

ICHINOMIYA 一宮団地

KENZO TANGE 丹下健三

TAKAMATSU CITY 高松市

ICHINOMIYA 一宮団地

KENZO TANGE 丹下健三

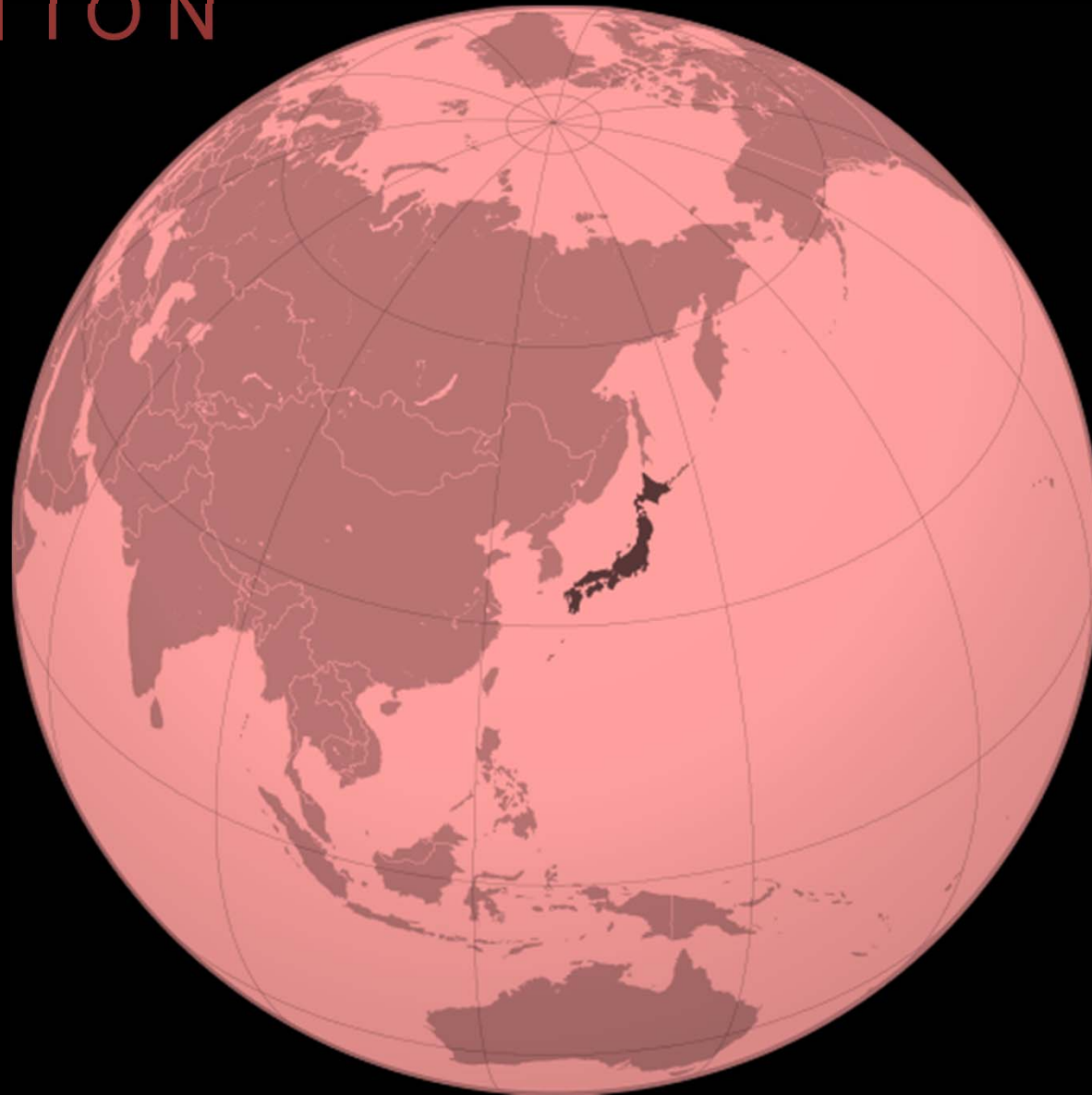
TAKAMATSU CITY 高松市

LOCATION



ICHINOMIYA 一宮団地

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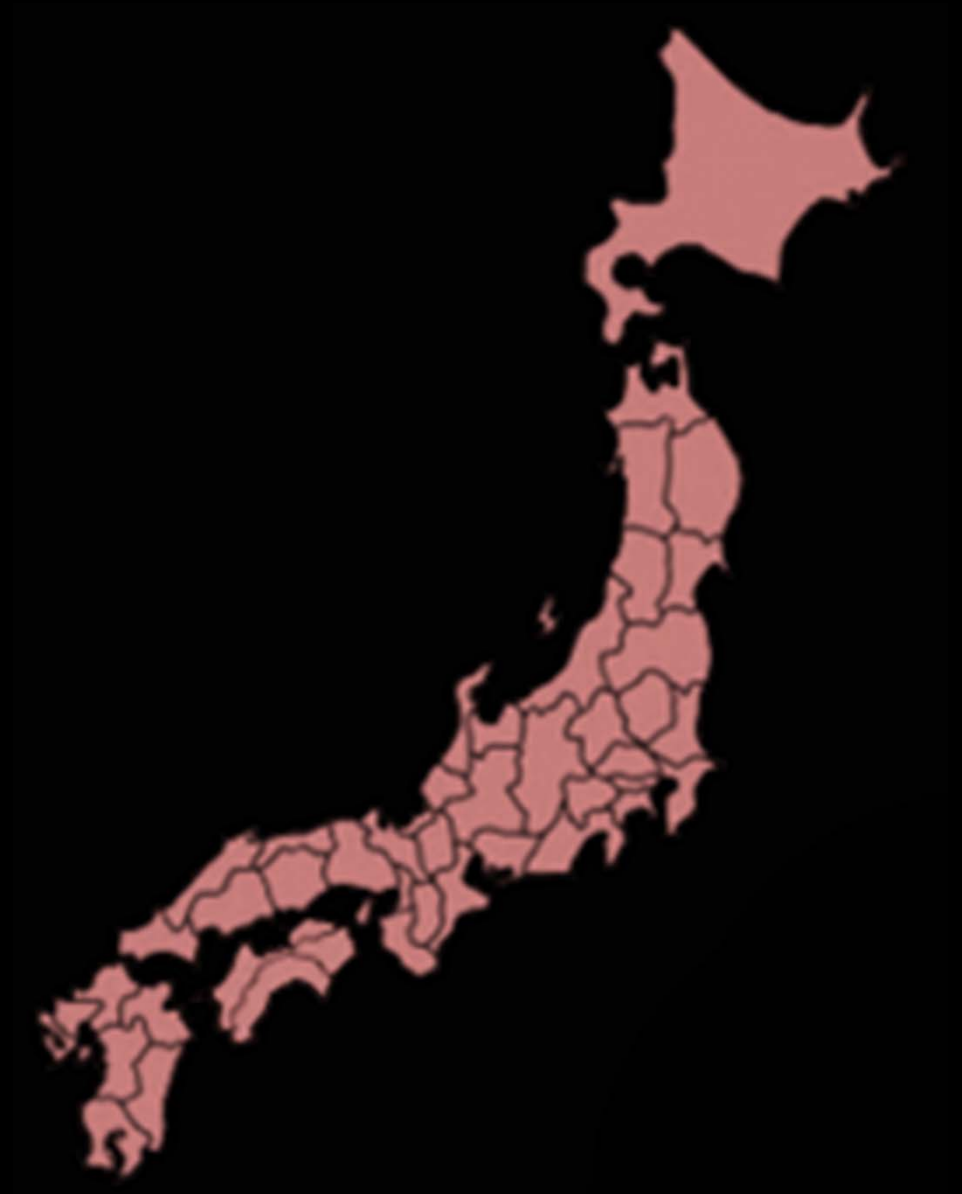
LOCATION

