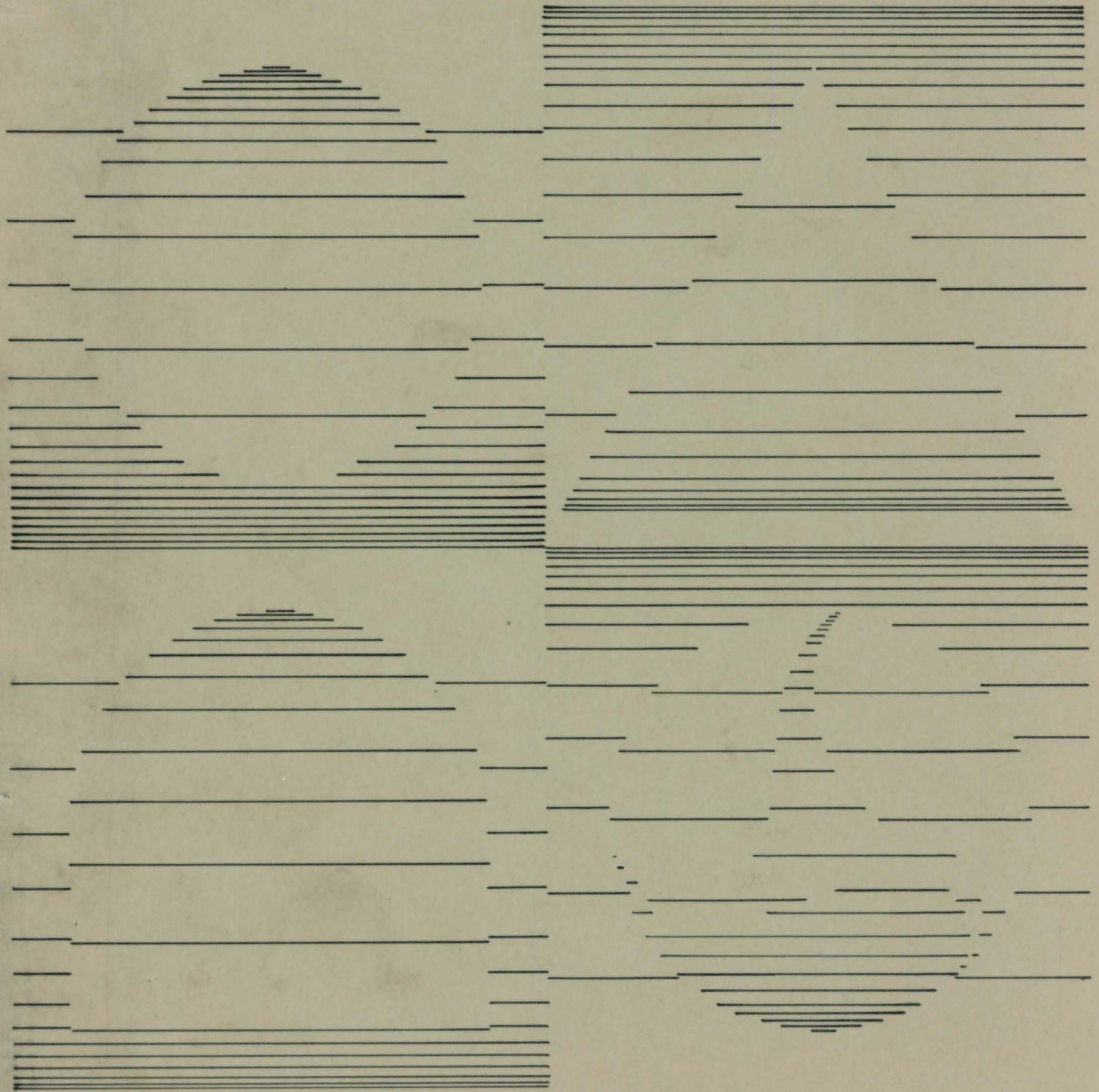


U.S. Department of Transportation

Report to the  
Secretary of Transportation

September  
1977

# design art & architecture in transportation



The first part of the report  
 deals with the general  
 situation of the  
 country and the  
 progress of the  
 work during the  
 year. It is  
 followed by a  
 detailed account  
 of the various  
 projects and  
 the results  
 achieved. The  
 report concludes  
 with a summary  
 of the work  
 done and a  
 list of the  
 references.





THE SECRETARY OF TRANSPORTATION  
WASHINGTON, D.C. 20590

September 1, 1977

To The Reader:

In his May 23, 1977, Environmental Message, President Carter asked each federal agency to support projects which contribute to the architectural and cultural heritage of our local communities, and to insure that each federal building dollar is an investment in the quality of the built environment.

This Department's commitment to the above principle is clearly demonstrated by my issuance of a Policy Statement on Design Quality, and my approval of the recommendations included in the following Report on Design, Art, and Architecture in Transportation. Our policy will be applied in the planning, constructing, and operating phases of all appropriate programs funded by this Department.

Our investment in the quality of the built environment will take the form of increased emphasis and support for architecture, art, graphics, landscape architecture, and urban, industrial, and interior design. We will also promote quality design in numerous other ways, such as giving national public recognition to outstanding achievement, supporting research and development, encouraging the exchange of information and examples, improving the Department's procedures as they relate to design, and increasing the number of departmental training courses in this area. We undertake these programs because of our fundamental belief that, through a consistent policy on design quality, transportation systems and facilities can and should improve the human environment and enhance the social, commercial, and cultural resources of the nation.

For the preparation of this report I am particularly indebted to the Task Force and its Staff Working Group, to the National Endowment for the Arts for its contribution of staff time and guidance, and to Mrs. Joan Mondale for her continuing interest in this undertaking.

Sincerely,

A handwritten signature in cursive script, appearing to read "Brock Adams", is written over a large, stylized, handwritten letter "B". To the right of the "B" is another handwritten signature, which appears to be "Adams".

Brock Adams

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## THE SECRETARY'S STATEMENT ON DESIGN QUALITY

In America, our transportation systems are among our proudest accomplishments. They provide us with great mobility, while shaping the man-made environment, our daily routines, and our visual surroundings. An investment in the design of transportation systems can produce humane and pleasant places and improve the quality of our environment.

It shall be the consistent policy of the Department of Transportation to encourage good design, art, and architecture in transportation facilities and services. The environmental design arts shall be combined with other technical skills in an interdisciplinary approach to planning, constructing, and operating transportation systems. Funding for appropriate works of art in public spaces shall be provided for Departmental facilities and encouraged in transportation systems receiving grants under our programs.

Attention to design quality can yield substantial economic benefits. Attractive and efficient design can increase ridership and support for public transit, as well as promote safety and economy in operations. While the aesthetic benefits of design quality often elude quantification, we recognize that transportation is not an end in itself, and that its design and operation must support efforts to improve the human environment and enhance the social, commercial, and cultural resources of our communities.

The goal of this Department is the development of a unified transportation policy that coordinates improvements in transportation systems with increments in the quality of life. To this end, we shall encourage the highest design achievements in all our programs.

## EXECUTIVE SUMMARY

This report contains the findings, conclusions, and recommendations of the Ad Hoc Task Force on Design, Art and Architecture in Transportation.

Transportation plays a central role in the lives of the American people and involves a vast expenditure of funds. The Task Force was created to examine how the design arts can be utilized to improve the Nation's transportation systems. It was directed to submit recommendations to the Secretary of Transportation in July 1977. This report summarizes those recommendations.

This Executive Summary briefly describes how the Task Force went about its work, lists the recommendations, and then discusses briefly each category of problems identified and the recommendations that resulted.

### The Work of the Task Force

The Task Force evaluated a variety of options, including five proposals which it was specifically asked to consider. These five proposals were:

1. the creation of a national advisory board on design, art and architecture;
2. a funding system for improving design and incorporating art in federally assisted projects;
3. the establishment of an annual awards program;
4. promulgation of regulations to assure that design quality is adequately considered in DOT-funded transportation systems; and
5. making matching grants available to communities for design enhancement on a one-to-one basis.

The Task Force requested public comment on these five specific issues. One hundred and forty-four responses were received. These comments generally supported the goal of integrating good design into transportation policy and planning, but some respondents had reservations about potentially inefficient implementation of this goal. The Task Force took this concern into account in evaluating the various options.

The Task Force concluded that the conscientious use of design not only enhances the transportation environment; it can also promote mass transit, create a better image of transportation services,

to make easier the integration of transportation facilities with community goals and activities, and provide more efficient and economical movement. The use of the term "design" in this context refers to the process of arranging physical spaces, materials, and objects to perform specific functions, with emphasis on the relationship of the resulting product to human and environmental factors.

The Task Force was chaired by the Assistant Secretary for Environment, Safety and Consumer Affairs and the White House Fellow, and was composed of other representatives of the Department of Transportation (DOT) from the Office of the Secretary (OST): the Assistant Secretary for Policy, Plans and International Affairs, the Assistant Secretary for Administration, the Director of Public Affairs, and representatives from the operating, or "modal", administrations of the Department: Federal Highway Administration (FHWA), Urban Mass Transit Administration (UMTA), Federal Aviation Administration (FAA), Federal Railroad Administration (FRA), and the United States Coast Guard (USCG).

### Problems

The Task Force found that the integration of the design arts was hampered by various problems, the major ones being:

1. a failure to consider design concerns early enough in the planning process;
2. lack of widespread knowledge of funding eligibility under DOT programs with respect to the design arts;
3. an inadequate method of obtaining ideas on specific applications of the design arts in transportation systems; and the need for a continuing oversight task force within the Department;
4. lack of uniformity and quality in symbols/signs systems and graphic designs; and
5. inadequate training and information for DOT and state and local transportation agency staff on design quality concerns.

### Recommendations

The Task Force makes the following recommendations to remedy these problems and to provide for systematic integration of the design arts into transportation.

The Department should:

1. publish a policy statement on design quality and report of Department's findings on design, art and architecture;
2. require that consideration of design quality be reflected in environmental impact statements where relevant;
3. make more explicitly and widely known the availability of planning and project funds for the incorporation of design arts principles in transportation systems, including the reasonable utilization of art in public spaces in such systems;
4. undertake appropriate research and development and demonstration projects to improve knowledge of design in transportation;
5. continue the Task Force on Design, Art and Architecture as a permanent coordinative mechanism;
6. establish a small in-house staff (two professionals) to administer the awards program and to provide staff support to the Task Force;
7. establish a Department-wide annual awards program to recognize achievement in the incorporation of design arts principles in transportation systems;
8. establish an annual conference on design quality in conjunction with the awards program;
9. establish a comprehensive graphics improvement program and endorse a uniform set of symbols/signs;
10. require recipients of grants to establish architect/engineer selection procedures comparable to those used by the Department of Transportation in its direct construction programs; and
11. establish awareness courses to teach agency personnel about design considerations, distribute on a wide basis DOT publications relating to design arts, and urge clearinghouses to include design materials relating to transportation.

### Early Design Consideration

A primary problem in assuring design quality in transportation is the very limited amount of attention (if any) devoted to design considerations prior to a project's detailed design stage. Design concerns need to be addressed from the beginning of the planning process. By the detailed design stage, a project is less susceptible to the functional and aesthetic improvements that the design arts can provide.

To insure that more time and thought are devoted to design earlier in the planning process, the Task Force recommends (1) that the prior considerations, steps, and consultations related to design quality, including art and architecture, be discussed in DOT environmental impact statements (EISs) where relevant, and (2) that relevant guidance material be prepared.

Section 102(2) (C) of the National Environmental Policy Act of 1969 requires preparation of environmental impact statements (EISs) for all major Federally-funded actions which may significantly affect the quality of the human environment. In addition, section 102(2) (A) of the Act directs all federal agencies to integrate the environmental design arts into initial planning and decision making. This congressional mandate, as well as the Department's objective of improved design, can be implemented by requiring that EISs--where appropriate--contain data and other evidence of considerations and consultations regarding environmental design and public arts issues.

Using the EIS to encourage design quality in transportation may be opposed by some as additional "red tape" or may only be given "lip service." If seriously pursued, however, combining an environmental design arts requirement with the EIS as the "enforcement" tool will serve to stimulate and encourage the Department's client agencies to give more positive consideration to aesthetic design from the very inception of the project, and throughout its development.

Implementation of the use of the EIS to encourage design quality would necessitate a minor change in the language of the departmental and modal procedures relating to EISs.

#### Information on Funding Eligibility

A second impediment to implementing the Department's commitment to design arts in transportation is the present lack of knowledge regarding funding availability for aesthetic enhancement or improved design. The Task Force, therefore, recommends that the Department provide more explicit guidance regarding funding availability for the design arts in transportation. Among the eligible costs of DOT programs and projects are (1) research and development to provide better information and guidance for incorporating design considerations into transportation projects; (2) demonstration grants; and (3) the acquisition of art work for public spaces in transportation systems.

If the Department is to require and encourage the consideration of environmental design and art in the development of transportation projects, it is important to prepare and publish specific guidance on such matters for state and local agencies receiving DOT grants. This work can be conducted as part of the Department's research and development effort. Similarly, DOT should fund marketing and other appropriate analyses of incorporating design and art in transportation modes.

Research could be implemented with modest funding. Guideline studies for design could be carried out under contract as part of current Departmental research programs with minor reprogramming of research projects and adjustments in staff time and priorities.

The provision of art and other aesthetic features in public spaces is being done in General Services Administration building construction and has been done to a limited degree in DOT programs. (By "art" this report means objects which are placed in a transportation facility for aesthetic rather than purely functional reasons.)

Grantees should be encouraged, but not required, to plan for the incorporation of art in their early budgeting and planning procedures. In the few cases of direct DOT construction where this would also be appropriate, a percentage of the cost of construction for public space or a reasonable amount of the total construction costs would be an appropriate expenditure for art work.

To implement this recommendation, each administration within the Department should develop guidelines to give an indication of what is an appropriate level of funding for its state or local agency. Examples of the kinds of projects to which this might be applicable are: highway safety rest areas; public use areas of airport terminals; the railroad stations being renovated under the Northeast Corridor Improvement Program; and selected mass transit stations.

### Outside Perspectives and Oversight

A third problem in systematically incorporating the design arts into transportation is the lack of a process for providing feedback on specific projects and for obtaining from inside and outside the Department suggestions and perspectives on how DOT can achieve its goals. The Task Force recommends (1) an annual awards program to recognize achievement in the use of environmental design arts principles in transportation systems, with a

distinguished jury to make the awards and critique the work of the Department and client agencies; (2) an annual conference on design quality in transportation to be held in conjunction with the announcement of awards; (3) a permanent intradepartmental Task Force to coordinate and monitor the actions taken to implement the integration of design and transportation; and (4) a small in-house design staff (two professionals).

A DOT-wide awards program should be established, incorporating and broadening the current Federal Highway Administration (FHWA) and Federal Aviation Administration (FAA) awards programs. The awards should be given by a distinguished jury of design professionals, consumers, sociologists, and transportation system owners. It would build on the experience of the FHWA and FAA awards programs.

A Department-wide program can present awards applicable to all administrations within DOT as well as specific awards to each administration. Moreover, this program would demonstrate DOT's concern for good design and the feasibility and desirability of incorporating art in transportation systems. An awards program is also an educational process and may serve as a means of attracting state, local, and private money for aesthetic projects. The jury can also serve an educational function by providing expert advice to the Department.

It is also recommended that in conjunction with the announcement of the awards, an annual conference for design professionals, citizens, and transportation employees should be held at the Secretary's discretion. This would provide a forum for new ideas and solutions to environmental design problems.

It is further recommended that the DOT Task Force on design quality be continued, to coordinate and monitor the implementation of the Secretary's policy. Two professionals with design backgrounds (and one support staff) should be assigned to the Office of the Secretary.

The above recommendations can be implemented by Secretarial directive.

### Graphics and Symbol Signs

A fourth inadequacy in the present relationship of design and transportation is the variation in the quality of the graphics used within the Department and the lack of uniformity among the modes in the use of symbols and signs. The Task Force, therefore,

recommends (1) a comprehensive graphics improvement program, and (2) departmental endorsement of a uniform set of symbol signs.

The goal of improved design in printed materials is to make clear and effective communication possible. In order to achieve this goal, the Office of Public Affairs will perform a study of the Department's current publications. The Department should then engage a consulting firm to prepare an analysis of the graphic effectiveness of existing publications, to prepare a detailed graphics manual outlining certain fixed design and printing standards which can be applied uniformly to all of the Department's design work, and to recommend approaches for the implementation of this program, including the phasing-in of new supplies and publications and the utilization of existing stocks and materials.

It is estimated that a comprehensive graphics improvement program would result in a savings of \$2.25 million per year. A recent circular from the Office of Management and Budget suggests that Federal agencies take advantage of savings in this area. A new graphics image would also give the Department a better means of communicating with the public.

It is also recommended that the Department endorse the standardized use of one set of symbol signs in the Nation's transportation systems. At present there are an unfortunately large number of competing sets of signs. Even within the Department, there are inconsistencies among the symbols of FAA, FHWA, and UMTA. The Office of Facilitation within the Office of the Secretary, in conjunction with the American Institute of Graphic Arts, has developed a set of symbol signs which are easy to understand and are of high graphic quality. This set of signs should be adopted as the transportation standard for the nation.

To implement this goal of uniform signs, the Secretary should recommend to the American National Standards Institute the adoption of the DOT-sponsored signs as the national standard, and should urge that the transportation industry as a whole adopt this set of signs. The DOT system should also be adopted in systems which are built and maintained by the Department.

#### Information and Procurement

In addition to remedying the four problems addressed above, the Department can perform an educational service to insure intelligent consideration of the design arts and the dissemination of information on incorporating design into transportation policy

and planning. The Task Force, therefore, recommends (1) requiring recipients of grants to establish architect/engineer selection procedures comparable to those used by the Department in its direct construction program in order to put greater emphasis on conceptual design in the selection process; (2) establishing an awareness course to teach federal and local agency personnel about design considerations; (3) widely distributing all DOT publications concerning environmental design and artistic values; and (4) urging the National Technical Information Service and other information clearinghouses to include design arts materials as they relate to transportation. The Task Force does not recommend the establishment of academic and internship training programs at this time, which is a proposal that had been advanced.

## Chapter I

### INTRODUCTION

On May 23, 1977, President Carter sent his environmental message to Congress. It contains a directive for the protection of our architectural and cultural heritage:

"I am directing all federal agencies to assess their programs to ensure that they take advantage of our rich architectural heritage wherever possible, for example by locating federal offices in historic buildings and by supporting projects that are compatible with and contribute to the local cultural and historic environment."

