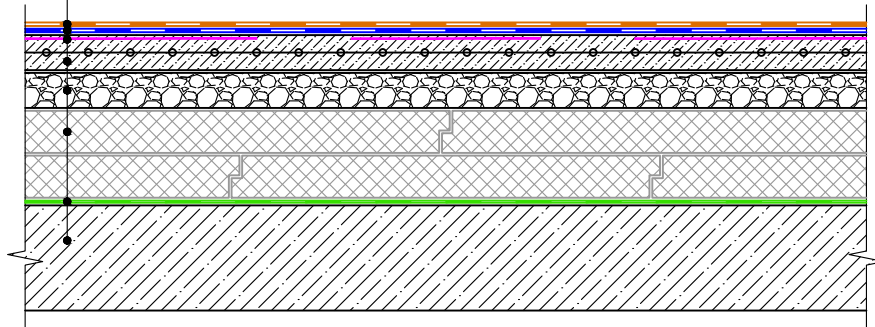




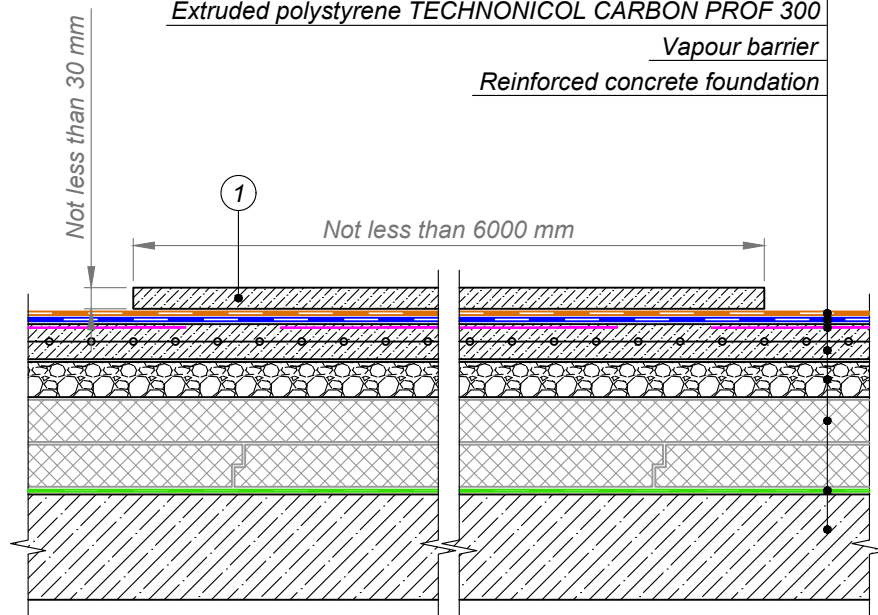
Cap sheet torch-on bitumen membrane
Underlay torch-on bitumen membrane
Bitumen primer TECHNOMICOL No. 01
Reinforced sand-cement screed
Sloping of expanded clay gravel
Extruded polystyrene TECHNOMICOL CARBON PROF 300
Vapour barrier
Reinforced concrete foundation



				EXPOSED FLAT ROOF	DESIGN	APPROVED
				STRUCTURE OF ROOFING SOLUTION	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No.	REV.



Cap sheet torch-on bitumen membrane
Underlay torch-on bitumen membrane
Bitumen primer TECHNOMICOL No. 01
Reinforced sand-cement screed
Sloping of expanded clay gravel
Extruded polystyrene TECHNOMICOL CARBON PROF 300
Vapour barrier
Reinforced concrete foundation

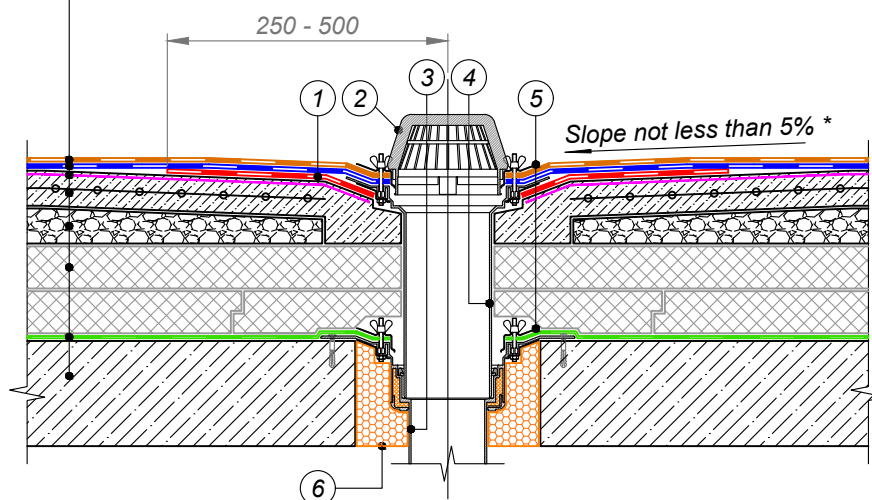


① *Protective coating of slabby or solid non-combustible materials
 with freeze resistance grade not below 100 and thickness not less than 30 mm*

				EXPOSED FLAT ROOF	DESIGN	APPROVED
				FIRE-PREVENTION BAFFLE	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No.	REV.



Cap sheet torch-on bitumen membrane
Underlay torch-on bitumen membrane
Bitumen primer TECHNICAL No. 01
Reinforced sand-cement screed
Sloping of expanded clay gravel
Extruded polystyrene
TECHNICAL CARBON PROF 300
Vapour barrier
Reinforced concrete foundation



- ① Additional layer of underlay waterproofing bitumen membrane
- ② Gutter leaf debris trap
- ③ Rainwater funnel
- ④ Extension element
- ⑤ Compression flange
- ⑥ Sealing foam

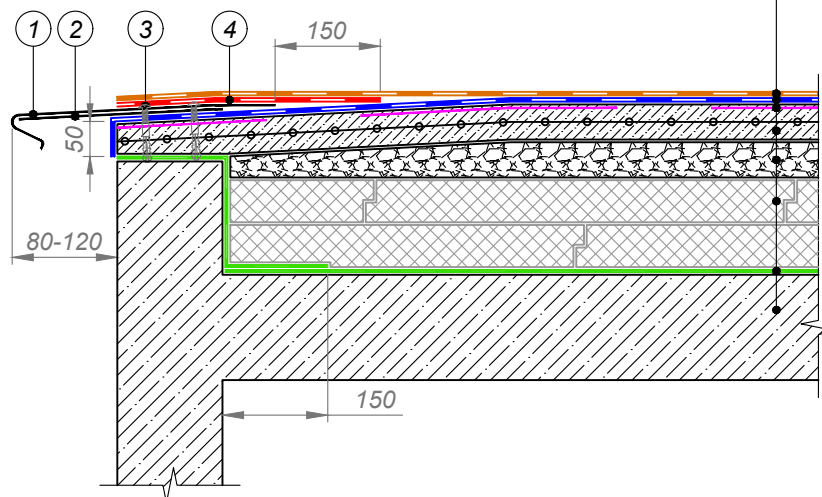
NOTES

* To provide for increase in slope to the funnel up to 5% within radius of not less than 500 mm around it. It is recommended to provide for the funnel deepening by 20-30 mm relative to the roof level.

				EXPOSED FLAT ROOF	DESIGN	APPROVED
				RAINWATER FUNNEL	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No.	REV.

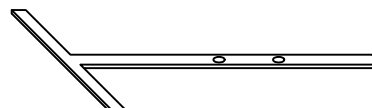
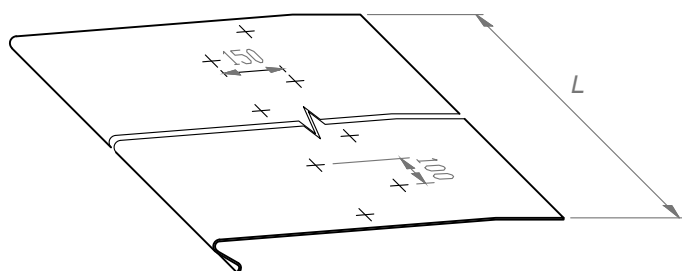


Cap sheet torch-on bitumen membrane
Underlay torch-on bitumen membrane
Bitumen primer TECHNICAL No. 01
Reinforced sand-cement screed
Sloping of expanded clay gravel
Extruded polystyrene
TECHNICAL CARBON PROF 300
Vapour barrier
Reinforced concrete foundation



Galvanized steel drip edge

T-shaped fastening element

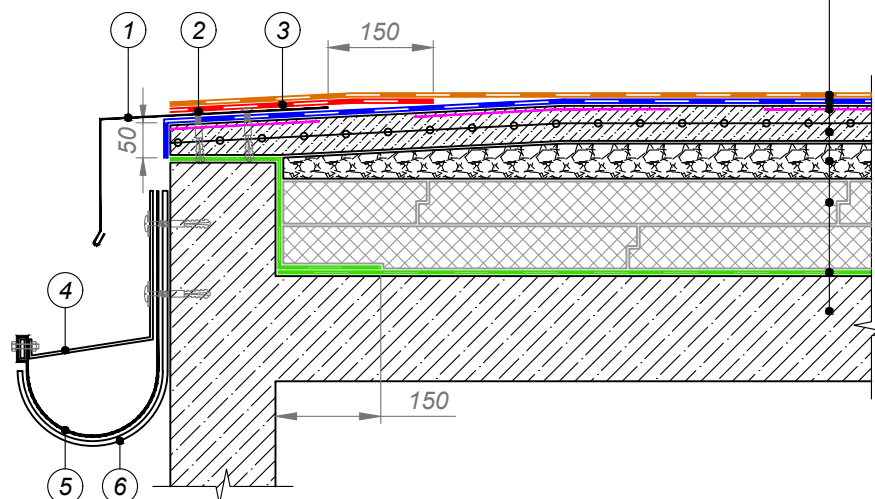


- ① Galvanized steel drip edge
(section length L not more than 4000 mm)
- ② T-shaped fastening elements
to be placed at 600 mm intervals
- ③ Fastening by self-tapping screws
at 100 mm intervals with staggered arrangement
- ④ Additional layer of underlay waterproofing
bitumen membrane

				EXPOSED FLAT ROOF	DESIGN	APPROVED
					SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED	EXTERNAL FREE-WATER DRAIN	DWG No.	REV.

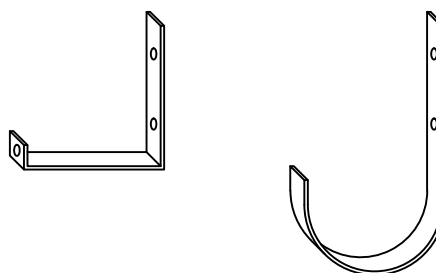
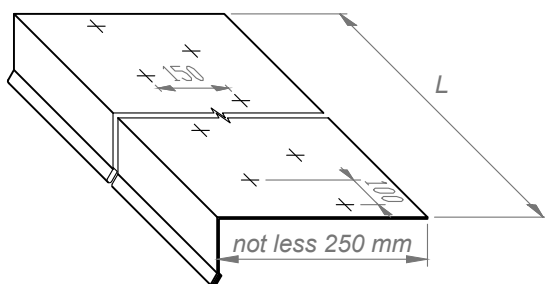


Cap sheet torch-on bitumen membrane
Underlay torch-on bitumen membrane
Bitumen primer TECHNOMICOL No. 01
Reinforced sand-cement screed
Sloping of expanded clay gravel
Extruded polystyrene
TECHNONICOL CARBON PROF 300
Vapour barrier
Reinforced concrete foundation



Galvanized steel drip edge

Fastening elements 4, 5

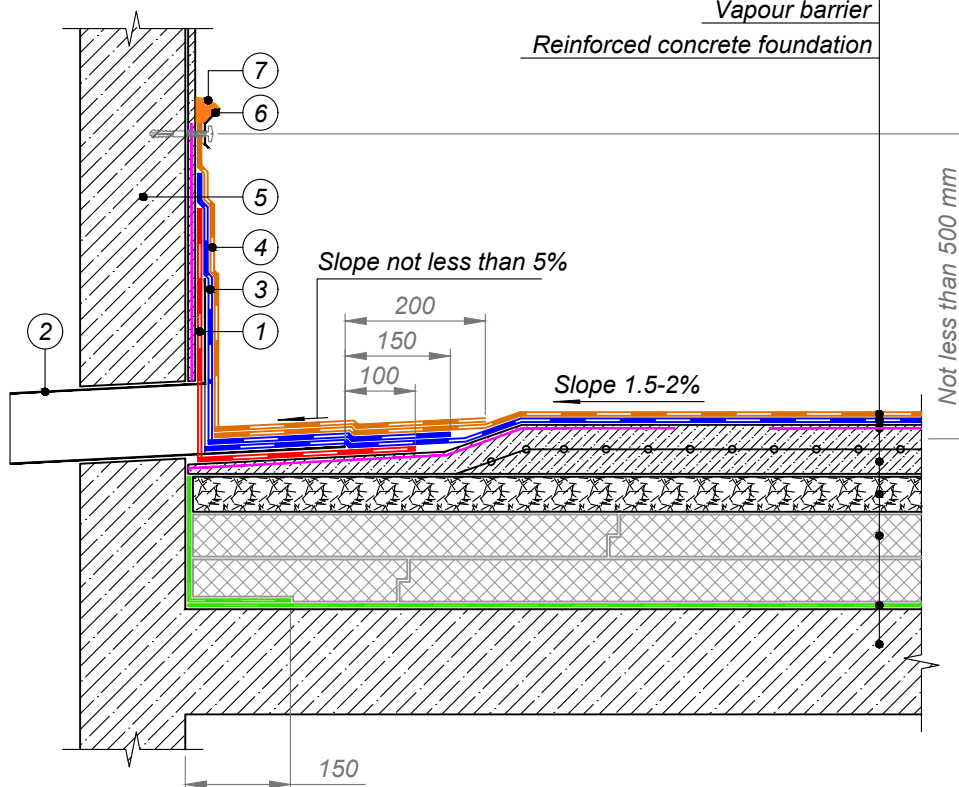


- ① Galvanized steel drip edge
(section length L not more than 4000 mm)
- ② Additional layer of underlay waterproofing bitumen membrane
- ③ Fastening by self-tapping screws at 100 mm intervals with staggered arrangement
- ④ Fastening elements to be arranged with intervals from 300 mm to 900 mm depending on the gutter design
- ⑤ Eaves gutter
- ⑥ Fastening elements to be arranged with intervals from 300 mm to 900 mm depending on the gutter design

				EXPOSED FLAT ROOF	DESIGN	APPROVED
				EXTERNAL CENTRALIZED DRAIN	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No.	REV.



