

Nakano Flow: Designing for Spatial and Temporal Flow in urban Tokyo

Eric Hanna

A thesis submitted in partial fulfillment of the requirements for the degree of

Master of Architecture

University of Washington

2017

Committee:

Ken Tadashi Oshima (Chair)

Gundula Proksch

Jeffrey Hou

Program Authorized to Offer Degree

Architecture

©Copyright 2017

Eric Hanna

University of Washington

Abstract

Nakano Flow: Designing for Spatial and Temporal Flow in urban Tokyo

Eric Hanna

Chair of the Supervisory Committee:

Professor Ken Tadashi Oshima

Architecture

Urban Tokyo is an environment of flows, having rapidly developed from its feudal form of the Edo period through cycles of destruction, growth and transformation since modernization. The plaza space adjacent to Nakano Station in Tokyo exemplifies this pattern, with an urban context drawing from many different eras of Tokyo's urban history and attitudes towards public space and the built environment. Drawing from observations of patterns of use in the site and urban context, the lessons of Nakano's eras of development, movements in urban design theory and from research into Japanese concepts of "movement space", this thesis explores the creation of a new Nakano Station plaza. Prompted by proposals for the redevelopment of Nakano Station, this plaza proposal explores the development of an urban infrastructure that is adaptable and host to organic development over time. This infrastructure will also reconnect the urban fabric and Nakano's users and perceivers across the void of the current site by hybridizing the site strategies of geometric spatial reference systems and sequenced movement spaces. The new Nakano Station plaza will exist as a platform and scaffold space, upon which new uses and modes of development can be explored and adapted to best accommodate the demands of future urban Tokyo.

Nakano Flow

Designing for spatial and temporal flow in urban Tokyo



Table of Contents

Table of Figures	6	Program of Spaces	46
I. Introduction	8	Program Goals	46
Problem Statement	8	Objectives.....	46
Thesis Proposition.....	9	Functions.....	47
Elaboration.....	9	List of program spaces.....	48
Tokyo Public Space.....	10	Design Approach.....	50
Concepts	12	Goals.....	50
II. Theoretical Framework	13	Objectives.....	50
Chapter Overview	13	Limits & Delimits.....	51
Observations	13	IV. Findings	52
Research stemming from observation	15	Chapter Overview	52
Movement Space	15	Problem Revisited	52
Metabolist Theory.....	17	Theoretical Framework Revisited	53
Informal Development of urban forms ...	20	Urban Strategy.....	54
Eras of Urban Development in Tokyo.....	22	The Sun Plaza Connection	56
Concluding Thoughts.....	27	The East-West Connection.....	59
III. Methods	28	The North-South Connection	62
Chapter Overview	28	Beneath the Surface.....	63
Overview of Design Methods	28	Materiality, Tectonics and Movement	64
Thesis Objectives.....	28	V. Conclusion	68
Research Paradigm.....	29	Bibliography	71
Conceptual Position	29	Image Credits.....	72
Site Analysis.....	30		
A Brief Introduction to Nakano.....	30		
Different “Zones” Of Nakano	33		
The Station Site.....	42		
JR Proposal for New Nakano Station.....	44		

Table of Figures

Figure 1: Streetscapes often feature human-scale and mobile elements.....	14
Figure 2: Circulation is three-dimensional and circuitous.....	14
Figure 3: Spaces and pathways extend through buildings and structures, existing as both interior and exterior spaces across three dimensions.....	14
Figure 4: Any available or marginal space is utilized.....	14
Figure 5: Infrastructure is three-dimensional and flowing.....	14
Figure 6: The procession of Ninomaru Palace is formed by bending space, dictating the path and perspective of the scene.....	15
Figure 7: Scenes are related to each other, forming a sequence without bearing from the external world. Characteristically "a" and "b" are equivalent.....	16
Figure 8: Nikko Toshougu. Instead of a central heirarchy or dominant axis of movement, processions and buildings are referenced to each other and to bends in the path.....	16
Figure 9: Kenzo Tange's 1960 Tokyo Bay plan.....	18
Figure 10: Kisho Kurokawa's Nakagin Capsule Tower (1972).....	18
Figure 11: Kenzo Tange's 1970 "Big Roof" at the Osaka EXPO 70.....	19
Figure 12: Eclectic elements and a cozy human scale in Shinjuku Omoide Yokocho.....	20
Figure 13: Analytical Sketch of street elements in Shinjuku Omoide Yokocho. Blue = Vertical, Yellow = Advertisements, Green = Utilities & Orange = Mobile Elements.....	20
Figure 14: Street Scene of Shinjuku Omoide Yokocho during a lull in activity.....	21
Figure 15: Pedestrian Flyovers became common features in post-war urban development.....	22
Figure 16: Entrance to Nakano Broadway. The Scale of the building is lost due to its dense and varied surroundings.....	23
Figure 17: Street Scene of Entertainment area near Nakamise-Dori. This use pattern and building and block form developed in response to traffic from adjacent Nakano Broadway.....	24
Figure 18: Nakano Sun Plaza presenting a blank and isolating facade to its main street.....	24
Figure 19: Nakano Central Park. An expansive and contemporary mixed-use environment.....	25
Figure 20: Nakano Ward within Tokyo.....	31
Figure 21: The Tokyo Metropolitan Area.....	31
Figure 22: The urban fabric of Nakano near Nakano Station.....	33
Figure 23: Zone 1, the dense, entertainment district.....	34

Figure 24: Building forms are highly individualized without reference to rigid planning or a unifying framework.....	35
Figure 25: Eclectic and Human-Scale Street Scene dominated by mobile elements and advertisements.....	35
Figure 26: Zone 2, the contemporary Office and Institutional Park.....	36
Figure 27: Open space for sports activities in Central Park.....	38
Figure 28: Central Park as a spacious and green environment.....	38
Figure 29: Zone 3, the mixed-use and typical zone.....	39
Figure 30: A variety of building scales, ages and uses in zone 3.....	40
Figure 31: Simple corridors with mixed buildings.....	41
Figure 32: Site and surroundings with major circulation corridors shown. The existing, as well as proposed Nakano Station are show, along with the prominently located Nakano Sun Plaza.....	42
Figure 33: The new plaza site in its current condition represents a void in the sequence of scenes from movement spaces in Nakano.....	43
Figure 34: The new plaza design treats pedestrian space as secondary.....	44
Figure 35: Japan Rail's Proposal for redevelopment of Nakano Station and the station plaza.....	44
Figure 36: Meiji University's student design alternative proposals.....	45
Figure 37: The proposed design connects to various parts of the surrounding urban fabric.....	52
Figure 38: The Site Strategy engages the railway as well as Sun Plaza and the surrounding Urban Fabric.....	53
Figure 39: Several primary connections are engaged through the new plaza's components.....	55
Figure 40: A strong axis of connection between Sun Plaza and the new Nakano Station, through multiple levels and spaces.....	56
Figure 41: The plaza's surface components connect various parts of the urban fabric through the site.....	57
Figure 42: The busy spaces of the project serve different needs and users at different times. During the day, the East plaza is a busy thoroughfare of movement.....	58
Figure 43: The Sun Plaza Connection is not only circulatory, but social and functional space as well.....	58
Figure 44: Section Perspectives through connective space, social space and changing space, across multiple levels.....	59
Figure 45: The ground plane and interior spaces are engaged, offering multiple options for circulation and programmed spaces.....	60
Figure 46: The approach from the Northwest, a scene in the sequence, a branch of opportunities and options for movement. Both direct and bent routes are available.....	61

Figure 47: Performance Space as a "Scene" of the sequenced movement spaces. Its natural elements frame the space and change over time..... 61

Figure 48: The South Plaza, a social and gathering space with many different uses through time..... 62

Figure 49: Reconnecting the sequence of Scenes in the movement spaces of Nakano. The site strategy hybridizes the use of geometric space references and movement space references..... 65

Figure 50: A dominant axis for the Sun Plaza Connection, referenced to the elevated railway and the centrality of Sun Plaza and the new Nakano Station..... 66

Figure 51: The South Plaza's uses can change depending on the day, week, month, year or season. Different uses can develop and fade away as time passes..... 67

Figure 52: Flows of time as well as flows of space. The busy thoroughfare of the day in the East Plaza is now a hub of social and entertainment activity. Future night uses could unfold in many possible futures..... 67

I. Introduction

Since its modernization beginning with the Meiji period in the mid-19th century, Japan's urban areas rapidly developed and grew in size, with their infrastructure racing to keep up with the pace of development. Public Space and Circulation were often afforded secondary concern to the developmental needs of housing and employing a rapidly growing population. Contemporary urban Tokyo is a testament to this legacy, with a dearth of larger open spaces for public activity and circulation and access that, while intensely used, is often relegated to leftover and less prominent spaces. The environments that make up public space in urban Japan today are an eclectic mixture of scales, eras, interior and exterior spaces and infrastructure. Much of this space arose from the interplay of formal, planned development and informal development driven by necessity and market forces, often in marginal or underutilized spaces. These spaces are fascinating to explore, but are often overcapacity and difficult to navigate, limiting options for who can travel where and how people make their path through their urban environment.

Problem Statement

Urban Tokyo is an environment of flows, both spatial and temporal. It is in the results of these flows of movement, of the connection between different scales of spaces and of the relationships between formal and informal development patterns, that urban Tokyo's public life takes place. This environment, as a result of developing and adapting across

different periods and across three dimensions and through complex pathways and connections, is often difficult to navigate and intuit, making its role as host of public space and circulation more difficult. This thesis explores the creation of public space in Nakano, Tokyo that utilizes this context of flows to improve connections between districts, users and various urban scales, to create an urban infrastructure that can adapt over time to accommodate different roles and uses and to enhance the options for circulation and spatial referencing in Nakano.

Thesis Proposition

This thesis seeks to establish a design strategy for Japanese public space and infrastructure. Drawing on observational research of use patterns in urban Tokyo, as well as on research of Japanese urban theory, public spaces and circulation, this thesis posits that public space in urban Tokyo can serve current and possible future users and uses by developing as an infrastructure that brings together both formal and informal forms of urban development. This thesis proposes a new plaza design adjacent to Tokyo's Nakano Station that explores strategies to adapt and grow to accommodate changes in infrastructure use and societal activities. The new plaza will also offer opportunities for enhanced circulation and spatial referencing as well as explore opportunities to connect different urban sub-areas, urban scales and different users of urban space.

approaches for the next stage of infrastructure and public space development in Tokyo.

Elaboration

The area around Nakano Station's present design and urban context are the result of a 125-year long process of industrialization, urban expansion and the interaction of government policy and private enterprise. While this process allowed Japan to rapidly develop, industrialize and re-develop over the past century into the economic and culturally dominant position it occupies today, there have also been unintended and often negative consequences on the Tokyo's urban environment and on its public space in particular. Nakano Station and its surrounding urban context are examples of this history, yet they also offer opportunities for innovative architectural and urban design

Tokyo Public Space

Japan's modern urbanization began during the Meiji period during the late 19th century and truly accelerated during the Taisho period, at the turn of and during the first few decades of the 20th century. This rapid development took place on a foundation of urban form inherited from Tokyo's feudal past. Much of Edo (feudal-era Tokyo) was comprised of Samurai estates, sprawling westwards towards the mountains. During the Meiji period, these lands were seized by the state and developed into neighborhoods for a rapidly expanding urban population. To accommodate this growth, the government of that era prioritized the creation of new housing and developed regulations for building construction for fire safety concerns.

In contrast to fire safety regulations for buildings, urban form regulations for these new residential areas were light, which, coupled with high demand for homes and infrastructure development that could not keep pace with residential and commercial development, resulted in sprawling neighborhoods of closely packed buildings and a relative lack of public infrastructure and open spaces as little attention or funding was given to public recreational and social spaces in urban areas.¹

In the early 20th century, these neighborhoods grew rapidly in population, again outstripping the growth of infrastructure. The Great Kanto Earthquake of 1923 created a large demand for housing and new construction took place in areas that were less developed and cheaper than central Tokyo, on what had by then been the suburban fringe. It was during this period that many of these neighborhoods became

¹ Sorenson "The Making of Urban Japan" (2002), p. 92

increasingly dense urban centers, placing further strain on their limited infrastructure. This cycle of destruction and construction was repeated once more during World War II, when massive bombing left much of the Tokyo Metropolitan area in ruins and demand for new housing far outstripped the remaining supply. New housing was built in these outer neighborhoods, which restored rapidly, increasing dramatically in population and density while doing so. Given these repeated cycles of high housing demand and rapid construction, open space was of secondary concern, with the resulting lack of significant open spaces in these areas apparent today.²

Nakano Ward, the subject area for this thesis, is an area that developed in such a manner. At the time of the early Meiji Period (1870's), the area that would become Nakano Ward was largely agricultural land, with a few scattered villages and the fringes of Samurai holdings. In 1889, the first Nakano Station opened as part of the Kofu Railway's Kobu Line. With the new station, people began moving to the area in greater numbers and a town grew around the station.³ The area gradually grew larger with time until 1923, when the Great Kanto Earthquake triggered a large amount of building in the area, dramatically accelerating its transition from an agricultural town into a residential and increasingly urban area.⁴ In 1932 Nakano became a Ward and after the abolition of Tokyo

² The Japan Times "The Green Machine" (2004), http://www.japantimes.co.jp/community/2004/04/20/issues/the-green-machine/#.WKpzv_krJEZ

³ Nakano Ward Office "History of Nakano area", <http://www.city.tokyo-nakano.lg.jp/dept/102500/d010003.html>

⁴ Ibid.

City in 1943 it became a full part of the new Tokyo prefecture. The area was devastated during the WWII bombings, but was subsequently rebuilt after the war, achieving an even greater population and higher population density than before.

As of August 2016, Nakano Ward had a population of 325,289 people, within an area of 15.59 square kilometers.⁵ Nakano has the highest population density of any municipal ward in Japan and also has the second lowest amount of green space per person of Tokyo's 23 Special Wards.⁶

This situation, while particularly prominent in Nakano, is a defining characteristic of Tokyo's urban fabric. In 2013, Tokyo had an estimated 7,642 Hectares of parks, which amounted to 5.77 m² of park space per capita.⁷ This is still below the goal of 6 m² set out by the city for the year 2000. The World Health Organization has also recommended at least 9 m² of green space per capita, which is above Tokyo's current capacity. Many of the most notable examples of Tokyo's existing green and public space lie towards the center of the city in the form of government project parks from the Meiji and Taisho periods such as Hibiya Park⁸ and the converted remnants of former Daimyo (feudal lord) properties.⁹ The urban areas that grew out

⁵ Nakano Ward Office, <http://www.city.tokyo-nakano.lg.jp/dept/102500/d010001.html>

⁶ The Japan Times "Green Machine" (2004)

⁷ Tokyo Bureau of Construction, <http://www.kensetsu.metro.tokyo.jp/english/jigyopark/01.html>

⁸ Sorenson, p. 73

⁹ Sacchi "Tokyo: City and Architecture" (2004), p.80

of the former western suburbs of the Taisho period, such as Nakano, are still characterized by their sprawling history and are often underserved by open public space.

Within the last two decades, there has been official interest and demand to develop alternative opportunities for open and public spaces as Tokyo's 21st century parks.¹⁰ Large properties suitable for open space development are rare and when the opportunity to utilize such a property arises, the battle over how to best use it can lead to a drawn out process of compromise. The issue of accessibility and connection to the wider neighborhood is a significant consideration in the development of these spaces.¹¹

Prime areas being considered for open urban space uses are the areas within and around train and metro stations, which have already taken on many public and social roles typically associated with parks.¹² As new use patterns and the difficulties associated with large-scale land acquisition make the development of new large scale public spaces prohibitively difficult, it is in the smaller open spaces that are integrated into the urban fabric and infrastructure, such as train stations and plazas, where the new public spaces can best be developed and connections between various neighborhood places and functions can be established or enhanced.

¹⁰ Golany, Hanaki, Koide "Japanese Urban Environment" (1998), p. 30-38

¹¹ The Japan Times "Green Machine" (2004)

¹² Ibid, p. 263

Concepts

This thesis explores several concepts through observation, research and application to design. A brief overview of relevant concepts is provided below, while a more comprehensive description and analysis of each concept is provided in Chapter II.

- **Infrastructure as a platform for adaptation over time.** This concept explores how urban infrastructure can be integrated with programmatic and smaller-scale uses. The *Metabolism* Urban and Architectural movement of the 1960's is explored in relation to this concept.
- **Formal development of the urban environment vs. informal development.** This concept examines the history and application of formal design plans in buildings and the urban realm alongside the development of informal structures and urban spaces. Of particular note are the development of large, multi-use complexes and the development of high-density entertainment/dining areas (Yokocho).
- **Different eras of urban Tokyo's development history.** Tokyo and the site neighborhood of Nakano have been influenced by several different eras of development. These eras not only differ in terms of visual style, but in their strategy for developing the urban area and the goals of that development. Eras to be examined will be the "Economic Miracle" of the 1960's & 70's, the contemporary wave of development from ca. 2000 – Present and the

possibilities of the future or "next era" of Japanese urban development.

- **Circulation and movement through space in a Japanese context.** An exploration of spaces of movement and what these spaces mean and look like in Japanese built environments. This concept draws primarily from Edo-period Japan, the feudal era preceding modernization.

II. Theoretical Framework

Chapter Overview

This chapter will focus on the theoretical framework through which this project is approached. This framework includes the interests and experiences that led to the selection of this thesis topic as well as the position taken on these interests and experiences. This is further expanded upon through a review of observations and research regarding the site and subjects such as public and social space in urban Japan, formal and informal architecture and urban design theories and applications and concepts of spatial and temporal movement and sequence in built environments in Japan.

Observations

The basis of this thesis is drawn from personal observations of the project site and its urban context. As an exchange student in Tokyo, I had the opportunity to directly observe the built environment of Tokyo and how it was used by its inhabitants.

The urban fabric of Tokyo is incredibly dense, with much of the public space consisting of streets and small recesses off of streets or under awnings or in the in-between spaces in infrastructure. Structures of various ages, scales, materials and uses stand side-by-side, often connected to each other or to infrastructure such as bridges, over and underpasses, tunnels and advertisements.

This environment is largely a product of accretion and accumulation, with buildings and infrastructure being added to or adapted in a piecemeal and uncoordinated fashion. Over time, with infrastructure and buildings building upon each other, this process has produced a very three-dimensional public realm. Social and circulation spaces often exist on multiple elevation levels, connected by stairs, ramps, escalators and elevators and existing as both interior and exterior spaces.

Due to the environment's dense physical confines and the demands created by high traffic in all modes of movement, circulation for pedestrians is placed wherever it can fit, in underutilized or secondary spaces, resulting in non-linear and non-intuitive paths, which often exist as the only option for traversing an obstacle such as a major arterial road, elevated railway or building complex such as a train station. The users of urban Tokyo have come to accept the constraints placed upon their freedom of navigation and limited options for path-finding.