In a fact sheet accompanying the President's message, there was a statement supporting substantial investments in the design and quality of the built environment.

"The federal government can have a significant impact on urban communities and neighborhoods both directly, because of construction of federal office buildings and other structures, and indirectly, through its financial assistance for housing, schools, industrial parks, and transportation facilities. The design of our communities is important for livable cities, and each federal building dollar should be regarded as an investment in the quality of the built environment of the nation." (emphasis added).

That same day the Harris Survey released a poll showing that a significant majority of Americans are skeptical about our capacity for unlimited growth and the benefits it is supposed to bring.<sup>1</sup> They are placing a higher priority on the quality of existing facilities, goods and institutions and on improving human and social relationships. Some of the findings, which demonstrate this aversion to traditional American axioms of "bigger is better"

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<sup>1</sup>Lou Harris, "The Harris Survey: Deep Skepticism Is Expressed About Unlimited Growth," The Washington Post, May 23, 1977.

and "more is best", have direct implications for the transportation industry. For example:

- "A lopsided 82 to 11 percent would concentrate on 'improving those modes of travel we already have'; only 11 percent would emphasize 'developing ways to get more places faster.'"
- "By 66 to 22 percent, the public would choose 'breaking up big things and getting back to more humanized living,' over 'developing bigger and more efficient ways of doing things.'"

The Department has already begun to address these challenges. In January 1977 an Ad Hoc Task Force on Design, Art and Architecture in Transportation was created to study how the Department should encourage the conscientious use of the design arts in planning, constructing and operating transportation systems. The creation of the Task Force occurred simultaneously with the promulgation by the Secretary of a Statement of Policy on Design, Art, and Architecture in Transportation Systems (see Appendix). Secretary Adams has affirmed the direction of the Task Force's efforts. The Task Force examined ways that transportation systems could support efforts to create better environments for human activities along their rights-of-way and at their terminal points.

The Task Force was asked to consider five specific mechanisms for achieving this goal:

1. The creation of a national advisory board on design, art, and architecture;
2. A funding system for improving design and incorporating art in federally-assisted projects;
3. The establishment of an annual awards program;
4. Promulgation of regulations to assure that design quality is adequately considered in DOT-funded transportation systems;
5. Making matching grants available to communities for design enhancement on a one-to-one basis.

This document fulfills the requirement that the Task Force consider these and other options, develop recommendations, and submit a report to the Secretary by July 15, 1977. The Task Force wished to assure the full benefit of public views and also wished to assure its own exposure to comment from a wide range of interested parties. Therefore, the Federal Register of January 25, 1977, (see Appendix) included a request for public comment on some specific issues which the Task Force was asked to consider.

One hundred forty-four responses were received, the majority of them favorable to the Task Force effort and the idea of improved design, art and architecture. Almost one-third of the comments were submitted by government agencies; over a quarter of the responses were sent in by planning or architectural associations, firms or professionals. Letters from art councils, commissions or associations accounted for seventeen percent of the responses. Eleven percent were from private citizens and six percent from universities. The remainder were from the transportation industry, the media, historic preservation groups, and transit authorities. An analysis of these comments is included in the Appendix to this report.

### Membership and Role of the Ad Hoc Task Force

The ten members of the Task Force were the Administrators for Federal Aviation Administration (FAA), Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), Urban Mass Transportation Administration (UMTA), and the Assistant Secretaries for Policy, Plans and International Affairs, for Environment, Safety and Consumer Affairs, and for Administration, the Director of Public Affairs, and the White House Fellow. The Acting Assistant Secretary for Environment, Safety and Consumer Affairs, and the White House Fellow jointly chaired the Task Force and directed an executive working group.

The working group was composed of persons appointed to represent the members of the Task Force. The National Endowment for the Arts was also represented on the working group by two members, one of whom was detailed to DOT to help coordinate working group activities and prepare this report.

This working group met frequently to report on assignments and to meet with experts in the field of design, art and architecture. In addition, the group consulted with many individuals within DOT and within other agencies of the federal government. Each program administration in DOT submitted a memo stating what it was doing currently to further a concern for design quality within its planning, construction, and operational activities. Other memos were prepared listing examples of what DOT and other agencies had been able to accomplish through direct construction and grant programs to further these concerns. A number of examples were found in the DOT publication, Transportation USA. Others were noted in design publications.

In addition, option papers were prepared on the five mechanisms on the original Task Force agenda, as well as other approaches that

were suggested subsequently. The Department's General Counsel's Office submitted a memo concluding that in most instances present law permits the inclusion of aesthetic design and art work in DOT projects. This memo is included in the Appendix.

### Structure of the Report

This report is arranged under the following general headings:

- Chapter II, Design Examples, outlines some areas where reassessments of transportation design and planning have produced an improved environment thereby providing increased benefits and opportunities to users and the surrounding community.
- Chapter III, Procedural Mechanism, discusses the need to address and document design concerns from the beginning of the planning process.
- Chapter IV, Funding, examines funding for public art in transportation, for research into qualitative design aspects of transportation environment, and for demonstration projects.
- Chapter V, Oversight Mechanism, looks at the need for institutional and organizational arrangements that help the Department achieve its goal of improving the environment.
- Chapter VI, Other Program Recommendations, examines (1) the use of uniform symbol/signs in passenger facilities, (2) the need for a graphics improvement program for DOT publications, (3) suggestions for improvements in the procurement of architectural and engineering services and (4) the need for professional development programs to increase sensitivity to design.

### Definition of Design

For the purposes of this report, design may be defined as the process of arranging physical spaces, materials, and objects to perform specific functions. Design is distinguished from art in that design proceeds from the stipulation of useful functions that

the design product must perform. Consequently, design quality is judged by broader criteria than aesthetics alone. Design, in our usage, includes architecture, landscape architecture, graphics, interior and industrial design.



## Chapter II

### DESIGN EXAMPLES

This section describes various ways in which design and art have been used in transportation systems. All of the examples are not of equal import, but are included to suggest the range of options available to each mode. The examples do not constitute an exhaustive list of such uses, of course. Significantly, most of the cases were conducted with DOT funding, indicating that an awareness of the design disciplines' potential contribution to transportation is not new to the Department, and indicating also that current DOT programs and procedures are receptive to the integration of design and art into transportation operations. However, as the body of this report indicates, these efforts to improve design quality and to incorporate art are not being undertaken in a systematic fashion by the Department, and much remains to be done. These examples are the exception rather than the rule.

#### Facility Design

Dulles Airport outside Washington, constructed, owned, and managed by the FAA is a good example of facility design. It was voted one of America's all-time top ten buildings in a poll of the American Institute of Architects last year. The architect, Eero Saarinen, studied the airport as a basic design problem of getting passengers to and from airplanes. The resulting design departed radically from the radial-arm plan of most airports and introduced a fleet of mobile lounges connecting terminal and airplanes. The planes were clustered around service modules that provided another cost-effective innovation. This fundamental re-design allowed Saarinen to produce a compact, unified terminal building, a dramatic symbol of air travel and an imposing international gateway to the nation's capital.

Subways have also benefitted from architectural design. METRO, the Washington subway funded largely by UMTA, hired an architect who was able, at an early stage in the planning, to suggest the use of vaulted rather than post and beam construction. This established the basic outline for his later detailed plans. The resulting stations are spacious and open, bringing them praise not

only for their appearance, but also for the added security and ease of maintenance provided by their design.

### Enhancing the Environment

Since transportation is a significant part of the man-built environment, increased attention should be given to making sure that it complements its physical surroundings. For example, in a post-construction evaluation, Bay Area Rapid Transit (BART) officials in the San Francisco area found that elevated structures and stations were hard to fit into residential neighborhoods and that the least intrusive were those that were small in scale and made use of backyard fences and landscaping to reduce adverse visual impacts.

In a joint effort to improve urban settings, the Urban Mass Transportation Administration (UMTA) and the Federal Highway Administration (FHWA) are screening proposals from several cities for demonstrations of downtown auto-restricted zones that will include preferred rights-of-way for mass transit. The zones will be similar to existing ones in Philadelphia and Minneapolis that also enhance pedestrian travel by providing widened sidewalks and benches.

To enhance the natural environment, FHWA has conducted a beautification program that funds improvements of the landscape adjacent to highways. The landscaping is also designed to act as a barrier against vehicles leaving the road; median strip vegetation is located to block oncoming headlight glare.

Street furniture is an important element of the travel environment. Its design and placement are important considerations for improved quality of life in cities. In Cincinnati, Department of Housing and Urban Development funds were used to develop new designs for the "streetscape" of a downtown area. Unified street posts containing overhead lighting, traffic signals, signs, trash bins, and telephones helped eliminate visual clutter, improve lighting, and improve communication of traffic information.

Transportation systems can also do many things to enhance the natural environment or enable the viewer to appreciate it more fully. For example, FHWA procedures encourage the use of scenic easements, the clearing of scenic vistas, and the provision of scenic overlooks to give highway users noteworthy views of surrounding countrysides.

## Historic Preservation and Resource Re-use

In many communities, existing facilities are community landmarks and historic sites. Many of these facilities are valuable resources and should be rehabilitated and utilized as intermodal transportation centers and centers for community and commercial activities. For example, along the Northeast Corridor, the Federal Railroad Administration (FRA) is renovating 15 major existing, architecturally significant railroad stations. Many of the railroad bridges being up-graded along the line are significant historic engineering designs.

In addition, planning for transportation improvements should give high priority to the preservation of historic areas. For example, visual impact studies can be used to mitigate the adverse effects of new construction in these areas. One section of DOT's 1975 Environmental Assessment Notebook Series, which has been written to help highway planners, is devoted to suggestions for measuring and ameliorating the effects of highway improvements on historic areas. FHWA also supported the work of Baltimore's interdisciplinary Urban Design Concept Team in aligning the route of an Interstate highway to preserve the integrity and views of one of the city's historic districts.

Existing transportation resources, which are no longer needed, should be reused to serve current transportation needs. In several areas of the country, abandoned railroad rights-of-way have been converted into hiking and bicycle trails.

## Mixed Use and Shared Use

There is an opportunity for the productive use of right-of-ways and shared use for intermodal transportation and community activities. Multiple use of space would recapture some of the relative capital costs of transportation. These goals have been accomplished in the Journal Square transit station, in Jersey City, that was built with UMTA funds. In addition to its transit function, it functions as a shopping and neighborhood activity center.

## The Arts

The arts can be incorporated into transportation systems to give public spaces individuality and to present an image of the local cultural and architectural heritage. They can provide visual clues to the social and economic preoccupations of the region and be an expression of ethnic sensibilities and identification. For example, in Puerto Rico the Commonwealth Juvenile Action Administration funded the painting of murals on bridge abutments in San Juan. The murals depicted Taino Indians (native to Puerto Rico) playing soccer. Here art was used to humanize an otherwise forbidding and austere existing environment. Ideally, it should be considered from the beginning of the planning process and be installed as an integral part of the system.

Airports have also been used to exhibit art. The FAA has encouraged efforts such as the San Francisco Airport Commission's "Art Enrichment" competitions program, and the installation at the Cincinnati airport terminal of the mural cycle executed for the city's railroad terminal in the 1930's. In Seattle, the airport terminal houses changing arts exhibits. These projects emphasize the role of the airport as symbolic portal to the city.

Art has served a functional role as well as enhancing subway terminals in several cities. In Boston, UMTA helped place murals in subway stations depicting landmark areas and buildings in their vicinity. UMTA funds have also been used in conjunction with private contributions to rehabilitate subway stations in New York and Philadelphia. Designers in Philadelphia have considered more than a facelift to one station; they re-channeled pedestrian traffic to reduce crowding, too.

## Graphics and Signs

Graphics when used properly can make directional signs and signals in transportation systems easy to interpret. Therefore, graphics should be considered when architectural and engineering standards are set for new facilities or when systems are renovated. For example, at SEA-TAC, the Seattle-Tacoma Airport in Washington, designers made their directional signs into super-graphics that lend color and visual variety to long corridors and large, open areas. Signs and other guides can play an important role. For instance, San Francisco has installed distinctive signs along some of its streets to guide automobile drivers along scenic routes.

Graphics are used in some cities to call attention to transit services. Philadelphia painted some of its trolleys in patriotic colors for the Bicentennial. In Houston, the downtown mini-bus has its own special graphics repeated on its bus stop signs. Richmond, Virginia, paints separate identities onto its downtown shuttle buses; one becomes the Toonerville Trolley, another a 1920 Rolls Royce, and each has a distinctive traffic horn.

The U.S. Coast Guard (USCG) commissioned the design of a logotype to make its search and rescue and law enforcement craft more identifiable. The resulting design of orange and blue stripes inset with the Coast Guard seal, appears on USCG craft ranging from helicopters to the Coast Guard Academy's tall-masted ship the Eagle and heightens public awareness of the role of the service.

### Vehicle Design

Americans are very design conscious when it comes to the purchase of a private vehicle like a bicycle, boat or automobile. They also react very positively to similar design components in public and private transportation systems. If we are to provide alternatives to the auto, vehicles must be designed to be equally comfortable and to provide access for elderly, handicapped and other special users.

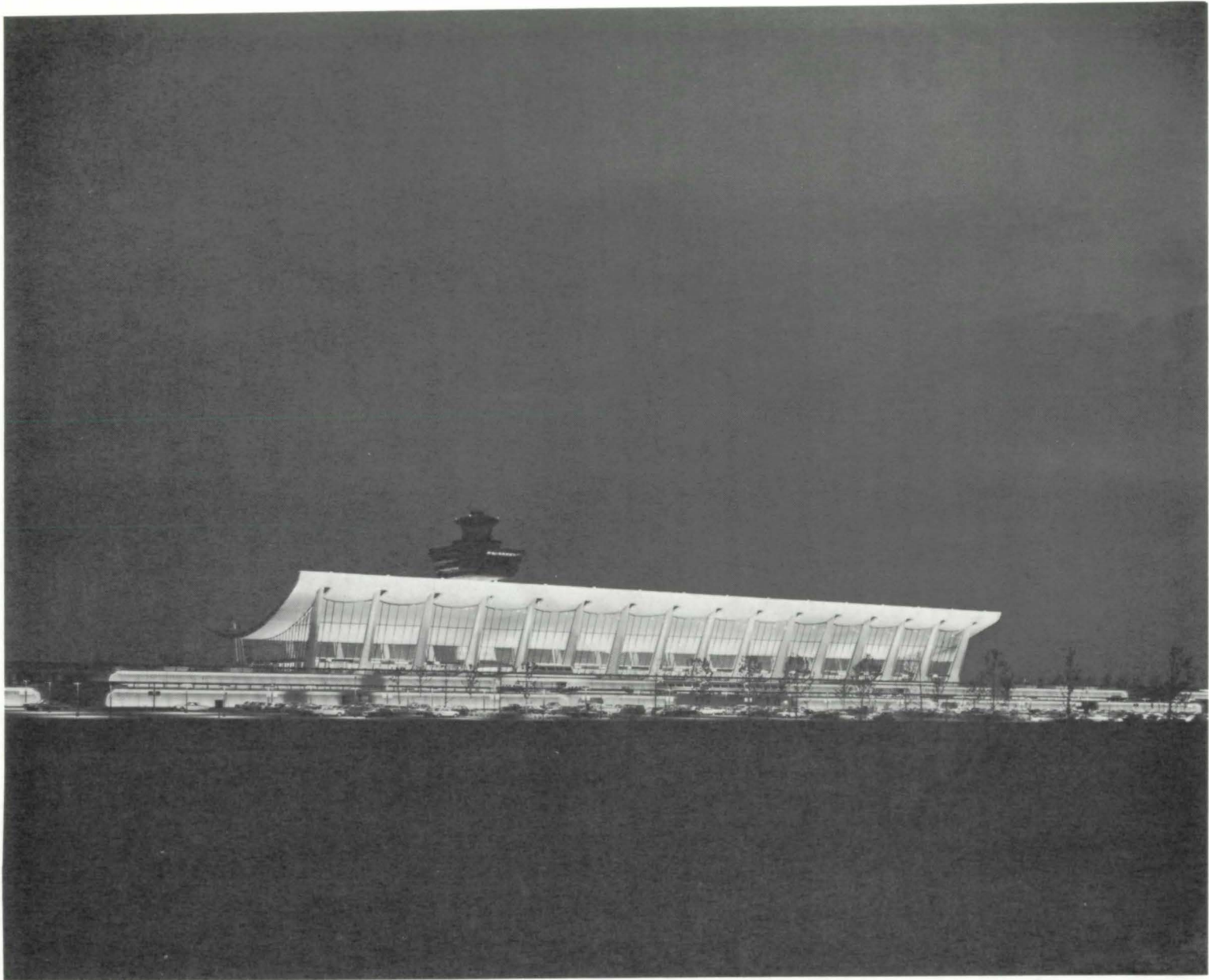
Although the Department is not often involved in vehicle design, there are some programs of note. For example, UMTA has supported several programs to test and improve the design of mass transit vehicles. Under the newly mandated Transbus program, three prototype vehicles have been developed that are accessible to the handicapped, quieter and less polluting than buses currently manufactured. Each Transbus has a low floor, 22 inches high, which can be lowered to 18 inches and which is substantially lower than the 34- to 35-inch height of existing vehicles. In addition, the new vehicles are equipped with a ramp to enable riders in wheelchairs to board easily. All buses offered for bid after September 30, 1979, must meet these and other Transbus specifications.

Another project, the Advanced Concept Train, has tested various seating configurations and other features in an effort to improve passenger comfort and to enhance the environment inside the car as well as outside by producing a better looking rail vehicle. A similar project in a totally different setting is a feasibility study of hovercraft and hydrofoils as water-borne transit vehicles. UMTA research here, too, has concentrated on passenger

acceptability, evaluating seating arrangements, means of boarding and disembarking, and noise suppression measures.

