



mark caruana

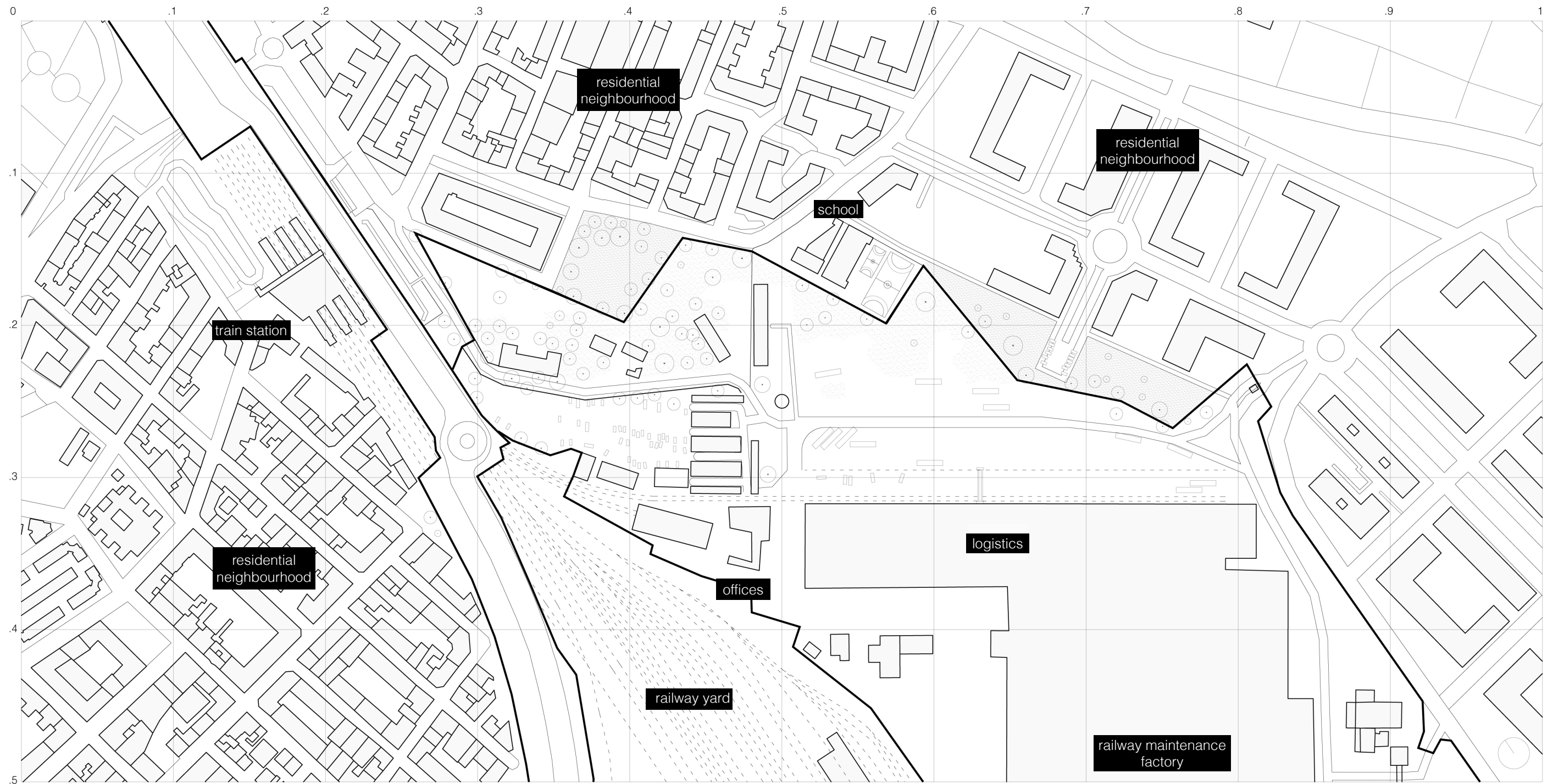
# the metabolic periphery

towards socially, economically and ecologically productive operational landscapes in madrid's periphery

