REMNANT RIGHTS OF WAY
as a Preservation Issue

by
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REM NANT RIGHTS OF WAY  
AS A PRESERVATION ISSUE  

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ABSTRACT  

Rights of way are corridors of land set aside for movement. The thesis is concerned mainly with those over which people moved. Rights of way become remnant when they lose their original rationale. The street pattern of New Amsterdam and the elevated Loop in Chicago are examples which have received preservationist attention.  

A right of way can be thought of as artifact, alignment, or configuration. Preservation normally deals with artifacts, but the essence of many rights of way is in their alignments or configurations.  

Rights of way can be classed as:  
. networks, in which rights of way are important not individually, but for their place in the whole;  
. embedded rights of way, more historic than the systems of which they are a part; or  
. linear rights of way, which are separate from their context, and are either continuous or discontinuous.  

The value of rights of way comes from history, access, and design. Historical value stems from their place as venerable parts of the built environment and from their significance as historic movement patterns. Access value for remnant rights of way is mainly for pedestrian and recreational circulation. Design value is both in the right of way itself, and in its role as a generator of form.
Abstract

Preservation and re-use of rights of way demand flexibility and clarity of purpose. Interpretation of rights of way provides an opportunity to extend historical awareness across the whole landscape.

Supervisor:

Dennis Frenchman
Lecturer, Director of Environmental Design
At first glance all seems normal hereabouts. But a sharp eye might notice one or two things amiss. For one thing, the inner lanes of the interstate, the ones ordinarily used for passing, are in disrepair. The tar strips are broken. A lichen grows in the oil stain. Young mimosas sprout on the shoulders.

Walker Percy, *Love in the Ruins*
REMNANT RIGHTS OF WAY
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Finally, I want to thank Aimée, and then I want to thank her again.
INTRODUCTION

Rights of way are linear corridors of land set aside for movement. The most interesting ones, the subject of this essay, are for movement of people, like streets, canals, and railroad and trolley grades. Some others, like aqueducts and pipelines and powerlines, were built to move other things. Many of the discussions of this essay will also be applicable to these rights of way, especially to the extent that they can be re-used to move people.

Remnant rights of way are those which have outlasted the rationales for their creation. They may be put to a new use or abandoned, or they may remain vestigially in their original use.

Rights of way are a fundamental part of settlement form, as basic as buildings or land parcels. Remnant rights of way are found almost everywhere. Different kinds of right of way have more in common as remnants than they did when they were created for their respective purposes; it is therefore appropriate to examine them as a generic landscape element. Historic preservation attention has begun to focus on individual rights of way, without yet recognizing them as a category.

This essay is meant not as a prescriptive work, but as a philosophical exploration of a broad and as yet uncharted field. Its aim is to provide a lexicon for preservationists dealing with a new issue.
1. A PROBLEM AT THE BOUNDARIES OF PRESERVATION
1.1 TWO UNUSUAL PRESERVATION CONTROVERSIES

New Amsterdam Streets

The Dutch West India Company laid out the first street plan of what is now New York in 1625 in its Amsterdam offices, and sent it in the hands of Crijn Fredericksz, an engineer, with the first group of settlers. The plan called for a symmetrical town within a five-sided bastion, surrounded by a square moat and orderly rectangular fields. We can only imagine Fredericksz' dismay on first seeing the topography of Manhattan Island, so hostile to his employers' neat geometry.

The idealized Baroque plan was set aside almost immediately, and the town laid out with streets following the irregular shore and ridgelines, conforming to the alignment of drainage channels and absorbing the Algonquins' Wickquasgeck Trail as Broadway. Because New Amsterdam was a walled town, it took only a generation for its street pattern to fill in.

Most of the present streets of lower Manhattan appear on the Castello Plan of 1660, the first extant survey of New York. Almost all the rest date from within a few years of the English takeover in 1664. After 300 years, the map is nearly unchanged. Until 1980, only one block was de-mapped (abandoned, the opposite of dedicating, or "mapping," a street), when the site for the Produce Exchange was assembled in 1880. Beaver, Bridge, Marketfield, Pearl, and Wall Streets
Two unusual preservation controversies

carry English translations of their original Dutch names. Archaeological excavations have recently shown that even building lines have remained nearly constant - streets have been neither straightened nor widened significantly.

In the early 1970s Dollar Savings Bank assembled a site which straddled a narrow section of Stone Street, and which included, on a corner away from Stone Street, a designated city landmark. The landmark was an early 19th century building, but its main significance was that it was believed to incorporate in its foundations the remains of the Dutch Stadt Huys.

Dollar Savings negotiated with the Landmarks Preservation Commission and, with their permission, demolished the building, re-erecting its facade in South Street Seaport, and financing an archaeological investigation on the site. The bank also applied to the City to de-map Stone Street. The city agreed, but had taken no final action yet when Dollar Savings abandoned the project.

By 1980, the bank found a new developer to take over the site, contingent on closing the street and de-commissioning the landmark site (even in the absence of the building, the Landmarks Commission retained control over the archaeological site). The Board of Estimate in 1980 honored its earlier agreements and de-mapped Stone Street. From other quarters, the revived project met with more skepticism. The Landmarks Commission required the most extensive archaeological dig ever in lower Manhattan, and reserved the right to require on-site display of any 2

Discussion based on conversations with Landmarks Preservation Commission staff, in particular Ms. Dorothy Miner, commission counsel.
Two unusual preservation controversies

significant finds. Since the landmark plot was across the site from Stone Street, the Commission had no purview for its chairman's concern about losing Stone Street from the lower Manhattan pattern.

This cause was taken up by the Community Planning Board, which had leverage for negotiation because the developer sought footprint and setback variances from the City Planning Commission. The Board successfully sought public access through the building along the former Stone Street, commemorating its alignment with special paving in the lobby. The street is further commemorated by bronze medallions set in the pavement at each entrance to what is now 85 Broad Street, showing the footprint of the building superimposed on a 17th century plan of the area. As a result of the archaeological dig, pavement markings also indicate the outlines of the Stadt Huys, another 17th century foundation, and an 18th century well.

Beyond these requirements, the developer and his architect did not respond at all to their historic site (ironically, the eventual purchaser of the building, Goldman Sachs, considered the historical commemoration a selling point). The building is a giant hulk, the massing and facade of which make no concession to the street it blocks. The building creates a plaza which destroys the enclosure of Coenties Alley, one of the other old streets bounding the site. Spatial continuity between Stone Street and the building lobby is broken by a half-flight of steps in the plaza. Finally, internal structure and elevator placement bumped the lobby...
Two unusual preservation controversies

and its pavement a foot and a half off the actual alignment of Stone Street, a liberty which some find offensive.

As a result of this controversy, the Landmarks Preservation Commission designated the "Street Pattern of New Amsterdam and Colonial New York" a landmark on June 14, 1983. Almost all of the buildings in the area date from the 20th century, and the landmark excludes them, covering only the street rights of way. All of the streets are public and under the control of the Board of Estimate, which ratified the landmark designation.

The pavement and street furniture of lower Manhattan, like its buildings, are modern; the Commission specifically intends "to regulate the configuration and presence of these streets, rather than to deal with matters of materials, paving, and grading." In preserving only alignment, with no concern for artifact, this landmark designation appears to be unique in the country.

New York City has one of the strongest landmark laws in the United States; the lower Manhattan street pattern is well protected. Even if a subsequent Board of Estimate, not sharing the current Board's appreciation of the street pattern, should vote to de-map part of it, they cannot remove its landmark designation. The de-mapped, privately-owned right of way would remain a landmark, and the Landmarks Commission would retain design control over it. The Commission could require design accommodations, as at 85 Broad Street, or presumably even require that it remain unbuilt and open to the public as, in effect,
What should the Landmarks Commission do with its extraordinary control over this street pattern? If it entertains future requests to de-map blocks, what can it learn from 85 Broad Street? What are the qualities it should seek to preserve? How well does an indoor space re-create a street? Should the facade and massing of the building be manipulated to contribute to the effect? How much of past form should be commemorated through such devices as pavement markings? How self-conscious should they be?

On the other hand, perhaps the Commission should refuse to consider these requests at all, aiming to keep the street pattern intact (this appears to be its intent). Perhaps it should seek to expand its purview from two dimensions to three, working with the City Planning Commission to establish a required building line at the right of way edge, to avoid future plazas and setbacks destroying the spatial sense of the streets.

Finally, if it is appropriate for the lower Manhattan street pattern to be preserved free from all street closings, are there other streets in New York which, while undeserving of this rigid protection, could merit the more flexible kind of control already exercised at 85 Broad Street? How much of the city's street pattern is worthy of preservationist attention?
Two unusual preservation controversies

L Loop Shuttle (from 1977 Chicago Transit Authority map)

Chicago Loop L

"The Loop" is downtown Chicago, and it is the "Loop L" ("L" is Chicagoan for "elevated") which rumbles around and defines "The Loop proper." For a few years the "L" was also the L-shuttle which ran clockwise around and around the Loop.4 Within downtown, the Loop is a bagel-shaped neighborhood on Wabash, Lake, Wells, and Van Buren Streets, underneath the L itself and taking its character from the tracks. "Establishments bearing 'Loop' in their names are as far as four miles north of Madison Street and 11 miles south of it," a Chicago Tribune writer discovered. "The word is almost interchangeable with Chicago."5

The name does not come from the current elevated circuit, but from an earlier loop of street-level cable cars, only three blocks square instead of the present five by seven.6 Between 1892 and 1895 three rapid transit companies opened elevated lines radiating from downtown Chicago, each with its own terminal. Two years later the Union Elevated Railroad tied together the city's transit system with "the Union Loop." The demise of cable cars shortened its name to "the Loop."7

The Loop L was hated before it was loved. A visitor from France wrote, "The sky is of iron, and perpetually growls a rolling thunder. Electric lights are emitting burning sparks; below are wagons of every kind, whose approach cannot be heard in the noise."8 From the moment it opened, it inspired

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Two unusual preservation controversies

The power of the Loop in the Chicago imagination was never clearer than in the assumption, from the beginning, that any subway replacement would also be a loop. The 1968 Central Area Transit Plan, which until recently served as the system's blueprint, called for subways exactly replicating the loop on three sides, moving the fourth side one block to Franklin Street to once again expand the rectangle. This seemed perfectly natural in Chicago; only when the plan reached the Urban Mass Transit Administration in Washington for funding did outside transit planners comment on the operational peculiarity of the configuration and the expense of tunneling beneath an operating elevated track.

A more subtle indicator of the meaning of the Chicago Loop is that this plan did not incite any widespread movement to preserve the elevated structure; that came later. By the mid-1970s, the Chicago Urban Transit District (CUTD) realized that it could not raise the money for the whole system it

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Two unusual preservation controversies

wanted. The plan was stripped down to a single north-south line. Two legs of the Loop L would be taken down, with the rest of the demolition put off to an uncertain date. There would be no elevated loop and no subway loop.

From this period dates the effective movement for retaining the Loop L. It was motivated by a newfound affection for the structure itself, by a growing realization that the available money would be wasted if it was all spent to replace existing lines, and by a feeling that Chicago should have a loop somewhere in the Loop.

