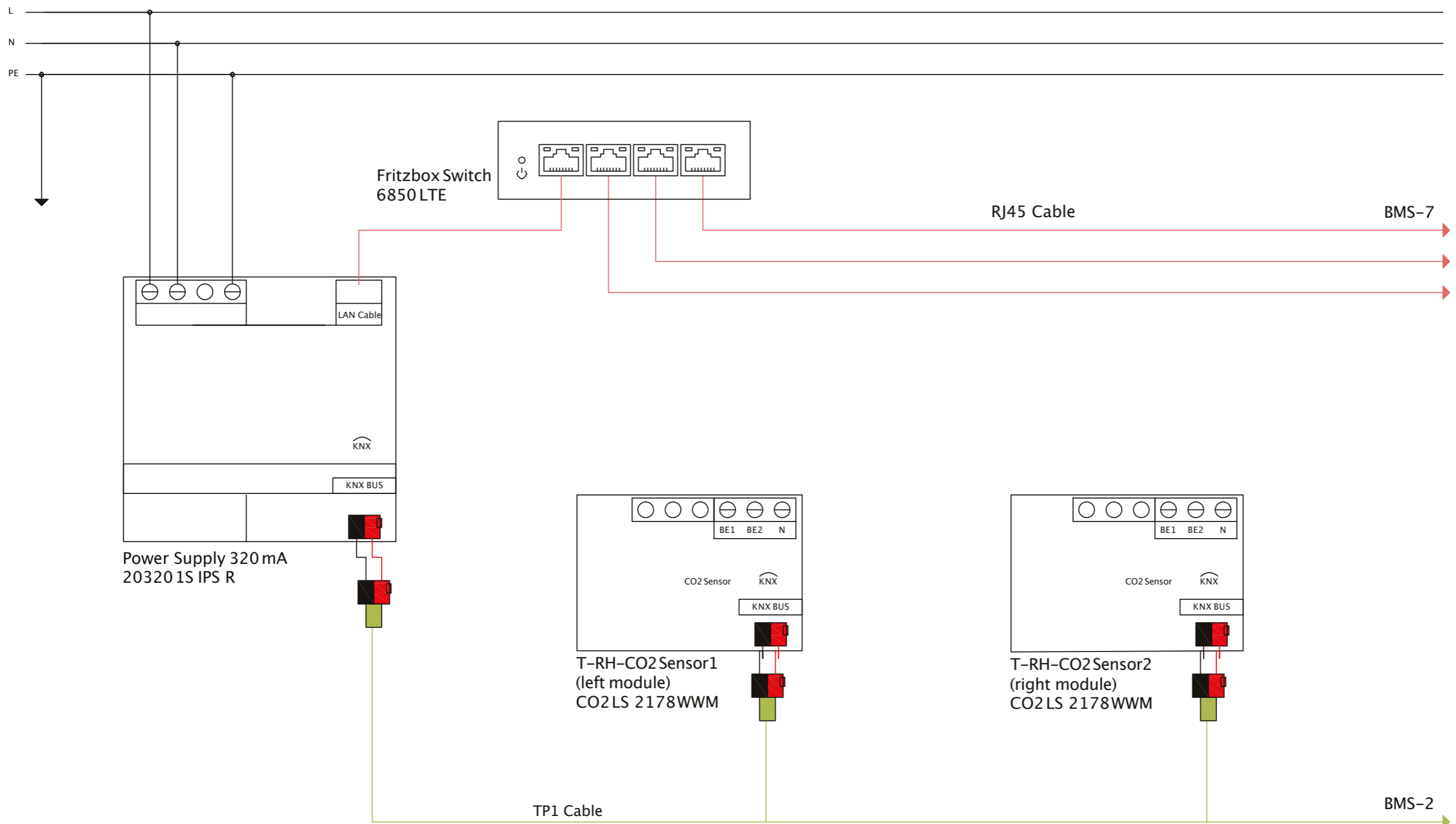


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



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Drawing Content Wiring Plan

BMS-1001

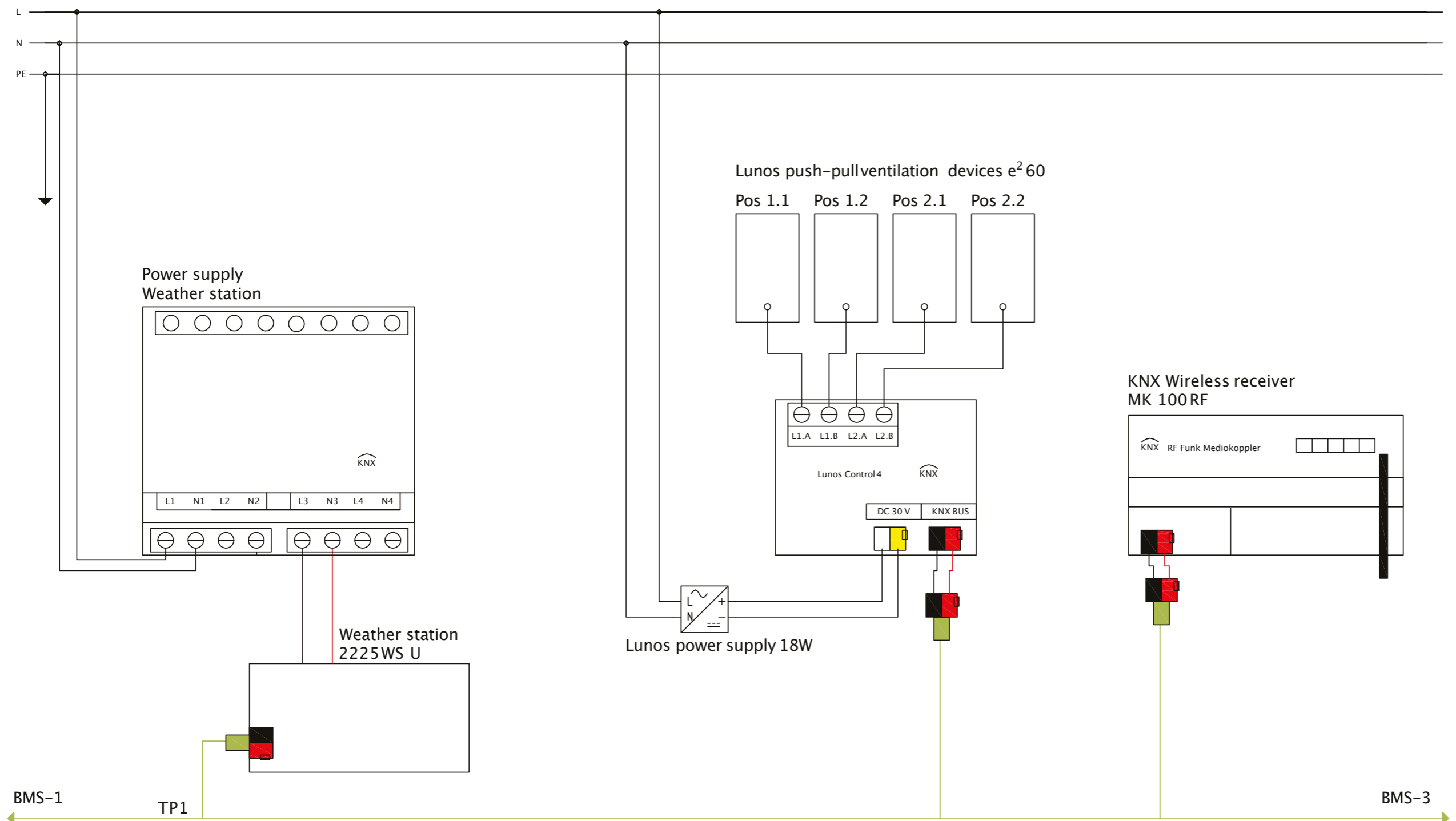


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



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Drawing Content
Wiring plan

BMS-1002

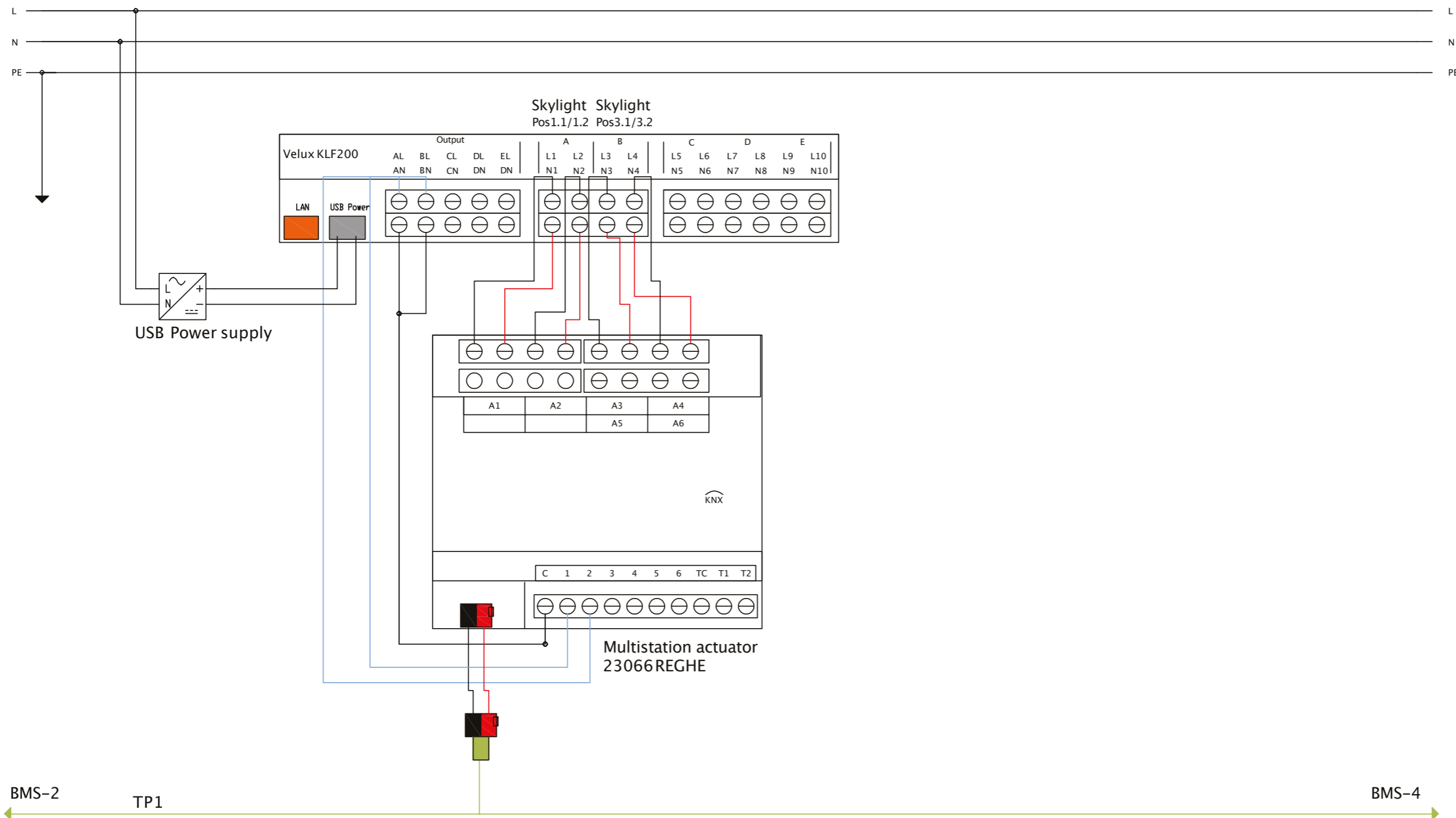


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



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Drawing Content
Wiring plan

BMS-1003

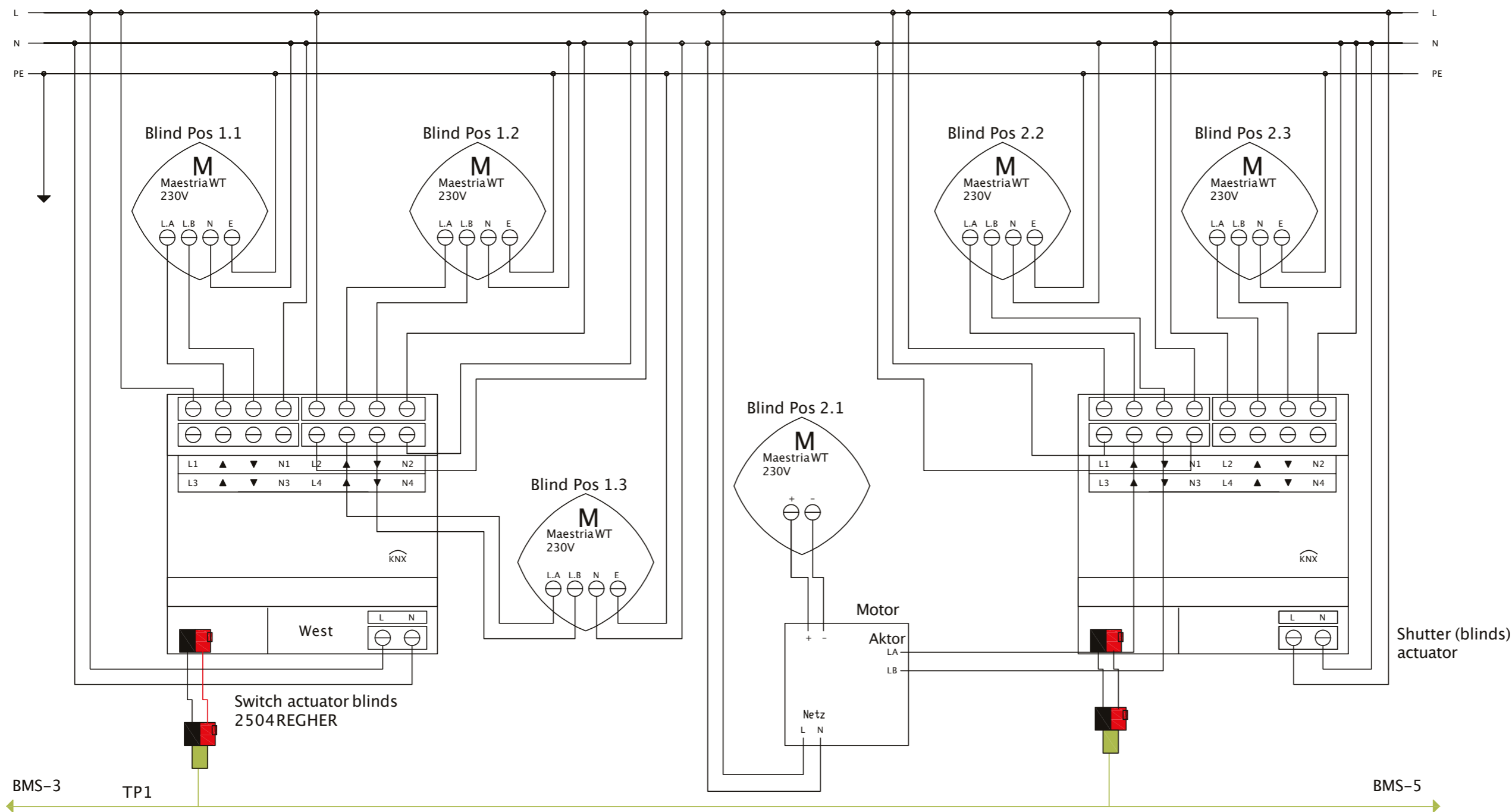


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



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no scale 177

Drawing Content
Wiring plan

BMS-1004

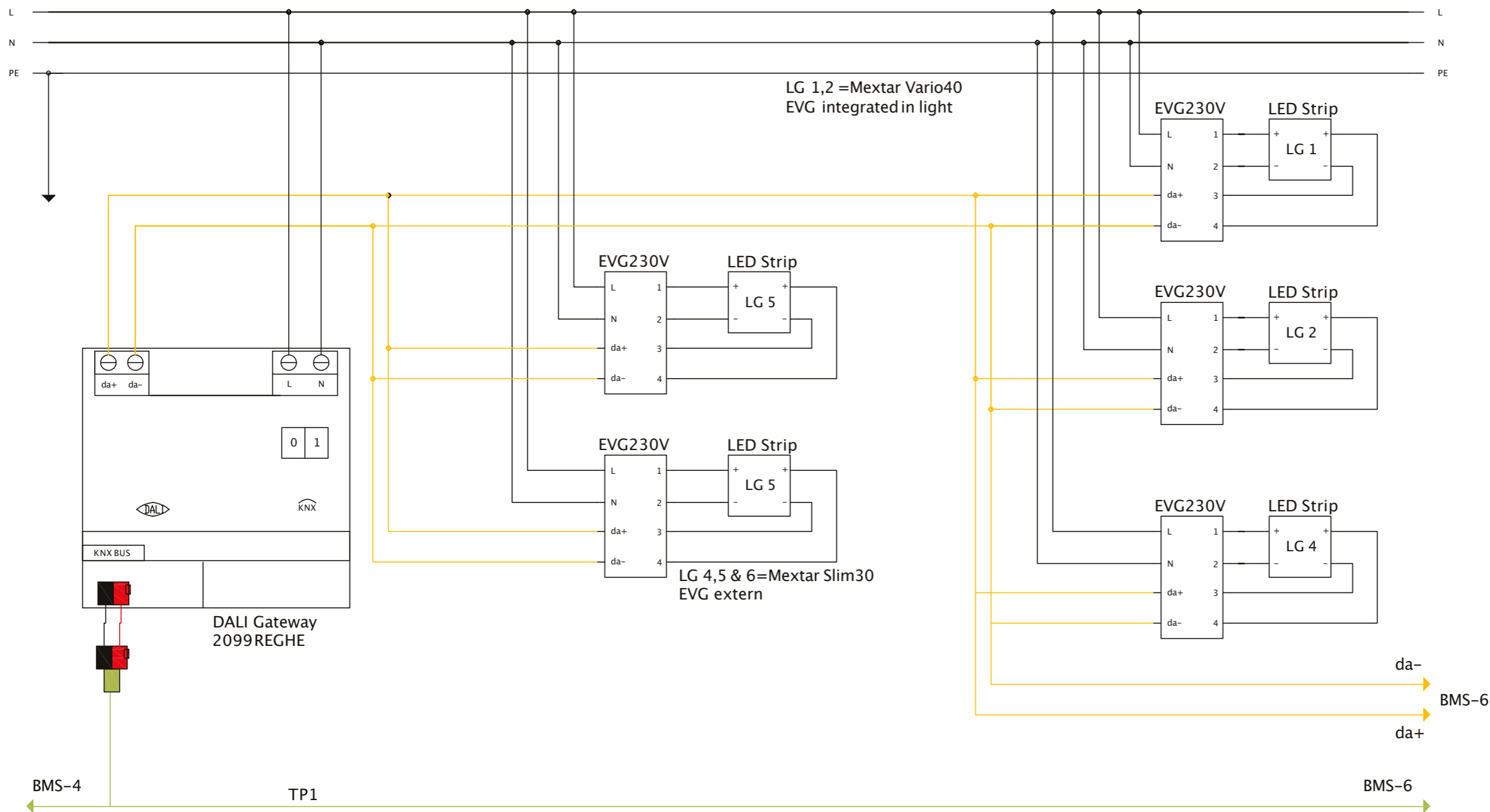


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale no scale Page No. 178

Drawing Content Wiring plan

BMS-1005

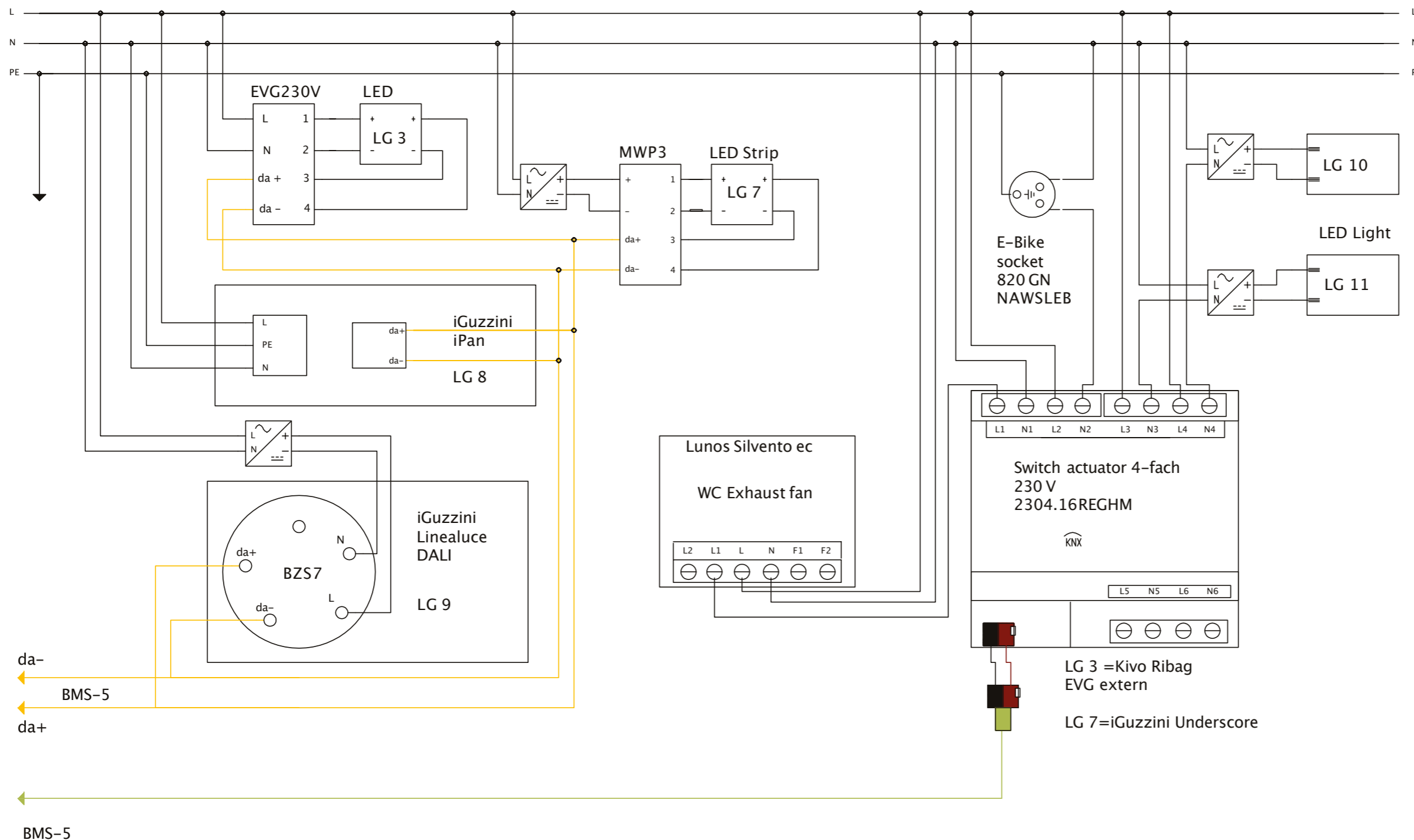


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



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Drawing Content Wiring plan

BMS-1006

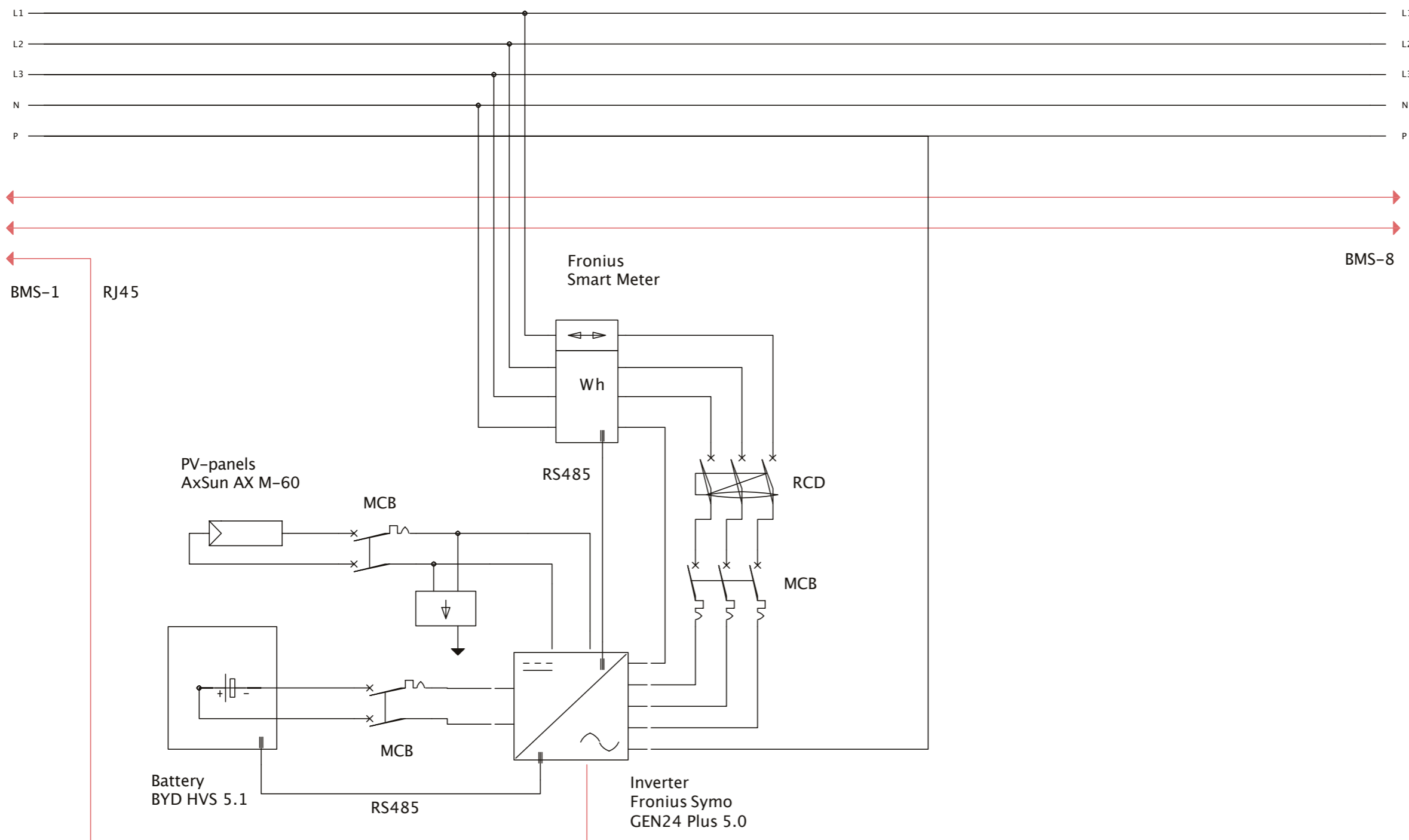


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



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Drawing Content
Wiring Plan

BMS-1007

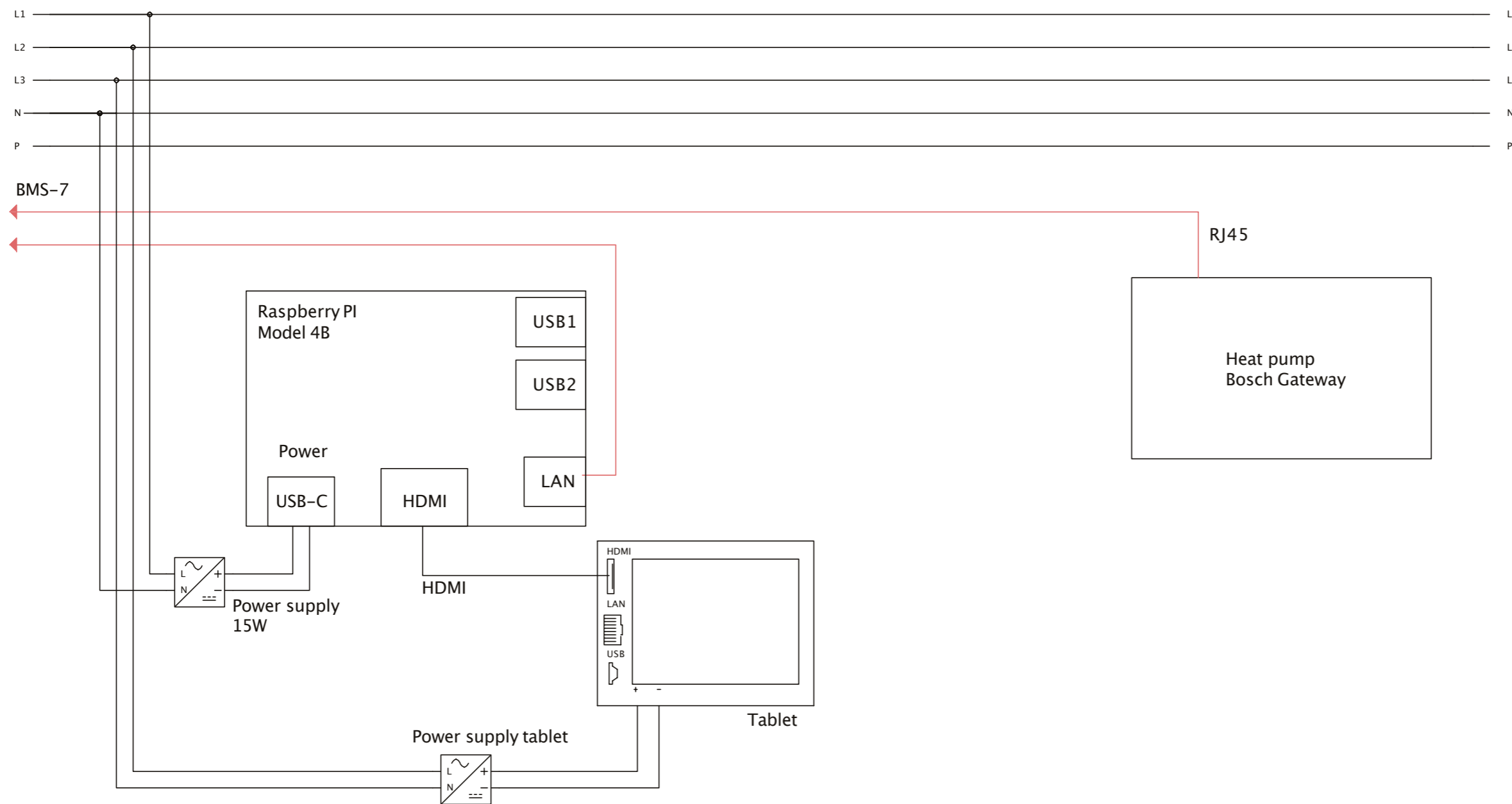


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
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Drawing Content
Wiring plan