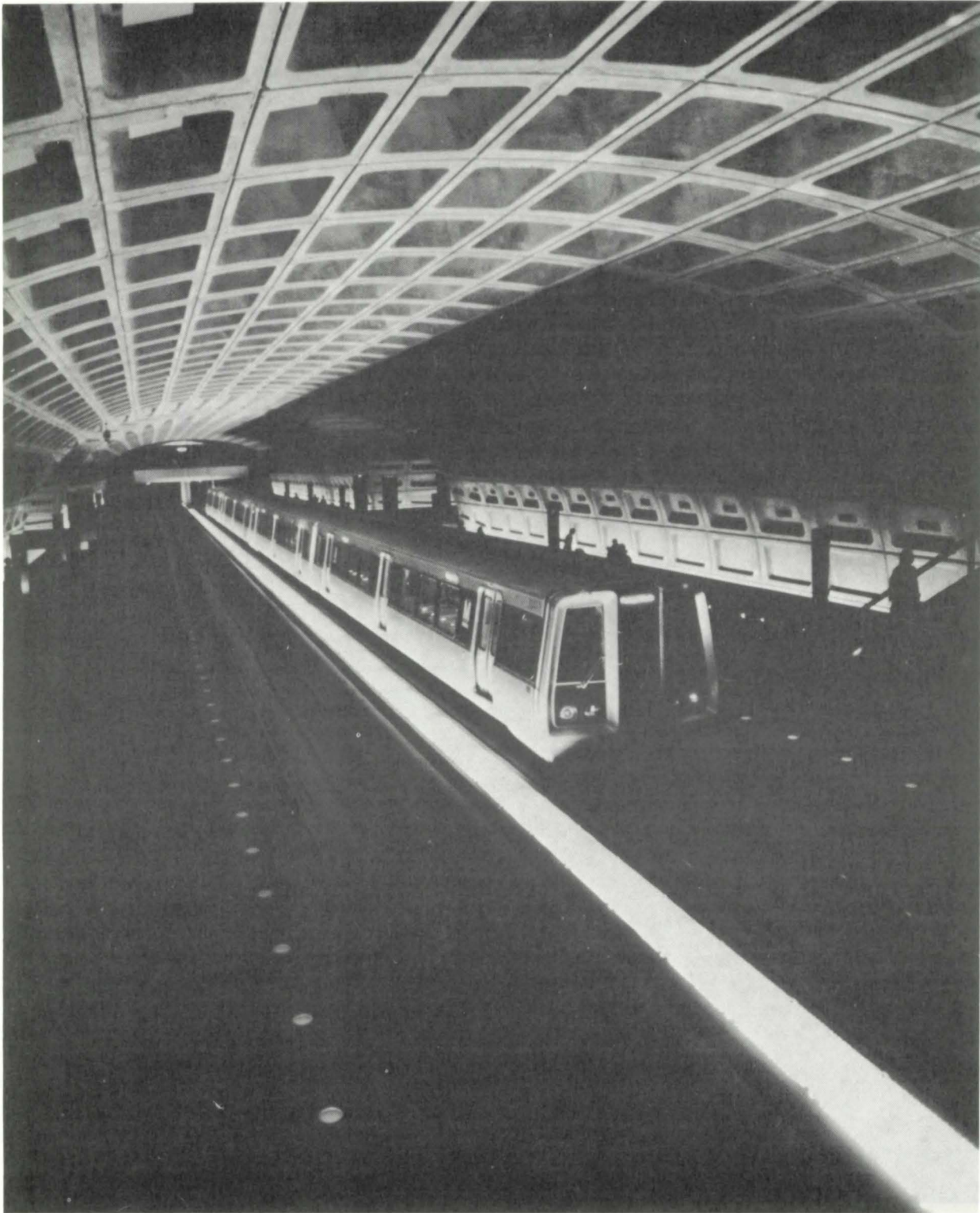
A classic case of vehicle design was the GG-1 electric locomotive, created in 1935 by industrial designer Raymond Loewy for the Pennsylvania Railroad. The locomotive was one of the first to bear a streamlined design, and its sleek lines not only reduced wind-resistance, but contributed to its operating efficiency in other ways: the absence of chrome eliminated glare and tarnish, the welded (rather than riveted) skin made it easier to prefabricate the body and made washing easier, the protruding nose protected the body from collision damage, the curved-under bottom edge of the body protected workmen from injury, and the painted gold striped on the dark green surface helped make it visible from a distance. So memorable was the design, that a group called the Friends of the GG-1 recently paid for refurbishing one of the locomotives which continues to make regular Amtrak runs.

Vehicular design can also aid in the appreciation of the environment. The attraction of rail passengers to domed observation cars led to recent UMTA-funded demonstrations of the urban double-decker bus, which results in less noise as well as a better view on the top deck.



FACILITY DESIGN: Dulles International Airport

FACILITY DESIGN: Metro Center, Washington, D.C.

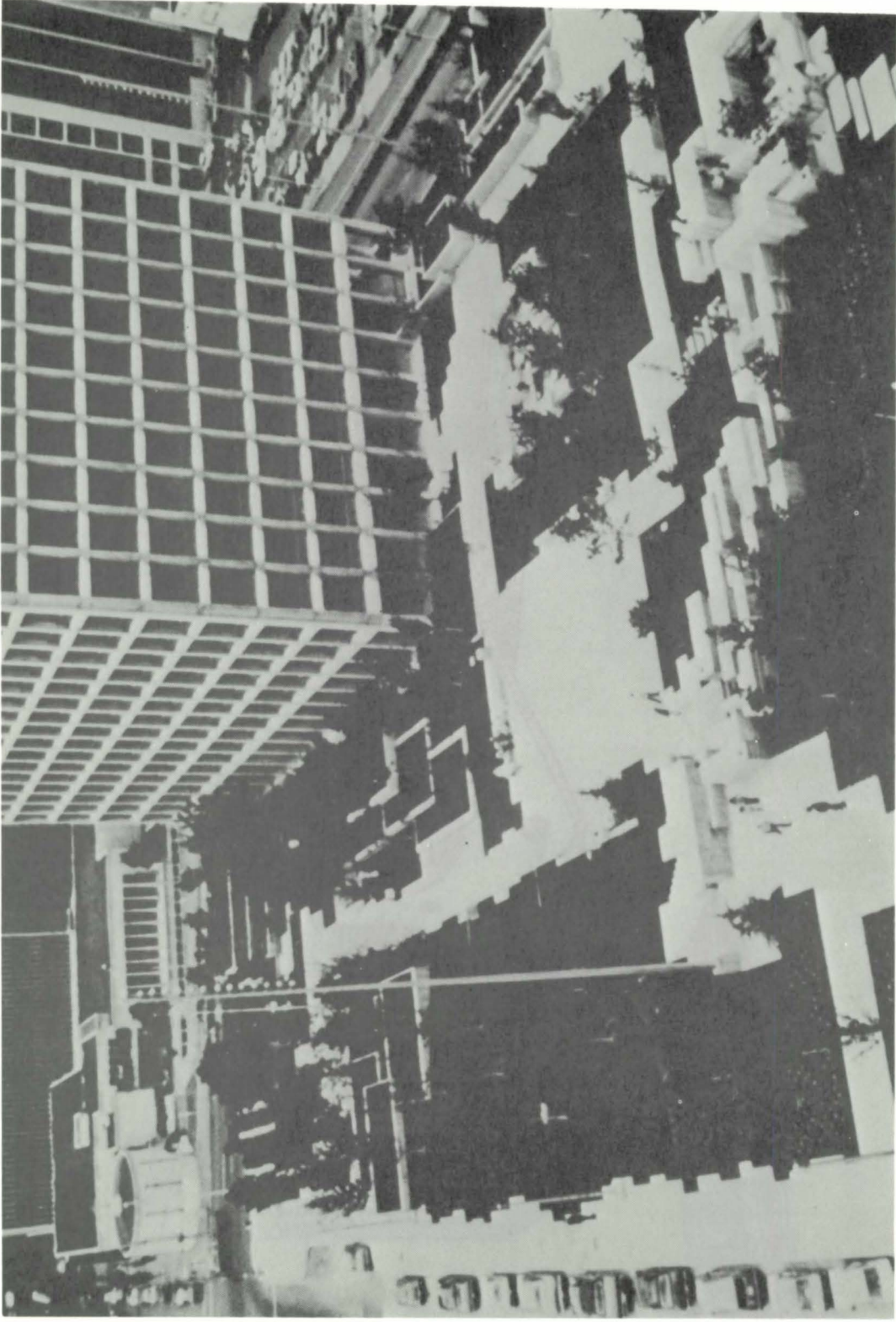




FACILITY DESIGN: Portland International Airport

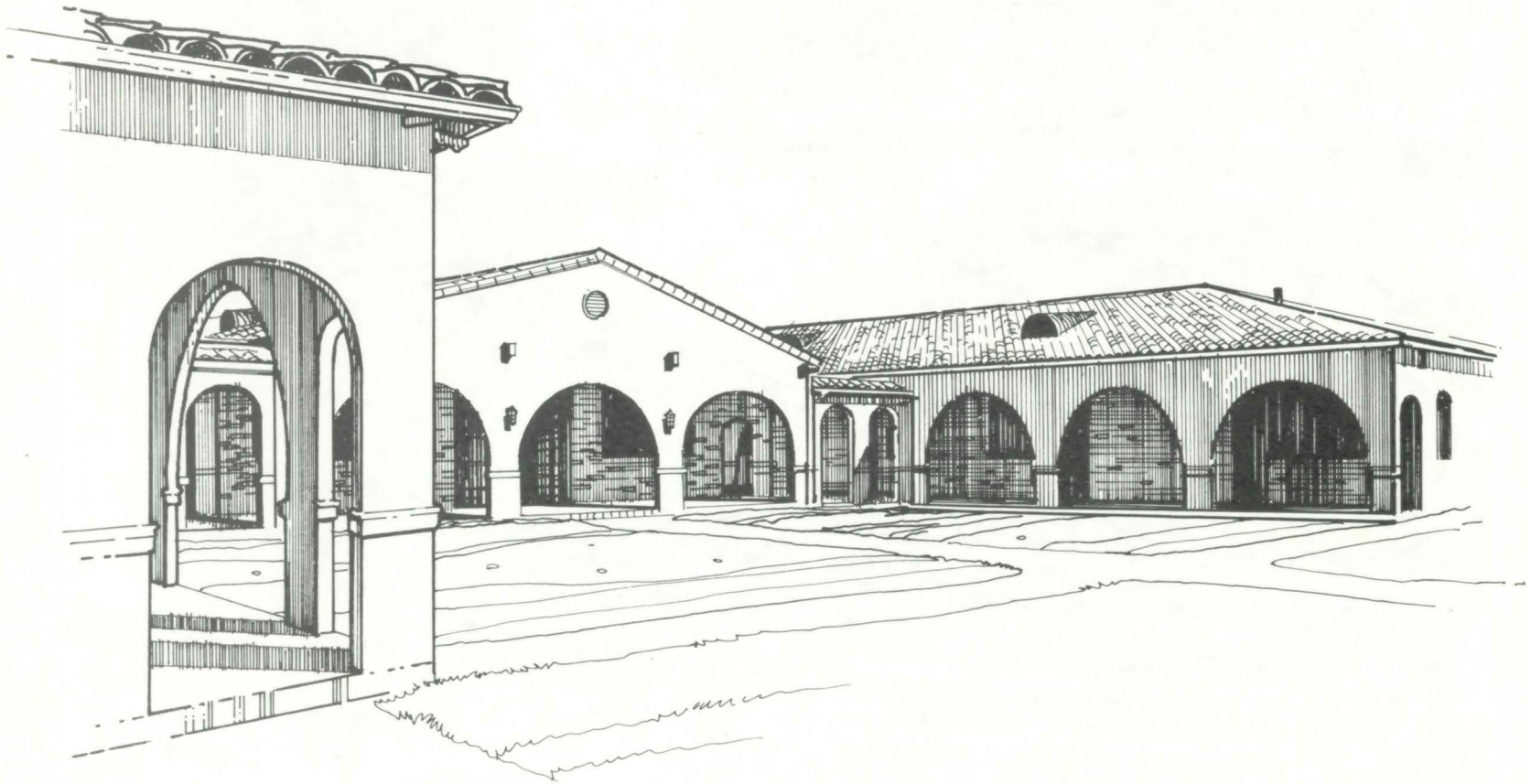
COMPATIBLE DESIGN: Pedestrian Overpass, Boulder, Colorado