Architect Doug Schroeder made the last point. "By God, you trifle with your urban images at your peril. We're not Des Moines or Kansas City; we're Chicago, and it's because of the lake and the Loop." Schroeder was arguing for the structure itself, but Chicago's ambiguous argot makes it difficult to distinguish among the artifact, its configuration, and the environment of which it is a part.

Schroeder was one of three on a Chicago AIA (American Institute of Architects) task force which prepared its own alternative to the official transit plan. The AIA proposal called for retaining the elevated tracks, with welded rails set in sound-absorbing beds, and new cars with acoustically absorbent bellies and axles divided to stop cornering squeal. Stations would be modified to open up views at cross streets (unreconstructed L fans refer to them as "gates to the city center"). The rest of the structure would be stripped of ninety years' encrustations and, in

11 Associated Press
Two unusual preservation controversies

the words of task force leader Harry Weese, painted "a lustrous United Parcel brown."14

A consultant to CUTD proposed building a new elevated structure of "slim, white, tubular steel columns ... One track would be higher than the other, and a sloping glass roof between the tracks would turn Wabash Avenue into a covered galleria-like shopping mall."15

Weese raised the stakes in 1978 by nominating the structure to the National Register of Historic Places. Federal funds would be denied to any project endangering the L, once it was listed, ruling out UMTA money for demolishing it. The city could conceivably find itself with a new subway and a trainless Loop L.

The nomination divided the Chicago preservationist community. The private Landmarks Preservation Council took the unusual step of actively opposing National Register listing.16 Pursuing more traditional preservation goals, they wanted to remove the elevated so that individual buildings which pre-dated it could be better appreciated. In spite of a state recommendation against National Landmark status, the U.S. Department of the Interior determined the structure eligible for National Register listing.17

This determination, even without formal listing, set in motion a procedure in which the federal advisory Council on Historic Preservation began meeting with UMTA to explore preservation options. Federal protection would allow, in Weese's words, "modi-

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17 Moorhead
Two unusual preservation controversies

"rivets tracery"

fications needed to keep the landmark viable so long as they do not destroy its essence." But what is the essence of the Loop?

Is it the existing structure, with what Weese's nomination calls its "classical motifs," "vaguely Italianate" stations, and "rivets tracery" which "ranks with the original Ferris Wheel and the Eiffel Tower"? If so, does it need trains running on it, or could it be re-used for something cleaner and quieter? Is the essence an elevated transit line running on the current right of way, which could run on a new white structure just as satisfactorily as on an old brown one?

Is the Loop simply a transit configuration at the center of the system, which could be underground or above? If so, is it important that it run under Van Buren, Wells, Lake, and Wabash, for nearly a century the boundaries of Chicago's "iron collar"? Or is the Loop an evolving figure which, having already changed its alignment once, would maintain its essence perfectly well through a further enlargement?

Has the Union Loop finished its job of conferring identity on downtown Chicago, accomplishing it so well that it can now disappear from the scene? Should it at least linger as a ghost, like the outline of Stone Street in New York? Or, as the Chicago Tribune editorialized, is it enough that "whatever flavor it may have lent the city can be preserved in photographs"? Perhaps even its memory would be a handicap, directing to an overcrowded core attention and development which ought

Two unusual preservation controversies
to spread across the river and along the lakefront.

Finally, how much difference should the Loop's significance make in the pragmatic billion-dollar decisions shaping a whole transit system?

The longer he waits, the more expensive she's going to be!

Chicago Tribune, 3.31.1974
(the Tribune did not need to identify Mayor Richard Daley)

The fate of the Loop L appears to be settled now, without really answering most of these questions. The Transit Authority has decided, for financial reasons, to save the L: it is there and it works. Rehabilitating it will cost something less than $100 million; just the first leg of the Franklin Avenue subway would have cost at least $400 million. At last report, work still has not begun.
1.2. PRESERVATION PHILOSOPHY AND RIGHTS OF WAY

The rest of this essay is devoted to ways of framing and answering questions like the ones raised by Stone Street and the Loop L. An important first step is to recognize that all rights of way can be described at three different levels of abstraction:

Artifact - the product of artifice, the tangible object made by man. The artifactual right of way may be a complex engineering work like the Chicago elevated, or it may be a simple beaten earth path. A few no longer exist as artifacts at all, like the interrupted stretch of Stone Street or an earthen path lost to wilderness.

Alignment - the right of way's location in space. Alignment may be fundamentally an abstract creation, laid out in a document and then mapped onto the ground. It may be a byproduct, defined or definable only by measuring the artifact. In a case like the New Amsterdam streets, it is a combination, first evolving with the artifact, then defined and set to paper, and now operating as a legal abstraction.

Configuration - the right of way's topological essence as a connection. Any geographically-fixed object exists as artifact and alignment; rights of way are distinguished by their configuration as connections, and their continuity between the points they connect. The simplest rights of way are reduced to this essence: a path can take one route or another; it could trample this or that.
Preservation philosophy
and rights of way

patch of earth, but if it ran between different
points it would be a different path. The Loop L,
infinity more complex as an artifact, is just as
simple as a configuration, connecting certain other
routes in a certain way.

Rights of way are artifically meager compared
to buildings, and the artifact is often not espe-
cially historic. The artificial street dates from
the last resurfacing of asphalt, the last repouring
of sidewalks, and the last relaying of curbstones.
Like the Japanese temple at Ise, rebuilt every
twenty years, these processes retrace a much older
form.²¹

Alignment and configuration are abstractions, and
this brings problems for preservation thinking which
has grown up around the tangible. Preservation
philosophy places great value on re-using original
fabric, and making replacements with identical
materials; a tremendous amount of preservation
orthodoxy is concerned with which substitutions may

²¹ Kevin Lynch, What Time is This
Place? (MIT, 1972), p. 34.
be appropriate under what conditions. Issues of form are dealt with only in the context of preserving some original fabric. Without original fabric, the process is considered "replication," and is frowned upon in any but exceptional circumstances. 22

Landscapes are an exception. Their materials have finite lifespans during which they grow and change. A formal garden is not preserved by nursing its plants into senescence, but by continually replacing them to maintain the design of the beds. Landscape preservationists have been forced to consider material and alignment separately and on an equal footing.

Preservation of vernacular rural landscapes has even forced consideration of something like configuration. Rural landscapes grow and change in different ways than landscape architecture. Their historical integrity is determined not by reference to an original design, but by their conformity to a normative pattern, a concept taken from cultural geography. In a living landscape, fields and woodlots and cartways will shift location. So long as the essential configuration remains, there is room for free variation with no loss to integrity.

Historic districts in general raise the same kinds of issues as rights of way. Districts must be delineated, a process which often relies on street configuration or other patterns as much as it relies on architectural artifacts. Proposed changes within historic districts are judged by their relationship to context, including streetscape scale and rhythm, building setback lines, and circulation patterns. These are less properties of buildings than of rights

of way; rights of way are context.

There is no reason for preservation to shy away from issues of alignment and configuration. The rationales put forward for preservation apply with equal force to alignment and continuity as to artifact. Those rationales can be divided into two categories, past value and present value.23

Past value comes from historical events, or from the diffuse sense of historical continuity which we take from old things around us. Only self-conscious monuments possess any past value when they are built; other objects accrue it as time goes by. It is value from the past.

Present value, such as architectural quality, comes from properties of the object itself judged in its modern context. It is value in the present and for the present. It may be ahistorical; for example, preservationists since 1973 have pointed out the energy savings of recycling old buildings. In theory present value is independent of history; in fact it changes as our ideas change.

Present value, unlike past value, can be replicated in a new object. Nonetheless, we value the original more. It is the "prototype," explains James Marston Fitch, from which we learn to re-create those qualities, and we save it because successive generations might see in it lessons we overlooked.24

Street patterns, canals, trails, railroad and trolley routes have great historical value from the past, aesthetic value and re-use potential in the

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24 Fitch, ch. 1, pp. 1-12.
Preservation philosophy and rights of way

present, and are useful as prototypes for the future. Their past value will be described in chapter 3 under the heading History, their present value under Access, and their prototype value under Design. All of these values are as likely to reside in the alignment and configuration of a right of way as in its materials, and are often diminished little by successive replacements of materials. Preservation philosophy, which has evolved a great deal to govern the design of new buildings in historic districts, can easily be adapted to encompass the spaces and paths between buildings.
2. A SURVEY OF RIGHTS OF WAY
2.1. A TYPOLOGY OF RIGHTS OF WAY IN CONTEXT

We are accustomed to speak of canals, streets, railroad and trolley grades, referring to rights of way by their original uses. Once they are abandoned, these may have little continuing relevance. Remnant rights of way may be usefully grouped, by their present context, in four categories: networks, embedded rights of way, and linear rights of way, either continuous or discontinuous.

Networks

The lower Manhattan streets are a right of way network. Networks are patterns in which individual rights of way are not particularly important in themselves; their significance is in the aggregate. The threat to Stone Street was important because it was in fact a threat to all the minor streets of lower Manhattan.

Street and alley patterns are the main examples of networks, and the most common of all kinds of right of way. Streets are unique in that, with few exceptions, they are public. Only a dirt road in a rural area becomes a remnant merely through disuse; in urban areas abandonment requires an explicit public decision. Preservation of streets must be planned while they are still in the vestigial use stage, not after they are abandoned. Streets are the oldest rights of way, and the ones most central to the lives of communities. They are the rights of way
A typology of rights of way in context

with by far the greatest historical value, though they are seldom treated that way.

Among other networks are:


26 Vineyard Open Land Foundation, Martha's Vineyard Byways Study (1976), pp. 12-17.

Footpaths, such as the dense network of ancient paths from field to field throughout rural England. The byways of Martha's Vineyard are an American example.

Designed pedestrian ways, such as the ones in Olmsted, Jr.'s Roland Park, Baltimore, subdivisions, or in Radburn, New Jersey. Many of them are modeled, directly or indirectly, on English country footpaths. These networks were usually designed simultaneously with the pattern of streets around them, and they are best understood together.

Hiking and cross-country ski trail systems are often amalgamated out of remnant pieces of other rights of way, such as logging roads or the carriage paths of Mt. Desert Island. Even
A typology of rights of way in context

network of disparate origin: carriage roads and hiking trails on Mt. Desert Island (detail from Appalachian Mountain Club map)

when they are of disparate origin, they function together as networks.

Embedded rights of way

Chicago's Loop L is an embedded historic right of way. Embedded rights of way are the opposite of networks. They are individual rights of way different from, and more historic than, the system of which they are a part. Embedded rights of way are governed by the criteria of their system, to which their historical qualities are usually irrelevant. In this sense they are remnants, even though they may remain actively used.

The significance which separates embedded rights of way from their systems may stem from some design or other difference which distinguishes them within the system, or it may stem from an origin outside the
A typology of rights of way in context

Chicago's Loop L originated as part of the transit system, but is distinct from it because of its design and its function as a hub for the rest of the elevated lines. Parkways differ in design from the rest of the highway system, and they may also have origins outside it, in earlier recreational networks.