drawing set

architectural design crossovers graduation studio

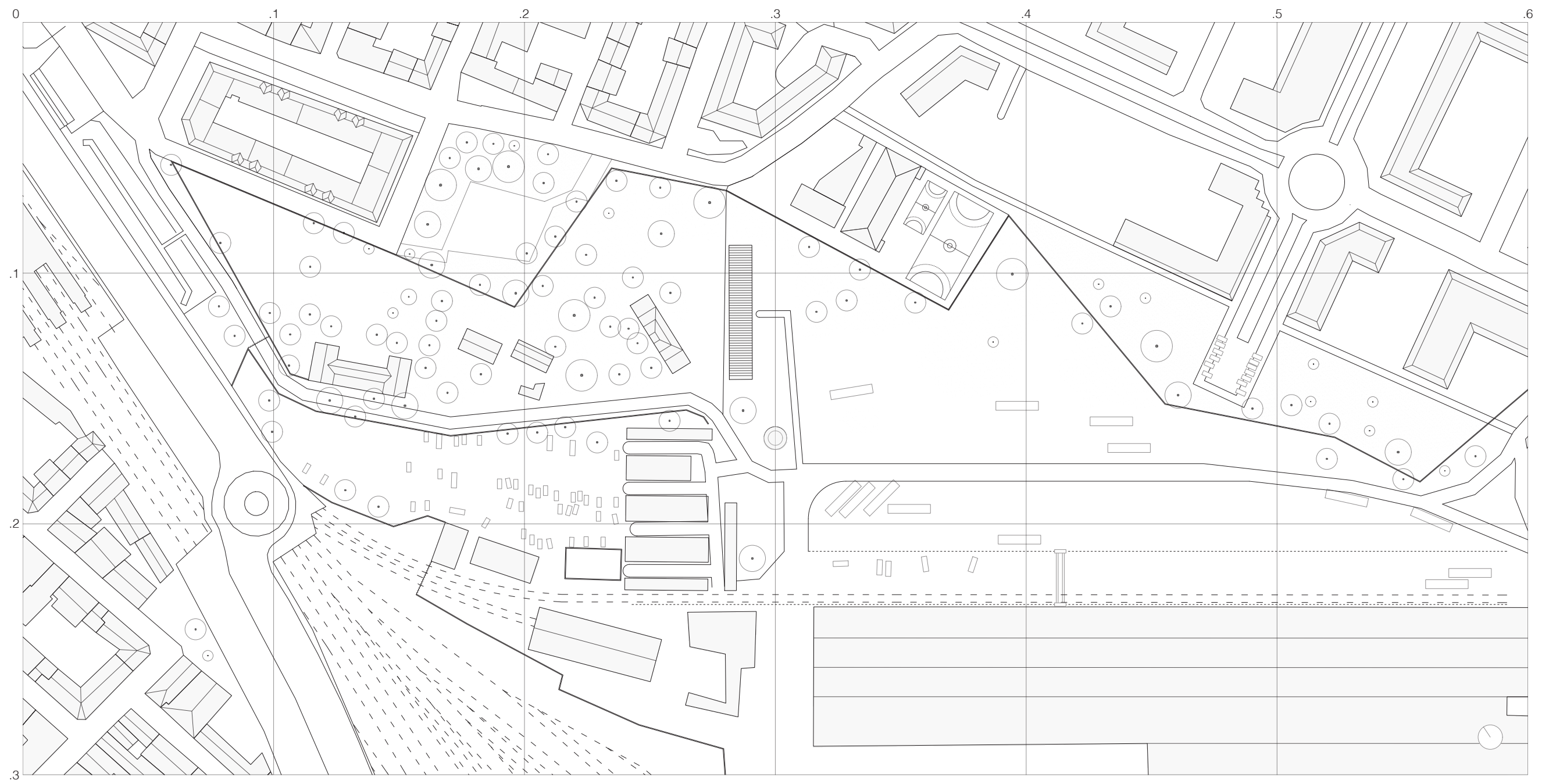
site



existing processes

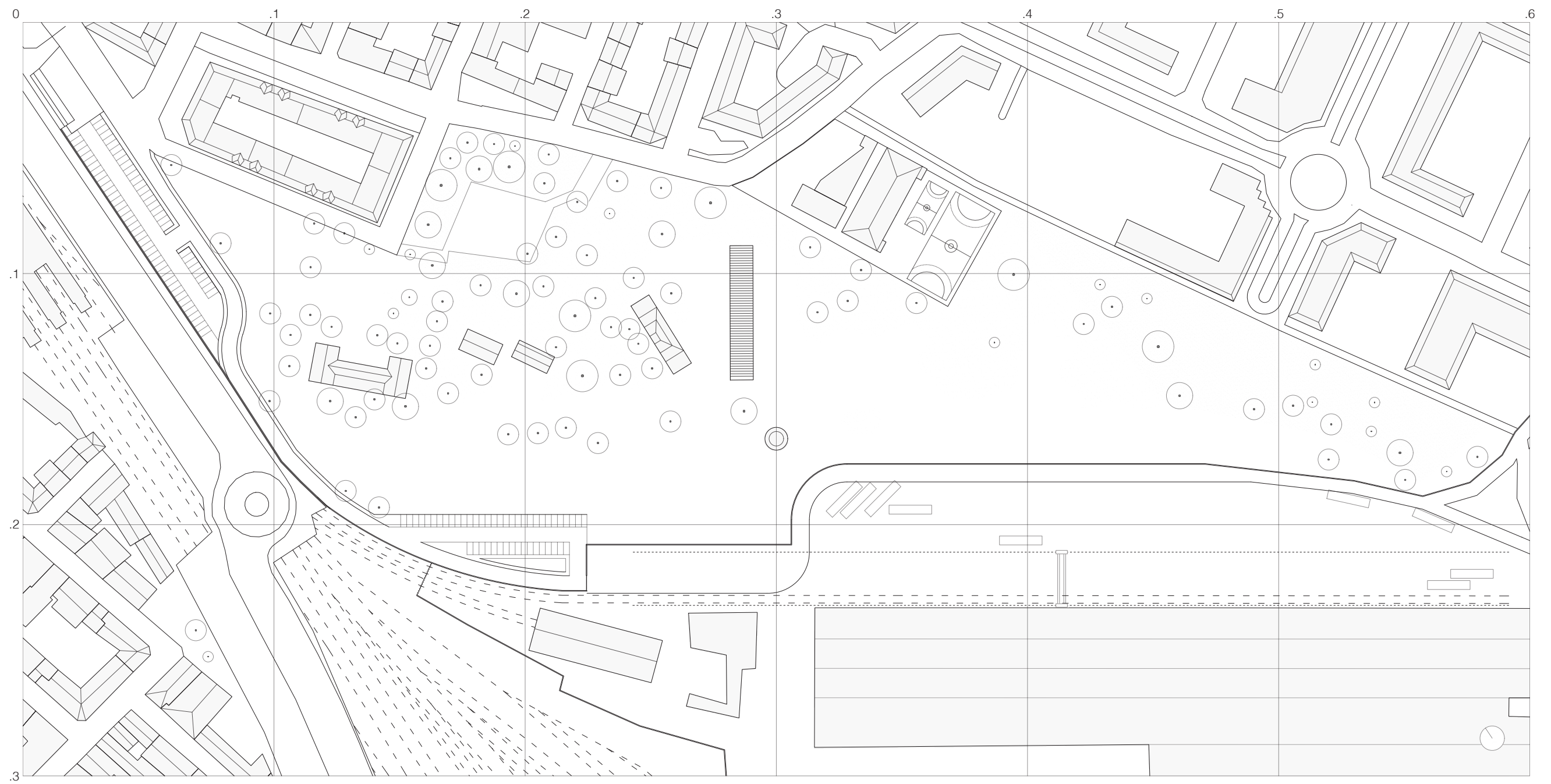


site



existing site

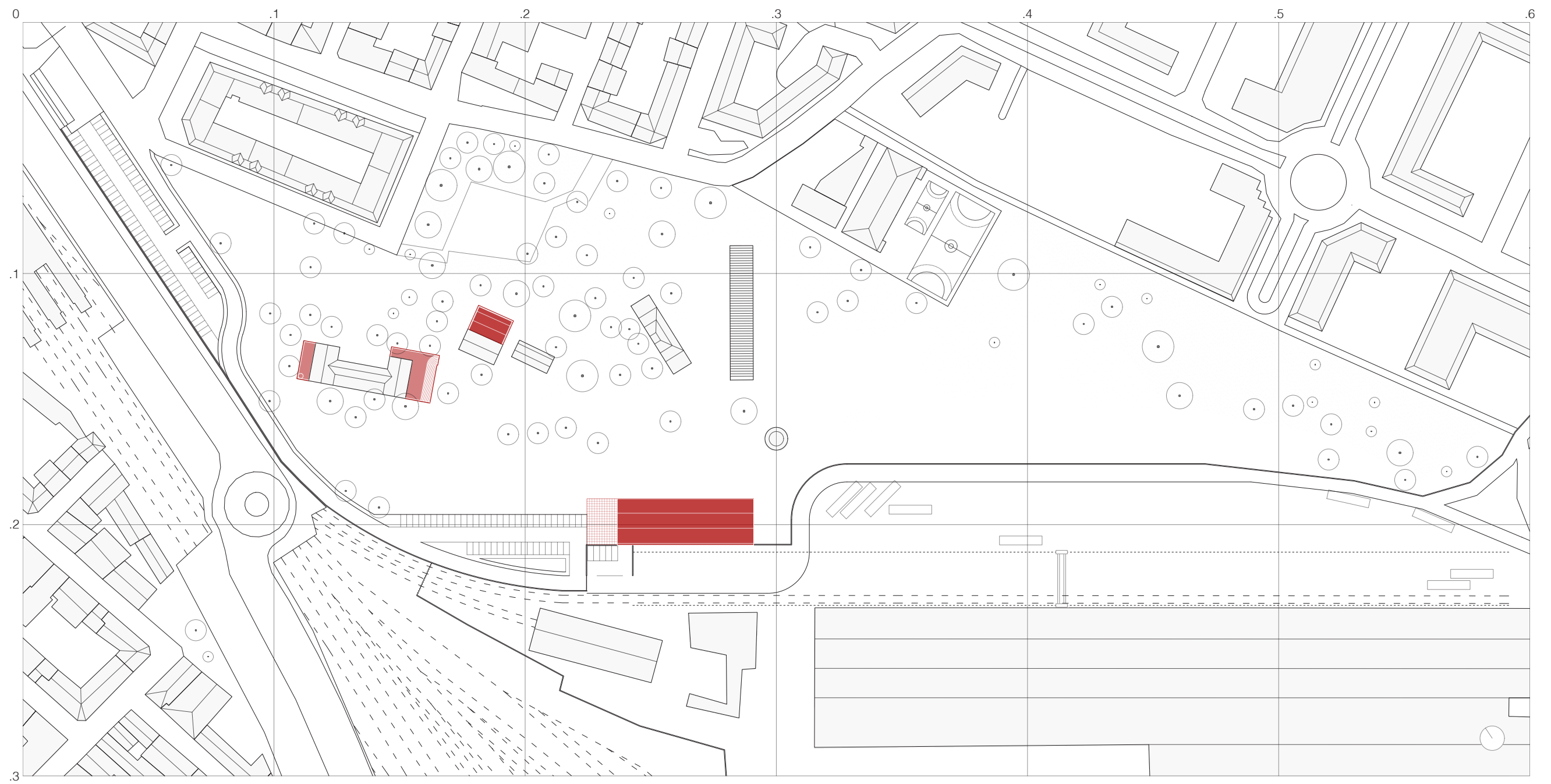
site



opened site

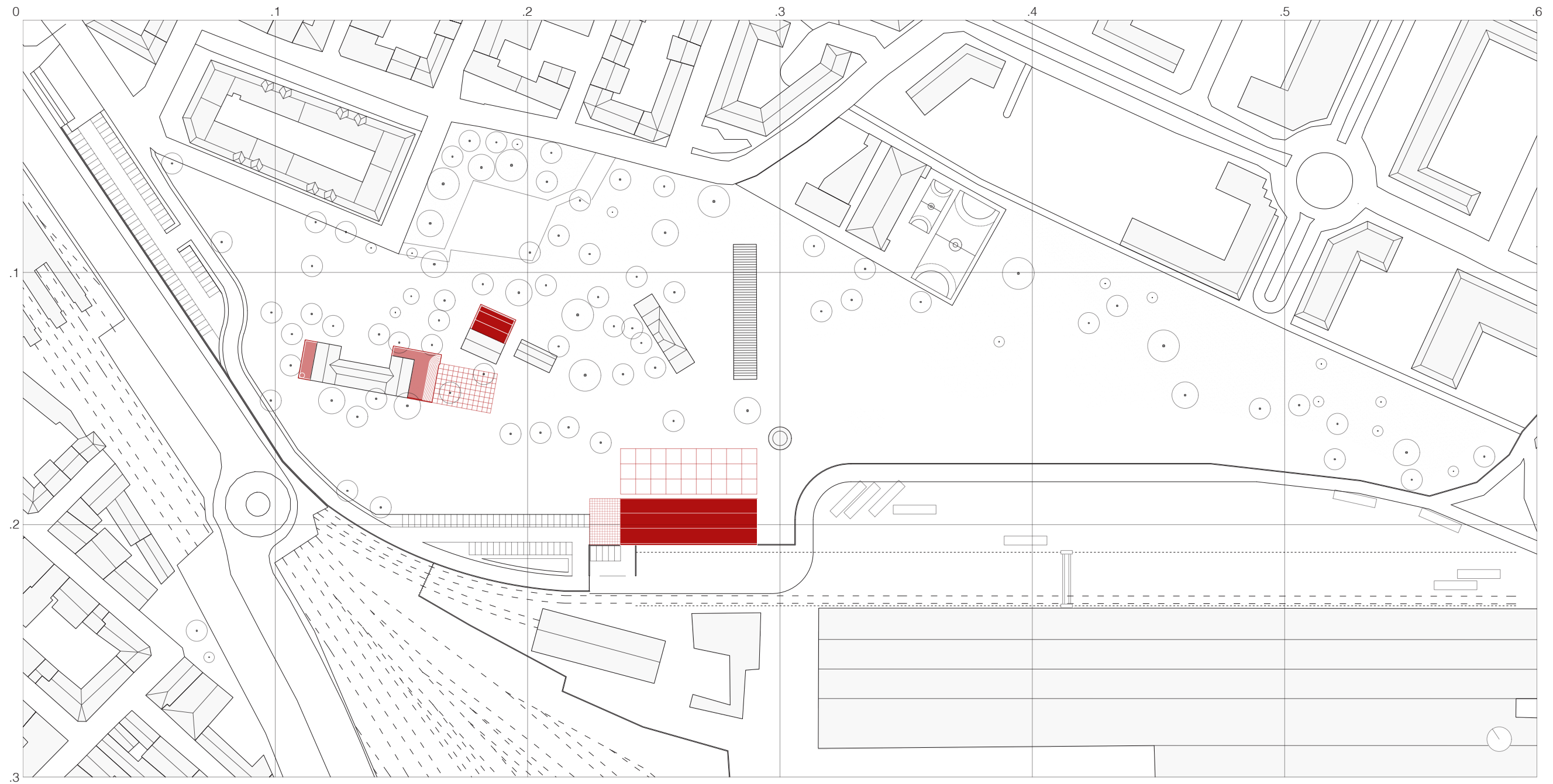


site



utility buildings

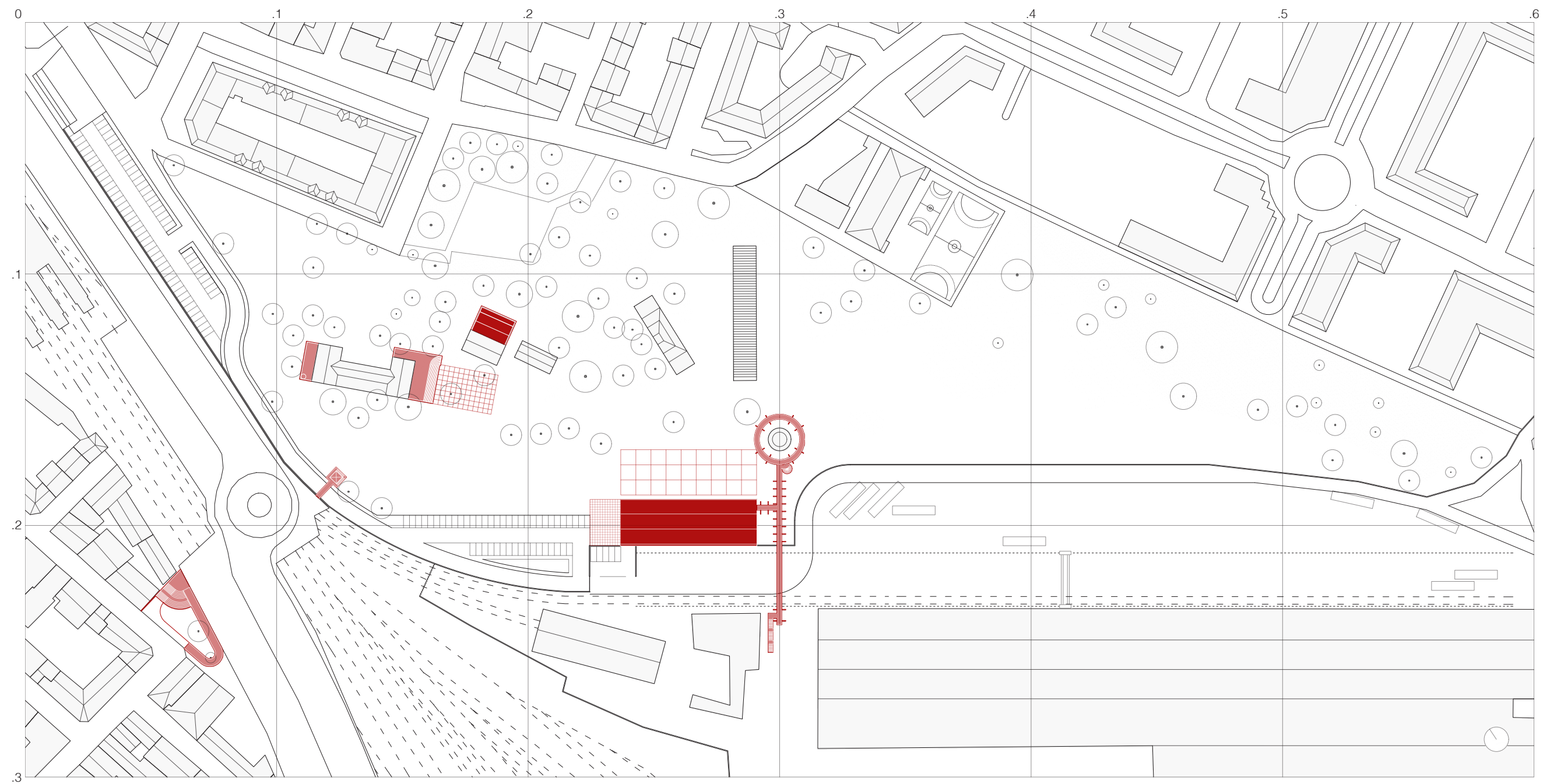
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community appropriation spaces

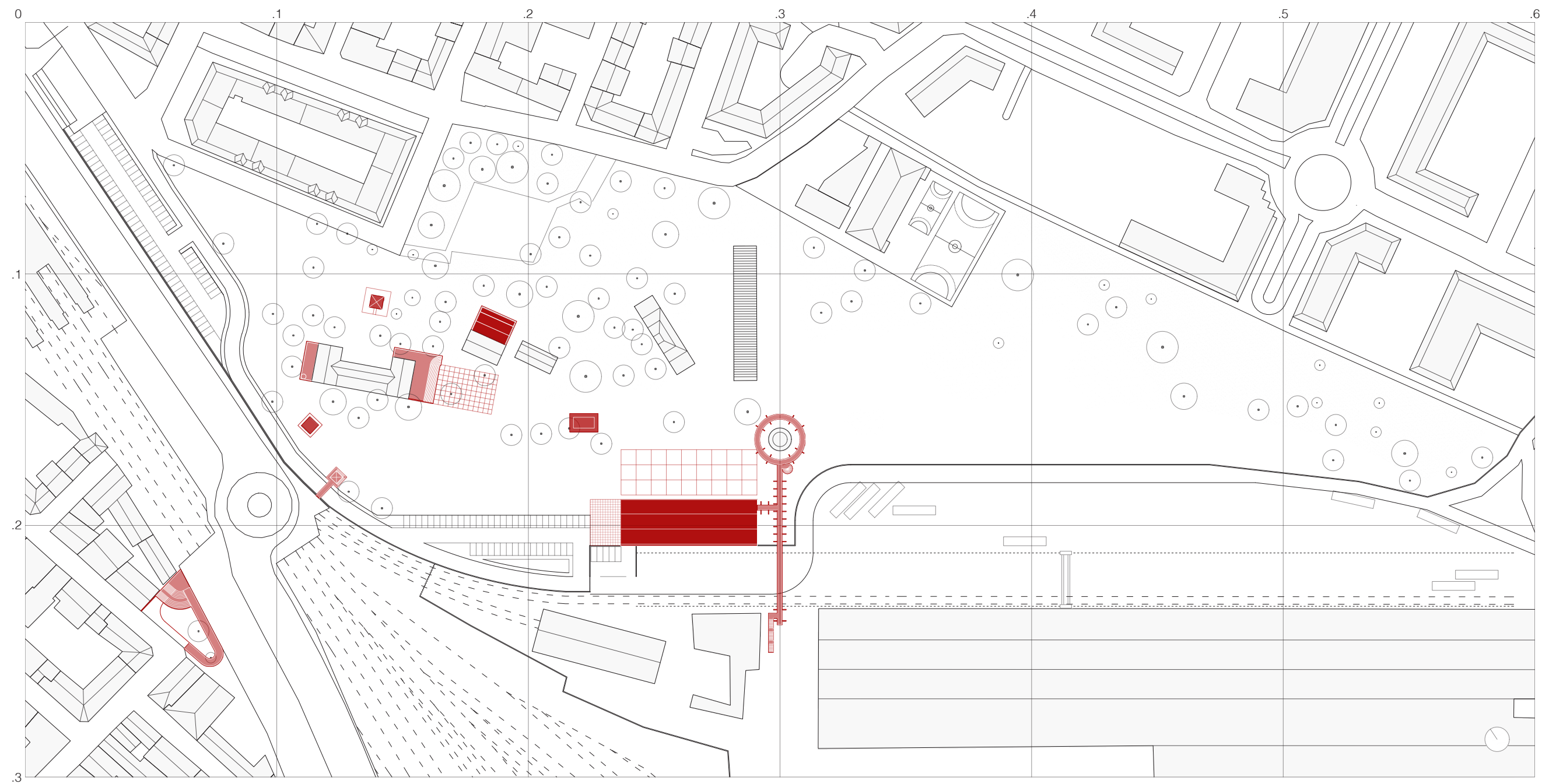


site



connecting gestures

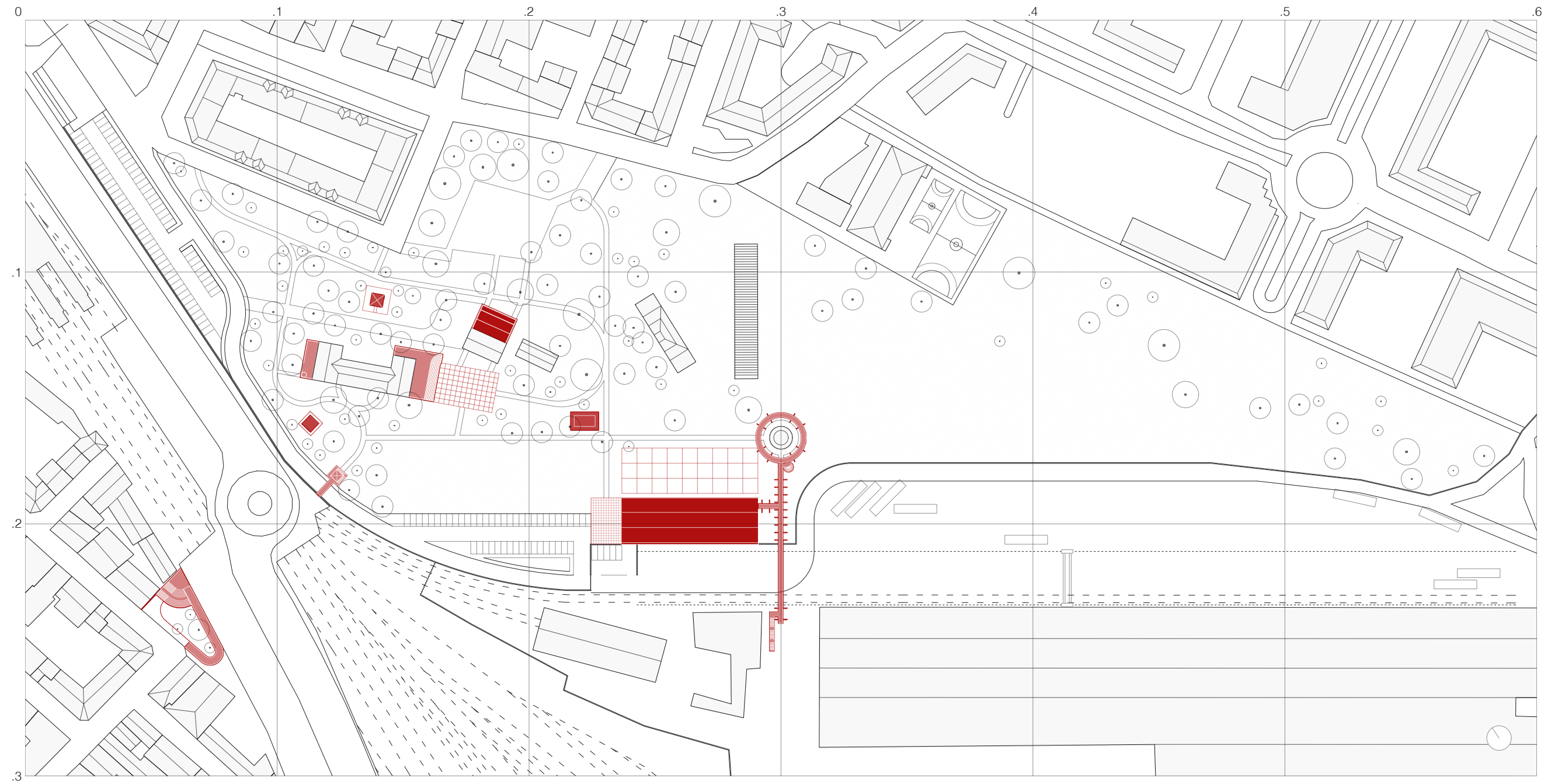
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exchange points

