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ABSTRACT

Railroad stations are a unique American resource that should continue to serve public and private interests even though their original purpose may have passed. Large stations should be considered as prominent civic structures whose redevelopment could offer significant opportunities to influence the future character, economy, and operation of urban centers. This report tells the story of rehabilitating sturdy, often handsome structures, ideally combining in one building several uses including public transit as a component of multiple use. Ten examples of the successful reuse of stations have been selected, representing different sized stations, uses, and ways in which reuse has been accomplished. Despite these and other encouraging examples of reuse, many architecturally resplendent stations remain in jeopardy. Five examples are given of endangered stations sited on highly valuable urban land. An analysis of the economic routes open to those interested in acquiring and reusing railroad stations points out the limited money available and the necessity of the private sector joining with government if the larger stations are to be saved. (Photographs may reproduce poorly.) (Author/MLF)

# REUSING RAILROAD STATIONS

A REPORT FROM EDUCATIONAL FACILITIES LABORATORIES

project is supported by a grant the National Endowment for the Arts in Washington, D.C., a federal agency.

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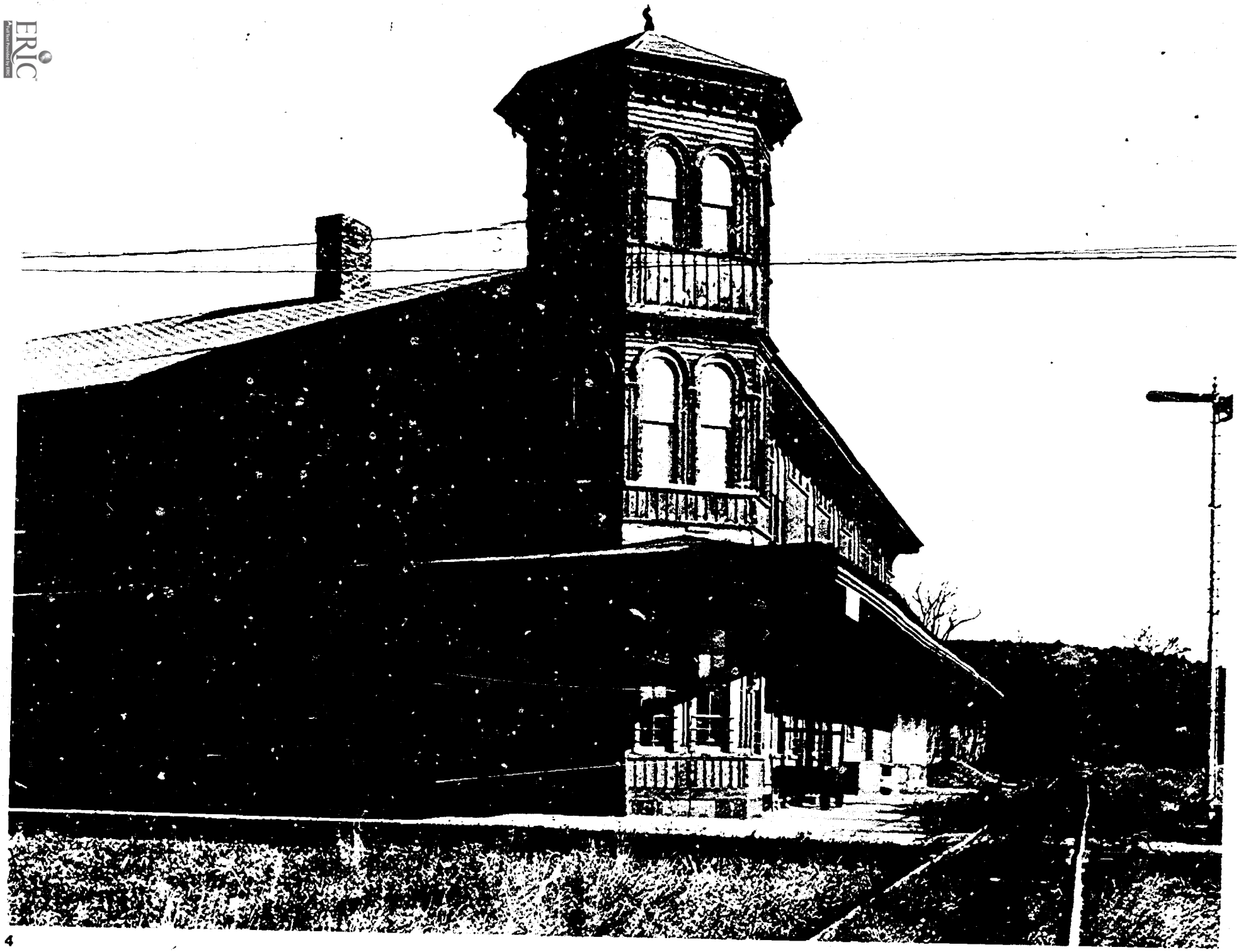
# Contents



# Foreword

When we thought there would be no end to our natural resources, we lived in a throw-away culture. But that illusion is ending, and the careless style it fostered is being replaced by a more responsible public attitude. It demands that we conserve land, energy, and water resources, and that we reuse materials and buildings whenever possible. One of the more noticeable changes this recognition has brought about is the growing public interest in restoring and reusing buildings of historic or architectural merit. Railroad stations are a unique American resource that should continue to serve public and private interests even though their original purpose may have passed.

*Reusing Railroad Stations* tells the story of rehabilitating sturdy, often handsome structures, ideally combining in one building several uses (arts, education, social services, commercial purposes). Should a continuing energy crisis cause its revitalization, public transit could form a component of multiple use, a solution currently under consideration for some of the large stations. The book also reminds us that many serviceable buildings located in the center of cities have been lost to the wrecker's ball, and that it is a matter of civic duty—by private citizen and public servant—to make haste before others meet the same fate.

The research and production of this report were funded by the National Endowment for the Arts and managed by EFL. The research and writing were undertaken by Hardy Holzman Pfeiffer Associates, New York City, architects well qualified to speak out on the benefits of reusing buildings. EFL hopes that this publication does credit to HHPA's concern for the future of railroad stations and that the message will be clearly understood so that stations will again serve as major centers of community life.

EDUCATIONAL FACILITIES LABORATORIES

Canaan, Conn.

# Introduction

Work on this report began with the simple notion that America's railroad stations are fine examples of architecture which might be preserved by reuse. But closer study revealed that stations, now tragically underused, are involved with a complex series of interlocking problems which touch many aspects of our history and of modern society. Completion of this report brought even stronger belief in the importance of reuse.

There is an appealing, persistent image of pioneers subduing the wilderness of early America by horseback, covered wagon, and ship. But it was the railroads that truly conquered the continent, both causing and following the transformation of the United States from an agricultural to an industrial nation. Historically the railroads represent our ingenuity at its most daring. For over a century they provided mass transportation of raw materials, finished goods, and people at an unprecedented scale. Without their mobility, comfort, and relative economy, the United States could not have fed its industrial revolution or attained today's technological sophistication.

The first railroad station was built at Mt. Clare, Baltimore, in 1830. It is believed that over 40,000 passenger stations were built in the next 120 years. An estimated 20,000 of them still stand, but, unless an enormous rush of enthusiasm and dollars for rail transport occurs, few will ever again enjoy their intended use. Some stations still serve commuters, others host a "train-a-day," but their use as passenger stations is limited and decreasing. Only big city stations can look for survival—and those only if they become centers of mass transit developments.

The operators of the passenger lines still running prefer building small new stations to maintaining old ones at ever rising costs. Yet old buildings are a great legacy offering a link with history, a textbook of American architecture, a prodigious capital investment, and the possibility of economically viable space. Only multiple use can offer the economic muscle which justifies preservation. Besides, even if the present realities of funding permitted their adaptation to museums, buildings are better used to house activities than artifacts.

This is not to imply that no other past architecture should be considered worthy of preservation through reuse. Without question other buildings could well benefit from this approach. Railroad stations have been singled out because their disappearance is so imminent, because their vigor and ingenuity are so typically American, and because they are a man-made resource of great potential benefit. Nonetheless, this report should perhaps be read as a metaphor for reuse in general.

But the first purpose of this report is a call to action—action by individuals, by communities, by private industry, by foundations, by government at all levels. The scope of required action, especially for saving the larger stations, is so great that the federal government must provide leadership. A bill (H.R. 2446), proposed by Representative Frank Thompson, Jr., Democrat of New Jersey, could be a welcome beginning because it recognizes that, with some federal help, private enterprise might make these structures viable for present-day use. However, further federal legislation and implementation will be necessary if the economic forces which control the private sector are to become less partial to demolition and new construction.

This call to action is made against a background of time. Most of the stations still standing are owned by the railroad companies, who have little need for them. They are given only token maintenance while the basic building fabric is eaten away; or they are used on a limited basis with no attempt at maintenance; or they are abandoned altogether. As each day passes water seeps deeper beneath roof plies, cracks increase between stones, and a little more plasterwork decomposes. It is essential to act quickly if railroad stations are not to pass into memory along with those who built them.

Framingham, Mass.

# Stations: A Man-Made Resource

Few would deny the importance of preserving our natural landscape. Such unique natural resources as the Grand Canyon, Yosemite, and Cape Cod have been kept from abuse and destruction by being removed from the marketplace and put under government protection. Nonetheless, these preserves are constantly threatened by the encroachment of industry. Strong pressures for the "use" of open park land as a resource for manufacturing and consumerism, rather than the use for which it was set aside, are always at hand.

Most of the existing and proposed legislation aimed at preserving old structures echoes the work of nature conservationists. Indeed, historic buildings are a man-made resource as important to our identity, well-being, and pleasure as any natural resource. We need a sense of the man-made past as much as we need to understand our relationship to nature.

Buildings embody a language of intent. They faithfully record the concerns and values of those who built them. Buildings exist in time, in physical space, in social context. They inalterably change what is around them by their presence. They irrevocably transform their surroundings by their absence.

The foolishness of fouling our own life support systems with waste born of greed is becoming recognized (at least in highly industrialized nations), but the arrogance of denying our past, our own personal and public knowledge of who we are, is becoming understood only very slowly.

### Railroad Stations as a National Heritage

If the railroads built America while America built the railroads, then stations form a man-made resource which is a priceless heritage, typically American and as necessary to preserve as our most generally accepted national symbols. Americans have an uncommon prejudice against thinking that mechanical systems and utilitarian structures are worthy cultural expressions. But mechanical innovation is an American cultural trait. Sigfried Giedion points out that by the mid-1860s

> Invention was in the normal course of things. Everyone invented, whoever owned an enterprise sought ways and means by which to make his goods more speedily, more perfectly, and often of improved beauty. Never did the number of inventions per capita of the population exceed its proportion in America of the sixties.

Nowhere was this swelling spirit of innovation more manifest than in the construction of railroad stations. These buildings are among the most self-assured and fully realized examples of nineteenth and twentieth century American architecture. Even so, only 56 stations are now listed on the National Register of Historic Places (out of more than 6500 entries), a situation that may have as much to do with the railroad companies' reluctance to have their properties encumbered, as with public or professional disinterest.

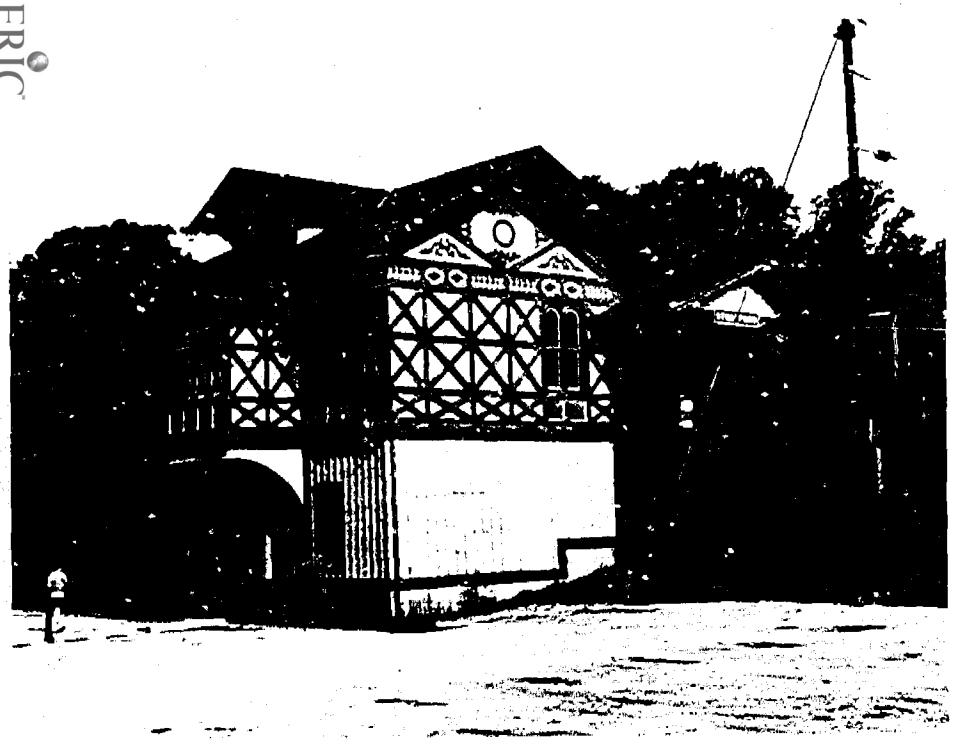
### The Architectural Form of Railroad Stations

Many railroad buildings are architectural and technological triumphs because competition between rival companies forced railroads into a pose of public service. This was a large factor in the construction of many opulent stations. Business communities also encouraged station building. Even in towns served by a single line, an impressive terminal was felt to be a requisite sign of civic well-being and better things to come. (The inscription over one entrance to Grand Central typifies the lofty sentiments these structures were supposed to embody: "To all those who with head, heart, and hand toiled in the construction of this monument to public service this is inscribed.")

Nonetheless the railroad did stimulate the development of an important new architectural form—the railroad station. We may now take it for granted but it was once without architectural precedent.

Carroll Meeks traces the origin of some smaller, early stations to toll houses used for horse-drawn vehicles; other early structures were obviously patterned on barns, with a porch added for passenger protection. But as the railroads grew, the increasing volume of passenger service required larger and larger stations. These could not merely be bigger; they also had to be more complex because they had to house a multiplicity of activities by hundreds (sometimes thousands) of people. Most notably, they had to be designed to channel the sudden arrival and departure of crowds moving in different directions.

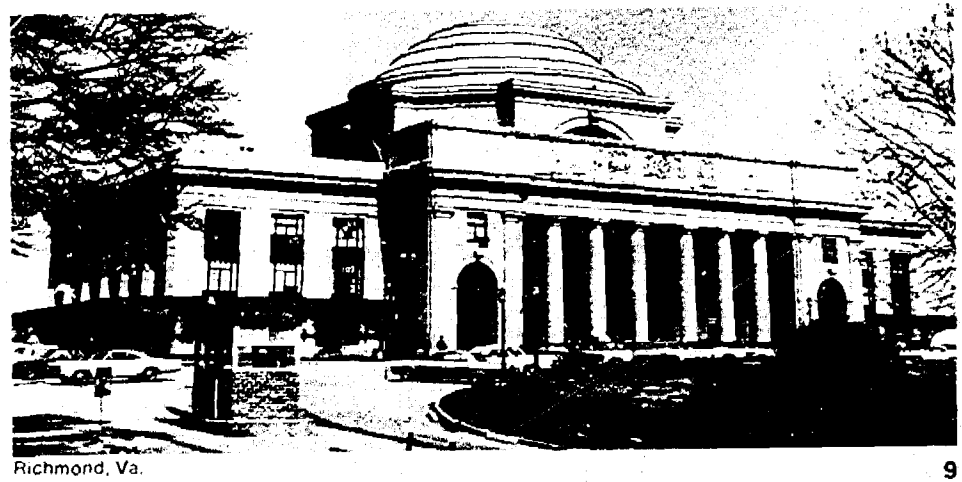
This necessitated architectural inventiveness, for there were no available prototypes for such structures. The only public buildings designed for mass circulation before the nineteenth century had been churches and theaters (or, reaching back to ancient Rome, gymnasiums and baths). These could not be directly adapted to railroad use, although some external embellishments were appropriated. Famous architects of the day were commissioned to design some stations; many others were designed by railroad personnel who adapted what became standard plans to suit local conditions



Strafford, Pa.

Susquehanna, Pa.

Nashville, Tenn.



Richmond, Va.

—all in a rich architectural vocabulary of hand craftsmanship.

Even the smallest early sheds served the many interlocking functions of a passenger station in a rudimentary way, all mixed together. As passenger and freight volume increased, architects developed highly complex plans in which each activity was separated from the others in different rooms. Comparison of Union Terminal in Cincinnati and the Greater Pittsburgh Airport shows how the concourse schemes of the last great railroad stations influenced airport terminal design, with discrete separation and interrelationships among passengers and baggage, waiting, ticketing, refreshment, and ground transportation. And without question, the multiple layers of Grand Central anticipated the most sophisticated examples of present-day mixed-use planning.

An endearing feature of stations is their lack of uniform style, although certain elements reappear in different combinations (the tower, the triple arch, the overhanging porch, the train shed). It is this diversity and directness which make them architecturally noteworthy, especially for communities fast disappearing beneath the impersonality of a machine-made landscape. Their architectural distinction could, in many cases, become the welcome catalyst for superior new urban development.

Allentown, Pa.

## The Railroads' Financial Situation

When the railroads were built, the owners incurred enormous debts on which hundreds of millions of dollars interest must still be paid annually. That investment allowed lines to be built quickly but maintenance of the debt and of the physical plants themselves has become impossibly expensive.

And there are complaints of the depletion of capital. By 1969 America's wealthiest railroad company (in terms of investment in transportation property) was the Penn Central system with $4.35 billion. However, in 1969 there was *no income return* from that investment for the Penn Central. In fact, there was a loss of $68 million—also the largest for any railroad. This paucity of working capital has made railroads wary of investing in capital equipment, so that today they are unable to transport the stepped-up yields of current manufacturing and food production, thus adding to inflationary pressures and challenging further their pose of "public service." Recent serious accidents have caused opposition to transporting substances such as poison gas by rail and offer public confirmation of the general deterioration of roadbeds and equipment.

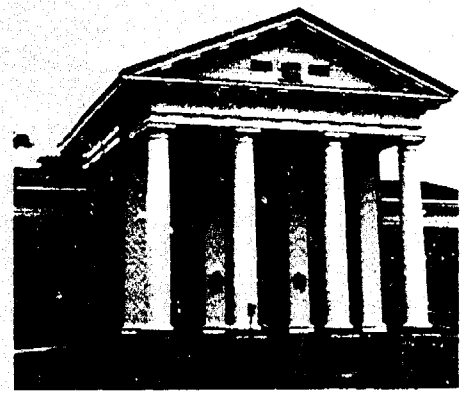
In considering the present financial situation of railroads, it must be acknowledged that *all* commercial trackage in the United States is held in private ownership. The railroads are taxed the same amount on these rights-of-way whether one train or one hundred use the tracks each day. At the same time, railroads are required to operate unprofitable passenger runs, and the tax payments on those rights-of-way have become disproportionate to their value. Although the federal government is now considering subsidizing purchase of all or part of such rights-of-way, no action has been announced. (A very different situation exists for highway, air, and water transport. In these sectors federal government expenditures and subsidies for domestic transportation increased nearly 15 fold between 1947 and 1973.)

### The Decline of Passenger Service

Today the glory of the passenger station is over. Some of the largest and greatest stations are being forsaken with no plans for continued use and no budget for maintenance. Many of the smaller stations face a similar future. In recent months Amtrak has received over 50 calls from companies declaring their intent to abandon stations.

Why are so many railroad stations being abandoned? The answer, of course, is that the decline of passenger traffic by rail has been precipitous. In 1929, over 780 million persons were carried. Forty years later the number had shriveled to 296 million.

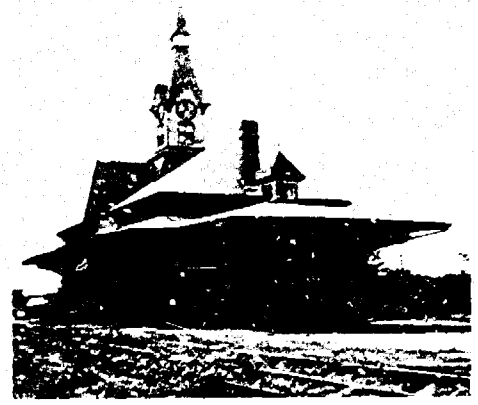
Many factors have contributed to this rapid disappearance of passenger service; the two most obvious are the airplane and the car—one offering speed, the other accessibility. The railroads taught Americans that such things were important for everyone. They handily replaced the horse-drawn carriage and the canal barge, but have now lost the businessman to the airplane and the family to the station wagon. There are still those who prefer rail travel (Amtrak can offer some proof of a turnaround in passenger volume), but the great transcontinental journeys are gone. Railroad passenger service now accounts for only one percent of all intercity travel and generates only four percent of railroad operating revenues.



Dover, Del.

Reading, Pa.

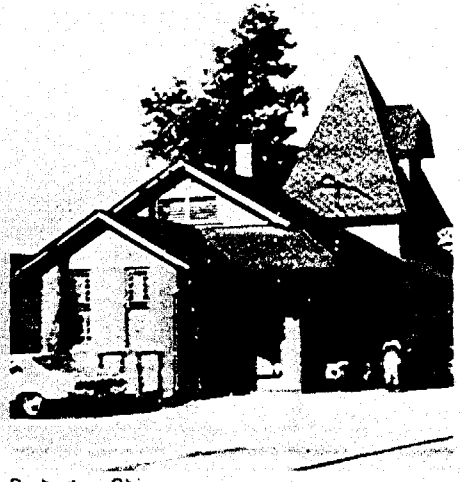
San Antonio, Tex.



Whitman, Mass.

Bucyrus, Ohio

San Francisco, Calif.

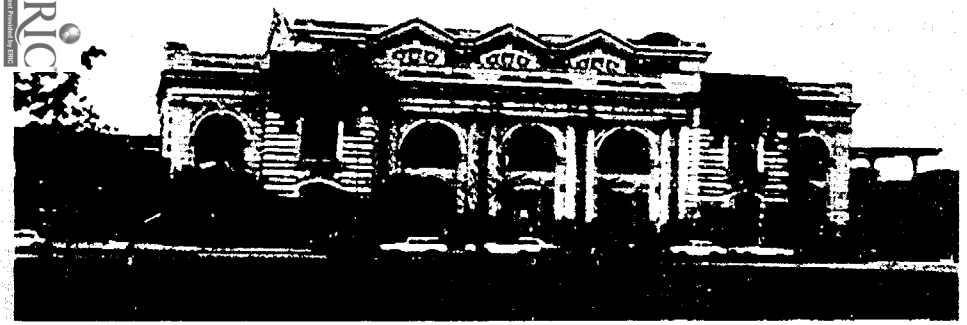


Barberton, Ohio

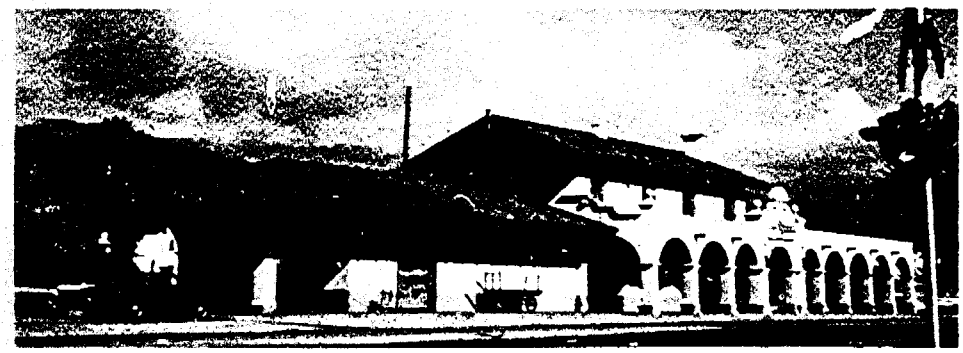
South Lyon, Mich.

Oradell, N.J.

Moorestown, N.J.

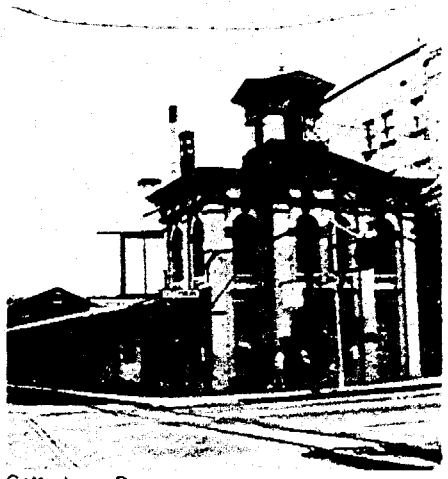


Worcester, Mass.



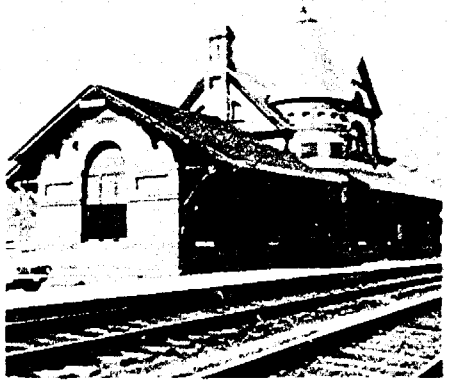
Santa Barbara, Calif.

San Diego, Calif.

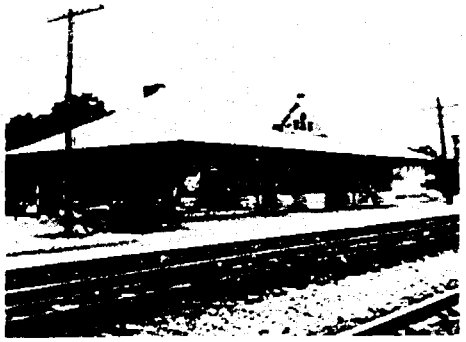


Gettysburg, Pa.

Easton, Pa.



Oakland



North East, Pa.

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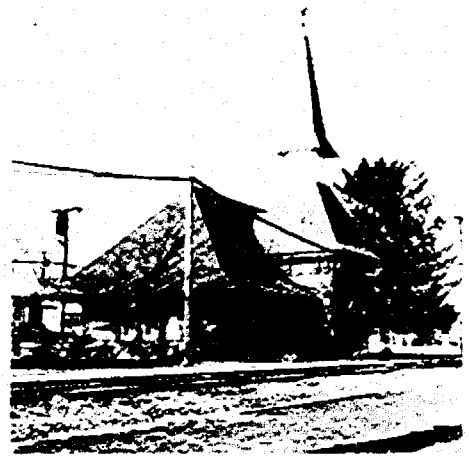
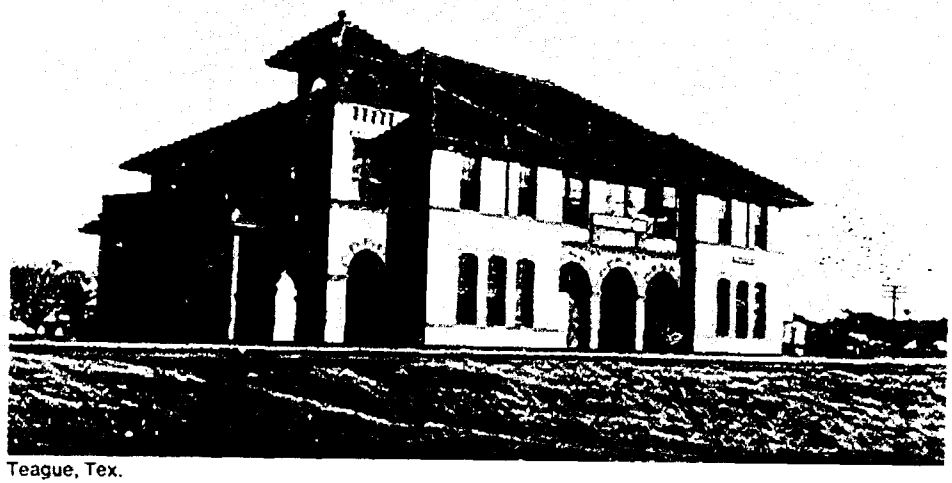


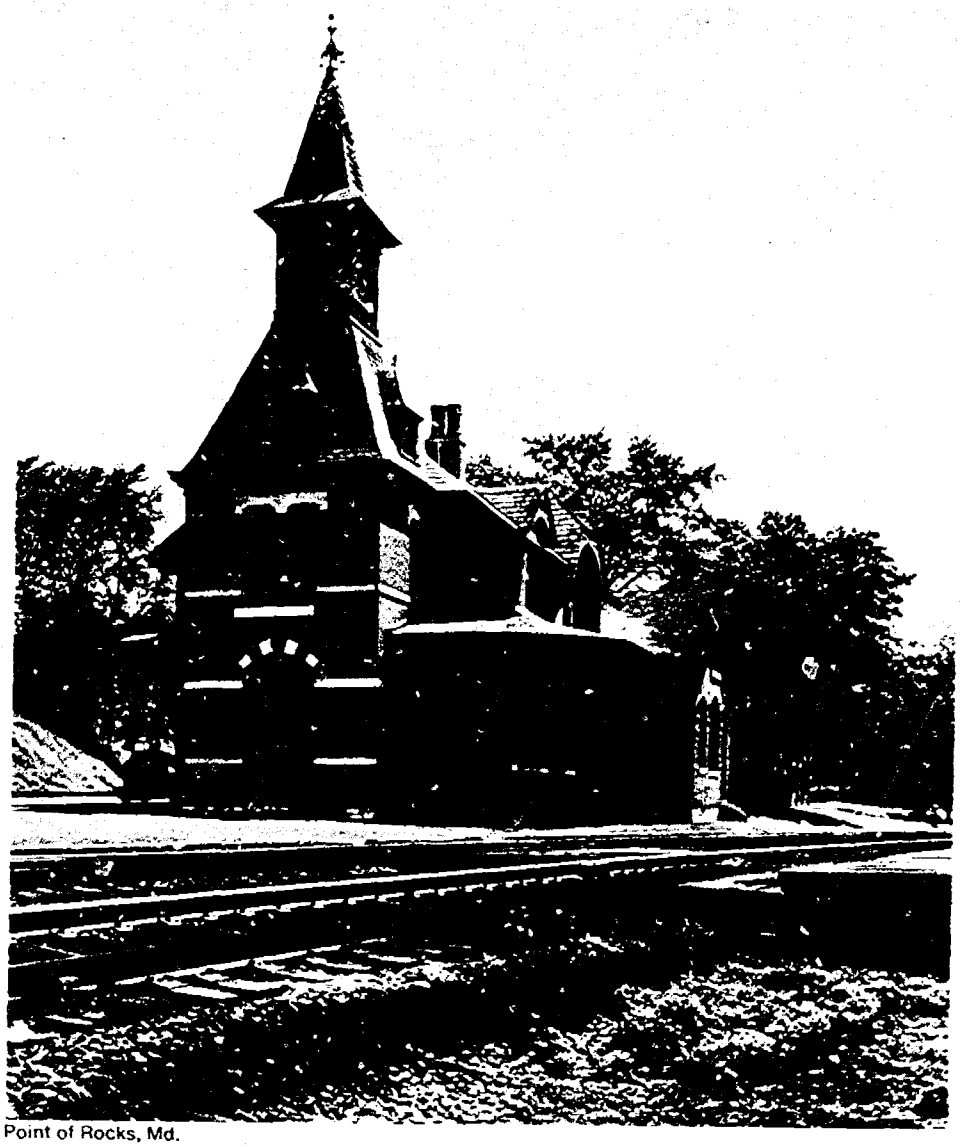
Demarest, N.J.