Embedded rights of way with origins outside their systems include highways which re-use the routes of earlier roads or trails. If the Loop were rebuilt as a subway it would fall into this category. Re-use may be purely pragmatic, or it may be historically self-conscious. The Natchez Trace Parkway, along the old flatboatmen's trail from Mississippi to Nashville, is an example of a linear historical monument, an intentionally-created embedded right of way.27

Continuous linear rights of way

Linear rights of way are separate from the networks (normally streets) around them. Continuous linear rights of way are the remnants often re-used as linear parks - railroad grades and canals.

Linear rights of way intersect one another, but they do so at a scale fundamentally different from right of way networks. The intersections of networks are a matter of design; the intersections of linear rights of way are a matter of geography.


Railroad grades are the archetypal linear rights of way.
A typology of rights of way in context

way, if only because there are so many thousands of miles of them. They are well-engineered, which makes them physically durable, and eminently suitable for re-use.

Canals and aqueducts were the earliest built, and often the earliest abandoned of the engineered rights of way. Water makes them compelling, and it makes continuity more important for them than for other rights of way. Because they are often bodies of water where water would not naturally be, and because maintenance on many ceased so long ago, canals are frequently the most decayed of rights of way, and thus often fall into the next category.

Discontinuous linear rights of way

A discontinuous linear right of way is separate not only from the network around it, but also from pieces of itself. A right of way may be discontinuous from the time of its origin, or it may start out discontinuous and then be dismembered.

If discontinuity is a matter of a few small gaps, issues of preservation, re-use, and interpretation will tend to focus on overcoming its gaps in order to treat it as continuous.

If, on the other hand, a discontinuous right of way consists of only a few small pieces widely separated, then attention will tend to focus on these segments, ignoring the gaps.
A typology of rights of way in context

Historic trails are often discontinuous with very small extant segments, although the alignment of the whole trail may remain as an embedded right of way in the highway system. On the Natchez Trace, preservation focuses on the intermittent original trail segments, while interpretation is spread along the whole parkway.

Trolley grades are discontinuous far more often than railroad grades. They went on and off of streets, so that exclusive trolley rights of way were usually discontinuous to begin with. Trolleys did not require the heavy engineering of railroads, so their grades are physically less durable. Street-car abandonment often coincided with street widening, so that there are few traces of the median strips and other varieties of shared right of way devised to get the trolley out of the roadway itself. Everyone loves trolleys and trolley lines are almost all within living memory, so the practical historical value of these traces is considerable.
2.2. WHAT RIGHTS OF WAY ARE

Legal form

Rights of way are a legal concept written on the landscape. Definitions and delineations of property are a template to which the built environment is fitted. When activity ceases, this template remains. It is composed of fee simple rights of way and various kinds of easements. Which legal concept defines a particular right of way influences its potential for re-use and its durability as a remnant.28

Fee simple - a right of way is owned outright as a parcel of land. Fee simple rights of ways are easily dismantled, because they can be sold off piecemeal. They are relatively rare, because fee purchase is the most expensive way to assemble a right of way.

Easement - literally, a "right of way;" fee title remains nominally with the land's original owner. Easements are the most common right of way form. Streets are public easements.

Legal status of an abandoned easement can become murky. Long ago a railroad may have purchased a right to lay tracks and run trains; does the easement's wording allow it to be used instead by a bicycle trail or sewer line? It clearly does not allow the railroad to dispose of the land for purposes other than a right of way, which is why these

What rights of way are pieces of land can sit idle for so long.

Easement with reversionary rights - a provision that, if the easement is abandoned (a change of use may be construed as abandonment) its title reverts, either to the present owners of the property from which the easement was taken, or to the heirs of the original owners from whom it was taken. Streets are an example of the first - an abandoned street is split down the middle and becomes part of the abutting parcels. Some railroad grades are examples of the second, which makes their title virtually impossible to clear. This makes them extremely durable as parcels of land, and thus as marks on the landscape, but it can be an impediment to re-use.

Assembly premium and the right of way life cycle

Rights of way are created by assembly or by subdivision. The process of assembling land creates an "assembly premium value" which real estate analysts suggest is two to three times the normal square foot value of the land. This is a dollar value of continuity. In terms of information theory, it is a cost of imposing order on the randomness of the prior pattern. This premium value is lost when an abandoned right of way becomes discontinuous.

Creation of a right of way by subdivision means that there was no prior pattern, or that any prior pattern was obliterated. One way or another, the right of way was laid across a tabula rasa. We normally think of subdivision as a relatively small-scale...

What rights of way are process, from the scale of the single block up through relatively large developments, with the upper end of the scale being new towns. But subdivision also describes the process by which the transcontinental railroad rights of way were laid out, across thousands of miles of what was, legally at least, *tabula rasa*.

When a right of way is created by subdividing, there is no premium cost at that time; instead, the right of way itself creates value (at least, its creator hopes it will). To the extent that it is successful, it retroactively increases its own assembly premium value, what it would cost to reproduce the right of way now that things have grown around it. Failed subdivisions create no value.

A right of way may be considered remnant when its original (or successor) use continues, but not at the same level. The use no longer justifies the assembly premium of the land.

A right of way may be abandoned when use falls off to the point where it no longer justifies even the raw value of the land; the right of way can be sold at a profit. It may be abandoned because some circumstance has forced the use to again justify the land's assembly premium. For example, a railroad grade severed by a highway will be compensated according to its assembly premium, but the railroad's owners will not invest the money in a relocated line, forcing them to re-assemble land, unless the use justifies it. For another example, a downtown alley created long ago by subdivision must suddenly justify its assembly premium when the land on both
What rights of way are sides of it comes into the same ownership, and the municipality is amenable to alley abandonments.

Most often, in the case of major transportation rights of way like railroads, trolleys, and canals, abandonment has little to do with the economics of the right of way, and comes about solely because operation itself has become uneconomical.

Once the right of way is abandoned, it may be put to a new use. That use will not have to pay the assembly price of the right of way - a fact which is responsible for several new transit lines and almost every off-street bicycle path in the country.

In the absence of a formal re-use, the right of way is likely to be taken over by informal users, often continuing uses begun when the right of was still in active use for its original purpose:

De facto alternative access - if there is demand for a use where the right of way goes, and it is not thoroughly blocked, it will be used. Often these uses are ones like snowmobiling and off-road motorcycling, which are not accommodated elsewhere.

Wastelands - Unused land is popularly identified with garbage dumping, drug dealing, and other marginal activities, rather than with any positive role, but children need unorganized space. Rights of way, with their properties of access, serve this need well and often. 30

Appropriation by adjacent users, with or without the legal right to do so. Some have a use for which

What rights of way are the right of way will serve (such as parking), some are hoping that an extra-legal appropriation will eventually ripen into title by adverse possession, and some are interested only in controlling access to the land so that it serves as neither a waste-land nor as alternative access, which is seen as the same thing.

Finally, rights of way decay. How they decay depends on the fabric around them:

In intense development, such as a downtown, the right of way is quickly cannibalized and absorbed into development. This is land which is worth enough to overcome any legal impediments to re-use (in effect, a premium of disassembly), in an area where re-uses are continually going on. Typically the only remnant rights of way in dense urban areas are vestigial streets, and even these, if recognized as vestigial, are often absorbed into land assemblies for redevelopment.

In areas of no development, such as a wilderness, the right of way is subject to decay of its physical form; its legal form is of little importance here. Like the urban right of way, it is absorbed back into the fabric, though through ecological rather than economic processes and over a much longer period.

In areas of moderate development the area around a right of way continues to change, but the demand for land is not great enough to overcome the premium of disassembly. A right of way then acts as an edge to development, while itself remaining unchanged.
What rights of way are

These are the circumstances in which rights of way are most durable, because they remain even after their physical traces have eroded.
The early history of right of way preservation blends in with the history of their persistence in the landscape and their re-use for entirely pragmatic reasons. Canals were often adapted as mill raceways; in Rochester and New Haven they were used as railroad beds and in Schenectady and Newark as streets. Abandoned railroad grades (which have been around in small quantities since the earliest railroads) have often been used as roads. British engineers in the 1950s seriously considered converting most of their rail system into highways.  

The Morris Canal in New Jersey was proposed as a linear park as early as 1912. It is not clear how much this owed to appreciation of the canal's history and how much to the pragmatic tradition, taking advantage of a preassembled corridor of land well-suited to the new idea of interconnected park systems.

Widespread awareness of the historical properties of rights of way has two origins. The first was attention given to long distance trails and roads, which can probably be traced to the heightened interest in local history following the 1876 Centennial.

The second source of historical awareness was the growth in touring made possible by trolleys and automobiles. Interurban lines promoted the historic sights along their routes in order to increase off-
peak ridership. The automobile, beginning its career at the turn of the century as a pleasure vehicle, was quickly served by rural guidebooks. Both trolley and auto guides were concerned primarily with buildings and sites, but they paid a great deal of attention to roadways, as the medium for the tours, as significant elements in all the scenes, and as historic features in their own right.

This was the beginning of a long ambivalence toward historic rights of way. Preservation efforts focused on buildings, because buildings were endangered. Early street patterns have long been recognized as significant, but have only recently seemed threatened. Important street patterns in Savannah, Annapolis, and the Back Bay of Boston have been preserved as a corollary of saving the buildings there.

In recent years attention has come to rights of way themselves by a number of routes. Gentrification brought people to the mews of New York, lanes of Savannah, and alleys of Philadelphia, where the intimate streets were clearly as important an attraction as the buildings on them. A one-time interurban line in 1965 became the Illinois Prairie Path, apparently the first such railroad right of way park; within a decade there were dozens.

These linear parks and trails came from the pragmatic tradition of re-use, but they were motivated at least as much by appreciation of the history of rights of way. The Chesapeake and Ohio Canal National Historical Park, established by Congress,

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33 John R. Stilgoe, Metropolitan Corridor (Yale, 1984), pp. 303-04.
in 1971, would have been re-used as a vehicular parkway until Supreme Court Justice William O. Douglas led a walk to call attention to the historic canal itself.\(^{35}\) As preservationists expanded their purview from architecture to other engineered structures, attention fell on canals, aqueducts, and especially bridges, and so to the routes on which these structures lie.

3. THE VALUE OF RIGHTS OF WAY
Why save rights of way?

The answers fall into three categories:

**History** - the traditional preservation rationale. Rights of way are imbued with historical value, in ways different from most structures.

**Access** - the functional reason for the existence of rights of way, and the function served by most right of way re-uses.

**Design** - both the design quality of the right of way originally, and the redesign potential inherent in its role as an organizer of space.
3.1. HISTORY

Movement patterns

A person's understanding of the environment comes largely from moving through it. Our mental maps are best developed for those regions we navigate regularly. They are less definite where we travel only infrequently, and they are very fuzzy for those places we know only by hearsay, whether on the other side of the globe or the other side of the tracks.

Our perceptions are shaped at least as much by how we travel as where we travel. A forty mile trip seems very different on a modern highway than it did three hundred years ago from a muddy and rutted dirt track; a seventeenth-century inn, no matter how accurately restored, cannot appear the same glimpsed from a passing car as it did coming into view after a harrowing day's walk.

