

c o n s o l i d a t e d p e r i p h e r y
c o m m e r c i a l a n d h i g h w a y i n t e r c h a n g e

christine l. mcgrath
bachelor of science in architectural studies
university of illinois at urbana-champaign, 1994

submitted to the department of architecture in partial
fulfillment of the requirements for the degree of mas-
ter of architecture at the massachusetts institute of
technology

february 1997

©christine l. mcgrath 1997. all rights reserved. the
author hereby grants to MIT permission to reproduce and
to distribute publicly paper and electronic copies of
this thesis document in whole or in part.

signature of author

christine l. mcgrath
department of architecture
january 17, 1997

certified by

U

ellen dunham-jones
assistant professor of
architecture and planning
thesis supervisor

accepted by

andrew scott
associate professor of architecture
chairman, departmental committee
on graduate students

MASSACHUSETTS INSTITUTE
OF TECHNOLOGY

MAR 26 1997

LIBRARIES

t h e s i s r e a d e r s .

n a s s e r r a b b a t

associate professor of the his-
tory of architecture / aga kahn
development professor in the
history of islamic architec-
ture

d e n n i s a d a m s

associate professor of visual
arts

all illustrations and photo-
graphs by author, christine l.
mcgrath, unless otherwise noted.

c o n s o l i d a t e d p e r i p h e r y
c o m m e r c i a l a n d h i g h w a y i n t e r c h a n g e

christine l. mcgrath

submitted to the department of architecture on January 10, 1997 in partial fulfillment of the requirements for the degree master of architecture.

abstract:

Highway expansion legislation has been a significant catalyst for suburban development. Initially funded for military mobilization in the 1930s, later massively extended in the 1950s, today's highway system, together with the service and information based economy of post-industrial development, have allowed for the dispersion of traditionally urban functions into continuously less urbanized peripheries. As the ambiguous zone between city and country is inhabited, suburbia emerges. Commercial, industrial and residential development take hold at new highway interchanges, bringing to suburbia the functions and amenities of a city, yet in a manner completely unique to its own position. In suburbia the landscape consists of sprawling fields of independent, privately-held capsules. "Centers" and "edges" are trivialized, if even discernible. Nondescript "architecture" is governed by economic and marketing strategies, subsidizing the making of space to the making of corporate identity. While the highway system itself is enabled through massive public investment, its "architecture" - the strip - is entirely private in its motivation.

This thesis proposes that the rational of the suburban strip landscape can be challenged through the insertion of generic private development into public infrastructure. Through the design of a commercial strip within a highway interchange it obviates tensions inherent in the suburban condition. The thesis implicates architecture as both a physical and conceptual mediator; it is the material interface between highway and town, and the ideological interface between public space and private enterprise.

thesis supervisor. ellen dunham-jones
title. assistant professor of architecture

c o n t e n t s

one: condition 1996
beyond industrial.
city. edge city. suburb. exurb.
mass architecture.

two: highway I-355
outlying chicago.
interstate extension.
at I-355 and 127th.

three: interchange 127
four models at 1":200'.
development by 2006.
consumer typologies.

four: 28.8sec @ 70mph
model at 1":50'.
28.8sec. @ 70mph.
structure/skin/access/program.
in section.

five: bacardi, vw, & the gap
interface / elevation.
bacardi, vw, & the gap.
model at 1":40'.
to the (n)th degree.

six: reference information
appendix one: edge city.
appendix three: extension I.355.
appendix three: construction documents.
works consulted.

...ics
...BA

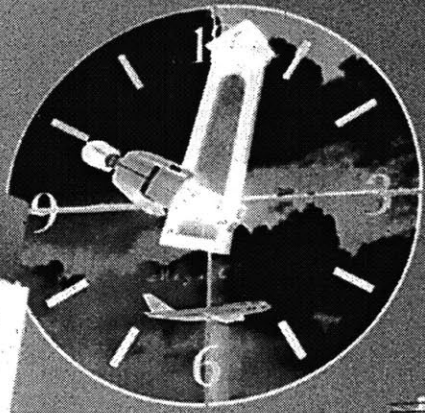
Of course,
some still prefer
it straight up.



REMY M

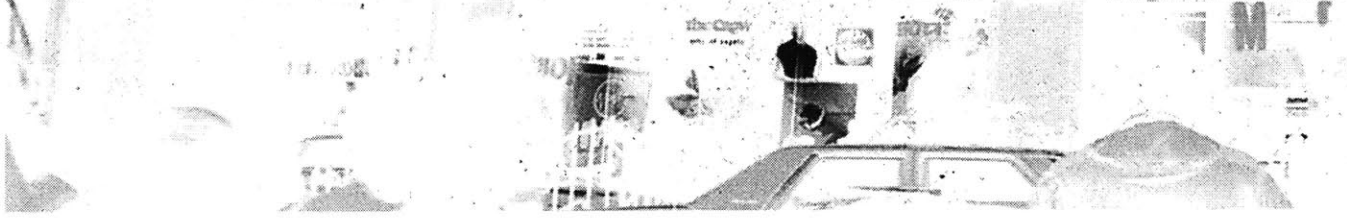
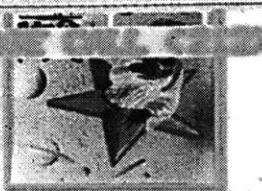
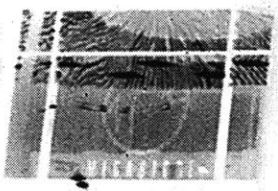
T E L S M I A A

Time To Fly



virgin atlantic

SONY



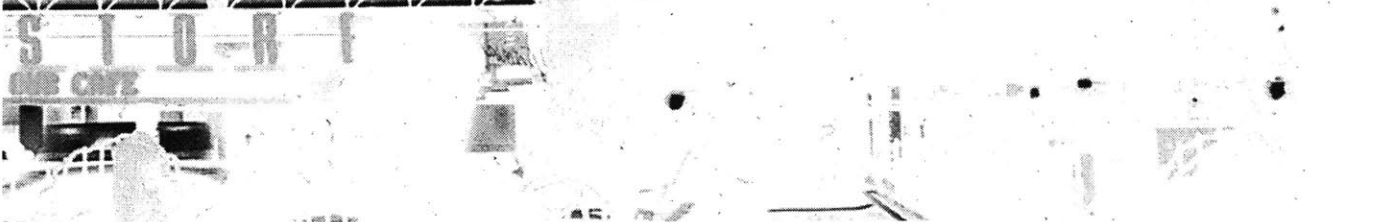
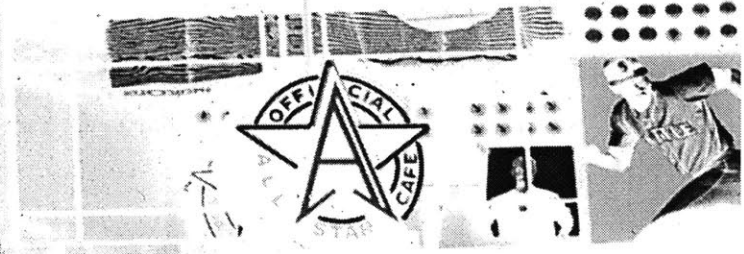
O
U
D

BUILD

THEATRES



STORY



condition 1996

one

beyond industrial.

city. edge city. suburb. exurb.

mass architecture.

[preceding image] [6.1] global. capital. signage. new york: times square.

beyond industrial.

Dominant political and economic tendencies of the late twentieth-century, in the United States and abroad, have signified the cessation of the Industrial Age - in its place, the emergence of "Post-Industrialism." In a post-industrial environment modes of production are supplanted by modes of consumption, generally marked by a shift from manufacturing (the making of objects) to processing (the handling of information). Intrinsicly tied to the so-called Information Age, the post-industrial economy revolves around telecommunications, information processing, and other service oriented activities. Its essence is one of transcendence; a global phenomenon nullifying limits at all levels, particularly the physical.

"As the twenty-first century draws near, an astonishing change becomes evident : the logic of economic and technical development in the microelectronics and other high-technology fields tends to eliminate the importance of spatially defined communities . The microcosm of microchips makes possible a macrocosm of worldwide communications and corporate operations. For those able to take advantage of this situation, the important horizons become global ones. Operations take place where there is the greatest competitive advantage. Locating a factory, office, shopping center, or even company headquarters in a particular place becomes an expediency of the moment, much like plugging in a portable computer into an available outlet. The industrial age, with its cumbersome equipment and communications,, tended to create productive enterprises in more or less permanent locations - the textile mill, the steel plant, the automobile factory. Very little in the material conditions of an information society requires such any such anchor."¹

Dependence on fiber optics, network connections, facsimile transmissions, etc. - a virtual versus physical infrastructure - has made the single most significant impact on the "form" of post-industrial "cities."

"Cities", according to current architectural discourse, is in fact a misnomer. The "morphology" spawned by a post-industrial economy is anything but the traditional "city". A notion of "morphology" itself, as currently under-

stood and advocated in architecture, may also be untenable terminology in the post-industrial context. The accelerated disintegration of physical limits via the maturation and extension of communication technologies, the globalization of capital, and the emergence of multinational corporations have rendered both terms obsolete, or at the very least, in need of a changed more inclusive definition. “Tendencies [of deregulation, de-industrialization, and privatization] have reinforced the continuing mutation of the American city from the erstwhile monocentric city comprised of dominant ‘urb’ and dependent suburbs, to the sub centered city with peripheral retail-commercial realms, to the polycentric suburban metropolis, a patchwork assemblage of the traditional center, differentiated suburbs, and variegated exurbs which are autonomous, highly competitive districts interconnected by a comprehensive network of arterials and freeways and animated by the process of ‘metropolitanization.’”²

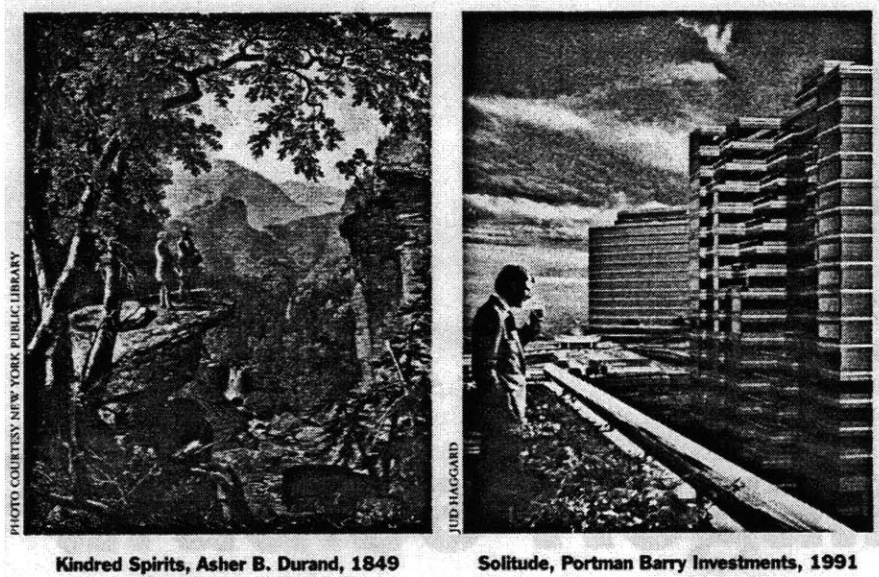
city. edge city. suburb. exurb.

“Metropolitanization”, resulting from post-industrial development and effectual from the most urban to the most rural, has found its clearest outgrowth in the emergence of so-called “Edge Cities”.³ An edge city is a “techno-burb” a “satellite-city”, “urbanoid tissue”, a “perimeter center”, “the periphery”, a “suburban metropolis”. It is that entity arising out of yesterday’s farm fields, punctuating the tautology of highway infrastructure in office towers of blue and green glazing, centering on malls and freeways, in an advocacy of efficiency and consumption.

More precisely, the presence of Edge City is said to be indicated by the following conditions: 1] five million square feet of leasable office space or more, 2] six thousand square feet of retail space or more, 3] a population that increases at 9 am on workdays - marking the location as primarily a work center, not a residential suburb, 4] a local perception as a single end destination for mixed use - jobs, shopping, and entertainment, and 5] a history in which, thirty years ago; the site was by no means urban; it was overwhelmingly residential or rural in character.⁴

“Edge City”, as condition, as place, did not exist at the dawn of the previous generation, not do I suspect it will exist at the close of the proceeding one, at least not with its present evocations. Its emergence, virtually overnight; its presence entirely in flux; its future incredibly speculative. Yet despite such uncertainty and potential temporality, edge city is, for the time, America’s life source.

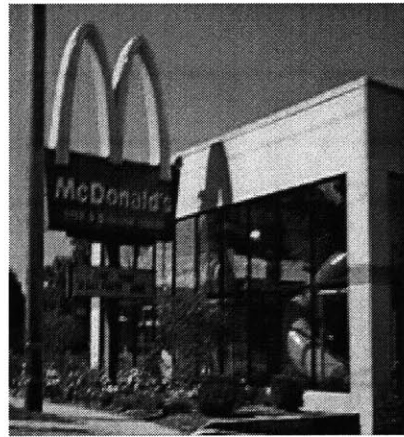
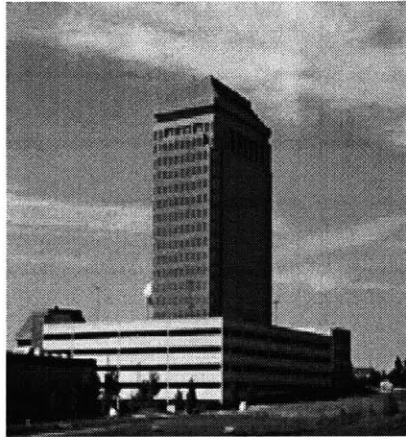
Edge City, epitome of the American dream, Modernity’s unfinished project, Post-Modernity’s playground; is the “culmination of a generation of individual American value decisions about the best ways to work, shop, and play - about how to create home.”⁵ The “periphery” is as psychological as it is physiological; a mental state of mind as much as a physical reality. It resonates with the indelible realities, ironies, and contradictions inherent in the American value system - one grounded in the ideologies freedom, opportunity, and self-empowerment. As Garreau suggests, “The battles we fight today over our futures do not have echoes only back to 1956, when Dwight D. Eisenhower changed America forever with the creation of the interstate highway program. Nor does it go back only to the New Deal of the 1930s, during which Franklin Delano Roosevelt shaped America into a society of homeowners. It goes to the core of what makes America America, right back to the beginning, with the Pilgrims of 1620 and the Virginia Cavaliers of 1607.”⁶



[14.1&2] the planner's dream. the developer's dream.
kieran and timberlake, "paradise regained".

The power, money, ambition and opportunity to shape and reshape our environment as we have done in Edge City, of course, is not without consequence, both positive and negative. Oscillating between unbridled opportunity and fraudulent chaos, lies suburbia, the developer's dream and the planner's nightmare. Suburbia, this place which for most Americans demarcates home, office, and recreation, is for architects and planners the void, as we say "non-place."

Perhaps the despair, disdain, and criticism often levied at suburban development by planners and architects can be attributed to the manner in which the "placeless" places have repeatedly physically manifested themselves, the psychological impact this had on our conception of the American landscape, as commodity rather than amenity, and our seemingly ineffectual ability to temper their obdurate perseverance. The so-called "ad-hoc" pollenary bits of non-city triggering along abstract highway circuitry constituting suburbia's presence appear to undermine any formal planning typologies we might futilely attempt to impose on them. The politics and economic which govern their presence, further eradicate this possibility.



[16.1] typical office tower at [16.2] mcdonald's, lemont.
i.355 interchange exit.

mass architecture.

The periphery is not like the city, and it genuflects little to the architectural rhetoric of order, hierarchy, node, and threshold. One can not trace its wide tree-lined boulevards, locate its center, or comprehend its order. Suburbia's architecture is not of the museum, the state house, the opera hall, the cathedral, but rather of the shopping mall, the "spec" office building, the residential cul-de-sac, the fast-food restaurant. Liberated by technology, the liquidation of capital, and patterns of global consumption, it has bypassed traditional scenes of urbanity and bucolic scenes of country. The nature of this place, Cyburbia, or as Michael Sorkin coins, the "theme park" - is one of complete ageography, fixated security, and simulated fantasy. "The 'theme park' imagery of suburbia, is nowhere more visible than in its architecture, in buildings that rely for their authority on images drawn from history, from a spuriously appropriated past that substitutes for a more exigent and examined present. An architecture of deception, which in its happy-face familiarity, constantly distances itself from the most fundamental realities ."⁷

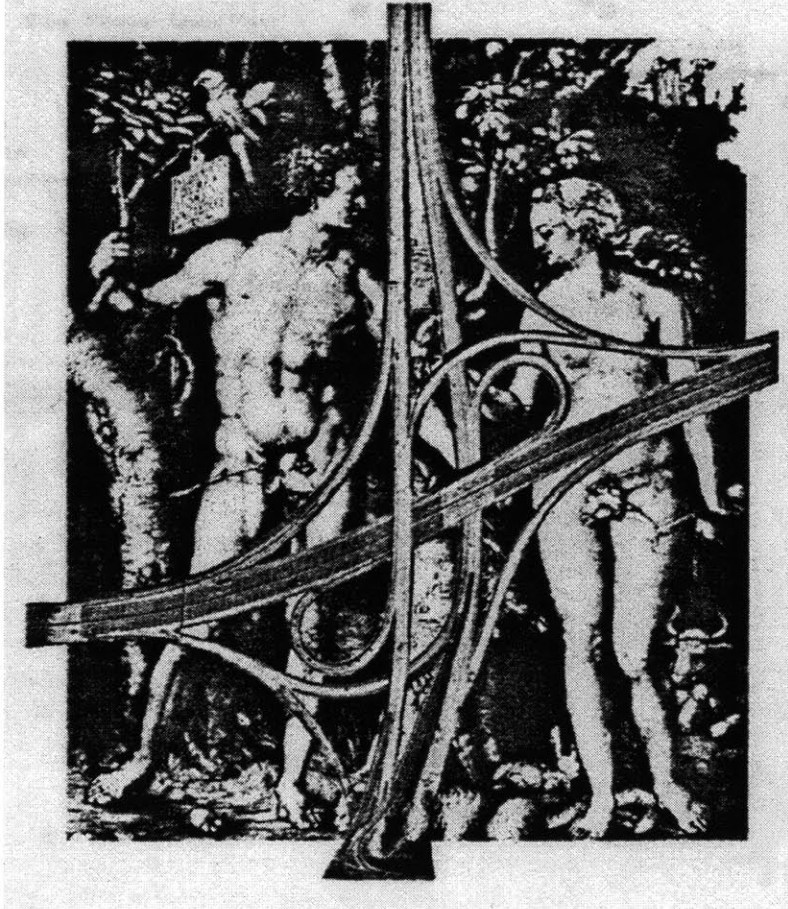
The practice of corporate expansion and the role of the franchise in the creation of this "theme park" can not be underestimated. Using roadways as both their supply and distribution networks, (fulfilling a century of government legislation protecting interstate trade and commerce), "the corporation" has repeatedly succeeded in subverting public space to private enterprise. Parcel by parcel the landscape has been rendered a set of available commodities, ready for purchase and consumption, "blurring the traditional dichotomy between public and private spheres into one of gradiated access."⁸ Further, notions of mass production, as once advocated and understood in the 1920s, have been eradicated. No longer is the end product or spatial experience of that product considered separately from its constituent manufactured pieces, but merely as an adjunct element of those pieces. The physical mass production of building components has been supplanted by the mass production of time, space and experience. "As capital has sought to reshape the production of architecture for commerce and profit, mass production has been reconceived as a broad organizational device. Today the notion of the mass production of architecture has developed beyond the prefabrication of constituent elements, and indeed implies the coordinated construction and management of whole sites and buildings."⁹

“Mass architecture” implicates the architectural object, the nature of its reception, and the conception of the landscape. It carries consequence, as well, for the practice of architecture.

“The new role of the architect is to comply with competitively asserted standards of efficiency, to cater to commercial clients, increasingly with the objective of representing corporate identity or else of fluctuating standards of good taste. The profession is thus torn in two distinct aspects: on the one hand, architecture becomes pure technique as if it were a branch of engineering; on the other hand, it becomes image-production, as if it were a branch of advertising.”¹⁰

- ¹ Winner, Langdon. p. 55.
- ² MacBurnie, Ian. p.135.
- ³ See Appendix One for further information on Edge Cities.
- ⁴ Garreau, Joel. “Cities on the Edge”. p. 46.
- ⁵ Garreau, Joel. Edge City. p. 7.
- ⁶ Ibid. pp. 14-15.
- ⁷ Sorkin, Michael. p. xiv.
- ⁸ Goldberg, Jacob J. p. 238.
- ⁹ Ibid. p. 240.
- ¹⁰ Hadid, Zaha. from The End of Architecture. p. 27.

**Eden made accessible. Is the highway
the serpent or the tree of life?**



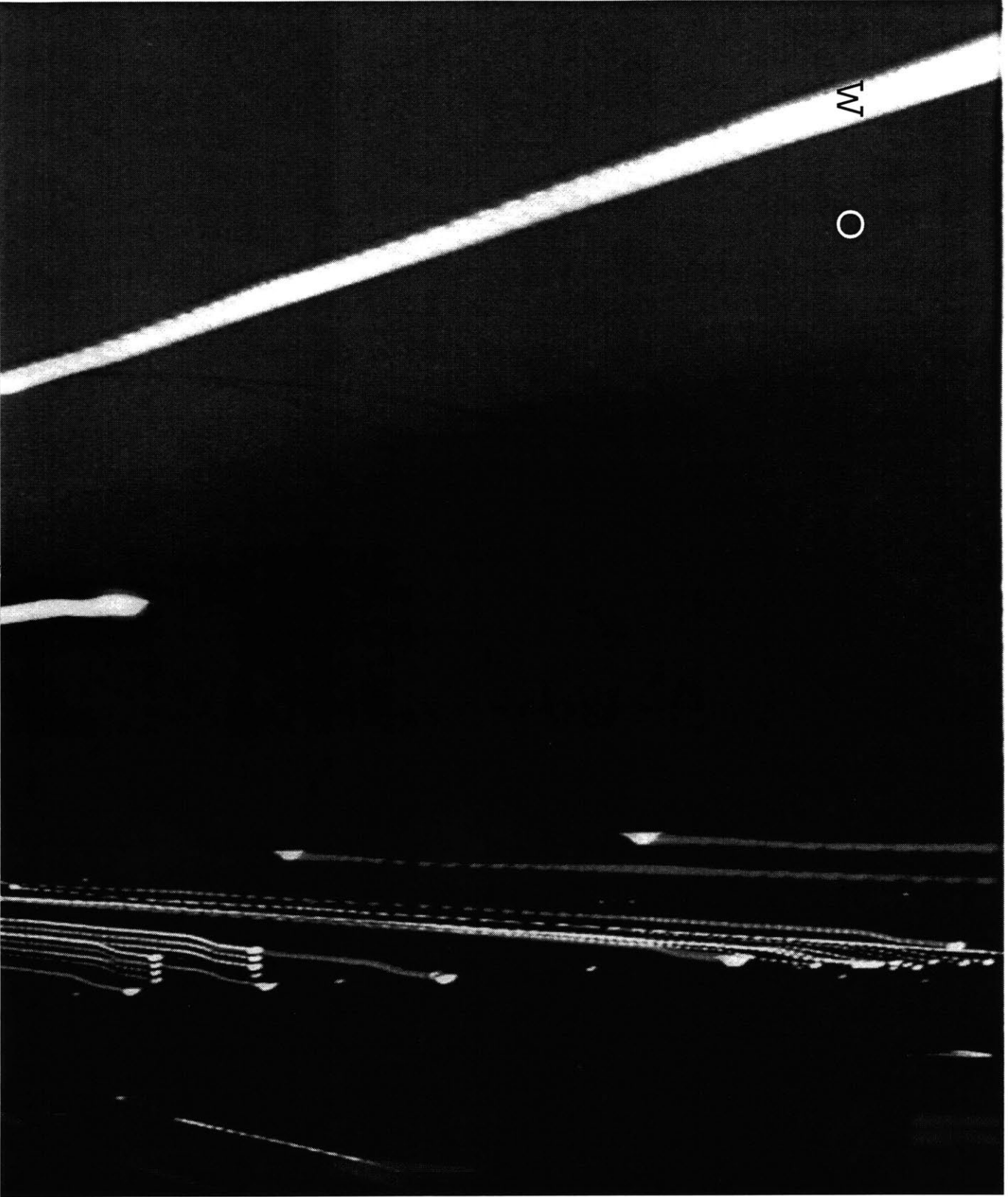
[19.1] the price of freedom...and the question of the highway.
kieran and timberlake, "paradise regained".



E

W

O



highway I-355

TWO

outlying chicago.
interstate extension.
at I-355 and 127th.

[preceding image] [20-21.1] highway lights.

outlying chicago.

*“Sears, Roebuck and Company no longer occupies the 110-story skyscraper in the heart of Chicago’s downtown; its new location is Hoffman Estates, thirty miles to the northwest.”*¹

Chicago, like most major American cities, has undergone the effects of post-industrial globalization and “metropolitanization”. While the downtown remains prosperous, much of what used to take place there has vanished. Skid Row is now Michigan Avenue, ship and rail yards are now office towers, and yesterday’s warehouses are today’s deluxe condominiums. From 1970 to 1990 the population of Chicago increased by four percent. During that same time, its size increased by forty-five percent.² And the case of Chicago, is not exceptional, it is typical. I will make brief mention here of recent growth in the Chicagoland Metropolitan Area, yet this thesis is rooted in the theoretical implications presented by the case of Chicago, as a major American city, more so than in the specifics presented by the actual city or its suburbs alone.

The area outlying Chicago, could (prior 1990) be roughly divided into four quadrants and/or two rings. Moving in a counterclockwise direction the quadrants, respectively, are the near north/northwest, the west, the southwest, and the south. Or moving outward from the city’s center there is a so-called “inner ring” located between the downtown and Interstate 294 (the Tri-State), which circles the city roughly 15 miles from its center, and an “outer ring”, by default lands which fall outside of this “inner ring”. [See Figure 23 .1]

To date metroplitanization in the form of “Edge Cities” or near approximations of them has occurred increasingly, outside of this inner ring, particularly in the city’s west and northwestern quadrants. There are said to be four such “Edge City” areas surrounding Chicago. They include, 1. the Schaumburg area (including Hoffman Estates and the Woodfield Mall area near the Northwest Tollway), 2. the O’hare Airport area, 3. the “Illinois Research and Development Corridor”, (including the area around Oakbrook, Lisle, Naperville, Aurora, and the East-West Tollway) and 4. the Lake Shore Corridor area (around the Edens Expressway and the Tri-State Tollway).³

Most recently Chicago suburban growth has been impacted by the addition of Interstate 355, a new north-south tollway, completed in 1990. Much like Interstate 294, I-355 and its adjunct arteries, encircle the city, except now running at a distance of twenty-five miles from its center. Effectively the insertion of Interstate 355 subdivided the aforementioned "outer ring" into two - establishing both a secondary (including land falling between Interstate 294 and Interstate 355) and now tertiary (land beyond Interstate 355) ring of suburban/rural development. Almost without exception, recent suburban development, say in the last decade, occurred either in anticipation, or as consequence of, this highway.

i.355
**proposed
extension**



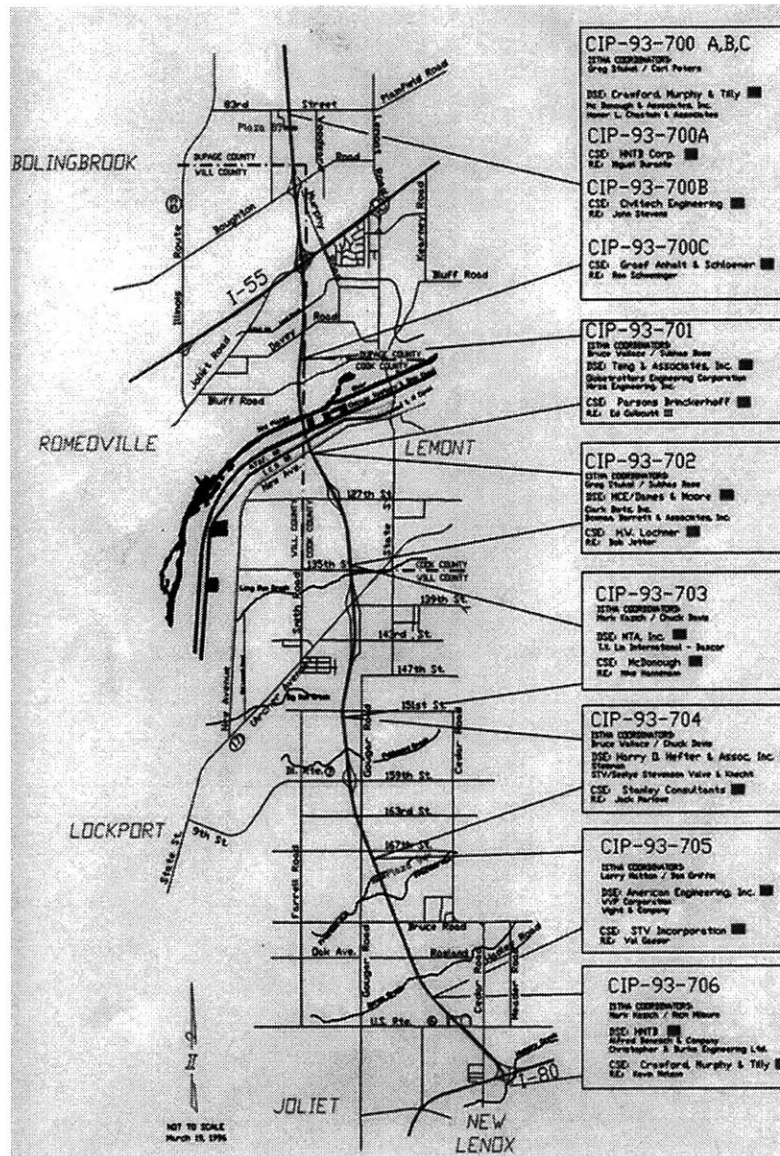
i.355
existing

i.294

i.55

i.80

[27.1] map of chicago and outlying suburbs. open space in the southwestern quadrant is location for I-355 extension. gousha, "fast map chicago".



