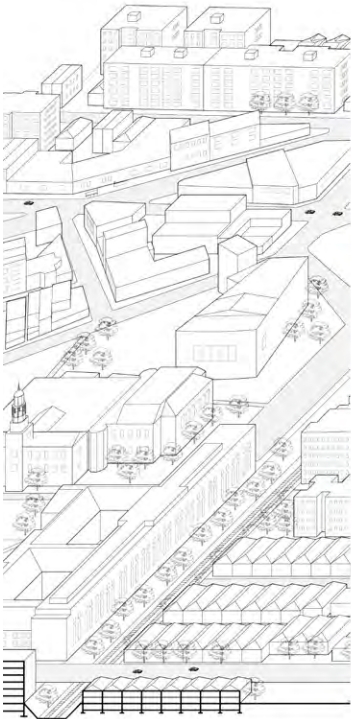# Corridor Workbook

Design Initiative for
RPA's Fourth Regional Plan
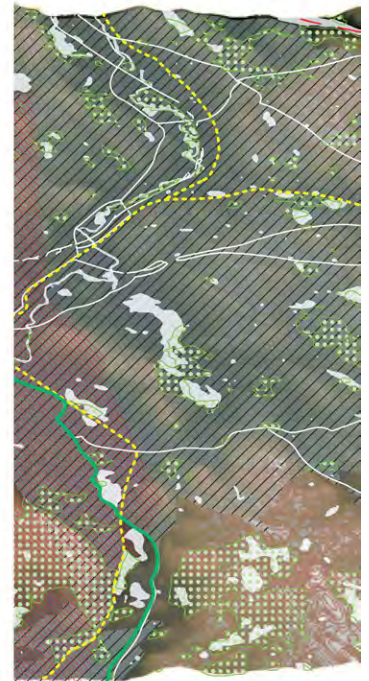
The Triboro - City Corridor   The Bight - Ocean Corridor   The Inner Ring - Suburban Corridor   The Highlands - Forest Corridor

Princeton University School of Architecture

Research Team

Guy Nordenson, Professor, Princeton University School of Architecture
Paul Lewis, Associate Professor, Princeton University School of Architecture
Catherine Seavitt, Associate Professor, City College of New York, Spitzer School of Architecture

Robert Lane, Senior Fellow for Urban Design, Regional Plan Association
Juliette Michaelson, Executive Vice President, Regional Plan Association
Christopher Jones, Senior Vice President and Chief Planner, Regional Plan Association
Lucrecia Montemayor, Deputy Director, Energy and Environment, Regional Plan Association

Elizabeth Hodges
Anna Knoell
Gina Morrow

Ryan Barney   May Jeong
Robert Becker   Rennie Jones
Emma Benintende   Katie Kennedy
Jayne Choi   Corliss Ng
Zachariah DeGiulio   Eli Sands
Ivi Diamantopolou   Michael Tantala
David Himelman   Aaron Yin

Design Initiative Advisors

Darius Sollohub
Felipe Correa
Rosalie Genevro
Maxine Griffith
Ellen Neises
Amale Andraos

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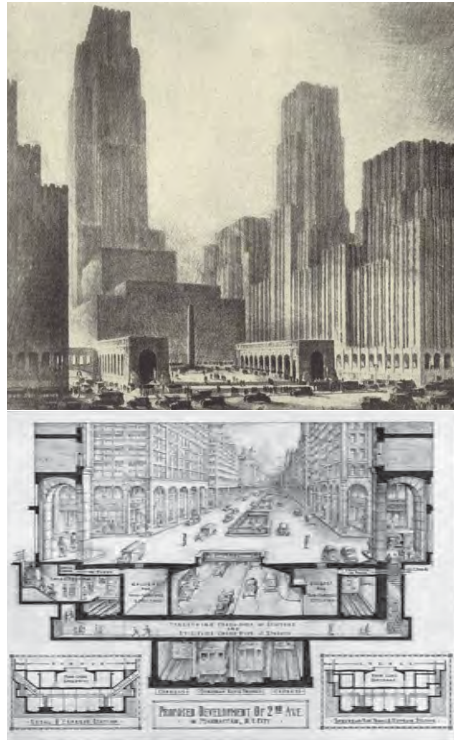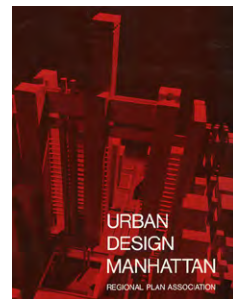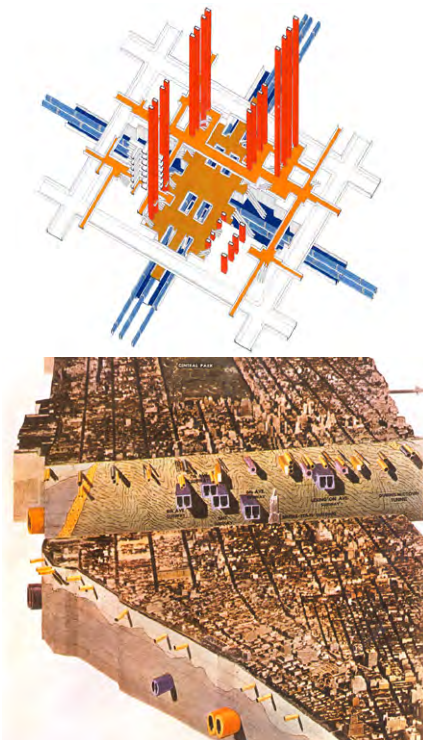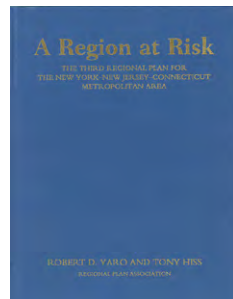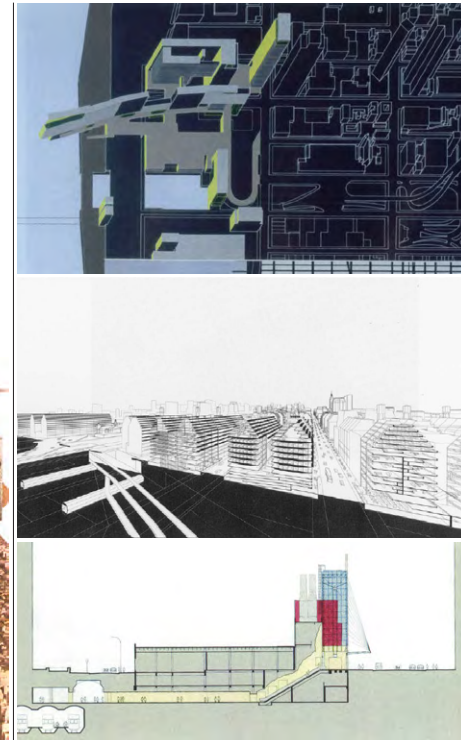
Second Regional Plan (1966-1969)

Third Regional Plan (1996)

Design and RPA

Design in the service of regional planning has always been more than just creating the compelling and polished renderings for the final documents. The survey of the design work associated with RPA's three regional plans summarized below, including the ongoing work since the third regional plan, reveals the role of design within RPA. These should all be considered as part of the agenda for the design work of this initiative.