Since we understand the environment by moving through it, moving in historic ways will help us understand historic environments. To know the world of our forebears, we must see it as they did. We can do this literally if we maintain the corridors along which they moved.

Paying attention to historic movement patterns can balance the preservation movement's bias toward events and origins, responsible for "that misguided view of history which sees it as consisting of
sharp peaks of achievement separated by long, empty durations.\textsuperscript{36} Because the significance of rights of way lies mainly in their use over long periods of time, they fill those empty durations and give us a view of historical continuity.

Modes of travel

Rights of way by themselves tell us about spatial structure; they throw light on the places around them. When a preserved right of way is combined with the means to re-live the experience of moving through it, it tells us about temporal structure, too; it enlightens us about the historic period from which it dates.

There are many ways of making available historic experiences of travel. They range from keeping a functioning transportation system like the Chicago L, to recreating one as an excursion ride, like the mule-drawn boats on the Chesapeake and Ohio Canal, to simply allowing people to re-create the experience for themselves, as they do on historic trails or the streets of old New Amsterdam.

Rights of way in the environment

Many contemporaries of turnpikes, canals, and early railroads knew these modes of transport not by travelling them, but by their rights of way, the same as we know them today. Turnpikes and canals were foreign intrusions into the landscape; they were in general the first landscape features not

\textsuperscript{36}Lynch, What Time is this Place? p. 31.
controlled by the communities around them.

They looked artificial, unlike the local landscape. As one turnpike builder put it in 1806, "The straightest line is a straight line."37 The New London Turnpike, stretching for miles through southern Rhode Island as a straight dirt road, is as strange to us today as when it was built; few modern rural highways are without bends and curves. It is as if we are barbarians coming across a Roman road, and it is perhaps a glimpse of a similar landscape, where the reassurance of visible order was as important to a traveller as more functional benefits such as grading and drainage.

Railroads are still more striking:

By its tracks did men know the fierce directed energy of the iron horse. Unlike lesser creatures that stumbled through gullies and struggled up steep hills, the iron horse molded topography to suit its particular demands. A hill cut through or a ravine filled over - or a mountain tunneled - objectified the immense power of the absent locomotive.38

This power is visible not only during the temporary absence of the train, but even during the permanent absence of tracks. In the quiet of an abandoned railroad grade grown back to woods, contemplating the crisp, level fissure through the landscape, we best can appreciate the shock of mechanization in rural 19th century America.


38 Stilgoe, *Metropolitan Corridor*, p. 141.
3.2. ACCESS

Pedestrian access

Pedestrian circulation requires a dense web of paths. People are smaller than cars. One of the "conditions of city diversity," according to Jane Jacobs, is that "most blocks must be short; that is, streets and opportunities to turn corners must be frequent." The mix of foot traffic permitted by frequent intersections supports a variety of street life and storefront uses, and this in turn makes walking attractive.

Walking in the countryside is equally dependent on a dense network of paths. All hikers know the preference for a circuit route; retracing steps puts a great burden on the destination to keep the hike from seeming pointless. More casual walking for enjoyment or transportation requires a lot of paths in order to serve origins and destinations well. The English countryside, unlike most of America, evolved around walking as the main mode of travel, and its system of footpaths is much denser than its roads.

Alternative access

Rights of way do not merely provide access in the environment; they provide access of a variety of types. This variety is important in itself. It

provides flexibility and therefore adaptability in our movement patterns, and gives us choice and control.

Kevin Lynch suggests that an important feature of environmental accessibility is "explorability." On foot, the typical American metropolitan environment is not explorable enough. Private property confines access mainly to streets; we know streets already from our cars, and even if we find that on some of them the experience of walking is infinitely richer than driving, we are seldom able by walking to discover anything really new about them. A park is accessible, but it is rare to find a park, like Boston's Emerald Necklace and Charles River Basin, which actually leads us to new territory to explore.

It is important for many reasons that the landscape, at both a neighborhood and metropolitan scale, open up paths of alternative access. They make for explorability, both to help kids' development and to satisfy grown-ups' curiosity. They make for variety, so that on that glorious May day when it would be well worthwhile to walk the long way, there is a worthwhile long way available.

Remnant rights of way can provide access which is alternative in yet another sense. Exploring some of these rights of way on foot, free to stop and stare and change direction, is the opposite of the original experience of travelling on them. It is the fulfillment of a wish felt by many, expressed by Robert Frost in "A Passing Glimpse:"

I often see flowers from a passing car
That are gone before I can tell what they are.
I want to get out of the train and go back
To see what they were beside the track. 41

We see the same impulse in the eagerness with which people explore superhighways not yet opened to traffic. They are free of the rules which later will keep them moving. We are accustomed to viewing railroads and highways through motion; only hoboes and hitch-hikers know these alien environments standing still. The rest of us have a secret thrill feeling the strangeness of a banked curve under our feet, or seeing the railroad as a piece of static engineering which we can pat with our hands and crane our necks at; it is the thrill of walking around on stage after a play.

Many of the landscapes around railroad grades are more attractive for exploration now than they were from trains.

Passengers on trains racing through the industrial zone glimpsed astonishing structural and mechanical forms backlit against the sky or the glow of open-hearth furnaces.... by the early 1900s Americans had learned to marvel at their fleeting visions of industrial enterprise. The marshes of northern New Jersey, the valleys north of Pittsburgh, the southeast approach to Chicago struck many Pullman passengers as extraordinarily intriguing, beautiful places. Refineries, steel mills, locomotive plants, coal breakers, and mysterious factories combined beyond the plate glass windows to make an awesome landscape of built forms. 42

This audience's appreciation depended on its plate glass windows; "vulcan's workshop" was not a place for the uninitiated to wander around on their own.

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42 Stilgoe, Metropolitan Corridor, p. 78.
Deindustrialization has since taken much of the work out of these workshops, especially along the railroad lines which have been abandoned. The mystery of technology is here compounded with the romance of ruins. The same aesthetic which lets an abandoned gasworks stand as sculpture in a Seattle park also makes the vine-covered industrial corridor a potential recreation attraction, especially if it can be viewed from the safety of the right of way.

Gasworks Park, Seattle

Public access

The most fundamental reality of rights of way is their legal existence as, literally, rights. Much of the fine grain of movement patterns is coming under private control. In cities atria and arcades, and in suburbs shopping malls and condominiums and office park driveways, are all taking the place of
public streets. Fewer and fewer people step out of home or work into public space.

There are widely acknowledged reasons why this is considered a boon to the public - it permits year-round public life in northern climates, for example, and it puts public maintenance costs onto private owners. There are less obvious reasons why it is an alarming trend. Privately controlled spaces are managed for private benefit, which often conflicts with real diversity (one looks in vain for a cleaner or shoe repair shop in a downtown mall) and real public access (few gallerias are available as shortcuts after a late movie or late night at the office).

As in other American cities, there are probably more private armed militias in downtown Boston than in medieval Bologna or modern Beirut. Concern for personal security is apparently inevitable, but there is a tendency, given tight control over a space, to take advantage of that control for more than preserving the peace. In several of the interior spaces which are a daily part of the public realm for tens of thousands of Bostonians (and tourists who come to explore Boston's heritage of individual liberty), security guards prevent the taking of unauthorized photos. The manager of The Corner mall explains that amateur photography is "an invasion of the privacy that we like to guarantee our customers." He does not define how the concept of privacy in this gregariously public space differs from privacy on the sidewalk outside.

Around the country security guards eject teenagers,
minorities, and religious and political proselytizers from malls and parking lots. Courts examining these actions are divided in their opinions; in many states they have decided that citizens have no rights of free speech and association in these new private town commons. However, in the tension between public space and private control, few episodes are decided in the courts. The word of an armed security guard is usually conclusive.

Minneapolis, with its northern climate, has developed probably the most extensive private indoor circulation system of any American city, its famous skyways. Issues of private control have recently come into sharp focus here.

Having a whole circulation system under private control has caused problems in Minneapolis for some time. Most noticeable is the confusion stemming from individual opening and closing times set by
owners of each segment. Confusion is compounded by difficulty of orientation and awkwardness of connections resulting from fragmentary development. These are being addressed by belated public involvement in planning the system, as it grows to surpass streets as the primary means of pedestrian circulation. 45

Now a thornier control issue has arisen. The hub of the skyways is Crystal Court in the IDS Center, designed by Philip Johnson and opened in 1973. Crystal Court is Minneapolis' Piazza San Marco, the central public space of the city. Unlike Piazza San Marco, it is in private hands. "It's not a public park," explains one City Council member, "even though people think of it that way." 46

The IDS Center was recently bought by a new owner, rumored to be planning to "alter Crystal Court to bring in pricier shops and discourage 'hanging out'." 47 The renowned success of IDC Center as a "model for the humanistic skyscraper" is given little value in its owners' calculus. No one expects to lose all public access to Crystal Court; the conflict is over more subtle details of design and use which will determine whether the space plays its accustomed role in the life of the city. The Minneapolis Heritage Preservation Commission in 1984 recommended that IDS be designated a city Heritage Site (the Minneapolis equivalent of landmark protection). The designation was tabled by the City Council, nervous about the implications of "instant landmarks," but with few other tools for controlling the new heart of their city.

Minneapolis' twin city of St. Paul has, by contrast,
built the country's second-largest skywalk system as city-controlled envelopes through building interiors - in effect, public rights of way. The city designs them, sets their hours of operation, and chooses their "interior street furniture." St. Paul bought that control at great expense, reimbursing developers for bridges, escalators, and other construction costs, and patrolling the whole system with city police.48

St. Paul's system is easier to understand than Minneapolis', and is available from early in the morning to late at night. It has been a great commercial success. While it is difficult to draw direct conclusions from a comparison of the two systems, perhaps the most telling indication is that Minneapolis is now attempting to follow St. Paul in design coordination, master planning, and operation.49 It is not easy, because Minneapolis does not have the same level of control over its skyways.

Access is not especially meaningful - is not a worthy object of public policy - unless it is public access, controlled by and guaranteed to the public. Public space is too important to leave to private owners.

48 Morphew
3.3. DESIGN

Potential for re-use

Just as recycling buildings conserves the energy put into their construction, so a recycled environment is in general more efficient than a rebuilt one. It is important to keep this in mind, because an argument often made against preservation, and in particular preservation of rights of way, is that it is inefficient to impose too many constraints on environmental change. The argument has a core of truth; adding any new value to a decision to a decision will force trade-offs with the old ones. But only in the last hundred years or so, with the mechanization of heavy construction, would anyone apply the term "efficient" to widespread rebuilding.

The efficiency of recycling is more profound than the mere thermodynamic sense of saving earthmoving fuel and building materials (for many rights of way which are not heavily engineered, these savings may be small). The necessity of land assembly greatly reduces the efficiency of new construction. Development around existing rights of way has already taken them into account in its orientation. The yards of houses next to trolley grades were laid out for privacy; homeowners need make few changes when the grade is converted to a bicycle path. Maintaining stability in the environment avoids externalized costs of disruption and adjustment.
Design

Scale and pattern

Beyond their own presence, rights of way have subtle effects on the rest of the environment. They form boundaries of land cells, and determine the orientation of development within those cells. The pattern of landscape or townscape is mainly the pattern of rights of way there. ⁵⁰

rights of way as generators of form: Quaker Lane in downtown Boston

The lower Manhattan streets impose a pattern different in form and scale from contemporary development. New buildings in this landmarked pattern will have to be different from new construction elsewhere. Lower Manhattan's history is reflected in its street pattern; preserving the pattern keeps it recogniza-
ble and thus continues its history as a distinct place.

