RE HOUSING

INTERVAM @ Camera Obscuradreef in Overvecht, Utrecht

QUALITY OF LIVING = SOMETHING EXTRA ∞ PRIVACY REGULATION

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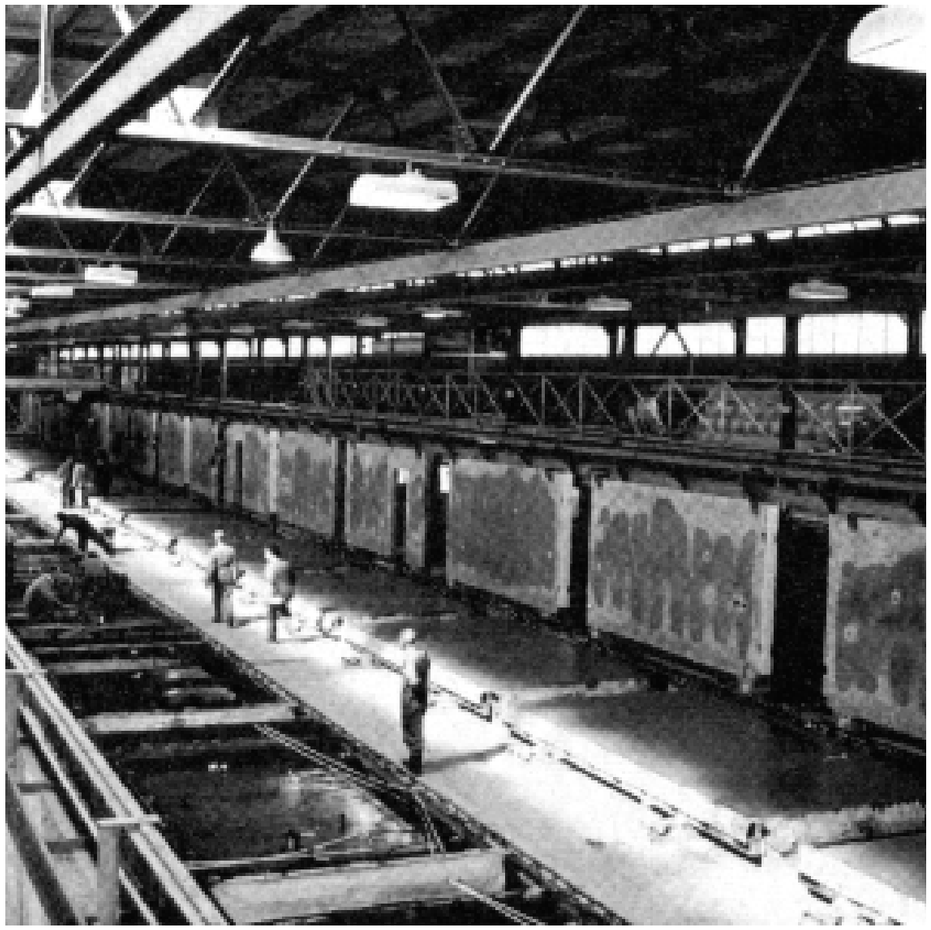
Tutor architecture (main) Lidwine Spoormans
Tutor building technology Bas Gremmen
Tutor cultural value Nicholas Clarke
Visiting professor Anne Lacaton

VAM

A Non-traditional Building System

VAM

A Non-traditional Building System



Standardized production

Prefab and assembly of heavy mounting elements

LOCATION

INTERVAM @ Camera Obscuradreef in Overvecht, Utrecht

Two Ideas

“De Wijkgedachte” & *“Light, Air and Space”*

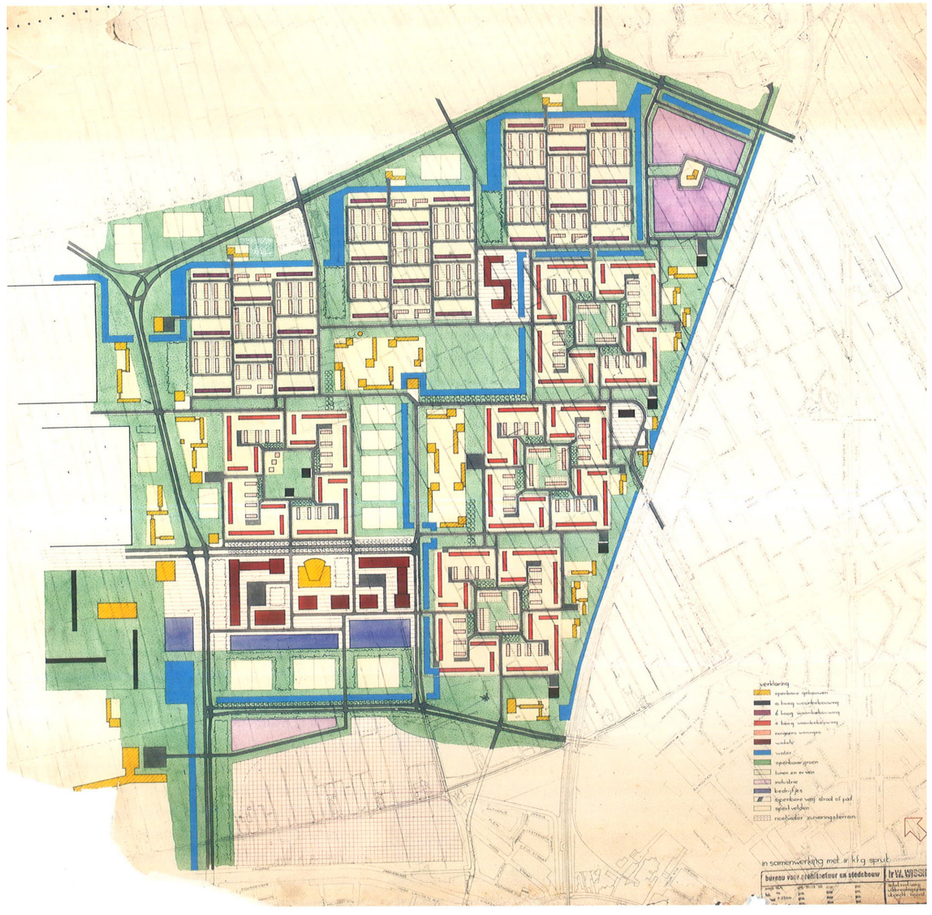
Catholic version of **“Wijkgedachte”**

“Light, Air and Space” of Nieuwe Bouwen Movement

“De Wijkgedachte”

Urban Planning / Green Space

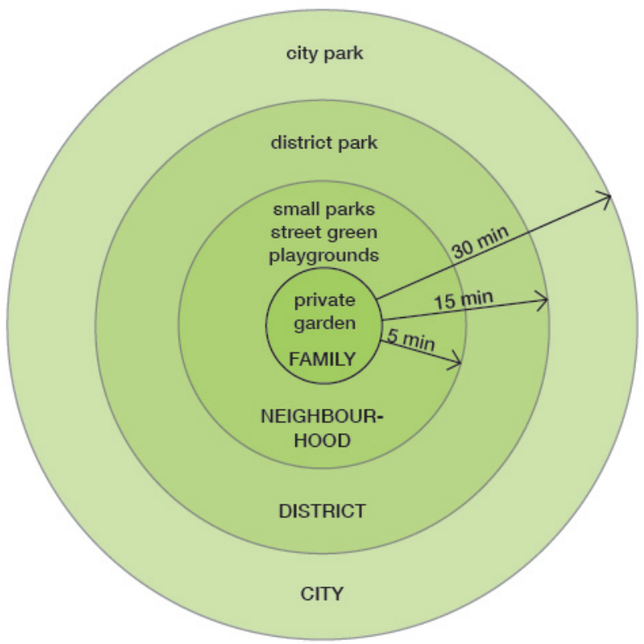
Catholic version of “**Wijkgedachte**”



1958 sketch design of Overvecht from architect Wim Wissing based on the neighborhood theory of “De Wijkgedachte”

“De Wijkgedachte”

Regarding Green Space



Bos’ wijkgedachte idea regarding green space based on Bos 1946

Private Garden

Front Green and Small Square

Open Public Playground

Street Green

“Light Air Space”

Openness and Transparency

“Light Air Space”

Openness and Transparency

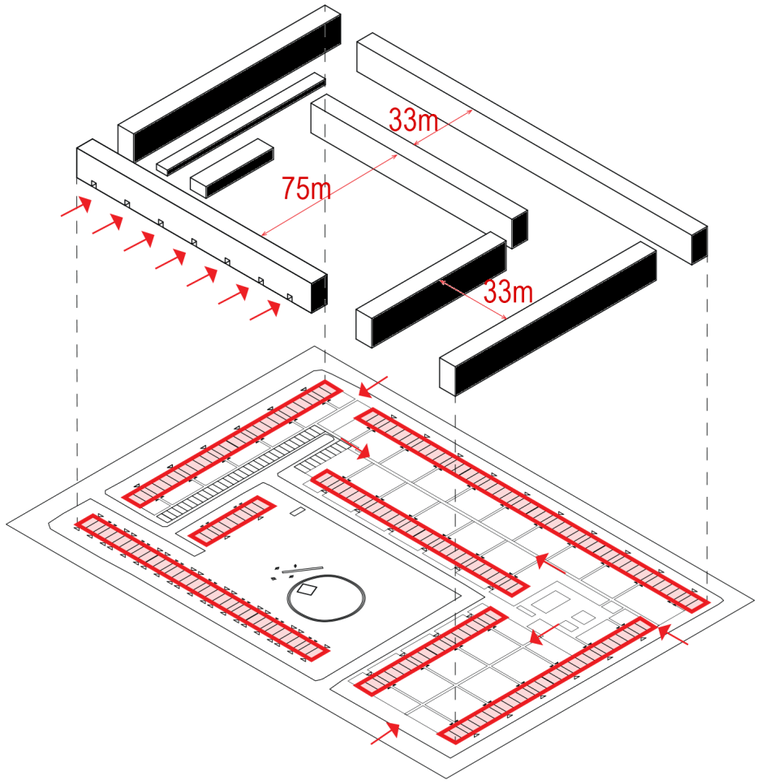
Democratic
Social control
Hygienic and healthy life

Problem Statement

Lack of technical qualities| Lack of use and safety

Site

Cultural Value and Dilemma



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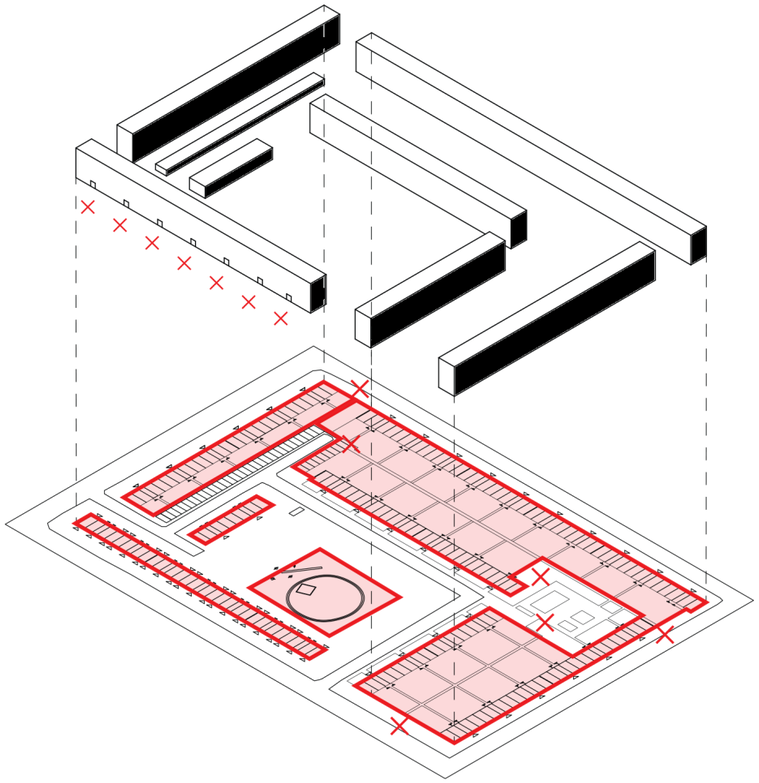
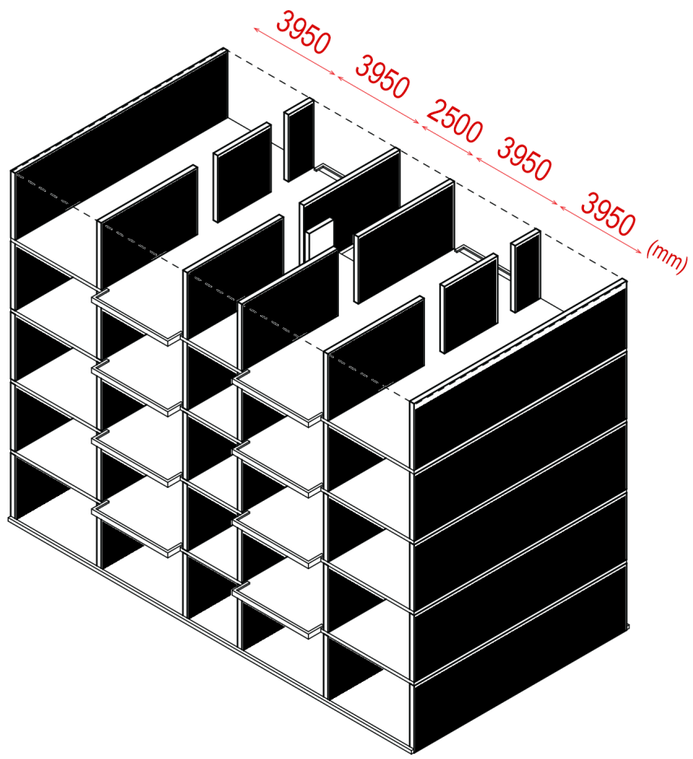


Existing Situation

Structure

Cultural Value and Dilemma

Existing Situation



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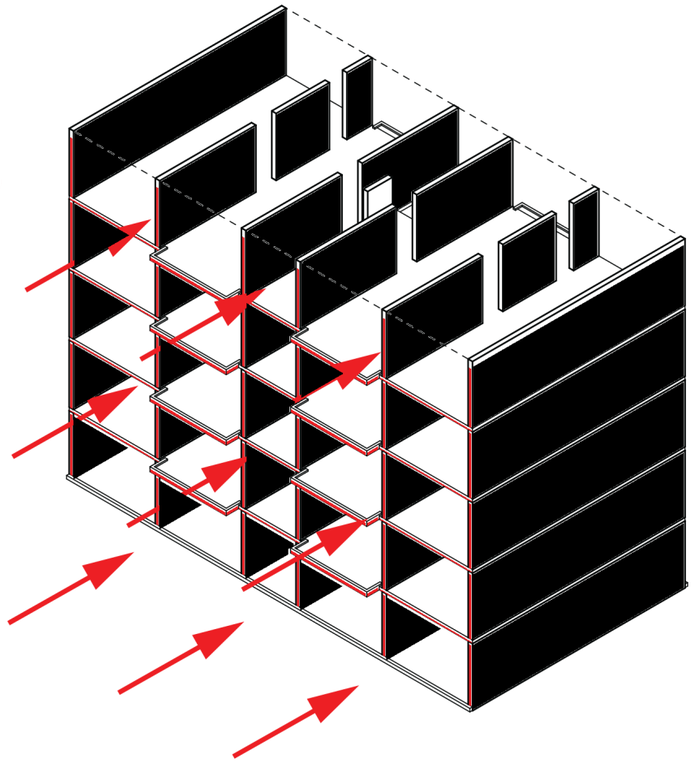
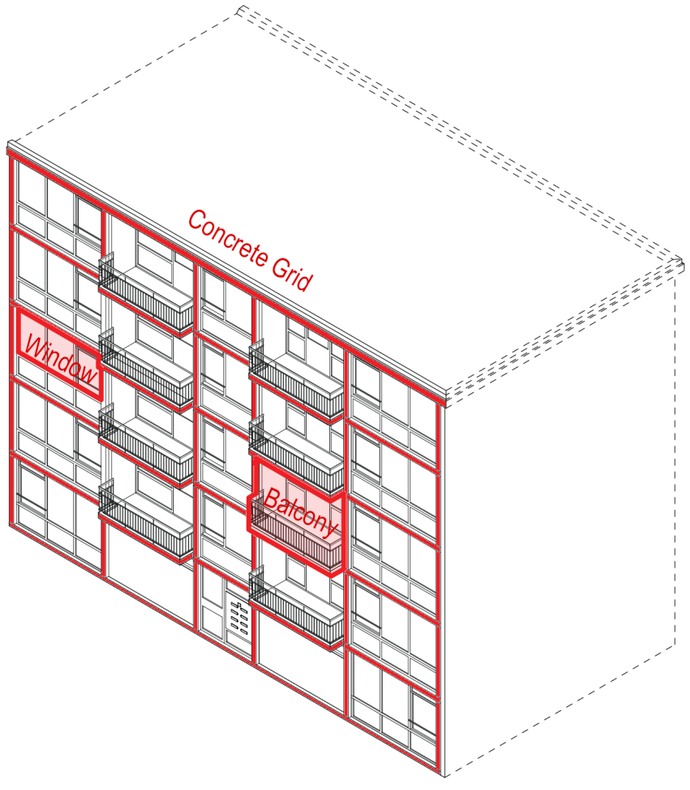


Existing Situation

Skin

Cultural Value and Dilemma

Existing Situation



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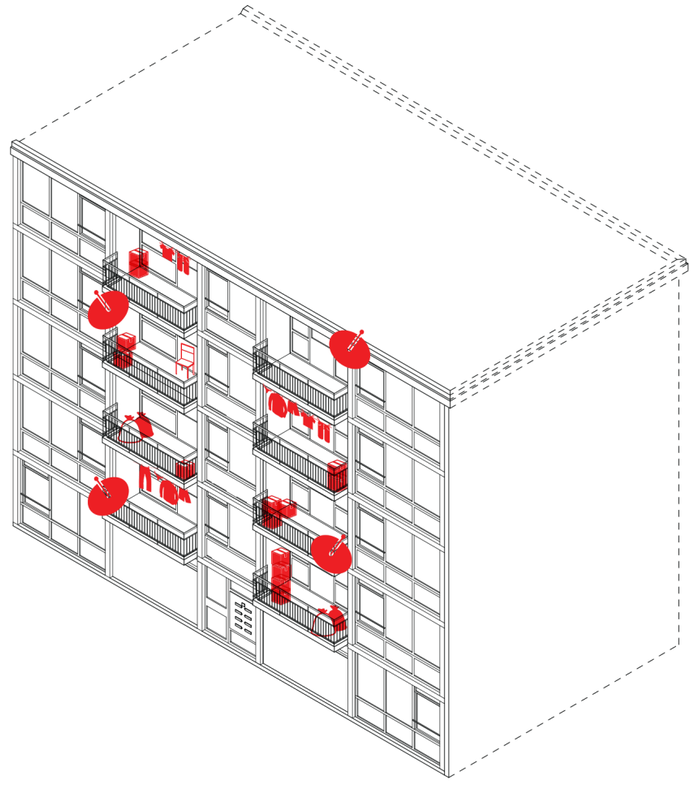
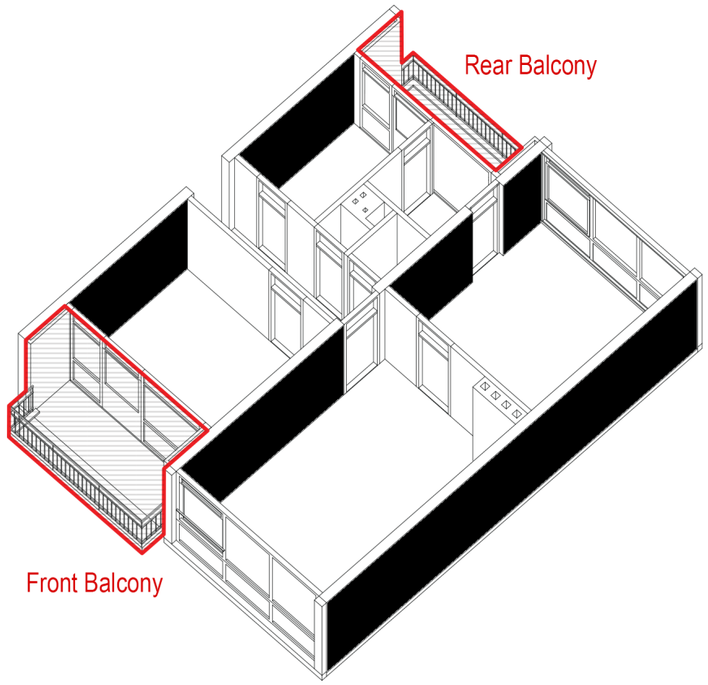