While the dense, dynamic and constantly accumulating nature of Tokyo's environment is a fascinating example of a highly-utilized dense urbanism, I became interested in the ways it could further adapt over time to offer a wider degree of options and choices to its users. I became interested in exploring the creation of an urban Tokyo that is not merely accepted by its users as a condition to be lived with, but is instead purposed as a platform for the development of new social uses for infrastructure. This would be an infrastructure and environment that is driven and developed by its users and directed to their desires and goals.



Figure 2: Circulation is three-dimensional and circuitous



Figure 1: Streetscapes often feature human-scale and mobile elements.



Figure 4: Any available or marginal space is utilized

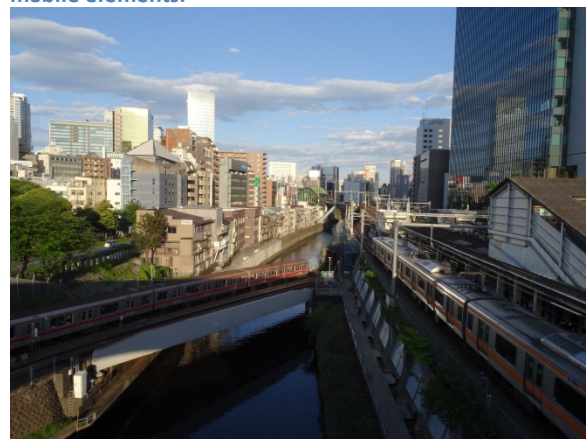


Figure 5: Infrastructure is three-dimensional and flowing

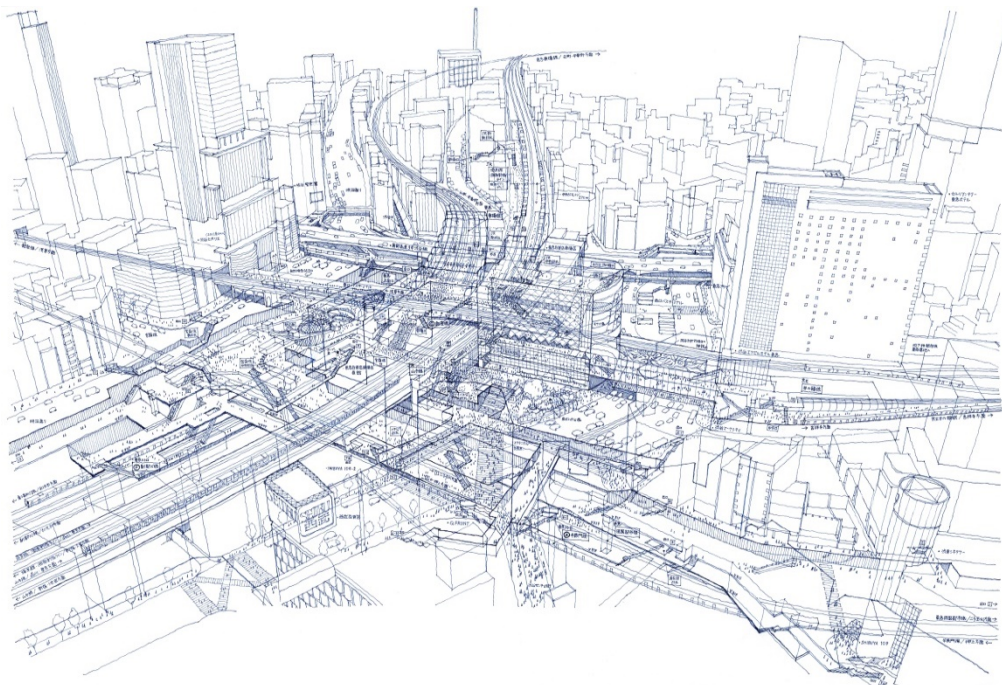


Figure 3: Spaces and pathways extend through buildings and structures, existing as both interior and exterior spaces across three dimensions.

Research stemming from observation

Upon observing and reflecting on Tokyo's urban conditions and use patterns I became interested in precedents and the processes that either led to the urban condition as it exists now or that might inform possible strategies for an infrastructure and environment that can grow as an enhancer urban circulation and user driven public space activities and built forms.

Movement Space

Space can be perceived through various reference systems. The most commonly used systems for spatial reference are Cartesian and polar systems. These systems relate spaces and connections between spaces to an overall framework of geometry.¹³ These geometric spatial systems are commonly found as spatial frameworks for European and North American built environments and structures, such as Baroque and Modern Europe's grand urban plans and palace estates¹⁴ or the American grid system. Such frameworks can be described as "geometric space".¹⁵

While these frameworks are great for organizing large amounts of space and breaking that space into different hierarchies of importance, prominence and uses, they are not the only manner in which space can be referenced. Edo-period Japan, the feudal era preceding modernization, exemplifies another

spatial referencing system, referred to as "movement space".¹⁶

In this movement space, individual spaces are not referenced to a central point or to an organizing set of axes and distances, but to each other. A space's most important connective relationships are to the space preceding it and the space following it. In such a system, the perspectival focus is reduced from the larger picture, as in a geometric space system, to the individual scene.¹⁷ The experience of the system of spaces thus becomes an experience of movement, of sequence and of progression through various scenes, which are related to each other across time and space. The spaces are designed in such a way as to deny reference to the overall geometry, forcing the user through the sequence and allowing only a relative connection between spaces to exist.



Figure 6: The procession of Ninomaru Palace is formed by bending space, dictating the path and perspective of the scene.

This type of spatial system is seen prominently in Edo-period religious and large residential environments. Temple complexes will feature "bent" or "rotated" pathways along the main path between entrance and head shrine, as well as the placement of other shrine buildings in such a way as to relate to each other, rather than in a geometric or polar arrangement.¹⁸ A

¹³ Inoue, "Space in Japanese Architecture" (1985), p. 137 – 141

¹⁴ Ibid.

¹⁵ Ibid.

¹⁶ Inoue, p. 141

¹⁷ Ibid., p.144-145

¹⁸ Inoue, p. 159-169

prominent example of this arrangement would be Nikko Toshougu in Tochigi prefecture.

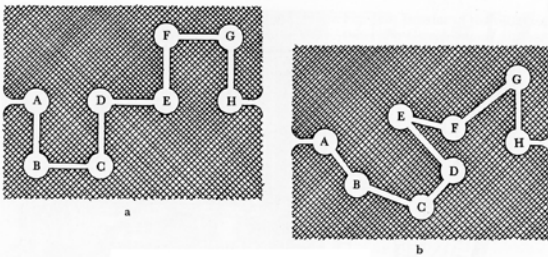


Figure 7: Scenes are related to each other, forming a sequence without bearing from the external world. Characteristically “a” and “b” are equivalent.

“Bent” and “Rotated” spatial sequences, designed for movement through the spaces and the establishment of specific scenes are the large *Shinden* residential complexes of Edo-period wealthy families. As these complexes developed over time, the connections between rooms and spaces became more and more relational to each other, leading to compounds with relatively isolated spaces connected by specific walkways and thresholds. The progression through the compound was dictated by these walkways and by the interior progression through individual rooms.¹⁹

The concepts of “Bent” and “Rotated” space and “Movement Spaces” are not relics of the Edo-period, but have carried over through Japan’s modernization into how the present built environment is perceived. This perception is not only spatial, but also exhibits a temporal element. Urban pathways and connections of spaces twist and turn, revealing themselves as a sequence of scenes and are relatable only to those immediately connected to them. These are spaces of movement and change, having undergone many different changes in form and connections since modernization, reflecting the

¹⁹ Ibid.

Edo-period ideas of mutability, lack of substance and impermanence (*mujoukan*).²⁰

Viewed through the lens of mutability, spaces and the connections between them and the environment are impermanent and disconnected. The world is largely unknown and only the part we can see before us with our eyes can be foreseen. The present moment, the environments and structures we inhabit and the connections between them are merely an instance in the flux or flow of time and space.²¹

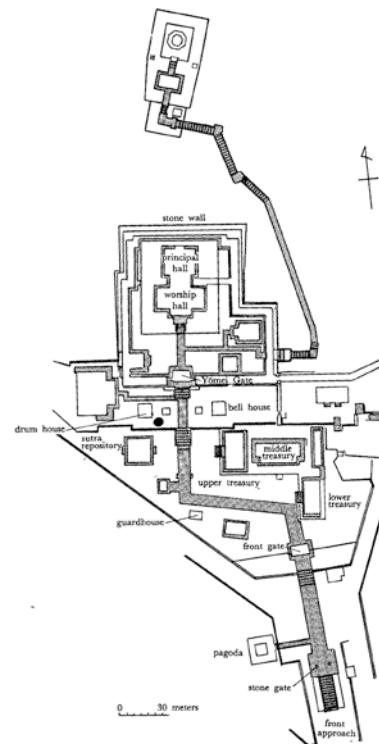


Figure 8: Nikko Toshougu. Instead of a central heirarchy or dominant axis of movement, processions and buildings are referenced to each other and to bends in the path.

²⁰ Inoue, p. 170

²¹ Inoue, p. 171

It is through these ideas of impermanence, of existing as an instance in the flow of time and of scenes existing as instances in the sequenced flow of space that movement space in Nakano is explored.

Metabolist Theory

Following the devastation of WWII, Japan was faced with the challenge of rapidly rebuilding its urban areas, as well as creating infrastructure that could handle the dramatic rise of urban populations. In the 1950's and 1960's, Kenzo Tange, one of Japan's most renowned architects, began an approach to Modernism in architecture that drew from Japanese tradition.²² Tange's approach to modernism and his ambition for Japan's recognition as a significant contributor to International architectural dialogue created the environment from which the "Metabolism" movement would ultimately grow.²³ While Tange is commonly associated with the Metabolism movement and cited as its forefather, much of the active development of Metabolism was driven by his contemporary and junior colleagues.

In 1960, at the World Design Conference initiated and hosted by Japan to showcase its resurgence, an architectural manifesto named "Metabolism 1960: The Proposals for New Urbanism" was released. This manifesto featured four essays, authored by prominent Metabolist designers, Kiyonori Kikutake (Ocean City), Noboru Kawazoe (Material and Man), Fumihiko Maki & Masato Otaka (Toward Group Form) and Kisho Kurokawa (Space City). This manifesto, in envisioning radical new projects, outlined the movement's many tenets.²⁴

²² Obrist, "Project Japan" (2011), p. 19

²³ Ibid.

²⁴ Ibid.

The Metabolism movement and its practitioners ranged widely in scope, encompassing many theories and aspects of design. Metabolism as viewed today is commonly associated with the harnessing of mass production and technological innovation to generate urban form through innovative infrastructure, an acknowledgement of the impermanence of built space that draws from traditional Japanese architecture and organic growth and development and bold and monumental visions for urban environments.²⁵ This thesis explores Metabolism as seen through the lens of impermanence and organic development and growth.

Metabolism as an architectural and urban theory of impermanence and organic growth draws from Japanese traditional precedent as well as the processes of organisms. Through this perspective, urban infrastructure is always subject to change and could channel this change, much as an organism does, by featuring a hierarchy of systems, all existing in a network of mutual support, with nested functions, together creating a larger organism that is in constant flux.

In Metabolist theories and proposals, the urban environment was approached as such an organism, with large or monumental-scale and permanent-but-adaptable infrastructure such as transportation and utilities networks forming the platform and scaffold upon which other functions such as housing, social life, manufacturing and services would build. As the demands and sizes of populations changed, this infrastructure could adapt and change to match.

This approach can be seen in many of the bold envisioned projects of the era, such as those of

²⁵ Ibid.

the 1960 manifesto or Kenzo Tange's 1960 "Plan for Tokyo Bay". Tange's plan proposed an infrastructure built out into Tokyo Bay, upon which housing, offices, commercial buildings and all of their associated urban infrastructure could build. This plan would change in scale and use patterns over time and would be made possible by radical new advances in production and engineering.

A major supporting element of Metabolism's organic growth model was mass production in the form of modularity, where components such as dwellings, spaces or sub-systems could be swapped and updated in an orderly and planned manner, as opposed to the more eclectic accumulative process prevalent in Japanese urban environments.

Ultimately the modularity of Metabolist structures proved to be rather rigid and prescribed, lacking flexibility at the scale of an organic process. Offsite manufacturing and formal mechanisms for replacement and upgrades ultimately limited in practice how these structures could adapt and grow over time, as evidenced best by the Nakagin Capsule Tower, which featured modular units attached to a central core of circulation and services. These units were designed to be self-contained and fully replaceable, with a more modern unit being swapped in for the outdated unit. With the unit itself as the module size, smaller upgrades did not fit well into the framework for adaptation and growth, leading to maintenance issues and a lack of interest in units that rapidly became outdated. Replacement of units proved to be an issue and ultimately the tower entered into a period of decline.

Metabolist theory grew in prominence both within Japan and abroad during the 1960's as Japan's "economic miracle" period of growth

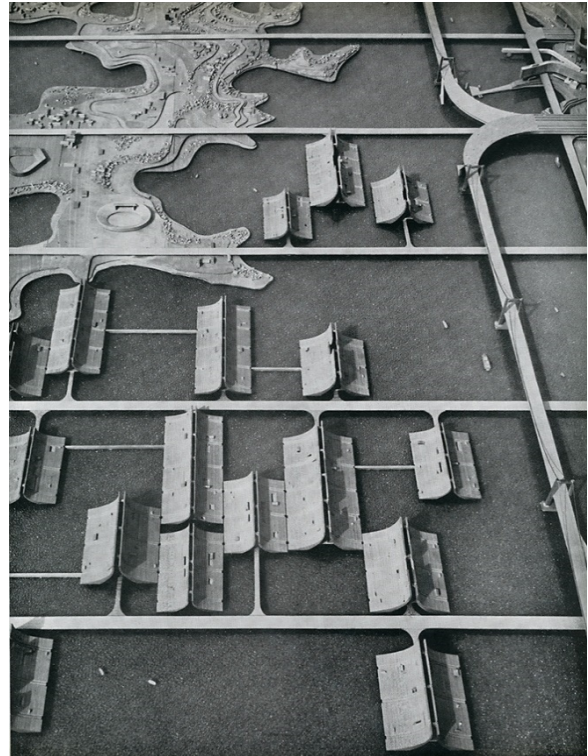


Figure 9: Kenzo Tange's 1960 Tokyo Bay plan



Figure 10: Kisho Kurokawa's Nakagin Capsule Tower (1972)

took off. Though the movement and its aggressive publications and declarations envisioned bold new urban forms such as floating cities and monumental three-dimensional mega-structures, metabolism, as actualized in built form consisted of largely mid and large-scale building projects, many of which did incorporate the movement's ideas of organic growth, impermanence and technological boldness.

Metabolist-era design and theorizing came to a culmination at the 1970 Expo in Osaka. The last visionary urban/monumental-scale project of the movement to be engaged with by the public was Kenzo Tange's "Big Roof". The roof was a steel space frame suspended 30 meters above the Expo's central plaza.

Moving into the 1970's, Metabolism lost public engagement and economic backing with the

1973 oil crisis. It did however inspire a generation of architects and urbanists both in Japan and abroad and leave a legacy of theoretical and realized examples in infrastructure and buildings. It is this legacy of integrating traditional and modern theories and forms of design, a focus on impermanence and organic growth that informs this thesis, which explores how infrastructure a contemporary urban infrastructure in Tokyo can accommodate future changes in use patterns, both anticipated and unanticipated.



Figure 11: Kenzo Tange's 1970 "Big Roof" at the Osaka EXPO 70

Informal Development of urban forms

Another legacy of the post-war period is the development of small, highly-dense and eclectic neighborhoods of alleyways and shops. Today these neighborhoods are known as “Yokocho” 横丁. The name translates roughly to “Alley off of the main street”.

Yokocho neighborhoods developed in the years following WWII largely as black markets for daily use items. Tokyo had been largely destroyed during the war and was struggling to provide adequate housing, services and goods for daily life and these markets were allowed to develop largely informally, without official planning, to satisfy the demand. They consist of narrow streets formed from alleys, usually less than 3m wide, with small buildings of two or three stories. Utilities and services as well as structures were built and adapted piecemeal, with any available space being put to use.²⁶

Over time, as Tokyo’s housing and economic situation improved, these areas transitioned into dining and drinking districts, catering towards entertainment of working professionals and also in more recent decades, tourists. Today these districts typically lie at the heart of busy commercial and social centers. They feature small restaurants and bars on the ground floor, with smaller residences above. The boundary between interior and exterior is softened as many of these establishments open to the outside with bars and stools accessible from the street. Utilities have largely been corralled into overhead lines, which run as a trunk above the alley, branching out to serve buildings and together with overhead vegetation forming a very human-scaled roof condition.

²⁶ http://web-japan.org/trends/11_lifestyle/lif120301.html



Figure 12: Eclectic elements and a cozy human scale in Shinjuku Omoide Yokocho

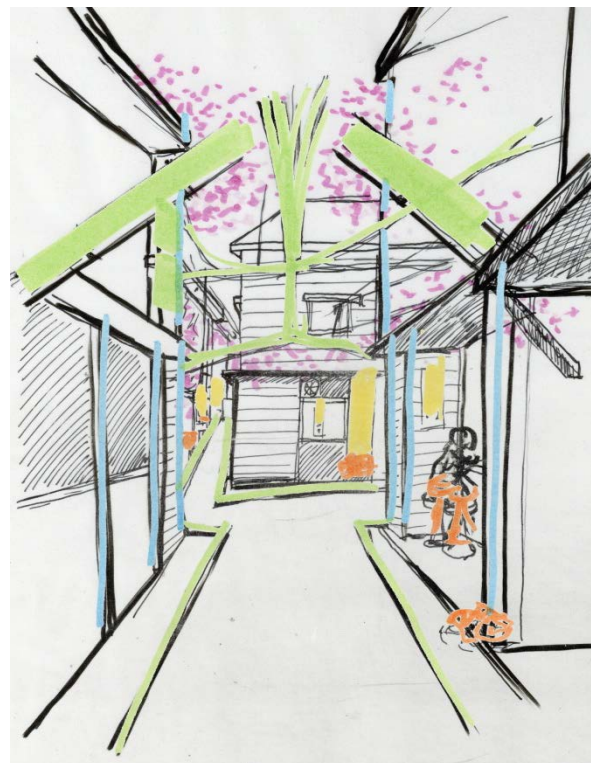


Figure 13: Analytical Sketch of street elements in Shinjuku Omoide Yokocho. Blue = Vertical, Yellow = Advertisements, Green = Utilities & Orange = Mobile Elements

These districts are of interest to this thesis due to their informal nature and continued use and adaptation over time as society has progressed. They developed in an uncoordinated fashion to fill an immediate demand and were largely allowed to occur in an organic manner, as opposed to the more formal plans of the metropolitan government and architects and urban designers. Yet they are a thriving and purposeful part of Tokyo's urban environment today.²⁷ In this thesis' exploration of infrastructure that can adapt and serve as a platform for changes and experimentation with use patterns, this precedent of Yokocho districts offers opportunities for exploring what might be able to grow from this new infrastructure.