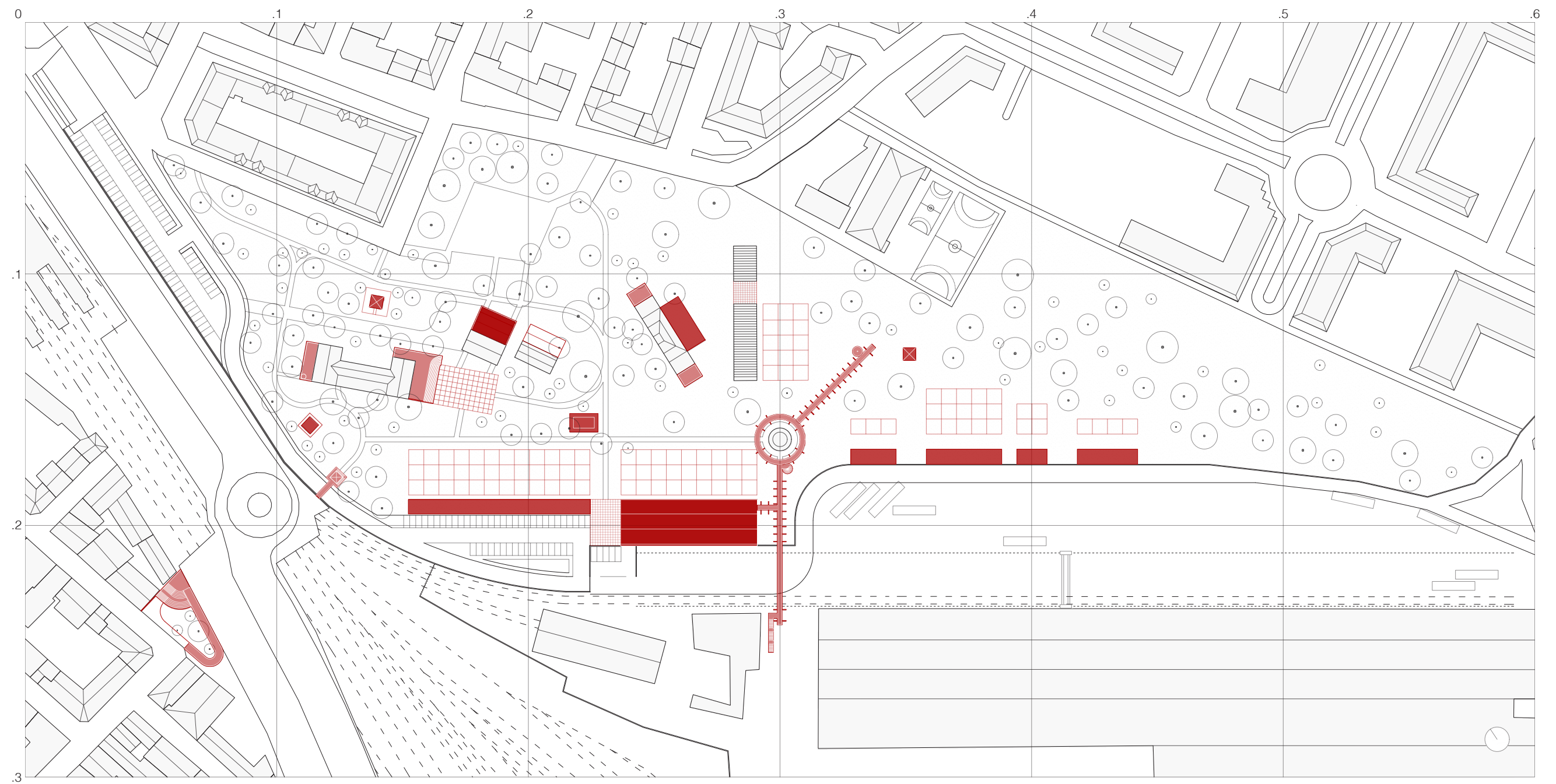


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park

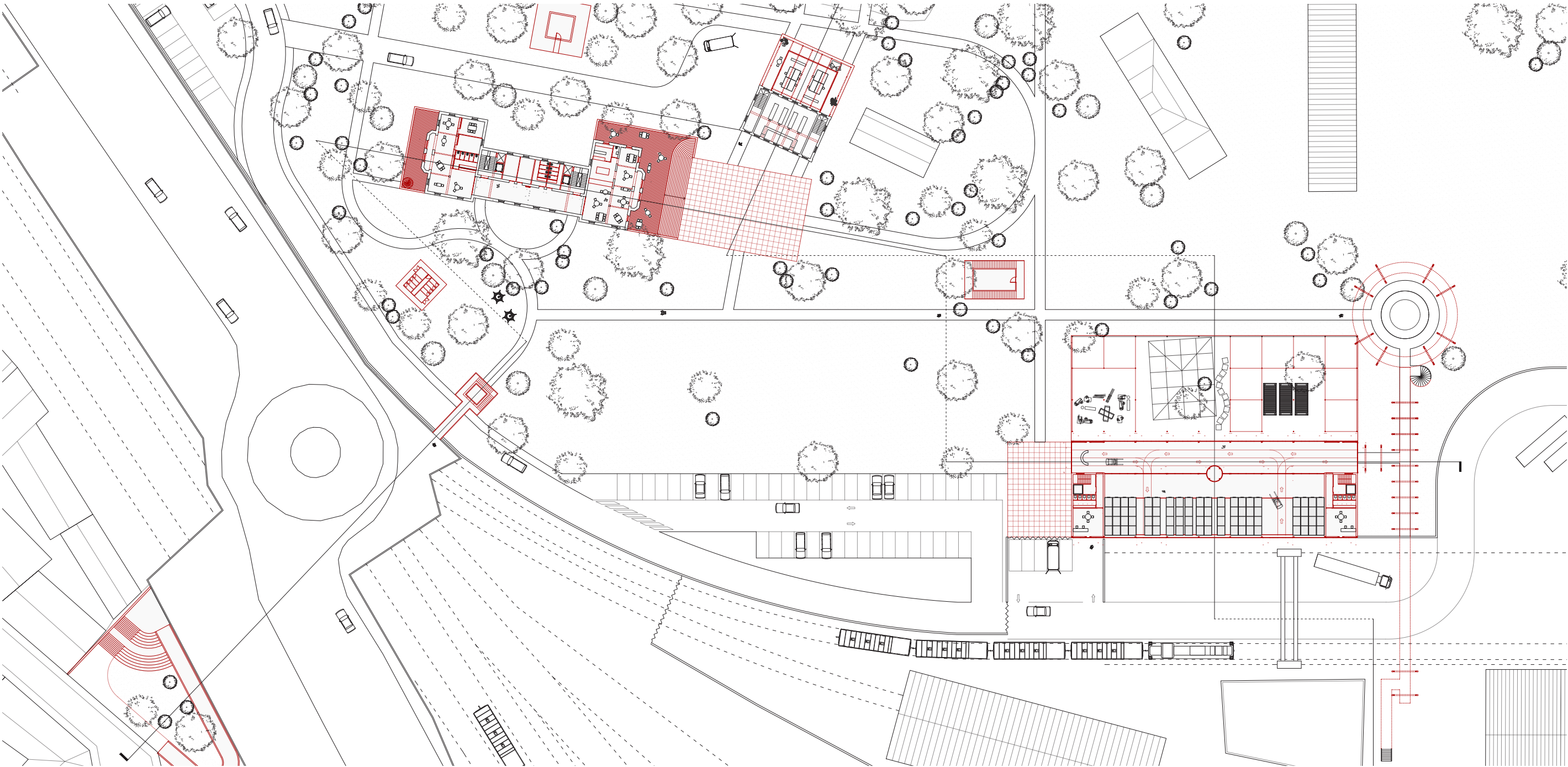
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future scenario

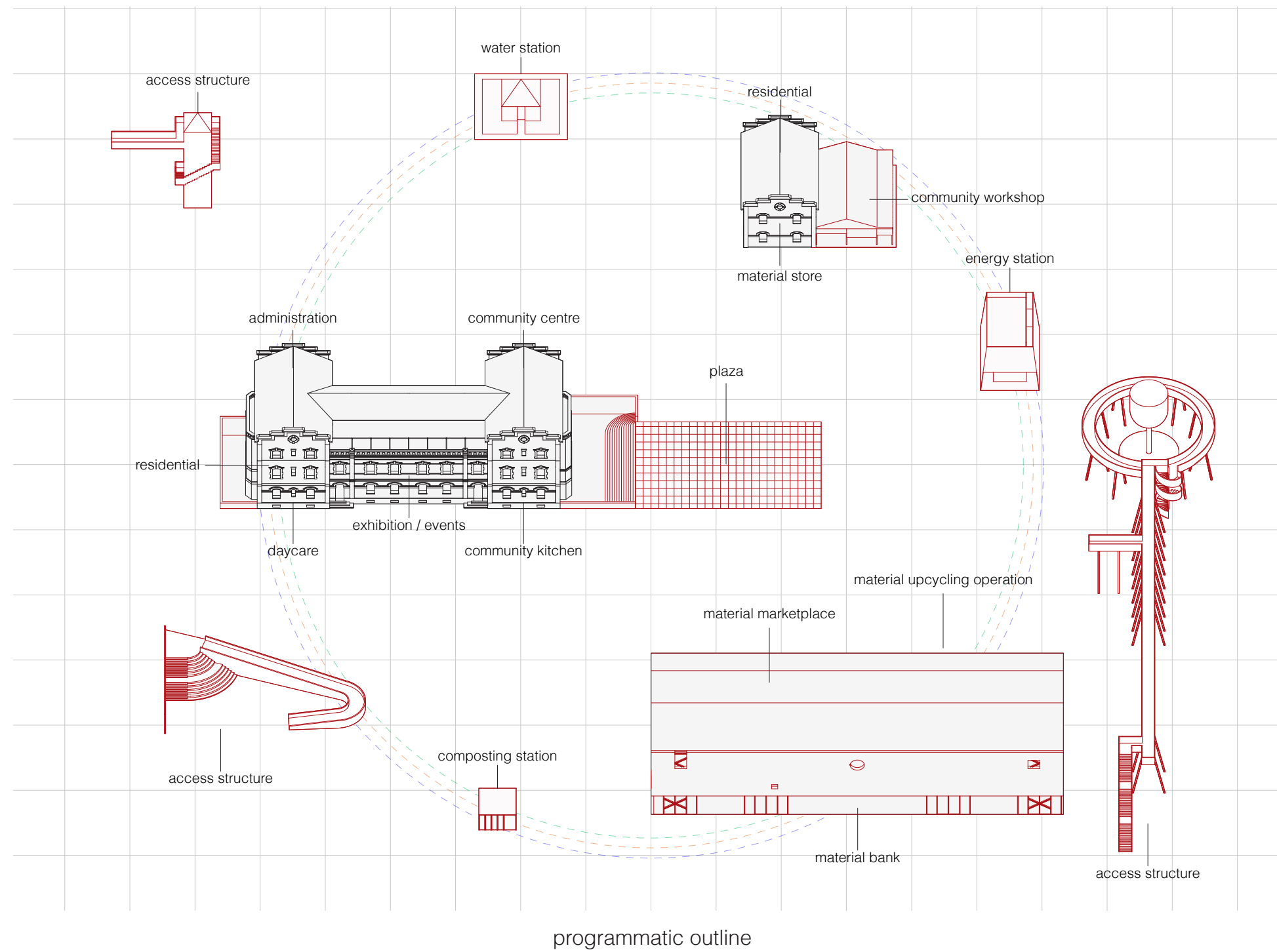


contextual ground floor plan



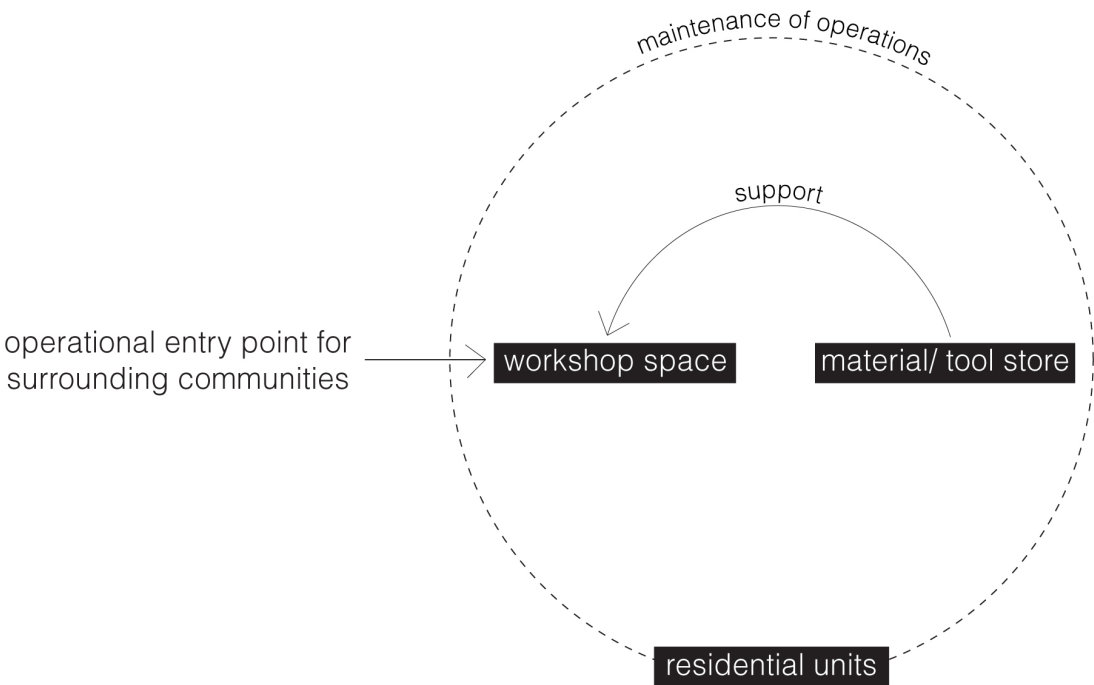
contextual ground floor plan

## ensemble of interventions

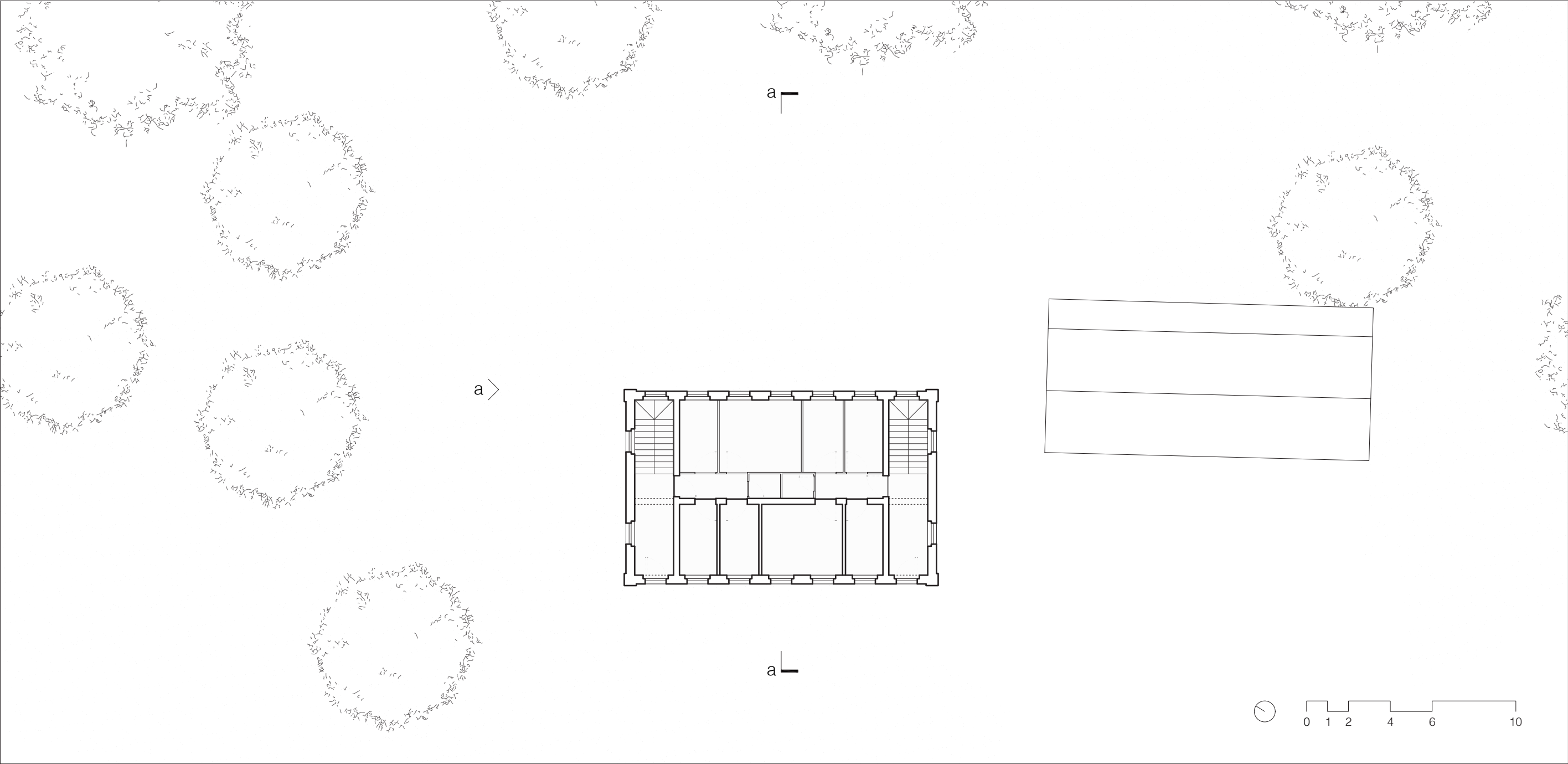








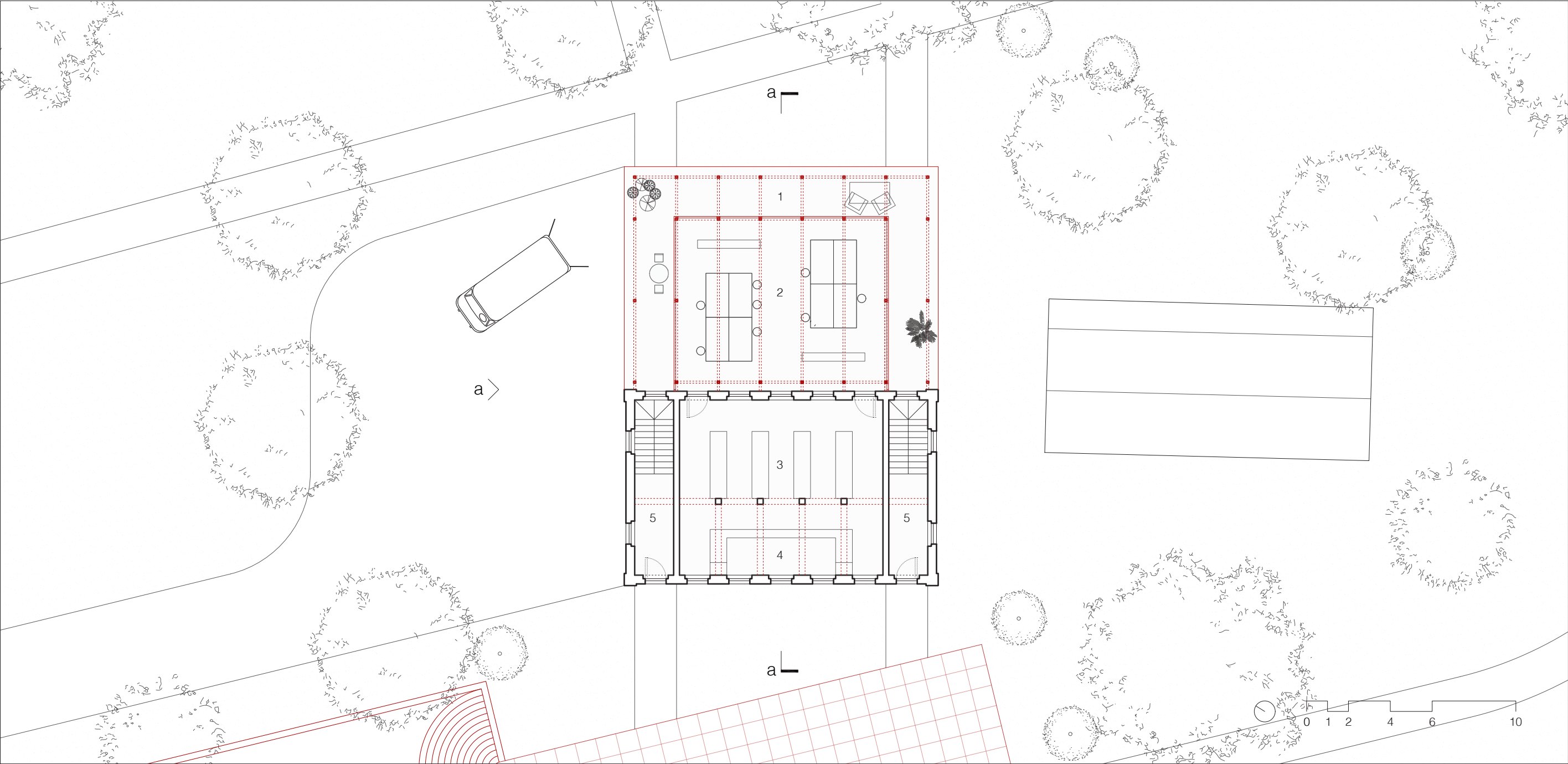
community workshop



existing ground floor plan

1 social space 2 community workshop 3 material / equipment store 4 store counter 5 entry hall 6 bedroom 7 bathroom 8 kitchen 9 dining 10 living