Existing Situation

Space

Cultural Value and Dilemma

Existing Situation



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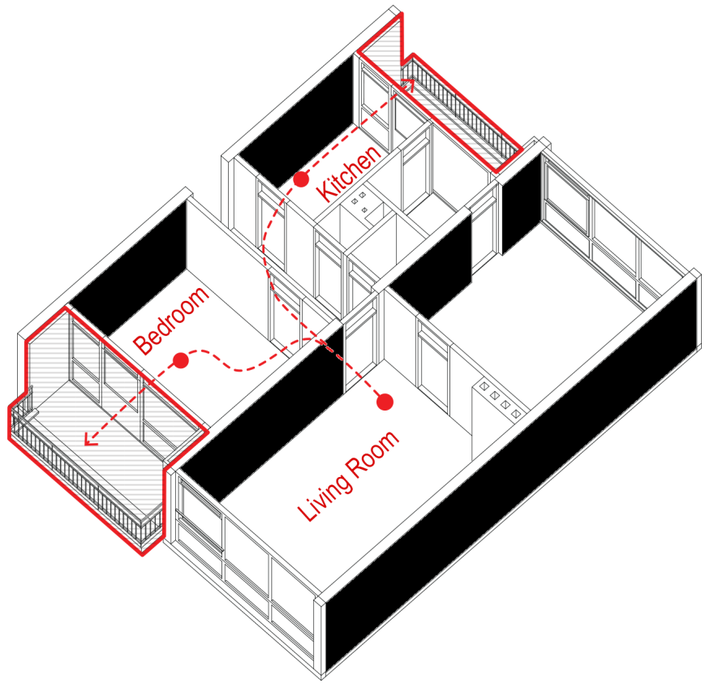
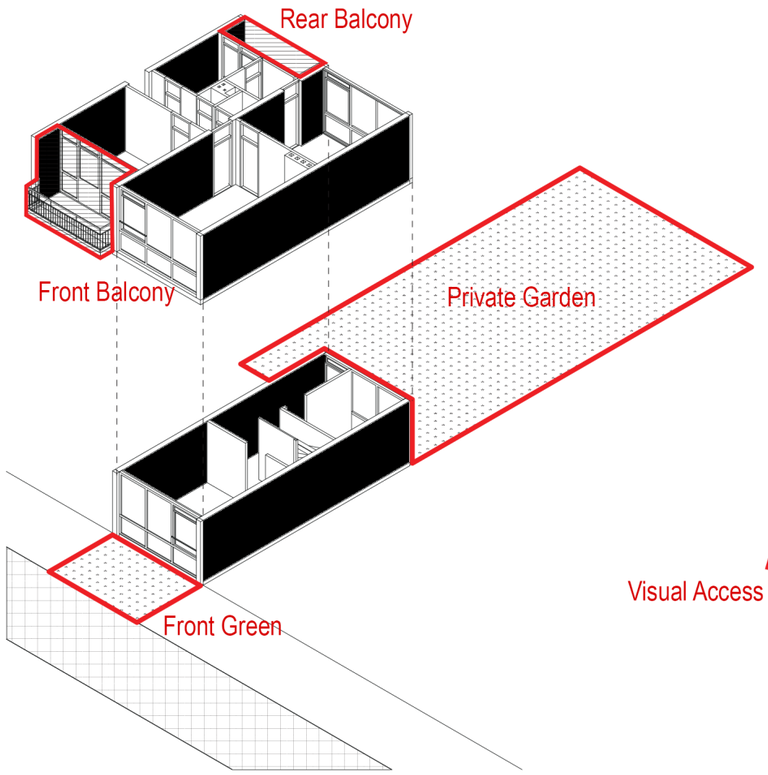


Existing Situation

Space

Cultural Value and Dilemma

Existing Situation



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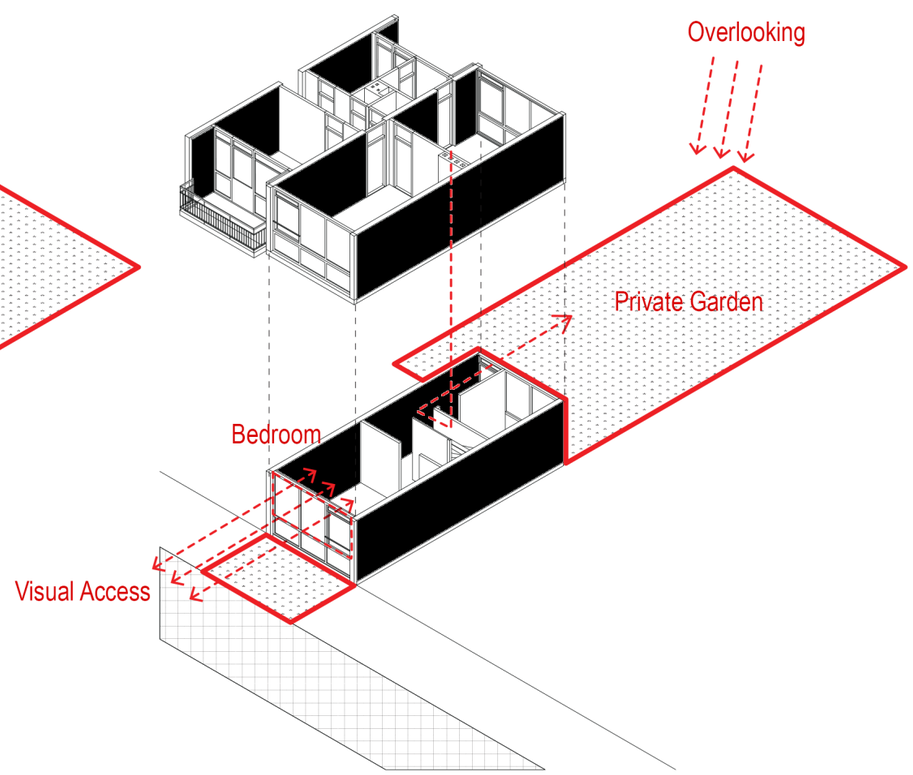
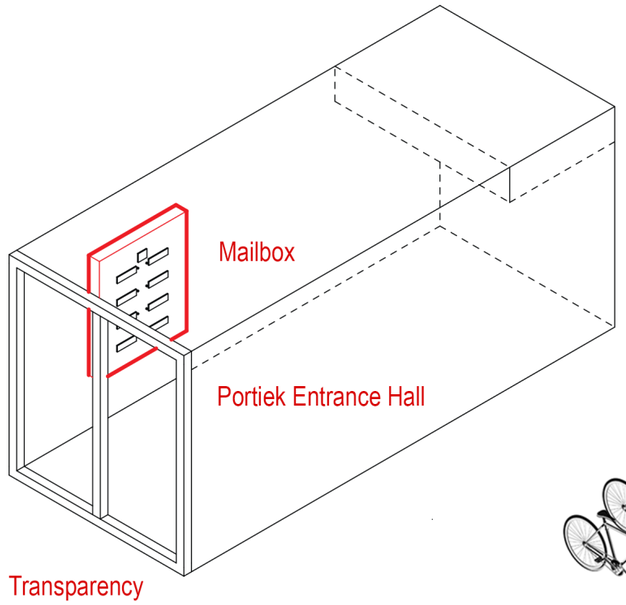


Existing Situation

Space

Cultural Value and Dilemma

Existing Situation



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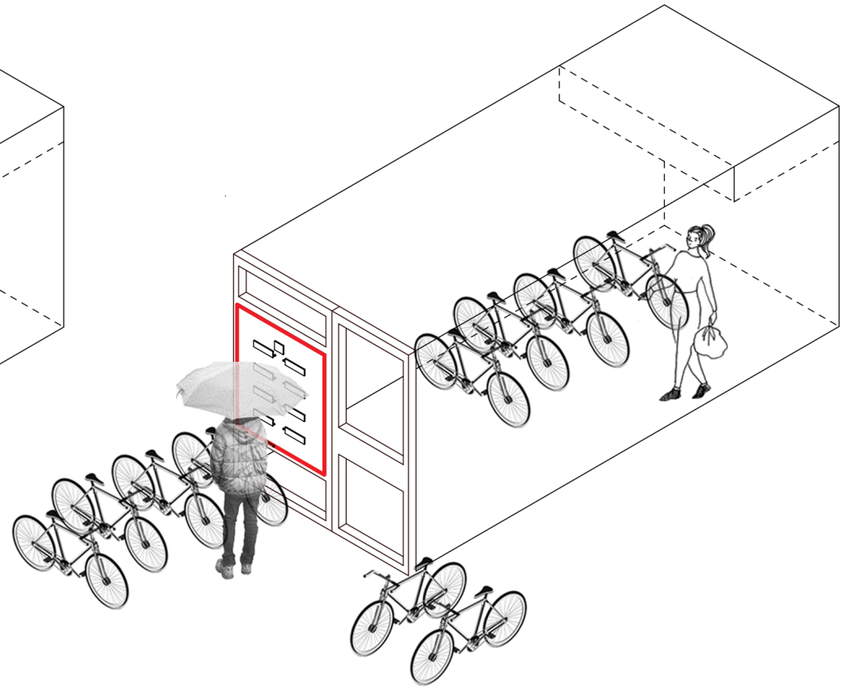


Existing Situation

Differentiation of the Significance of Cultural Values

SUPER HIGH

HIGH

MEDIUM

LOW

CURRENT SITUATION

DILEMMA

System \ *Value*	*Conflict*	*Age*	*Historical*	*Artistic*	*Commemorative*	*Use*	*Newness*	*Current Situation*	*Dilemma*
Site			Open green structure following the principle of " Light Air Space" & "Wijkgedachte"			open green structure		1.Inconvenient Route and Use 2.Lack of Use 3.Lack of Maintenance 4.Insecurity	openness & transparency VS privacy & sense of security
Structure			Vam structure			Vam structure		1.Rigidity 2.Thermal Bridges 3.No sound proof	exposed VS insulated
Skin			Grid character; large window and balcony embody "Light Air Space"					1.Chaotic appearance 2.Lack of Maintenance 3. Poorly insulated & Energy Loss	openness & transparency VS privacy
Services								1.Limited Service Space 2.Poor Energy Performance 3. High Energy Comsumption	
Space Plan			Rooms with large window, balcony and garden represent "Light Air Space"					1.Inconvinient use 2.Poor transition link between spaces 3. Lack of privacy in some space	openness & transparency VS privacy
Stuff								Lack of Storage Space	
Story								Neighborhood Quality Decay	

Figure 2 Cultural value assessment matrix (individual)

Conclusion

Cultural Value and Dilemma

CULTURAL VALUE	*VAM SYSTEM*	*"DE WIJKGEDACHTE"*	*"LIGHT, AIR AND SPACE"*
CHARACTER	*Concrete Structure* *Concrete Grid*	*Green Space*	*Large Window* *Balcony* *Garden* *Open Green Space*
CURRENT SITUATION	*Lack of Technical Qualities* ***(eg: Comfort and Maintenance)***	*Lack of Use and Safety*	
DILEMMA	*New Demands VS Old Lifestyles*		*Privacy VS Openness & Transparency*

Intervention

Social Housing Update

CULTURAL VALUE

VAM SYSTEM

"DE WIJKGEDACHTE"

"LIGHT, AIR AND SPACE"

POSITION

Concrete Structure *REUSE*
Concrete Grid *RENOVATE*

Green Space *ACTIVATE*

Large Window *TRANSFORM*
Balcony *TRANSFORM*
Garden *TRANSFORM*
Open Green Space *ACTIVATE*

OFFER SOMETHING EXTRA TO IMPROVE

OFFER RESIDENTS PRIVACY CONTROL

DILEMMA

New Demands VS Old Lifestyles

Privacy VS Openness & Transparency

Privacy Script

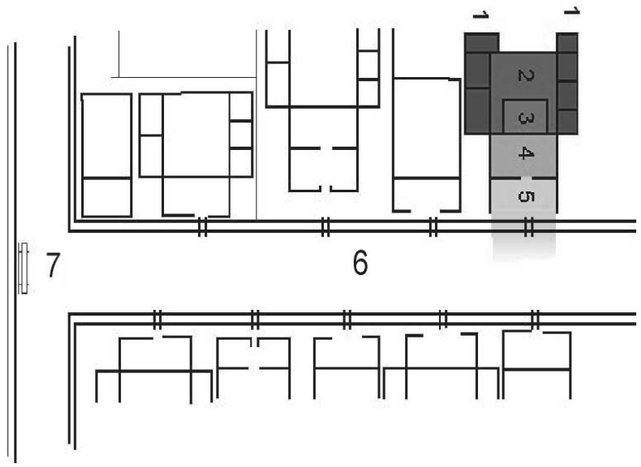
A Design Theory

PRIVACY

Privacy is conceived of as an interpersonal boundary process in which a person or group **REGULATES INTERACTION** with others (Altman 1975: 6). Privacy is **'SELECTIVE CONTROL OF ACCESS** to the self or to one's group' (Altman 1975: 18).

This process can be supported by a **PHYSICAL ENVIRONMENT** in which territories for residents, visitors and passers-by **CAN BE IDENTIFIED.** (Sundstrom and Altman, 1974).

PRIVACY ZONING

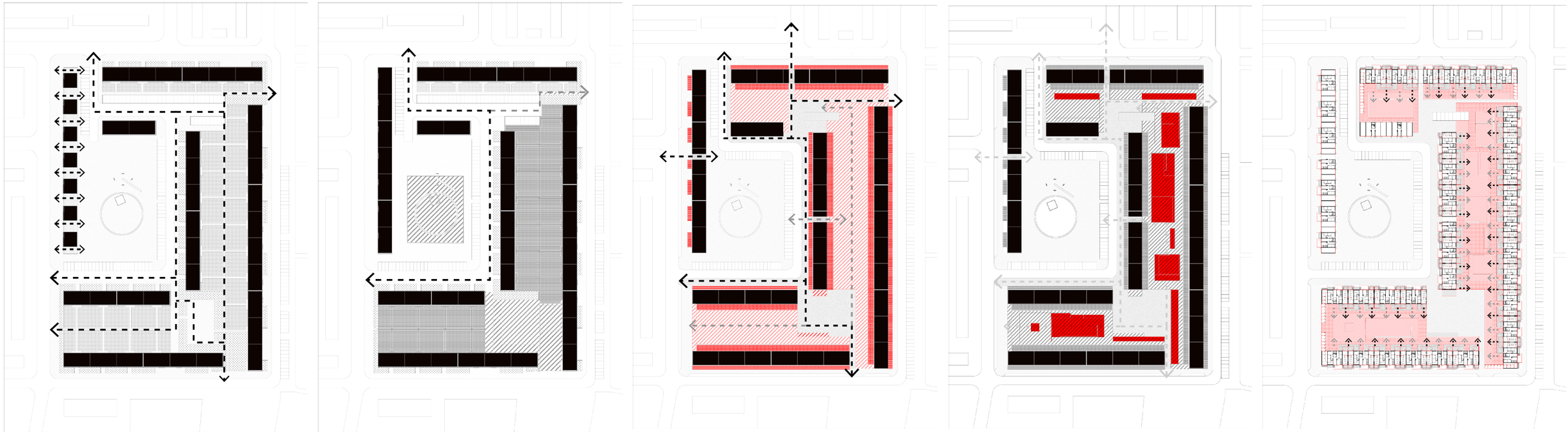


Case_Privacy zoning in Tunjungan :

Zone 1: The bedroom
Zone 2: The family room
Zone 3: The guest room
Zone 4: The veranda
Zone 5: Front yard or bench in front of the house
Zone 6: The gang
Zone 7: Squares, crossroads and shops in the network of gangs
Zone 8: The entrance to the kampong
Zone 9: The public spaces in the city

Urban Scale

Privacy Zoning



ACTIVATE THE USE OF GREEN SPACE

USABILITY

degree to which the space is able or fit to be used

ACCESSIBILITY

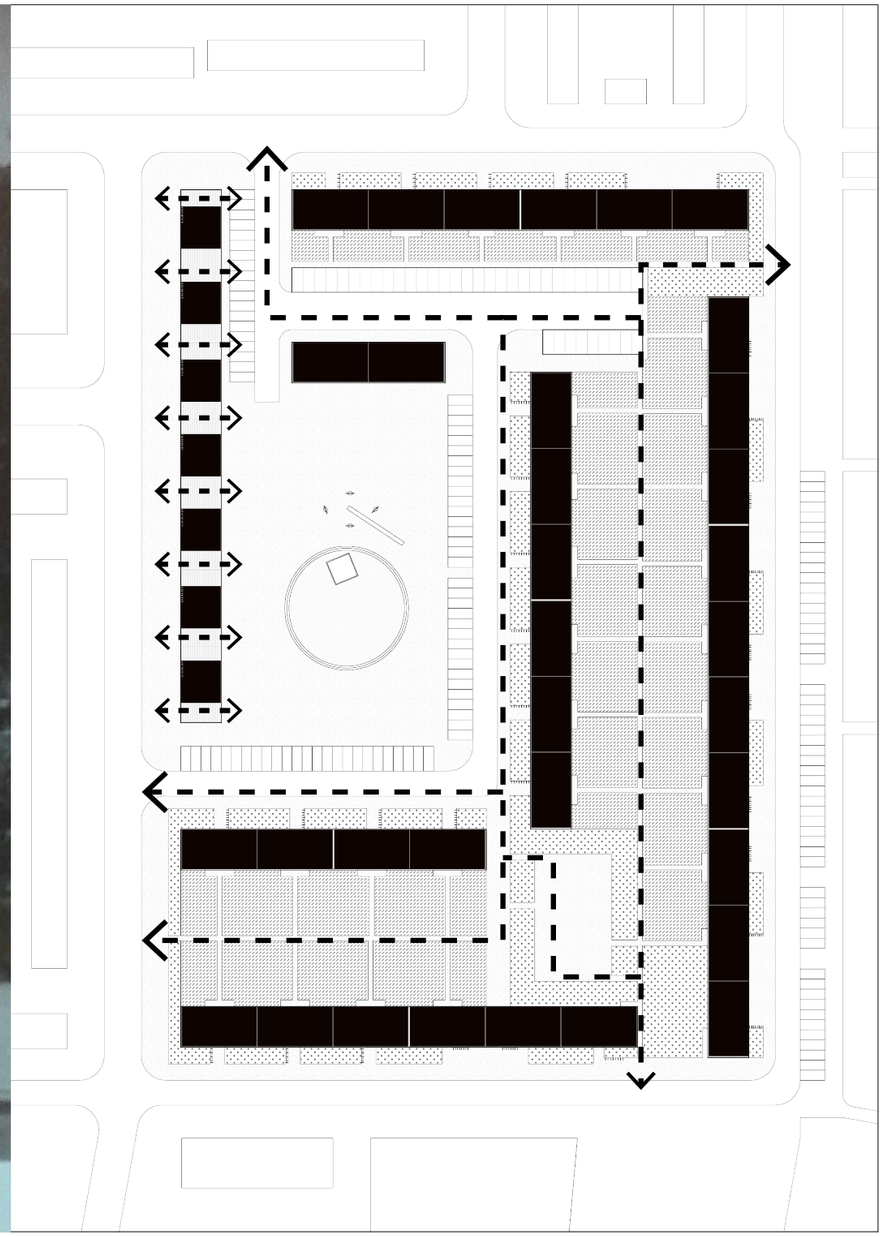
degree to which the space can be accessed