Figure 14: Street Scene of Shinjuku Omoide Yokocho during a lull in activity

²⁷ http://web-japan.org/trends/11_lifestyle/lif120301.html

Eras of Urban Development in Tokyo

Tokyo has seen many different waves of development since Japan's modern period began in the 1860's. These waves were brought about by many factors; technological advances, societal changes, wars, economic pressures and political/municipal goals. These eras, either through intent or natural development forces, had an impact on the project's host neighborhood Nakano.

As outlined in the introduction of this document, Nakano began as a small village on the outskirts of Tokyo's wealthier western areas. During the Meiji and Taisho periods (late-19th and early-20th centuries), the area developed into a suburb of central Tokyo with the establishment of the railroads. The area grew into a larger and denser suburb during the first half of the 20th century, driven by rapid population growth and housing needs. Much of this redevelopment happened in large waves after the 1923 Great Kanto Earthquake and in the 1950's following

World War II.

At the beginning of the second half of the 20th century, Nakano was a densely populated central Tokyo ward, primarily residential in character with a small core of commercial use surrounding Nakano Station. It is from this state that two subsequent eras of development in Nakano and their impact on the neighborhood's forms and functions are explored. The first era is a wave of development in the 1960's and 70's, coinciding with Japan's "Economic Miracle" decades. The second era is the beginning of the 21st century, from 2000 to the present day. This second era coincides with the continuation of Japan's "Lost Decades" of economic stagnation and societal/demographic unease, which began in the 1990's.



Figure 15: Pedestrian Flyovers became common features in post-war urban development.

The 1960's and 70's

Following World War II, Japan underwent a massive rebuilding and modernization program of its economy, society and built environment. Much of the 1950's was spent building economic capacity and strength and by the 1960's, Japan had entered what would come to be called its "Economic Miracle". This period saw living standards and economic opportunities rise for much of Japanese society. Japan also sought to promote itself internationally as rebuilt and modernized. These trends led to the development of many showcase projects, intended to demonstrate Japan's newfound prosperity and modern appeal. Within Nakano, this effort was manifest through several mega-structures and their supporting infrastructure. Nakano Sun Plaza and Nakano Broadway were both developed as monolithic, high-end, self-contained complexes for living, working and entertaining.

Nakano Broadway is a large, monolithic shopping mall to the North of Nakano Station, connected to it by the Sun Mall shopping arcade. Initially developed in 1966²⁸ as a high-end complex featuring restaurants, shops, apartments and luxury amenities such as roof terraces and a swimming pool, Broadway was a symbol of Tokyo's modernity.²⁹ Broadway was a destination to be visited and a highlight of the 1960's Japanese economic and social aspirations.

Located two blocks to the southwest of Broadway is Nakano Sun Plaza. Built in 1973, the complex features among other things, a

²⁸ <http://www.ocada.jp/tokyo/nakano.php>

²⁹ Gotokyo.org, <http://www.gotokyo.org/en/discovery/vol5/special06.html>

hotel, manga cafe, shops, restaurants, lifestyle amenities, a fitness center and a 2222-seat concert hall. At its inception, this complex was at the forefront of hosting Japan's major concerts and events, featuring many internationally renowned and foreign acts.

Both of these structures were large, high-end, multi-function and self-contained. They were



Figure 16: Entrance to Nakano Broadway. The Scale of the building is lost due to its dense and varied surroundings.

large objects inserted into the surrounding urban fabric as a new typology of urban development. Although these structures were developed during the prominence of the Metabolist movement, even drawing from some Metabolist ideas such as monumental scale and multi-function complexes, these structures were less integrated with their context spatially and temporally.

The goal of a modern and appealing environment was of a built environment of technologically advanced, amenity-rich and highly structured complexes. It was an exercise of a formalized urban process, driven by large developers and municipalities. Yet this goal ultimately was not achieved in full.

Following the development of these large complexes, much of the surrounding neighborhood adapted to their presence through myriad small-scale interventions. Driven by individual property owners, surrounding buildings shifted to more entertainment and recreational uses to capture the resident and professional populations of the new complexes. This development was haphazard and uncoordinated, lacking any unifying plan or vision and ultimately became a maze of eclectic buildings, spaces, pathways and street elements.

This more individual, informal and uncoordinated development ultimately overtook the mega-structures as the busiest spaces of the area, leading to a period of decline for the mega-structures, with the uncoordinated and informal development representing the dominant urban typology of the area.

Contemporary Developments

As the cutting edge of Japanese modernity progressed, it left Nakano behind. Nakano Sun Plaza and Nakano Broadway, along with the Sun Mall and surrounding informal developments came to be seen in a more retro light, representative of the Showa-era and out of sync with newer more modern areas of Tokyo such as Shibuya and Roppongi. It was in this context that Nakano's next major phase of development began in the first decade of the 21st century.

Following the closure of the National Police Academy, formerly the WWII Army Intelligence Training Facility, site in Nakano and its handover to the ward government, a comprehensive urban design strategy was developed for the site. Unlike previous strategies for large sites, this strategy outlined multiple buildings and spaces of different uses



Figure 17: Street Scene of Entertainment area near Nakamise-Dori. This use pattern and building and block form developed in response to traffic from adjacent Nakano Broadway



Figure 18: Nakano Sun Plaza presenting a blank and isolating facade to its main street

and scales. It sought to develop not a stand-alone complex, but an urban sub-area, connected to its adjoining urban fabric and serving functional needs within the larger Nakano neighborhood.

The new sub-area is open to surrounding areas and came about as a collaborative process between the ward government and many local and regional stakeholders. It is also envisioned not as a single development, but as a series of developments, built up over time in response to neighborhood growth and demands.

Physically and functionally the design is contemporary and places an emphasis on flexibility and open space, encouraging recreational and social activity. It is centered on

a large park space surrounded by office, university and dining across numerous price points and specialties. The park space has several different designed areas, as well as areas which host temporary uses such as food trucks and community/social gatherings.



Figure 19: Nakano Central Park. An expansive and contemporary mixed-use environment

This new development paradigm represents a formalized, yet flexible approach to urban design that also seeks to engage its surrounding context to a larger extent and with an eye towards the future of the spaces and uses. Unlike the rigid formal thought behind the mega-complexes of the 60's and 70's and their subsequent decline and subversion by informal development, the Nakano Central Park area represents an effort to not only develop as a modern and appealing place to live and work, but as a place with the capacity to adapt to changes in economic and social forces.

The future era of Nakano's Development

Having undergone numerous phases of development throughout the 19th and especially the 20th century, Nakano now sits at the head of the 21st century. With these previous eras exploring urban development through a rigid, formalized model, subsequently dealing with the decline of that model and its subversion by informal development patterns, only to re-establish a formal framework for the development of urban space in a more flexible manner, Nakano is poised to explore how its urban form can adapt to the future demands and challenges of 21st century urban Japan. This thesis project explores the possibilities for such an urban framework through design, drawing on this legacy of formal and informal development and adaptability.

Concluding Thoughts

The characterization of movement space as a specific spatial reference system for movement, as well as a perception of that space's place in time, bears influence on the design and context of this thesis project. As the project aims to create a connection between various sub-areas of Nakano, as well as to provide circulation options for users, a large portion of the space is dedicated to movement. The project must also exist within the development history of the neighborhood context and maintain an awareness of its responsibility to address not only the present's needs, but must also possible future needs, which are difficult to foresee.

Nakano is not a static existence, but a network of temporal and spatial flows, played out across different eras of development and in different physical spaces, but linked by the users who move through the space and by how the urban environment relates these scenes in time and space to each other.

As this thesis looks to developing the new Nakano Station Plaza's capability to flow through instances in time and to host ever-adapting scenes in the sequences of movement within Nakano, it can draw from Metabolist-influenced ideas of large-scale infrastructure and adaptive growth, the interplay between formal and informal urban development strategies, an understanding of movement spaces of its site and of neighborhood contexts to develop a design that can better serve users in their spatial perception of the site and neighborhood and more ably adapt to future scenes in the flow of Nakano.

III. Methods

Chapter Overview

This chapter explores the methods of this thesis, referenced to the theoretical framework. First is an overview of design methods, which reiterates the goals of the thesis, how research and knowledge are treated and positions taken on this knowledge. Following is a site analysis, viewed through the lens discussed in the theoretical framework chapter, as well as a list of programs, spaces and functions, also building upon the theoretical framework. The next segment briefly explores the design approach to the thesis project and the final segment explores the limits and delimits of the project.

Overview of Design Methods

Thesis Objectives

This project aims to create a Japanese public space and infrastructure that can develop adaptively to future societal demands and uses. The spaces of this public infrastructure will support different uses across different spans of time, from different times of the day, to weekly and monthly events to seasonal uses. In addition to these temporal goals, the project addresses spatial concerns by offering enhanced options for circulation that are more apparent and accessible than existing options in urban Tokyo, as well as seeking to provide better connections between various neighborhood sub-areas and between different urban scales.

Research Paradigm

My attitude towards knowledge and method for learning has largely been constructivist in character. Though I gain large amounts of information through absorbing work and research, my learning tends to come from the parsing of the information gathered and hypothesizing possible processes acting behind the outcome.

This learning process of this thesis is dealt with through a constructivist perspective of knowledge. The impetus for the thesis topic and source material driving the theoretical knowledge is predominantly primary observational experience and interpretation thereof. While secondary research is incorporated, this research is interpreted through my understanding of the topic and its relevance to the thesis subject.

Conceptual Position

Given the scale of the project site, the breadth of the design intervention and the forward-looking nature of the project, this thesis is approached from a primarily speculative position.

This thesis proposes a significant urban design-scale project that draws from my interpretation of several aspects of Tokyo's urban development. It then attempts to synthesize these aspects into a strategy for future development in urban Tokyo, with the Nakano site serving as an exploration of this concept as applied to specific site contexts and conditions. The design strategy itself involves speculation on how future developments and uses of urban space and the project site will unfold, as well as how those spaces and the connections between

these spaces and between the proposed project and the flow of time will be perceived.

The design strategy and thesis theory are fairly normative, re-examining and re-applying existing aspects of Urban Tokyo's built and social form towards this speculative future. Having observed and interpreted the built and social conditions in the theoretical framework, it does not significantly challenge the assumption of the mechanics at work behind these conditions.

Site Analysis

The first element of this thesis to be selected was the site. As an exchange student at Meiji University in Nakano, I was a daily user of the station and was afforded ample opportunity to explore the station and surrounding urban context. It was through Meiji University that I learned about the history of the neighborhood and its development as well as the proposals for the redevelopment of Nakano Station. This familiarity with and personal interest in the urban qualities of the neighborhood surrounding the station site, along with the opportunity represented by the proposed redevelopment, led me to choose Nakano Station as the site to explore the interface between a station and its urban context.

A Brief Introduction to Nakano

Nakano Ward, 中野区, is composed of two Kanji, 中 = referring to “middle” or “central” and 野 = referring to “plain” or “flat”. This derives from ward’s central location within the Tokyo basin and from its relatively flat nature, when compared to the surrounding geography. Unlike the majority of the wards around it, Nakano is relatively even, with only gradual and smooth elevation changes.

Nakano Ward is one of Tokyo’s central 23 Wards and is the most densely populated urban neighborhood in Japan. Much of this density is related to a high amount of housing and large predominantly residential areas within Nakano. Although Nakano is perceived as a residential area, there are also significant commercial, institutional and lifestyle elements within the ward, the largest concentration of which is located in the area surrounding Nakano Station.

Overall, Nakano has a balanced feel to it. It has the residential amenities and diversity of housing types and sizes to support a varied and extensive population, with a balance of bustling and calmer areas. It has major cultural and lifestyle areas and amenities that host a wide variety of users, both locals and visitors. The neighborhood has also recently begun to focus on institutional and commercial uses and users, developing available properties into a business and university area, which is becoming increasingly utilized and recognized in Tokyo.

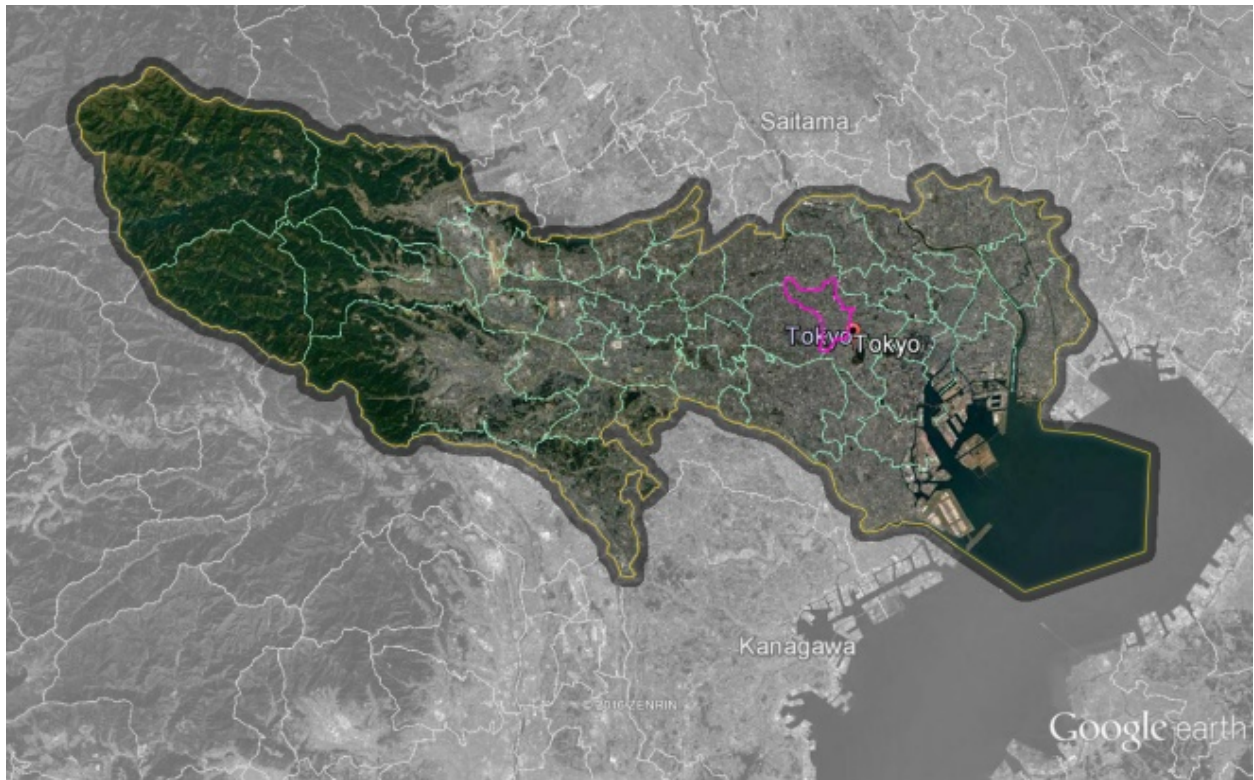


Figure 21: The Tokyo Metropolitan Area

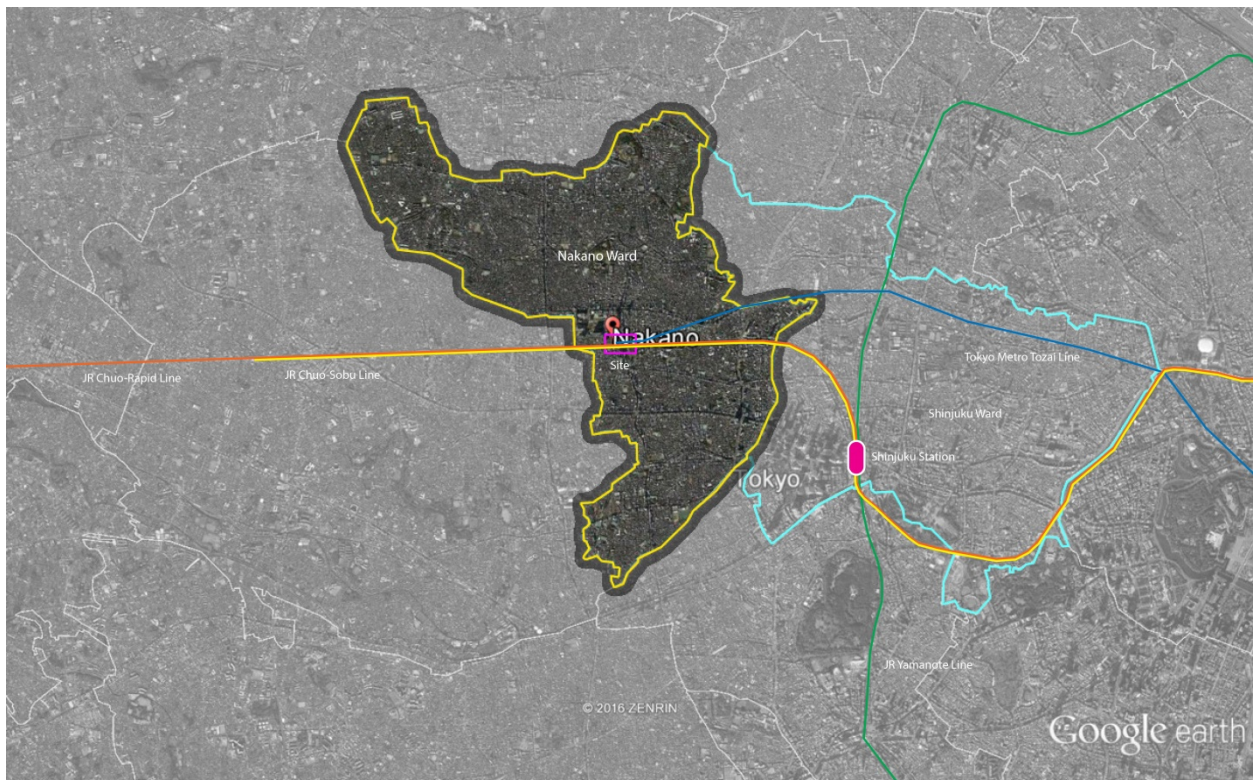


Figure 20: Nakano Ward within Tokyo

Nakano Ward is a neighborhood with a history of change that has shaped how the area functions today. Initially developed as a railway suburban area on the fringe of rapidly urbanizing Tokyo in the late 19th century, Nakano underwent several cycles of destruction and dense rebuilding, first with the 1923 Kanto Earthquake and then after WWII. Each cycle brought changes to the neighborhood, with more dense residential and more urban amenities such as shopping, commercial and cultural institutions. The most visible forms of today's Nakano stem from the post-war economic boom of the 1950's through 1970's. Nakano rapidly developed into a more dense urban fabric, featuring taller multi-family and mixed-use structures closely spaced with smaller single-family structures. This period also saw the development of two Nakano's most iconic places, the Nakano Broadway and Nakano Sun Plaza.