community workshop

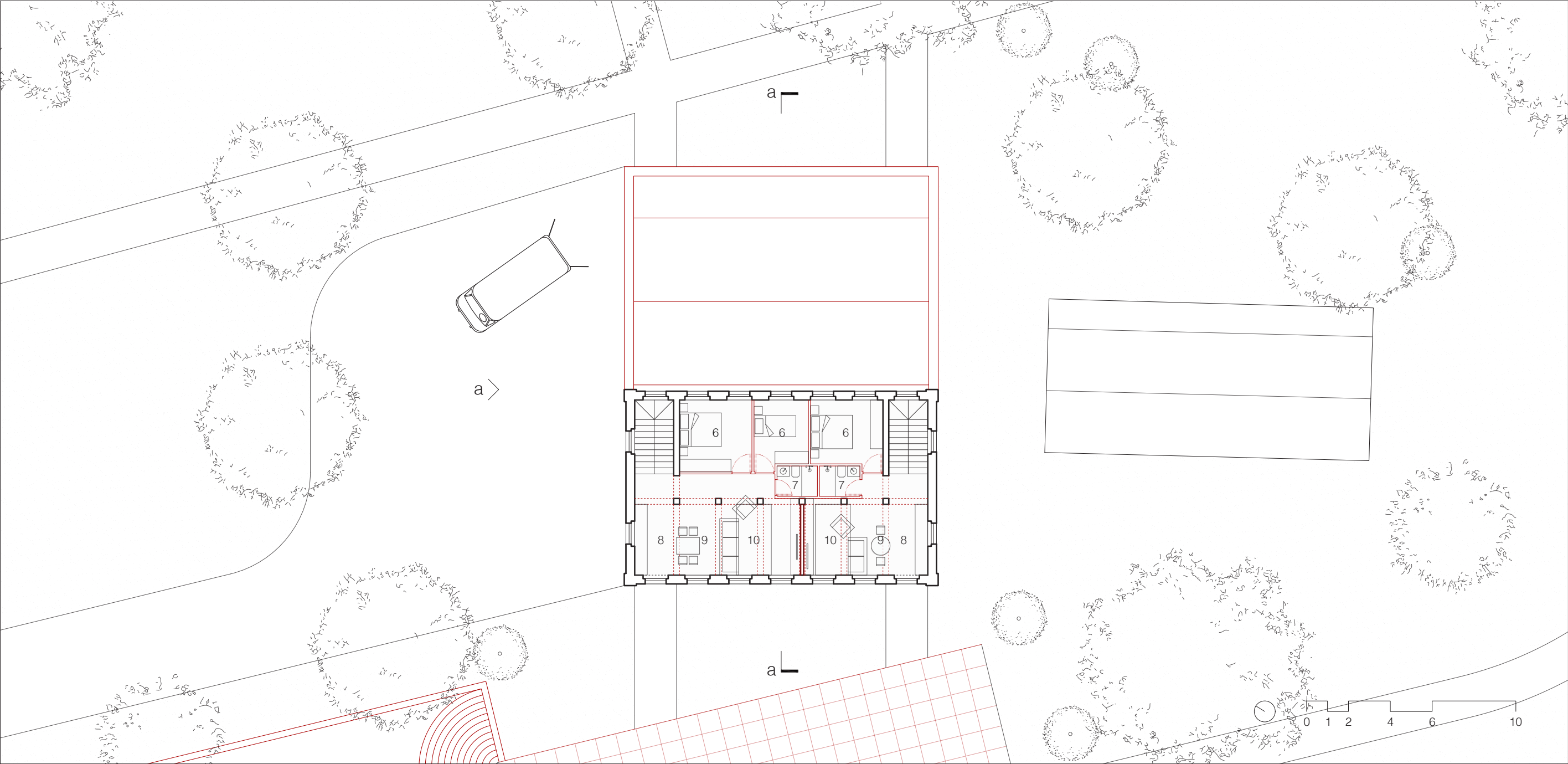


proposed ground floor plan

1 social space 2 community workshop 3 material / equipment store 4 store counter 5 entry hall 6 bedroom 7 bathroom 8 kitchen 9 dining 10 living



community workshop



first floor plan

1 social space 2 community workshop 3 material / equipment store 4 store counter 5 entry hall 6 bedroom 7 bathroom 8 kitchen 9 dining 10 living



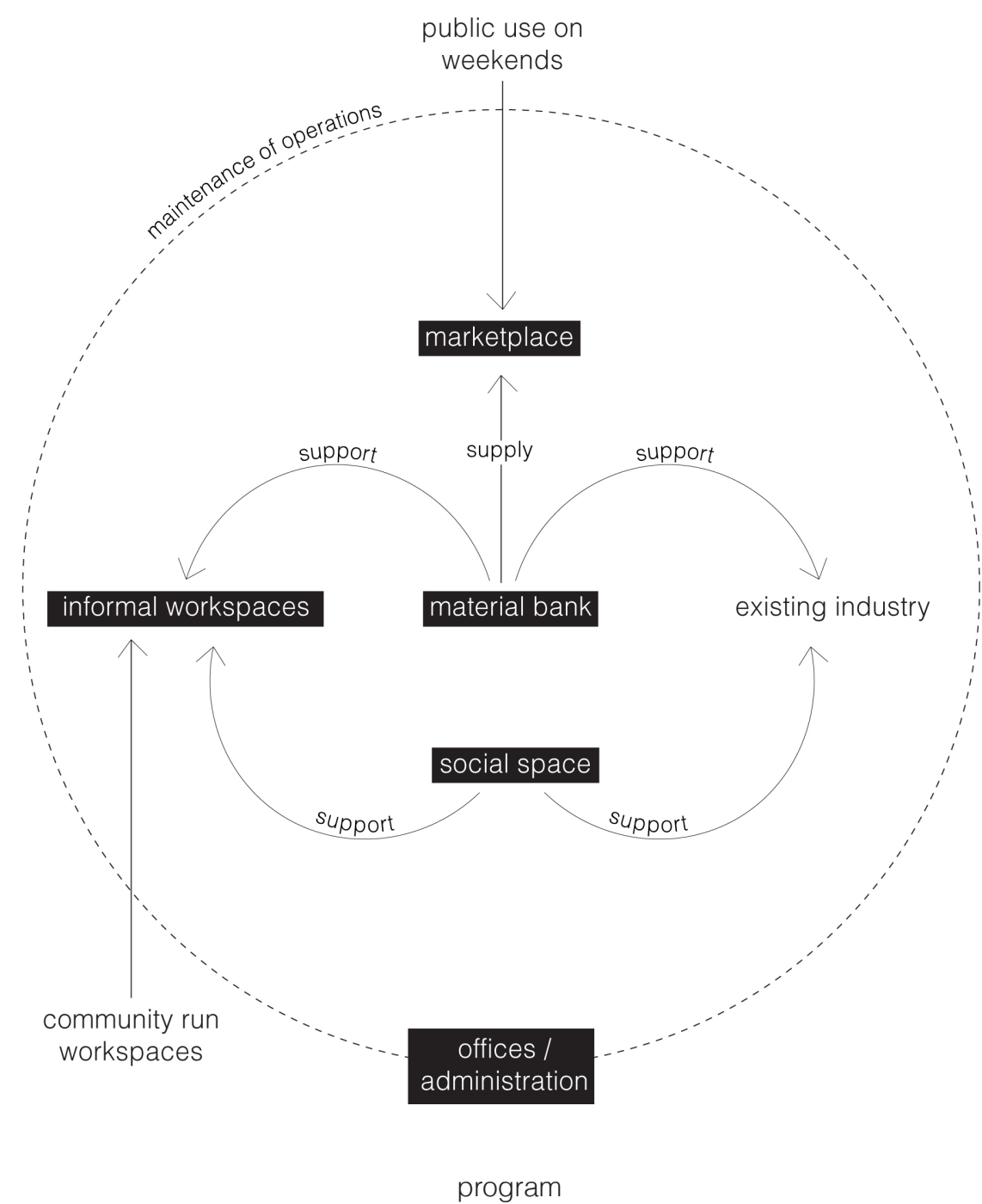
section aa

1 social space   2 community workshop   3 material / equipment store   4 store counter   5 entry hall   6 bedroom   7 bathroom   8 kitchen   9 dining   10 living

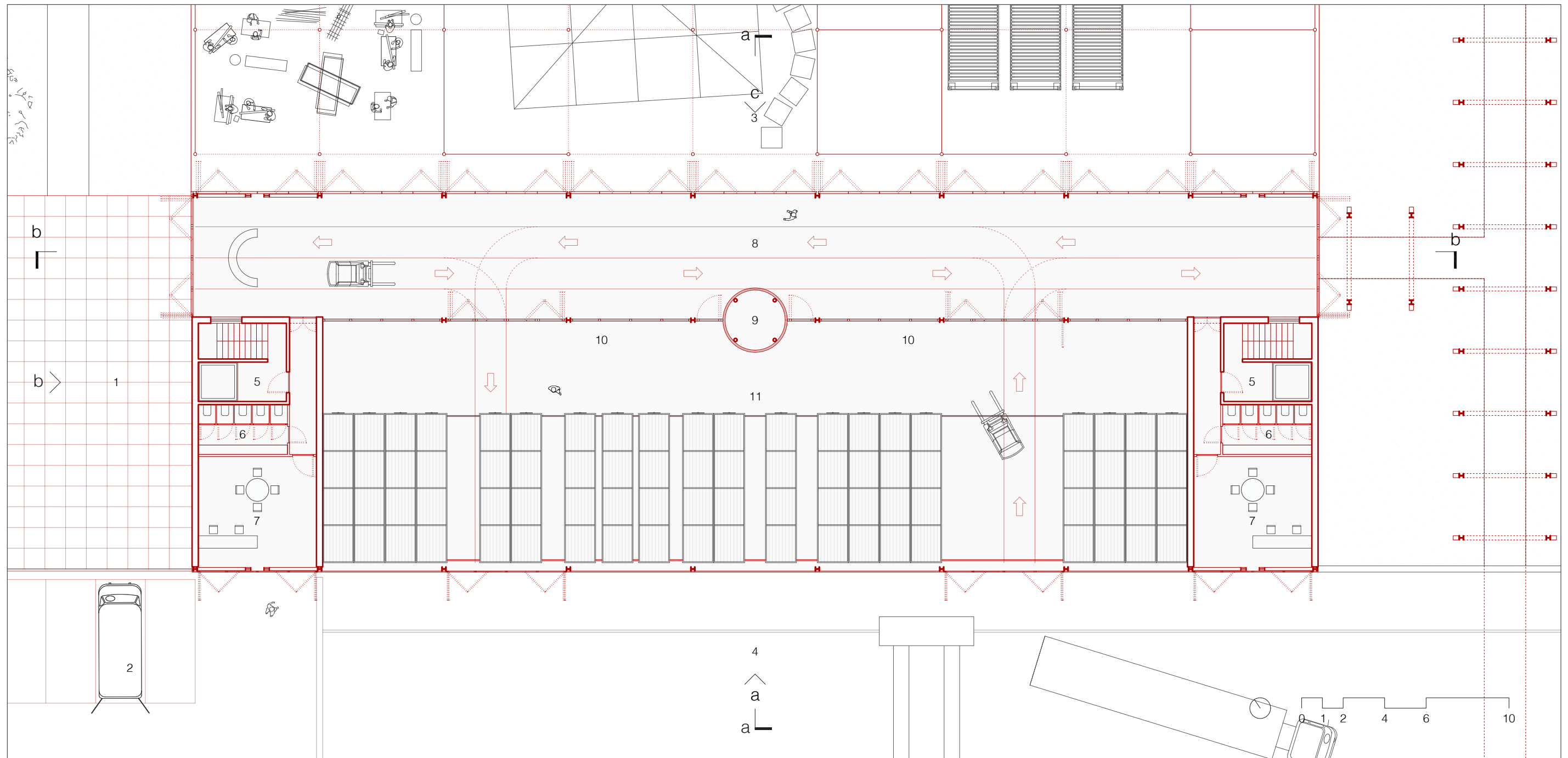


elevation a





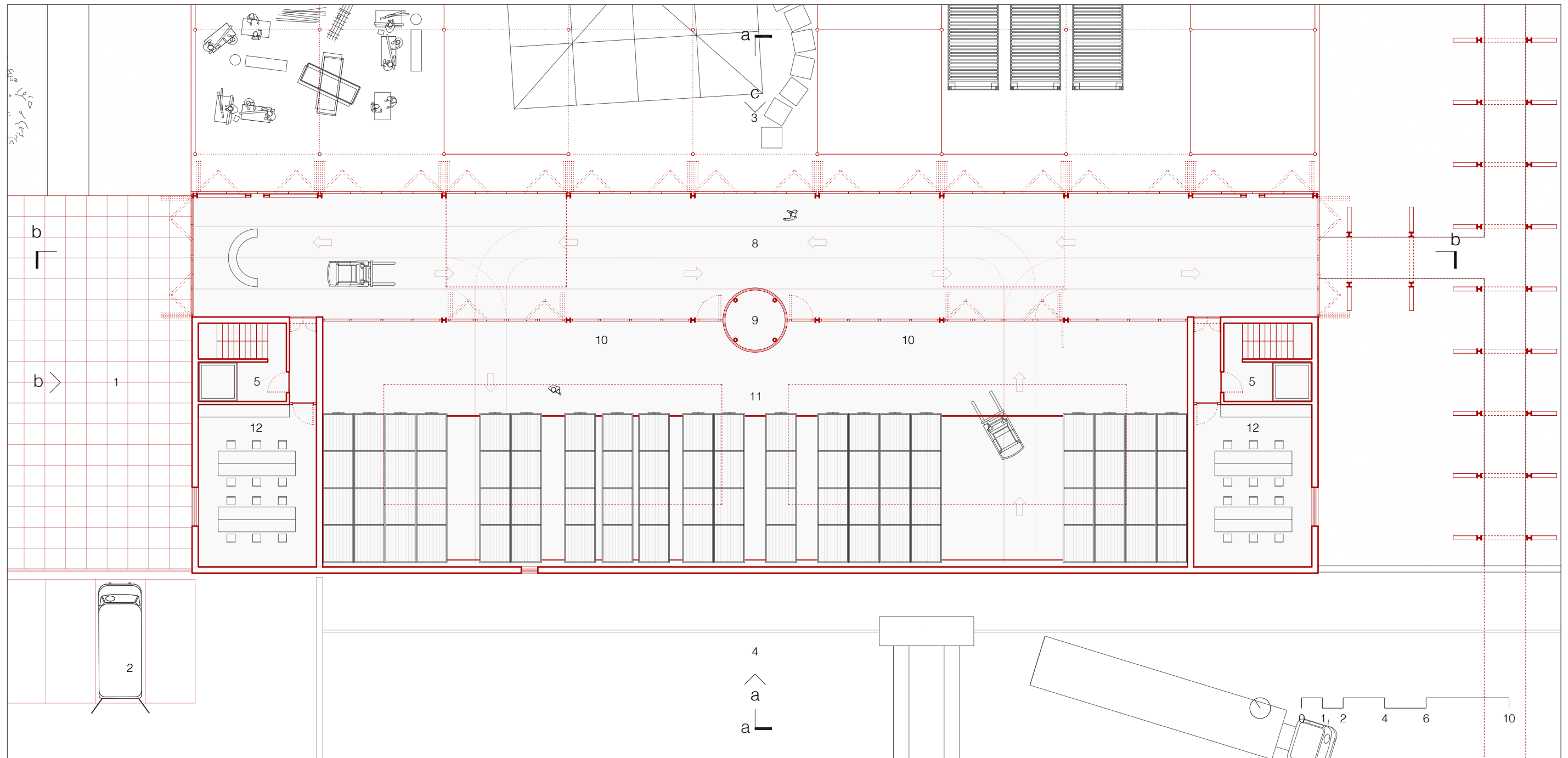
# operational base



ground floor

1 public plaza 2 neighbourhood material drop-off 3 community workspaces 4 city material drop-off 5 circulation core 6 bathrooms 7 material drop-off reception 8 movement corridor/ marketplace 9 cargo lift 10 temporary material storage 11 salvaged material archive 12 offices 13 store 14 food store 15 dishwasher 16 kitchen 17 social space 18 finished products storage