LEGIBILITY

degree to which the space can be identified

Urban Scale

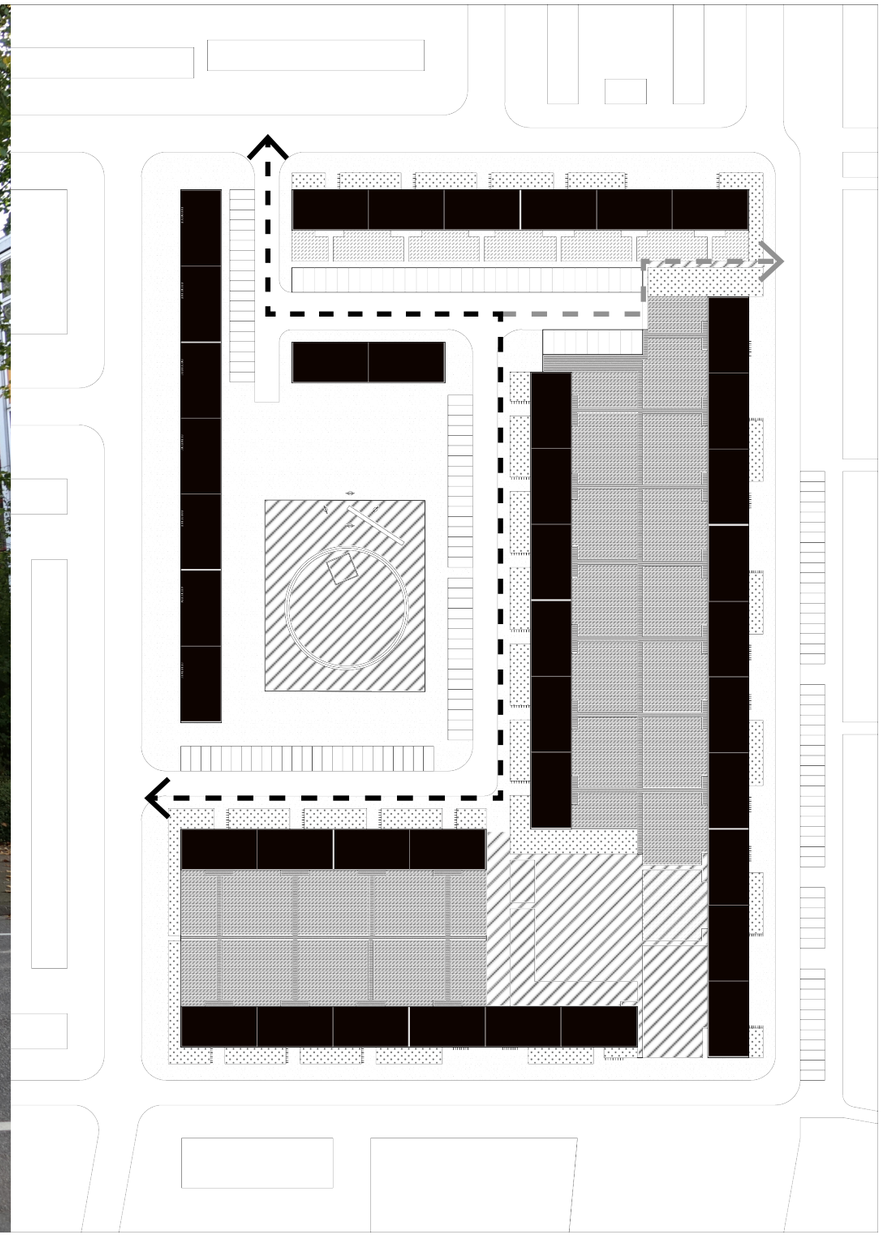
Privacy Zoning



ORIGINAL_ Openness and Transparency

Urban Scale

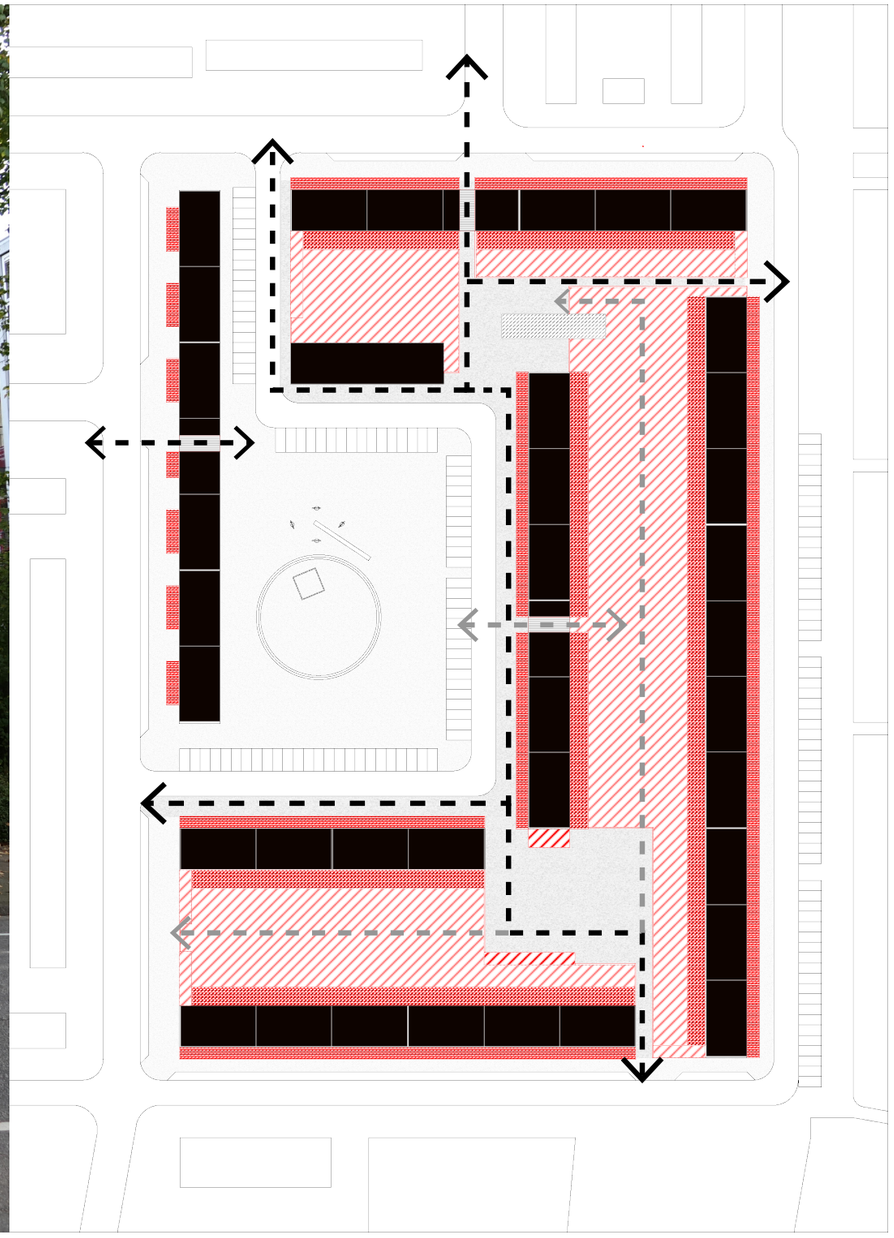
Privacy Zoning



EXISTING_ Closed and Segregated

Urban Scale

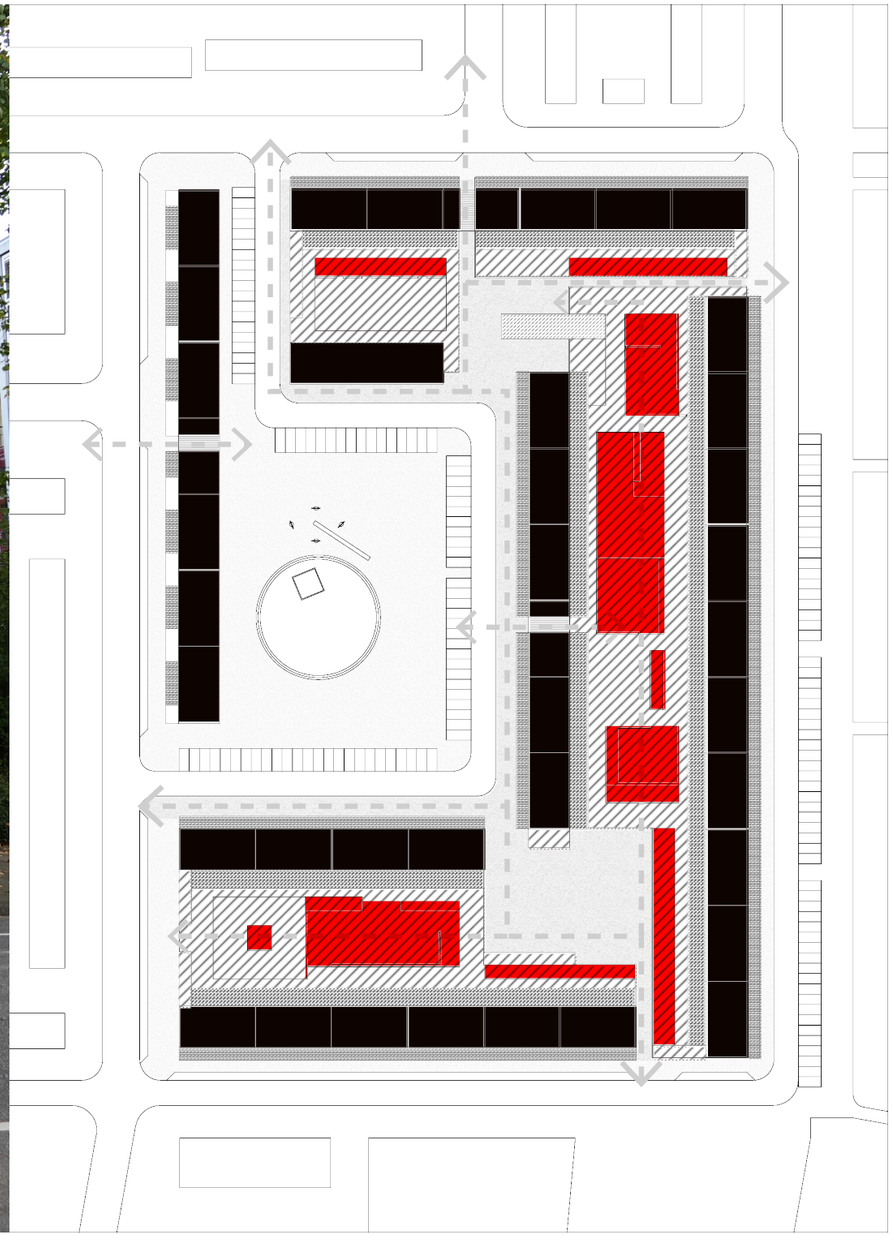
Privacy Zoning



NEW_ Controlled Privacy

Urban Scale

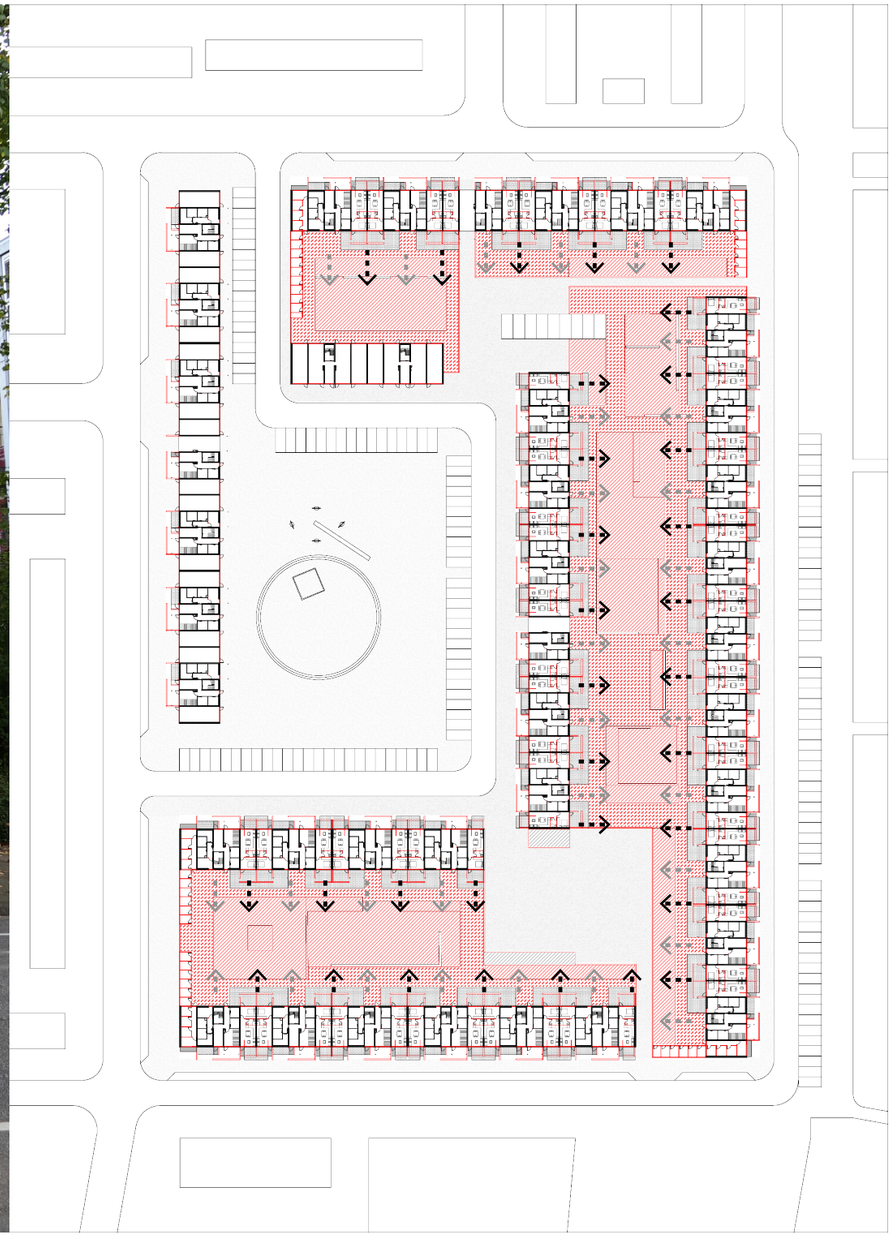
Privacy Zoning



NEW_ Programmed Green

Urban Scale

Privacy Zoning

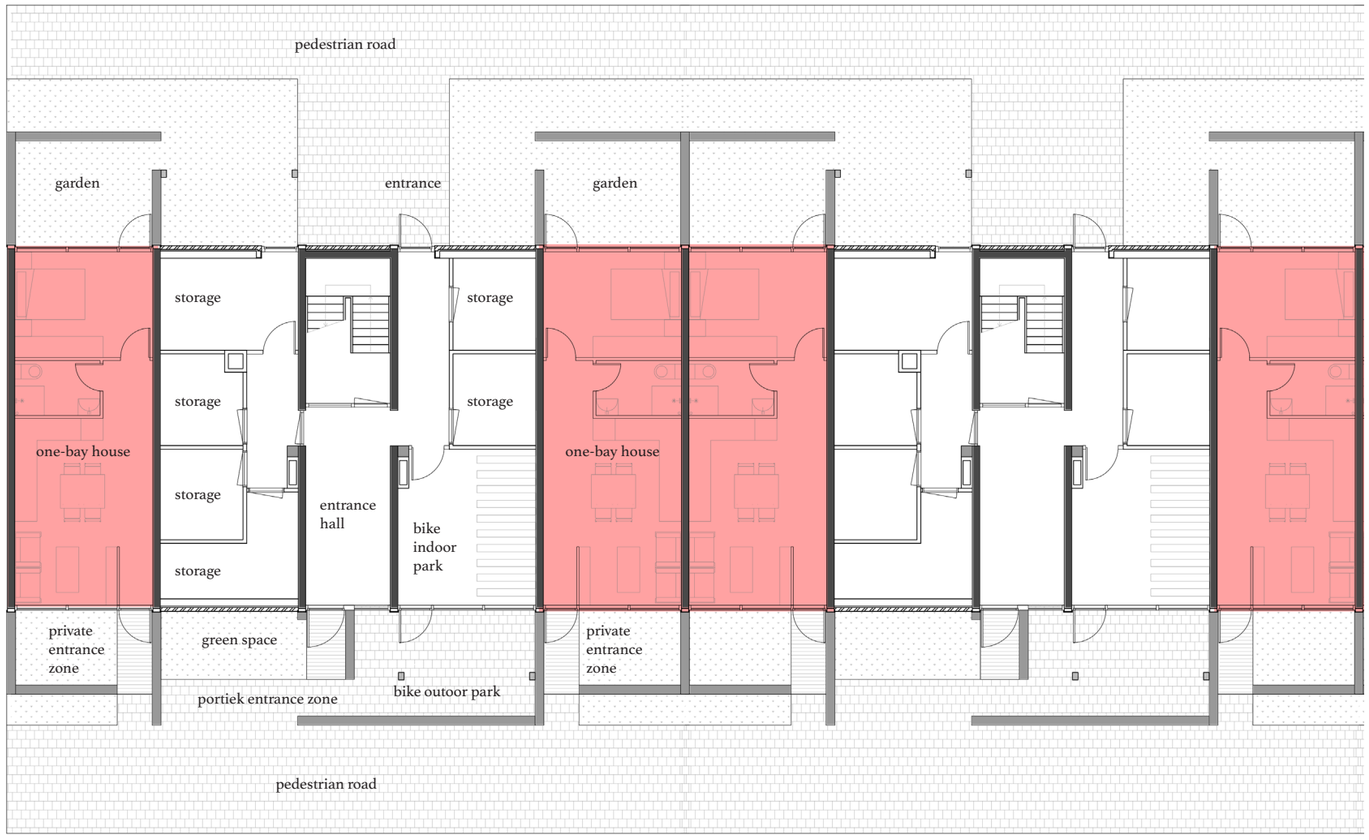


NEW_ Better Accessibility and Route

Building Scale

Transformation Strategies

EXISTING GROUND FLOOR PLAN



NEW GROUND FLOOR PLAN

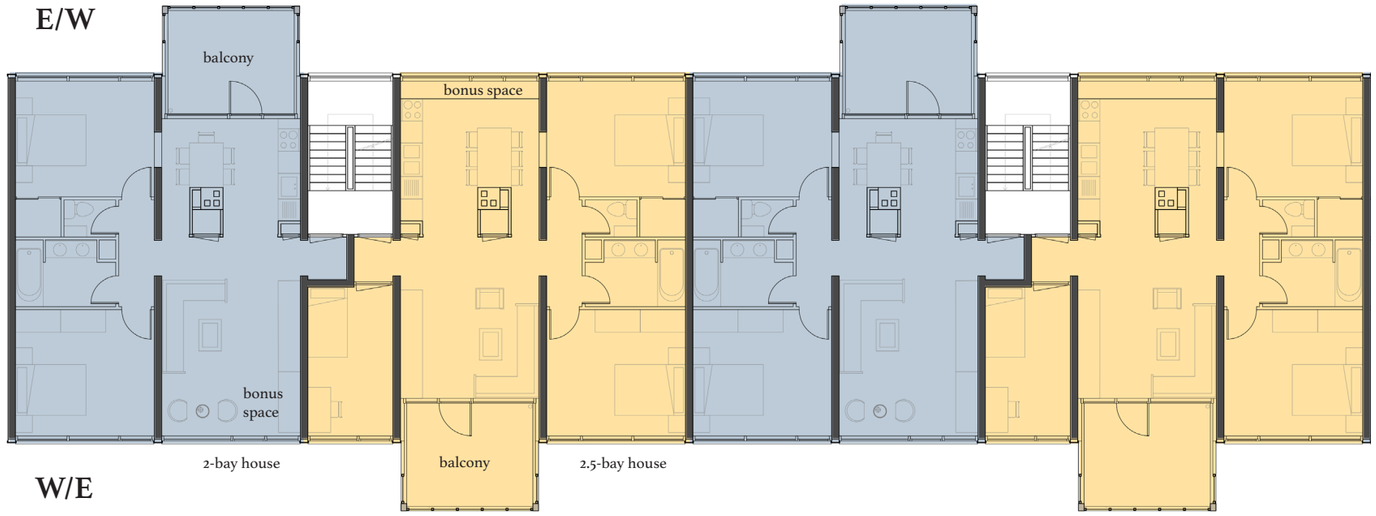
Building Scale

Transformation Strategies

EXISTING FIRST FLOOR PLAN

EXISTING 2nd-4th FLOOR PLAN

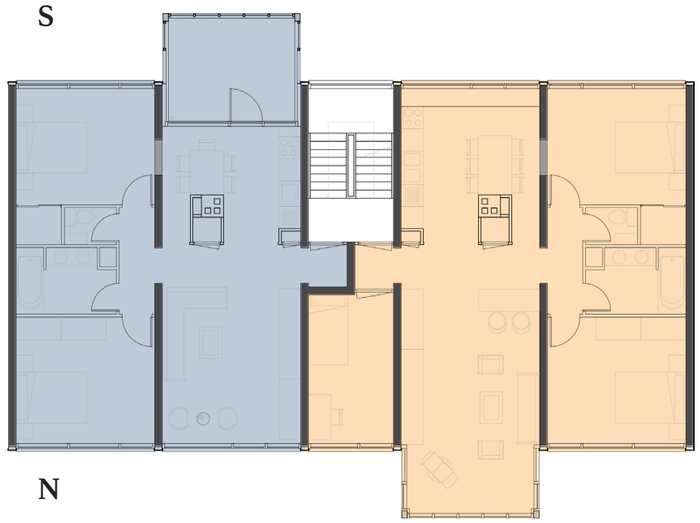
E/W



W/E

NEW 1st-4th FLOOR PLAN

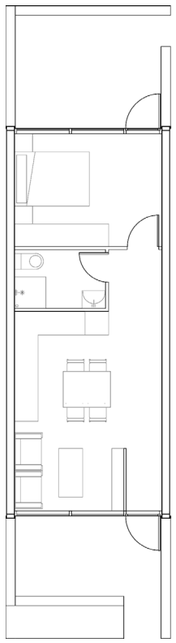
NEW 1st-4th FLOOR PLAN



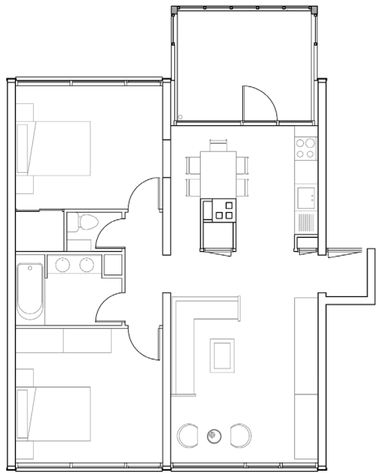
NEW 1st-4th FLOOR PLAN

Building Scale

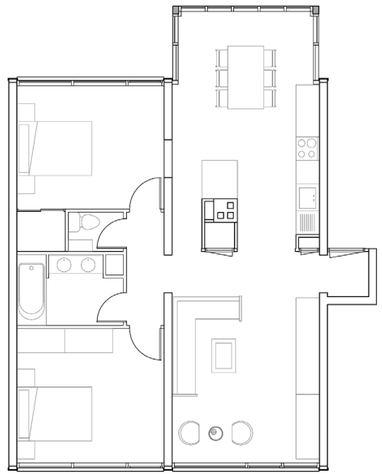
House/Households Variety



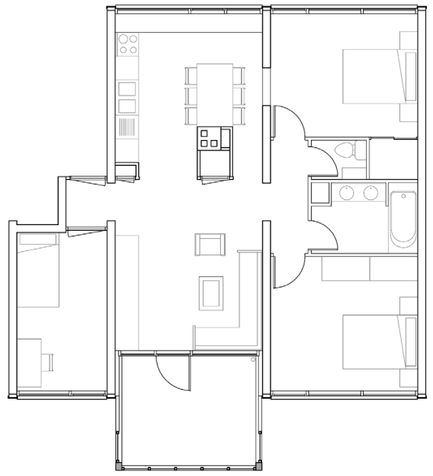
Type 1:
1-Bay | 1-Bed house
Orientation: E-W/S-N
Surface area: 37.5 m²
Tenants:
single/couple