Nakano Broadway is a large, monolithic shopping mall to the North of Nakano Station, connected to it by the Sun Mall shopping arcade. Initially developed in 1966³⁰ as a high-end complex featuring restaurants, shops, apartments and luxury amenities such as roof terraces and a swimming pool, Broadway was a symbol of Tokyo's modernity.³¹ Broadway was a destination to be visited and a highlight of the 1960's Japanese economic and social aspirations. Over the next few decades however, Broadway was supplanted by other luxury areas and gradually shifted into a center for Otaku culture. Today, Broadway is home to numerous

manga and video game shops catering to a more underground and niche clientele than more well-known Otaku culture areas such as Akihabara and Ikebukuro. The physical design of Nakano Broadway and its connections to the neighborhood is largely unchanged from its original 1960's character and today the area is notable for its retro appearance and feel, surviving as a strong memory of the Showa era (1926-1989) that formed it.

Adding to the retro atmosphere and also showcasing one of Japan's pivotal eras in history is the Nakano Sun Plaza, a large mixed-use skyscraper complex from that same period. Built in 1973, this complex sits across the street from Broadway's block. The complex features among other things, a hotel, manga cafe, shops, restaurants, lifestyle amenities, a fitness center and a 2222-seat concert hall. This complex was at the forefront of hosting Japan's major concerts and events, featuring many internationally renowned and foreign acts. The building's large scale and infrastructure-like design shows the influence of the prominent architectural theories and movements of its day, drawing from metabolist ideas of scale, monumentality and multi-function infrastructure.

³⁰ <http://www.ocada.jp/tokyo/nakano.php>

³¹ Gotokyo.org,
<http://www.gotokyo.org/en/discovery/vol5/special06.html>

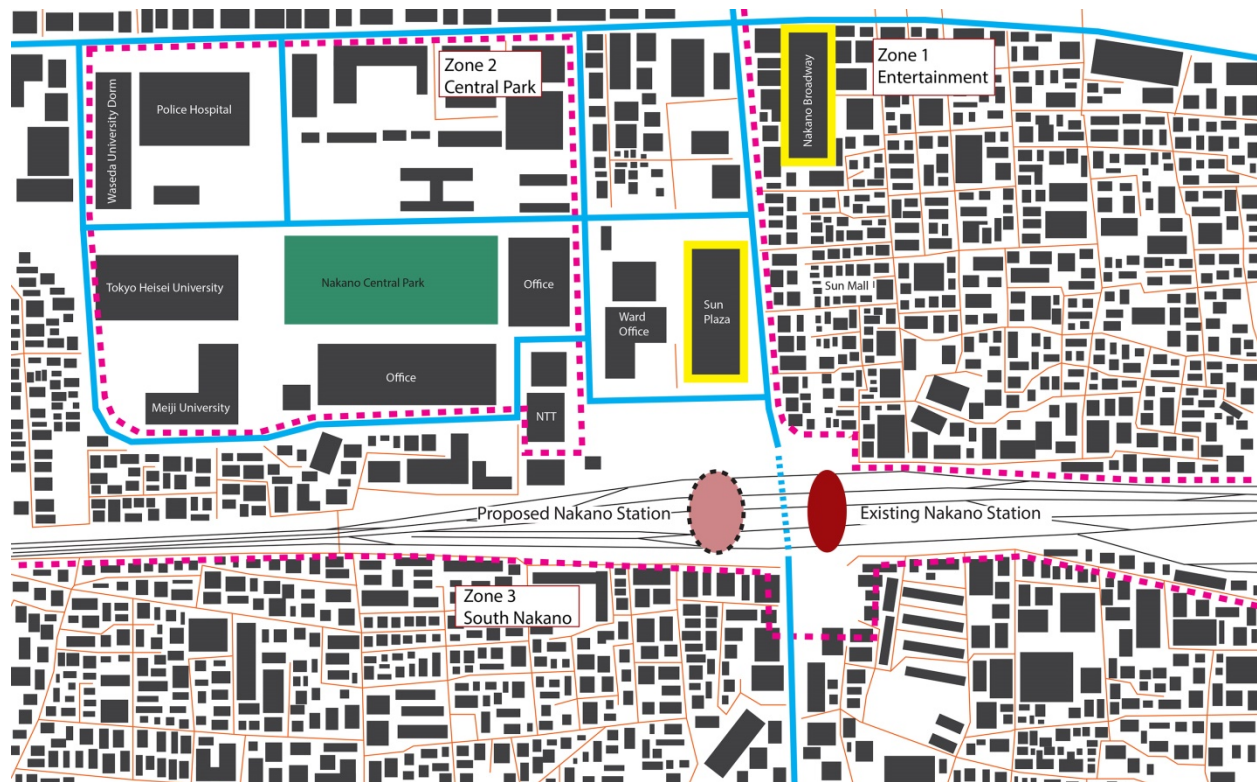


Figure 22: The urban fabric of Nakano near Nakano Station

Different “Zones” Of Nakano

Nakano can be divided into several sub-areas, based on urban forms and typologies, land uses, landmark structures and the eras in which these sub-areas developed.

Zone 1 - Entertainment

The first such area grew around the larger monumental structures of Nakano Broadway and Nakano Sun Plaza in the 1960’s and 1970’s. Centered on Sun Mall and Nakamise-Dori streets, this area was originally a typical 1920’s shopping street, featuring grocers and pharmacies. Following the establishment of Broadway and the Sun Plaza, the area surrounding these streets and the two complexes incrementally and organically developed into an entertainment area, aimed at attracting the new patrons of the larger

complexes.³² This area is now densely packed with ramen shops, small restaurants, gambling halls, pachinko parlors, bars and “Tachinomiya” (a very small standing only bar) and massage parlors. This area is full of chaotic and eye-catching visual and auditory advertisements and is typically crowded for much of the day, with businessmen, workers and students eating out for lunch and dinner, as well as visitors, tourists and shoppers and Otaku packing the streets and shops. The atmosphere is bustling and energetic, but also very casual and inviting, encouraged by the shared use of small amounts of public space by large and diverse groups of users.

³² <http://www.ocada.jp/tokyo/nakano.php>

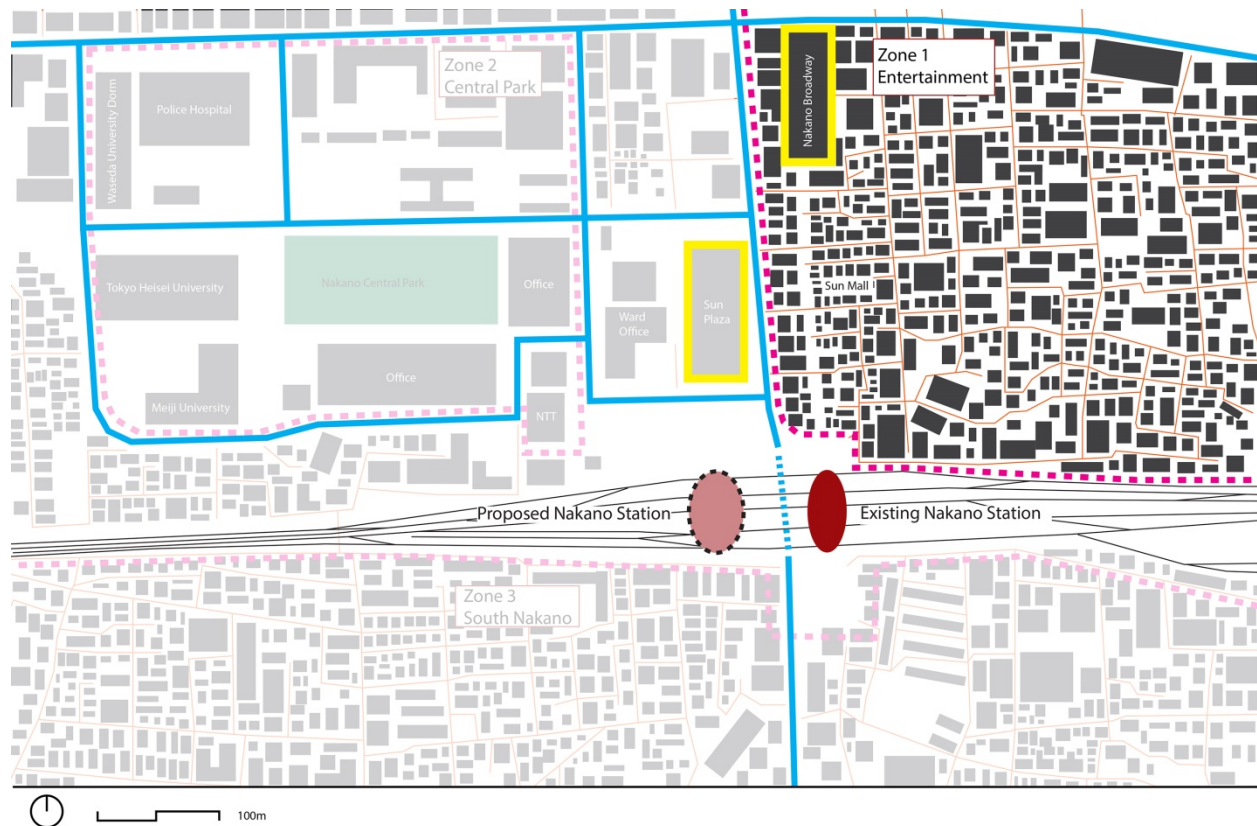


Figure 23: Zone 1, the dense, entertainment district

Dominant Building Typologies:

- **Small residential and retail/dining:** these are typically 2 - 4 stories tall and are light timber or concrete construction. They typically house residences and often shops or dining establishments on the ground and second floors. These can be found in most parts of the area surrounding the station, but are especially concentrated in the area to the north and east of the station, which serves as an entertainment, retail and dining area.

- **Older Mixed-Use Mega-Complexes:** This building type refers to Nakano Sun Plaza and Nakano Broadway. These were developed during Japan's post-WWII economic boom decades in the 1960's through

the 80's. They are typically concrete and steel monoliths of monumental scale. They have housed a variety of different uses such as event spaces, malls, hotels and commercial spaces over their lifetimes. While initially intended as high-end enclaves of consumer culture and cutting-edge architecture, over time their condition and uses have undergone significant change.



Figure 25: Eclectic and Human-Scale Street Scene dominated by mobile elements and advertisements



Figure 24: Building forms are highly individualized without reference to rigid planning or a unifying framework

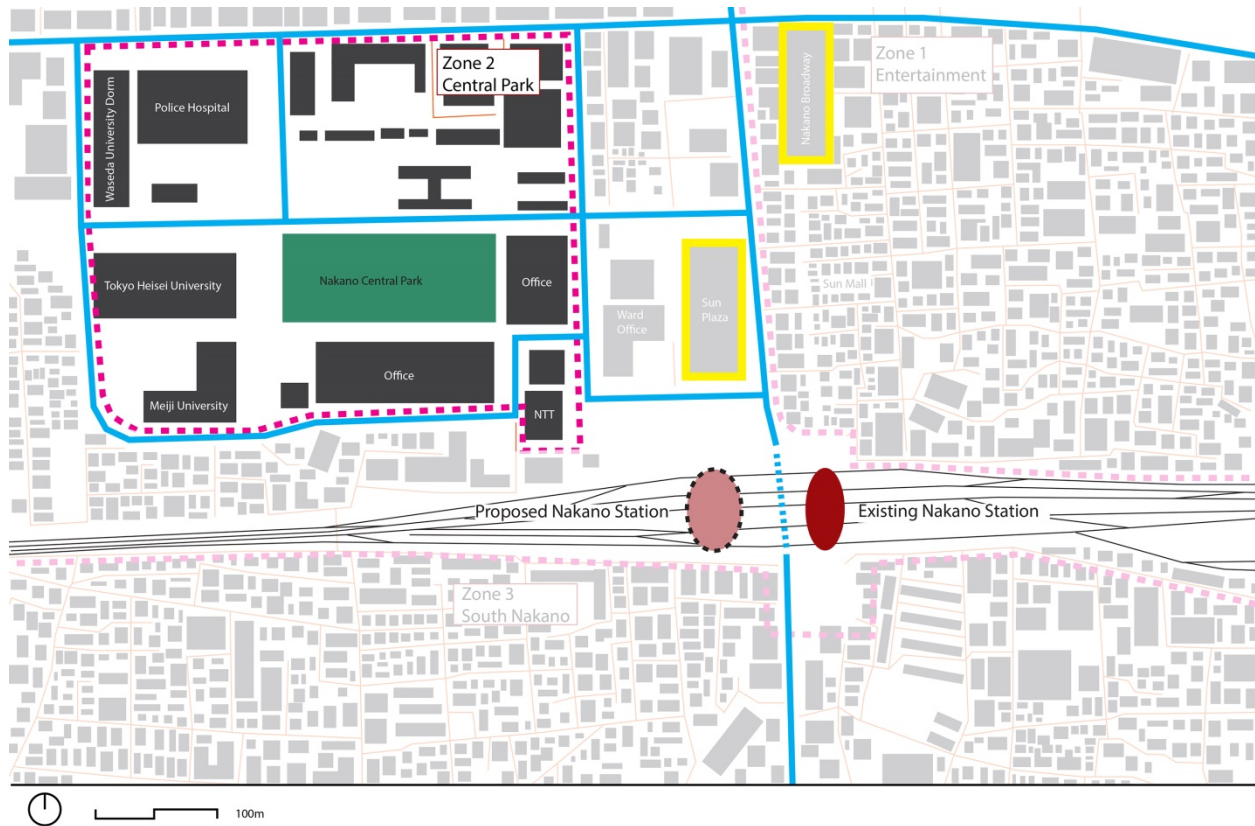


Figure 26: Zone 2, the contemporary Office and Institutional Park

Zone 2 - Institutions

While the Nakano of Sun Plaza, Broadway and the surrounding entertainment district are emblematic of the Japan of the Showa era, they alone do not represent the full character of Nakano. As the Japanese economy began to slow down during the late 1980's, these older icons, complexes and urban life patterns lost their prominence and recognition as the shiny face of modern Japanese society, gradually being supplanted by newer developments in other areas such as Roppongi. Over the last two decades, the Nakano Ward office explored ways to usher in a new wave of development and the new stage of modern Japanese Urban living.

One such exploration was the redevelopment of the old Nakano School, a former WWII-era

military intelligence training facility and later National Police training facility.

Redeveloped into Nakano Central Park in 2012, following a decade of planning, negotiations and consensus-building, the former police training facility is now home to numerous offices, university campuses, shops, park facilities and housing, all developed from a comprehensive masterplan. The new masterplan utilizes the former facility's 13.7 hectares of open space to provide mixed-use and open spaces and amenities, quite unlike large Japanese development projects of previous eras. The centerpiece of the area is the central park, a large open park, featuring numerous different designed plantation and activity zones, fronted by outdoor plaza seating for restaurants and cafes and opening onto the university campuses. The design and

atmosphere of the park is unlike many other spaces in Tokyo or Japan of a similar scale, having many commonalities with North American or European public spaces.

This central space sees a variety of different users and uses throughout the day. Throughout the day it is host to mothers and children using the park facilities and socializing who are joined during lunch and dinner hours by students and workers from the adjacent buildings, making heavy use of the adjacent restaurants and food trucks and food stands that dot the area. An increasingly large number of these users are people from outside Nakano, but who are users of its facilities. A growing percentage is also foreign, as the universities and surrounding companies are working hard to attract foreign students and employees. The area also sees high amounts of through traffic as people from the universities and offices make their way to and from Nakano Station and the Sun Mall/Nakamise-Dori area.

Despite the heavy pedestrian traffic and diversity of uses this space still feels very tranquil. The scale of buildings and spaces allows for ample sunlight and wind exposure, which coupled with the green elements provides for a very refreshing and outdoor's feel, in complete contrast to the dense and confined indoors feeling of the older adjacent area of Nakamise-Dori and the Showa era complexes.

Dominant Building Typologies:

- **Modern Office and Institutional:**
Constructed primarily during the last decade and primarily on land made available by the acquisition of the former National Police Academy, this type is mostly large-scale steel and glass

construction, often high-rise. They are clustered mostly around Nakano Central Park and house larger companies and University Campuses. They were designed and developed as part of a comprehensive and coordinated effort to create a 21st century cosmopolitan district within Nakano and to support more modern and balanced lifestyles.



Figure 28: Central Park as a spacious and green environment



Figure 27: Open space for sports activities in Central Park

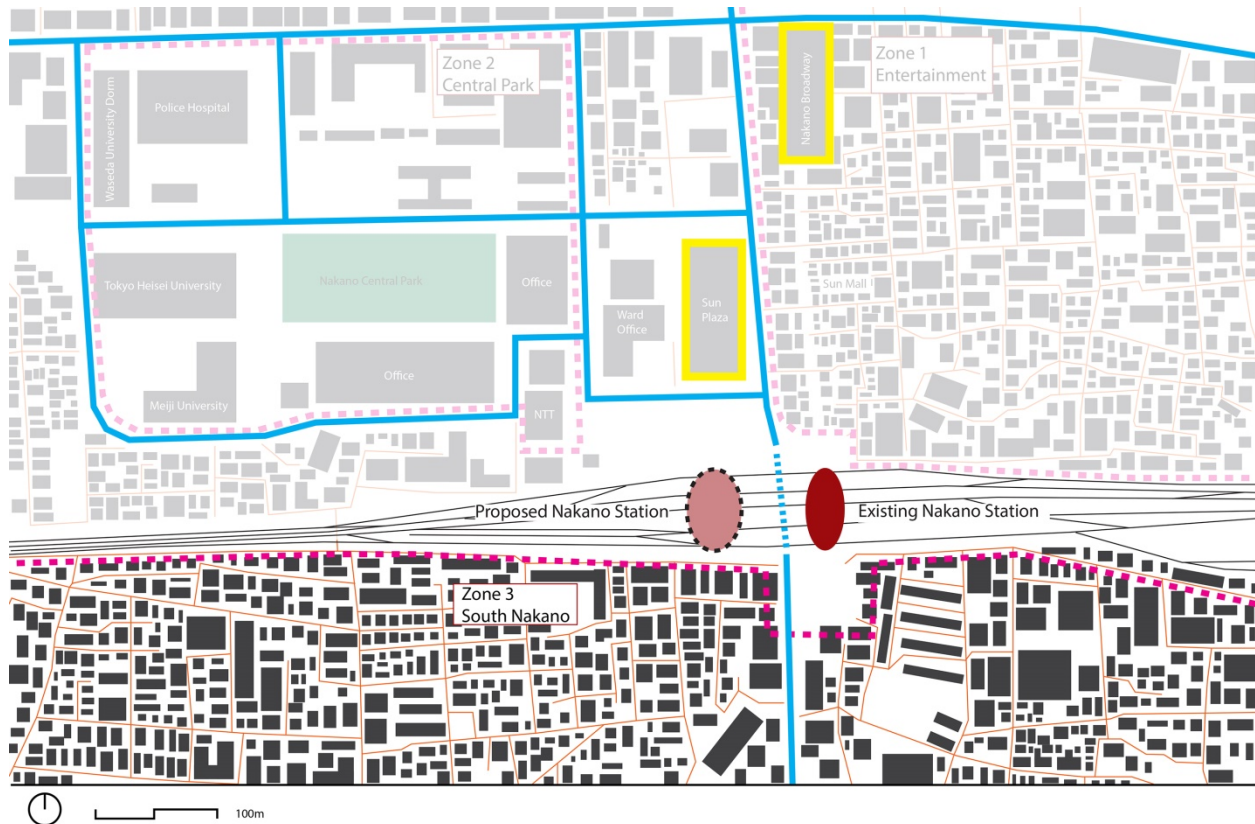


Figure 29: Zone 3, the mixed-use and typical zone

Zone 3 – Mixed/Typical

The area south of the rail lines constitutes a third “zone” in the urban context of Nakano. This area is mixed-use and medium-grained relative to zone’s 1 and 2. While much of the area is small and medium-scale residential, there is a smaller commercial core abutting the south end of Nakano Station. This core area features a scattering of smaller-scale retail and dining establishments as well as many mid-sized business buildings and several department stores and office buildings. There are also several mid-sized apartment buildings and even several large residential towers. Outside of the area immediately adjacent to the Station, this area is largely quiet and residential.