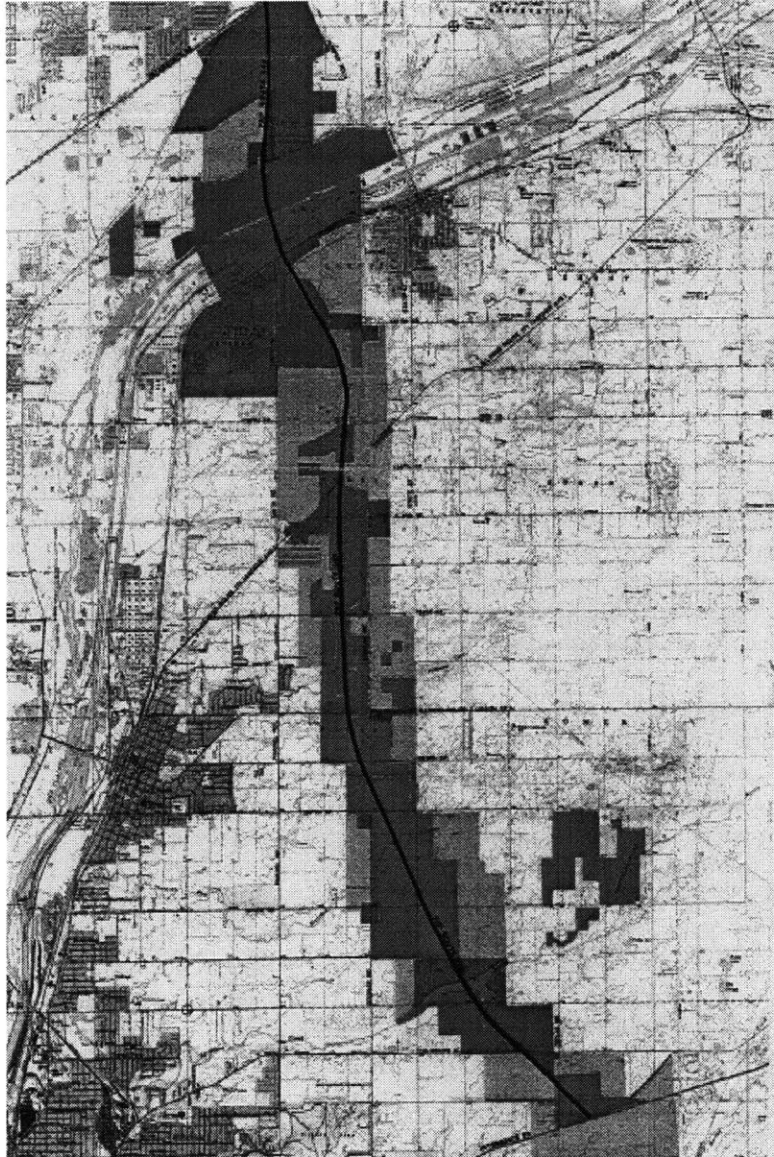
[28.1] diagram: I-355 extension proposal. indicates northern and southern termination points, at I-55 and I-80 respectively. illustrates proposed location and "type" for all new interchanges along extension. contractual subdivisions also noted.
 (ISTHA) illinois state toll and highway authority.

interstate extension.

This thesis considers the further extension of the I-355 highway, a project known as Federal Primary Aid Route 340. Though under consideration for over thirty years, in conjunction with the aforementioned Interstate 355, it was not until 1993 that the Illinois State Legislature passed legislation allowing the Illinois State and Toll and Highway Authority (ISTHA) to actually construct FAP Route 340 - aptly referred to as the I-355 extension.⁴ Recently initiated, this 12.5 mile extension is intended, by providing north-south expressway continuity, to facilitate the suburban commuter traffic which presently overburdens local roadways as well as to provide accessibility to the major spoke arteries running into the city proper. Further, it would act as a quintessential artery for a third, though not confirmed, airport proposed for Chicago's southwest suburbs.

Specifically, [as illustrated in Figs. 27.1 and 28.1] the FAP Route 340 project will provide a connecting corridor between Interstate 55 in the north, the present termination point of the existing I-355, and Interstate 80 in the south, thus almost fully completing a second circumferential route around Chicago. Upon its intended completion in 1998, the extension will traverse three counties, (Will, Cook and DuPage), furnishing an immediate linkage between seven established suburbs and rapid access to at least a dozen others.

The increasing development that has occurred in the northwest and western quadrants outside Chicago in the last decade, has been coupled with a similar increasing desire for the spread of growth to newer, cheaper, more open land - particularly to areas located in the southwestern quadrant. Perhaps this condition, and the intentions of the highway extension, are most readily depicted in the map of Chicago [Fig. 27.1]. On the map, the large open area of white space is the southwestern quadrant; one of the few zones remaining for massive development within reasonable distance of the city. The I-355 extension will bypass this zone, infilling it sporadically with office buildings, shopping centers and residential subdivisions.



[30.1] suggested zoning for I-355 corridor, as proposed by illinois department of transportation.
(IDOT) illinois department of transportation, "final environmental impact statement and section 4(f) evaluation".

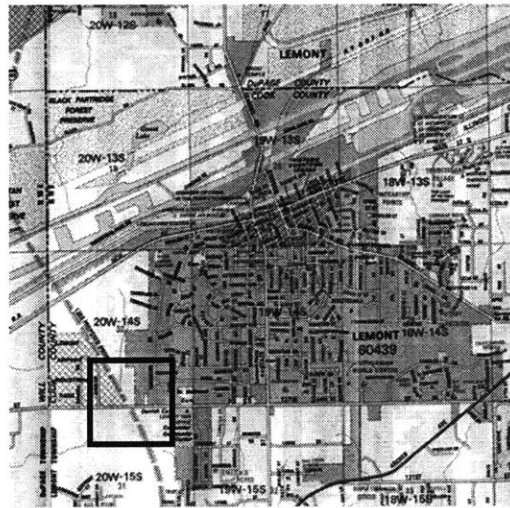
at I-355 and 127th.

The specific interchange investigated by this project is of the generic diamond type configuration; it is to be located in the village of Lemont, at the proposed intersection of I-355 and 127th Street. [See Figures 32.1, 32.2, 33.1, and 33.2].

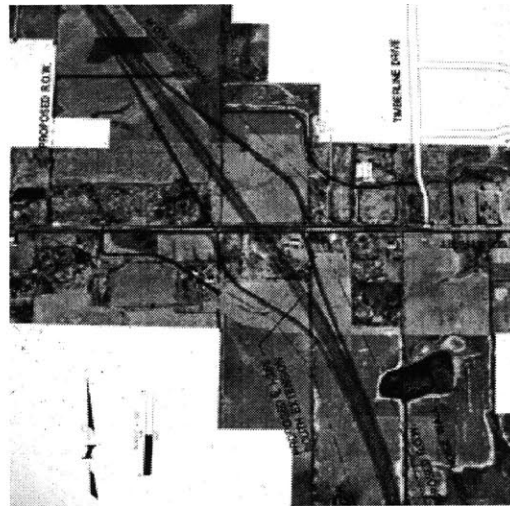
Rimming the southern edge of the DesPlaines River Valley, Lemont's history dates back to the 1840s, during the time of the construction of the Illinois and Michigan canal. It was developed later, with the addition of the Chicago Ship and Sanitary Canal, not as a conventional suburb, but more as a labor and maintenance post mandated by the canal's presence; it eventually flourished as an industrial shipping and railroad town. Up until recently Lemont's growth has been steady and limited. Within the past five to ten years, however, its appearance has changed dramatically. It has received much of the in-migration from surrounding more heavily populated areas. And, in anticipation of the I-355 extension, massive amounts of land surrounding the original town have been purchased by developers for both residential and commercial type uses. Lemont is quickly becoming a conventional suburb of the 1990s - perhaps said best through the accompanying images taken in August of this year. [Figs. 35.1-6.]

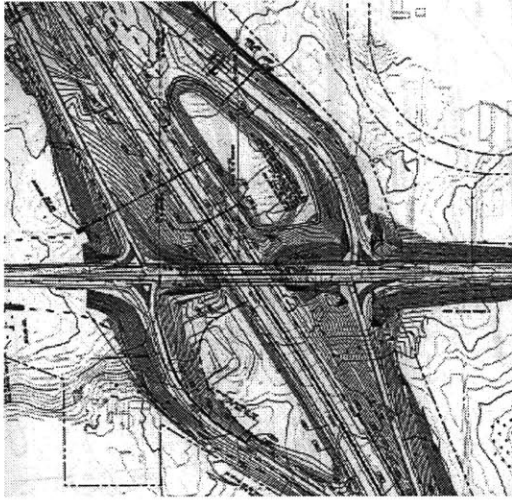
The proposed 127th interchange falls at the crease between the most recent residential and civic developments (some still presently under construction) and older existing industrial facilities, namely oil refineries. As development is continually displaced from Lemont's older Main Street, 127th Street has become a principle east-west artery for the town. Its use and development is expected to be only further augmented by the future interchange. Pharmacies, grocery stores and medical offices, expectant of this, have already emerged and much of the remainder of its frontage has been zoned by the Village of Lemont for commercial and retail development. If we can speculate - in ten years - it will be the "strip", a fragmented linear arrangement of dispersed single-story commodities, homogenized and floating in a sea asphalt.

[32.1] site map: lemont. dashed line indicates I-355 extension. intersection with 127th street - proposed interchange location. rand mcnally, "southern dupage county, 1996.

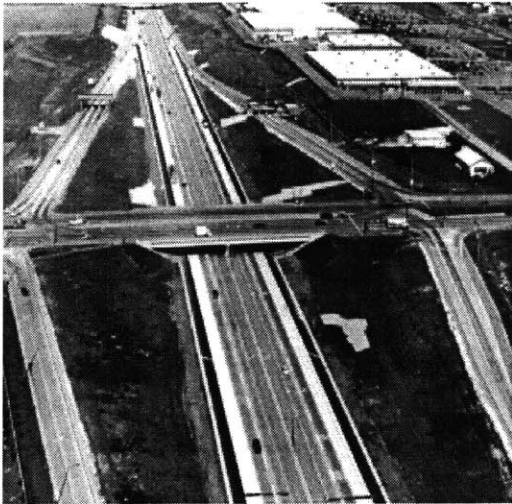


[32.2] photo montage: aerial view of existing condition with superimposed proposed interchange at 127th street. illinois state toll and highway authority (ISTHA), presentation board for FAP Route 340 project.





[33.1] plan for the 127th street interchange. existing and proposed contouring indicated. illinois state toll and highway authority (ISTHA), drawing from prebid construction documents.



[33.2] arial photograph. typical diamond interchange condition and surrounding landscape. illinois state toll and highway authority, (ISTHA), presentation board for FAP Route 340 project.

Taking the condition Lemont and the 127th Street interchange, as conceptual example as much as physical reality, this thesis addresses building rooted in commodification and privatization, though operations of dispersion, simulation and homogenization. It proposes that the rationale of the suburban strip landscape can be challenged through the insertion of generic private development into public infrastructure.

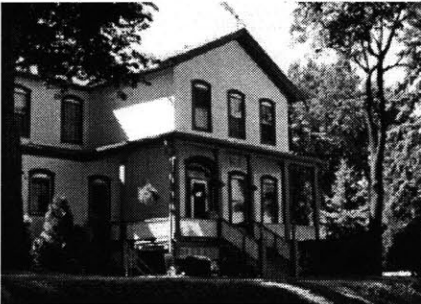
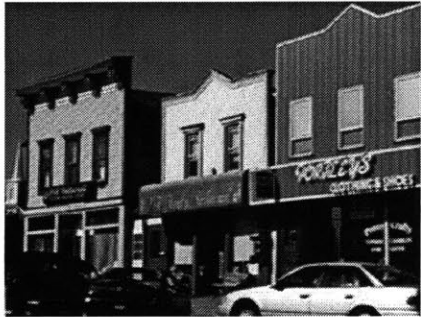
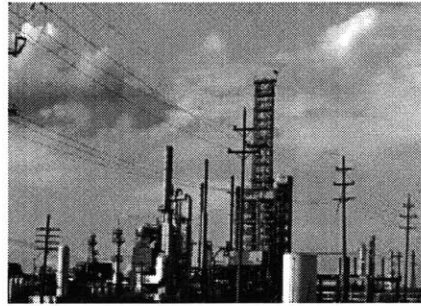
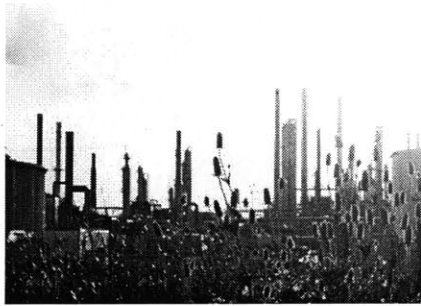
¹ Garreau. *Edge City*. p. 28.

² The statistical information presented here is taken from a lecture given at MIT by Ellen Dunham-Jones, entitled "Blurred Boundaries". March 1995.

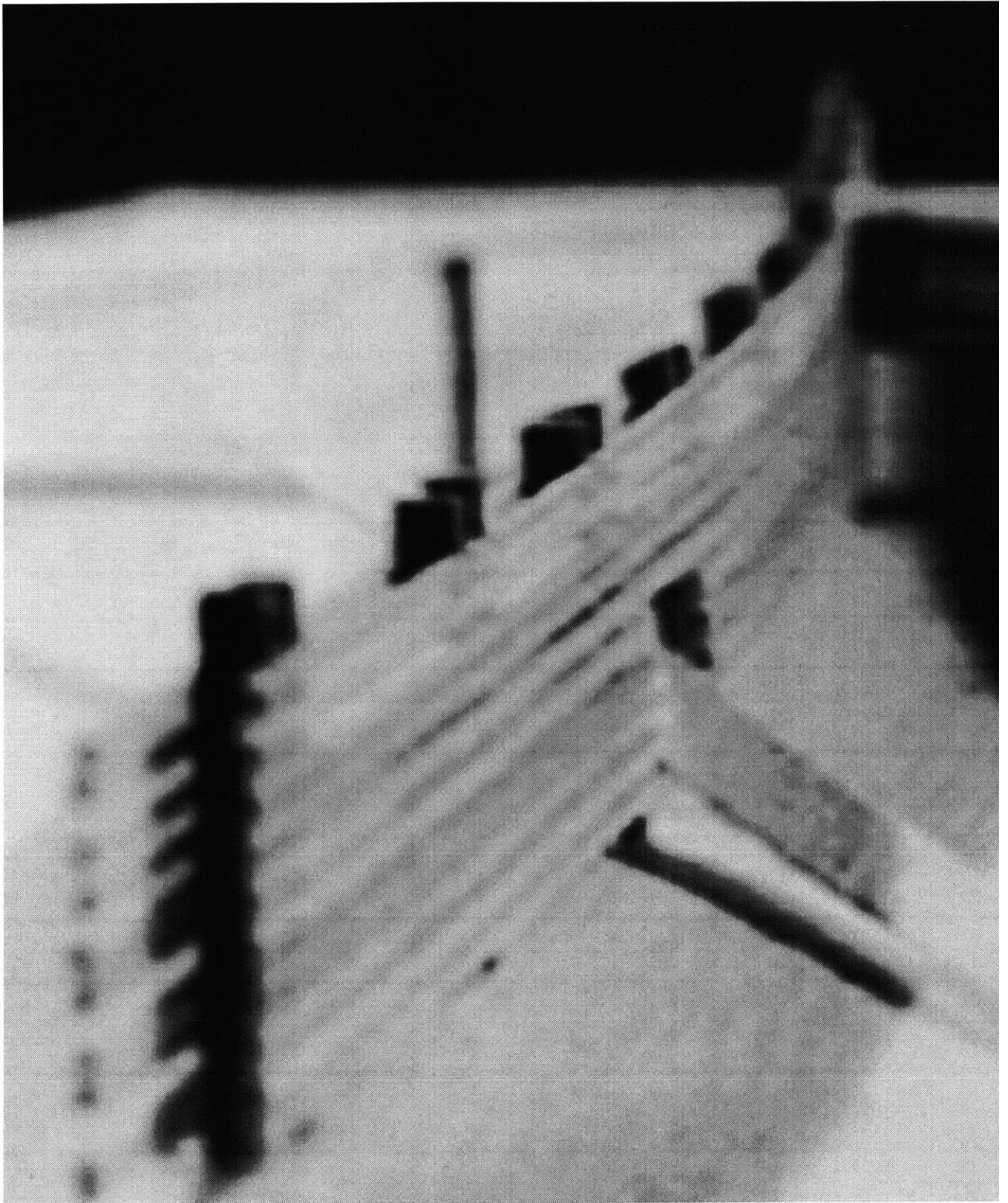
³ Garreau. *Edge City*. p. 428.

⁴ For further information on the FAP Route 340 project, See Appendix Two.

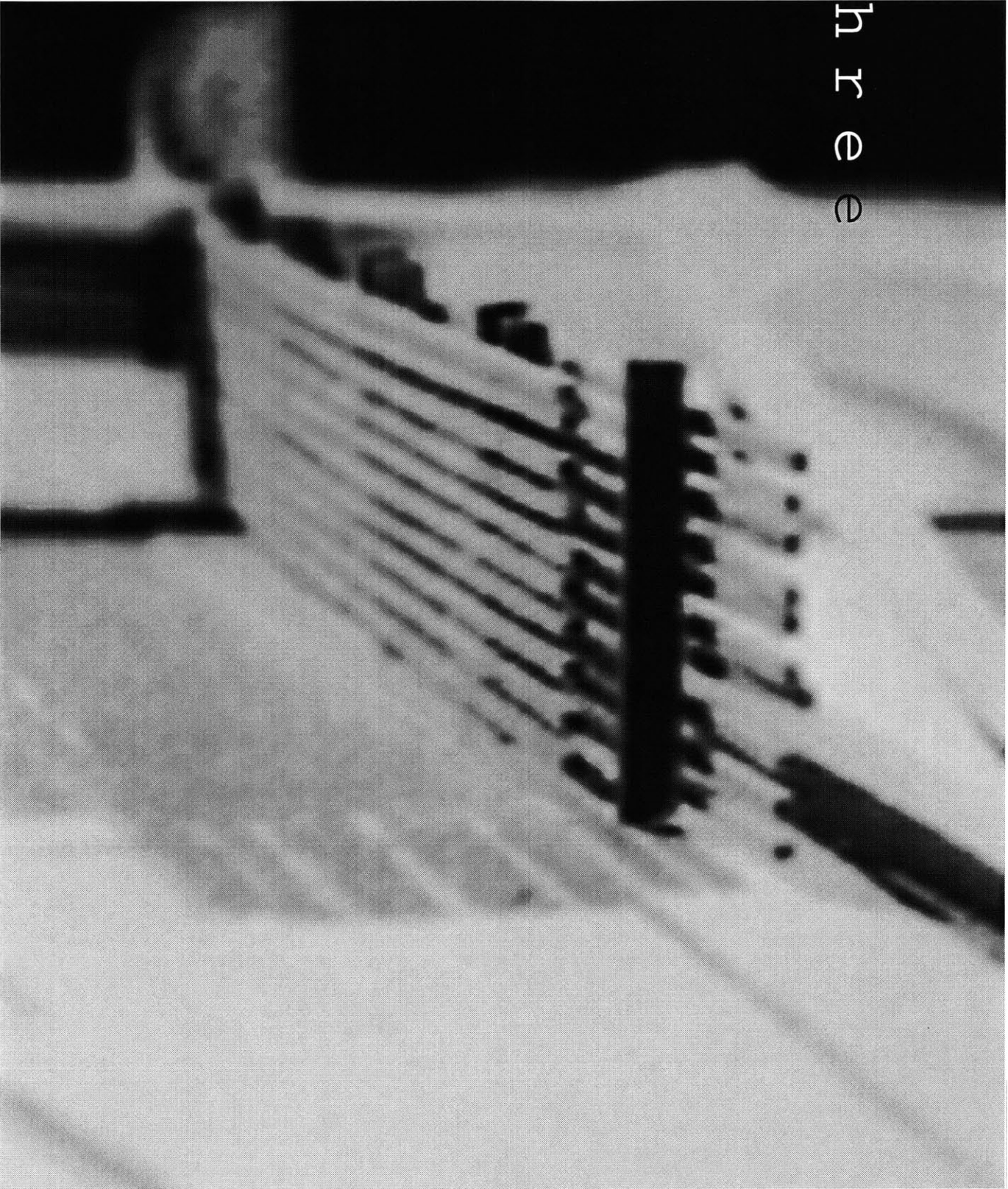
⁵ For further construction documentation on the FAP Route 340 project, See Appendix Three.



[35.1-6] industry, main street and residence. then and now.



Further



interchange 127

three

four models at 1":200'.

development by 2006.

consumer typologies.

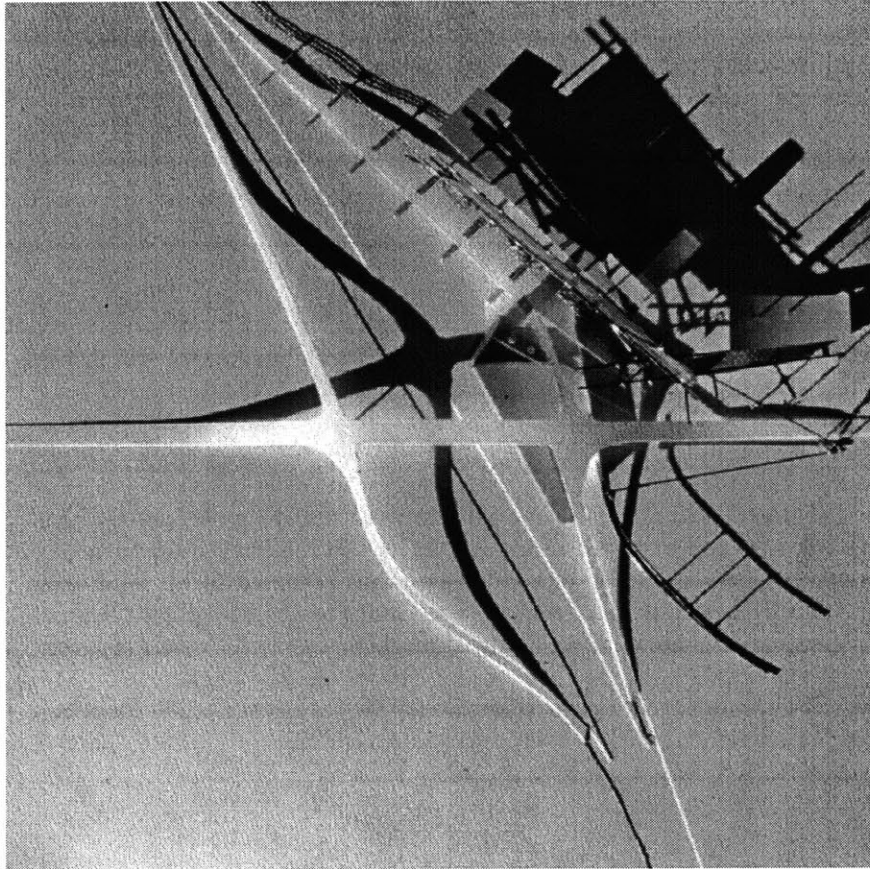
[preceding image] [36-37.1] highway perspective. gestural model "two"
at 1":200'.

four models at 1":200'.

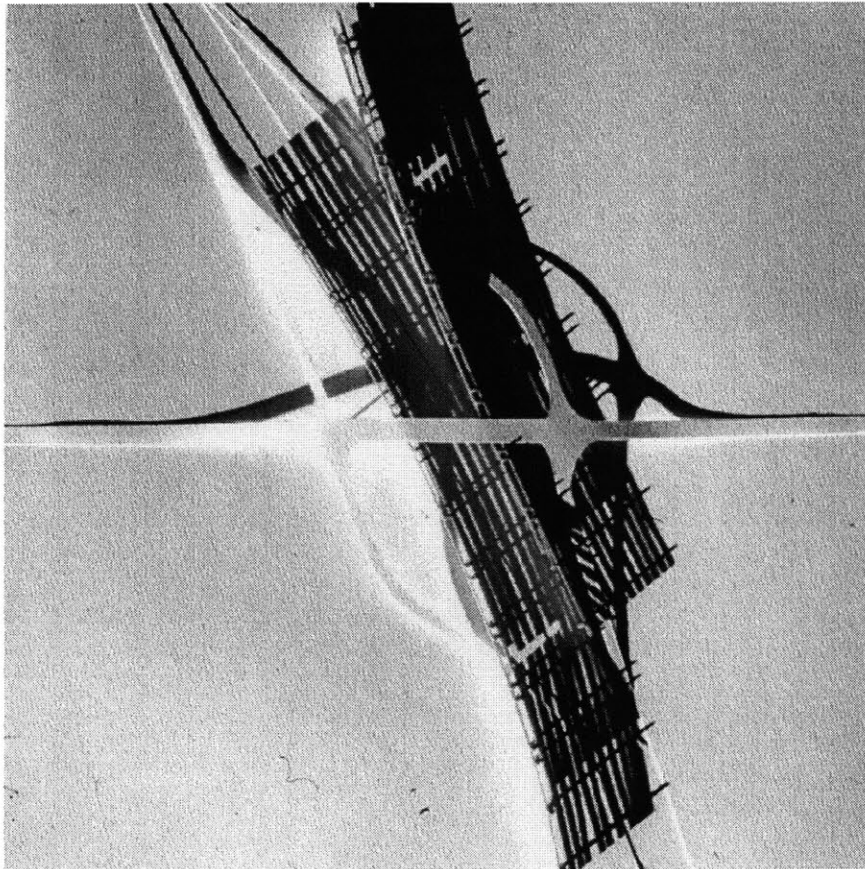
Lying somewhere between conceptual and actual propositions, four gestural models acted as the vehicle through which the project was entered. Representing varying degrees of adaptation, reaction, and disassociation, each advocates a different attitude or agenda that might be taken relative to the site. While a generic diamond interchange is an established prototypical condition, the actual site for which the project was proposed remained allusive, hypothetical in the fact that it does not yet exist. This condition of a "blank slate" (for lack of better words) meant that before even beginning the design of an actual building, it was necessary to determine how, where, and why an intervention might be made. The specificity of the site was indeterminate - and thus the first design motivation was one of establishing limits. Establishing limits implied taking a position, in the theoretical sense, and in that way the models were heuristic tools used to further situate a conceptual framework for the design.

In each case the actual highway itself is accepted as designed and presented by ISTHA (Illinois State Toll and Highway Authority) in the (pre-bid) construction documents. All other aspects of the roadway's infrastructure, however, are regarded as malleable and thus removed from the models. Specifically here I am referring to such things as grading plans, drainage profiles, noise abatement walls, signs, markers, delineators, and suggested "rights of way."