JAPAN

SHIKOKU ISLAND

KAGAWA PREFECTURE

34° 16' 45" N 134° 1' 14" E



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KAGAWA PREFECTURE

34° 16' 45" N 134° 1' 14" E



ICHINOMIYA 一宮団地

HISTORY

WORLD WAR II

1939-1945

ICHINOMIYA 一宮団地

HISTORY



HIROSHIMA 広島

HISTORY

POSTWAR RECONSTRUCTION

URBANISATION + INDUSTRIALISATION



TRADITIONAL
COURTYARD
HOME

ICHINOMIYA 一宮団地

HISTORY

POSTWAR RECONSTRUCTION

URBANISATION + INDUSTRIALISATION

WESTERN ROWHOUSES



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HISTORY

KENZO TANGE

1913-2005

- METABOLIST
- URBAN STUDIES
- JAPANESE
ECONSTRUCTION

R



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FOCUS

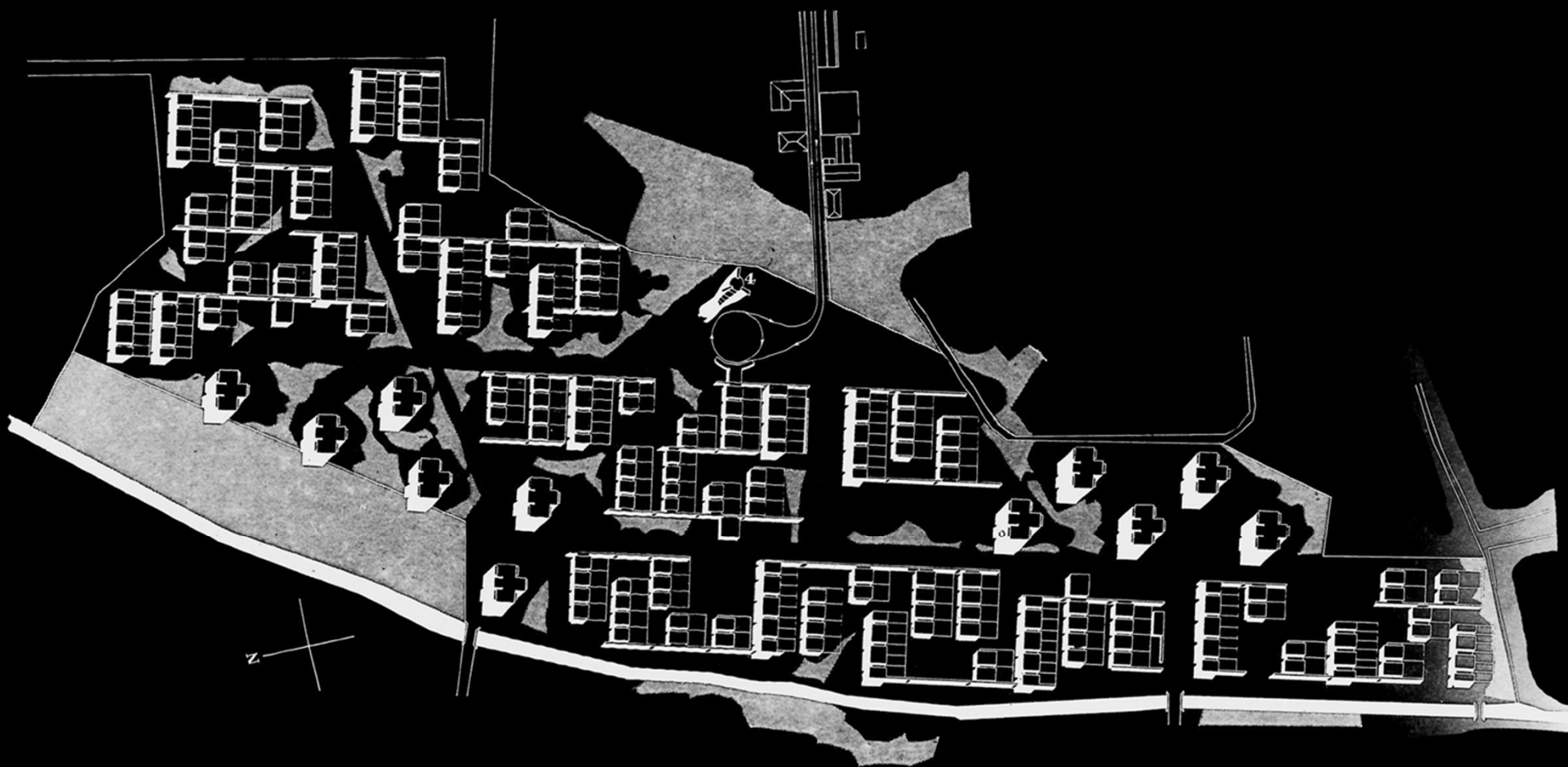
1964:
THE ICHINOMIYA ESTATE

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SITE PLAN



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SITE PLAN

"NEIGHBOURHOOD"