BMS-1008

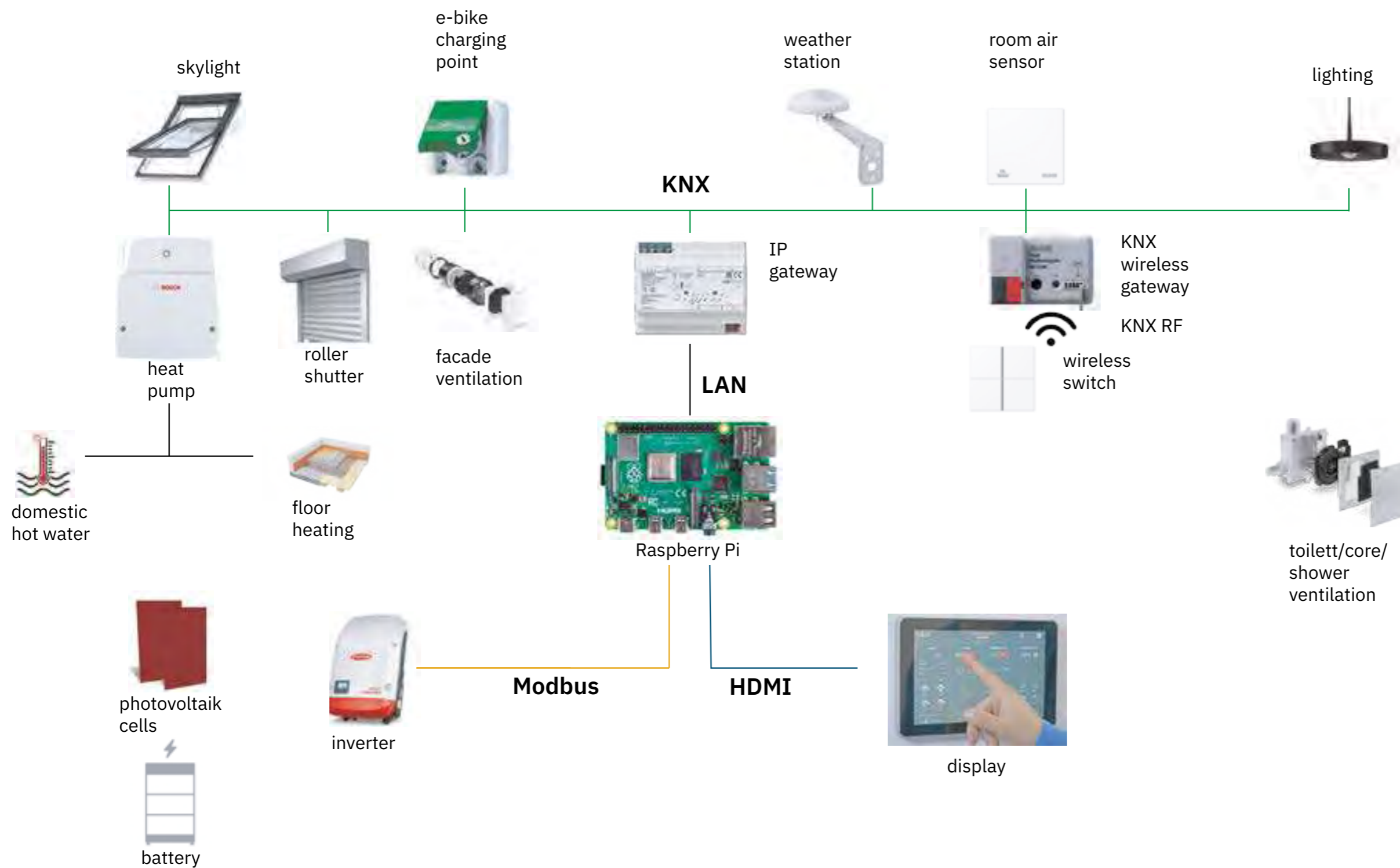


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



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Drawing Content Schematic Diagram

BMS-2001



RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
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Public Tour	PT

Category	Name	Usage	Manufacturer	Identifier
General BMS	Voltage/IP gateway	Voltage supply for KNX and ethernet gateway	Jung	203201S IPS R
	Controllable power socket	Loading of e-bikes	Jung	ES 1520KIKL
	4G Internet Router	Internet connection, switch, wifi	AVM	Fritzbox 6850 LTE
	Central computer	Optimization, "heart of the BMS"	Raspberry Pi fdn.	RaspberryPi 4
	DALI Gateway	Control of the lights	Jung	2099REGHE
User interface	Touch Monitor	User interface for most BMS functions	iiyama	PL T2234MSC-B7X
	some wireless user switches	User control over lights, shutters and skylights	Jung	e.g. 4073 RF TSM
	KNX wireless connection box	Connection all wireless user switches	Jung	MK 100RF
Sensors	2x Room sensors	Monitoring of room comfort	Jung	CO2 LS 2178 WWM
	weather station	Monitoring of outside conditions	Jung	2225WS U
	Power supply weather station	Supply of needed power	Jung	WSSV 10
Heating	Heat pump	Heating and domestic hot water	Bosch	Compress7800iLW M(F)
	Heat pump connection box	Gateway to KNX/RaspberryPi	Bosch	MB Lan 2
Ventilation	Ventilation Control	Control of the 4 wall ventilators	Lunos	KNX Control 4
	4x Ventilation	CO2 and humidity control of the room	Lunos	e ² 60
	3x Core ventilation control	Built in controlunits for different rooms	Lunos	5/EC-ZI +5/EC-FK +5/EC-KE
	3x Core ventilation	Ventilation in core, bathroom and shower	Lunos	Silvento V-EC
PV Management	Inverter	Information about battery status and PV production	Fronius	SYMO GEN24 PLUS 5.0
	Smart Meter	Sensor for inverter control unit	Fronius	63A-3
	Battery	Power storage	BYD	HVS 5.1
Skylights	Skylight control gateway	Gateway to KNX/Raspberry Pi	Jung	23066REGHE
	Skylight control	Controls the opening of the skylights	Velux	KLF 200
	4x Skylight-opening actuator	Opening of rooftop windows	Velux	Schwing Elektrodachfenster GL
Shutters	2x Shutter control actuator	Power supply and control of the shutter	Jung	2504 REGHER
	5x Shutter motor	Control of the facade window shutters	Roma	Maestria WT 230V
	1x Shutter motor emergency exit	Same as above, but with battery in case of emergency	Roma	Maestria WT 12V + battery



Instrumentation Drawings (ID)

Karlsruhe, 23rd March 2022

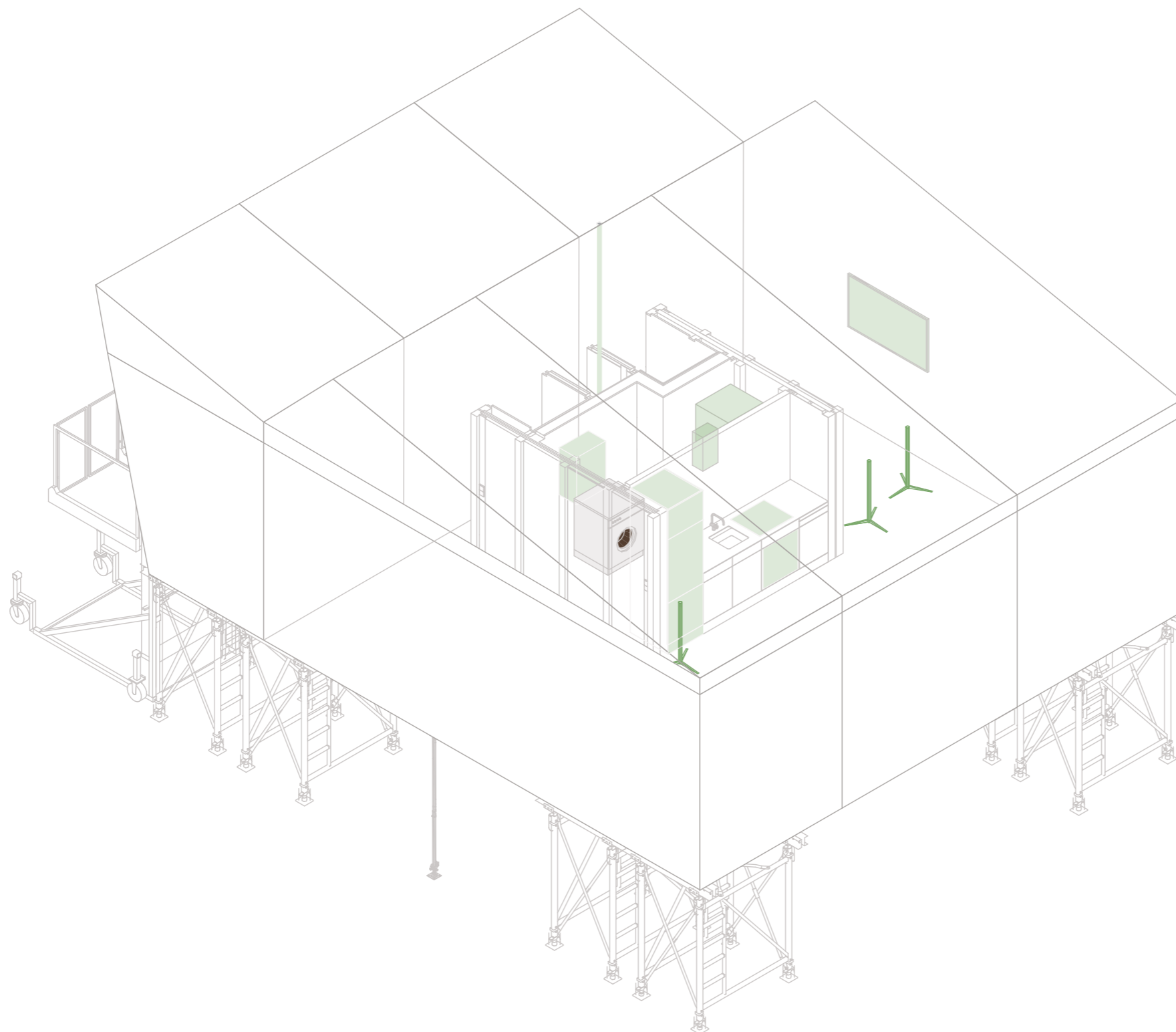


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale Page No.
no scale 185

Drawing Content
Conceptual Drawing

ID-0001

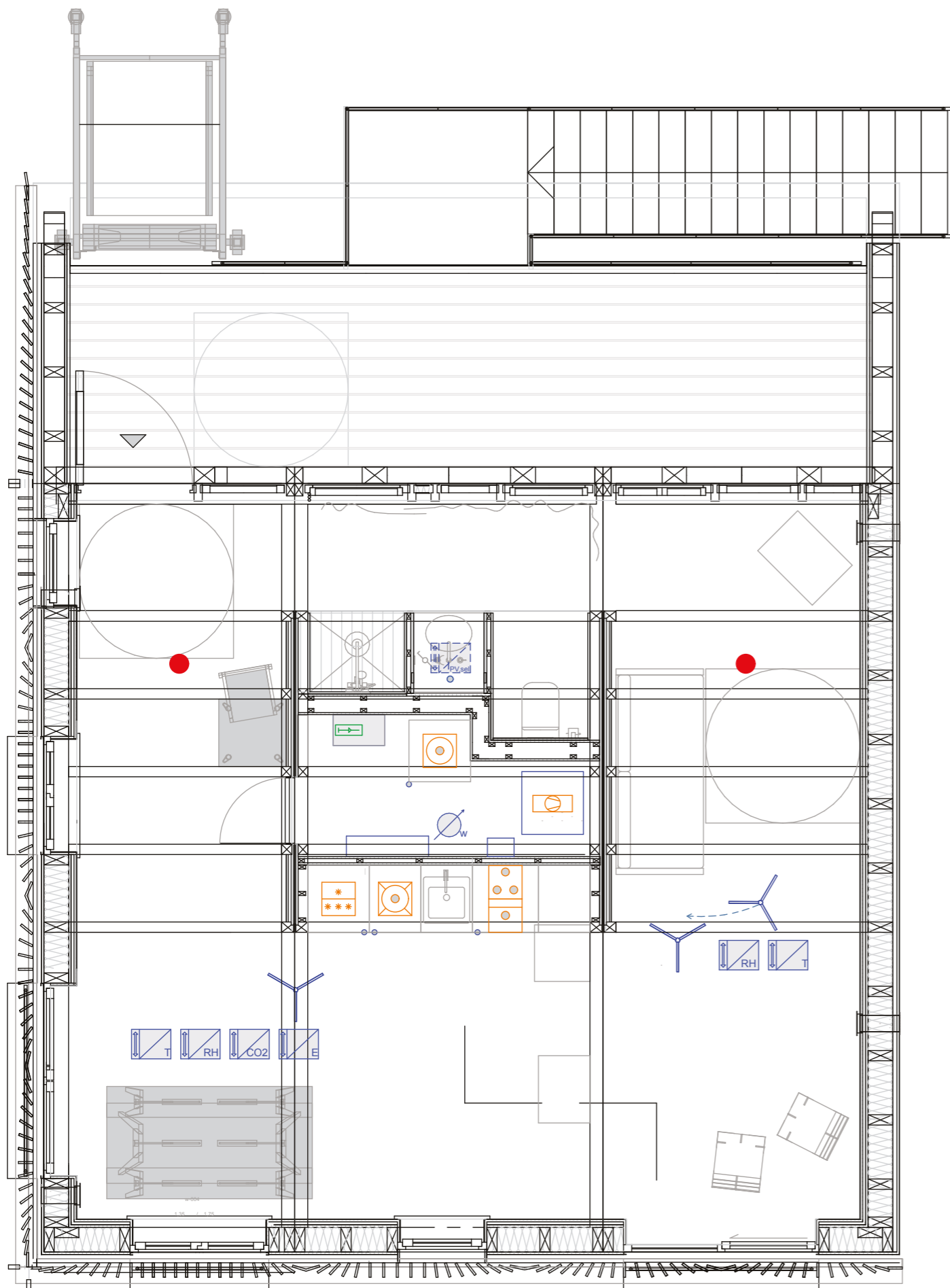


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



SENSOR (SUBCONTEST)	SENSOR	CONDUIT / CABLE DUCT DIAMETER [mm ²]	LENGTH OF WIRE FROM MP TO SENSOR [m]
3.4	PV reference cell	25 mm	3,6 m
7.1	Temperature	25 mm	3,2 m
7.2	Humidity	25 mm	3,2 m
7.3	Air Quality	25 mm	3,2 m
7.4	Daylighting	25 mm	3,2 m
7.1	Temperature	25 mm	4,8 m
7.2	Humidity	25 mm	4,8 m
8.1-8.2	Refridgerator	25 mm	2,1 m
8.3	Clothes Washing	25 mm	0,8 m
8.5	Dishwashing	25 mm	2,1 m
8.6	Oven	25 mm	3,1 m

PV REFERENCE CELL		WATER METER	
AIR TEMPERATURE SENSOR		OVEN/ STOVE COMBINATION	
RELATIVE HUMIDITY SENSOR		DISH WASHER	
AIR QUALITY CO2 SENSOR		REFRIGERATOR	
DAYLIGHT, ILLUMIANCE SENSOR		HEAT PUMP	
THERMOCOUPLE SENSOR		WASHING MACHINE	
AREA TRIPODS		SMOKE DETECTOR	

Scale no scale Page No. 186

Drawing Content General Monitoring - Floor Plan Level 1

ID-1001

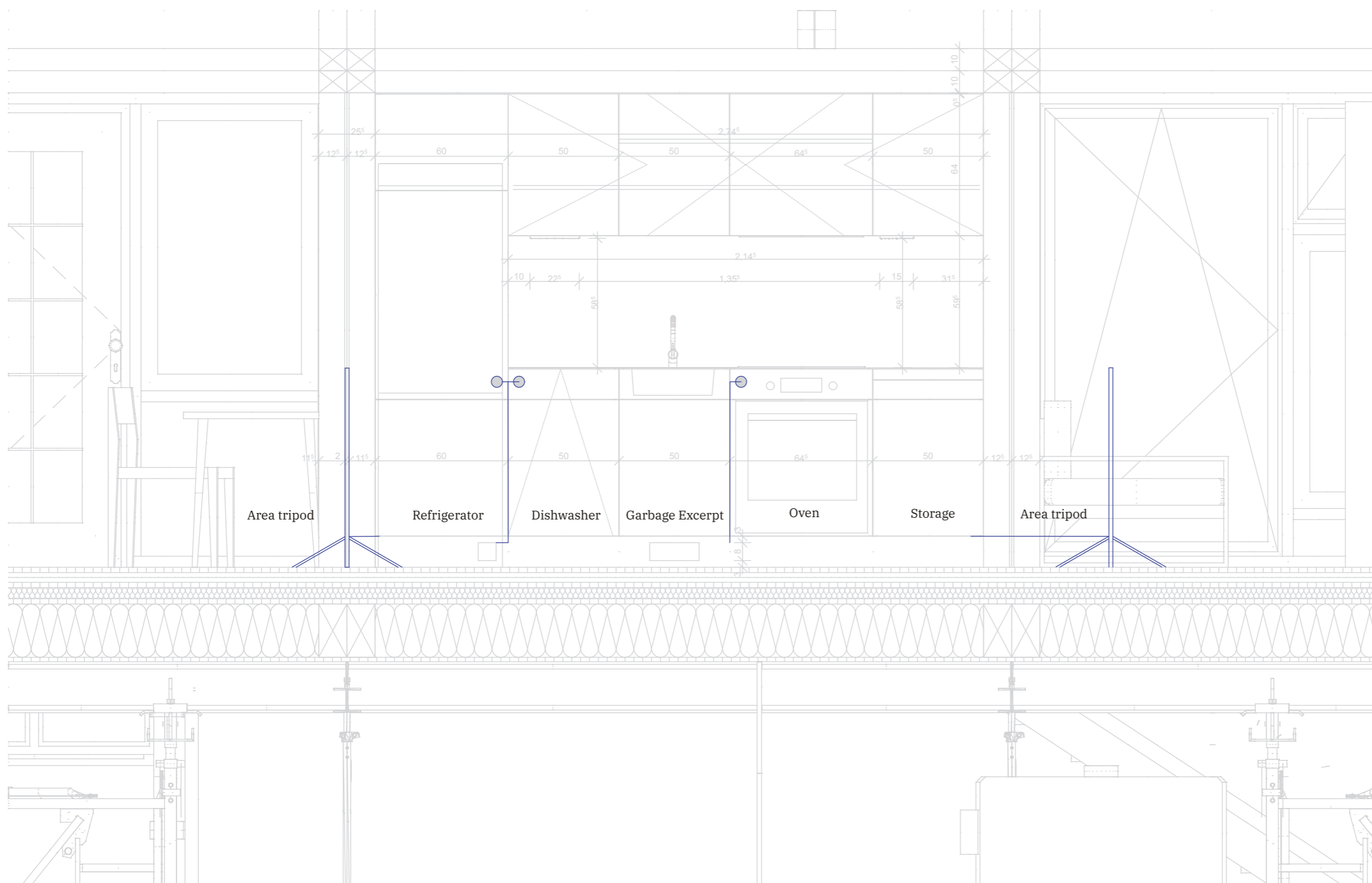


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale no scale Page No. 187

Drawing Content General Monitoring - Section

ID-1002

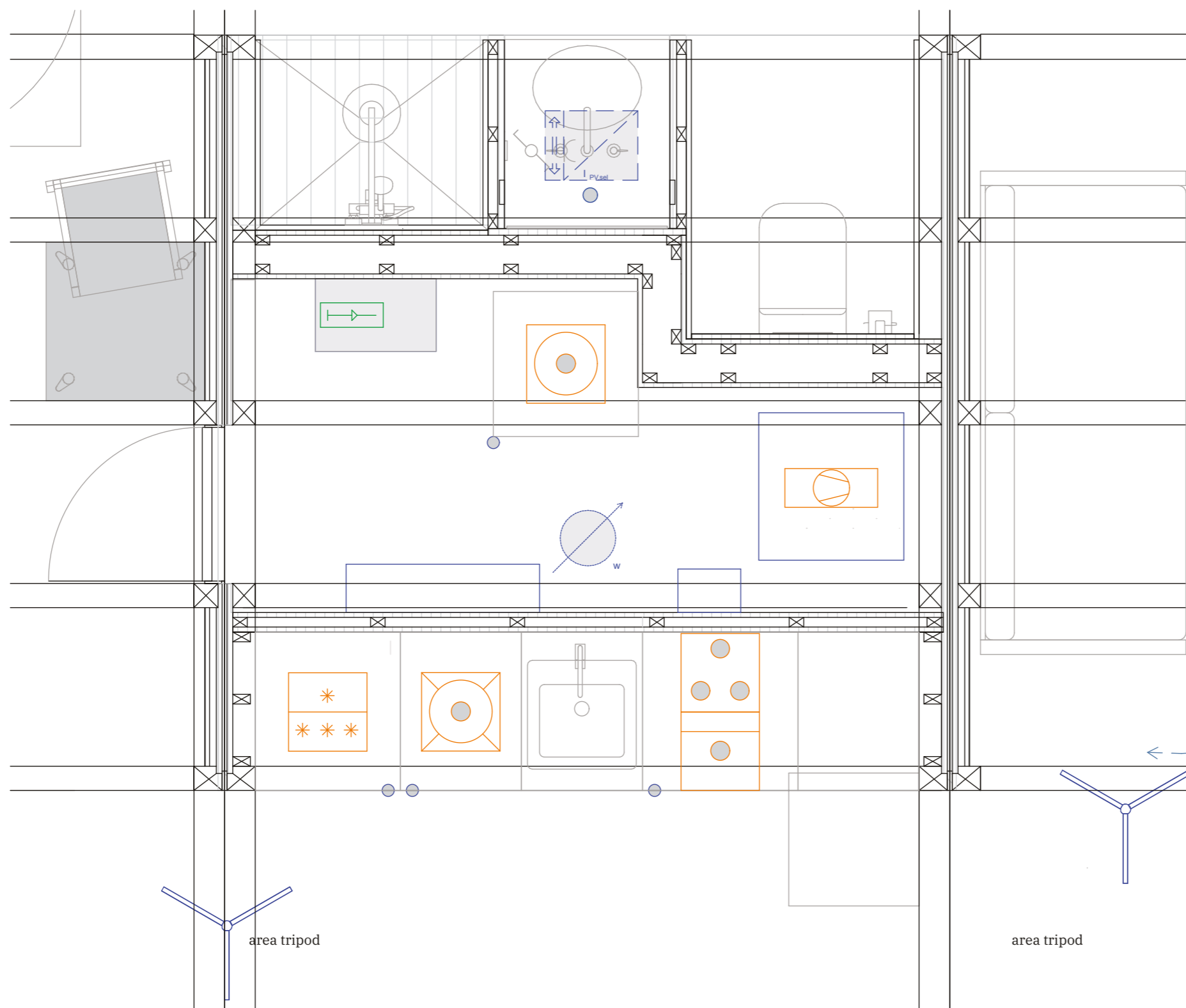


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale Page No.
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Drawing Content
Monitoring Panel Room - Floor Plan Level 1

ID-2001

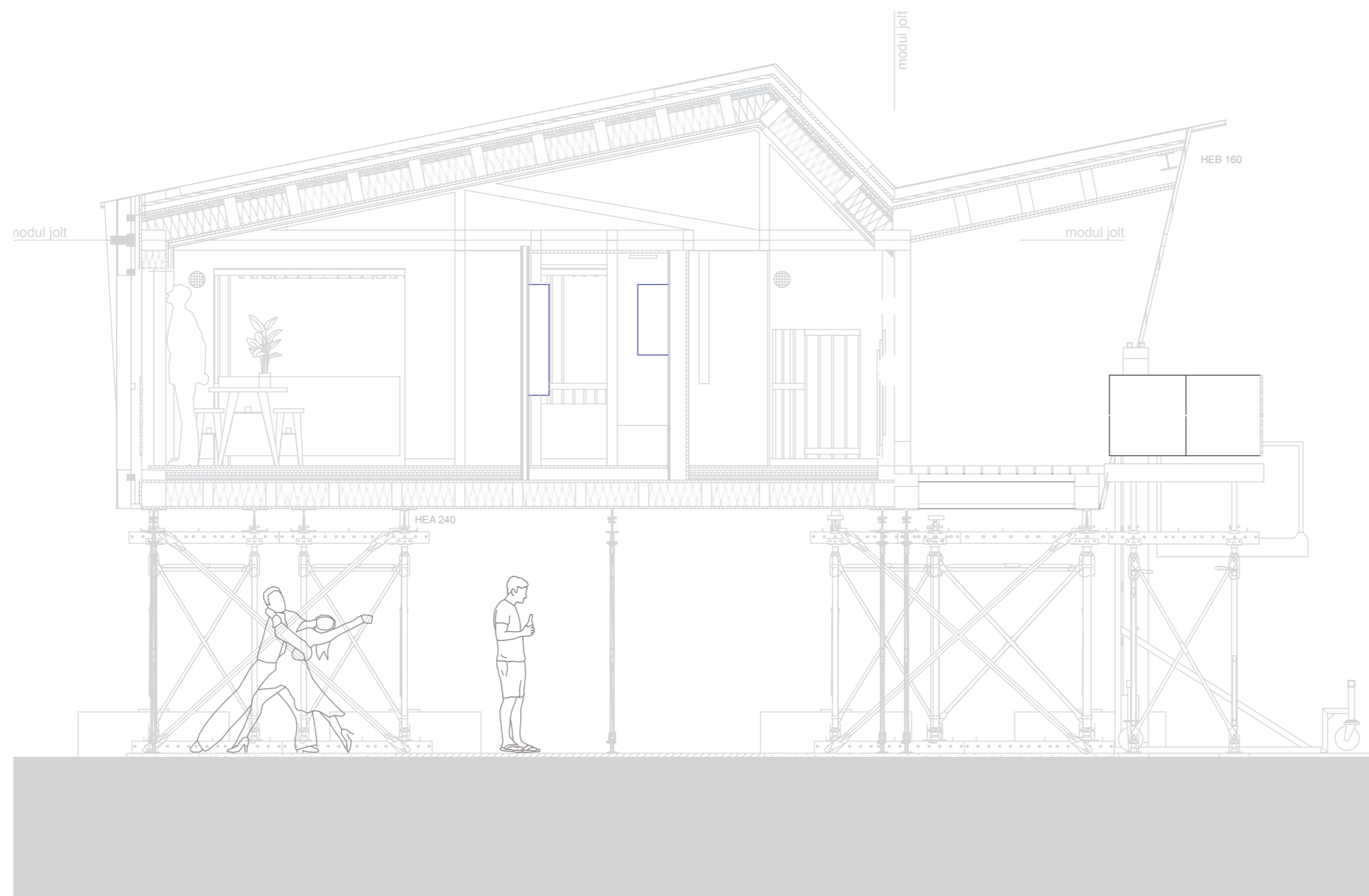


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale Page No.
no scale 189

Drawing Content
Monitoring Panel Room - Section

ID-2002

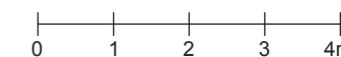
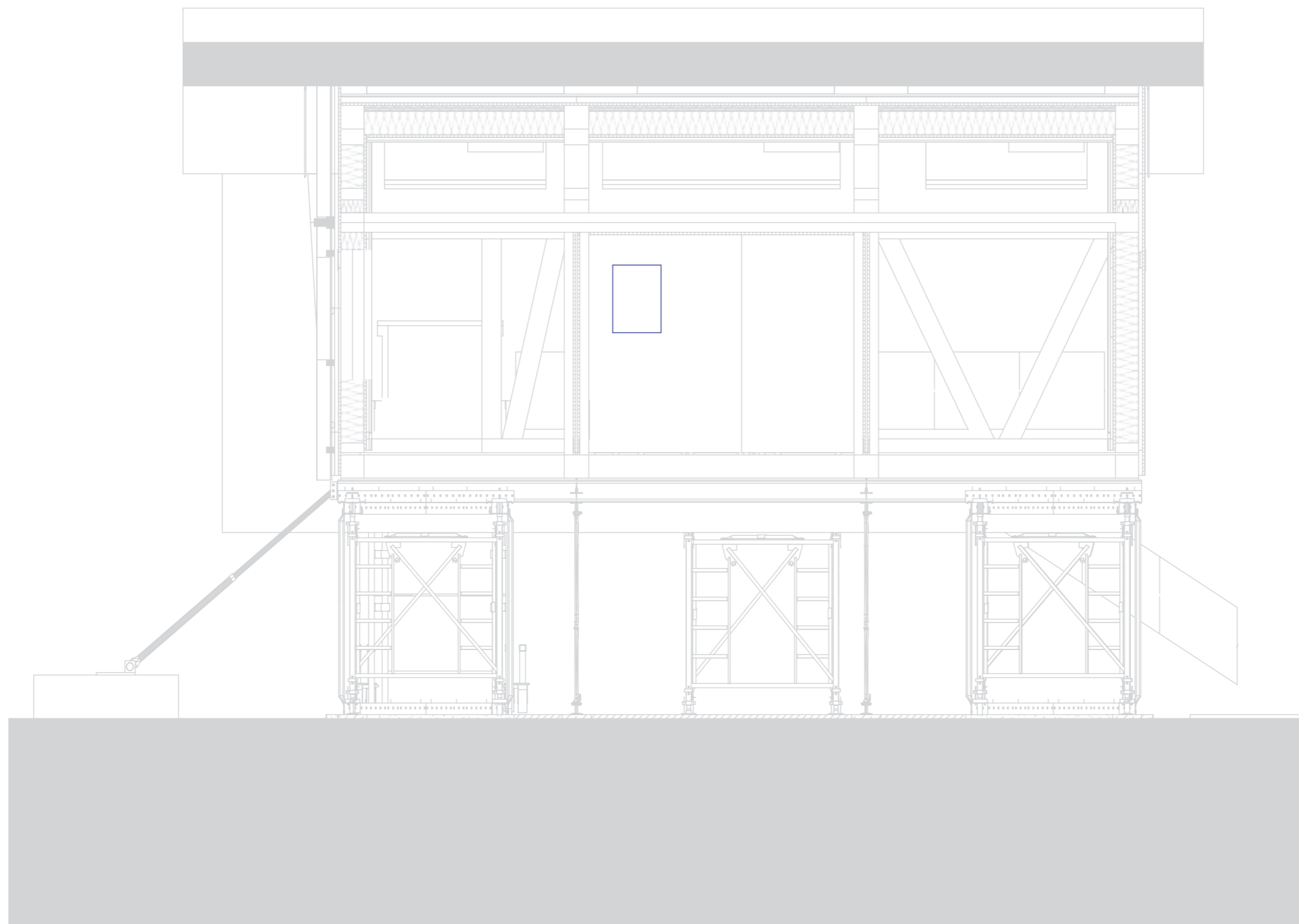