Boise, Idaho

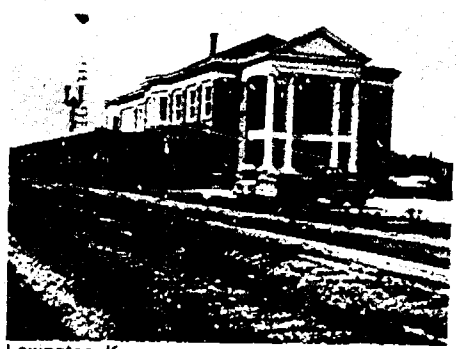
Jacksonville, Fla.



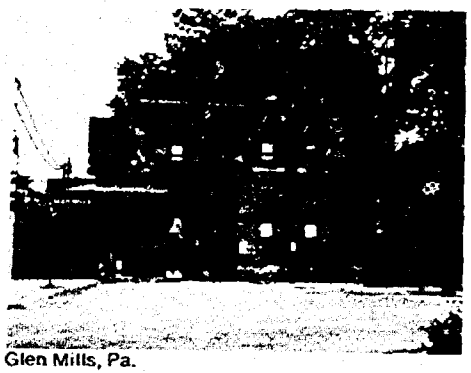
Teague, Tex.



Point of Rocks, Md.



Lexington, Ky.



Glen Mills, Pa.

Indianapolis, Ind.

The oddity is that *freight* revenue is *up* three times from the 1929 heyday ($4.8 billion in 1929 to $12.6 billion in 1972), despite all the competition from trucks, ships, airplanes, and pipelines. Thus the irony that, while Congressional voices in support of mass transit have grown more insistent each day, the railroad companies are moving away from any involvement with passenger service.

**Amtrak**

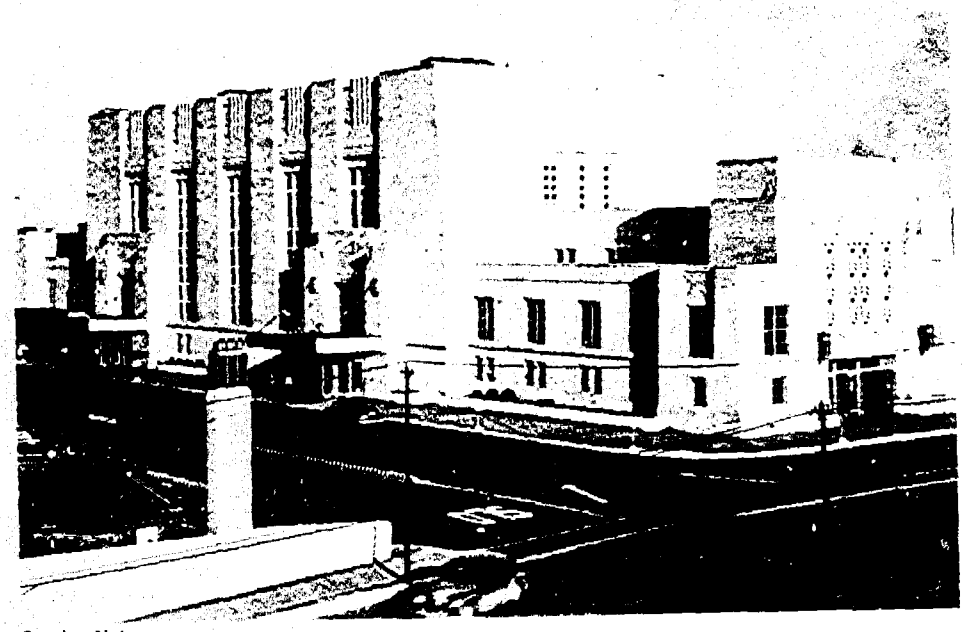
In 1971 Congress established Amtrak, the National Railroad Passenger Corporation, in order to insure that passenger service did not disappear altogether. Unfortunately, the responsibility for upkeep of railroad stations still falls on the railroad company owners, who must bear the tax and maintenance burden. Amtrak does not own rights-of-way, stations, fixed equipment, or air rights. It operates over the roadbeds of 12 different companies and pays them for the operation of its trains. And, although federally subsidized, Amtrak is a private corporation and is little motivated to preserve expressions of past grandeur built by others.

Until recently, it appeared that Amtrak would shortly vacate all larger stations in favor of new, smaller facilities built at other locations. It turned to small, plastic pre-fabs for new passenger stations rather than tackling the rising maintenance costs of old structures. In some cases fine existing buildings were ignored because of shifts in population. Cincinnati's Union Terminal cost $40 million to build in 1933; it has now been replaced by a new $270,000 building only one mile away. The original terminal, offering over 457,110 sq ft of usable space, stands empty.

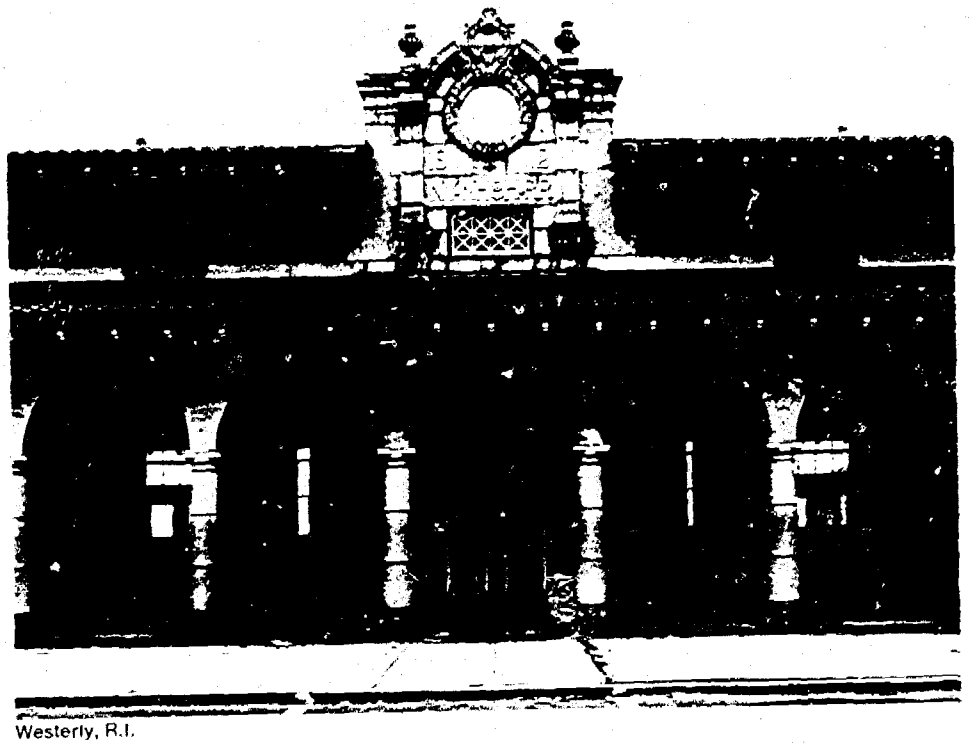
However, recent Amtrak policy changes indicate its intention in the future to use parts of existing stations for passenger service and to share the remaining space with others.

But no policy change by Amtrak can possibly rescue our man-made resource of railroad stations. The task demands action by the federal government, by state and local governments, and by the private sector. It also demands ingenuity, resourcefulness, and concern from legislators, architects, planners, developers, and communities.

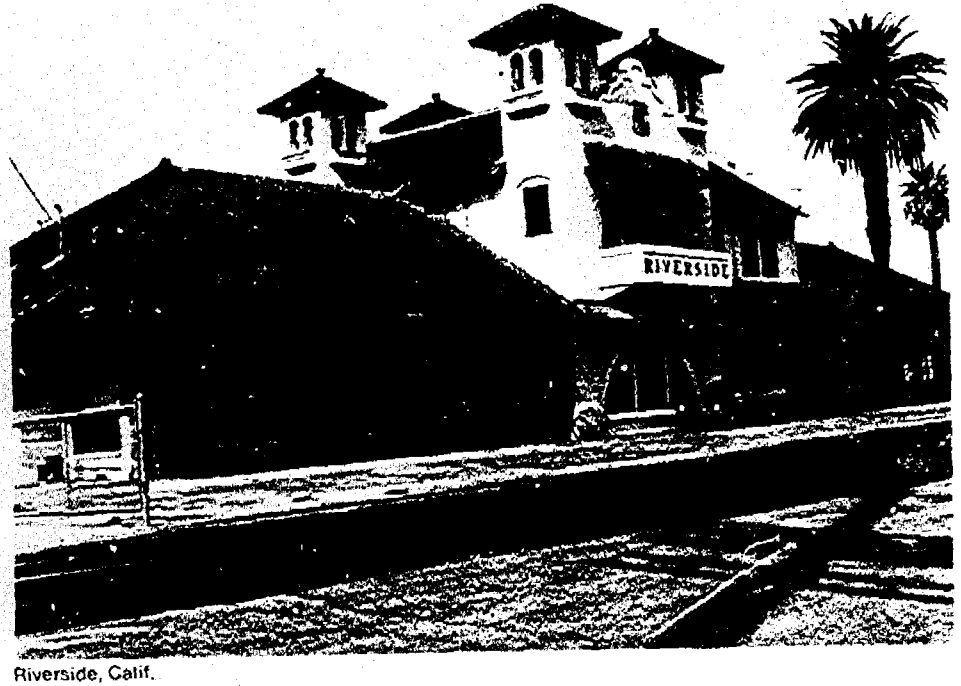

Martisco, N.Y.



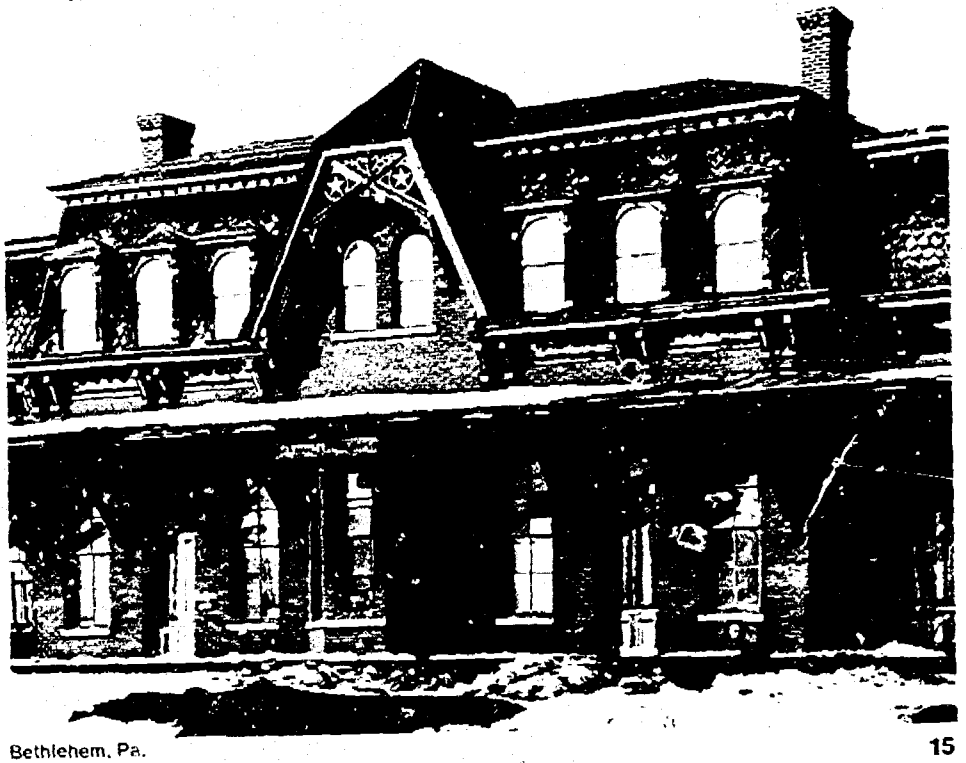
Omaha, Neb.



Westerly, R.I.




Riverside, Calif.



Bethlehem, Pa.

# The Idea of Reuse

The designers of railroad stations had to invent ways to house many interlocking activities, including

- Boarding and debarking from trains.
- Intercommunication between trains.
- Change from rail to other forms of transportation.
- Purchase of tickets.
- Purchase of goods for the journey.
- Waiting and refreshment.
- Communications (telegraph, mail, and among people).
- Baggage and freight handling.
- Administration.
- Access to adjacent buildings.

This complexity of function generated the interior diversity of form that evolved. It also suggests the great potential of stations for multiple-activity reuse.

The small stations may be fairly easy to save by conversion to a single new activity. But as size increases, the economic difficulties of reuse increase significantly. The very form of the larger buildings, however, encourages their reuse for a multiplicity of activities.

And there is no question that potential users are available. Every city already has activities which are ill-housed and searching for space in which to operate more effectively. There are also desirable programs which have not been initiated because of a lack of space. At the same time, most institutions are diversifying their services and reaching out into complementary activities. Museums are increasingly involved with schools, schools with commercial interests, performing arts groups with corporations, etc.

In education there is great interest in placing learning experiences outside the traditional classroom, either in loosely defined alternative schools or directly in the doing and making of things. The same desire for participation in process is found in the arts, where distinctions between arts activities, as well as differences between art and craft, are being blurred. (The mix of commercial, artistic, and educational activities now often enclosed in covered shopping malls points the way to the potential reuse of railroad stations.) Government functions, especially those requiring public access, could also well be housed in these buildings. And, finally, mass transit, which is becoming more and more necessary, could form an obvious component of reuse.

### Railroad Stations as an Environmental Resource

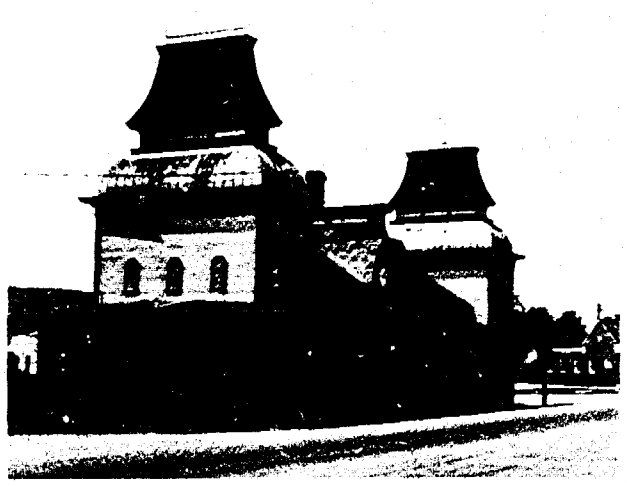
In recent years there has been an increasing awareness of our natural environment and a keen interest in preserving its ecological systems. We have finally realized that the resources aboard "Spaceship Earth" are finite, and that we must conserve nonrenewable elements. With depletion of energy sources threatening our well-being, we must husband and recycle what we have or find new sources.

Buildings can be regarded as a finite resource, too, especially if they were well built originally. The cost in manpower, materials, and energy required to reproduce existing railroad buildings would be enormous. Indeed, for the most part, they could not be duplicated because most of the necessary craftsmen and surface materials are no longer available. Most startling in a time of shortage is the investment of energy in these structures, which were built with manpower, horsepower, and steampower. Their present-day counterparts would have to be built with machines powered by our constantly dwindling sources of energy.

### Railroad Stations as an Economic Resource

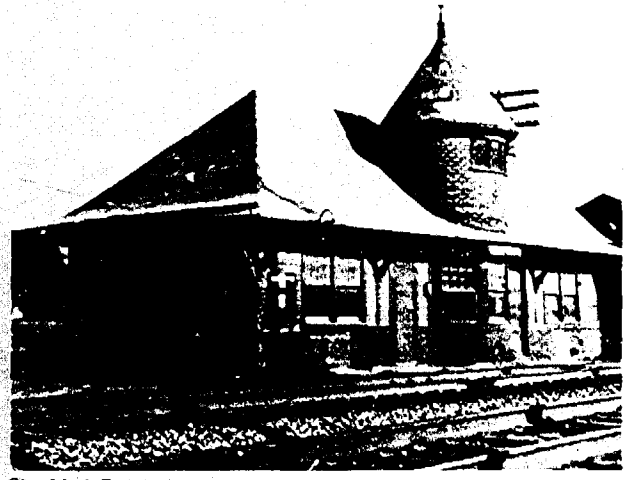
Aside from the historical heritage they represent, the approximately 20,000 remaining railroad structures enclose countless acres of valuable space which even a rich nation would be foolish to destroy. However, because of their location in the urban centers which they generated, many railroad stations are often on what is today very valuable land, land which could, in most cases, be put to more profitable use. To avoid bulldozing, the buildings can be redeveloped either within their existing walls or through the manipulation of their air rights. They could thus be saved by the very economic forces which now portend their undoing.

Lake Huntington, N.Y.



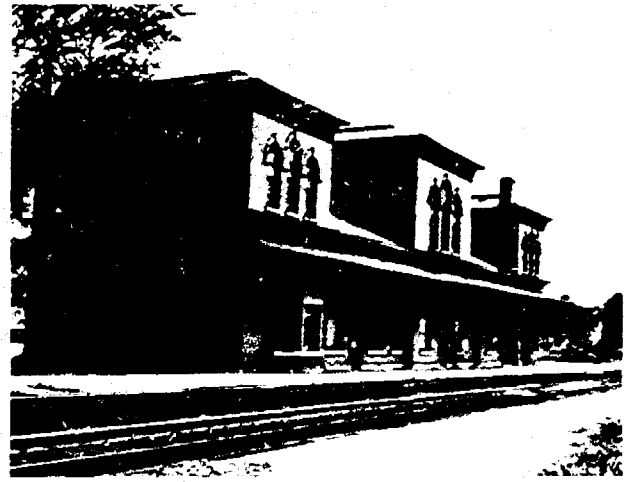
North Conway, N.H.

New London, Conn.

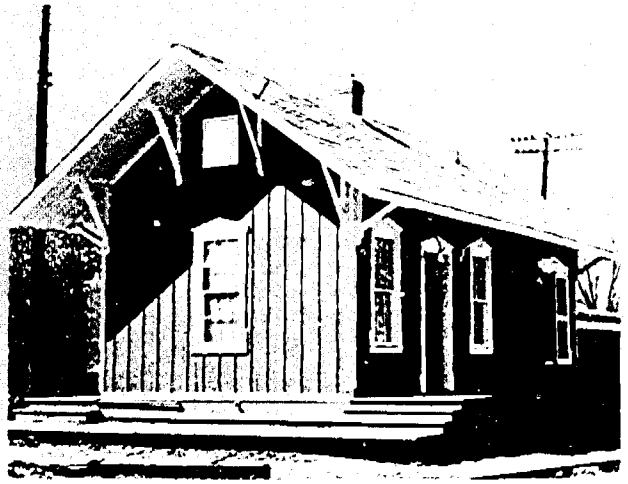


Siegfried, Pa.

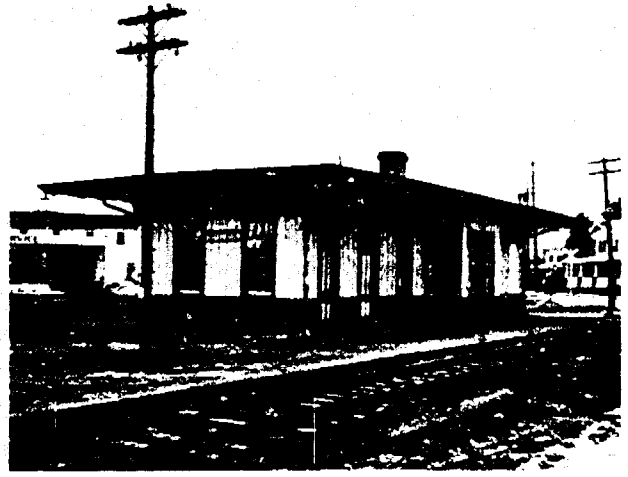
Gravers Lane, Pa.



Kent, Ohio



Peninsula, Ohio



Elmer, N.J.

Battle Creek, Mich.

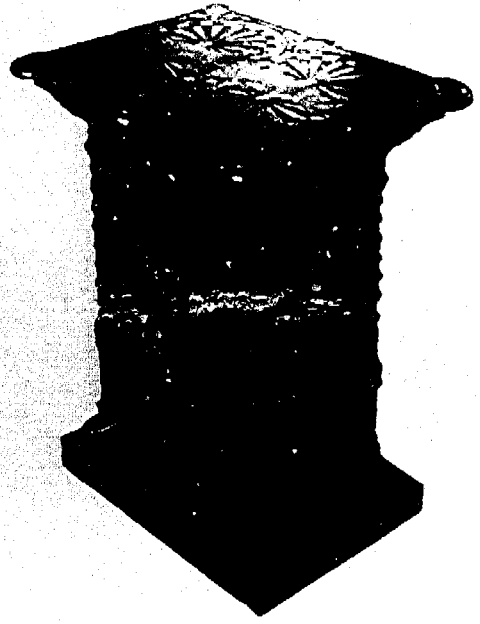
## Present Realities of Reuse

Unfortunately, not everyone is aware of the need for conservation of our railroad stations. Many individuals—in the railroad companies, in real estate, in the financial community, in government—oppose reuse, actively or passively.

### Opposition from the Railroads

How do the railroads—as interested parties—react to the idea of reuse of their stations? Some companies were very helpful to the makers of this report. They spoke frankly about available stations and some of the problems they face in considering reuse. Others reacted negatively. Many attempts to gather information were either ignored or answered with aggravation. The following quotes suggest the latter sentiments:

> We have no buildings to report for this reason [reuse].
>
> The stations which do not fall in these categories are being removed, and I venture to say that the communities involved are glad to see the eyesores go.
>
> We have spent a great deal of time and money, for safety reasons, discouraging the use of railroad facilities for public gathering.
>
> We have no unused old station buildings which, in our judgement, deserve preservation for historical reasons alone when the cost of preservation is measured against the economic facts of life which our company and the American taxpayer in general must face today. In most cases, we need the land occupied by any unused stations for the growth of our transportation and other services which are in the best public interest.



### Other Problems of Reuse

In addition to the lack of enthusiasm by the railroad companies, there are several other problems that stand in the way of reuse. One is the legal difficulties of a tangle of multiple ownerships. After the original wild expansion of the nineteenth century, a drive for consolidation of facilities took place, especially in medium-size cities served by many competing lines. In such cases, several companies would form a terminal company (usually with the word "Union" in its title), which constructed and operated an imposing terminal. Reuse of such structures means lengthy negotiations with the terminal company and with the remaining railroad companies, whose interests are often dissimilar.

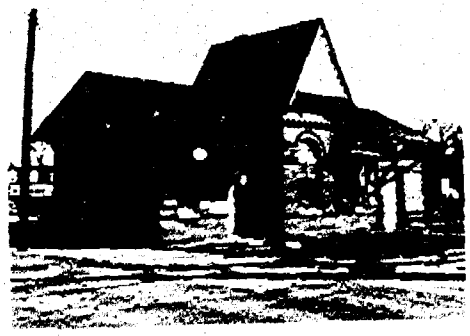
Financing can also snarl reuse projects. The attitude of the financial community toward preservation and reuse of existing structures has been highly conservative. It believes there are fewer unknowns in the financing of a new building than in the reworking of an old one. Reuse projects are usually considered "high-risk"; if funds are available at all, the interest rates are steep. Additionally, several railroad companies are entangled in bankruptcy proceedings in which their terminals are listed as assets—making both the financial and legal status of these buildings murky.

Land speculation is another problem. In the nineteenth century, the railroads engaged in extensive land speculation to provide much of the capital for their own expansion. And many stations are sited on now valuable urban land. Thus, it is not surprising that railroad companies continue to believe that economic gain can best be achieved through ever greater land-use density.

In considering underused or deteriorating stations, many railroads tend not to search for ways to save structures. They believe it is more lucrative, especially in crowded urban areas, to demolish buildings and replace them with new highrise structures. Although wasteful of resources, this game of rising density does effectively increase land value, and the owner benefits, through either outright sale or lease. The results of this moneyed sport cause buildings to become an expedient rather than an end in themselves, the land they occupy having more potential value than its structures. Rarely do railroad companies consider multiple use for an existing structure, air rights, or new zoning devices intended to save important buildings from demolition.

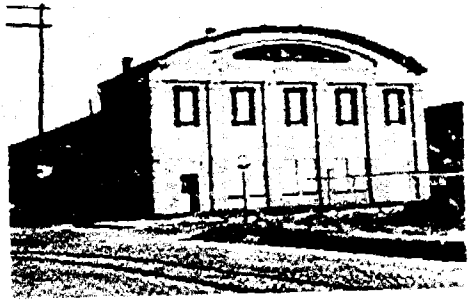
Unidentified

Lebanon, Pa.

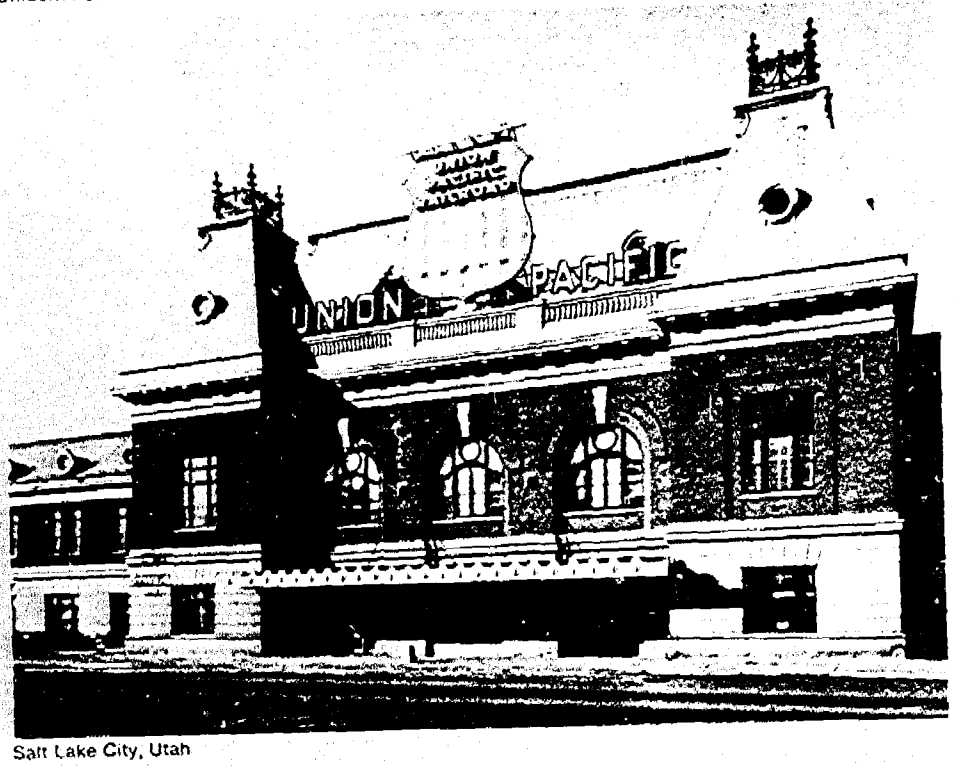


Garthersburg, Md.