Research

Design research is iterative. By showing alternatives, design research gives RPA an opportunity to understand the on-the-ground consequences of the proposed policies before they are transformed into recommendations. RPA can also test how the objectives of the fourth regional plan transfer to different contexts across the region. In this initiative, one example will be testing different forms of neighborhood intensification. Design research also involves identifying best practice solutions from around the nation and the world and calibrating them to the RPA region.

Communication

Design has always been an essential part of communicating RPA's policies to a multiplicity of audiences which include: professionals, elected officials, agency representatives, citizen stakeholders and opinion leaders. By grounding policies in the physical and civic landscape of the New York-New Jersey-Connecticut metropolitan region, design is the most essential tool for connecting local constituencies to the larger regional agenda by explaining how these policies affect their experience of place. This design work must address these audiences.

Advocacy

Design is used to advocate for RPA's positions on the contentious issues of the day. An early example of this is the photo-based rendering that was used to show the negative impacts of a proposed bridge from Lower Manhattan to Brooklyn. After 9/11, RPA along with the Civic Alliance to Rebuild Downtown New York convened Listening to the City, a public event that tested the emerging design alternatives for Ground Zero. On the Far West Side, design alternatives were used to evaluate the relative fiscal advantages between a stadium or mixed-use development.

Empowerment

The design program at RPA after the third regional plan has also been devoted to empowerment and capacity-building. Much of this design work has emerged through intense community-based planning processes that create local master plans, regulations and design guidelines. RPA also trains local stakeholders and elected officials through its Regional Design Institutes. While this initiative does not anticipate the same kind of community-based planning effort that is undertaken for shorter-term place-based initiatives, the design work must be accessible to local stakeholders and respond at some level to community-based planning concerns.

Implementation

RPA uses design to model and disseminate best practices to agencies, municipalities and developers. This includes model regulation language and design guidelines. By emphasizing transferrable, typological solutions, this initiative will be used to create those kinds of products.

First regional plan (1929). View up Broadway from the arch of the Customs House. Drawing by Luigi Kasimir.

Representations of Regional Planning

Design has played various roles in each of RPA's previous regional plans: from projecting fantastic visions of the future to illustrating new forms of regulation; from describing the wholesale transformation of urban centers to providing solutions for new suburban development types.

RPA's first regional plan was appropriately titled "A **Graphic** Plan for the New York Region" and today, this nationally historic landmark document is considered the model for joining design planning and policy. The ambition and artistry are unrivaled and the range of representational techniques and subjects is extraordinary.

By the 1960's, the context for regional planning had completely changed and so had it for design. In response to the political context, RPA made what were at the time ambitious attempts at public engagement for the second regional plan, including town-hall style meetings, newspaper-based surveys and a public television special. Nevertheless, large-scale regional planning was viewed with skepticism and as a result there are no idealized comprehensive visions of the entire region. In the second regional plan, the drawings of the regional settlement pattern show the changing dynamic between the core and the region's suburban centers which are now becoming more independent.

In the third regional plan, the underlying framework for regional settlement relies on Ian McHarg's "Design with Nature": Some times summarized as "Points, Lines and planes", regional settlement patterns are organized around the integrity of the underlying open space networks (planes), compact centers of development (points) which are linked by transportation infrastructure (lines). Reflecting this are what became the signature images associated with the plan: a series of aerial perspectives—renderings over real but un-named places and landscapes—presented as triptychs to contrast the existing pattern, with future sprawl (present trends continue) or with compact "smart growth" (third plan policies implemented).

Over the history of RPA's three regional plans, it is possible to trace the changing dynamic between Manhattan as the region's CBD and the larger geography of the rest of the region. Current discussions at RPA around the fourth regional plan suggest a richer and more complex understanding of this relationship:

- That sub-regional scale geographies, such as the "corridors" around which this initiative is organized will be one of the organizing strategies for the plan.

- That the region will be defined differently for different purposes.

- That the region will be defined in non-geographic as well as geographic terms.

This is because many of the new challenges the region is facing—energy security, information infrastructure, climate change, changing patterns of production and goods movement—are defined not so much by discrete geographies as by complex networks of relationships that act at every scale, from the hyper-local to the global.

This discussion is informed by emerging ideas in the disciplines of landscape architecture, planning and urban design. Key among these is the need to understand how underlying systems of all kinds – socio-political, environmental, economic – interact over time. In this context, the role of the planner and designer is more than to prescribe and represent a singular vision or design philosophy.

From an urban/suburban/landscape design perspective, this means that the static images of alternative future settlement patterns which have been the staple of the three previous regional plans will have to be supplemented by new forms of representation that capture more complex relationships and move beyond the compelling but reductive images of city-versus-country or centers-versus-sprawl development. This initiative will explicitly acknowledge the design challenges presented by a deeply entrenched and sometimes intractable legacy of a maturing region: the myriad of hybrid and interstitial conditions that populate most of the landscape.

To different degrees the full range of regional planning, urban design and architecture images can be found in the three plans: land use plans, plans organized around themes such as transportation or open space, illustrative plans of particular places, renderings, and the extensive use of photography. Again, the first regional plan is the richest in terms of the range of representational techniques and the beauty of the artwork.

Second regional plan (1969). Aerial of a model for a proposal for 42nd Street. Photograph by Jeremiah O. Bragstad.

Aerial perspectives

The first regional plan established the precedent, embraced in the subsequent plans, of the sweeping, high-altitude point of view—the "long view", literally and figuratively. What today we would call "photo-simulations"—the digital superimposition of design elements onto photographs to make photo-real representations of proposals—was pioneered in the first regional plan by hand painting proposals as realistically as possible on top of oblique aerial photography. Today, when aerial photography is ubiquitous and accessible, this seems less radical than it was. In the second plan's Urban Design Manhattan book, there are a few aerial views over midtown, but this mode is not heavily used.
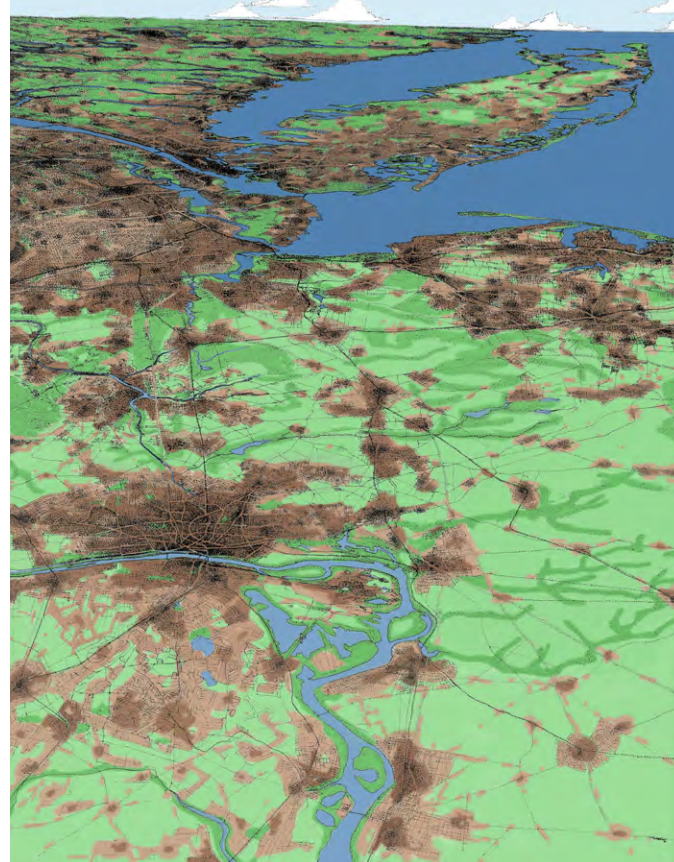
Aerial perspective renderings were also a staple of the third regional plan, although for these drawings, photorealism was not an objective and because they are more abstract, they can be read more as design solutions for types of places across the region. The drawback is that all of the designs reflect a very singular and nostalgic vision of city planning.