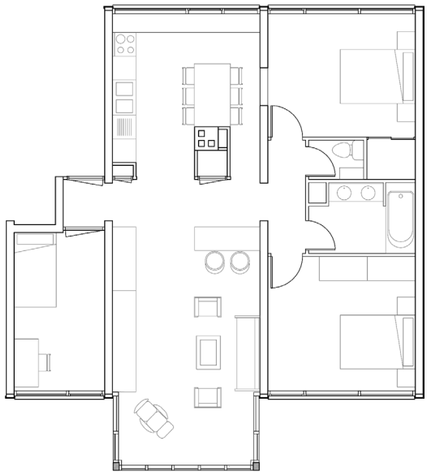
Type 2:
2-Bay | 2-Bed house
Orientation: E-W
Surface area: 72 m²
Tenants:
family (1-2 children)



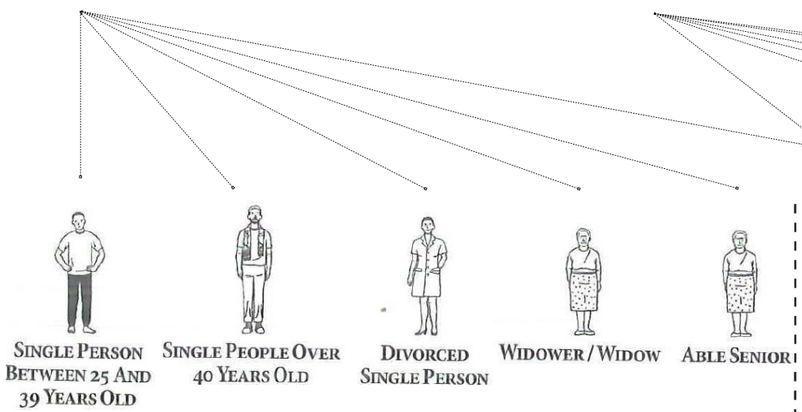
Type 2+:
2-Bay | 2-Bed house
Orientation: S-N
Surface area: 78.5 m²
Tenants:
family (1-2 children)



Type 3:
2.5-Bay | 3-Bed house
Orientation: E-W
Surface area: 83.5 m²
Tenants:
family (2-3 children)



Type 3+:
2.5-Bay | 3-Bed house
Orientation: S-N
Surface area: 90 m²
Tenants:
family (2-3 children)