Cap sheet torch-on bitumen membrane
Underlay torch-on bitumen membrane
Bitumen primer TECHNICAL No. 01
Reinforced sand-cement screed
Sloping of expanded clay gravel
Extruded polystyrene
TECHNONICOL CARBON PROF 300
Vapour barrier
Reinforced concrete foundation



- | | |
|--|---|
| ① Strengthening layer - Underlay bitumen membrane | ⑤ Reinforced concrete wall plastered with cement-sand grout on metal grid fixed with screws |
| ② Funnel for parapet | ⑥ Edge strip to fastened by self-tapping screws at 200 mm intervals |
| ③ Bottom layer of system membrane on vertical surface - Underlay bitumen membrane | ⑦ Sealing mastic |
| ④ Top layer of waterproofing system on vertical surface - Cap sheet bitumen membrane | |

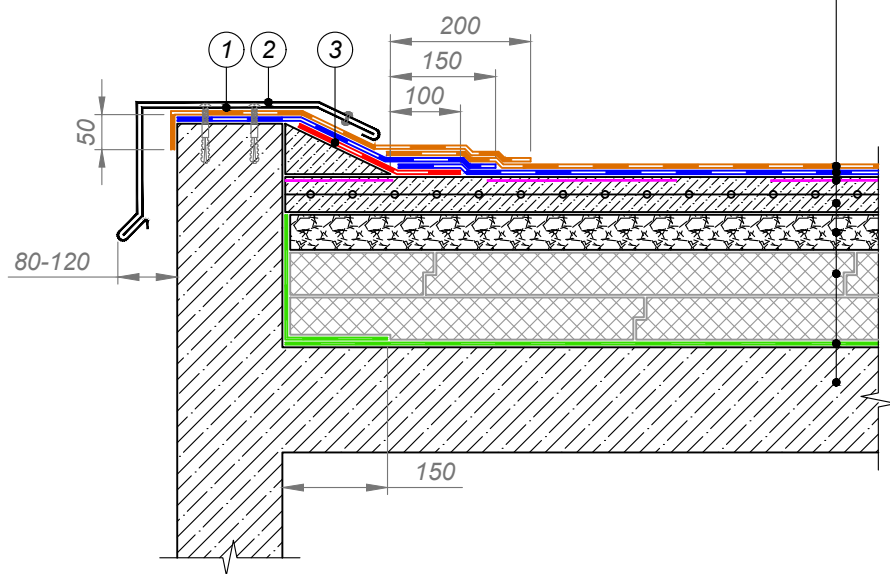
NOTES

1. Vapour barrier to be laid over the thermal insulation level.

				EXPOSED FLAT ROOF	DESIGN	APPROVED
				PARAPET OVERFLOW	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No.	REV.

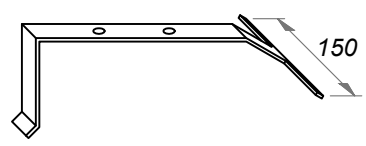
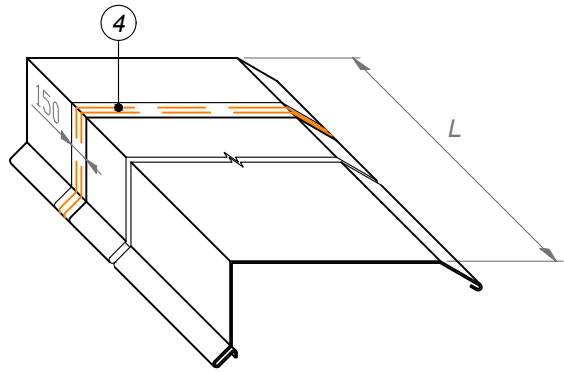


- Cap sheet torch-on bitumen membrane
- Underlay torch-on bitumen membrane
- Bitumen primer TECHNICAL No. 01
- Reinforced sand-cement screed
- Sloping of expanded clay gravel
- Extruded polystyrene
- TECHNICAL CARBON PROF 300
- Vapour barrier
- Reinforced concrete foundation



Galvanized steel drip edge

Fastening element



- ① Fastening elements to be placed at 600 mm intervals
- ② Galvanized steel drip edge (section length L not more than 4000 mm)
- ③ Additional layer of waterproofing membrane - Underlay bitumen membrane
- ④ At the place of drip edge sections junction to apply two paths of sealing mastic

				EXPOSED FLAT ROOF	DESIGN	APPROVED
				CONJUGATION OF ROOF WITH OUTSIDE WALL WITHOUT ARRANGEMENT OF PARAPET	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No.	REV.

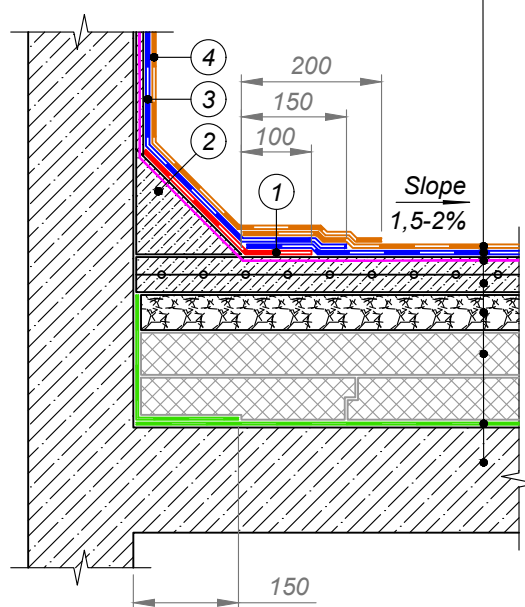
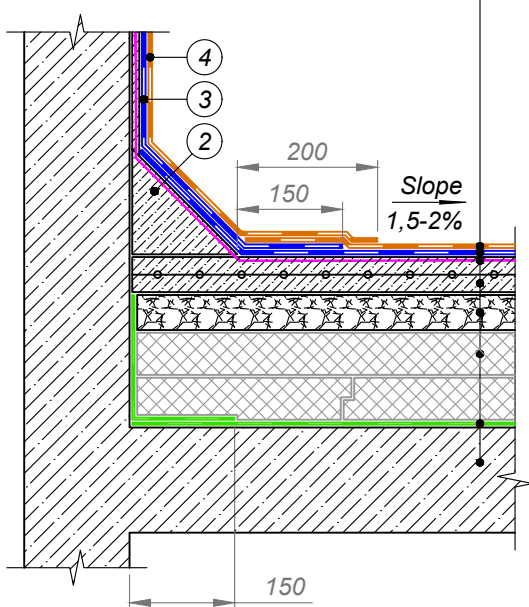


Variant 1

Variant 2

Cap sheet torch-on bitumen membrane
Underlay torch-on bitumen membrane
Bitumen primer TECHNOMICOL No. 01
Reinforced sand-cement screed
Sloping of expanded clay gravel
Extruded polystyrene
TECHNOMICOL CARBON PROF 300
Vapour barrier
Reinforced concrete foundation

Cap sheet torch-on bitumen membrane
Underlay torch-on bitumen membrane
Bituminous primer TECHNOMICOL No. 01
Bitumen primer TECHNOMICOL No. 01
Sloping of expanded clay gravel
Extruded polystyrene
TECHNOMICOL CARBON PROF 300
Vapour barrier
Reinforced concrete foundation

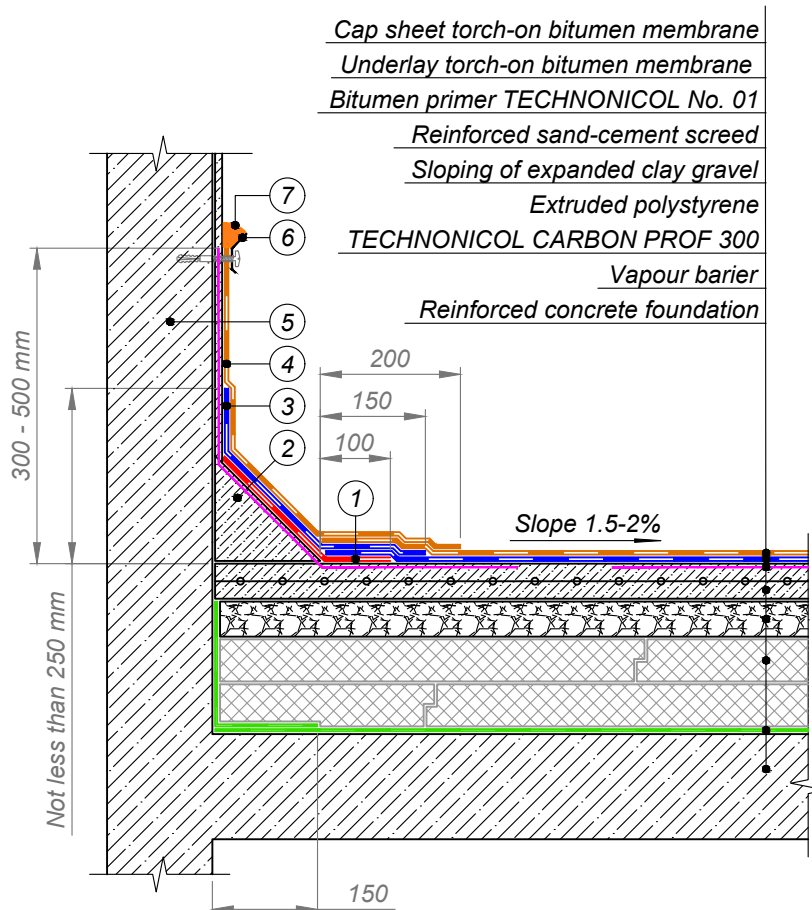


- ① Strengthening layer - Underlay bitumen membrane
- ② Transitional upstand of lightweight concrete
- ③ Bottom layer of waterproofing system on vertical surface - Underlay bitumen membrane
- ④ Top layer of waterproofing system on vertical surface - Cap sheet bitumen membrane

NOTES

1. Variant 1 is not applicable at installation of waterproofing membranes along junction.
2. Variant 2 is applicable at installation of waterproofing membranes using any methods.

				EXPOSED FLAT ROOF	DESIGN	APPROVED
				VARIANTS OF ROOFING MATERIALS LAYOUT AT JUNCTIONS TO VERTICAL SURFACES	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No.	REV.

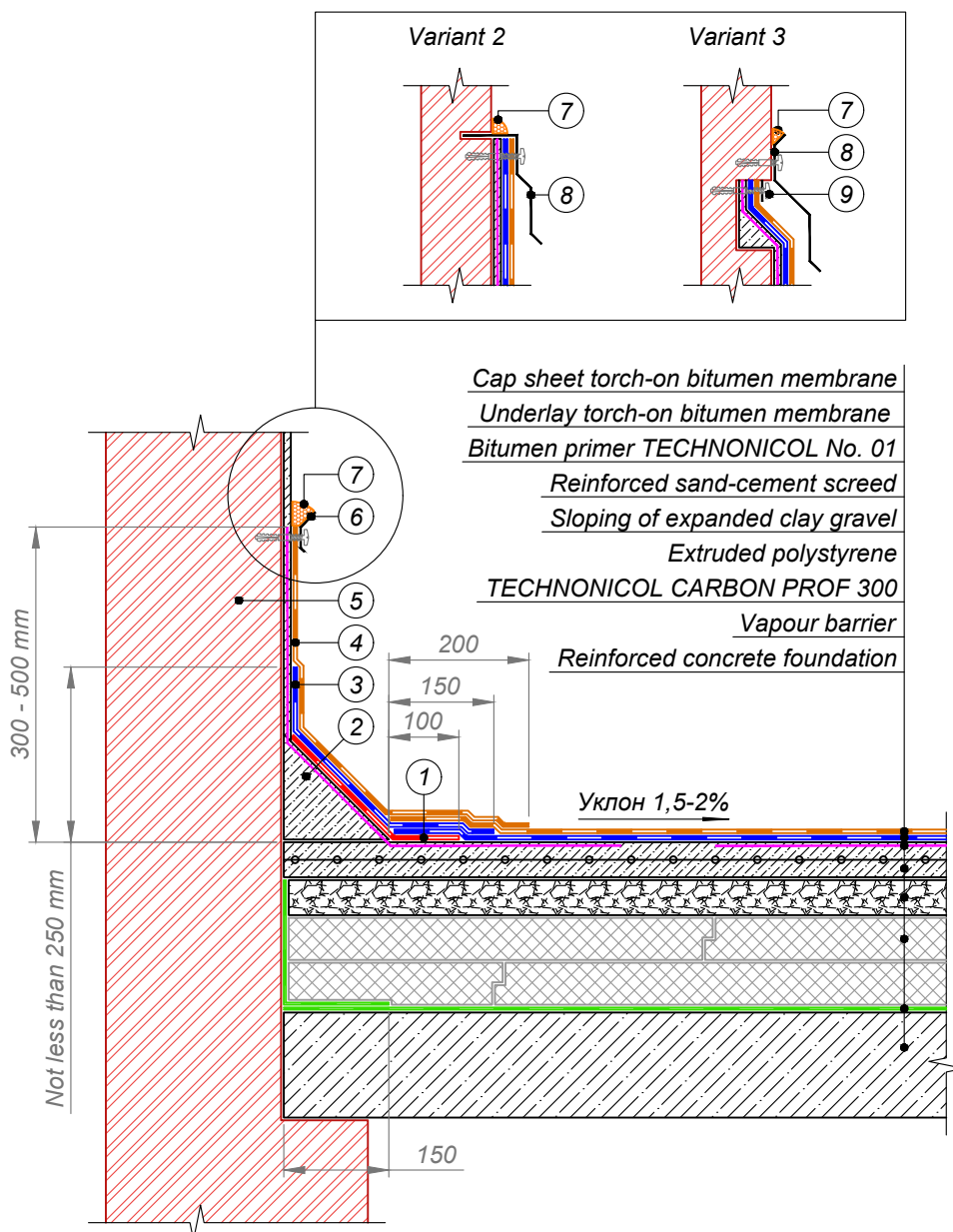


- | | |
|---|--|
| <ul style="list-style-type: none"> ① Strengthening layer - Underlay bitumen membrane ② Transitional upstand of lightweight concrete ③ Bottom layer of waterproofing system on vertical surface - Underlay bitumen membrane ④ Top layer of waterproofing system on vertical surface - Cap sheet bitumen membrane | <ul style="list-style-type: none"> ⑤ Reinforced concrete wall plastered with cement-sand grout on metal grid fixed with screws ⑥ Edge strip to fastened by self-tapping screws at 200 mm intervals ⑦ Sealing mastic |
|---|--|

NOTES

1. Vapour barrier to be laid over the thermal insulation level.

				EXPOSED FLAT ROOF	DESIGN	APPROVED
					SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED	INSTALLATION ON VERTICAL SURFACES OF REINFORCED CONCRETE WALLS	DWG No.	REV.