First regional plan (1929). Aerial looking southwest across the center of the region. Painting by Jules Guerin.

Third regional plan (1996). Aerial of Northern New Jersey and how it could look if developed in accordance to regional design principles.

Ground-level perspectives

The renderings in the first regional plan, such as those done by Hugh Ferris for a proposed art center for Manhattan, are notable for the atmospheric sense of place they convey. The second plan's Urban Design Manhattan volume also contains ground-level perspective views that are meant to convey a sense of place, although these black and white line drawings are very sparse by comparison. The third regional plan contains almost no ground-level views of spaces.

Second regional plan (1968). Rendering of galleria under proposed elevated railway in Jamaica, Queens.

First regional plan (1929). The Future Tower City, E. Maxwell Fry
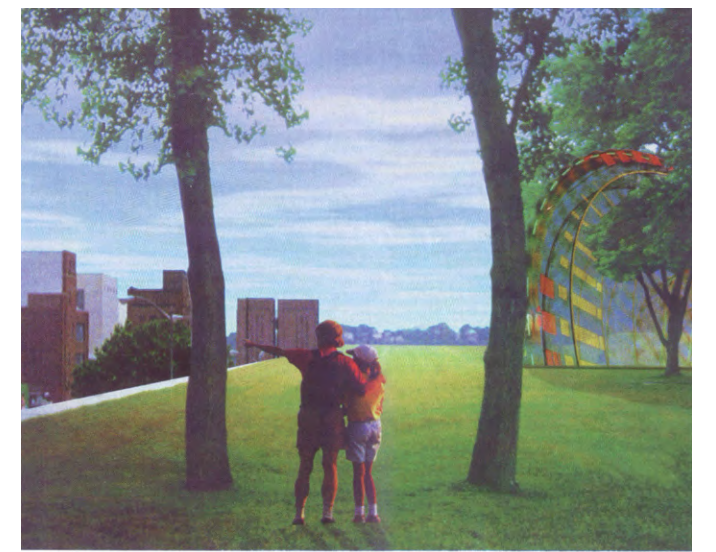
Third regional plan (1996). Proposal for Clinton Park. Wayne Berg.

Technical and information graphics

The first regional plan is also notable for representing technical information in compelling ways. The complete integration of policy and design is exemplified by the series of massing and shadow studies done by Hugh Ferriss and others that would become the basis for the original height and setback regulations in the zoning (also now rediscovered as "Form-Based Zoning"). Even purely technical representations such as the series of illustrations from the first regional plan showing recommended envelopes for business centers, are notable for their artistry and legibility for multiple audiences. The drawings of bridges, tunnels and parkways reveal a commitment to the idea that infrastructure is not just a technical undertaking but the building of civic architecture.

In the past decade, there has been an explosion in the number of outlets and audiences for RPA's work, including social media. In response, RPA has developed graphics that communicate to an ever-widening audience through our technical research and advocacy perspective. that communicate to an ever-widening audience through our technical research and advocacy perspective.
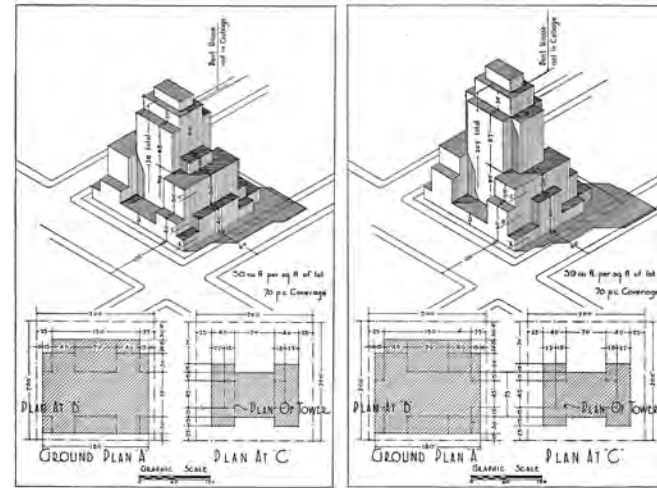
First regional plan (1931). Envelopes of Types of Buildings Recommended for Business Centers in Open Suburban Areas.
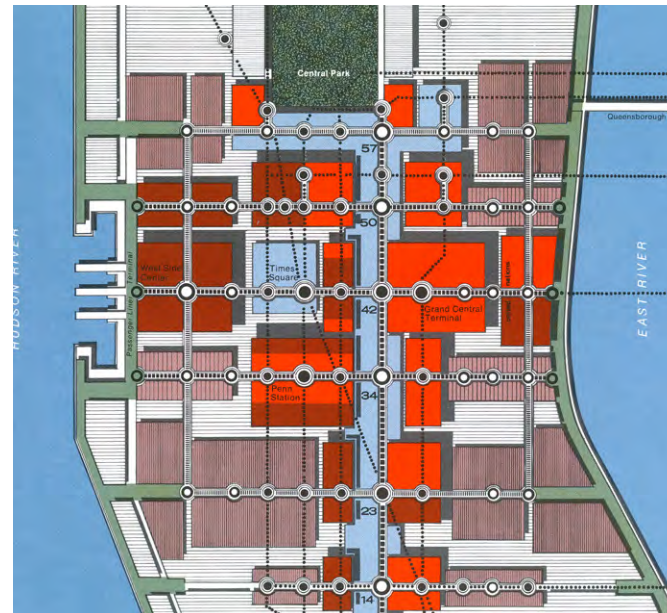
Second regional plan (1969). Concept Diagram for Midtown Manhattan showing "Low" and "High" areas.
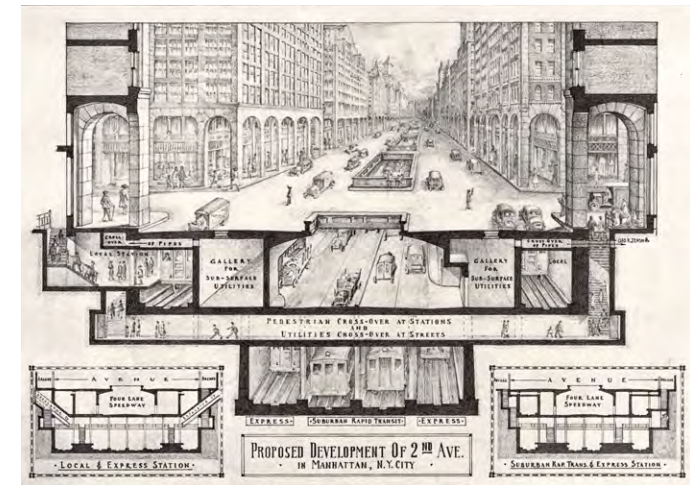
Cross sections

Of special interest in this workbook is the use of cross sections, section perspectives and axonometric sections.