This role is not limited to maintaining historic patterns; it is of design interest apart from its historical value. Rights of way break up the scale of large development projects, making them comprehensible and comfortable, qualities often associated with historic districts but valuable anywhere. Extant rights of way embody this scale better than new automobile-generated patterns.

All developments above a certain size need to provide for their own internal circulation. Designers searching for a rationale for a pattern, or for a way to confer identity on a project, are often well-served by selecting historic alignments and configurations.

Lane, Frenchman's West Broadway Housing Project Rehabilitation in South Boston restores a prior street grid.
Design control

Rights of way in their legal form have a powerful effect as ballast to keep urban form stable, and to afford latent public control over changes in its most critical aspects—scale, access, and continuity of the fabric. Replacement of a public right of way by private space deprives the public of control not only of its use but of decisions about its future.

In large urban development projects one of the main levers for public input into design decisions is the public approval required for the development parcel to absorb streets. Public rights of way through Quincy Market and South Street Seaport provide ample evidence that commercially successful development does not require private control of the whole site. In cases where it is necessary to abandon streets, they should be exchanged for public easements along the development's new alignments. If not, the city will never again have this leverage over design.
4. WHAT TO DO WITH RIGHTS OF WAY
The Chicago Loop L as a preservation issue (separate from the re-use issues of transportation planning) presents a number of problems unusual in most preservation, but fairly typical for rights of way.

Evaluating significance took place both through normal preservation channels, and through the political machinery of the city.

Context issues were the impetus for destroying the L, as part of a plan to redevelop its present surroundings. Some preservationists endorsed its destruction for the opposite reason, to restore the pre-L setting of historic buildings beneath it. Many who argued for preserving the L thought its effect on the ambience of those streets should itself be considered an historic contribution. Right of way or context may dominate decisions, but their fate will never be decided independently.

Essence to be preserved: in what essence does the Loop's significance reside? Is it the artifact, its alignment (in two dimensions? or in three?), or simply the configuration as a loop?

Evaluating significance

Significance is a concept which preservationists leave purposely open-ended. It is defined in practice, in a way which would make semioticians happy -
any example which stands out is considered significant; it can stand out on the basis of any comparison which seems to make sense. We find significance in the unusual, whether unusually old, unusually beautiful, or unusually rich in history. We even pay attention to the unusually typical.

We sometimes preserve the unusually large. Buildings above a certain size must have been significant to someone, or they would not have been built; with the passage of time that significance is historic. In the same way, for most linear rights of way, their assembly premium and the effort which went into their construction ensure their significance, at least in a local context.

The significance, at least within their communities, of canals, railroads, and interurban trolleys is fairly clear. When they were constructed, each was an important regional spine, around which whole cities were sometimes constructed. Just about every 18th and 19th century canal in the country has been deemed historically significant.

We have not generally come around to preserving every railroad grade, but if a single agency responded both to their historical significance and to their potential for re-use, there are few which would not be saved. For linear rights of way, as for most buildings, the important preservation issue is not determining significance, but finding a re-use.

Networks are all worth saving if there are historic structures around them. The street pattern in an
Preservation

historic district should be afforded the same degree of protection as its buildings. Without historic buildings or landscapes, networks are only historically significant if they are more or less unique.

A street network may be unique as the original plat from which its settlement grew. The New Amsterdam streets are an example, as are the nine squares of New Haven. These embody the genius loci; whatever the physical city has become is either an extension or a reaction to this origin. They are the earliest surviving traces in any city.

A network may also be unique because of its configuration or alignment, like Providence's gangways. These alleys originated in the 17th and 18th centuries as passageways to wharves. By the 20th century most of the city's original harbor was filled in, leaving the high and dry gangways, surrounded with comparatively recent buildings, as the only surviving indication of the early waterfront.

All designations of networks should include a whole piece of the fabric, not individual strands within it. In the New Amsterdam Streets landmark, the Commission did not designate only those streets of Dutch or of colonial origin, but the whole system with its changes to the present. Just like a designated building, a street network should be protected as a whole; the time for distinguishing among its elements is when a proposal is made to alter one.

Networks and embedded rights of way are almost all public streets, and because they are under public
control suggest a more flexible kind of protection than that afforded to private landmarks. Streets might be designated in a hierarchy of significance. Those most worthy of preservation would be made traditional landmarks, giving the landmarks commission veto power over any changes to them. At the other end are streets of no historic interest. In between is a category of some historic interest, in which an advisory opinion from the landmarks commission would be required before abandonment. The city could then decide to de-map these streets, but it would not make the decision out of historical ignorance.

Context issues

For most historic resources it is inadvisable to judge them out of context; for rights of way it is nearly impossible. A right of way is legally defined by its position in context, and functionally defined by how it serves that context. Everything else - all the artifactual reality - is only elaboration of these contextual relationships.

If a right of way is of sufficient importance, its context may be worthy of preservation or management as an appurtenance. In a limited sense this is true of all linear rights of way, since without protecting their immediate surroundings it is hard to protect the rights of way themselves in any meaningful way. Thus National Register nominations of canals and railroad grades typically include a strip of specified width on either side of the right of way itself.
The Natchez Trace is preserved not as a right of way, but as a linear park up to a mile or more in width, through which the Natchez Trace Parkway winds, often at some distance from the alignment of the original Trace. Rights of way of less intrinsic importance may be treated as scenic corridors around which the landscape is managed with a combination of historical and aesthetic motives.

Essence to be preserved

The National Register of Historic Places demands of its entries not only significance, but integrity. It outlines as categories of integrity "location, design, setting, materials, workmanship, feeling, and association." It is the issue of integrity, not significance, which makes rights of way rare so far on the National Register; demanding integrity of materials demands an artifact. How to apply these criteria depends on which are relevant to the object being evaluated; it demands a judgement as to what the essence of the thing is. If materials are not essential to an historic resource, its integrity is not compromised by their substitution.

The essence to be preserved is a question important far beyond eligibility for the National Register. It determines the appropriateness of potential reuses, and the means of control appropriate for the object. A right of way's essence may lie in artifact, alignment, or configuration.

Artifact

This is the traditional preservation problem, and it
calls for traditional solutions. Bridges, canal locks, pieces of pavement, even earthen paths can be identified, protected from physical disturbance, restored or rehabilitated.

Artifactual interest should not be allowed to skew right of way preservation. Few rights of way dating from before the turn of this century have material integrity along any great length, so that an artifactual bias can lead to preservation of discontinuous piece of continuous rights of way. National Register entries note the historic significance of the entire Boston to Albany railroad right of way, but the Register lists only the Hoosac Tunnel and a set of stone arch bridges along the line.\(^5^2\)

Artifactual bias can also make management of change difficult. If the original materials should be lost, is the right of way necessarily without remaining value? Or are alignment and configuration also relevant?

Alignment

Alignment is a cross between the traditional purviews of preservation and of urban design. In the New Amsterdam streets case, the Landmarks Preservation Commission felt that alignment alone had sufficient integrity of feeling, association, and location, to merit traditional preservation. More often, when historic alignment is maintained in new development, it is the work of a redevelopment agency or some other agent or urban design, operating with an interest in history.

\(^{52}\text{Massachusetts Historical Commission, National Register nominations: "Hoosac Tunnel" (1973); "Middlefield--Becket Stone Arch Railroad Bridges District."}
Whoever is responsible for preserving an historic right of way alignment must take great care to be explicit and precise in their definitions. Stone Street provides a good example. It was agreed that significance lay in the alignment of the street, and the alignment was easy to determine. But what was to be done with it? Was it an alignment in three dimensions, including the level of the ground plane? If it was, the city slipped in letting the developer insert stairs into it. What was the essence of the alignment as it passed through the building? Does the lobby’s three-dimensional section matter? What is to be aligned? This is the critical question along the rest of the lower Manhattan streets, which, without a firm building line, will gradually become meaningless legal abstractions through undefined space.

Configuration

Concern for historic right of way configurations demands topological preservation, managing historic corridors and patterns without worrying about the precise locations of elements which make them up. This is well beyond traditional preservation; it is urban design. The proposal to rebuild the Loop underground is an example; so is the Boston Redevelopment Authority’s pedestrian plan for Downtown Crossing, which calls for extending the present alley system with passages through new development. 53

A landmarks commission might manage the configuration of an historic street network without managing alignment, and without carrying out any of its own urban design, by a process of topological landmarking.
Topologically landmarked streets could be closed, but only by providing an equivalent right of way across the site (equivalence, of course, would need to be carefully defined). The pattern and density of right of way would thus be preserved, while allowing them to move around slightly to assemble usable building footprints.
4.2. RE-USE

Re-use issues cannot be generalized quite as readily as preservation issues, because they are mainly practical rather than theoretical.

Continuation or restoration of original use - Is re-use the issue, or can the original use of the right of way continue? For the Loop L, this was the dominant issue.

Rebuilding transportation systems - For the Loop L, no use could be as appropriate as running subway trains on it. If its historical value were greater and its transportation value less, it might be more appropriate to run the trains elsewhere to avoid having to alter the structure, or to allow period trains to run around it.

History as recreation - The Loop L is probably not ready to be used mainly for recreation or tourism (and if it were, Chicago might not be willing to keep it where it is). For many other remnant rights of way, the appropriateness of this use is the question which will determine whether or not they survive.

Control - As an embedded historic right of way, the Loop L is publicly and unambiguously controlled as part of its system; the Chicago Transit Authority determines everything from its hours of operation to its continued existence. For rights of way which undergo changes of use, like Stone Street, control may be ambiguous.
Design and context issues - Should the Loop L structure be accurately restored? Should it be altered substantially to reduce the noise and opacity which have depressed development around it? Should it be completely rebuilt in "slim, white, tubular steel"?

Continuation or restoration of original use

The impetus to preserve a right of way is often, as with the Loop L, a conviction that the movement pattern of which it is a part is still viable. Chicago's elevated trains, Philadelphia's streetcars, and the alleys of most cities tend to look pretty scruffy, and in a preservation battle this can put the burden of proof onto those who claim they are still useful. If in fact they are still useful, preserving them may require only a small injection of historical awareness to overcome predilection for the new.

Excursion lines and tourist attractions often preserve original uses, but for a new rationale and new users. San Francisco's cable cars and Pittsburgh's Monongahela and Duquesne Heights inclined planes are transit systems which matured into tourist attractions and so have been preserved. In cases like Chicago's L, tourist value is still submerged in transportation. We are increasingly able to see tourist and transportation value at the same time. New Orleans' St. Charles Avenue trolley serves both equally. So do covered bridges on country roads, saved for generations because of a lack of any predilection for newness ("If it works, don't fix it"), and now because of a preference,

among a different set of users, for the old.