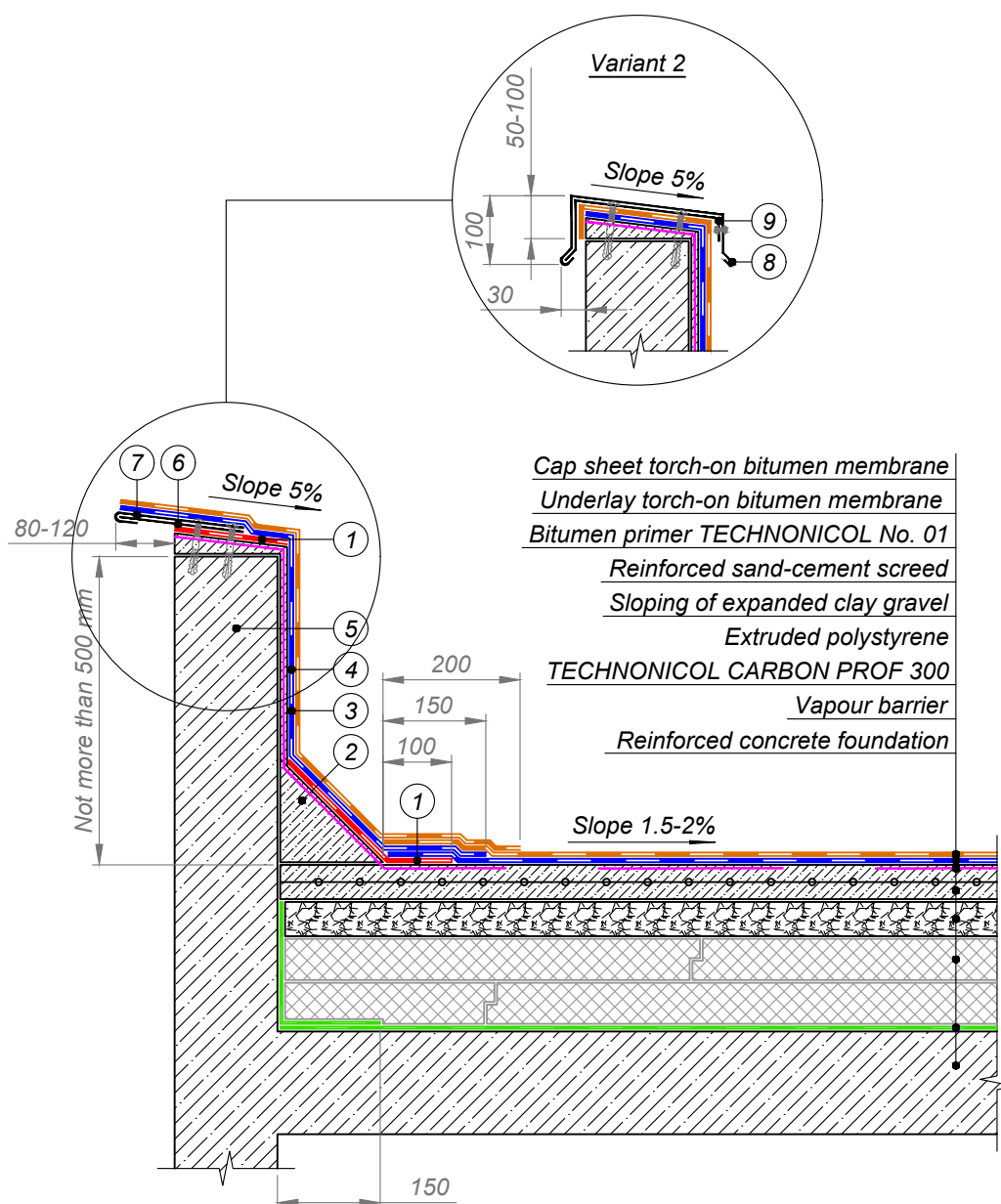


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|--|--|
| <p>① Strengthening layer -Underlay bitumen membrane</p> <p>② Transitional upstand of lightweight concrete</p> <p>③ Bottom layer of waterproofing system on vertical surface - Underlay bitumen membrane</p> <p>④ Top layer of waterproofing system on vertical surface - Cap sheet bitumen membrane</p> <p>⑤ Brick wall plastered with cement-sand grout on metal grid</p> | <p>⑥ Edge strip to fastened by self-tapping screws at 200 mm intervals</p> <p>⑦ Sealing mastic</p> <p>⑧ Galvanized steel drip edge to be fastened by self-tapping screws with rubber washer at 200-250 mm intervals</p> <p>⑨ Roof cladding to be fastened by self-tapping screws with washer at 200-250 mm intervals</p> |
|--|--|

NOTES

1. Vapour barrier to be laid over the thermal insulation level.

				EXPOSED FLAT ROOF	DESIGN	APPROVED
				INSTALLATION ON VERTICAL SURFACES OF BRICK WALLS	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No.	REV.

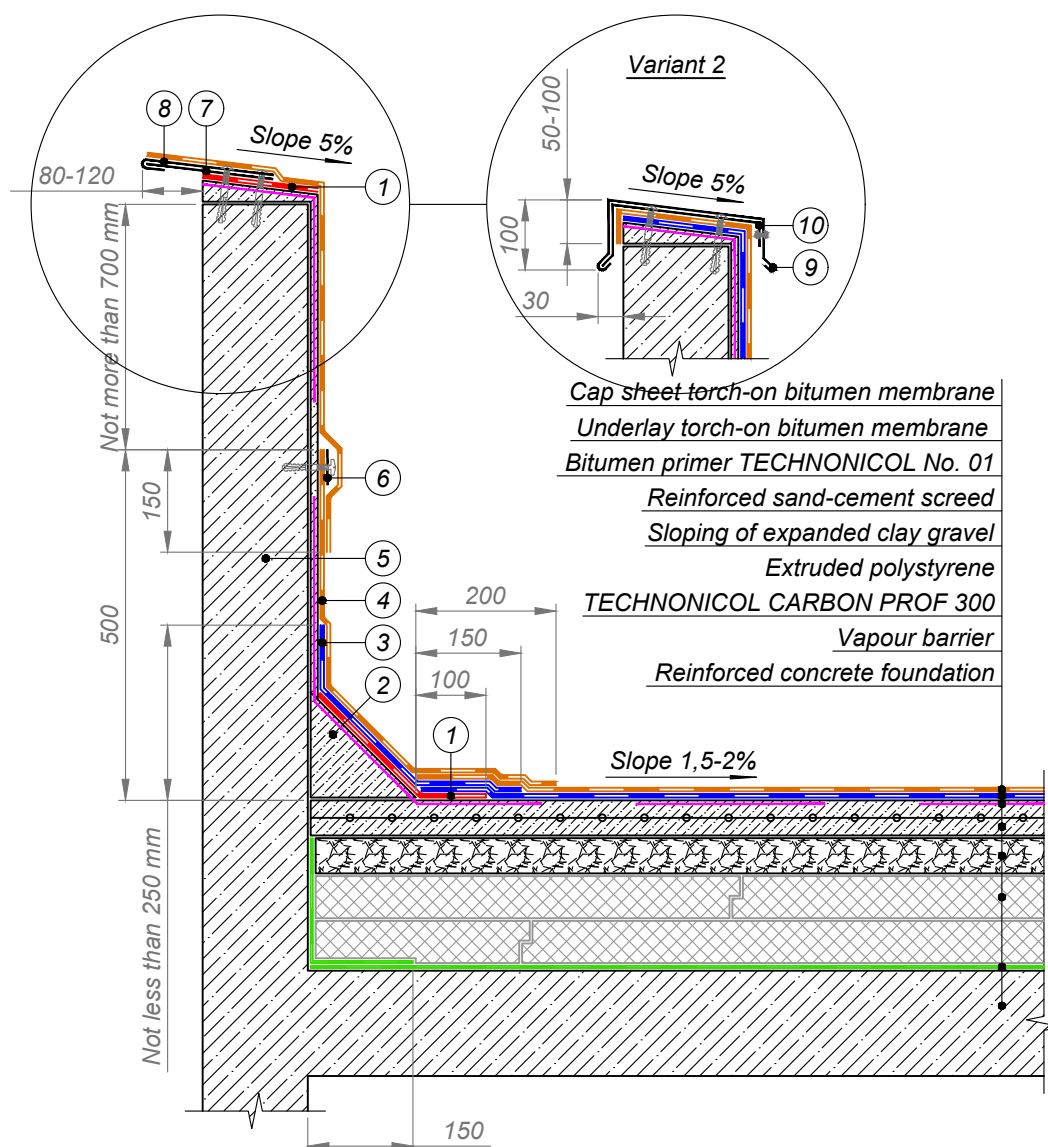


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|--|---|
| ① Strengthening layer - Underlay bitumen membrane | ⑤ Reinforced concrete foundation plastered with cement-sand grout on metal grid fixed with screws |
| ② Transitional upstand of lightweight concrete | ⑥ T-shaped spike |
| ③ Bottom layer of waterproofing system on vertical surface - Underlay bitumen membrane | ⑦ Galvanized steel drip edge |
| ④ Top layer of waterproofing system on vertical surface - Cap sheet bitumen membrane | ⑧ Galvanized steel flashing |
| | ⑨ Fastening element |

NOTES

1. Vapour barrier to be laid over the thermal insulation level.

				EXPOSED FLAT ROOF	DESIGN	APPROVED
				JUNCTION TO PARAPET NOT MORE THAN 500 MM IN HEIGHT	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No.	REV.



- Cap sheet torch-on bitumen membrane
- Underlay torch-on bitumen membrane
- Bitumen primer TECHNOMICOL No. 01
- Reinforced sand-cement screed
- Sloping of expanded clay gravel
- Extruded polystyrene
- TECHNONICOL CARBON PROF 300
- Vapour barrier
- Reinforced concrete foundation

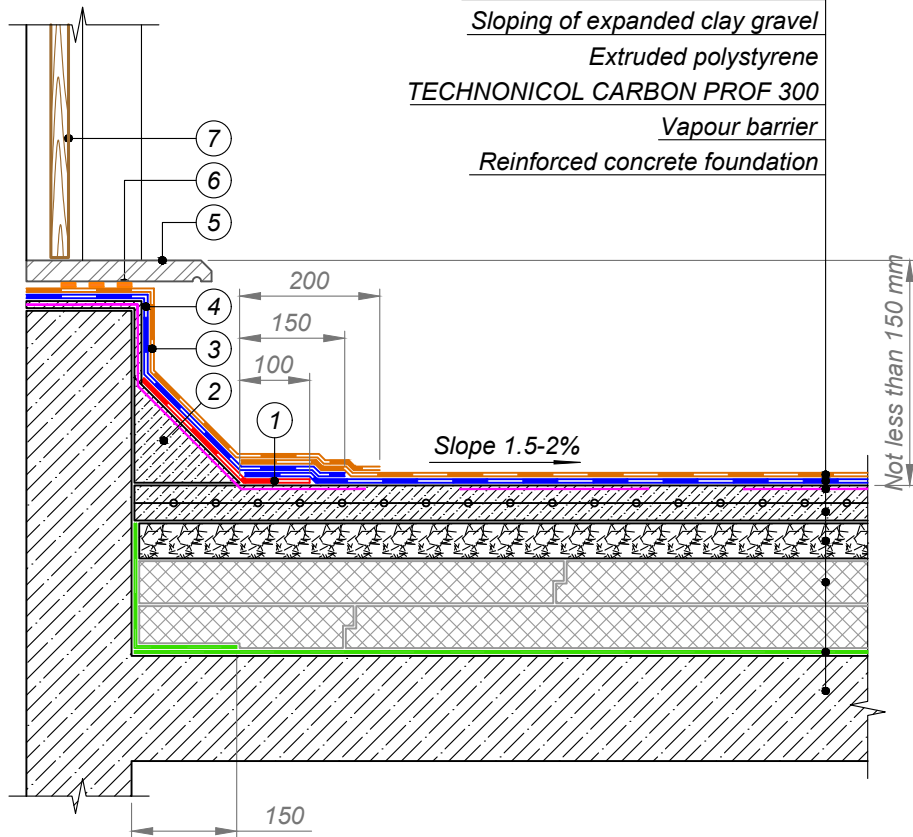
- ① Strengthening layer - Underlay bitumen membrane
- ② Transitional upstand of lightweight concrete
- ③ Bottom layer of waterproofing system on vertical surface - Underlay bitumen membrane
- ④ Top layer of waterproofing system on vertical surface - Underlay bitumen membrane
- ⑤ Reinforced concrete foundation plastered with cement-sand grout on metal grid fixed with screws
- ⑥ Pressure strip, fastened at 200 mm intervals
- ⑦ T-shaped spike
- ⑧ Galvanized steel drip edge
- ⑨ Galvanized steel flashing
- ⑩ Fastening element

NOTES
 1. Vapour barrier to be laid over the thermal insulation level.

				EXPOSED FLAT ROOF	DESIGN	APPROVED
				JUNCTION TO PARAPET MORE THAN 500 MM IN HEIGHT	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No.	REV.

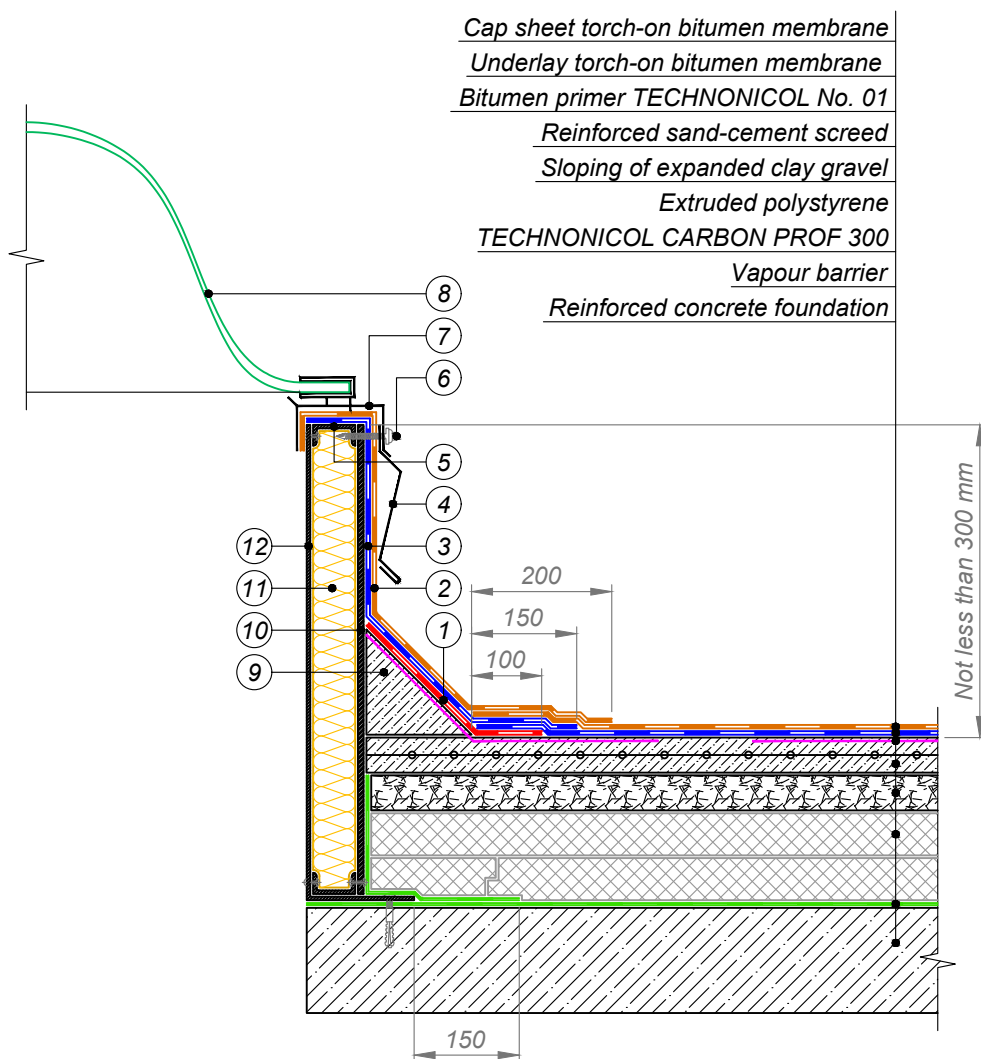


Cap sheet torch-on bitumen membrane
Underlay torch-on bitumen membrane
Bitumen primer TECHNICAL No. 01
Reinforced sand-cement screed
Sloping of expanded clay gravel
Extruded polystyrene
TECHNONICOL CARBON PROF 300
Vapour barrier
Reinforced concrete foundation



- | | |
|--|--|
| ① Strengthening layer - Underlay bitumen membrane | ④ Top layer of waterproofing system on vertical surface - Cap sheet bitumen membrane |
| ② Transitional upstand of lightweight concrete | ⑤ Sill plate |
| ③ Bottom layer of waterproofing system on vertical surface - Underlay bitumen membrane | ⑥ Sealing mastic |
| | ⑦ Door |