In the first regional plan, inventive designs for new kinds of urban corridors that reconcile development and mobility of all varieties are presented frequently in cross section. Among the issues considered are pedestrian access, transit and the emerging auto mobility. Cross sections are used to visualize the effects of increased car traffic, transit capacity or walkways. A series of sections showing the proposed development along 2nd Avenue is one such example.

The work in Urban Design Manhattan in the second plan reflects an interest in urban megastructures. Urban design in the 1960s was based largely on urban movement systems, with future nodes of intensity driven by levels of access to transit. The Access Tree Diagram shown in the report is an axonometric projection that depicts layered sets of movement systems—both horizontal and vertical—at the individual and mass transit levels. In a report on Jamaica, Queens, which was intended to be an example of an urban sub-center, cross sections are again used to explain the strategies of megastructures over transportation infrastructure. In the report The Lower Hudson, cross section diagrams are used to explain alternative massing concepts for development on the New Jersey side of the Hudson River.

In contrast to the first two regional plans, the third regional plan contains only a couple of section drawings; one depicts the Far West Side to show the relationship between loft-type structures and infrastructure, another shows a proposed entrance to Penn Station.
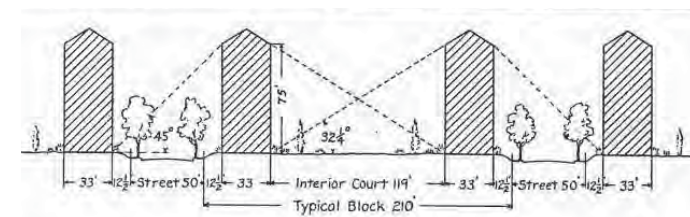

First regional plan (1931). Section perspective proposed development of 2nd Avenue.
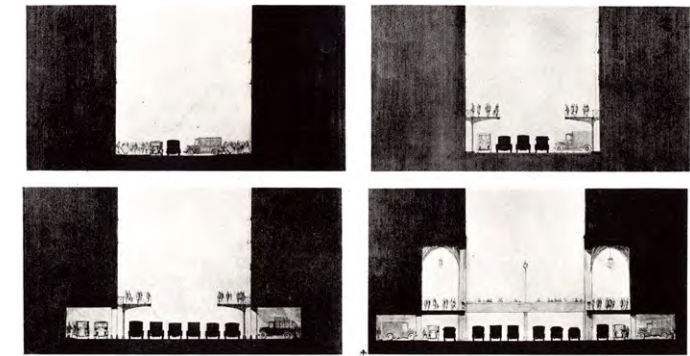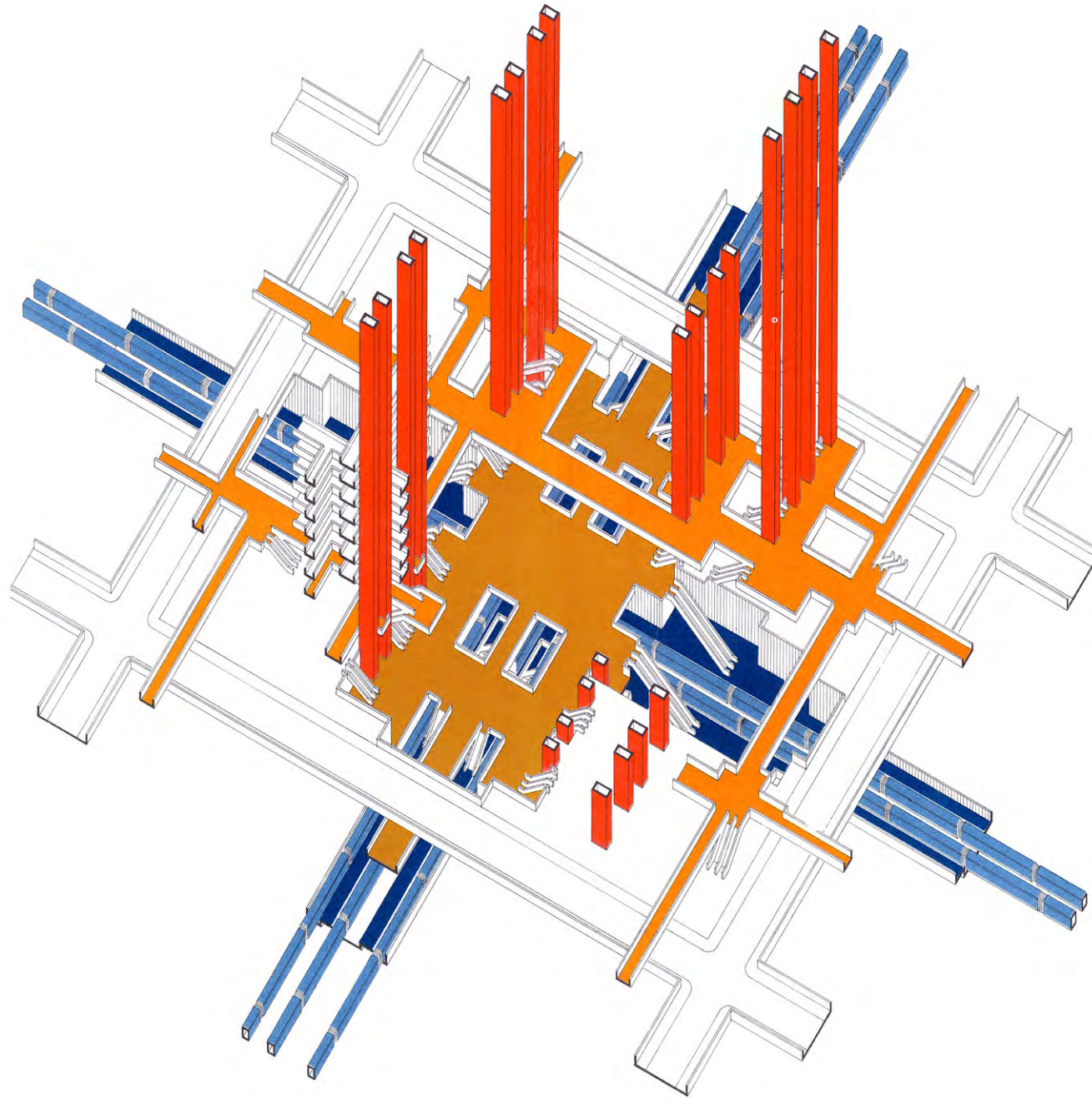