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale 1:100 Page No. 190

Drawing Content
Monitoring panel room - Section

ID-2003



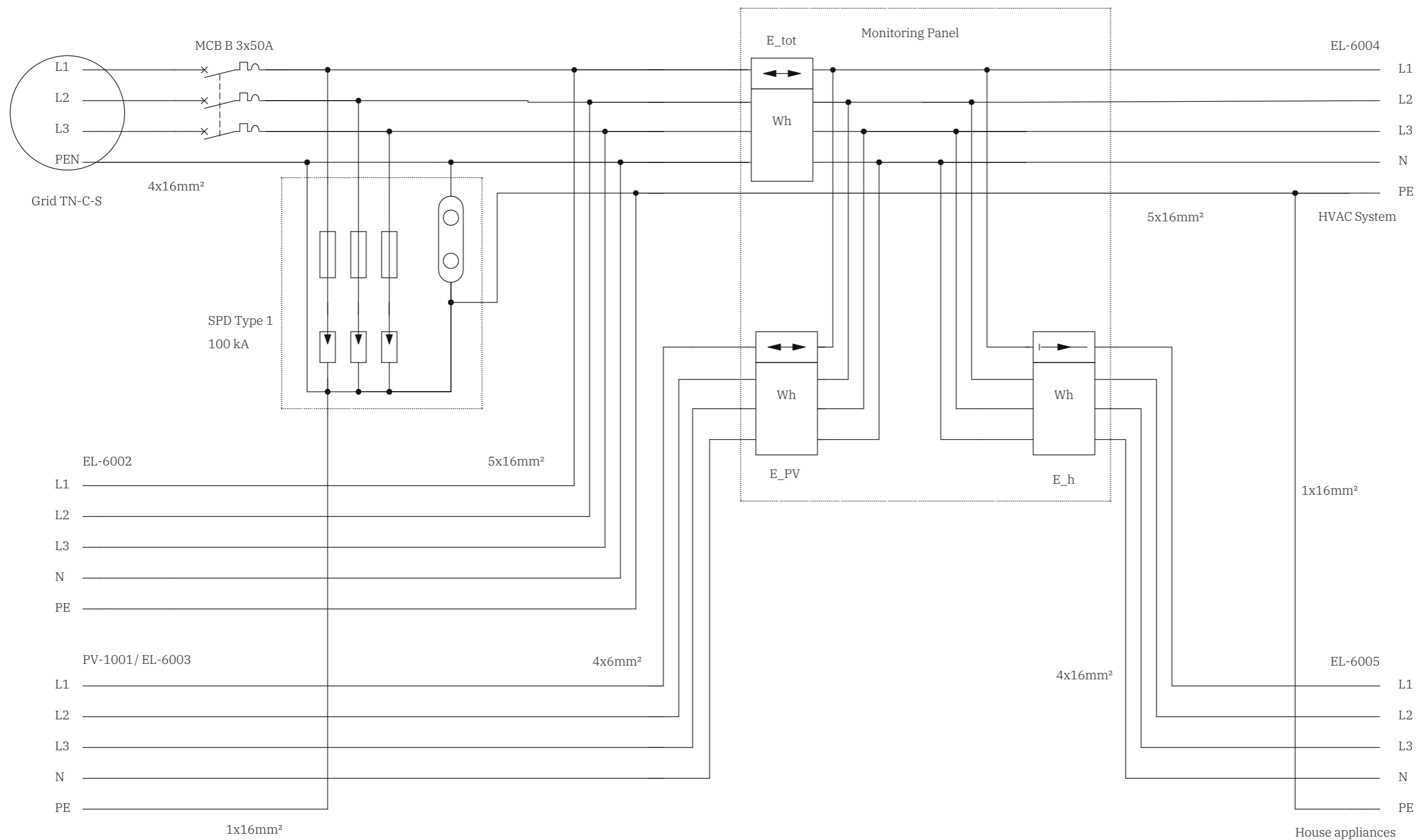


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale: no scale
Page No.: 191

Drawing Content:
Electricity Meters' Typology

ID-3001

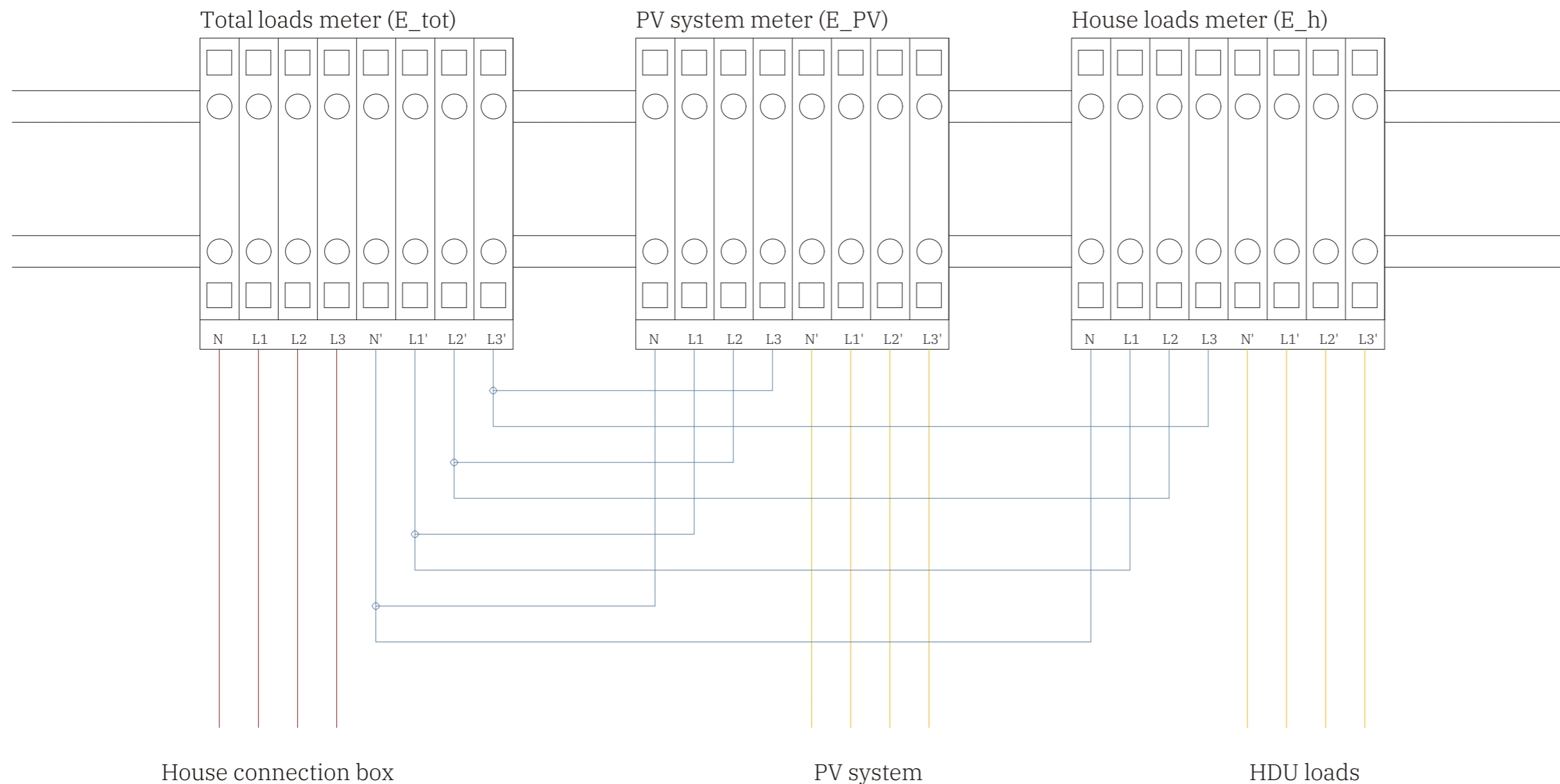


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



House connection box

PV system

HDU loads

Scale no scale Page No. 192

Drawing Content
Electricity Meters' Connection

ID-4001



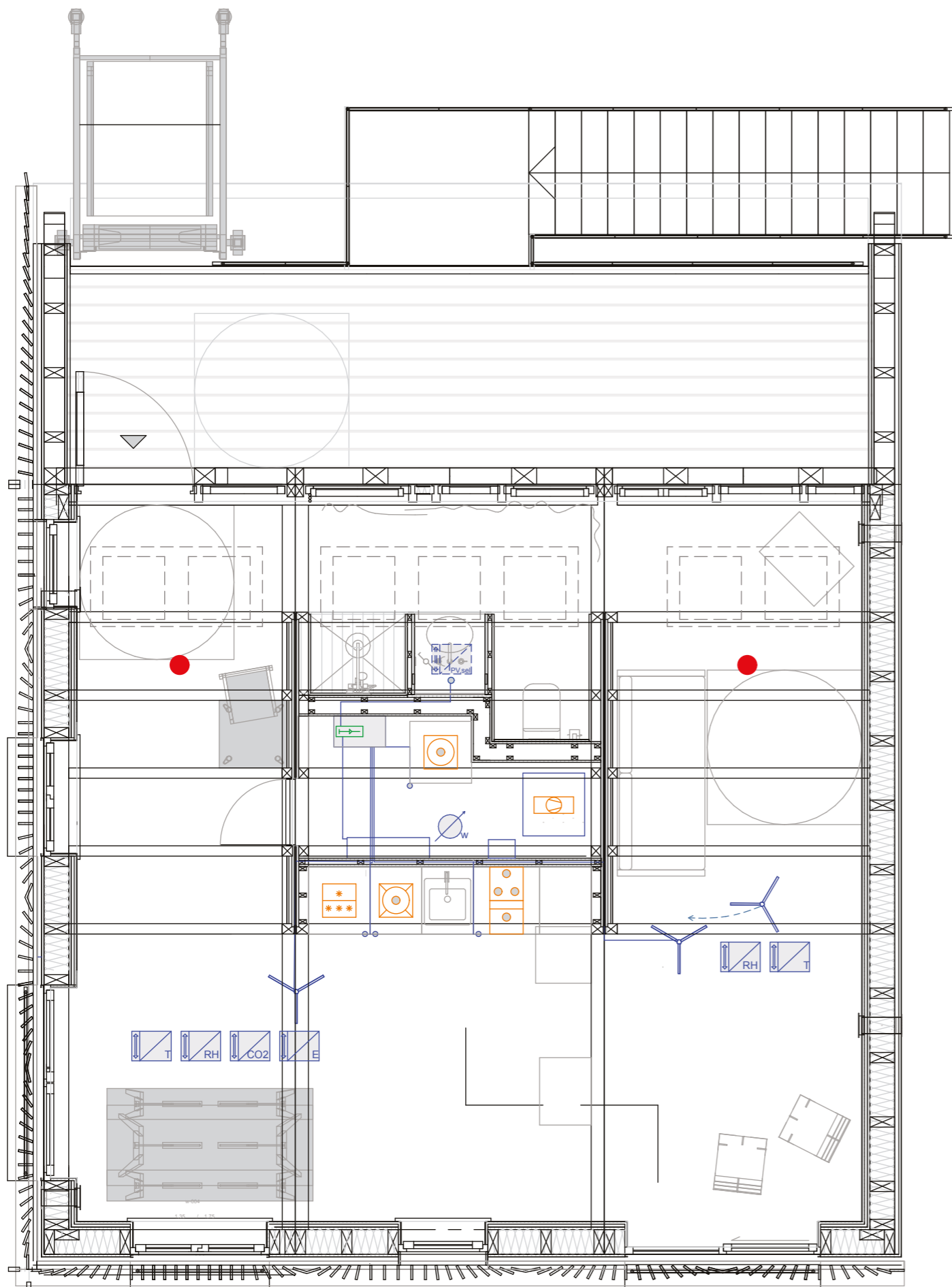
RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Ethernet



SENSOR (SUBCONTEST)	SENSOR	CONDUIT / CABLE DUCT DIAMETER [mm ²]	LENGTH OF WIRE FROM MP TO SENSOR [m]
3.4	PV reference cell	25 mm	3,6 m
7.1	Temperature	25 mm	3,2 m
7.2	Humidity	25 mm	3,2 m
7.3	Air Quality	25 mm	3,2 m
7.4	Daylighting	25 mm	3,2 m
7.1	Temperature	25 mm	4,8 m
7.2	Humidity	25 mm	4,8 m
8.1-8.2	Refridgerator	25 mm	2,1 m
8.3	Clothes Washing	25 mm	0,8 m
8.5	Dishwashing	25 mm	2,1 m
8.6	Oven	25 mm	3,1 m

PV REFERENCE CELL		WATER METER	
AIR TEMPERATURE SENSOR		OVEN/ STOVE COMBINATION	
RELATIVE HUMIDITY SENSOR		DISH WASHER	
AIR QUALITY CO2 SENSOR		REFRIGERATOR	
DAYLIGHT, ILLUMIANCE SENSOR		HEAT PUMP	
THERMOCOUPLE SENSOR		WASHING MACHINE	
AREA TRIPODS		SMOKE DETECTOR	

Scale
no scale

Page No.
193

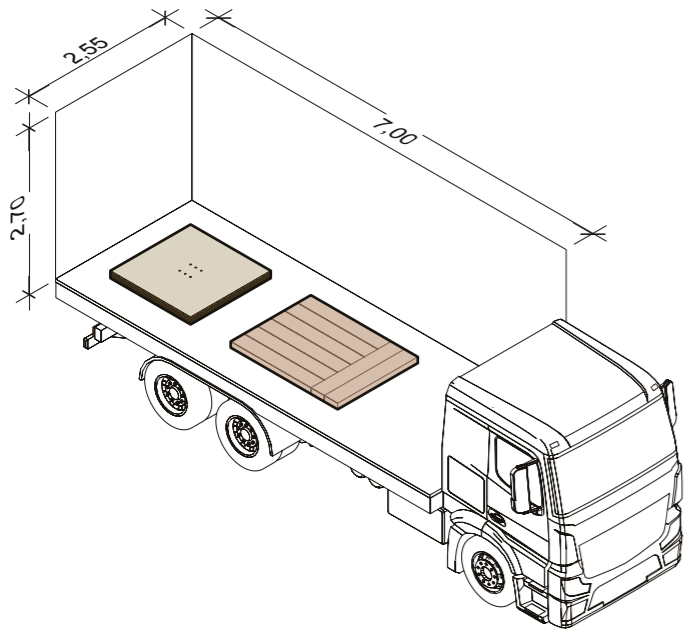
Drawing Content
House Appliances

ID-5001

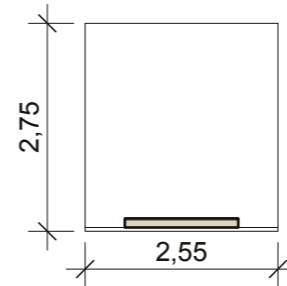


Site Operations (SO)

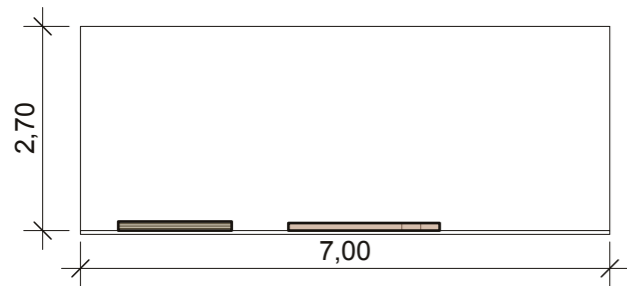
Karlsruhe, 23rd March 2022



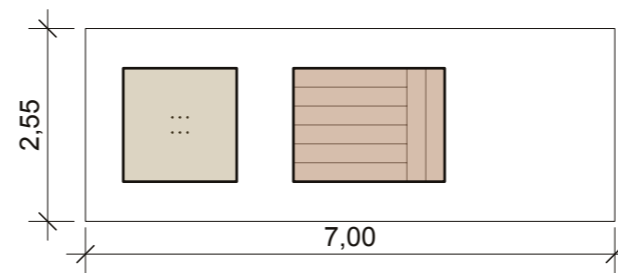
axonometry



front view



right view



top view

Truck 1

-  Steel Plates
-  Strip Footings



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Scale no scale Page No. 195

Drawing Content
Trucks Shipment - Truck 1

SO-0001



RoofKIT

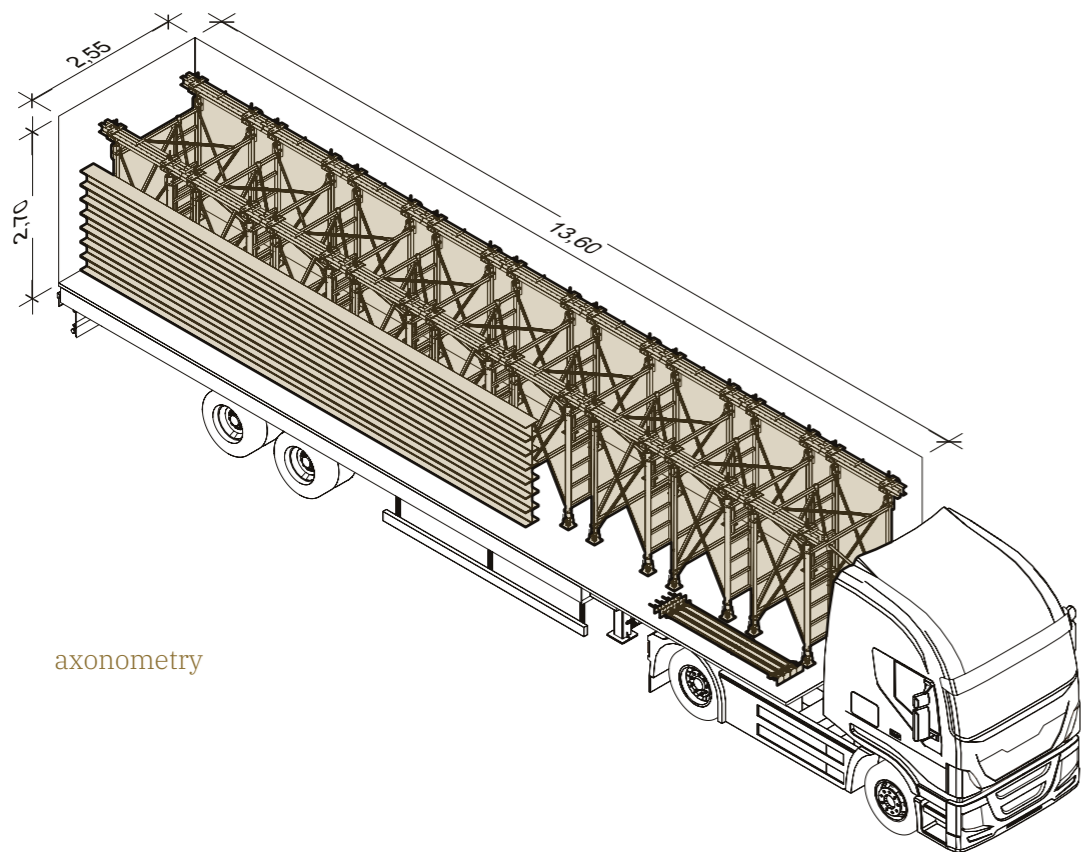
Truck 2

■ Scaffolding

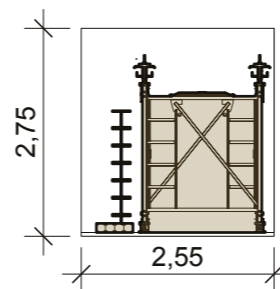


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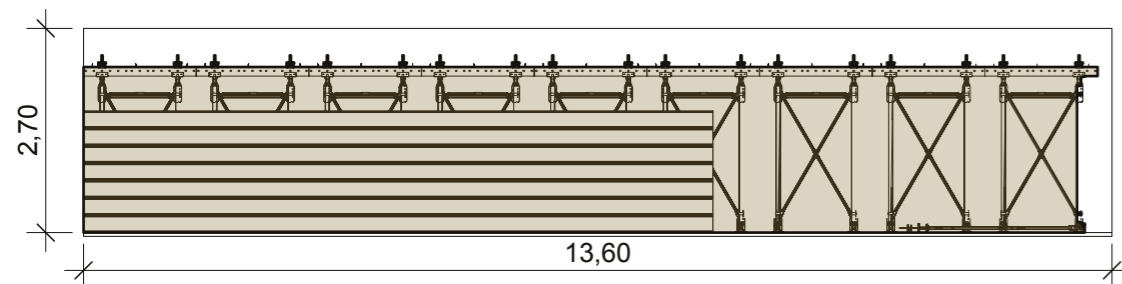
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Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



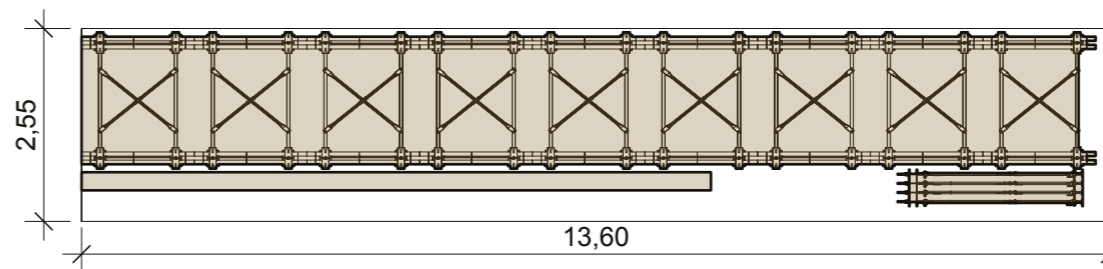
axonometry



front view



right view



top view

Scale no scale Page No. 196

Drawing Content Trucks Shipment - Truck 2

SO-0002



RoofKIT

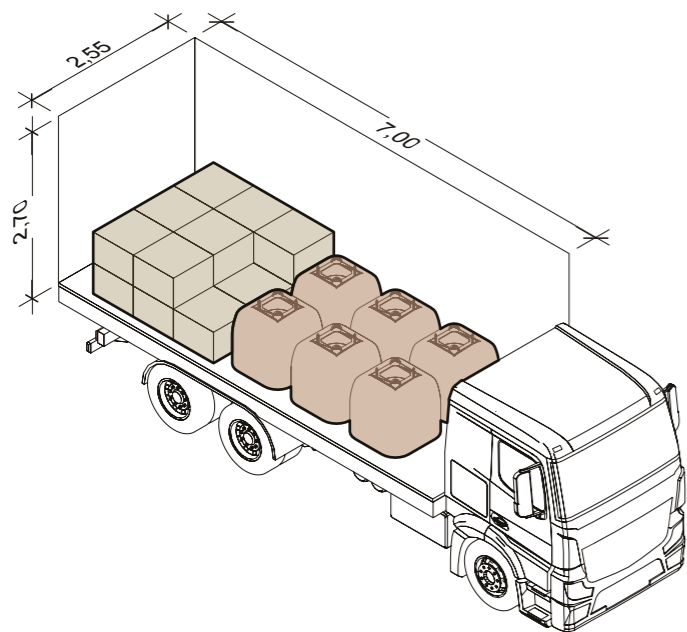


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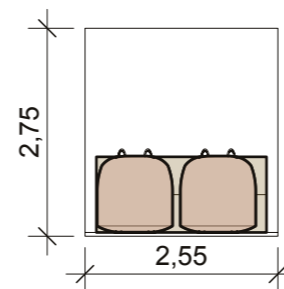
General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Truck 3

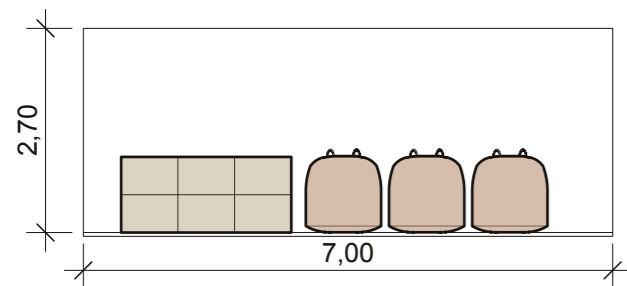
-  Gabions
-  Stones



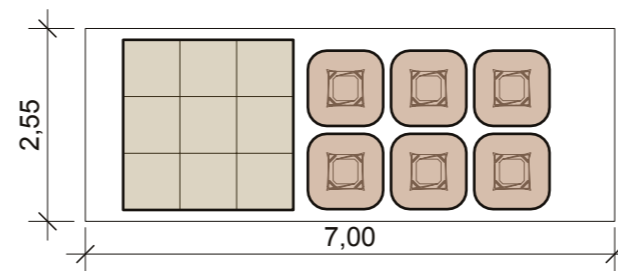
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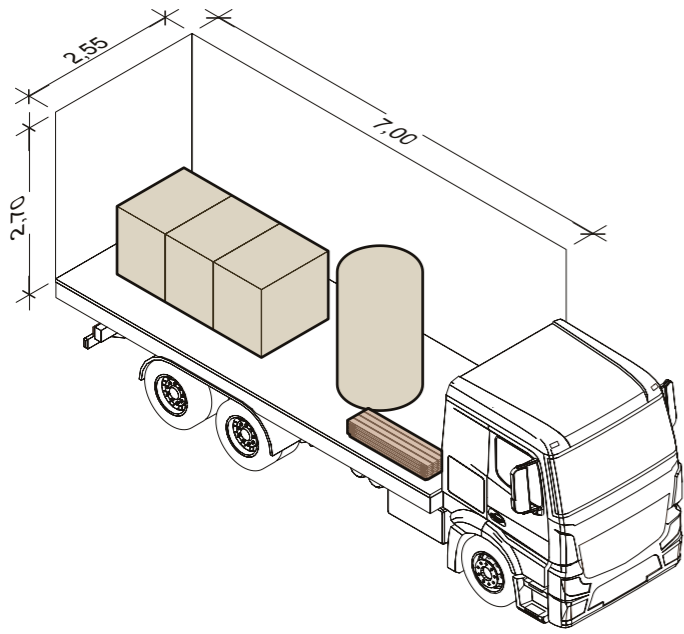
front view



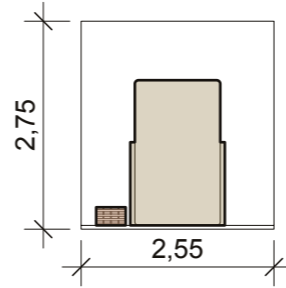
right view



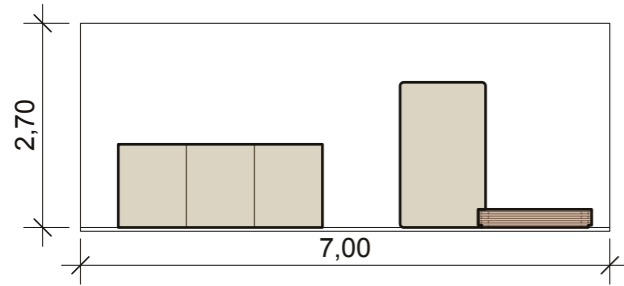
top view



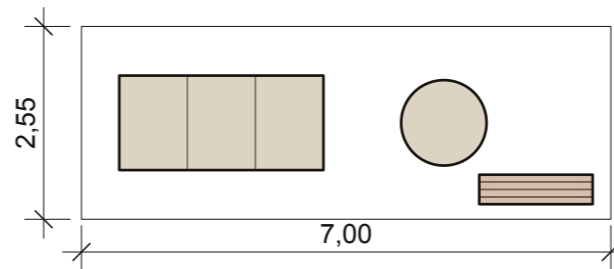
axonometry



front view



right view



top view

Truck 4

- Buffer Storage+Tanks
- Seating Boards



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Scale Page No.
no scale 198

Drawing Content
Trucks Shipment - Truck 4

SO-0004



RoofKIT

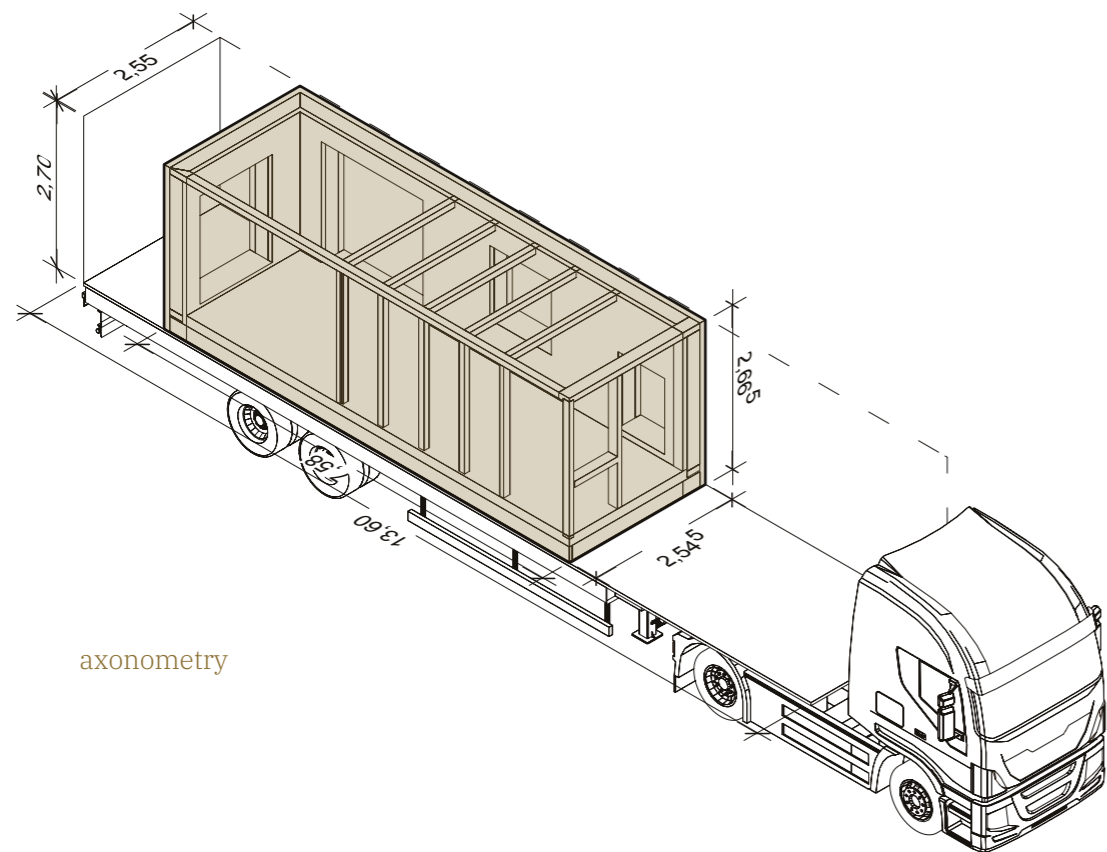
Truck 5 Special Transport

Living Module A

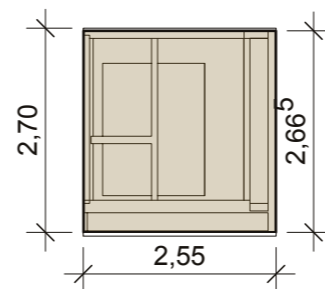


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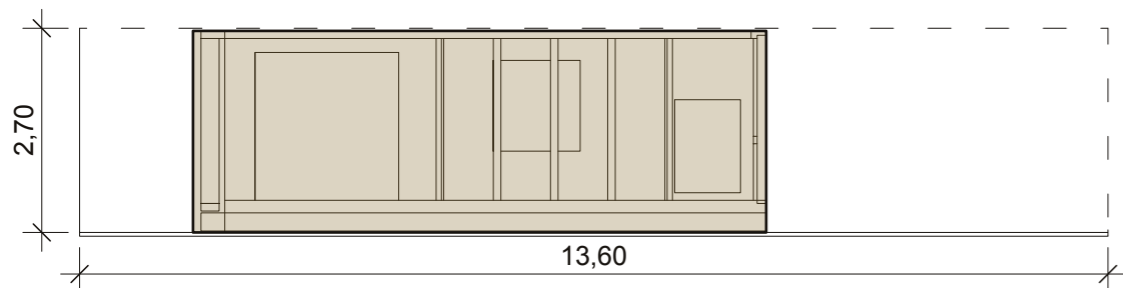
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Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



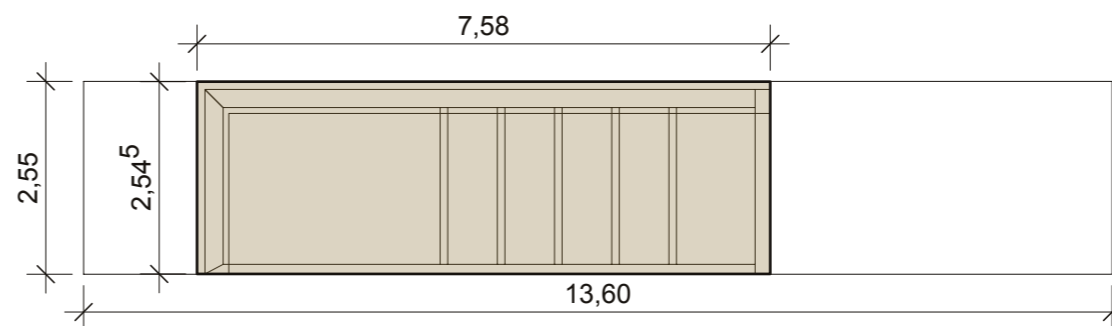
axonometry



front view



right view



top view

Scale no scale Page No. 199

Drawing Content Trucks Shipment - Truck 5

SO-0005



RoofKIT

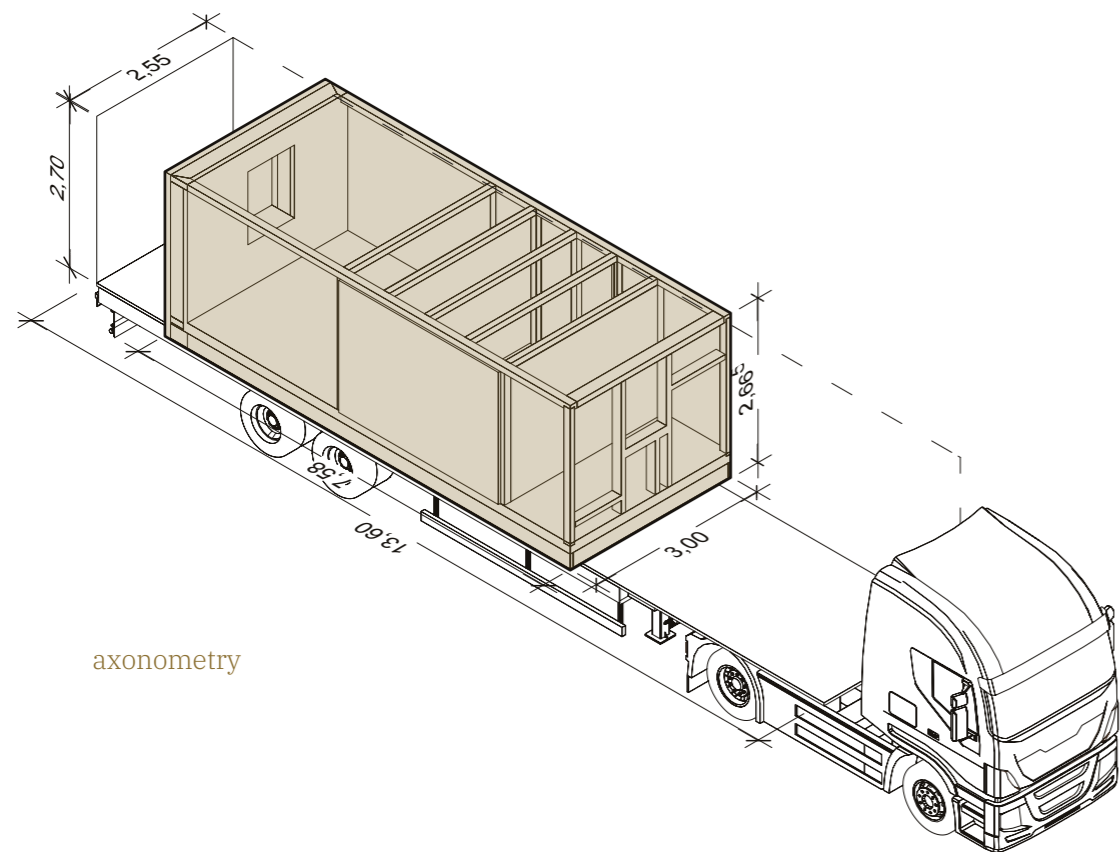
Truck 6 Special Transport

Living Module B

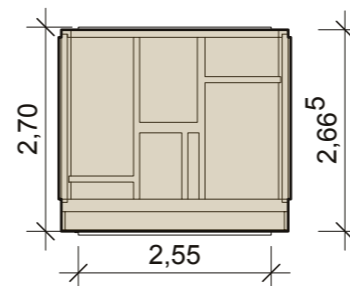


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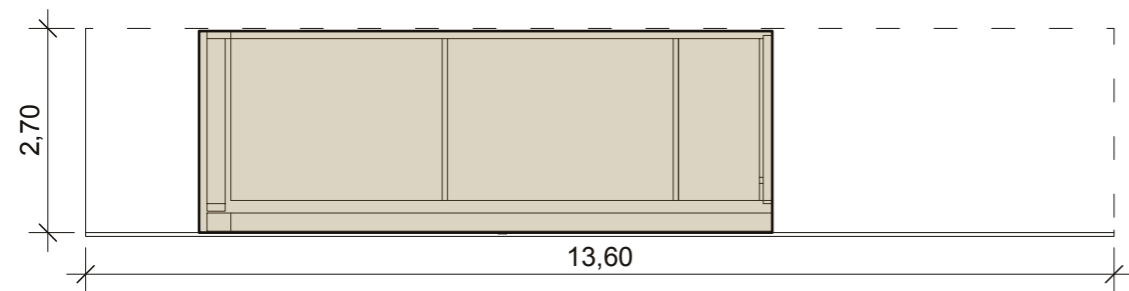
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Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