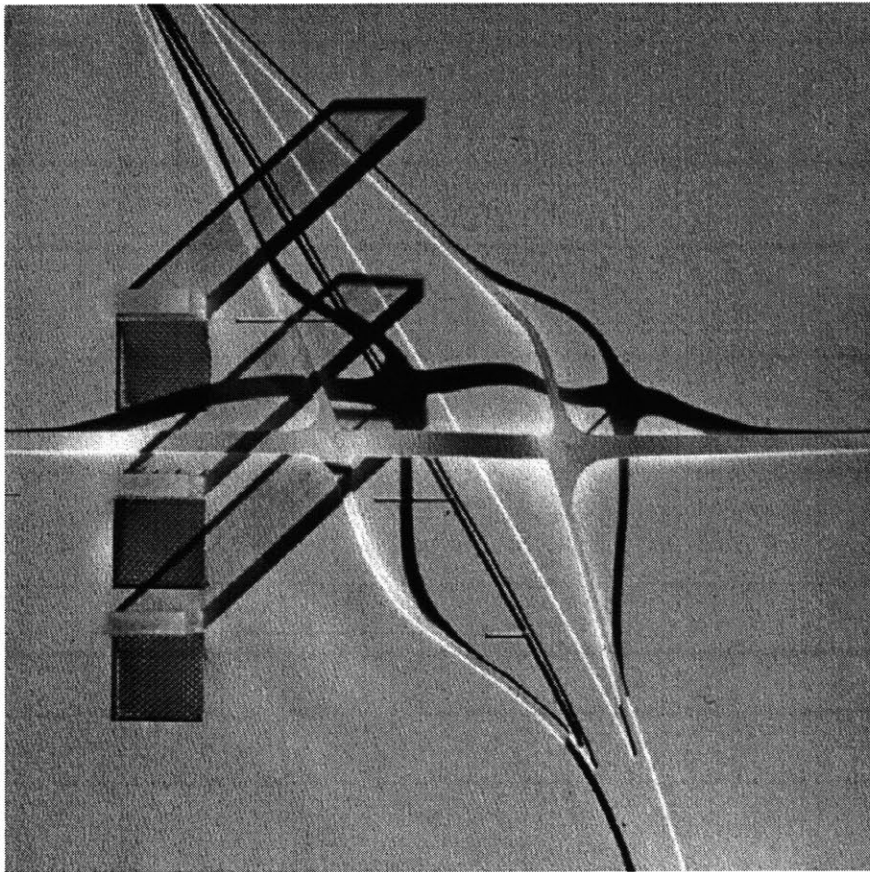
As shown, models are oriented north (top of page) with 127th Street running east-west.



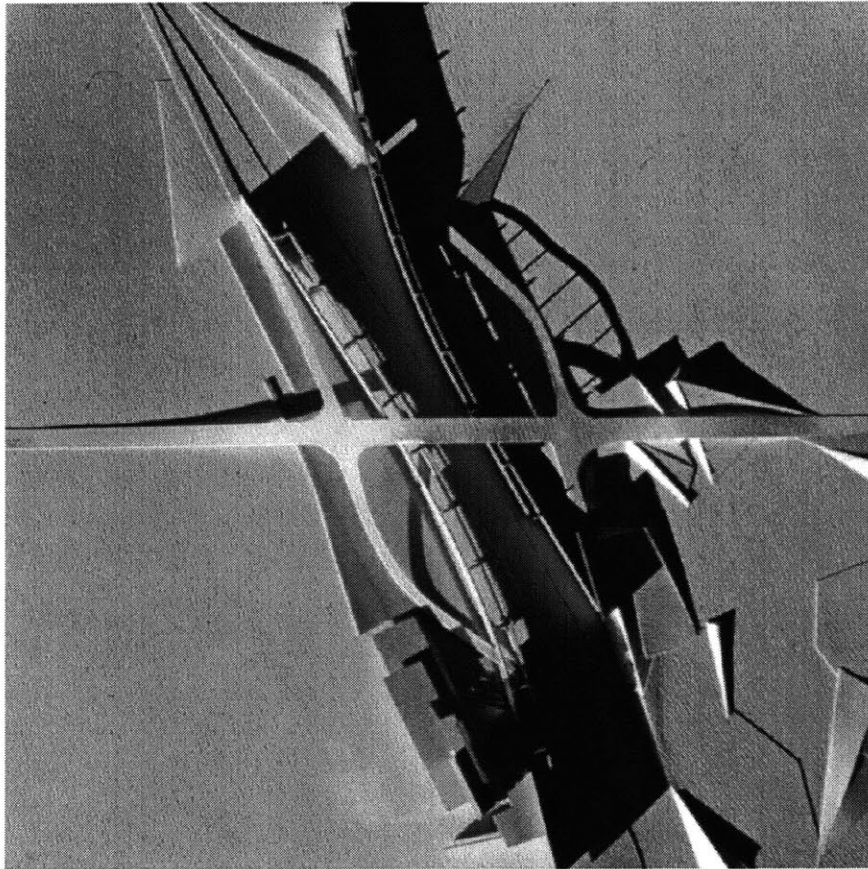
[42.1] model one.
intention. preference one quadrant of interchange. integration
/ reconciling with highway infrastructure. shared structure. semi-
independent building components. pedestrian access. sectional.
response. non-addressing of whole. readable as parcel / land
bay. lacking self-limitation - continuously expansive. disengaged
from high-speed vehicular movement. typologically conservative - only
compositional and aesthetic divergence. limited for further develop-
ment.



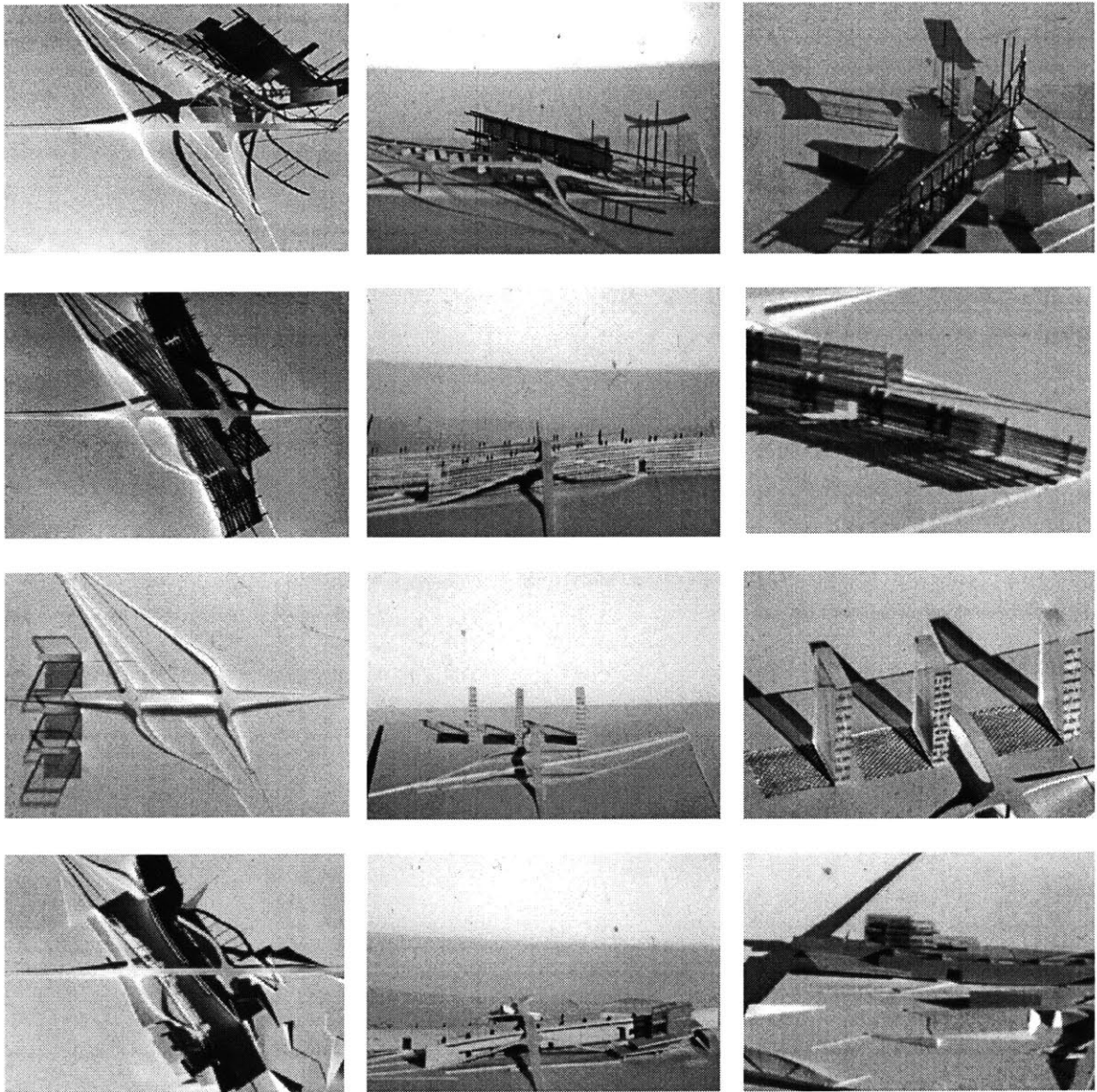
[43.1] model two.
intention. address whole of interchange. compaction / compression. implicate high speed travel. react vs. reconcile. ambivalent front / back / top / bottom. minimal. absorption of constituent elements within larger gesture. self-limiting.
response. gesture, not building. addresses whole. typological transgression - not only composition and aesthetics. question of section. potential for further investigation.



[44.1] model three .
intention . removal from proximity of interchange . disengage-
ment . impact via perversity . absolute repetition of form . vertical-
ity . self-referential . freed from restraints .
response . non-addressment is not freeing . easy way out . anti-
thetical to premise of thesis . limited for further development . im-
plicates nothing .



[45.1] model four.
intention. return to model two. adding volume. differentiating
walls. front / back relationship established. landscape / ground
plane integration. first attempt - gesture to building.
response. mutated. weakened. lost compaction. no longer one
elemental gesture. return to two, again.



[46.1-12] top to bottom: model one, model two, model three, model four.

development by 2006.

The site, as a highway interchange, does not exist. By 1998, it will exist. By 2000, it will have transformed itself from what it was in 1998. And by 2006, its present 1996 condition will no longer be legible. To address both the fact that the site is still to some degree a non-site, or hypothetical site, and that it will be radically and rapidly transformed with the insertion of the I-355 extension, a potential evolution for the site was projected for the proceeding decade. The drawings are based on the proposed zoning ordinances put forth both by the Illinois Department of Transportation (IDOT) and the Lemont township and a presumed general pattern of commercial/retail development predicated by the condition of a highway interchange. In the last drawing, a schematic alternative, based on model two [Fig 43.1], is inserted into the diagram of the site. It demonstrates how development, rather than emerging as independent privatized dispersed capsules might be amalgamated and compressed into a singular entity, tied to, rather than distanced from, the infrastructural network of the highway.

It is noteworthy here at four levels. First, it addresses issues of dispersion and land consumption by grafting the suburban landscape and its constituent pieces into a single amalgamation and inserting them into the presumed “leftover” space of highway infrastructure. Second, its “insertion point”, that being entirely within the proposed highway “right of way”, calls into question basic understandings of ownership, and more pointedly, issues of privatization. As the land encompassed by the highway constitutes publicly held land owned by the state, the location of commercial entities within this realm relegates ideologies of private enterprise to a unique platform. Private enterprise is no longer entirely private. It is co-opted and reinserted into what could be viewed as the truest “public space” within the highly privatized world of suburban development, the highway.

Third, at a larger urban scale, and at the scale of the highway, the scheme implicates architecture as a physical and psychological interface between highway and town, between line and place. Possibly, this is more readily apparent the aforementioned models than in these drawings, none the less I make mention of it here. It conjectures as to how a building, through its mass, form and presence, might be regarded in the context of the entirety of an highway network, the locality of the I-355 extension, and the immediacy of the 127th Street interchange. Focusing on duality or even multiplicity rather than singularity, it brings to the surface a series of dichotomous and at times antithetical relationships that would later be explored in

the design. For simplicity sake, and as they will be addressed later, I merely list some of the “polar relationships” being considered in the initial phases of the design. They include: movement/stasis, transience/permanence, public investment/capital gain, vehicle/individual, day/night, front/back, top/bottom, and plan/section.

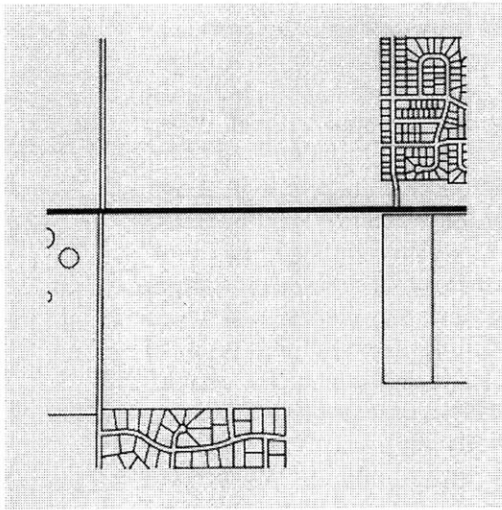
Finally, by situating development immediately within and around infrastructure, it obviates the current lack of integration between architectural and infrastructural endeavors in the suburban context. If the two might be considered synchronically it becomes less necessary to continually reconfigure the former to allow for the presence of the later. I make the suggestion that various construction and adjunct elements of infrastructure might have a more supple relationship with architecture, such that the two might begin to mutually inform and limit the other’s growth. In this case, a singular gesture made by two wall elements is intended to absorb most all the functions necessitated by both the highway and a commercial presence. The building is the earth berm. It is the abatement wall. It is the strip mall, the parking lot, the roadway, and the billboard.

consumer typologies.

The most common typologies found in commercial/retail type spaces (particularly within the suburban American context) were then accessed. To the degree that “*analysis*” evokes notions of both directed search and discovery, this was not an analysis. It was a consideration. Its purpose was simply to portray existing commercial models/prototypes and to speculate how a design, such as any of the four model propositions, might be regarded in this context. Four “types” were considered: a typical portion of “main street”, a strip mall, a regional mall, and a “power center” (often also referred to as an outlet store or discount warehouse). The prototypes were evaluated at an immediate level as well as at the level at which they might lend themselves to the four following criteria: 1. the degree of integration between automobile and architecture, 2. the degree of integration between automobile and individual, 3. sectional and volumetric flexibility, and 4. potential malleability with respect to speed.

It became readily apparent upon their completion, that the prototype drawings, would be neither models for selection nor for rejection. Their potential lie not in their singularity but in the degree to which they might be juxtaposed and conjoined with one another. Further if we place these prototypes within the larger conceptual framework from which they emerge, and which ultimately governs their definition, (here I include economic and political structures, marketing strategies, and zoning policy), it becomes clear that an attempt to alter the given prototype without calling into question this larger context is futile. Thus the thesis was directed neither towards “reinventing the wheel”, so to speak, nor towards fixing a broken one. It was directed towards acceptance and transgression; transgression in this case through questioning the formal singularity and conceptual ideologies which govern the existing prototypes as much as, or even more so, than the prototype itself.

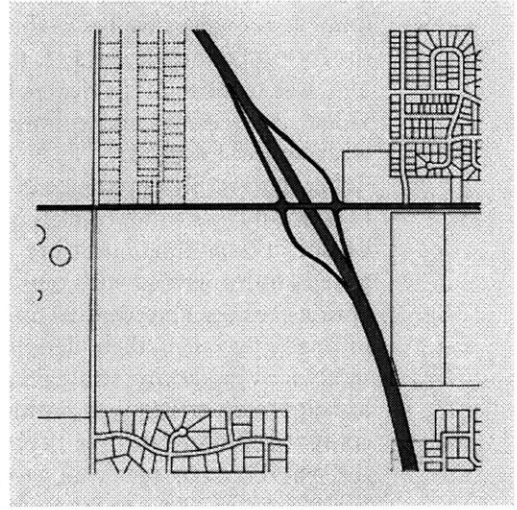
1996



[50.1] existing condition.

mostly open. agricultural. the crease between the industrial and residential. respectively, oil refineries and shipping canals / isolated cul-de-sac PUDs. edge of most recent and spreading development.

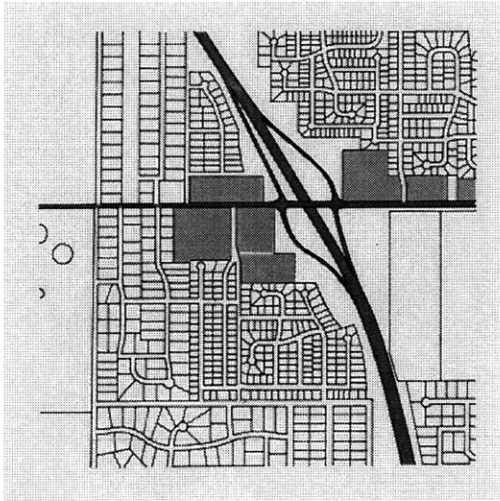
1998



[50.2] proposed interchange.

typical diamond interchange. generic. could be anywhere. transient commuter based usage. increasing the divide. zoned commercial. generative of dispersion.

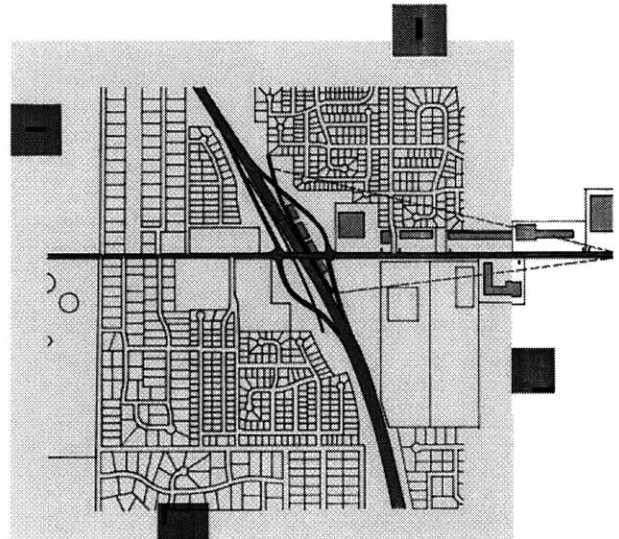
2000



[51.1] projected typical development.

large scale retail at four corners.
127th street - the strip - interspersed with civic amenities. trends in building dispersion exacerbated. asphalt.

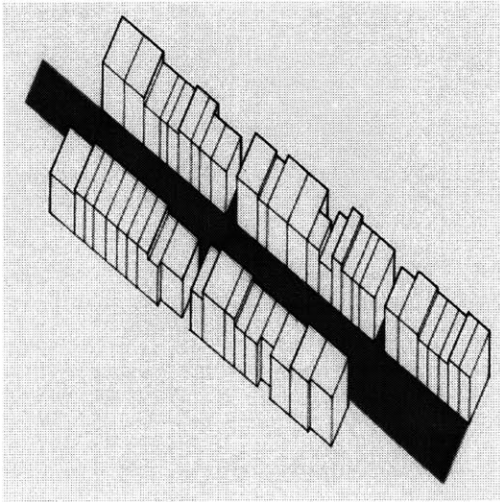
2006



[51.2] consolidated development.

interchange as magnet. engage not disengage. impact vehicular highway experience. identity. grafting of dispersed sprawl via compaction and consolidation. public agency to gain from private development. 127th reopened for alternative use.

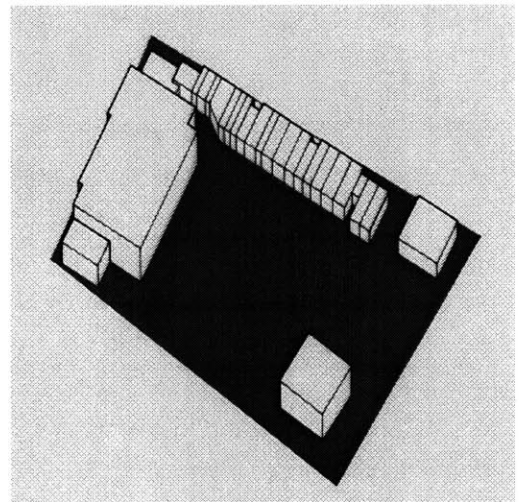
one



[52. 1] main street .

immediate building/parking adjacency. vehicular access through center. multi-level. privately held. typically not corporately held. preferences smaller square footage.

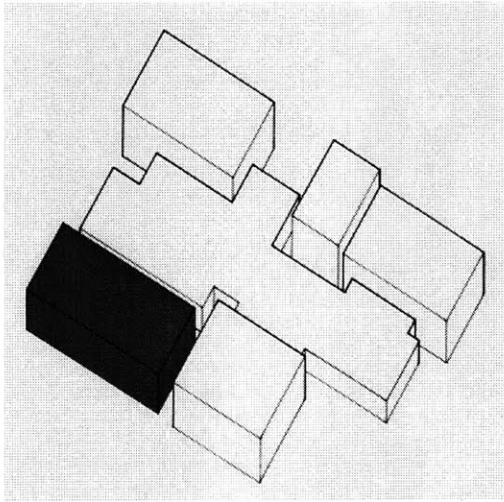
two



[52.2] strip mall & out parcel.

non-immediate building/parking adjacency. vehicular access around perimeter. typically single story. both private and corporately held. variable square footage. out parcel - greater profits.

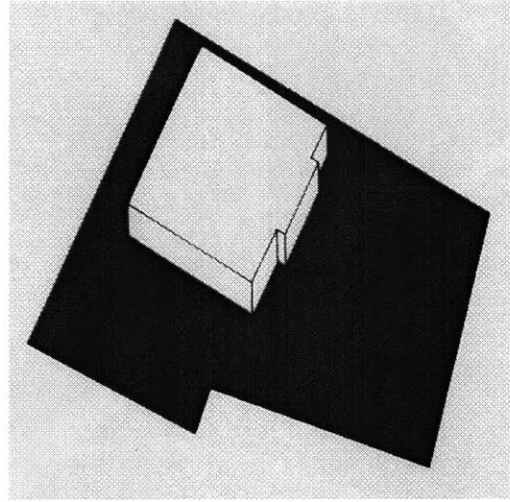
three



[53.1] regional shopping mall.

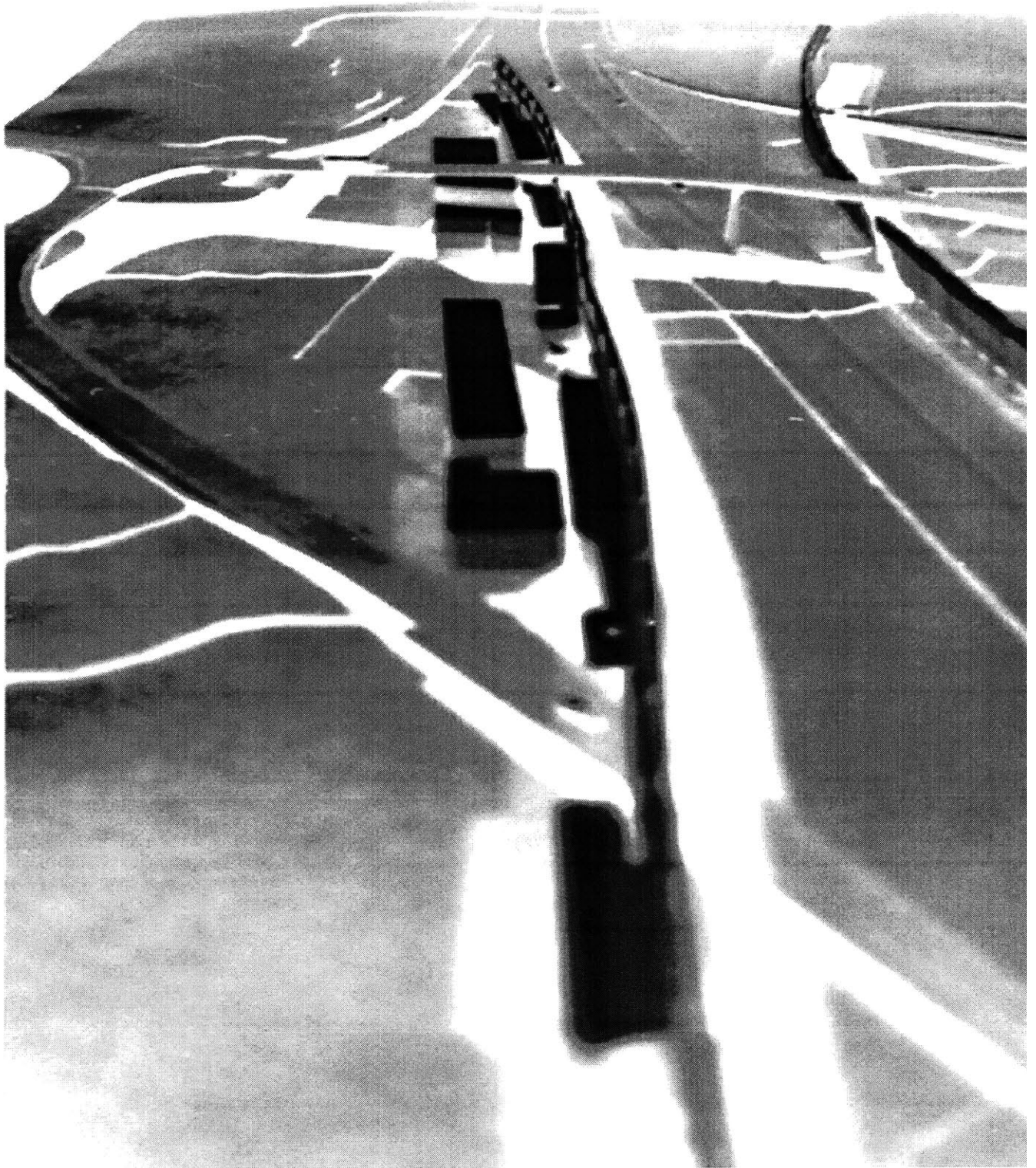
distanced building/parking adjacency. parking condensed in garage (as above) or more typically skirts entire exterior at grade. predominately corporately held. variable square footage.

four

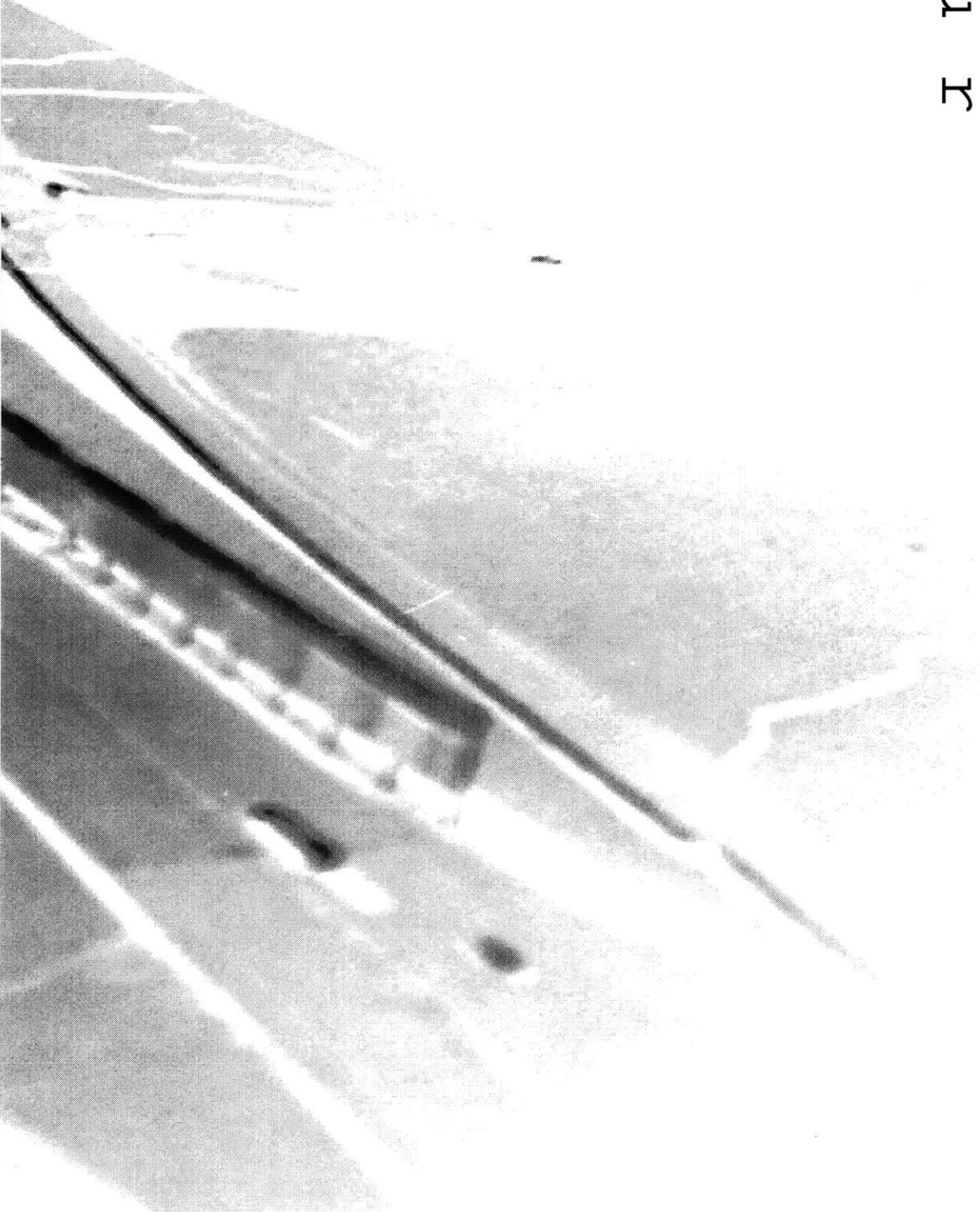


[53.2] power/outlet center.

potentially remote building/ parking adjacency. single story. corporately held. "amenities" minimized. profits leave location. single massive volume.



F O U R



28.8 sec. @ 70 mph.

four

model at 1':50'.

28.8 sec. @ 70 mph.

structure/skin/access/program.