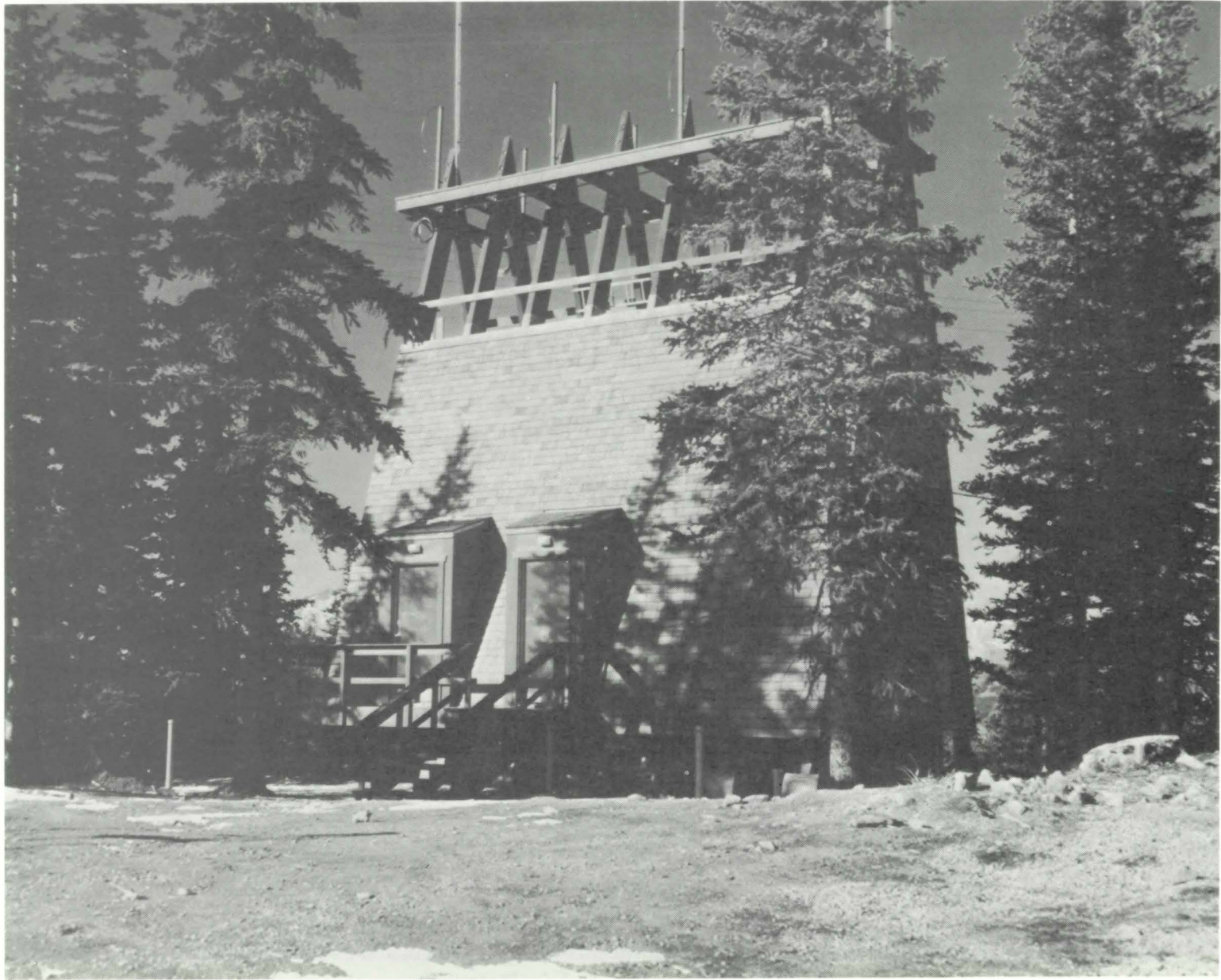


COMPATIBLE DESIGN: Seattle Freeway Park

COMPATIBLE DESIGN: Coast Guard Air Station Barracks  
San Diego, California



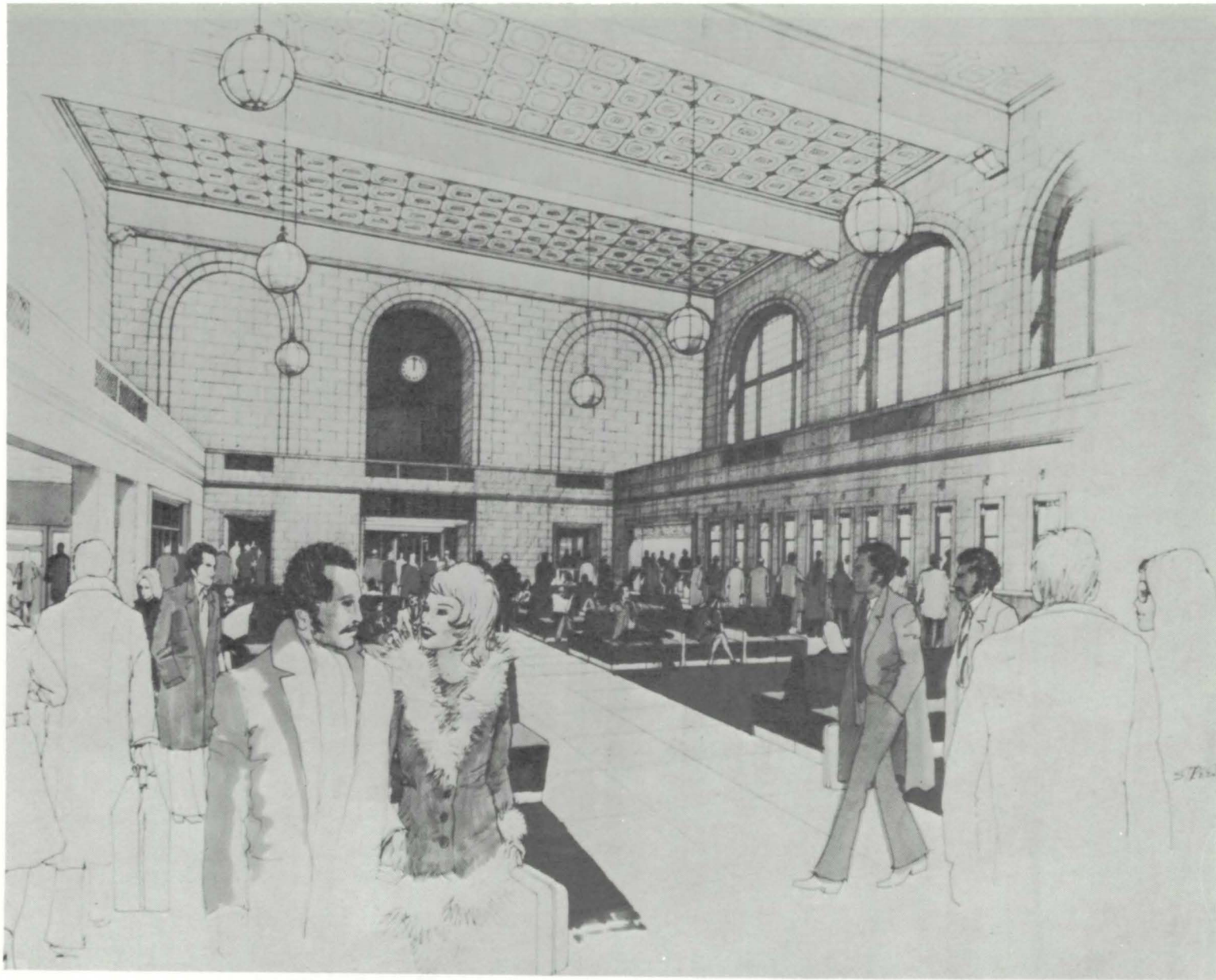
San Diego Air Station Barracks



COMPATIBLE DESIGN: FAA Remote Control Radio Tower, Aspen, Colorado

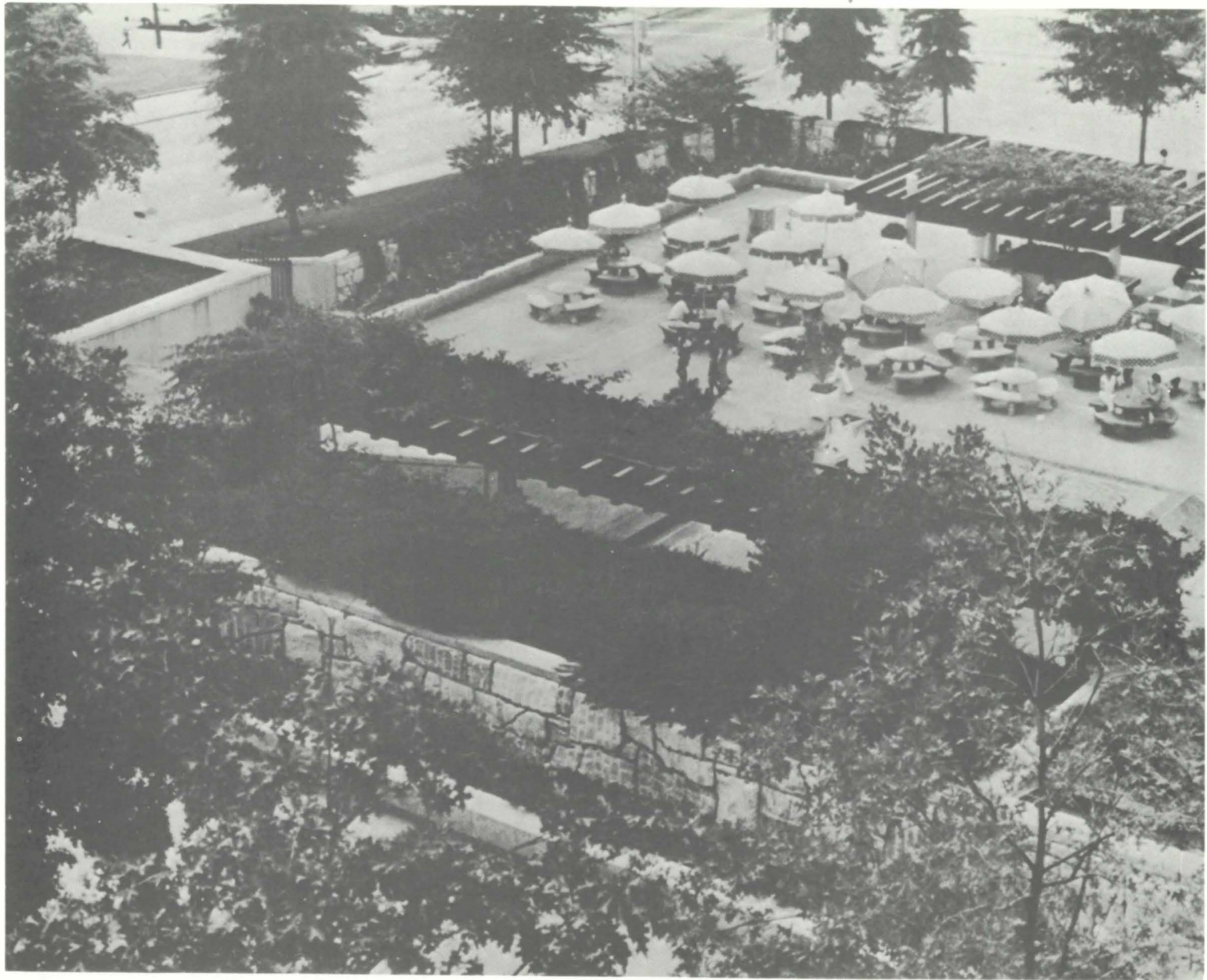
HISTORIC PRESERVATION: Abandoned New Haven Amtrak Station





HISTORIC PRESERVATION: Proposed Renovation of New Haven Station  
Under Northeast Corridor Improvement Program

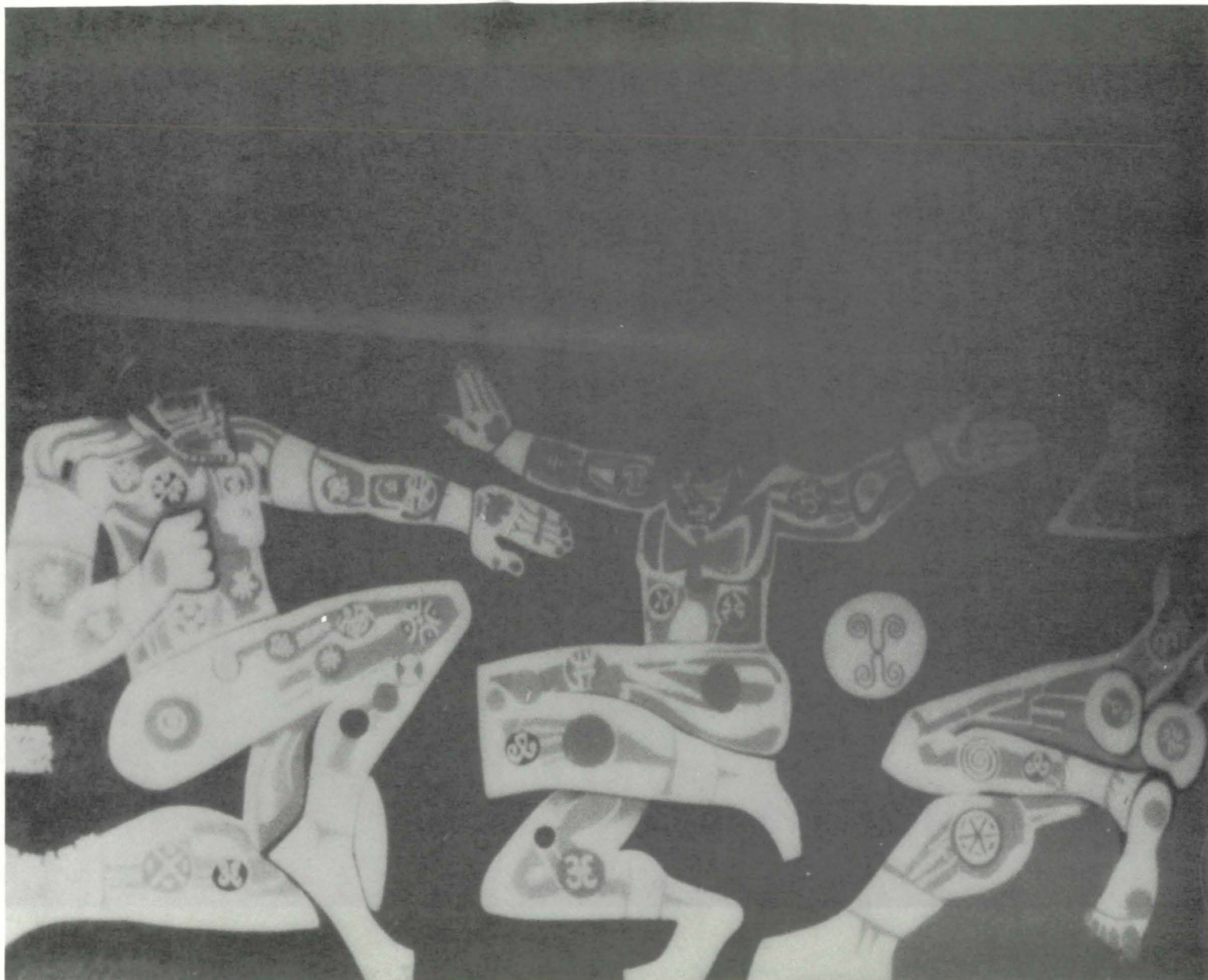
SHARED USE: Restaurant Over Garage in Highway Right-of-Way, Atlanta, Georgia

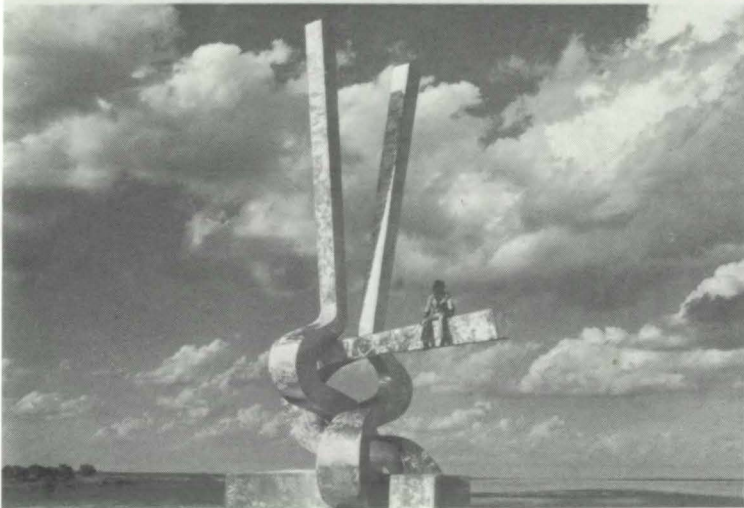
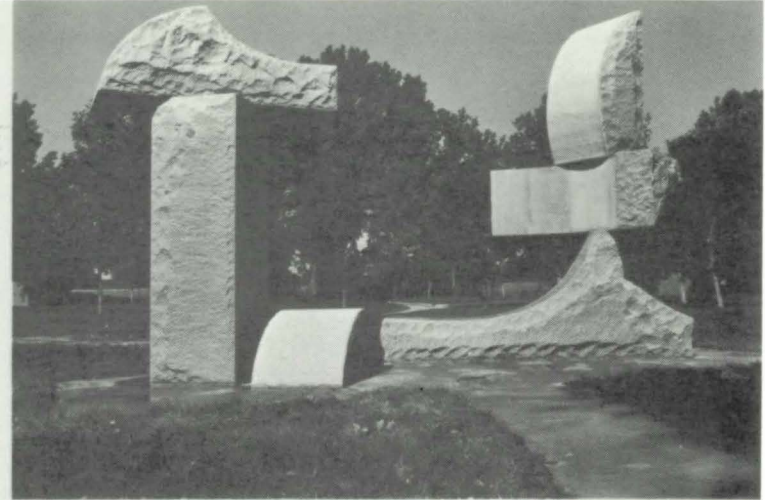




THE ARTS: Painted Tiles Museum of Natural History Subway Station, New York City

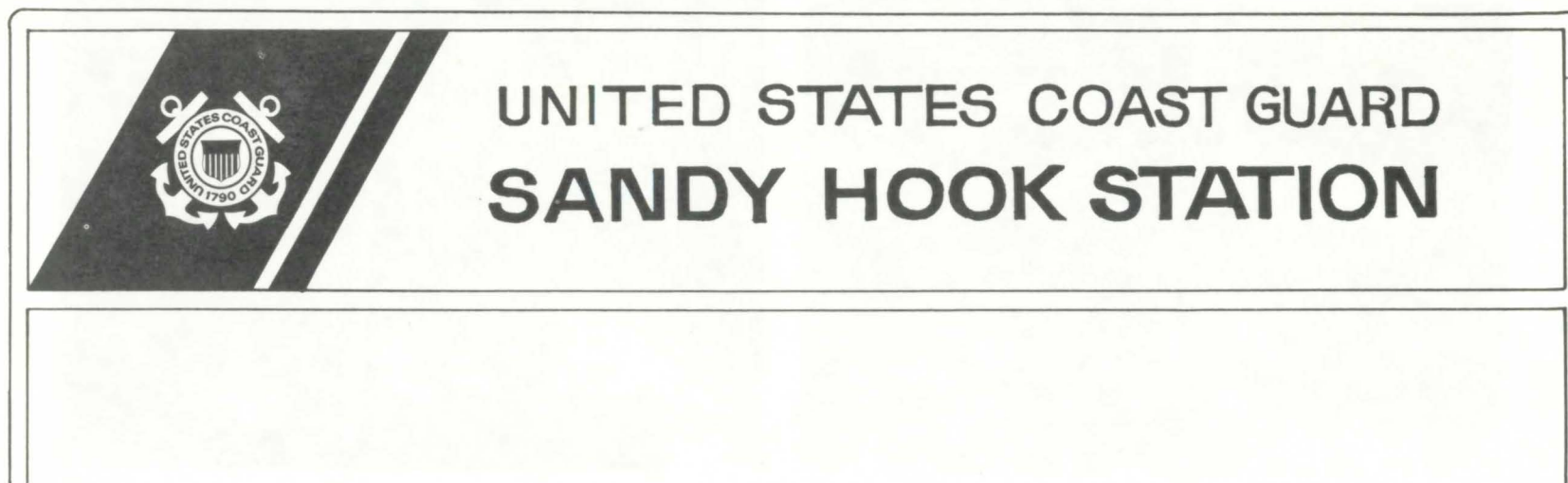
THE ARTS: Mural on Highway Bridge Abutment, San Juan, Puerto Rico





THE ARTS: Sculptures in Rest Stops on Nebraska Interstate 80

GRAPHICS: Coast Guard High Visibility Logotype



Sandy Hook Station Sign –



GRAPHICS: Supergraphics at Seattle-Tacoma Airport



## Chapter III

### PROCEDURAL MECHANISM

Environmental design concerns need to be addressed from the beginning of the planning process. Currently, a very limited amount of attention (if any) is devoted to design considerations, including the integration of art and architecture, in transportation planning prior to the stage where a project undergoes detailed design. By then, major approvals may have been granted, with little opportunity remaining for citizen participation regarding these issues, and for an evaluation of them in relation to a full range of alternatives. In this context, the treatment of design, art, and architecture in transportation and other undertakings often tends to be cosmetic. More time and thought should be devoted to these concepts earlier in the planning process.

#### Options Considered

- Using the Environmental Impact Statement (EIS) process as a vehicle for documenting the consideration given to design, art and architecture in transportation projects.
- Writing of specific regulations to be followed in complying with EIS documentation.
- Preparation of relevant guidance material.

#### Recommendation: Environmental Impact Statement Procedures

It is recommended that the Department require EISs where appropriate to reflect definite prior considerations, steps, and consultations related to design quality including, art and architecture. It appears that at least some environmental design considerations would be applicable and justified for most projects, and that these considerations could be addressed in a conceptual manner if not in great detail, in the EISs.

Discussion -- Section 102 (2) (C) of the National Environmental Policy Act of 1969 contains the statutory basis for preparing environmental impact statements on major Federal actions having a significant impact on the human environment. Departmental procedures, issued pursuant to the Act and Council on Environmental Quality guidelines, make EISs prepared by the Department the single vehicle for all environmental findings and determinations required by law. Yet, there is a requirement -- called for in the National Environmental Policy Act (NEPA) itself -- that has been largely ignored in project planning and in environmental statements. Section 102(2) (A) of NEPA directs agencies of the Federal Government to "utilize a systematic interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decision making which may have an impact on man's environment..." (emphasis added). This provision has not been enforced consistently by the Federal agencies, if at all, although it is referred to in some guidance documents and research reports.

The Department can further its objective of improved design, art, and architecture in transportation by placing greater emphasis on section 102(2) (A) in its programs. More specifically, it can require that an EIS -- where appropriate -- contain data and other evidence of considerations and consultations regarding environmental design and public arts issues including visual quality and multiple and adaptive use issues. Under this approach, section 102(2) (A) would not be treated very differently from other environmental findings and determinations which must be made by DOT officials as part of the EIS process.

Further support for linking section 102(2) (A) to the EIS can be derived from another provision of NEPA. Section 102(2) (B) states that Federal agencies shall "identify and develop methods and procedures ... which will ensure that presently unquantified environmental amenities and values may be given appropriate consideration in decision making along with economic and technical considerations..." (emphasis added). Matters related to design, art, and architecture can be interpreted as falling within the definition of "unquantified environmental amenities and values." A linking of section 102(2) (A) with the EIS approval constitutes a "method" or "procedure" responsive to section 102(2) (B).

Sections 102(2) (A) and (B) and the EIS procedure all represent an attempt to improve the planning process for Federal projects and actions and to foster better projects and decisions with respect to them. Combining an environmental design arts requirement with the EIS (as the enforcement tool) will serve to stimulate and encourage the Department's client agencies to give more positive consideration to aesthetic design from the very inception of a project and throughout its development.

Some agencies have already taken steps in this direction. For example, one of the major components of the environmental impact study for the West Side Highway in New York City was a visual consideration of alternative proposals. Drawings showed what result each proposal would produce on views from adjoining streets. Also, in San Francisco, videotapes were made of an area proposed for a parking facility. The facility's proposed outlines were superimposed on the tape to determine its impact on the surrounding environment.

Consideration of multiple use of rights of way to enhance the environment as well as adaptive use for historic and other existing structures that are part of a community would also be appropriate in the EIS. For example, a linear park was created along the BART right of way where the subway was elevated and passed through residential areas. Thus, much of the negative impact was mitigated by providing an important recreational resource to the community.

Using the EIS to encourage design quality in transportation may be opposed by some who would view it as one more item requiring documentation and therefore as additional "red tape." Agencies disinterested in pursuing these concepts as part of project planning and development might succeed, to some extent, in substituting "lip service" for real compliance and commitment. It could prove difficult to look behind the documentation and measure the results by any objective standards. In addition, some projects with design potential may not be covered by EISs.