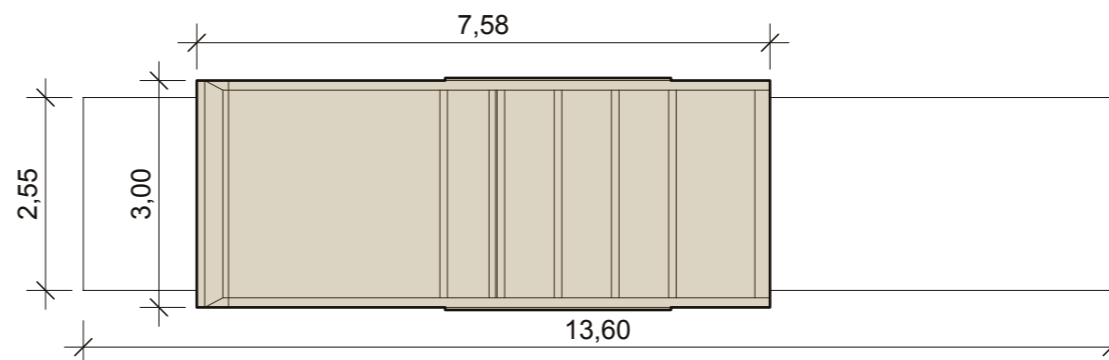
axonometry



front view



right view



top view

Scale no scale Page No. 200

Drawing Content Trucks Shipment - Truck 6

SO-0006



RoofKIT

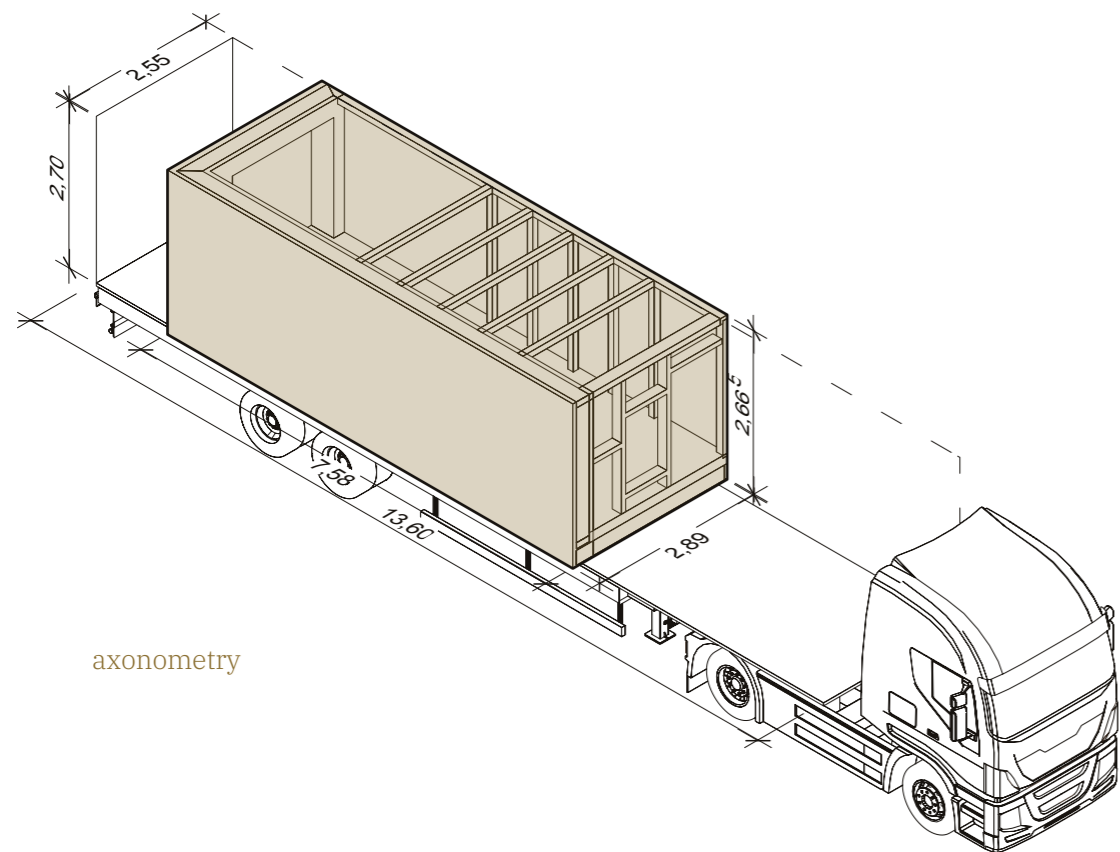
Truck 7 Special Transport

Living Module C

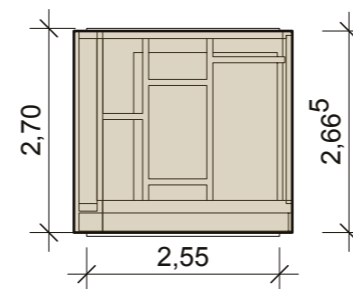


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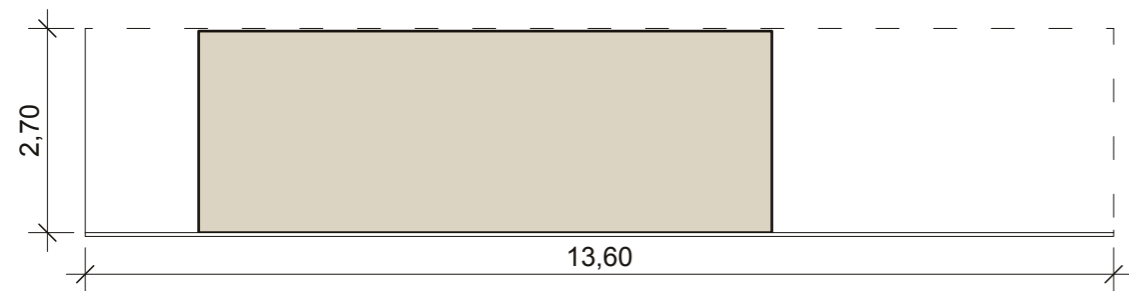
General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



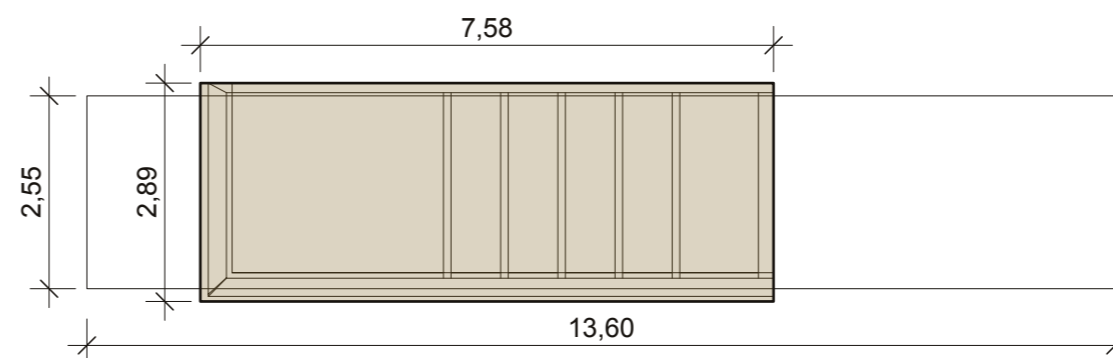
axonometry



front view



right view



top view

Scale no scale Page No. 201

Drawing Content Trucks Shipment - Truck 7

SO-0007



RoofKIT

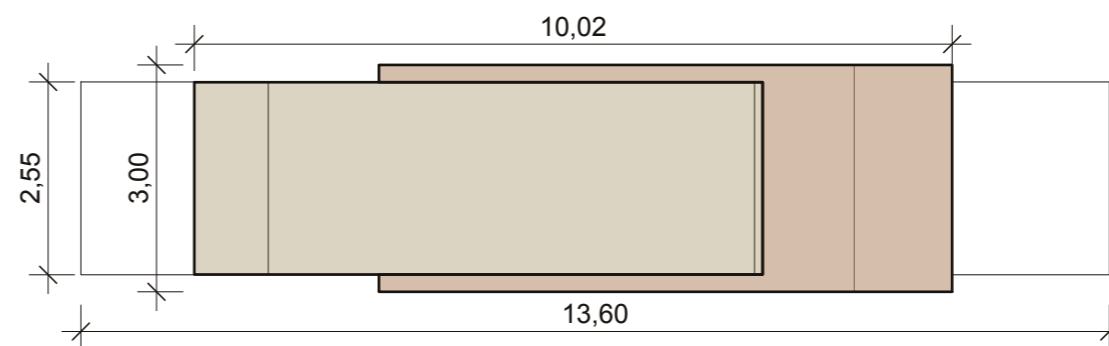
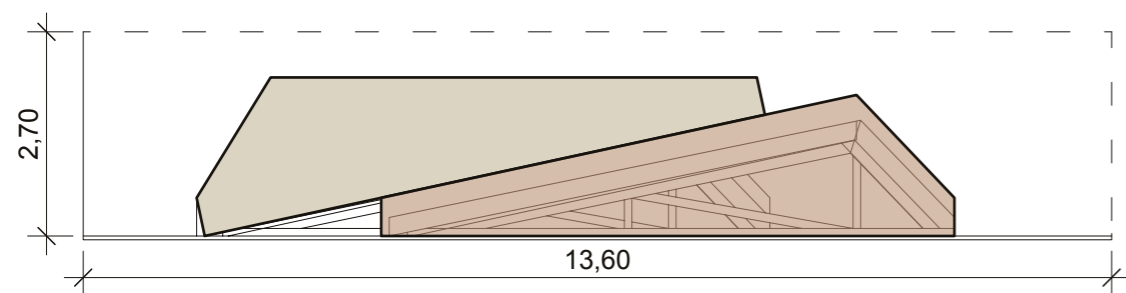
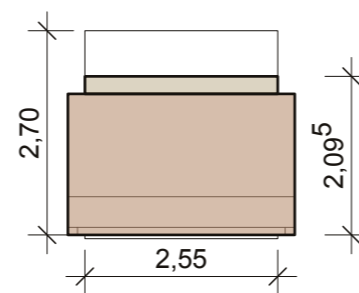
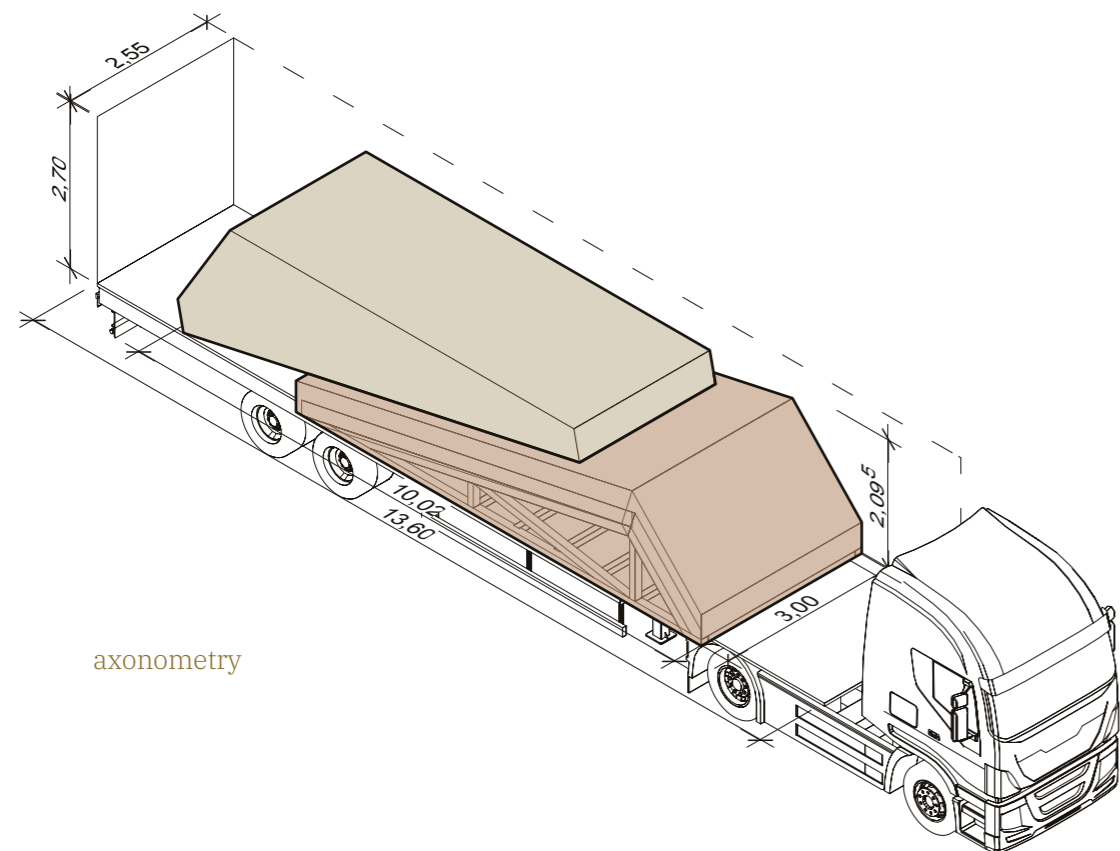
Truck 8 Special Transport

- Living Module 1-Roof
- Living Module 2-Roof



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale Page No.
no scale 202

Drawing Content
Trucks Shipment - Truck 8

SO-0008



RoofKIT

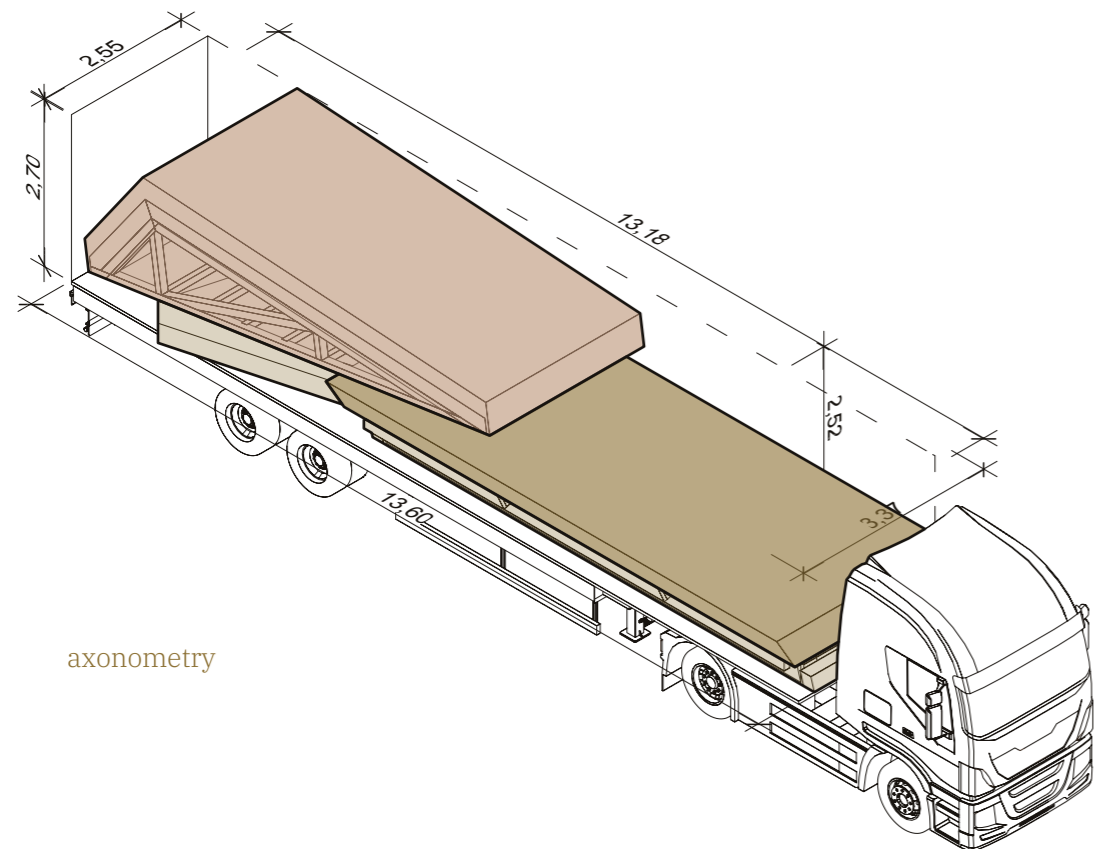
Truck 9 Special Transport

- Terrace Module
- Terrace Module-Roof
- Living Module C-Roof

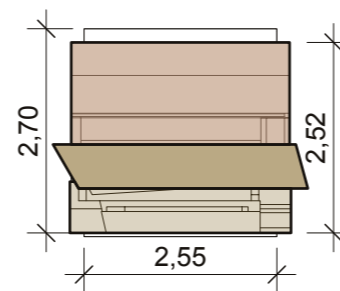


WUPPERTAL GERMANY

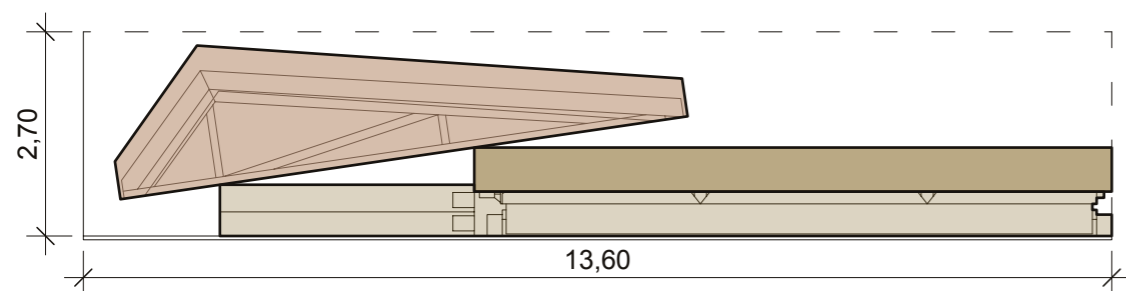
General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



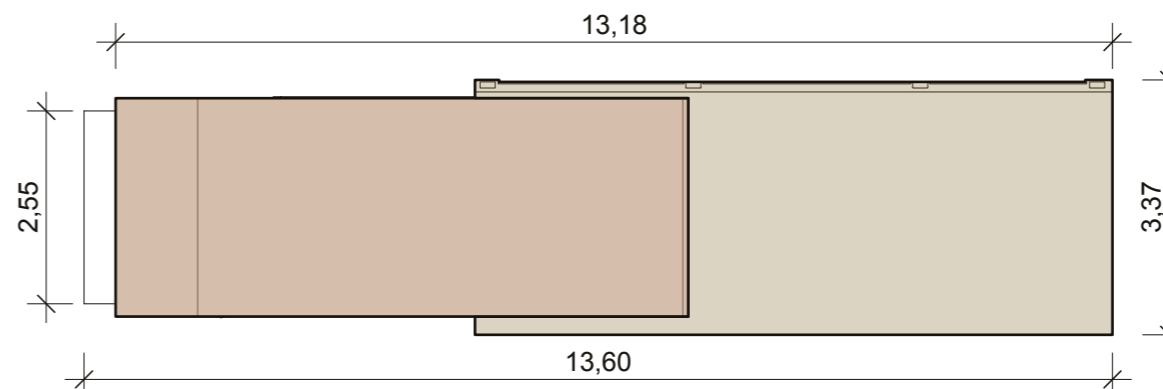
axonometry



front view



right view



top view

Scale Page No.
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Drawing Content
Trucks Shipment - Truck 9

SO-0009



RoofKIT

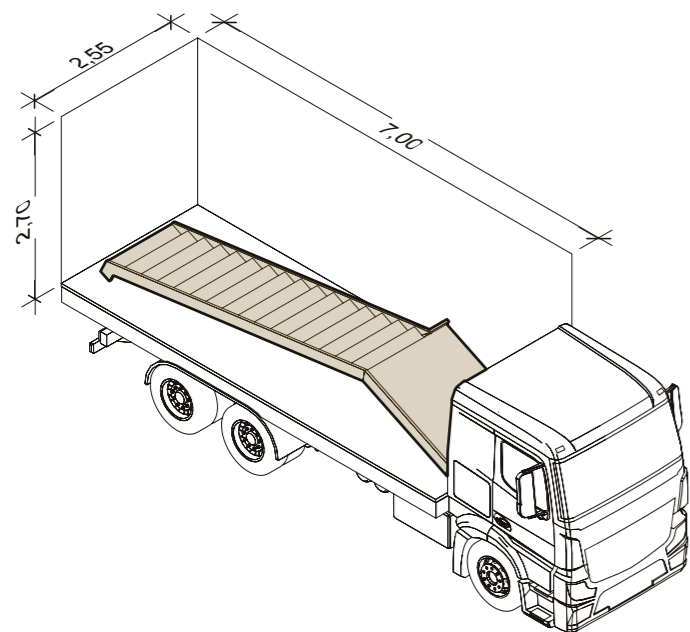


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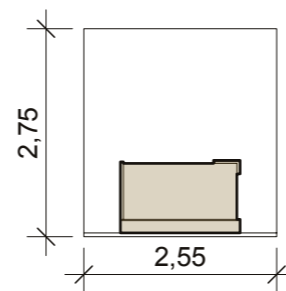
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Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Truck 10

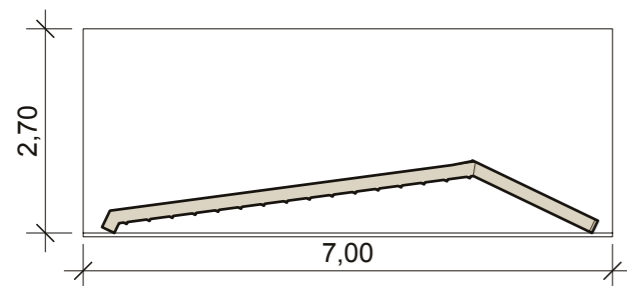
■ Stairs



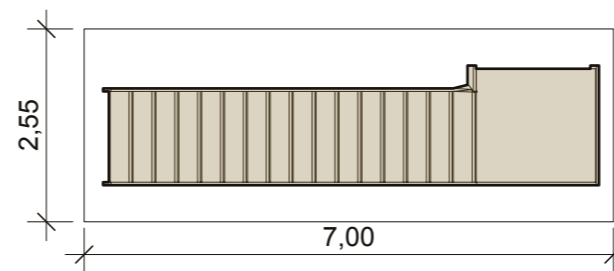
axonometry



front view



right view



top view

Scale no scale Page No. 204

Drawing Content Trucks Shipment - Truck 10

SO-0010



RoofKIT

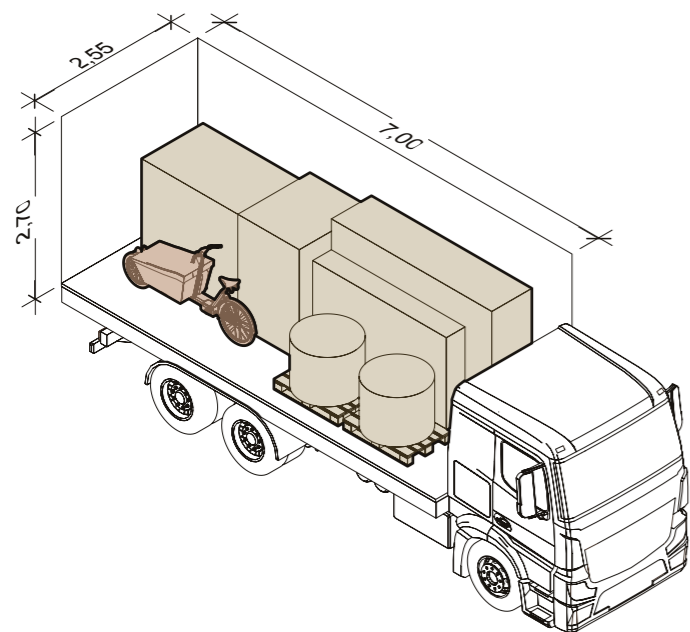


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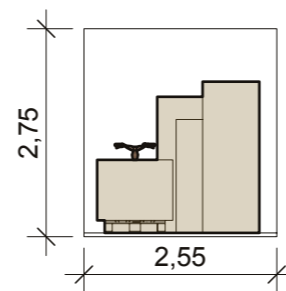
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Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

Truck 11

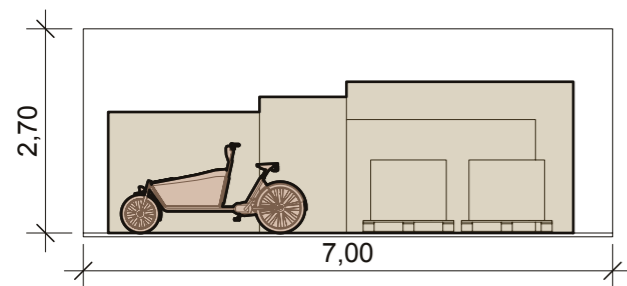
-  Furniture
-  Cargo Bike



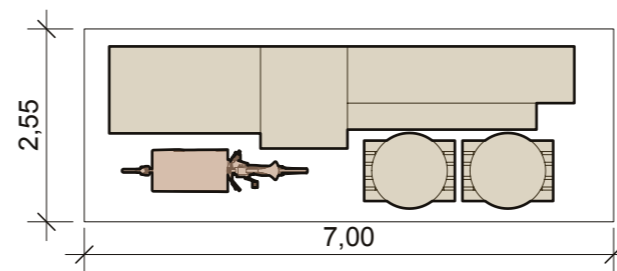
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front view



right view



top view



RoofKIT

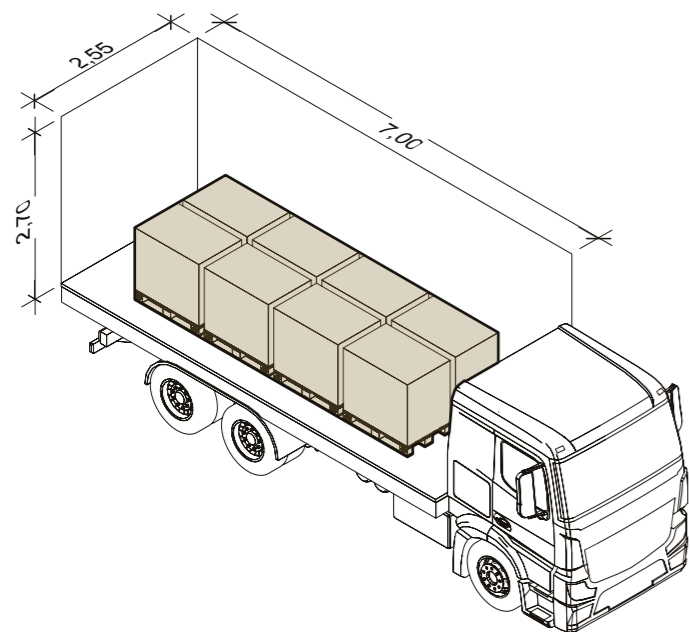
Truck 12

█ Paving Stones

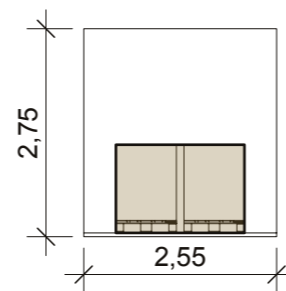


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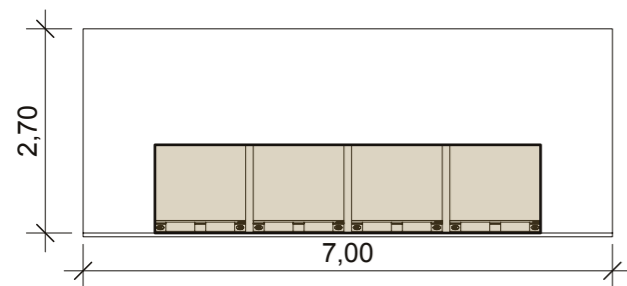
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Mechanical	ME
Electrical	EL
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Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



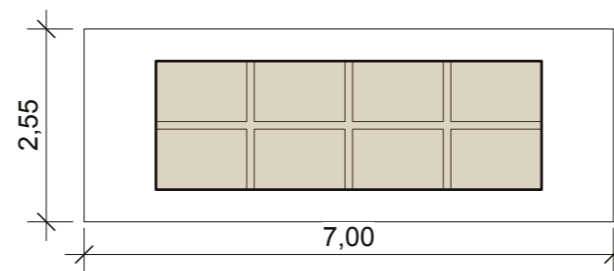
axonometry



front view



right view



top view

Scale Page No.
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Drawing Content
Trucks Shipment - Truck 12

SO-0012



RoofKIT

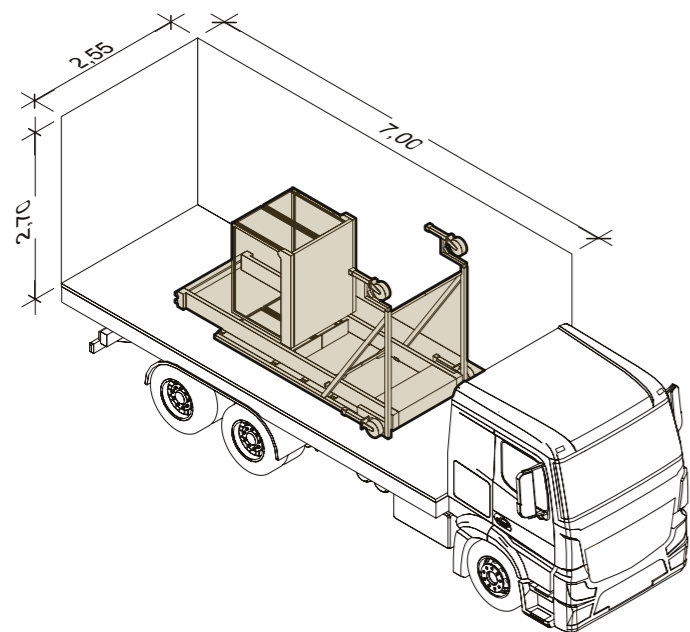
Truck 13

█ Elevator

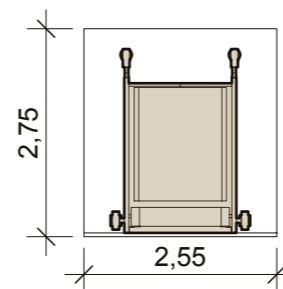


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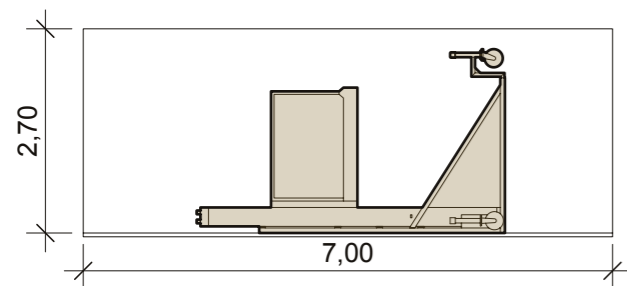
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Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