Galena, Ill.



Baltimore, Md.




Salt Lake City, Utah

Somerville, N.J.

North Jackson, Ohio

Charlestown, N.H.

Altoona, Pa.

# The Idea Is Working

Enthusiasm is growing for the idea of reuse of many sorts of landmark buildings. Railroad stations, in particular, have inspired the concern of organizations and individuals who are vitally concerned with the future of their communities. Many stations have been successfully saved through creative reuse, despite the economic problems, the attitudes of the financial community, and the time necessary for negotiations.

It would be impossible here to give a complete list of the successful reuse of stations. There is no central registry, and some examples are doubtless known only locally. The researchers for this report contacted railroad companies, state historical societies, and federal, state, and local agencies, as well as many organizations and individuals. In addition, *Architectural Forum* printed a request for data in March 1973. The result was a flood of information, including 500 examples of successful reuse—and details of over 1,000 buildings available for it.

From this onslaught, ten examples of reuse have been selected, representing different size stations, different uses, and different ways in which reuse has been accomplished. Not all examples can be considered completely successful as architectural adaptations. Some interiors have been brutalized, some exteriors have unfortunate additions and deletions. But all have met an enthusiastic response in their new roles.

As the diversity of these examples shows, it is not possible to provide specific guidelines for reuse. Each station requires a unique solution for a variety of economic, political and legal problems; each station is in a different physical condition; each station varies as to size, location, structural arrangement, and

| Location | Built | Acquisition | Use |
|---|---|---|---|
| **Whistle Stops** | | | |
| Lincoln, Neb. | 1893 | Private purchase | Commercial bank |
| Fargo, N.D. | 1884 | Private purchase | Commercial (shops, galleries, offices) |
| Oberlin, Ohio | 1866 | Purchase (by foundation); school operated on $1/yr lease (federal & local funds) | Head Start school |
| **Medium Size Stations** | | | |
| Yuma, Ariz. | 1927 | Gift/fund raising by nonprofit assoc. | Cultural center |
| Duluth, Minn. | 1892 | Purchase by nonprofit corporation (funding: federal, and state; foundation; private fund raising) | Cultural center/ railroad museum |
| Hartford, Conn. | 1889 & 1914 | Private purchase | School/architect's office/railroad & bus depot |
| Baltimore, Md. | 1896 | Educational purchase (private fund raising) | Art college/social & cultural activities. |
| **Large Stations** | | | |
| Chattanooga, Tenn. | 1908 | Private purchase | Commercial complex |
| Washington, D.C. | 1907 | Lease from RR by federal government with option to purchase for $1 in 25 yrs. Renovation: federal & RR funds | Government visitors center |
| Indianapolis, Ind. | 1888 | Municipal option; private purchase (general & limited partners) | Commercial complex/ mass transit station |

mmunity needs. It is hoped, how-r, that these ten projects will indicate some of the ideas and economic methods available.

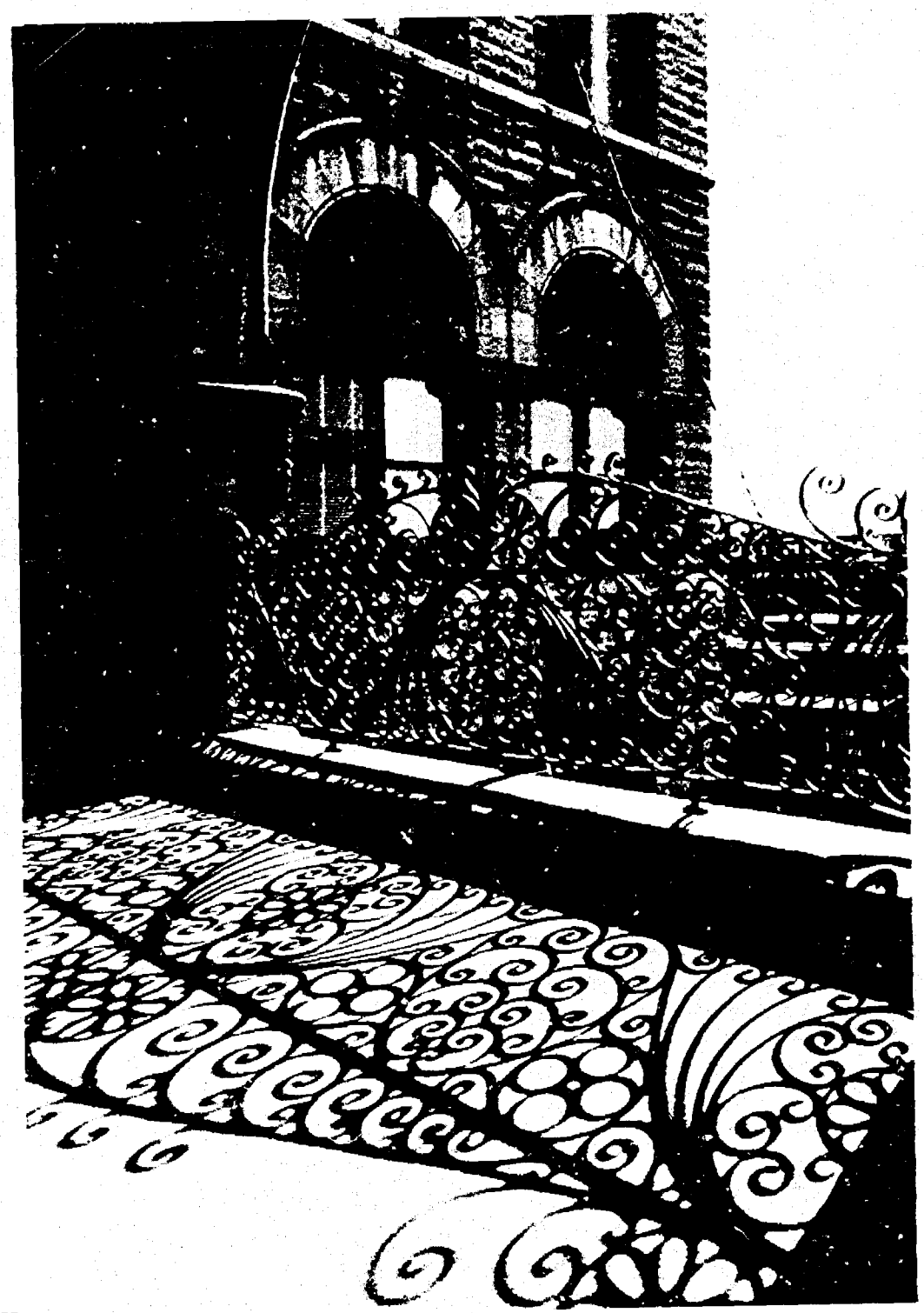
Before examining the details of each of these conversions, it is interesting to survey several points:

**Means of Acquisition** Most were purchased outright. Only Yuma's station was a direct gift. Union Station in Washington, D.C., will initially be redeveloped by the owning railroads, after which it will be leased to the government and eventually pass to federal ownership.

**Sources of Funding** Of the ten examples, only Duluth has used preservation financing, in this case through HUD. Washington's Union Station is receiving funds through the National Park Service and the railroad companies themselves. The other eight examples have been funded by private means or foundations (in Indianapolis the municipality did purchase the initial option).

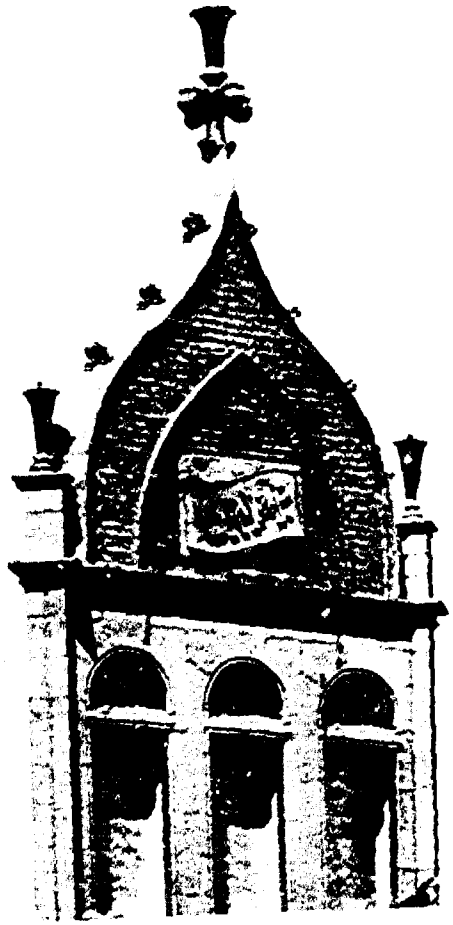
**Private Development** Five of the examples were purchased by private developers for commercial use. Chattanooga now operates as a restaurant and shopping concourse with plans for a theater; Lincoln is a branch bank; Hartford, Fargo, and Indianapolis are intended for a variety of commercial uses, the last to include a mass transit depot. Oberlin and Mt. Royal are used as schools, foundation and privately owned respectively. Yuma and Duluth are nonprofit cultural centers.

At first it appears that these ten examples have nothing in common but *that* is the point. Variety—of use, of financial support, of architectural style, and of community response—is the hallmark of this man-made resource.



Nashville, Tenn.

**Rural and Suburban Whistle Stops**
By far the easiest stations to save are the small whistle stops, most often found in rural and suburban areas. These usually consist of one large waiting space flanked by smaller ancillary spaces, an arrangement that can easily be converted to a variety of uses. Because of frame construction, they can often be readily moved and adapted to new sites. Their size means they can be redeveloped for a relatively small amount of money, usually by a single owner.



## Lincoln, Nebraska
### Rock Island Depot

A Nebraska banking statute was the unexpected salvation of Lincoln's whimsical Rock Island Depot.

In 1968 the City National Bank of Lincoln needed a branch; under Nebraska law it had to be within 2,600 feet of the main bank office. So the bank's president, Roland Tornblom, had to search within a circle with a half-mile radius. The 1893 depot, which stretched along the tracks like a fairy tale illustration, seemed perfect for his needs. Rail service had stopped two years earlier; the building had begun to suffer the ills of vacancy; the railroad was about to abandon it. The building was structurally sound, although the red sandstone and brick walls had been painted, new mechanical systems were required, and the undulating roofs rising above low, bracketed eaves needed replacement.

The bank purchased the station and charged its architects to adapt it with minimum modification to the Chateauesque style. With the exterior walls sandblasted, the building refurbished, the inventive roof trim repaired, and accommodation made for a drive-in facility, the station was restored to its original distinction and was ready to open in 1969 as the "Citibank Depot Drive-Up."

The remodeled interior retains as much of the original decor as possible, using old railroad and bank furniture—roll-top desks, a pot-bellied stove, lounge car chairs—and railroad memorabilia throughout. (Much of it was provided by other railroad companies.) In 1970, a portion of the rambling structure not being used by the bank was converted to rental space.

The depot, adapted at a cost of approximately $75,000, is now listed on the National Register of Historic Places and the Nebraska Historical Society. It has received a Certificate of Commendation from the American Association for State and Local History of Nashville, Tennessee, as well as local awards for civic improvement.

## Fargo, North Dakota
### Fargo and Southern Depot

A trip to Germany provided the stimulus for restoring the spacious brick depot once rapidly deteriorating in Fargo, North Dakota. Jack Akre, the present owner and a member of the American Institute of Interior Designers, was so impressed with Europe's brick-by-brick reconstruction of bombed out buildings that he began to investigate reusing an historic building in his own community. The result was his purchase of the Fargo and Southern Depot.

The station had been built on deliberately impressive lines in order to encourage development of its neighborhood and to lend stature to a planned railroad, the Fargo and Southern. In 1884 the *Fargo Daily Argus* proudly proclaimed, "The passenger depot will be of solid brick, two stories high, and one hundred feet long and thirty-five feet wide . . . the roof is quite steep and is surmounted by a handsome observatory, ten feet high. It is forty-two feet from the ground to the peak of the roof and seventy-two to the top of the flagstaff on the observatory. . . . Numerous windows are in each wall and the structure is designed so as to be both attractive and handsome." The writer went on to describe the commodiousness of the interior.

The railroad did not succeed, and the station was purchased the following year by the Milwaukee Road, which used it as a passenger-freight station until 1956, and for freight alone until 1961. The station then stood idle for almost ten years, until Akre became interested in it and its history. He wisely consulted with the city engineer, who assured him that the building was structurally sound, volunteering the information that, unlike other early structures, railroad stations were generally "overbuilt." Akre began to envision the possible multiple use.

The purchase was completed, and arrangements were made to finance the restoration. Akre conferred with railroad historian Stewart Mitchell; wherever possible they preserved the original structure. They were fortunate in locating an 1897 photograph of the depot and in having the detailed information from the early newspaper article. These were invaluable for the observatory had disappeared. (It has now been reproduced, and the flag once again flies from the flagstaff.) Unfortunately the natural yellow Fargo brick had been painted, so they decided on exterior white with olive green trim. Total cost of the restoration was approximately $60,000.

There was no problem in finding tenants for the restored building. "They found us" is Akre's simple explanation. "All ten firms are allied with the arts and are enthusiastic about the building and the stimulation of being surrounded by other creative people."

## Oberlin, Ohio
## Oberlin Station

"The New Depot—All About It" read the banner headline of *The Lorain County News* on November 21, 1866.

The article described a building constructed by the Cleveland and Toledo Railroad on grounds purchased by the citizens of Oberlin. In precise terms it boasted of the ". . . solid brackets of a very tasteful pattern . . . door and window caps which are of a similarly neat and heavy design. . . . The floor is of double thickness and, in short, every part of the work in the building is of the best character." In summation the editor wrote, "The depot itself is the finest of any intermediate station on the road, and the location is the roomiest and pleasantest of any station — intermediate or terminal. The Depot Committee are talking of an oyster supper and 'house warming', in the most approved style."

The joy of the townspeople of Oberlin was understandable. When a railroad from Cleveland to Toledo had been proposed in 1852, the people of Oberlin had sent out surveying parties to show that the road could easily be made to pass through their town. The township had subscribed $20,000 to the stock, and individual citizens as much more, and the road had been deflected sufficiently to touch Oberlin.

By 1969 the stolid little railroad station stood vacant for want of passenger service. The Nordson Foundation, realizing it could easily be adapted for any one of a variety of needed civic activities, purchased it and was immediately beseiged by potential users of the hitherto unappreciated space.

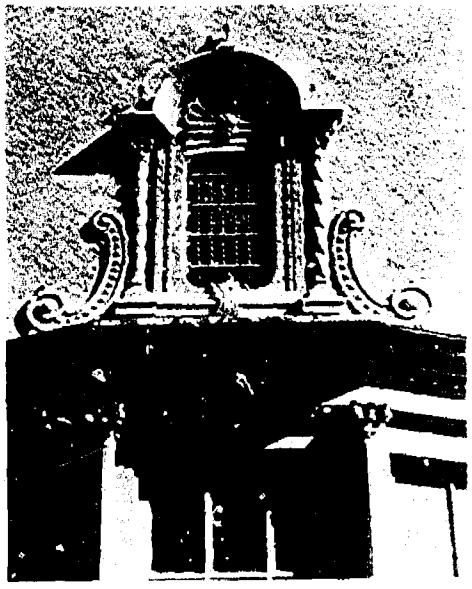
The foundation decided to lease the property for use as a Head Start school. The architects first defined the needs of the school, then began their task of restoring the exterior. This included repair and replacement of the wood trim and a fresh coat of paint. The interior was modified and now houses classrooms, offices, toilets, and a modern kitchen. In October 1969 the simple, one-level, multiwindowed station under tall trees in a quiet residential area was officially opened as Oberlin Head Start. A caboose, found in another Ohio town, was purchased, repaired, and moved to the school's playground.

The school leases the station from the foundation for $1.00 per year and operates as a delegate agency under the supervision of the Oberlin School Board. Funding is from the Office of Economic Opportunity, with 20 percent local contribution.

The Nordson Foundation is pleased with the results and is converting a station in Amherst, Ohio, into a cultural center which will include the performing arts.


OBERLIN
HEAD START

**Medium Size Stations**
It is difficult to draw a fine line separating railroad stations into categories. For the purpose of this report they have been grouped according to physical size—medium-size stations being those with between 50,000 and 170,000 sq ft of usable space. These structures, although fairly large, can be converted without exorbitant costs and, most often, can be administered by one or two organizations.



## Yuma, Arizona
### Southern Pacific Railroad Depot

The Yuma Fine Arts Association is the beneficiary of the combined generosity of the Southern Pacific Railroad and three prominent Yuma families who in 1971 gave the Southern Pacific Railroad Depot to the Association for use as a visual and performing arts center.

The building, which is in fine condition, is an important part of the Yuma cityscape and a beautiful example of Southwest architecture. The three main entrance doors, flanked by matching windows, arch to almost the full two-story height of the main section of the building; the pilasters between them are repeated in columns supporting the canopy on the track side of the building. Intricate details around the windows and under the eaves add interest to the stucco walls, which are capped by a Spanish tile roof. Identical one-story wings flank the main section emphasizing the basic symmetry.

The architects foresee little necessary exterior work. Interior alterations will include providing ample gallery space, including one for modern and historical art and another for religious artifacts; meeting, lecture, and work rooms; office and storage spaces; and modern kitchen facilities to service special dinners and community meetings. Future landscaping plans envision a small amphitheater for dramatic and musical performances, workshop areas, a children's museum in a railroad car, and shaded oases for reading and relaxation.

A disappointing aspect of this example of reuse is that the railroad company is building an adjacent structure for its passenger operations. Where the need for passenger facilities still exists, a redeveloped station should continue to meet that need. However, multiple use is preferable to single use, and even though the Yuma station is well suited to housing the planned art activities, it would have been more appropriate to reinforce this community resource by using it for passenger service as well.

Renovation is awaiting construction of the new passenger building, scheduled for completion by the end of 1973. Alteration costs for the old station will be about $150,000, and community and corporate reaction to initial fund raising was very favorable. The tempo is now slowed because of the present inactivity, although it is expected to pick up when work begins. Another effect of the renovation delay is an anticipated 15 to 20 percent increase in the estimated budget because of rising construction costs—an example of why renovation programs should be initiated as quickly as possible.

The Yuma Fine Arts Association feels strongly that the community needs a focal point for its cultural activities; it is convinced that the renovation of the depot is feasible and will enrich the citizens of Yuma and the surrounding areas.

## Duluth, Minnesota
### Union Depot

Thirty years ago some citizens wanted to replace Duluth's Union Depot. Luckily the movement failed. By 1976 the 80-year-old station will be the focal point of an exciting cultural center which will include two new buildings, an industrial and railroad museum over the tracks south of the depot, and a new theater for the Duluth Playhouse.

Long regarded as one of the finest examples of French Norman architecture in the nation, Union Depot was designed by Peabody, Stearns and Furber for the Northern Pacific and the St. Paul & Duluth railroads. It was completed in 1892 at a cost of $615,000.

In 1967 the Interim Cultural Committee began negotiations with the Northern Pacific (now the Burlington Northern) for the purchase of the building and surrounding land, which were valued at $500,000. In 1970, the Interim Committee, now the Area Cultural Center Corporation, signed an option for the purchase, which was exercised the following year. Purchase of the building and six sets of tracks at the rear was completed in 1972 with $137,500 from the Kresge Foundation and other private donors. The Burlington Northern's continued interest was proved at one point in the negotiations when a balance of $85,000 was due and the railroad extended the payment time for a year without interest.

The entire center will cost $2.5 million. Funding strategy anticipates 30 percent from government grants, 35 percent from foundations, and 35 percent from businesses and individuals. Of the total amount, $1.6 million will be used for renovation of the depot. Duluth is the only known station restoration using the historic preservation monies currently available.

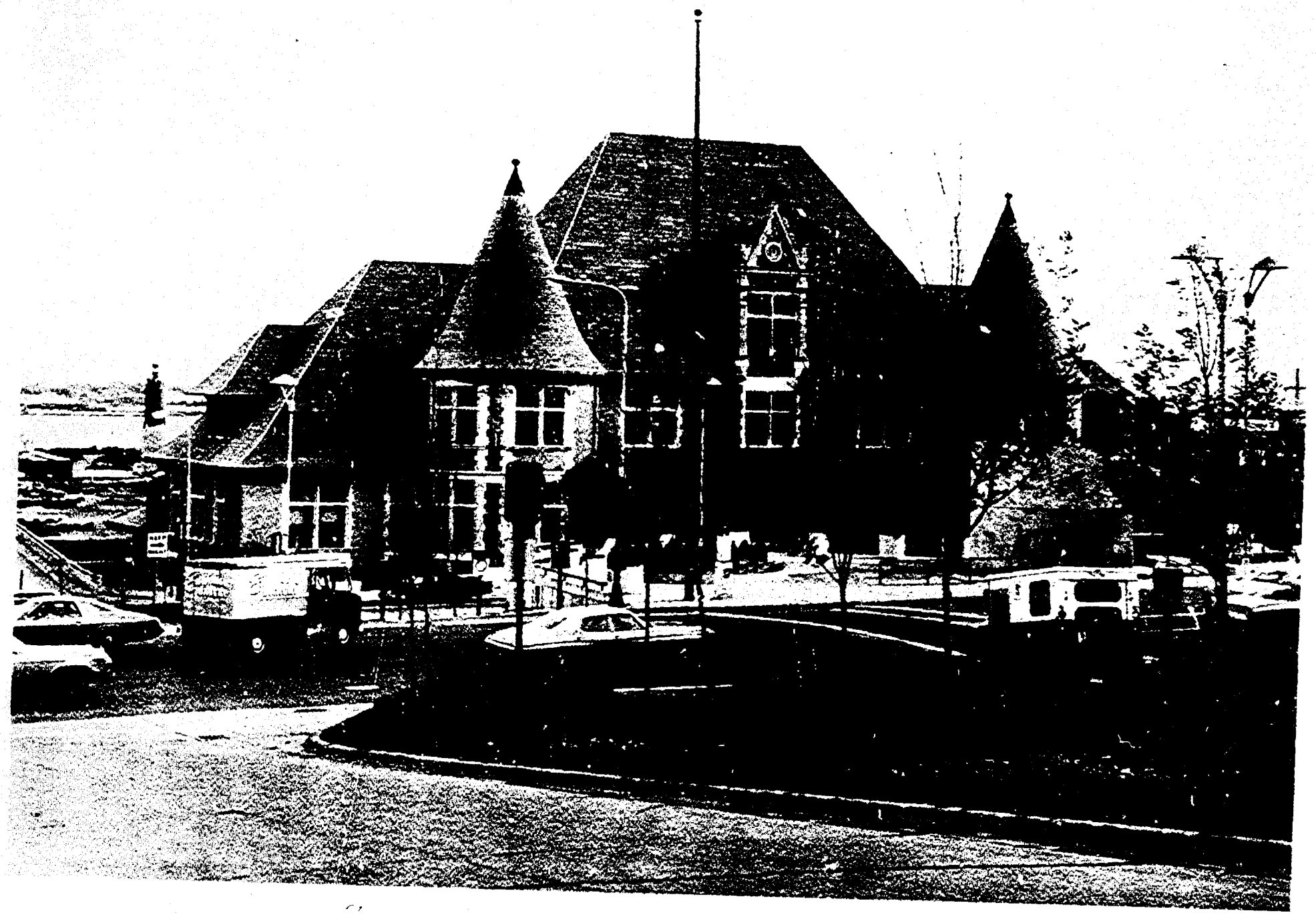
The Upper Great Lakes Development Authority has given a grant of $200,000 (an example of federal money being distributed through a state agency). The Historic Preservation Division of HUD has awarded the project an additional $201,000. The industrial and railroad museum now rising has also received federal monies: the National Economic Development Authority granted $350,000, 80 percent of the estimated $440,000 cost. The balance was raised from private donors. In addition, the Duluth, Mesabi and Iron Range Railroad gave $100,000 worth of restored railroad equipment and memorabilia.

Principal tenants of the restored depot will be the Duluth Art Institute, the A. M. Chisholm Museum, and the St. Louis County Historical Society; other groups, such as the Duluth Symphony Orchestra will have offices and other spaces. The new theater will house the Duluth Playhouse and The Duluth Civic Ballet.

Union Depot was listed on the National Register of Historic Places in 1971, insuring that all architectural changes are of a restorative nature. A false ceiling has been removed, exposing the building's original beamed construction to the full height of the slanting roof, and the immigrant waiting room—once one of the depot's busiest areas—is being restored to its original dungeon-like appearance, to retain this part of railroad history. Interior improvements will be made as needed for the new tenants.

Unlike many railroad station locations, the Area Cultural Center neighborhood is rapidly changing for the better. Nearby are the new Radisson Duluth Hotel, the Arena-Auditorium, and new buildings for station KDAL and the *Duluth Herald and News Tribune;* the intended site of Duluth's new public library is across the street. The Center looks up the new Fifth Avenue Mall to the Civic Center's Priley Fountain, and it is within easy walking distance of downtown stores and parking.

When operational, the Area Cultural Center is expected to be self-sustaining through membership dues, admission charges for Playhouse productions and art shows, and the occasional rental of exhibit and theater facilities.



## Hartford, Connecticut
### Union Station

The ponderous Union Station in Hartford is really a melding of two architectural forms. The original Romanesque station, built in 1889 by Shepley, Rutan and Cooledge, was gutted by fire in 1914; the brownstone structure survived and was quickly rebuilt, at which time an Italian campanile was added.

The station still serves Penn Central passengers, but the railroad no longer needs facilities of this size. In 1965 the building and its property (approximately 1200 ft x 100 ft) were sold to a local developer, Clayton Gengras, of The Connecticut Company. Shortly, architects started restoration of the building; $200,000 was spent to modernize the property, remove temporary additions, and clean and repaint the interior.

In 1969, the second floor of the station was leased to an architectural firm, the Hartford Design Group. The firm adapted the space to its needs and is still a tenant. At about the same time, the Shanti School, an experimental secondary school, was offered about one-third of the first floor space for a nominal rent, "practically a gift," if it would undertake the necessary alterations. With a small grant from EFL and the guidance of a carpenter who donated his time, the students built four portable classrooms, deck space over the roof for an art studio, and two sets of stairs. The Connecticut Council on the Arts commissioned a large mural for the school. The space was ready for occupancy in September 1971. A fourth tenant is the Trailways Bus Company.

Union Station is an excellent example of multiple use. The railroad still needed space, but less than it owned. By selling the station and leasing back a small portion, they relieved themselves of a tax burden and permitted a private owner to allocate the additional space to new uses. Thus the building is preserved, used, *and* continues as a railroad station.

CAREWI-ER-A

## Baltimore, Maryland
### Mount Royal Station

One of the most successful renovations of a railroad station to date is that of the Baltimore & Ohio's Mount Royal Station in Baltimore, now a part of the 147-year-old Maryland Institute, College of Art.

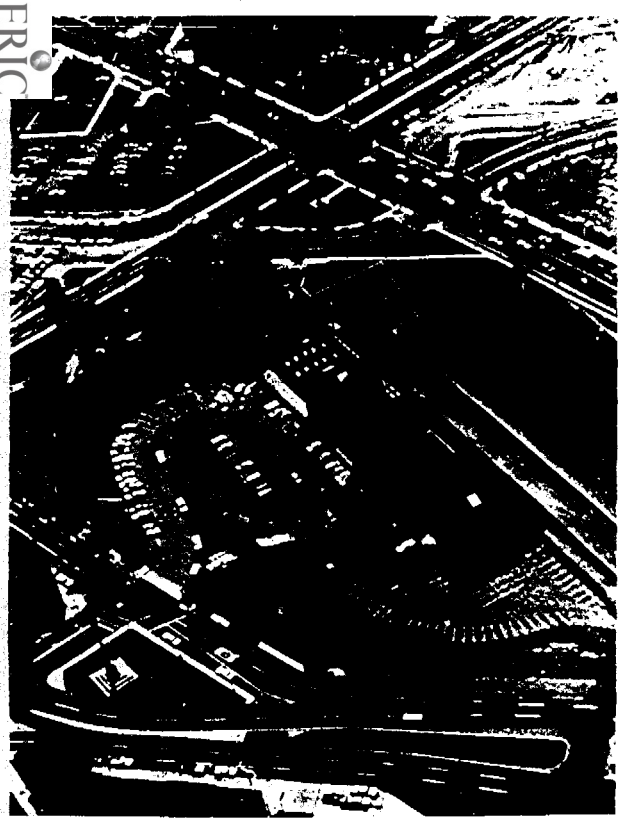
The neo-Renaissance station, built in 1896 by Baldwin and Pennington, is a magnificent building of granite with limestone trim and red glazed tile roof; its 150-ft clock tower is a landmark for the community. The interior was lavishly appointed in marble and mosaic floors, oak walls, marble columns, and glittering chandeliers.