First regional plan (1931). Cross sections showing increased street capacity.
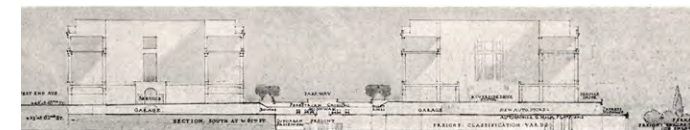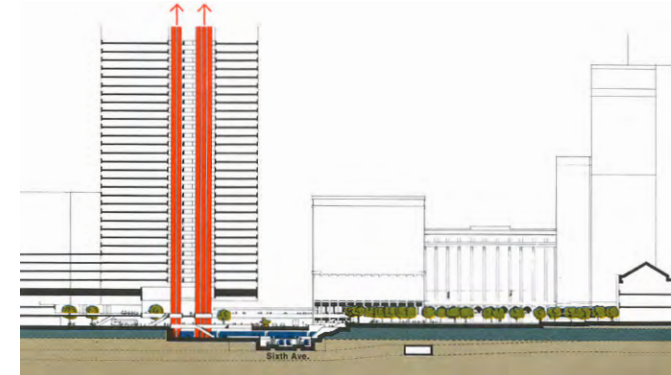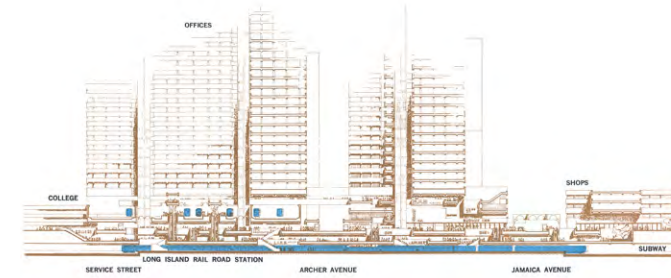

First regional plan (1931). Cross section of yard and building development at 65th Street.

First regional plan (1931). Cross section analysis of block and housing dimensions of a development proposed for the Newark Bay Waterfront of Bayonne, NJ.
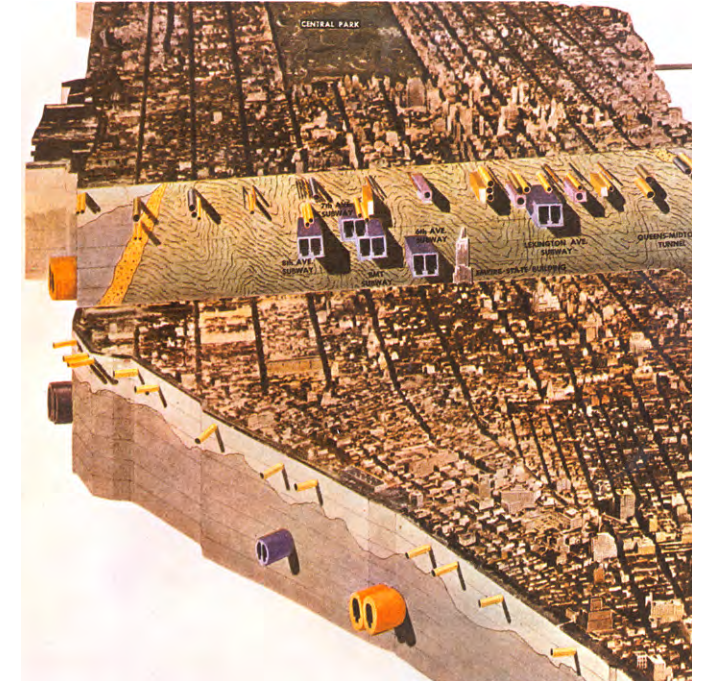
Second regional plan (1968 and 1969). Urban scale sections of Jamaica Center (above) and 42nd St and 6th Ave - Bryant Park (below).

Second regional plan (1969). Section through infrastructure of Midtown Manhattan. Drawing by Emil Lowenstein.

The strategic value of cross sections as a mode of representation lies in their ability to:

- Enable a consideration of scale, relationships and strategy for proposed designs while maintaining some distance from place-based specificity;

- Reveal and organize multiple concurrent urban/ suburban systems, opening new conceptual and spatial territory for design speculation;

- Demonstrate relationships arising from the layering of landscape with multiple systems of urban infrastructure, such as roads, sidewalks, transit and buildings;

- Show contrasting or even contradictory programmatic conditions in a single view.

Looking at cross sections of sites at multiple scales of resolution and at various points of interest exposes new territory for development and invention. For example, cross sections along rail lines may reveal an interesting interweaving with other rail lines, roads, human activity and adjacent neighborhood fabric. In suburban towns, axonometric sections may highlight the relative flatness of the built suburban landscape by throwing into relief the vast and adjacent yet disconnected residential areas and commercial strips.