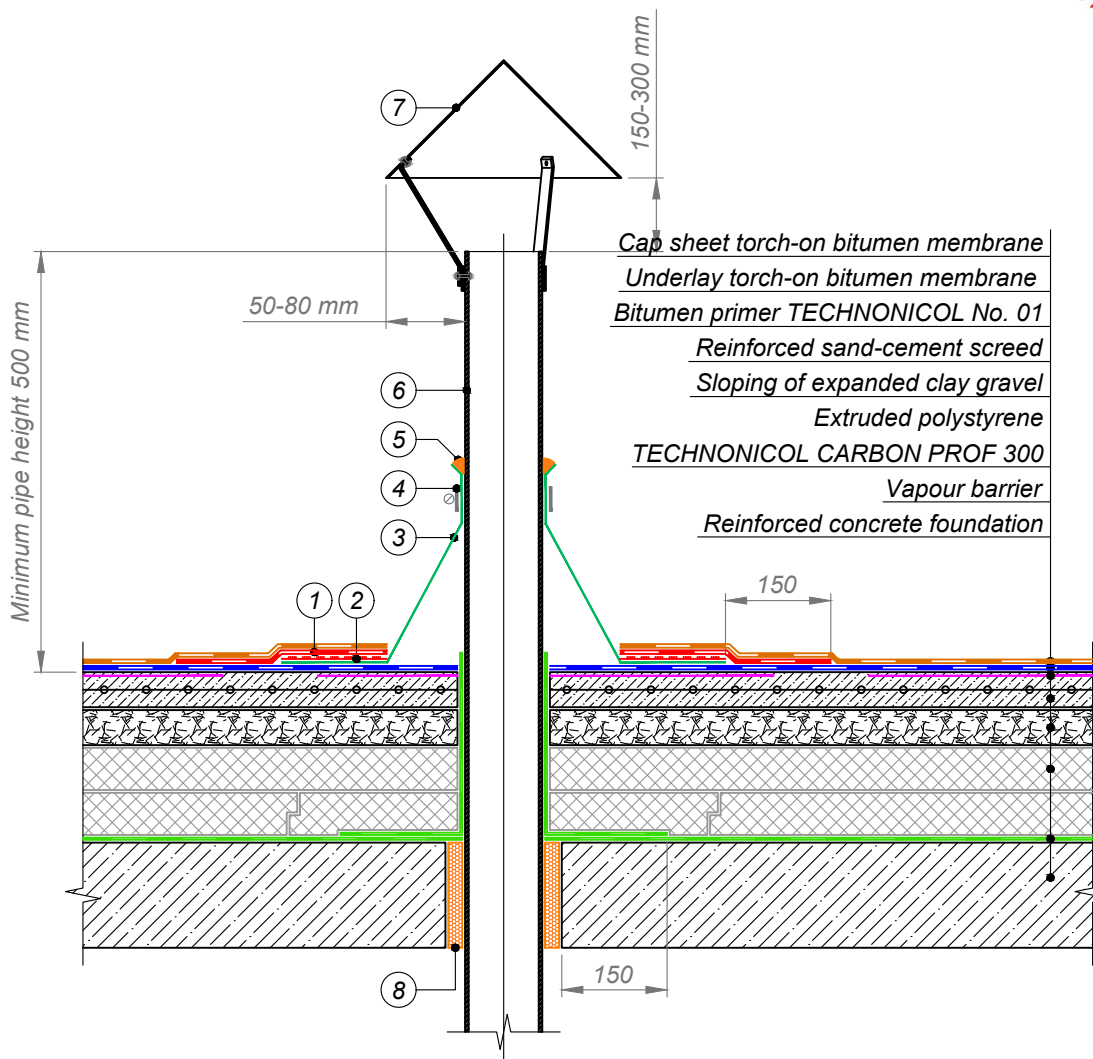
				EXPOSED FLAT ROOF	DESIGN	APPROVED
				JUNCTION TO EXIT ON THE ROOF	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No.	REV.



Cap sheet torch-on bitumen membrane
 Underlay torch-on bitumen membrane
 Bitumen primer TECHNIPOL No. 01
 Reinforced sand-cement screed
 Sloping of expanded clay gravel
 Extruded polystyrene
 TECHNIPOL CARBON PROF 300
 Vapour barrier
 Reinforced concrete foundation

- | | |
|--|--|
| ① Strengthening layer - Underlay bitumen membrane | ⑥ Fasten the roof cowl base with intervals not more than 500 mm, depending on wind load, but not less than 2 fastening elements per one side |
| ② Bottom layer of waterproofing system on vertical surface - Underlay bitumen membrane | ⑦ Metal cap |
| ③ Top layer of waterproofing system on vertical surface - Cap sheet bitumen membrane | ⑧ Skylight translucent dome |
| ④ Removable metal flashing | ⑨ Transitional upstand of lightweight concrete |
| ⑤ Galvanized steel profile to be fastened by rivets | ⑩ CBPB or ACB |
| | ⑪ Stone wool thermal insulation |
| | ⑫ Galvanized steel sheet not less than 3 mm in thickness |

				EXPOSED FLAT ROOF	DESIGN	APPROVED
				JUNCTION TO SKYLIGHT	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No.	REV.

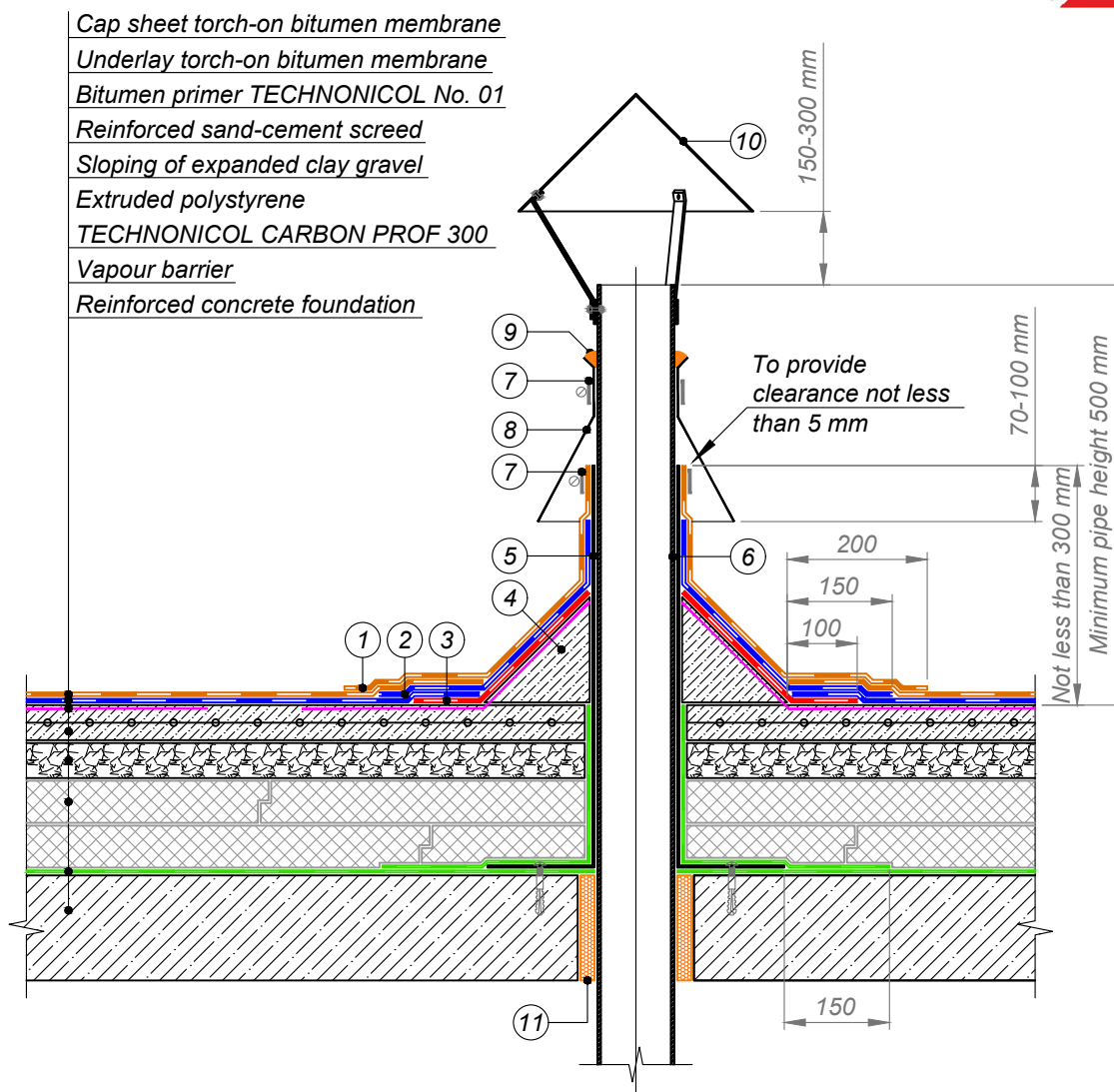


- | | |
|---|------------------|
| ① Additional layer of waterproofing membrane -
Underlay bitumen membrane | ⑤ Sealing mastic |
| ② Hot roofing mastic | ⑥ Pipe |
| ③ Pre-formed EPDM component | ⑦ Roof cowl |
| ④ Compression metal clamp | ⑧ Sealing foam |

NOTES

The solution is used for single cold pipe up to 250 mm in diameter, anchors, antenna bracings

				EXPOSED FLAT ROOF	DESIGN	APPROVED
				JUNCTION TO COLD PIPE VARIANT 1	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No.	REV.



- | | |
|--|---------------------------|
| ① Cap sheet torch-on bitumen membrane | ⑥ Pipe |
| ② Underlay torch-on bitumen membrane | ⑦ Compression metal clamp |
| ③ Additional layer of waterproofing membrane -
Underlay torch-on bitumen membrane | ⑧ Metal rain collar |
| ④ Transitional upstand of lightweight concrete | ⑨ Sealing mastic |
| ⑤ Galvanized steel sleeve
not less than 1 mm in thickness | ⑩ Roof cowl |
| | ⑪ Sealing foam |

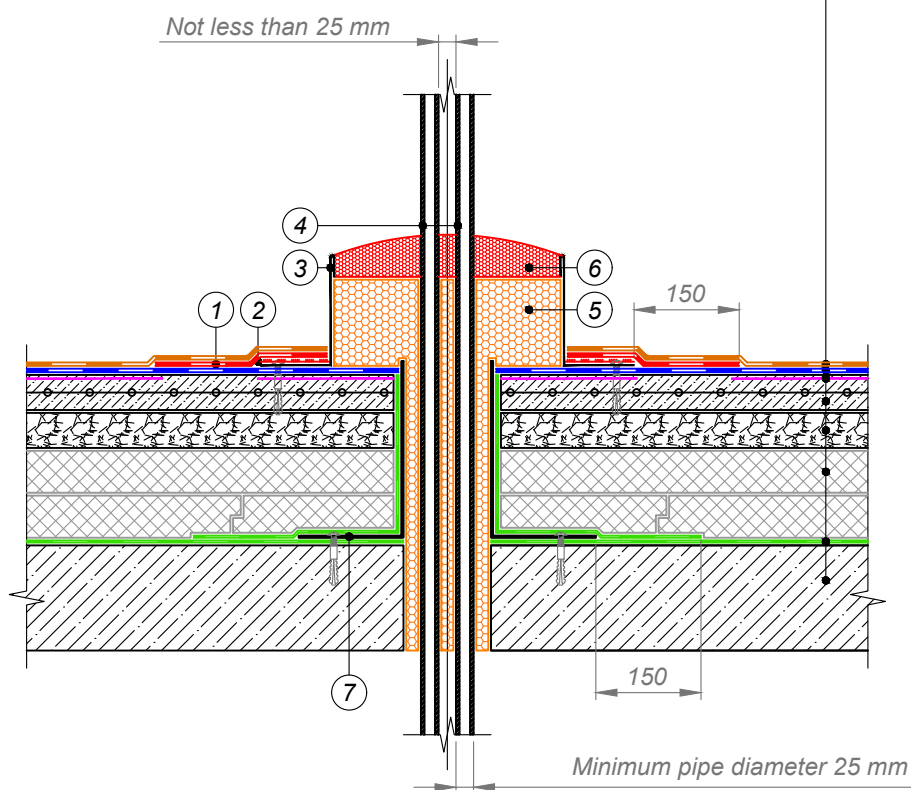
NOTES

The solution is used for single cold pipe up to 250 mm in diameter, anchors, antenna bracings

				EXPOSED FLAT ROOF	DESIGN	APPROVED
				JUNCTION TO COLD PIPE VARIANT 2	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No.	REV.



Cap sheet torch-on bitumen membrane
Underlay torch-on bitumen membrane
Bitumen primer TECHNICAL No. 01
Reinforced sand-cement screed
Sloping of expanded clay gravel
Extruded polystyrene
TECHNONICOL CARBON PROF 300
Vapour barrier
Reinforced concrete foundation

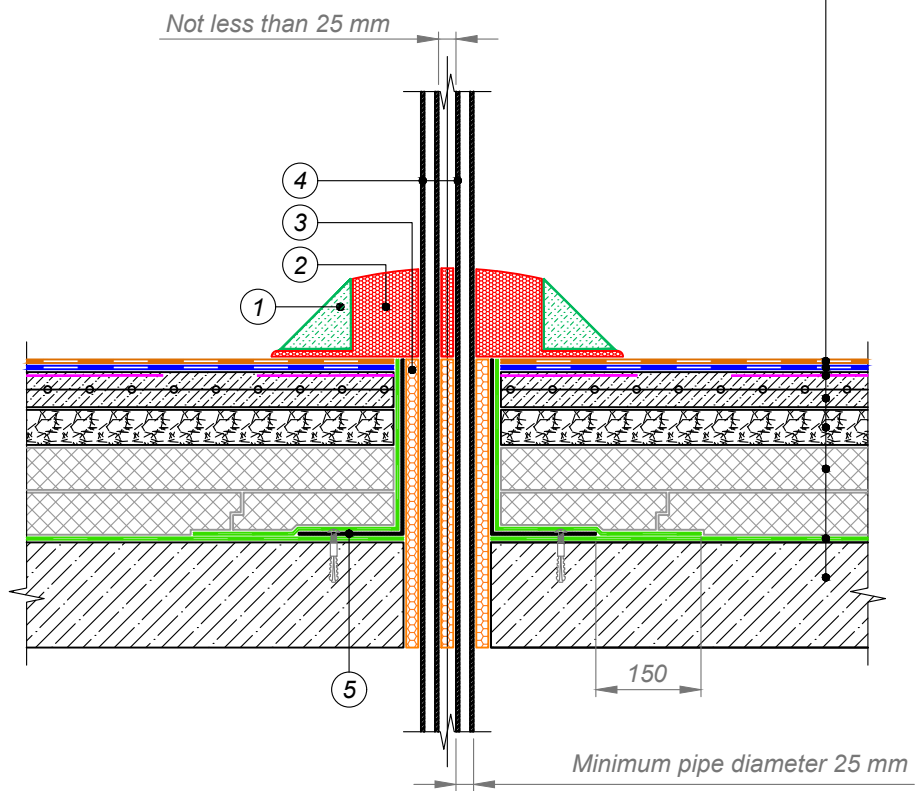


- | | |
|---|--|
| ① Additional layer of waterproofing membrane - Underlay bitumen membrane | ④ Pipe bundle |
| ② Hot roofing mastic | ⑤ Sealing foam |
| ③ Watertight sleeve (minimum height 100 mm) to be fastened by self-tapping screws to screed, sleeve flange width 100 mm | ⑥ Two-component bitumen-polyurethane sealant |
| | ⑦ Metal sleeve |

REV.	DATE	DESCRIPTION	CHECKED	EXPOSED FLAT ROOF	DESIGN	APPROVED
				JUNCTION TO COLD PIPES BUNDLE. VARIANT 1	SCALE	DATE
					DWG No.	REV.