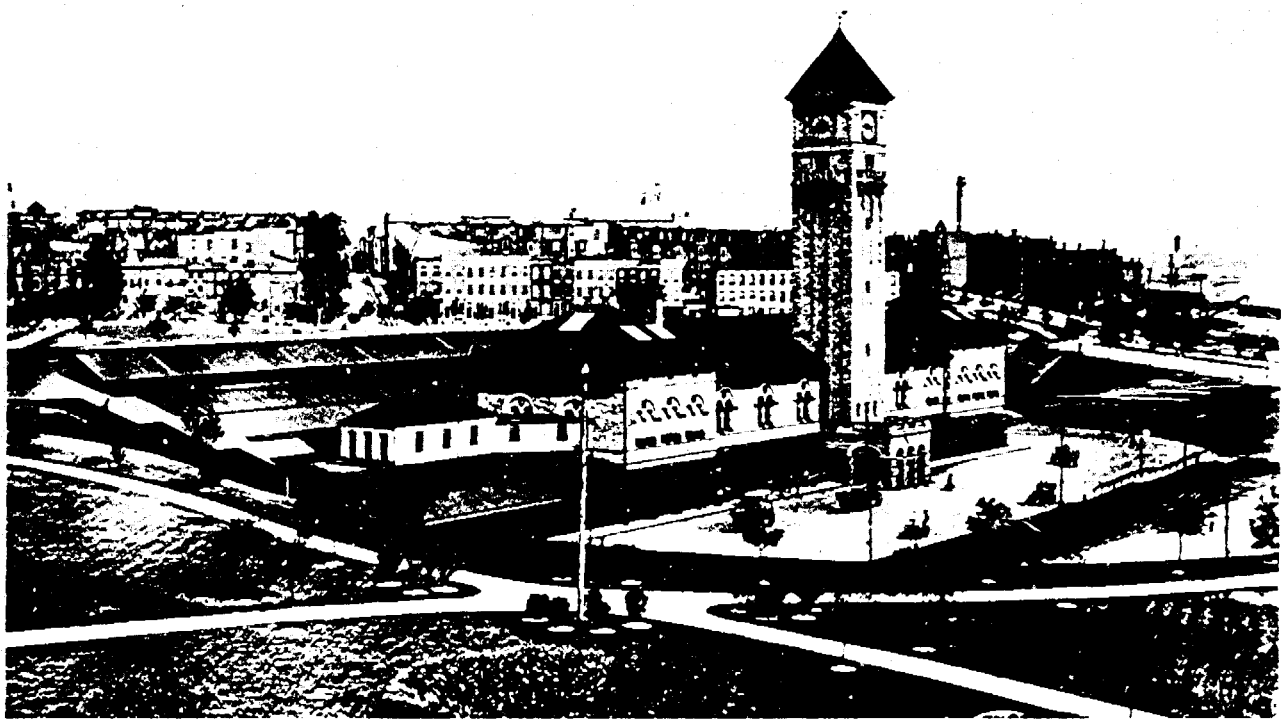
In 1958 passenger service to the station was discontinued; in 1961 the B&O was forced to close it. The station stood idle for several months, suffering the vandalism and decline of vacant buildings. The structure and its gracious four-acre park in a highly desirable part of town were valued at several million dollars, but the railroad deferred its sale and leased it, unrenovated, to the nearby Institute. In 1964, the railroad was again pressed to sell the property. The school was pleased with the facility, but in no financial position to purchase it. Finally, the school began a community campaign, and, with the encouragement of two of the railroad's prominent directors, the B&O sold the station, land, and air rights to the Institute for $250,000 (a fraction of their value) with three years to pay at no interest.

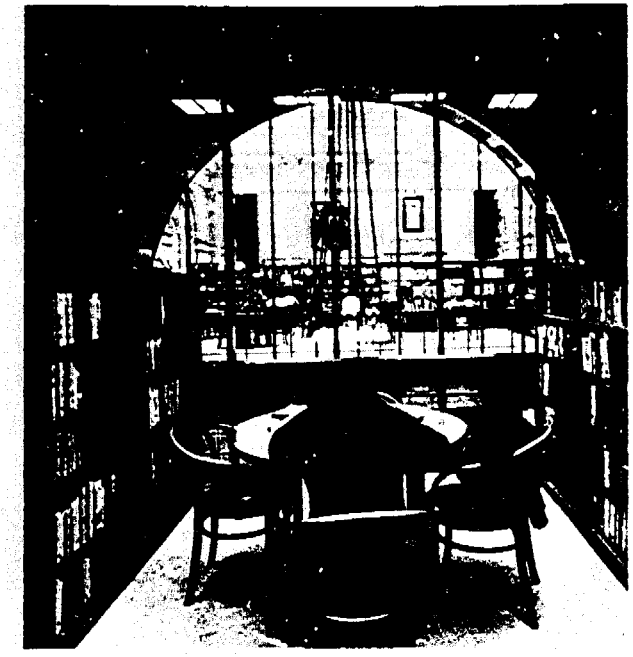
With $600,000 borrowed against early pledges in the $2.5-million fund-raising campaign, the Institute put its architects to work refurbishing the exterior and adapting the interior while retaining as much of the original splendor as possible.

The architects more than doubled usable floor space to 47,000 sq ft. The double-height vaulted waiting room, now serving as entry hall and exhibition space, is flanked on one side by a spacious gallery, and on the other by a 250-seat auditorium. Up the grand staircase, a new second floor (at the former balcony level) houses a library. Two third-floor areas at either end of the building have been converted into huge, skylit studios. An iron-framed baggage transfer shed is now the Rinehart School of Sculpture; offices and storage areas have been formed into studios and a cafeteria; the former train platforms now house another sculpture studio and a photography gallery.

The Maryland Institute, College of Art took occupancy in 1966, and the building has since been listed on the National Register of Historic Places. The Institute's president, Eugene W. Leake, who conceived and engineered the acquisition and adaptation, considers the renovation and the fund-raising campaign completely successful. No financial assistance was received from the public sector. In addition to serving the needs of the school admirably, the old station has become the center for many social and cultural activities sponsored by organizations throughout the Baltimore metropolitan area.







largest stations, found in the major cities of the United States, are the most difficult to save, although they consist of a variety of open and closed spaces best adapted to multiple use. They are usually costly to purchase and rehabilitate, and since they are usually owned by terminal companies representing many different lines, negotiations for acquisition can be difficult. Their size may also require multiple ownership and multiple sources of funding in reuse programs.

Because of these complications, examples of successful reuse of large stations are limited to the three described here.

## Chattanooga, Tennessee
### Terminal Station

Chattanooga was a major railroad center in the 1880s when the term "Chattanooga Choo Choo" was coined, but by 1906 a larger station was needed. The railroad chose a young New York architect, Donn Barber, who had won an Ecole des Beaux Arts competition for the design of a major urban station a few years earlier. Barber's Beaux Arts exterior was used for the new station, but the interior was modeled after New York's National Park Bank.

The station, built for over $1.5 million, was—and still is—one of superlatives. The largest brick arch of its kind in the world leads to a huge domed and skylighted waiting room. The dome reaches 85 ft above the ground floor and is believed to be the highest free-standing dome in existence. The waiting room is flanked by extensive service wings with floor-to-ceiling arched windows along their full lengths: decorative brickwork and terra cotta details ornament the facade.

By 1970 the station was closed and faced demolition. Then a group of 24 Chattanooga businessmen, headed by B.A. Casey, Jr., formed an investment group, The Chattanooga Choo Choo Company. In 1972 the company acquired the station and its 24-acre tract of land and began planning the transformation of the station into a group of restaurants and shops. One idea was always kept in mind, "the preservation of the Victorian concept of architecture and design."

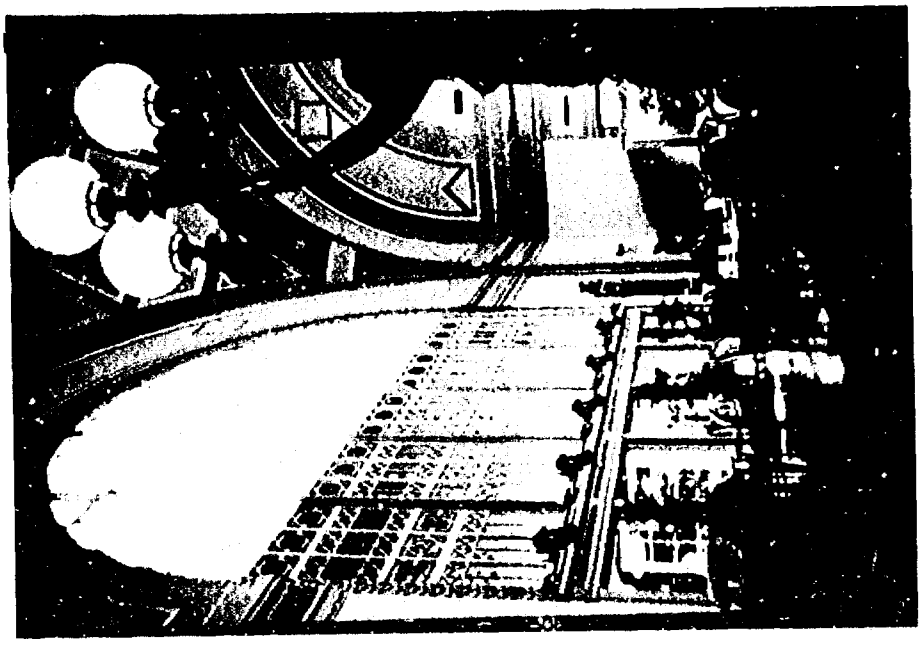
A low ceiling had been installed beneath the dome in 1961; it was removed to reveal the full magnificence of the architecture. Long-lost chandeliers were reproduced. The first of many planned facilities was officially opened on May 27, 1973—a restaurant seating 1,350 people amid the splendor and elegance of the turn of the century. Since then a variety of shops have opened in the former baggage areas along the sides of the tracks. Eventually there will be a town hall theater and a comprehensive model railroad display now being assembled by the Chattanooga Model Railroad Club.

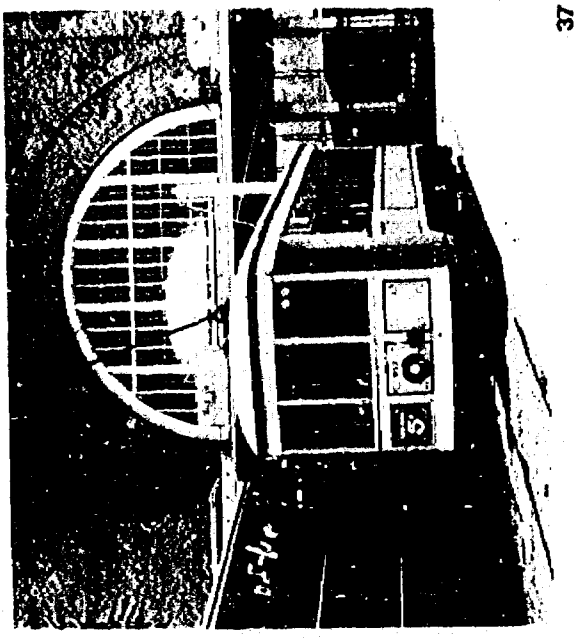
The station's platforms, interlaced with formal gardens, fountains, Victorian statuary, and gaslights, lead to a unique 150-room motor inn about 175 yards from the old passenger terminal gate—the Choo Choo Hilton Inn, a franchise, which opened in June 1973.

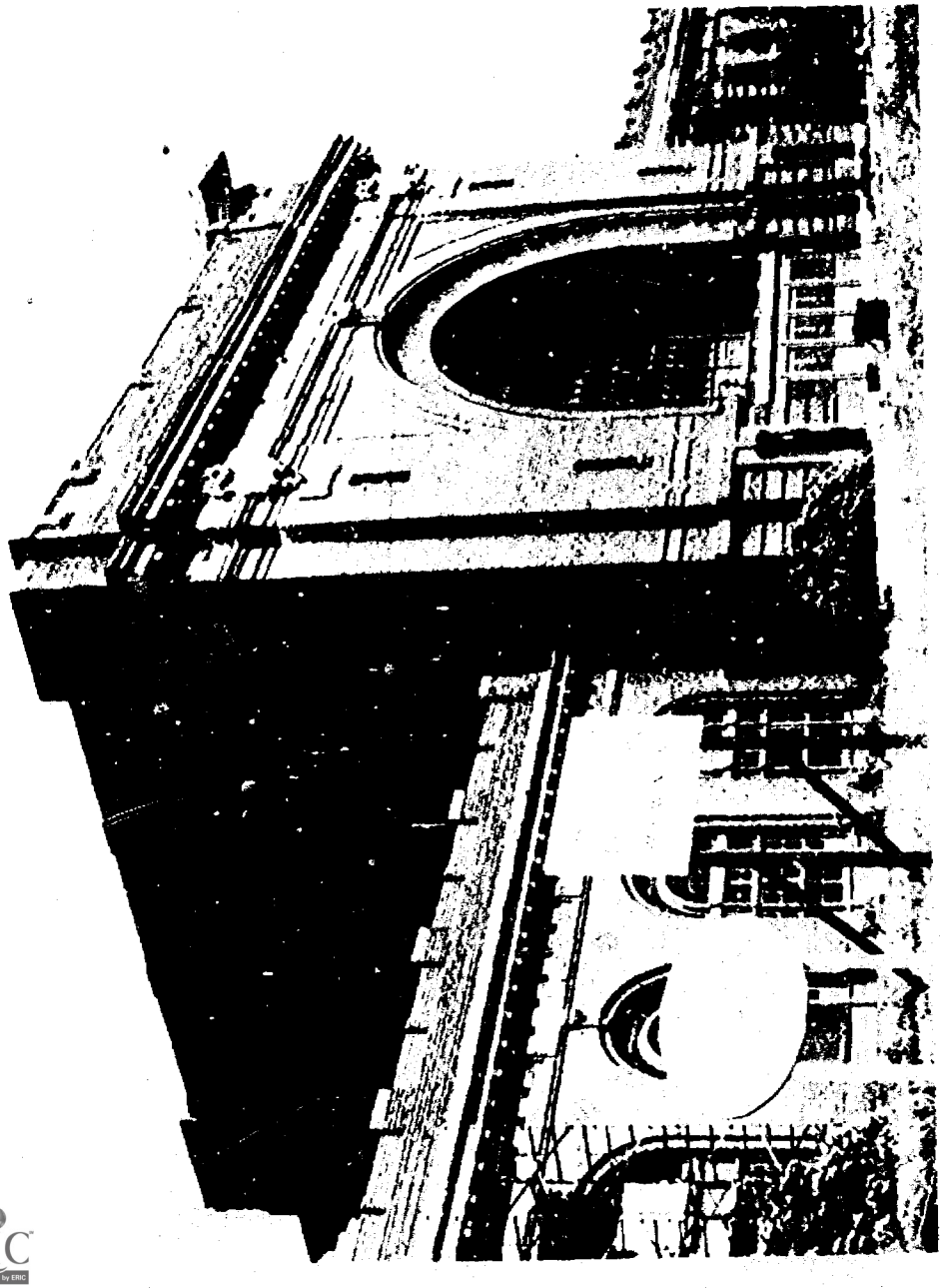
The inn consists of two-story structures designed to carry out the railroad station motifs of the early 1900s, and extending along the tracks are 48 restored Pullman cars, each containing two large living/bedroom suites. There are also four renovated dining and club cars, including the original Wabash Cannonball Club Car. An old trolley transports Choo Choo Hilton guests to the restaurant in the Terminal Station.

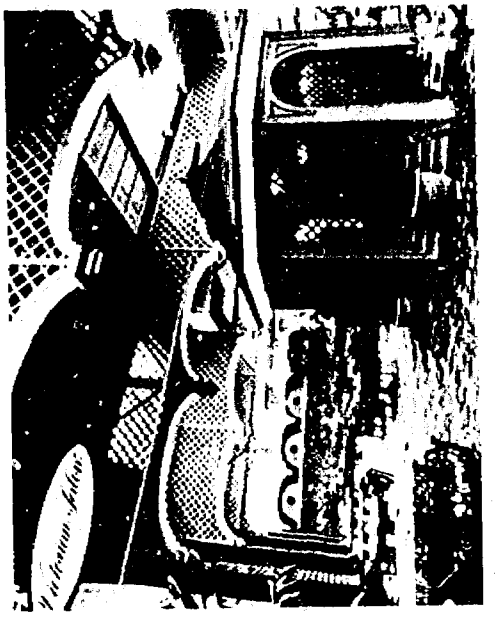
The project has cost more than $4 million, all privately funded. (Southern Railway Systems is a stockholder of the Chattanooga Choo Choo Company.) The original investors believed that the project would act as a catalyst to renewal of the downtown area, and this has proved true in a remarkably short time. According to Chairman Casey, "Much of the area surrounding us has been bought by other businessmen with an eye to future development."

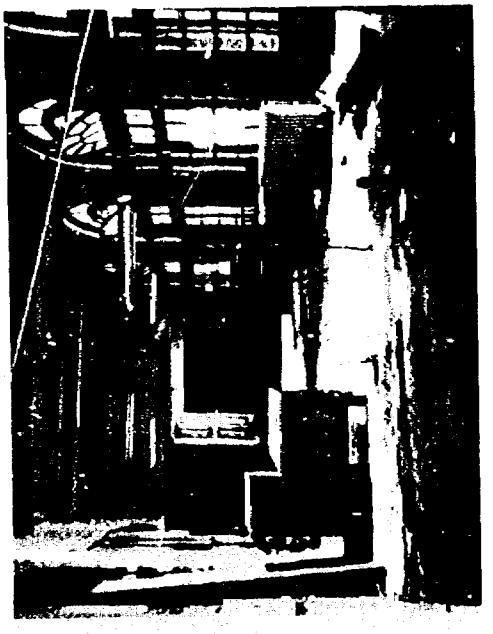
In early 1973 Terminal Station was listed on the National Register of Historic Places. Ironically, in August of the same year, the National Register's *Notices* recorded that the Chattanooga Union Station "has been demolished and removed from the National Register." Meanwhile Terminal Station is a prototype for adaptive use.

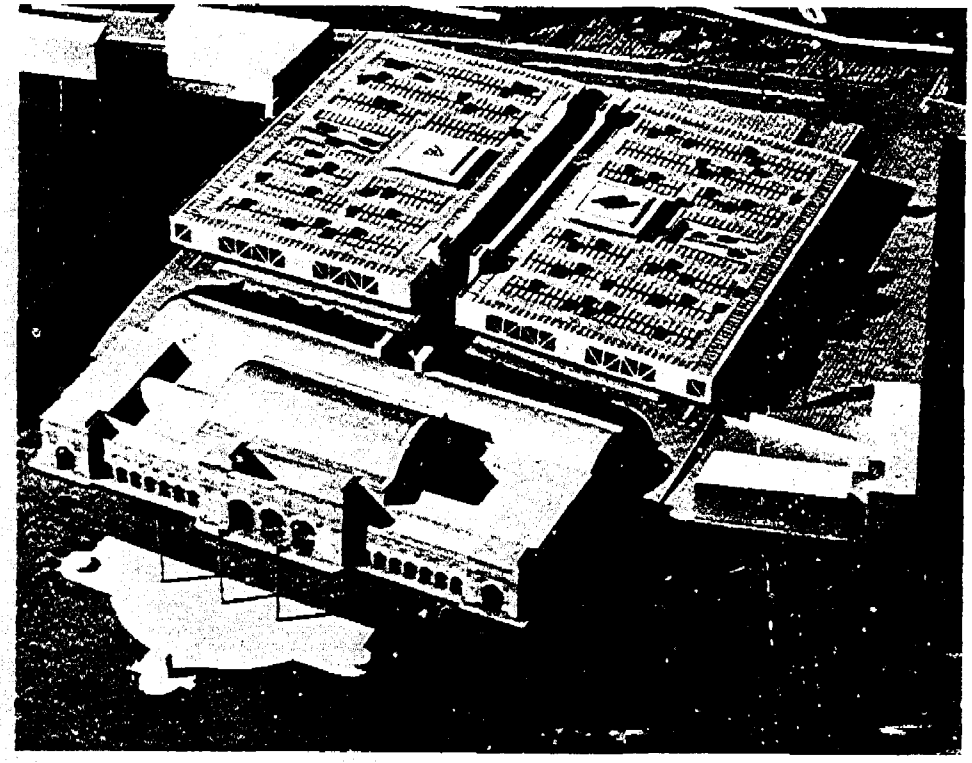












## Washington, D.C.
### Union Station

Most urban stations are constricted by other structures, but the capital's imposing Union Station is made even more impressive by its park-like setting, which allows a viewer to truly appreciate its architecture and classical detail. Designed by D. H. Burnham and Company in 1907, it is an early example of the Beaux Arts wave of architecture which followed the picturesque eclecticism of the late nineteenth century.

Arches, columns, and statuary grace the entrance and the extensive wings flanking it, but the conspicuous vaulted mass rising behind the entrance and dominating the exterior is an indication of the powerful spaces within. It delineates the vast, barrel-vaulted passenger and concourse waiting room. Deeper into the building is the train concourse, 130 ft wide and 760 ft long, stretching under a graceful arched vault; portals at either end allow access without the need to pass through the head building. The deployment of space within the station is so sophisticated that large numbers of people and equipment can be moved with great efficiency.

This majestic building is now being renovated under the direction of the National Park Service and will become the National Visitor Center. New construction includes a parking facility over the tracks at the rear of the building. Ownership of the station is retained by the Chessie System and the Penn Central, who are responsible for the $16-million conversion cost. The federal government has appropriated an additional $8.68 million for the refurbishing and exhibition work.

When the center is completed in December 1975—just before the bicentennial—the federal government will begin a 25-year lease of the building. Rent is now estimated at $3,338,000 annually; the money will be used to pay off the first and second mortgages. Financiers foresee the station and accompanying property free of all encumbrance by the end of the lease period; at that time the federal government will have an option to purchase for a token $1.00.

Although the Chessie, the Penn Central, and their federal assistants are to be congratulated for reclaiming Union Terminal, it is disturbing that they have done so by removing all railroad passenger activity. Instead of maintaining needed passenger facilities within the renovated station, they are moving them to a new station adjacent to the Terminal. There is no provision for shared use.

This is all the more disappointing because this is a prime location in the nation's capital. What more obvious place to demonstrate how both multiple funding and multiple use could encourage reuse?

## Indianapolis, Indiana
### Union Station

If current plans materialize, the Indianapolis Union Station may well become this country's most outstanding example of historical restoration and imaginative adaptation.

The Romanesque Revival station, designed by Thomas Rodd in 1888 with a wealth of detail and an artful balancing of materials, was built at a cost of $1 million. It is now covered with grime and virtually unused. But the restoration plans are exciting. The exterior will be cleaned and repaired by craftsmen to restore its intricacy. The handsome interior arched gallery, extending the full height and breadth of the station, will once more be exposed to changing light from the dominant stained glass windows in the north and south facades. The lower concourse and first three stories of the station will be eminently suitable for restaurants, night spots, shops, and kiosks.

A mass transit link from the station to Weir Cook Airport is also proposed, primarily for the use of visitors to the Indiana Convention-Exposition Center. It is thought that part of the revenue from the activity can be used to offset future maintenance costs of the complex.

The acquisition of Union Station is an excellent example of a city and private developers combining to save a railroad station. When the station was threatened with demolition, the City of Indianapolis, through its Metropolitan Development Commission, negotiated to buy the station from its owner, The Indianapolis Union (Belt) Railway Company (now controlled by the Penn Central Transportation Company). The city put together development guidelines for the station and its immediate environs and sought outside developers to carry the project forward.

As a further safeguard, the city council also set aside money equal to the purchase price ($196,666) in case the option expired before private developers could take title. To accomplish this the council passed an ordinance transferring $120,000 from the city's general redevelopment fund to the Metropolitan Development Department's urban renewal property fund, which already contained $76,666.

In the spring of 1972, the Metropolitan Development Commission negotiated the purchase of the station for $196,666. In October of that year, the Commission offered to assign its rights to a private developer for $5,000, the city's cost of survey and legal work. A condition of the offering was that the deed would restrict the use of the property for ten years to the historic preservation and restoration of the Union Station building (the station could be further developed for shops, places of entertainment, offices, public service facilities and the like).

After considering three bids for the station, the Commission awarded the project to Union Station Associates on January 24, 1973.

Union Station Associates raised funds for the venture as a limited partnership. Capital contributions were received as follows: from general partner—$100,000; from limited partners—$460,000 (limited partnerships were offered in units of $20,000). A loan commitment for $1.1 million from Indiana National Bank was also secured—allowing total capitalization of $1.66 million.

The Indiana Secretary of State approved the limited partnership structure in the fall of 1973. Now the developer is gathering the final signatures of the investor group; then the purchase of the station property will be closed. Cleaning of the outside and leasing of the inside will begin immediately thereafter.

The investment group believes that the quality development of Union Station is essential to the continued growth of downtown Indianapolis. Therefore, the tenant mix and the atmosphere will be created with care and attention to historical detail.

In structuring the purchase and reuse program, the developer solicited advice from those responsible for the successful development of Underground Atlanta and Ghirardelli Square in San Francisco; both groups indicated enthusiasm for the Indianapolis project. The planned restoration and reuse of Union Station have been so thoroughly and meticulously documented that they should prove an excellent source of ideas for anyone facing a similar situation.

# Endangered Species

Despite these and other encouraging examples of reuse, many architecturally resplendent stations remain in jeopardy. The most seriously affected are large stations, which can truly be considered an endangered species. Many are architectural triumphs but they are sited on highly valuable urban land; none are used to capacity. If they are to be saved from the bulldozers, these structures demand vigorous study.

Because of their size, however, such buildings have a great potential for influencing the future of their surrounding urban communities. Therefore it is best to think of these examples not as isolated buildings beset by unique problems. Instead, they should be considered as prominent civic structures whose redevelopment could offer significant opportunities to influence the future character, economy, and operation of urban centers. While outright destruction would be their most dramatic form of loss, it is also possible to lose these buildings by degrees, watching them melt slowly away under a burden of negligence.

Following are five examples of an endangered species—four large and one medium size. Only for the last is there much hope without federal leadership.