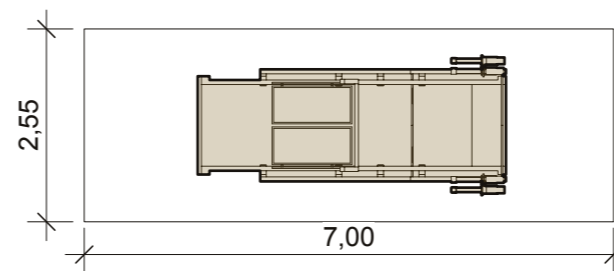
axonometry



front view



right view



top view

Scale Page No.
no scale 207

Drawing Content
Trucks Shipment - Truck 13

SO-0013



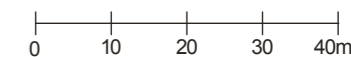
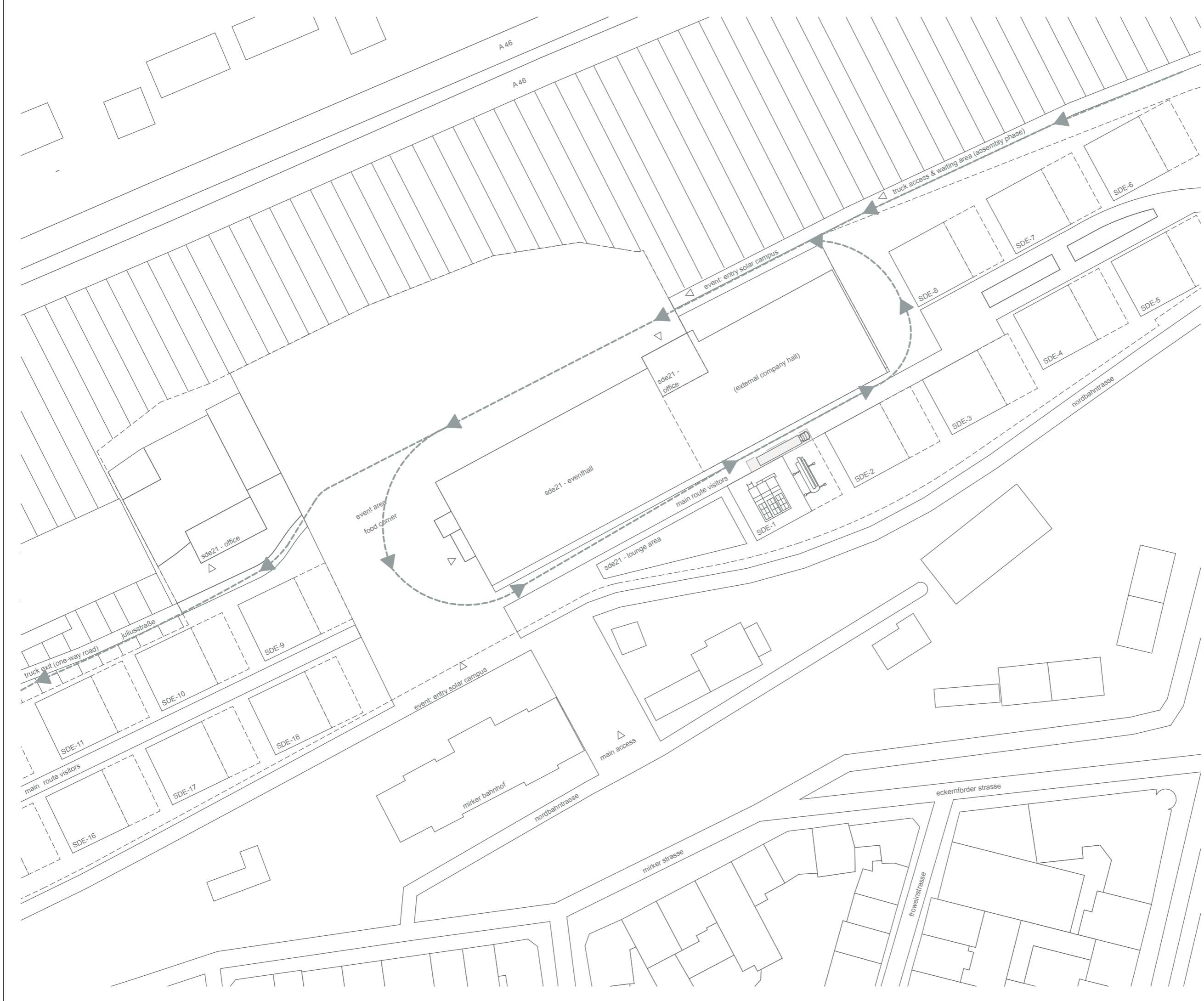
RoofKIT



solar decathlon europe 21»22

WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale 1:1000 Page No. 208

Drawing Content
SDE21/22 Solar Campus

SO-1001

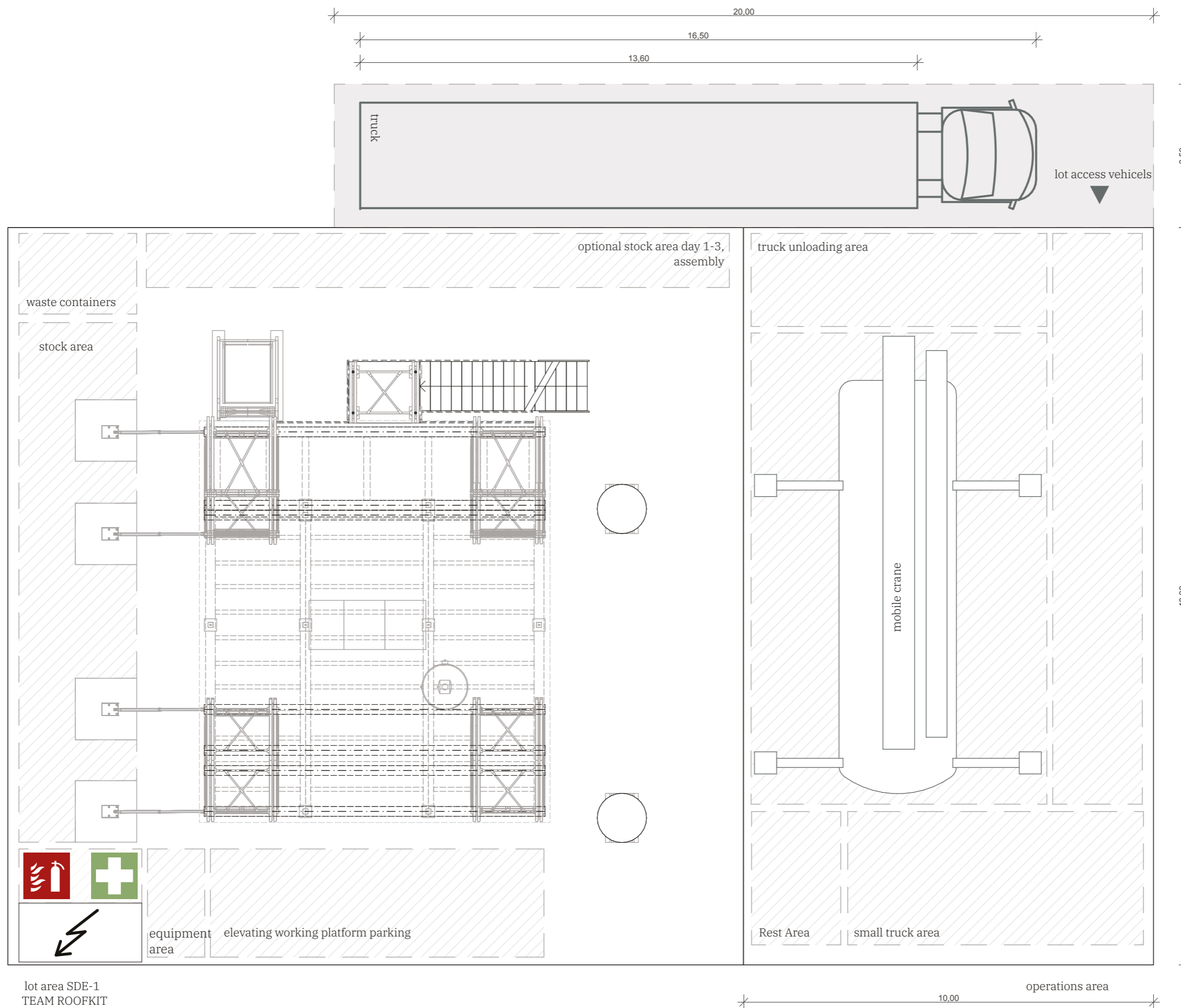


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



lot area SDE-1
TEAM ROOFKIT

Scale no scale Page No. 209

Drawing Content
Lot Plan

SO-2001



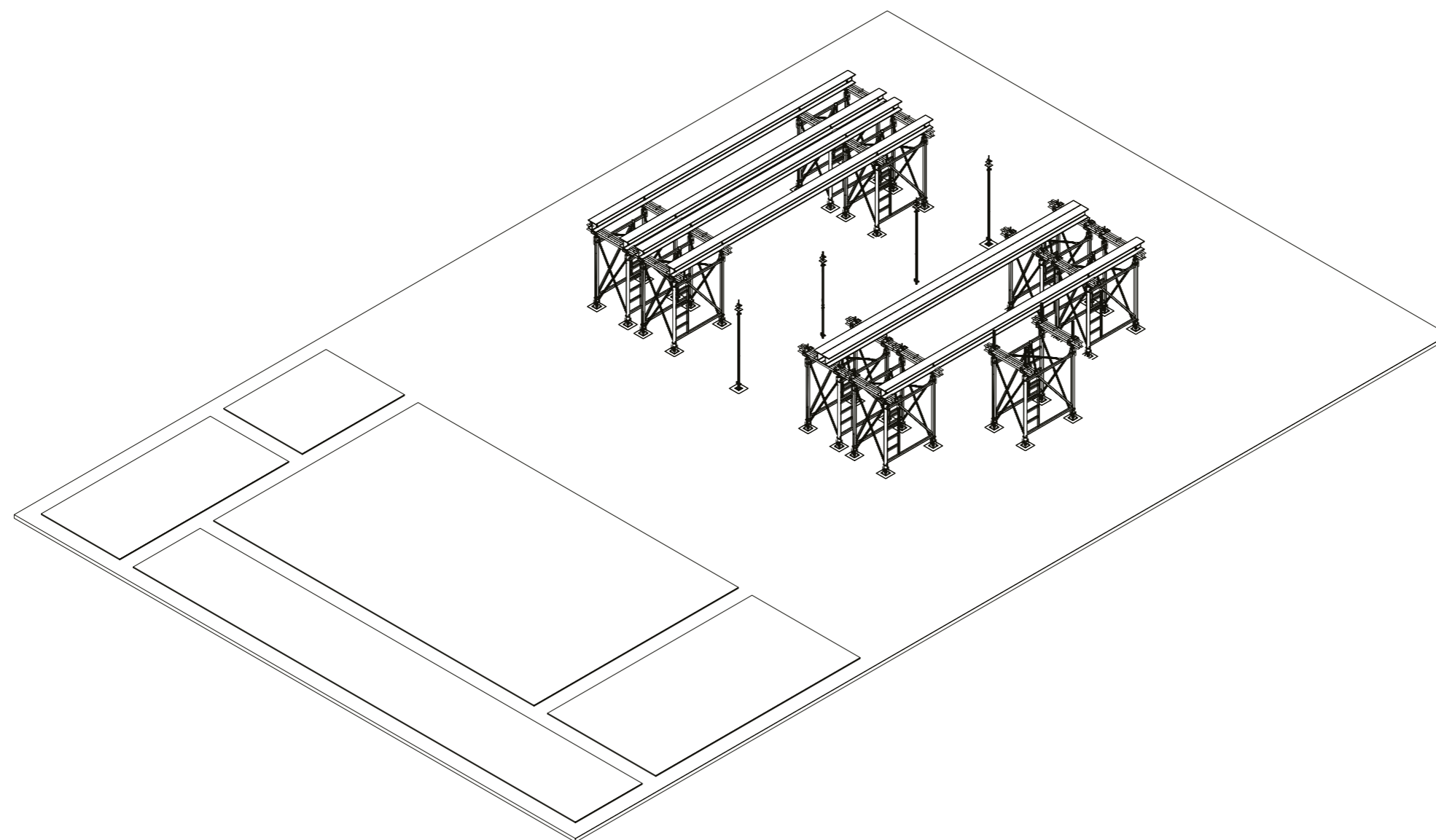
RoofKIT



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WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale

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Page No.

210

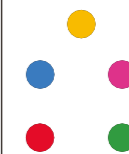
Drawing Content

Phase 1

SO-3001



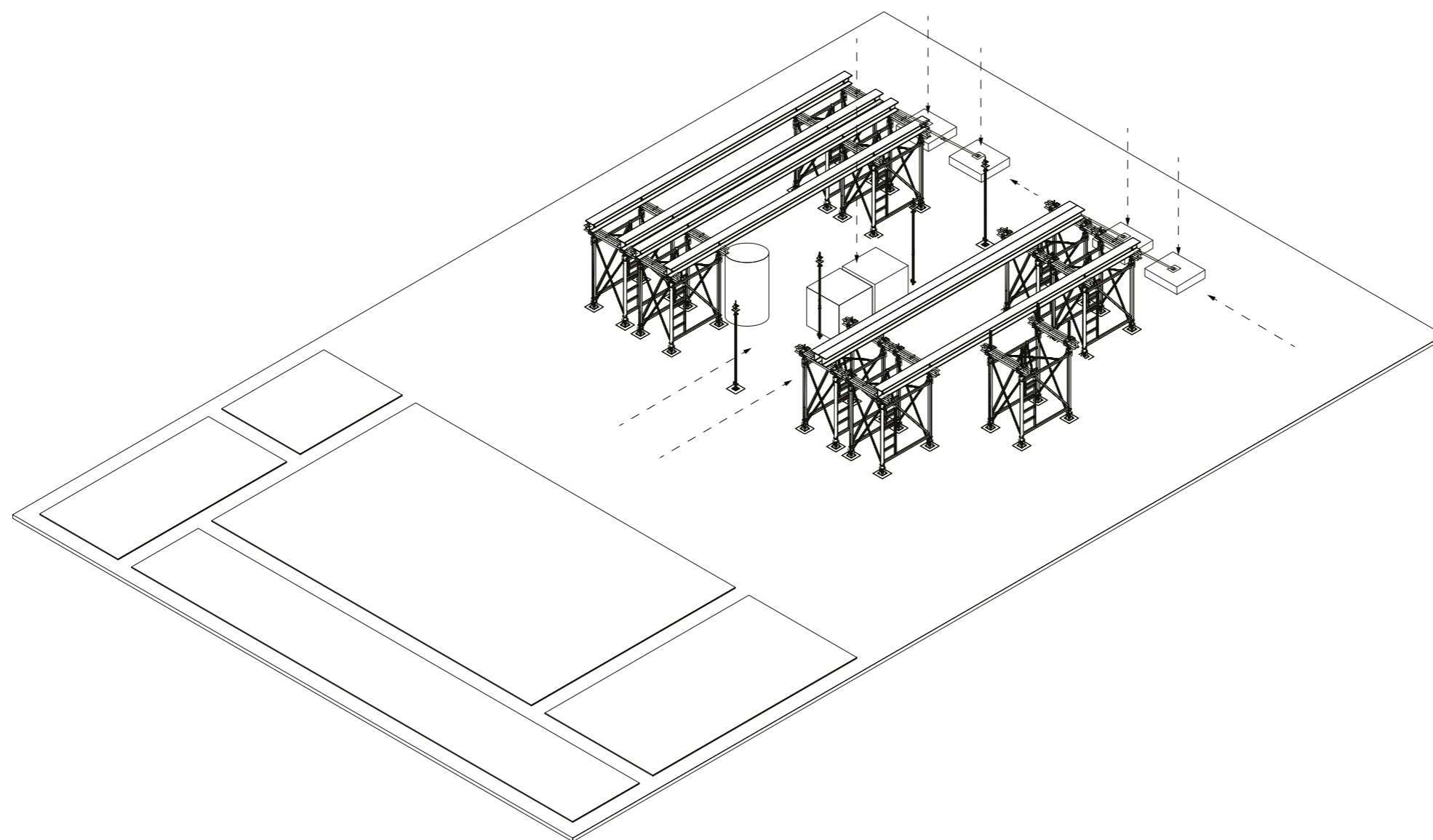
RoofKIT



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europe

WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
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Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale

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Drawing Content

Phase 2

SO-3002

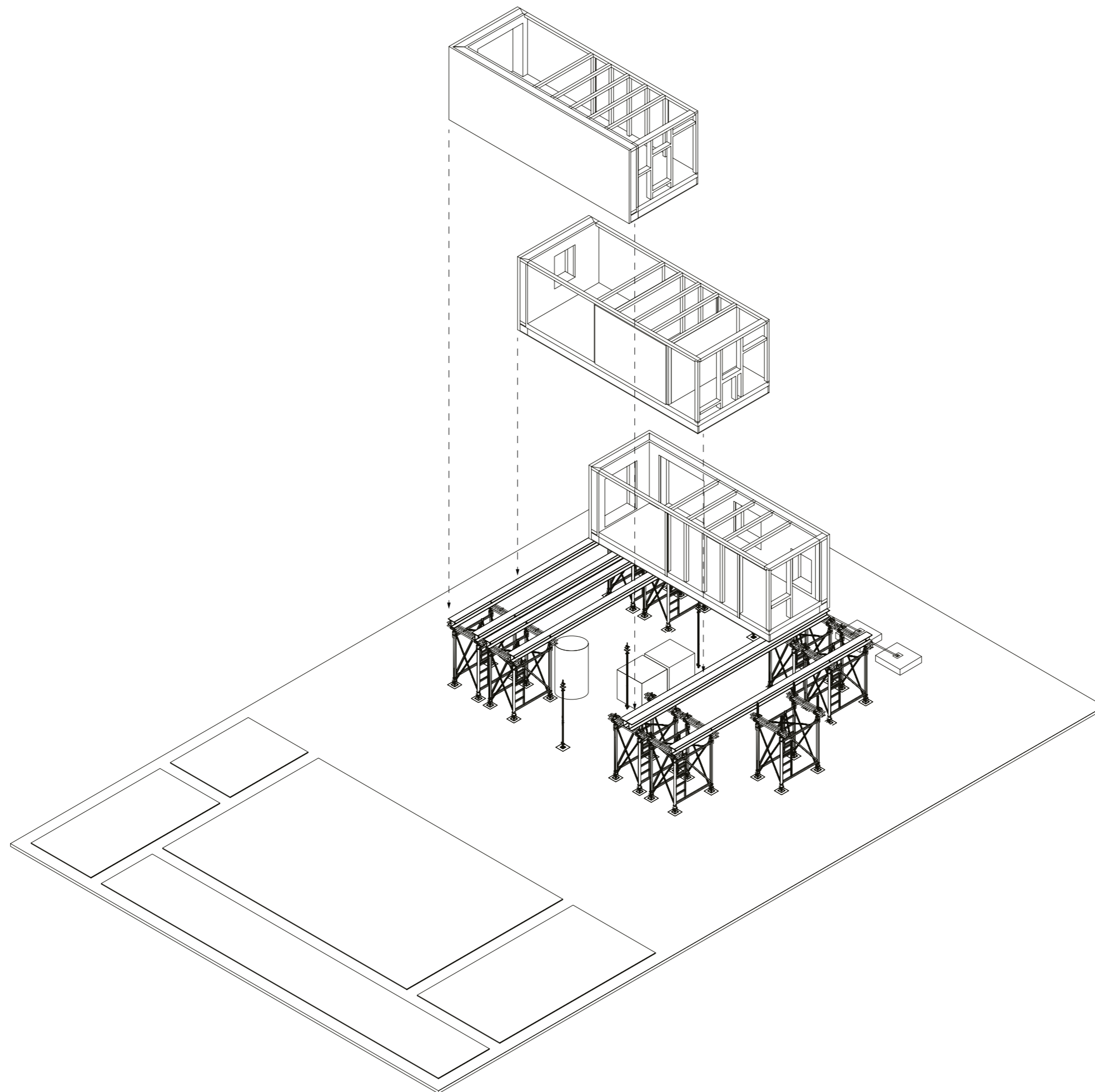


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



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Drawing Content
Phase 3

SO-3003

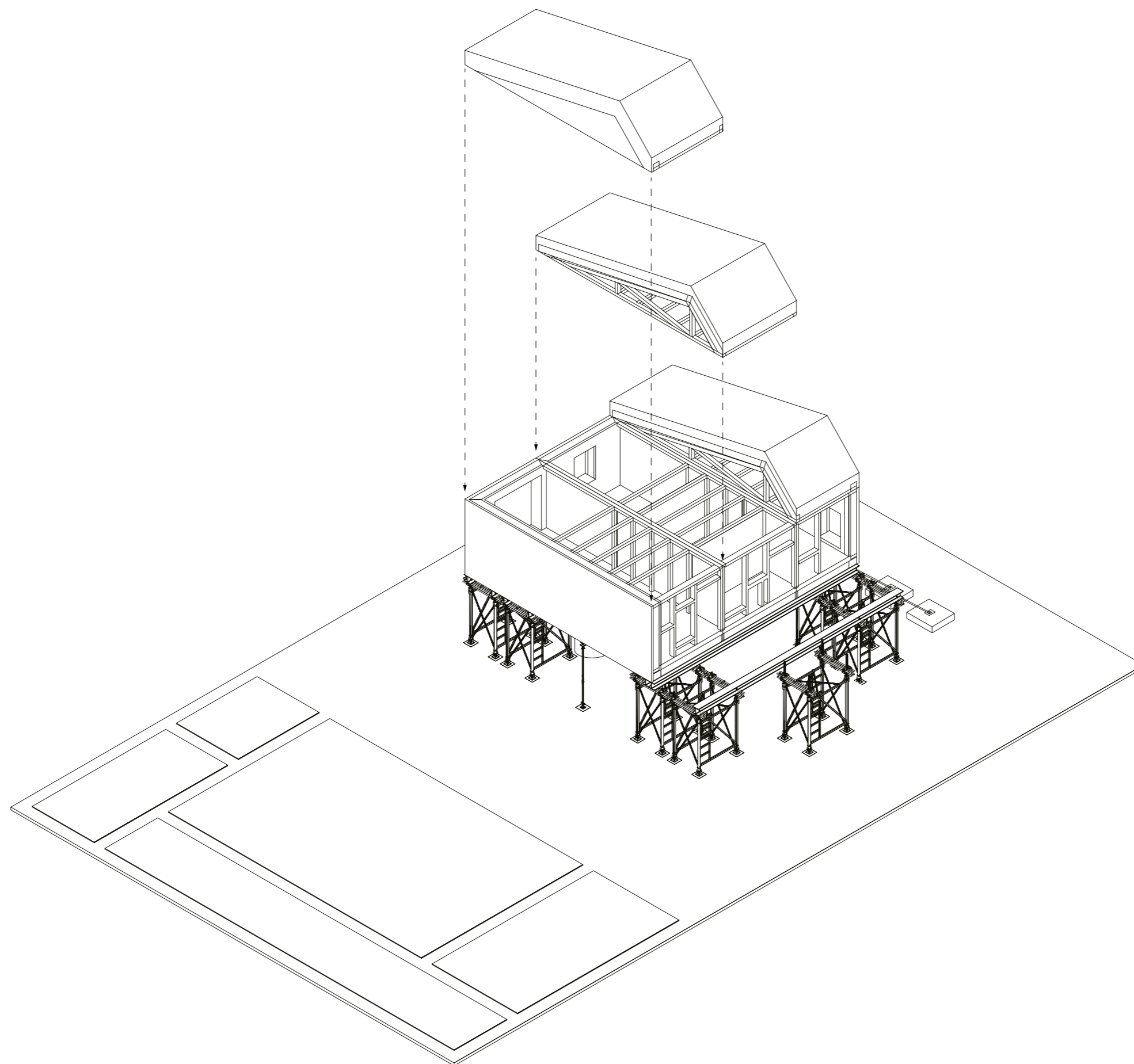


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



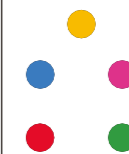
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Drawing Content
Phase 4

SO-3004



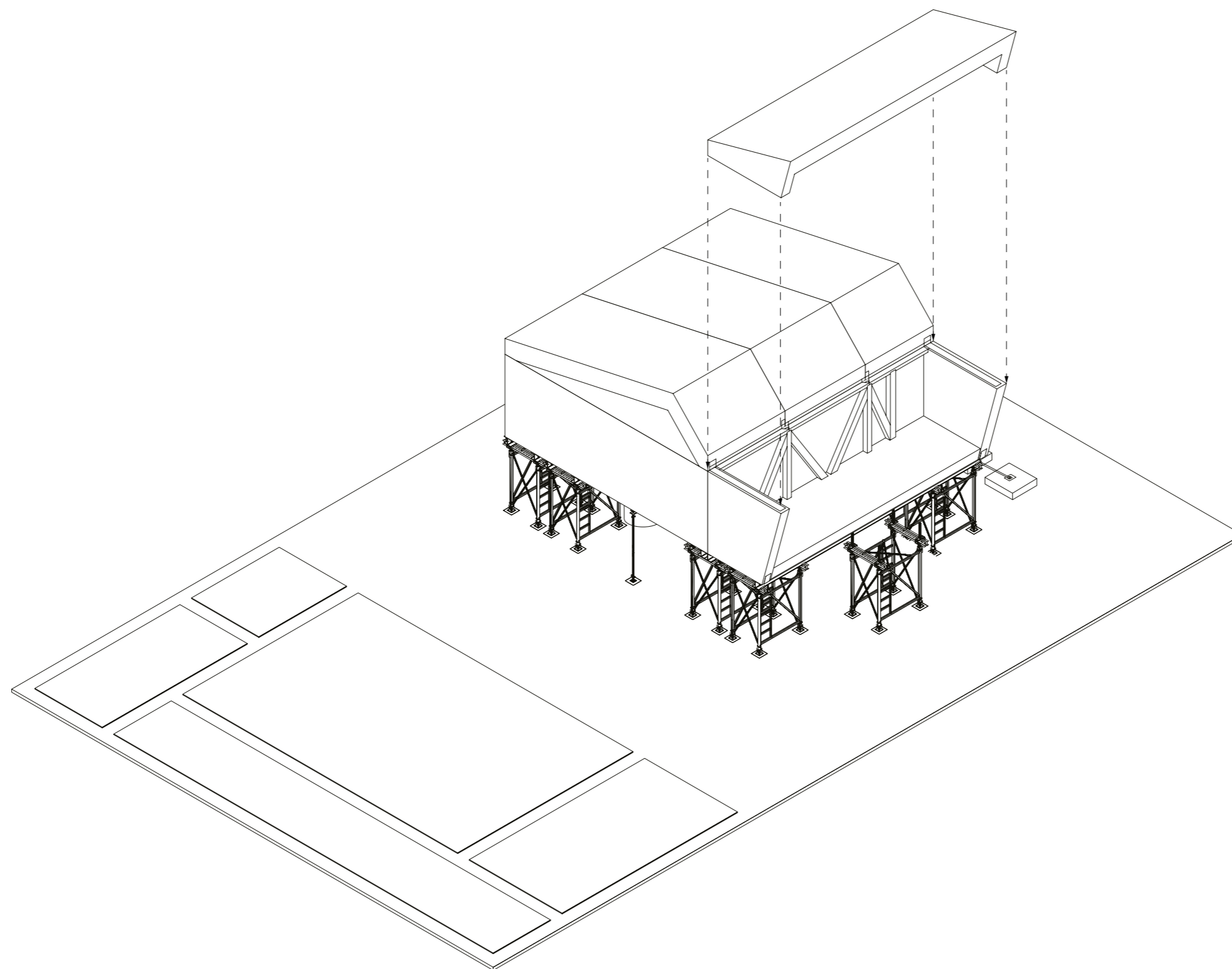
RoofKIT



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WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale

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Drawing Content

Phase 5

SO-3005



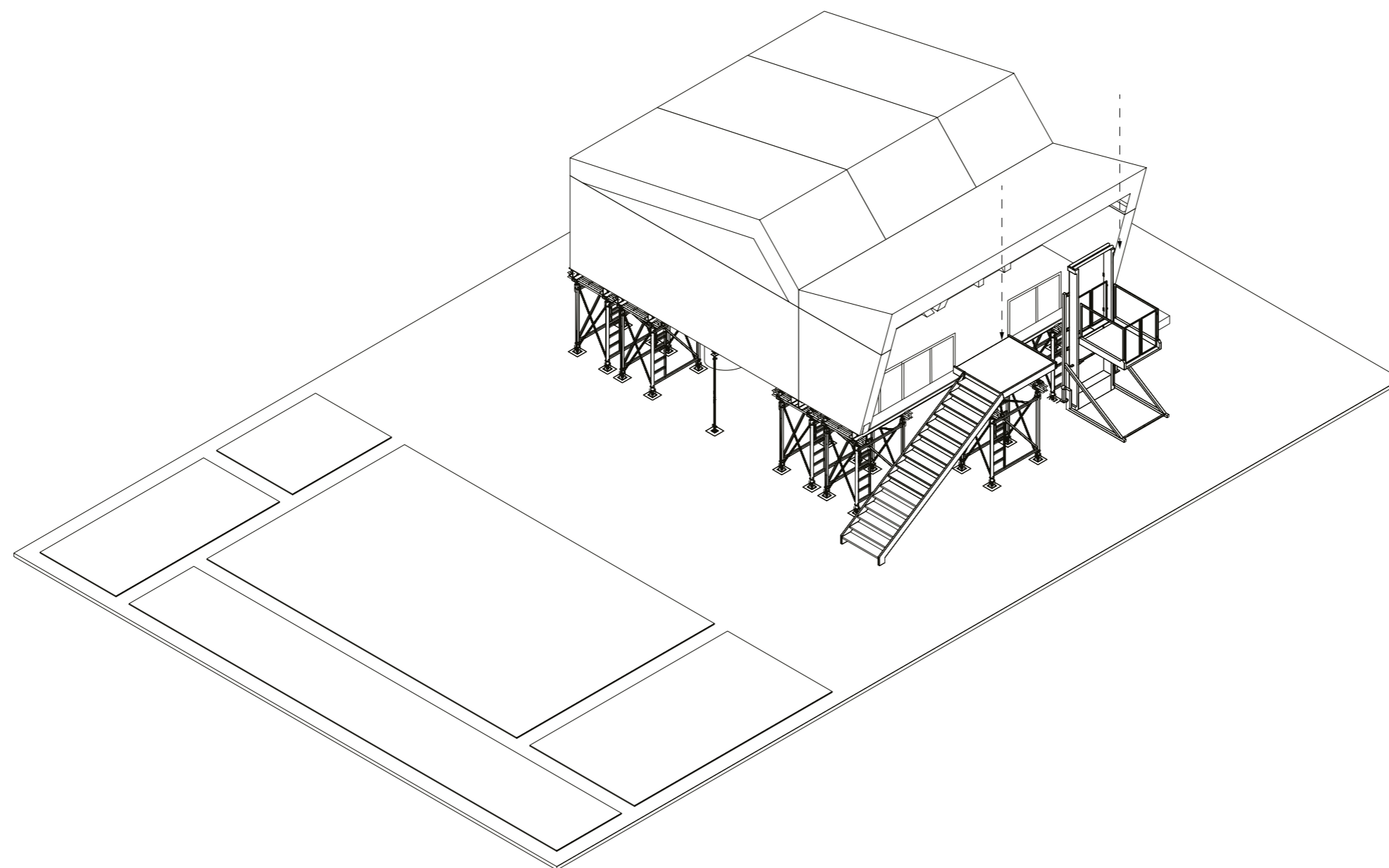
RoofKIT



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europe

WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
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Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



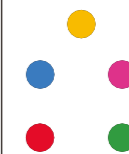
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Drawing Content
Phase 6

SO-3006



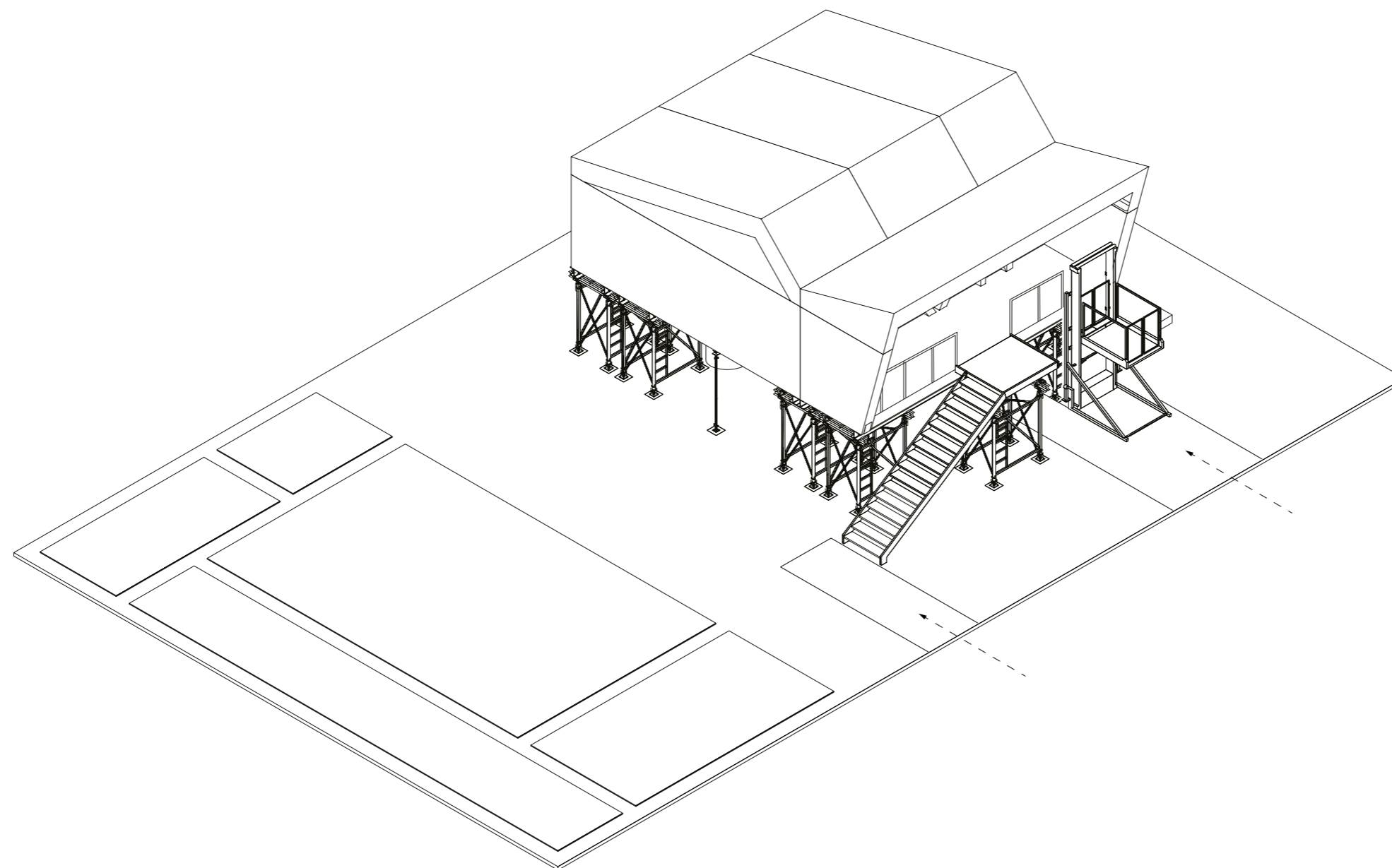
RoofKIT



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decathlon^{21»22}
europe

WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale

no scale

Page No.