# operational base

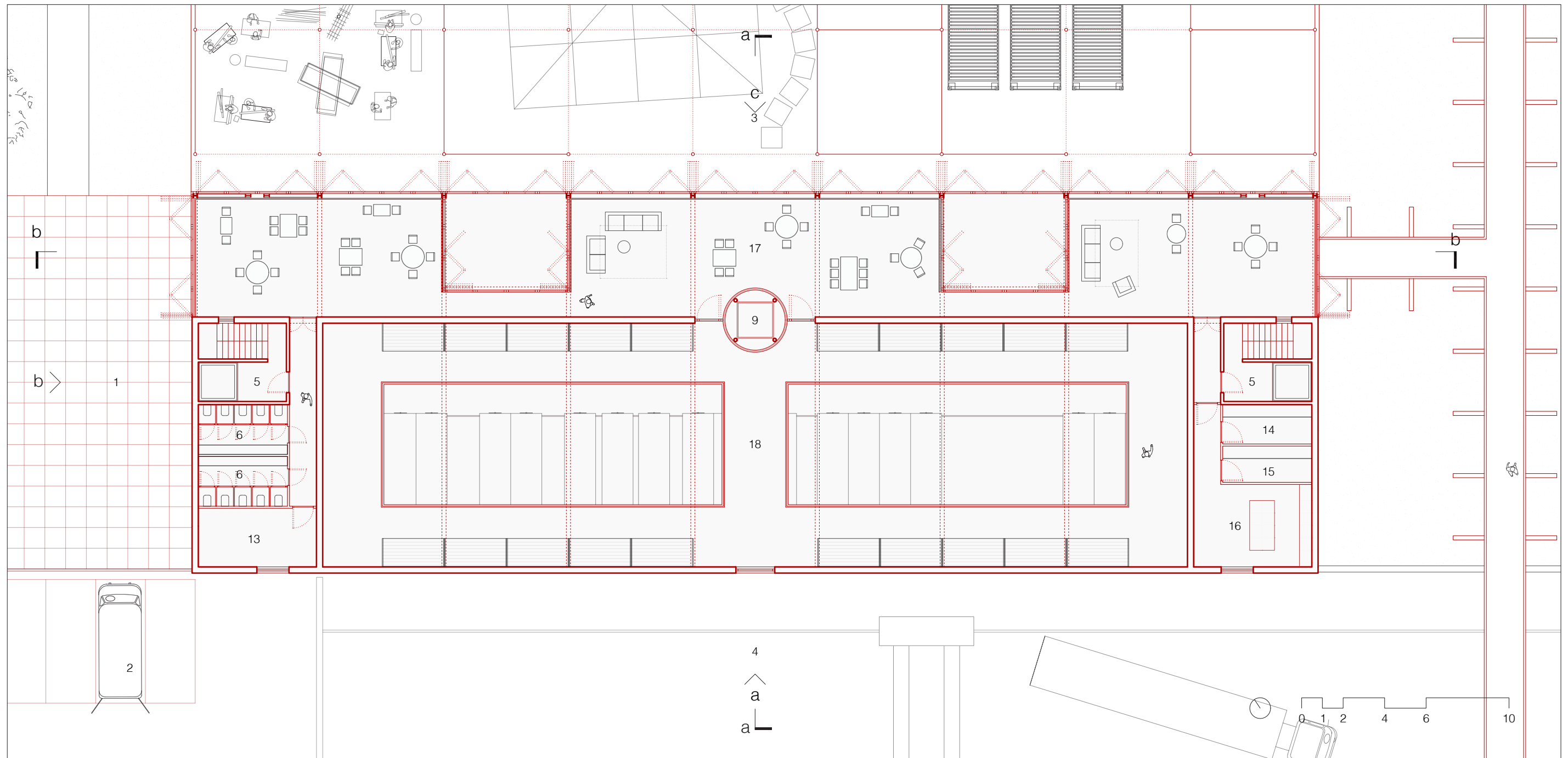


first floor

- 1 public plaza 2 neighbourhood material drop-off 3 community workspaces 4 city material drop-off 5 circulation core 6 bathrooms 7 material drop-off reception 8 movement corridor/ marketplace 9 cargo lift 10 temporary material storage 11 salvaged material archive 12 offices 13 store 14 food store 15 dishwasher 16 kitchen 17 social space 18 finished products storage

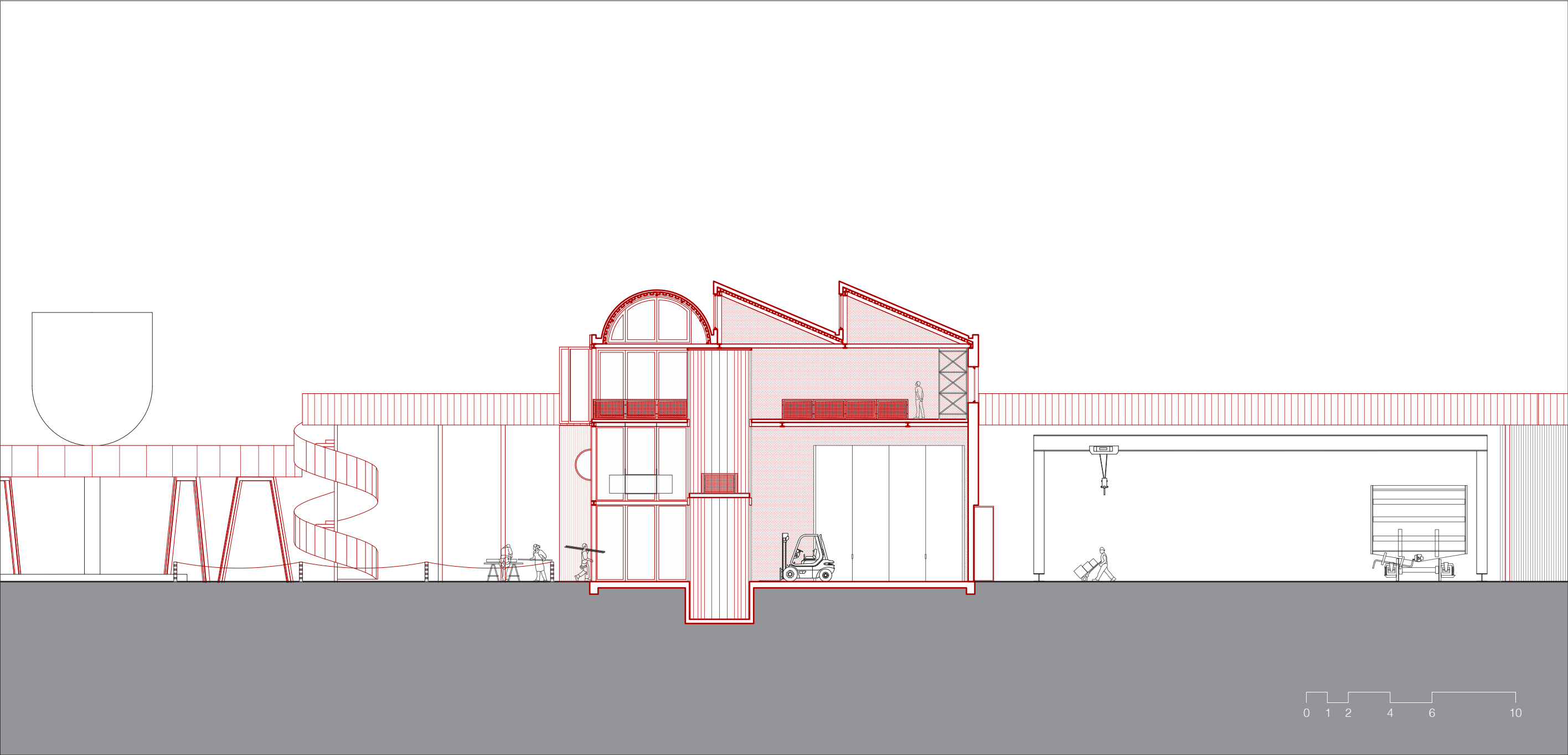


# operational base



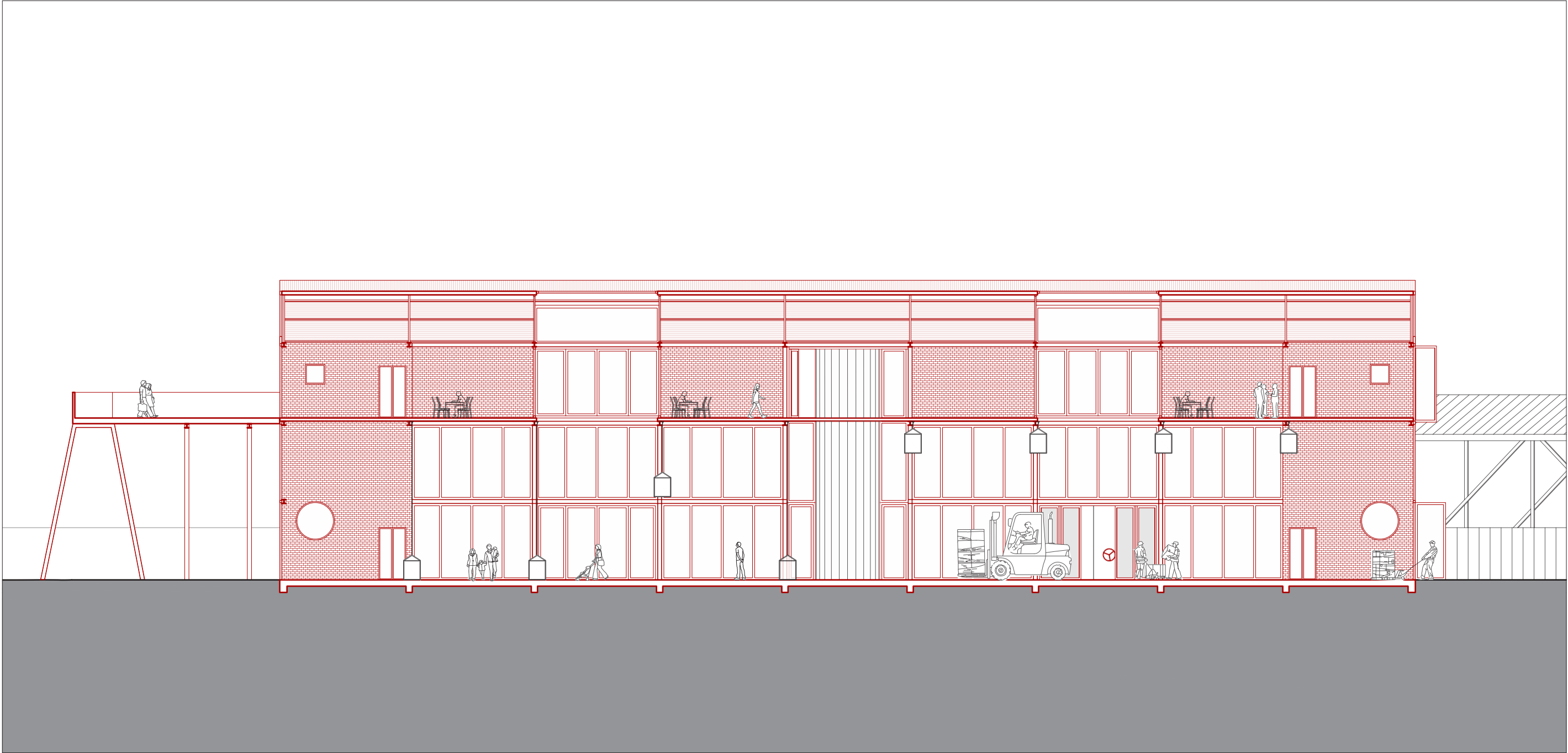
## second floor

1 public plaza 2 neighbourhood material drop-off 3 community workspaces 4 city material drop-off 5 circulation core 6 bathrooms 7 material drop-off reception 8 movement corridor/ marketplace 9 cargo lift 10 tempo-  
rary material storage 11 salvaged material archive 12 offices 13 store 14 food store 15 dishwasher 16 kitchen 17 social space 18 finished products storage