Cap sheet torch-on bitumen membrane
Underlay torch-on bitumen membrane
Bitumen primer TECHNICAL No. 01
Reinforced sand-cement screed
Sloping of expanded clay gravel
Extruded polystyrene foam
TECHNICOL CARBON PROF 300
Vapour barrier
Reinforced concrete foundation

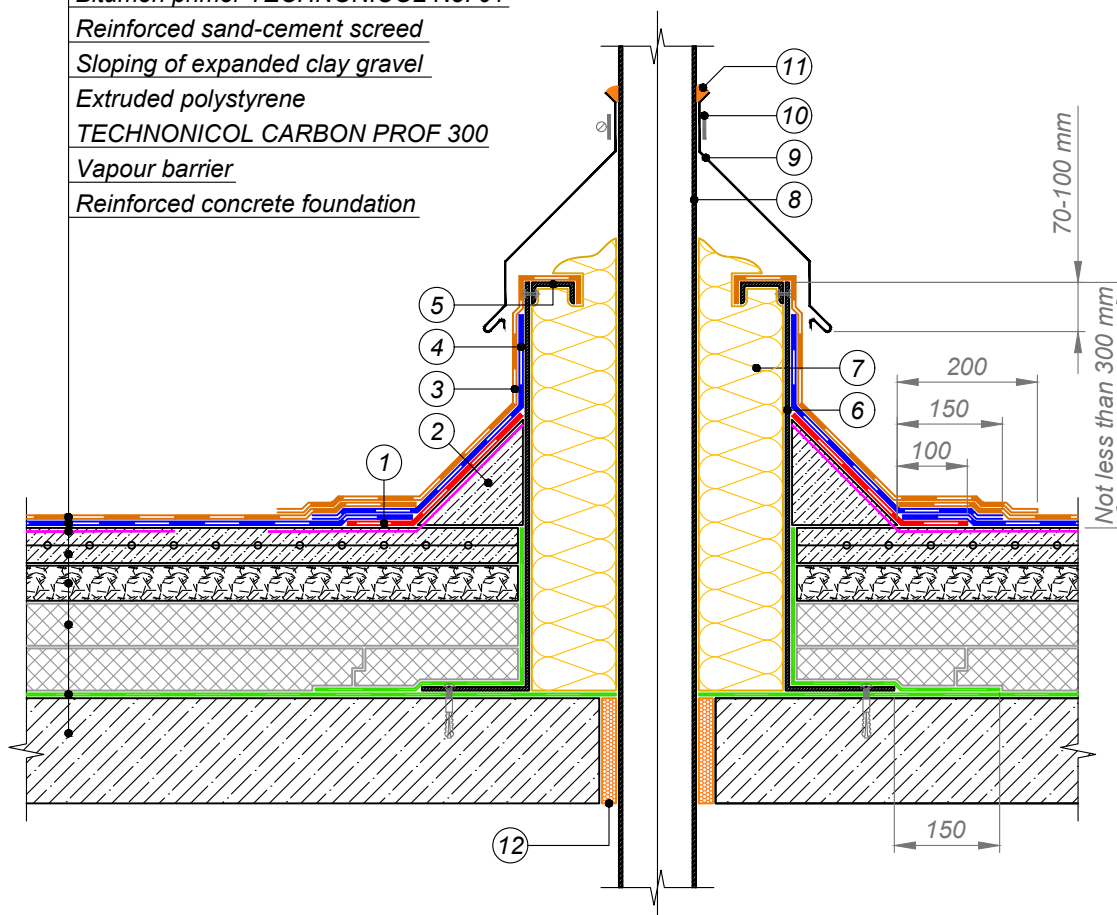


- | | |
|--|----------------|
| ① Polymer frame | ③ Sealing foam |
| ② Two-component bitumen-polyurethane sealant | ④ Pipe bundle |
| | ⑤ Metal sleeve |

				EXPOSED FLAT ROOF	DESIGN	APPROVED
				JUNCTION TO COLD PIPES BUNDLE. VARIANT 2	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No.	REV.



Cap sheet torch-on bitumen membrane
Underlay torch-on bitumen membrane
Bitumen primer TECHNIPOL No. 01
Reinforced sand-cement screed
Sloping of expanded clay gravel
Extruded polystyrene
TECHNIPOL CARBON PROF 300
Vapour barrier
Reinforced concrete foundation



- | | |
|--|---|
| ① Additional layer of waterproofing membrane - Underlay bitumen membrane | ⑥ Galvanized steel duct not less than 3 mm in thickness |
| ② Transitional upstand of lightweight concrete | ⑦ Stone wool thermal insulation not less than 120 mm in thickness |
| ③ Top layer of waterproofing system on vertical surface - Cap sheet bitumen membrane | ⑧ Pipe |
| ④ Bottom layer of waterproofing system on vertical surface - Underlay bitumen membrane | ⑨ Galvanized steel flashing |
| ⑤ Galvanized steel profile to be fastened by rivets | ⑩ Compression metal clamp |
| | ⑪ Sealant * |
| | ⑫ Sealing foam |

NOTES

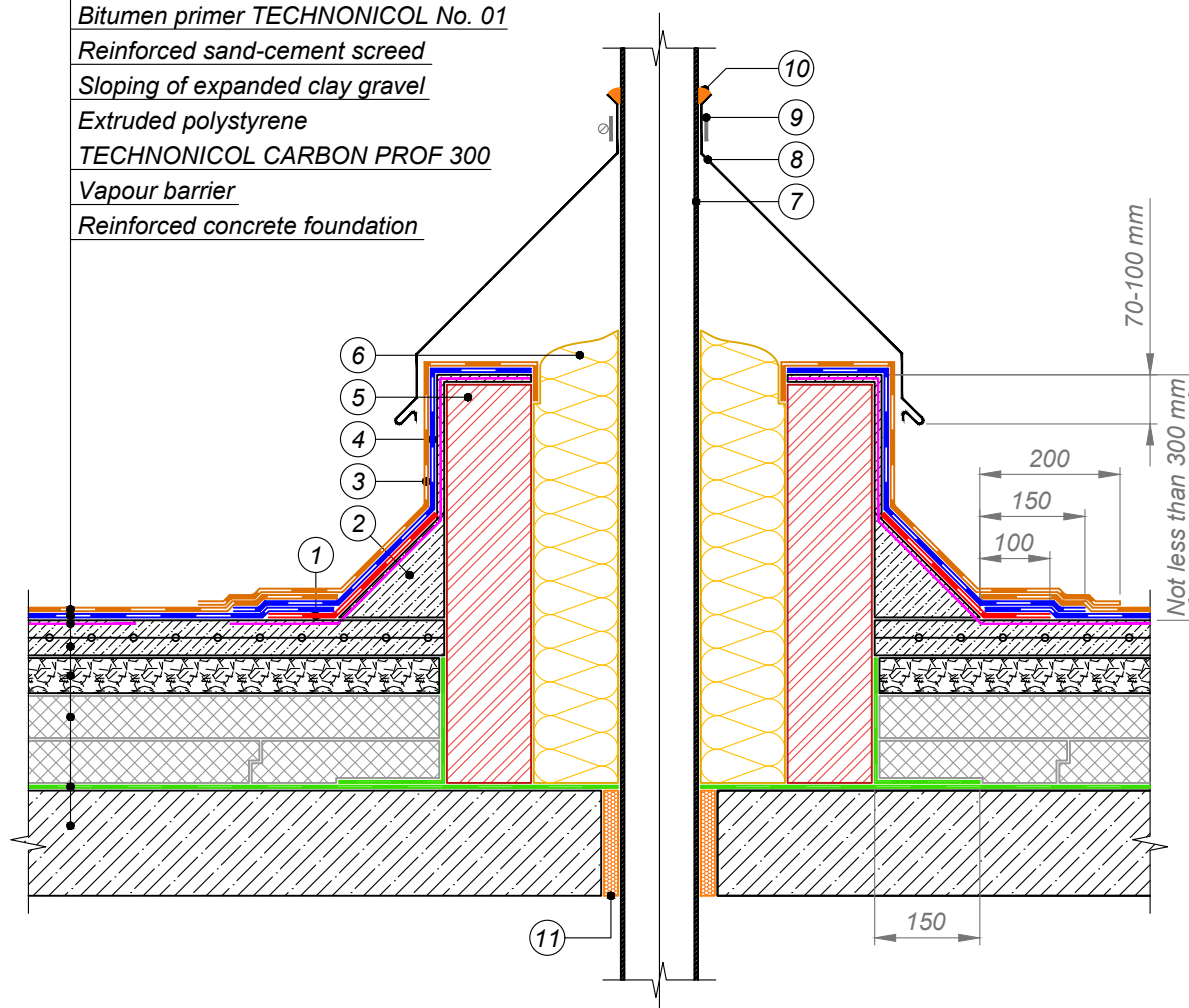
* Polyurethane sealant to be applied at temperatures up to 80°C.

At high temperatures use specialized high-temperature sealants

				EXPOSED FLAT ROOF	DESIGN	APPROVED
				JUNCTION TO HOT PIPE VARIANT 1	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No.	REV.



Cap sheet torch-on bitumen membrane
Underlay torch-on bitumen membrane
Bitumen primer TECHNIPOL No. 01
Reinforced sand-cement screed
Sloping of expanded clay gravel
Extruded polystyrene
TECHNIPOL CARBON PROF 300
Vapour barrier
Reinforced concrete foundation



- | | |
|--|--|
| <ul style="list-style-type: none"> ① Additional layer of waterproofing membrane - Underlay bitumen membrane ② Transitional upstand of lightweight concrete ③ Top layer of waterproofing system on vertical surface - Cap sheet bitumen membrane ④ Bottom layer of waterproofing system on vertical surface - Underlay bitumen membrane ⑤ Brickwork plastered with cement-sand grout | <ul style="list-style-type: none"> ⑥ Stone wool thermal insulation not less than 120 mm in thickness ⑦ Pipe ⑧ Galvanized steel flashing ⑨ Compression metal clamp ⑩ Sealant * ⑪ Sealing foam |
|--|--|

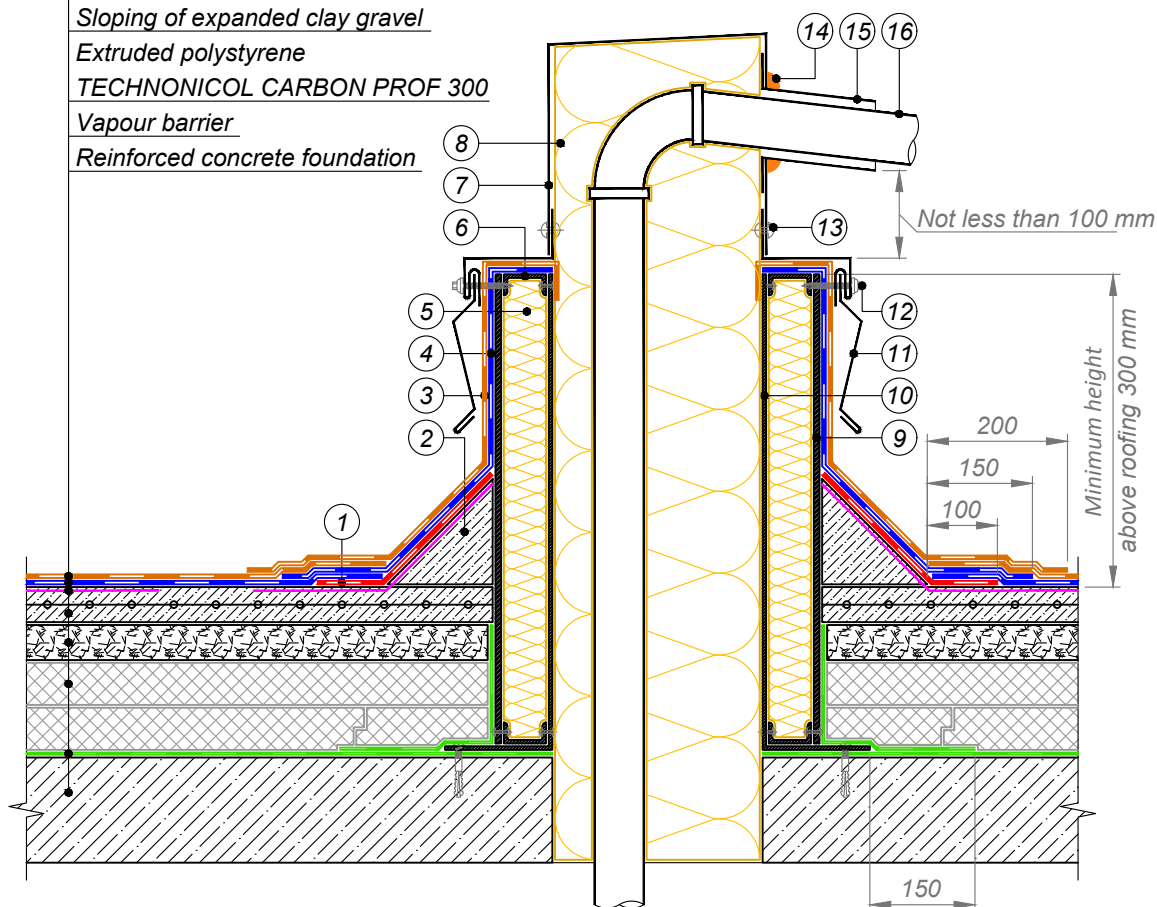
NOTES

* Polyurethane sealant to be applied at temperatures up to 80°C.
 At high temperatures use specialized high-temperature sealants.

				EXPOSED FLAT ROOF	DESIGN	APPROVED
				JUNCTION TO HOT PIPE VARIANT 2	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No.	REV.



Cap sheet torch-on bitumen membrane
 Underlay torch-on bitumen membrane
 Bitumen primer TECHNOMIC No. 01
 Reinforced sand-cement screed
 Sloping of expanded clay gravel
 Extruded polystyrene
 TECHNOMIC CARBON PROF 300
 Vapour barrier
 Reinforced concrete foundation



- | | |
|--|---|
| <p>① Additional layer of waterproofing membrane - Underlay bitumen membrane</p> <p>② Transitional upstand of lightweight concrete</p> <p>③ Top layer of waterproofing system at junction - Cap sheet bitumen membrane</p> <p>④ Bottom layer of waterproofing system at junction - Underlay bitumen membrane</p> <p>⑤ Stone wool thermal insulation</p> <p>⑥ Galvanized steel profile to be fastened by rivets</p> <p>⑦ Metal cover</p> | <p>⑧ Fill with stone wool thermal insulation</p> <p>⑨ CBPB or ACB</p> <p>⑩ Galvanized steel sheet not less than 3 mm in thickness</p> <p>⑪ Removable metal flashing</p> <p>⑫ Fasten by roofing self-tapping screws with EPDM gasket at intervals not more than 450 mm</p> <p>⑬ Fasten with combined rivets</p> <p>⑭ Sealant *</p> <p>⑮ Metal or rubber clamp</p> <p>⑯ Tip chute</p> |
|--|---|