Restoration of discontinued uses is a more substantial project, but it follows the same logic; an original use is found to have been discontinued prematurely, often because of a short-term lack of viability which masked a long-term continuation of usefulness. One class of examples is trolley rights of way revived as light rail transit (which means, essentially, trolleys), such as the Tijuana Trolley in San Diego, which takes explicit advantage of its historical value as a tourist attraction. Another class of example, not involving movement patterns of people, is power canals re-used for electric power generation, such as the Boott Mill system at Lowell, Massachusetts, or the Tupperware factory plant in Woonsocket, Rhode Island.

Rebuilding transportation systems

Embedded rights of way are endangered in two contradictory ways. If they are valued as part of a large-scale historic movement pattern, they are in danger of premature senescence, an end to their place in the transportation system, as discussed in the preceding section. If, on the other hand, they are valued for their design and artifactual qualities, continuing in active use may subject them to changes which destroy this value.

An example of changes destroying integrity is the Merritt Parkway through New York City's Connecticut suburbs. The Merritt, "Queen of the Parkways," was built in the late 1930s as one of the original
"townless highways" proposed by Benton Mackaye. Designed before widespread experience with high-speed auto traffic, it has entrance and exit ramps with very tight radii, and no acceleration or deceleration lanes. Entrance ramps end in stop signs at the highway, often without enough visibility to safely enter traffic from a stop. The parkway carries far more traffic than it was intended to, at much higher speeds.

In the early 1970s, the Connecticut State Department of Transportation planned several new expressways intersecting the Merritt Parkway. In addition to the interchanges required for these new roads, the state proposed rebuilding 13 miles of the parkway to "smooth out curves and hills" and to allow for its eventual expansion from four to eight lanes. After months of preservationist opposition, Governor Thomas Meskill personally interceded with a compromise allowing the interchanges but no widening. Long stretches of the parkway now emerge from their narrow tree-lines channel into the most up-to-date turbine interchanges in the state, dramatic in their own right but completely foreign to the 1930s roadway.

There is no question that the Merritt Parkway needed to be changed, in the interest of saving lives. There is also no question that its significance and value lay in its design, the same tight curves and overhanging limbs which make it dangerous. An historically satisfying solution might replace all the stop-sign entrance ramps but leave a few of them visible as remnants within the new cloverleaves. Drivers might even have the experience of using them,

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under their original, safer conditions, if some stretch of the original parkway could be cut off as an access road through one of the giant interchanges. The remainder of the reconstruction would combine modern safety engineering with the landscape design of the original road.

Even with the most sophisticated attention, the Merritt Parkway would suffer an inevitable conflict between its historic design and its place in the transportation network. Since its transportation function is not likely to change, its design will have to.

Embedded historic rights of way require clarity in defining the nature of their value, in order to balance compromises in their re-use. If we value the spatial structure of an historic movement pattern, we are interested in stability and extent of the system. Our abstract ideal would be the accommodation of changing transport modes in the same corridors; there would be no remnant rights of way.

If we value the right of way as artifact, we are interested in its material and design integrity, and if we value the experience of historic modes of travel, we are interested in vividness and accuracy. In either case the continuing evolution characteristic of an active system may be unacceptable. We would prefer a remnant right of way, no longer subject to the considerations of the system in which it was embedded, devoted to faithfully re-creating historical experience.

This approach depends, of course, on the practical-
ity of relocating the active transportation line, and on the availability of a use, tourist or practical, to support the old one. An everyday example is the bypass road, which gives a driver the choice of modern efficiency or an older movement pattern; at its best it is coupled with an historic district and faithfully preserves the earlier experience. A more extreme example is former Chicago Mayor Michael Bilandic's proposal to build subways but save a section of the Jackson Park elevated "for historical purposes." 58

This approach will not work for the Merritt Parkway, which is too large a piece of too important a system to be intentionally made remnant. Nor will it work for rights of way where we value both artifact and alignment, like the Loop L. When we rebuild transportation systems with historic segments embedded in them, we must take our principles from adaptive re-use in architecture, learning to identify what is important and make compromises to keep it.

History as recreation

Recreation is the natural re-use for many rights of way, especially linear rights of way which are no longer part of any transportation system. Recreation and tourism are better understood, and more widely accepted as land uses, than history or alternative access. They are easier to justify as public policy goals. We are comfortable with seemingly irrational decisions made for the benefit of tourists. The practical rationale, of course, is tourist dollars, but tourist dollars are hard to measure,
and more of us spend than pocket them. The real importance of tourism and recreational re-use is that tourists' supposed interest in history and aesthetics allows our own interests to operate within the theology of economics.

History is a growth sector of recreation. Historical sites entertain kids at the same time they interest grown-ups. They are one of the few kinds of recreation site which can be provided in urban areas, where demand is greatest.

The National Park Service has expanded in recent years with major new National Historic Parks in Boston and Lowell. The Lowell park treats the heritage and physical fabric of a whole city as a recreational resource. New York State's Urban Cultural Park system does the same for entire regions.
parks along canals, railroad grades, aqueducts, and other available corridors. Federal surveys of leisure time use show a long-term trend toward activities accommodated by these rights of way, such as walking and bicycling.

Recreational re-use maintains historic movement patterns, and for many kinds of right of way can re-create the original experience of travel. In the case of remnant turnpikes and trails, this idea needs little elaboration. Their original users walked or rode horses along rutted tracks of dirt, or at best gravel; recreational users do exactly the same.

Canals' original users experienced them both from the water and from the towpath, and ideally modern travellers will have the same choice. Many canals are more continuous as paths than as bodies of water; on the C&O this was remedied by re-watering parts of the canal, and on the Blackstone by using the parallel Blackstone River to make up missing links for canoe travel. At least some part of each canal ought to be accessible by boat, so that people hiking a dry route can keep in mind some taste of the water-borne experience.

Even better than the experience of canoes and rowboats is the experience of travelling on a real canal longboat, drawn by a mule on the towpath. This is a form of excursion ride available among other places on the Delaware Canal at New Hope, Pennsylvania, and on the C&O at Georgetown. Unlike trolley and railroad excursion lines, longboat rides are an off-shoot of preserving the right
of way itself; they exist to interpret the canal. They are marvellously effective. They make us immediately aware of how small the canal is. We see the need for features like turnarounds, and we begin to intuitively understand the economics of canal building: the relationship of cost to channel cross section, and how that makes canal traffic differ from river traffic. If the excursion boat can go through a lock, we will understand these remarkable devices much better than we ever could from a less concrete display, and we will grasp how thoroughly locks dictate boat size.

Trolleys brought a new kind of travel experience, which John Stilgoe explains:

For the first time, Americans rode a power vehicle in which they looked straight ahead... At thirty miles an hour, the silent car thrilled its riders not so much with the sense of speed - express trains easily tripled that speed in the early 1890s - but with an almost overpowering intimacy. No smell, no sound interfered with the passengers' experience of the landscape rushing past... 60

Stilgoe could be describing a bicycle ride just as easily as a trolley, and the similarities point to a natural re-use for trolley rights of way. Bicycling produces a speeded-up experience of canal towpaths and old turnpikes, but it is an uncanny duplication of an open-air trolley ride.

The similarities are not limited to kinaesthetics. Like bicycle paths, trolley rights of way followed roads where that was convenient, and cut through the countryside where it suited them. Trolleys were not only utilitarian, but also recreational, to a greater degree than any transportation mode before...

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60 Stilgoe, Metropolitan Corridor, pp. 297-99.
them. The rural trolley line brought country folk to city jobs and shops, and it brought city people out to enjoy the countryside on weekends. Commuter bikepaths are often planned with this same dual purpose; a park at its rural destination might even be one of the hundreds of pleasure grounds and amusement parks installed by trolley companies to draw passengers out to the ends of their lines.

Bicycle paths along trolley grades should be designed with a trolley ride in mind. One phenomenon about which contemporary observers waxed lyrical was the sensation upon leaving the road, as one wrote in 1890:

With a zip and a whiz it darts forward, taking the free track with a bound that brings laughter to careworn lips and blood to the cheeks.61

Transportation planners are going about it exactly wrong when they mark these transitions with speed bumps and S-curves; bicyclists should be allowed to sail from the street into the woods. So long as there is adequate visibility, they will figure out for themselves not to sail from the woods into the street.

Right of way re-use should re-create the nodal rhythm of travel, as well as the sensory phenomena. A railroad grade bikeway can provide parking and rest rooms at former stations. Canal locks, which originally might have been accompanied by taverns, would now more appropriately have concession stands, or at least picnic tables, nearby. They are also appropriate spots for interpretive exhibits. On a dry canal bed, a path through the remaining walls of a lock can give a land traveller some of the

61 Stilgoe, Metropolitan Corridor, p. 297.
experience of locking through. Anything will do so long as it gets the modern traveller to slow down and focus attention here, which is what the canal traveller had to do.

The nodal rhythm of canals and turnpikes can be experienced at the scale of a whole journey, if these routes connect inns a day apart from one another. David and Kathleen MacInnes' Hiking from Inn to Inn tells of places in the northeast which already present this opportunity. If accommodations can be provided at inns which served the right of way originally, so much the better.
Most rights of way are either in public ownership or under some kind of public control. To be reused for recreation, others will come into public ownership. While private ownership may be appropriate for preserving some remnant transportation lines, only public control serves the values of history and access for most of the web of rights of way. Public control of some sort is especially important in urban developments, where rights of way are not the developer's main concerns, and their history, access, and design may be compromised.

The first principle is not to lose public control once it exists. The network of street rights of way is the most fundamental public control over urban form. Street abandonment proceedings, which typically turn on the value of a street for automobile circulation, should routinely ask if it is not appropriate to keep a pedestrian easement over the street right of way, or take an equivalent one as a replacement.

Where there is not now public ownership or control there are numerous ways of guarding the public interest. The most basic is the extension of constitutional rights to all de facto public spaces regardless of ownership. A number of states have recognized places like shopping centers as something between traditional public and private spaces. Private owners retain their substantial powers to decide when to open and close the space, and whether
to do away with it entirely, but while people are using it, they are subject to the rights and rules of behavior of the public sidewalk, not the private shop or restaurant.

The Crystal Court controversy, in which Minneapolis considered designating a Heritage Site only 11 years old, is a further extension of this issue. It looks odd as a landmarking case because unlike most preservation, which relies on history and design as its rationale, this case relies on design and access.

Crystal Court points to a possible joining of the idea of landmark preservation with the idea of public easements. Public use of a space like Crystal Court does not establish a public easement by prescription because it is done by permission of the owner, yet it is the sort of public space which the doctrine ought to protect. Landmarks preservation law withstands challenge because it secures resources important to the community without confiscating private property. This logic is equally applicable to resources of historical or of access value. It would be quite reasonable for a city like Minneapolis to legislatively establish a degree of public control over its whole network of interior spaces on the grounds that they are as important to the city as any historic landmark and as much a part of the public realm as any street, and that public control will not deprive the owners of a reasonable return on their investment.

While no city has yet taken the step of establishing an access equivalent to historic landmarking, many have acquired more traditional public control in a
variety of ways. New York City has pioneered the use of zoning to obtain public easements, through both incentives and outright requirements.