This area is the most alike the average Tokyo urban sub-area, with a range of scales in buildings and spaces and places and infrastructure from across the last half-decade.

There is no particular urban theory or development period that defines this area.

Dominant Building Typologies:

- **Small residential:** these are typically 2 - 3 stories tall and are light timber, reinforced masonry or concrete construction.

- **Mid-rise Commercial buildings:** These buildings are typically relatively narrow, relative to their height, and often exceed 6 stories. They typically house a variety of commercial uses with the ground and second floors often containing retail and entertainment. These are typically concrete construction and are primarily located along arterial roads and surrounding open spaces, which in this site context, means predominantly along route 420 and surrounding the station plaza.



Figure 30: A variety of building scales, ages and uses in zone 3



Figure 31: Simple corridors with mixed buildings

The sub-areas of Nakano discussed above differ in scale, history and character, but all are representative of the greater character of Nakano, of past, present and future, of a district first created by and subsequently driven by change, of a district in which the Japan of yesterday, today and tomorrow exist side by side. Nakano Ward is cognizant of its own situation and is looking to work with its own character and the forces that drive it to better utilize this change and help guide it.

Nakano is increasingly investing in increasing its awareness among Japan and the world, seeking to bring in more foreign students, more foreign employees and more companies, alongside attracting more Japanese residents and providing 21st century amenities and an enhanced and more flexible urban environment that can grow through and support future changes in urban Tokyo.

Part of this initiative is the promotion of Nakano as a destination, of highlighting the diversity of

the area and its environments, of how Nakano represents all elements of Japanese society and history and also supports the future direction of urban Japan.³³

³³ <http://the-japan-news.com/news/article/0003508119>

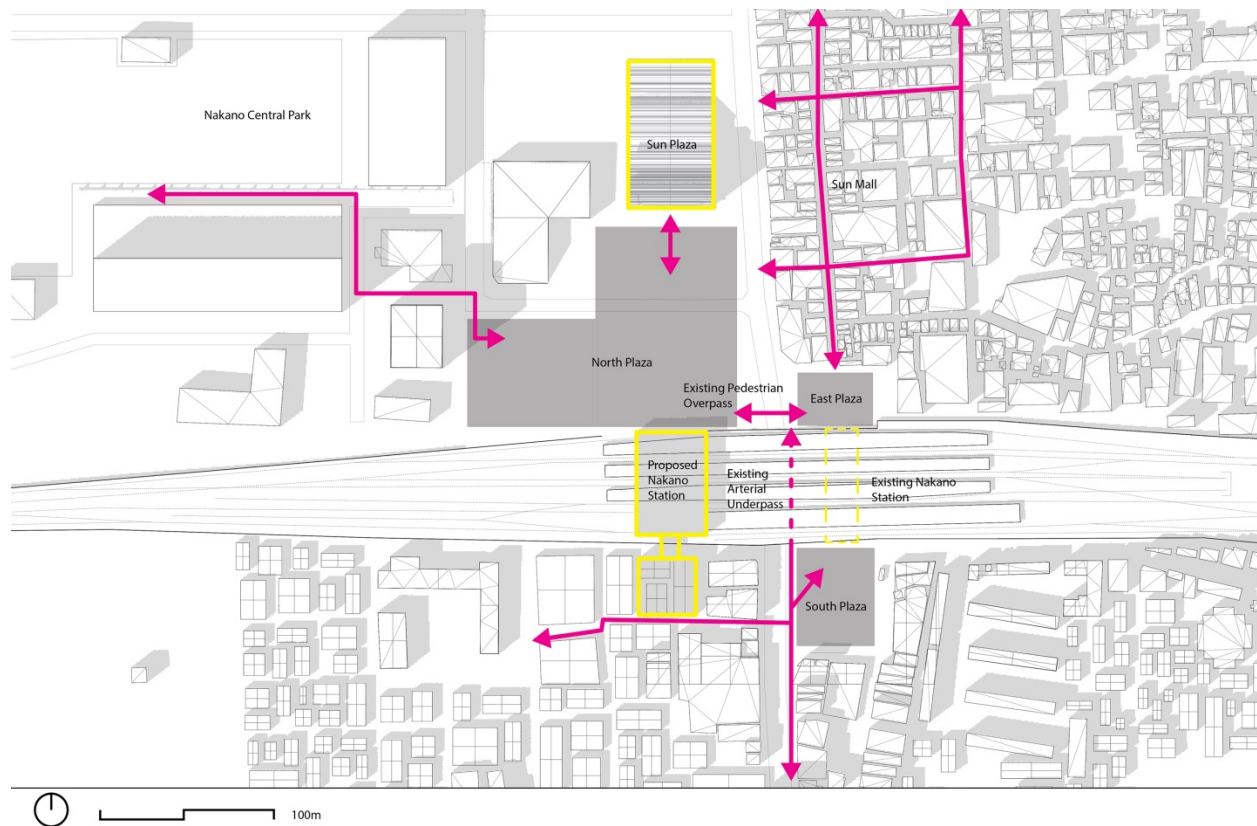


Figure 32: Site and surroundings with major circulation corridors shown. The existing, as well as proposed Nakano Station are show, along with the prominently located Nakano Sun Plaza

The Station Site

The first point of reference for the Nakano Station site and its immediate surroundings is the Chuo Main Line railway infrastructure. The rails run east-west, connecting Central Tokyo to the Western Metropolitan Area and the mountains beyond. This rail infrastructure is elevated five meters above grade at Nakano Station, bisecting the district into northern and southern areas. The site is relatively level, with less than two meters elevation change north-south across a quarter kilometer.

Nakano Station is a medium-sized urban train and metro station in Tokyo, Japan. Located at Latitude 35°42'19.46"N and Longitude

139°39'56.97"E, roughly in the center of Nakano Ward. With 4 platforms and eight tracks, the station serves 3 lines; the JR Chuo and Chuo-Sobu lines, as well as the Tokyo Metro Tozai Line. The station is the terminus of the Tozai Lines and is the first station in the Tokyo Urban Center on the Chuo and Chuo-Sobu lines. This makes Nakano an important transfer station and a gateway from the outlying metropolitan area into the central Tokyo area.

The existing Nakano Station is raised above the street level, with passengers entering and exiting the concourse level at street level beneath the tracks and platforms. This concourse lies on the eastern side of route 420 and is 80 meters in length and is the sole connection between the four platforms and the urban environment outside the station.

The eastern side of route 420 hosts the existing plaza spaces fronted by the station. The station's south portal connects to a small plaza and contains the entrances to JR's ticketing office. The plaza hosts existing bus loop and taxi waiting area and is surrounded by a smaller area of retail and dining. The concourse' north portal also opens onto a small plaza. The northern plaza is the busier of the two, with direct connections to the Sun Mall, Broadway and the retail and dining area north of the station. There is also an indirect connection to Nakano Sun Plaza and on towards the Ward Offices, Central Park, the Universities and the emerging office district. While the space to the south of the station is currently relatively dense and solid, the spaces north of the station consist of large open spaces by the standards of Nakano and urban Tokyo.

West of route 420 on the north side is a large open space, currently home to a parking lot and bicycle parking. Northwest is the new office district, Central Park and the Universities. These spaces are much more open and rectilinear than the surrounding urban fabric, being built as a single redevelopment on the former site of the National Police Academy. Further redevelopment of the remaining open spaces and some possibly some of the existing structures such as Nakano Sun Plaza is under consideration.

Viewed through the framework of movement spaces and sequence of scenes, the current site represents a void or gap within the chain of sequences. Its large scale and lack of definition do little to frame the scenes and progression through different parts of Nakano.

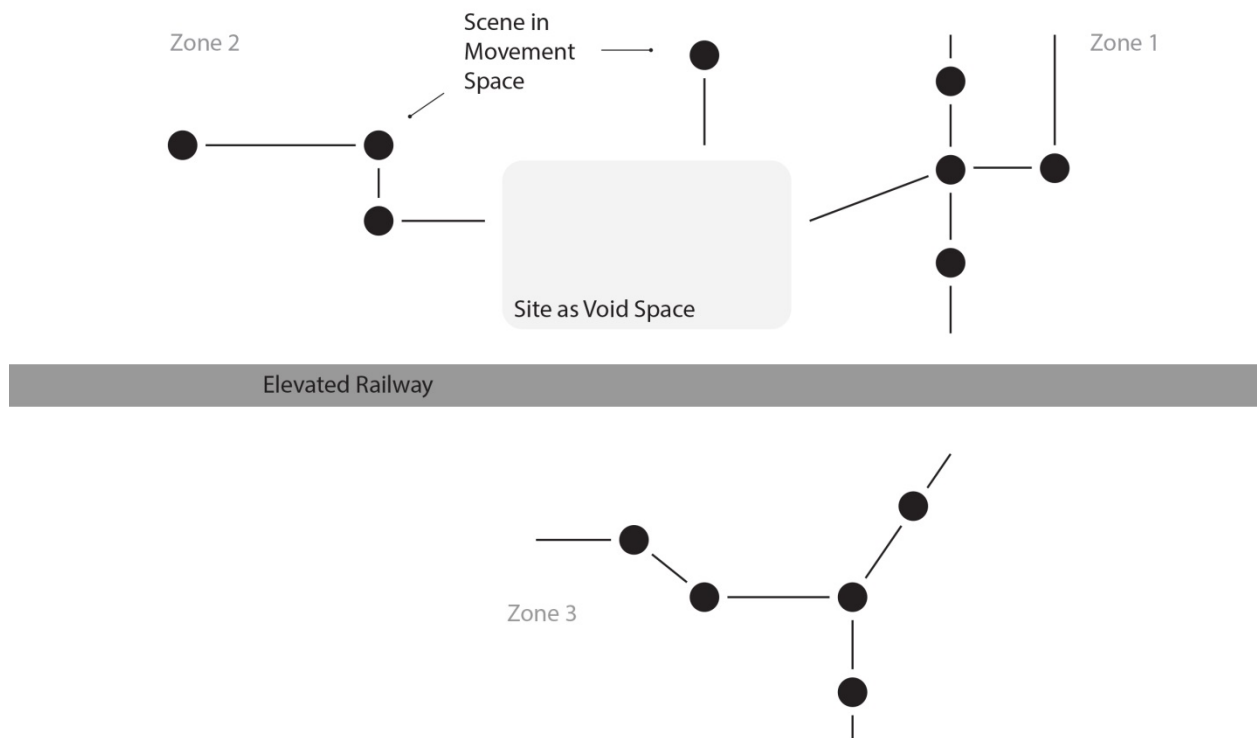


Figure 33: The new plaza site in its current condition represents a void in the sequence of scenes from movement spaces in Nakano 43

JR Proposal for New Nakano Station

One of the impetuses for this thesis project was the discovery that Japan Rail (JR) proposes to create a new Nakano Station to the west of the current station, ultimately replacing the existing station and redeveloping much of the adjacent land.

This redevelopment proposal represents an opportunity to engage the surrounding urban context in a more successful manner, more thoroughly connecting the various sub-areas of Nakano and providing enhanced options for amenities and quality of life improvements for the many users of the area.

The JR proposals represent an awareness of the opportunity and perhaps even an attempt to address it, yet these proposals fall short of creating a more connective and adaptable urban environment.

The JR Nakano Station proposal calls for a new station building to the west of route 420 and the current station. This station building and its concourse are to be elevated above the level of the elevated rails, creating an elevation change of three levels between the station concourse and the general ground plane of the surrounding site. In JR's preferred alternative, pedestrians would have to scale two sets of stairs or elevators, to the concourse, where they would need to descend down one level to the platforms.

These approach stairs, escalators and ramps are pushed to the periphery of the site, with a large bus and taxi loop taking the central position in axis with the station entrance. The path between trains and the surrounding urban context would therefore be circuitous and non-

intuitive. The majority of the site would be given over to vehicular traffic, office buildings or ornamental "green" spaces.

Neighborhood connections are noted on the proposals, but are not elaborated on and in many cases, consist of narrow and steep staircases across arterials or small, indirect pathways connecting to adjoining urban fabric.

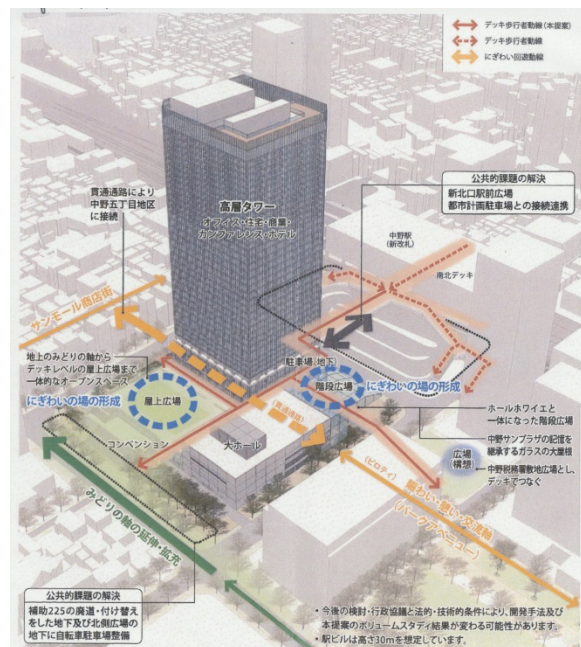


Figure 35: Japan Rail's Proposal for redevelopment of Nakano Station and the station plaza

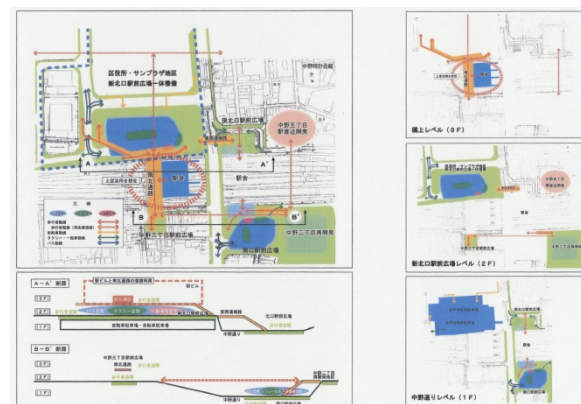


Figure 34: The new plaza design treats pedestrian space as secondary

This is the same mode of planning for pedestrian traffic that prevailed in the 1960's and 70's, when urbanization was rapid and building options were scarce. In contrast to then, today's site and time constraints provide ample land and sufficient time to plan a more comprehensive site strategy that better connects to the urban context and assigns a higher priority to pedestrians, who constitute by far the largest share of Nakano Station's users.

While JR's proposal, with its twisted pedestrian pathways and broken sightlines, represents an opportunity, perhaps inadvertently, of creating instances of movement spaces, the potential referencing of these spaces to their counterparts in the sequence of travel through Nakano is an unknown. The larger site strategy of connection is lacking in specific hierarchies of a geometric system.

The redevelopment of Nakano Station's plaza can thus be explored as an opportunity to embrace the potential for reconnecting the surrounding urban fabric of Nakano through reconnecting sequences of scenes through movement spaces, while simultaneously acknowledging the prominent elements of the site and its context and establishing a geometric spatial reference system for the site. The plaza can thus become a hybrid strategy, seeking to offer users the both options of spatial reference as they travel through the site.

Meiji University Design Charette

Meiji University conducted a design charette in which student teams and faculty members developed alternative proposals to JR's development plans. These proposals sought to address issues of hierarchy of uses and users and to reinforce neighborhood connections.

While the larger plaza spaces and direct connections to buildings represent a stronger connection to the pedestrian uses of the site and offer stronger opportunities for path-finding and circulation, the neighborhood connections and elevation change-related challenges of the new station proposal are still an issue.



Figure 36: Meiji University's student design alternative proposals

Program of Spaces

Program Goals

Directives for this project are grouped into three main goals. The first goal is the development of an urban infrastructure that is adaptive over time to future needs. The second goal is the spatial enhancement of circulation and public spaces and the third goal is the creation of opportunities for social interaction between different groups of the urban realm's users.

Objectives

In meeting the goals outlined above, several strategies are employed in this thesis project.

In creating an urban infrastructure that is capable of adapting and responding to future demands this project utilizes an infrastructure-as-platform approach. Drawing from research and observations of Metabolist urban theory, as well as observations of small-scale informal development in Urban Japan, this thesis seeks to create a more permanent generalized infrastructure of circulation and public space that will act as a scaffold for other programs, such as social, entertainment, dining, housing and institutional. These programs and the structures and spaces which contain and support them would be free to adapt over time as their use patterns change. Building out across the more permanent circulatory infrastructure, these spaces would be able to change form, scale and use depending on demand. This strategy seeks to combine the formal planning mechanisms of previous eras of Japanese urban development with the informal and more user-driven and flexible development demonstrated in several of these eras.

Circulation and public space is to be enhanced by providing a greater range of options for circulation within the site and through to different connecting areas. Whereas previous patterns of development emphasized the maximum buildout of programmed space to accommodate severe and rapid growth pressures, at the expense of circulatory continuity and clarity, this thesis' circulatory and spatial strategy seeks to work with contemporary Tokyo's reduced economic and development pressures to offer circulation as an amenity, as well as a necessity. This is envisioned as multiple options of differing character and secondary functions as means of transiting or inhabiting the site.

The existing urban context around the site can be divided into multiple zones, each with primary, specialized uses, connected through a void space that is the site. This thesis' strategy for achieving a greater interaction between the users of these various zones is to blur their edges through spatial design and programmed spaces. It is in these blurred edges that overlapping uses and programmed spaces that can be utilized by multiple user groups are to be located, with the aim of creating increased incidences of social contact and cross-pollinating.