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Drawing Content

Phase 7

SO-3007

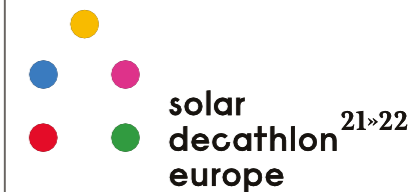


Fire Protection (FP)

Karlsruhe, 23rd March 2022

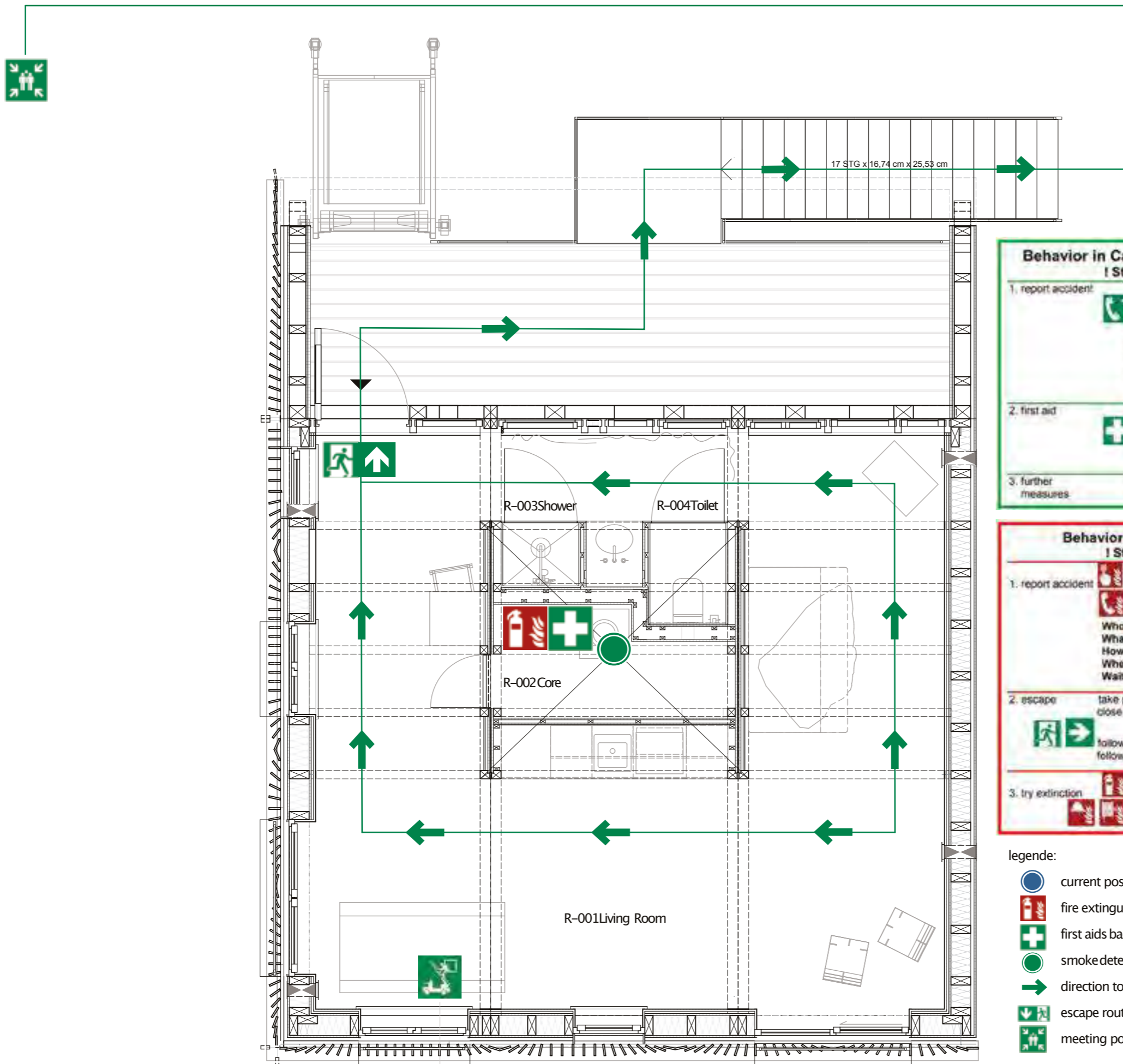


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Behavior in Case of Emergencies
! Stay Calm !

1. report accident

Number: **112**
 Where did it happen?
 What happend?
 How many injured persons?
 Which type of injuries?
 Wait for requests!

2. first aid securing of scene

care for injured
 follow instructions

3. further measures instruct emergency services
 remove onlookers

Behavior in Case of Fire
! Stay Calm !

1. report accident use fire detector or

Number: **112**
 Who is calling?
 What happend?
 How many are effected/ injured?
 Where did it happen?
 Wait for requests!

2. escape take people at risk
 close doors.

follow sign posted escape routes.
 follow instructions

3. try extinction fire extinguisher, fire blanket
 wall hydrant/ fire hose usage

legende:

- current position
- fire extinguisher
- first aids bag
- smoke detector
- direction to emergency exit
- escape route
- meeting point

2nd escape route

Scale
1:50

Page No.
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Drawing Content
Fire Protection Plan

FP-0001



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT

SDE 21_Fire Protection: Fire Protection Concept

Deliverable No.	D=6
Team ID	KT
University/City	Karlsruhe

A Object	B Requirements	Planned /Present	Requirements fulfilled and evidence adduced
All applied (construction) materials	<ul style="list-style-type: none"> E-d2; E₁-d2; E₂ acc. to EN 13501-1:2010-01 or E₃ acc. to EN 50575:2017-02 	Walls: Claytec, clay plaster: A1(KIT_FP_ClayPlaster_OberputzFein_Claytec_01) ClaytecLemix, clay slab(heavy): A1(KIT_FP_Clayboard_Claytec_02) ECOVAP blue, PE-foil: E (KIT_FP_EcovapBlue_Amann_03) diagonal formwork: D-s2,d0 (KIT_FP_Woodenboard_GFM_MassivholzJunker_04) NeptuThermInsulation: E (KIT_FP_NeptuTherm_NeptuGmbH_05) Doerken, delta 50, facade membrane: B_s1-d0(KIT_FP_Delta50_Doerken_02_15) Reclaimedwood: D-s2,d0(KIT_FP_Wood_Kaufmann_16) TruckTarpaulin, temporary facade: B1(KIT_FP_TruckTarpaulin_Freitag_20) Construction materials: Structural solidwood: D-s2,d0(KIT_FP_ConstructionWood_Kaufmann_11) Steel beams: A1(KIT_FP_SteelBeams_Kaufmann_12) Stair: A1(KIT_FP_Stairs_Rieger_13) Floors: Woodenfloorboards, reclaimedwood: D-s2,d0(KIT_FP_Wood_Kaufmann_14) ClaytecLemix, clay slab(heavy): A1(KIT_FP_Clayboard_Claytec_02) ECOVAP blue, PE-foil: E (KIT_FP_EcovapBlue_Amann_03) diagonal formwork: D-s2,d0 (KIT_FP_Woodenboard_GFM_MassivholzJunker_04) NeptuThermInsulation: E (KIT_FP_NeptuTherm_NeptuGmbH_05) Tyvek, soft antireflex, windpaper: E (KIT_FP_TyvekSoftAntireflex_Ampack_06) CladdingMaterial: Magna, Glaskeramik: A1(KIT_FP_Glaskeramik_MAGNA_21) Mycelium, Boards: A(KIT_FP_Mycelium_22) Smile Plastic, Boards: UL94HB (KIT_FP_board_smile_plastics_23) Exterior door: The entrance door is a self-built door, which is a combination of an existing door and an extension of this door. The door fulfills all the requirements. Windows: Stock/Reprocessed windows: B2(KIT_FP_StockWindows_Various_08) Skylight windows: B2(KIT_FP_Skylight_Velux_10) Window and facade awnings: Serge Ferrari, SoltisVeozip: B-s2(KIT_FP_SoltisVeozip_SergeFerrari_09) Roof: Copper sheet covering: A1(KIT_FP_CopperSheets_KME_17) Amann, SucoTecto 0.8, roof underlay, (KIT_FP_SucoTecto_Amann_18) diagonal formwork: D-s2,d0 (KIT_FP_Woodenboard_GFM_MassivholzJunker_04) NeptuThermInsulation: E (KIT_FP_NeptuTherm_NeptuGmbH_05) ECOVAP blue, PE-foil: E (KIT_FP_EcovapBlue_Amann_03) Ecor lightcore, ceilingpanelling: A(KIT_FP_BasicPanel_ECOR_NET_01_19) woolfliz: Bfl -s1(KIT_FP_Designfliz_MKFlize_07) Pipes: Wieland, Copper pipes: A1(KIT_FP_CopperPipes_Wieland_26) Wieland, Floor heating: A1(KIT_FP_FloorHeating_Wieland_27)	yes
Loadbearing walls and pillars	R 30 acc. to EN 13501-2:2016-12	The loadbearing exterior walls comply with R 30 arrangements.	yes
Rooms for lithium-ion-storage with a storage capacity over 2,5kWh	Perimeter walls: -B1 30 acc. to EN 13501-2:2016-12 Door: -SaC5 acc. to EN 16034:2014-12 incl. EN 16034 Corrigendum 1:2018-02 Openable Window: -Preferably available for ventilation in case of fire	The lithium-ion storage unit is positioned outside the HDU. It is located below the HDU in a fire-retardant box.	yes
Escape routes	Length of first escape route maximum 35m.	Escape Route in m: 8,70	yes
	First escape route from the upper floor via necessary staircase; usable width: -minimum 1.00 m stair depth: -minimum 0.26 m -maximum 0.37 m height difference per stair: -minimum 0.14 m -maximum 0.19 m	First escape route via necessary external staircase; usable width: 1.20m stair depth: 0.26m height difference per stair: 0.17m	yes
	Emergency escape routes have a -minimum width of 1.00 m -minimum height of 2.20 m	Emergency escape routes have a -width of at least 1.00m and more -height of at least 2.20m and more	yes
	Door have -a clearance width of at least 0.90m -a clearance height of at least 2.05m	Door have -a clearance width of 1.00m -a clearance height of 2.05m	yes
	Doors along the escape route can be opened directly by anyone without tools.	We don't have standard interior doors. The core has a door that can be unhinged, this is made of the same material as the interior wall and isn't lockable. Exterior doors have a door handle acc. to EN 179.	yes
	Second escape route in the upper floor via: • further necessary staircase or • place accessible with fire brigade rescue equipment	Second escape route via an escape route window, this can be reached with rescue equipment from the fire department. There are no obstacles between the stand and the window. The stand has a stable base (area 2.00m*4.00m). The escape route window is marked and drawn in the fire protection/escape route plan.	yes
	Windows used as escape routes must be -at least 0.90m* 1.20m in usable size -no higher than 1.20m above the upper edge of the floor -with the lower edge of roof windows, no more than 1.2m away from the eaves edge	The escape route window has a minimum usable size of 0.90m* 1.20m.	yes
	• There are two escape routes from the ground floor to the outside or • an escape route from the ground floor is available if the route can be reached from any point on the ground floor within 15m. Escape and rescue plan compiled in accordance with DIN EN ISO 23601.	There are two escape routes from the HDU. One via the outside staircase and a second via a window on the other side of the building. The escape and rescue plan FP-0001acc. to ISO 23601 has been prepared.	yes
Smoke detector	Interconnected smoke detectors in bedrooms and living-rooms.	There is a smoke detector in the middle and at the highest point in the HDU. Only one smoke detector is provided as sleeping and living areas and all other areas are within one room. (KIT_FP_EL_SmokeDetector_Jung_24)	yes
Fire extinguisher	A foam fire extinguisher with a minimum extinguishing capacity of 21A and 113B acc. to EN 3-7 in a central position on each floor.	There is a foam fire extinguisher in a central location with an extinguishing capacity of 21A and 113B according to EN 3-7. (KIT_FP_foamfire_extinguisher_Green_25)	yes



Health & Safety (HS)

Karlsruhe, 23rd March 2022

SDE 21_Health & Safety: Risk Analysis

Deliverable No.	D#5
Team ID	KIT
University/ City	Karlsruhe

L Slight Injury	CP Collective Protection
G Serious Injury	IP Individual Protection
Mo Fatal Injury	S Signs

NOTE: In this evaluation we consider "avoided risks" all qualified as "trivial" or "tolerable"; the rest of the qualifications are considered "not avoided risks" and need to be solved with further measures.

A Work-Units		B Tasks		C Agents	D Risks					E Measures							
Break down to WORK-UNITS		Identify TASKS in each work unit		Identify the AGENTS	Identify the RISKS					Develop MEASURES							
Work Unit Number	Name of Work Unit	Task Number	Name of the task	Name of the agents	Risk Number	Brief description/ listing of the risks	Probability of the risk	L	G	Mo	Risk qualification without measures	Solution Number	Brief description/ listing of the solution	Determined precaution CP	IP	S	Risk qualification with measures
Previous Works at university phase																	
Work Unit 1	Model Building	Task 1	Cutting elements for the Model	team members	Risk 1a	slight injury due to inattentive work	Possible		x		Moderate risk	Solution 1a	always providing a first aid kit near by, team members will work focused and take breaks whenever needed		x		Tolerable risk
General protective measures																	
General protective measures will be performed at all times. this includes wearing the PPE including helmet, safety boots reflective clothing and when needed gloves and noise protection. The team members and contracted staff will undergo a special health&safety training and will always be aware of risks and working with high focus on their tasks and the surroundings. Everyone																	
Prefabrication in Reuthe (AT) phase																	
Work Unit 2	Module Building	Task 2	handling dangerous machines (like saws)	workers	Risk 2a	injuries due to wrong, careless handling	Possible			x	Moderate risk	Solution 1a	educated, professional workers used to the tasks and the environment; wearing certified protective workwear		x		Tolerable risk
		Task 3	loading up the modules	workers	Risk 3a	getting knocked down while loading up the module	Possible			x	Intolerable risk	Solution 2a	educated, professional workers used to the tasks and the environment	x		x	Tolerable risk
					Risk 3b	overloading the loading ramp	Possible			x	Intolerable risk	Solution 2b	educated, professional workers used to the tasks and the environment	x		x	Tolerable risk
					Risk 3c	overloading the slings	Possible			x	Intolerable risk	Solution 2c	educated, professional workers used to the tasks and the environment	x		x	Tolerable risk
					Risk 3d	using unapproved slings	Possible			x	Intolerable risk	Solution 2d	Use only certified slings visually checked before every use. Only educated, professional workers used to the tasks and the environment	x		x	Tolerable risk
Decathletes Training phase																	
	H&S education	Task 4	safety training	team members		General Health&Safety training from a certified safety engineer							strengthen awareness for general safety hazards on a construction site and especially for our tasks from a professional	x	x		Trivial risk
		Task 5	risk presentation	team members workers		Presentation from our H&S team for the whole team, presenting our risk analysis so everyone is aware of all the hazards								x	x		Trivial risk
		Task 6	First aid training	team members										x	x		Trivial risk
		Task 7	daily briefings	team members workers		the H&S team will provide a daily briefing to team members and contracted workers, going through the tasks of the day and the safety hazards connected to those								x	x		Trivial risk
Transport Phase																	
Work Unit 3	Transport from Production Facility	Task 8	transport of scaffolding for the first floor, stairs, lift, eight open modules with trucks	truck truck driver	Risk 8	road accidents due to the load getting loose because of insufficient locking	Remote			x	Important risk	Solution 1a	locking the load with certified equipment from all 4 sides	x			Trivial risk
		Task 9	driving on Solar Campus where the road is not only used by vehicles but also by decathletes and other SDE participants	truck truck driver pedestrians	Risk 9	Possible accidents caused by speeding (driving faster than walking speed)	Possible			x	Important risk		Truck is leaded and followed by two team members to prevent driver from speeding	x			Trivial risk
		Task 10	parking	truck truck driver	Risk 10	getting hit by parking (very dangerous, but low probability)	Remote			x	Intolerable risk	Solution 2a	qualified drivers and workers, marking the work area; supervision by one member of the site operations/ h&s team (banksman) ; guiding the truck while parking	x	x	x	Trivial risk
Assembly Phase																	
Work Unit 4	Unloading	Task 11	unloading foundations, stones, scaffolding, modules, lift, stairs and other materials	truck, workers, team members, fork lift	Risk 11a	Risk of getting hit while unlocking the load	Possible			x	Important risk	Solution 1a	qualified workers/briefing of the team members; checking the load before unlocking; supervision by one member of the site operations/ h&s team	x	x		Tolerable risk
					Risk 11b	Risk of injury caused by the fork while unloading with the fork lift	Possible			x	Important risk		Only specially trained drivers are allowed to operate the fork lift; supervision by one member of the site operations/ h&s	x	x		Tolerable risk
					Risk 11c	getting hit by the crane during movement (very dangerous, possible)	Possible			x	Intolerable risk	Solution 1b	briefing of the team members; marking the movement range of the crane; supervision by one member of the site operations/	x	x	x	Tolerable risk
					Risk 11d	getting knocked down while unloading heavy objects	Possible			x	Important risk	Solution 1c	briefing of the team members; marking the slewing range of the crane; controlling the load with ropes; keeping other workers/team members away from the module; supervision by one member of the site operations/ h&s team"	x	x	x	Tolerable risk
					Risk 11e	risk of injury while placing objects (e.g. foundation plates, gabion stones) on the ground	Possible			x	Moderate risk		Every team member wears their safety shoes at all times on site. Both the workers and the person who places the objects have to watch out for the other and keep a safe distance during the placement	x	x		Tolerable risk
					Risk 11f	disablement of the work due to materials lying in the working area (Slight Injury, possible)	Possible			x	Moderate risk	Solution 1d	preparation of the site and approval by the site operations manager	x	x		Trivial risk
Work Unit 5	Assembly	Task 12	assembling of the scaffolding as the primary supporting structure for the HDU	workers team members	Risk 12a	disablement of the work due to materials lying in the working area (Slight Injury, possible)	Possible			x	Moderate risk	Solution 2a	preparation of the site and approval by the site operations manager	x	x		Tolerable risk
					Risk 12b	getting hit by scaffolding elements assembly (can be very dangerous, possible)	Possible			x	Intolerable risk	Solution 2b	briefing of the team members (handling long objects); keeping other workers/team members away; supervision by one member of the site operations/ h&s team; marking the slewing range of the crane wearing a certified helmet	x	x	x	Tolerable risk
					Risk 12c	Cuts due to sharp edges on steel	Possible			x	Moderate risk		all people working with the scaffolding pipes have to wear protective gloves	x	x		Trivial risk
		Task 13	levelling of the load distribution beams, working from mobile scaffolding	workers team members	Risk 13	danger of the scaffolding tipping over or workers stumbling due to movements.	Possible			x	Important risk		Use of certified mobile scaffold that can be secured against movements and moving to another work area only when no one is standing on it				Tolerable risk
		Task 14	Filling the gabions with stones	workers team members	Risk 14a	Scratches or cuts due to sharp edges of stones	Possible			x	Moderate risk		Wear protective gloves				Trivial risk
					Risk 14b	risk of injury caused by falling stones	Possible			x	Tolerable risk		Safe placement of stones, not dropping it from a height and waering safety boots.			x	Trivial risk
		Task 15	assembling the modules on top of the ground floor structure	workers team members	Risk 15a	disablement of the work due to materials lying in the working area (Slight Injury, possible)	Possible			x	Moderate risk	Solution 3a	preparation of the site and approval by the site operations manager	x	x		Trivial risk
					Risk 15b	getting hit by the module during assembly (can be very dangerous, possible)	Possible			x	Intolerable risk	Solution 3b	briefing of the team members; keeping other workers/team members away; supervision by one member of the site operations/ h&s team; marking the slewing range of the crane, wearing a certified helmet	x	x	x	Tolerable risk
					Risk 15c	risk of getting hit by falling objects during assembly of the modules	Possible			x	Intolerable risk		no one is allowed under the modules during the task			x	Tolerable risk
					Risk 15d	getting trapped during assembly with the existing building elements/objects (can be very dangerous, possible)	Possible			x	Intolerable risk	Solution 3c	briefing of the team members; keeping other workers/team members away; supervision by one member of the site operations/ h&s team	x	x		Tolerable risk
				workers	Risk 15e	Working in heights, risk of falling	Possible			x	Intolerable risk	Solution4a	work executed on a telescopic work platform with standardised railing; wearing a certified helmet; qualified workers used to working on the assembly of roofs; supervision by one member of the site operations/ h&s team	x	x	x	Tolerable risk



WUPPERTAL GERMANY

General Architecture	GE
Interiors	AR
Structural	IN
Plumbing	ST
Solar Water Heating	PL
Mechanical	SW
Electrical	ME
Photovoltaic System	EL
Teleco. & Build. Man. System	PV
Instrumentation Drawings	BMS
Site Operations	ID
Fire Protection	SO
Health & Safety	FP
Public Tour	HS
	PT



WUPPERTAL GERMANY

General	GE
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			workers	Risk 15f	working on a telescopic work platform	Possible		x		Moderate risk		the vehicle is only to be moved by a qualified driver when no one is standing on the platform	x	x		Tolerable risk	
	Task 16	Installation of the lift	workers	Risk 16	risk of tilting back during installation	Possible			x	Moderate risk		no one is allowed to be in the moving area until it is secured; special workers used to working with this lift, supervision by H&S coordinator/officers	x	x		Tolerable risk	
	Task 17	securing the well-being of the workers and team members	workers team members	Risk 17	workers and team members being unwell, sick, weak, stressed; overexertion	Possible	x			Moderate risk	Solution 5a	Securing availability of a comfortable place of retreat, food and drinks; not extending work hours	x	x		Trivial risk	
	Task 18	laying the paving stones	team members	Risk 18a	risk of injury caused by falling stones	Remote	x			Moderate risk		safe placing, no dropping from a height		x		Trivial risk	
				Risk 18b	risk of injuring hands while paving work (includes use of a hammer)	Possible	x			Moderate risk		protective gloves, working focused		x		Trivial risk	
	Task 19	connecting electricity for the HDU	workers	Risk 19	exposure to electric connections	Possible		x		Moderate risk	Solution 6b	qualified workers, wearing the appropriate workwear	x		x	Tolerable risk	
	Task 20	general assembly	workers team members	Risk 20	getting knocked out by objects or tools	Possible			x	Intolerable risk	Solution 6d	wearing the appropriate workwear, e.g. a certified helmet	x	x	x	Tolerable risk	
Work Unit 6	interior fittings	Task 21	assembling the interior of the HDU	workers team members	Risk 21a	Injury because of carrying too much weight	Possible		x	Important risk	Solution 7a	organizing safety briefing with showing the appropriate way to carry; supervision by one member of the site operations/ h&s team	x	x	x	Tolerable risk	
					Risk 21b	Risk of tripping due to cables or other equipment	Possible			Important risk	Solution 7b	keeping the working area clean and tidy at all times. Controls are carried out by the H&S coordinators/officers	x	x	x	Tolerable risk	
Work Unit 7	preparation for Competition Phase	Task 22	cleaning the construction site of all equipment, waste, tools, etc.	workers team members	Risk 22	fall after tripping over objects lying around on the construction site	Possible	x		Moderate risk	Solution 8a	wearing the appropriate workwear, cleaning the construction site carefully; approval by the site operations manager and the health and safety coordinator	x	x	x	Trivial risk	
Maintenance during Competition Phase*																	
Work Unit 8	Competition Phase	Task 23	Public House Tour	visitors team members	Risk 23a	Getting hit by loose objects	Possible		x	Moderate risk	Solution 1a	approval by the site operations manager/ h&s team; checking the HDU for loose objects before Opening Day of the Solar Campus	x	x		Tolerable risk	
					Risk 23b	Stepping on objects	Possible	x		Moderate risk	Solution 1b	checking the HDU before Opening Day of the Solar Campus, approval by one member of the site operations/ h&s team	x	x		Trivial risk	
					Risk 23c	Fall of persons at a different level	Possible		x	Intolerable risk	Solution 1c	installation of a railing; supervision of the visitors by the Public Tour Guide	x	x	x	Tolerable risk	
					Risk 23d	Fall of persons at the same level (e.g. because of collision with still objects, other people, ...)	Possible	x		Moderate risk	Solution 1d	installation of a railing; supervision of the visitors by the Public Tour Guide; planning the Public House Tour with wide enough passageways through the building, e.g. no interior in	x	x	x	Trivial risk	
					Risk 23e	Not knowing the way out in case of emergency	Possible		x	Intolerable risk	Solution 1e	Health and Safety briefing for all team members, clear signs, always one person on the construction site which knows what to do in case of emergency	x	x	x	Tolerable risk	
					Risk 23f	Visitors ignore dangers of the project site	Possible		x	Intolerable risk	Solution 1f	relevant signs with informations about specific danger areas (no entry), only walking on predetermined ways	x	x	x	Trivial risk	
Disassembly Phase																	
Work Unit 9	Disassembly, Unloading	See Unloading, Assembly, in reversed order															
General risks during the whole Competition on the Solar Campus																	
Work Unit 10	work on the construction site, competition period	Task 24	work on the construction site, competition period	workers team members visitors	Risk 24a	Fire	Remote		x	Intolerable risk		prohibition of smoking and open fire (indicated by signs)	x	x	x	Tolerable risk	
					Risk 24b	Explosion	Remote		x	Intolerable risk		prohibition of smoking and open fire (indicated by signs)	x	x	x	Tolerable risk	
					Risk 24c	injury because of wet, slippery floors	Possible	x		Moderate risk		all materials that are meant to walk on or hold onto should be topped with anti-slippery material; wearing appropriate shoes; posting signs after rain	x	x	x	Tolerable risk	
					Risk 24d	exposure to electric connections	Possible		x	Intolerable risk		electricians being professional workers wearing protective workwear; no team members working on electrical connections; proper electrical isolation	x	x		Tolerable risk	
					Risk 24e	bad hygiene leading to the spread of illnesses	Possible	x		Moderate risk		Wiping frequently touched surfaces e.g. door handles with disinfection regularly	x	x		Tolerable risk	
					Risk 24f	Risk of injury from operating machines and tools	Possible		x	Intolerable risk		Creating and visible attachment of important rules of conduct for the individual machines and tools. For example, ladders, hammers, saws... Before the equipment is used, the HS Team Coordinator will provide a briefing.	x	x		Tolerable risk	
General risks from environment																	
Work Unit 11	work on the construction site, competition period	Task 25	work on the construction site, competition period	workers team members visitors	Risk 25a	Noise	Remote		x	Intolerable risk		Provide proofed noise protection headphones	x	x	x	Tolerable risk	
					Risk 25b	Weather	Possible		x	Moderate risk		Provide workers with rain jackets. Stop work if weather conditions are too difficult. Team members must wear safety shoes throughout the construction process. These also serve to prevent slipping. Anything that could be potentially dangerous if it gets wet must be secured (e.g.: building electricity).	x	x	x	Tolerable risk	
					Risk 25c	Wind	Possible	x		Moderate risk		Temporary barriers so that no foils or materials can fly around. Leave nothing lying around, secure things position protections	x	x	x	Tolerable risk	
					Risk 25d	Visibility	Possible	x		Moderate risk		Adequately equip the construction site with light	x	x	x	Tolerable risk	

*** examples of further work-units can be used by the teams; the list is not complete and may be extended
 **** examples for further risks descriptions can be used by the teams, but does not need to; the list is not complete and may be extended; nevertheless teams are encouraged to describe risks in their own words