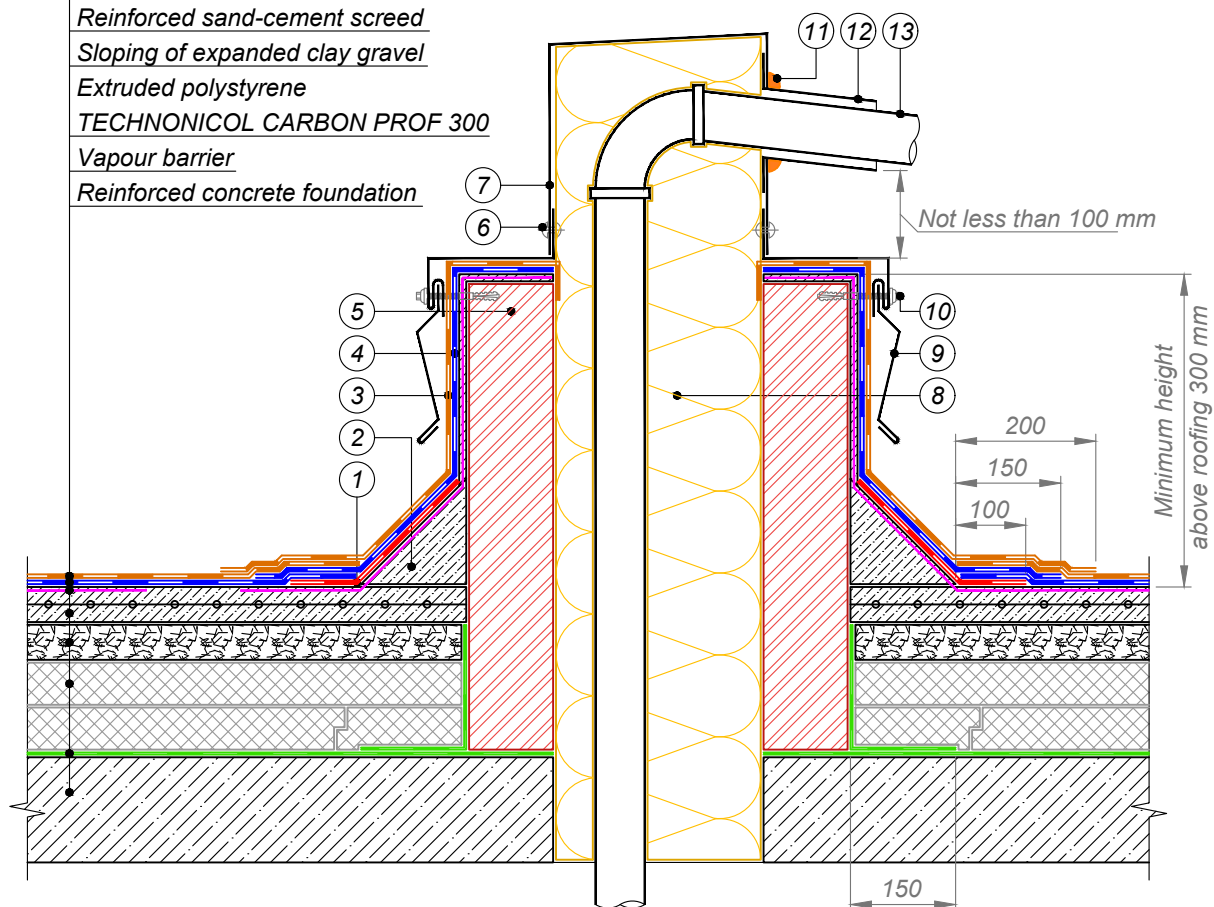
NOTES

* Polyurethane sealant to be applied at temperatures up to 80°C.
 At high temperatures use specialized high-temperature sealants

				EXPOSED FLAT ROOF	DESIGN	APPROVED
				JUNCTION TO HOT PIPES BUNDLE. VARIANT 1	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No.	REV.



Cap sheet torch-on bitumen membrane
 Underlay torch-on bitumen membrane
 Bitumen primer TECHNICAL No. 01
 Reinforced sand-cement screed
 Sloping of expanded clay gravel
 Extruded polystyrene
 TECHNICAL CARBON PROF 300
 Vapour barrier
 Reinforced concrete foundation

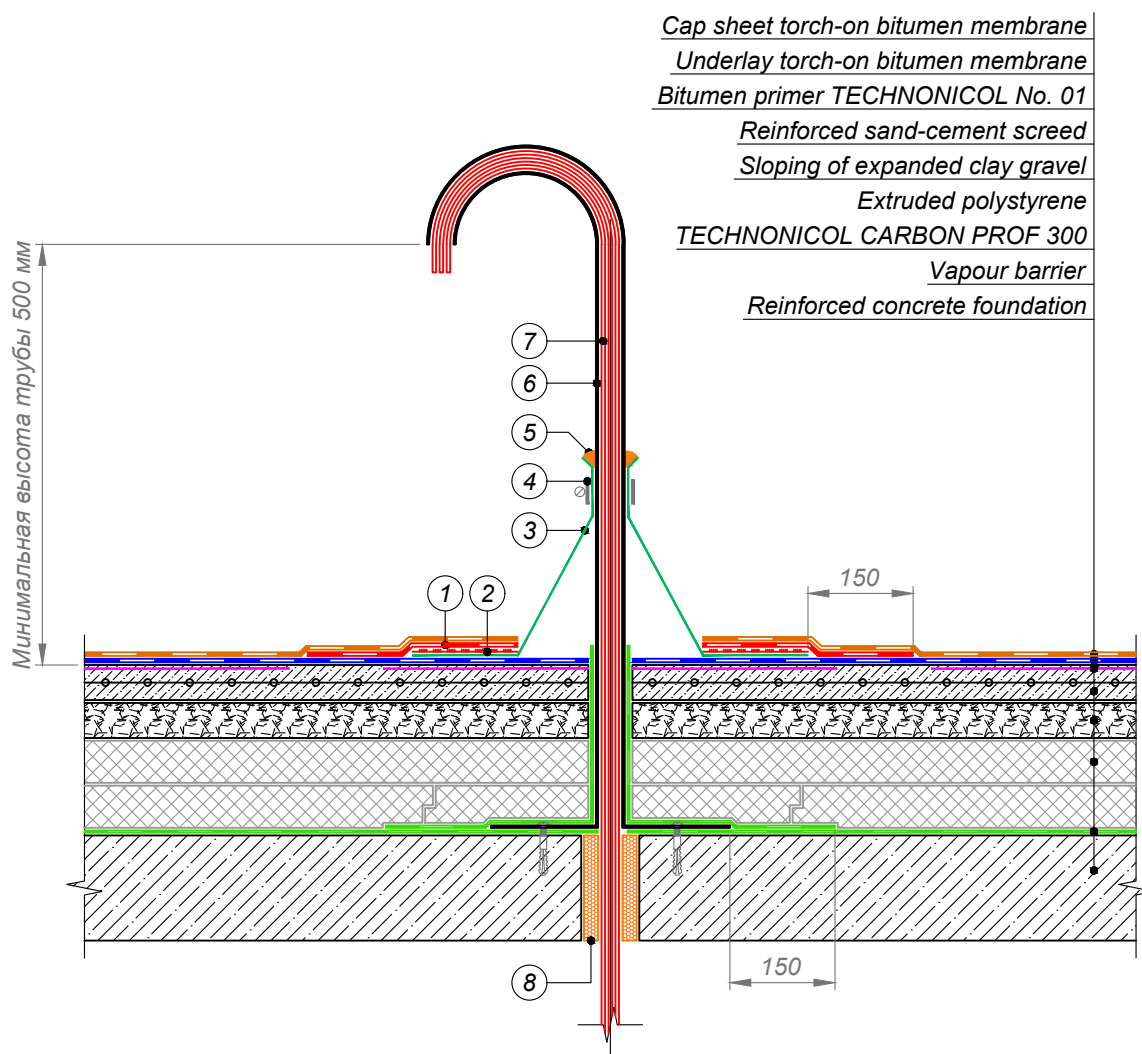


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|---|---|
| <p>① Additional layer of waterproofing membrane - Underlay bitumen membrane</p> <p>② Transitional upstand of lightweight concrete</p> <p>③ Top layer of waterproofing system at junction - Cap sheet bitumen membrane</p> <p>④ Bottom layer of waterproofing system at junction - Underlay bitumen membrane</p> <p>⑤ Brickwork plastered with cement-sand grout</p> | <p>⑥ Fasten with combined rivets</p> <p>⑦ Metal cover</p> <p>⑧ Fill with stone wool thermal insulation</p> <p>⑨ Removable metal flashing</p> <p>⑩ Fasten by roofing self-tapping screws with EPDM gasket at intervals not more than 450 mm</p> <p>⑪ Sealant *</p> <p>⑫ Металлический или резиновый хомут</p> <p>⑬ Tip chute</p> |
|---|---|

NOTES

* Polyurethane sealant to be applied at temperatures up to 80°C.
 At high temperatures use specialized high-temperature sealants.

				EXPOSED FLAT ROOF	DESIGN	APPROVED
				JUNCTION TO HOT PIPES BUNDLE. VARIANT 2	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No.	REV.



Cap sheet torch-on bitumen membrane
 Underlay torch-on bitumen membrane
 Bitumen primer TECHNOMICOL No. 01
 Reinforced sand-cement screed
 Sloping of expanded clay gravel
 Extruded polystyrene
 TECHNOMICOL CARBON PROF 300
 Vapour barrier
 Reinforced concrete foundation

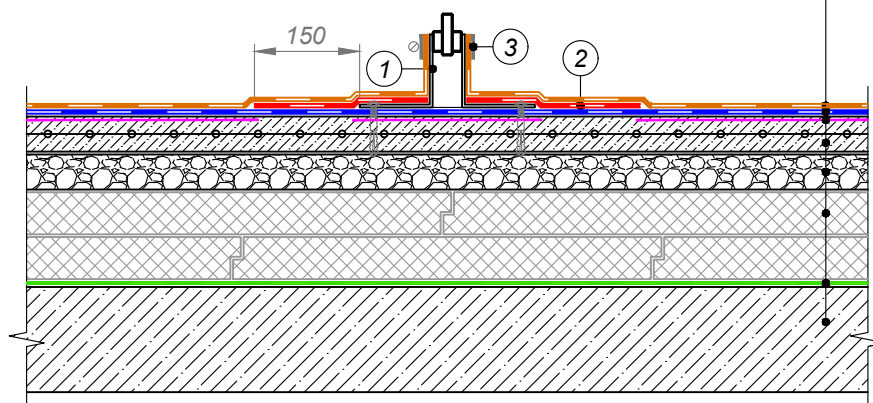
Минимальная высота трубы 500 мм

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|---|---|
| ① Additional layer of waterproofing membrane -
Underlay bitumen membrane | ⑤ Sealing mastic |
| ② Hot roofing mastic | ⑥ Bent metal pipe with welded
flange below |
| ③ Pre-formed EPDM component | ⑦ Electric cable |
| ④ Compression metal clamp | ⑧ Sealing foam |

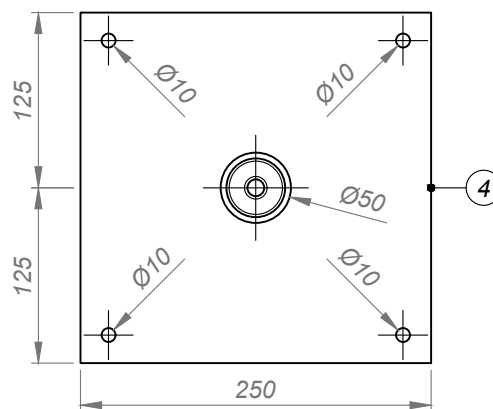
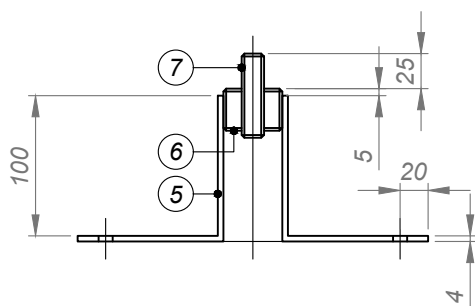
EXPOSED FLAT ROOF				DESIGN	APPROVED
JUNCTION TO ELECTRIC CABLE OUTLET				SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED	DWG No.	REV.



Cap sheet torch-on bitumen membrane
Underlay torch-on bitumen membrane
Bitumen primer TECHNIPOL No. 01
Reinforced sand-cement screed
Sloping of expanded clay gravel
Extruded polystyrene
TECHNIPOL CARBON PROF 300
Vapour barrier
Reinforced concrete foundation

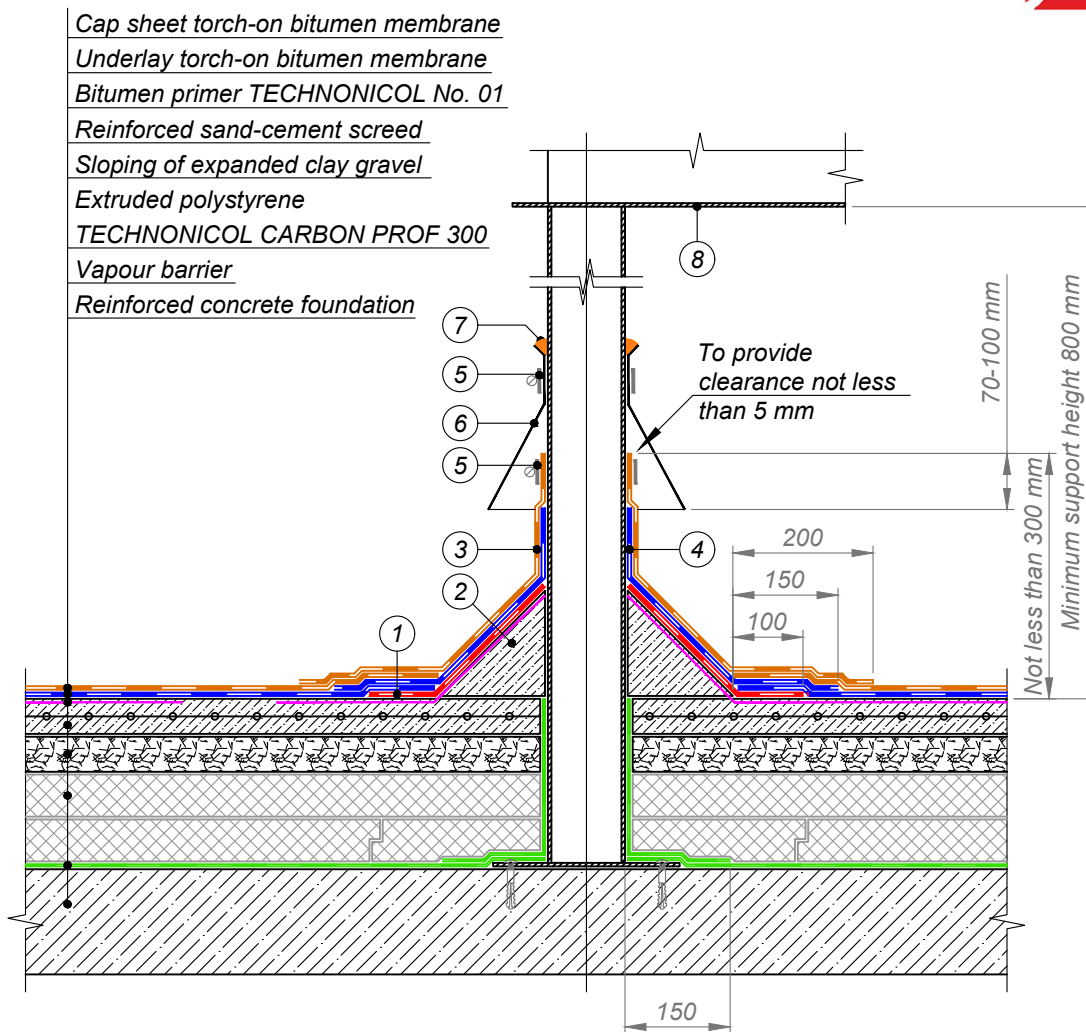


Embedded element for anchor, antenna bracing or equipment



- ① Embedded element
- ② Additional layer of waterproofing membrane - Underlay bitumen membrane
- ③ Steel plate
- ④ Compression metal clamp
- ⑤ Steel pipe 50 mm in diameter
- ⑥ Steel stud M16x70
- ⑦ Metal embedded element with external and internal thread

				EXPOSED FLAT ROOF	DESIGN	APPROVED
				FASTENING OF EMBEDDED ELEMENT FOR ANCHOR, ANTENNA BRACING OR EQUIPMENT	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No.	REV.