Single People

Families

Cohabitations

Facade Design

Facade Design

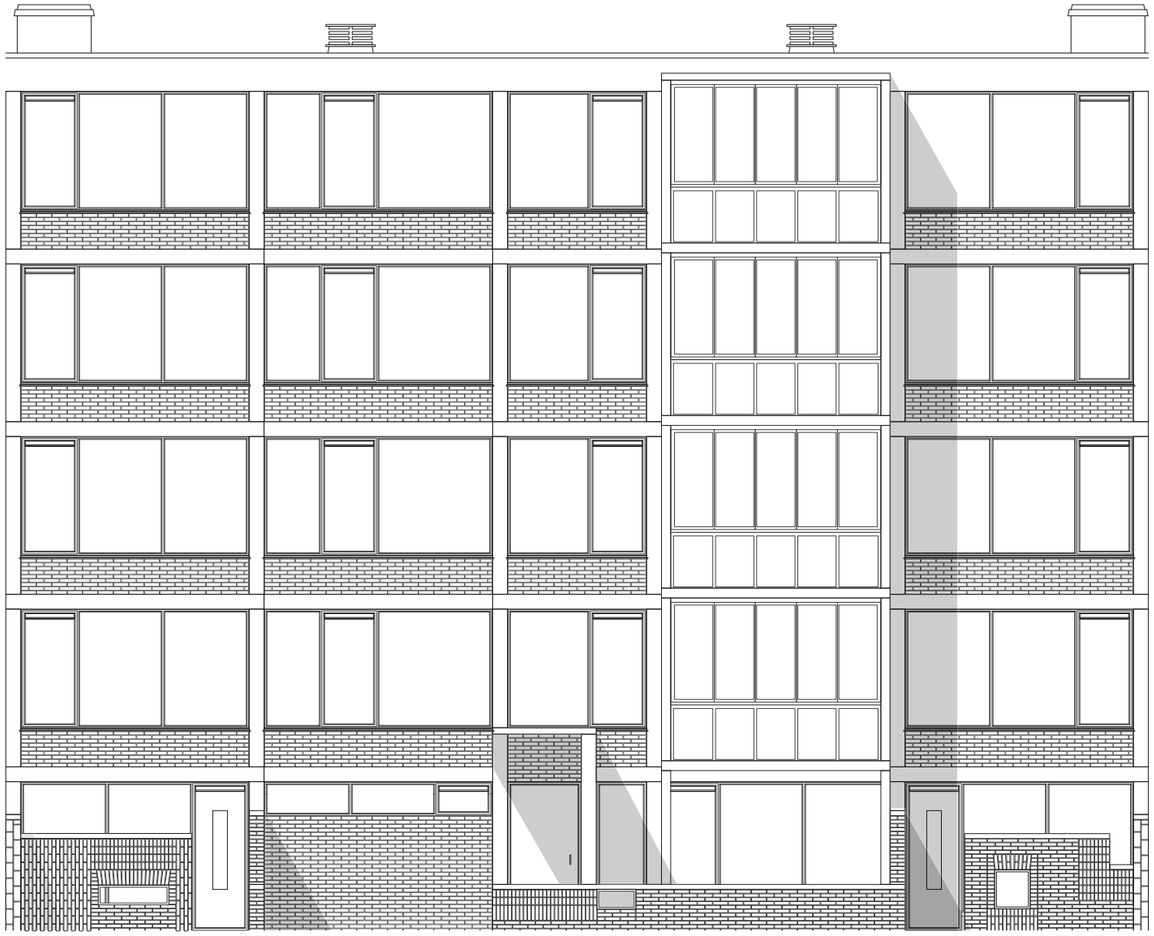
Original Facade

Existing Facade

Facade Design

Facade Design

Original Front Elevation



NEW Front Elevation

Facade Design

Facade Design

Original Front Elevation

NEW Front Elevation

Facade Design

Facade Design

Facade Design

Facade Design

Original Rear Elevation

NEW Rear Elevation

Facade Design

Facade Design

Original Rear Elevation

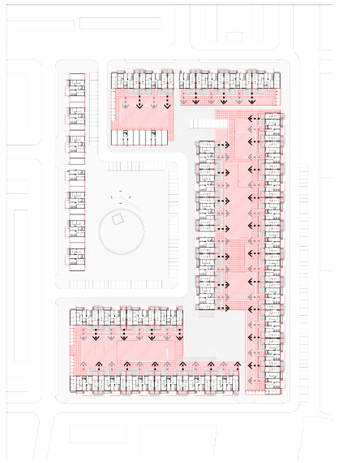
NEW Rear Elevation

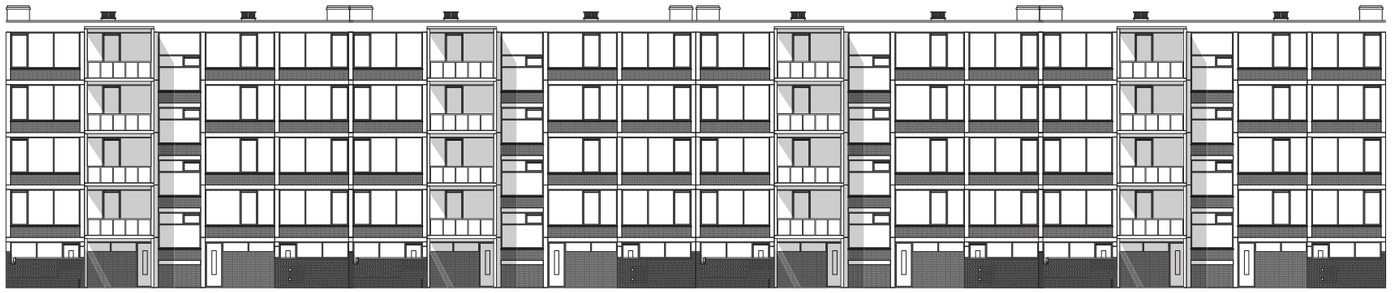
Facade Design

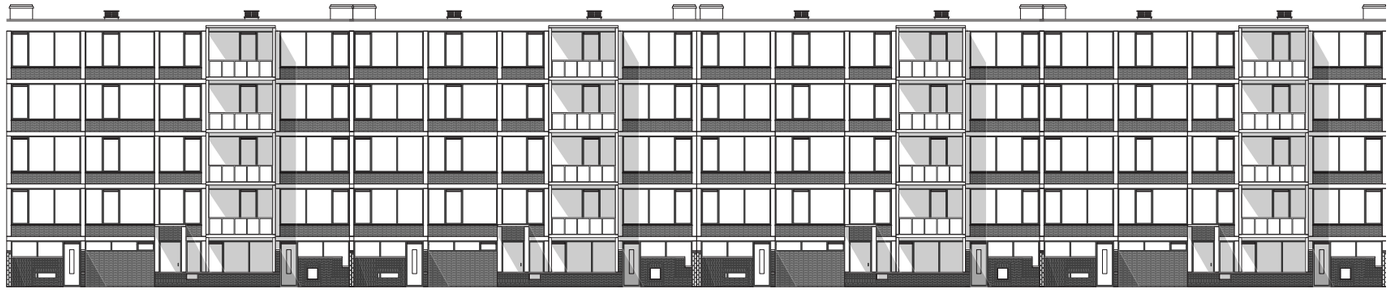
Facade Design

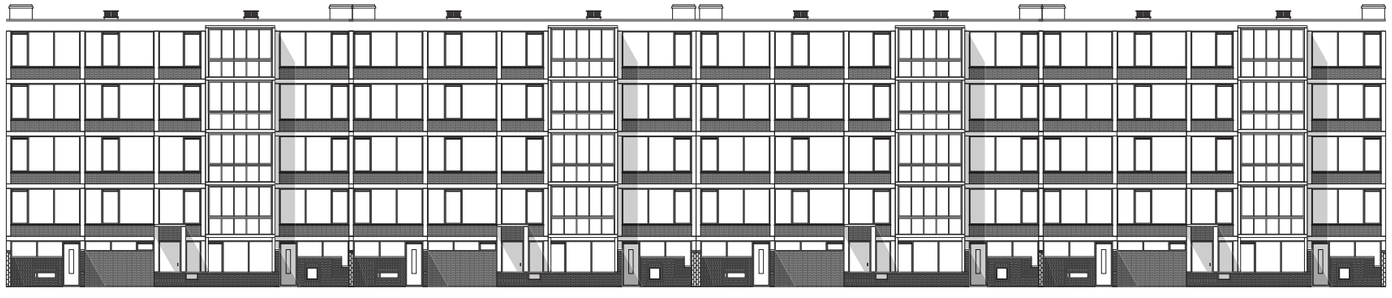
Facade Design

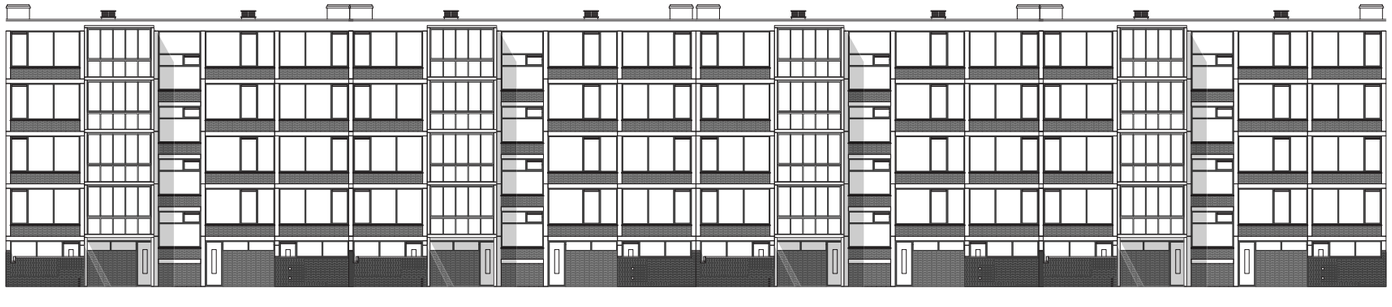
Facade Design





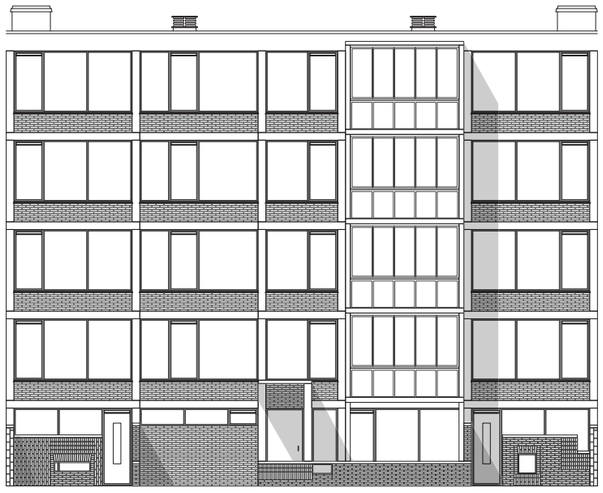


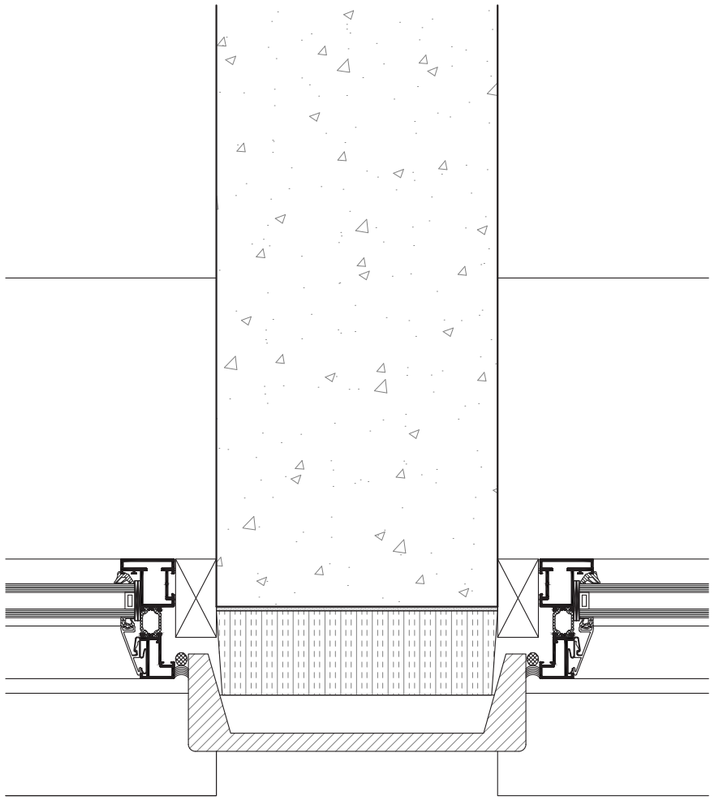


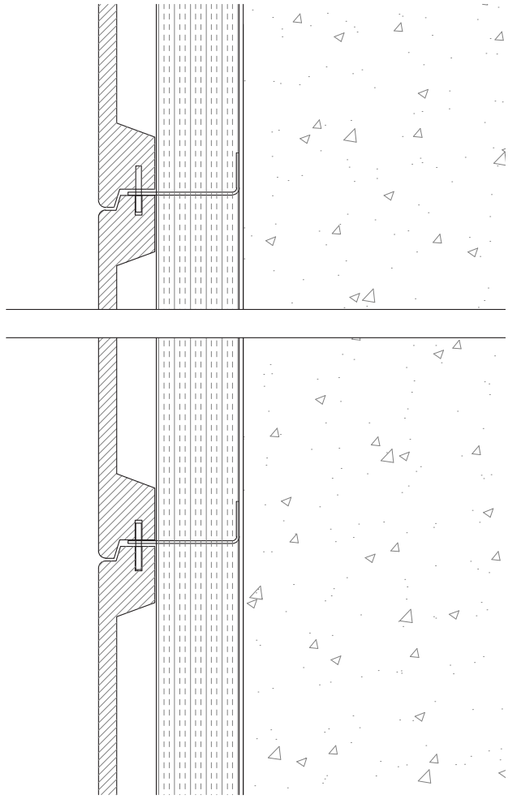


Materialisation

Concrete Grid Cladding

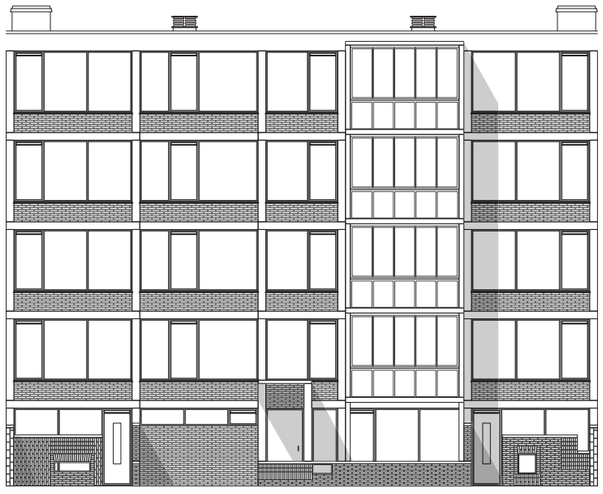


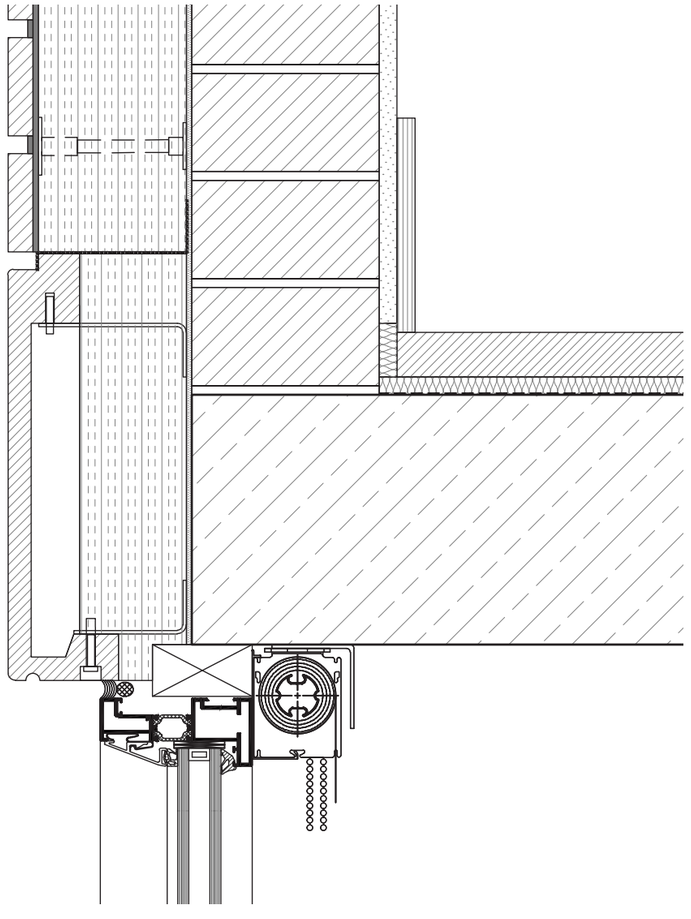




Materialisation

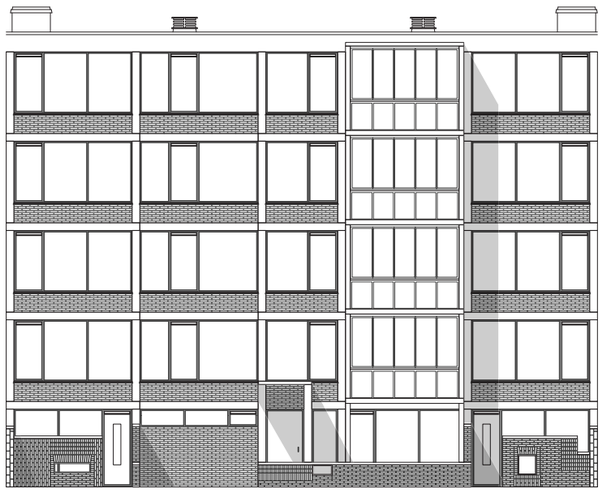
Concrete Grid Cladding

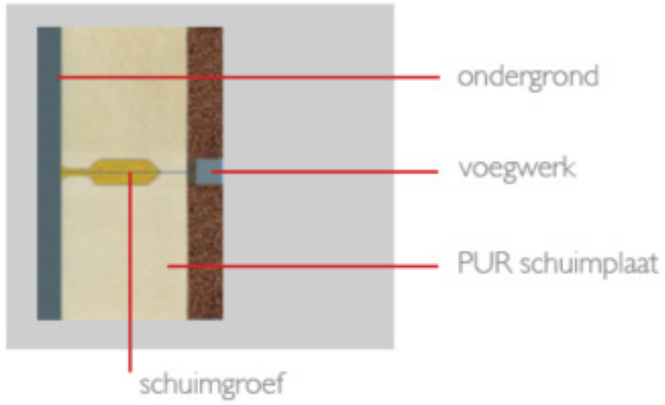


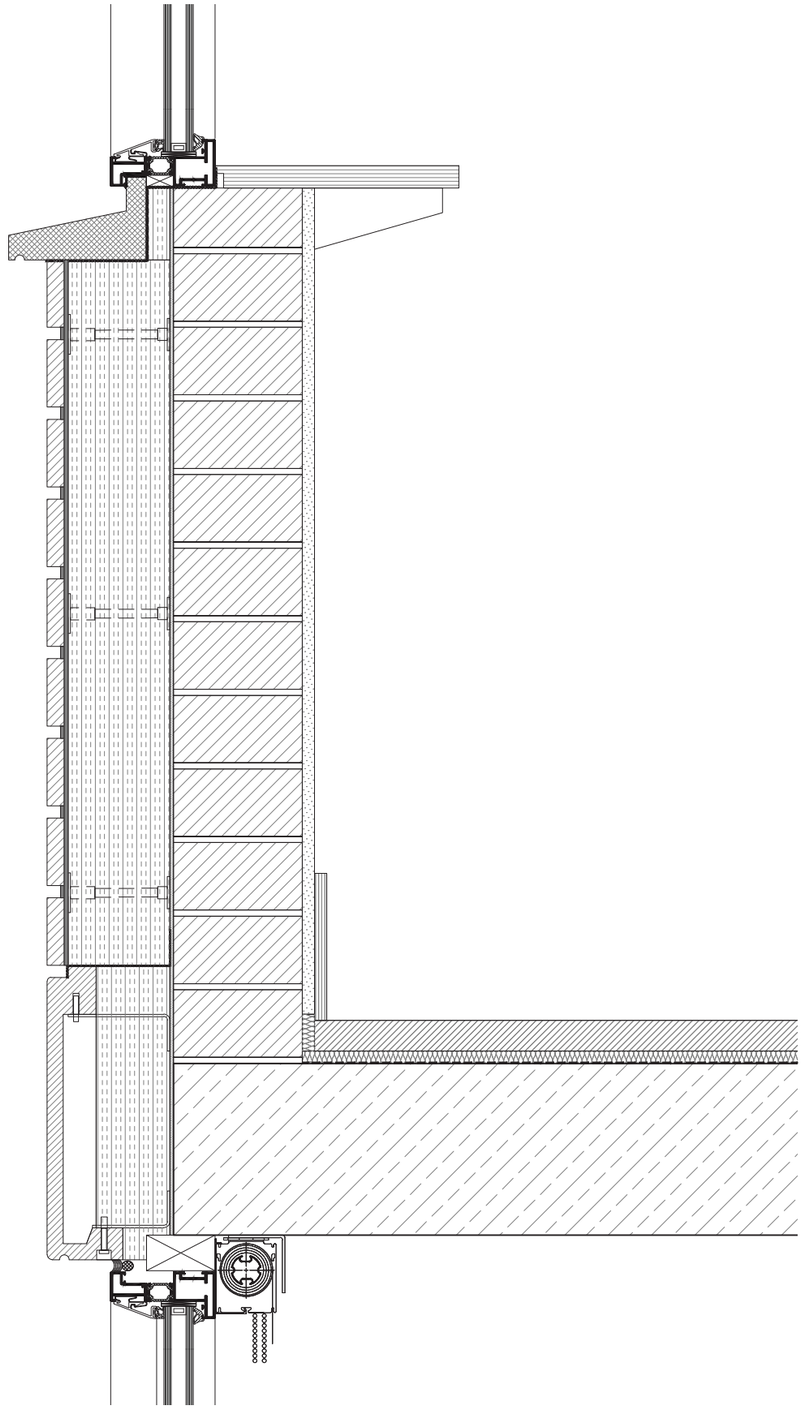


Materialisation

Thermo Steen Cladding

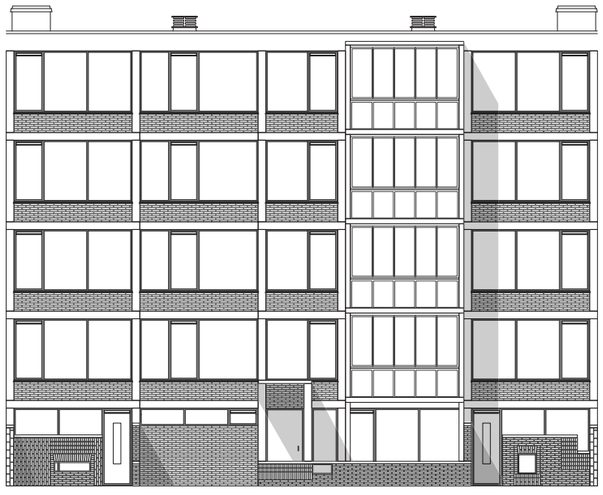


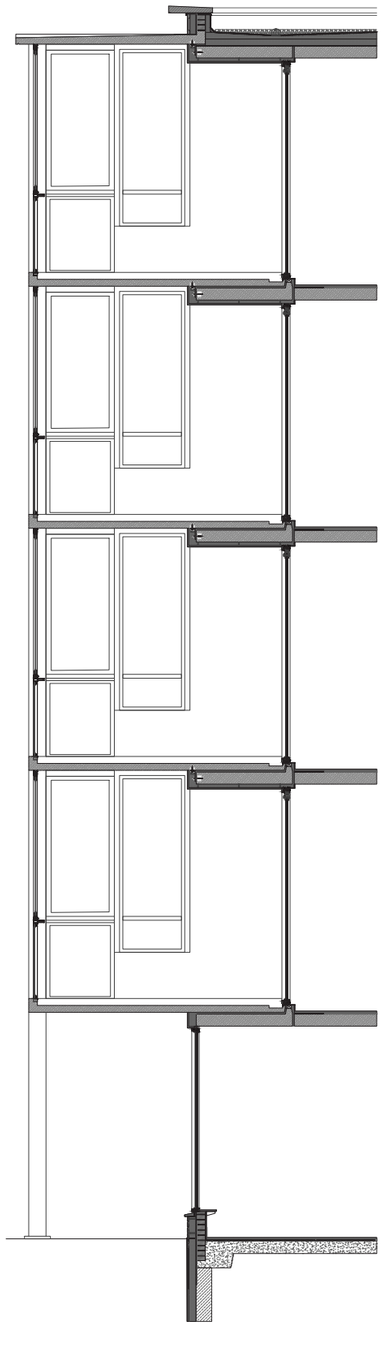


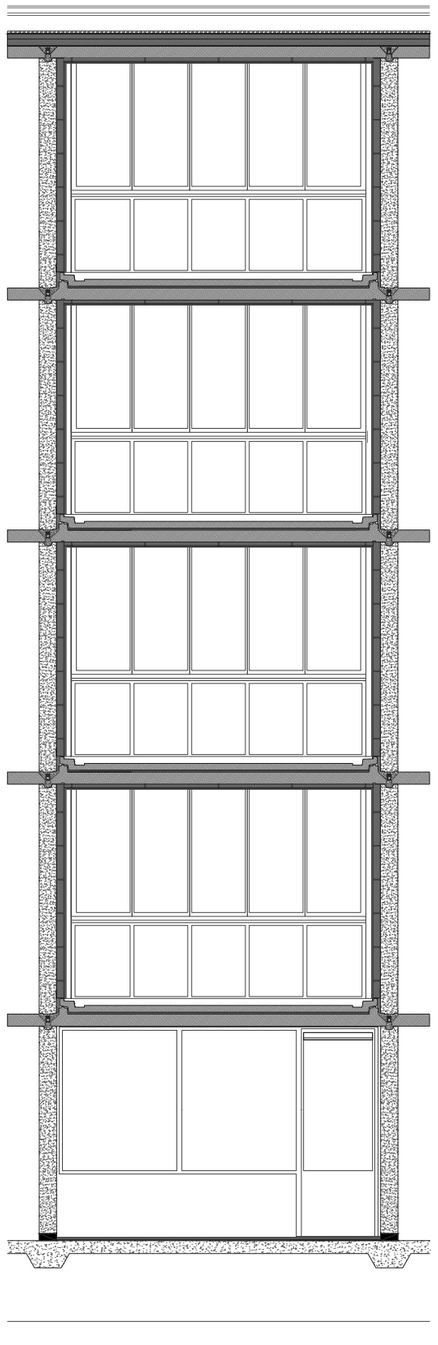


Materialisation

Balcony Structure

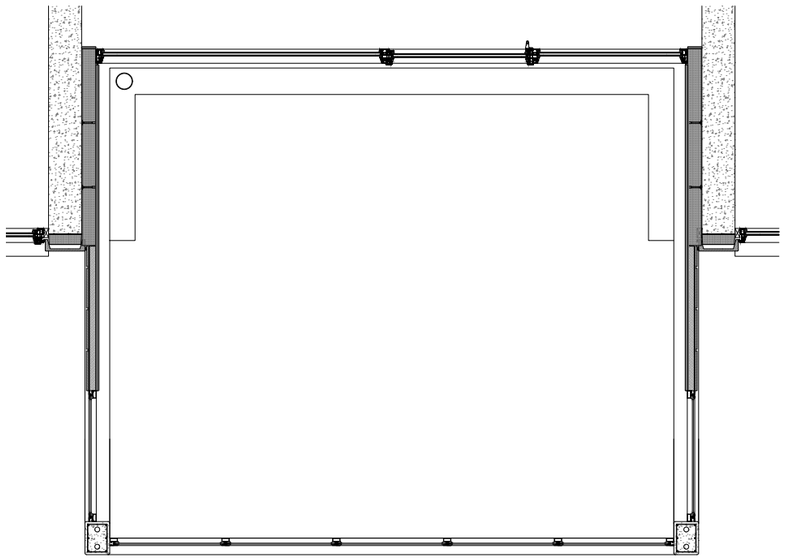


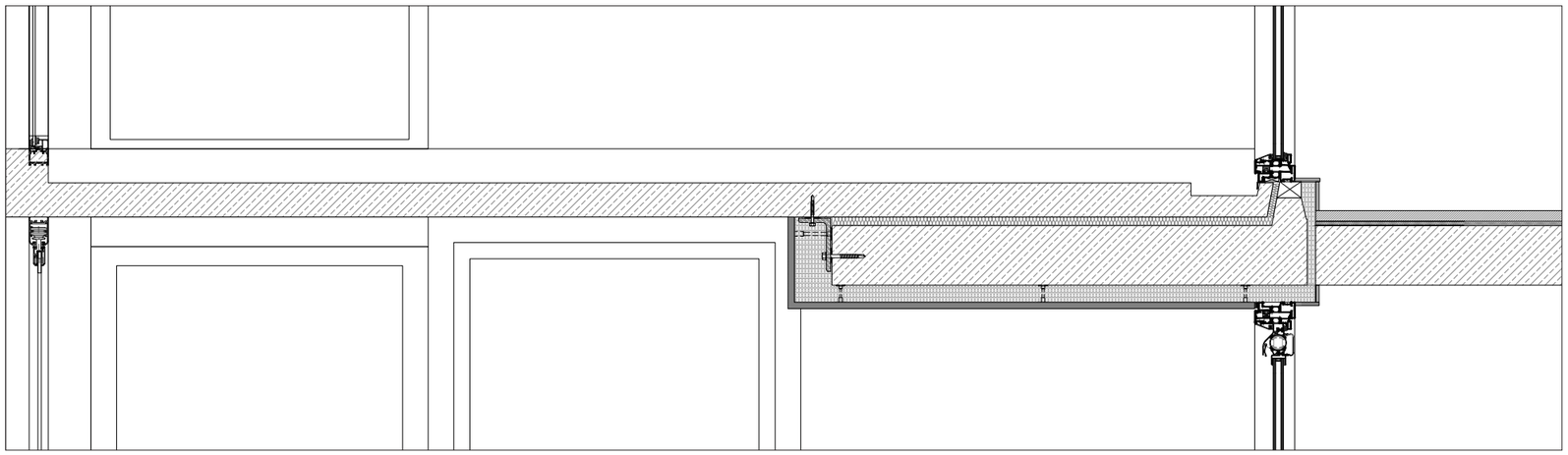


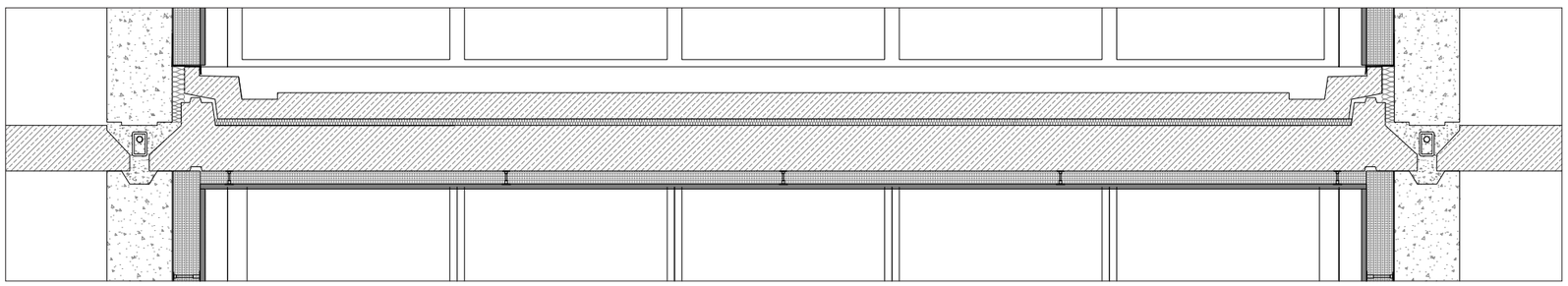


Materialisation

Balcony Structure

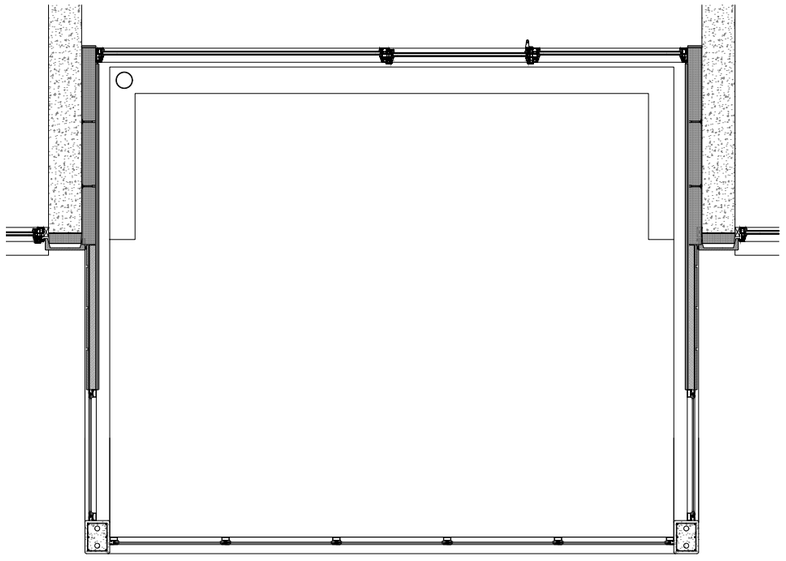


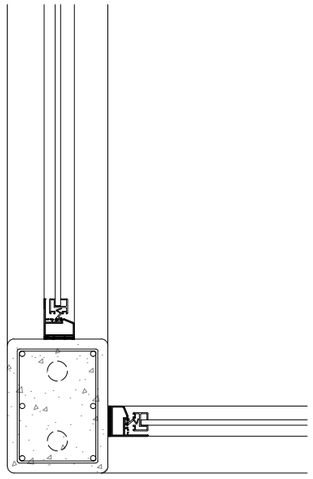


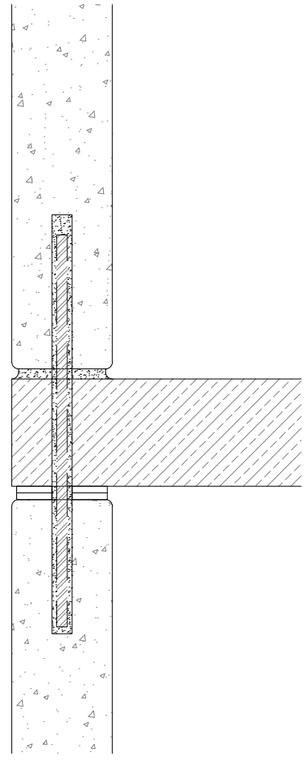


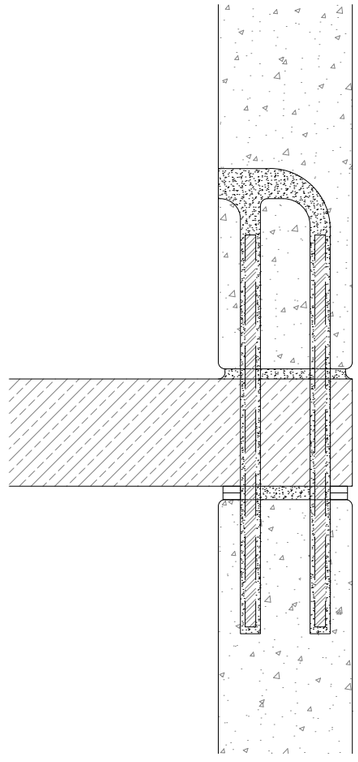
Materialisation

Balcony Structure



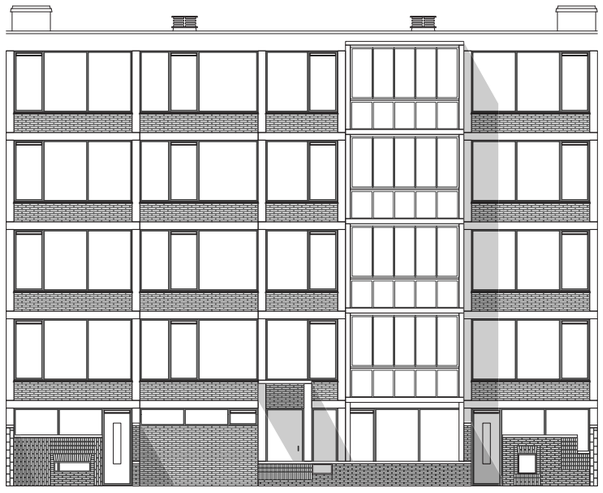






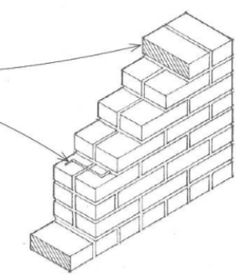
Materialisation

Masonry Wall_Structure

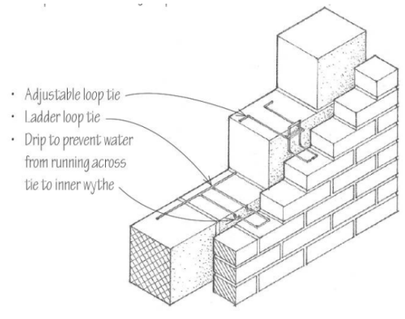


UNREINFORCED MASONRY WALL

- Wythes may be bonded by masonry headers or by metal ties.
- Masonry headers should compose at least 4% of exposed face area, with a vertical and horizontal spacing of not less than 24" (610).
- Metal ties should conform to requirements for cavity walls.