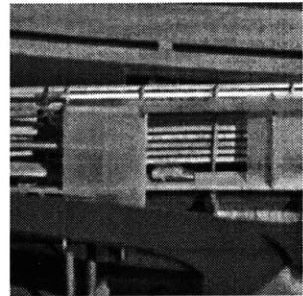
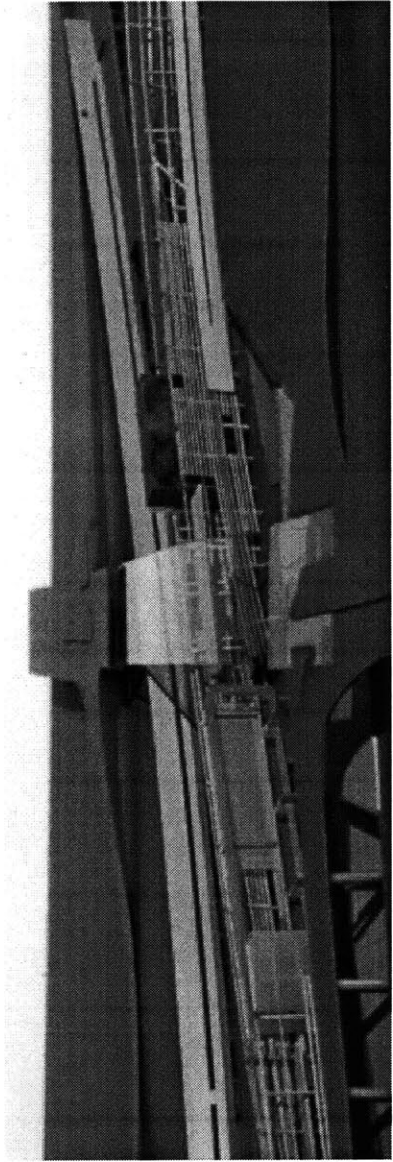
in section.

[preceding image] [54-55.1] final model at 1":40'.

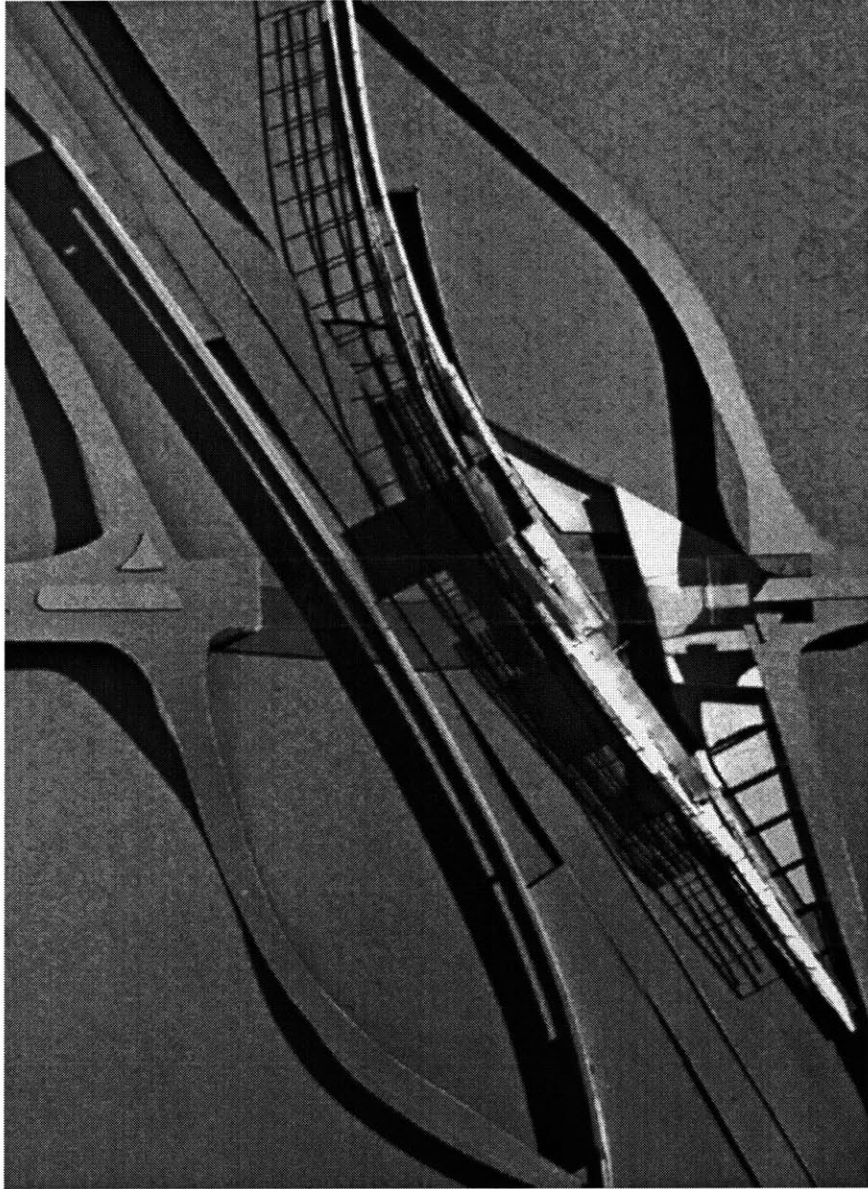
model at 1":50'.

Addressing the issue of scale became a critical imperative, but also one that proved difficult to handle effectively. The mere size of the project and a formal scheme which sought to make an immediate physical impact on the whole of the interchange, necessitated the use of a smaller scale - such that the project could be drawn, constructed, and understood in its entirety. Yet, such a scale as 1':200', while offering a holistic depiction of the project, remains at basic diagrammatic level. Conversely, working at a more traditional "architectural" scale, say 1/8", implies that while specific moments/attributes may be investigated in greater detail, this is done at the expense of a holistic representation. A condition further exacerbated by the radical disproportion one finds in the building's length to height and length to width relationships. Direct examples clarify. An elevation of the building at 1":100' is abstracted to lines and boxes; an elevation at 1/16" begins to take on "architectural" qualities, yet it alone, without any contextual information, is ninety-six inches long. Similarly, a model built at 1":200' while expressive is not architecturally definitive. A model built at 1/8" or even 1/16" scale offers definition, yet its construction necessitates moving out of studio. The final model includes only the building and the immediate context of the interchange. It is built at 1":40'. It is 9'4" long.

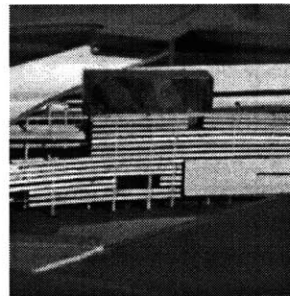
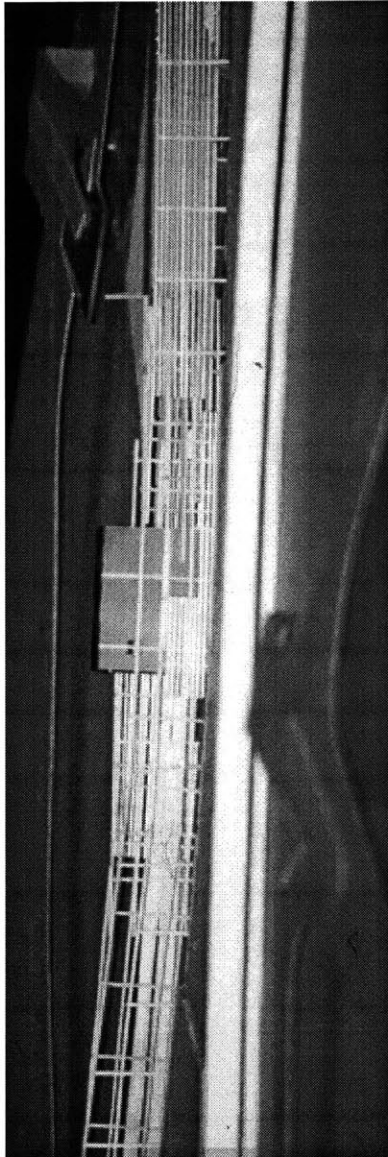
After unsuccessful endeavors in a range of scales, a model at 1":50' proved of most useful for design development. While still remaining intuitive and gestural, such a scale is at least suggestive with respect to issues of structure, circulation, plan, section, elevation, and articulation. Through the model further motives for the project surfaced. Acting as a foundation or outline, it allowed subsequent explorations, at larger, more architectural scales, to occur - each of which, while potentially only alluded to in the 1":50' model can ultimately be traced back to it.



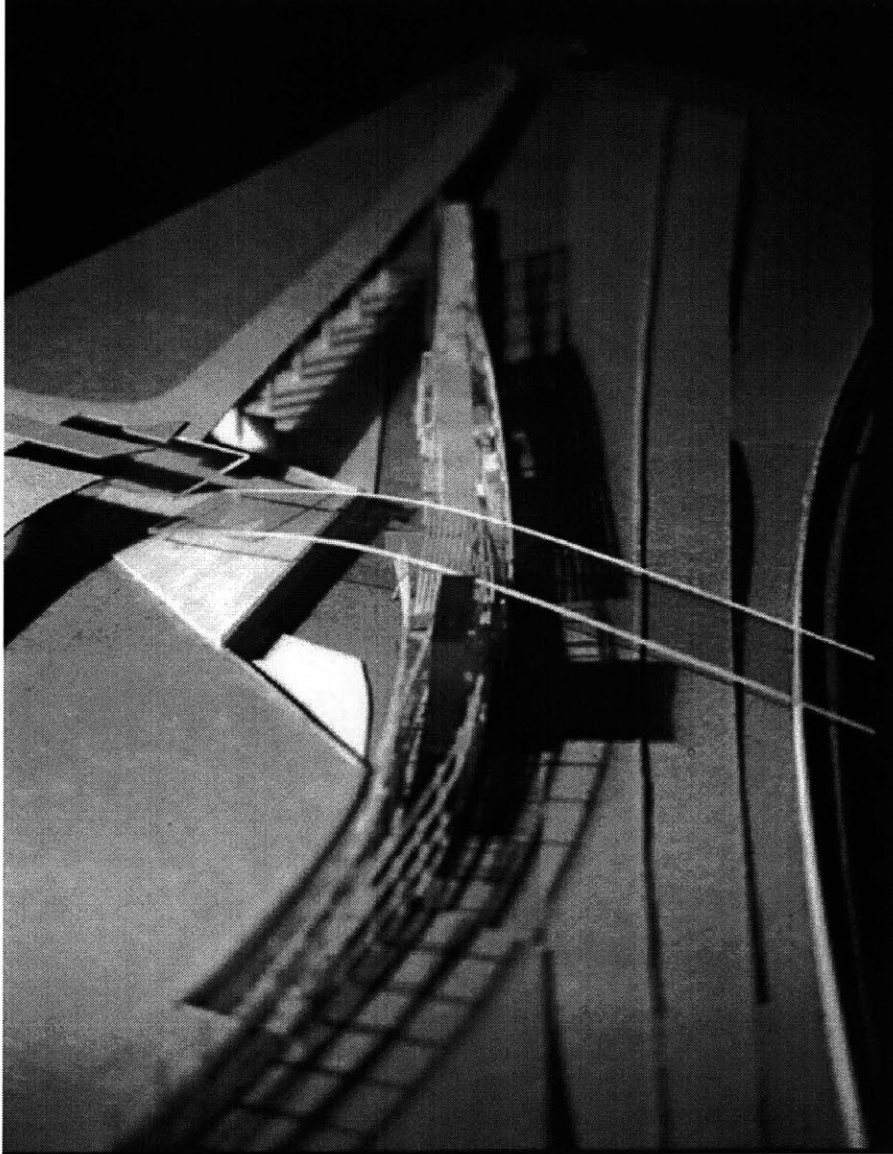
[60.1] town elevation. model at 1":50'.
[60.2] elevation detail. vehicular access at concourse level.



[61.1] plan. model at 1":50'.

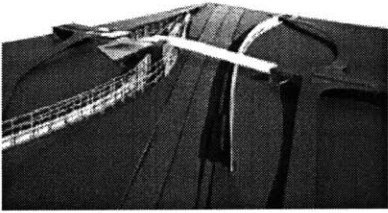


[62.1] I-355 elevation. model at 1":50'.
[62.2] elevation detail. layering of structure, skin, and program.

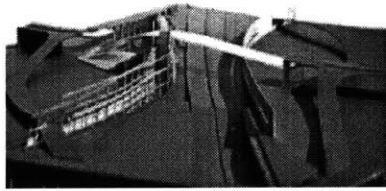


[63.1] above. model at 1":50'.

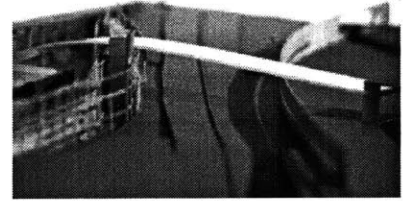
12:38.04



12:38.10

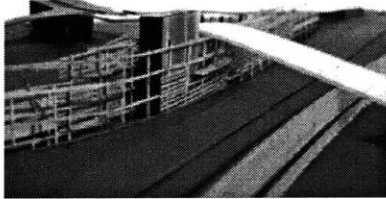


12:38.16

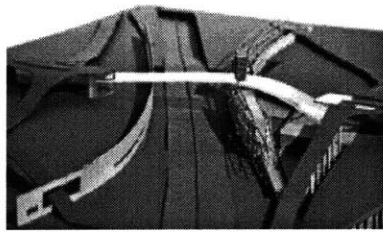


[64-65.1-6] 28.8 seconds at 70 miles per hour. i once drew sections at three second intervals. they behind the windshield. the building is 2016 feet long. that is 28.8 sec. @ 70 mph. its length, its expectant desire to extend that moment's existence.

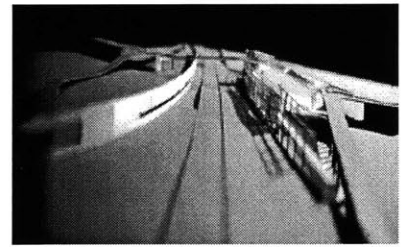
12:38.22



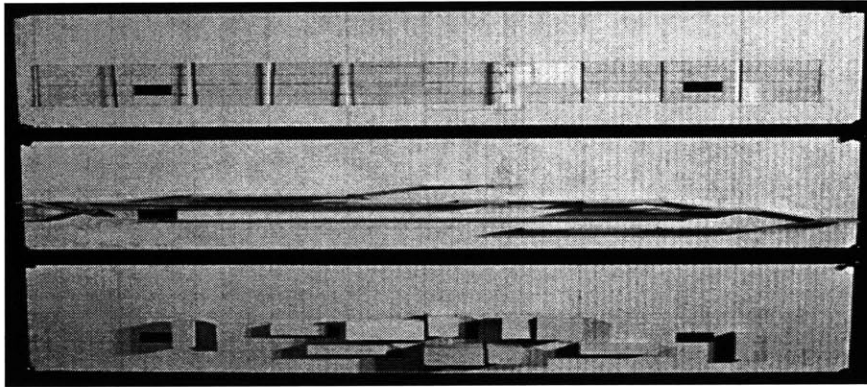
EGAT VIEW RIIIGI
12:38.28 8



EGAT VIEW RIIIGI
12:38.34



were based on a car moving at 70 miles per hour. they revealed the ephemerality of "place" from compressive action is as much about heightened acceleration in a fleeting moment as it is about an



[66.1] systems study relief models at 1":50'. (top to bottom) structure/skin. access. program.

structure/skin/access/program.

It became increasingly evident, that absolute “resolution” neither could nor should be the objective of the design. The project’s conceptual intentions, speculative nature, and mere physical size lent itself more readily to the realm of overriding strategies and objectives, than to singular situational decisions. The design could not have been approached in a linear fashion - having each decision informed by the one prior and informing the one following - as simply such an approach appears ineffectual with large-scale complex projects. Rather, an attempt was made to distill the quintessential aspects of the entire project, and then thinking of them holistically, generate strategies by which these “systems” might be defined both individually and with respect to one another.

Such an agenda, I felt, was valid at three levels. First, while ultimately an architectural project, in many respects it was necessary to approach the design from an “urban planning” vantage point. For clarification, I make the following analogy. Much as an urban planner might design the “space” of the city by defining the composition and organization of its various elements (buildings, roadways, parks, etc.), without formally designing the elements themselves, it was necessary *not* to design the actual program pieces, but the manner in which they might engage with one another and the larger framework in which they were located. Effectively, this meant designing the void.

Second, because the project was intended to be understandable and viewed at the level of infrastructure, or at least a collaborative aspect of it, meant that the design had to operate at the level of infrastructure. In this regard, the design had to be refined and legible; the nature of infrastructure is of systematic organization not of idiosyncratic divergence. The building had to express its readability, its logic, its potential for reproduction. And finally as the whole of the project was viewed as an elemental self-limiting gesture - two walls within an interchange, compressing the space of the highway - it seemed only natural that the composite pieces which defined these walls demonstrate the same degree of restraint and elementality as the walls themselves.

The design can be essentialized to three fundamental elements or systems: structure/skin, access, and program. Considered together, we can describe the building as having a structure/skin system, which supports an interlaced network of vehicular and pedestrian access, perforated by volumetric program entities.

The basic attributes of each system are summarized in the following.

structure/skin.

The structure for the building is intended as an infrastructural piece, constructed of repetitive components, capable of mass-production. It is divided along its length into seven primary sections (A-G), each comprised of eight bays (1-8). Each section measures 288 feet, thus making each bay 36 feet - a dimension, scaled to the automobile, allowing for adequate accessibility, circulation and parking to occur within its frame. The building skin will be discussed further in the proceeding pages; for now, suffice to say it's primary concern was one of "articulation".

access.

The design grafts from the site condition of a diamond interchange, the notion of an inversely reciprocal organizational system. Applying this to the building's circulation meant that the building was designed to be roughly symmetrical about a diagonal axis, or in other words, that one would read its ends as inverted opposites of one another. The appropriation of such a system, was not merely a formalist decision; it was a strategic one. The benefit of doing so was that it allowed the building to be thought of as carrying equal weight at both the ground plane as well as the roof. Eliminating hierarchy, or vertical stratification, was critical in order to make multi-story building, as was intended, an economically viable design solution. Thus initially the access system was designed such that one either entered at the roof and traversed the building descending toward the ground plane, or one entered at the ground plane and ascended upward. Further, it was hoped that a sectional separation between the primary inlets/outlets for the building would ease in matters of congestion.

Later, this system would be reconsidered, as its initial formation had two primary faults. First, it was too complex and idiosyncratic, an actual design more than a design strategy, and thus diminished the building's legibility.

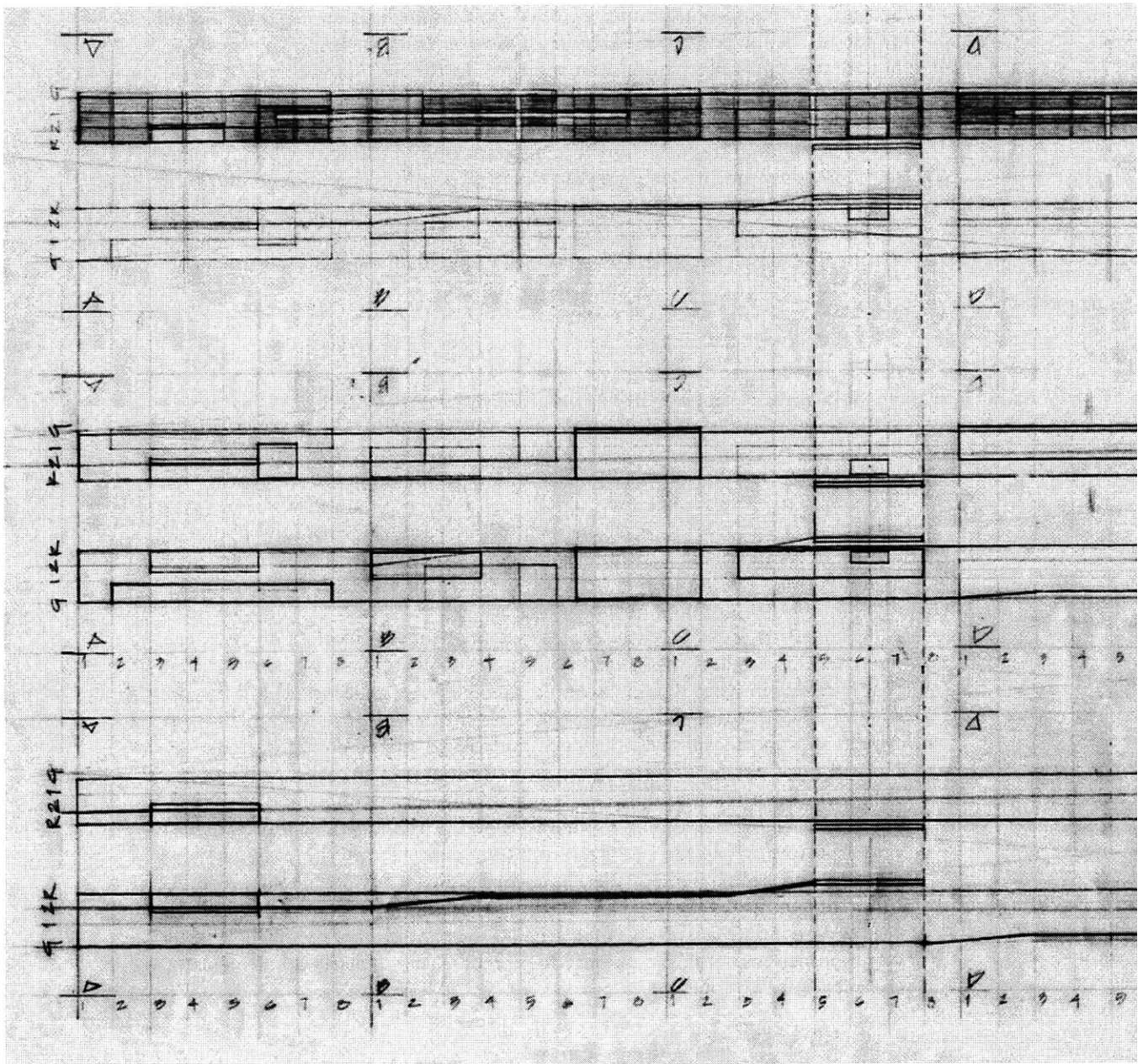
Second, and more importantly, offering only immediate access from 127th Street, it failed to address the highway traveller - the transient being, wanting not to stay, but only pause, momentarily. In the end, the aforementioned system was a simplified and clarified. It was also augmented with a third additional access route. Acting much as a concourse in an airport, this sliver of space, running from the northbound exit ramp, piercing through the center of building, and re-emerging at the corresponding northbound entrance ramp, is the epitome of a fixated desire for efficiency. It is here, literally in this fast lane, one encounters those spaces most rapidly consumed - the gas station, the dry cleaner, the automatic teller machine, the drive-thru, the coffee joint.

program.

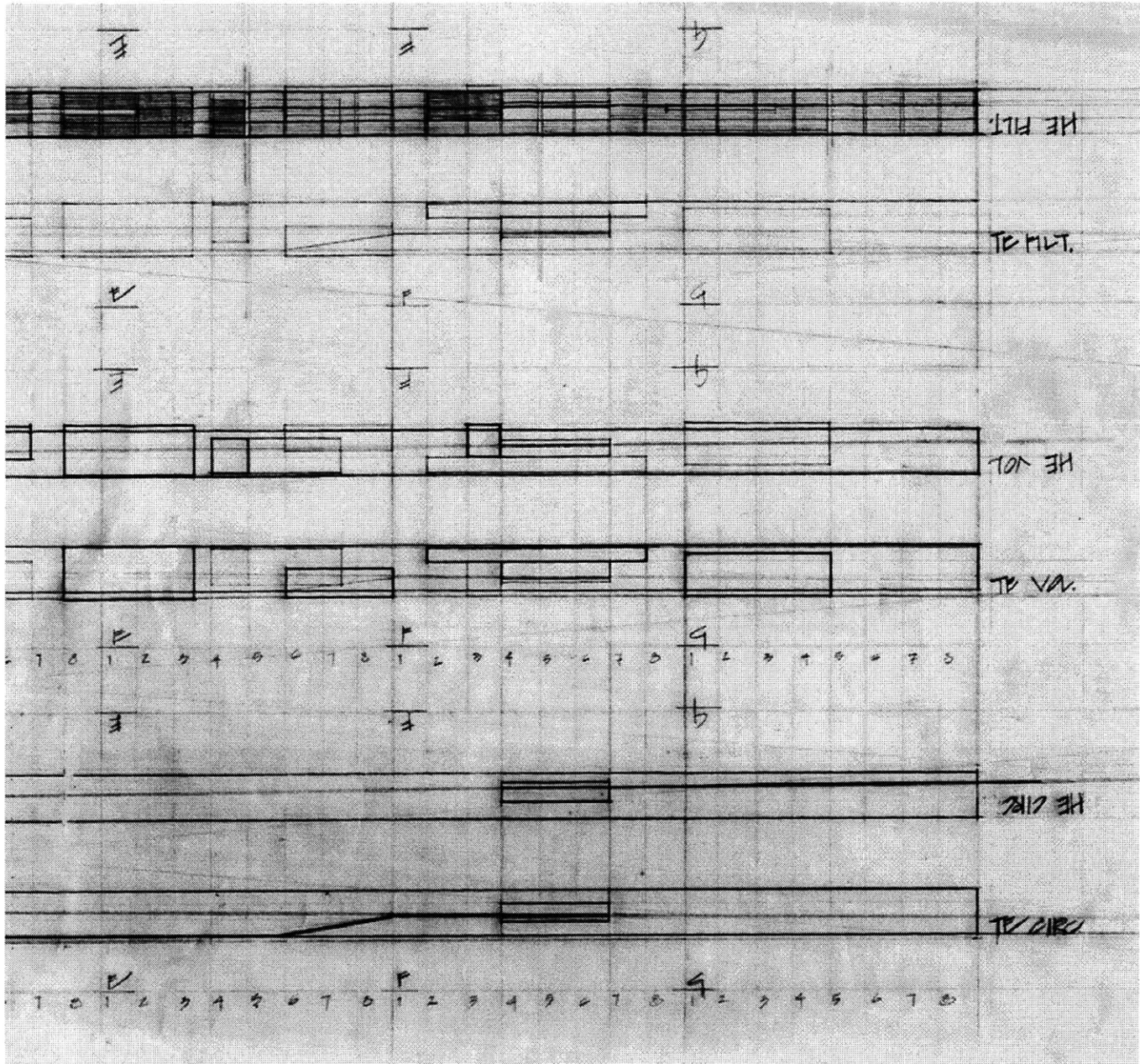
In keeping with the aforementioned organizational principle of the access system, the distribution of program also was originally conceived of in an inversely reciprocal fashion, a field of interspersed events activating the circulation spine which conjoins them. Roughly speaking, the programmatic volumes were to be concentrated vertically about the building's middle and presumed most active level - that of the concourse, and horizontally about its center - most likely the location of the so-called anchor stores - compressing as much program as possible within this sector, in an effort to increase the likelihood of pedestrian activity in these zones.

A deterministic attitude, with respect to spatial programming, however, was purposefully avoided; capitalism would run its own course. It was realized that included in what would come to inhabit such a structure would be corporately-held entities and/or franchises, in other words, pre-designed prototypical structures, each with their own individual spatial configurations.