In Boston, Boylston Place was a private alley south of the Common. The new State Transportation Building abuts it, and the state was able to take a public easement through it without cost because the easement did not affect the value of the surrounding properties. Adjacent owners are taking advantage of the new pedestrian traffic to develop the alley with retain space. In contrast to the ordinary development strategy of avoiding public access and control, they are dedicating the alley as a public way. Their incentive is the city's Browne Fund, which pays for public art, but only in legally public places.

All of the measures discussed so far relate mainly to networks. Control issues focus mainly on individual segments: some active use is proposed, which
may include or exclude public access. Linear and embedded rights of way present the opposite control issue, of landbanking to retain the right of way in the absence of a re-use proposal. Whoever controlled it before — whether a private railroad or a public highway department — no longer has a use for it, and has no reason to preserve it. If the right of way ought to be preserved, some other agency must be in a position to prevent its dismemberment, and if necessary to take over its ownership until the question of re-use is settled.

The issue has come up most often in the case of railroad abandonments, both because they are so common, and because railroad companies, as private holders of rights of way, have interests distinct from the public. Railroad abandonments have given rise to a set of mechanisms which work more or less smoothly to land-bank those rights of way of public interest. Federal regulations serve as a first line of defense if it is rail service itself which is valued. Federal proceedings also provide public notice of an imminently-available remnant line, and can be used to steer rights of way into some other public use such as transit or recreation. Several states have passed laws taking for themselves the first option to buy rights of way, and in the last ten years a number of lines have been bought and re-used or land-banked in New York, New Jersey, Wisconsin, and Rhode Island.

Similar provisions could be passed for all rights of way, and, better yet, included in new rights of way as they are created. For the many existing rights of way which are already public, the interesting
Re-use

feature is not the first option itself, but the deliberate way in which it is exercised. Rhode Island, for example, has evaluated every rail line in the state for potential re-use, and methodically follows a master plan of which ones to pick up during abandonment proceedings.

Most rights of way have at least a chance of re-use or restoration of original use. Realizing the chance requires long-range, speculative planning to keep options open. This planning must make a probabilistic assessment of:

- the chance of re-use;
- the cost of reserving the right of way (including, especially, the opportunity cost of not putting it to other, piecemeal uses); and
- the impact of losing the chance or re-use of the right of way is not reserved.

This planning function must have a longer time horizon and lower discount rate than the operating agencies (public or private) that actually decide to use or stop using the right of way.

Design and context issues

Rights of way have different relationships with their contexts. The key variable is the edge of the right of way, which may be either permeable or impermeable. A permeable edge is typical of right of way networks, which, like capillaries, exist to provide unlimited access to all of the tissue around them. Streets and alleys may be entered by a drive or a door anywhere along their length, and networks of footpaths are normally open to the woods and fields
around them. Whether the walker has a right to traipse about the fields and woodlands, or the driver to enter all the driveways, is a separate matter. An impermeable edge, on the other hand, is typical of most linear rights of way, more analogous to arteries. Railroad grades and parkways cut through the landscape remaining aloof from the land around them, often divided from it by a fence.

An important issue in the re-use of rights of way is whether this relationship is maintained. The East Bay bicycle path in Rhode Island, to be fashioned from an old railroad grade, for a time seemed blocked by the opposition of a small but vocal group of abutting property owners fearful that it would become a "criminals' highway" of bicyclists and hikers swarming over their land for unspecified nefarious ends. This reaction is almost universal where recreational re-use is proposed for a railroad right of way; neighbors who may have found the trains unaesthetic at least did not find them threatening, because they knew they would stay on the tracks.

The East Bay right of way is in fact already permeable; the change came when the railroad was abandoned. Anyone interested in using it for mischief can already do so. Recreational re-use tempers this permeability by populating the right of way with users who will keep its boundaries under surveillance. In practice, recreational users of rights of way have been exceptionally law-abiding.

Travelling experience depends a great deal on the view. Railroad and trolley grades which originally

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65 MacDonald, pp. 71-76.
66 MacDonald, pp. 63-67.
ran through open fields are now, in most of the east, surrounded by second-growth forest. This presents a design problem. In some cases it may be appropriate to cut out trees to open up original views; in others the modern forest might be judged more valuable than the historic vista. Views also depend on the condition of land adjacent to the right of way, and on maintaining historic patterns throughout the viewshed. Historic districts, scenic easements, and outright acquisition can protect these qualities. In the case of major linear rights of way, like the Natchez Trace and its Parkway, these measures take their importance less from the inherent value of the district than from their role in maintaining perceptions from an historic movement pattern.

Re-use responds to its context. In its crudest form we see this in the dismemberment of rights of way as context absorbs them. We see it also in private development, which relies not only on access but on surroundings where access is valuable. Thus the pedestrian flow through Boylston Place induces development because it is in a retail district, and the terminus of the C&O Canal park has been heavily developed because it is in the heavily developable center of Georgetown.

Right of way context requires a balancing act in re-use. Response to context must be balanced with continuity of the right of way. At Georgetown the new development carefully makes room for through walkers on the towpath, so that continuity is unbroken and the re-used canal serves both patrons of the new development, who have hikers to enter-
tain them, and hikers, who have a variety of surroundings to walk through. The original use may have made only the slightest adjustments to context, and earthen bank in the countryside and a stone wall in the town, with the form of canal and towpath remaining otherwise the same for mile after mile. Strict historical integrity may seem to demand that a re-use duplicate this uniformity, but accepting and even magnifying the variety of present-day surroundings can highlight continuity in some remaining element, such as the restored canal walls.

Private developers have ambivalent positions on right of way continuity. On the C & O Canal, the re-used right of way as a whole contributes a clearly valuable population of users. In many downtown alley systems, by contrast, developers may prefer to separate a re-used segment from its humbler cousins, seeing continuity as a benefit to the context but not to the re-use. Where an improved alley is next to other unimproved ones, the public interest in the network as a whole generally demands that it partake of the character of the redevelopment through continuity of access, design, and use.

Davol Square in Providence was designed well in this respect. It is a four-story atrium made of a service alley in a former industrial complex (it was never a public right of way). One end of the ex-alley, at a main street, serves as the main entrance to the complex. The opposite end, South Street, is a little-used industrial cul-de-sac. The great glass wall here provides Davol Square's main view of the downtown skyline, and an entrance provided access and ambience to South Street. This entrance
Davol Square atrium, looking toward South Street and downtown

has since been closed, snubbing any pedestrians walking from downtown, but its existence enhances the prospects for further redevelopment on South Street.

The alley-into-atrium conversion is becoming almost common, and it raises design questions other than right of way continuity. Davol Square looks very little like the alley it once was. If the alley
was of value, what of that value has the re-use preserved?

The question of design transformations separates design value from historical value. The architect of one of these atria responds to the material texture, the sense of enclosure, and the feeling of being in a secret place, which are the same design qualities the preservationist values in an alley. These qualities are reinterpreted and recast, but in a good design they are retained, and may be rendered more noticeable by inserting contrasting materials and forms. History is part of the design palette and provides a rationale for design decisions. Design elements which could be reproduced in new construction are enhanced by the historical value of temporal continuity.

The objections to this kind of transformation are several. To the extent that the right of way is valued as an artifact, they are the familiar issues
of adaptive re-use. The transformation may be done badly, leaving the design qualities marred. Even if done well, the place is different, and to the extent that its qualities were dependent on its character as a whole, its value is lost. Finally, while design value may be retained and even magnified through transformations, historical value will become further removed from the form of the right of way.
4.3. **INTERPRETATION**

The term interpretation is used here in its broadest sense; it refers to all management of information - other than the information inherent in the right of way itself - to make the environment's history more legible.

**Enhancing environmental legibility** - how much can the interested public find out about the Loop L? How much of it can they figure out from the environment itself, as they ride the L? How much is it appropriate to help them - how self-conscious should a transit system be?

**Interpretation and preservation** - how would more interpretation of the Loop L have affected the debate over its future?

**Historical movement patterns** - The greatest significance of the Loop L comes from the four generations of Chicagoans who have ridden it. This is quite an interpretation task compared to merely explaining its engineering and origin. The Loop L itself can be a tool for historical interpretation of downtown Chicago.

**Environmental ghosts** - How would we interpret the Loop L if it were torn down?
Enhancing environmental legibility

We must understand our environment to function in it. Minimal function requires only that we understand enough to avoid getting lost, but a satisfactory life includes more profound orientation to its setting. Kevin Lynch lists another category of orientation:

There is also an orientation in time...which... includes the deeper emotional sense of how the present moment is linked to the near or distant past and future. This deep sense of orientation in time is very likely more important to most people than is the corresponding sense of orientation in space. Moreover, since our internal representation of time is poorer than our internal representation of space, we are more dependent on external clues to keep us temporally well oriented. Thus, environmental forms and sequences are very useful for anchoring and extending our temporal orientation.68

Spatial and temporal orientation are both dependent on our ability to read the environment. When we are at home in a place, we read it better than a book. We can distinguish at a glance the Perrier from the Pabst bars; we unconsciously know the safe street from the dangerous one. We have at least a vague idea of how it got this way, and in fact our ability to read it is often dependent on a personal understanding of history.

The aim of interpretation is to enhance environmental legibility, not to supplant it with some other kind of legibility. Interpretation ranges from choreographed reenactments of historic battles, through simpler guided tours and exhibits, to displays and plaques in the environment and guidebooks and education independent of it.

68 Lynch, A Theory of Good City Form, p. 135.
Most of these measures induce in the viewer what David Lowenthal laments as "an academic frame of mind" - we are no longer experiencing the environment, but observing it. With overzealous interpretation, what might have been rich and romantic is reduced to "interesting;" what might have been a discovery is reduced to a lesson. When we have sought out a place for its historic significance, this is merely annoying, but when it intrudes into our daily setting, it can be alienating.

For these reasons blatant historical markers are often less effective than subtle ones: a mark in the curb where a street crosses the original shoreline, a name and a date in small print on a sign devoted to utilitarian information.

The archetype of this kind of historical information is the building cornerstone: it is easy to ignore, and is mostly ignored, but we know exactly where to find it and how to read it if we want to. More people have learned more architectural history from cornerstones than from all the interpretive kiosks in the world. Because these minimal markers can be ubiquitous without bothering anyone, they can make the whole environment self-explanatory, to the person who is interested. Because they are not overtly didactic, they do not raise the defense of "an academic frame of mind;" people draw their own conclusions and absorb history the same as they do spatial orientation, as a part of everyday life.

The Cambridge, Massachusetts, Historical Commission has marked street signs around Harvard Square with the streets' seventeenth-century names and the years

they were laid out. If a fine print date (legible to the curious pedestrian, but not big enough to confuse a driver) were included on all the street signs in the city, the whole population could learn urban history as it now learns architectural history from cornerstones. Someone curious enough to read the date is also interested enough to piece together the different subdivision patterns and the kinds of houses in them, and in time read the social evolution of the city from its streets.

The spatial extent of a right of way dilutes our consciousness of interpretation; a plaque at one end of a canal can describe its construction without diminishing our enjoyment of a view later as we paddle around a bend.