## New York, New York
Grand Central Station
1903-1913

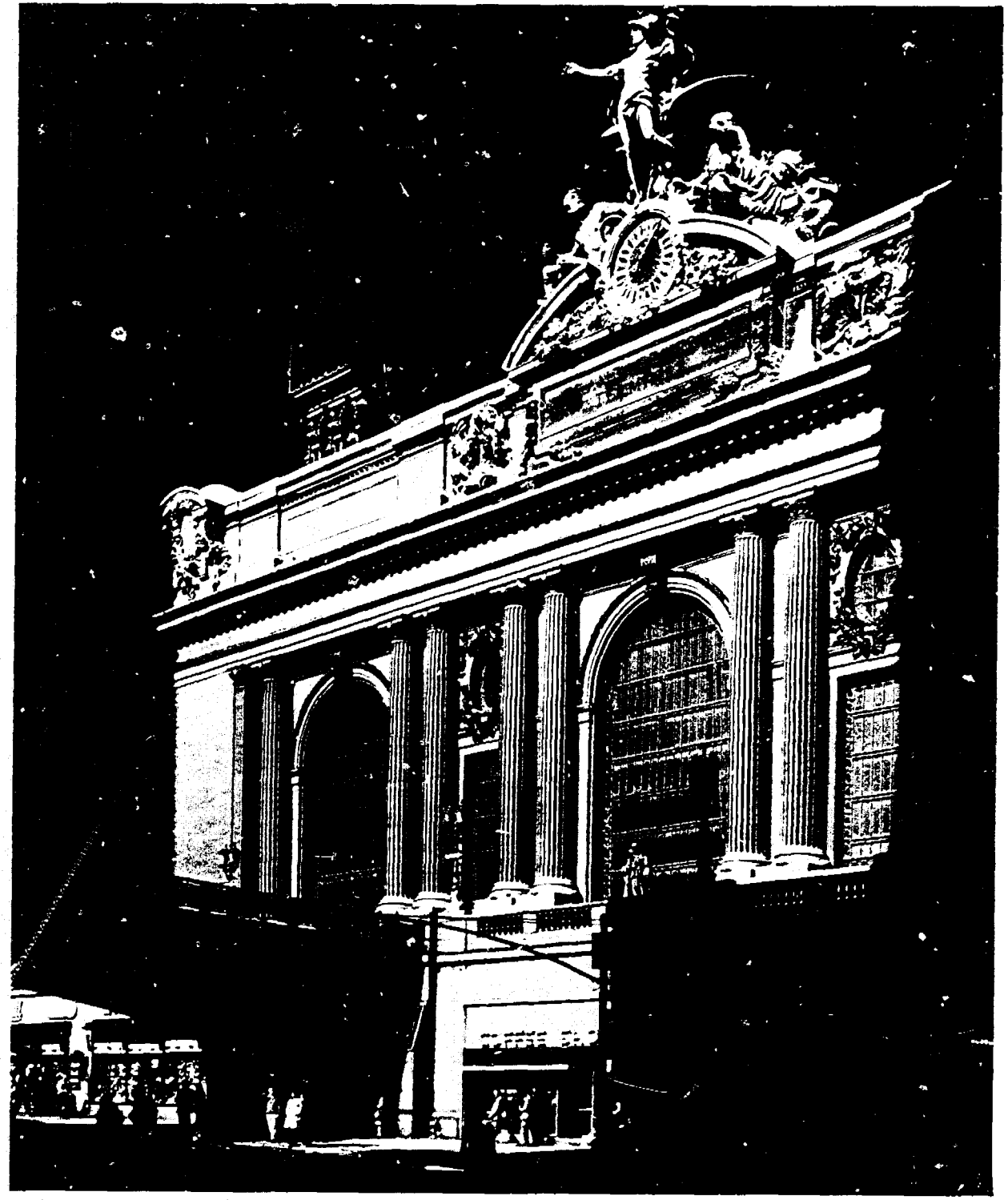
In *The Railroad Station*, published by the Yale University Press in 1956, Carroll Meeks writes eloquently of Grand Central:

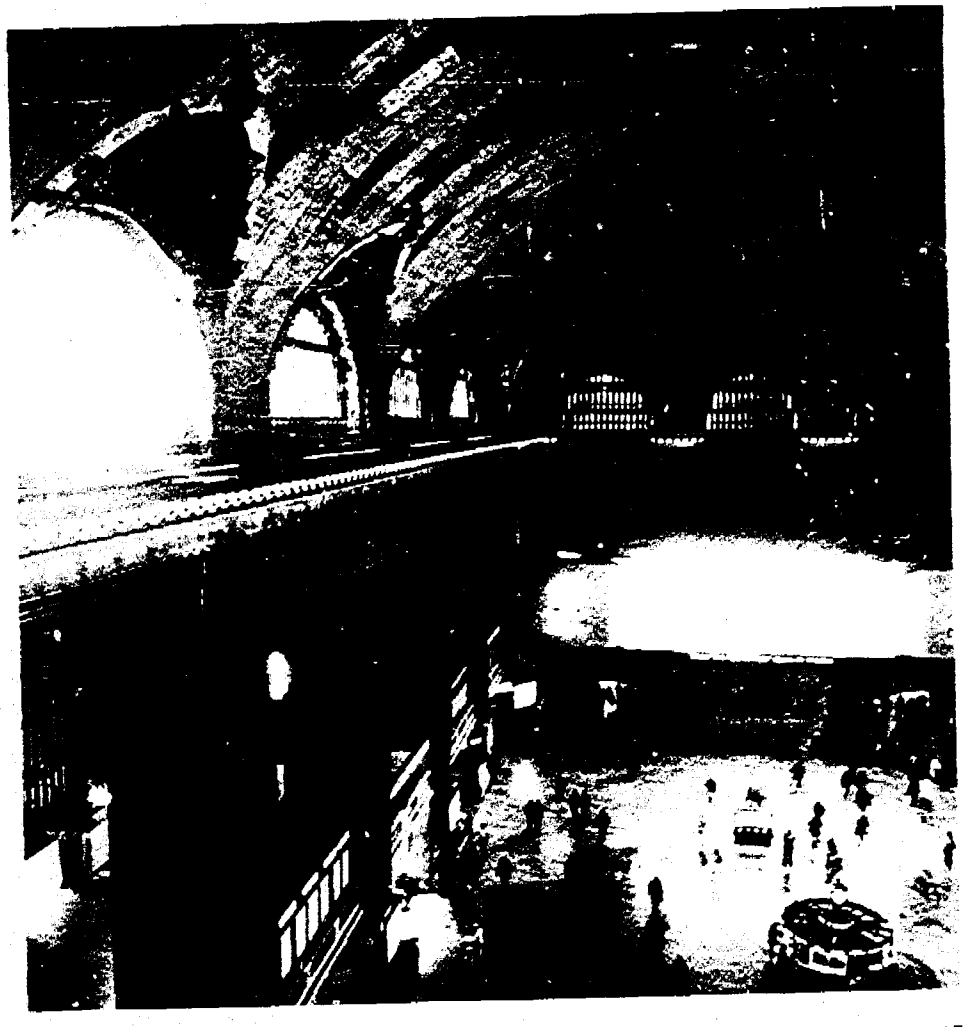
> The present Grand Central Station in New York, now nearly half a century old, was and is one of the outstandingly successful stations of history. The use of multiple levels to handle the complex circulation problems was carried further than in any other station; the credit for this is to be divided between the company engineers and the architects, Reed and Stem. The engineers devised the track layout with express trains above and suburban trains below, each set of tracks being provided with a concourse of its own, so that in effect two stations are superimposed. Unlike the earlier loop lines at South Station, Boston, those provided in New York functioned admirably. Ramps were used lavishly, not only to get passengers to and from the platforms but also to get them in and out of the station. There are connections to all the neighboring streets and to subways and shuttle trains. All of this was achieved without forcing passengers to walk excessive distances. . . .
>
> A long-lived firm first called Reed and Stem acquired a great and lasting reputation as station architects. . . . Their masterpiece, Grand Central in New York (1903-12), is closer to Burnham Baroque. The scale—nearly that of Michelangelo at St. Peter's—was considered normal for public buildings in the early part of this century. . . . The details of the evolution of this brilliant design are somewhat obscure. A limited competition was held in the exceedingly short time of two months; Reed and Stem were declared the winners and were undoubtedly responsible for the main outline of the final building, although the firm of Warren and Wetmore was associated with them in the execution. The reasons for this, like the competition drawings themselves, are currently inaccessible in the files of the New York Central Railroad. The clarity, directness, and simplicity of the final building has always been recognized. No better station of its size has ever been built; its only rival is the recently completed Stazione Termini in Rome. As real estate values rose in the surrounding area, Grand Central Station proved to be a successful investment as well. After fifty years, however, the situation has changed, and today operating costs are proving a heavy burden. As a result, the great concourse may soon be torn down to make way for more profitable office buildings, thus destroying one of the finest interior spaces ever erected.

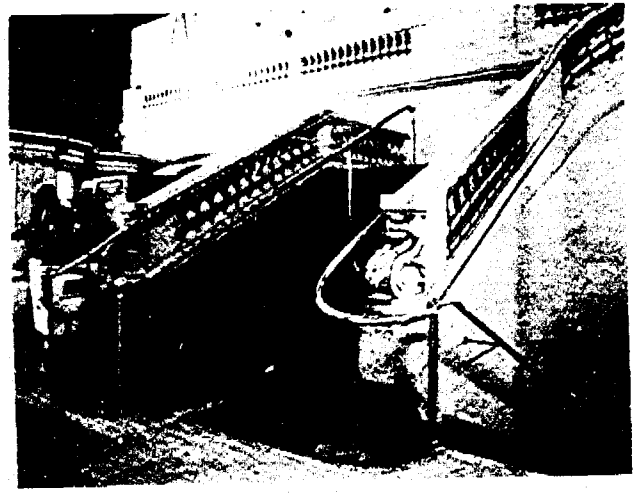
Grand Central is now an official New York City landmark and thereby temporarily saved from the bulldozers. However, it is the subject of a lawsuit in which developers who hold the air rights to the property are claiming damages from the city because of what they claim is an unfair law. No matter how the court rules—for or against the landmark law—the matter will be appealed. Meanwhile water stains have begun to appear on the plasterwork of the grand concourse, and a general scene of gloom prevails.

Studies of Grand Central are being conducted by various state and city

cies, but their outcome is un-
in, the owners are in bank-
y, and the operating authority
(The Metropolitan Transit Authority)
is mute.







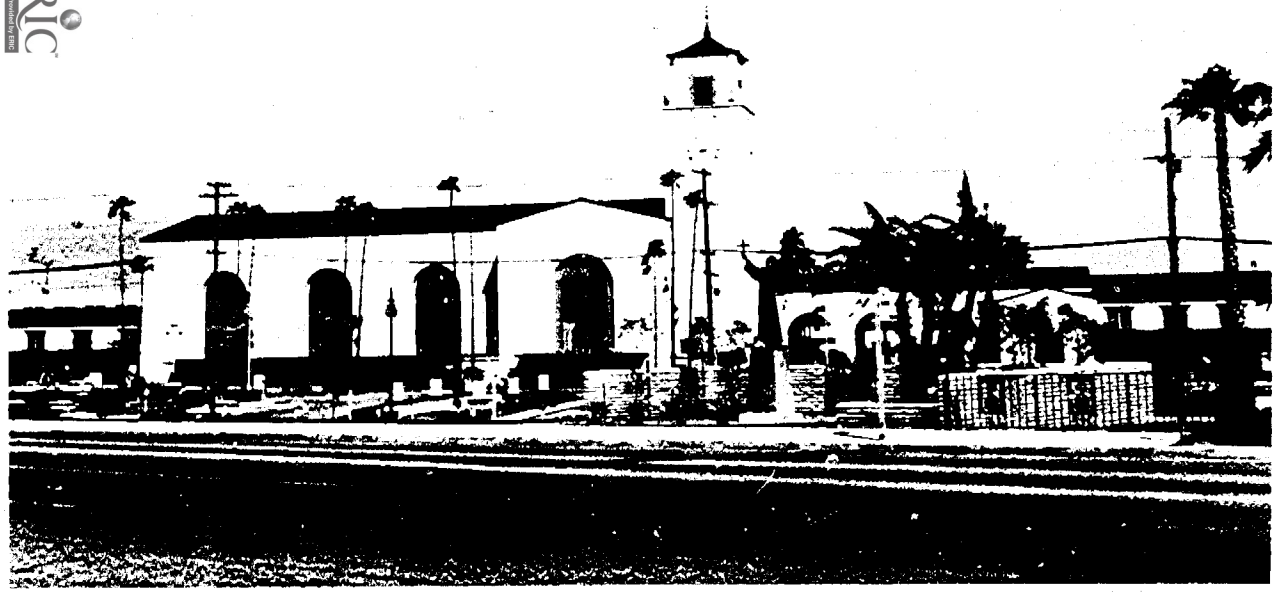

## Los Angeles, California
### Union Passenger Terminal
### 1934-1939

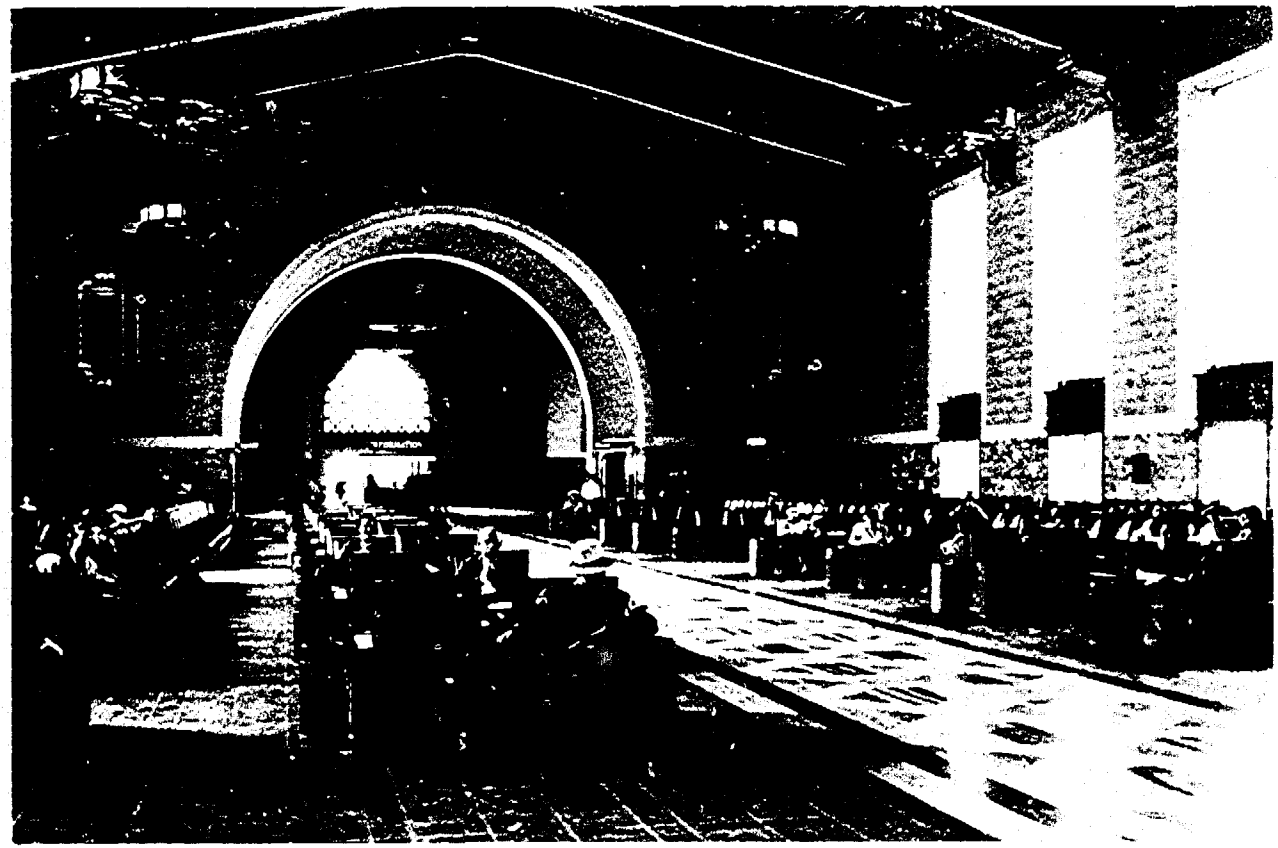
Carroll Meeks describes Los Angeles Union Passenger Terminal as the culmination of the mission-inspired depots and as the last large station built in the United States.

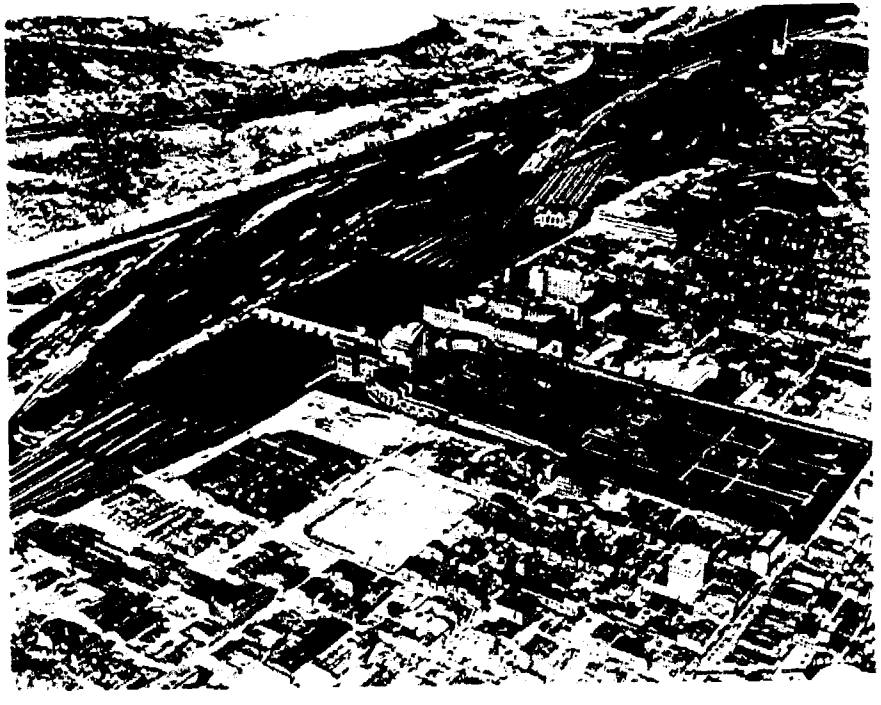
> Further evidence of the lack of a major architectural direction in the first postwar period is provided by the existence of still another stylistic current which swept the western and southern parts of the United States. From Texas to California the original ramshackle stations, and in a few cases the second more permanent but inadequate stations, were being replaced by larger and more pretentious ones in a style which sprang from the indigenous Spanish tradition. This group of mission-inspired depots with arcades, balconies, and belfries had counterparts in hotels and mansions. Together they reflected a conspicuous outbreak of regionalism, a mutation of the nationalist virus which had determined the stylistic garb of so many late 19th-century buildings in Europe. Like them they embodied the canons of the picturesque. The culminating station of this group was the one at Los Angeles, 1934-39, by Donald and John Parkinson. . . . It was done in a freer version of the Santa Fe's ubiquitous mission style, with a bow to the modern in the simplicity of its forms. There is an echo of the lavishness of the Meadville, Pennsylvania, depot of the 1860's in its landscaped grounds. A union station, it provided fifteen spur tracks, with their platforms shaded by umbrellas and connected by tunnels to the picturesque forebuilding. Sensible use was made of the change in levels, and various kinds of traffic were kept distinct. The automobile was better provided for than at any previous station, with extensive parking lots which were immediately in front and not cut off by an intervening highway.

The station is still being used for passenger service by Amtrak, although on a curtailed basis, and for the freight operations of the Atchison, Topeka and Santa Fe, Union Pacific and Southern Pacific Railroads. It is also a Post Office center.

City council members and others have suggested that it be converted to mass transit use, but it is not in a heavily populated area, so an extensive feeder system would have to be constructed to make the project feasible. At this time there does not seem to be any great awareness about the station's future.







## Cincinnati, Ohio
### Union Terminal 1929-1933

"Their masterpiece," writes Carroll Meeks of Cincinnati's Union Terminal and its architects, marveling at the complexity of its circulation patterns.

> . . . . Then in 1929 they [Fellheimer and Wagner] began their masterpiece at Cincinnati. As in Buffalo, this station was a badly needed replacement for a clutch of decrepit stations scattered in the lower parts of the city subject to flooding. Far out from the urban center, an ample site was secured on which to build as ideal a station as could be conceived. The tracks were made to swing past at the rear, and an enormous elevated plaza was raised in front. The conception was that of a half funnel laid on the ground, the wide mouth gathering in the streams of travelers and the narrow end ejecting them onto the platforms. Circulation was the fundamental consideration. From the plaza, passengers enter the semicircular concourse at grade level. Three curving ramps lead down to the lower level, where buses or taxis deposit departing passengers and pick up arriving ones, then loop around and continue back up the ramp to the plaza. This remains today the most elaborate provision for vehicular traffic in any modern station. Back of the concourse a combined waiting room and train concourse 450 feet long stretches out over eight platforms and is connected to them by ramps and stairs. . . .
>
> Inside this Cincinnati station the era of sumptuous stations had left its traces. The prosperity and optimism of the years before the great Wall Street crash had stimulated a revival of mural decoration, and Winold Reiss was commissioned to decorate the interior in mosaics. Externally, the station is an example of the carton style. The entrance is a great arch 200 feet in diameter—the unchallenged giant of station portals. The plaster vault behind is hung from six arched trusses of which the largest weighs 380 tons.

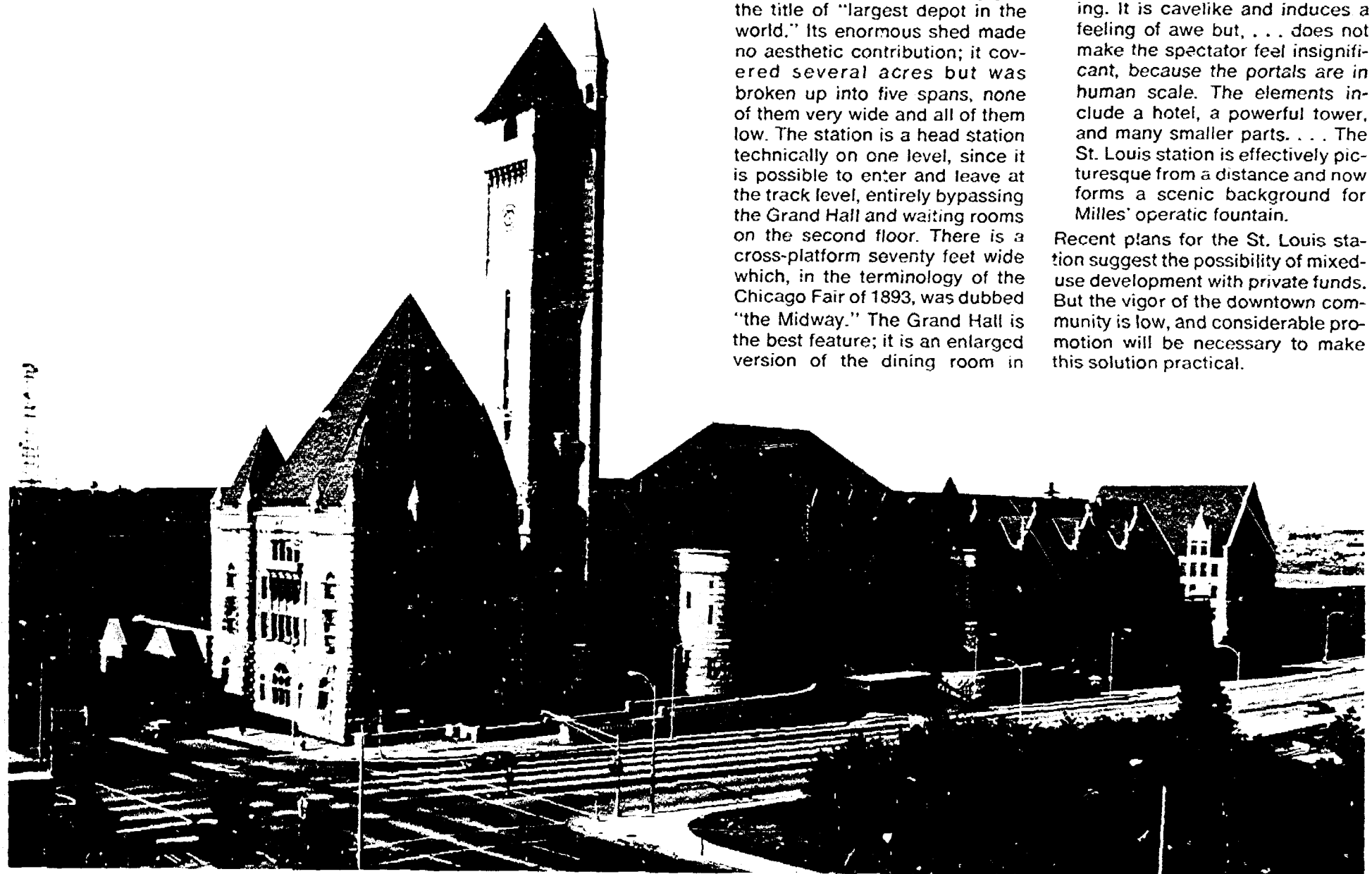
Despite a mounting campaign of public interest, the Cincinnati station is being eaten away, first because piggyback loadings required demolition of portions of the rear concourse, and second by the forces of decay. EFL gave support to assist in planning alternative uses and funding, but a science museum was attempted and failed, and a bond issue for an alternative education center was defeated. The white elephant status is compounded by the $10-million debt remaining from the original investment.

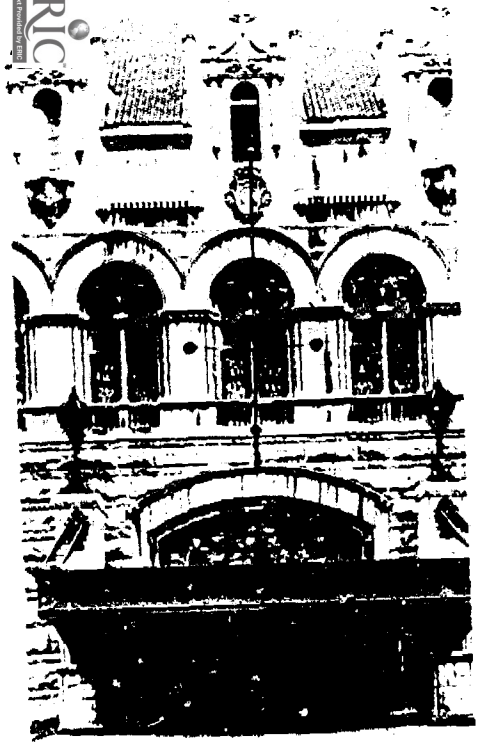
## St. Louis, Missouri
Union Station 1891-1894

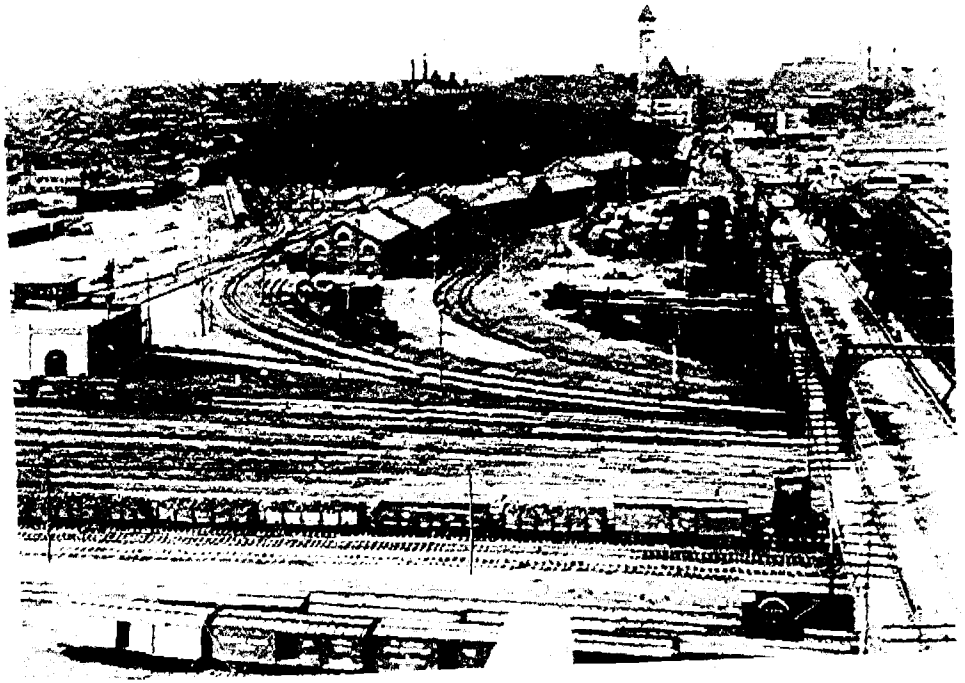
Theodore C. Link designed Union Station to be St. Louis' pride. Carroll Meeks writes:

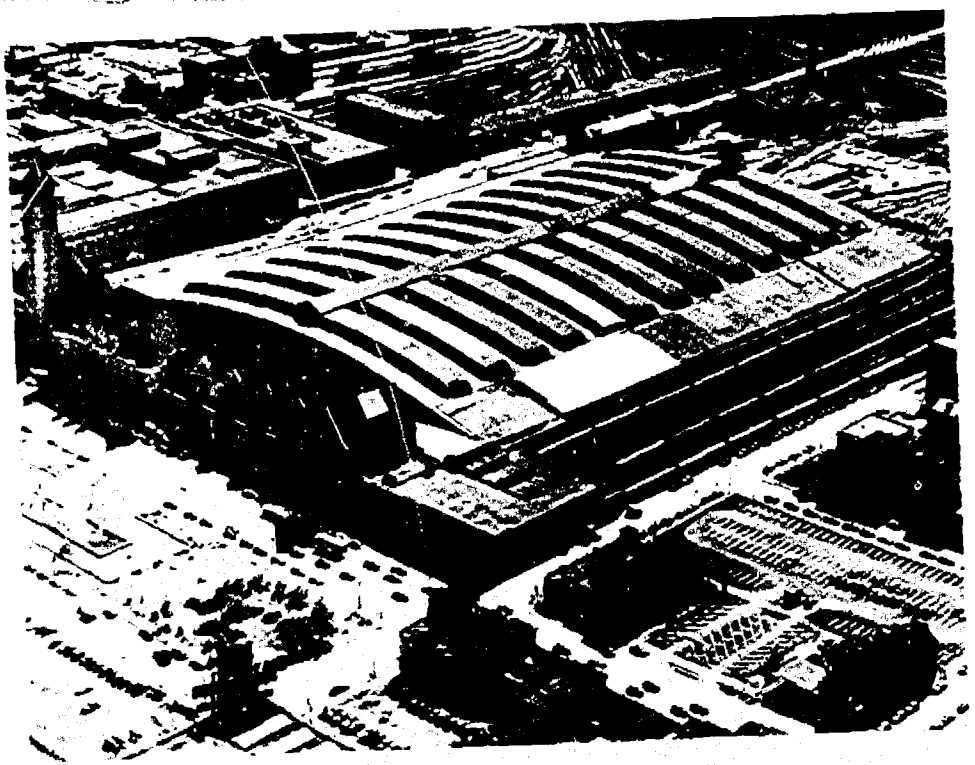
> For a brief moment it enjoyed the title of "largest depot in the world." Its enormous shed made no aesthetic contribution; it covered several acres but was broken up into five spans, none of them very wide and all of them low. The station is a head station technically on one level, since it is possible to enter and leave at the track level, entirely bypassing the Grand Hall and waiting rooms on the second floor. There is a cross-platform seventy feet wide which, in the terminology of the Chicago Fair of 1893, was dubbed "the Midway." The Grand Hall is the best feature; it is an enlarged version of the dining room in Adler and Sullivan's Auditorium Hotel in Chicago, roofed by a semicircular barrel vault which seems to spring from the floor itself, so low are the side walls. No previous age had used this proportion of wall to ceiling. . . . The sense of enclosure is overwhelming. It is cavelike and induces a feeling of awe but, . . . does not make the spectator feel insignificant, because the portals are in human scale. The elements include a hotel, a powerful tower, and many smaller parts. . . . The St. Louis station is effectively picturesque from a distance and now forms a scenic background for Milles' operatic fountain.