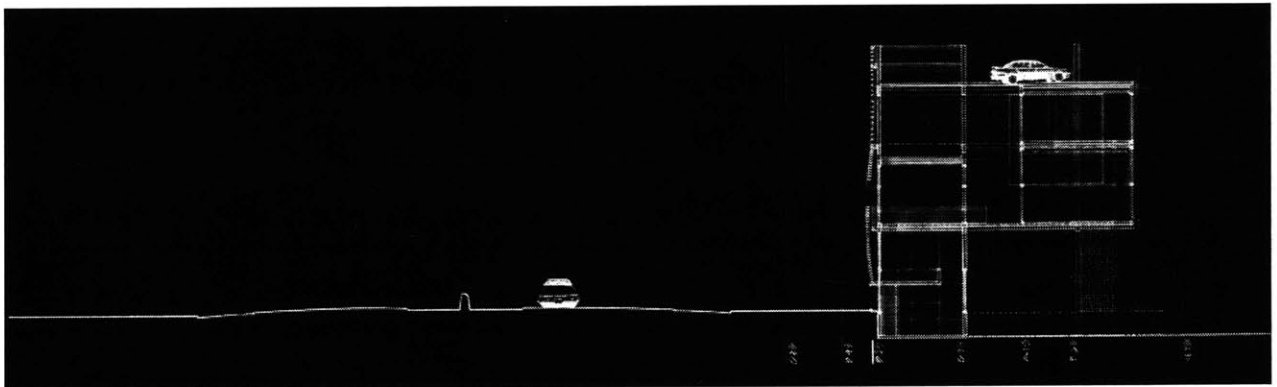
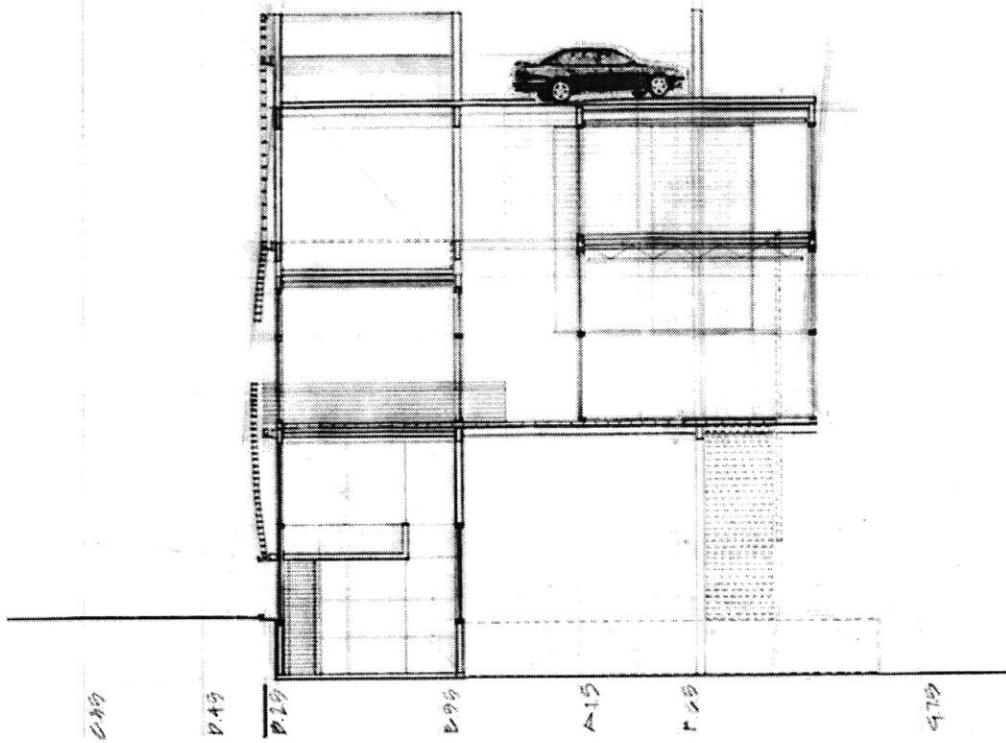
None the less, the fundamental texturing of program I have just spoke of has definite and purposeful implications. Generally, these can be read in the sectional drawings which follow. Viewed together, the drawings illustrate two important aspects of the design. First, they demonstrate the design's volumetric and sectional flexibility. Second, they indicate how in spite of any multitude of conditions that may occur along the building's length, that in each case these conditions are always relative to the condition of the wall. It is the common denominator, the unifier, the prevailing organizational element for the entire building.



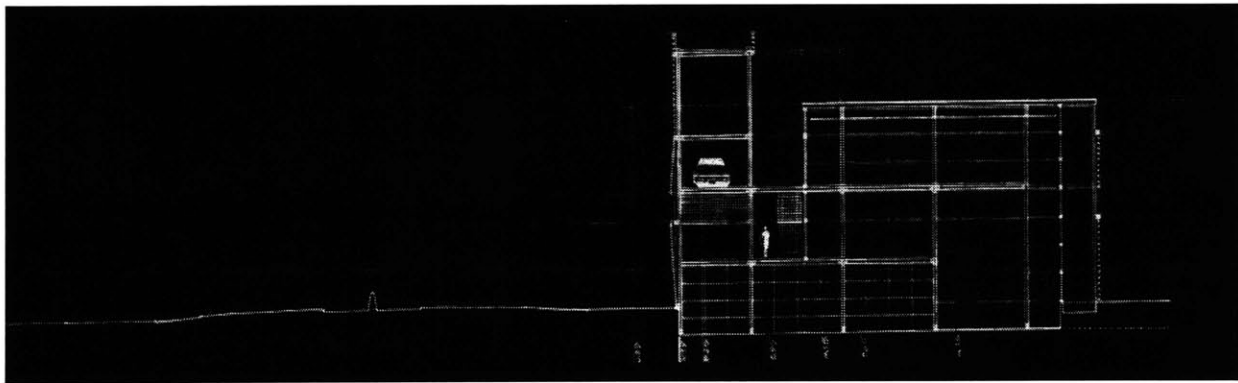
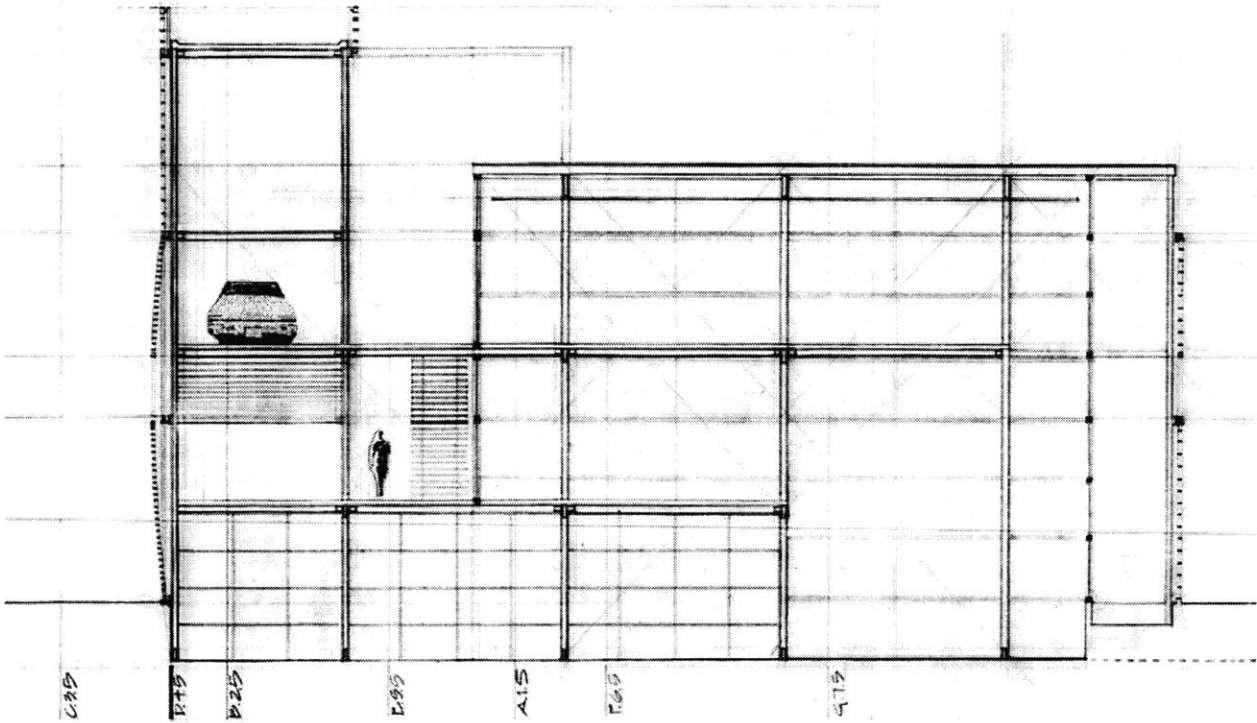
[70-71.1] systems study drawing. three systems: structure/skin. access. program volume. section & bay systems indicated: a-g sections, each with 1-8 bays. demonstrates inverse reciprocal organiza-



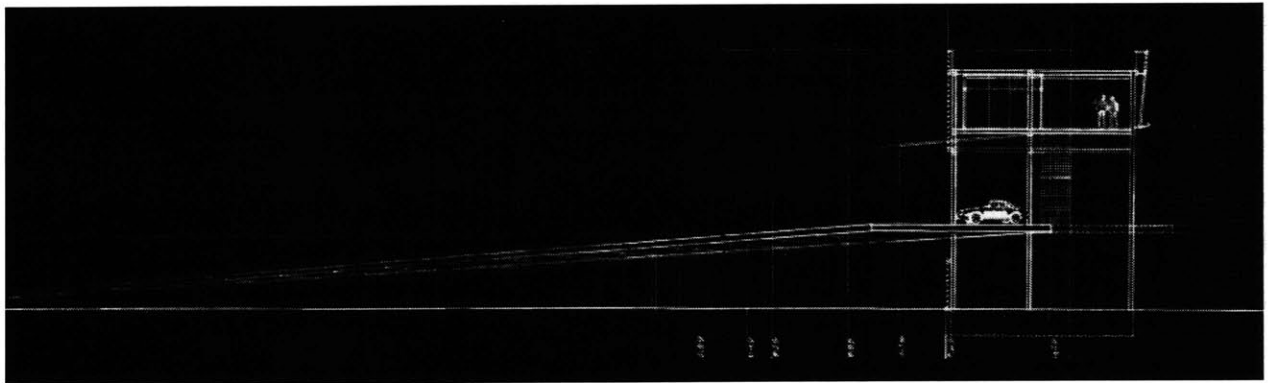
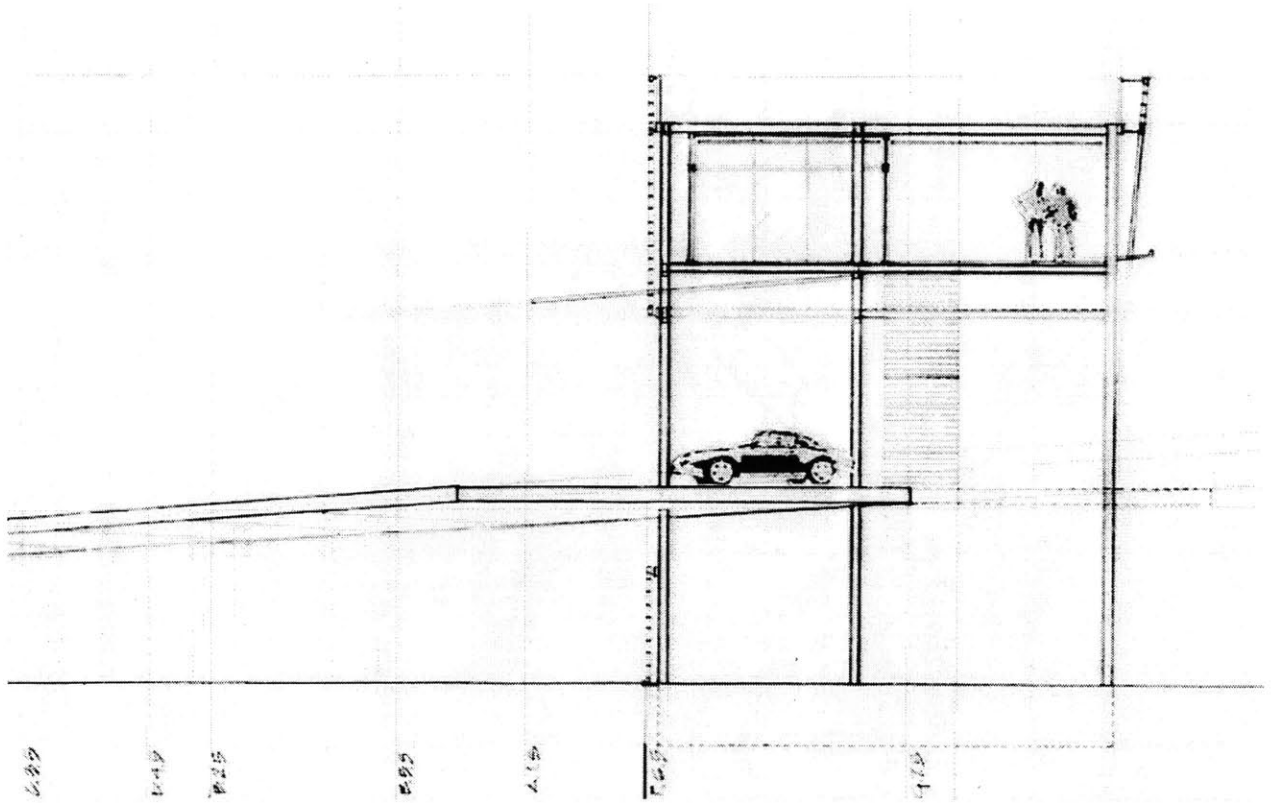
tion strategy. he=highway elevation. te=town elevation.



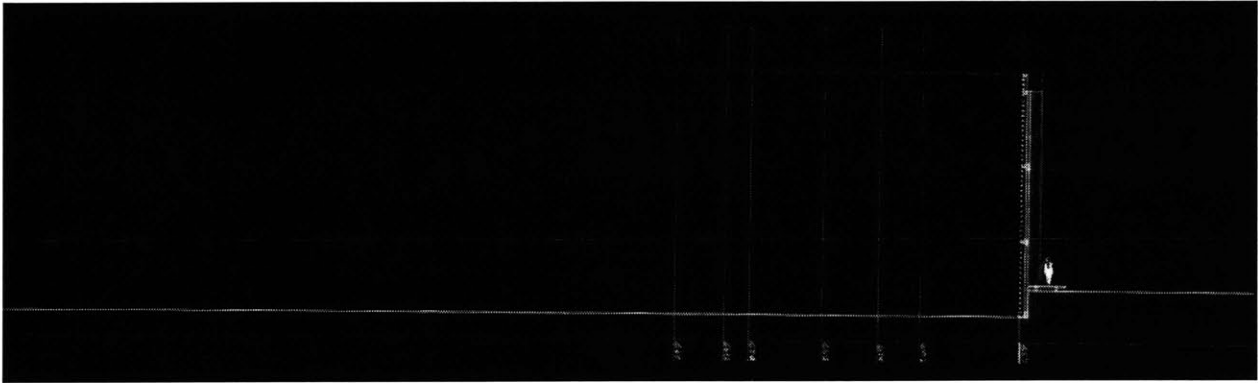
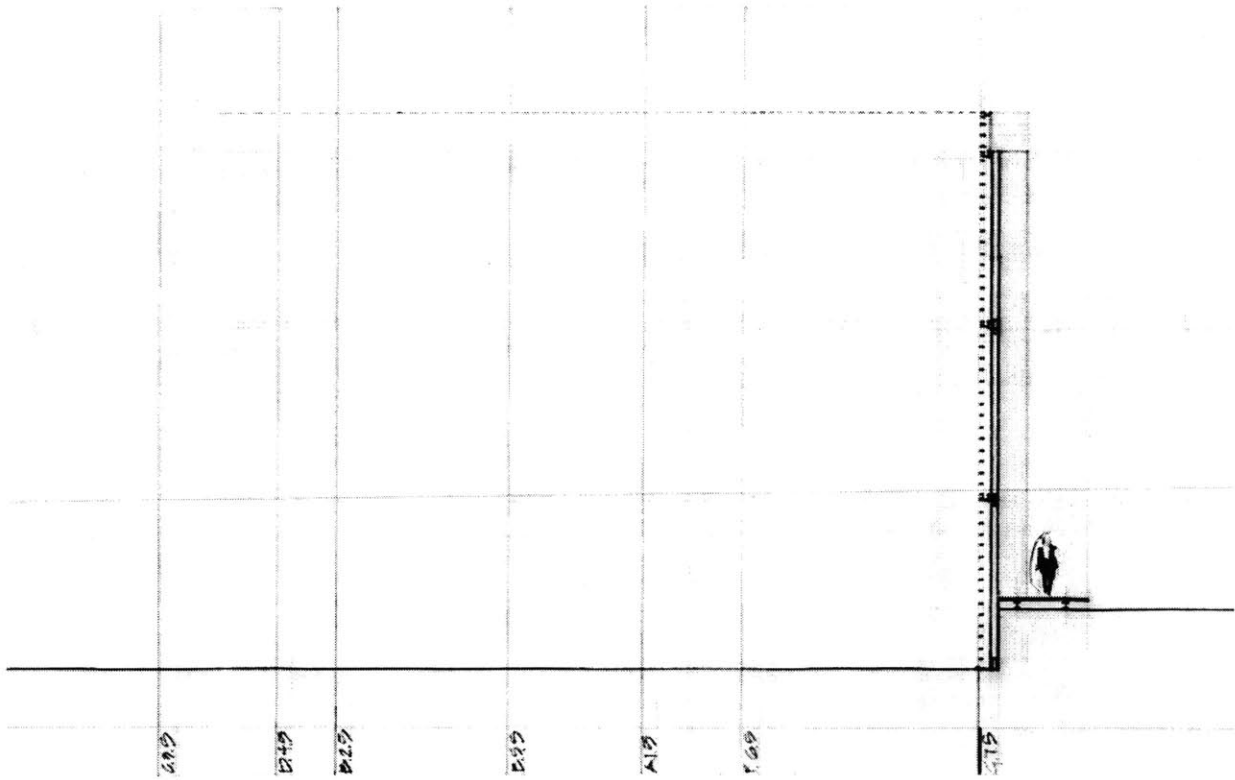
[72.1&2] section b-2.5. roof access above program volumes.



[73.1&2] section d-4.5. concourse level access. adjacent program volume.



[74.1] section f-6.5. access through building to i.355 entrance ramp. program above.



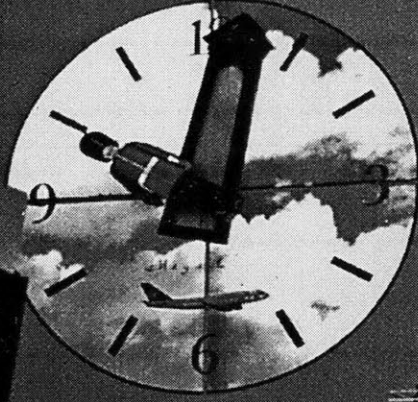
[75.1&2] section g-7.5. building as wall. pedestrian access. no program.



Of course,
some still prefer
it straight up.

REMY MARTIN
FINE CHAMPAGNE COGNAC

Time To Fly



Virgin Cola

virgin atlantic

SONY



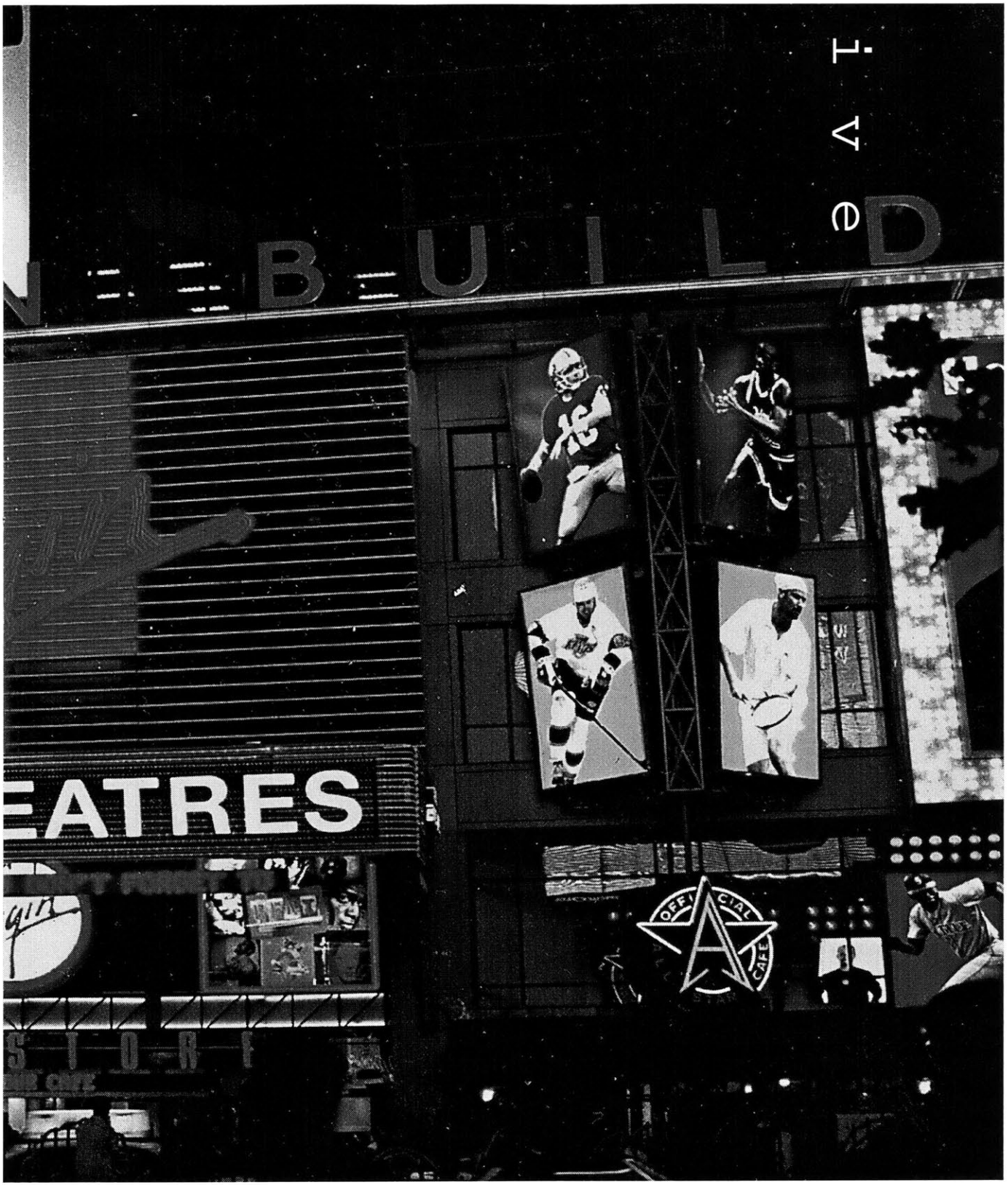
F
I
V
E

N
B
U
I
L
D

E
A
T
R
E
S

412

S
T
O
R
Y



bacardi, vw, & the gap

five

interface / elevation.

bacardi, vw, & the gap.

model at 1":40'.

to the (n)th degree.

interface / elevation.

Due to the speculative nature of the potential specific program requirements, and the fact that the subtleties of the circulation system would ultimately yield to these needs, the project became centered around issues of articulation. Specifically, it focussed on the interaction of the project's two principle walls - the interface they might have with one another as well as that with the highway and the town. Just as the two walls make a singular gesture, demarcating the ground plane with a minimal, yet exacting incision, so too, did their "skins" need to function as unifying element, with the potential to tie together all of the singular program and circulation irregularities and digressions.

While the fundamental experience of the building rests in the compressive, reaction of two walls, unyielding to forces of the highway, there was also a desire to "unhinge" this solidity; to express concurrently their thinness, permeability and ultimately their fragility. Such an articulation would both attenuate the speed of a fleeting moment while contradicting that acceleration by fracturing the space of a single moment into a multitude of singular episodes.

A further "polar" dialogue is generated between the two walls through the use of signage. The literal overtness of the "media/billboard wall" is contradicted by the subtle abstraction of the building facade itself. It is both wall and aperture; it shields the program entities at the same time it discloses and frames their presence. A system of translucent skins, pulled taught over the building's structural frame, initiates a tenuous relationship between building and observer. One is made aware of the existence of all that occurs within and behind the wall, yet without gaining full knowledge as to the nature of that existence. The building, its interior, can not be readily consumed by the viewer; shrouded in ambiguity, it becomes more desirable.

This is a "facade" that is not about decoration - it is about articulation - it is about establishing a presence, a beauty, a sublimity, a memorability through its own restraint. It is neither symbol nor sign; it is simply the layering of structure and skin, the overlapping of multiple scales and proportions, and the readability of solid and void.

[preceding image] [76-77.1] the decadence of public consumption. new york: times square.

bacardi, vw, and the gap.

Signage. An architect's definition: that afterthought applied to buildings ruining an otherwise perfectly designed facade. While I am clearly being sarcastic here, it does seem that signage, excluding more recent projects by contemporary European and Japanese architects, has been a deplorable aspect of architecture - "applique." The Modernist aesthetic has little room for non-Corbusian extras and the PostModern revels in symbols - a comfortable "once-removed" position from the actual sign. And while not advocating the communication of sign over space, it must be realized that one can not do a project such as this and not address the issue of signs.

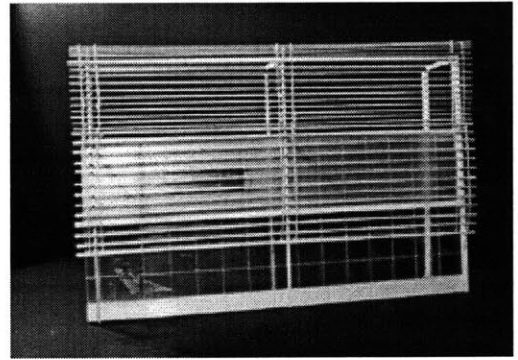
Signage had be approached, and in a very direct sense, or it would become an afterthought. In the project, the necessity of signage in a retail/commercial building is not only accepted, it is appropriated, to the degree that is no longer viewed as additive to the architecture, but a part of it - neither duck nor decorated shed.

Effectively two strategies are established for dealing with signage, one operates at the level of the highway, and the other at the level of the individual building components. From the highway, the building is two walls - one is the program, the other the advertisements for that program. On the media wall, one buys time, not space. Advertisements here are directed toward the highway traveller, they move at his/her speed. 28.8 seconds is not only the length of the building but the duration typical commercial. Signage is used to forge an indelible inextricable relationship between two walls. The later would not be needed if it were not for the presence of the former; the former would not exist were it not for action of the later. The tenuous duality between the two is exploited. One is three-dimensional space; one is the compressed two dimensional representation of that space. One is subtle, the other overt. One is in motion, the other is static.

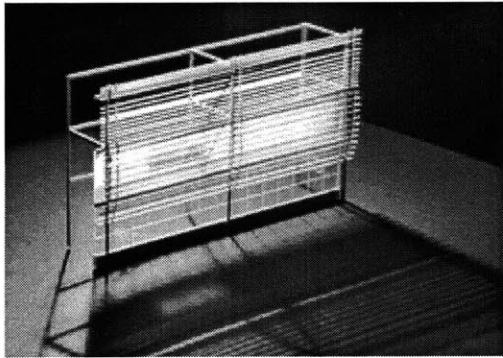
At the level of the individual building components, signage is compressed and interiorized, defining the space of the void between volumes and access. Travelling by car at the concourse level, with volumes above, below and adjacent, one encounters signs on the tops, bottoms, and sides of buildings. Much as the media wall activates the void space of the highway, the signs of individual volumes within the wall activate the void spaces of the building, delineating new ambiguous inhabitable territories.



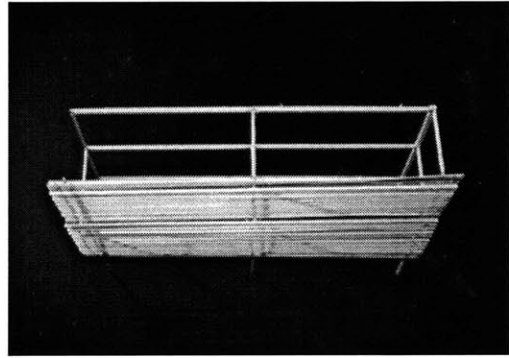
[82.1] skin/enclosure study model at 1/8".



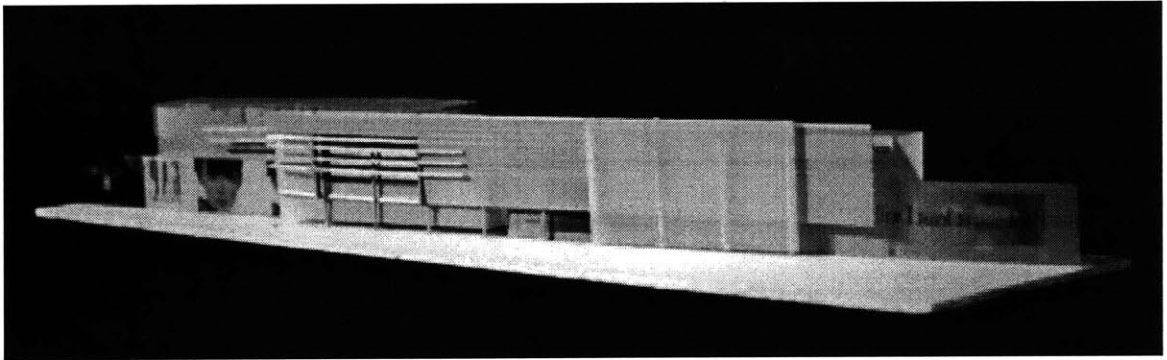
[82.2] skin/enclosure study model at 1/8".



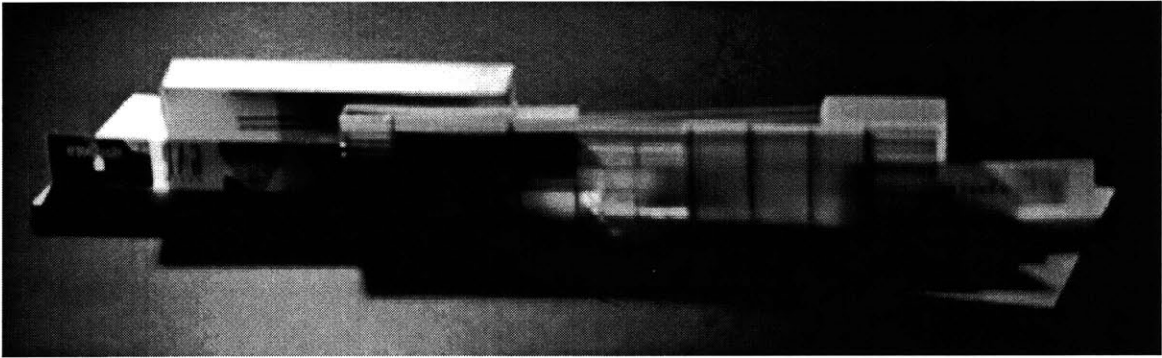
[83.1] skin/enclosure study model
at 1/8".