It is evident that the rich design potential within the built environment cannot be fully investigated through aerial photographs or maps alone. While master plan strategies depict a mapping and reorganizing of territories, design through section enables a concurrent consideration of invisible yet important operations and interactions of the region.
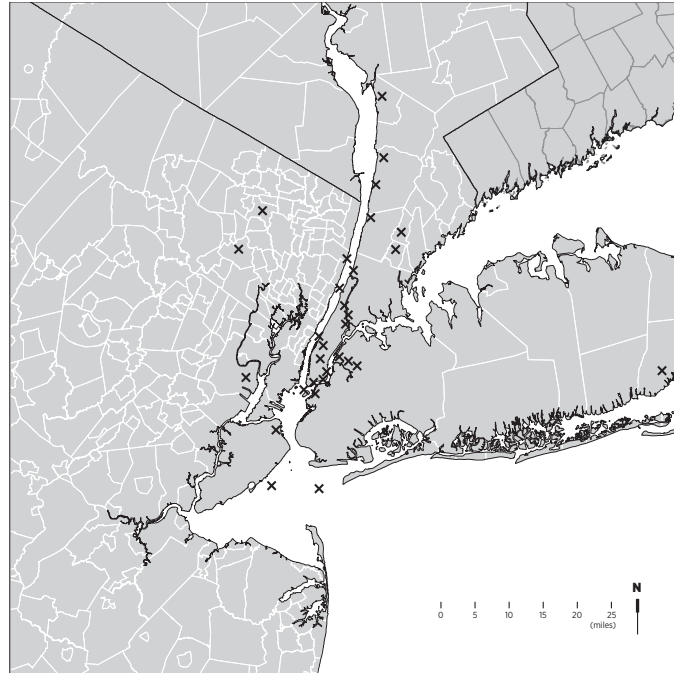
Projects represented visually in the first regional plan
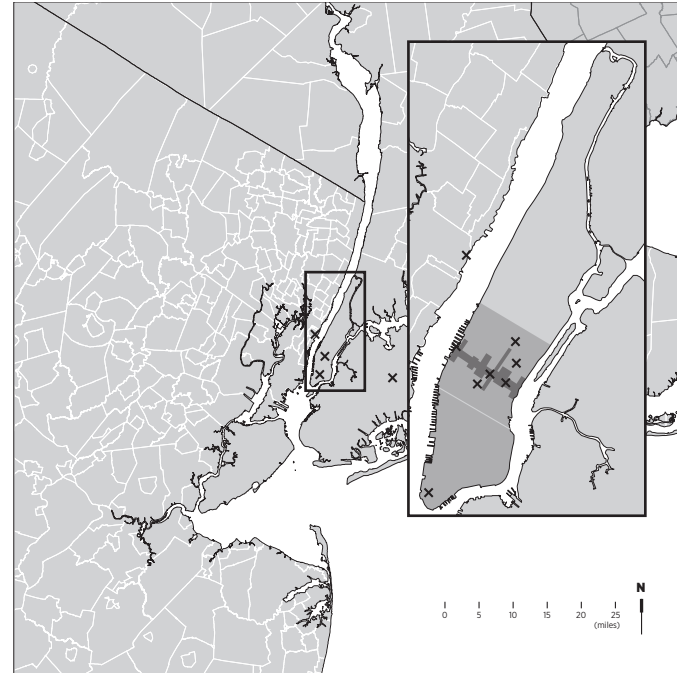
Projects represented visually in the second regional plan
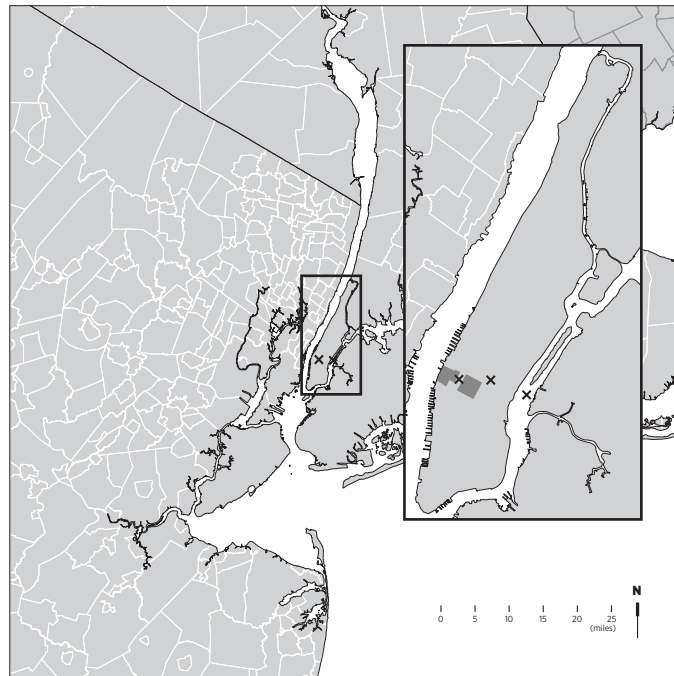
Projects represented visually in the third regional plan

Changing Contexts, Changing Representation

The arc of the three regional plans and of RPA's work after the third regional plan, as revealed in the signature maps from each of the plans, tracks a progressive increase in the scale of the context for regional planning. In the first regional plan of 1929, the region was identified as the commuter-shed defined by rail transit to and from the core -a model now overtaken by a polycentric region in which the origins and destinations of trips are far more complex, reverse commuting is growing at a faster pace, telecommuting is possible, and workers are commuting from outside of the region. In the second plan of 1967, the jurisdictional definition of the region had not changed, but the geography covered by the various maps was larger. It increased again in the third regional plan of 1996 when the signature maps tried to capture the importance of larger natural systems that extended beyond the 31 counties.

In the decades following the release of the third plan, new contexts have come into play: RPA's America 2050 initiative, building on emerging European spatial planning, foregrounded the role of "megaregions" in national planning with an emphasis on our own Northeast megaregion stretching from Boston to Washington DC. Globalization and internet connectivity have expanded this context even farther. While the immediate context for the design studies in this initiative is the regional corridors within the RPA region, these larger contexts are an essential frame for the design proposals.

Since the release of the third regional plan there also has been an explosion in the range of representational techniques that are available to designers. Significant advances in ArcGIS and the development of other platforms such as Carto has helped bridge the still significant divide between the disciplines of planning,
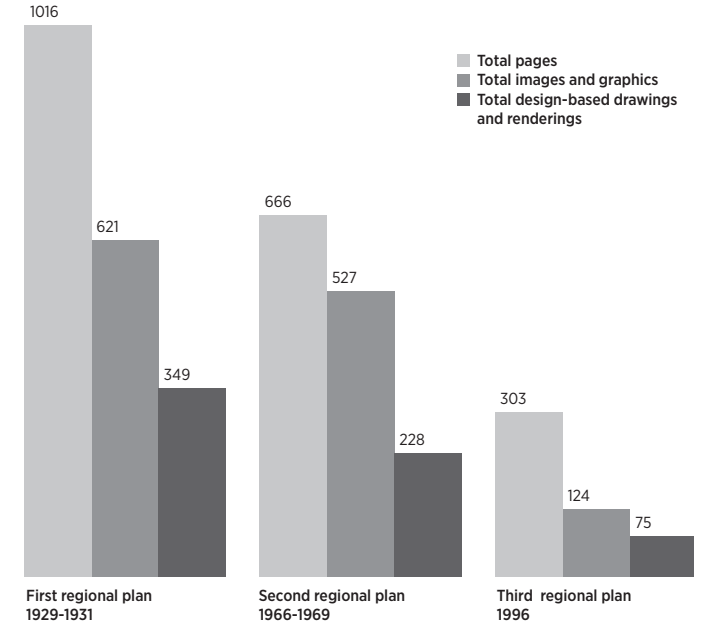
Generated representations as share of total visual content and total pages in the first three regional plans
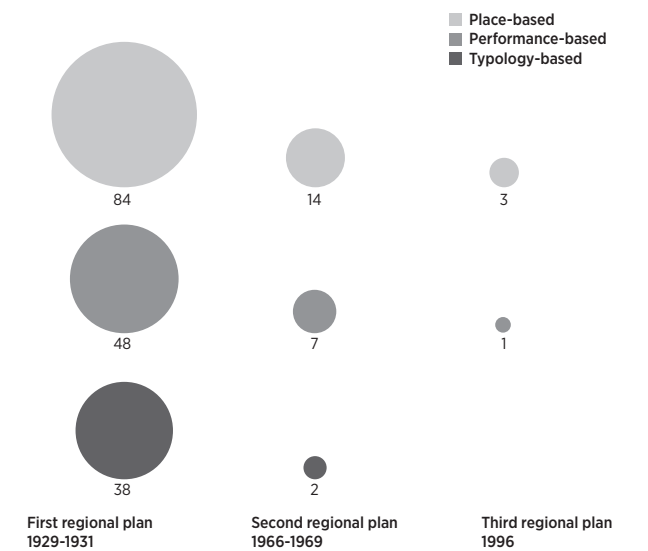
Inventory of representational strategies in the first three regional plans

Aerial Photograph of Cortland County, New York, 1955
Photo: New York State Aerial Photographs

urban design, landscape design and architecture. It is easier than ever to overlay data onto built form. This includes not just physical information such as environmental performance (heat gain, shadow, etc.) but also ephemeral information like intensity of use over time.