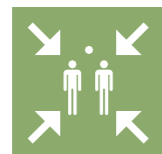


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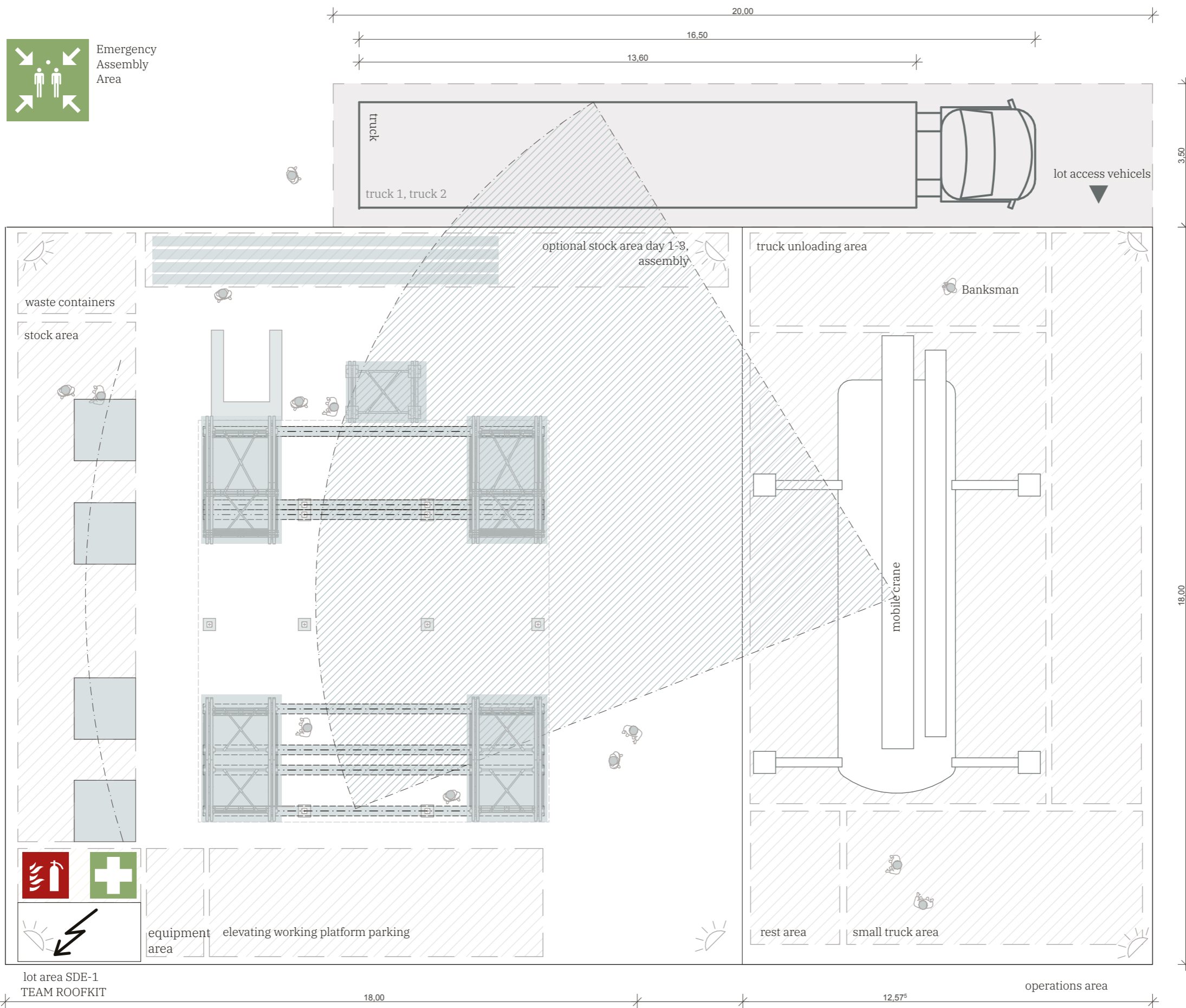


WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Emergency Assembly Area



Scale no scale Page No. 223

Drawing Content Assembly Phase 1 - Foundation Scaffolds

HS-1001

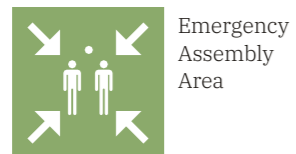


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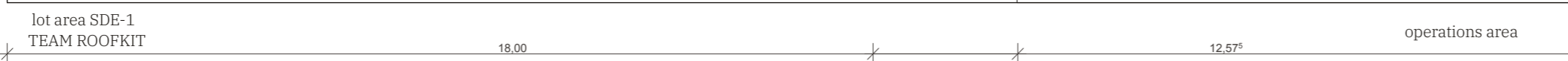
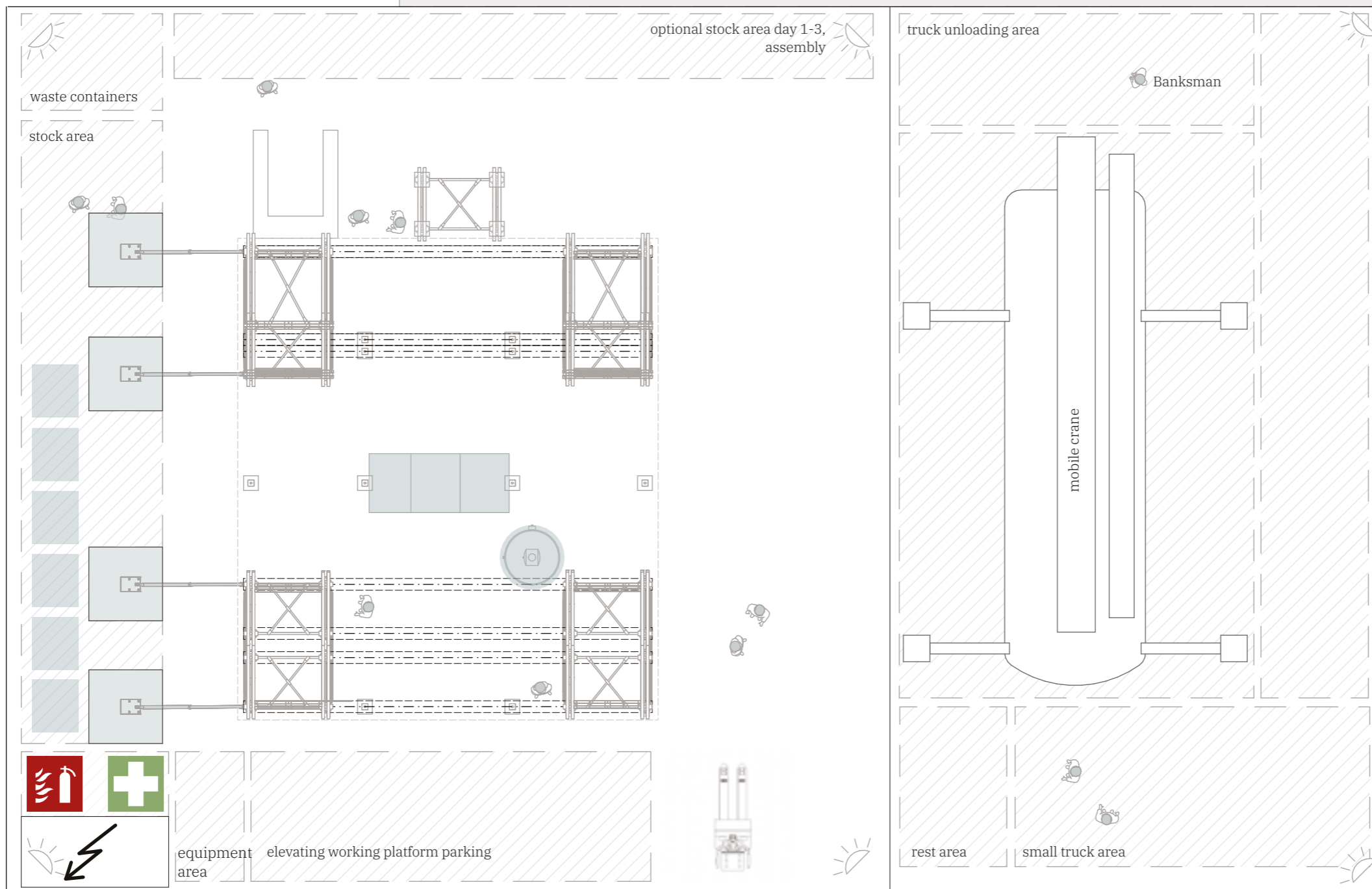
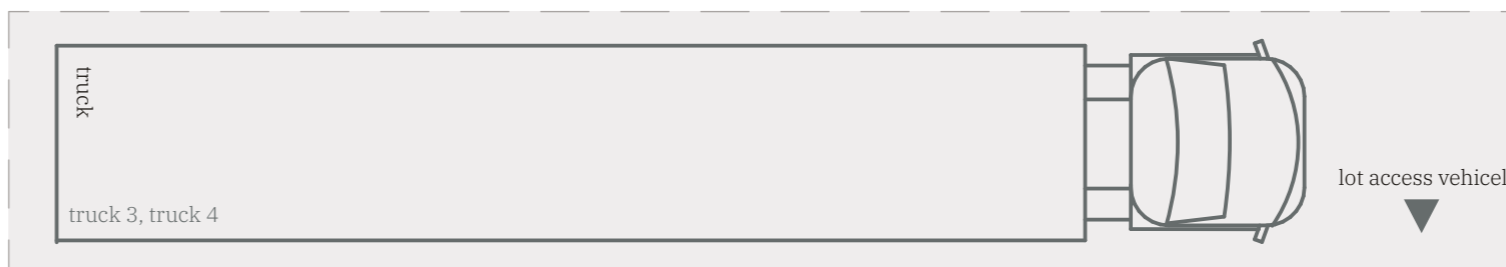
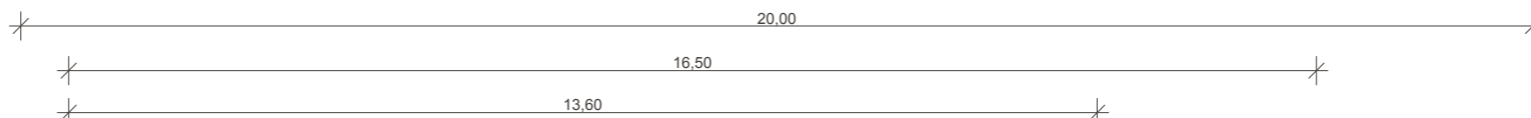


WUPPERTAL GERMANY

General	GE
Architecture	AR
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Emergency Assembly Area



3.50
18.00

lot area SDE-1
TEAM ROOFKIT

equipment area elevating working platform parking

rest area small truck area

operations area

Scale no scale Page No. 224

Drawing Content Assembly Phase 2 - Gabions Watertanks

HS-1002

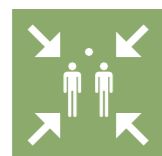


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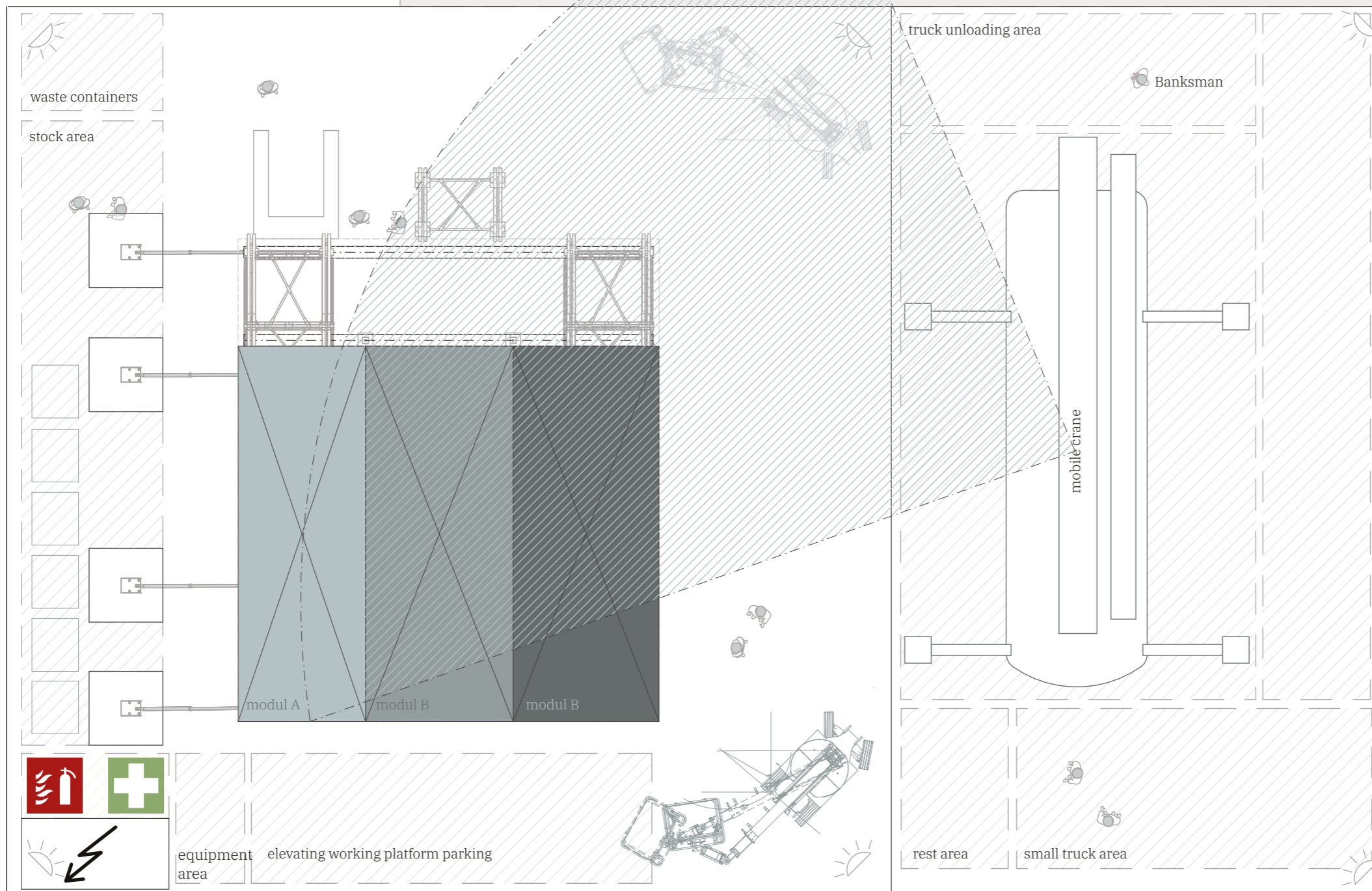


WUPPERTAL GERMANY

General	GE
Architecture	AR
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Emergency Assembly Area



lot area SDE-1
TEAM ROOFKIT

18,00

12,57^s

operations area

Scale

no scale

Page No.

225

Drawing Content

Assembly Phase 3 - Living Modules A/B/C

HS-1003

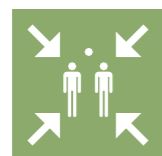


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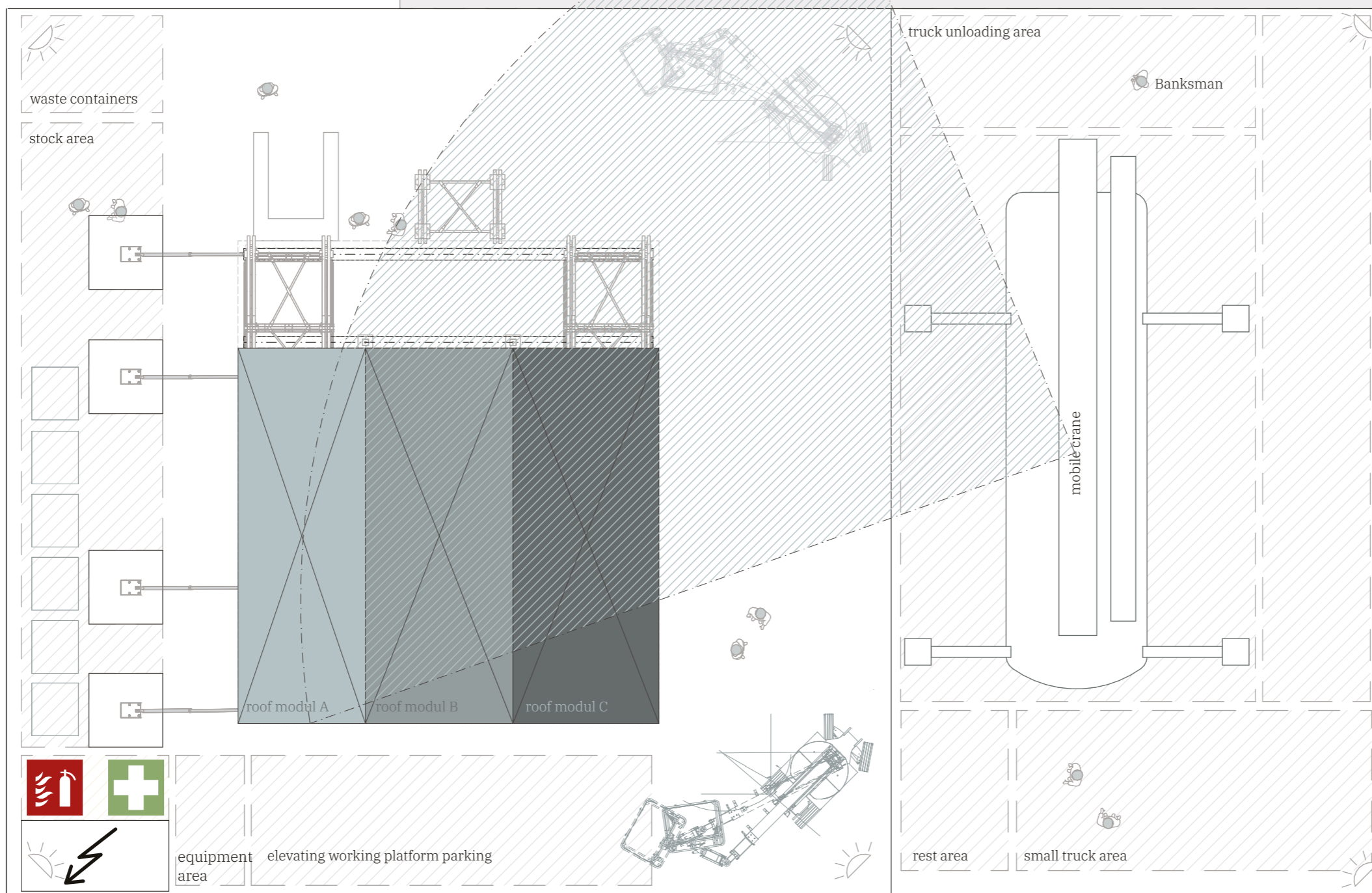


WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
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Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Emergency Assembly Area



lot area SDE-1
TEAM ROOFKIT

18,00

12,57^s

operations area

3,50

18,00

20,00

16,50

13,60

Scale

no scale

Page No.

226

Drawing Content

Assembly Phase 4 - Living Modules Roof A/B/C

HS-1004

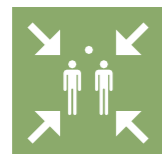


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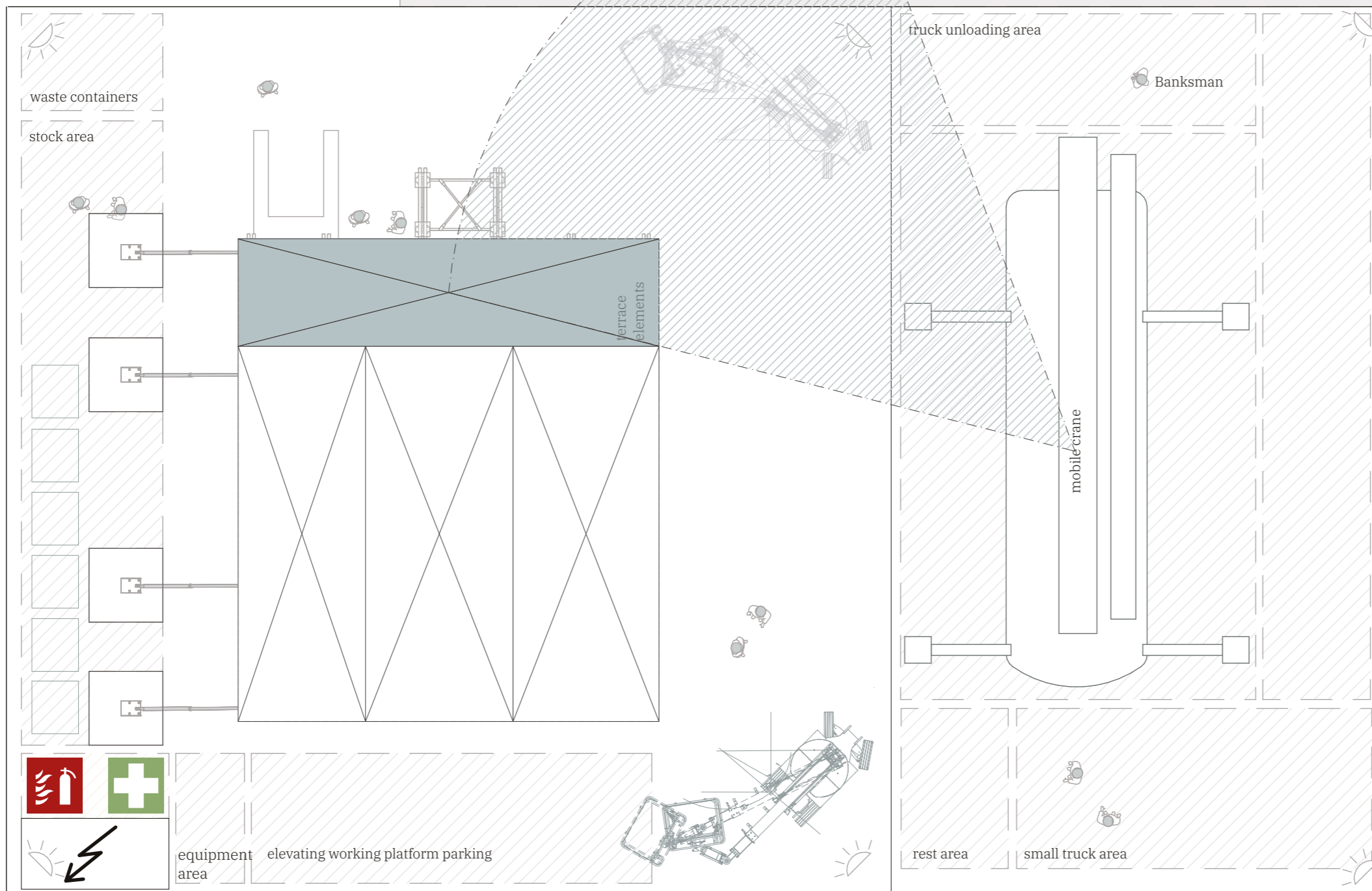


WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
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Public Tour	PT



Emergency Assembly Area



lot area SDE-1
TEAM ROOFKIT

18,00

12,57^s

operations area

Scale

no scale

Page No.

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Drawing Content

Assembly Phase 5 - Terrace Elements

HS-1005

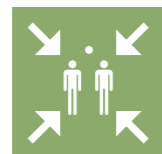


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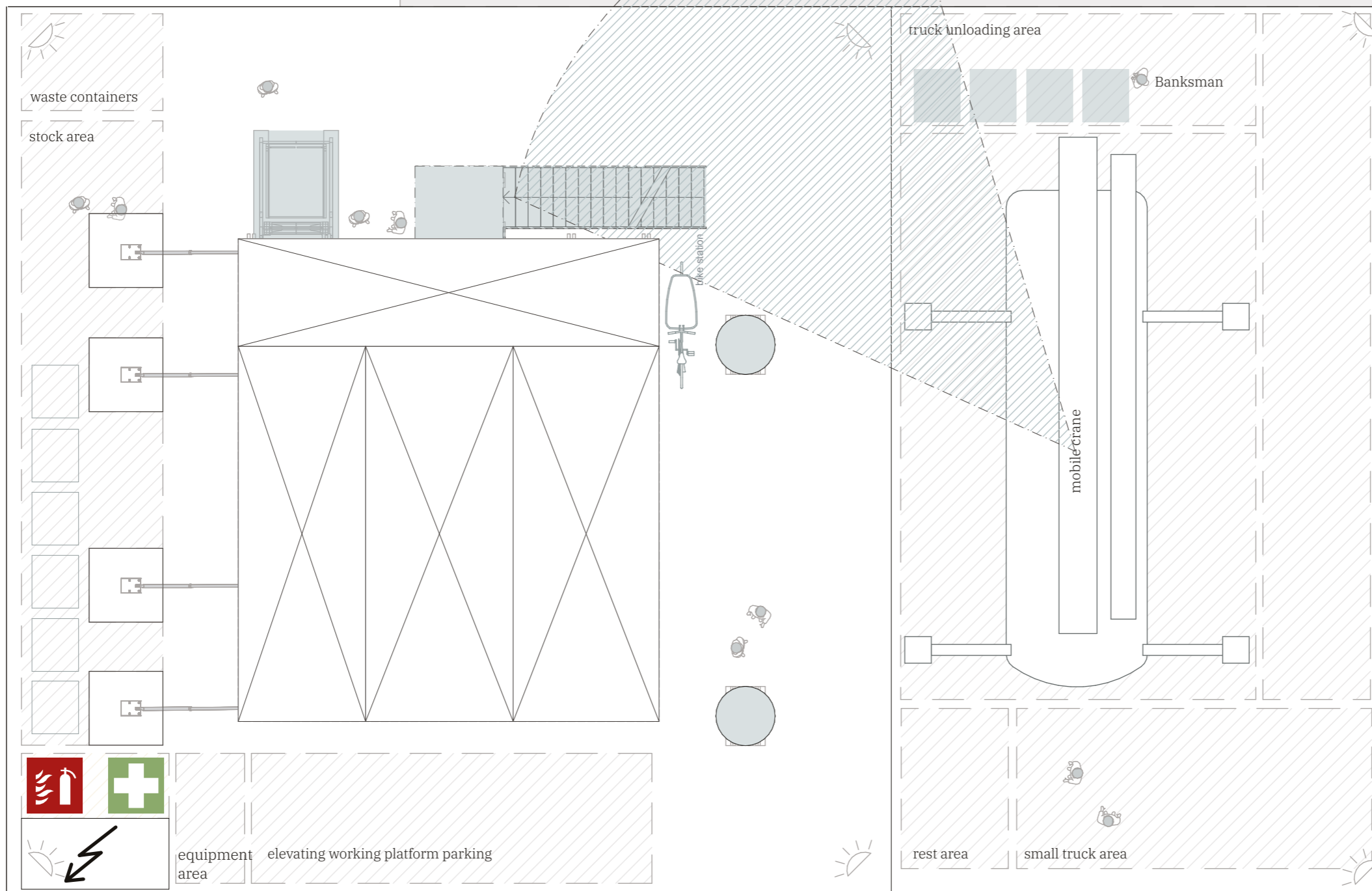


WUPPERTAL GERMANY

General	GE
Architecture	AR
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Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
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Health & Safety	HS
Public Tour	PT



Emergency Assembly Area



lot area SDE-1
TEAM ROOFKIT

18,00

12,575

operations area

Scale

no scale

Page No.

228

Drawing Content

Assembly Phase 6 - Stairs Lift Interior

HS-1006

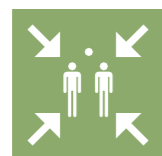


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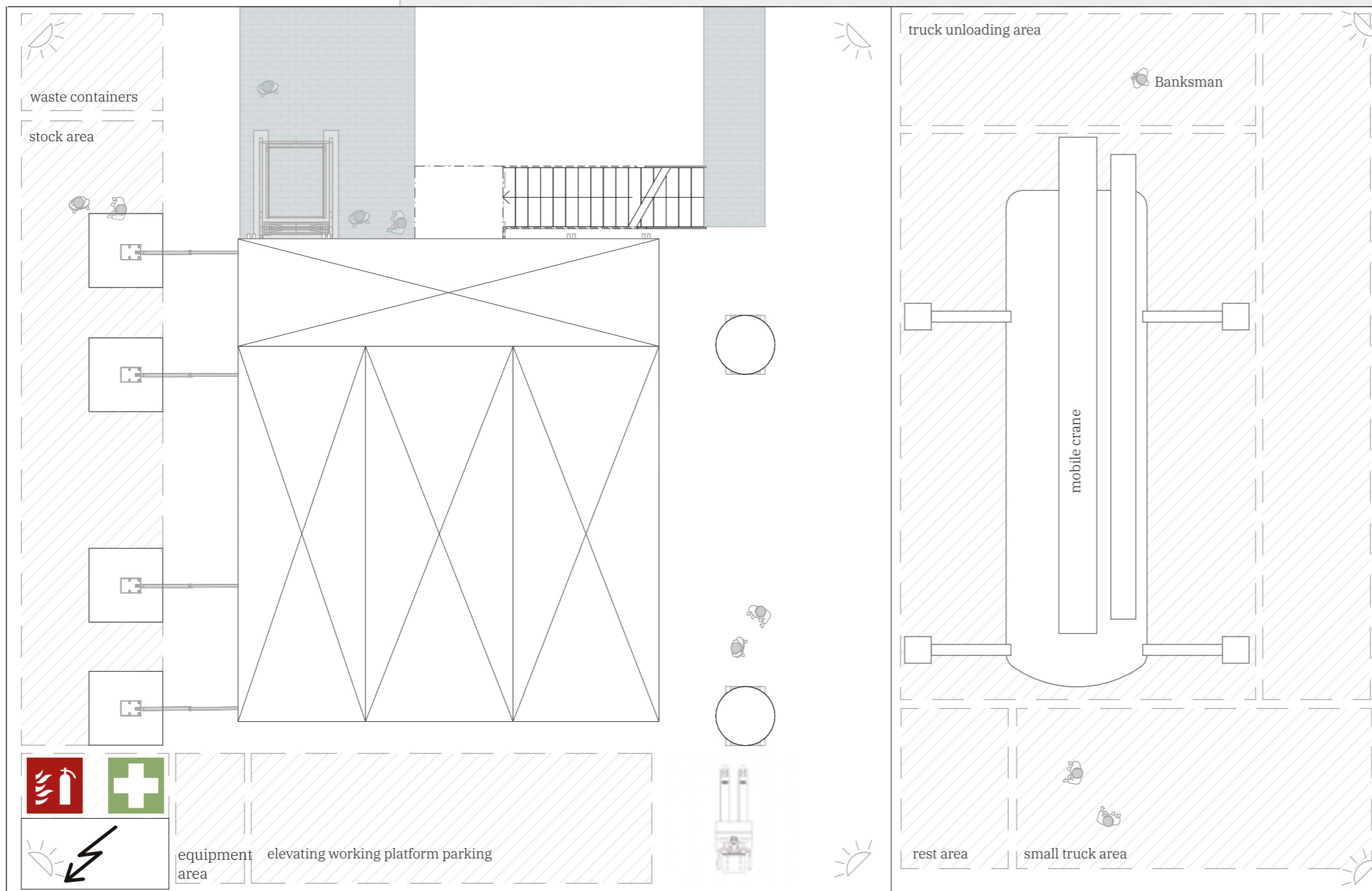
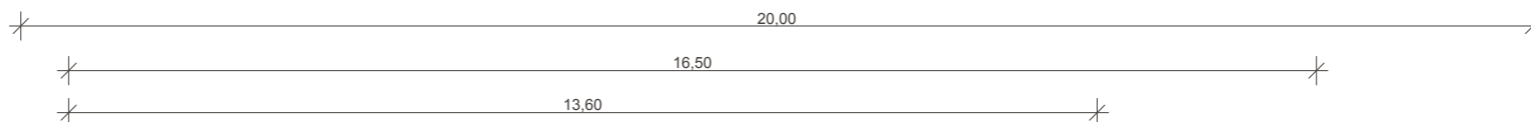


WUPPERTAL GERMANY

General	GE
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Health & Safety	HS
Public Tour	PT