[83.2] skin/enclosure study model
at 1/8".



[84.1] interface/elevation . articulation study model. sign/skin/screen.

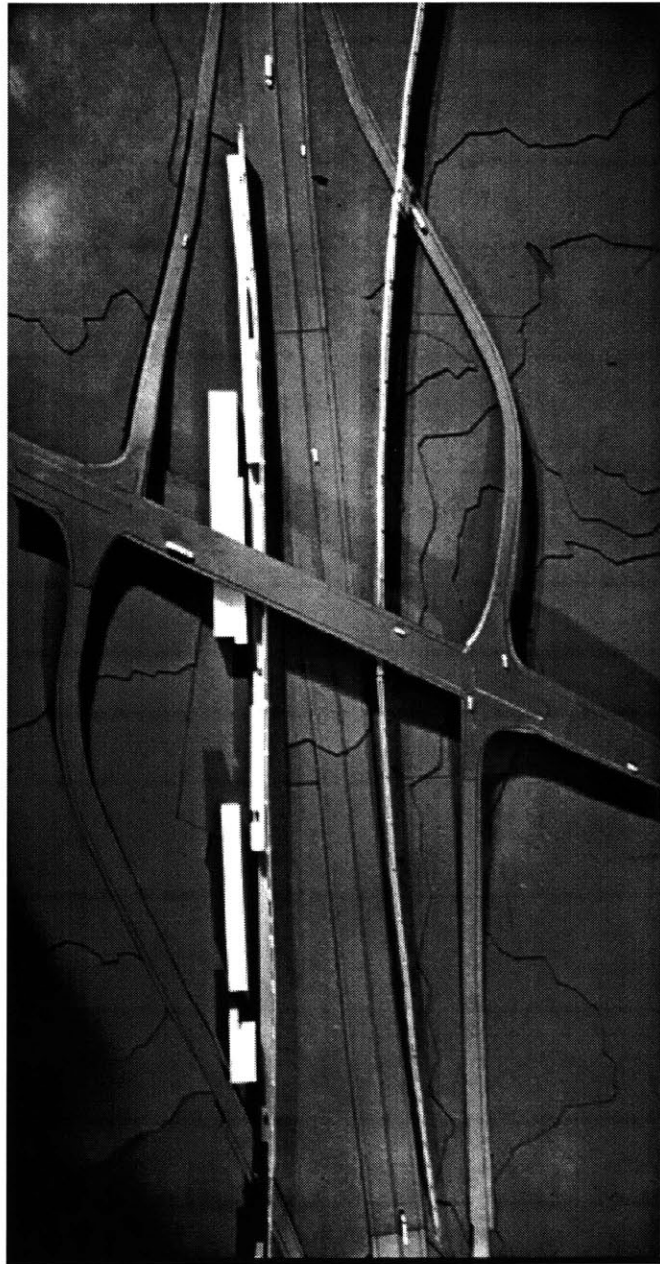


[85.1] interface . articulation study model. translucency. readability of solid/void.

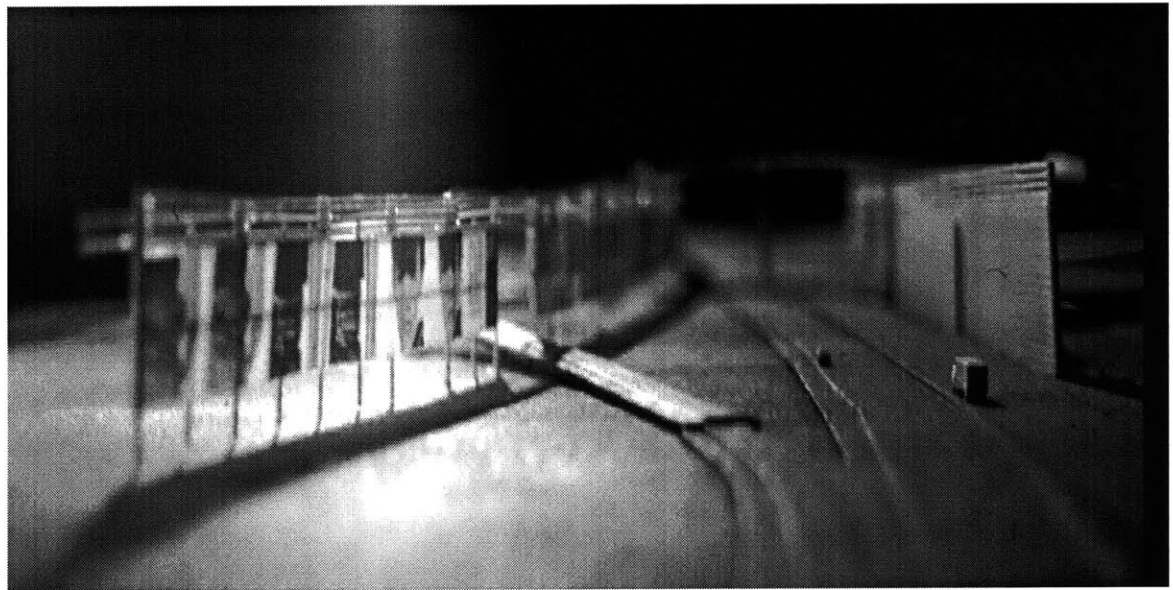
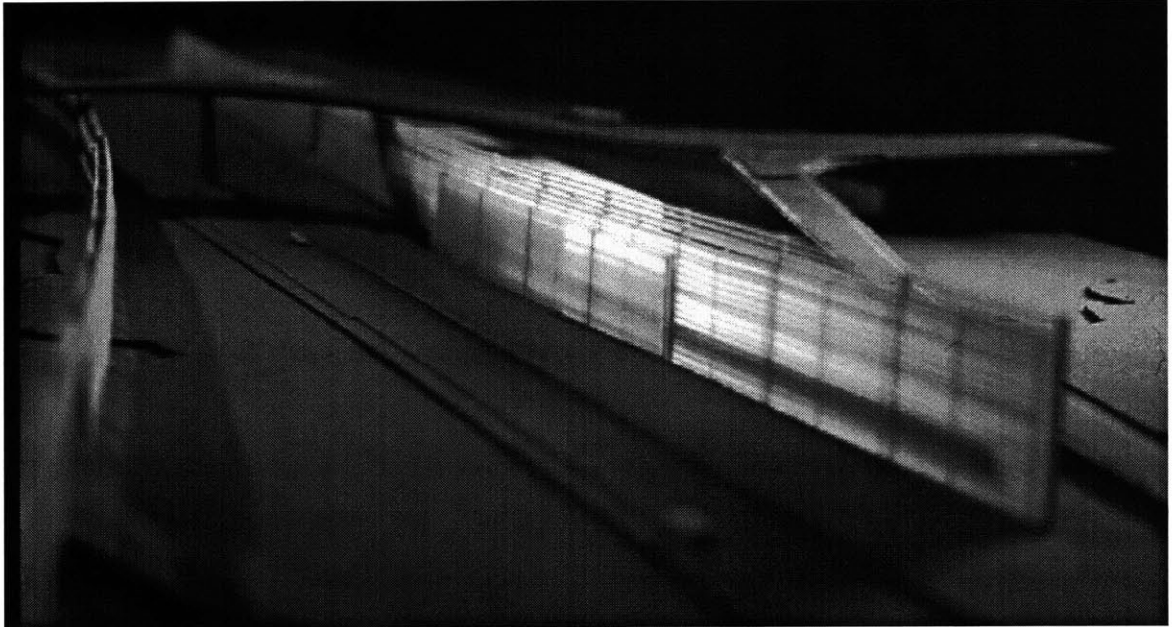
model at 1":40'.

The following final model images represent a reconsideration and consolidation of ideas aforementioned in this text. Together they illustrate the ideological intentions of this thesis. It challenges the rational of the suburban strip landscape through the design of a commercial strip within a highway interchange, and in doing so obviates tensions and contradictions inherent in the suburban condition.

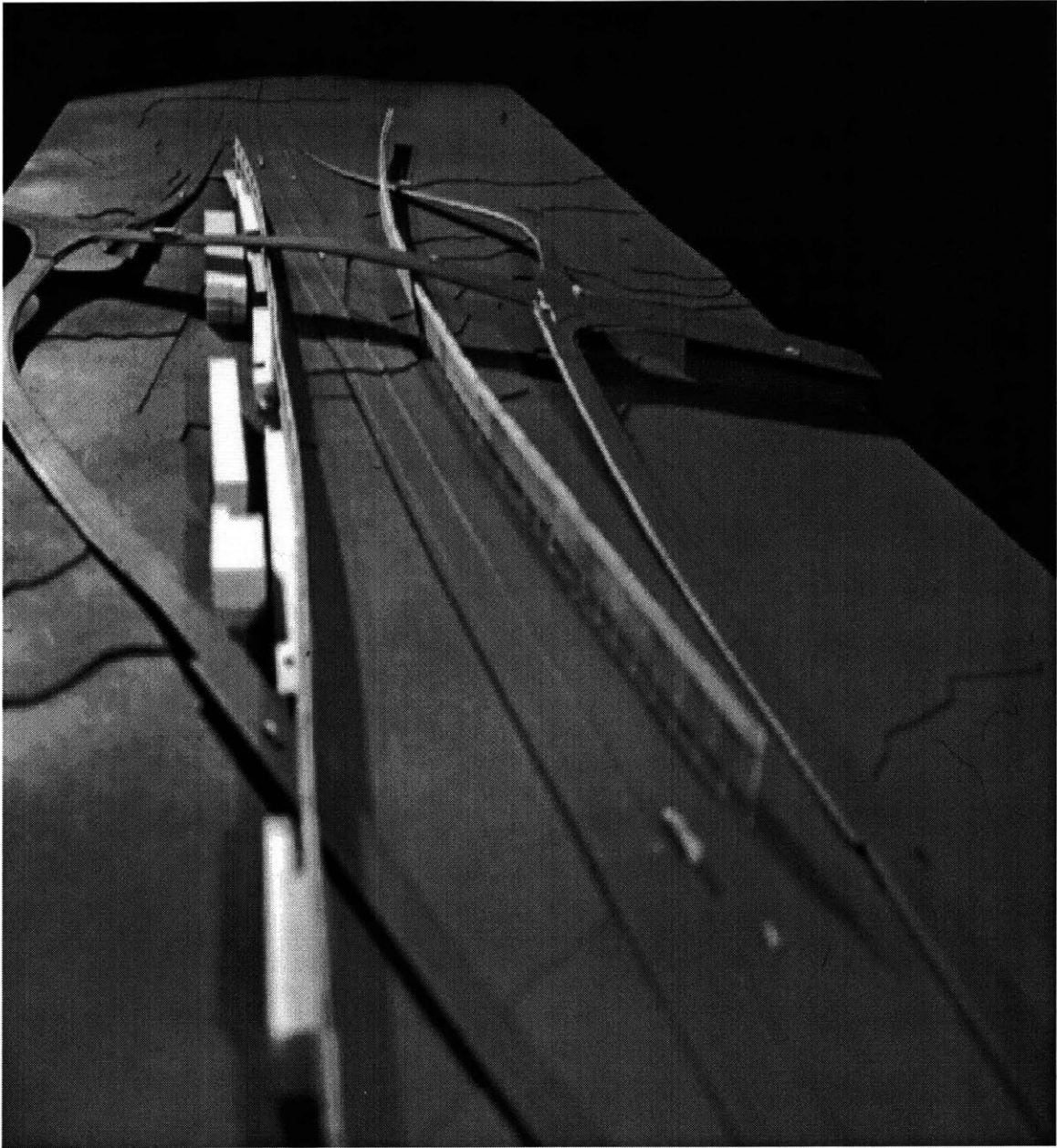
At the physical level, the final model speaks to the experience of an interface between line and place, between highway and town. It is about articulation, translucency, the layering of minimal skin membranes, and the readability of the void. And it is about engaging architecture as infrastructure - a building which one experiences by moving on, in, under, and above.



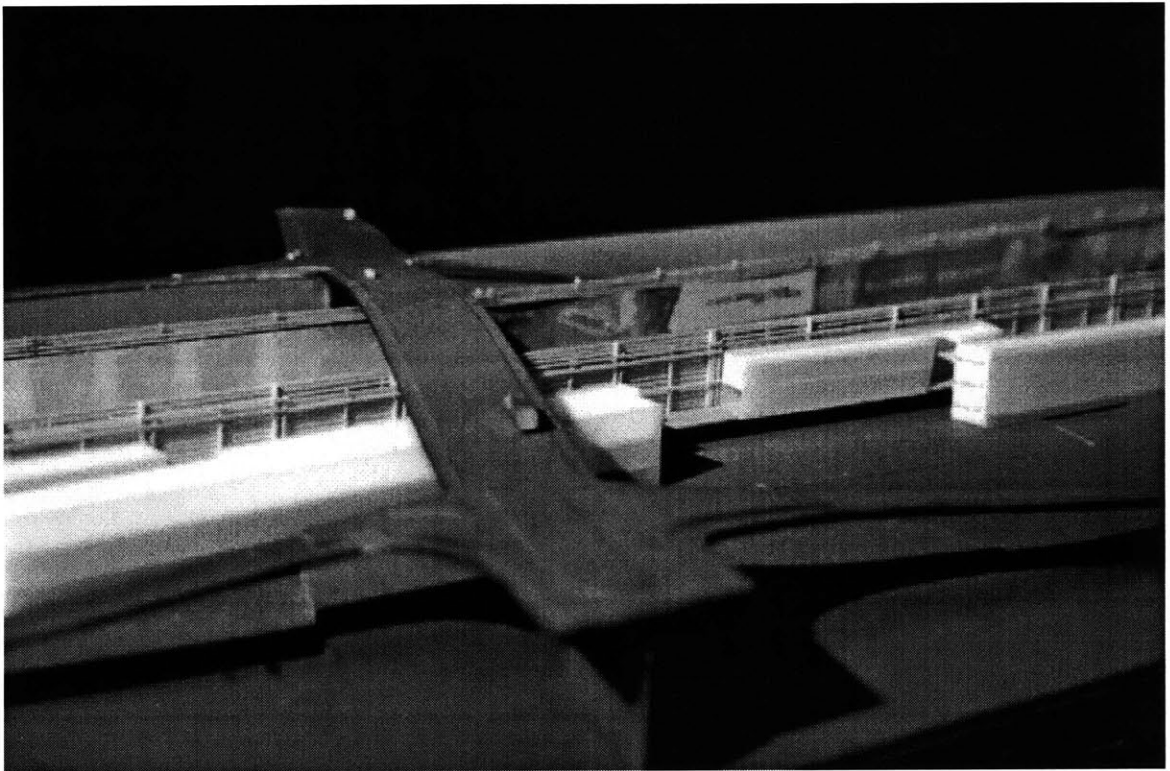
[87.1] above. final model at 1":40'.



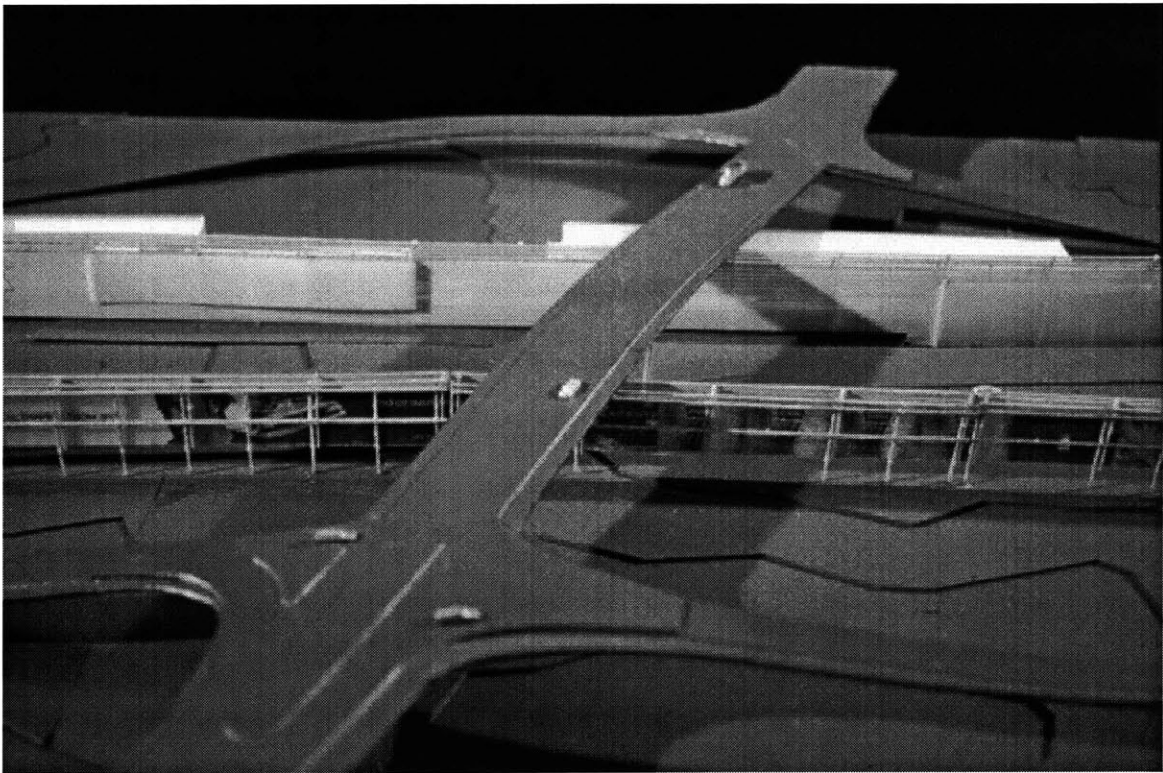
[88.1] final model at 1":40'. building skin.
[88.2] final model at 1":40'. media skin.



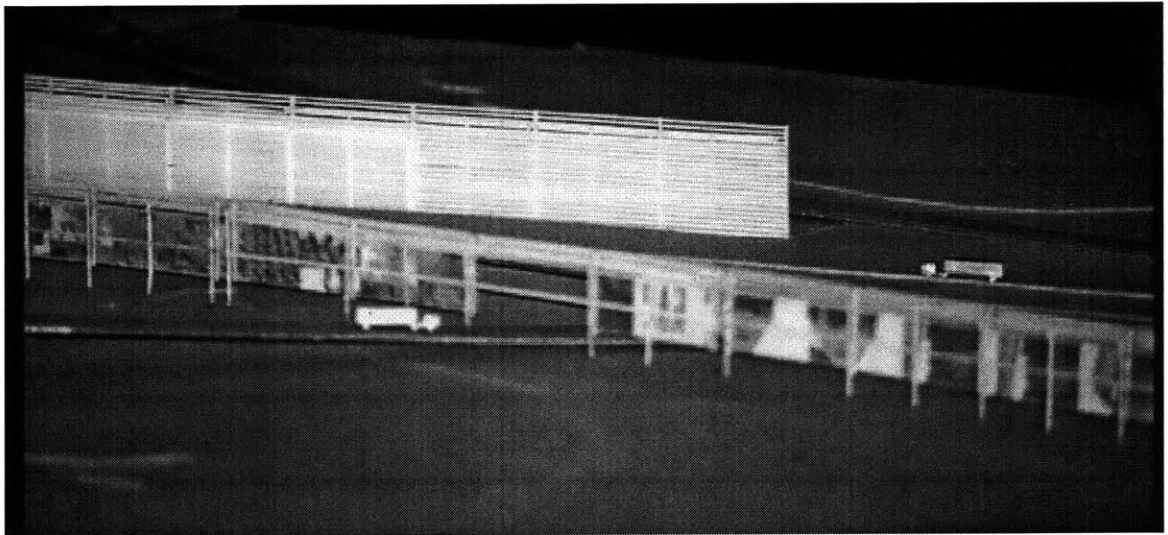
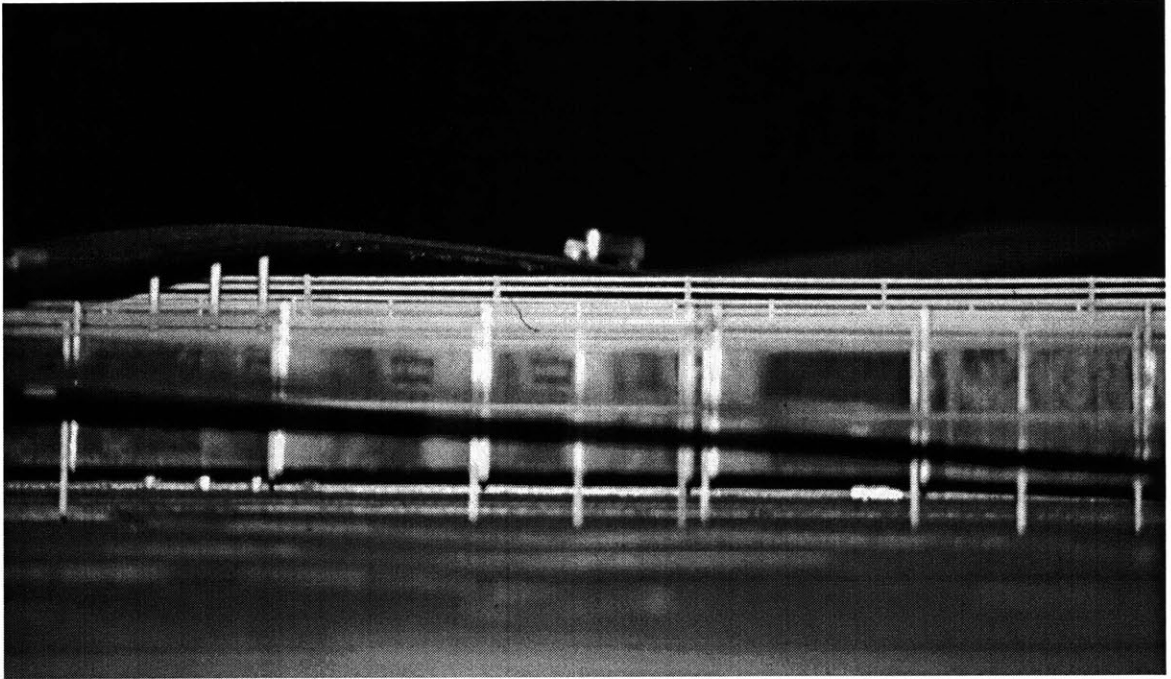
[89.1] above. final model at 1":40'. at the scale of highway infrastructure. filling the void of "left over" space.



[90.1] final model at 1":40'. above the interchange. westbound on 127th.

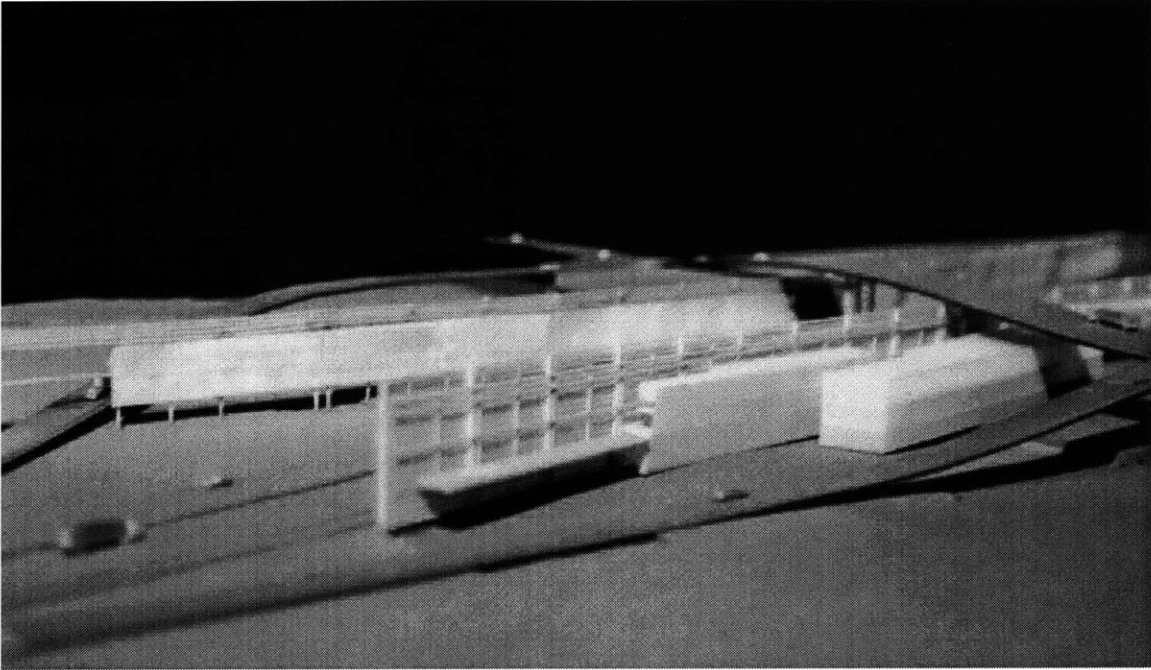


[91.1] final model at 1":40'. above the interchange. eastbound on 127th.



[92.1] final model at 1":40'. above the walls from 127th & behind from southbound entrance ramp.

[92.2] final model at 1":40'. perforation of wall by southbound entrance ramp.



[93.1] final model at 1":40'. behind. north bound exit ramp. structure/skin. concourse level access. perforated and adjacent program.

[93.2] final model at 1":40'. piercing the gap. southbound entrance ramp.

to the (n)th degree.

nostalgia versus nihilism.

1] i grew up in a small suburb, about twenty miles outside of downtown chicago. i never thought i lived in “non-place”.

2] “suburbia” has been america’s ambition since the late 19th century. capitalism, with respect to freedom, opportunity, and entrepreneurship, is an american ideal. i apologize for the presence of neither.

3] consumption is inherently human. social interaction is inherently human. consumption is often a social engagement.

4] within architecture, the “public sphere” may exist. architecture may, and ideally, facilitates this occurrence. architecture, however, is not a formula for “civitas”. a public space does not necessarily equate with the public realm. i, nor architecture, governs subsequent actions of the human race - people do.

5] i bought my first car two years ago. sometimes, now, i drive, for the feeling, more than for then necessity.

6] my parents are typical suburbanites. they own a split-level house on a cul-de-sac road. they live in one suburb and work in another. i don’t know if they’ve ever been to the “town hall”. they spend most of their time running from the bank, to the dry cleaner, to the grocery store.

7] basing parking requirements on the single most busy shopping day of the year means a lot of asphalt for the other 364 days.

8] the seemingly chaotic formlessness of “exopolis” may not be chaotic or formless at all - it may simply have an order, a form, a potential, we fail to see.

9] in the fragmented vastness of suburbia, all things are relative to the highway.

10] we might *consider* the decadence of consumerism, the naked ambition of capitalism, and the transience of the post-industrial nomad - epitomized in the “cyburbian peripheral theme park of edge city” - as the plight of the contemporary american condition. or, conversely, we might *reconsider* them.

Nostalgia Versus Nihilism in the Post-Industrial Suburban Context. This was ultimately the theoretical question of the thesis. The project advocates, to the (n)th degree, both, and yet neither of the two positions. It is neither nostalgically yearning for an irretrievable past nor reveling in apocalyptic lyricism about the present. It offers neither “correction” nor “commentary”. Rather it attempts to approach the suburban condition by accepting its reality, inclusive of all positive and negative aspects, and transgress that reality by questioning the “rules” which give rise to it.