At the scale of urban design and regional planning, there are now many tools that can be used to model the performance of alternative futures such as Community Viz, Urban Footprint, and I Place. Many costly regional mapping tools that were at one time proprietary are now widely available.

Finally, significant transformations enabled through the use of new social media, as well as the ever increasing access to data and photography, and access to interactive mapping tools such as Google Maps and Sketch Up, has changed the degree to which the public expects to access data and enabled new levels of participatory planning. RPA's regional base map is on Carto which enables access.

Lessons for this initiative

The choice of representational techniques is one of the critical aspects of this initiative and needs to account for the intersection of several parameters:

- **Level of abstraction**: The case study locations and the use of cross sections have been selected for their value as prototypes with the expectation that the lessons learned will be transferable to other like places across this very large region. Two competing agendas need to be resolved: on the one hand, designs need to be both specific enough to point the way to implementable strategies as well as close enough to the ground so that

our audience can relate to them as real places. On the other hand, the designs need to be abstract enough to transcend architectural stylistic preferences and to be relevant for a multitude of places.

- **Alternatives and change over time**: This is an ambitious and very long-term plan. One way to insure that the designs remain relevant is to demonstrate how the same principles may be realized in different formal ways. Also, demonstrations of change over time are likely to make change more understandable and point the way to short, medium and long-term actions.

- **Legibility for multiple audiences**: The designs, like the plan itself, need to speak to a wide audience that includes: policy makers, community stakeholders, technicians and advocates. As in previous plans, a diversity of representational techniques is desirable.

- **Presentation of technical information**: Teams will demonstrate how their designs perform with technical evaluations of different kinds (exploiting the increasingly close connection between combining representation of data and form). Representations of technical information must also be legible to multiple audiences.

- **Multiplicity of media**: Far more than in any of the previous plans, designers need to anticipate that their work will be presented in multiple outlets including print, exhibitions and web-sites.
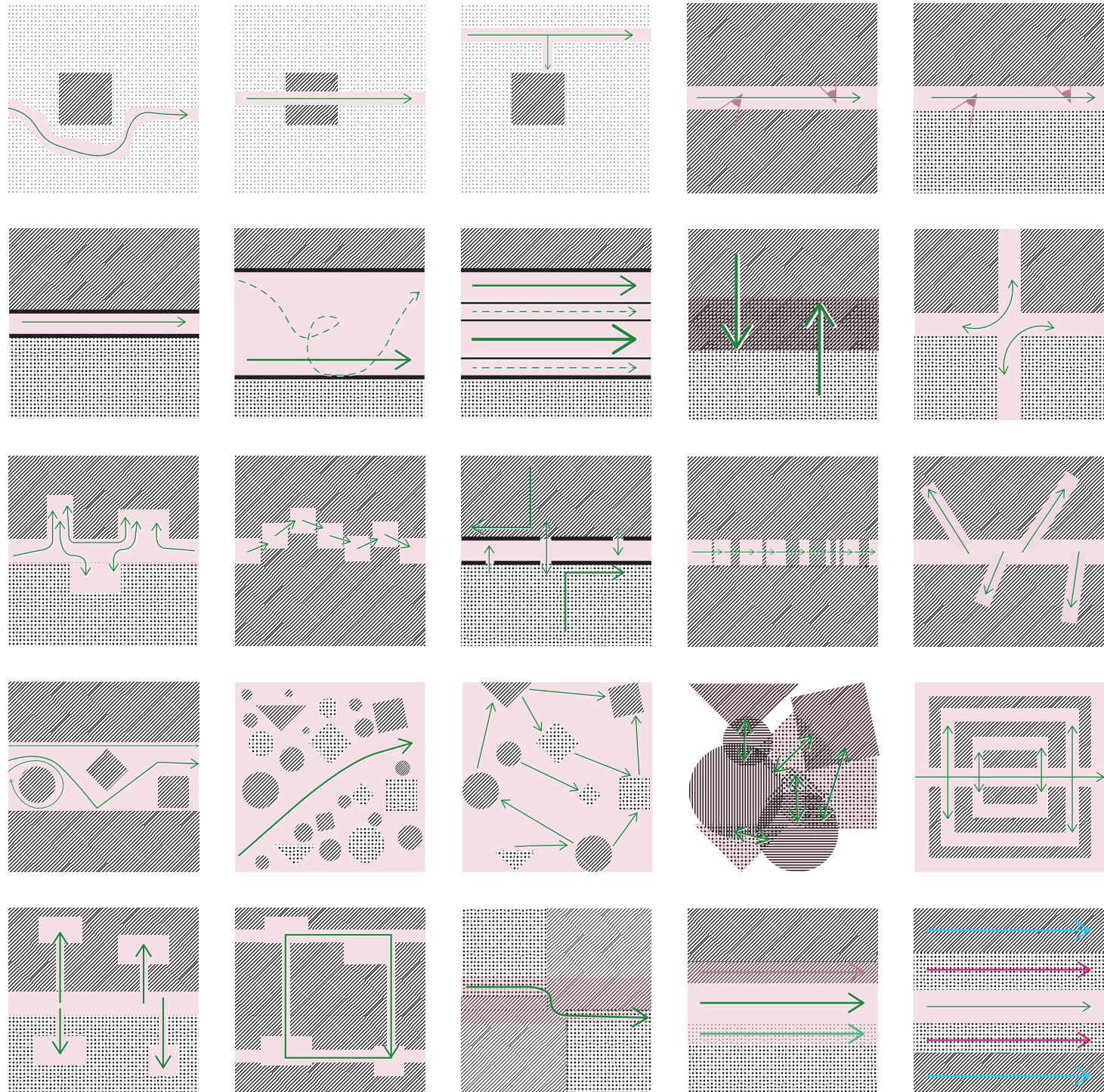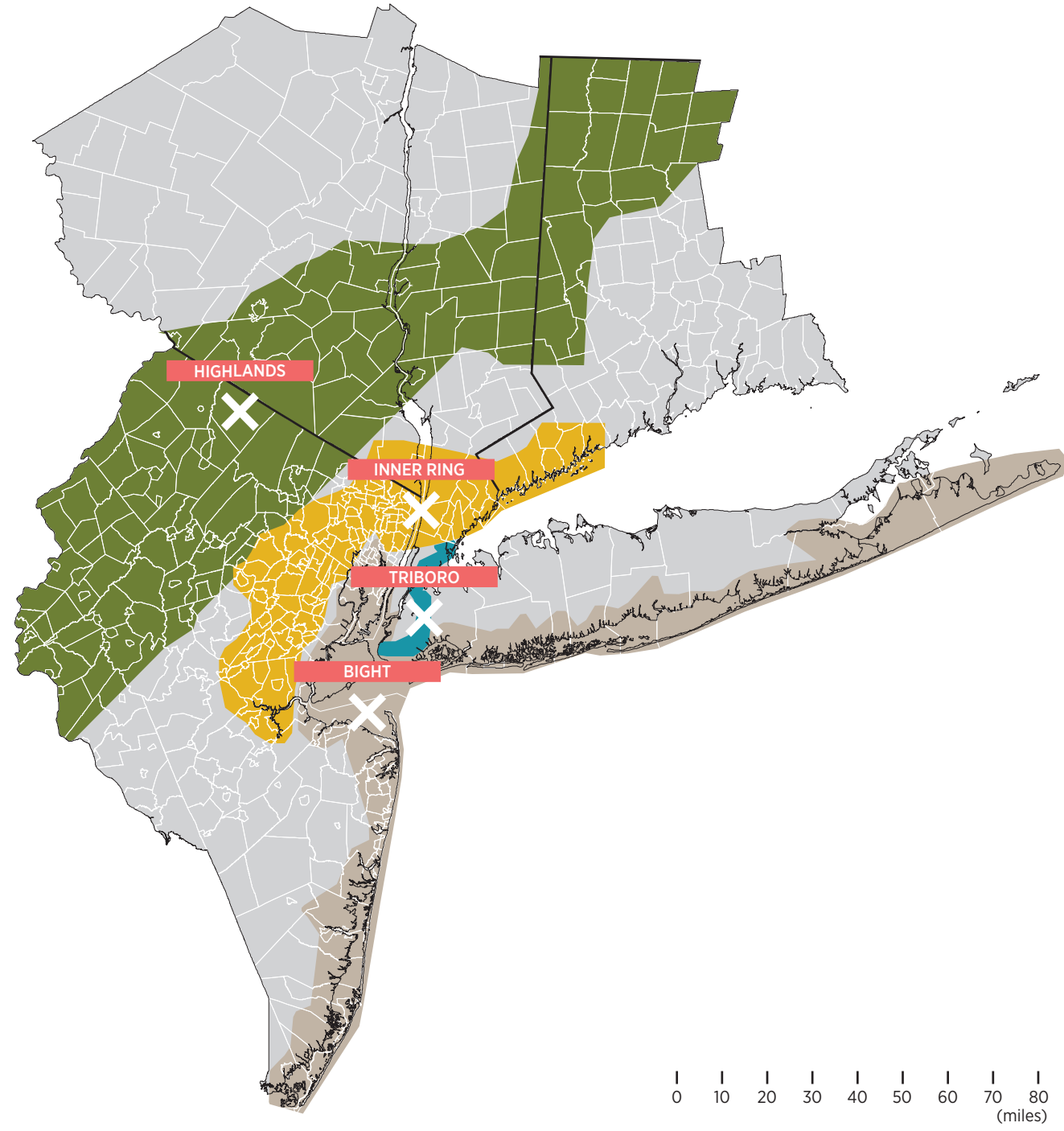
Corridors