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|---|--|
| <p>① Additional layer of waterproofing membrane - Underlay bitumen membrane</p> <p>② Transitional upstand of lightweight concrete</p> <p>③ Top layer of waterproofing system at junction - Cap sheet bitumen membrane</p> | <p>④ Bottom layer of waterproofing system at junction - Underlay bitumen membrane</p> <p>⑤ Compression metal clamp</p> <p>⑥ Metal rain collar</p> <p>⑦ Sealing mastic</p> <p>⑧ Equipment support</p> |
|---|--|

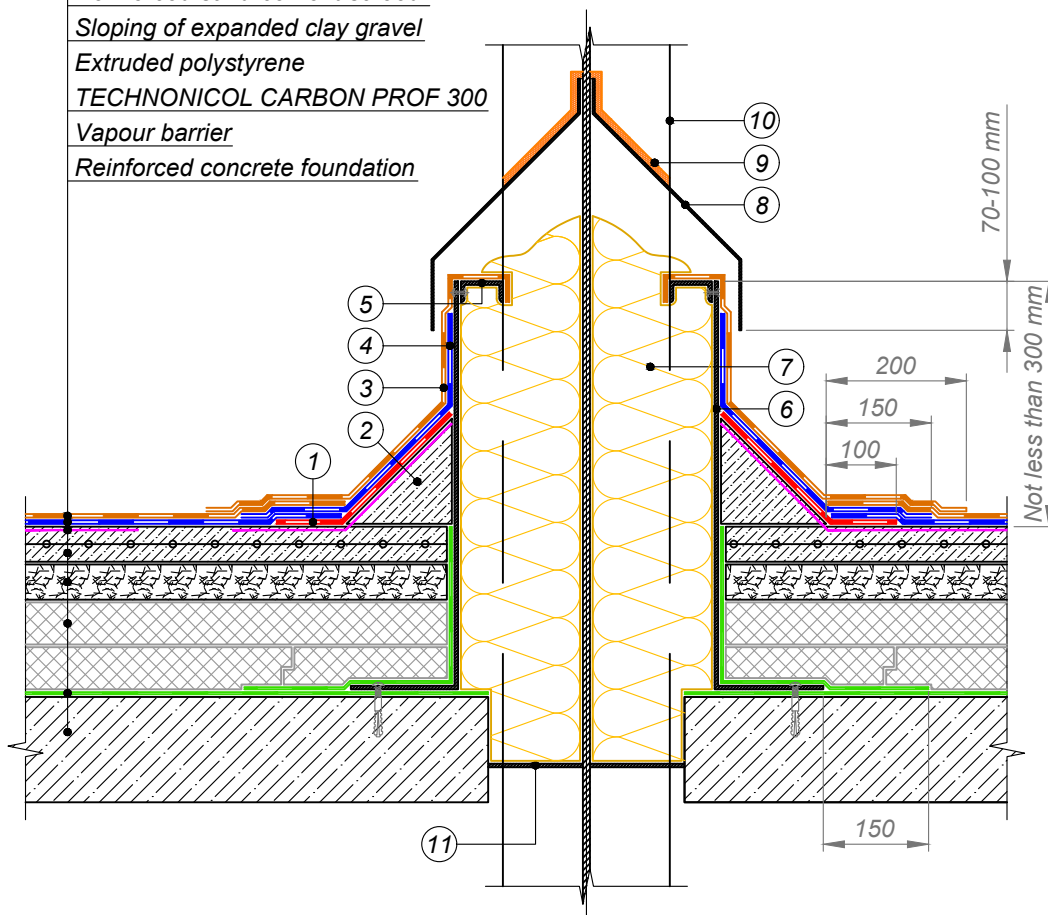
NOTES

Height of support above the roof surface should be not less than 800 mm to allow for possibility of roofing works and repairs.

				EXPOSED FLAT ROOF	DESIGN	APPROVED
					SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED	SUPPORT FOR EQUIPMENT	DWG No.	REV.



Cap sheet torch-on bitumen membrane
Underlay torch-on bitumen membrane
Bitumen primer TECHNIPOL No. 01
Reinforced sand-cement screed
Sloping of expanded clay gravel
Extruded polystyrene
TECHNIPOL CARBON PROF 300
Vapour barrier
Reinforced concrete foundation

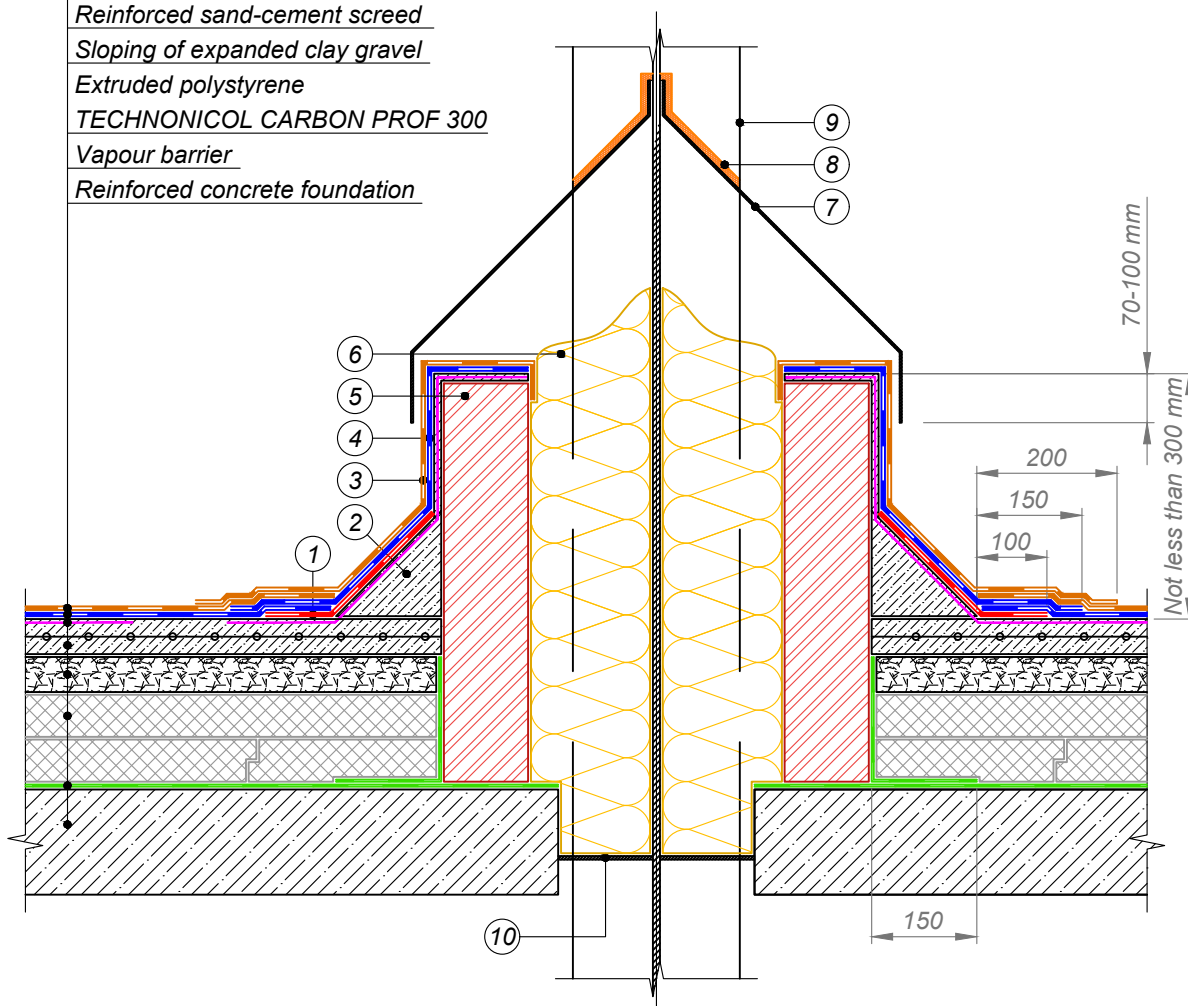


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|---|---|
| <p>① Additional layer of waterproofing membrane - Underlay bitumen membrane</p> <p>② Transitional upstand of lightweight concrete</p> <p>③ Top layer of waterproofing system at junction - Cap sheet bitumen membrane</p> <p>④ Bottom layer of waterproofing system at junction - Underlay bitumen membrane</p> <p>⑤ Galvanized steel profile to be fastened by rivets</p> <p>⑥ Galvanized steel duct not less than 3 mm in thickness</p> | <p>⑦ Non-combustible thermal insulation</p> <p>⑧ Metal flashing not less than 3 mm in thickness should overlap the duct by 70-100 mm</p> <p>⑨ Weld flashing to the column and treat the joint with sealing mastic</p> <p>⑩ Rolled metal column</p> <p>⑪ Weld the metal plate and apply sealant around the perimeter</p> |
|---|---|

EXPOSED FLAT ROOF				DESIGN	APPROVED
ROLLED METAL COLUMN PASSING THROUGH THE ROOF. VARIANT 1				SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED	DWG No.	REV.



Cap sheet torch-on bitumen membrane
Underlay torch-on bitumen membrane
Bitumen primer TECHNIPOL No. 01
Reinforced sand-cement screed
Sloping of expanded clay gravel
Extruded polystyrene
TECHNIPOL CARBON PROF 300
Vapour barrier
Reinforced concrete foundation

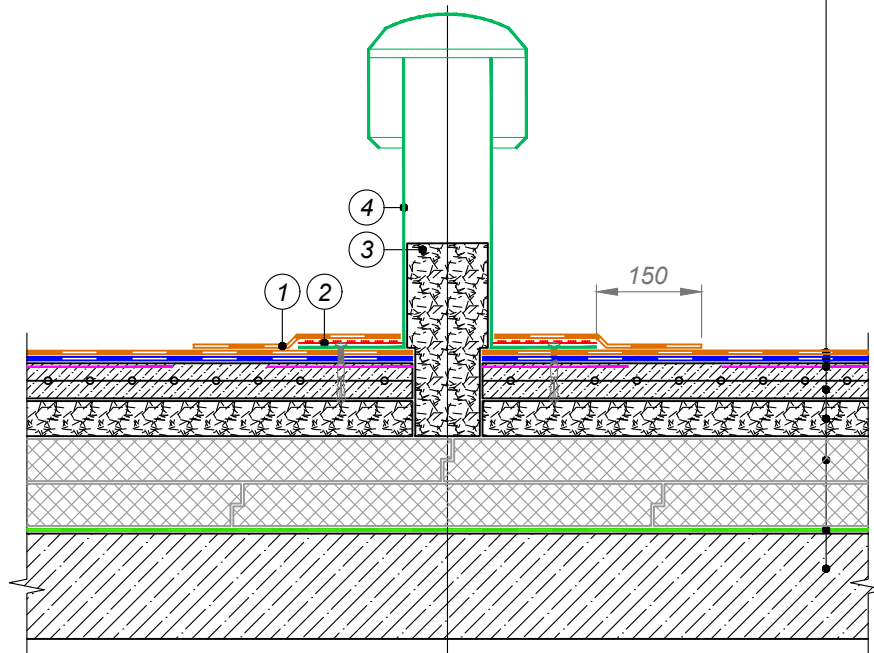


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| <p>① Additional layer of waterproofing membrane - Underlay bitumen membrane</p> <p>② Transitional upstand of lightweight concrete</p> <p>③ Top layer of waterproofing system at junction - Cap sheet bitumen membrane</p> <p>④ Bottom layer of waterproofing system at junction - Underlay bitumen membrane</p> <p>⑤ Brickwork plastered with cement-sand grout</p> | <p>⑥ Stone wool thermal insulation not less than 120 mm in thickness</p> <p>⑦ Metal flashing not less than 3 mm in thickness should overlap the duct by 70-100 mm</p> <p>⑧ Weld flashing to the column and treat the joint with sealing mastic</p> <p>⑨ Rolled metal column</p> <p>⑩ Weld the metal plate and apply sealant around the perimeter</p> |
|---|--|

				EXPOSED FLAT ROOF	DESIGN	APPROVED
				ROLLED METAL COLUMN PASSING THROUGH THE ROOF. VARIANT 2	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No.	REV.



Cap sheet torch-on bitumen membrane
Underlay torch-on bitumen membrane
Bitumen primer TECHNOMICOL No. 01
Reinforced sand-cement screed
Sloping of expanded clay gravel
Extruded polystyrene
TECHNONICOL CARBON PROF 300
Vapour barrier
Reinforced concrete foundation

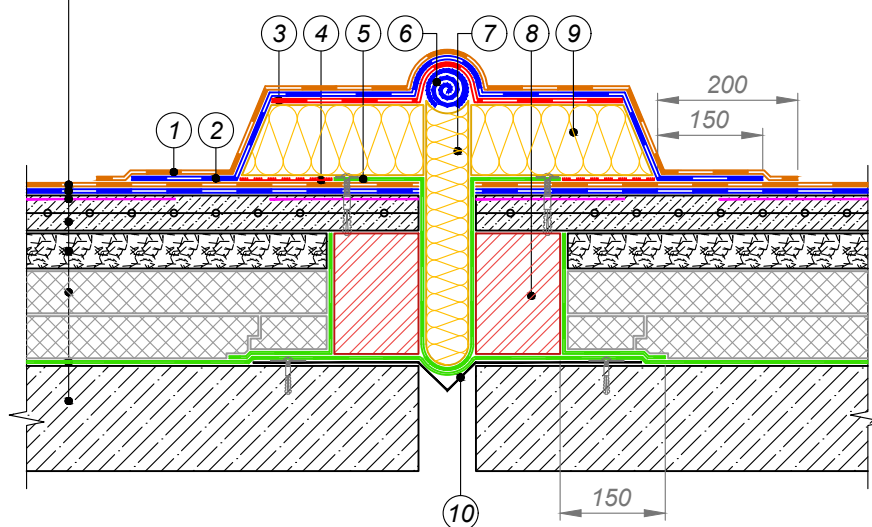


- ① Additional layer of waterproofing membrane - Cap sheet bitumen membrane
- ② Hot roofing mastic
- ③ Expanded clay gravel
- ④ Roof aerator

				EXPOSED FLAT ROOF	DESIGN	APPROVED
					SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED	ROOF AERATOR	DWG No.	REV.