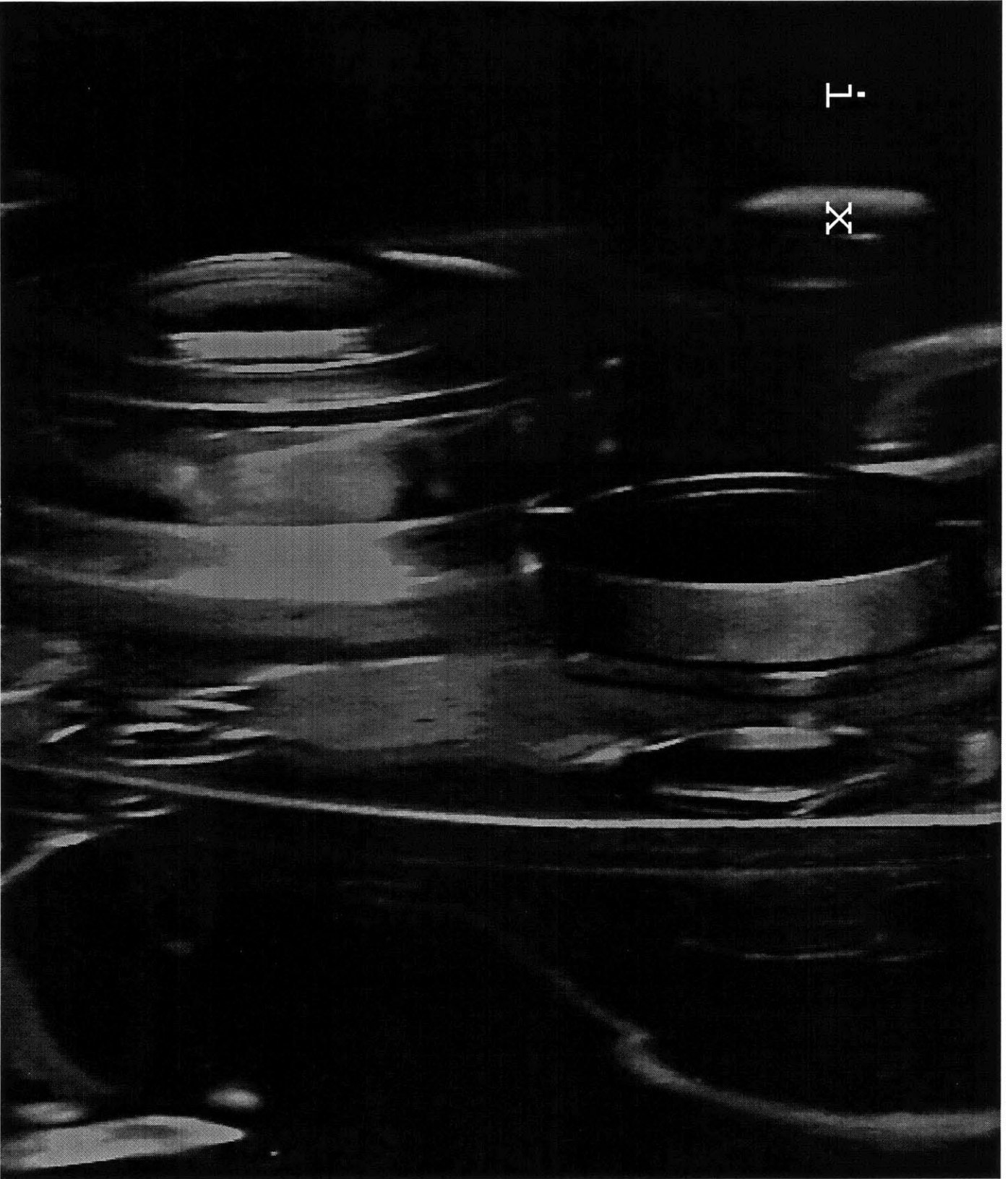
The formal design proposal, as is the case in any design, may be debated. And while it is thought to raise a number of relevant issues concerning construction and articulation in the context of the suburban strip, its evaluation and possible potential are more appropriately understood at the conceptual level of the thesis itself. That is to say, the project is about more than the engagement of two walls at the highway’s edge, it is about the implications of and suggestions made by their mere presence. Effectively, they suggest that the rational of the suburban strip landscape can be both accepted and challenged, that its ideologies can be transgressed, and that there is potential for architecture in “non-place”.



5

i.

x



reference information

six

appendix one. edge city.

appendix two. extension i.355.

appendix three. construction documents.

works consulted.

appendix one: edge city.

The following information summarizes points made in an article appearing in Architecture magazine in December of 1991, by author Joel Garreau. For further information, refer to this article, entitled, "Cities on the Edge."

Five Vital Statistics Indicating the Presence of an Edge City.

- 1] Five million square feet of leasable office space or more.
- 2] Six thousand square feet of retail space or more.
- 3] A population that increases at 9 am on workdays - marking the location as primarily a work center, not a residential suburb.
- 4] A local perception as a single end destination for mixed use - jobs, shopping, and entertainment.
- 5] A history in which, thirty years ago; the site was by no means urban; it was overwhelmingly residential or rural in character.

General Edge City Typologies.

- 1] Uptowns: Edge cities built on top of settlements that existed before the automobile. (examples: Pasadena, California and Stamford Connecticut).
- 2] Boomers: The classic kind of edge city which is usually located at freeway intersections and is almost always centered on a mall. Boomers can be subdivided into the following three types.
 - a] Strip (examples: Route 1 Corridor near Princeton, New Jersey and Route 128 near the Massachusetts Turnpike outside of Boston).
 - b] Node (examples: the Galleria in the Houston region and Tysons corner, Virginia).
 - c] Pig in the Python (examples: Freeway in Southfield, northwest of downtown Detroit and the King of Prussia area, Pennsylvania).
- 3] green fields: Green fields are the state-of-the-art responses to the perceived chaos of boomers. They usually occur at the intersection of thousands of acres of farmland and one developer's ego. Their hallmarks are amazingly grand visions of human nature and rigid control of vast areas by private corporations. (examples: Las Colinas, near the Dallas /Fort Worth Airport and Irvine, on the southern fringe of the Los Angeles basin).

[preceding image] [96-97.1] inside the auto.

appendix two. extension i.355.

Though planning for the Federal Aid Primary Route 340 (as the I-355 extension is called) began in the early 1960s and continued intermittently for over 30 years it was not until 1993 that the Illinois State Legislature passed legislation enabling the Illinois State Toll and Highway Authority (ISTHA) to develop FAP 340 as a tollway.

As the FAP 340 project included the proposed site for the thesis, it was necessary to become familiar with this project, to understand its history, its intentions, its potential implications. It was also necessary, as the project was just being initiated in late August, to gain access to the construction documentation which concretely illustrated the proposed physical nature of the highway extension. Such a project as the FAP Route 340 is not a minor endeavor; it encompasses far more information than this text could ever be adequately surmise. Particularly relevant maps, diagrams, and photographs have been included in the body of the text; these have also been augmented with a selective number of pages from the (pre-bid) construction documents. The following excerpts taken directly from the “Final Environmental Impact Statement and Section 4(f) Evaluation” hope to further place the actual I-355 extension.

“The purpose of the construction of FAP 340 is to provide a [word deleted] north-south transportation corridor [word deleted] linking Interstate Route 55 and Interstate Route 80 thereby [word deleted] providing a more efficient and better balanced transportation system that addresses existing and projected transportation demands within Will County and the region. An improved transportation facility would help to more efficiently move goods and people to and from their destinations within the county and region. The facility would also improve local traffic times in Will County on the presently fragmented north-south highway network in the study area.” [p.1.2]

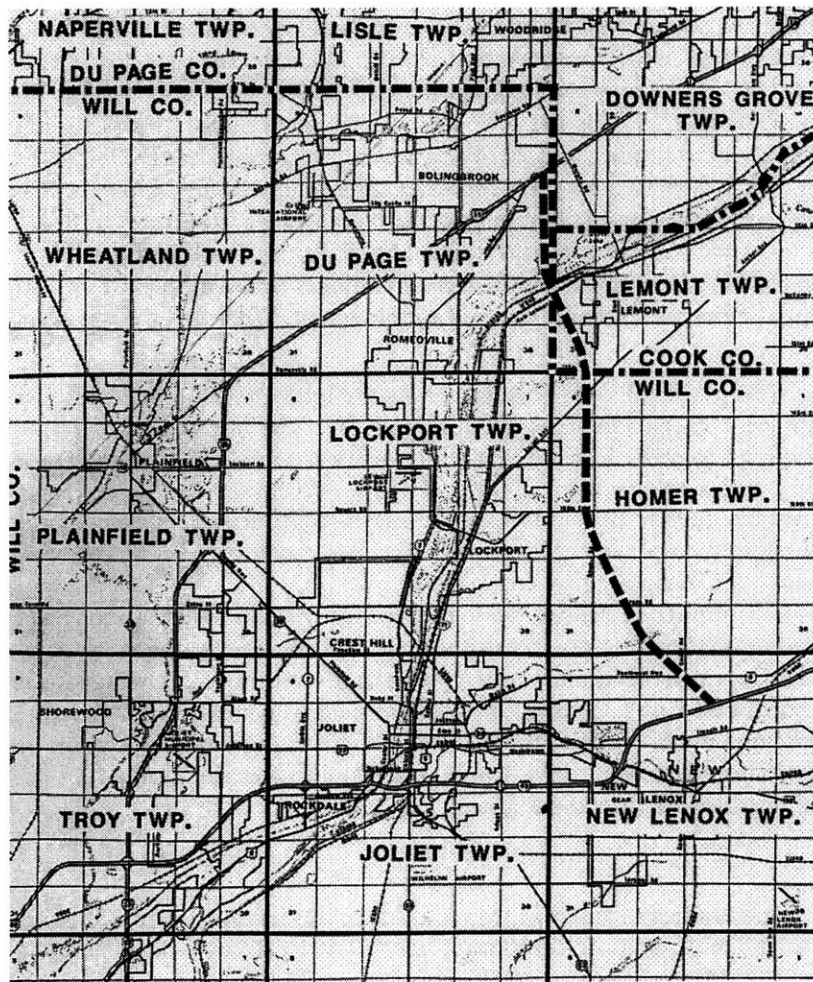
“FAP Route 340 would serve as an extension link in a potential circumferential route in the Chicago metropolitan planning area. The circumferential route would consist of Interstate Route 290 (and Interstate 53) in Cook County, Interstate 355 (North-South Tollway) in DuPage County, recommended FAP Route 340 in DuPage County, Cook and Will Counties into Indiana. This route would provide expressway level continuity from the Lake-Cook County line to Indiana. The proposed Lake-Will Express way North (Illinois Route 53, FAP 342) extension to the Tri-State Tollway (Interstate Route 94) would provide a connection north into Wisconsin.” [p.1.3]

“The need for the construction of a highway along the north-south FAP 340 has been an element of regional and county transportation plans for over thirty years. As the Northeastern Illinois region continues to expand, traffic volumes are also increasing on the existing roadway network. As projected by the Chicago Area Transportation Study (CATS), by the year 2010, traffic in the study area is expected to grow from its present volumes. The Average Daily Traffic (ADT) for the FAP Route 340 corridor for the years 1992 (existing), 2010 (build), and 2010 (no build) as prepared by CATS is shown in Exhibit 1-3. Based on these forecasts, FAP Route 340 would carry over 31,000 vehicles at the northern portion (north of 127th Street) to 35,600 vehicles at the southern section (south of U.S. Route 6). The traffic projections are based on the Northeastern Planning Commission (NIPC) 2010 Adopted Forecast for Land Use and Employment.” [p.1.3]

“The focus of the interstate system during the initial development stages was on the job center in the City of Chicago. Over the last twenty years, jobs have spread to other locations such as northwestern Cook County, DuPage County, and southern Lake County. The region’s Interstate highway system was not designed to accommodate the north-south oriented trips generated by the shift in employment locations. The movement of Jobs into the outlying areas of Chicago region continues.

The total number of census work trips originating in Will County has increased dramatically in the last twenty years. Additionally, the work trips to DuPage County have seen the largest percentage increase. The DuPage County and northwest Cook County employment centers generate work trips that are oriented north-south, a direction that the existing highway system does not accommodate well. FAP Route 340 would meet the need of an additional north-south oriented highway.” [p.1.4 - 1.5]

“The communities within the area with older cores include Joliet (1990 population 76,836), Lockport (1990 population 9,401), Romeoville (1990 population 14,074) and Lemont (1990 population 7,348). Other communities include New Lenox (1990 population 9,627), Woodridge (1990 population 26,256), and Bolingbrook (1990 population 40,843) (see Exhibit 2-1). Regardless of age or structure, communities in the project area are in the process of annexing lands or have recently annexed lands next to the project limits...



[104.1] exhibit 2-1. fap 340 - township map of affected regions. illinois department of transportation (IDOT), final environmental impact statement and section 4(f) evaluation.


Overall, residences in the project area tend to single family units spread out in low density development with little focus a traditional community consistent with rural areas. Many of these residences have sprung up in the last several years. Low residential densities and an abundance of open, agricultural land have facilitated this in-migration. In addition, the area is within a reasonable commute of major employment areas in the region.” [p.2.4]

“The rapid growth occurring in Will County is a relatively recent trend. Most of population growth has taken place over the last fifteen years and is the result of in-migration. In the last half of the 1980s, Will County experienced an increase in the number of building permits two and one-half times the number for the previous five years. Increasingly the construction has taken place in the unincorporated areas.”

Developing areas that have recently permitted in the FAP 340 corridor include: Internationale Centre, an industrial and office complex located south of Interstate Route 55 between Joliet and Murphy Road; Bluff Oaks Estates, recently purchased for protected corridor acquisition by the State of Illinois [phrase deleted] located north of Bluff Road near the corridor; and Broken Arrow, a subdivision bounded by 167th Street, Cougar Road, Bruce Road and Farrell Road. Two subdivisions, Aero Landings and Rolling Meadows, along with the District 113 School District site are all proposed developments in Lemont.” [p.2.5]

appendix three: construction documents.

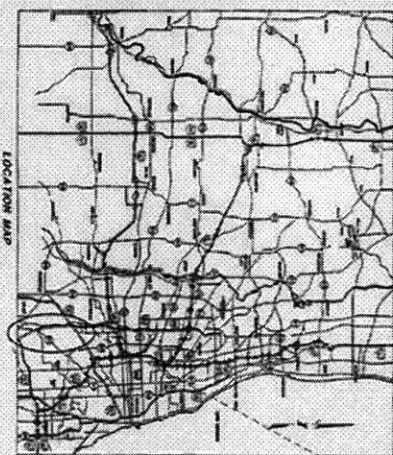
Particularly relevant maps, text, and documents with respect to the I-355 extension have been referenced in the body of the text whenever possible. Perhaps, however, much of my thinking was impacted, even subconsciously, through the mere presence of FAP Route 340 construction documents, piled along my desk throughout the semester.



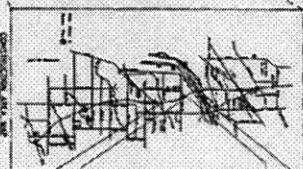
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
ROADWAY AND BRIDGE CONSTRUCTION

PART I - ROADWAY PLANS
CONTRACT CIP-93-702
NORTH-SOUTH TOLLWAY - SOUTH EXTENSION
STA. 594+00 TO STA. 596+00

Part 1 - Location Plans
 Stationing on 1/2" = 200' scale 412
 Part 2 - ROADWAY ACCIDENT/INVESTIGATION
 SEE DRAWING NO. 20100 20100 413
 Part 3 - CROSS SECTIONS AND STATIONING
 DRAWING NO. 201 20100 412



LOCATION MAP



NOT FOR BID

| SECTION SYSTEM PROPERTIES - STARS | |
|-----------------------------------|------------|
| CONTRACT | CIP-93-702 |
| SECTION | ROADWAY |
| DATE | 11/11/93 |
| DESIGNED BY | ... |
| CHECKED BY | ... |
| APPROVED BY | ... |
| DATE | ... |
| CONTRACT | ... |
| SECTION | ... |
| DATE | ... |
| DESIGNED BY | ... |
| CHECKED BY | ... |
| APPROVED BY | ... |
| DATE | ... |

NOT FOR BID

NOT FOR BID

[107.1] drawing sheet no. 1 of 432.
 illinois state toll highway authority (ISTHA):
 roadway and bridge construction: contract CIP-93-702.

PART 1 - ROADWAY PLANS

| NO. | NO. | NO. | NO. |
|-----|-----|-----|-----|
| 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 |
| 7 | 7 | 7 | 7 |
| 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 |
| 10 | 10 | 10 | 10 |
| 11 | 11 | 11 | 11 |
| 12 | 12 | 12 | 12 |
| 13 | 13 | 13 | 13 |
| 14 | 14 | 14 | 14 |
| 15 | 15 | 15 | 15 |
| 16 | 16 | 16 | 16 |
| 17 | 17 | 17 | 17 |
| 18 | 18 | 18 | 18 |
| 19 | 19 | 19 | 19 |
| 20 | 20 | 20 | 20 |
| 21 | 21 | 21 | 21 |
| 22 | 22 | 22 | 22 |
| 23 | 23 | 23 | 23 |
| 24 | 24 | 24 | 24 |
| 25 | 25 | 25 | 25 |
| 26 | 26 | 26 | 26 |
| 27 | 27 | 27 | 27 |
| 28 | 28 | 28 | 28 |
| 29 | 29 | 29 | 29 |
| 30 | 30 | 30 | 30 |
| 31 | 31 | 31 | 31 |
| 32 | 32 | 32 | 32 |
| 33 | 33 | 33 | 33 |
| 34 | 34 | 34 | 34 |
| 35 | 35 | 35 | 35 |
| 36 | 36 | 36 | 36 |
| 37 | 37 | 37 | 37 |
| 38 | 38 | 38 | 38 |
| 39 | 39 | 39 | 39 |
| 40 | 40 | 40 | 40 |
| 41 | 41 | 41 | 41 |
| 42 | 42 | 42 | 42 |
| 43 | 43 | 43 | 43 |
| 44 | 44 | 44 | 44 |
| 45 | 45 | 45 | 45 |
| 46 | 46 | 46 | 46 |
| 47 | 47 | 47 | 47 |
| 48 | 48 | 48 | 48 |
| 49 | 49 | 49 | 49 |
| 50 | 50 | 50 | 50 |
| 51 | 51 | 51 | 51 |
| 52 | 52 | 52 | 52 |
| 53 | 53 | 53 | 53 |
| 54 | 54 | 54 | 54 |
| 55 | 55 | 55 | 55 |
| 56 | 56 | 56 | 56 |
| 57 | 57 | 57 | 57 |
| 58 | 58 | 58 | 58 |
| 59 | 59 | 59 | 59 |
| 60 | 60 | 60 | 60 |
| 61 | 61 | 61 | 61 |
| 62 | 62 | 62 | 62 |
| 63 | 63 | 63 | 63 |
| 64 | 64 | 64 | 64 |
| 65 | 65 | 65 | 65 |
| 66 | 66 | 66 | 66 |
| 67 | 67 | 67 | 67 |
| 68 | 68 | 68 | 68 |
| 69 | 69 | 69 | 69 |
| 70 | 70 | 70 | 70 |
| 71 | 71 | 71 | 71 |
| 72 | 72 | 72 | 72 |
| 73 | 73 | 73 | 73 |
| 74 | 74 | 74 | 74 |
| 75 | 75 | 75 | 75 |
| 76 | 76 | 76 | 76 |
| 77 | 77 | 77 | 77 |
| 78 | 78 | 78 | 78 |
| 79 | 79 | 79 | 79 |
| 80 | 80 | 80 | 80 |
| 81 | 81 | 81 | 81 |
| 82 | 82 | 82 | 82 |
| 83 | 83 | 83 | 83 |
| 84 | 84 | 84 | 84 |
| 85 | 85 | 85 | 85 |
| 86 | 86 | 86 | 86 |
| 87 | 87 | 87 | 87 |
| 88 | 88 | 88 | 88 |
| 89 | 89 | 89 | 89 |
| 90 | 90 | 90 | 90 |
| 91 | 91 | 91 | 91 |
| 92 | 92 | 92 | 92 |
| 93 | 93 | 93 | 93 |
| 94 | 94 | 94 | 94 |
| 95 | 95 | 95 | 95 |
| 96 | 96 | 96 | 96 |
| 97 | 97 | 97 | 97 |
| 98 | 98 | 98 | 98 |
| 99 | 99 | 99 | 99 |
| 100 | 100 | 100 | 100 |

PART 1 - ROADWAY PLANS

| NO. | NO. | NO. | NO. |
|-----|-----|-----|-----|
| 101 | 101 | 101 | 101 |
| 102 | 102 | 102 | 102 |
| 103 | 103 | 103 | 103 |
| 104 | 104 | 104 | 104 |
| 105 | 105 | 105 | 105 |
| 106 | 106 | 106 | 106 |
| 107 | 107 | 107 | 107 |
| 108 | 108 | 108 | 108 |
| 109 | 109 | 109 | 109 |
| 110 | 110 | 110 | 110 |
| 111 | 111 | 111 | 111 |
| 112 | 112 | 112 | 112 |
| 113 | 113 | 113 | 113 |
| 114 | 114 | 114 | 114 |
| 115 | 115 | 115 | 115 |
| 116 | 116 | 116 | 116 |
| 117 | 117 | 117 | 117 |
| 118 | 118 | 118 | 118 |
| 119 | 119 | 119 | 119 |
| 120 | 120 | 120 | 120 |
| 121 | 121 | 121 | 121 |
| 122 | 122 | 122 | 122 |
| 123 | 123 | 123 | 123 |
| 124 | 124 | 124 | 124 |
| 125 | 125 | 125 | 125 |
| 126 | 126 | 126 | 126 |
| 127 | 127 | 127 | 127 |
| 128 | 128 | 128 | 128 |
| 129 | 129 | 129 | 129 |
| 130 | 130 | 130 | 130 |
| 131 | 131 | 131 | 131 |
| 132 | 132 | 132 | 132 |
| 133 | 133 | 133 | 133 |
| 134 | 134 | 134 | 134 |
| 135 | 135 | 135 | 135 |
| 136 | 136 | 136 | 136 |
| 137 | 137 | 137 | 137 |
| 138 | 138 | 138 | 138 |
| 139 | 139 | 139 | 139 |
| 140 | 140 | 140 | 140 |
| 141 | 141 | 141 | 141 |
| 142 | 142 | 142 | 142 |
| 143 | 143 | 143 | 143 |
| 144 | 144 | 144 | 144 |
| 145 | 145 | 145 | 145 |
| 146 | 146 | 146 | 146 |
| 147 | 147 | 147 | 147 |
| 148 | 148 | 148 | 148 |
| 149 | 149 | 149 | 149 |
| 150 | 150 | 150 | 150 |
| 151 | 151 | 151 | 151 |
| 152 | 152 | 152 | 152 |
| 153 | 153 | 153 | 153 |
| 154 | 154 | 154 | 154 |
| 155 | 155 | 155 | 155 |
| 156 | 156 | 156 | 156 |
| 157 | 157 | 157 | 157 |
| 158 | 158 | 158 | 158 |
| 159 | 159 | 159 | 159 |
| 160 | 160 | 160 | 160 |
| 161 | 161 | 161 | 161 |
| 162 | 162 | 162 | 162 |
| 163 | 163 | 163 | 163 |
| 164 | 164 | 164 | 164 |
| 165 | 165 | 165 | 165 |
| 166 | 166 | 166 | 166 |
| 167 | 167 | 167 | 167 |
| 168 | 168 | 168 | 168 |
| 169 | 169 | 169 | 169 |
| 170 | 170 | 170 | 170 |
| 171 | 171 | 171 | 171 |
| 172 | 172 | 172 | 172 |
| 173 | 173 | 173 | 173 |
| 174 | 174 | 174 | 174 |
| 175 | 175 | 175 | 175 |
| 176 | 176 | 176 | 176 |
| 177 | 177 | 177 | 177 |
| 178 | 178 | 178 | 178 |
| 179 | 179 | 179 | 179 |
| 180 | 180 | 180 | 180 |
| 181 | 181 | 181 | 181 |
| 182 | 182 | 182 | 182 |
| 183 | 183 | 183 | 183 |
| 184 | 184 | 184 | 184 |
| 185 | 185 | 185 | 185 |
| 186 | 186 | 186 | 186 |
| 187 | 187 | 187 | 187 |
| 188 | 188 | 188 | 188 |
| 189 | 189 | 189 | 189 |
| 190 | 190 | 190 | 190 |
| 191 | 191 | 191 | 191 |
| 192 | 192 | 192 | 192 |
| 193 | 193 | 193 | 193 |
| 194 | 194 | 194 | 194 |
| 195 | 195 | 195 | 195 |
| 196 | 196 | 196 | 196 |
| 197 | 197 | 197 | 197 |
| 198 | 198 | 198 | 198 |
| 199 | 199 | 199 | 199 |
| 200 | 200 | 200 | 200 |

NOT FOR BID

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 CONTRACT CIP-93-702
 SHEET NO. 2 OF 221

[108.1] drawing sheet no. 2 of 432. illinois state toll highway authority (ISTHA): roadway and bridge construction: contract CIP-93-702.

PART II - PLAZA BUILDING ARCHITECTURAL / BRIDGE AND CULVERT STRUCTURAL PLANS

| DWG. NO. | TO DWG. NO. | SHEET NO. | SHEET TO NO. | DWG. NO. | TO DWG. NO. | SHEET NO. | SHEET TO NO. |
|----------|-------------|-----------|--------------|----------|-------------|-----------|--------------|
| 200 | 200 | 1 | 1 | 200 | 200 | 1 | 1 |
| 201 | 201 | 1 | 1 | 201 | 201 | 1 | 1 |
| 202 | 202 | 1 | 1 | 202 | 202 | 1 | 1 |
| 203 | 203 | 1 | 1 | 203 | 203 | 1 | 1 |
| 204 | 204 | 1 | 1 | 204 | 204 | 1 | 1 |
| 205 | 205 | 1 | 1 | 205 | 205 | 1 | 1 |
| 206 | 206 | 1 | 1 | 206 | 206 | 1 | 1 |
| 207 | 207 | 1 | 1 | 207 | 207 | 1 | 1 |
| 208 | 208 | 1 | 1 | 208 | 208 | 1 | 1 |
| 209 | 209 | 1 | 1 | 209 | 209 | 1 | 1 |
| 210 | 210 | 1 | 1 | 210 | 210 | 1 | 1 |
| 211 | 211 | 1 | 1 | 211 | 211 | 1 | 1 |
| 212 | 212 | 1 | 1 | 212 | 212 | 1 | 1 |
| 213 | 213 | 1 | 1 | 213 | 213 | 1 | 1 |
| 214 | 214 | 1 | 1 | 214 | 214 | 1 | 1 |
| 215 | 215 | 1 | 1 | 215 | 215 | 1 | 1 |
| 216 | 216 | 1 | 1 | 216 | 216 | 1 | 1 |
| 217 | 217 | 1 | 1 | 217 | 217 | 1 | 1 |
| 218 | 218 | 1 | 1 | 218 | 218 | 1 | 1 |
| 219 | 219 | 1 | 1 | 219 | 219 | 1 | 1 |
| 220 | 220 | 1 | 1 | 220 | 220 | 1 | 1 |
| 221 | 221 | 1 | 1 | 221 | 221 | 1 | 1 |
| 222 | 222 | 1 | 1 | 222 | 222 | 1 | 1 |
| 223 | 223 | 1 | 1 | 223 | 223 | 1 | 1 |
| 224 | 224 | 1 | 1 | 224 | 224 | 1 | 1 |
| 225 | 225 | 1 | 1 | 225 | 225 | 1 | 1 |
| 226 | 226 | 1 | 1 | 226 | 226 | 1 | 1 |
| 227 | 227 | 1 | 1 | 227 | 227 | 1 | 1 |
| 228 | 228 | 1 | 1 | 228 | 228 | 1 | 1 |
| 229 | 229 | 1 | 1 | 229 | 229 | 1 | 1 |
| 230 | 230 | 1 | 1 | 230 | 230 | 1 | 1 |
| 231 | 231 | 1 | 1 | 231 | 231 | 1 | 1 |
| 232 | 232 | 1 | 1 | 232 | 232 | 1 | 1 |
| 233 | 233 | 1 | 1 | 233 | 233 | 1 | 1 |
| 234 | 234 | 1 | 1 | 234 | 234 | 1 | 1 |
| 235 | 235 | 1 | 1 | 235 | 235 | 1 | 1 |
| 236 | 236 | 1 | 1 | 236 | 236 | 1 | 1 |
| 237 | 237 | 1 | 1 | 237 | 237 | 1 | 1 |
| 238 | 238 | 1 | 1 | 238 | 238 | 1 | 1 |
| 239 | 239 | 1 | 1 | 239 | 239 | 1 | 1 |
| 240 | 240 | 1 | 1 | 240 | 240 | 1 | 1 |
| 241 | 241 | 1 | 1 | 241 | 241 | 1 | 1 |
| 242 | 242 | 1 | 1 | 242 | 242 | 1 | 1 |
| 243 | 243 | 1 | 1 | 243 | 243 | 1 | 1 |
| 244 | 244 | 1 | 1 | 244 | 244 | 1 | 1 |
| 245 | 245 | 1 | 1 | 245 | 245 | 1 | 1 |
| 246 | 246 | 1 | 1 | 246 | 246 | 1 | 1 |
| 247 | 247 | 1 | 1 | 247 | 247 | 1 | 1 |
| 248 | 248 | 1 | 1 | 248 | 248 | 1 | 1 |
| 249 | 249 | 1 | 1 | 249 | 249 | 1 | 1 |
| 250 | 250 | 1 | 1 | 250 | 250 | 1 | 1 |
| 251 | 251 | 1 | 1 | 251 | 251 | 1 | 1 |
| 252 | 252 | 1 | 1 | 252 | 252 | 1 | 1 |
| 253 | 253 | 1 | 1 | 253 | 253 | 1 | 1 |
| 254 | 254 | 1 | 1 | 254 | 254 | 1 | 1 |
| 255 | 255 | 1 | 1 | 255 | 255 | 1 | 1 |
| 256 | 256 | 1 | 1 | 256 | 256 | 1 | 1 |
| 257 | 257 | 1 | 1 | 257 | 257 | 1 | 1 |
| 258 | 258 | 1 | 1 | 258 | 258 | 1 | 1 |
| 259 | 259 | 1 | 1 | 259 | 259 | 1 | 1 |
| 260 | 260 | 1 | 1 | 260 | 260 | 1 | 1 |
| 261 | 261 | 1 | 1 | 261 | 261 | 1 | 1 |
| 262 | 262 | 1 | 1 | 262 | 262 | 1 | 1 |
| 263 | 263 | 1 | 1 | 263 | 263 | 1 | 1 |
| 264 | 264 | 1 | 1 | 264 | 264 | 1 | 1 |
| 265 | 265 | 1 | 1 | 265 | 265 | 1 | 1 |
| 266 | 266 | 1 | 1 | 266 | 266 | 1 | 1 |
| 267 | 267 | 1 | 1 | 267 | 267 | 1 | 1 |
| 268 | 268 | 1 | 1 | 268 | 268 | 1 | 1 |
| 269 | 269 | 1 | 1 | 269 | 269 | 1 | 1 |
| 270 | 270 | 1 | 1 | 270 | 270 | 1 | 1 |
| 271 | 271 | 1 | 1 | 271 | 271 | 1 | 1 |
| 272 | 272 | 1 | 1 | 272 | 272 | 1 | 1 |
| 273 | 273 | 1 | 1 | 273 | 273 | 1 | 1 |
| 274 | 274 | 1 | 1 | 274 | 274 | 1 | 1 |
| 275 | 275 | 1 | 1 | 275 | 275 | 1 | 1 |