However, this approach would offer added incentive for sponsors requesting DOT funds to incorporate aesthetic design into projects, and would in fact be a further impetus to implementation of other design approaches discussed in this report, including the "A-Percentage-For-Art" strategy (see Funding, Chapter IV) and the design awards program. Moreover, any legal complications regarding alleged noncompliance with section 102(2)(A) of the National Environmental Policy Act, which calls for the use of environmental design arts in agency planning and decision making, would be precluded by the procedure being proposed.

Implementation Requirements -- A decision to pursue this course of action would necessitate a minor change in the language of the departmental and modal procedures relating to environmental impact statements. This change could be accomplished with a minimum of effort, although some time may have to be set aside for coordination and public comment. The language in the NEPA orders would also be modified to include the instruction that EISs expand the EIS review and comment process where applicable to bring organizations concerned with design quality including state and

local arts councils into the review process. These groups would have considerable expertise to offer with respect to design issues.

In addition, grant applications and agreements should include specific proposals -- as previously referenced in EISSs or as developed for the first time during the detailed design phase in a project -that reflect the use of "environmental design arts" in the planning process and which demonstrate that adequate consideration has been given to "unquantified environmental amenities and values". These proposals may deal with the issue of design quality as a whole and give special consideration to architectural features and landscape site design, original works of art, graphics, and historic preservation in transportation systems.

Recommendation: Criteria for Environmental Impact Statement Procedures

It is not recommended that the Department issue regulations requiring all EISSs to reflect design quality considerations regardless of the project involved. It is also not recommended that the Department issue detailed criteria for the evaluation and documentation of design matters.

Recommendation: Guidance Material

It is recommended that DOT fund specific guidance material for incorporating environmental design arts in transportation projects (See Chapter IV on Funding).

## Chapter IV

### FUNDING MECHANISMS

The importance of design, art, and architecture in transportation has not been articulated by the Department of Transportation nor has a systematic policy regarding its funding been developed. It is the conclusion of the Task Force that funding for aesthetic enhancement and improved design will yield results which outweigh the costs. It is recommended that design initiatives that will increase facility use, improve the travel environment, and benefit the community be funded through research and development, demonstration projects, and existing grant assistance programs.

#### Options Considered

- Research and Development -- direct some of the Department's \$400 million spent on Research and Development (R&D) to study aspects of design, art and architecture in transportation.
- Demonstration Projects -- establish a new category of grants to demonstrate ideas related to qualitative design, and set criteria for all other demonstration projects to insure that design factors are considered in the grant approval process.
- One-to-One Matching Grants -- to make available Federal money to be matched by non-public money for aesthetic enhancement of new or existing transportation systems.
- Funding for Works of Art -- establish a policy for purchase of original art works in Federally assisted transportation systems. Permit a percentage of the total capital cost of a construction project to be used for acquiring art for display in public places.

#### Recommendation: Funding for Research and Development

It is recommended that the Department in general fund research and development activities related to the areas of design, art, and architecture. Specifically, DOT should fund contract-research that would serve as, or result in, specific guidance for incorporating design considerations including the integration of art and architecture into transportation projects. In addition,

projects could study the relationship between design and transit use, write case studies, and study design concepts.

Discussion: DOT now spends approximately \$400 million a year on R&D. This money is spent mostly in the areas of increasing transportation efficiency and service, improved safety and security, lessening unfavorable environmental effects, and in developing new technologies. With the exception of a portion of one evaluation project for FHWA, it appears that no funds are presently used for research and development on the subject matter of this task force.

If the Department is to require and encourage the consideration of environmental design, art, and architecture in the development of transportation projects, it would be important to prepare and publish specific guidance on such matters for DOT's field units and client agencies. The need to develop and disseminate guidance on these matters is in fact given implicit recognition in section 102(2)(G) of NEPA, which requires that all Federal agencies shall: "make available to States, counties, municipalities, institutions, and individuals, advice and information useful in restoring, maintaining, and enhancing the quality of the environment."

This work could be conducted as a research effort, intended to reflect (and possibly go beyond) the current thinking in the use of design, art and architecture in transportation. DOT has already taken several steps in this direction, including the publication of the Environmental Assessment Notebook Series: Highways, the development of the FHWA training course materials on visual resource management, and the publication of a report on transit station joint development. However, considerably more needs to be done in this area.

Similarly, DOT should fund behavioral and marketing analyses. Design, art, and architecture can play a significant role in stimulating use of transportation modes. Research is required to identify and quantify the influence that design has on increased demand. The incremental benefits of increased demand might be compared to the incremental costs of these alternatives. In addition to demand studies, research is required on the influence of different environments on behavior and psychological well being of the traveler. Case study research on successful and unsuccessful projects would also be appropriate. This research would identify the role of design considerations in success or failure and evaluate different mechanisms for incorporating design quality considerations into the overall planning and development process. In addition, experts at universities could be directly engaged in design studies. Student design projects would also be set up to familiarize students with ideas for facility design and integration of design and art into the transport systems.

Implementation: Guidelines studies for design could be carried out under contract as part of current Departmental research programs. To accomplish the studies at an early date some reprogramming of research projects would be required if the funding levels remain the same. No additional staff would be required for this option alone, but adjustments in staff time and priorities would be required.

Recommendation: Demonstration Programs

It is recommended that demonstration projects funded by DOT reflect the Department's high level of concern for the use of design, art, and architecture in transportation. Criteria used for reviewing grant applications for existing demonstration programs should stress overall design quality.

Discussion -- Demonstration projects, which often have as a primary function the testing of the effectiveness of innovative transportation ideas, should also test for the usefulness of new design concepts. The new design concepts, which may be researched and developed through the Department's ongoing R&D programs, should be demonstrated in a "real world" setting, in the same manner as the technological advancements. The two administrations with substantial demonstration programs, UMTA and FHWA, should report back to the Secretary, within 45 days after this report is accepted, specific ways to implement this recommendation into their programs.

Recommendation: One-to-One Matching Grants

The Task Force does not recommend establishing a new category of matching grants, but recommends that private contributions to local matching funds be encouraged.

Discussion -- The Task Force considered whether or not it would be advisable to establish a category of grants for the purpose of encouraging contributions from the private sector for the acquisition of art works. These donations from either individuals, corporations, or foundations were to be matched on a one-to-one basis by a DOT program. The Task Force was of the

opinion that such a new category was unnecessary and would essentially be contrary to all existing formula.

It is recommended, however, that private contributions be encouraged in all situations for the acquisition of art or for the design enhancement of transportation facilities to supplement local funds used to match Federal dollars. For example, the Metropolitan Transit Authority of New York City raised \$500,000 for the design enhancement of a number of subway stations, which clearly demonstrates the impact of encouraging non-public sources of funding to improve publicly owned transportation facilities.

Recommendation: Funding for Works of Art

It is recommended that the Secretary's Policy Statement make clear that DOT project funds (for direct construction and grant programs) can be utilized for appropriate art work for public spaces in transportation systems. The funding for art works is eligible for Departmental assistance in the same manner as other costs associated with construction of new facilities or refurbishing existing systems. The amount spent on art should be reasonable and appropriate in context with the cost of the entire project. Accordingly, under this recommendation, each administration would develop guidelines as to the programs and projects where these expenditures would be appropriate.

Discussion -- Transportation use becomes a more satisfying human experience when there is art in transportation-related public spaces. By "art", this report means objects which are placed in a transportation facility for aesthetic rather than purely functional reasons. Landscaping, which may improve the aesthetic environment, also may provide functional benefits such as the prevention of soil erosion, the control of noise, and the direction of traffic flow. Art has as its purpose the decorative treatment of a space or a surface and as its primary benefit making that space unique and more interesting. Art forms of particular value to transportation planning include sculpture, paintings, murals, lighting effects, mosaics, and mobiles. Transportation related industries have already found investment in art to be beneficial to their public image and the acceptance of their services.

Many recently built Federal office buildings have large monumental sculptures in the court yard. For example, in New Orleans and Seattle, sculptures by Clement Meadmore and Isamu Noguchi have

been commissioned by the General Services Administration (GSA). The GSA's ongoing program of commissioning works of art is based on the "A-Percentage-For-Art" concept. By the GSA Administrator's directive, 3/8 of one percent of the total construction cost of the building project may be used for art acquisition.

The DOT Assistant General Counsel, in response to the question as to whether the Department of Transportation has the authority to spend appropriated funds for the acquisition of aesthetic design and art work to be included in the construction or the renovation of public transportation facilities, responded "We have concluded that, for the most part, the Department is not prohibited from expending funds in this manner." (See Appendix for full text of memorandum, May 3, 1977.) The Task Force thought a strict percentage rule such as GSA's was not appropriate for most of DOT's programs, and would be difficult to administer. Art is for display in public places. The public typically uses only the lobby and plaza of an office building, whereas it often sees and experiences the entire transit facility. Thus, it would be appropriate for a larger amount to be expended for art in passenger-related facilities than in Federal office buildings. Therefore, a fixed 3/8 of one percent would be too small for DOT because of the different nature of the facilities the two agencies build.

The Task Force recommends that the Secretary issue a directive to the Department to fund the acquisition of works of art in transportation facilities. The Department should spend a percentage of the construction cost related to public space or an amount reasonable and appropriate in the context of the overall project's construction costs. The Department's actions will serve as an example to the rest of the transportation industry. The directive should state the importance of art in public spaces and make the recommendation that agencies which build transportation facilities with DOT grant funds do likewise.

Grantees should be encouraged to plan for the incorporation of art in their early budgeting and planning procedures. Such expenditures should not be mandatory; however, each agency applying for Federal assistance would be required to explain in its environmental impact statement how it considered the provision of art or why a decision was made to include art in the final plan. While the Task Force is of the opinion that the incorporation of art is not appropriate to all projects, nonetheless in many, such as passenger terminals, rest areas along the highways, and facilities which serve large numbers of people, funding and planning for works of art would be highly desirable.

Implementation: Each Administration within the Department should develop guidelines as to the programs and types of projects in which design, art and architecture expenditures would be appropriate, and possibly an indication of an appropriate level of funding. The concept of "A-Percentage-For-Art", which has been adopted by numerous cities and states would be satisfactory for some programs. However, it would provide too little money for some, and too much for others.

Some examples of possible guidelines follow:

- Under the Airport and Airway Development Act of 1970, as amended, funds can be used for the purchase of original art in the construction of non-revenue-producing public use areas of airport terminals. A reasonable level of funding for the art acquisition may be approximately equal to one percent of the total cost of construction of such public use areas. For example, the Seattle-Tacoma airport prominently displays numerous wall-sized paintings and some monumental sculpture. The San Francisco North Terminal, scheduled to open in December of 1978, will be enhanced by a \$1.7 million "Art Enrichment" program. These funds are being used to purchase works of sculpture, free hanging objects and reliefs. The authority for this expenditure is a San Francisco municipal ordinance which mandates that an amount equal to 1-1/2 percent of the total capital construction cost of a project be used for "art enhancement".
- Designs for safety rest areas should include provisions for the installation of original works of art. Special efforts have been made to landscape these areas with indigenous plants and to use the most appropriate regional style of architectural design. The cost of providing an area for the display of pieces of sculpture would be very nominal and could be included in the construction and landscape project. In addition, urban landscape designs should include provisions for the display of original works of art for viewing by the adjoining community that would not distract the motorists on the roadway.

Funds for the acquisition of works of art for safety rest areas and urban settings may also be eligible for matching federal dollars, in keeping with the Secretary's policy statement. For example, pieces of sculpture which now grace the rest areas of highways in Vermont and Nebraska have evoked favorable public reaction and have not been targets of vandalism. Art could also be installed along rights-of-way where appropriate. In addition, unusual and monumental bridges in urban areas have in the past and could in the future incorporate works of art in the basic design and construction.

- The Federal Railroad Administration, through the Northeast Corridor Improvement Program (NECP), could participate directly in the Department's endeavors to promote design, art, and architecture in transportation facilities where federal funding is exclusively or predominantly the financing source.

A major element of this improvement program is the rehabilitation, expansion or reconstruction of fifteen rail passenger stations along the Northeast Corridor between Washington, D.C. and Boston, Massachusetts. Seven of these stations are on the National Register of Historic Places necessitating particular sensitivity with regard to preservation of elements of historic significance as an integral part of assuring the long term vitality of the building.

It would be in keeping with the Department's proposed policy on design for the architects to incorporate works of art as an integral part of the station development program. The NECP could identify a specific amount of money related to projected construction budgets at individual stations toward commissioning or direct purchase of significant works of art as an overall aspect of the station program.

- The Urban Mass Transportation Administration has funded the incorporation of art in public spaces of capital construction projects. For example, in the Journal Square intermodal terminal in Jersey City, UMTA funds were used for the acquisition for a major piece of sculpture.

The lack of enthusiasm which the American city or suburban dweller has for riding mass transit is all too clear. The economic conditions of driving one's own car have not yet deteriorated to the point where many commuters are forced into mass transit, and mass transit is not attractive enough on its own merits to draw sufficient numbers of patrons. The Task Force believes that the attitude of potential riders can be influenced by making the transit experience as pleasing as possible. This can be accomplished not only by diminution of the discomforts of dirt, noise, pollution, and over-crowded conditions, but also by enhancing the the surroundings and making them more pleasant through use of the design arts.

## Chapter V

### OVERSIGHT MECHANISM

There is a need for mechanisms that will bring in suggestions and perspectives from many sources, as well as provide direction, on how DOT can achieve its goal of enhancing the environment through better use of design quality considerations including art and architecture. Also needed is a means of giving and obtaining feedback on those suggestions as they are used to shape transportation projects at all levels of government and in all sectors of society.

#### Options Considered

- Annual awards program - would build on experience of FHWA annual environmental awards program. It would recognize achievement in use of environmental design arts principles in transportation systems. Awards recipients would be selected by jury of distinguished designers, transportation officials and consumer representatives, and social scientists.
- Non-DOT Advisory Panel - designers, artists, architects, and transportation specialists to advise Secretary and work with DOT Task Force in order to provide insights into possibilities for improvements in transportation projects and strategies to facilitate such improvements.
- Annual conference on design quality in transportation - program to provide a periodic information exchange by transportation officials and constituents on the state of the art and review of accomplishments of the Department, client agencies and the transportation industry.
- DOT Task Force - permanent intra-departmental Task Force to monitor the actions taken to implement the Secretary's policy statement on design quality and to advise the Secretary on design matters in relation to the Department's programs.
- DOT design staff - in-house expertise to provide staff support for the Office of the Secretary and for the Task Force, and to implement the annual awards program.

Recommendation: Awards Program

It is recommended that the Secretary establish an annual awards program to recognize and encourage outstanding design, art and architecture in transportation facilities, and to incorporate existing Federal Highway Administration (FHWA) and Federal Aviation Administration (FAA) environmental awards programs.

Discussion -- The awards program, which should be for all transportation systems, should be administered by the Office of the Secretary. The awards should be given by a distinguished jury of design professionals, consumers, social scientists, and transportation officials. At their discretion, the operating modes could continue to make their own awards at the district and regional level. Implementation of the DOT-wide awards program would not cost substantially more than the administration of the current FHWA awards program according to FHWA estimates.

An award coming from the Department as a whole would have added prestige over an award coming from a single mode. Furthermore, the judging would be on a national basis with categories that were not predominantly mode specific. It would give recognition to individuals and institutions who had made outstanding contributions to the transportation design field. Awards programs are sources of pride for local communities whose facilities receive such awards and morale builders for transportation officials and employees. A Department-wide awards program would demonstrate DOT's concern for good design, and for the success of the design process. It would also demonstrate the feasibility and desirability of incorporating art in transportation systems.

An awards program is also an educational process. It is a physical demonstration of the principles discussed and the goals of improved design, art and architecture. It would publicize outstanding examples of design quality, such as landscape and cityscape considerations, art in transportation, vehicular design, mixed and shared use facilities, the use of graphics and signs, resource use and historic preservation.

In addition, the awards may serve as a means of attracting state, local and private money for these projects. It is often the case that once the federal government has demonstrated its interest in a project, other funds are attracted to the effort. For example, in Philadelphia, firms and companies have begun an Adopt-a-Station program, providing planning funds and dollars to supplement UMTA grants to rehabilitate subway stations used by their employees.

The designers tried to present a new image of the subway environment, with improved passenger flow as one of the benefits.

It is important that the awards process be seen as a means of soliciting ideas for improving the quality of transportation systems. Nominations should be allowed from any source whether from a local, state, or federal agency, or from a community or professional group, or from individuals. Categories should be structured so that projects involving different levels of expenditure, government, sectors of society, and areas of the country, might be rewarded for their achievements. For instance, the Friends of the Kingston Depot spent private funds to rehabilitate the 19th century Kingston, Rhode Island Amtrak Station. Their efforts might be among the many that would be nominated as examples of historic preservation projects. In another category, the design for a mixed use facility/subway stop in Baltimore might be recognized for the imaginative integration of a transportation facility into a larger economic rehabilitation scheme for an important urban area.

In addition to giving these awards, the jury should also take on the role of providing expert advice to the Department. It would thus fulfill part of the role set aside for the national advisory board originally considered as an option by the Ad Hoc Task Force (see below). The Department of Housing and Urban Development (HUD) awards jury has been successful in using its awards as a forum for critiquing the work of HUD and its major design impacts.

Equally important to the success of the awards process would be the submission of ideas for the use of design, art and architecture to improve existing facilities and make new ones more sensitive to these concerns. An analysis by the design staff of these ideas for specific projects would be sent to the DOT Task Force and might form the basis of an agenda for the future that the awards jury should set for the Department.

Recommendation: Annual Conference

It is recommended that in conjunction with the announcement of the awards, that an annual conference for design professionals, citizens, and transportation employees might be held at the Department's discretion.

Discussion -- This would provide a forum for new ideas and solutions to environmental design problems to be presented, critiqued and exchanged. Both problem solving tools and resources could be discussed.

These discussions would exemplify the Department's concern for good design, for art and architecture in its transportation systems.

Recommendation: DOT Task Force

It is recommended that a DOT task force on design, art and architecture be established on a permanent basis.

Discussion -- The current DOT task force should be continued in order to monitor the implementation of the Secretary's policy statement on design, art and architecture. It should be inter-departmental and continue to deal with the issues discussed by this report, make recommendations for changes in procedures and administrative mechanisms, as well as funding and oversight mechanisms. Its knowledge of the internal workings of the Department would enable it to concern itself with the Department's programs, and how specific legislative, administrative, regulatory and other proposals would affect either positively or negatively these programs as they relate to design quality.