Functions

The thesis design is difficult to separate into either a building or a site. Its form is large, touching every part of the site and connecting to adjacent urban areas, as well as comprehensive, existing as both indoor and outdoor space and as simple two-dimensional surfaces and three-dimensional multi-level spaces.

In being so many things, the project takes on numerous roles and serves many different users and functions. The most immediate function to be associated with the project upon initial examination would be circulation. Many of the project's surface areas and public spaces as well as many interior spaces serve circulatory purposes. One of the main goals of the project is to better connect the neighboring urban contexts to each other and to the new Nakano Station. Therefore perhaps the largest group of users would be commuters and other transitory users. To these users, the project functions as both a neighborhood hub and as a gateway between Nakano and Greater Tokyo.

As many of these commuters are purposefully commuting through the project to other places within Nakano, it can be reasoned that these commuters comprise other groups of users too. These groups are the groups that would be brought together through some of the overlapping and socially programmed spaces of the project. These groups include students and office workers from the universities and large offices located around Nakano Central Park. Other such groups are the residents from Nakano's surrounding neighborhood and the visitors to the entertainment and shopping district built around Nakamisedori and Nakano Broadway.

Nakano Ward is also seeking to brand itself as an appealing, contemporary and mixed-use place to live and to visit. Increasingly, the ward is promoting tourism in the district and its access to both Japanese and global culture. This project seeks to cultivate this appeal through its programmed spaces, which will provide lodging opportunities, as well as social and entertainment spaces where visitors and locals and interact with each other. These spaces will also be well connected to the surrounding fabric and serve as a starting point for those wishing to explore further into Nakano.

The infrastructure and adaptable nature of the new Nakano Station Plaza are also meant to serve as a testbed for future developments in urban uses by allowing entrepreneurs and proprietors to set up and flexibly adapt their uses and businesses on this scaffold. The development and use of the site will be a combination of formal, programmed activities and user-driven activity, involving a stake from everybody in the neighborhood.

List of program spaces

Transportation & Circulation

- **Bus stops & Taxi waiting area:**
Relocated to the north part of the site and lining the street, these areas will be located adjacent to the plaza and connections to trains while giving over primary space to social and pedestrian uses.
- **Pedestrian ramps & stairs:** These structures form the core of the site circulation strategy as well as the structure for numerous programmed spaces.
- **Pedestrian overpass over Route 420:**
An important element of the existing site to be retained in function and integrated in form into the pedestrian ramp infrastructure.
- **Primary underpass under elevated railway:** Replacing the current location of JR Nakano Station, this underpass will connect the East and South Plazas under the elevated railway, widening the path available to pedestrians and providing space for vending uses.
- **Secondary underpass under elevated railway:** Located on the western periphery of the site, this would be a simple pedestrian tunnel at ground level under the elevated railway, providing another connection between north and south Nakano.
- **Bicycle Parking:** To be located in the interior of the infrastructure, this facility would be easily accessible and secure.
- **Secondary Entrance to station in underpass:** This secondary entrance to the JR platforms would be accessed

through the primary underpass connecting north and south Nakano. This secondary entrance would alleviate the need for commuters to walk the full length of a crowded and narrow train platform if they are at the far end of the train from the Primary Station building. The presence of this secondary entrance reduces the risk of injury and death from falling onto the tracks off of overcrowded platforms and makes safety evacuations of the platforms easier.

Social Spaces

- **Visitor/Info Center:** Prominently located for easy discovery, this space could be an independent enterprise or operated as a branch of the Nakano Ward Office or by the Universities in partnership with JR. This space would promote Nakano events for locals and visitors as well as provide information on the neighborhood and activities.
- **Manga Café:** In Japan, manga cafes serve not only as comic book stores, but as short term bunks and showering facilities. Manga cafes are heavily used by university students working late past the train service hours. This café can also showcase the various Otaku-culture elements of Nakano Broadway.
- **Hostel/Capsule hotel:** A resting place for visitors, both Japanese and foreign. Hostels in Japan have a very social atmosphere and are excellent grounds for interaction between internationals and Japanese and long-term residents and short term guests. This prominently located and easy to discover space is intended to bring different users of Nakano in closer contact with each other and to serve as a base from which to explore Nakano and Tokyo.
- **Exhibit/Event space:** This space hosts exhibits from the universities, companies and residents of Nakano. It can also serve as an interior event space for larger gatherings such as Otaku events.
- **Performance Space:** This exterior space will host street and small performances. It features outdoor theater-style seating which is integrated into the surrounding terrace infrastructure. Along with the adjoining terraced garden, this space

will serve as a slower-paced, more informal location for meeting, waiting and watching.

- **Entertainment & Dining**

Establishments: Located on and adjoining the infrastructure and route 420, these establishments will be semi-temporary in character. Allowed to develop and adapt over time, these would be small-scale places such as standing bars *Tachinomiya*, noodle shops and grills. Their scale, informality and location are intended to provide a stronger connection between the larger site and the entertainment area to the northeast of Nakano Station.

- **Sports Center:** Located in the spaces underneath the elevated infrastructure and under ground level, this sports facility will be accessible to residents, office workers and students of the area as well as visitors staying at the hostel.

Design Approach

Goals

Given its surrounding contexts of different scales, uses and histories, the project needs to connect these elements together within itself. Its use is based on maximizing accessibility, connectivity and inviting active use of its spaces. It also is intended to be long-lasting through adaptation.

Objectives

The strategy developed for the project's design draws largely from observation of existing urban spaces in Tokyo of different eras of development and how these spaces are used. It seeks to take these lessons and reapply them with updated materials and construction in a manner that acknowledges the characters of the site's urban contexts.

The site strategy aims to create a mix of open medium and large-scaled spaces, as well as various smaller and more human-scaled spaces. In connecting to its various urban contexts, the site strategy relies on blurred thresholds of scale, materials and uses. In these threshold areas, site elements, structures and uses will be scaled to provide visual and spatial connections between the site and adjacent areas. As the user progresses through the site, its spaces will reveal more of their unique character through materials and structure. Materials closer to the threshold connections will match those of surrounding contexts. Much of the ground plane in these areas is hardscape such as concrete and pavers, augmented with strategic plantings and soft elements. More specialized and independent spaces such as gardens and performance spaces will incorporate a larger

degree of "green" elements, providing an alternative to the harder circulation and connective elements and adding to Tokyo's green public space inventory.

Since much of the strategy is based on infrastructure and much of the project's function lies in circulation and connection, many designed elements will emphasize this circulatory nature. As vertical connection and connections between distinct areas is an important part of the site strategy, the visual expression of much of the site's infrastructure will be as pathways and bridges. The structure of this circulatory infrastructure will be primarily concrete, like much of the surrounding infrastructure, but softened with adaptable and more semi-temporary elements such as wooden surfaces, plantings, street elements and operable shading devices.

This approach of harder structure and softer elements also reinforces the project's language of more permanent infrastructure as a scaffold for future adaptation and semi-temporary/changing uses.

Limits & Delimits

Project delimits refers to the constraints on the project coming from the project author. With this thesis project, delimits primarily concerned defining the scope and scale of the project. Given the large extent of the project site and the broad scope of the project objectives, it became necessary to develop a hierarchy of project aspects. To this end the thesis emphasizes the built form and its development across time, along with spatial issues such as accessibility, connectivity and scale to a greater extent than it does the social aspects of user groups and how they might use spaces and programs within the project.

The design process is also delimited in its acceptance of generalized and speculative site design. This is due in part due to the large extent of the site and variety of programs, necessitating a prioritization of certain spaces and functions and in part due to the project's goal of accommodating future adaptation, which is difficult to predict with specificity.

Project limits refers to constraints beyond the control of the project author. In the case of this thesis the largest limit was language proficiency and the ability to access information on the site and on certain research materials. Much of the site information is in Japanese and beyond the level of this author, necessitating an emphasis on observation and interpretation.

IV. Findings

Chapter Overview

This chapter concerns the thesis design and how it connects to concepts and findings explored in previous chapters. The chapter is divided into two parts, with the first part introducing the urban strategy and design. This part highlights the physical design of project components and explores how the design addresses specific goals and strategy concerns at the site and architectural scale. The second part addresses the Materiality, Tectonics and Temporality of design components in higher detail.

relationships between formal and informal development patterns, that urban Tokyo's public life takes place. This environment, as a result of developing and adapting across different periods and across three dimensions and through complex pathways and connections, is often difficult to navigate and intuit, making its role as host of public space and circulation more difficult. This thesis explores the creation of public space in Urban Tokyo that utilizes this context of flows to improve connections between districts, users and various urban scales, to create an urban infrastructure that can adapt over time to accommodate different roles and uses and to enhance the options for circulation and spatial reference in urban Tokyo.

Problem Revisited

Urban Tokyo is an environment of flows, both spatial and temporal. It is in the results of these flows of circulation, of the connection between different scales of spaces and of the

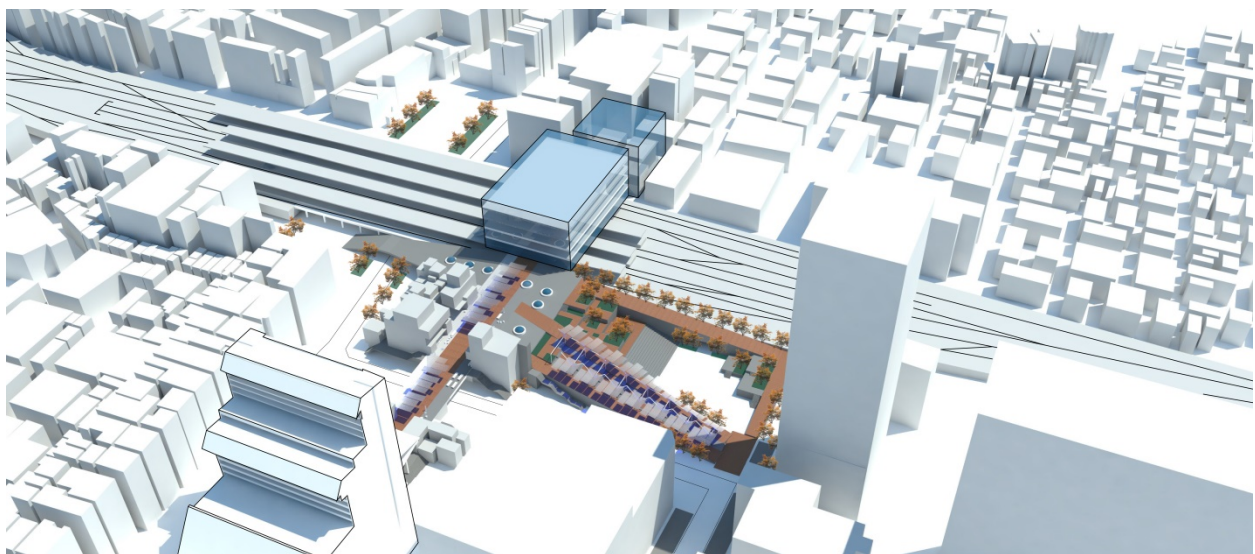


Figure 37: The proposed design connects to various parts of the surrounding urban fabric.

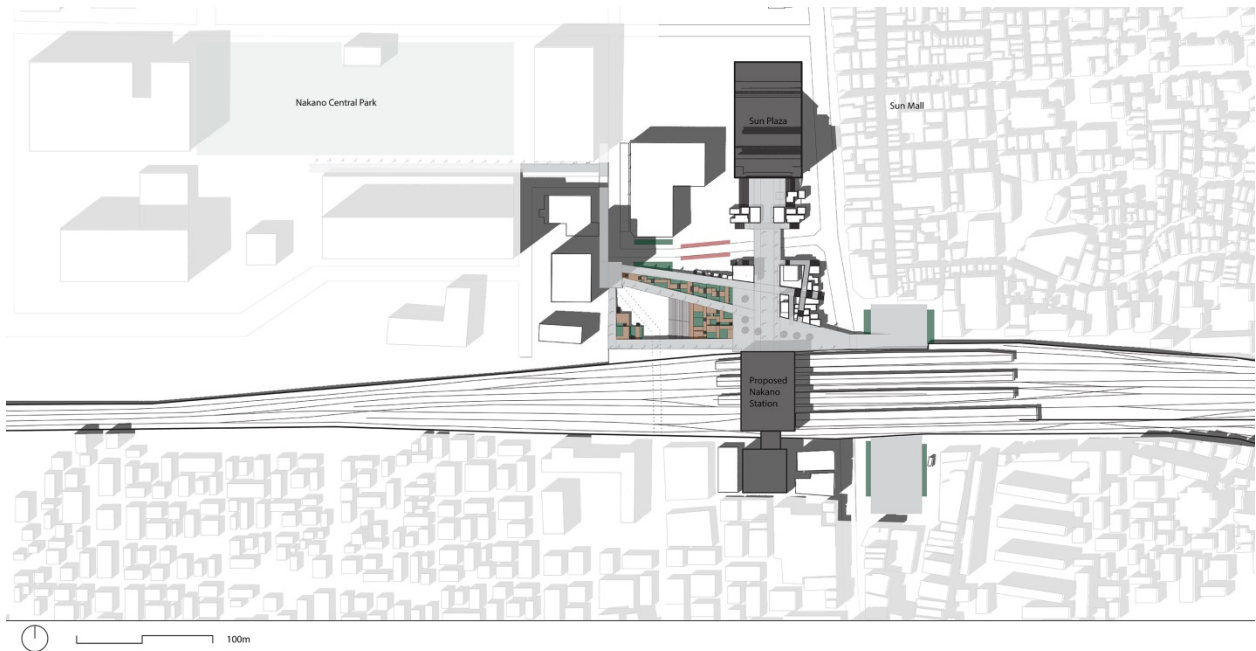


Figure 38: The Site Strategy engages the railway as well as Sun Plaza and the surrounding Urban Fabric.

Theoretical Framework Revisited

This thesis proposal and position is influenced by several different precedents and aspects of Tokyo’s urban history. The concept of a formal adaptive and growing infrastructure and framework for development was explored in the Metabolist architectural and urban theory movement from the 1950’s through the early 1970’s. This is opposed to the more informal and user-driven development of “Yokocho” districts.

This thesis design explores the possibility of large-scale infrastructure that is integrated into other uses and structures in a similar manner to how this concept was explored in Metabolist theory and practice. Unlike metabolism as it was realized, this thesis seeks to create an infrastructure scaffold on which more informal and user-driven experimentations and solutions can thrive, influenced by the development history and current uses of Yokocho districts.

This thesis also draws from precedent in Japanese concepts of movement space and how connections between spaces and time can be perceived, exploring connections and thresholds between different spaces and scales.

Urban Strategy

The site area around Nakano station is a large-scale open space, connected to the new Nakano Station and adjacent to several surrounding districts. This space serves as the threshold to Greater Tokyo and to Nakano's various sub-areas. These sub-areas feature both formal and informal urban typologies of various scales from different eras of Tokyo's developmental past, and form the environments for different aspects of public life and activities. Despite the traffic through the project site between the station and these various districts, the site location is under-utilized, with its connections to the surrounding districts insufficiently defined and transitions between urban scales and typologies abrupt. While much of the surrounding urban context can be moved through as a sequenced series of connected spaces, the site area around the station represents a "break" in this chain of scenes and references, a void in an otherwise navigable context of movement spaces.

The urban strategy for this project's proposed intervention responds to this condition. It does so through expanding spatial connections to surrounding sub-areas, connecting different modes of formal and informal urbanism by creating an infrastructure that can support future developments and by enhancing the circulatory options available to pedestrians in Nakano through the reconnection of the chain of movement spaces.

The project's first strategy point is the enhancement of the connections between different sub-areas within Nakano and between these areas and the new Nakano Train Station. (See Figure 38)

The highest-trafficked connection between sub-areas is the connection between the Nakano Central Park area to the northwest of the site and the entertainment district built around Sun Mall and Nakano Broadway to the northeast of the site. This connection brings working professionals and students from the institutions and offices around Central Park to the entertainment area throughout the day and particularly during the lunch and dinner rushes. (shown in Blue on Figure 38)

Nakano Sun Plaza is also along this path and contributes to this flow of users between these two zones of activity. The connection between Nakano Sun Plaza and Nakano Station, which intersects the East-West connection, is a major pedestrian pathway and a primary component of the site strategy, connecting the neighborhood to Greater Tokyo and to Nakano Sun Plaza. (Show in Red on Figure 38)

The other major pedestrian pathway is the connection between north and south Nakano, which are divided by the elevated railway. This pathway primarily serves to connect users in south Nakano with the entertainment district north of the station and to allow users from throughout Nakano to access the department stores and other commercial activities south of the station. (shown in green on Figure 38)

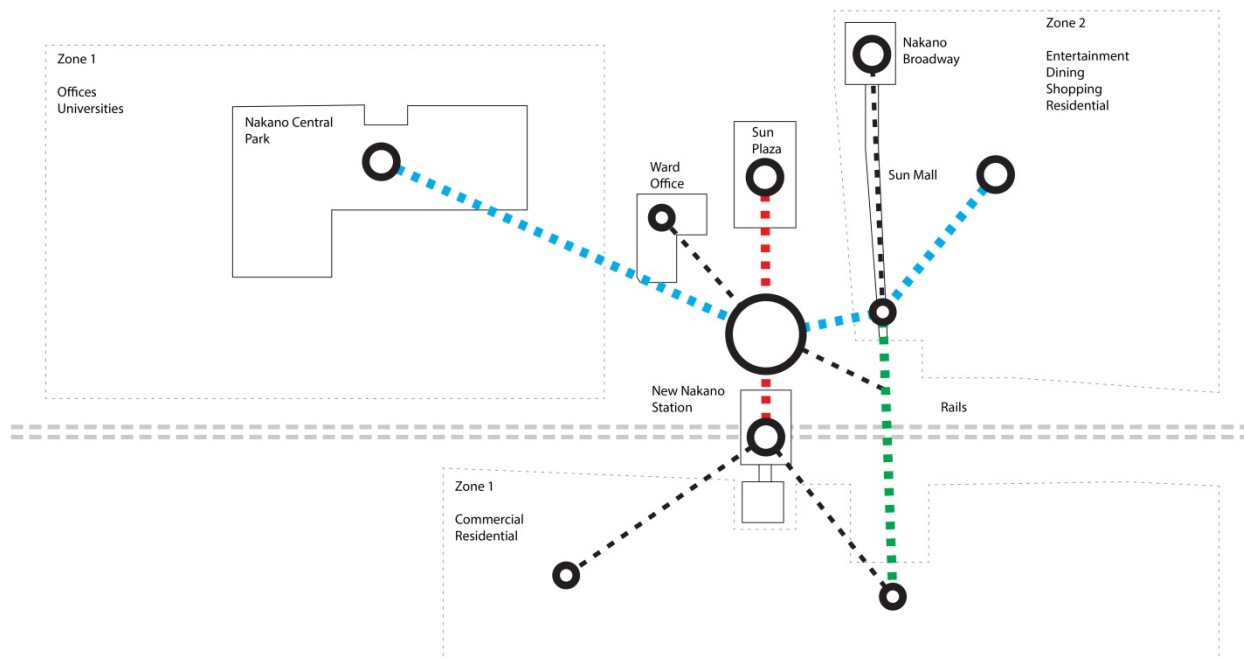


Figure 39: Several primary connections are engaged through the new plaza's components

The design's urban strategy focuses on these three major connections and seeks to enhance the options for moving through the space along these pathways, as well as connect them with other important site elements such as Nakano Sun Plaza and the new Nakano Station. These enhanced connections will offer multiple routes through varied programs and spaces, across multiple dimensions, as opposed to the limited number of options available currently.