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AXONOMETRIC



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AXONOMETRIC

TWO TYPES OF UNITS:

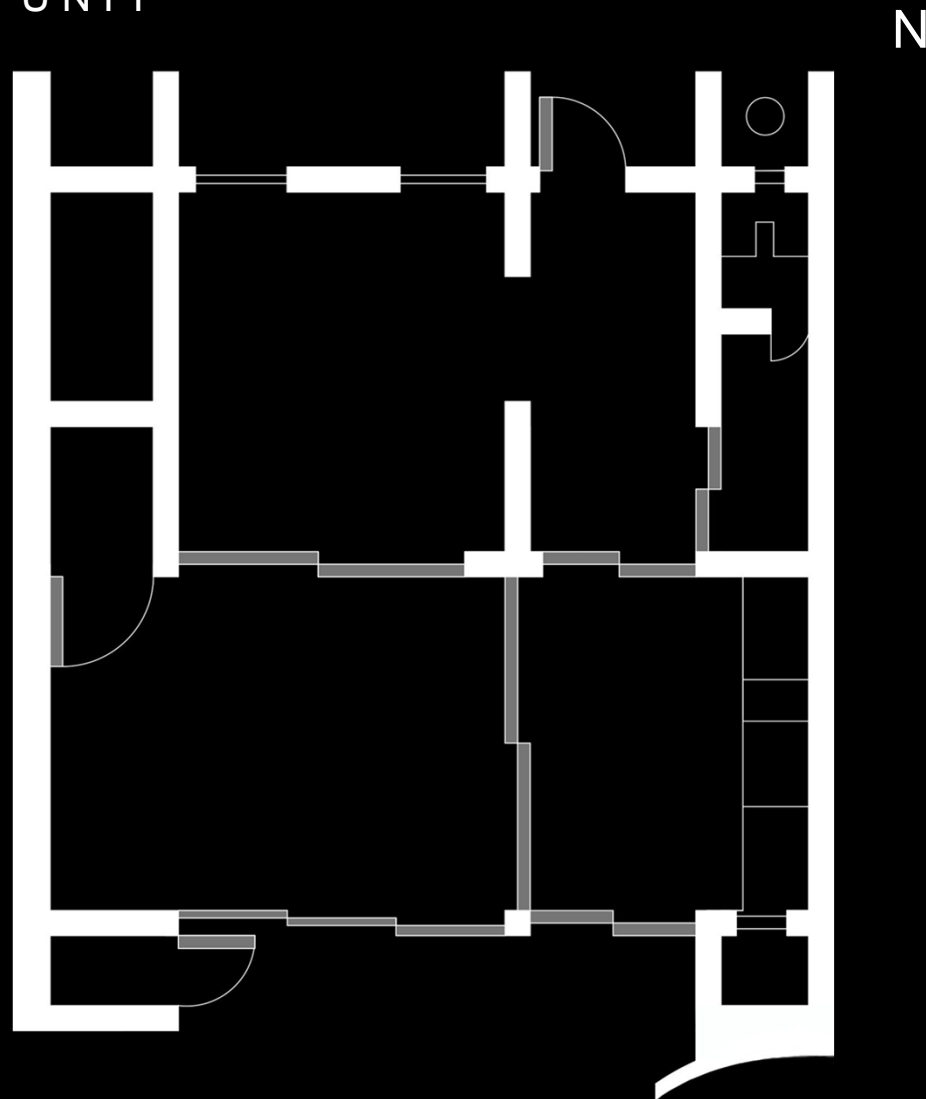
ONE STOREY



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FLOOR PLAN

ONE STOREY: ONE UNIT

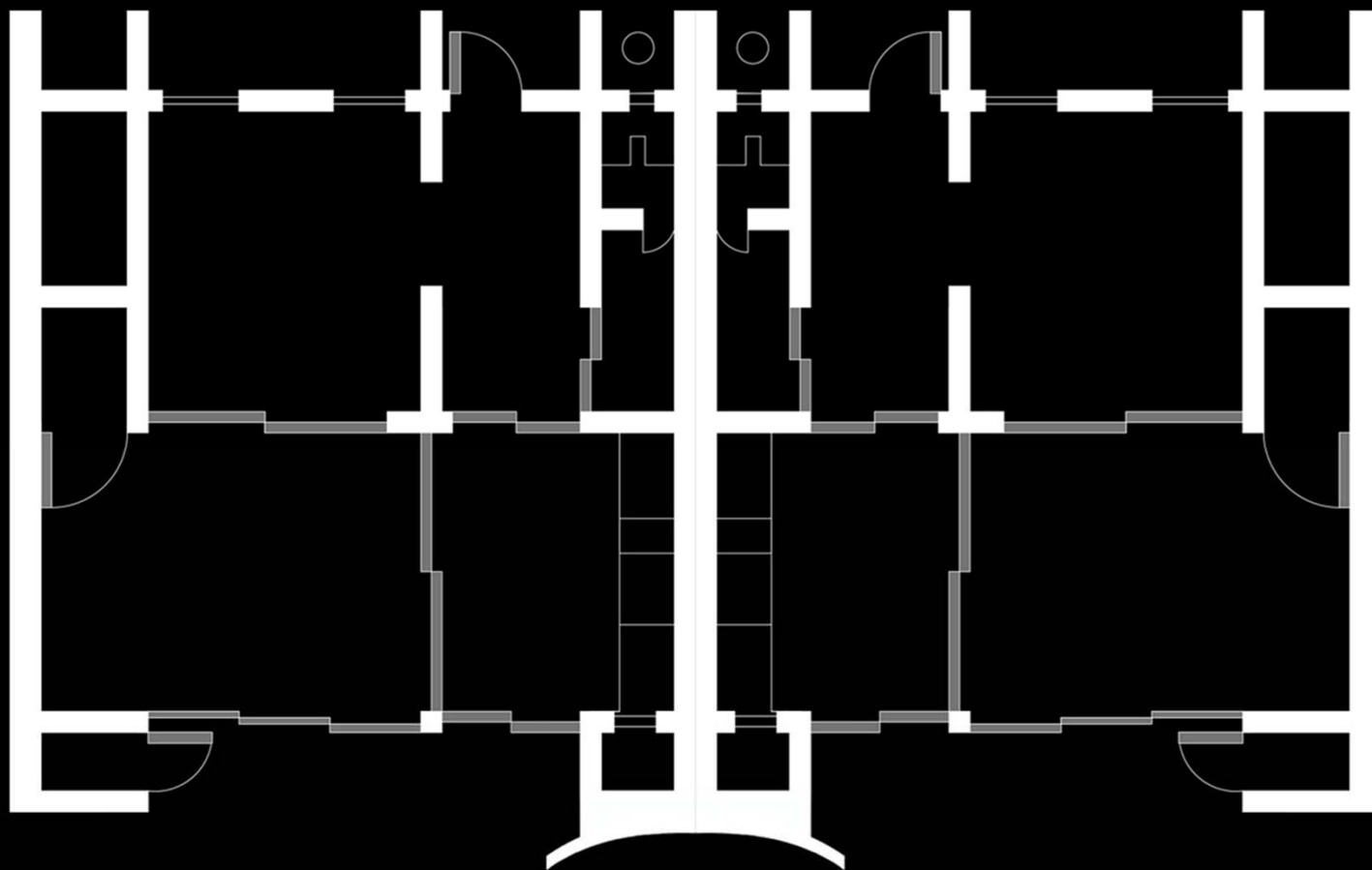


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FLOOR PLAN

ONE STOREY: TWO UNITS

N



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BUILDING SECTION

SINGLE STOREY: NORTH-SOUTH



N

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AXONOMETRIC

TWO TYPES OF UNITS:

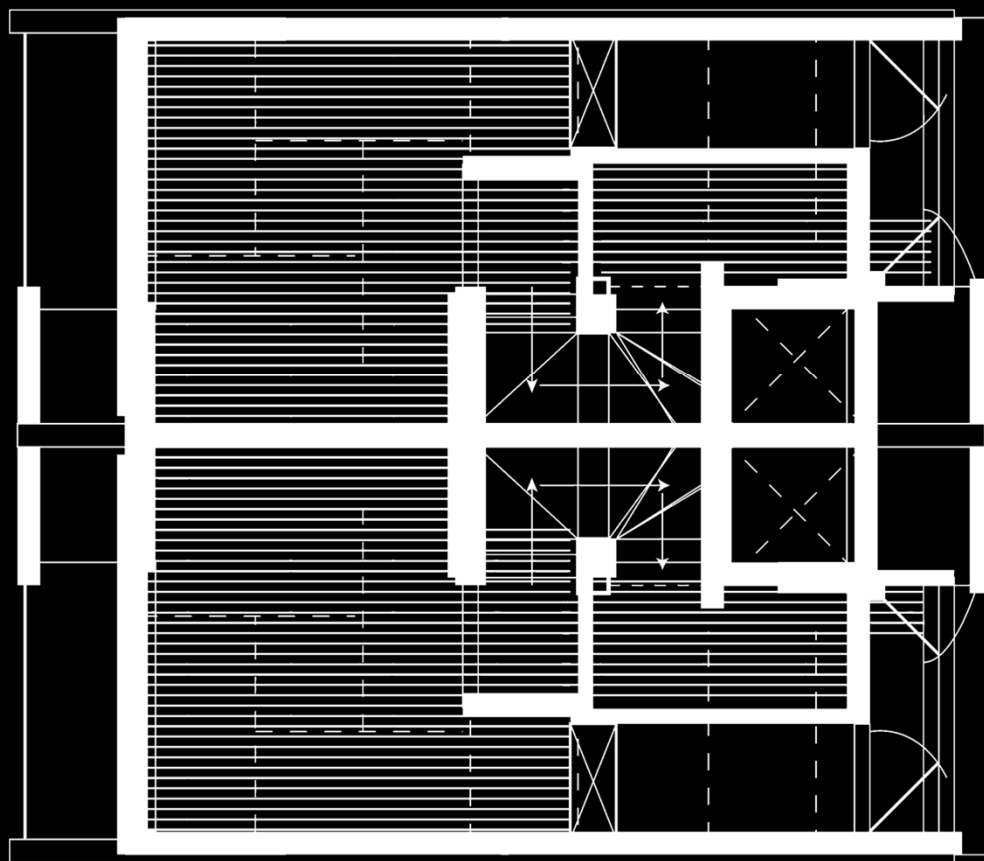
TWO STOREY



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FLOOR PLAN

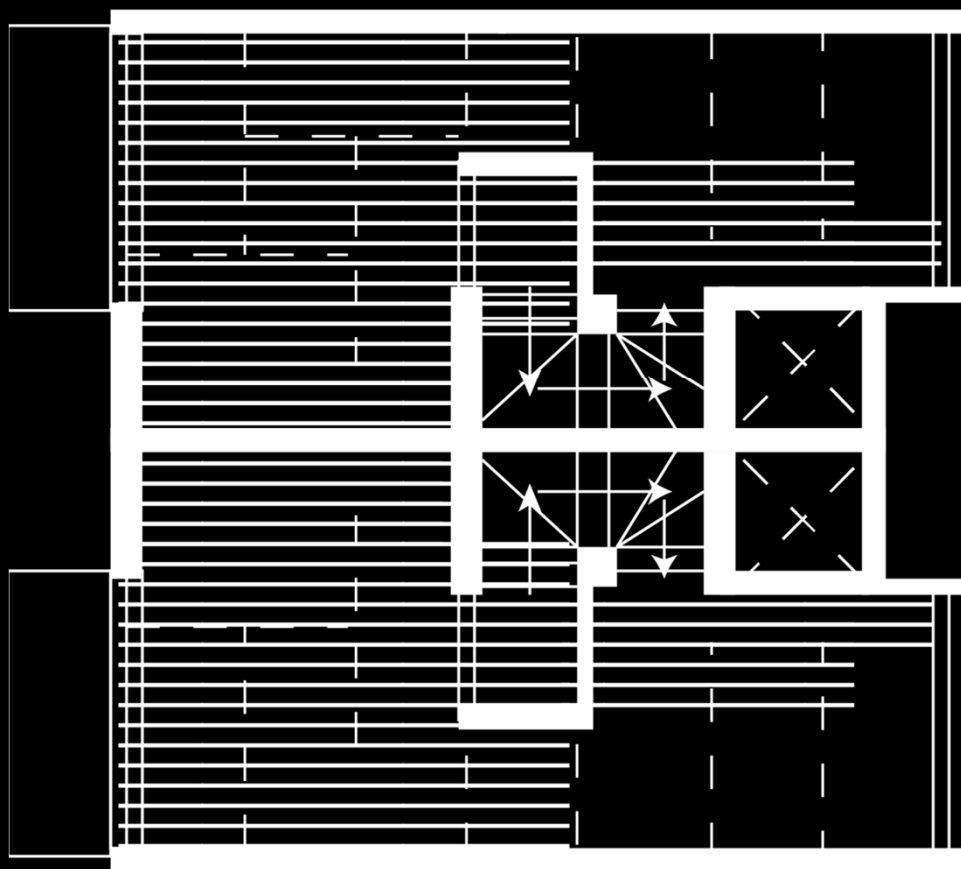
TWO STOREY: GROUND FLOOR



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FLOOR PLAN

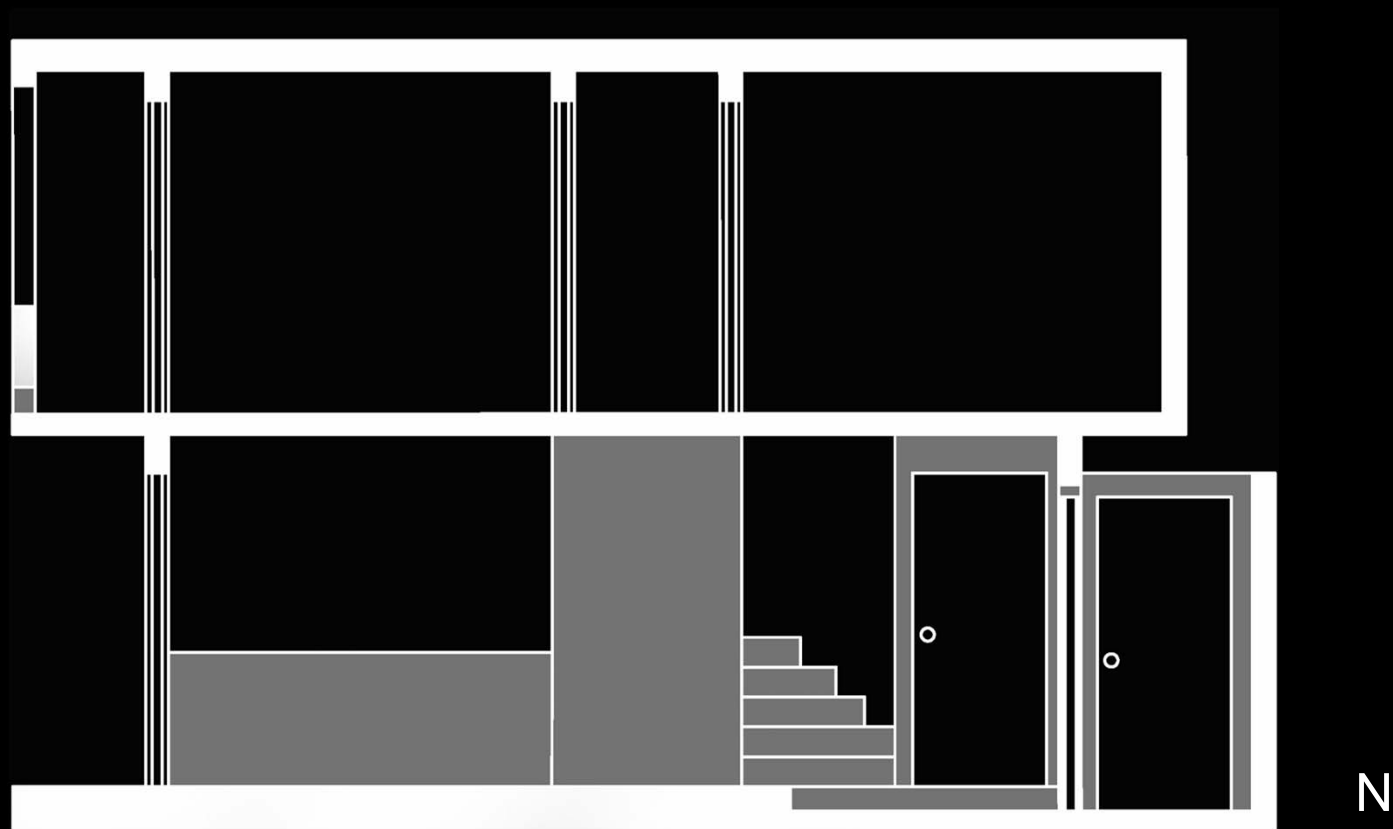