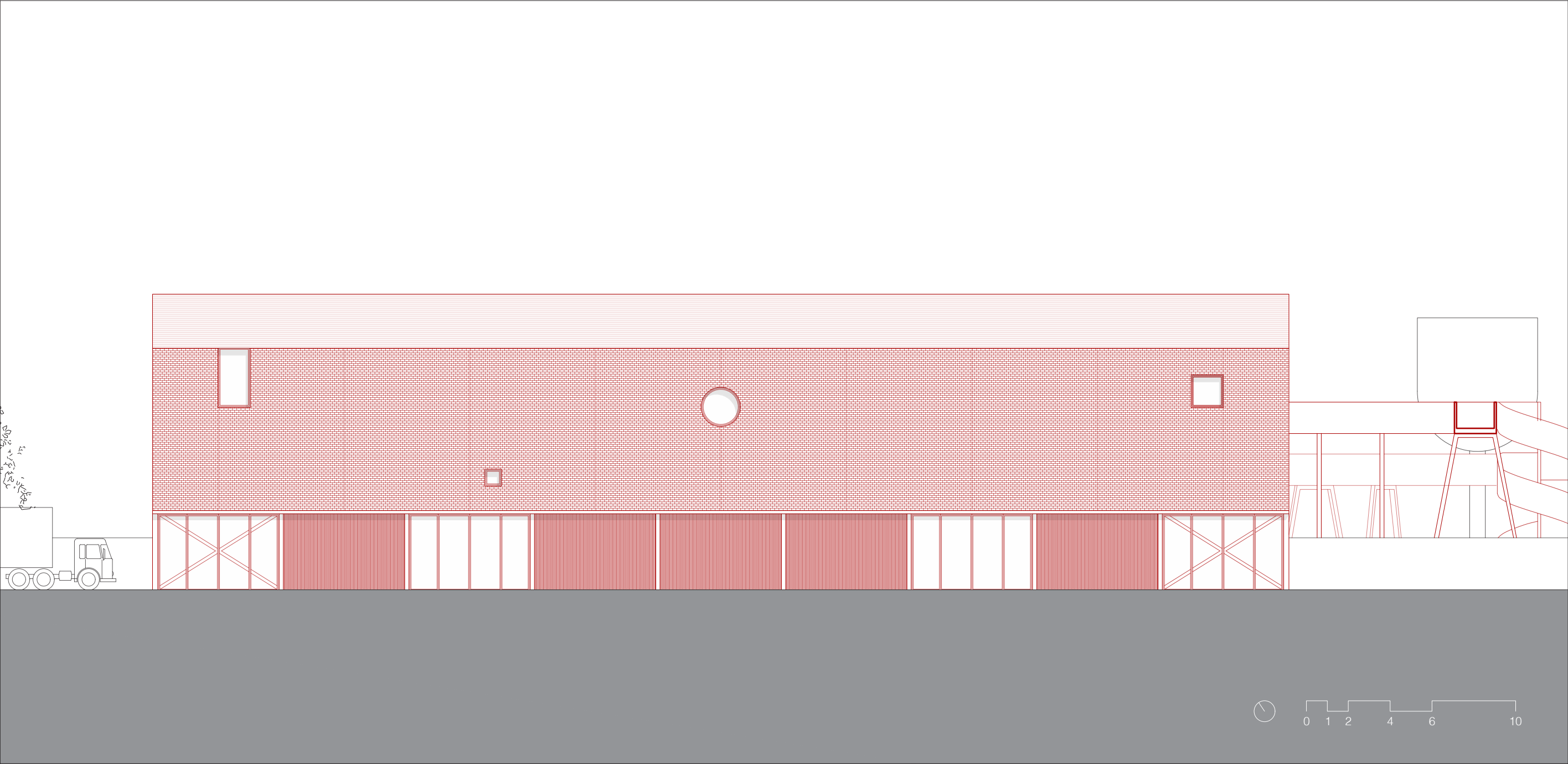


section aa

operational base

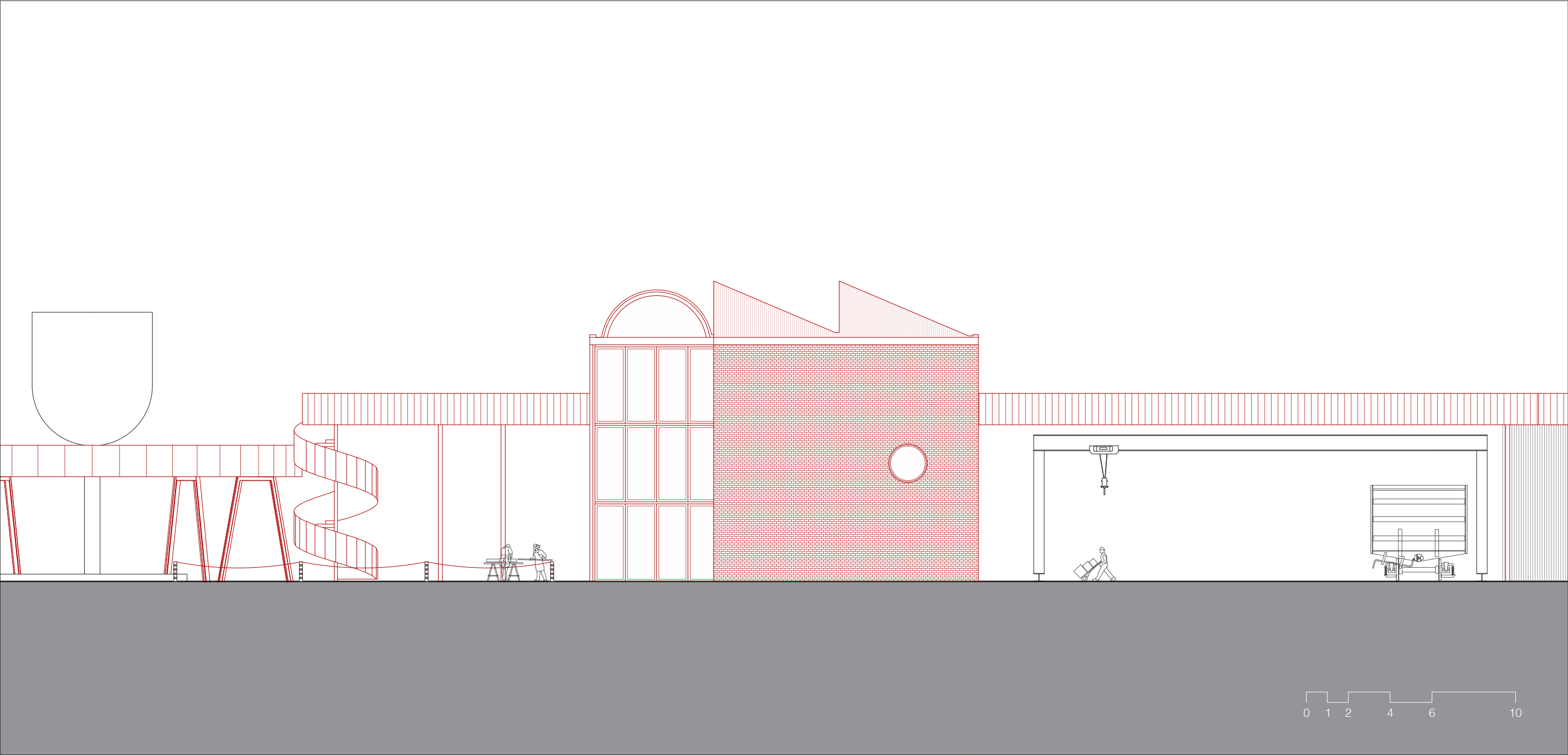


section bb

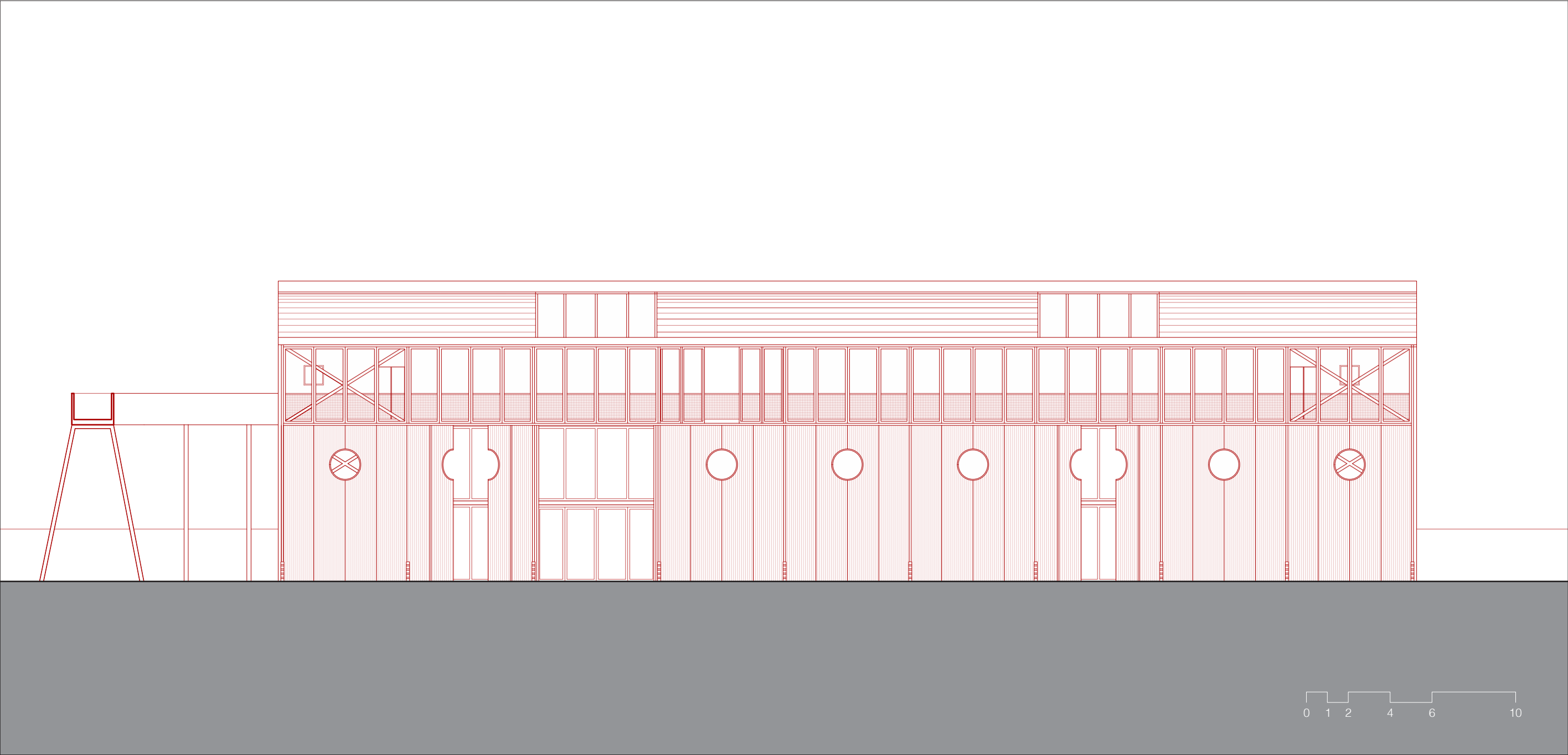


elevation a



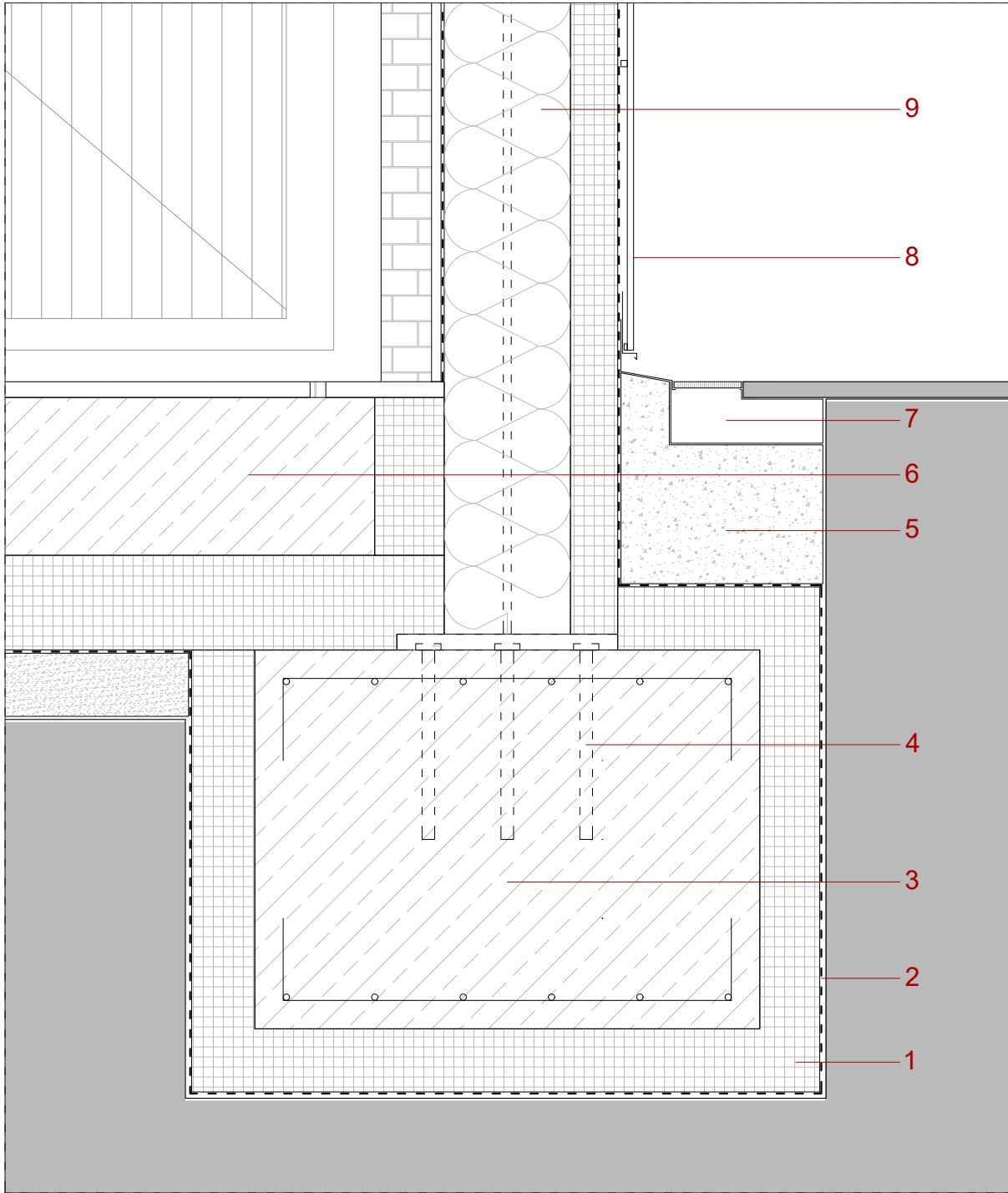


elevation b



elevation c

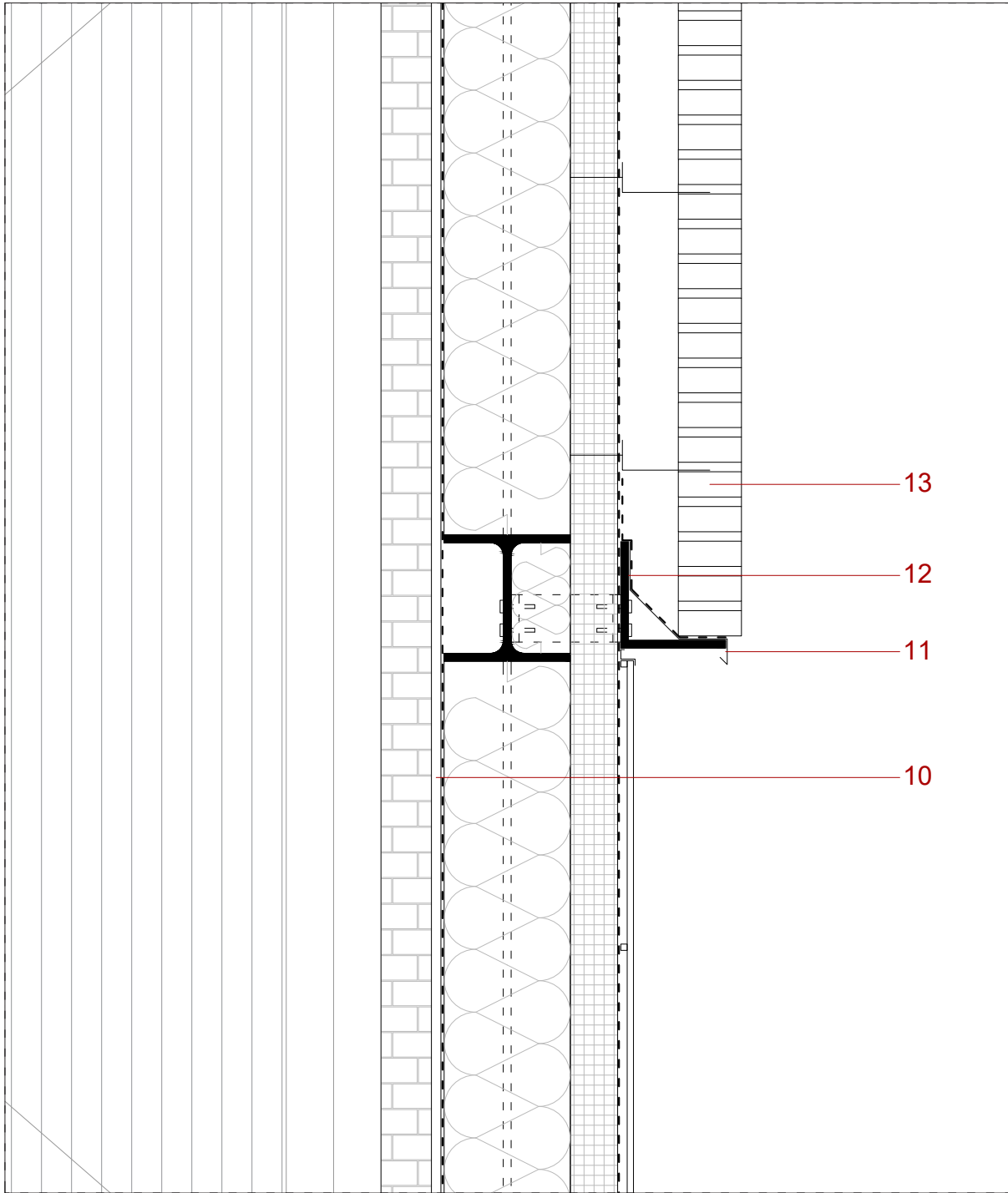
operational base 1:10 details



d1 - foundation and ground floor slab

- 1 rigid insulation   2 bituminous waterproofing membrane   3 reinforced concrete footing   4 anchor bolts to footing   5 concrete base   6 reinforced concrete ground floor slab   7 slot drain - continous through facade perimeter, allowing for level thresholds at openings   8 corrugated sheet metal, galvanized   9 mineral wool insulation   10 plasterboard   11 steel flashing with drip edge   12 steel lintel angle bolted to clip angle and connected to primary structure   13 ventilated brick facade with wall ties   14 external brick sill   15 double glazed circular aperture   16 steel flashing with drip edge   17 rigid insulation   18 structural steel i-beam   19 structural steel column with bolted connections   20 corrugated steel decking   21 rigid insulation - roof   22 alumnium roofing panel   23 steel coping with drip edge   24 solar thermal panels   25 roof rainwater collection drain   26 steel truss supporting roof   27 double glazed aperture opening outwards

operational base 1:10 details

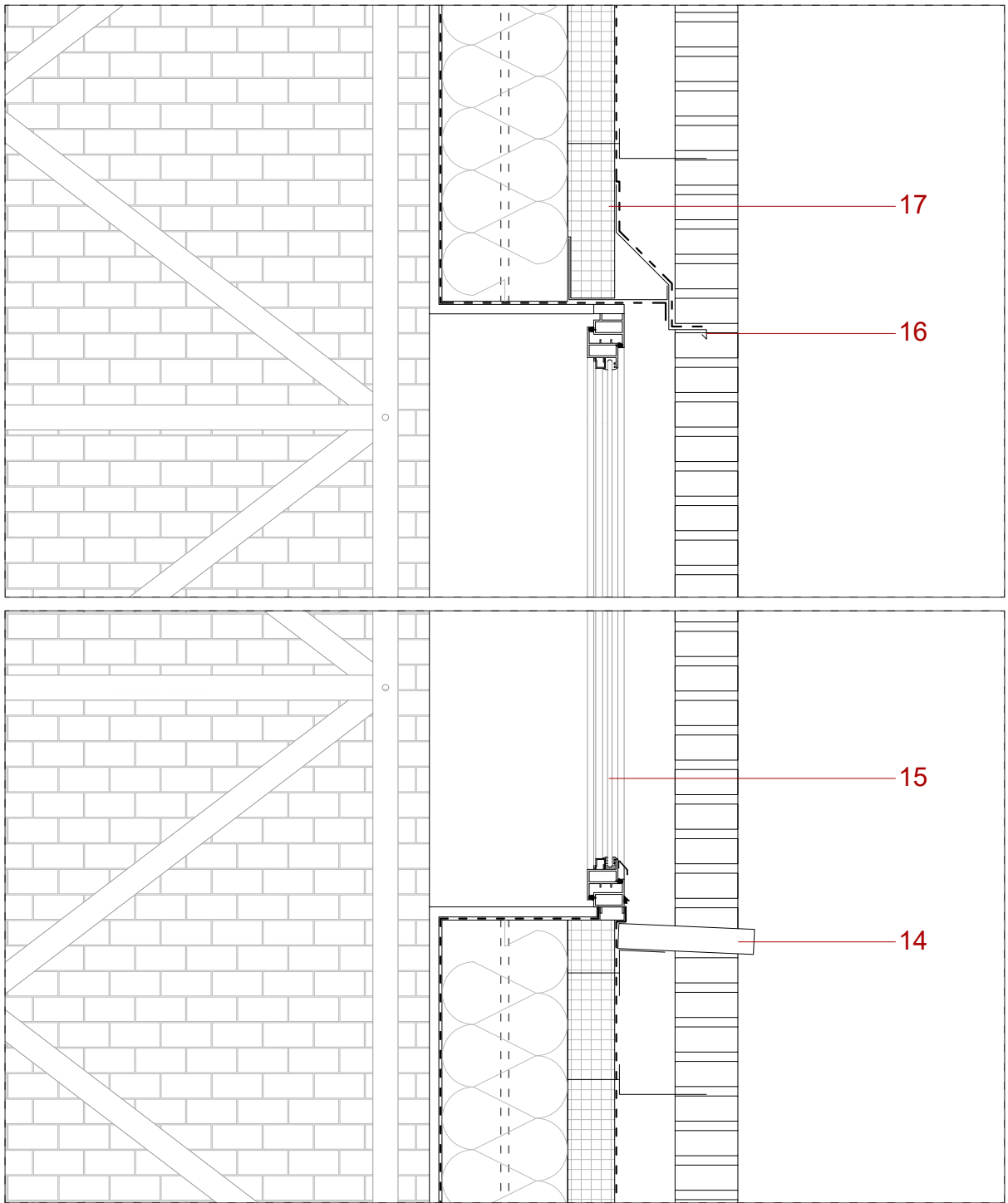


d2 - brick to metal cladding transition

- 1 rigid insulation   2 bituminous waterproofing membrane   3 reinforced concrete footing   4 anchor bolts to footing   5 concrete base   6 reinforced concrete ground floor slab   7 slot drain - continous through facade perimeter, allowing for level thresholds at openings   8 corrugated sheet metal, galvanized   9 mineral wool insulation   10 plasterboard   11 steel flashing with drip edge   12 steel lintel angle bolted to clip angle and connected to primary structure   13 ventilated brick facade with wall ties   14 external brick sill   15 double glazed circular aperture   16 steel flashing with drip edge   17 rigid insulation   18 structural steel i-beam   19 structural steel column with bolted connections   20 corrugated steel decking   21 rigid insulation - roof   22 alumnium roofing panel   23 steel coping with drip edge   24 solar thermal panels   25 roof rainwater collection drain   26 steel truss supporting roof   27 double glazed aperture opening outwards