PART III - CROSS SECTIONS AND STANDARDS

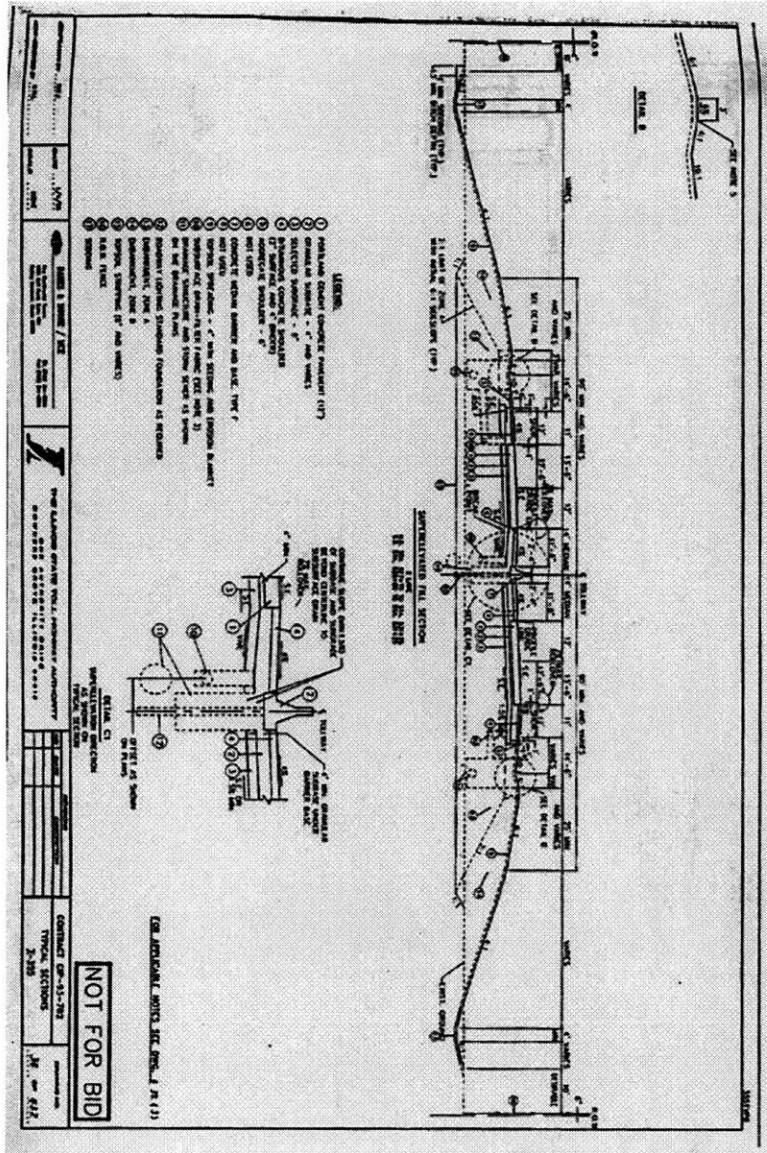
| DWG. NO. | TO DWG. NO. | SHEET NO. | SHEET TO NO. |
|----------|-------------|-----------|--------------|
| 200 | 200 | 1 | 1 |
| 201 | 201 | 1 | 1 |
| 202 | 202 | 1 | 1 |
| 203 | 203 | 1 | 1 |
| 204 | 204 | 1 | 1 |
| 205 | 205 | 1 | 1 |
| 206 | 206 | 1 | 1 |
| 207 | 207 | 1 | 1 |
| 208 | 208 | 1 | 1 |
| 209 | 209 | 1 | 1 |
| 210 | 210 | 1 | 1 |
| 211 | 211 | 1 | 1 |
| 212 | 212 | 1 | 1 |
| 213 | 213 | 1 | 1 |
| 214 | 214 | 1 | 1 |
| 215 | 215 | 1 | 1 |
| 216 | 216 | 1 | 1 |
| 217 | 217 | 1 | 1 |
| 218 | 218 | 1 | 1 |
| 219 | 219 | 1 | 1 |
| 220 | 220 | 1 | 1 |
| 221 | 221 | 1 | 1 |
| 222 | 222 | 1 | 1 |
| 223 | 223 | 1 | 1 |
| 224 | 224 | 1 | 1 |
| 225 | 225 | 1 | 1 |
| 226 | 226 | 1 | 1 |
| 227 | 227 | 1 | 1 |
| 228 | 228 | 1 | 1 |
| 229 | 229 | 1 | 1 |
| 230 | 230 | 1 | 1 |
| 231 | 231 | 1 | 1 |
| 232 | 232 | 1 | 1 |
| 233 | 233 | 1 | 1 |
| 234 | 234 | 1 | 1 |
| 235 | 235 | 1 | 1 |
| 236 | 236 | 1 | 1 |
| 237 | 237 | 1 | 1 |
| 238 | 238 | 1 | 1 |
| 239 | 239 | 1 | 1 |
| 240 | 240 | 1 | 1 |
| 241 | 241 | 1 | 1 |
| 242 | 242 | 1 | 1 |
| 243 | 243 | 1 | 1 |
| 244 | 244 | 1 | 1 |
| 245 | 245 | 1 | 1 |
| 246 | 246 | 1 | 1 |
| 247 | 247 | 1 | 1 |
| 248 | 248 | 1 | 1 |
| 249 | 249 | 1 | 1 |
| 250 | 250 | 1 | 1 |
| 251 | 251 | 1 | 1 |
| 252 | 252 | 1 | 1 |
| 253 | 253 | 1 | 1 |
| 254 | 254 | 1 | 1 |
| 255 | 255 | 1 | 1 |
| 256 | 256 | 1 | 1 |
| 257 | 257 | 1 | 1 |
| 258 | 258 | 1 | 1 |
| 259 | 259 | 1 | 1 |
| 260 | 260 | 1 | 1 |
| 261 | 261 | 1 | 1 |
| 262 | 262 | 1 | 1 |
| 263 | 263 | 1 | 1 |
| 264 | 264 | 1 | 1 |
| 265 | 265 | 1 | 1 |
| 266 | 266 | 1 | 1 |
| 267 | 267 | 1 | 1 |
| 268 | 268 | 1 | 1 |
| 269 | 269 | 1 | 1 |
| 270 | 270 | 1 | 1 |
| 271 | 271 | 1 | 1 |
| 272 | 272 | 1 | 1 |
| 273 | 273 | 1 | 1 |
| 274 | 274 | 1 | 1 |
| 275 | 275 | 1 | 1 |

CROSS SECTIONS

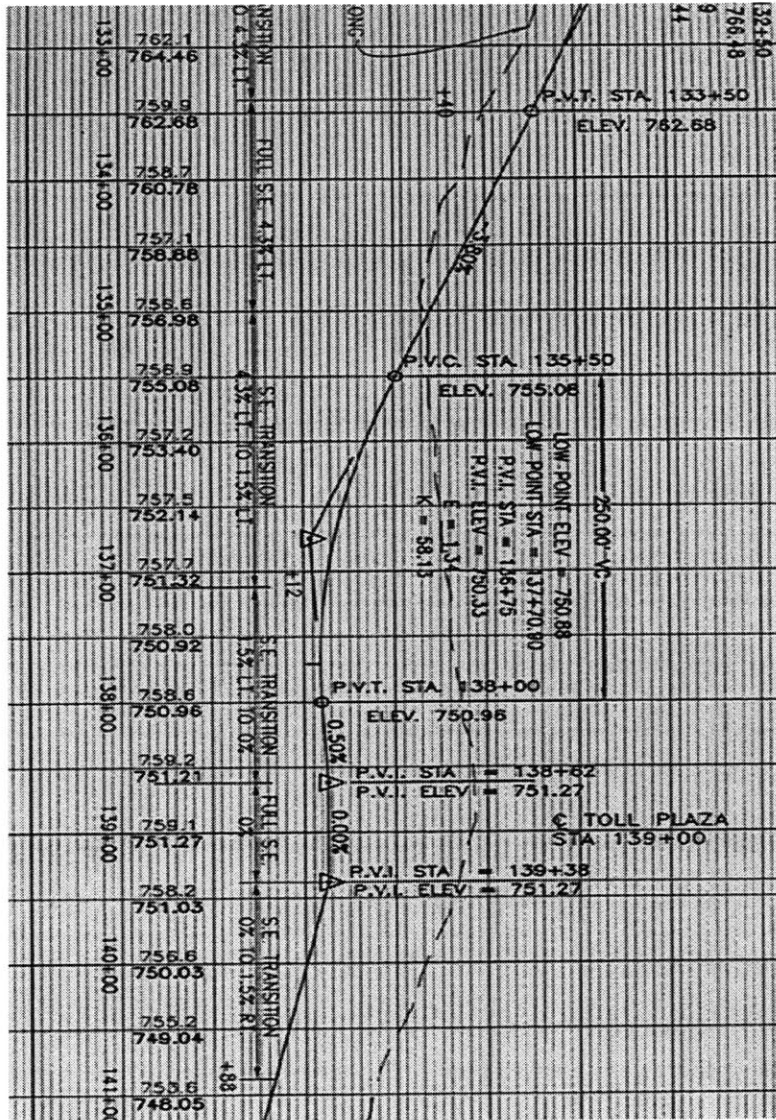
127th STREET STRUCTURE OVER NORTH-SOUTH TOLLWAY

NOT FOR BID

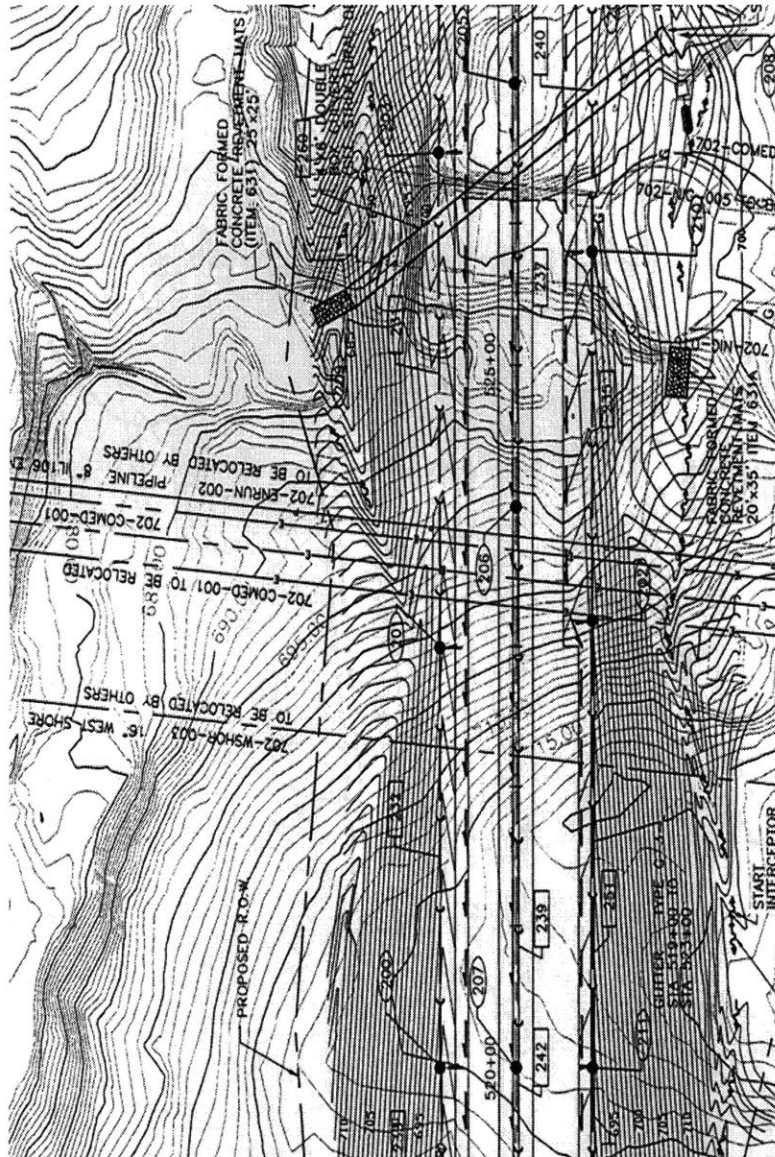
[109.1] drawing sheet no. 3 of 432. illinois state toll highway authority (ISTHA): roadway and bridge construction: contract CIP-93-702.



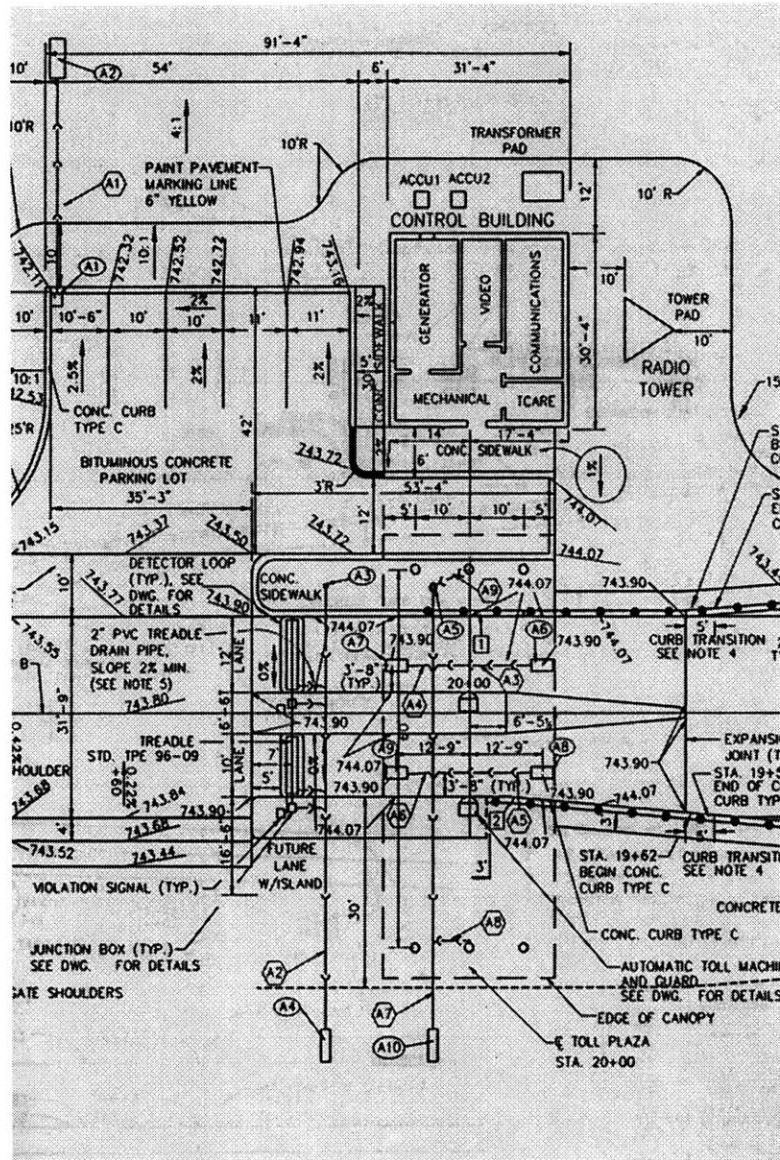
[111.1] drawing sheet no. 34 of 432.
 illinois state toll highway authority (ISTHA):
 roadway and bridge construction: contract CIP-93-702.



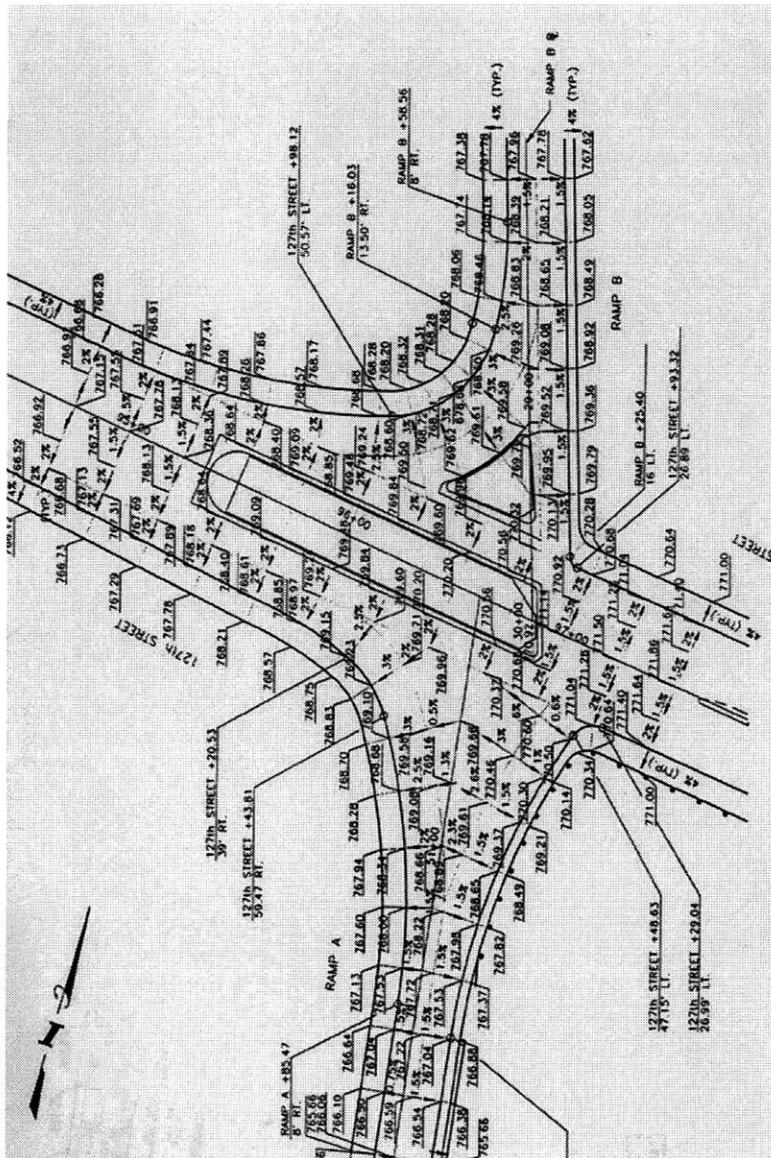
[112.1] detail / partial drawing sheet.
 illinois state toll highway authority (ISTHA):
 roadway and bridge construction: contract CIP-93-702.



[113.1] detail / partial drawing sheet.
 illinois state toll highway authority (ISTHA):
 roadway and bridge construction: contract CIP-93-702.



[114.1] detail / partial drawing sheet.
 illinois state toll highway authority (ISTHA):
 roadway and bridge construction: contract CIP-93-702.



[115.1] detail / partial drawing sheet.
 illinois state toll highway authority (ISTHA):
 roadway and bridge construction: contract CIP-93-702.

works consulted.

issues.

Barnett, Jonathan. The Fractured Metropolis. New York: Harper Collins Publishers, 1995.

Baird, George. The Space of Appearance. Cambridge, MA: The MIT Press, 1995.

Berman, Marshall. All That Is Solid Melts Into Air: The Experience of Modernity. New York: Penguin Books, 1988.

Baudrillard, Jean. The Perfect Crime. New York: Verso, 1996.

Cervero, Robert. "Unlocking Suburban Gridlock", from the American Planning Association Journal, v. 52, no. 4. (Autumn 1986).

Crawford, Margaret. "The World in a Shopping Mall" in Michael Sorkin's, ed., Variations on a Theme Park: The New American City and the End of Public Space. New York: Hill and Wang, a division of Farrar, Straus, and Giroux, 1992. pp. 3-30.

Dunham-Jones, Ellen. "Blurred Boundaries". Lecture given as part of the MIT lecture series. MIT: rm 10-250, March 1995.

Fisher, Thomas. "What Would Mumford Say?", from Progressive Architecture, v. 76, no.10 (October 1995). pp.70-73.

Garreau, Joel. "Cities on the Edge", from Architecture, v. 80, no. 12 (December 1991), pp. [45]-47, 14-115.

Garreau, Joel. Edge City: Life on the New Frontier. New York: Doubleday, 1991.

Goldberg, Jacob J. "Corporate Capital and the Techniques of Modernity - Problems in the Mass Production of Space, Image and Experience", Journal of Architectural Education, v. 48, no. 4 (May 1995). pp. 227-238.

Langdon, Philip. A Better Place to Live: Reshaping the American Suburb. Amherst: The University of Massachusetts Press, 1994.

Kieran, Stephen and Timberlake, James. "Paradise Regained", from Architecture, v. 80, no. 12, December 1991, pp. 48-51.

MacBurnie, Ian. "The Periphery and the American Dream", Journal of Architectural Education, v. 48, no.3 (February 1995). pp. 134-143.

Mitchell, William J. City of Bits: space, place and the infoban. Cambridge, MA: The MIT Press, 1991.

Office for Metropolitan Architecture, Rem Koolhaas, and Bruce Mau. Small, Medium, Large, Extra-Large. New York: The Monacelli Press, 1995.

Rowe, Peter G. Making a Middle Landscape. Cambridge, MA: MIT Press, 1991.

Sorkin, Michael, ed. Variations on a Theme Park: The New American City and the End of Public Space. New York: Hill and Wang, a division of Farrar, Straus, and Giroux, 1992.

Soja, Edward W. "Inside Exopolis: Scenes from Orange County" in Michael Sorkin's, ed., Variations on a Theme Park: The New American City and the End of Public Space. New York: Hill and Wang, a division of Farrar, Straus, and Giroux, 1992. pp. 94-122.

Tschumi, Bernard. Architecture and Disjunction. Cambridge, MA: The MIT Press, 1994.

Venturi, Robert, Brown, Denise Scott and Izenour, Stephen. Learning from Las Vegas: The Forgotten Symbolism of Architectural Form. Cambridge, MA: The MIT Press, 1993.

Venturi, Robert. Complexity and Contradiction in Architecture. New York: The Museum of Modern Art, 1992.

Vienna Architecture Conference. The End of Architecture: Documents and Manifestos: Vienna Architecture Conference. New York: Prestel, 1993.

Wall, Alex. "Movement and Public Space: Equipping the City for a Mobile Culture", Journal of Architectural Education (September 1995). pp. 22-28.

Winner, Langdon. "Silicon Valley Mystery House" in Michael Sorkin's, ed., Variations on a Theme Park: The New American city and the End of Public Space. New York: Hill and Wang, a division of Farrar, Straus, and Giroux, 1992.

Webb, Bruce . "Martin Price: Resonating with the Highway", from Architecture and Urbanism, no. 10 (289) (October - December), 1994. pp. 96-135.

Wright, Talmadge. "The Deliberate Design of Nondescript Architecture: Corporate Ideology and Design" in David G. Saile's, ed., Architecture in Cultural Change: Essays in Built Form and Culture. School of Architecture and Design, The University of Kansas, 1985. pp. 83-90.

site.

Abbey, Lester. Highways: An Architectural Approach. New York: Van Nostrand Reinhold, 1992.

Illinois Department of Transportation: Division of Highways. "Final Environmental Impact Statement and Section 4(f) Evaluation". (Federal Aid Primary Route 340, Interstate Route 55 to Interstate Route 80: Cook, DuPage, and Will Counties). Schaumburg, Illinois: Illinois Department of Transportation: Division of Highways, February 1996.

Illinois Department of Transportation: Division of Highways. [Supplement and Correspondence/ Appendices for the] "Final Environmental Impact Statement and Section 4(f) Evaluation". (Federal Aid Primary Route 340, Interstate Route 55 to Interstate Route 80: Cook, DuPage and Will Counties). Schaumburg, Illinois: Illinois Department of Transportation: Division of Highways, February, 1996.

Illinois State Toll Highway Authority (ISTHA). "Roadway and Bridge Construction: Part I - Roadway Plans". Contract CIP-93-702 (North-South Tollway - South Extension: STA. 519+00 to STA. 596+00). Downers Grove, Illinois: Illinois State Toll Highway Authority, 1996.

Illinois State Toll Highway Authority (ISTHA). "Roadway and Bridge Construction: Part II - Plaza Building / Bridge and Culvert Structural Plans". Contract CIP-93-702 (North-South Tollway - South Extension: STA. 519+00 to STA. 596+00). Downers Grove, Illinois: Illinois State Toll Highway Authority, 1996.

Illinois State Toll Highway Authority (ISTHA). "Roadway and Bridge Construction: Part III - Cross Sections and Standards". Contract CIP-93-702 (North-South Tollway - South Extension: STA. 519+00 to STA. 596+00). Downers Grove, Illinois: Illinois State Toll Highway Authority, 1996.

Illinois State Toll Highway Authority (ISTHA). "Contract Requirements for Contract CIP-93-702" (North-South Tollway - South Extension and 127th Street Interchange: STA. 519+00 to STA. 596+00). Downers Grove, Illinois: Illinois State Toll Highway Authority, 1996.

Mueller-Wille, Christopher. Natural Landscape Amenities: Metropolitan Chicago, 1970-1980. Chicago: Michelin Travel Publications, 1990.

program - related types.

Howe, Deborah A. and Rabiega, William A. "Beyond Strips and Centers: The Ideal Commercial Form", Journal of the American Planning Association vol. 58, no. 2 (Spring 1992). pp. 213-219.

International Council of Shopping Centers. Winning Shopping Center Designs 1994. New York: The International Council of Shopping Centers, Publication Department, 1994.

Pearson, Clifford A. "Building Types Study 677: Retail Facilities", Architectural Record vol. 178 (April 1990). pp. 97-111.

Pearson, Clifford A. "Building Types Study 703: Retail Facilities-Reworking the Mall", Architectural Record vol. 181 (March 1993). pp. 84-93.

Rathbun, Robert Davis, ed. Shopping Centers & Malls / 3. New York: Retail Reporting Corporation, 1990.

supplemental.

Anderson, Will. New England Roadside Delights. Portland, Maine: Will Anderson, 1989.

Anderson, Will. Mid-Atlantic Roadside Delights. Portland, Maine: Anderson & Sons Publishing Company, 1991.

Berger, K. T. Where the Road and the Sky Collide. New York: Henry Holt and Company, Inc., 1993.

Brouws, Jeffrey. Twenty-Six Abandoned Gasoline Stations. Santa Barbara, Ca.: Colorworks, 1992.

Fisher, Joan E., ed. Automobile and Culture. New York: Harry N. Abrams, Incorporated, 1984.

Hess, Ala. Googie: Fifties Coffee Shop Architecture. Toyko, Printing Company, Ltd., 1985.

Huggins, Eleanor and Olmsted, John. Adventures on and off Interstate 80. Palo Alto, Ca.: Tioga Publishing Company, 1985.

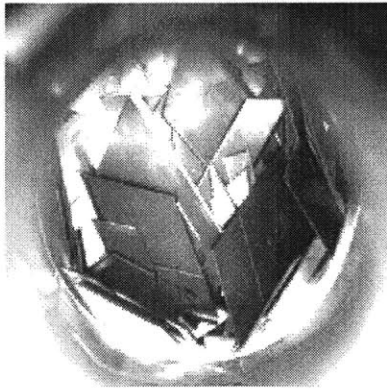
Jackle, John A. and Sculle, Keith A. The Gas Station in America. Baltimore, Md.: The John Hopkins University Press, 1994.

Kerouac, Jack. On the Road. New York: Penguin Books, 1991.

Liebs, Chester H. Main Street to Miracle Mile: American Roadside Architecture. Boston: Little, Brown, and Company, 1985.

Margolies, John. Pump and Circumstance. Toronto: Bulfinch Press of Little, Brown and Company, Inc., 1994.

Vieyra, Daniel I. Fill 'Er Up. New York: MacMillan Publishing Co., Inc., 1979.



to my committee, my family, and my friends,
thank you.

dedicated to nancy.