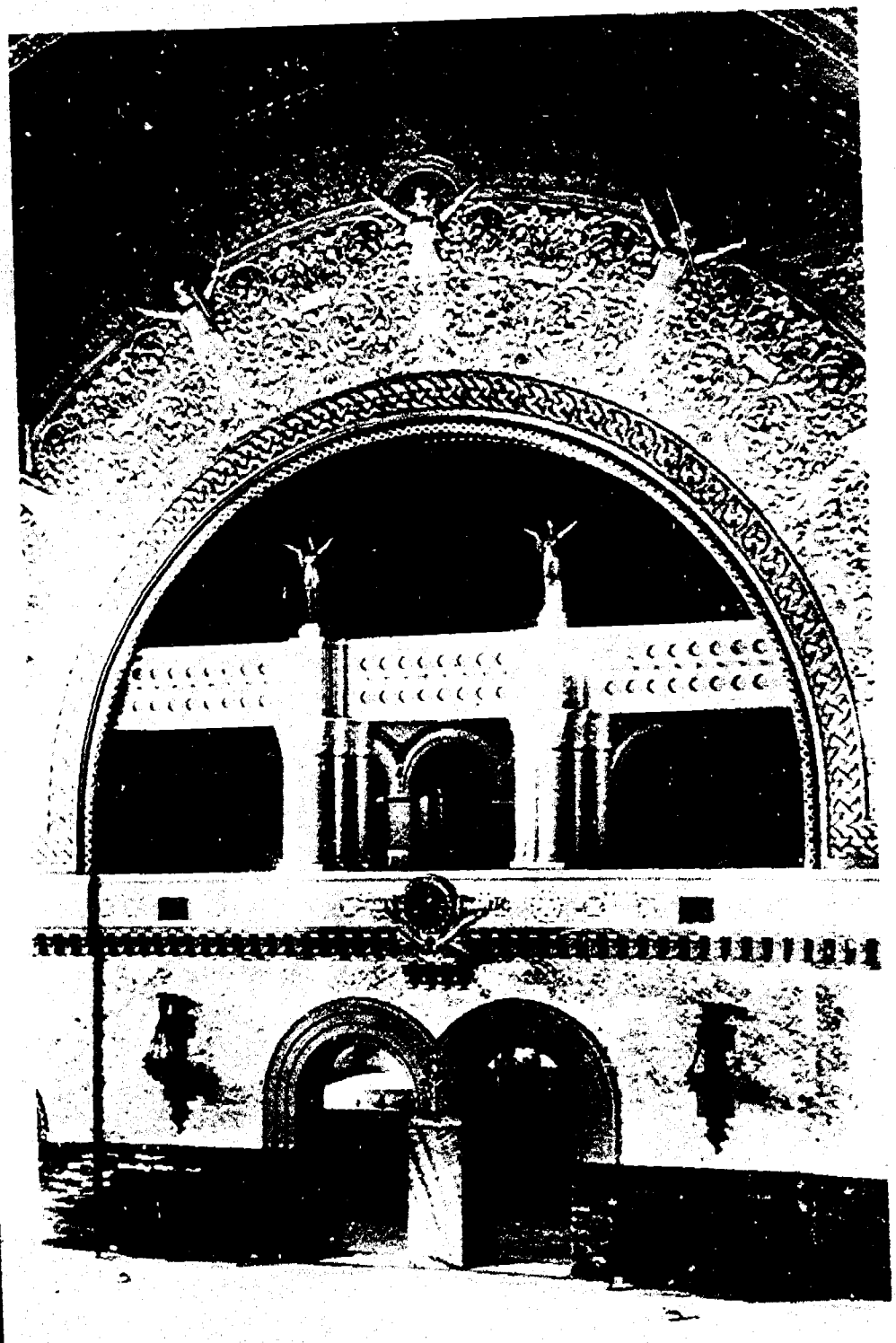
Recent plans for the St. Louis station suggest the possibility of mixed-use development with private funds. But the vigor of the downtown community is low, and considerable promotion will be necessary to make this solution practical.

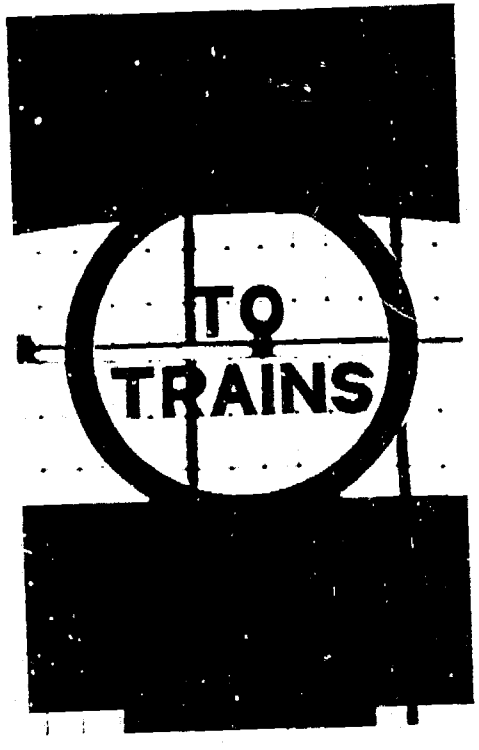








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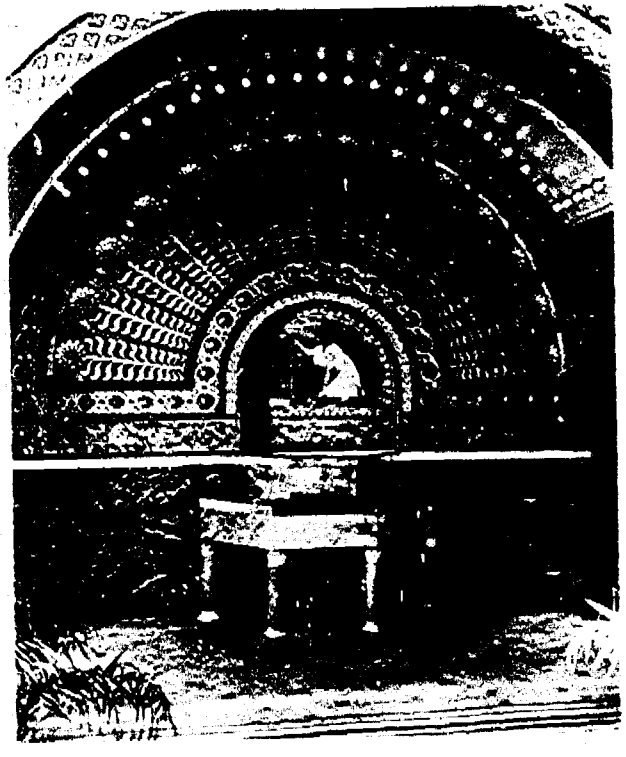
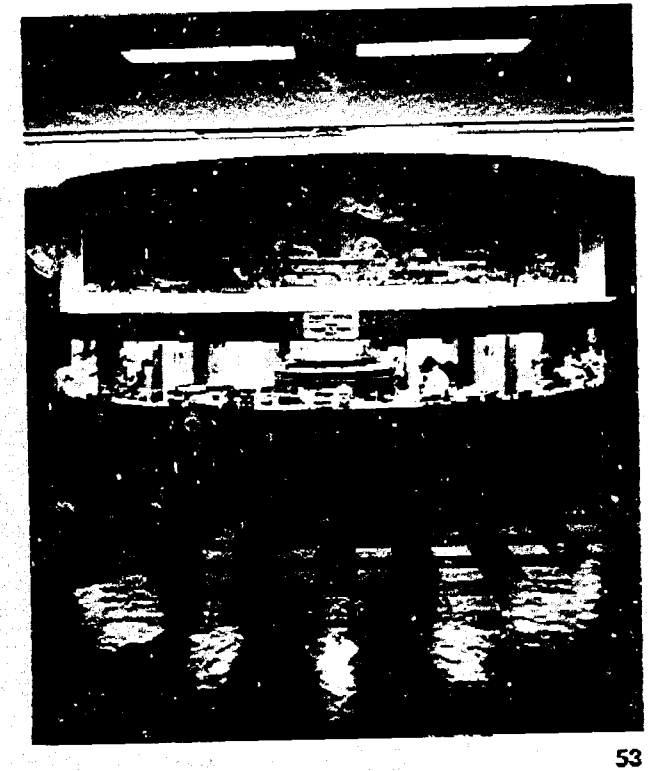




## Montclair, New Jersey
### Lackawanna Station 1913

The history of the Montclair Station is less important than its recent catalytic role in urban redevelopment. It is an excellent example of the protective power of the National Register of Historic Places.

The Lackawanna Station, a handsome brick and stone neoclassic structure, was designed by William Hull Botsford in 1913. Built to serve a suburban population, it once held a position of importance in the community. Now its function is replaced by private cars and buses, but the building is still viewed with pride by the citizens.

Montclair's commercial center has never kept pace with the town's residential beauty, as has been pointed out by every major town survey since 1909. So the citizens were pleased when a local redevelopment agency announced, in 1969, that the downtown area would be levelled and replaced with housing and offices with substantial backing from HUD. Pleased, that is, until they realized that the station site was included in the proposed 48-acre Lackawanna Plaza and the building would be replaced by a skyscraper.

The Lackawanna station stands on the corner of the renewal area closest to the present business section. Many citizens wanted the building left standing, feeling that the familiar landmark would make a salubrious bridge between the older section of town and the redeveloped portion. But the local redevelopment agency vetoed an effort on the part of some townspeople to purchase the station, maintaining that its location made the site of vital importance to the HUD-approved plans, and that any change this late might jeopardize the whole project.

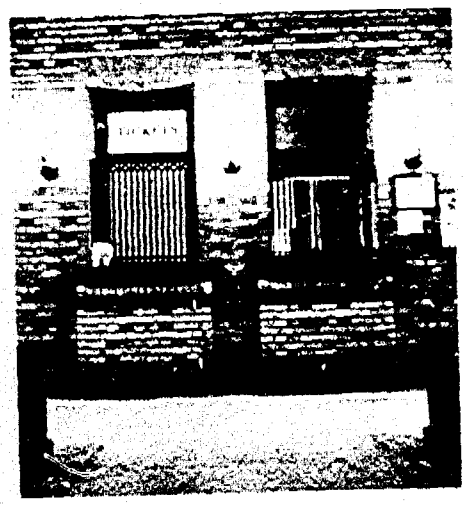
Then, assistance was sought from the New Jersey Department of Environmental Protection. After an examination of the station and a review of its history, the Historic Sites Division of the DEP placed the building on its registry as a state historic landmark in August 1972. The National Register of Historic Places also reviewed the station and listed it officially in January 1973.

Since the station was listed *after* the project's plans had been approved, the station was not yet saved. An officer of the National Advisory Council on Historic Sites advised that the station could be brought under the Council's jurisdiction if any one of three conditions existed: if the urban renewal project were funded only on a year-to-year basis; if the project should require HUD approval of a change in the basic plan; if local pressure became sufficiently strong to attract the attention of the Council. The officer also stated that it is the Council's policy that "no National Registry building should be needlessly lost."

To overcome the "historic site" hurdle, the president and executive director of the redevelopment agency planned to appeal to the state attorney general and to the federal government to have the listings set aside. The mayor of Montclair became concerned that, if the renewal project did not go through, the town would be in financial trouble, since much of the new construction would be revenue-producing.

The decision was still being contended when, in July 1973, HUD announced there would be $5 million less than the redevelopment agency needed for its project as planned. The plan would have to be rewritten and, with listing on the National Register, the landmark station building would have to be included.

Many uses for the station are now being considered, and the community will have its historic landmark *and* its urban renewal.



**Conclusion**

Each railroad station is unique, but a few generalities may be drawn from consideration of these examples of the endangered species.

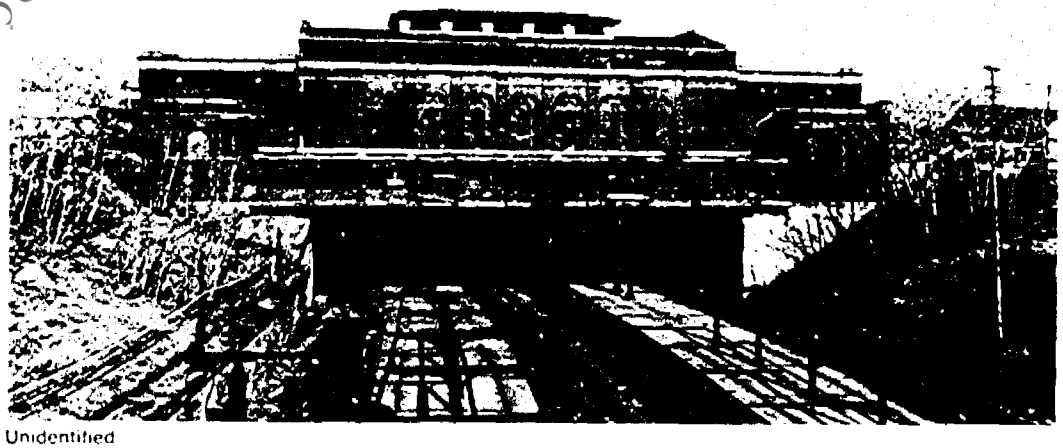
- They were all built as parts of a larger system of transportation, not as ends in themselves.
- They were built to house a variety of activities.
- Each is unique to its community and for the nation.
- Without some form of federal assistance these and many other such fine structures will probably not survive.

The variety of architectural styles and the robust manner in which these five examples command the landscape are representative of many other excellent buildings. Their commodious interiors could be used for a rich and profitable mix of activities including culture, education, government, commerce, mass transit, and recreation.

By assuming multiple use, most likely administered by a nonprofit community organization, the funding and operation of reused large stations becomes more realistic than when a single redeveloper considers renovation. In addition, the civic spirit in which they were built is better served.

Time is both friend and enemy to man-made heritage. Well-maintained buildings can gain in intrinsic worth *because* they are old; and with help from both the private and public sectors our national heritage of railroad stations could grow in value. Unlike the natural landscape, which is self-renewing, railroad stations demand constant care—whatever their potential for reuse. But few now receive more than cursory maintenance. Some are subjected to deliberate abuse in order to hasten their dereliction so that a case can then be made for destruction in the name of public safety. Renovation work costs more each day, but each day there is more to do. Meanwhile, any program of reuse, however public-spirited and well managed, takes time to achieve.

Memphis, Tenn.



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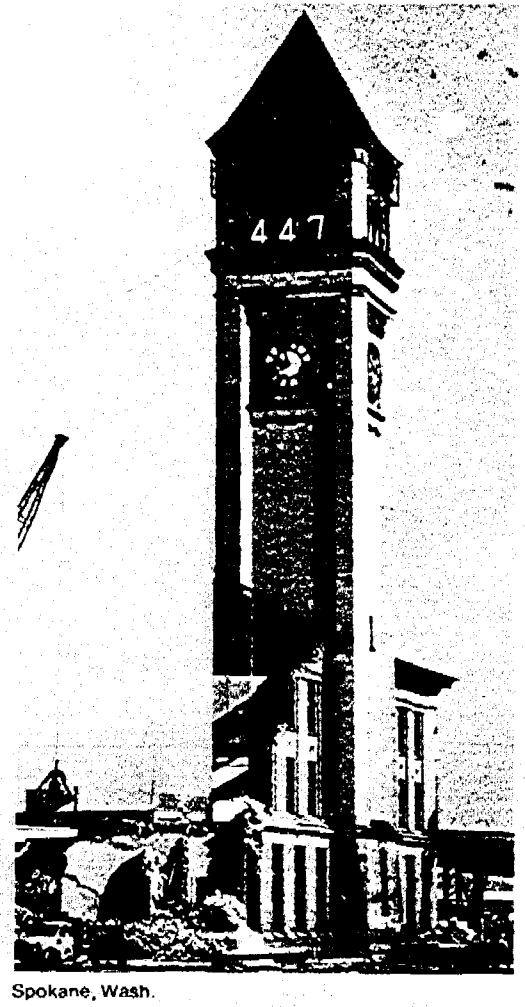


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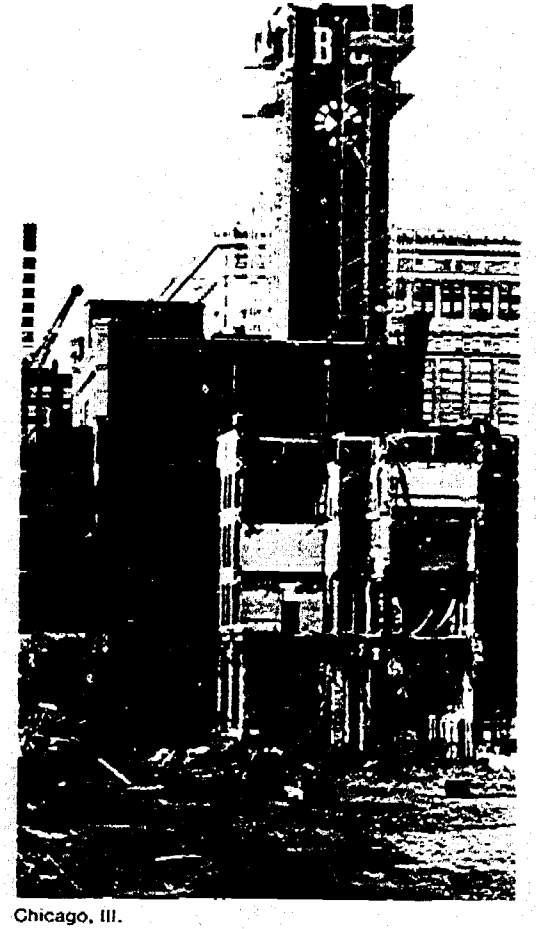

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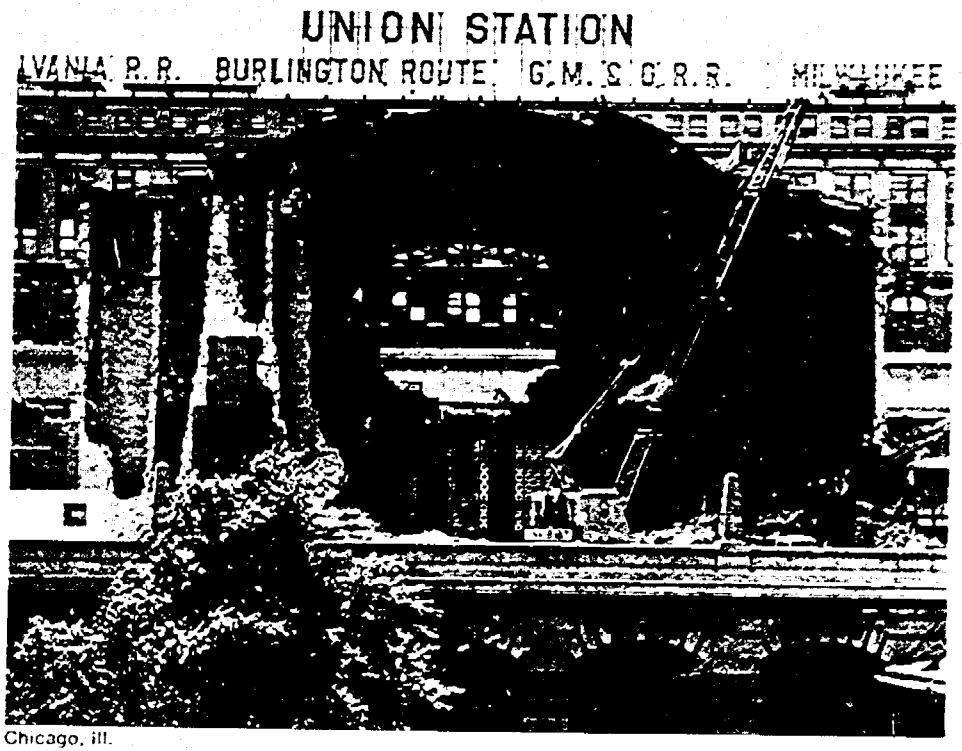
New York, N.Y.

Cumberland, Md.




Chicago, Ill.

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Chicago, Ill.

Turn On Your Lights In The Daytime This Holiday Weekend To Remind Others To Drive Safely

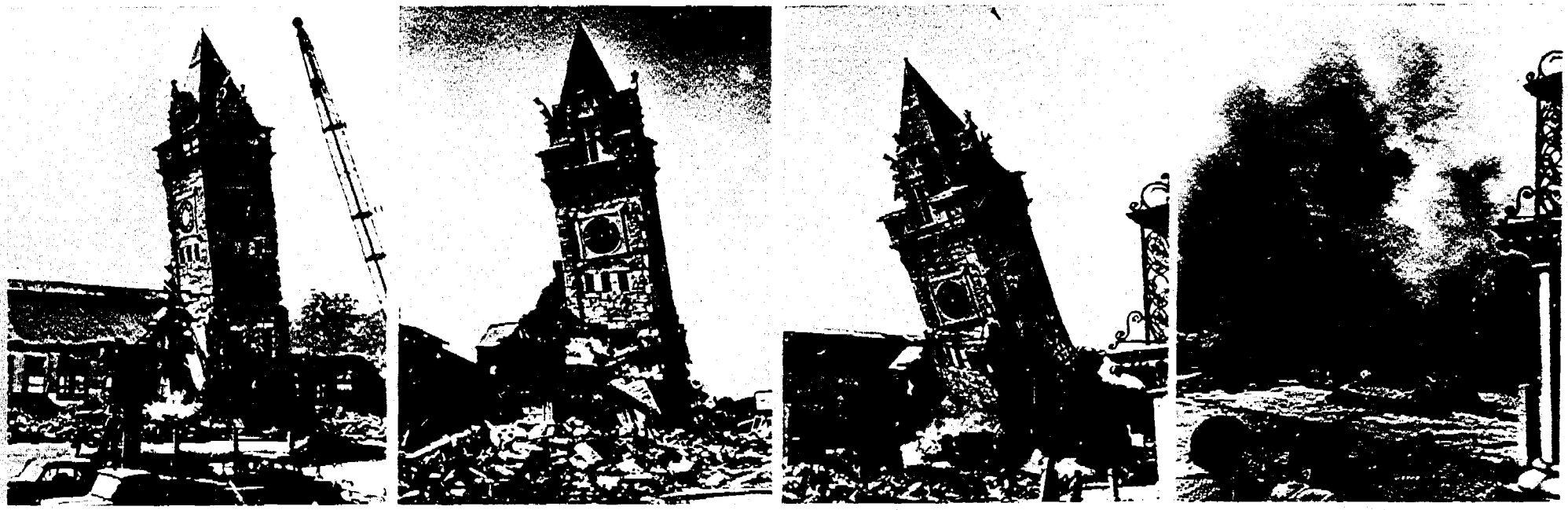
**The Weather:** Official Bureau Forecast
Fair, Warm, Humid
Today and Saturday
(Complete Report On Page 2)


# Portland Press Herald

Our Number Is: SPruce 5-5811

★ ★ ★ ★ 26 Pages

VOL. 100—NO. 61 | Established June 23, 1862 | PORTLAND, MAINE, FRIDAY MORNING, SEPTEMBER 1, 1961 | Second Class Postage Paid At Portland, Maine | PRICE SEVEN CENTS

## *Union Station Tower Comes Tumbling Down*

An historic Portland landmark passed from sight in a matter of seconds Thursday afternoon. While hundreds of persons watched, workmen razing Union Station toppled the clock tower with a swinging steel ball.

Last to leave the tower was a seagull (inset, left photo). Nicknamed "Willie the Hermit" by workmen, the bird has been perched on top of the tower daily since demolition started six weeks ago.

The station, built in 1888, is being razed to make way for a shopping center. (By Staff Photographers James, Roberts, Morrison and Johnson)

# World Shock Follows Red N-Test News

By THE ASSOCIATED PRESS

Moscow's decision to resume nuclear testing provoked worldwide shock waves Thursday, even among some nations that often lean toward the Soviet line in the cold war.

Reaction among the neutralist nations crystalized quickly, as Premier Nehru also is reported to have repeatedly asserted that the nuclear armaments race is the greatest danger facing mankind.

The Indian prime minister feels a disarmament agreement is necessary which would reduce armies and control nuclear testing.

# Massive Bang Expected Soon

MOSCOW (AP)—A "big and im... Premier Khrushchev said on...

# President Holds Back On New Nuclear Tests

WASHINGTON (AP) — President Kennedy declared full confidence in U.S. atomic might Thursday and held back on resumption of nuclear weapons testing while the Soviet go-ahead decision soaked in on a shocked world.

Kennedy denounced the Soviet action as "atomic blackmail."

Heavy pressure for immediate resumption of U.S. testing rose in Congress where 13 senators of... decided at least for the time being against resuming atomic testing.

"That's the way I would interpret it," Hatcher replied, "but it's up to you."

An indication of the administration's current trend of thinking came in a remark by Secretary of State Dean Rusk, who told newsmen: "This business of the Soviet Union ought to soak in hard ... ought to soak in hard every...

...tion was keeping an eye on the ... effect the Soviet move was having ... on a conference of professedly neutralist states starting Friday in Yugoslavia.

Many of these unaligned nations are opposed to nuclear testing and reports from Belgrade showed some negative reaction already was setting in against the Soviet Union.

Congress leaders generally avoided any comment of substance on learning the White ... fol Hill there was angry talk against the Soviet move.

Sen. Thomas J. Dodd, D-Conn., who drafted the resume testing now resolution, said the U.S. suspension of testing was "the most fatuous blunder in our history."

Sen. Thomas H. Kuchel, R-Calif., told the Senate, "The sham and hypocrisy of the Soviet Union stands out in bold relief before all the world."

Some voices were raised to...

# Economic Observations

The thought of saving a railroad station appeals to nostalgia, but it is the economic realities of the twentieth century that will determine feasibility. Our man-made environment requires dollars for sustenance.

Assuming that in a given instance the responsible railroad company cannot be convinced to rehabilitate a station, the parties interested in saving it must both acquire access to the building and acquire capital funds for the reuse project. Obviously, the means of meeting these two requirements will be interdependent—and both will be affected by circumstances and by the activities reuse is planned to encompass. But for the sake of simplicity, acquisition and funding are considered separately in this report.

Pittsburgh, Pa.

## Means of Acquisition

In any reuse project, the means of acquiring the property deserves careful consideration. Some ways seem obvious, but even these are often overlooked. Five ways of acquisition are discussed here; there are undoubtedly others.

- Direct purchase
- Option to purchase
- Lease
- Direct donation
- Eminent domain and condemnation

### Direct Purchase

The most obvious means of acquiring a station is to buy it outright. Of course, this is possible only with ready cash or a credit line through a local bank or lending institution; it is most often limited to small stations which involve relatively small amounts of money, single ownership, and single use. Where the station is to be used in part or whole as a revenue-producing activity, or where the credit rating of the purchasing party is sound, it is often possible to obtain a standard mortgage. If the building is to be used for non-revenue-producing operations or even nonprofit projects, it is usually necessary to obtain backers to guarantee the mortgage or, through their personal funds, meet the required payments.

### Option to Purchase

Option money allows the interested group to "buy time" to work out the details of acquisition. Since the process can be very time consuming (because of the many legal problems and the frequent multiple ownership of stations), the option can be a very useful device.

With an option, the interested party offers the owner an agreed amount of money for the first right of purchase within a given period of time. The amount of the option can vary greatly depending on the ultimate purchase price and on the details of any particular station. If the potential buyer fails to arrange financing and other legal matters within the time limit, he forfeits the option money to the owner.

### Lease

Lease arrangements with a railroad or terminal company give access to a building at a fixed rate over a given time period. In some cases this is particularly useful. The obvious advantages are that initial costs are kept to a minimum, and a lessee can count on much earlier occupancy than a buyer.