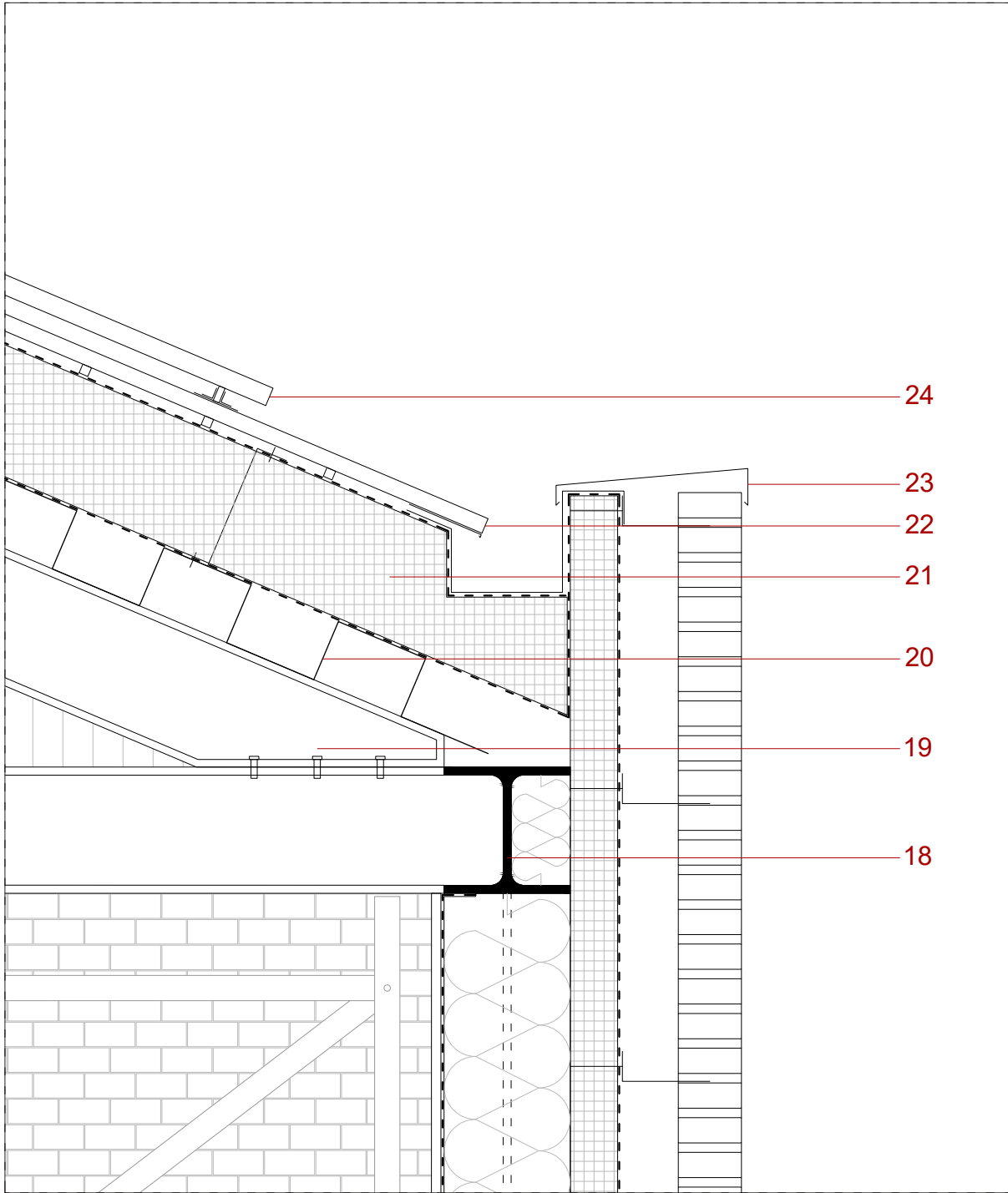
operational base 1:10 details



d3/ d4 - brick facade aperture

- 1 rigid insulation   2 bituminous waterproofing membrane   3 reinforced concrete footing   4 anchor bolts to footing   5 concrete base   6 reinforced concrete ground floor slab   7 slot drain - continous through facade perimeter, allowing for level thresholds at openings   8 corrugated sheet metal, galvanized   9 mineral wool insulation   10 plasterboard   11 steel flashing with drip edge   12 steel lintel angle bolted to clip angle and connected to primary structure   13 ventilated brick facade with wall ties   14 external brick sill   15 double glazed circular aperture   16 steel flashing with drip edge   17 rigid insulation   18 structural steel i-beam   19 structural steel column with bolted connections   20 corrugated steel decking   21 rigid insulation - roof   22 alumnium roofing panel   23 steel coping with drip edge   24 solar thermal panels   25 roof rainwater collection drain   26 steel truss supporting roof   27 double glazed aperture opening outwards

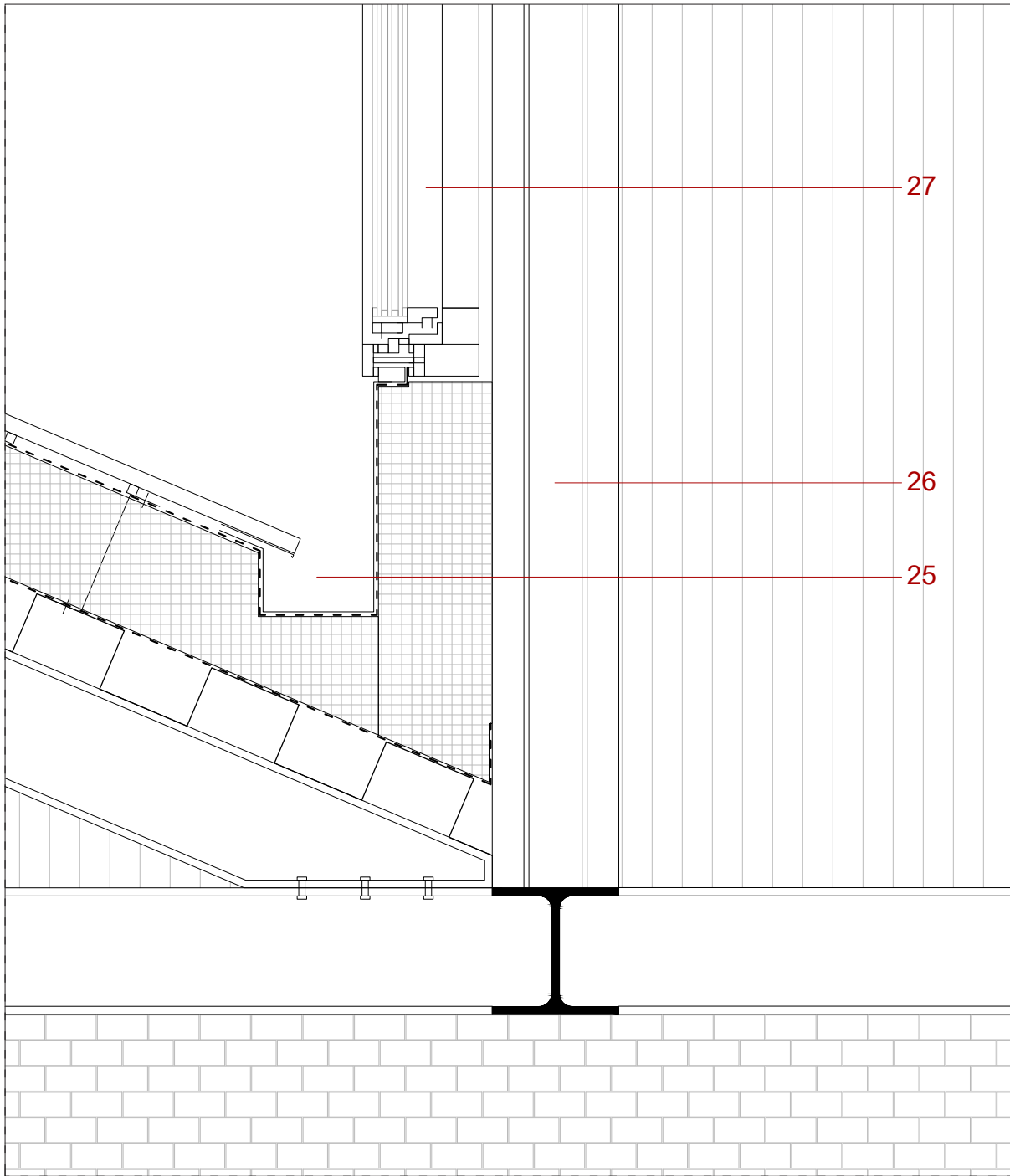
operational base 1:10 details



d5 - roof coping

- 1 rigid insulation   2 bituminous waterproofing membrane   3 reinforced concrete footing   4 anchor bolts to footing   5 concrete base   6 reinforced concrete ground floor slab   7 slot drain - continous through facade perimeter, allowing for level thresholds at openings   8 corrugated sheet metal, galvanized   9 mineral wool insulation   10 plasterboard   11 steel flashing with drip edge   12 steel lintel angle bolted to clip angle and connected to primary structure   13 ventilated brick facade with wall ties   14 external brick sill   15 double glazed circular aperture   16 steel flashing with drip edge   17 rigid insulation   18 structural steel i-beam   19 structural steel column with bolted connections   20 corrugated steel decking   21 rigid insulation - roof   22 alumniun roofing panel   23 steel coping with drip edge   24 solar thermal panels   25 roof rainwater collection drain   26 steel truss supporting roof   27 double glazed aperture opening outwards

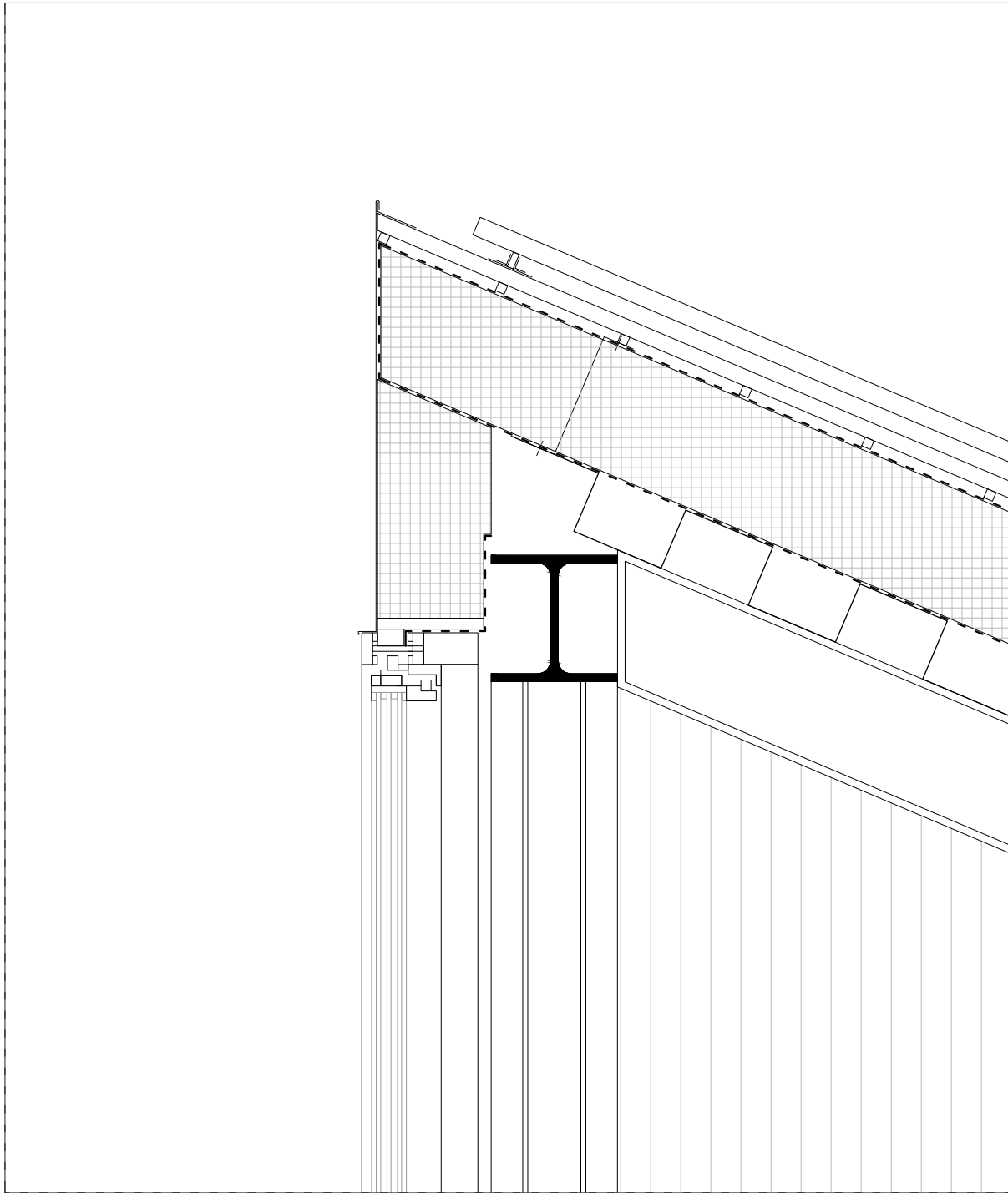
operational base 1:10 details



d6 - roof structure

- 1 rigid insulation   2 bituminous waterproofing membrane   3 reinforced concrete footing   4 anchor bolts to footing   5 concrete base   6 reinforced concrete ground floor slab   7 slot drain - continous through facade perimeter, allowing for level thresholds at openings   8 corrugated sheet metal, galvanized   9 mineral wool insulation   10 plasterboard   11 steel flashing with drip edge   12 steel lintel angle bolted to clip angle and connected to primary structure   13 ventilated brick facade with wall ties   14 external brick sill   15 double glazed circular aperture   16 steel flashing with drip edge   17 rigid insulation   18 structural steel i-beam   19 structural steel column with bolted connections   20 corrugated steel decking   21 rigid insulation - roof   22 alumnium roofing panel   23 steel coping with drip edge   24 solar thermal panels   25 roof rainwater collection drain   26 steel truss supporting roof   27 double glazed aperture opening outwards

operational base 1:10 details



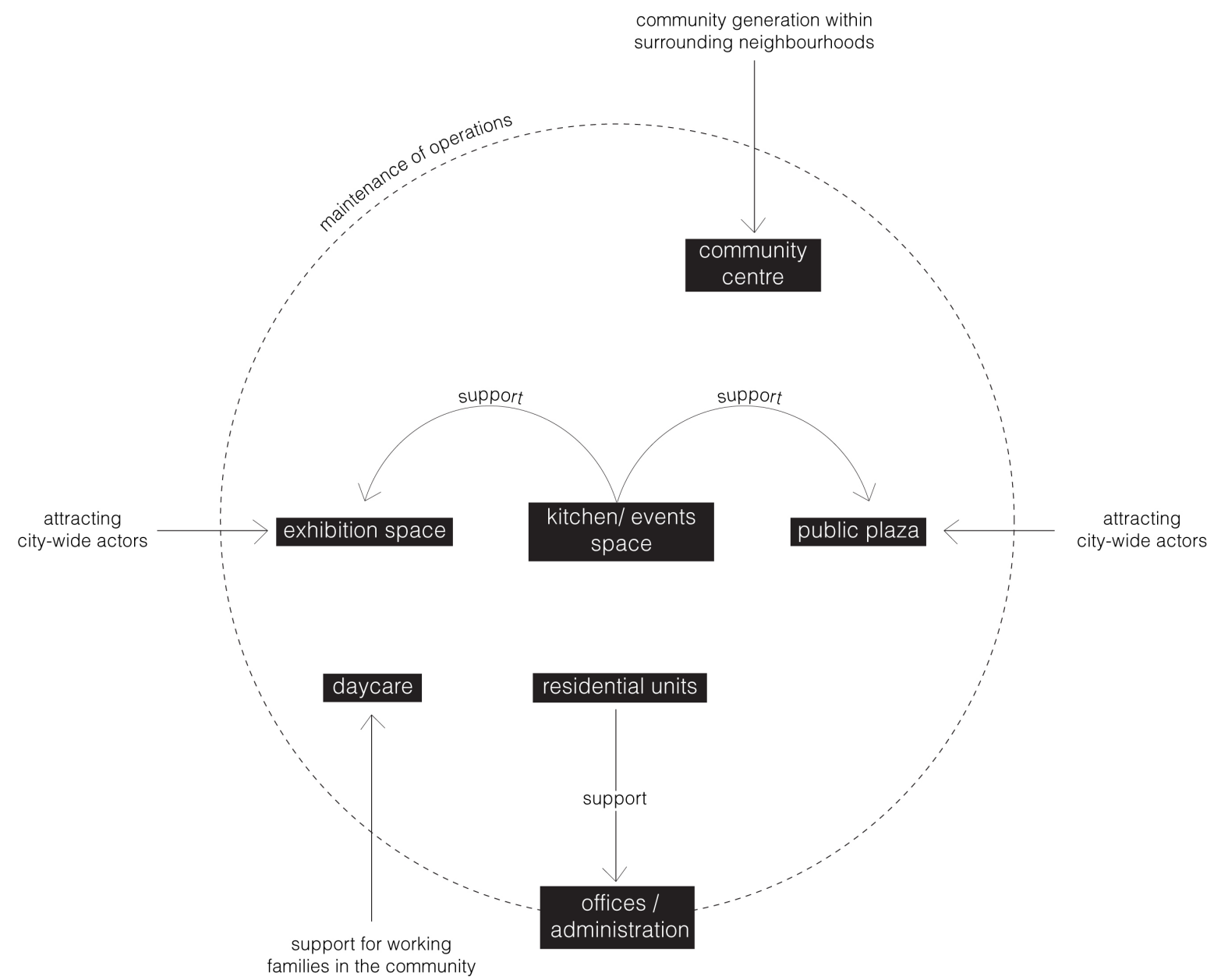
d7 - roof structure

- 1 rigid insulation   2 bituminous waterproofing membrane   3 reinforced concrete footing   4 anchor bolts to footing   5 concrete base   6 reinforced concrete ground floor slab   7 slot drain - continous through facade perimeter, allowing for level thresholds at openings   8 corrugated sheet metal, galvanized   9 mineral wool insulation   10 plasterboard   11 steel flashing with drip edge   12 steel lintel angle bolted to clip angle and connected to primary structure   13 ventilated brick facade with wall ties   14 external brick sill   15 double glazed circular aperture   16 steel flashing with drip edge   17 rigid insulation   18 structural steel i-beam   19 structural steel column with bolted connections   20 corrugated steel decking   21 rigid insulation - roof   22 alumnium roofing panel   23 steel coping with drip edge   24 solar thermal panels   25 roof rainwater collection drain   26 steel truss supporting roof   27 double glazed aperture opening outwards