Emergency Assembly Area



lot area SDE-1
TEAM ROOFKIT



Scale no scale Page No. 229

Drawing Content
Assembly Phase 7 Paving Stones

HS-1007

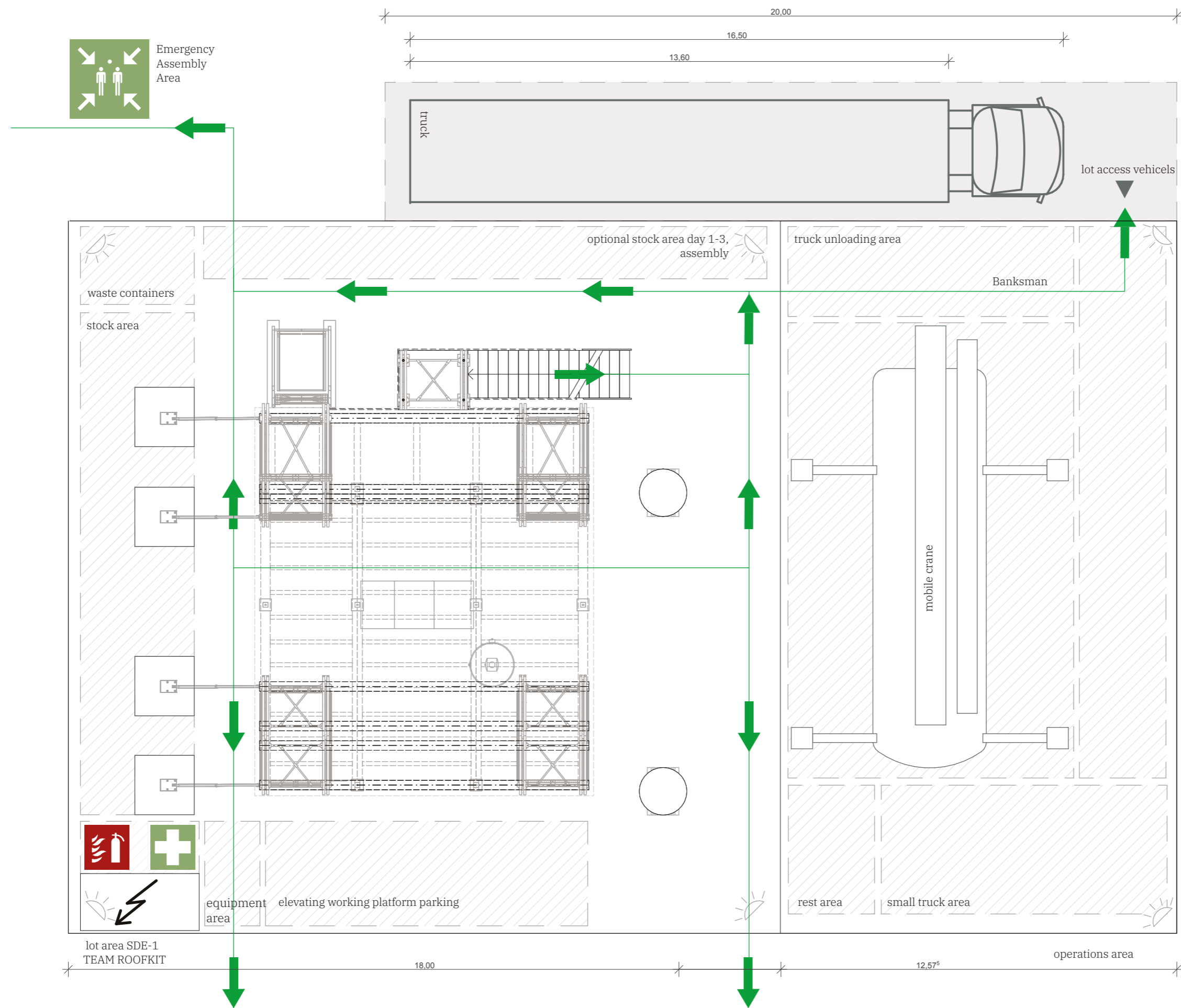


RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
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Mechanical	ME
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Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



Scale no scale Page No. 230

Drawing Content Evacuation Plan Level 0

HS-2001

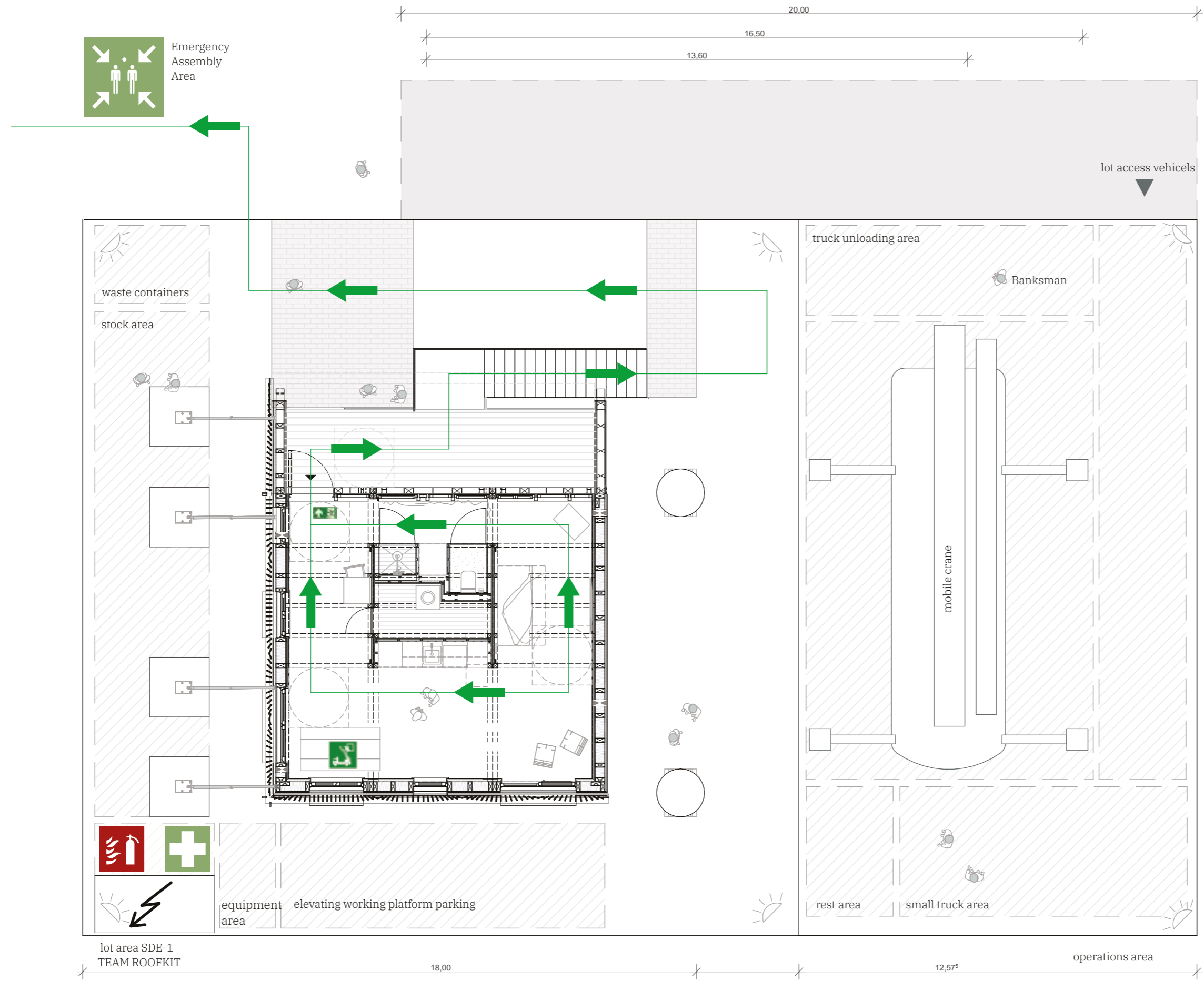


RoofKIT



WUPPERTAL GERMANY

General	GE
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Mechanical	ME
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Health & Safety	HS
Public Tour	PT



lot area SDE-1
TEAM ROOFKIT

equipment area elevating working platform parking

18.00

12.57⁵

operations area

Scale

no scale

Page No.

231

Drawing Content

Evacuation Plan Level 1

HS-2002



Public Tour (PT)

Karlsruhe, 23rd March 2022



RoofKIT



WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
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1 number of tour stop

● tour stop

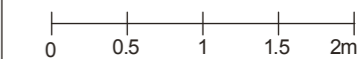
● QR-Code

— information panels

▼ entrance

▲ exit

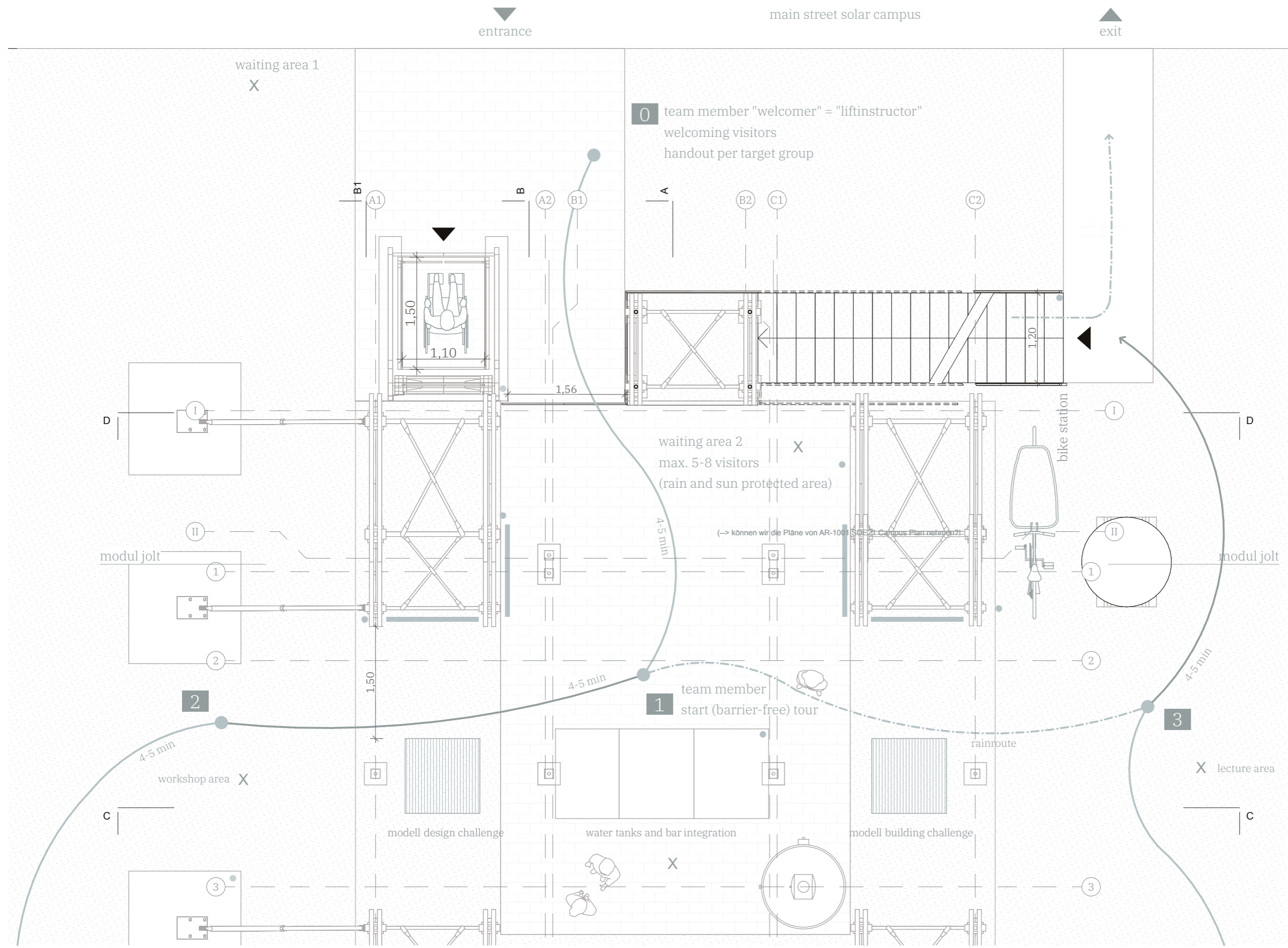
X waiting entertainment/out of tour actions



Scale 1:50 Page No. 233

Drawing Content Site accessibility

PT-0001



0 team member "welcomer" = "liftinstructor"
 welcoming visitors
 handout per target group

waiting area 2
 max. 5-8 visitors
 (rain and sun protected area)

1 team member
 start (barrier-free) tour

3 lecture area

(-> können wir die Pläne von AR-1001 S&E 21 Campus Plan nehmen?)

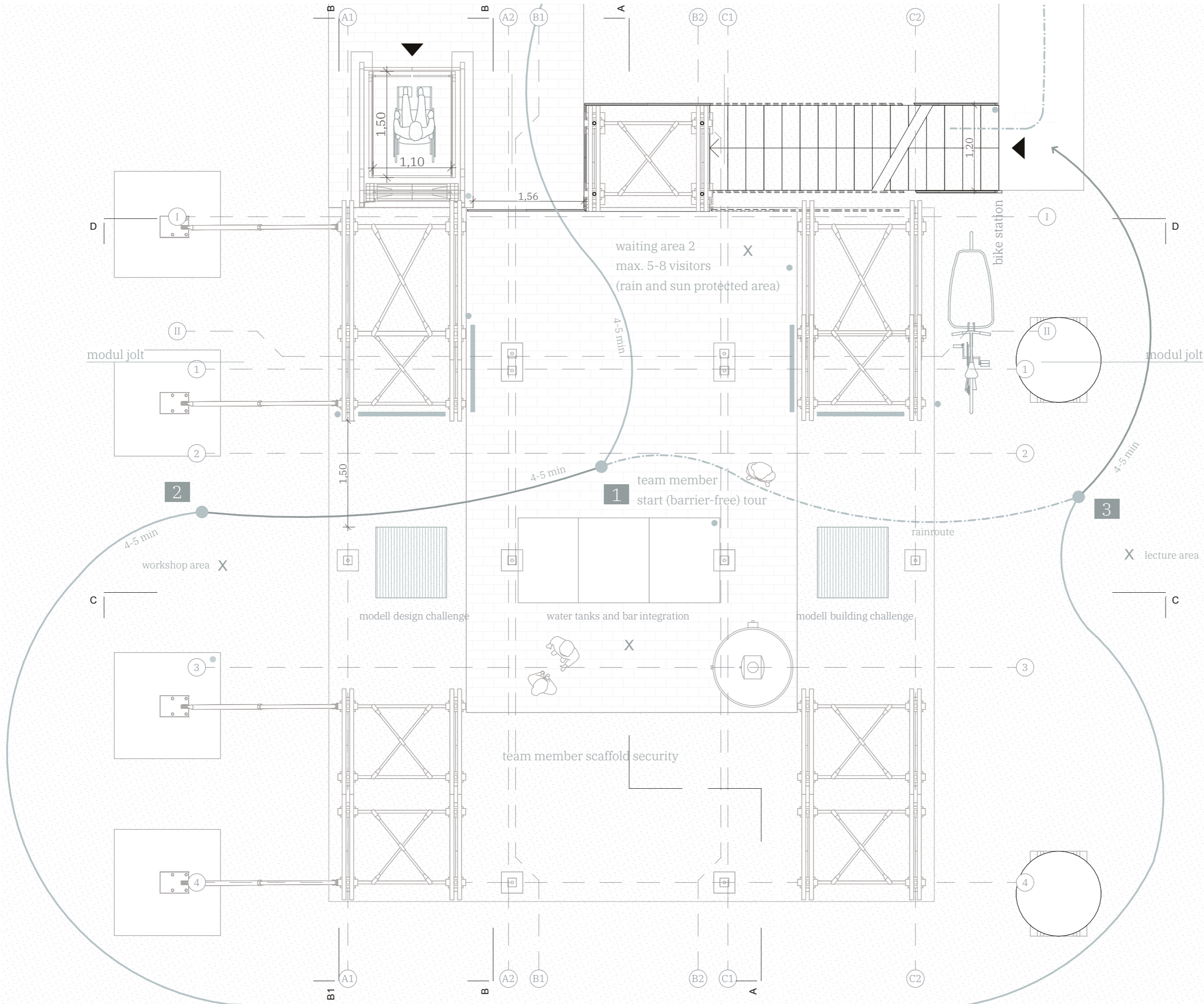


RoofKIT

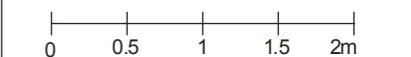


WUPPERTAL GERMANY

General	GE
Architecture	AR
Interiors	IN
Structural	ST
Plumbing	PL
Solar Water Heating	SW
Mechanical	ME
Electrical	EL
Photovoltaic System	PV
Teleco. & Build. Man. System	BMS
Instrumentation Drawings	ID
Site Operations	SO
Fire Protection	FP
Health & Safety	HS
Public Tour	PT



- 1** number of tour stop
- tour stop
- QR-Code
- information panels
- ▼ entrance
- ▲ exit
- X waiting entertainment/out of tour actions



Scale 1:50 Page No. 234

Drawing Content
Tour Level 0

PT-0002



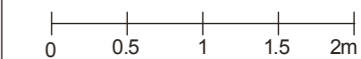
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WUPPERTAL GERMANY

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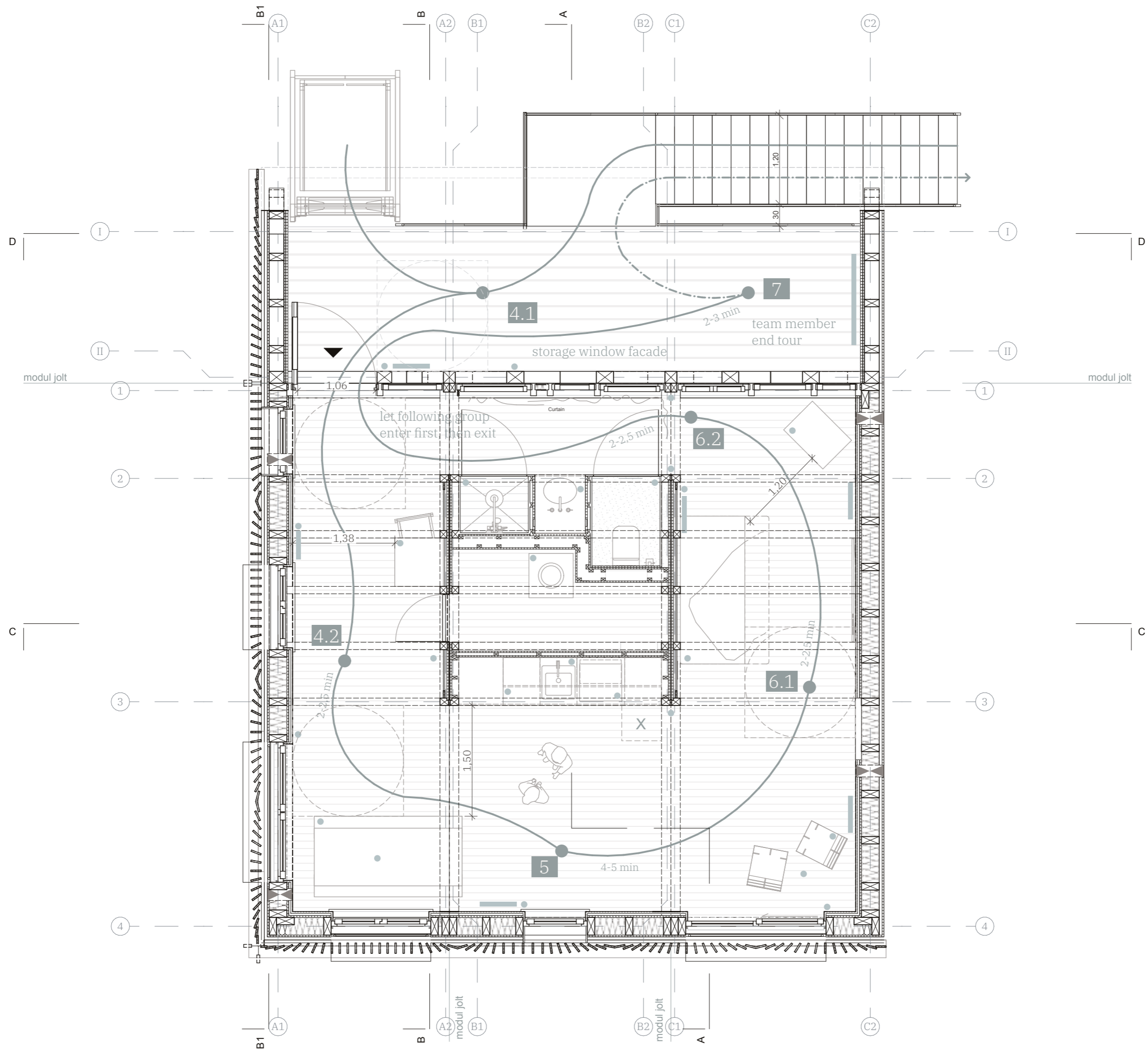
- 1 number of tour stop
- tour stop
- QR-Code
- information panels
- entrance
- exit
- waiting entertainment/out of tour actions



Scale 1:50 Page No. 235

Drawing Content House Tour Level 1

PT-1001



HOUSE TOUR GENERAL INFORMATION

Visitors to the HDU come to the Lot at position 0. This is where waiting area 1 is located if the waiting line is quite long. The team member „welcomer“ welcomes the guests, distributes the handout per target group and leads the first group of 5-8 people to waiting area 2. Protected from rain, wind and sun, the visitors have the opportunity to look at the brochure and get a first impression from the info panels before the tour starts.

At point 1, the first tour with team member guide 1 starts with a group of maximum 5-8 people. The target group as well as the language will be checked first. The tour is then given in english or german. Team member guide 1 accompanies the group from start to finish. As soon as team member guide 1 reaches position 2, Tour 2 starts with team member guide 2 according to a rotating system. Time management is done via a timer.

The long tour lasts 24-30 min, the short tour in case of a long waiting line is reduced to 12-18 min. Which tour takes place is managed by team member "welcomer", depending on the checked waiting line.

Visitors gain access to the housing unit via an Urban Mining staircase as well as barrier-free access via a rented lift.

	p0	p1	p2	p3	p4	p5	p6	p7
ts0	w1							
ts1	w1	t1						
ts2	w1	t2	t1					
ts3	w1	t3	t2	t1				
ts4	w1	t4	t3	t2	t1			
ts5	w1	t5	t4	t3	t2	t1		
ts6	w1	t6	t5	t4	t3	t2	t1	
ts7	w1	t7	t6	t5	t4	t3	t2	t1
ts8	w1	t1	t7	t6	t5	t4	t3	t2
ts9	w1	..	t1	t7	t6	t5	t4	t3
ts10	w1	..	..	t1	t7	t6	t5	t4
ts11	w1	..	..	..	t1	t7	t6	t5
ts12	w1	..	..	..	..	t1	t7	t6
ts13	w1	..	..	..	..	..	t1	t7
ts14	w1	..	..	..	..	..	..	t1

= public tour
 ts = timeslot
 p = position
 t = team member guide
 w = welcomer, liftinstructor

public tour rotation concept

X waiting line entertainment, further actions out of public tour:

- kids tour/game: playful acquisition of the topics, downscaled information
- VR, AR
- darts match floor level 0
- daily lectures on the east facade, lecture area
- workshops, workshop area
- late night tour
- urban mining and circular economy tour (focus materials and detachability)
- energy tour (focus energy concept)
- open house
- interior change tour
- get together bar area

- 0 **teammember "welcomer"="liftinstructor"**
welcoming visitors, guiding every 4-5 min visitorgroup of maximum 5-8 persons to waiting area;
handout per target group
- 1 **team member guide 1**
presenting the project, Design Challenge and cut out HDU (general concept) to group 1
- 2 **team member guide 1** presenting idea of the ground floor (scaffold towers, stone cycling, gabions, lift and staircase, west and south facade, ..);
team member guide 2 starting at position 1
- 3 **team member guide 1**
presenting more detailed concept of the HDU at the east facade (truck plane, water tanks, energy supply);
checking whether previous group has finished the tour, walking upstairs, liftinstructor helping people with need
- 4.1 **team member guide 1**
and whole group meeting at the terrace; presenting cut out situation of the whole design concept;
presenting idea of the storage window facade, idea of the door, taking a look to the private area
- 4.2 **team member guide 1**
presenting idea of the core and the flexible usage of space around, giving insight to the core, working area, claywalls, ..
- 5 **team member guide 1**
more private area through walking the round,
living room, lounge area and kitchen, offer to take a seat while showing kitchen idea and portable lighting idea with possibility to try, showing flexible table (dining table and kitchen), ..
- 6.1 **team member guide 1**
flexible bed, suitcase cabinet, private space, ..
- 6.2 **team member guide 1**
wet cells, how to design wet cells without wet seals , ..
- 7 **team member guide 1**
Thank you, questions, feedback, invitation to further actions on the lot



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Scale Page No.
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Drawing Content
House Tour General Information

PT-2001

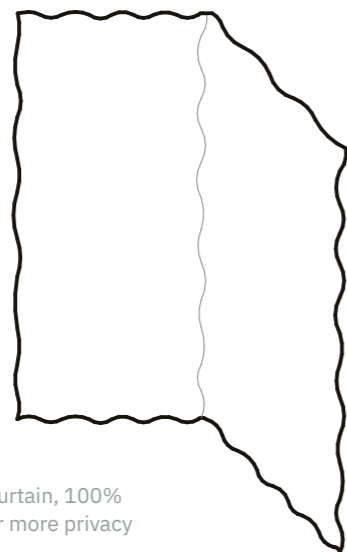


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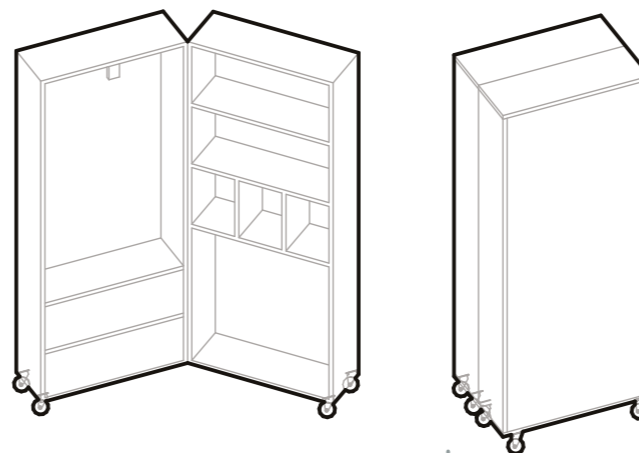


WUPPERTAL GERMANY

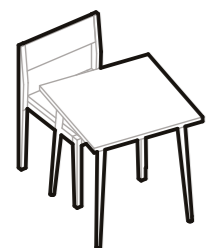
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flexible curtain, 100% cotton for more privacy

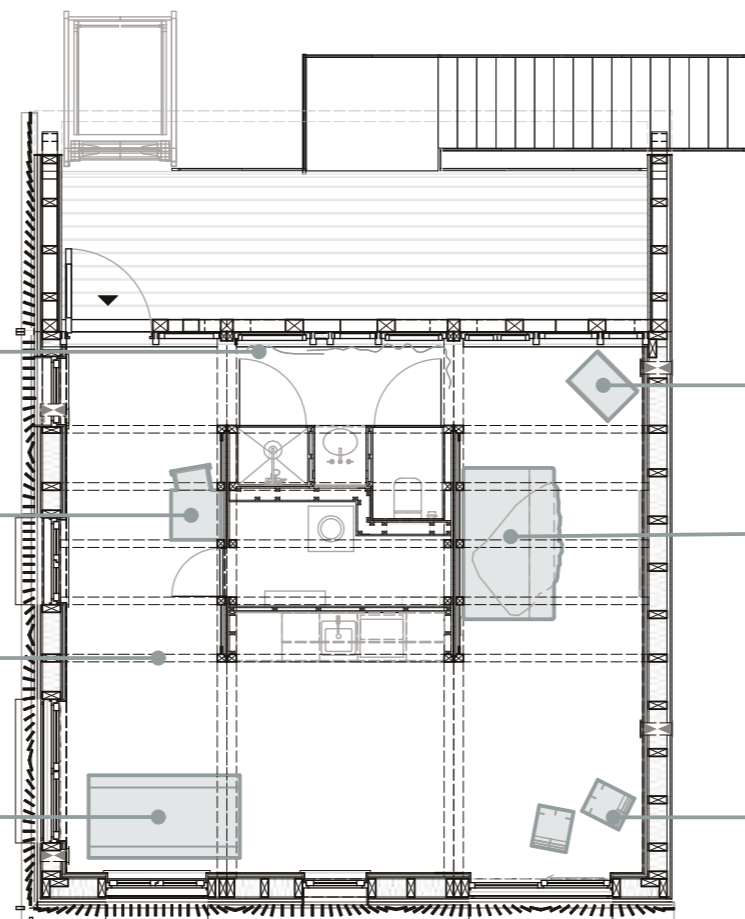
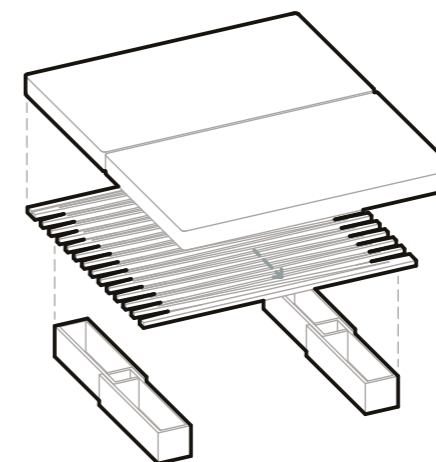
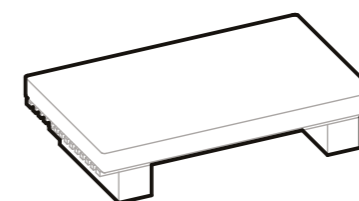


sliding wall cabinet, which can be moved around the room on rollers



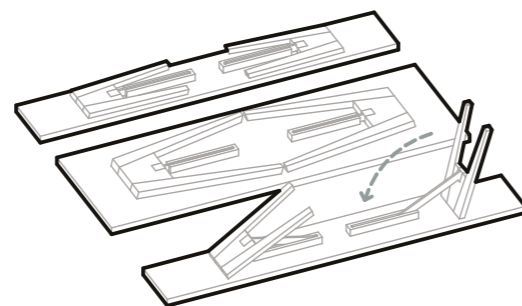
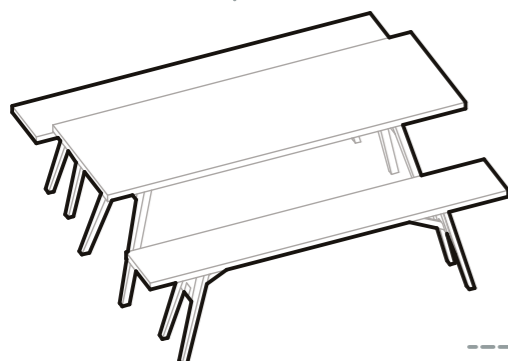
moveable working desk

flexible bed that serves as a couch when folded during the day

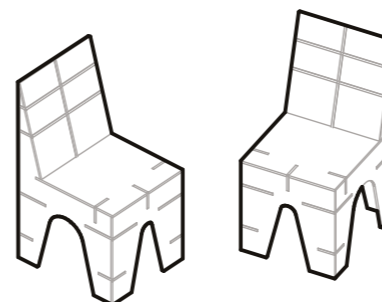


flexible, portable lighting products

flexible dinner table, space saving construction, locally produced in Austria



lounge furniture made out of recycled tetrapack milk cartons



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Drawing Content

Flexible Furniture

PT-2002

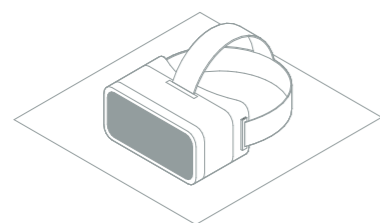


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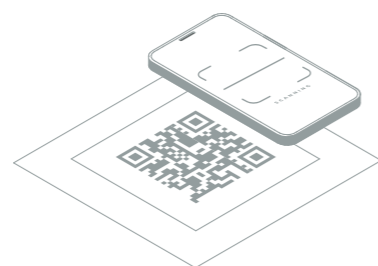


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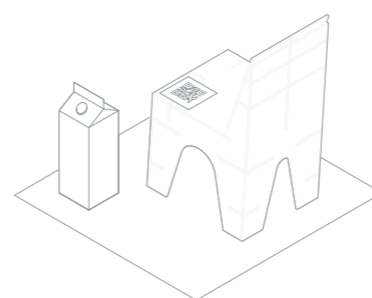
Exploring the Whole Design of Café Ada/HDU through VR



Getting more informations and link to website through QR Codes



Getting more informations about materials and joining techniques .. through AR



Telling material storys using QR



Data on Monitor Showcasing informations about the energy concept, technical facts and results about the HDU

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Drawing Content

Additional Informations

PT-2003