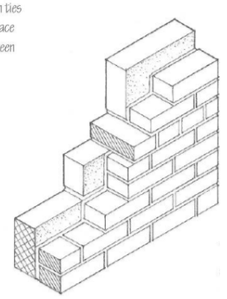


Solid masonry

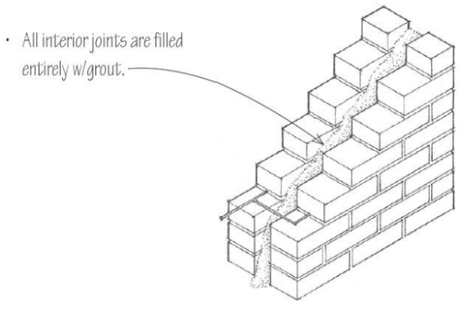


Cavity wall

5/8" (16) minimum mortar cover between ties or joint reinforcement and any exposed face
1/4" (6) minimum mortar thickness between masonry and ties or joint reinforcement



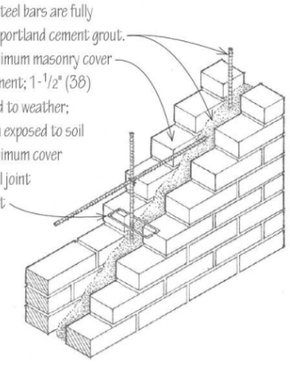
Solid masonry



Grouted masonry

REINFORCED MASONRY WALL

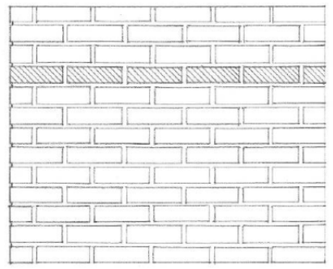
- Reinforcing steel bars are fully embedded in portland cement grout.
- 3/4" (75) minimum masonry cover for reinforcement; 1-1/2" (38) when exposed to weather; 2" (51) when exposed to soil
- 5/8" (16) minimum cover for horizontal joint reinforcement



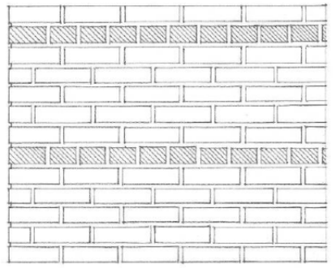
Reinforced grouted masonry

Materialisation

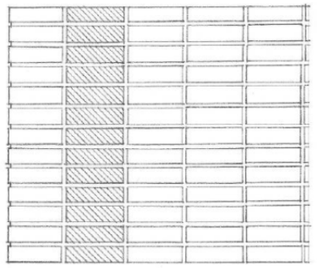
Masonry Wall_Bonding



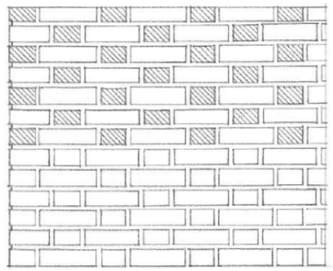
running bond



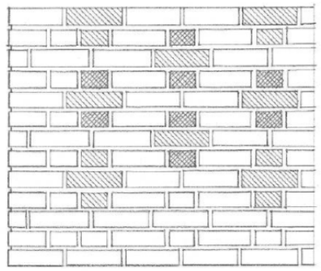
common bond



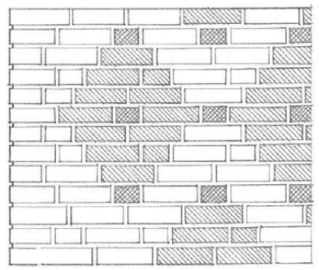
stack bond



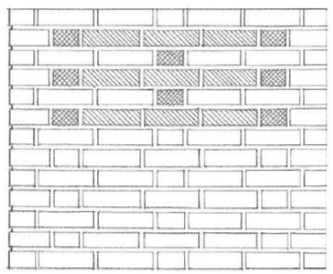
flemish bond



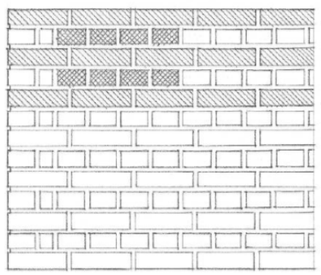
flemish cross bond



flemish diagonal bond



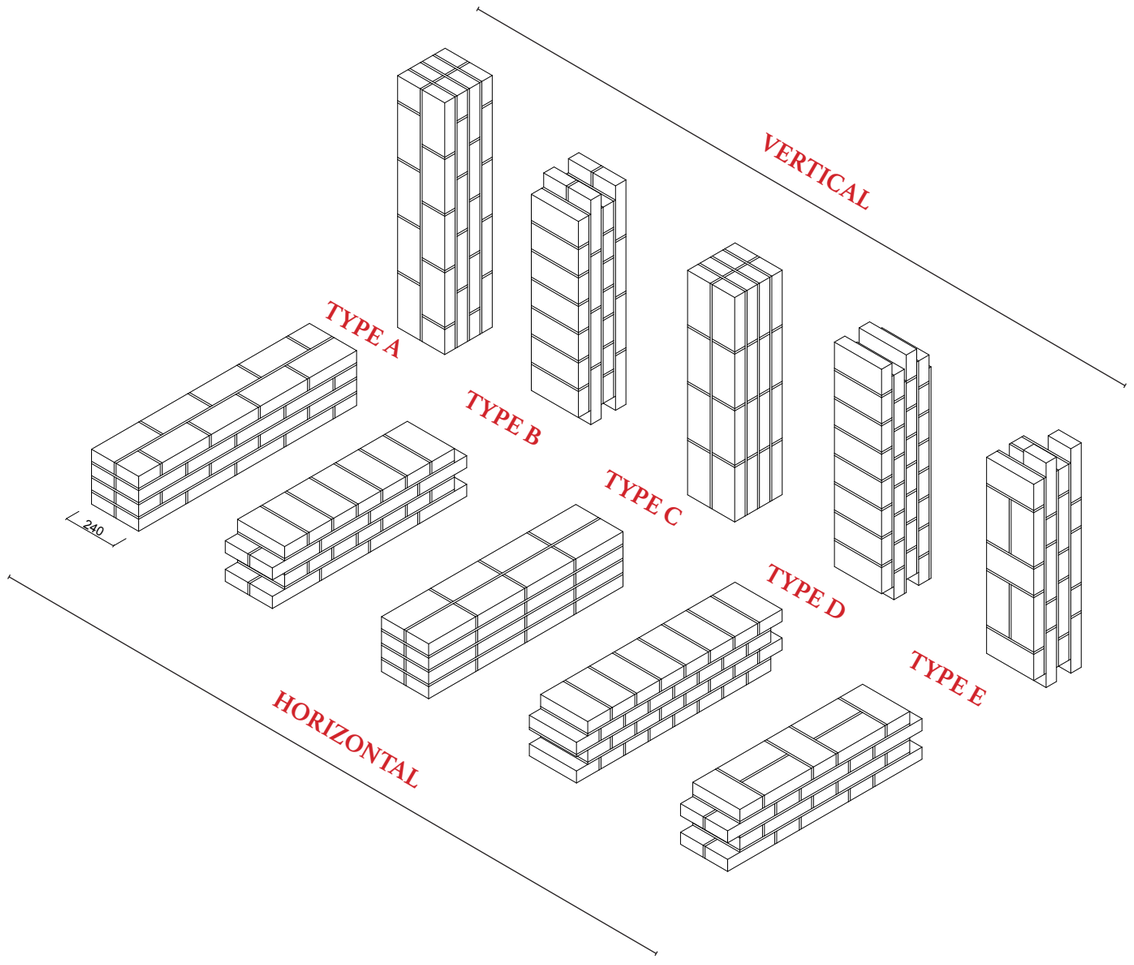
garden-wall bond



English bond

Materialisation

Masonry Wall_xxxx?

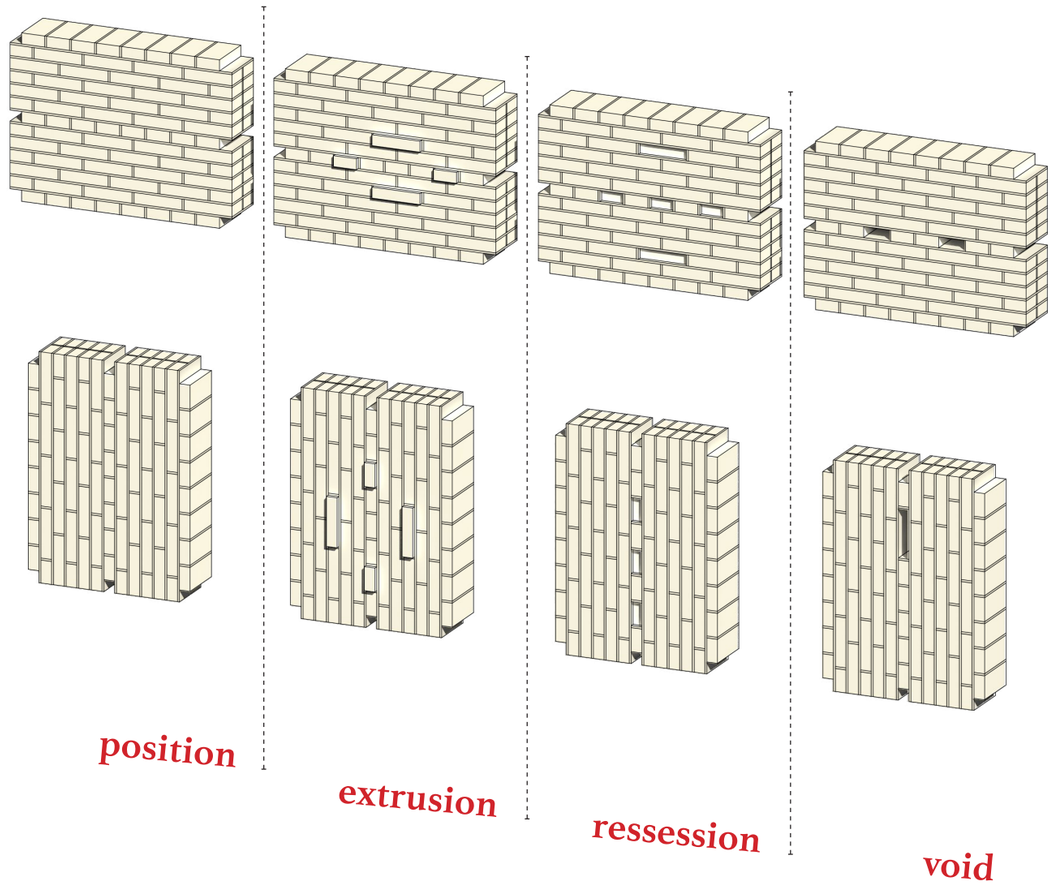


BRICK BONDING

brick module: 240 x 115 x 53 mm
joint: 10 mm
wall thickness: 240 mm

Materialisation

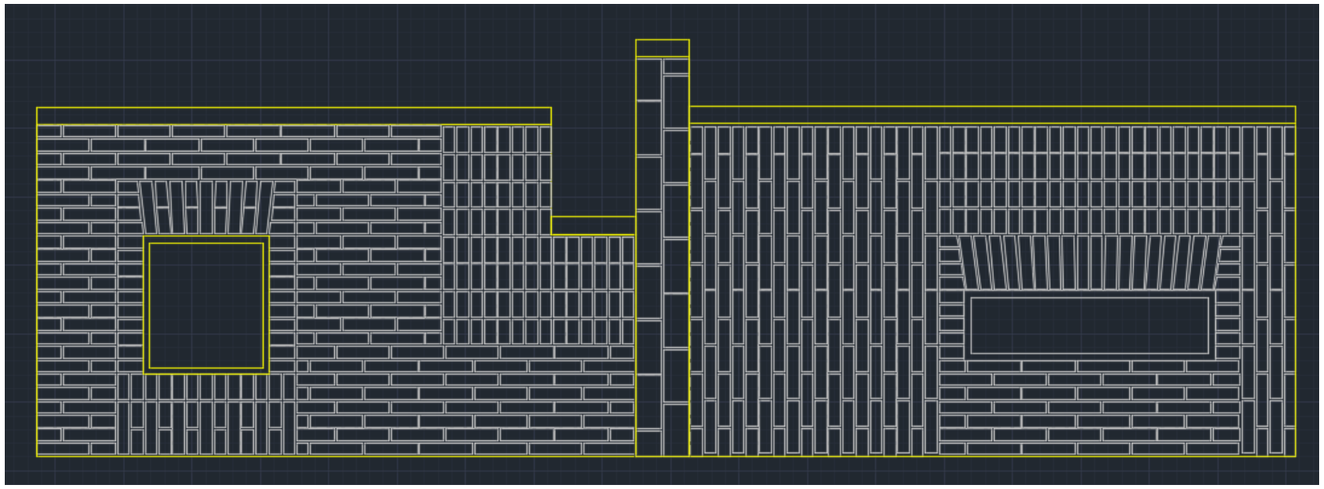
Masonry Wall_Bonding Variety



eg: Type--COMMON BOND

Materialisation

Masonry Wall_ Elevation



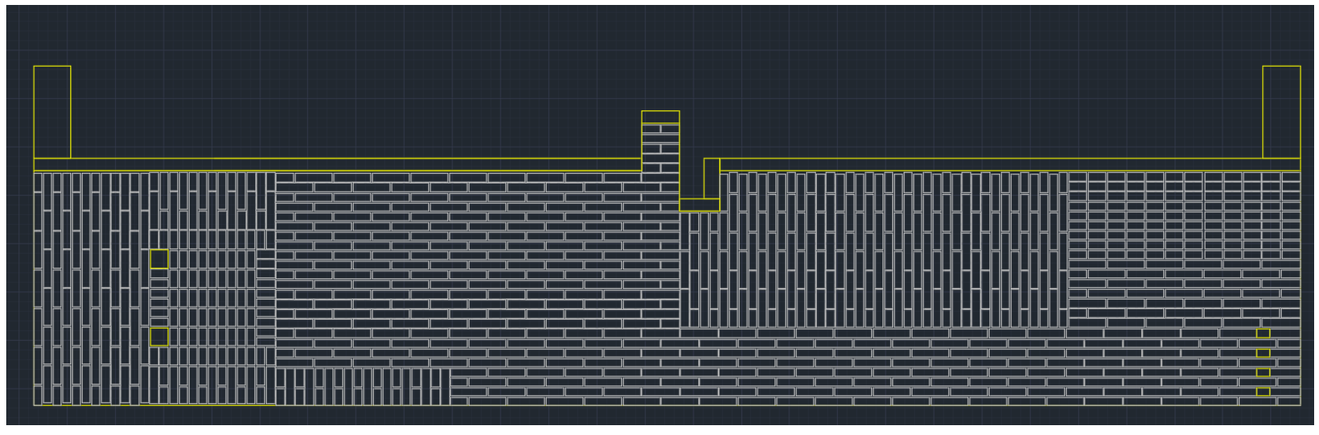
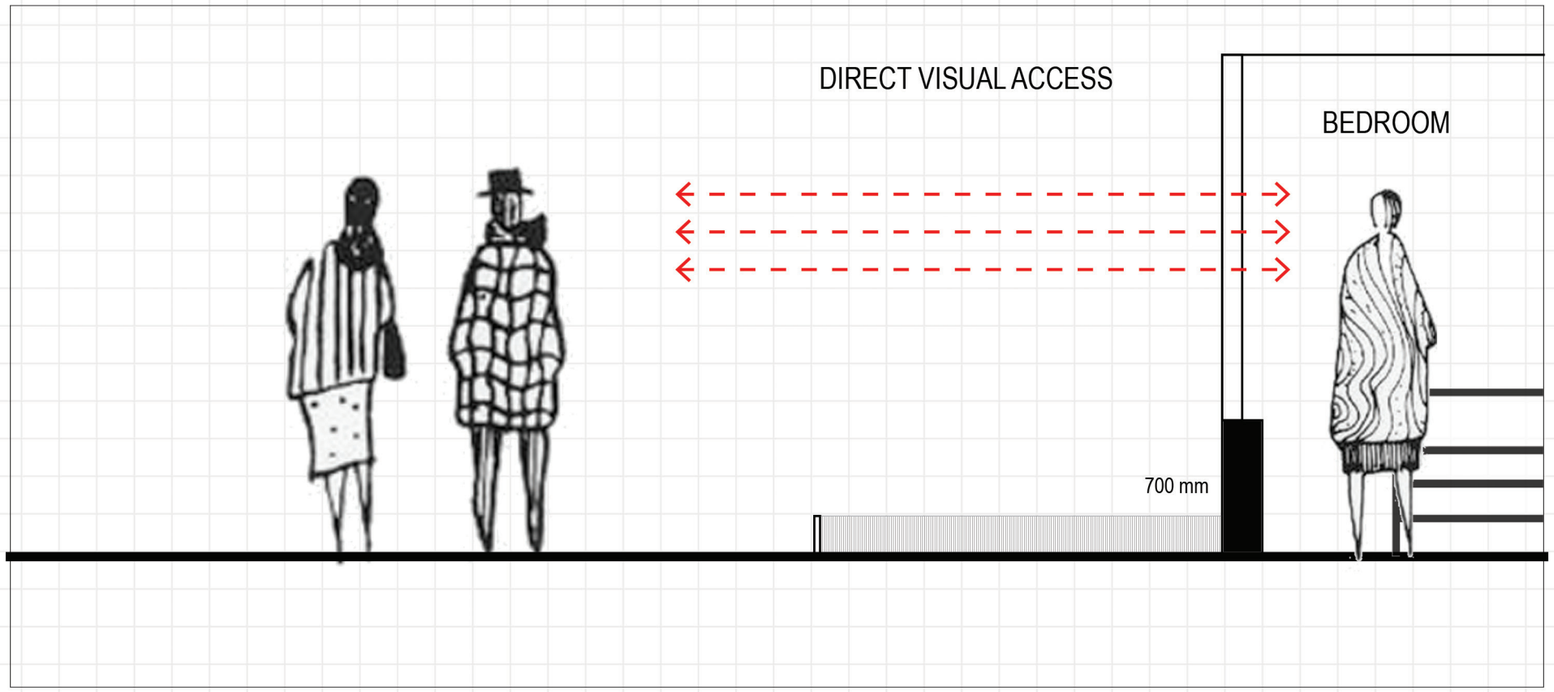


Figure x Alvar Aalto, Paradise Backyard, Muuratsalo Experimental House, Muuratsalo, Finlandia, 1953