Recommendation: DOT Design Staff

FHWA has agreed to transfer to the Office of the Secretary the staff conducting its annual awards program. It is recommended that, in addition, a new position should be designated to provide full time coordination for the over-all program and staff support to the Task Force. The Task Force recommended that this small design staff be assigned to the Office of Environmental Affairs, but another possibility would be the Office of Installations and Logistics.

Discussion -- These professionals with design backgrounds and clerical staff would provide staff support for the annual awards programs and to the DOT task force, suggesting problems to be considered and monitoring the implementation of its decisions. This nucleus of design personnel is essential to the success of these proposals. Without full time staff support the effort to

improve design quality and integrate art into transportation systems will be dissipated.

## Chapter VI

### OTHER PROGRAM RECOMMENDATIONS

This chapter discusses four other matters related to design, art and architecture: graphics, symbol signs, selection of architects, and information and training. Specifically:

- There is a wide variation in the quality of the graphics used within the Department. And, while each mode may have some formalized scheme for publication layout, none follows this with consistency.
- There is a lack of uniformity among the modes in the use of symbol signs. This creates confusion among the public.
- Good design can depend on a selection process that emphasizes the merits of the architectural firm and its analysis of the design problem. A related issue is that good design also depends on cooperation between designers and local agencies.
- There is a need to improve information and training for DOT staff and DOT clients in design quality issues.

#### Options considered.

- Comprehensive graphics improvements program.
- Departmental endorsement of uniform symbol signs.
- Requiring state and local agencies to adopt DOT procedures for selecting architects and engineers and to emphasize conceptual design (narrative) in oral examinations.
- "Awareness Course" for federal, state and local agency personnel -- short course for educating administrative, technical and managerial employees to aesthetic and other qualitative concerns.
- Publications -- case studies, post construction evaluations, annotated bibliographies so both technical and lay audiences can learn to consider design criteria.

- Information Clearinghouse Function -- central repository for the dissemination of materials relating to environmental design in transportation.
- Academic and Internship Programs -- training programs in transportation for current and aspiring environmental designers and administrators.

Recommendation: Graphics program.

It is recommended that the Department initiate a comprehensive review of its graphics program.

Discussion -- At the present time, the Department spends approximately \$15 million for its printing and graphics. It utilizes 150 people to do this work. These figures include work performed within DOT, by the Government Printing Office, and by private contractors for graphic design, printing of occasional technical reports, periodicals for use in-house and for national distribution, stationery, books, tracts, posters and publications of all kinds. These figures do not include the costs for photography. Despite these expenditures of time and money, the Department's publications need improvement.

The goal of improved design in printed materials is to make clear and effective communication possible. Such communication is achieved when the function of a printed material is effectively reflected in its design. In order to achieve this goal, the Office of Public Affairs will perform a study of the Department's current publications to determine the effectiveness of their content. Following this study, the Department, in consultation with the Federal Graphics Improvement Program of the National Endowment for the Arts, should engage the services of a noted consulting firm through a competitive and open bidding process to study how graphics can be used to enhance and reflect the improved subject material.

The consultant should prepare an analysis of the graphic effectiveness of existing publications. The consultant should consider the use of print styles, logos, layouts, formats, size and quality of paper, colors, photographs, illustrations and charts. The firm should also review the management and personnel resources which create the Department's visual images in printing.

A report summarizing these findings should be prepared for review by the Department. Based on this review, and after receiving appropriate guidance from the Department, the consultant should then prepare a detailed graphics manual. The manual would outline certain fixed design and printing standards which can be applied uniformly to all the Department's design work. This design manual would permit in-house graphic designers to put together high quality publications.

The design consultant should also recommend approaches for the implementation of this program including the phasing-in of new supplies and publications and allowing for the utilization of existing stocks and materials. It is estimated that two years will be needed to complete this process.

Periodic workshops and other checkup programs may be needed on an occasional basis to ensure that the new program is meeting the Department's needs. In addition, a graphics coordinator should be assigned to work within the Office of Public Affairs and carry out the consultant's recommendations.

It is estimated that a comprehensive graphics improvements program would result in the reduction of printing costs by reducing the variety of sizes in publications and the type faces used, and by standardizing color runs. Also, redundant or unnecessary publications could be eliminated concurrently by the Department. The graphics manual would also enable more work to be done in-house, and would help the Department attract and inspire new talent to work with the Department.

A new graphics image would give DOT a better means of communicating with the public. It would also eliminate some misunderstandings and confusion that can be translated into actual dollar costs. According to the Federal Graphics Program Director, standardizing graphics would result in an estimated savings of 15 percent of the total budget, or about \$2.25 million per year.

Implementation Requirements -- The Secretary should direct the Office of Public Affairs, in consultation with the National Endowment for the Arts Federal Graphics Improvement Program, to hire a consultant to perform a comprehensive review of the DOT graphics program. Following this review, a graphics coordinator should be assigned to work within the Office of Public Affairs and to follow up the consultant's recommendations.

Recommendation: Symbol/Signs.

It is recommended that the Department endorse the standardized use of one set of symbol/signs in the nation's transportation systems.

Discussion -- The Department of Transportation, Office of Facilitation, in conjunction with the American Institute of Graphic Arts, has developed a set of symbol/signs which are easy to understand and are of high graphic quality. This set of signs should be adopted now as the transportation standard for the nation. Were this to be done, symbol/signs throughout all transportation systems would become consistent. Too often now, the passengers -- particularly those who do not travel frequently, like the elderly and the poor -- find traveling unnecessarily confusing because of the bewildering array of visual messages they encounter.

The basic purpose of symbol/signs is to bridge the language barrier and to simplify basic messages at domestic and international travel facilities. The signs indicate various types of services: public service facilities like telephone, currency exchange, lost and found, toilets, information, ground transportation; and, concessions and processing activities like ticket purchase, baggage check-in, immigration. They also indicate regulations like smoking, no smoking, parking, and no entry. All of these simple messages can be easily understood through appropriate symbols.

Symbols become most effective when they are used frequently in a standardized manner. Through repetitive exposure a passenger automatically recognizes the symbol for the function. In this country alone there are a large number of competing sets of signs. In the early 1970's separate symbols were created for the Port Authority of New York and New Jersey, the Seattle-Tacoma Airport, the National Park Service, the Las Vegas Airport, and the Dallas-Fort Worth International Airport. Special symbols were also created for international events such as the Olympic Games in Tokyo, Mexico City and Munich. Even within the Department of Transportation there are inconsistencies in the use of symbols between the FAA, the FHWA, and UMTA.

Implementation Requirements -- The Secretary should recommend to the American National Standards Institute (ANSI) the adoption of the DOT sponsored symbol/signs as the national standard. He should urge that the U.S. transportation industry as a whole adopt this one set of symbol/signs for both the public and private sector. He should launch a coordinated effort with the National Endowment for the Arts and the General Services Administration to bring about the adoption of these basic symbols wherever appropriate in systems maintained by federal agencies.

The DOT sponsored symbol/sign system should be adopted in systems which are built and maintained by DOT. The symbols should be used within DOT office buildings, within the two federally-owned and

operated airports (Dulles and Washington National) and within the FAA and USCG facilities.

The Department should seek to bring about the use of the comprehensive DOT system at the transportation facilities owned, controlled or administered by other agencies of the Federal government, and at transportation facilities receiving federal grants, subsidies or other financial assistance. Changeover would take time but could be financed out of regular DOT grant programs. The Department could continue its efforts through normal public information channels to publicize and encourage voluntary acceptance by transportation terminal operators and others responsible for administration of large public places.

The Secretary should also instruct the Department's Office of Facilitation to monitor the application of these signs and where necessary to create supplementary symbols as the need may dictate.

Recommendation: Architect-Engineer Selection

It is recommended that recipients of DOT grants be required to establish architect/engineer selection procedures comparable to those used by the Department in its direct construction programs. FAA opposes this recommendation, pointing out some problems peculiar to grant recipients and the administration of the airport grant-in-aid program. Therefore, it is recommended that required application of the DOT procurement regulations be the subject of further discussion between representatives of the Assistant Secretary for Administration and FAA.

Discussion -- DOT procedures state that the constructing agencies must establish a multidisciplinary Architect-Engineer (A-E) evaluation board composed of in-house design and construction personnel and, in some cases, outside professionals. The board reviews qualification forms of A-E firms for each proposed procurement and selects a list of no less than three finalists. The finalists are interviewed and evaluated according to a set of pre-determined and pre-announced criteria. The criteria include consideration of the firms' previous work performance (in terms of both design and ability to meet budget and time constraints), current workload, management approach, minority employment, and technical approaches, including narrative conceptual design approaches, for the project at hand.

DOT procurement regulations for the direct construction program presently encourage the comparison of technical approaches (including narrative conceptual approaches) suggested by A-E firms

selected as finalists in oral interviews. It is recommended that the Department, through a policy statement of the Secretary, stress the value of this comparison as a means of selecting an A-E firm that best understands the program needs of the client. Where projects are of a magnitude to warrant it (magnitude being defined in terms either of high public visibility or in sensitive environmental issues), the A-E finalists may be compensated for developing more elaborate tentative design schemes. In certain circumstances, limited or open design competitions may be used to air more fully the advantages and disadvantages of different design approaches. Architects chosen as finalists would be paid to develop drawings and other materials for the review panel.

In addition, the Department should encourage grantees to use professional A-E's in assisting in writing the scope of work, or design program, to which qualified A-E's must respond. Simultaneously with writing the scope of work, the grantee should determine, again with the aid of professional advice, what other design professionals will be needed on the project -- for example, landscape architects and industrial designers and graphic artists. Procurement of these other design services should begin at the same time as other A-E procurement. These other services may be procured separately or by requiring applicant A-E's to include in their presentations the names, qualifications, and conceptual approaches of these landscape architects, etc., with whom they propose to associate should they be selected for the job.

Implementation Requirements -- The Secretary should direct the Department's Assistant Secretary for Administration (TAD) to insure that grant manuals are revised to include A-E selection procedures consistent with those now used in DOT direct construction. Emphasis should be given to outlining the procedure for the A-E's to follow in presenting their narrative technical design approach during the interview stage of the selection process.

In addition appropriate language should be included in the manual to allow funding of design competitions. Criteria and other guidelines should be developed to assist grantees in determining when design competitions can or should be undertaken.

Recommendation: Training

Building on FHWA's training course called "Aesthetics and Visual Resource Management in the Highway Development Process," a basic

course should be developed by DOT for federal, state and local agency administrators and professional personnel about design quality considerations in the creation of transportation systems. Such a basic course might be tailored to suit each transportation system.

The course should discuss basic principles of aesthetics and visual quality, including planning and location considerations, design approaches which contribute to visual quality as well as functional needs, techniques for evaluating visual impacts of transportation systems, and the continuing use of criteria in all stages of planning, construction and maintenance.

The purpose of this course is not to make instant experts of the people who attend, but rather to help them understand the concepts and the vocabulary of the designers with whom they will be working. One of the best ways to achieve a well-designed product is for the client to understand the design process and to be able to participate in that process.

It is important to offer continuing educational opportunities to state and local agency personnel because it is at this level that programs are defined and early guidelines are set, often long before the architecture-engineering firm is hired.

#### Recommendation: Publications

Research offices in DOT should assure that there is wide distribution of DOT reports which concern environmental design and artistic values: case studies, post-construction evaluations, and other materials developed under research and development grants.

Discussion -- Available information on design concepts as they relate to transportation should be distributed to a wide audience. For example, the Urban Mass Transportation Administration (UMTA) helped fund an exhibit at the Museum of Modern Art in New York in 1976 called "The Taxi Project: Realistic Solutions for Today." Five companies designed and produced prototype vehicles complying with specifications for a taxi that would be roomy, maneuverable, efficient to operate and maintain, relatively pollution-free, and easy for the elderly and handicapped to use. The catalogue for this exhibit was widely distributed and the proposals it offered thus gained considerable attention from the general public.

Published materials of this kind could also be used in the development of training courses for DOT clients. The benefit of such a dissemination effort is that it creates a demand for good transportation design.

Recommendation: Information Clearinghouse Function

It is recommended that the Department urge the National Technical Information Service and other information clearinghouses to include design arts materials as they relate to transportation.

Discussion -- The Smithsonian Scientific Information Exchange now has a computer category on Highway Aesthetics. The Department should make a special effort to ensure that projects dealing with other facets of design, art, and aesthetics in transportation are brought to the attention of the Smithsonian indexing staff and to the staff at other information exchange centers.

The compilation of a DOT annotated bibliography on environmental design arts in transportation--printed by NTIS--and given wide circulation could facilitate greater design awareness in transportation agency personnel.

Recommendation: Academic and Internship Training Program

Internship programs in the design arts are not recommended at this time.

Discussion -- The Task Force discussed the concept of academic and internship training programs in the design arts. However, questions were raised regarding the placement of interns in appropriate DOT offices. It was felt that at the present time there were not enough identifiable design tasks for them to perform. Establishment of an internship program must await greater emphasis on design within the Department as a whole.

APPENDICES



APPENDIX A

**Office of the Secretary**

[OST File No. 49; Notice 77-2]

**DESIGN, ART AND ARCHITECTURE IN  
TRANSPORTATION**

**Request for Public Comment**

The purpose of this notice is to invite public comment on ways to encourage the use of art, good design, and architecture in the development of federally funded transportation projects.

On January 14, 1977, I issued "A Policy Statement on the Use of Design, Art and Architecture in Transportation System." On that same date, I established a task force within the Department of Transportation on the subject of design, art and architecture in transportation. The statement of policy and the memorandum establishing the task force are set forth below.

The Department of Transportation hereby requests comments of the interested public on (1) the policy; (2) matters which commentators believe the task force should consider; (3) the matters which I have specifically asked the task force to consider; and (4) any other suggestions as to how the Department can appropriately improve design, art and architecture in transportation systems.

Comments should be submitted in writing to:

Docket Clerk, OST File No. 49, Office of the General Counsel, Department of Transportation, Washington, D.C. 20590.

Comments received by Friday, March 25, 1977, will be considered; those received after that date will be considered only to the extent feasible. Comments will be available for public inspection and copying in the Office of the Assistant General Counsel for Operations and Legal Counsel, Room 10100 Nassif Building, 400 Seventh Street, SW., Washington, D.C., 9 a.m. to 5:30 p.m. local time, Monday through Friday, except Federal holidays.

For further information, contact:

Charles Ansbacher, White House Fellow, Department of Transportation, Washington, D.C. 20590, (202) 426-4363.

Issued in Washington, D.C. on January 18, 1977.

**WILLIAM T. COLEMAN, JR.,**  
*Secretary of Transportation.*

A POLICY STATEMENT ON THE USE OF DESIGN,  
ART AND ARCHITECTURE IN TRANSPORTATION  
SYSTEMS

JANUARY 14, 1977.

The purpose of this statement is to set forth an explicit Departmental policy with respect to the use and encouragement of art and good design in our Nation's transportation systems. It is our strong conviction that a Nation's public works reflect the strength and depth of its cultural heritage. We need only look at the creations of great nations of antiquity to find examples of their civilization—Athens gives us her places of worship and trade, Rome bequeaths her aqueducts and colosseums, Paris presents her splendor in magnificent boulevards and public museums of unsurpassed beauty. The Parliament Building of London commands our regard for that Nation's splendid history of leadership and commitment to democratic principles.

These examples have been emulated in many instances by our own great country—often as our youthful cities sought to develop their own statement of character and achievement. New York was identified by the majestic height of its Empire State Building and the massively attractive Brooklyn Bridge; San Francisco is the home of the Golden Gate; Washington, like London, is a city planned for its leading governmental role and through its monuments, parks and buildings, constantly reminds us of our great leaders and strong Constitution.

Today, enormous amounts of public funds, collected from our people, flow into the development and continued improvement of our Nation's cities and countryside. Since transportation systems claim a large portion of those funds, we recognize that in the spirit of the past, and with care for the future, the Department of Transportation must make a strong commitment to a policy which will assure that all public funds allocated to transportation be spent with due consideration for their design, artistic and cultural impact.

Thus, as a matter of policy, we believe that a concern for good design is an integral part of responsible planning for safe, efficient and economical transportation systems. To accomplish this objective, the Department proposes to establish a process which will encourage the use of art and good design in the development of Federally funded transportation projects.

In the final analysis, high quality design will accomplish the broadest transportation objectives and may generate benefits which far outweigh any additional costs. Design which provides visual testimony to the Country's respect for the dignity of individuals will become another cherished portion of our Nation's heritage. Emphasis, therefore, must be placed on the choice of plans which embody the finest American architectural, design, and artistic thought.

WILLIAM T. COLEMAN, Jr.

JANUARY 14, 1977.

Memorandum to: Commandant, United States Coast Guard, Federal Aviation Administrator, Federal Highway Administrator, Federal Railroad Administrator, Urban Mass Transportation Administrator, Assistant Secretary for Policy, Plans and International Affairs, Assistant Secretary for Environment, Safety and Consumer Affairs, Assistant Secretary for Administration, White House Fellow, Director of Public Affairs.

Subject: Establishment of Task Force on Design, Art and Architecture in Transportation.

I am establishing herewith an ad hoc Task Force on Design, Art and Architecture in Transportation, with the addressees of this memorandum as members. The Task Force will be chaired jointly by the Assistant Secretary for Environment, Safety and Consumer Affairs and the White House Fellow. The purpose of the Task Force is to develop and submit to the Secretary, within six months, a report setting forth proposals for the implementation of the policy which I am issuing today on Design, Art and Architecture in Transportation.

In developing its report, the Task Force should consider the following:

(1) The creation of a National Advisory Board on Design, Art and Architecture in Transportation.

(2) The understanding that the cost of incorporating aesthetic design and art work may be eligible for Department of Transportation assistance at a certain level of funding based on a formula of a project's total budget. This assistance will apply to transportation systems which will be refurbished and modernized, and for new construction.

(3) The establishment of an annual awards program to give recognition to outstanding examples of achievement in design, art and architecture in transportation systems.

(4) The promulgation of regulations regarding procedures which the Department of Transportation grantees should follow to assure that design, art and architecture factors in transportation systems are given due consideration.

(5) Grants be made available to communities for aesthetic environmental enhancement of transportation systems on a one-to-one matching basis, where federal dollars are matched by funds from individuals, neighborhood organizations, or businesses.

The Task Force should evaluate the comments received on the policy, and the foregoing items, in response to a notice in the FEDERAL REGISTER. Also, for the purpose of informing itself more completely, the Task Force is hereby authorized to hold a public hearing and to travel to the extent necessary. In developing its report, the Task Force should review all relevant programs and policies within the Department, as well as elsewhere in the Federal Government, and—on a selected basis—in State and local governments.