TWO STOREY: SECOND FLOOR



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BUILDING SECTION

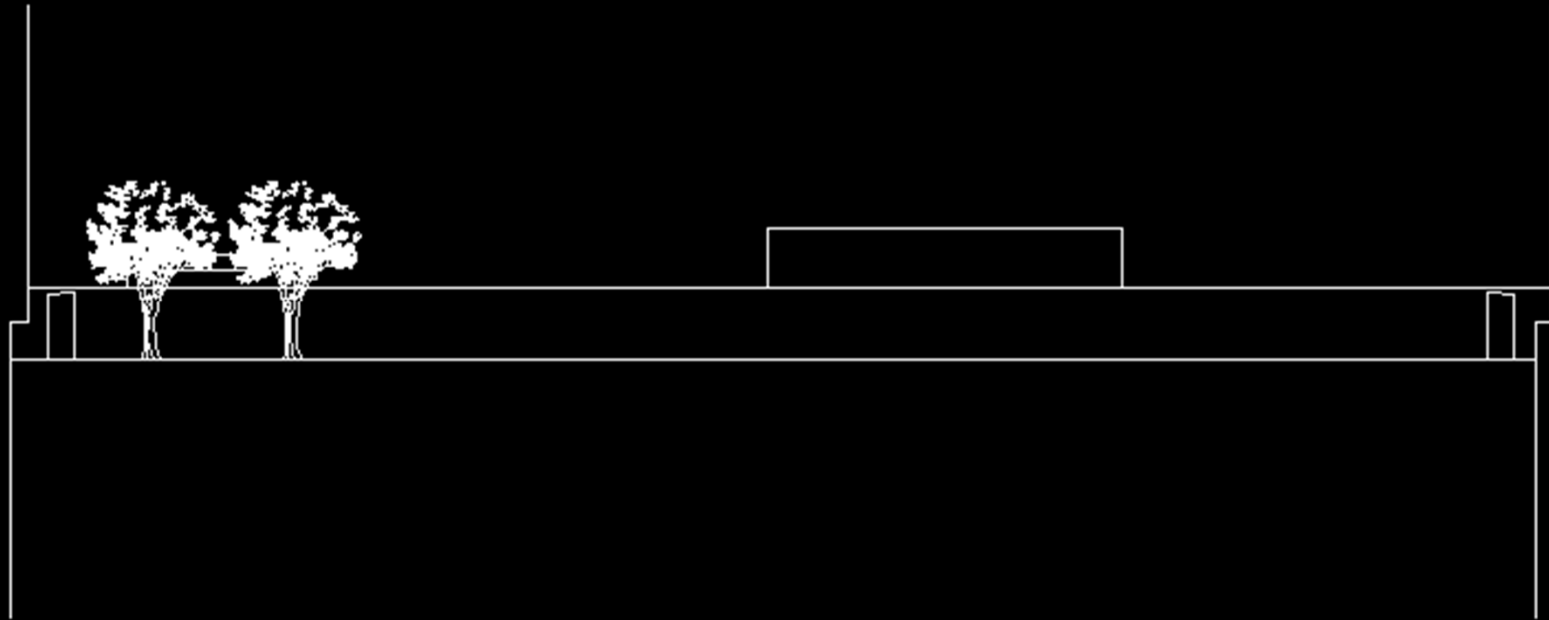
TWO STOREY:NORTH-SOUTH



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SITE SECTION

EAST: ELEVATION