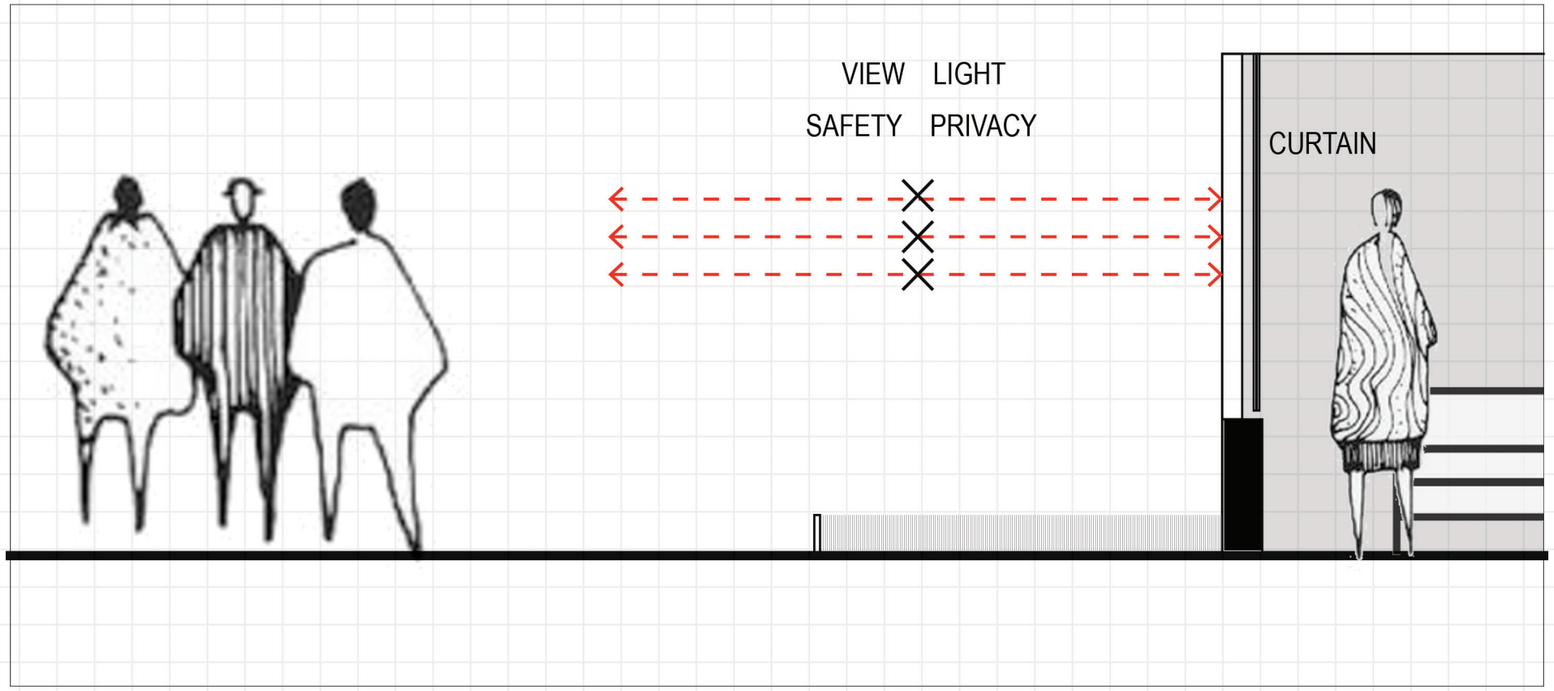
Zone Scale

1-Bay House_Private Entrance



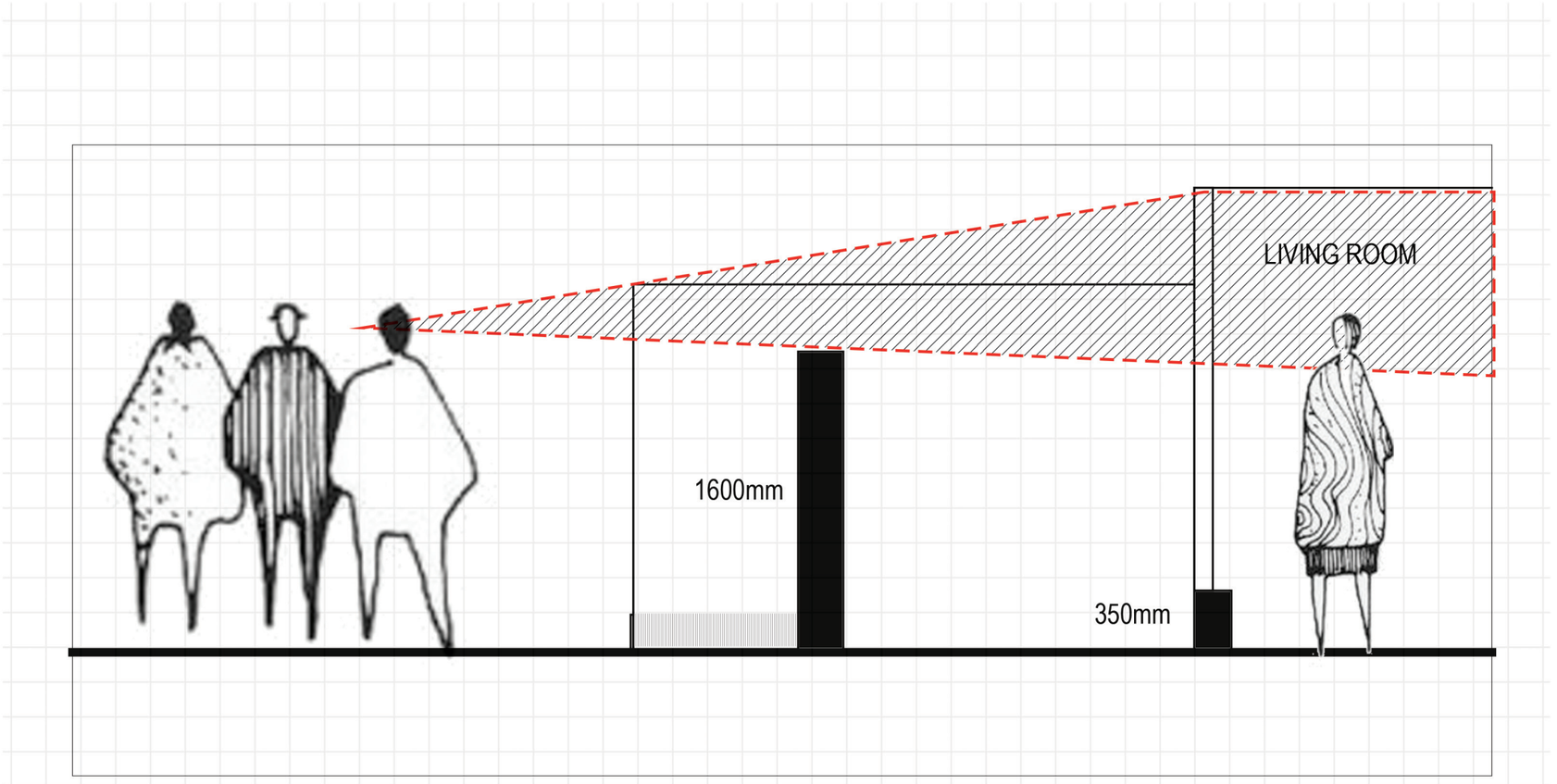
Zone Scale

1-Bay House_Private Entrance



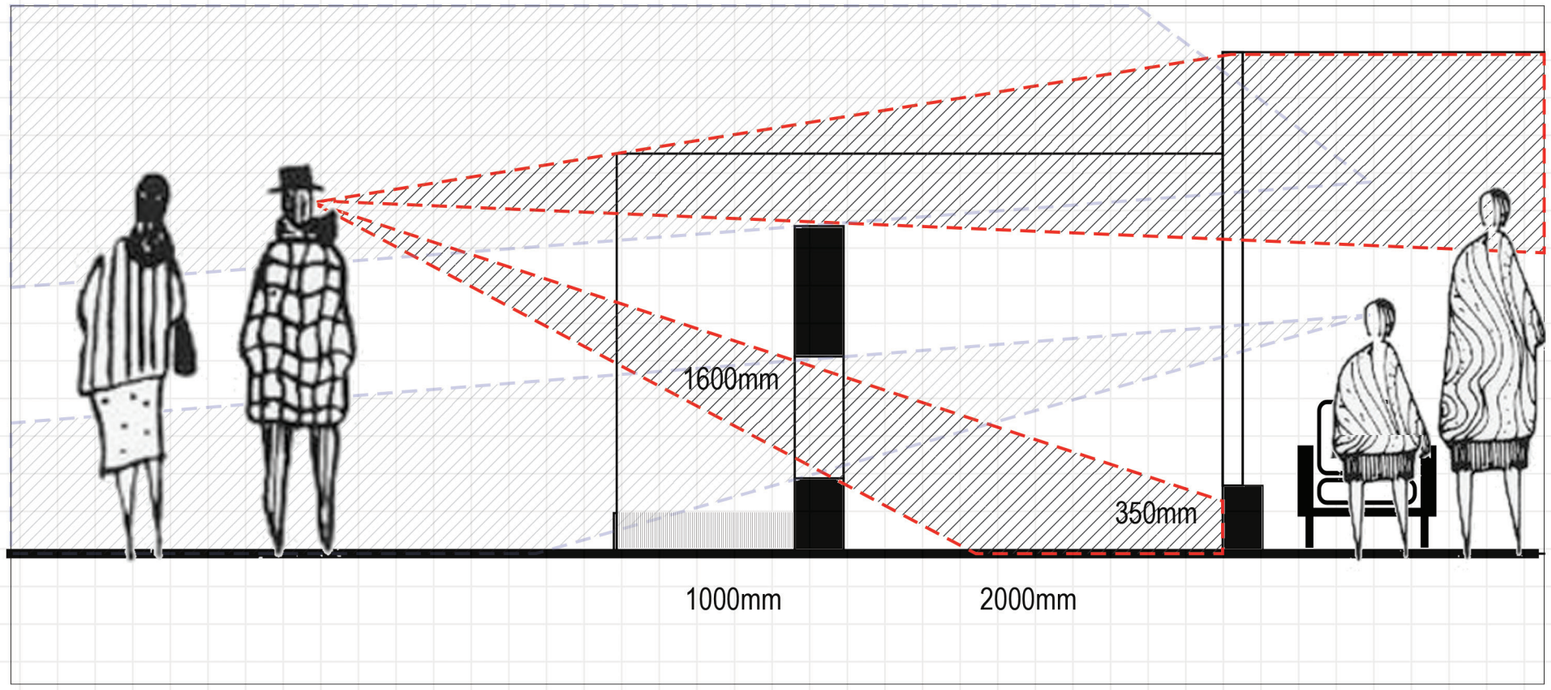
Zone Scale

1-Bay House_Private Entrance



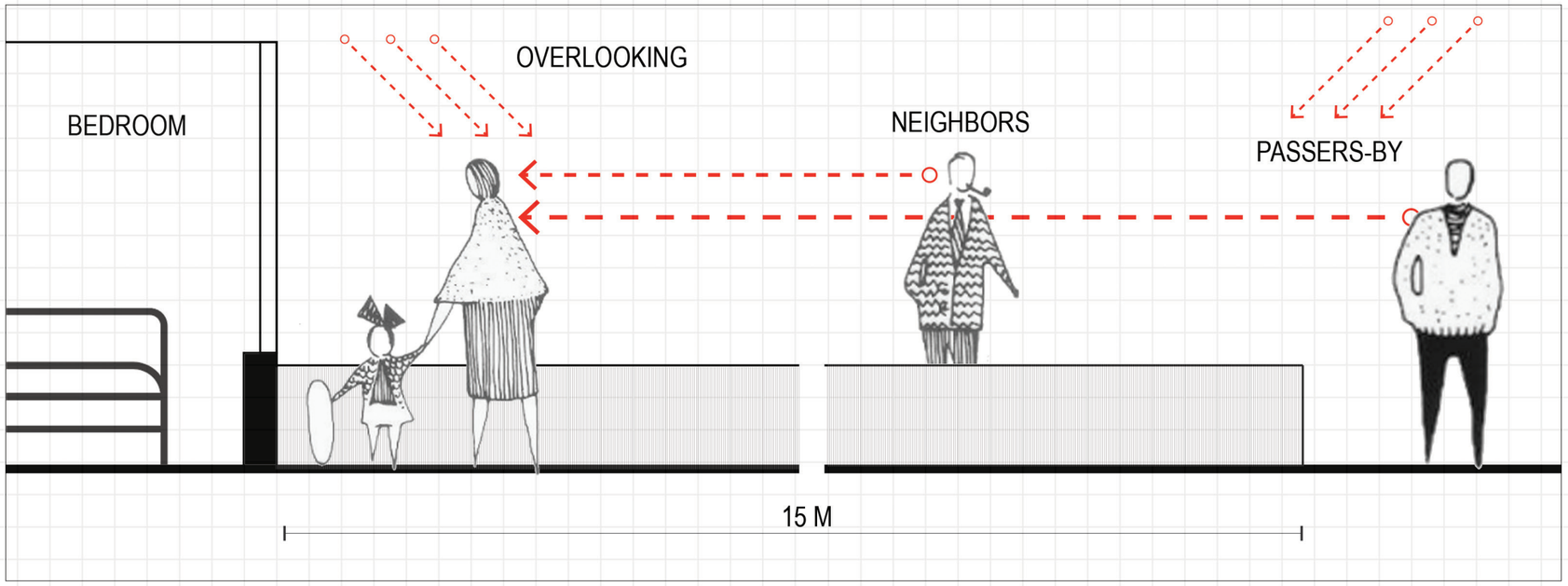
Zone Scale

1-Bay House_Private Entrance



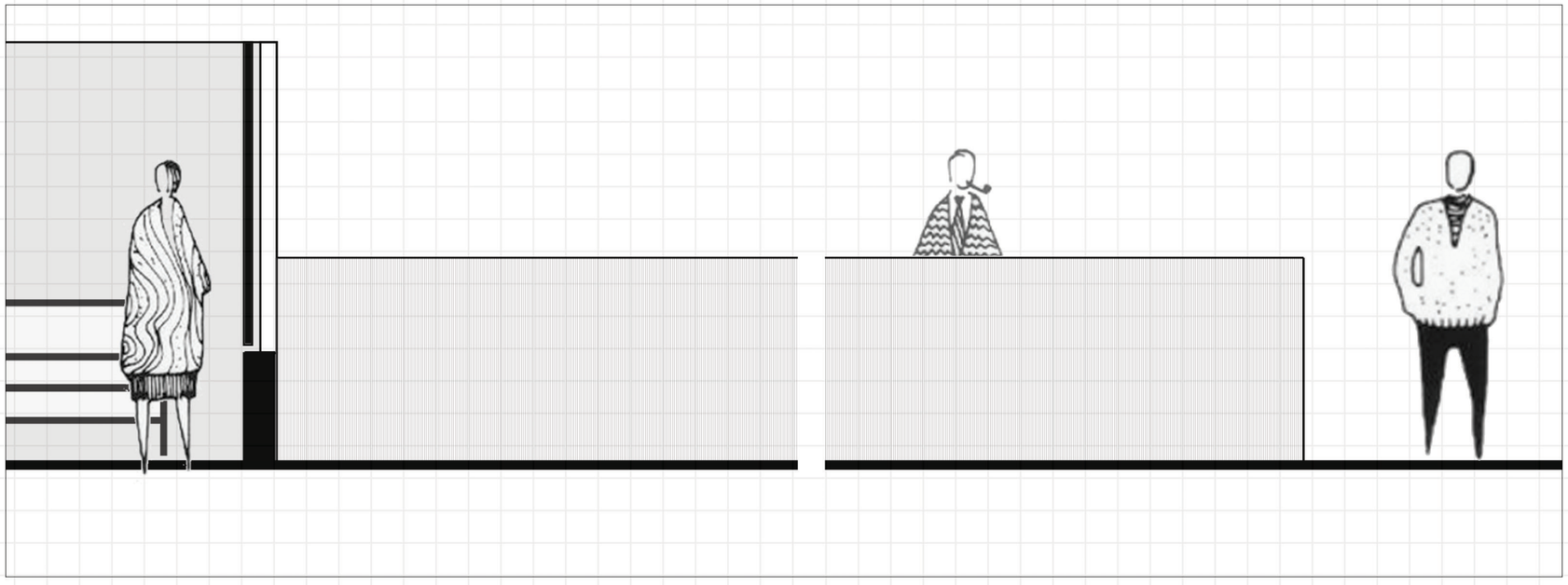
Zone Scale

1-Bay House_Private Garden



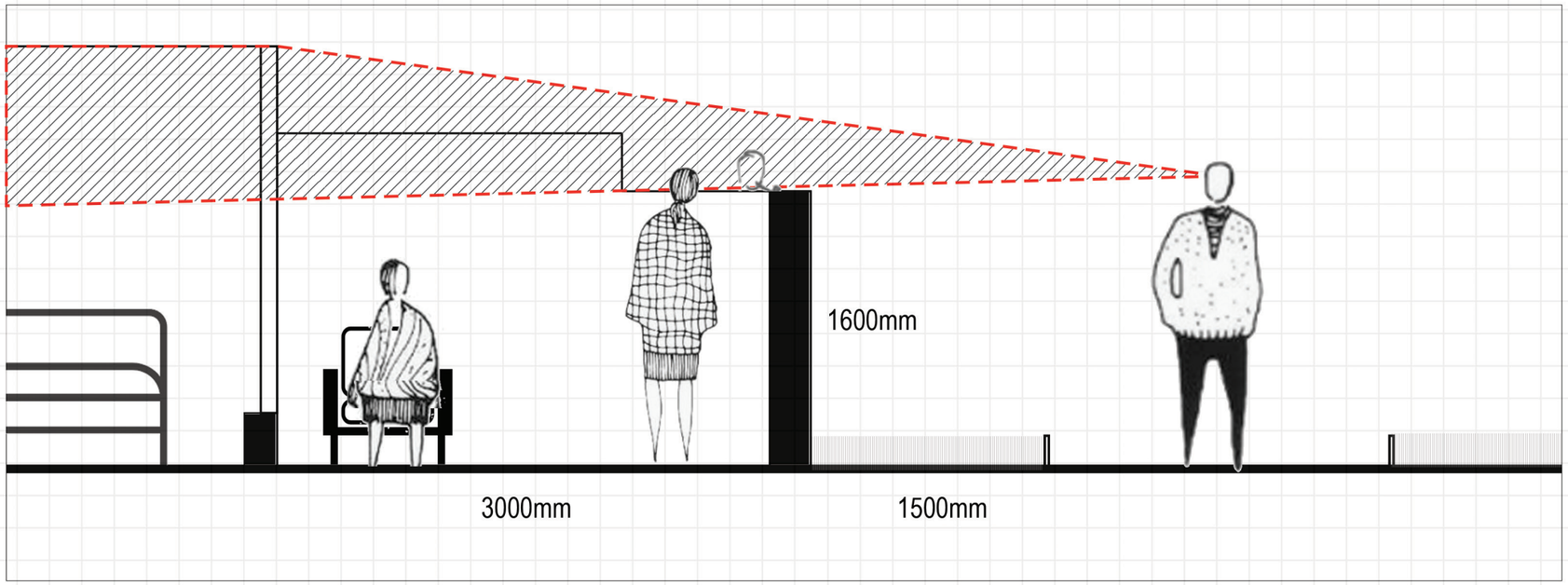
Zone Scale

1-Bay House_Private Garden



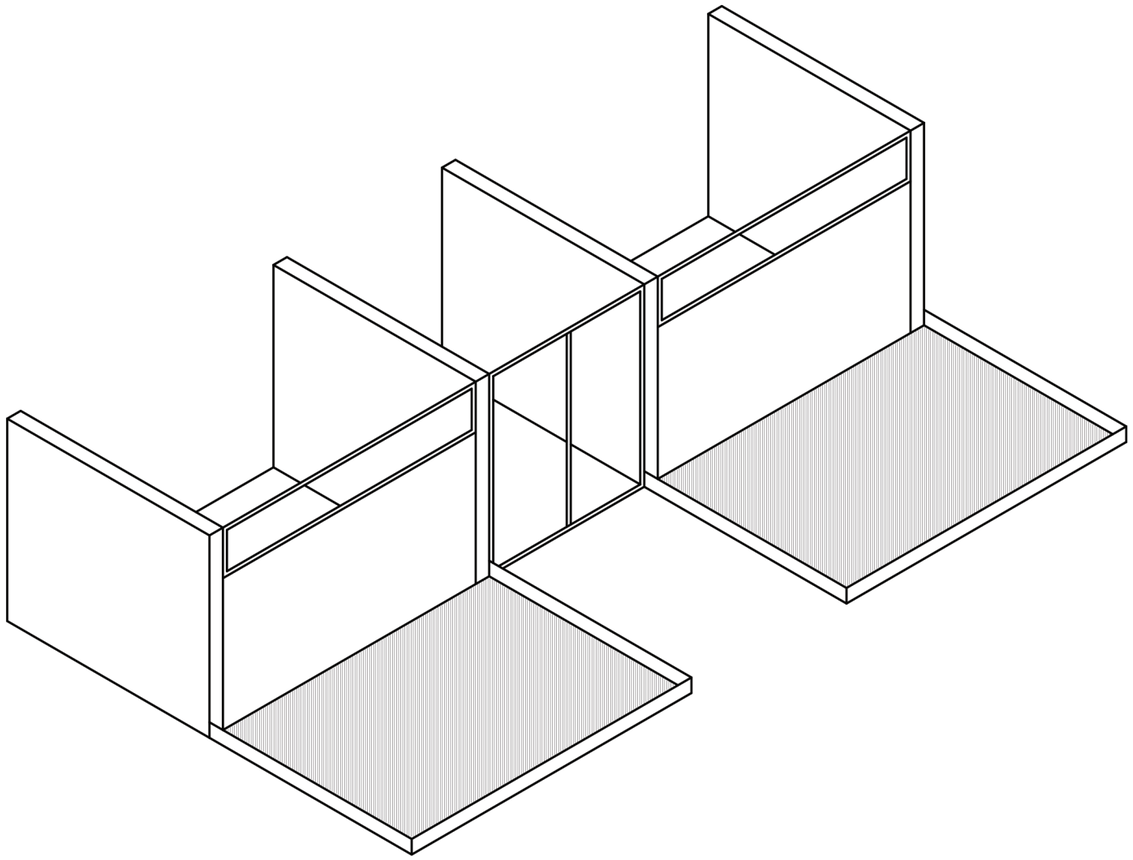
Zone Scale

1-Bay House_Private Garden



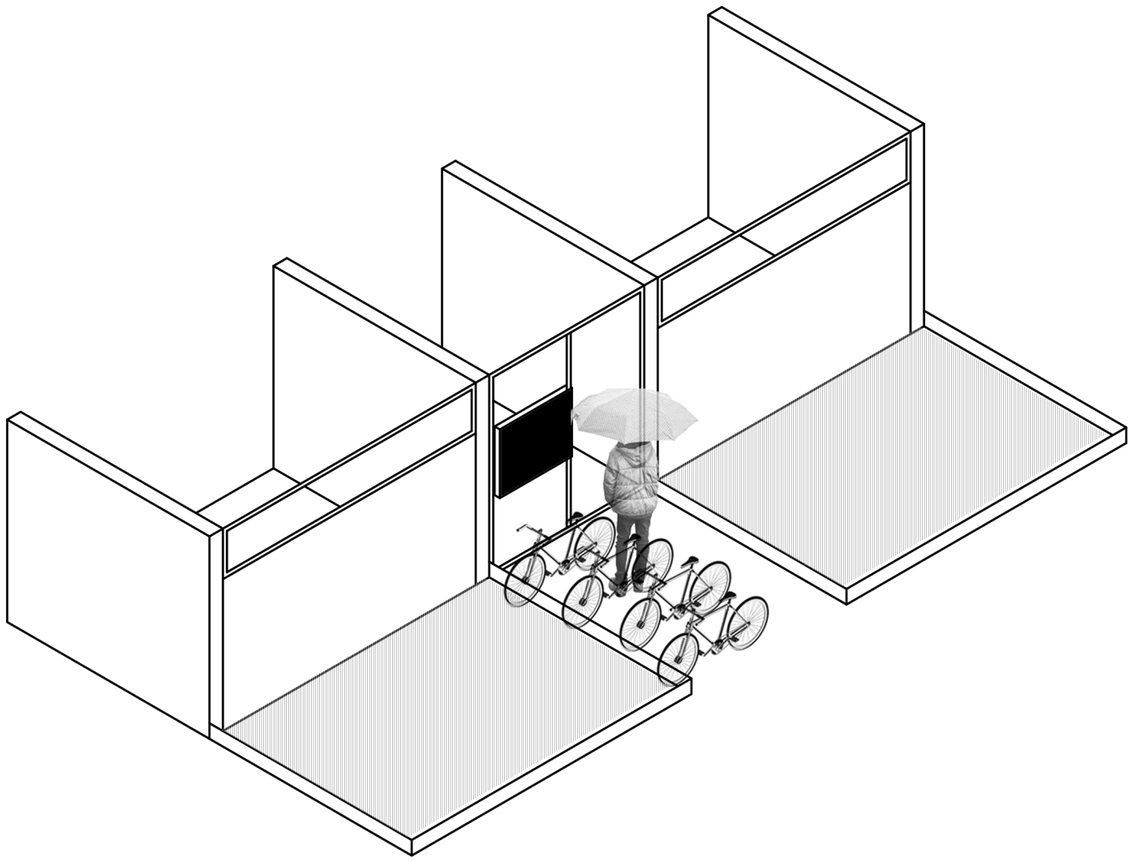
Zone Scale

Portiek Entrance



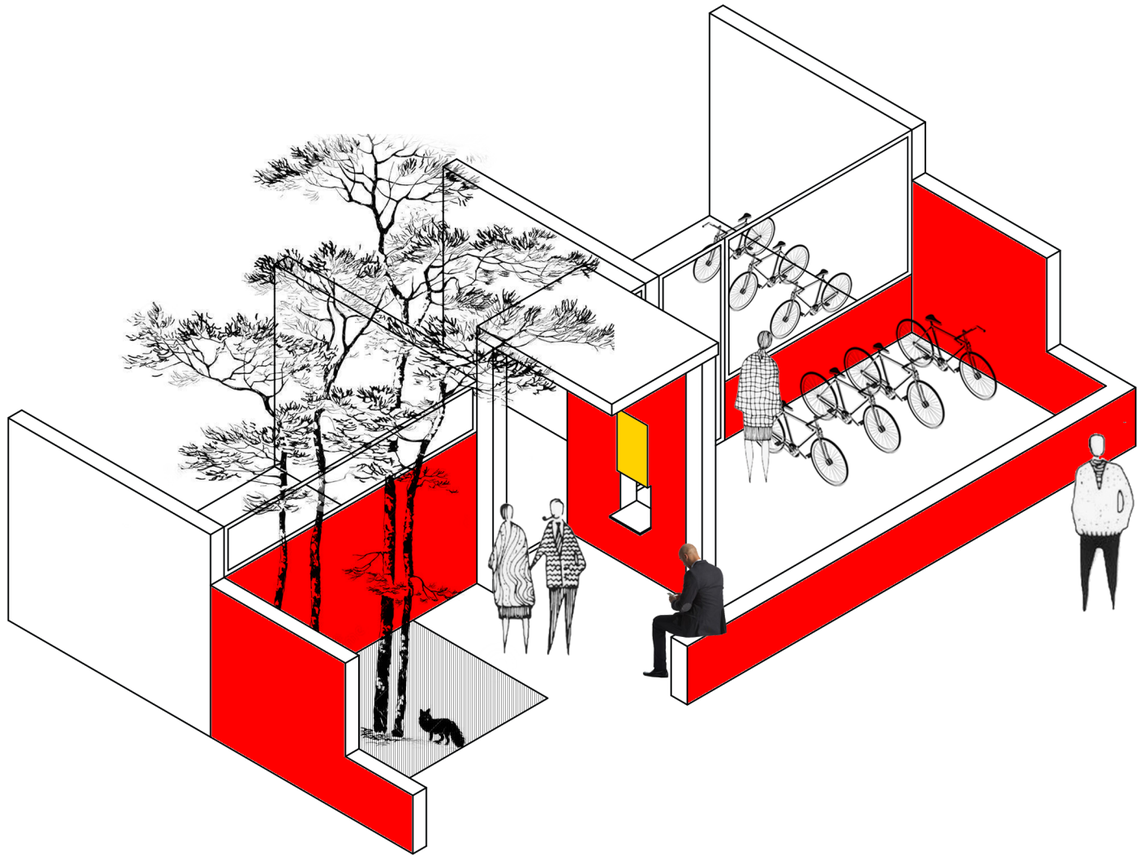
Zone Scale

Portiek Entrance



Zone Scale