Railroad companies, however, are often reluctant to enter into a landlord relationship, because it may not always be in their best interest. The lessor, however, may not always be the railroad. In some cases it is best for one party—perhaps a unit of government—to acquire the station and another to actually use it on a lease arrangement.

### Direct Donation

Donations are nice, although unpredictable. It is not uncommon for a public-spirited person to receive great satisfaction from supporting a worthy cause, which can be preserving a historic structure from demolition or decay.

Sometimes, too, railroad companies themselves will donate a small station (sometimes with the stipulation that it be relocated to another site, freeing them of any liabilities from its trackside location). Railroad companies are in business and not known for their sympathy with the idea of saving stations, but they might benefit by the favorable publicity—an incentive not to be overlooked in dealing with them on matters of preservation.

### ıent Domain and Condemnation

cise of eminent domain and condemnation proceedings are often viable means for the acquisition of property by a state or local government, but they should be used only as a last resort, when there are no alternative means of saving a particular station.

The rarity of using these procedures stems from the usual unwillingness of local authorities to spend money for preservation and reuse projects in the first place. Also, complying with the generally cumbersome eminent domain procedures of each state can take an overwhelming amount of time and involve protracted legal proceedings. To our knowledge, no station has been acquired in this way.

There is, however, a major practical advantage in the power to condemn a property, whether or not that power is ever exercised. It tends to keep down the "asking price" to a reasonable level and makes the owner more amenable to a negotiated sale.

## Funding Preservation Projects

Private industry is probably the best potential source for money to save many stations; its role will be discussed separately. In addition, there are various government and nonprofit programs which may be tapped. The following list, although not complete, is indicative of the kinds of sources available:

- National Historic Preservation Act grants
- Urban Renewal programs
- The Open Space Land Program
- Revenue Sharing
- State programs
- Nonprofit corporations
- Private philanthropy

### National Historic Preservation Funds

Under the National Historic Preservation Act of 1966, states can get matching grants-in-aid for up to 50 percent of a historic preservation project's cost. These may be applied to survey or planning work, or to the acquisition and development of historic resources (including excavation, stabilization, or restoration).

To qualify, a station must be listed on the U.S. Department of the Interior's National Register of Historic Places, and its eventual use must be for public benefit. Although administered and supervised through the state, grants may be transferred to private organizations or individuals. Matching monies may come from any "combination of State, Municipal or Local appropriation; bond issues; private donations; and donated equipment, materials, services or property."

Aside from being a prerequisite for these grants-in-aid (and other federally supported funding programs), National Register status is of primary importance in any attempt to reuse a railroad station. National Register listed properties are provided a measure of safeguard against other federally funded or licensed projects, through the review power of the Advisory Council on Historic Preservation. Less tangibly, they may also benefit from national recognition and attendant prestige.

### Urban Renewal (HUD)

Before the recent funding freezes at the U.S. Department of Housing and Urban Development (HUD), capital for historic preservation programs was available through Urban Renewal funding, generally on a two-thirds basis up to $90,000 for each project. This could be applied to surveys, restoration, relocation, environmental enhancement, and acquisition of protective easements or other property interests. To qualify, a railroad station had to be listed on the National Register and be *within* an Urban Renewal area.

### Open Space Land Program (HUD)

Although also affected by the freeze, HUD's Open Space Land Program used to make historic preservation funds available to state and local governments on a 50 percent matching basis. Railroad stations that were *not* located within an Urban Renewal area were eligible if listed on the National Register. Funds could be used to acquire, restore, or improve the station and, like the Urban Renewal monies, could be used for interior and exterior work—if the project were for public use.

However, in anticipation of Revenue Sharing, in early 1973 HUD declared a moratorium on additional funding for many of its programs, including Urban Renewal and the Open Space Land Program. Funding for ongoing Urban Renewal projects continues through fiscal 1974, at which time transfer to Community Development and Special Revenue Sharing is ex-

pected. With few exceptions, no additional funds will be available for new projects or for the amendment of others through the Open Space Land Program, which, in effect, was terminated January 5, 1973. Therefore municipalities, institutions, and individuals must now look for federal money primarily through Revenue Sharing funds. These must be sought in the arena of state legislatures where the priorities will be established to determine the division of Revenue Sharing dollars.

**Revenue Sharing**

The underlying concept of Revenue Sharing is that federal funds will be distributed to state and local governments, in hopes of making the funds more responsive to regional needs. The money will be channelled through either General Revenue Sharing or one of several Special Revenue Sharing programs.

The latter will be most appropriate for historic preservation efforts, and monies from them may be used for the acquisition and rehabilitation of railroad stations. On October 20, 1972, the State and Local Assistance Act of 1972 became law, authorizing distribution of $30.2 billion over the next five years under the general program. It is unlikely that any of this money will find its way directly into preservation efforts, and it is important to note that it *may not* be used as matching funds for other federal programs.

Complementing General Revenue Sharing, however, are four special programs now being considered by Congress. Should they be approved in their present form, they will replace a multitude of existing categorical grant programs. Of these measures, the community development special revenue sharing programs embodied in the proposed Better Communities Act (BCA) will undoubtedly have the greatest impact on historic preservation. Under BCA, an anticipated annual $2.3 billion, over five years, would fund a broad range of community development activities, including the acquisition of real property and historic preservation. It is important to note that these funds *may* be used as matching monies for other federal programs (such as National Historic Preservation Act grants). To receive funds for railroad station projects under this program, interested parties will have to work directly through state governments, where statements of intention and projected use of the funds must originate.

Although it is too soon to know the effects of Revenue Sharing on historic preservation, three potential problems could surface. Under HUD's previous categorical grants, it was fairly certain that a designated amount of money would be allocated to National Historic Preservation projects. Under General and Special Revenue Sharing, the federal government has no power to specify how funds should be spent, and it is possible that *less* public money originating at the federal level will be used for preservation. All preservation projects will have to compete with other state and local priorities for funds.

A second potential problem is that the granting of federal funds to states and localities with no strings attached may circumvent the review processes established under the National Historic Preservation Act. At present the Advisory Council for Historic Preservation insures that federally assisted activities do not impair the nation's cultural heritage, a protection that may be lost under the new legislation. If it is lost, it will adversely affect all railroad station projects.

Finally, although the possibility of allocating Revenue Sharing monies to match National Historic Preservation Act grants may encourage states and local governments to do just that, it may also stifle efforts to raise private funds, a big element in any preservation endeavor. This could lead to total reliance on federal funds for preservation. It is not too early to realize that a lot of community organization and lobbying at the state and local levels will be required by any group wishing to tap Revenue Sharing funds.

**State Programs**

Some states have also established capital funding programs by grants-in-aid and technical assistance. Others have passed such enabling legislation, but not yet made funds available. Still others are now developing similar programs, many to provide monies on a matching basis. Since programs differ, the state in which a particular reuse project is located should be contacted to see how its programs might be applicable to a given venture.

Perhaps the most ambitious state capital funding program is that of North Carolina. Modeled after the National Historic Preservation program, it has assisted many preservation projects. The enabling legislation created a State Department of Archives and History as the official agency to:

> Acquire and administer historic and archaeological properties; assist counties, municipalities, and organizations in historic preservation; select sites and prepare inscriptions for historical markers; maintain museums; and collect and preserve historical materials.

legislature also established the th Carolina Advisory Council on Historic Preservation, similar to the Advisory Council on Historic Preservation at the national level. It adopts criteria for state acquisition of historic properties and for non-state projects seeking state funds, comments on any state-funded or state-licensed undertaking that affects a property listed on the National Register, and makes recommendations to the General Assembly on any funding request for local historical projects.

As of January 1972, the grant-in-aid program administered by the North Carolina Department of Archives and History had received direct legislative appropriations for six special restoration and construction projects amounting to $862,000 during the preceding two years. Grants for 13 local projects (that were matched with non-state funds) amounted to $267,000 during the same period.

In New York State, the Next Step Bond Program, established by the 1966 Outdoor Recreation Bond Act, is under the Office of Parks and Recreation and administered by the New York State Division for Historic Preservation. Capital funding of up to 50 percent of total project cost is available to local governments. To be eligible, a property must be listed on the National Register and be owned by the local government unit. Another agency, the New York State Council on the Arts, could provide funding for architectural and economic feasibility studies and for building-condition surveys through its technical assistance program. Although at the end of 1973 no railroad station has received assistance through this state-funded program, such projects would be eligible to receive aid.

**Nonprofit Corporations**

Nonprofit corporations formed to acquire and operate railroad stations are extremely advantageous because they are exempt from a variety of taxes levied on business corporations. Profit may result from such corporations' activities, but it may not be distributed directly or indirectly to any private person.

One of the several nonprofit classifications covers activities serving and supported by the general public for education, charitable, religious, literary, scientific, or cultural purposes. State laws vary, but, in general, a nonprofit corporation may be organized by anyone over age 19 by filing a "Certificate of Incorporation" with the Secretary of State. Money may be collected in several ways, including fees, dues, assessments, donations, bonds, notes, and capital contributions.

A corporation established for educational purposes or for the promotion of the arts can receive exemption from federal income taxes. Individual and corporate donors can generally deduct contributions to, or gifts for the use of, such exempt organizations in the computation of their income taxes; they are also deductible in computing federal and most state estate and gift taxes.

A corporation that receives a federal exemption will also be exempt from most state and city income taxes. It may also be able to obtain exemption from real estate taxes on property used exclusively for charitable or educational purposes.

**Private Philanthropy**

Philanthropic organizations, under a variety of programs, can be the source of funding for both capital and professional services for the acquisition and rehabilitation of railroad stations. Too numerous to mention here, most such organizations are listed in *The Foundation Directory* (Columbia University Press). There are no general guidelines to follow in applying for these funds. For example, some foundations are partial to certain types of projects, while others may only be interested in improving a particular geographical region. The kinds of programs to be housed may qualify a particular project or make it ineligible for funds from certain sources. Because of this complexity and because the policies of many organizations are constantly changing, several sources should be approached simultaneously.

Baltimore, Md.

## The Role of the Private Sector

It is possible to acquire and restore a station entirely through one or more of the economic means just discussed, but most likely only one of the smaller stations because of the amounts of money involved. The various sources of funding which could generate larger sums have not proved very effective to date. This makes it imperative that the private sector become more involved in saving the stations.

It is indeed ironic that the same reasons that can attract the real estate industry to the rehabilitation of landmarks can also lead it to the demolition of others. In a society where starting over is assumed better than fixing what we have, it is not unusual to see pieces of our architectural heritage demolished in hopes of a greater economic return from new construction. Of the 12,000 buildings listed on the Historic American Building Survey over 50 percent have been demolished, many for this reason. Fortunately only eight of these have been railroad stations.

But it is possible to interest private industry in the rehabilitation of buildings—if the proper incentives are devised. The most obvious incentive is the economic one. If a station or other historic property can be rehabilitated for a reasonable return on an investor's dollar within a limited time period, it is likely that private funds will flow into the project.

### Motivation for Private Developers

The most obvious candidate in the private sector to save a railroad station is the real estate developer. He must be motivated to go against the bulldoze-and-build-new tendency of his industry. But, once interested in a reuse project, the professional developer can be very valuable indeed. His principal work is to increase property value by using it for some income-producing activity. Having been through the process many times, he is familiar with inherent legal, economic, marketing, and planning problems. Developers know potential investors and have usually established credibility with banks or other lenders. They may have dealt with city agencies and become familiar with their procedures and processes, which can help to accomplish goals within acceptable time periods.

Too often developers shy away from rehabilitation projects, prejudiced by the belief that it is more profitable to develop a vacant piece of property. But there are many examples where historic preservation has been viable economically. In addition, the redevelopment of a landmark can bring a sense of pride to the developer. In fact, the image of such a project usually increases its potential for success. Although most real estate projects must fall within definite economic limits, there are developers who will sacrifice *some* percentage of profit in return for the prestige and satisfaction of saving a station.

The real estate developer should not be considered as a source of help only in entirely private reuse projects. Where on-going institutions or new civic organizations are interested in stations for public or nonprofit use, the developer can be an invaluable consultant, outlining procedures and anticipating pitfalls.

Additionally, private revenue-producing activities coupled with nonprofit or public use can also work. This is particularly true in the larger stations where no single activity can possibly use all the space and where the layout is conducive to multiple use. Since private and public sources can legally be combined here, it is critical that incentives be established to encourage this approach to preservation—one for which there is little precedent.

### Help from Municipalities

Little has been said so far about the role municipalities can play in reuse projects. This is because, however interested, they rarely have the financial ability to offer more than moral support and sympathy. But in certain instances they can be very helpful by expediting approvals and allotting variances under zoning and building codes.

This is particularly true when the potential redeveloper is from the private sector. The decision to bulldoze landmarks is usually taken by the private owners who control much of our urban land. Although they may be sympathetic with the notion of preservation and with the goals of planned urban design, they are understandably influenced by the realities of the real estate market.

Recognizing both the problems of the landmark owner and the demands of the market, many cities have devised a variety of zoning incentives to reward these owners on an economic basis comparable with new development in order to save landmarks from demolition.

Despite considerable differences in detail, these plans fall into two basic categories. The first, "zoning bonuses," awards the developer more rentable floor area than would normally be allowed in return for his inclusion of some civic amenity, such as landmark preservation. The second, "transfer of development rights," allows the property owner to sell his development rights for use on another site when the presence of a landmark prevents full use on its site.

ing bonuses have been used cessfully in New York City when in design goals have called for such public amenities as plazas, walkways, or theaters as part of new office buildings. The city allows the developer to build more rentable floor area than zoning would normally permit in return for the amenity or a financial contribution toward its development. The economic value of the bonus, calculated on increased revenue over a period of years, is usually slightly higher than the cost of the amenity, thus providing the incentive.

Because of their functional requirements, railroad stations often occupy only a portion of their sites and are suited for zoning bonuses. A city might allow an owner to develop the unoccupied portion at a greater density than normal in return for preservation of the station. The economic value of this bonus would have to be enough to offset both conversion and maintenance costs of the rehabilitated station.

Where an additional amount of undeveloped site area is not available, but where the stations fail to exhaust the amount of floor area permissible under local zoning, the transfer concept can be used. The city can allow the owner of the station to sell his unused floor area to the developer of another site. The economic value of this sale should be slightly higher than the return possible from new construction on the station site, thus discouraging the owner from razing the station. In some instances it may even be high enough to encourage the owner to develop the station for a new use or to sell it off at a low enough price, giving someone else an opportunity for reuse. This solution is particularly pertinent to urban landmarks such as railroad stations, which rarely take advantage of the maximum floor-to-land area ratio permitted under present zoning regulations.

In concept, "zoning bonuses" and "transfers of development rights" have been received enthusiastically. In fact, only the zoning bonus programs have been successfully realized. But, although the legality of the device is somewhat in question and the many administrative regulations attached have hindered its use, it is a viable concept which, if applied to railroad stations, may assist in their preservation and reuse.

Each city and each railroad station must be analyzed separately in regard to these new zoning concepts. But with minor modifications, these ideas could be made to work in most cities.

In addition to granting zoning concessions, there may soon be another way in which municipalities can aid reuse projects—mixed or public. Two bills now before Congress (H.R. 4973 and H.R. 9354) may lead to the availability of local public funds for historic preservation. They would amend the IRS code so that municipalities could issue tax-free bonds at low interest rates, which, in effect, would put the federal government in a position of subsidizing local preservation efforts.

**Revenue-Producing Activities**

The uses a rehabilitated station can be put to can also be an incentive to attract private developers, even though they are not a direct reason for capital acquisition. Revenue-producing activities within a station can be used to offset other costs, especially maintenance costs, which tend to be high on railroad stations because they are old and contain intricate architectural detailing. Revenue can be produced by owner-sponsored activities or by rental of space.

Revenue-producing activities can also be helpful in securing financing through local banks; in effect, this is an additional incentive for their inclusion in a rehabilitation program.

Indeed, no matter whether a developer is private or public, program funding should always be considered simultaneously with capital funding for any reuse project. Many foundations, government departments and agencies, and other sources can provide money for program and operating costs, but not for capital construction.

Program grants can be extremely helpful in reducing the total dollar cost of a reuse project, allowing fund raising and finance efforts to concentrate on capital costs. Also, financial commitment by a prestigious institution or agency is often testimony to the project's worthiness, giving other potential investors, donors, and community leaders confidence to participate.

**Summary**

This is, by no means, an exhaustive analysis of the economic routes open to those interested in acquiring and reusing railroad stations. Out of the uniqueness of each successful effort will come new solutions which in turn will serve as better economic models.

This brief analysis has pointed out the limited money available and the necessity of the private sector joining with government if the larger stations are to be saved. It seems, therefore, that preservation on a limited scale can be done privately and profitably. But, ironically, many of the largest stations also represent the best architecture; reuse on this scale will require local, state, and federal participation.

# The Need for Federal Leadership

The desire for reuse of the railroad stations is growing in many communities. Citizens may be able to save many of them for future creative uses. But, with a few exceptions, the job is so gigantic that it can only be done under federal leadership.

Actually, as noted in a previous chapter, some federal funds are already available for reuse projects. But of the hundreds of known examples of stations saved through new use, only a few have used federal dollars. This is in part attributable to the amount of time required to secure such funds, in part to lack of awareness that these programs exist or of how they work, in part to the limited dollar amounts they offer (in comparison to what is needed).

This is not to say that the task demands a federal takeover or a pouring out of gargantuan sums. Indeed, this would not be wise. These stations have particular local significance because of their community identity and architectural style. The *private* sector can and should best save them by reuse, but it needs help from every level of government.

## The Role of Private Capital

In many large undertakings today, federal funds are used to underwrite private borrowing power, to uphold direct participation in a multiuse project, or to make a token contribution as seed money. But these monies are best used as fertilizer, not seed. Massive federal giveaways are excruciatingly slow in reaching their goals and indirect in result; they also sap community incentive. Reuse projects should be generated and owned within the community.

If there seems scant wisdom in encouraging the federal government to own railroad stations, there is less sense in suggesting it operate them as community facilities, although it should encourage other organizations to do so. Amtrak is an obvious choice, even though the multiple activities favored here may not at first appear to be in that corporation's interest or range of experience. Local park and recreation departments might well own some structures, using them for their own activities or leasing them to the private sector to pay for upkeep. For instance, in the case of large terminals (such as Grand Central), the great public hall might well be considered open space similar to a community park and removed from the tax rolls. Such a designation would permit no development at the center, while insuring that surrounding spaces *do* generate income for maintenance.

Railroads were built in this country with private capital underwritten by the federal government (see next chapter). This federal assistance could be repeated, except that the absurd and spendthrift manner in which railroads were built should be replaced by a coherent policy for using stations. Although the federal government should act through private corporations or local governments, it should not underwrite the cost of private development with no strings attached. Rather, it should assist communities in recognizing the historic, cultural, and economic value of the stations they possess and offer short-term assistance as part of a long-range national policy that would put ownership of these buildings in the hands of each community, without destroying their unique architectural character.

### Immediate Actions

Some actions need to be taken quickly. The most serious problem confronting reuse is the rapid pace with which railroad stations are being demolished outright or allowed to fall apart. Therefore, the first programs must be instigated immediately to buy time. Several possibilities come to mind, all of which take into account the railroad companies' economic desire to abandon stations:

- Providing interim maintenance funds.
- Earmarking tax monies for maintenance.
- Setting architectural criteria.
- Providing other direct supports.
- Taking various indirect actions.
- Sponsoring further study.

### Interim Maintenance Funding

An amount of federal assistance could be made available immediately to protect and maintain stations for a set period of time—a maximum of five years or until an organization could be found to take over the building for rehabilitation and reuse. (Of course, such an organization would have to demonstrate a sound financial program for operation.) This assistance would assure that a station would remain in good condition, without adding to the cost of adapting it to new use. Such money could ultimately be recov-

through the agency that takes the station—a nonprofit institution, a profit-making corporation, or the government itself.

Interim period funds could be channeled through the railroad companies, Amtrak, municipalities, or park systems. Such organizations would accept interim period responsibility for providing maintenance and protection. Ultimately they might also seek out prospective tenants or, in some situations, decide to be tenants or cotenants themselves.

**Earmarked Tax Monies**

At the present time railroad companies pay corporate tax to the federal government on profits generated through passenger, freight, and nonrail activities. They are also taxed on a countywide basis for their rights-of-way and pay additional real estate taxes to the cities in which they hold property. By redirecting these tax monies to local, state, and federal agencies, it would be possible to set up a maintenance fund for the upkeep of select stations. This should last for a token five years, or until the local community could achieve reuse.

Alternatively, the federal government (and county and local authorities) could relieve the railroad companies of back tax obligations and exempt them from any future taxes, at least for stations and their sites. This would encourage the railroads themselves to view their stations more favorably. Tax incentives could also be given private investors who are willing to underwrite reuse projects—incentives similar to those now offered on oil speculation and feeding cattle and formerly available in the housing industry.

**Architectural Criteria**

One nettlesome problem of reuse is to find an appropriate balance between the program needs of the developer and the architectural integrity of the existing building. As we have seen, not all "successful" reuse solutions are architecturally satisfactory or suitable in character. Therefore, another way in which the federal government could provide useful leadership would be by providing criteria for architectural distinction, both for existing buildings and for proposed reuses. Federal participation in a project should be contingent upon the application of such criteria, which should be used not as a design review but as a standard to be interpreted by interested community agencies. Local arts councils and preservation groups could be encouraged to seek out buildings for reuse in accord with these criteria, thus insuring maximum community involvement.

**Other Direct Supports**

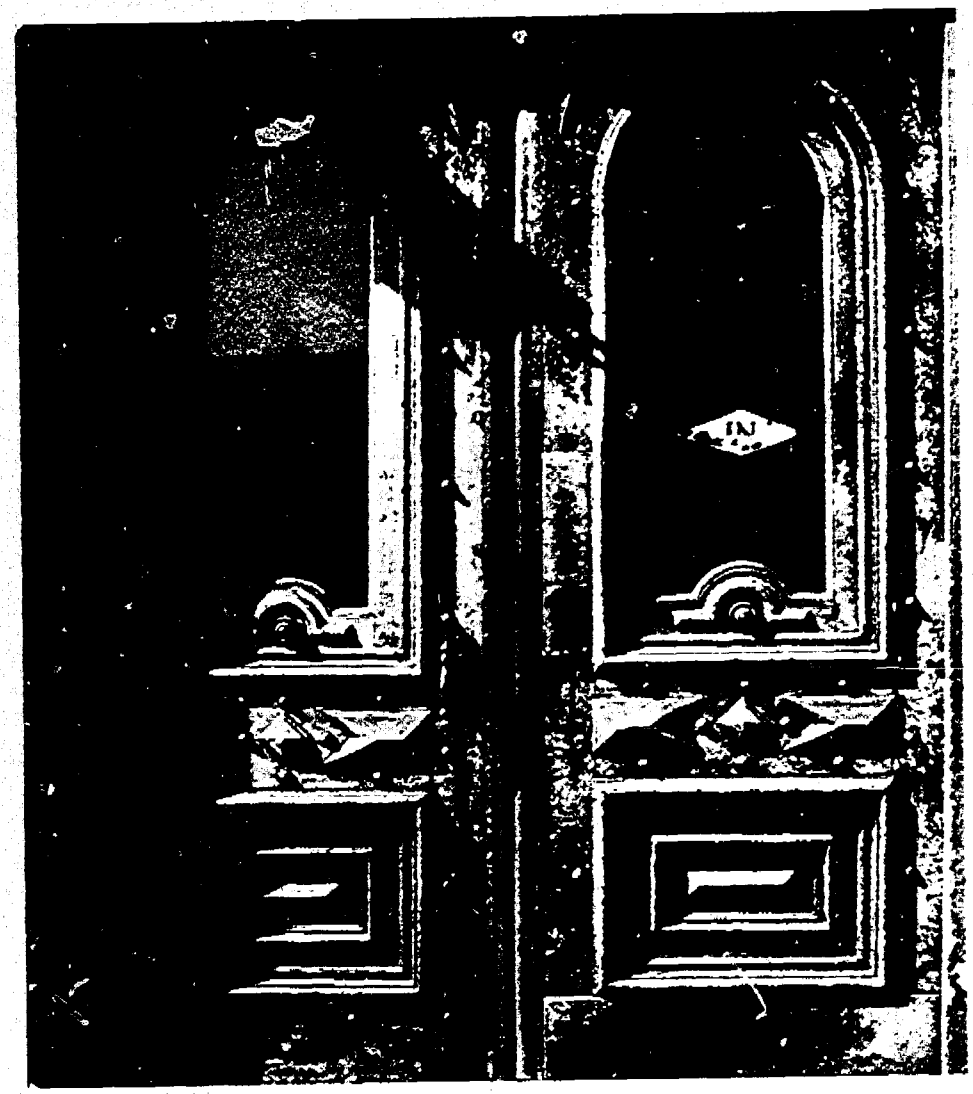
In addition, the federal government could assist by offering:

**Zoning Incentives** Enact bills that would encourage local governments to legislate for the transfer of air rights over existing structures where land values are high. This lessens the case for immediate demolition and encourages community-wide development.

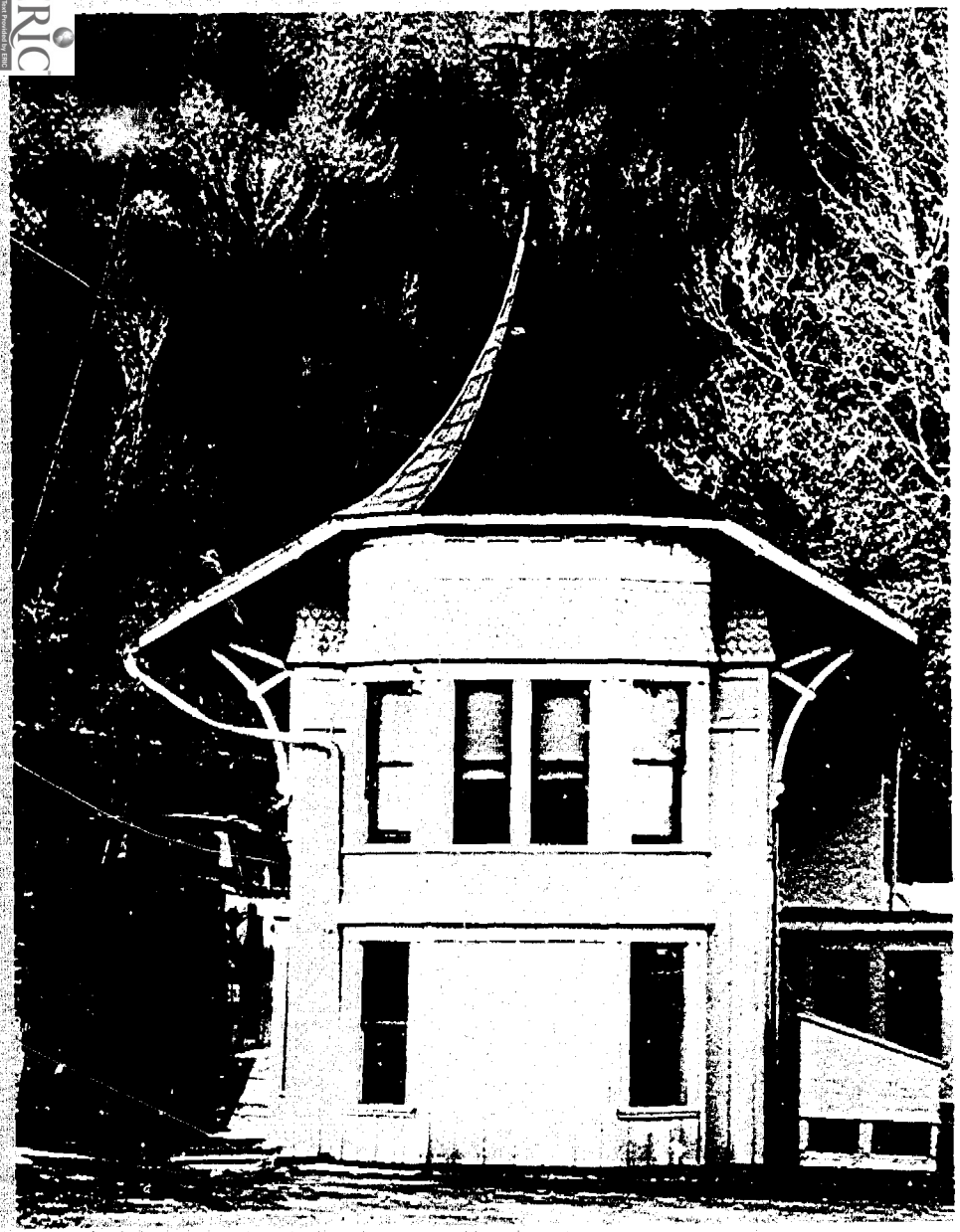
**Guaranteed Loans** Provide lending security for reuse (similar to FHA housing guarantees).

**Tax-exempt Bonds** Promote borrowing in the private sector at the low-interest rates of municipal bonds, rather than the normal lending institutions' fees.