Unlike the current condition for circulation, the design proposal prioritizes pedestrian circulation with prominent and central location and connections, making path-finding more intuitive. Underlying the priority given to circulation infrastructure is its integration with other programmatic elements, forming not only the connective tissues between spaces, but also acting as the central spaces where circulation interacts with social and commercial uses.

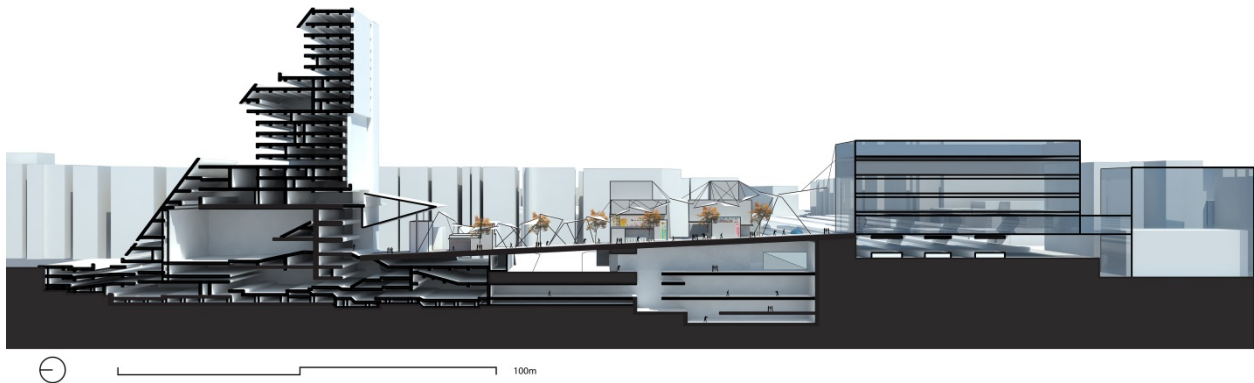


Figure 40: A strong axis of connection between Sun Plaza and the new Nakano Station, through multiple levels and spaces.

The Sun Plaza Connection

The infrastructure of the site design consists of three major components. The first is an elevated pedestrian bridge, connecting the new Nakano Station proposed by JR with the existing Nakano Sun Plaza. This bridge begins at slightly above ground level, where it meets Nakano Sun Plaza on its entrance plinth. From this point the bridge ascends upwards and towards the south, meeting the new Nakano Station at level 3, where the new station concourse is to be located. Clustered at various points on this bridge are buildings, featuring social and commercial spaces such as a youth hostel, manga café and various dining and convenience stores. Through the buildings, and through vertical connections along the bridge, pedestrian is able to access any point on the site west of route 420 at any level. (See figure 39)

The first role this structure fulfills is in creating a direct, axial connection between Nakano Sun Plaza and the new Nakano Station. Sun Plaza houses a wide variety of programs and people and is a focal point of the surrounding area, yet it stands in relative isolation to its urban context, with physical connections tenuous and lacking

the prominence befitting the role of Sun Plaza. The bridge structure will establish that prominent connection and work to more fully integrate Sun Plaza into its urban fabric. (See figures 39 & 40)

The structure's exterior and interior programmed spaces on its various levels are meant to offer amenities to the various users of Nakano's sub-districts who will pass through the structure on their path between districts, Sun Plaza and the new train station. These programs and amenities serve the needs of these various groups and create the social space and opportunities for interaction between user groups. Thus the axial structure connecting Sun Plaza and the new train station also serves a role in creating social spaces and enhancing the social connections between Nakano's user groups. (See Figure 40)

Simultaneous with its role as a physical and social connector, the bridge structure is also intended to act as a platform for adaptation and growth over time. The structure creates spaces of different scales and roles, which can adapt flexibly to future use demands. The structure, while large and permanent, will offer the platform for smaller-scale, temporary or semi-

permanent, user-driven development to occur on its eastern side, creating a connection in scale and use with the entertainment district across route 420. (See figures 40, 41 & 42)

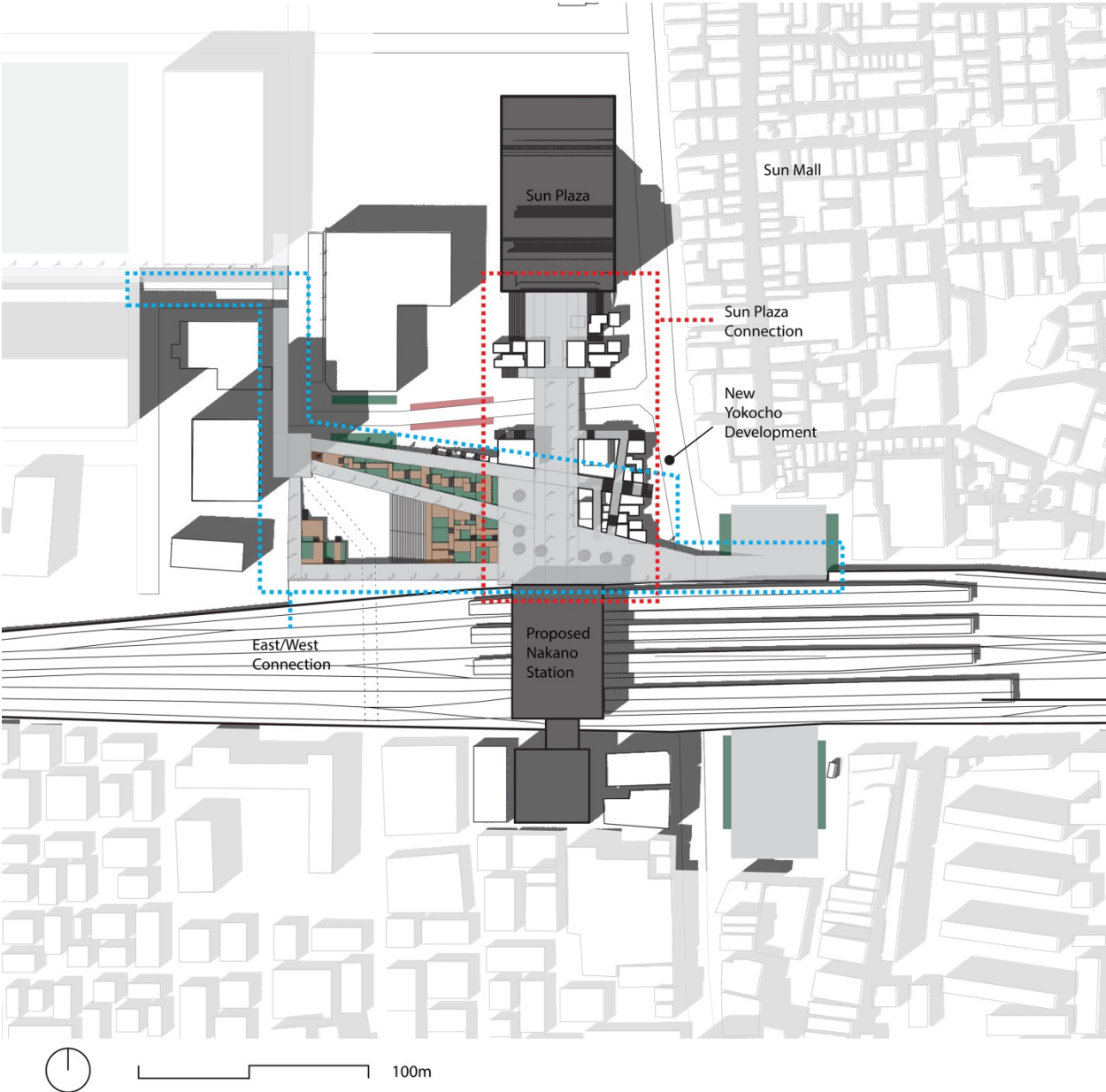


Figure 41: The plaza's surface components connect various parts of the urban fabric through the site.



Figure 43: The Sun Plaza Connection is not only circulatory, but social and functional space as well.



Figure 42: The busy spaces of the project serve different needs and users at different times. During the day, the East plaza is a busy thoroughfare of movement.

The East-West Connection

The second major component of this thesis design is the East-West Connection. This connection consists of a series of ramps and steps, along with a terraced garden and performance space to the west of the first intervention and a ramp and stair bridge across route 420 to the east of the first intervention. (See figure 42)

This series of structures serves the east-west connection between the Nakano Central Park area and the entertainment zone around Sun Mall. Together with the Sun Plaza connection structure, this component handles the bulk of pedestrian and bicycle traffic north of the elevated railway. Its primary purpose is in providing many circulation options across three dimensions and through various types of spaces

for people traveling between the northern sub-areas of Nakano and the new train station. There is also a secondary underpass under the elevated railway, allowing enhanced connections between north and south Nakano. (See Figure 40)

The other purpose of this series of structures is to create and connect various public spaces and programs. The western approach ramp features a terraced garden providing green and open spaces for sitting, waiting, conversing and watching. There is also a large, open performance space with steps leading up into the terraced garden and through to the station entrance. (See Figures 40, 43, 45 & 46)

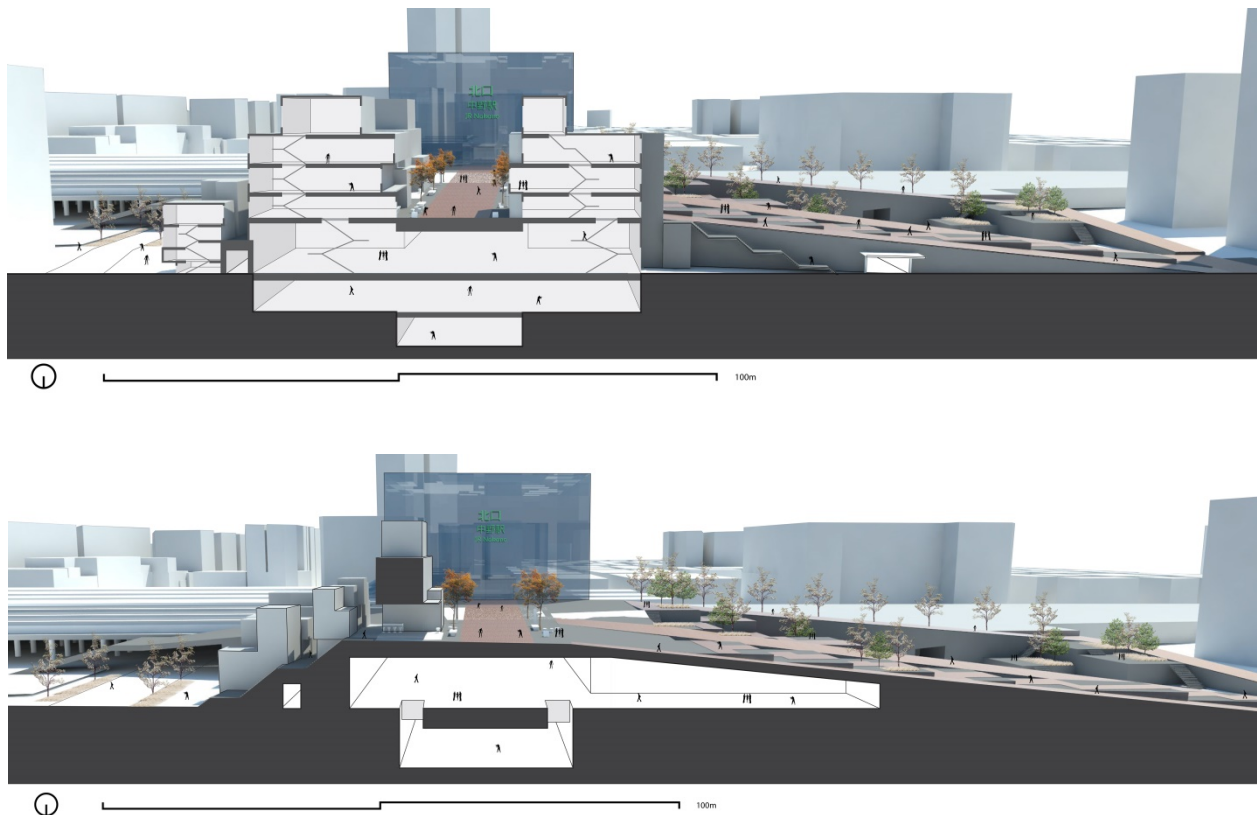


Figure 44: Section Perspectives through connective space, social space and changing space, across multiple levels.

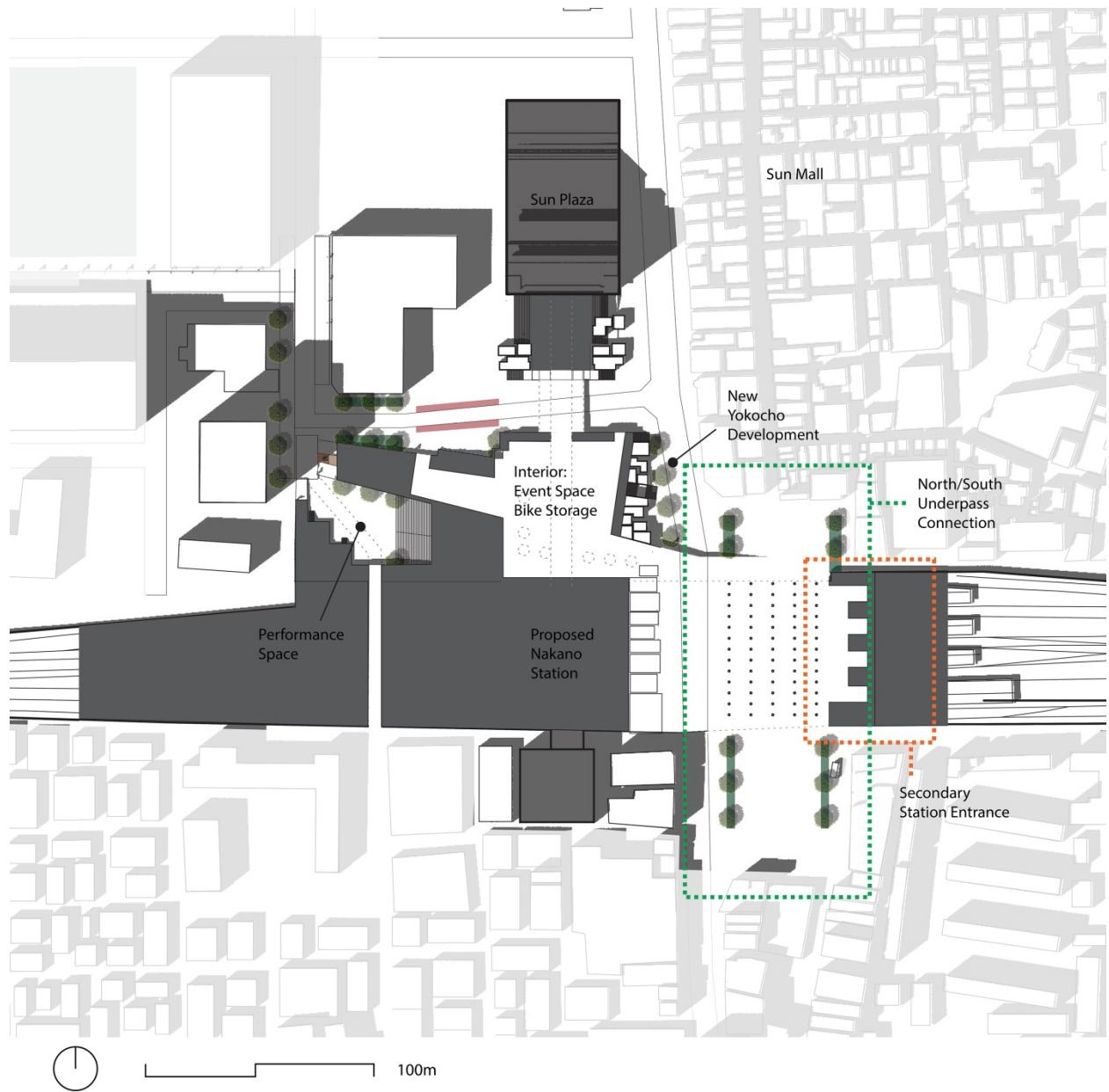


Figure 45: The ground plane and interior spaces are engaged, offering multiple options for circulation and programmed spaces.



Figure 47: Performance Space as a "Scene" of the sequenced movement spaces. Its natural elements frame the space and change over time.



Figure 46: The approach from the Northwest, a scene in the sequence, a branch of opportunities and options for movement. Both direct and bent routes are available.

The North-South Connection

The third major component of the site design is an expansion of the underpass to the east of route 420, where the existing Nakano station is currently located. This expansion would form a plaza-wide connection between the north and south plazas east of route 420, where before there existed only a narrow sidewalk along the road and a ticket-controlled concourse. This underpass would also feature a secondary entrance to Nakano station at the eastern end of the platforms and connecting directly to ground level. (See Figure 44)

This third component focuses on connections across the railway between north and south Nakano and on connecting the two plazas adjacent to the railway, creating the conditions for their increased use as social and cultural spaces, with uses depending on the time of day, season, year or generation. (See Figures 47, 50 & 51)

The spaces and programs of these major components are meant to enhance circulation options as well as opportunities for exploration, social and leisure activity in a busy environment.



Figure 48: The South Plaza, a social and gathering space with many different uses through time.

Beneath the Surface

The project components discussed above primarily constitute the spaces and programs on the surface of the infrastructure. This massive infrastructure, through its need to connect to points around the site and neighborhood, many of which are elevated at different levels, also contains significant space below the surface, which is also utilized for programmatic and circulatory purposes.

The majority of the interior program for the proposed project sits under the intersection of the Sun Plaza Connection and the East-West Connection. This space is roughly 2500 square meters and tapers from a triple-height space to a 1.5x height space from south to north. This space is accessible from several locations across the site, with primary entrances at the western approach ramp, under the Sun Plaza ramp and under the eastern approach ramp fronting route 420. There are also numerous secondary entrances and vertical connections to the surface of the connection ramps and raised plaza spaces and to the interior of larger programmed spaces such as the hostel and the manga café. Along with the interior portion which is at ground level with the site, there are also interior portions and connections on underground levels, connecting to the basement levels of Nakano Sun Plaza.