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SITE SECTION

ONE STOREY: ELEVATION



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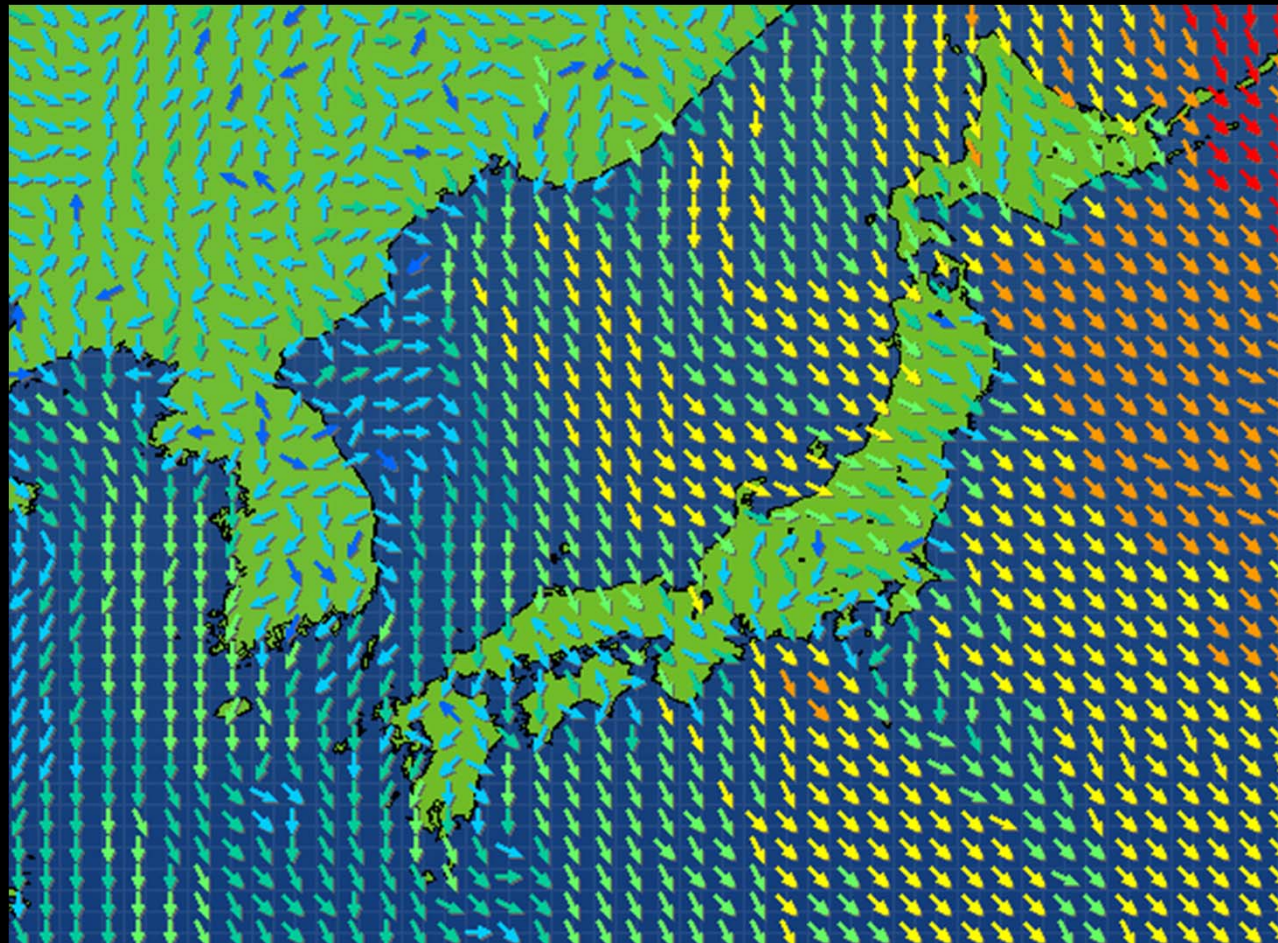
SITE SECTION

TWO STOREY: ELEVATION



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SITE WINDS



SPEED :



(Km/h)