WILLIAM T. COLEMAN, Jr.

[FR Doc.77-2325 Filed 1-24-77;8:45 a.m.]

APPENDIX B

TASK FORCE

Commandant, United States Coast Guard

Federal Aviation Administrator

Federal Highway Administrator

Federal Railroad Administrator

Urban Mass Transportation Administrator

Assistant Secretary for Policy, Plans and  
International Affairs

Assistant Secretary for Environment, Safety  
and Consumer Affairs

Assistant Secretary for Administration

White House Fellow

Director of Public Affairs

TASK FORCE WORKING GROUP AND OTHER PARTICIPANTS

Charles A. Ansbacher, Co-Chairman  
White House Fellow

Donald Bowman  
Federal Aviation Administration

Abner B. Cohen (Cover Design)  
Office of Public Affairs

Martin Convisser, Co-Chairman  
Acting Assistant Secretary for Environment, Safety and  
Consumer Affairs

Barbara Ducoff  
Office of Policy, Plans and International Affairs

Patricia J. Endel  
Office of the Secretary

Joseph A. Foster  
Federal Aviation Administration

Hanan A. Kivett  
Federal Railroad Administration

Roy Knight  
National Endowment for the Arts

Shari N. Leinwand  
Federal Aviation Administration

Kiyoski Mano  
Urban Mass Transportation Administration

Luis S. Ortega  
United States Coast Guard

Robert A. Peck  
National Endowment for the Arts

David K. Phillips  
Federal Highway Administration

Angelo P. Picillo  
Office of Administration

Alan E. Pisarski  
Office of Policy, Plans and International Affairs

Elizabeth A. Reid, Task Force Design Consultant  
National Endowment for the Arts

Philip J. Steece  
Federal Aviation Administration

Robert P. Thurber  
Office of Environment, Safety and Consumer Affairs

W. Jack Wilkes  
Federal Highway Administration



APPENDIX C

JANUARY 6, 1976 CONFERENCE

LIST OF PARTICIPANTS

William T. Coleman, Jr.  
Former Secretary of Transportation

John W. Barnum  
Former Deputy Secretary of Transportation

Nancy Hanks, Chairman  
National Endowment for the Arts

Honorable Wesley C. Uhlman  
Mayor of Seattle

Livingston Biddle  
Assistant to Senator Pell  
Director of Subcommittee on Arts and Humanities  
for the U.S. Senate

Peter Chermayeff, Designer  
Cambridge Seven Associates  
Cambridge, Massachusetts

Richard Hunt, Sculptor  
Chicago, Illinois

Ronald Kane  
Metropolitan Transit Authority  
New York, New York

Michael Lomax, Arts Council  
Director, Bureau of Cultural & International Affairs  
Atlanta, Georgia

Kevin Lynch, Urban Designer  
Massachusetts Institute of Technology

Gerald McCue, Dean  
Harvard Graduate School of Design

Francis Faust, President  
Greater Buffalo Development Corporation  
Buffalo, New York

Alan F. Kiepper  
Metropolitan Atlanta Rapid Transit Authority  
Atlanta, Georgia



## APPENDIX D

### An Analysis of Responses to the Docket: Art, Architecture, and Design in Transportation

In order to obtain public views on proposed public policy regarding design, art and architecture in transportation, public Docket #49 was established by notice in the Federal Register on January 25, 1977. Public comment was solicited by March 25 regarding the desirability of the five following items:

1. The creation of a National Advisory Board on Design, Art and Architecture in Transportation.
2. The understanding that the cost of incorporating aesthetic design and art work may be eligible for Department of Transportation assistance at a certain level of funding based on a formula of a project's total budget. This assistance will apply to transportation systems which will be refurbished and modernized, and for new construction.
3. The establishment of an annual awards program to give recognition to outstanding examples of achievement in design, art and architecture in transportation systems.
4. The promulgation of regulations regarding procedures which the Department of Transportation grantees should follow to assure that design, art and architecture factors in transportation systems are given due consideration.
5. Grants be made available to communities for aesthetic environmental enhancement of transportation systems on a one-to-one matching basis, where federal dollars are matched by funds from individuals, neighborhood organizations, or businesses.

#### Respondents

A wide variety of groups and individuals responded to the docket. Table 1 shows the number of respondents for each of fourteen types of affiliations.

Table 1

Respondents by Affiliation

Federal Agencies	5
State Agencies	25
Local Government Agencies	13
Universities	9
Local Art Councils or Commissions	7
Art Associations	17
Arthitectoral Planning or Engineering Associations	13
Industry	3
Media	1
Historic Preservation Groups	3
Professional Individuals or Firms	19
Other Private Citizens	18
Private Local Planning Groups	7
Transit Authorities	<u>5</u>
Total Responses	144

Almost one-third of the comments were submitted by government agencies; over a quarter of the responses were sent in by planning or architectural associations, firms, or professionals. Letters from art councils, commissions or associations accounted for seventeen percent of the responses. Eleven percent were comments from private citizens and six percent were prepared by universities. The remainder were from the transportation industry, the media, historic preservation groups, and transit authorities.

#### Analysis of Responses

A system was established to analyze docket submissions. First, a log containing the respondent's affiliation and date of letter was developed with the responses organized by letter of alphabet and letter date.

A simple coding form was developed to permit standardized and systematic evaluation of the content of each letter. The letters were examined for responses to the five areas of consideration assigned to the task force and general response to improving art, design, aesthetics, and architecture in transportation. Each response was analyzed to identify the major area of concern of the respondent, e.g. vehicles, terminals, landscaping, art, user information, graphics, standards, historic preservation, highway beautification, or none. Letters that were unrelated to the topic at hand or that required a response were further identified.

Table 2 presents an aggregated response which characterizes the general positive or negative nature of the responses received. The responses to the Docket were preponderantly positive.

TABLE 2

Positive	Negative	No Response	Total
125	6	13	144

General Attitude Towards the Overall Concept

Highlights of some of the responses to the docket appear below and illustrate the endorsement of improved design, art, and architecture in transportation systems.

Mrs. Joan Mondale: "I was very excited to learn more about the DOT design task force. Their work can be so very valuable in setting standards, in raising the public conscienceness and in making good design contagious! Your task force is unique, and I believe of particular interest, because if successful in your Department, it can serve as a prototype both inside and outside of government. I am convinced it is just this kind of thinking that is going to save our surroundings from mediocrity."

Mayor William Donald Schaefer of Baltimore: "Based on our experience in Baltimore, I should like to make the following suggestions:

1. Works of art should be seen as an integral part of the living or working environment and not simply as applied decoration. Works of art not only provide pleasure, but can also add clarity and a sense of direction in a complex environment. For this to happen it is necessary that the art concepts be developed early in the overall design, and that artist and architect work together through the development of the design.
2. Too often in public projects, as a result of restrictive budgets or narrow criteria, we find ourselves with stark utilitarian environments that cannot be resolved through the introduction of a piece of sculpture or a mural. The definition of art in public places should be a broad one, encompassing not only sculpture and painting but also encompassing special architectural and landscape treatment.

3. Public facilities should be evaluated both for their effect upon the user and for their effect upon people who live or work nearby. Design review should be concerned not only with the facility itself but also with its visual impact upon the area in which it is located.

I repeat my wholehearted support for the proposal to encourage better design and to introduce art in transportation projects."

William Ronan, Chairman of the Port Authority of New York and New Jersey:

"We at the Port Authority concur in the recognized need to establish the goals delineated in the Policy Statement and we urge the Task Force to identify and recommend practical procedures for their implementation and accomplishment.

There can be little argument with the Policy's affirmation that the public sector's ever-enlarging fiscal and operation roles in transportation development should be accompanied by the Department's expanding commitment to excellence in the design, art and architecture of Federally-funded transportation projects.

The Port Authority's long-term inclusion of these criteria in our own transportation programs convinces us that improvement of design - together with the aesthetic enhancement of artistic and architectural elements - is only possible with strong and clear policy-level executive concern. Thus, we note with approval both the broad-gauged nature of the present Task Force and the provocative proposal for the National Advisory Board on Design, Art and Architecture in Transportation.

Our activities of originally constructing, frequently enlarging and continually modifying the Port Authority's transportation facilities include the basic assumptions that good design does not necessarily cost more than bad (and frequently costs less), that good taste need not be unduly expensive, and that signage and hardware should be informative and useful but not intrusive.

A considerable segment of institutional involvement with transportation - by us and others, too - is rehabilitating and modernizing in-use facilities. We believe that the Advisory Board's guidance in requiring consideration of design, artistic and architectural factors should emphasize appropriate "re-cycling" of existing structures, retaining attractive and useful characteristics. ..."

W. R. Eaton, General Manager, Southeastern Pennsylvania  
Transportation Authority:

"... 'a Nation's public works reflect the strength and depth of its cultural heritage.'"

We heartily agree with that observation made in "A Policy Statement on the Use of Design, Art and Architecture in Transportation Systems", appearing in the January 25, 1977 Federal Register. And in this spirit, we applaud the efforts of U. S. DOT to encourage the use of art and good design in federally funded transportation projects.

The policy statement goes on to say that " ... good design is an integral part of responsible planning for safe, efficient, and economical transportation systems." To that we would like to add that good design is also an integral part of the construction and management of such systems. The decisions and policies of operating management affect the quality and unity of design. ..."

Alan F. Kiepper, General Manager, Metropolitan Atlanta Rapid  
Transit Authority:

"To improve design and stimulate better architecture:

1. Include the architect in the planning process earlier.
2. Recognize that architectural appearance will be one of the chief standards by which patrons and the media will judge the completed system.
3. Give architectural matters equal - fair - comparable - consideration when in conflict with engineering.
4. Structure the selection process for architects to raise the competence of those selected.
5. Develop complete criteria before design begins.
6. Include the Transit Authority in more active participation in the design process.
7. Devise design contracting procedures that do not set up artificial constraints to design creativity.

How should the program be justified and "sold"?

1. The cost of any transportation system is so large that it has to serve more than one purpose - transit; it has to somehow also enrich the lives of those who come in contact with it.
2. Transportation systems are built for human beings. The humane quality of any highly mechanical system is multiplied and enriched by sensitive design, art, and architecture.
3. Give wide exposure to what has been and can be done. European and Canadian systems seem to have set a fast pace to follow in some cases. Perhaps not all of it is of the highest quality, but the spirit of including art is admirable.
4. In many cases, the art can be a very functional, necessary part of the design - not an added "frill". And the cost of this kind of art can be negligible in the total cost of transit construction. In a system such as ours, of great architectural diversity, we will have both functional and decorative types of art - and it's probably good for a system to have both."

Sayde Sklar, President and Mary Ann Mears, Legislative Chairman,  
Maryland Chapter Artists Equity Association:

" ... in order for the integration for the art in architecture to be successful, it is essential that artists be selected for commissions and begin working with architects while the facilities being built or renovated are still in the initial design stage."

Sam Robertson Little, Private citizen:

"You, the former Secretary and the Department are to be commended for providing a chance for public discussion on an issue of such importance and potential controversy.

The Policy Statement points out far more basic problems about the quality of today's transportation and how it is planned than it resolves. On the other hand, it hints at ways in which new approaches to transportation planning could provide major practical benefits in social, economic, environmental, and energy terms.

We need to rethink transportation and its role in everyday life. It must be considered, planned, and designed as a total environmental experience for the traveler and the community. This will require a better understanding of public needs and expectations, re-analysis of opportunities and constraints within existing systems for improvements, and revitalized concepts of what transportation could be. It will also require the manpower and methods to re-establish the importance of human qualitative factors in the traditional transportation planning and decision-making process.

Although these steps will be a major undertaking they should not be considered optional. As with all major activities, the future of transportation and the planner's latitude to improve it depends upon public attitudes. And for such a major part of everyday life it is astonishing how little people like transportation. Original feelings of excitement and adventure have given way to feelings of boredom, annoyance, and, in many cases, outright fear. This is evidenced in increasing opposition to projects, vandalism, failure of bonds, and general skepticism about plans. While difficult to quantify, this can be more easily seen in the change of transportation's cultural symbolism; the film "orient Express" is replaced by highjackings on the news. The irony is that while today's transportation may be safer, cheaper and more convenient than ever, it does not feel that way.

The failure of public confidence and support becomes critical when combined with other major national problems. Energy and environmental needs call for increasing future use of types of transportation with minimum fuel consumption and air quality impacts. To change travel habits these alternatives will need to be equally attractive to modes now used by the public. Without a major increase in their quality as traveling environments, people will need to be forced into hated means of travel. That is an ominous scenario.

On the other hand, thinking of transportation as a total travel environment could have enormous benefits. If people's needs were considered as prime planning and design determinants rather than as "amenities" and "add ons" to basic costs, then transportation could become a positive and attractive element in public life.

The advent of transportation designed primarily for people should re-establish public confidence and support for the transportation establishment, giving it the necessary credibility and latitude to reshape travel habits. While designing and planning for such added qualitative criteria would entail added costs and efforts, it would ultimately result in natural and significant shifts in travel habits with fundamental energy savings and environmental benefits. It should also be noted that a new quality of transportation may not only have long term gains, it might also result in direct dollar savings."

The approach to response identification employed here fails to show the intensity of a response. Although comments were highly favorable, the implementation of the matters considered here could generate a high level of support or opposition from groups with relatively few comments pursuant to the Docket, because of insufficient publicity at the present time and the ambiguity of such a general notice. Attitudes tend to be revealed when impacts are perceived to be immediate and direct. Even respondents to the docket failed to address the specific points in the notice, i.e., 49% - 70% of respondents ignored each item.

The relatively large number of responses by art associations and professionals and professional associations is to be expected because of their interest in art, design, and aesthetics and their potential work opportunities resulting from increased spending on the visual aspects of transportation projects. Comments by State agencies and private citizens seemed to be prompted by two considerations that may be at odds with each other: (1) avoiding increased spending of tax money and limited fiscal resources and (2) visual enhancement for the user of a transportation system possibly to promote pride and identification with the system.

The somewhat low number of responses by transit authorities, the transportation industry, and the media is enigmatic given the possible ramifications of this subject: higher costs, diversion of a portion of financial resources, and additional Federal regulations. The lack of media response is also surprising because of the trade-off between expected public benefits and higher costs. The silence of the media could be construed as indicative of the relative lack of importance of this topic compared to other societal issues. Conversely, the paucity of responses of some groups could be attributed simply to lack of knowledge of the notice in the Federal Register.

Only a few responses were coded as wholly negative toward the overall idea expressed in the Docket. Two of these are worth examining further because they exemplify the basic concerns less emphatically expressed in some of the other responses. The two responses are from major transportation organizations: the Department of Transportation of a major State, and a major modal trade association. The third was submitted by a professor of landscape architecture from a State university. His concern was more with the relative role of architects and artists vis-a-vis those disciplines he thought more appropriately related to transport design matters, than it was with disagreement on the ideas in the Register.

The prime concerns expressed in the two negative letters and echoed in some of the letters identified as positive are:

- o Lack of funds presently for basic projects, i.e. construction and maintenance.
- o Concern for Federal regulation and paperwork.
- o Across-the-board programs for problems that exist in individual cases limited in frequency of occurrence and scope.

Regarding lack of funding, the State DOT response comments:

"Many States are currently cutting back their construction programs because of severe financial constraints that have developed over the last few years."...

"It does not seem appropriate to be considering the expenditure of highway funds for nonfunctional purposes."

The association adds the following more specific comment:

"With respect to Federal participation in the extra costs for 'aesthetic design' there are no specifics as to the source of the funds. ATA opposes the use of highway user taxes to any 'extra costs' for this purpose, beyond the normal cost responsible designers incur as they develop and advance the project."

It should be noted that both organizations are commenting with respect to the unique funding structure and funding scarcity of the Highway Trust Fund.

A positive suggestion made by the State DOT seeks a focused program limited to specific projects with funds and paperwork requirements limited to those projects.

"As the goals outlined in this Policy have considerable merit when viewed with the constraints discussed above, we would suggest that such a program be instituted to a limited degree on a voluntary basis. We would suggest that the Federal Highway Administration and the Department of Transportation initiate special cultural considerations on large or unique projects. Federal participation should be available. The encouragement of a national policy and the availability of Federal-aid should be sufficient incentive

to those States that feel they have the financial resources available to include full consideration of cultural and visual designs. Documentation should be required only where the States initiate a request for funding of these special design considerations."

Dwelling at too great a length on the negative responses is perhaps unfair to the 125 responses that were not only positive but congratulatory, appreciative of the Federal recognition of the importance of design in transportation, and expressive of support including offers to assist the work as called upon.

With the exception of those concerned about the specific situation with the Highway Trust Fund, the body of comments we have received can be characterized as supportive and positive regarding the goals espoused in the policy statement (the negative responses also supported the goals) but wary of the methods that might be employed including:

- o New layers of project screening
- o Additional regulations
- o Dilution of available funds
- o Remote and unresponsive design decision making.

The comments regarding specific issues should be considered with these factors in mind.

Response to Item 1: National Advisory Board

Comments were solicited on the creation of a National Advisory Board on Design, Art, and Architecture in Transportation. The tabulation of responses appears below:

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Table 3

Responses to Creation of a National Advisory Board  
on Design, Art, and Architecture in Transportation

<u>Favorable</u>	<u>Favorable w/Artists Participation</u>	<u>Opposition</u>	<u>Total Response</u>	<u>Failure to Respond</u>	<u>Total</u>
49	14	10	73	71	144

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Clearly, respondents who addressed the question were very much in favor of establishing a National Advisory Board. Two-thirds favored the board; approximately ninety percent responded affirmatively when responses stating the importance of placing an artist on the board were included.

List 1 below contains the names of organizations, groups and individuals who have volunteered to work in some capacity with a National Advisory Board. The Arts Equity Association stated its willingness to recommend professional artists for positions on the board and to lend its expertise based on its experience with establishing a designated percentage of public funds for art in public buildings in a number of cities. Ten respondents suggested that the board be coordinated with the National

LIST 1

Volunteers to Work With or Participate on the Board

1. Advisory Council on Historic Preservation
2. Arts Equity Association
  - National
  - Los Angeles Chapter
3. National Assembly of Community Arts Agencies
4. National Trust for Historic Preservation
5. Architectural Heritage Association
6. American Society of Landscape Architects
7. American Institute of Architects
8. Industrial Designers Society of America
9. American Institute of Planners
10. American Society of Civil Engineers
  - North Carolina Chapter
11. Opera America
12. Poetry on the Buses
13. Virginia Historic Landmarks Commission
14. Department of Communications Design
  - Rochester Institute of Technology
15. Kevin Lynch, Professor of City Design, MIT
16. Peter Selz, Professor of Art History, University of California, Berkeley

Endowment for the Arts' Architectural and Environmental Arts Program under the Federal Design Improvement Program. Several groups pointed out the importance of public as well as private representation on the board.