Portiek Entrance

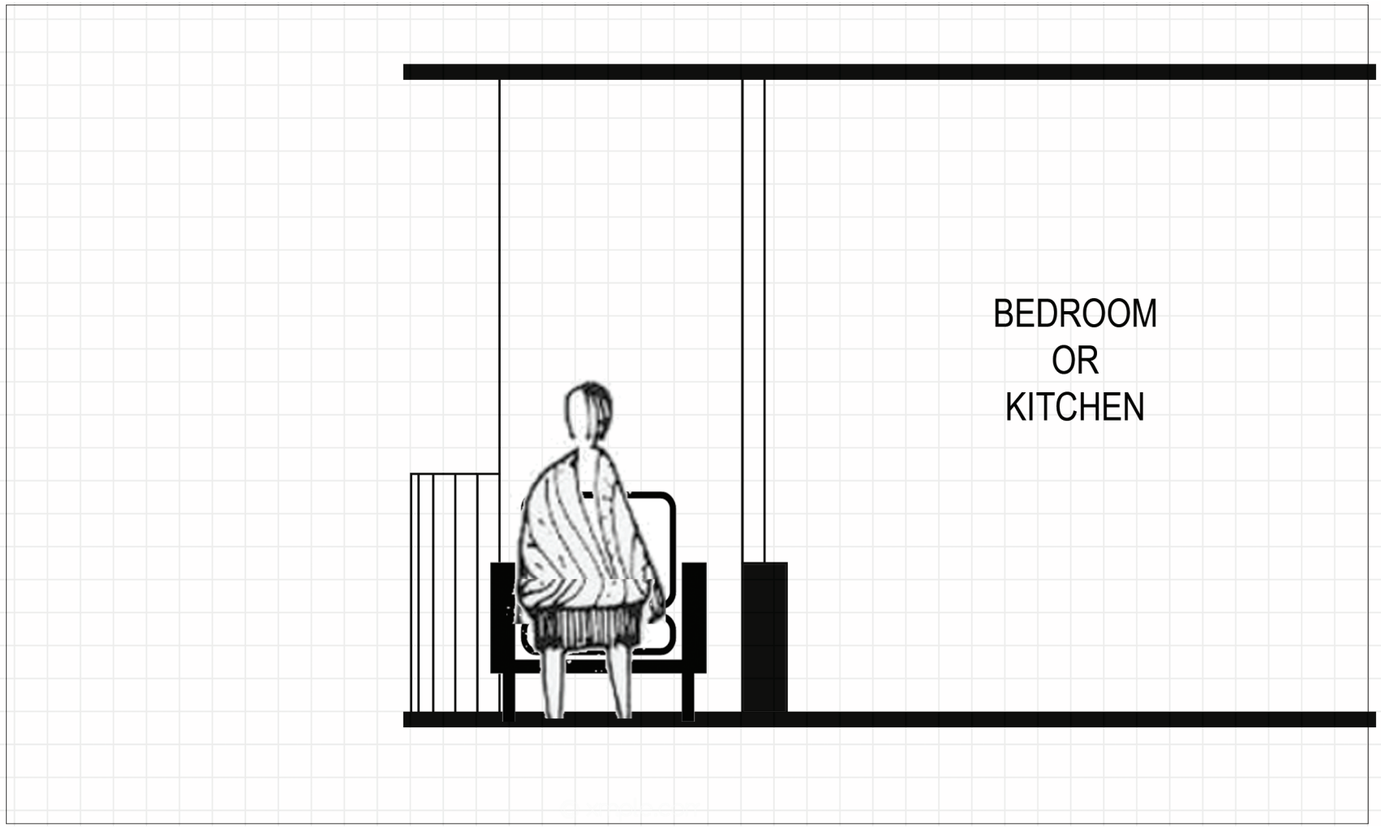


Zone Scale

1-4 Floor Apartment_Bonus Space|Balcony

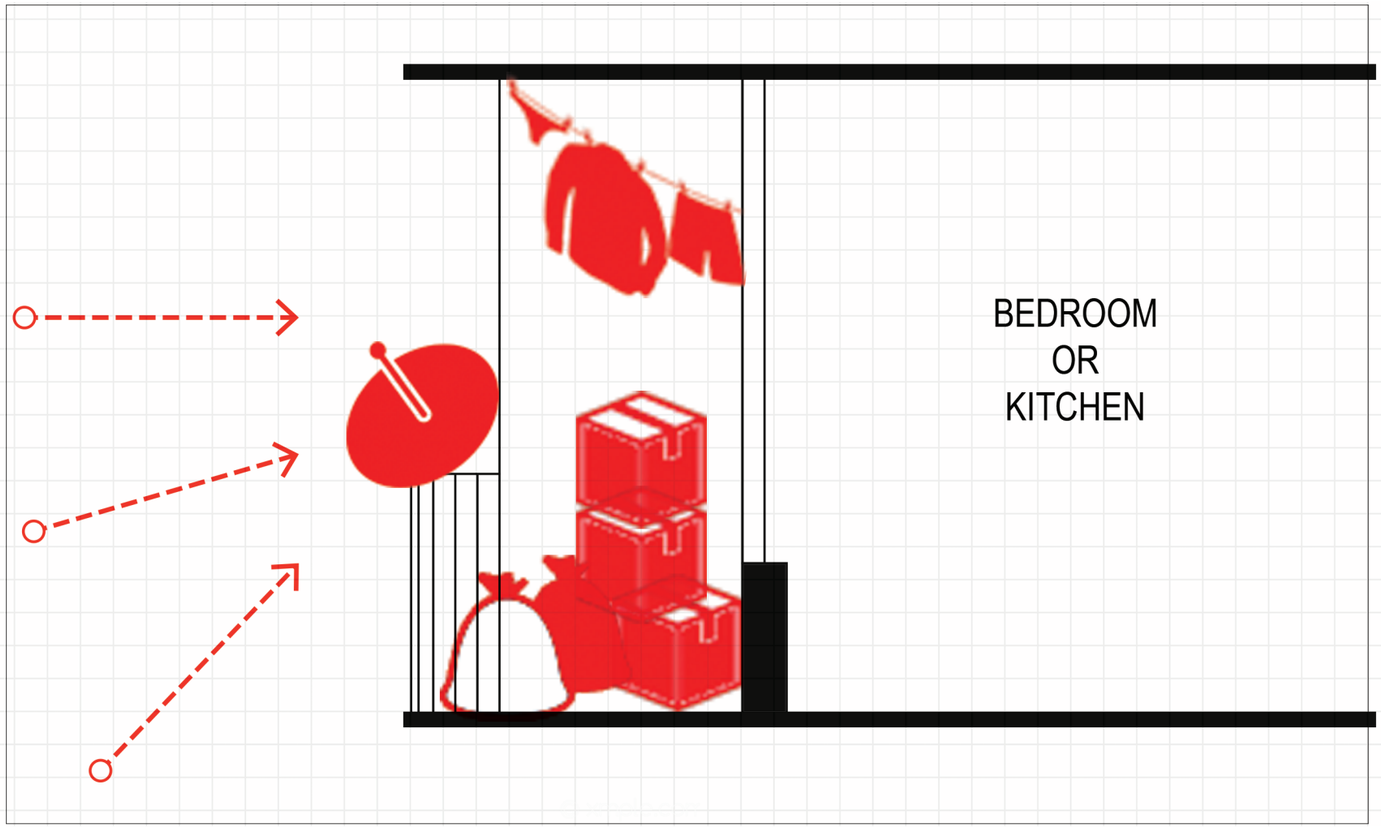
Zone Scale

1-4 Floor Apartment_Bonus Space|Balcony



Zone Scale

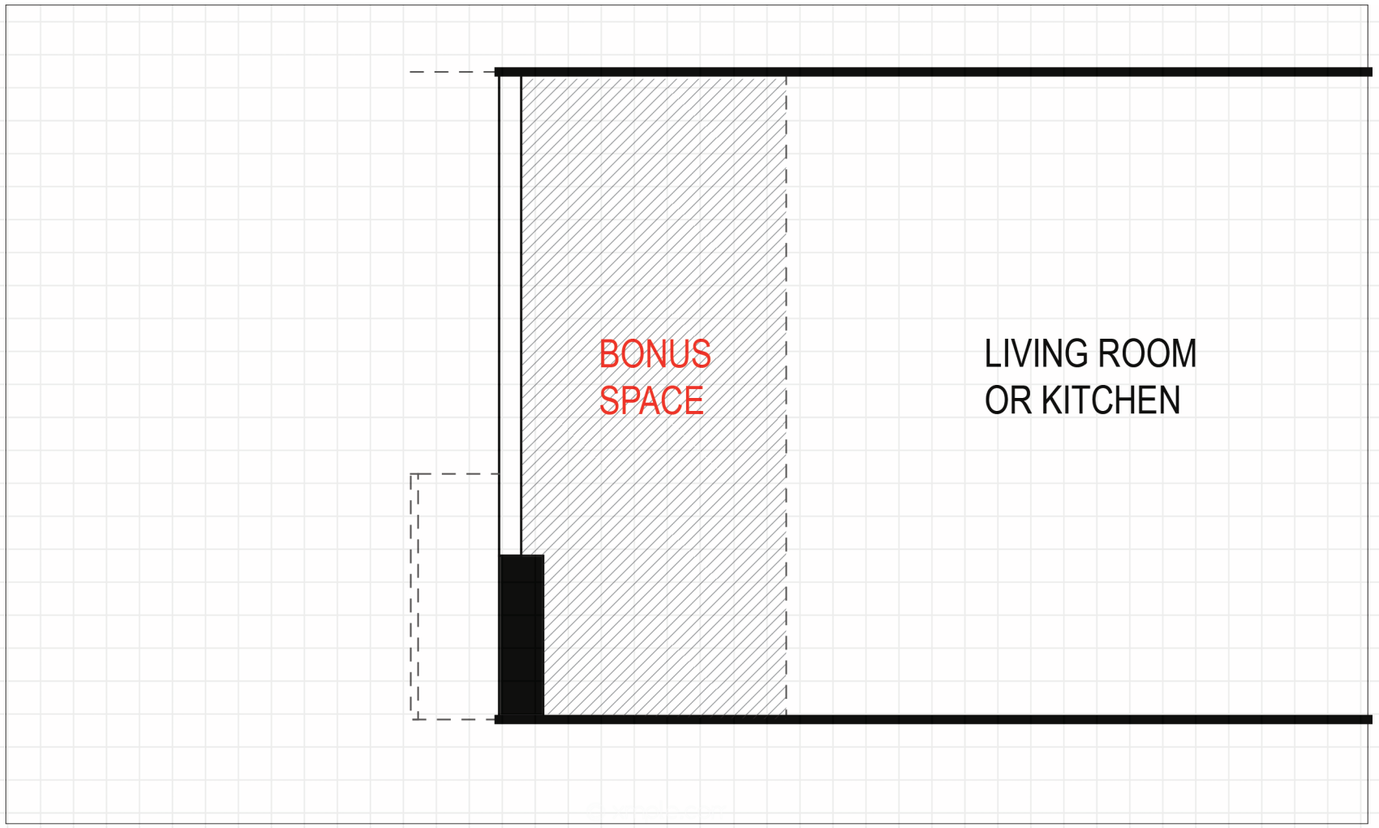
1-4 Floor Apartment_Bonus Space|Balcony



Zone Scale

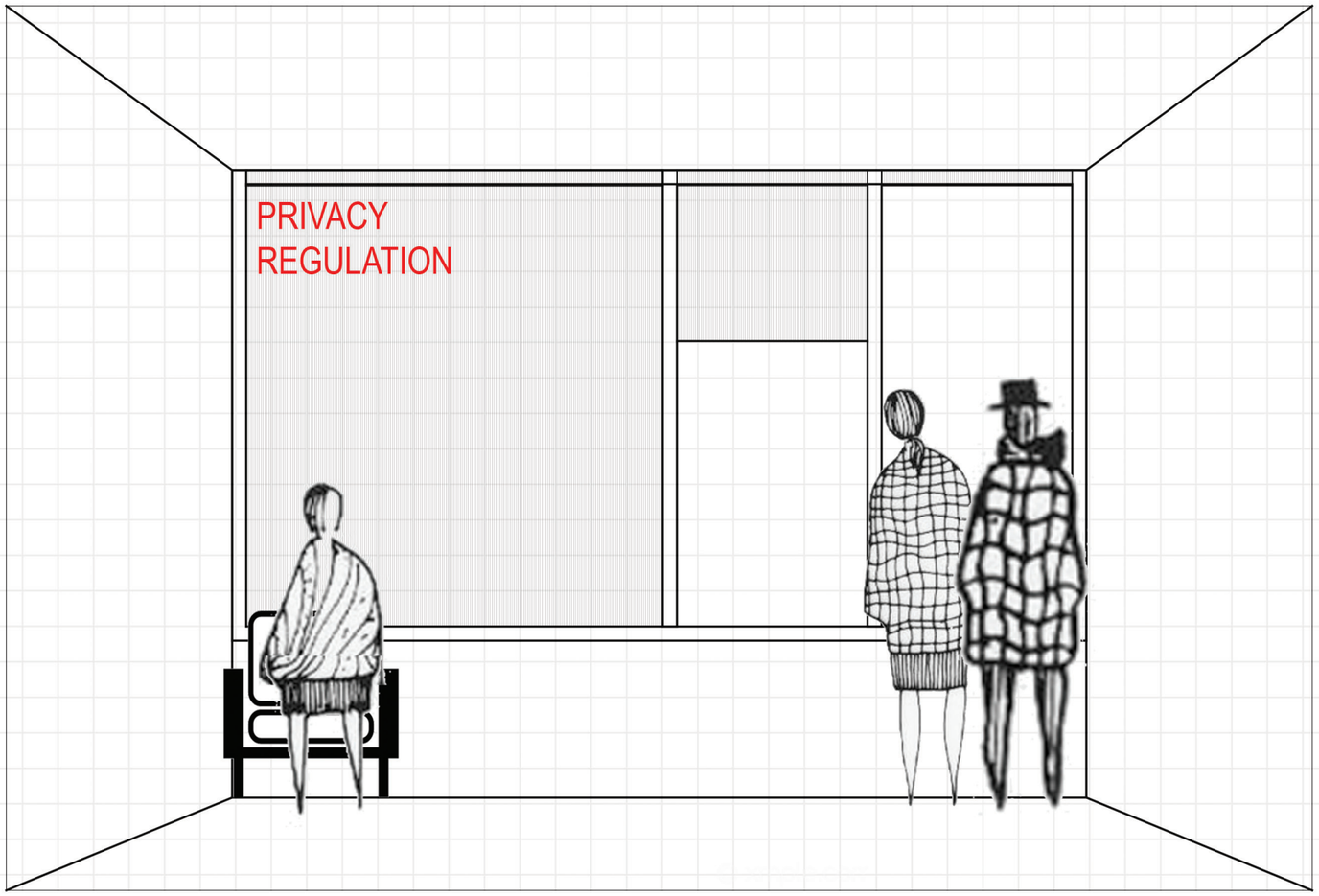
1-4 Floor Apartment_Bonus Space|Balcony

INTERNALIZE



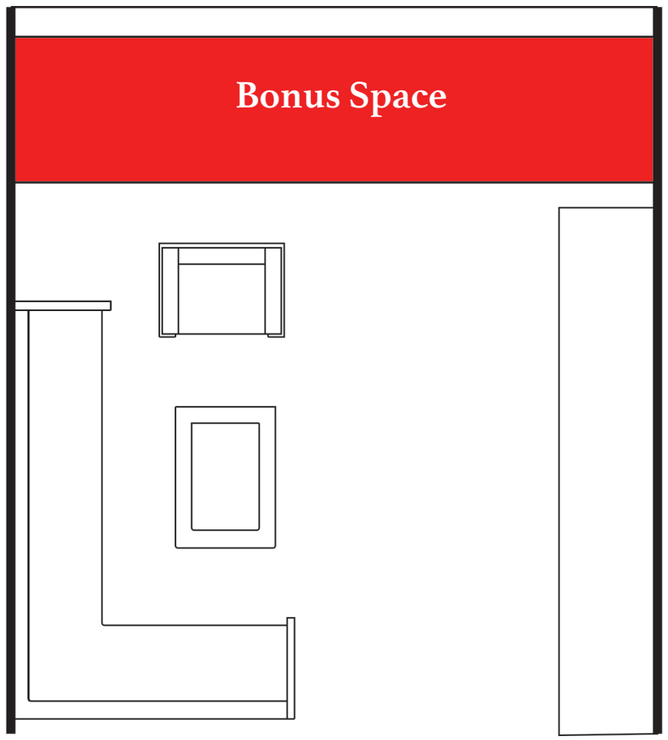
Zone Scale

1-4 Floor Apartment_Bonus Space|Balcony

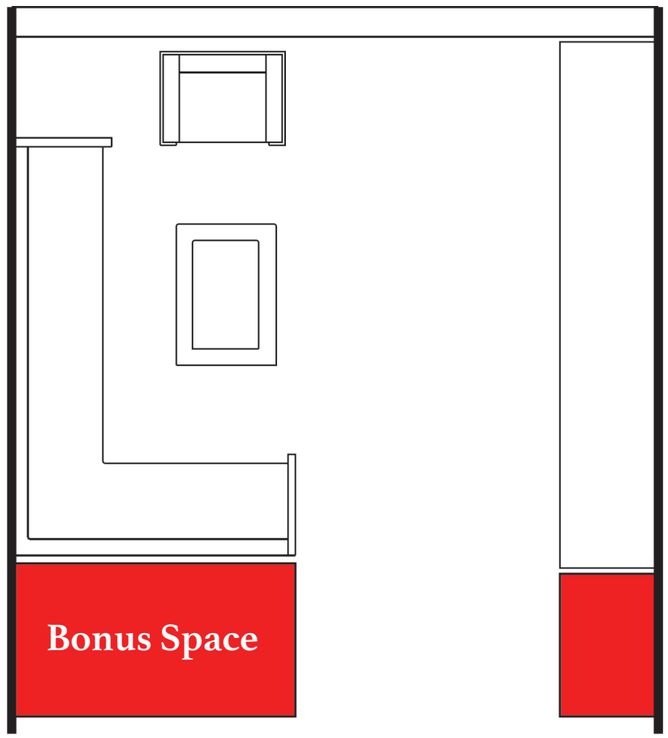


Zone Scale

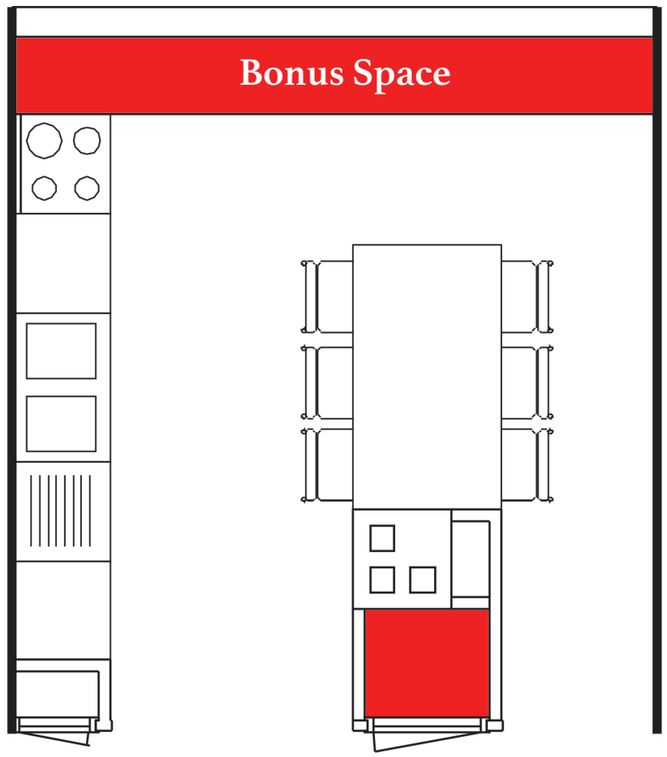
1-4 Floor Apartment_Bonus Space|Balcony



LIVING ROOM



LIVING ROOM



KITCHEN

Zone Scale

1-4 Floor Apartment_Bonus Space|Balcony