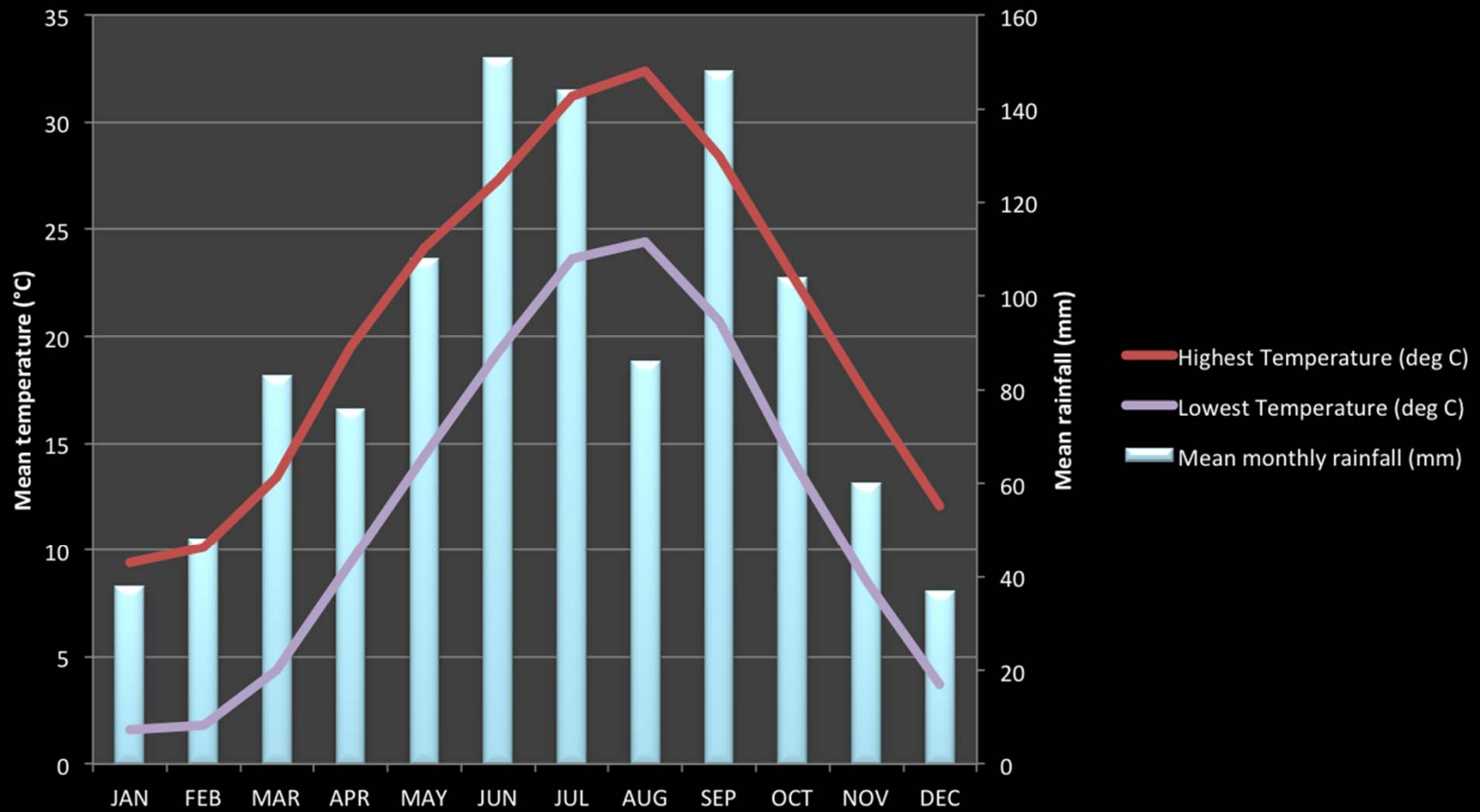
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SITE WINDS



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SITE CLIMATE



KAGAWA PREFECTURE HAS A TEMPERATE CLIMATE

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PRIVACY+COMMUNITY SPACE

PROS:

- WALLS CREATE SMALL, INTIMATE “NEIGHBOURHOODS” WITHIN THE LARGER ESTATE
- PARKETTES AND SHARED GARDENS CREATE SENSE OF COMMUNITY

CONS:

- LACK OF FULLY SEGREGATED GARDENS / LAWNS MEANS LOSS OF PRIVATE SPACES
- DISTANCES BETWEEN “NEIGHBOURHOODS” AND SECLUSION OF ESTATE FROM CITY CENTRE CREATE FEELING OF ISOLATION

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ICHINOMIYA 一宮団地

SOLAR LIGHTING AND HEATING

PROS:

- UNITS ARE STRUNG TOGETHER IN AN EAST-WEST FORMATION TO MAXIMIZE SOUTHERN EXPOSURE AND TO DECREASE THE NUMBER OF EXTERIOR WALLS
- VERTICAL AND HORIZONTAL SHADING ALLOW SUNLIGHT TO PENETRATE THE BUILDING IN THE WINTER BUT NOT IN THE SUMMER
- FLOOR TO CEILING GLASS SLIDING DOORS ON EITHER END OF THE UNIT LET IN NATURAL LIGHT YET MOVEABLE PARTITIONS CAN ACT AS INTERNAL SHADING

CONS:

- LACK OF INSULATION IN THE CONCRETE WALLS LIMITS THE EFFECTIVENESS OF PASSIVE SOLAR HEATING
- DOES NOT BENEFIT FROM MORNING AND EVENING (EAST/WEST) SUNLIGHT

SOLAR LIGHTING AND HEATING

PROS:

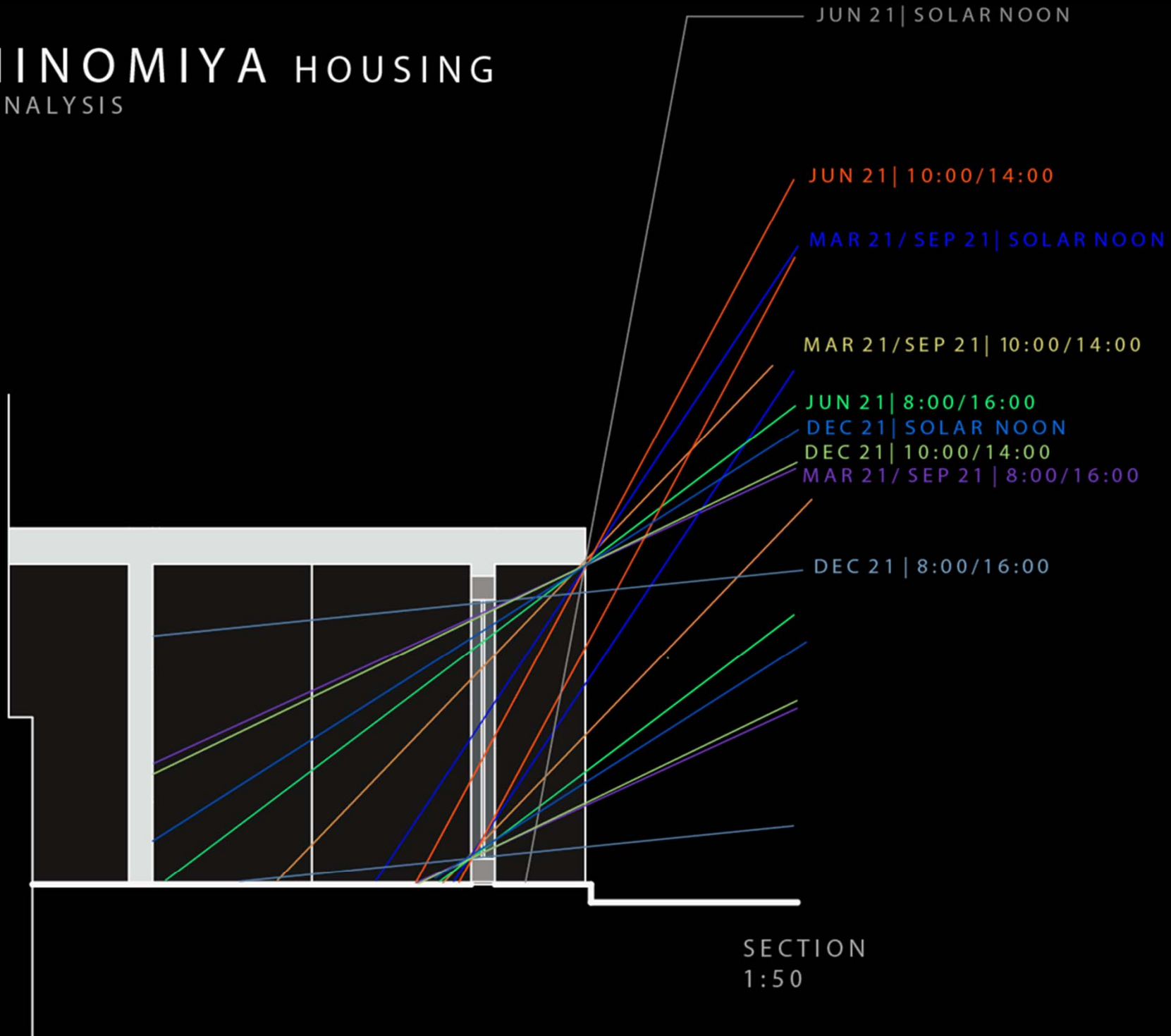
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ICHINOMIYA HOUSING

SUN ANALYSIS



NATURAL VENTILATION

PROS:

- FULLY OPERABLE WINDOWS ON THE NORTH AND SOUTH SIDE OF EACH UNIT ALLOW FOR AIRFLOW THROUGH THE LIVING SPACE
- INTERNAL PARTITIONS CAN ALSO BE USED TO CONTROL AIR CIRCULATION THROUGH THE BUILDING
- CLOSELY PLACED UNITS ACT AS A NATURAL WINDBREAKER

CONS:

- PREVAILING WINDS FROM THE NORTHWEST MAY BE A PROBLEM DURING WINTER
- NO OPERABLE WINDOWS ON THE EAST AND WEST NOR OPENINGS BETWEEN UNITS

NATURAL VENTILATION

PROS:

- FULLY OPERABLE WINDOWS ON THE NORTH AND SOUTH SIDE OF EACH UNIT ALLOW FOR AIRFLOW THROUGH THE LIVING SPACE
- INTERNAL PARTITIONS CAN ALSO BE USED TO CONTROL WINDS BLOWING THROUGH THE BUILDING
- CLOSELY PLACED UNITS ACT AS A NATURAL WINDBREAKER

CONS:

- PREVAILING WINDS FROM THE NORTHWEST CAN CREATE COLDER MICRO CLIMATES DURING WINTER
- NO OPERABLE WINDOWS ON THE EAST AND WEST NOR OPENINGS BETWEEN UNITS

SUSTAINABLE NEIGHBOURHOOD

PROS:

- POCKETS OF GREEN SPACES
- TRANSIT ACCESS TO ICHINOMIYA TRAIN STATION.
 - THE LINE PASSES THROUGH KAWARAMACHI STATION IN THE HEART OF TAKAMATSU.

CONS

- DISTANCES BETWEEN “NEIGHBOURHOODS” AND SECLUSION OF ESTATE FROM CITY CENTRE CREATE FEELING OF ISOLATION
- LOCATED IN A RURAL AREA WITH FEW AMENITIES MAKING IT DIFFICULT FOR RESIDENTS TO BE SELF SUFFICIENT

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TWO DECADES:
AN AGING STRUCTURE

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REDEVELOPMENT

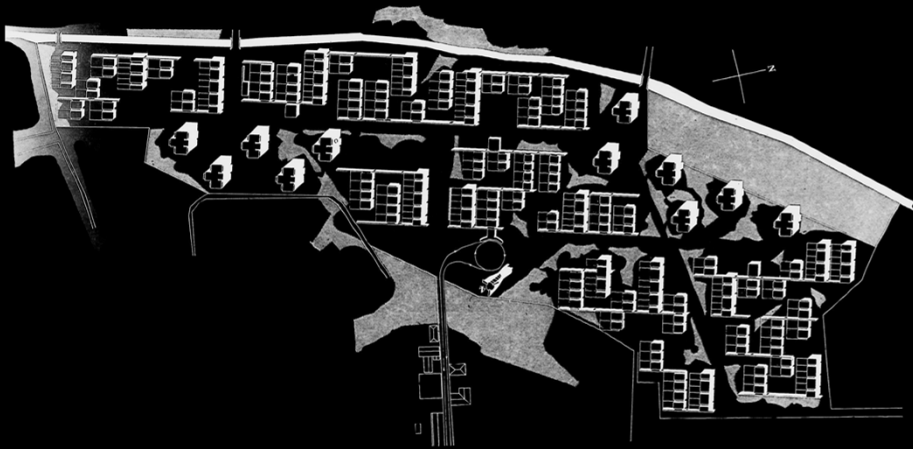
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REDEVELOPMENT

FROM A LINEAR NORTH-SOUTH ORIENTATION TO ZIGZAG DIAGONAL
NORTHWEST ORIENTATION



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REDEVELOPMENT

FROM A LINEAR NORTH-SOUTH ORIENTATION TO ZIGZAG DIAGONAL
NORTHWEST ORIENTATION



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REDEVELOPMENT



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SOURCES

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