**Rights-of-Way** Purchase the rights-of-way on a lease-back basis, to reduce tax burdens on railroads, and apply a portion of the lease income to reuse programs.



Reading, Pa.



Hammondsport, N.Y.

**National Lottery** Promote reuse by means of a national lottery whose funds would be used to stimulate community interest.

**Mass Transit** Study the use of railroad stations for mass transit. Such study should assume mass transit as one element of larger programs of reuse.

### Indirect Federal Actions

Another federal responsibility, more abstract and difficult to discharge, is that of educating the public about the validity of reusing stations. The public is often frustrated by those who are supposed to serve its will. It is the noise of shuffling paper which drowns out many a worthy cause. The federal government—most especially through the National Endowment for the Arts—should celebrate its capacity to encourage the faint of heart in government agencies at other levels. When the capacity for mixed use in railroad stations is fully understood, a rich concert of programs is imaginable. State arts councils are also an obvious means to encourage grassroots support of cultural programs, but efforts must go further to reach those in local government.

The federal government should immediately announce that railroad stations are a "national resource," and it should call for proposals from municipalities, communities, and local institutions for their reuse. The immediate motivation would be national publicity for local projects. Approved by a "blue ribbon" panel of experts, these projects should then be eligible for federal support, depending upon the programs available—all within the frame of community ownership and operation.

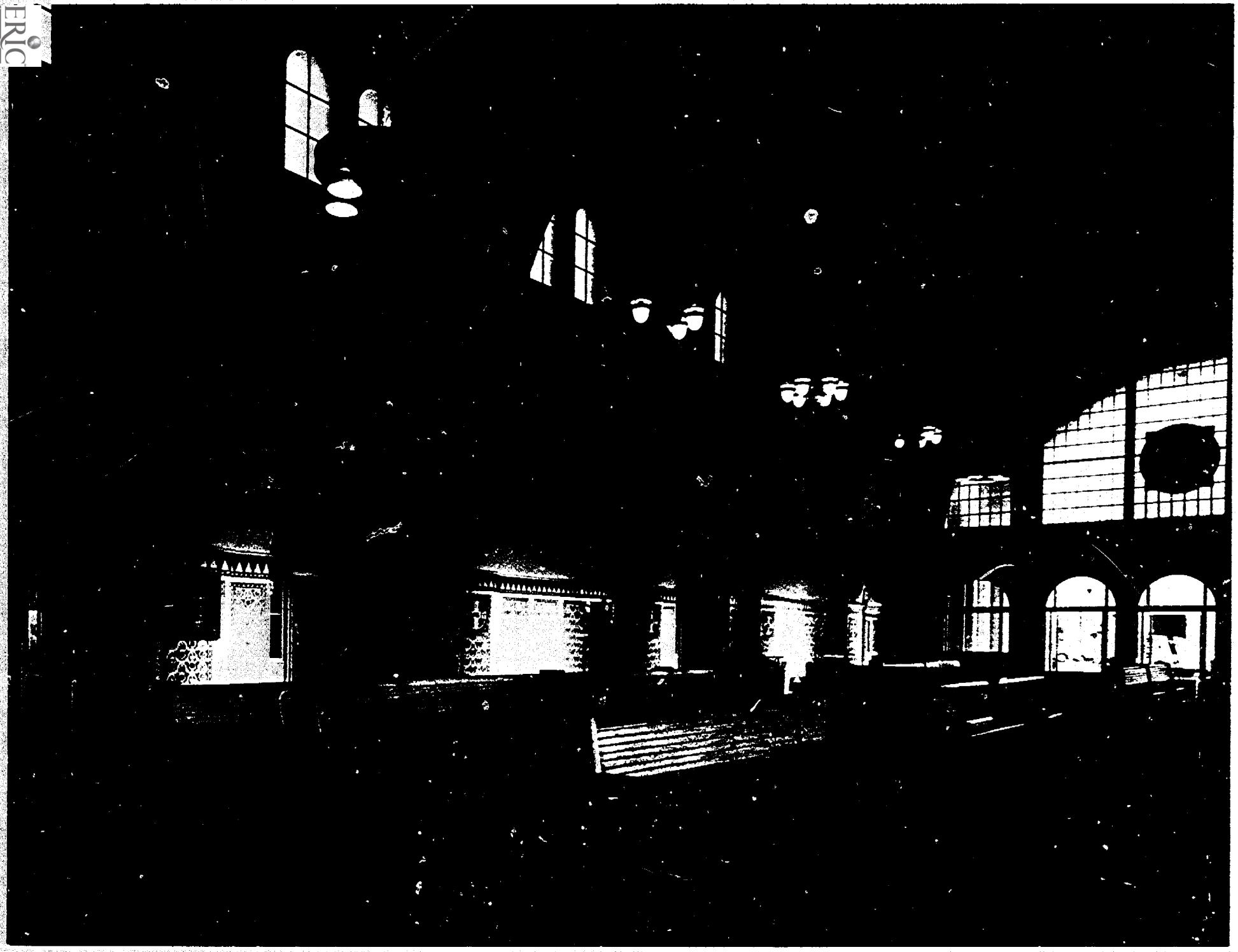
Certainly Washington also has the leverage to nudge the private sector into a greater sense of public responsibility about the matters of preservation and reuse. The banking community often remains conservative to the point of cynicism about the future of unproven ideas. Only institutions such as the federal government, which has only an indirect stake in the profit motive, can encourage imaginative uses of capital beyond short-term gain.

### Further Study and Grassroots Support

By now it is surely clear that the subject cannot be properly served by the limited scope of this report. A full-length book could be written, and such a publication would be most helpful in raising general consciousness. The widest possible coverage should be sought—perhaps by using local arts councils as both sources of information and means of distribution.

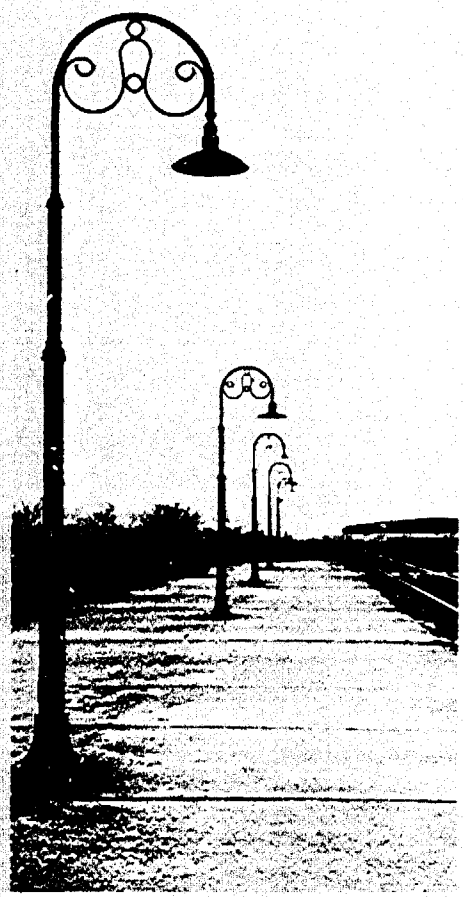
The National Endowment for the Arts film, *The Life and Death of the American Railroad Station* produced by Roger Hagan, should similarly receive wide visibility, especially in communities attempting reuse projects. Again local arts councils could be of great use in distribution.

Most important, persons and agencies qualified in finance, law, real estate, historical preservation, legislation, public awareness, existing and proposed government programs, design, and the railroad companies must be encouraged to further research. An immediate colloquy among them would provide background for new legislation and, if officially sponsored, be a welcome boost to community morale.



San Diego, Calif.

# Historical Background: An Age of Steam, Steel, and Exploitation



The temptation to regard the Age of Steam with nostalgia is strong, but there is no need to add to the sentimental distortions of the Victorian era. Its ruthless exploitation of natural and human resources is too often forgotten in admiration of surface charm. Nevertheless to examine the history of the railroads is to learn much of our heritage—economic, technological, and social.

**The Growth of the Railroads**

America's first wealth was bound to sailing ships and agriculture. By the mid-nineteenth century New England's ship technology had linked the produce of an infant rural country to international marketplaces with unprecedented swiftness. Graceful clipper ships brought wealth to eastern seaports, wealth great enough to create rich pools of capital, which soon spilled over into other investments, including the new technologies of land transport.

Until the railroads came, much of the continent was inaccessible to industrialization. Inland transport was by tedious horse-drawn vehicles or ships and barges on natural waterways. In the early nineteenth century the reach of barges was extended by canals, but it was not sufficient for growing industrial needs.

The Erie Canal System, for example, was built between 1825 and 1850 and linked the Middle West with the marketplace of New York. Hailed as a great technological advance, the canal route permitted freight rates to drop to $10 per ton (from $100 by land). However, speed was limited to what horses trotting along towpaths could muster, and it took three and one-half days to travel the 363-mile length of the canal. The train reduced the distance from Buffalo to New York City to an overnight journey.

Despite the early dominance of water transportation, the rapid rise of the United States in the world economy came from a phenomenal industrial growth directly dependent upon the railroads. Manufacturing requires an easy exchange of goods and services. Railroads were ideally suited to the task.

**The Rapid Spread of Railroads**

The first steam railroad in America was built in 1825. By the 1850s the rails had spread to Chicago and were reaching out across the prairie. In 1869 the Union Pacific had forged the first transcontinental rail link. By 1893 the nation had five transcontinental trunk lines. Between 1865 and 1900 trackage leaped from some 35,000 miles to nearly 260,000. This swift expansion allowed railroads to shape the face of nineteenth-century America as powerfully as the automobile has remade our present geography. Poor indeed was the community untouched by rails at a time when the pace of construction was frantic enough to have ten miles of track built in a single day.

How did this complex rail network get built so quickly? And how did its construction affect the American experience?

**The Role of Private Capital**

Transcontinental construction required enormous investments of capital. *All* of it was borne by private sources. The federal government guaranteed bonds and gave away land but *did not directly invest funds*. (When members of Congress attempted to convince President Lincoln that the federal government should build the Union Pacific, he is said to have replied, "The National Government has its hands full carrying on the war. Private enterprise must build the Pacific Railroad. All the government can do is aid, even admitting its construction is a political as well as military necessity.") In all, private companies incurred a capital debt of $5.7 billion. The railroads still pay $234 million annually on the investment.

Fed by dreams of instant wealth, private corporations were formed to build a highly diverse (sometimes redundant) web of rails. For funds, these new companies enticed capital from eastern ports where the fortunes of clipper ship merchants lay.

Financiers in Boston and New York already relied on contact with lucrative world markets, so the prospect of connecting Asia with these cities by rail instead of the hazardous journey around Cape Horn was appealing. For example, *The New York World* noted, in 1867, that a transcontinental railroad would offer a "grand highway of all nations" which would "give to San Francisco the keys of all the treasures of the distant Orient," and "transfer the earth's financial center from London to New York." Although impetus for construction of the Union Pacific originated in California, the "men of Boston" made heavy capital contributions and considerably influenced its policy.

When the Union Pacific was first planned, promoters were unable to win federal support for even a sale of bonds; they actually began construction with personal funds, totalling $138,000. Subsequently both the federal government and the California state legislature did agree to help underwrite financing, with Washington offering 30-year bonds.

**The Railroads' Use of Land**

Federal land grants for construction of railroads were, perhaps, more important than guarantees of investments, and they were to have a

Durand, Mich.

startling impact upon the development of America. For the railroads they served a double purpose, providing a right-of-way across government land, and, more important, permitting railroad companies to deal in land speculation. By selling off acreage, capital was generated which could be used to build more lines. In 1862 Congress gave the Union Pacific a land grant of 6400 acres for every mile of road built. By 1880 this company had sold nearly 2 million acres and still had almost 10 million acres ready for disposal. In Nebraska alone, the Union Pacific in 1864 held 4,857,744 acres, or slightly less than one-tenth of the entire area of that state.

Thus, the railroad companies came to be among America's first large-scale developers, owners that use land not to grow or build something on as an end in itself, but rather to exploit its commercial use in order to increase its value. Railroads promoted land sales by the sides of their trackage with a gusto equal to any modern entrepreneur's. They promised fertile soil, abundant water, generous stands of timber, easily obtained coal, a healthful climate, free education, ticket discounts, and reduced shipping rates for household goods, livestock, farming tools, trees, and shrubbery. In addition, hunting, fishing, "pleasure resorts," and access to "the finest steamship lines to China, Japan, and India" were touted.

**Immigration and the Railroads**

With such land-booming, an increasing supply of people was needed. The waves of European immigration in the late nineteenth century played a dual role in railroad development: they created a market for land sales, and they generated revenue by providing a new population to be transported from ocean ports to the interior. By 1900 the center of United States population had moved from the eastern seaboard almost to the center of Indiana, and this westward movement continued into this century.

**National Security**

A final impetus for the construction of railroads was the need for national security. The Civil War had discouraged the federal government from making capital contributions to the construction, but it had also encouraged securing the western territories as part of the Union. There were also Indians to consider. Officially denigrated as "savages," these dispossessed people were "pacified and subdued" by conscious government policy.

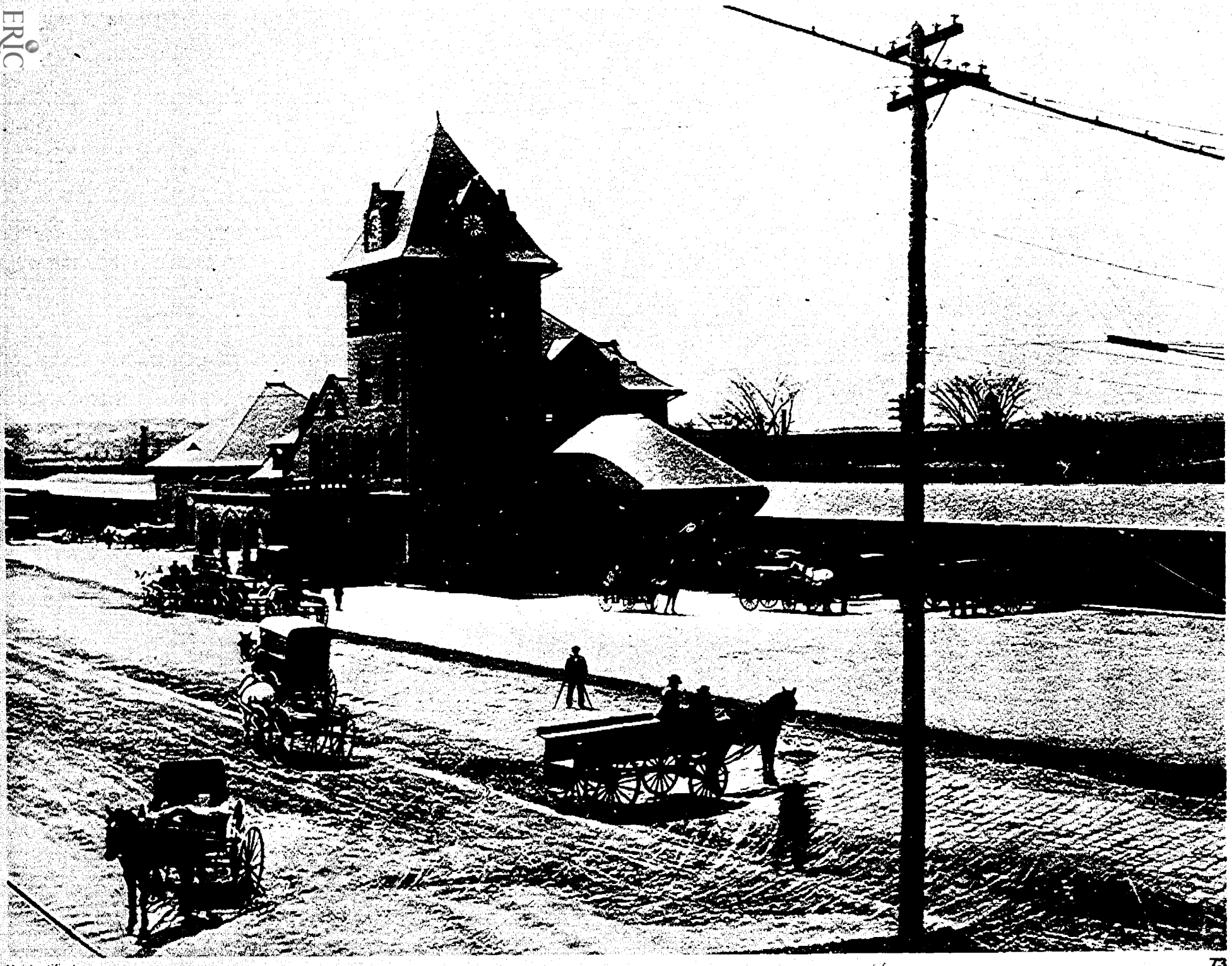
Indians were no match for the railroads' speed and efficiency in dispatching men and materiel; they correctly saw the puffing "fire wagon" as a menace and did everything possible to harrass surveyors and work crews. The War Department was so appreciative of the railroads' military potential that, in 1878, it successfully petitioned Congress and the courts to stop withholding money due land-grant railroads for transportation of its troops and supplies. (Note also that the year of the railroads' highest use was in 1945, a result of World War II troop movements.)

## The Effects of the Railroads

The direct effects of railroad construction are all around us. Although railroads fostered the agricultural expansion of the country into the west, they also gave rise to an increasing urbanization of small and large communities and created completely new urban centers. Their economic power built new cities, impoverished those it ignored, and heaped riches on those it favored. Some communities joined together and built roadbeds with volunteer labor, hoping to entice the magic steel ribbons into town.

This growing urban density marked social changes in American life. By the nineteenth century American cities had become major manufacturing centers, a development fed by the logistics and aspirations of the railroads. (By contrast our present urban centers are chiefly organized around service industries made possible by the mobility provided by automobiles and trucks.) The brief history of interest in densely populated cities which America can claim was roughly contemporary with the period of railroad ascendency. The innovative systems which characterized American cities—tall buildings, vertical transport, pneumatic communication, and multi-layered activities—*all* were dependent upon the population density which the railroads made possible.

Industrialization was therefore interdependent with urbanization in the nineteenth century. Railroads required coal and steel. As they grew, they depended upon the expansion of both mining and heavy industry. And that expansion came. Between the summer of 1869 and the autumn of 1871 ores valued at $2.5 million and bullion worth $1.25 million were shipped by rail from the Mormons' Utah territory alone.



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In time the railroads became not only the means of hauling large quantities of raw materials to industry, but also the way to distribute finished goods. All of this was so profitable that even in 1935 a single railroad (the Pennsylvania) earned five percent of the total national income.

**The Development of the Cattle and Grain Industries**

An offshoot of railroad land speculation was the promotion of cattle ranching, which happily coincided with an increased market for beef. Cattlemen offered a triple blessing to the railroads. Their livestock required great acreage for grazing. (Parcels of 100,000 acres were not uncommon purchases from the Union Pacific.) In addition, corn and grain for food had to be transported to the ranches by rail from midwest farms. Finally, the fatted cattle were moved by rail to Chicago for slaughter.

And the grain cars did not haul only cattle feed. As railroads reached out further into the Dakotas, Minneapolis and St. Paul millers bought wheat by the carload and made it into flour. By 1886 the cities' mills were handling 35 million bushels a year, and their daily output of flour filled 328 railroad cars. The little twin towns soon became the grinding capital of the world.

**Social Luxuries**

The indirect effects of the railroads may be less obvious, but were no less influential. The railroads directly generated unprecedented riches. In part it was concentrated in the hands of a wealthy few, but it also resulted in general prosperity, which gave rise to a large middle class. Many became sufficiently affluent to indulge in free-standing private homes, ornate clothes, splendid carriages, and other public displays. To complement this show, by the late nineteenth century, Americans were treated to an unparalleled luxury in their train transport. The Victorian parlor, so much the focus, symbol, and achievement of the era, was literally put on wheels. The comfort of parlor, dining, day coach, and sleeping cars suited the growing middle class and foreshadowed the upholstered automobiles and tufted living rooms so commonplace today.

Even more important was the personal mobility the railroads brought. The rich have always had it (sometimes literally on the backs of the poor), but through the railroads it became increasingly accessible to everyone ("hobos" included). Americans began to assume an inalienable right to mobility, and soon everyone got used to cheap and convenient transportation. Thus, in a real sense, railroads showed the automobile, the camper, and the mobile home how to subdue a landscape. Indeed, some of their roadbeds were eventually used to make interstate highways (for example the Pennsylvania Turnpike).

Railroads (and their close cousins, the streetcar and the subway) also made it possible for the middle class and the lower classes to separate home from work. Railroad-fostered industrialization made manufacturing plants the center of dreary but lucrative factory towns. Soon the gigantic scale of these plants and their overcrowded neighborhoods encouraged the separation of work places from living places, and rail transport made the idea practical. Thus the dream of suburbia was born—ideal, green, dormitory communities in which pastoral pleasures could be combined with selected urban amenities. Olmsted and Vaux's 1869 plan for Riverside near Chicago (serviced by rail) is credited with being America's first planned suburb; it remains a model bedroom community prophetic of so many others that followed.

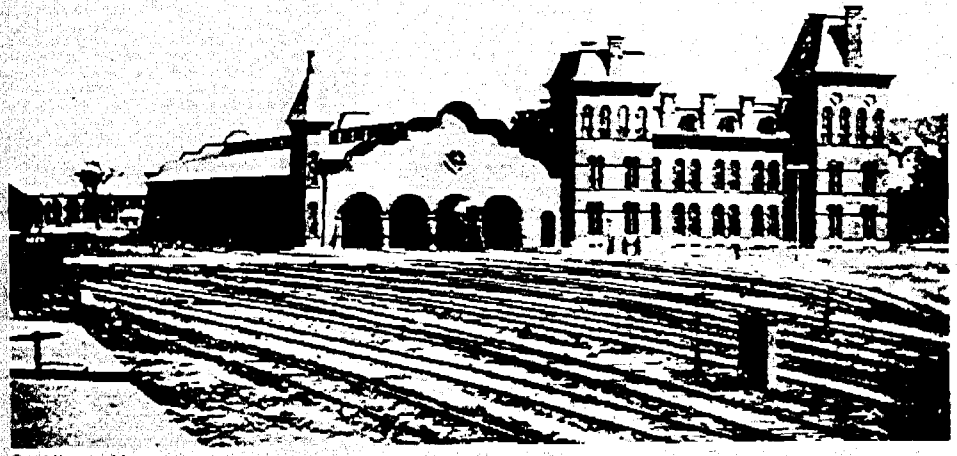
**Technological Development**

A list of innovations caused by railroads is awesome. The assumption that the "iron horse" had a right to go anywhere led John Roebling to build a suspension bridge to carry trains over the Niagara gorge, Henry Flagler to set locomotives island-hopping across the Florida Keys, James Eads to span the Mississippi in three leaps, and a California dry goods consortium to wind steel-railed access across the mile-high Sierras. In the process new technologies of construction, engineering, and manufacturing appeared, which built remarkable structures in timber, masonry, and steel. These technical feats affected architecture rather slowly even though engineers designed train sheds hundreds of feet in width and length. John Roebling sought new ways to expand the use of steel products and patented a floor system which used railroad rails and masonry vaults to build the large open loft spaces essential to nineteenth century manufacturing.

By the turn of the century the density of railroad-sustained cities had given impetus to taller and taller buildings. From this need came the steel-framed tower supported by the products of a steel industry inseparably bound to rail transportation. High buildings conjured up the elevator, and soon the public was being pulled up and down on vertical rails as happily as it was hurtled across gorges.

Railroads brought many other technological innovations. Steam-engine technology became available nationwide. Before long most forms

Haverstraw, N.Y.



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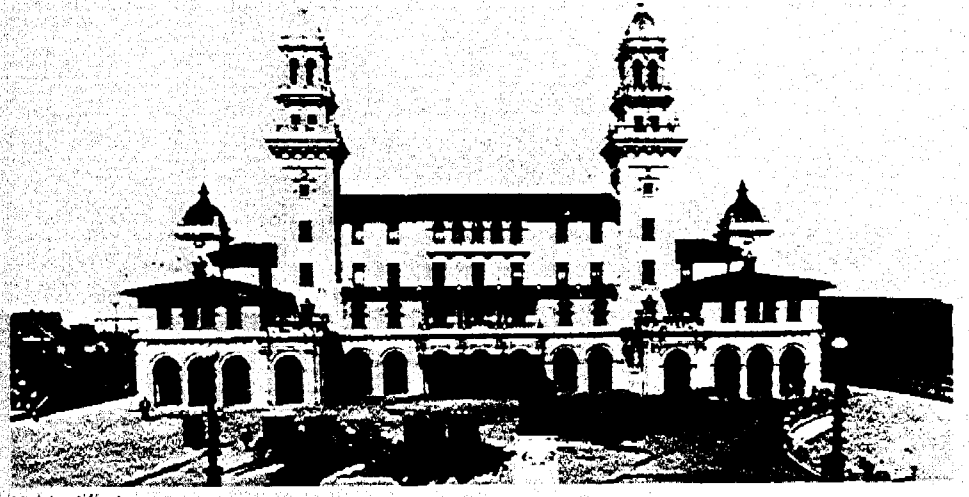

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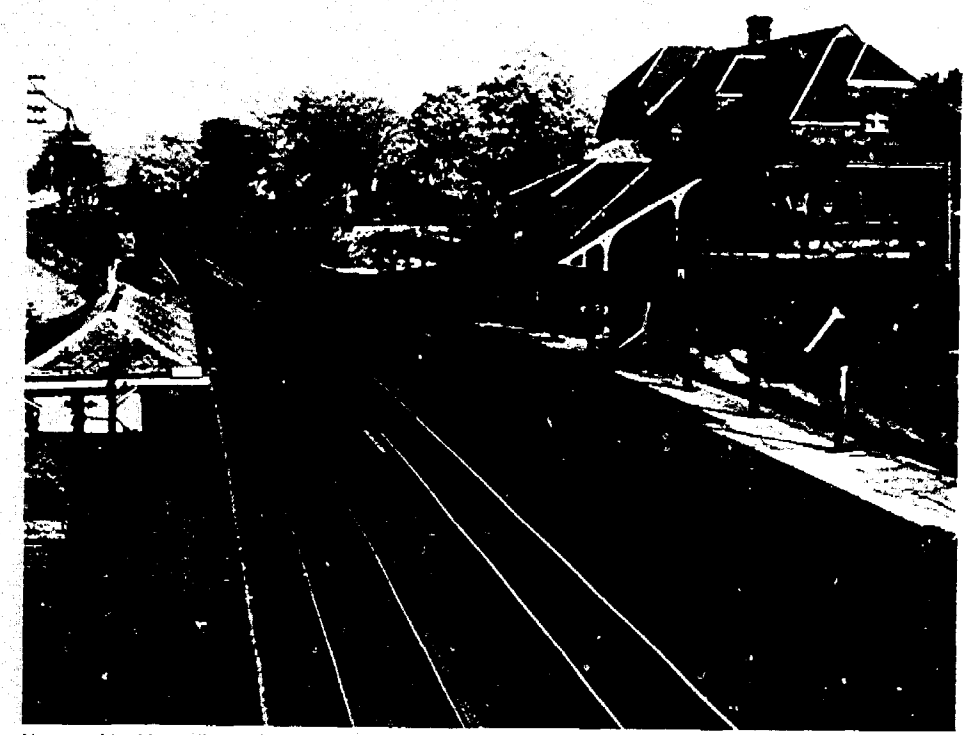

Newtonville, Mass. (before)

Newtonville, Mass. (after)

of machinery were steam driven. The speed of rail transport required improvements in time-keeping, communications, and guidance systems which horse-drawn vehicles did not need. (For example, time zones, Western Union, and traffic lights all resulted from the railroads.)

**Lack of National Policy**

Throughout this period of technological growth railroads adopted a great pose of public service. In fact, for the most part this was highly self-serving. The swiftness of rail construction had not been without its drawbacks, and many complaints of shoddy work were heard in the halls of Congress. Worse still, in long-term effect, was the inability of competing lines to consider any coherent policy for a nationwide system of rail transport, a conspicuous failure for an industry so involved with the public interest. Without question the "railroad fever" which swept America resulted in considerable excesses of construction. Miles of trackage were later abandoned outright or absorbed through the increasingly frequent mergers at the turn of the century.

The Transportation Act of 1920 officially encouraged consolidation of weak lines with strong by suspending antitrust laws for all mergers and acquisitions that the Interstate Commerce Commission could find to be "in the public interest." History shows, however, that the effect was quite the opposite of this pleasant phrase. No national plan for public transportation ever developed out of the resultant corporate leapfrogging. Instead gigantic entities, such as the Penn Central, were formed which finally sank beneath their own ponderous incompetence.

Scranton, Pa.

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pp. 9 Susquehanna, 13 Point of Rocks*

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pp. 15 Omaha, Riverside, 19 Sait Lake City

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p. 47—photos 1, 2, 3

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p. 51—photos 2, 4, p. 52—photos 1, 4, p. 53—photos 2, 3

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p. 56

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