For the fourth regional plan's design initiative, four corridors have been identified in the New York- New Jersey-Connecticut metropolitan region, each representing a common set of needs and opportunities. The idea of relating locations along a corridor is useful for several reasons: it highlights existing and potential transportation links; it identifies successful urban and landscape resilience design strategies that can be shifted from one location to another along a corridor of similar conditions; and it allows those strategies to be typologically identified through sectional or transect representation, permitting a future design strategy of imaginative development and refinement. The corridor concept allows for the development of designs that engage issues that transcend the limits of a given place, but engage common issues germane to their territory. These design strategies thus provide simultaneous specificity and abstraction simultaneously.

This workbook advocates for a more complex and intricate conception of "corridor," one that transcends its contemporary use that is often limited to notions of transportation. Corridors have a long and interesting history in the realm of urban planning. The corridor concept is examined in William H. Whyte's prescient 1968 book, *The Last Landscape*, a critique of the idea of using wedges and zones to limit encroachment on open spaces. Whyte instead advocated for the adoption of an the idea of linkages between open spaces; of the preservation and enhancement of stream valleys and beds, ridges, and other corridors; of the elongation of parks and linear open spaces to maximize edges; and of the adaptation of railroad and other disused right-of-ways. The term "corridor" is currently used for transportation lines, including the regional "Northeast Corridor," to designate linear structures linking urban nodes, but it also goes back to the

unifying concept of Frederick Law Olmsted and Calvert Vaux's 1858 Greensward plan for Central Park.

The idea of regional corridors both recognizes an existing linkage of shared structural conditions—coastal, rail, and roadway; suburban fabric and open spaces—and anchors innovative proposals for future change in those regional swaths or bands in keeping with that commonality. The selection and definition of these four corridors—Highlands, Bight, Triboro and Inner Ring- as sites for novel design work at the regional scale contrasts the dominant role of a Manhattan-centric center / periphery relationship emphasized in RPA's past three regional plans. These four corridors address distinctly different yet interconnected issues at a geographical scale within the region, focusing on conditions of ocean, forest, city, and suburbs. Collectively, the four corridors identify and explore the diverse, and often contradictory, demands and concerns that coexist within the greater region.

HIGHLANDS - FOREST CORRIDOR

The Highlands Corridor extends across the entire region from the Delaware River to Northern Connecticut. It is a kind of upland "green belt," dividing the region between its coastal and upstate areas. The Highlands is comprised of a nearly continuous natural swath of green open space traversing the region. It presents an opportunity to link open and protected park spaces, allowing for improved access and recreational connectivity for the public, but also providing pathways for wildlife and species that may need to migrate northward as a result of climate change. The Highlands Corridor also serves as a backbone to a series of stream valleys and riverbeds that would connect the the Highlands to the coast, offering "geneways" to help coastal species migrate upland.

THE BIGHT - OCEAN CORRIDOR

The challenges to the region's coastal communities from climate change and sea-level rise, from Atlantic City, New Jersey, to Montauk, New York, are varied but share many commonalities along the Atlantic coast's New York-New Jersey Bight. Through recent initiatives both before and after Hurricane Sandy's landfall in 2012, many excellent proposals for the adaptation and increased resilience of coastal communities have been developed. These are largely location-specific, but many strategies may be generalized along the entire New York-New Jersey Bight Corridor. Research indicates that this corridor is the location of many of the region's most socially vulnerable populations, and strategic planning is imperative.

TRIBORO - CITY CORRIDOR

The Triboro Corridor envisions the transformation of an existing freight rail linking the three boroughs of the Bronx, Queens, and Brooklyn. The addition of light rail service along this freight railway would allow for potential links to seventeen to subway and commuter train lines. Each station along the Triboro also presents opportunities for transit-oriented development and connections between new residential and workplace nodes. It would enable new outer-borough connections independent of radial links through Manhattan. The Triboro Corridor has the potential to link many poorly-served neighborhoods with new employment, cultural and open space opportunities.

THE INNER RING - SUBURBAN CORRIDOR

The ring of inner suburbs from Port Chester and White Plains, New York, through Paterson, Montclair, Rahway and Perth Amboy, New Jersey, present excellent opportunities for reinvigorating urban communities, creating new jobs in the places that need them most, increasing the availability of affordable housing and improving existing or potential public transit linkages. These "first-ring suburbs," defined as the Inner Ring Corridor, are a critical component of the region's future—sites where population density might increase, and where innovative design approaches will envision positive transformation.