Interpretation of rights of way extends the fraction of the environment about which we are self-conscious. If our historical awareness is to encompass the pattern of the whole environment, there is no easier way to do it than through rights of way. Even in England, with probably the most historically self-conscious rural landscape in the world, it is not possible to communicate a story and date for each field and hedgerow. Labelling the paths which divide them as medieval market roads, Roman highways, and Bronze Age tracks provides a framework for understanding the rest.
Interpretation and preservation

Interpretation and preservation are independent of one another. A place can be preserved with no indication of its significance outside landmark commission offices. A place can be interpreted with abundant graphics and text placed in the environment, without taking any steps to preserve it. Finally, perhaps most familiarly, interpretation can itself be a preservation strategy. Making legible the history of a place confers value on it, and may ripen into preservation measures.

Preservation equates significance with value. Interpretation separates them. Interpretation can make history visible without implying that it ought to be frozen. Plaques explained the origins of Wall Street long before anyone dreamed of landmarking the lower Manhattan streets, not as part of any effort to preserve it, but simply to make the environment more legible and therefore richer.

Interpretation provides flexibility in our view of history - it takes longer to arrive at a consensus about what we want to preserve than about what we want to communicate or understand. In successive rebuildings of an environment, commemorations can either be magnified or eliminated. Marking something in the environment without preserving it can mean that it is worth noting but not worth saving. Because interpretation separates significance from value, it can be appropriate even for things which are negatively valued, things we want to get rid of.

The Providence "Chinese Wall" of railroad tracks has
Interpretation

cut the city in half since 1895. Like the Loop L, its replacement has been a civic fantasy since before it was completed. Unlike the Loop L, no countervailing affection for it as a structure ever emerged. The fantasy will come true within the next year or so; it will be demolished and the tracks moved underground.

Providence's Chinese Wall is clearly significant, precisely because of its negative value. It is Rhode Island's foremost monument to the age of robber barons, built through a public park given to them for free. It has shaped downtown Providence with effects as powerful, if not as satisfactory, as the Loop had in Chicago. It has achieved significance of a sort through ninety years' accumulation of public hatred for the dripping "rat hole" underpasses through which one half of the city has to travel to get to the other half. It is achieving its final significance as an impetus for the huge public works project which will eliminate it by rebuilding much of downtown Providence.

Surely anything this significant deserves commemoration even as it deserves demolition. Photographs of the rat holes could cheer us as we walk in the sun. The outline of the tracks marked on the ground could help us understand how much of a barrier has been lifted.

This is historical interpretation to remind us of past mistakes so that we are less likely to repeat them, and can rejoice in having corrected them. Communicating prior physical form is in itself indepen-
dent of value; it lets people draw their own conclusions.

**Historic movement patterns**

Corridors which were important enough to have structured perceptions tend to be in use still. Embedded historic rights of way are the most important ones to interpret in order to make historic movement patterns legible. Identifying them gives us the option of travelling them self-consciously. If we choose to, we can see the landscape around us as it was. The historic route becomes an armature around which we can organize the other remnants we see. Historic architecture, land development patterns, and ethnic enclaves are no longer randomly distributed features, because we know we are on the spine around which they grew.

The Loop L is often used for tours of Chicago because it both provides present-day views and gives historical insight into those views. Boston's Green Line subway includes in its stations historical views of the areas above them. Stations on the Red Line's southern extension, along a former railroad right of way, include pictures of the areas around them during the early days of railroading. In a general way these provide historical as well as spatial orientation.

The Loop L could offer effective and entertaining interpretation by providing in its stations (or even on the trains) peep-show movies of views from the old L. Such movies surely exist from various times.
If films could be provided on the cars themselves, synchronized with their movement, the effect would be so immediate and powerful as to completely overwhelm Lowenthal's "academic frame of mind."

Interpretation of historic movement patterns has the greatest effect where movement patterns have changed the most. The Erie Canal in New York and the Illinois and Michigan Canal in Illinois were the spines of their regions during the early nineteenth century. By the end of the century they had each lost their original importance, and during this century they have become backwaters. Historical attention focused on each of them is now re-establishing a sense of identity. The New York State Cultural Park along the Erie Canal and the National Historic Corridor along the I & M both interpret the raison d'être of their regions, strongly affecting the present-day perception of the regions and allowing them to build on their historic achievements.  

For linear rights of way, interpreting historic movement patterns means maintaining access to them, and maintaining their continuity. The perception of a region from a canal or a railroad will be easiest to understand through uninterrupted movement along the original right of way. This may conflict with the needs of the particular re-use; the East Bay bicycle path in Rhode Island, for example, will leave its railroad grade in order to avoid various access problems. On discontinuous rights of way, like the Blackstone Canal, it is no longer possible to experience the region entirely from the original corridor. The task in these cases is to bridge the discontinuities, where possible, in a way which

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Interpretation offers roughly the same experience as navigating the canal, and elsewhere to provide whatever interpretation will help overcome the gaps — for example, maps showing the location of missing pieces of the canal, or better yet marks in the environment which indicate its alignment, so that a person intent on retracing it can follow the whole thing.

Environmental ghosts

Discontinuous rights of way raise the question of what to do with their gaps. The missing segments exist, if at all, as ghosts, more or less legible traces consisting of fragmentary physical remnants, boundary lines, or configurations of new uses — anything and everything short of the right of way itself. These ghosts are information embedded in the environment. Calling attention to them, or deliberately creating them, is an act of interpretation.

Environment as information is an archaeological concept. A well-preserved canal contains along all its length the information of how an operating canal and its towpath looked. Retaining this information requires a high level of maintenance, the same level that was required when the canal was operating. A ghost arrived at naturally — the Northampton Canal in the Connecticut River valley, for example, often visible only as a line of dark vegetation through a field — still contains a wealth of information for the curious amateur, and a great deal more which could be unearthed by scientific archaeology.
Interpretation

If a canal is already too discontinuous for boating, it has no potential for navigational re-use, and since its earthen banks have little value as artifacts, the remains of the canal are valuable mainly for the information they supply about its alignment. A sensible preservation strategy would confine maintenance to the still-usable towpath, leaving the canal to natural succession but preserving it as a ghost. A few representative stretches of canal might be actively maintained and kept watered (say, at the locks).

Artificially created ghosts like the lobby of 85 Broad Street are information re-inserted into the environment. The archaeological information in Stone Street was extracted and the original destroyed. The information embodied in the lobby was all put there intentionally, unlike a natural environmental ghost. Artificial ghosts must usually rely on a certain amount of explicit interpretation - at 85 Broad Street it is bronze maps in the pavement - to make clear their intention.

Much simpler ghosts, more accessible because we recognize them as remnants, are the artifactual fragments left over from obliterated rights of way. Old bridge abutments remain until they wash away, showing the history of crossings on the river. Obsolete curb cuts remain in sidewalks for decades because there is no call for removing them.

It would be easy to save the curb cuts from every de-mapped street. It would cost nothing and would not impede functioning of the environment. It would provide a complete, on-site record of the evolution
of the city's plan, an invaluable interpretive accomplishment, yet never done.

The reason is that we are a little afraid of environmental ghosts. Ruins are romantic in the wilderness, or safely set off in a park, but bits and pieces of ruin interspersed throughout the city are threatening. They are grass growing in the streets; they smell of death and decay. We are afraid of entropy. We try to tidy up our environment.

Abhorrence of entropy is institutionalized. Redevelopment agencies traditionally provide cleared-field sites, plowed under and seeded to erase all traces of prior development. The very agents who would have to retain old curbstones are the city's line departments charged with keeping the environment tidy. Fragmentary ghosts of old streets may be read by the historian as traces of a bygone pattern, but to a public works official they say the department has been lax. We solve this problem by making ghosts into art, transforming them enough that they are clearly deliberate. Historical interpretation confers value.

The power of environmental ghosts is their immediacy. "Right here," they tell us, not "somewhere near here." Much of the information we draw from them comes from this exactness - we can imagine view lines and see the relationships between the ghost and other contemporary remnants. Rue Neuve Notre Dame in Paris was the frontal approach to the Cathedral until Haussmann cleared the present Parvis Notre Dame. After archaeological investigations, the lines of Rue Neuve Notre Dame were
pavement ghosts,
Parvis Notre Dame

Inscribed in the Parvis pavement in 1970, the visitor can now walk toward the cathedral envisioning the medieval approach down a narrow street.

Real ghosts - artifactual fragments - do not tell lies. Artificial ghosts must not lie either. This is why we are disturbed by the discrepancy between Stone Street’s commemoration and its original alignment. If the lobby paving were honest

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about the location of the street, we would not mind the misaligned elevators. But if the building cannot be aligned to the street, the street's ghost at least should not be realigned to the building.
5. CONCLUSION
Conclusion

Because preservationism evolves according to whatever is threatened and seems worth saving, it is really an ad hoc theory of what is valuable in the environment. Preservation is the country's main urban design movement. In the majority of places it is the only kind of urban design movement, and it is the only one with nationwide organization, a nationwide power base, and a philosophy accessible to the general public. Most urban design controversies demand an audience able to visualize three-dimensional form. Preservation asks only that we save what is already good, and so has the distinct advantage of being able to point to it.

In many places urban design is already incorporated into the preservation machinery. Landmark commissions review new buildings as well as old, weighing their impact on the historic environment. Preservationists are the officially designated custodians of our urban design values.

This represents a new sophistication in environmental design. We are coming to see the built environment in historical terms, to realize that successful improvements come about through gradual change, and that we must understand the subtleties of change before we can influence it. Radical surgery has resulted in more maimings than miracle cures. If we must choose a single metaphor to guide our planning, we will get better results thinking of urban form as a growing, changing organism than as an abstract gameboard.
The preservation movement is taking on the role of guide for the tremendous public powers over evolution of urban form. Operating at this new scale, preservation cannot attempt to prevent change. Instead it manages change, often by directing public attention and thus conferring value.

Rights of way are as extensive as the settled landscape, and as old. Giving preservation attention to them is an intermediate step between managing discrete historic resources and managing the historic pattern of the whole environment. Rights of way are publicly owned or devoted to public purpose, and thus present fewer tactical difficulties than trying to manage the spaces between them. As preservation moves from the static object to the changing landscape and townscape, it will go by rights of way.
REFERENCES


Boston Redevelopment Authority, Downtown Crossing: An Economic Strategy Plan (Spring, 1983), pp. 50-51, 57.


Citizens' Advisory Committee on Environmental Quality, From Rails to Trails (1975).

Condit, Carl W., Chicago, 1910-1929 (U. Chicago, 1973)


Lynch, Kevin, What Time is this Place? (MIT, 1972).


MacInnes, David and Kathleen, Hiking from Inn to Inn (Charlotte, NC, 1982: East Woods Press).

Massachusetts Historical Commission, National Register nominations: "Hoosac Tunnel" (1973); "Middlefield--Becket Stone Arch Railroad Bridges District" (1980).


Morris Canal Parkway Association, A People's Parkway 100 Miles Long (1912).


Parsons, John G., Chesapeake & Ohio Canal National Historical Park, General Plan (National Park Service, 1976).


Stilgoe, John R., *Common Landscape of America, 1580-1845* (Yale, 1982).