As with the rest of the other major project components, this area is designed as a semi-permanent infrastructure that can adapt to changes in use and offer increased flexibility and utility in program. Interior partitions and circulation patterns can be modified to create new spaces and paths depending on the future demands placed on the space.

An initial program for the interior space is a sports complex, accessible to neighborhood

residents, employees of area offices and to guests at the hostel. This places an active use close to workplaces and transit while also creating another opportunity for user groups to interact.

Another initial program is secure bike storage. This use can expand as needed into the underground space, possibly even across multiple levels and would provide a valuable service for neighborhood residents and commuters.

Materiality, Tectonics and Movement

The proposed project is intended to last a long time and to serve many functions, chief among them public space and movement. In order to best serve these functions and to remain resilient and adaptable as uses and contexts change, the design of this project must consider how the project's materials and tectonics affect these goals.

The larger-scale infrastructure of the plaza's ramps, stairs, more-permanent buildings and vertical load-bearing elements is intended to last the longest and to convey its character of durability and permanence. These elements will be constructed of durable reinforced concrete for the structure, with various finishing elements attached at a finer scale, the character of which will depend on the purpose and intended permanence of the space in question.

Reinforced concrete is chosen for its durable and solid nature, characterizing larger scales and permanence. The larger infrastructure of ramps and planes also represent a rising of the ground plane to various elevations. Concrete, as a material language, is one of solidity and grounding and is often used in the site context's ground plane. Thus, the concrete ramps and planes of the new Nakano Plaza would materially extend the ground of the site into the project at various elevations.

More semi-temporary elements such as stair connections to the informal development along the eastern threshold of the project site would consist of structural steel. While steel is strong and durable if properly maintained, it is a material that changes over time, with different

paints, rust and a degree of structural flexibility. Steel is also more easily modified than reinforced concrete, with its bolted and welded connections accepting additions and changes.

On top of the more permanent infrastructure elements would be finishing materials designed to the spatial, programmatic and temporal qualities of their host spaces. Flexible social spaces and movement spaces would receive materials that can be replaced or updated relatively easily and also materials and elements that change noticeably over time. Examples of such materials would be wooden structural elements for smaller street elements and structures as well as for circulation surfaces in secondary or slower-paced circulation paths. Natural and soft elements, which grow over time and change with the seasons, would be numerous and prominent in social spaces such as the performance space, the terraced gardens and the east and south plazas.

The movement strategy for the site and its context is a hybrid of a geometric spatial reference system and various instances of movement spaces. The geometric space is represented by long lines of site and strong axes of circulation and by obvious connections between central site elements and the larger urban context. An example of this is the connection between the new station and Sun Plaza, both of which are large buildings in the hierarchy of structures and places and are connected by a direct, single-axis connection of monumental scale, in line with the north-south axis and referenced by its perpendicular relationship to the elevated rail line. Other such important geometric references are the strong axial connection of the east-west ramp and the north-south underpass components.

Inserted into this larger framework of geometric space are multiple instances of movement spaces. These spaces reference each other, forming a sequence of scenes that connect together as a chain, insulated from the geometric context around them. These spaces rely heavily on softscape, natural elements, and street elements to create instances of “bent” and “rotated” spaces that stand outside of the more permanent flows of the geometric space. Through bending and rotating space, these spaces control the perception of space and time as they are traversed, revealing scenes to the beholder only at the designed moment. These movement spaces would create less-direct alternative paths of movement through the site and would form the missing pieces of the sequence of scenes that is created when experiencing Nakano in movement.

Just as how these spaces control not only spatial, but temporal movement through the site, they themselves would change and adapt through time, with natural elements changing with the seasons and years and with future modifications and changes reconfiguring their sequence and scenes.

As the larger site strategy anticipates changes and seeks to serve as a platform for those changes, thereby acknowledging that what is built and experienced at any point in time exists only as a moment in that construct’s flow, so do the many options for movement through the site seek not to create a permanent set of sequences of movement through space, but to create a set of sequences and scenes that changes and adapts, that flows along with the larger flux of the site’s development history and future.

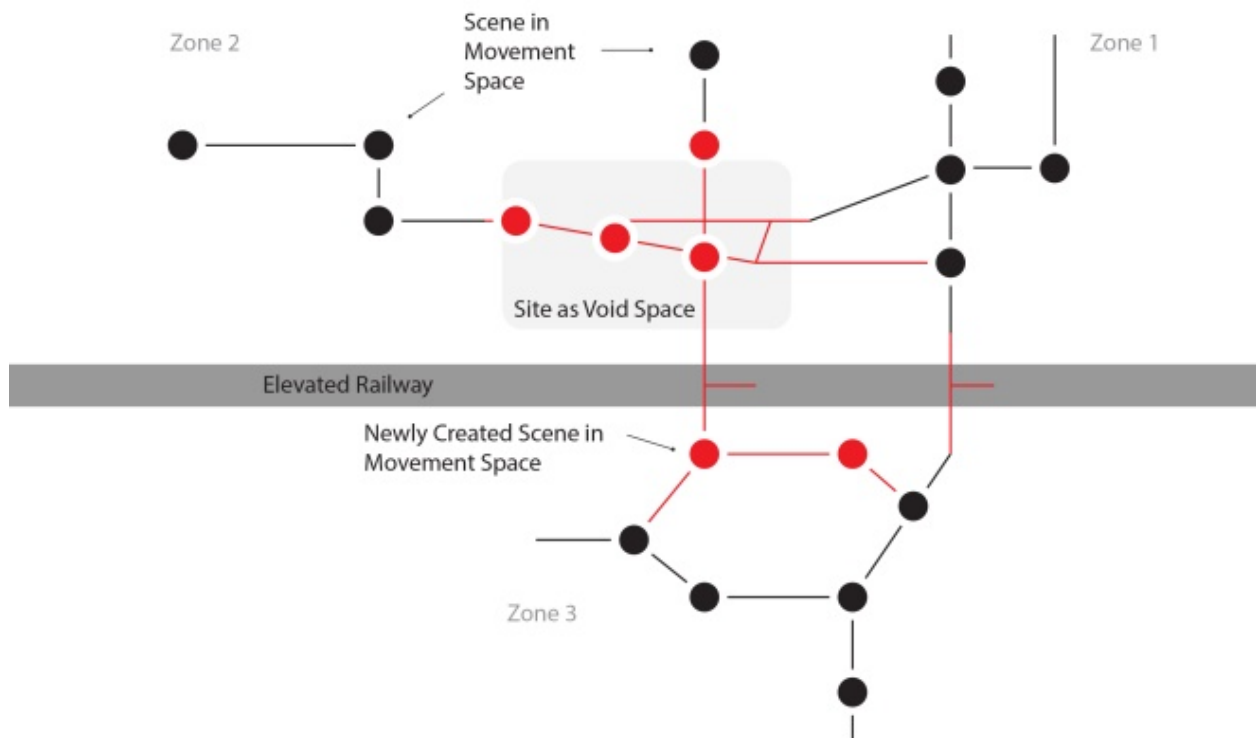


Figure 49: Reconnecting the sequence of Scenes in the movement spaces of Nakano. The site strategy hybridizes the use of geometric space references and movement space references.

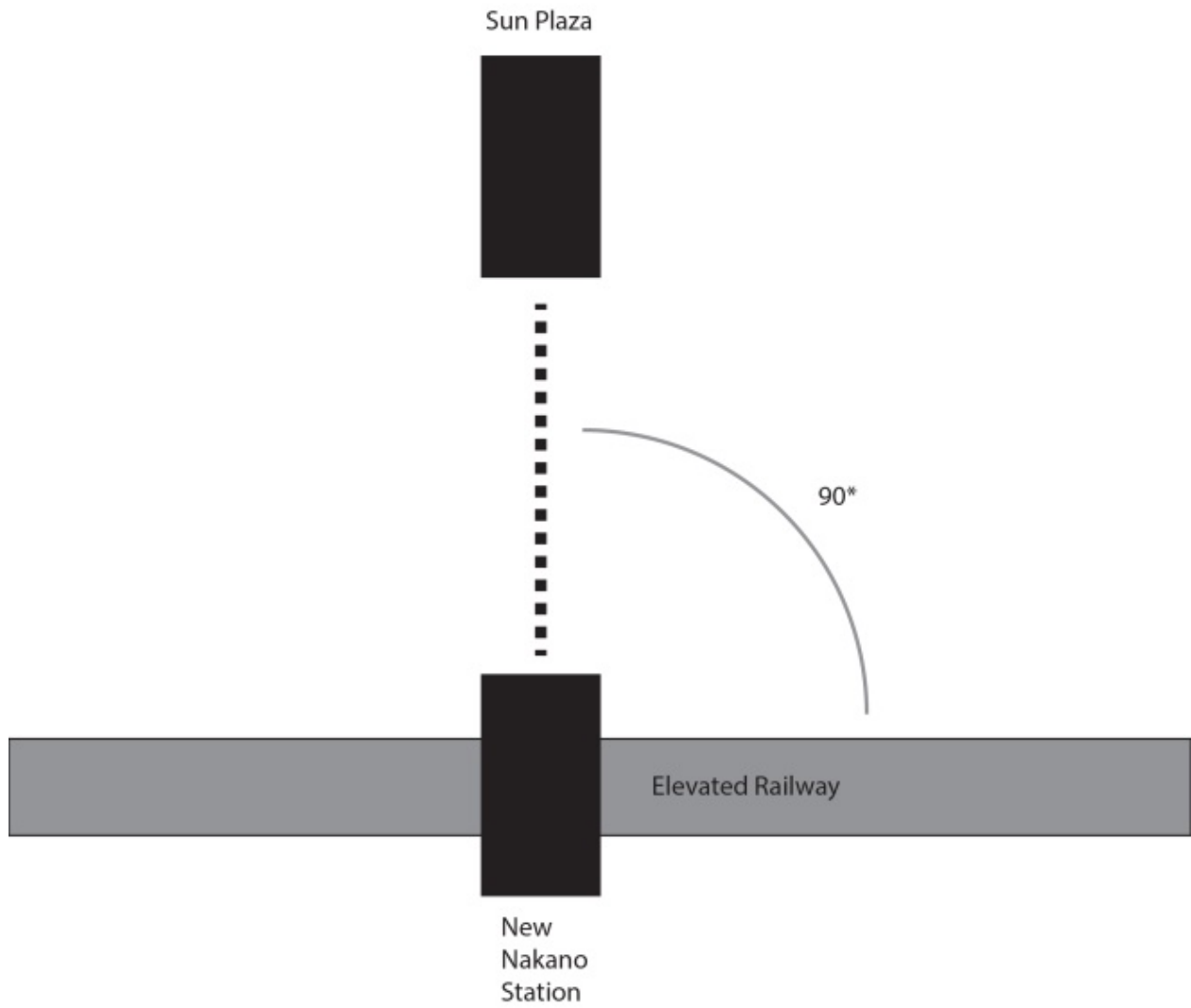


Figure 50: A dominant axis for the Sun Plaza Connection, referenced to the elevated railway and the centrality of Sun Plaza and the new Nakano Station.



Figure 52: Flows of time as well as flows of space. The busy thoroughfare of the day in the East Plaza is now a hub of social and entertainment activity. Future night uses could unfold in many possible futures.



Figure 51: The South Plaza's uses can change depending on the day, week, month, year or season. Different uses can develop and fade away as time passes.

V. Conclusion

This thesis has explored the physical design and societal use patterns of the urban area around Nakano Station in Tokyo, Japan. Through observation and research, the development of Tokyo's urban environments as it relates to present day public space use, scales of urban spaces, movement and attitudes towards development were examined.

While urban Tokyo is a highly mobile and flowing urban environment, both spatially and temporally, its development history has resulted in a physical environment that presents numerous challenges to circulation, the creation of larger-scaled public space and planned growth and adaptation of spaces and infrastructure.

In the case of Nakano and the area around Nakano Station, the neighborhood's diverse sub-areas adjoin the station site, which is used by many people as they travel between sub-areas and between Nakano and Greater Tokyo. But this area is currently a void space, lacking programmatic and scaled connections between these sub-areas. In approaching Nakano as a network of sequenced movement spaces, where scenes and instances in space are related to each other instead of to an overarching and centralized framework, this void space represents a break in the chain of sequenced scenes. In this break, the flow of perception from space to space and from scene to scene is lost, destroyed by large scale and a lack of calibrated connections between spaces.

The surrounding site context is rich with the legacies of several different eras of Tokyo's development history and various attitudes towards social spaces and connectivity. It is

from observing the results of these eras of development and examining the methods behind their creation and the goals of their development, coupled with a strategy of hybridizing geometric spatial references with instances of movement space, that this thesis develops a framework through which to connect these sub-areas to each other and to Nakano Station in a manner that enhances movement options by rejoining the sequence of scenes and spaces in the site, provides programmatic and scaled connections to the surrounding urban fabric, creates new opportunities and spaces for social activity and creates an infrastructure that can adapt to future changes in Tokyo's urban environment.

Utilizing this framework, this thesis envisions a comprehensive and multi-purpose infrastructure for the station plaza around the new Nakano Station being proposed by Japanese Rail. This infrastructure is composed of several major connective components and the spaces and programs on and connected to these components. The first major connection is an elevated path connecting the new Nakano Station to Nakano Sun Plaza on the northern edge of the site. This pathway will feature not only circulation space, but also programmed social spaces such as a hostel, a manga café and various eating and entertainment locations. This infrastructure will also feature vertical connections between site elements and spaces at various elevations. The second major connection is an east-west connection across the site, intersecting with the first connection at the entrance to the new Nakano Station. Along with multiple circulatory options, this connection will feature performance and social spaces, gardens and access to various dining and entertainment spaces, all of this across several levels of the site's elevation. The third

major connection consists of an underpass through the elevated railway, connecting the northern and southern halves of the site and providing a stronger connection between north and south Nakano and a more versatile open space for various events depending on time, season or era.

These three major components do not exist in isolation, but are built off of each other, integrated into each other and the surrounding urban fabric. With these components, formed by the intersections and connections of these major components, is a large interior and underground portion of the complex which will host active and social programs, as well as provide additional circulatory options.

This infrastructure is designed as a scaffold or a platform, upon which and around which further developments are allowed to occur as time progresses and the demands on urban space change. This process is intended to be user-driven, with a less-formal, more semi-temporary and entrepreneurial process taking advantage of the more permanent and formal foundation of the site infrastructure.

This design approach and urban strategy synthesizes the development patterns of the area and several different movements and trends in urban Tokyo's development with the site's potential for connection and future growth. Drawing from the dialogue of formal and informal development patterns in Nakano and Tokyo, as well as the incremental and adaptive approach employed towards Tokyo's infrastructure and public space, the new Nakano Station Plaza creates spaces that are connected to each other and that can grow and adapt organically with time, it provides enhanced connections between sub-areas and between Nakano and Greater Tokyo through a

greater range of options for path-finding across three dimensions and through different types of spaces and different spatial and social programs.

The new Nakano Station Plaza will remove the void that exists at the center of a diverse and vibrant neighborhood and replace it with a hub of activity and spaces, transitioning through scale and program out into various sub-areas. It is in this hub and its transition spaces where the users of Nakano can meet and interact and where user-driven activity and change can develop.

Sequences of movement begun in Nakano's various sub-areas will be connected to each other through the spaces of the new plaza. The options exist to either head directly to the station or across the site to some other destination, utilizing the geometric reference of strong axes of movement and landmark structures that anchor these axes, or to continue the sequence of movement and scenes through alternative paths that reference each other and together form another perspective of Nakano as a network of spaces related to each other.

As it is inherently difficult to predict the future changes in a society, how this society will use its infrastructure and spaces and how those spaces can prepare for these new use patterns, this thesis proposes a strategy that utilizes the various patterns of the past and synthesizes them with current demands to create a platform of flexibility. This strategy seeks to provide the basic utility to address current demands and to likely address future demands, along with the capacity to accept future modifications and adaptations by future users to accommodate future demands. It is not only the spatial character of the plaza and its spaces that are accommodating of change, but also its

temporal perception, in its acceptance of its existence in any form as just an instance in the flow of time and perception.

Bibliography

- Inoue, Mitsuo. Space in Japanese Architecture, New York: Weatherhill, 1985.
- Sorenson, Andre. The making of Urban Japan, New York: Routledge, 2002.
- Sacchi, Livio. Tokyo: City and Architecture, New York: Universe, 2004.
- Golany, Gideon and Keisuke Hanaki and Osamu Koide. Japanese Urban Environment, New York: Pergamon, 1998.
- Koolhaas, Rem and Hans Ulrich Obrist. Project Japan, London: Taschen, 2011.
- Seikatsu Bunkakyoku, Tokyo: The Making of a Metropolis, Tokyo: Metropolitan Government of Tokyo, 1993.
- Nakano Ward Office, <http://www.city.tokyo-nakano.lg.jp/dept/102500/d010001.html> ([Accessed Feb 22, 2017](#))
- The Japan Times "The Green Machine" (2004), http://www.japantimes.co.jp/community/2004/04/20/issues/the-green-machine/#.WKpzv_krJEZ ([accessed Mar 07, 2017](#))
- Tokyo Bureau of Construction, <http://www.kensetsu.metro.tokyo.jp/english/jigyo/park/01.html> ([accessed Feb 23, 2017](#))
- Nakano Sun Plaza, <https://www.sunplaza.jp/en/about/> (accessed Feb 08, 2017)
- Trends in Japan, http://web-japan.org/trends/11_lifestyle/lif120301.html ([accessed Jun 21, 2017](#))
- Dennis A. Amith, <http://dennisamith.com/2016/05/24/the-one-about-nakano-broadway/> (accessed Feb 15, 2017)
- Hamadayama Life: Japan as it is in the 21st Century, <http://www.ocada.jp/tokyo/nakano.php> ([accessed Feb 15, 2017](#))
- Go Tokyo, Gotokyo.org, <http://www.gotokyo.org/en/discovery/vol5/special06.html> ([accessed Feb 15, 2017](#))
- The Japan News, <http://the-japan-news.com/news/article/0003508119> ([Accessed Feb 23, 2017](#))
- Wired, <https://www.wired.com/2016/07/lose-tomoyuki-tanakas-x-ray-illustrations-tokyo-train-stations/> (accessed Jun 21, 2017)

Image Credits

Unless noted otherwise, images used are the work of this author.

- Figure 1 – Tomoyuki Tanaka
- Figure 6 – Y. Futugawa, Mitsuo Inoue & Hiroshi Watanabe
- Figure 7 – Mitsuo Inoue & Hiroshi Watanabe
- Figure 8 – Mitsuo Inoue & Hiroshi Watanabe
- Figure 10 – Kenzo Tange
- Figure 11 – Kenzo Tange
- Figure 16 – Ken_Works@figure.fm
- Figure 34 – Japan Rail
- Figure 35 – Japan Rail
- Figure 36 – Meiji University I-AUD Program