The role of a National Advisory Board was discussed in a number of letters. Some excerpts follow:

American Society of Civil Engineers: "... should be confined primarily to the discovery or preparation and publication of exemplary projects."

Chicago Public Works Commission: "active intervention" and "advocate good design"

Industrial Designers Society of America: "...selection of policy making design panels" to ensure a "total design approach for an entire system"

Buckeye Basin Management Team: "...should ensure the participation of qualified personnel in the project... Regulatory agencies should have staff professionals to review projects and to provide professional assistance."

Skidmore, Owings and Merrill: "The crucial issue here is the mandate given the board. A board composed of well-known architects, designers, artists, and cultural leaders undoubtedly could give the Department invaluable advice and counsel, particularly if it were charged with examining and correcting the statutory, procedural and financial regulations in existing Federal programs which may inadvertently constitute major obstacles to good design. However, if the board were established to review plans and designs for transportation facilities, we would recommend against it. Design reviews already are well established aspects of both local development regulations and State and Federal projects, and we do not believe the proposed National Advisory Board should play this type of role."

The Skidmore, Owings, and Merrill comment reflects the concern expressed in a number of letters that the Department's interest in improving art and design in transportation systems should not result in redundancy of

existing processes and requirements. Similarly, the American Trucking Association opposes the creation of an advisory board because, "It would simply multiply the bureaucracy, red tape, delay, and costs if imposed as another level of required review in the process of developing and advancing transportation projects."

Minnesota Automotive, Inc., doubted the need for another board, in general, and this board, in particular. The respondent was interested in the cost of preparing the task force report.

The overall response to the establishment of a National Advisory Board on Design, Art, and Architecture in Transportation is highly favorable. Respondents believe that the appropriate composition of the board would include professional artists and designers as well as private and public interests. Over a dozen affiliations have offered to participate on the board or to support its operation. Coordination with the National Endowment for the Arts is deemed advisable. The proper function of the board is a matter of disagreement. Some respondents view the board as a high level policy making body. Others expect the board to provide technical assistance and become involved in specific projects. Whatever the scope of the advisory board were to be, the general consensus seems to be that the promulgation of additional regulations, red tape, and procedures must be avoided.

Response to Item 2: DOT Formula Funding

A wide spectrum of response was received regarding the question of formula eligibility of DOT assistance for funding. The question of whether funding for improved design should be embedded in existing programs or separated out as a categorical element to be funded at a given percentage of project cost has both philosophical and practical overtones. The overall response to item 2 was as follows:

Positive	Negative	No Response	Total
47	10	87	144

Most of those submissions not responding to this question were brief supportive letters or telegrams that did not address any of the issues raised specifically.

The key question of item 2 to which respondents referred was the question of creating a fixed formula categorical fund for improved design in transportation. Other elements of the issue such as the distinction between funding renovations as well as new facilities were not touched upon significantly.

The thrust of the views provided overwhelming support for a fixed percentage of funds to be assignable to design. Many instances of

experience with percentage formulas were mentioned e.g., G.S.A., Seattle, Philadelphia, California and Hawaii. Several suggestions of percentages, varying around 1% were received as well as suggestions for absolute dollar cut-off levels on the projects and on the percentage fund for design.

Most of those supporting a percentage arrangement cited the view that it was the only way to assure funds would not be diverted elsewhere or lost in the competition among many demands on insufficient funds.

One Highway Agency stated it this way:

"If we in this state are to respond to this type of encouragement, what we need is increased funding, not simply increased opportunity to use the same funds for other purposes."

Also there is a view that a categorical fund would insulate local officials from charges of extravagance if funds were not combined.

Dissenting views emphasized the point that percentage funds tend to become the maximum limit on expenditures effectively precluding voluntary additional expenditures; and that a separate fund would compartmentalize design and not achieve the desired integration of design thinking at an early state of development.

Response to Item 3: Annual Awards Program

Commentary on the question regarding annual awards programs were quite favorable. There seems to be little in the way of an emotion-charged issue either way in the responses. The overall response follows:

Positive	Negative	No Response	Total
43	7	94	144

Several State DOT's or Highway Departments participating in the existing program made suggestions for improvement such as a regional awards approach, and in reduced emphasis on the photographic impact of a project. It was suggested that greater emphasis should be placed in awards on achieving project design goals successfully and harmoniously.

Response to Item 4: Regulations

Less than a third of all respondents specifically made comments regarding the promulgation of regulations. Of those who responded, 75% were favorable to the idea. However, throughout many others, positive, negative and those to which a no-response code was attributed, a general fear of "red-tape", heavy-handed Federal intervention was evinced.

Table 4 expresses the actual response count:

Table 4

Positive	Negative	No Response	Total
33	13	98	144

Among the kinds of negative views expressed were:

"I am opposed to Federal regulation where local action obtains the same objective."

Several State planning agencies expressed similar concern, particularly with regulations designed to provide assurances of "due consideration" and to adding one more layer to the screening process on new projects.

Of the thirteen negative responses, nine were from State DOT's or Highway agencies.

The pejorative tone of "regulations" seems to figure strongly in the responses particularly among those with implementation responsibility.

Those who favored item 4 tended to use terms like "guidelines." One supporting response referred to the need for a "manual of Design Standards".

Several respondents make reference to the existing NEPA legislation as being an effective base for regulation. One response stated:  
"Much of what is needed already lies in the regulations implementing NEPA of 1968 and we feel it would be more fruitful to eliminate procedures which inhibit the process instead of adding new ones to it."

Response to Item 5: Matching Grants

The last item cited specifically in the notice was the establishment of a matching grant program in which Federal dollars and equal contributions from individuals, neighborhood organizations, or businesses would be spent on aesthetic enhancement of transportation systems. Respondents overwhelmingly favored this program with the ratio of support to opposition four to one.

Table 5

Matching one-to-one Grants

<u>Positive - Negative</u>		<u>No Responses</u>	<u>Total</u>
32	8	101	144

Some of the comments were very similar to the ones recorded for item two above; they contained examples of local matching programs. Some respondents, such as the Chicago Commissioner of Public Works, contend that a matching percentage for aesthetic purposes should be mandatory for large scale projects with an upper limit on expenditures for art and design.

The Arts Council of Greater New Orleans stated the importance of local participation and suggested that the local groups should assume the responsibility to initiate the funding process.

The National Trust for Historic Preservation recommended that participation in a matching program be expanded to include local governments.

The American Society of Civil Engineers National Transportation Policy Committee commented that EPA permits the expenditure of two percent of the cost of a project for art. The committee also expressed concern that a designated percentage of expenditures for art with a one-to-one match could be a disincentive for programs in which the Federal share exceeds one half. Therefore, it concluded, "A 90% or better, 100% Federal program to cover art for say 1-2% gross construction costs would be a true incentive for promoting excellence in transportation design."

Clearly, there is some confusion here between the matching formula in most existing programs which consist of Federal and local and/or State government shares and the program proposed here which consists of Federal funding with private matched funds from sources such as businesses, neighborhood organizations, and individuals. Similarly, some misinterpreted this item to mean that local government contributions would be matched, but State expenditures would not generate Federal support. However, to reiterate, the intent of this item is to develop a Federal grant-in-aid program that stimulates private interest in the aesthetics of a transportation system and it is not intended to reward local governments nor to increase their costs.



UNITED STATES GOVERNMENT

DEPARTMENT OF TRANSPORTATION

OFFICE OF THE SECRETARY

*Memorandum*

DATE: MAY 3

In reply  
refer to:SUBJECT: Design, Art and Architecture  
in Transportation SystemsFROM : Assistant General Counsel for  
Operations and Legal Counsel

TO : Chief, Facilities Management Division

You have asked whether the Department of Transportation has the authority to spend appropriated funds for the acquisition of aesthetic design and art work to be included in the construction or the renovation of public transportation facilities. We have concluded that, for the most part, the Department is not prohibited from expending funds in this manner.

Procurement:

Generally, in appropriating funds for procurement programs, a statute defines the purpose for which these funds are to be used, but gives the implementing agency some discretion in determining how to spend the funds. It is a settled rule that, where an appropriation is made for the procurement of a particular object, by implication it confers authority to incur expenses which are necessary or incident to the proper execution of the object unless there is another appropriation which makes more specific provision for such expenditures or unless they are prohibited by law. 50 Comp. Gen. 534; 38 Comp. Gen. 785; 29 Comp. Gen. 419.

This general principle gives procurement program administrators substantial leeway in determining the permissible scope of expenditures. For example, funds appropriated to the Treasury Department would be available for payments to the Musak Company for tapes of incentive music upon a determination by the Commissioner that based on factors such as the improvement of employee morale, increased employee productivity and resulting savings to the Government, the proposed expenditure constituted a "necessary expense" of the Department under its appropriation. 51 Comp. Gen. 797.

GSA has operated under the above requirements in authorizing the purchase of art work for buildings. It would seem legally defensible for DOT to follow GSA's lead in this area. Thus, DOT would seem to be able to include the cost of art work and aesthetic design in procurement **appropriations**.

Grants-in-Aid:

To be allowable under a grant program, as with a procurement project, costs must be necessary and reasonable for the proper and efficient administration of the grant program, and must not be proscribed by law. Again, this general

principle has been interpreted to give the grant administrator substantial discretion in determining the permissible scope of expenditures, subject to the Administrative Procedure Act's general proscription of arbitrary or capricious actions, abuses of discretion, or acts in contravention of the law.

Specifically, to determine the extent of the Department's authority, it is necessary to look to the various substantive authorization acts enabling the operating administrations to provide grants and procure items, to see if there are prohibitions on the expenditure of funds for art works and aesthetic design. If there are not such prohibitions, the funding of art work and aesthetic design could reasonably be considered "necessary or incident" to transportation construction and renovation. This memorandum therefore examines the primary statutory authority given to the Coast Guard, the FAA, the FHWA, the FRA, and the UMTA.

#### Coast Guard

The Coast Guard participates in the construction and alteration of bridges over navigable waters. In approving and/or funding such work, it does not seem to be able to mandate the use of aesthetic design or art work.

33 U.S.C. §§ 511 et seq. provides for the participation of the Coast Guard in the alteration of bridges over navigable waters. If a bridge must be altered because it unreasonably obstructs the free navigation of any navigable waters, the bridge owner shall pay those costs attributable to direct and special benefits to the owner as a result of the alteration. The Federal government must pay the balance of the costs. The legislative history indicates that betterments, i.e., desirable items which have no counterpart in the old bridge or are of higher quality than similar items in the old bridge, must be borne by the owner and not the Federal government. The Federal government could not, therefore, provide funds for the improvement in design for aesthetic purposes, unless this design also directly improved navigation.

33 U.S.C. §§ 525 et seq. relates to the construction of new bridges. Under its provisions, before a bridge can be built over navigable waters, the Coast Guard must approve the location of the bridge. Again, however, the Coast Guard is limited in its discretion. It can impose specific conditions that must be met before a bridge construction permit will issue, but these conditions are limited to those which it deems to be necessary to the interest of public navigation. Again, the Coast Guard cannot impose conditions unrelated to navigation. Thus, it would seem that it could not under this section mandate conditions relating to aesthetic design which do not also directly relate to improved navigation.

Of course, an environmental impact statement is filed before a bridge is constructed or altered under the above provisions. The NEPA may provide an alternative route for imposing aesthetic design requirements.

## Design, Art and Architecture

### FAA

The Airport and Airway Development Act of 1970, 49 U.S.C. § 1720 (1970), as amended by Public Law No. 94-353, § 12, 90 Stat. 879 (1976), provides grants for terminal development. A terminal is eligible for 50% federal funding subject to four restrictions:

1. The terminal must be located at an airport serving scheduled and supplemental airlines (air carrier airports);
2. The airport must meet all safety and security equipment requirements;
3. The airport has provided for terminal area access to passengers using general aviation aircraft; and
4. The development grants are limited to nonrevenue producing public use areas of airport terminals which are directly related to the movement of passengers and baggage.

If these restrictions are met, the Secretary has discretion to approve terminal development expenditures.

Once it is determined that a terminal is eligible, the only limitations on expenditures deal with the amount of overall funding. Only funds apportioned on the basis of enplaned passengers are available, and only 60% of these funds can be expended in any one year. But for these limits, all terminal development programs, subject, of course, to limitations of reasonableness, are eligible for federal grants. Thus, it would seem that the Secretary has the authority to fund the acquisition of art work and aesthetic design for many airport terminals.

Funding for the development of other areas of the airport is subject to different limitations. Federal funding on a 75% - 90% share is available for airport development costs, if reasonable and necessary. Construction of public automobile parking facilities and construction or modification of airport buildings except such of those buildings or parts intended to house facilities or activities directly related to the safety of persons at the airport are not eligible.

Consequently, it would be more difficult to fund the acquisition of art work and aesthetic design in airport areas outside the terminal. In these areas, funded projects would primarily have to serve a functional, safety-related goal, and the costs would have to be necessary and reasonable to implement this goal.

### FHWA

23 U.S.C. § 319 authorizes the Secretary to approve as part of the construction of federal-aid highways the costs of landscaping and roadside development for scenic enhancement. The inclusion of this section in the Federal Highway Act indicates a Congressional attitude that scenic enhancement is a reasonable and necessary aspect of highway planning and construction. Given the language and goal of this section, there should not be an impediment to

## Design, Art and Architecture

funding art or aesthetic design on highway right-of-ways.

### FRA

The Department of Transportation Act, 49 U.S.C. § 1653 (i), requires the Secretary to provide financial, technical, and advisory assistance, among other things, 1) to acquire and utilize space in historic or architecturally significant buildings, after consultation with the National Endowment for the Arts and the Advisory Council on Historic Preservation; and 2) to stimulate state and local governments, regional transportation authorities, common carriers, philanthropic organizations, and others to develop plans for the conversion of railroad passenger terminals into intermodal transportation terminals and civic and cultural activity centers. Civic and cultural activities include, but are not limited to, musical and dramatic presentations and art exhibitions. The federal share is limited to 60% of the costs of implementing such use.

This section provides a structure under which art work and aesthetic design can be maintained and promoted in railroad stations. Although the statutory language does not necessarily provide for the acquisition of art work or the creation of new architecture, it does provide for alternative programs, including the stimulation of local entities to make their railroad stations more aesthetically pleasing. Moreover, the Department seems to have discretion to fund art work and aesthetic design in the renovation of acquired station space.

Sections 505 and 703 of the Railroad Revitalization and Regulatory Reform Act of 1976, 45 U.S.C. §§ 825, 853, also provide for grant funding for the improvement of railroad stations. These sections provide different, and in some ways more stringent, requirements on the expenditure of funds for such projects.

Section 505, id. § 825, permits federal funding of railroad facility rehabilitation and improvement if in the public interest. In deciding to provide such funds, the Secretary must consider, among other things, whether the public is interested in supplementing such financing, and whether the public benefits to be realized from the project, in relation to the public costs, justify such an expenditure. In deciding which projects to fund, the Secretary must give the highest priority to those which will fund safety improvements. The Secretary must give the next highest priority to those projects which will enhance essential freight services.

Under this priority arrangement, it is quite likely that there will be little money left to finance the beautification of railroad stations.

Section 703, id. § 853, provides for funding of railroad facilities in the Northeast Corridor. This section permits funding the improvement of non-operational portions of stations used in intercity rail passenger service. The government is authorized to provide 50% of the cost of such improvement, except that it can provide 100% of any safety-related improvement. There are no other explicit restrictions.

Under this section the Secretary seems to be allowed more leeway in funding aesthetic aspects of station improvements. The funding of art work and

Design, Art and Architecture

aesthetic design would seem permissible as long as reasonably related to improvement of nonoperational portions of railroad stations.

UMTA

The Urban Mass Transportation Act of 1964, 49 U.S.C. §§ 1602 (a), 1604, as amended, permits the Secretary to fund on a discretionary basis urban mass transit construction projects, including design costs. The Federal government can provide grants for 80% of the net project cost.

This assistance is subject to two limitations relevant to the purposes of this memorandum. First, the facilities and equipment for which federal assistance is sought must be needed to carry out a coordinated transportation system as part of a comprehensively planned development of an urban area. Second, the facilities and equipment must be necessary for the "sound, economic, and desirable development" of the area. Id. § 1604 (1).

This statutory structure and language arguably permit the funding of art work and aesthetic design. The specific inclusion of design costs in the list of allowable construction costs could demonstrate that design, as distinct from engineering, is a relevant and important aspect of construction. More importantly, the choice of the term "desirable" in the statutory discussion of what constitutes appropriate development indicates a Congressional desire for aesthetic, as well as functionally efficient, transit development. As such, the acquisition of art work and/or aesthetic design may well be considered a necessary aspect of urban mass transit construction.

In sum, the above discussion has attempted a broad-based evaluation of the Task Force's goals in light of existing statutory requirements. Please be advised that any specific recommendations should be examined by the General Counsel's office for an in-depth analysis.

  
William J. Driscoll





APPENDIX F  
EXECUTIVE OFFICE OF THE PRESIDENT  
OFFICE OF MANAGEMENT AND BUDGET  
WASHINGTON, D.C. 20503

June 17, 1977

TO THE HEADS OF EXECUTIVE DEPARTMENTS AND ESTABLISHMENTS


SUBJECT: Federal Graphics Improvement

As one part of your overall effort to achieve greater efficiency and effectiveness in the operations of your agencies, you should include a review of the design and composition of forms, reports, brochures, and other publications. It is often possible to realize significant cost savings and at the same time improve the effectiveness of the publications in achieving their purposes, simply by applying better design principles.

Attention to good graphics design is especially relevant when new agencies or units are created by reorganization efforts. A great deal of uncoordinated development tends to take place, resulting in the adoption of conflicting and inefficient graphics requirements.

The National Endowment for the Arts, through its Federal Graphics Improvement Program, can provide an evaluation of a department's or agency's publications portfolio, and can often supply some continuing consultation as well; these services usually entail no direct cost to the agency. A number of departments and agencies have already achieved substantial savings with the help of this program.

Waste and inefficiency in Federal operations is the result of many factors, many of which may seem relatively insignificant by themselves. Your constant attention to improvement in all details of your department's or agency's operations is needed to achieve the President's goals of efficient government and a balanced budget.

  
Bert Lance  
Director