Cap sheet torch-on bitumen membrane
Underlay torch-on bitumen membrane
Bituminous primer TECHNOMIC No. 01
Reinforced sand-cement screed
Sloping of expanded clay gravel
Extruded polystyrene
TECHNOMIC CARBON PROF 300
Vapour barrier
Reinforced concrete foundation

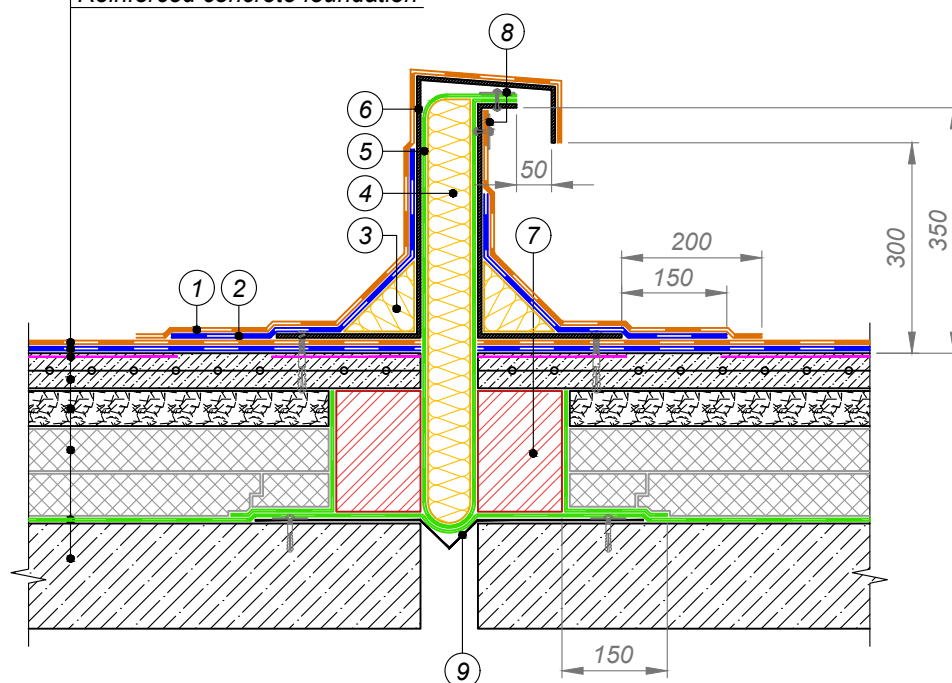


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| ① Cap sheet torch-on bitumen membrane | ⑥ Roofing material
in a roll Ø 50-70 mm |
| ② Underlay torch-on bitumen membrane | ⑦ Compressible thermal insulation |
| ③ Additional layer of waterproofing membrane -
Underlay bitumen membrane | ⑧ Brickwork |
| ④ Stone wool thermal insulation to be glued
with hot roofing mastic | ⑨ Stone wool thermal insulation
100 mm in thickness |
| ⑤ Vapour barrier for fixation of insulation | ⑩ Metal compensator |

				EXPOSED FLAT ROOF	DESIGN	APPROVED
				EXPANSION JOINT VARIANT 1	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No.	REV.



Cap sheet torch-on bitumen membrane
Underlay torch-on bitumen membrane
Bitumen primer TECHNICAL No. 01
Reinforced sand-cement screed
Sloping of expanded clay gravel
Extruded polystyrene
TECHNONICOL CARBON PROF 300
Vapour barrier
Reinforced concrete foundation

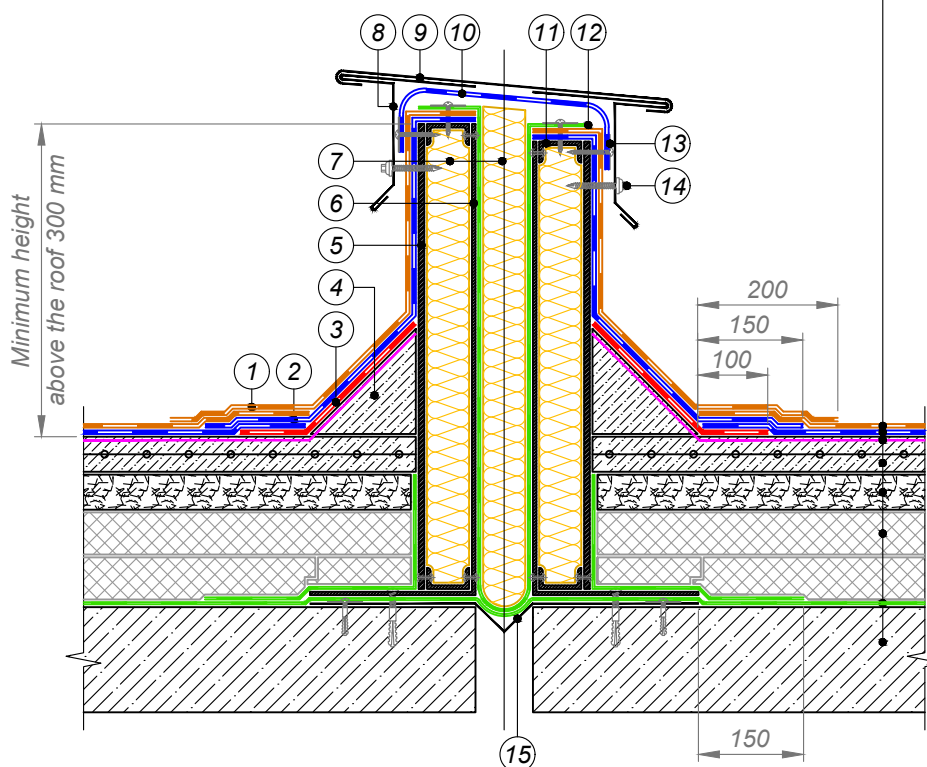


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| ① Top layer of waterproofing system at junction - Cap sheet bitumen membrane | ⑤ Vapour barrier for fixation of insulation |
| ② Bottom layer of waterproofing system at junction - Underlay bitumen membrane | ⑥ Galvanized steel profile not less than 3 mm in thickness |
| ③ Roofing fillet 100x100 mm | ⑦ Brickwork |
| ④ Compressible thermal insulation | ⑧ Fasten by rivets through washer \varnothing 100 mm |
| | ⑨ Metal compensator |

				EXPOSED FLAT ROOF	DESIGN	APPROVED
				EXPANSION JOINT VARIANT 2	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No.	REV.



Cap sheet torch-on bitumen membrane
Underlay torch-on bitumen membrane
Bitumen primer TECHNOMICOL No. 01
Reinforced sand-cement screed
Sloping of expanded clay gravel
Extruded polystyrene
TECHNONICOL CARBON PROF 300
Vapour barrier
Reinforced concrete foundation

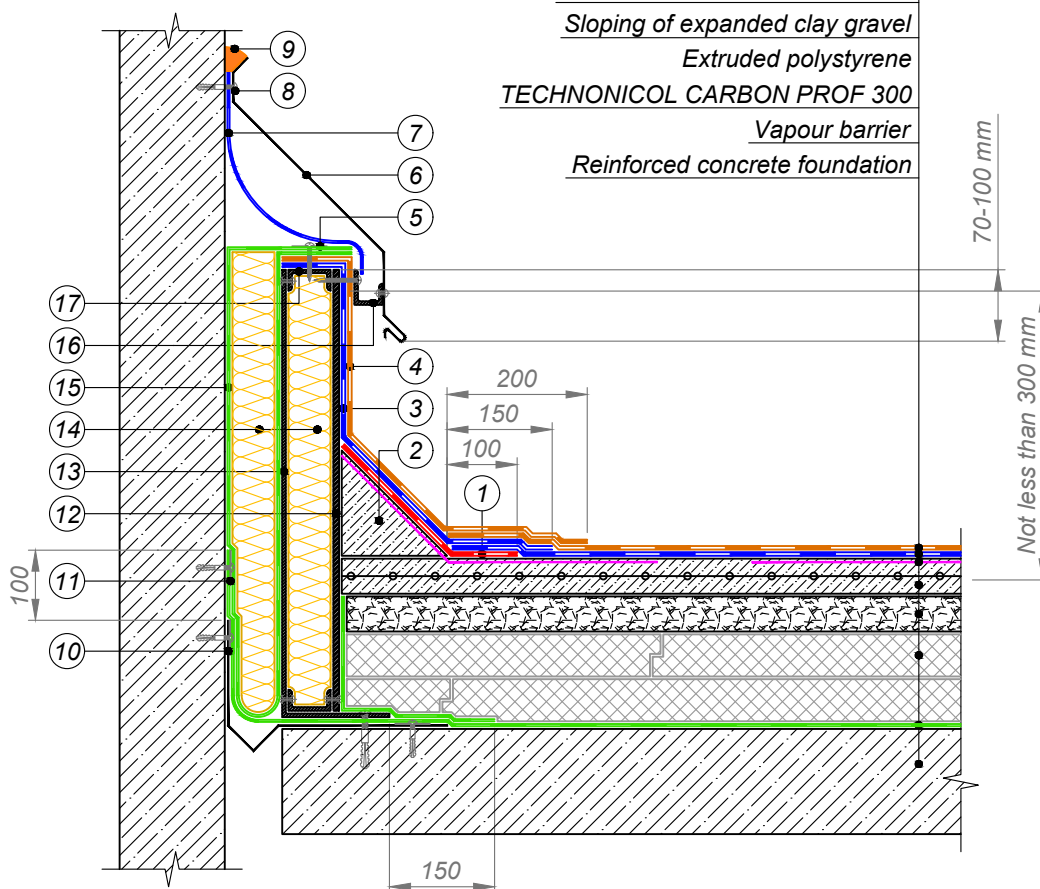


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|--|---|
| ① Bottom layer of waterproofing system on vertical surface - Underlay bitumen membrane | ⑨ Coating of galvanized sheet |
| ② Top layer of waterproofing system on vertical surface - Cap sheet bitumen membrane | ⑩ Roofing material flashing |
| ③ Strengthening layer - Underlay bitumen membrane | ⑪ Galvanized steel profile to be fastened by rivets |
| ④ Transitional upstand of lightweight concrete | ⑫ Vapour barrier for fixation of insulation |
| ⑤ CBPB or ACB | ⑬ Fasten by self-tapping screws with washer \varnothing 50 mm at 250 mm intervals |
| ⑥ Galvanized steel profile not less than 3 mm in thickness | ⑭ Fasten by roofing self-tapping screws with EPDM gasket |
| ⑦ Stone wool thermal insulation | ⑮ Metal compensator |
| ⑧ Fastening element | |

				EXPOSED FLAT ROOF	DESIGN	APPROVED
				DEFORMATION SEPARATOR	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No.	REV.

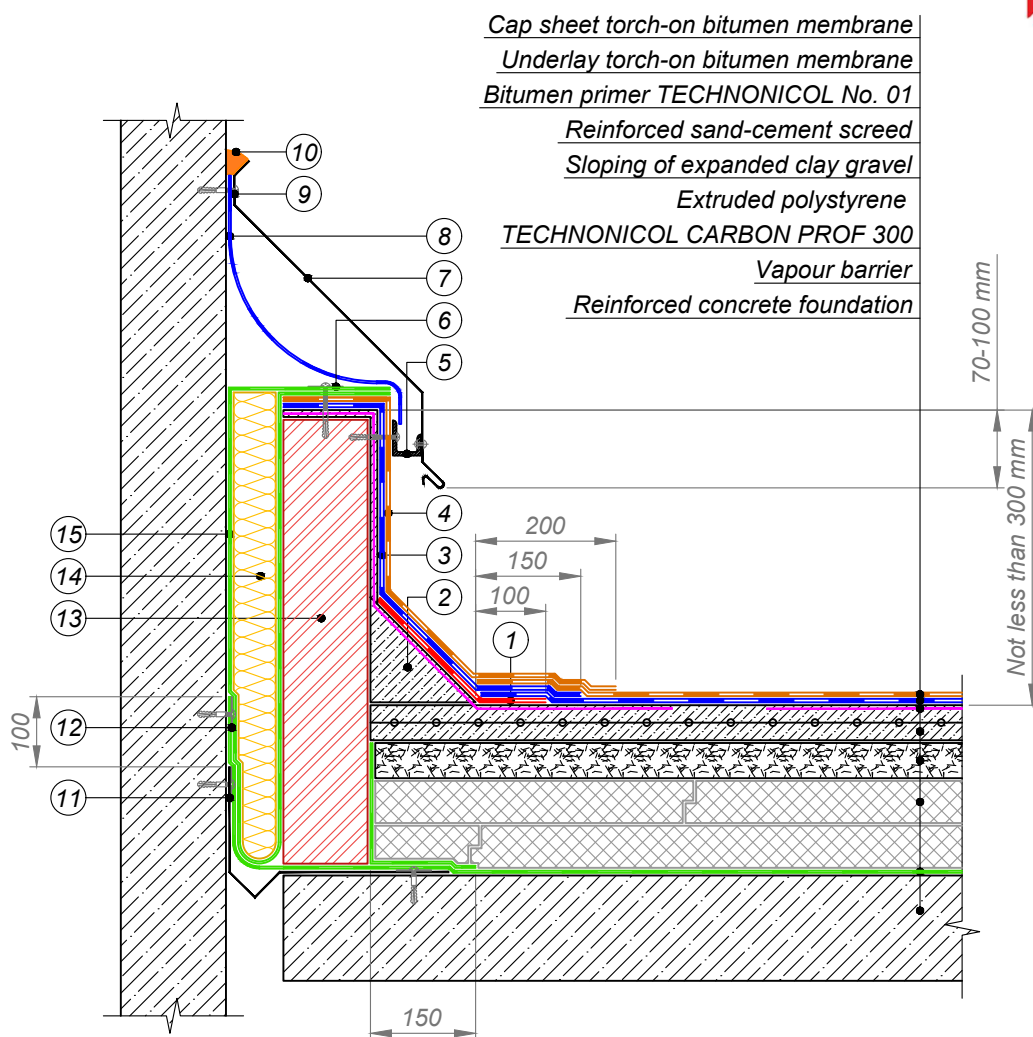


Cap sheet torch-on bitumen membrane
 Underlay torch-on bitumen membrane
 Bitumen primer TECHNOCOL No. 01
 Reinforced sand-cement screed
 Sloping of expanded clay gravel
 Extruded polystyrene
 TECHNOCOL CARBON PROF 300
 Vapour barrier
 Reinforced concrete foundation



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| ① Strengthening layer - Underlay bitumen membrane | ⑪ Material to be built-up on vertical surface and mechanically fastened by self-tapping screws with washer Ø 50 mm |
| ② Transitional upstand of lightweight concrete | ⑫ CBPB or ACB |
| ③ Bottom layer of waterproofing system on vertical surface - Underlay bitumen membrane | ⑬ Galvanized steel profile not less than 3 mm in thickness |
| ④ Top layer of waterproofing system on vertical surface - Cap sheet bitumen membrane | ⑭ Stone wool thermal insulation |
| ⑤ Vapour barrier to be fastened by self-tapping screws with washer Ø 50 mm at 500 mm intervals | ⑮ Vapour barrier for fixation of insulation |
| ⑥ Galvanized steel flashing | ⑯ Galvanized steel compensator to be mechanically fastened with flashing |
| ⑦ Roofing material flashing | ⑰ Galvanized steel profile to be fastened by rivets |
| ⑧ Fasten by self-tapping screws at 200 mm intervals | |
| ⑨ Sealing mastic | |
| ⑩ Galvanized steel compensator to be mechanically fastened with flashing | |

				EXPOSED FLAT ROOF	DESIGN	APPROVED
				EXPANSION JOINT AT JUNCTION TO WALL. VARIANT 1	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No.	REV.



Cap sheet torch-on bitumen membrane
 Underlay torch-on bitumen membrane
 Bitumen primer TECHNIPOL No. 01
 Reinforced sand-cement screed
 Sloping of expanded clay gravel
 Extruded polystyrene
 TECHNIPOL CARBON PROF 300
 Vapour barrier
 Reinforced concrete foundation

- | | |
|---|--|
| ① Strengthening layer - Underlay bitumen membrane | ⑧ Roofing material flashing |
| ② Transitional upstand of lightweight concrete | ⑨ Fasten by self-tapping screws at 200 mm intervals |
| ③ Bottom layer of waterproofing system on vertical surface - Underlay bitumen membrane | ⑩ Sealing mastic |
| ④ Top layer of waterproofing system on vertical surface - Cap sheet bitumen membrane | ⑪ Galvanized steel compensator to be mechanically fastened with flashing |
| ⑤ Galvanized steel compensator to be mechanically fastened with flashing | ⑫ Material to be built-up on vertical surface and mechanically fastened by self-tapping screws with washer Ø 50 mm |
| ⑥ Vapour insulation to be fastened by self-tapping screws with washer Ø 50 mm at 500 mm intervals | ⑬ Brickwork plastered with cement-sand grout |
| ⑦ Galvanized steel flashing | ⑭ Stone wool thermal insulation |
| | ⑮ Vapour barrier material for fixation of insulation |

				EXPOSED FLAT ROOF	DESIGN	APPROVED
				EXPANSION JOINT AT JUNCTION TO WALL. VARIANT 2	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No.	REV.