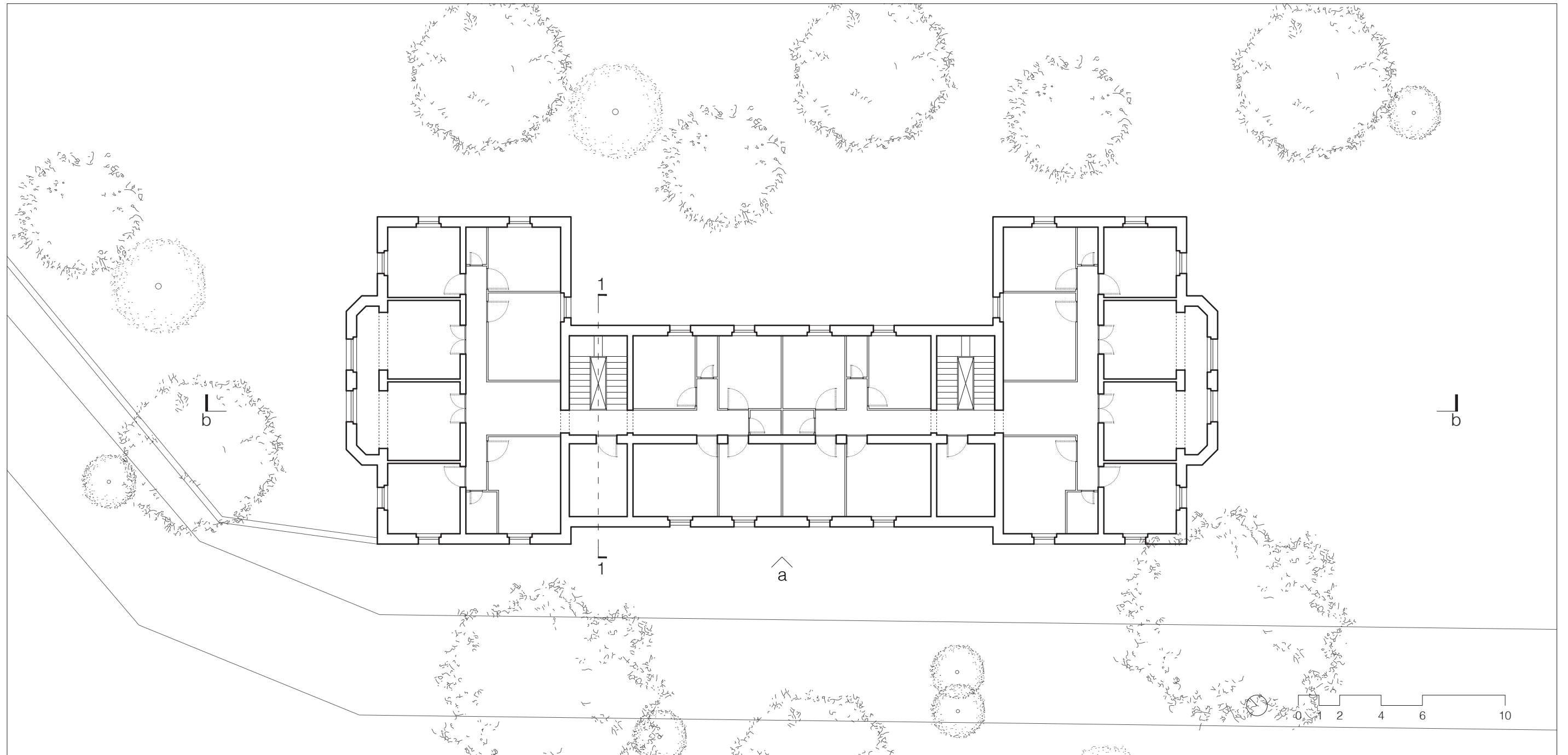


## community base



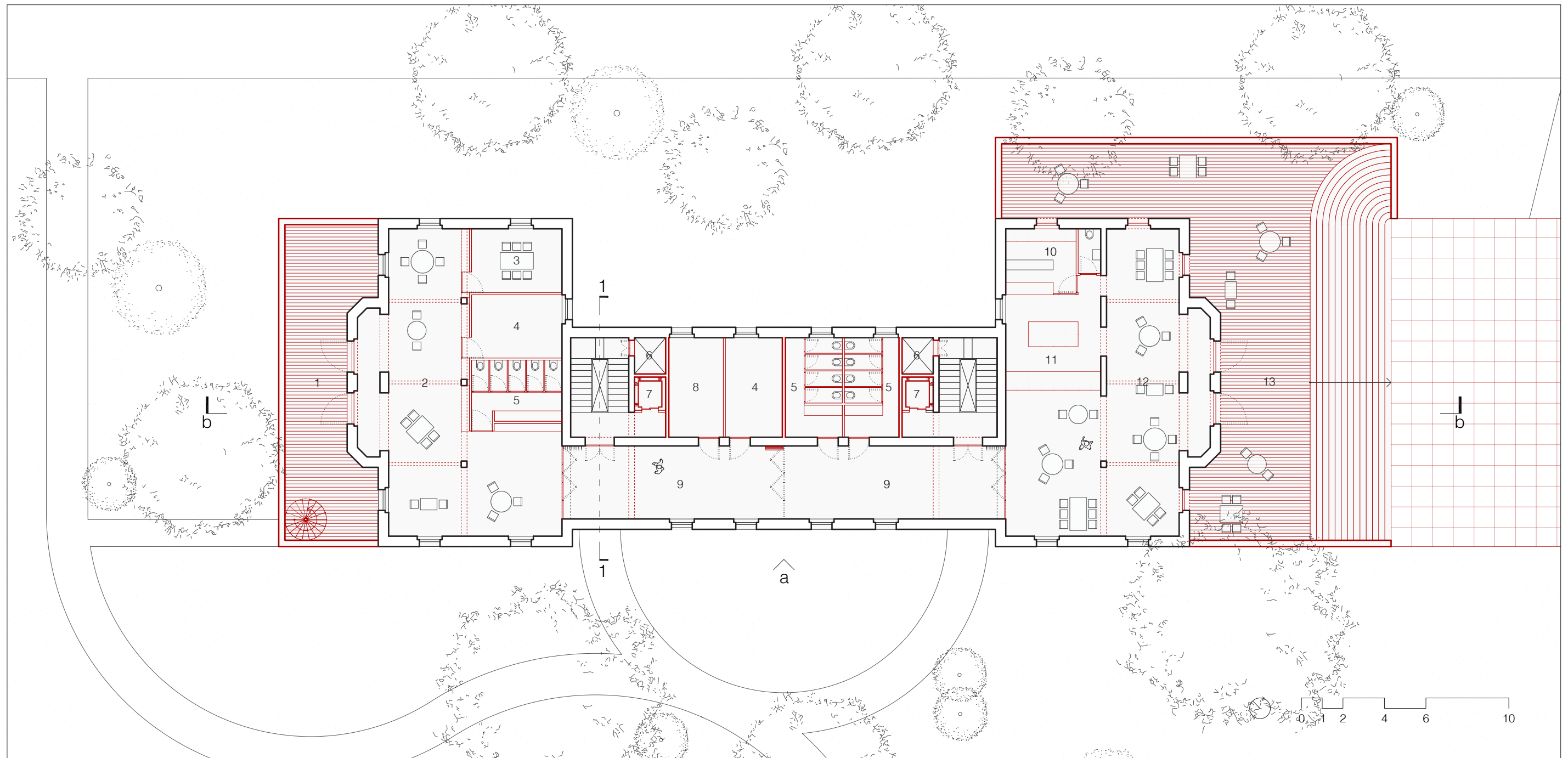
program

community base



existing -1 floor plan

# community base

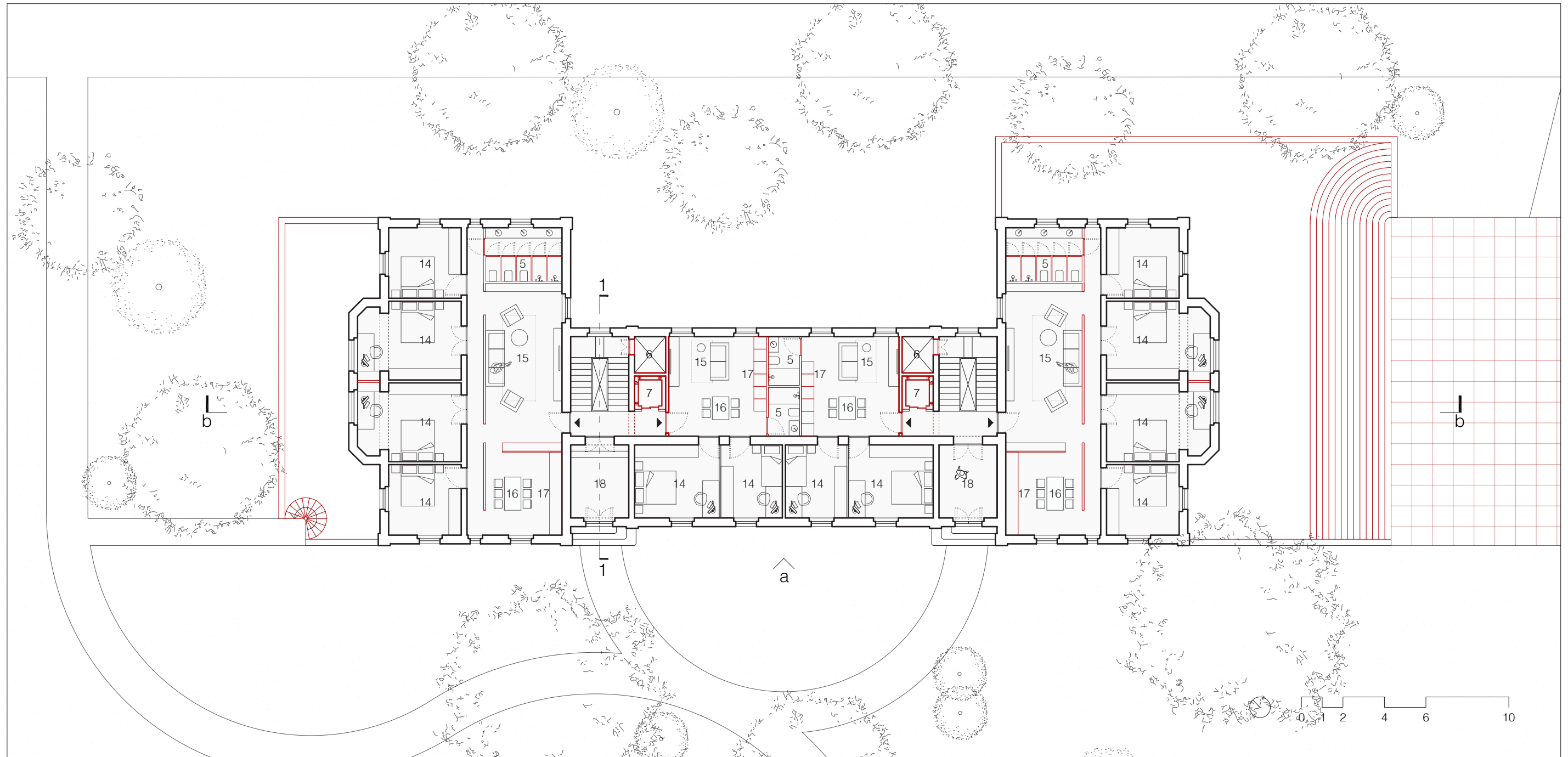


proposed -1 floor plan

1 sunken garden 2 daycare play area 3 meeting room 4 storage 5 bathrooms 6 shaft 7 lift 8 mechanical room 9 exhibition space 10 restaurant back of house 11 restaurant kitchen 12 dining area 13 sunken plaza  
14 bedroom 15 living space 16 dining 17 kitchen 18 entry hall 19 office 20 administration work space 21 rentable work space 22 communal terrace 23 community hall 24 social space 25 public workshops



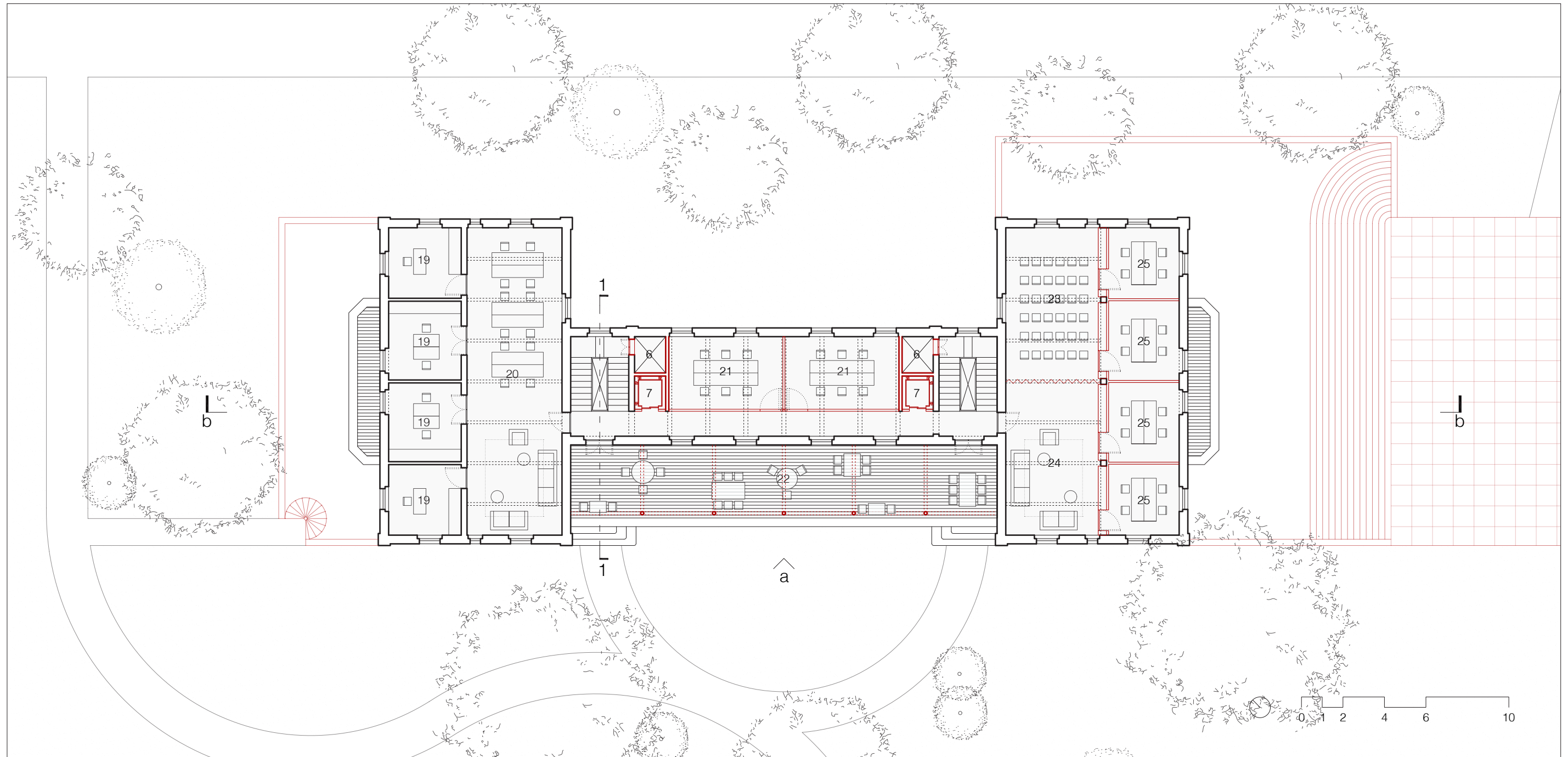
# community base



ground/ first floor plan

1 sunken garden 2 daycare play area 3 meeting room 4 storage 5 bathrooms 6 shaft 7 lift 8 mechanical room 9 exhibition space 10 restaurant back of house 11 restaurant kitchen 12 dining area 13 sunken plaza  
14 bedroom 15 living space 16 dining 17 kitchen 18 entry hall 19 office 20 administration work space 21 rentable work space 22 communal terrace 23 community hall 24 social space 25 public workshops

# community base



second floor plan

1 sunken garden 2 daycare play area 3 meeting room 4 storage 5 bathrooms 6 shaft 7 lift 8 mechanical room 9 exhibition space 10 restaurant back of house 11 restaurant kitchen 12 dining area 13 sunken plaza  
14 bedroom 15 living space 16 dining 17 kitchen 18 entry hall 19 office 20 administration work space 21 rentable work space 22 communal terrace 23 community hall 24 social space 25 public workshops

# community base



section aa

1 sunken garden 2 daycare play area 3 meeting room 4 storage 5 bathrooms 6 shaft 7 lift 8 mechanical room 9 exhibition space 10 restaurant back of house 11 restaurant kitchen 12 dining area 13 sunken plaza  
14 bedroom 15 living space 16 dining 17 kitchen 18 entry hall 19 office 20 administration work space 21 rentable work space 22 communal terrace 23 community hall 24 social space 25 public workshops

community base



elevation a





