

Environmental Impact Statement for Detroit People Mover

STEVE BEARD AND THOMAS RUSHFELDT

Since 1968 studies in southeastern Michigan have addressed the feasibility of an automated people mover to serve the Detroit central business district (CBD). The two goals of such a system have been to facilitate travel and to improve the economic functioning of the CBD. In September 1978, preliminary engineering of the Detroit people mover began under a federal demonstration program. The draft environmental impact statement (EIS) was circulated in March 1980, and the final EIS followed in December 1980. Construction of the 3-mile, elevated, single-lane loop alignment around the Detroit CBD was proposed to begin in the spring of 1983; revenue service was scheduled to begin in 1985. The major environmental issues were both procedural and technical. A significant procedural issue was the desire to make the final EIS an all-purpose environmental document that satisfied all the state and federal environmental requirements. Waiting for clearance by Section 106 of the Historic Preservation Act and Section 4(f) of the Department of Transportation Act of 1966 delayed publication of the final EIS but facilitated the overall completion of environmental requirements. The key technical issue was the integration of an elevated guideway into a CBD containing numerous historic buildings and districts. Coordination with the State Historic Preservation Office was essential to developing an acceptable system. It was eventually possible to finalize plans for a system that would have an adverse effect on only three historic sites.

Since 1968 studies in southeastern Michigan have addressed the feasibility of an automated people mover to serve the Detroit central business district (CBD). The two goals of such a system have been to facilitate travel and to improve the economic functioning of the CBD. In August 1982, the Southeastern Michigan Transportation Authority (SEMTA), the project sponsor, notified the system supplier, the Urban Transportation Development Corporation (UTDC), to proceed. Final design is now under way; construction activities were to begin in the spring of 1983. Revenue service is scheduled for December 1985. The purpose of this paper is to present an overview of the planning and development of the system, emphasizing the environmental process.

PLANNING HISTORY

The planning history of the downtown people mover (DPM) can be divided into three periods: 1968 to 1978, 1978 through completion of the preliminary engineering, and after preliminary engineering. The first period was characterized by local and state planning efforts. Preliminary engineering work under a federal demonstration program began in 1978. Efforts after the completion of the preliminary engineering involved selecting a system supplier, securing federal and local funding, and initiating final design and construction.

First Period (1968 to 1978)

Although planning efforts had been undertaken as early as 1968, it was 1972 when SEMTA assumed responsibility for regional transit planning, including development of a DPM for Detroit. Planning for the DPM was initiated in November 1973 with a feasibility study sponsored by the Michigan Department of Transportation as part of the state's New Transportation Technology Demonstration Program. This study established a basic project plan for the Detroit DPM.

In May 1974, the Detroit DPM proposal was one of four selected by the state for more detailed study. This study culminated in June 1975 with the publica-

tion of several major documents, including an engineering report, preliminary systems specifications, and a draft environmental impact assessment report. The impact assessment was the first report to document the potential environmental effects of a DPM in the Detroit CBD, and it was used as the starting point for later environmental analyses.

In 1975, an automated guideway transit program for socioeconomic research was approved by Congress and initiated by UMTA. In April 1976, UMTA announced the establishment of a DPM demonstration program. To investigate their feasibility, DPMs were to be built in a number of cities. In December 1976, four cities were approved as demonstration cities for this program. Detroit's proposal, which was developed from the earlier work, was not selected by UMTA as one of the first demonstration projects, but SEMTA was told that it could proceed with the Detroit DPM provided that the following stipulations were met:

1. The system would form a part of the total regional transit improvements being developed by an ongoing transit-alternatives analysis,
2. The DPM would be funded from UMTA's previous commitment to Detroit for \$600,000,000 in transit development funding, and
3. The funding project would be conducted in accordance with UMTA's DPM demonstration guidelines.

Second Period

UMTA approved funding for the preliminary engineering of the Detroit DPM, and work began in September 1978. The preliminary engineering program included engineering feasibility, travel demand modeling, economic analysis, and preparation of an environmental impact statement (EIS). The draft EIS was prepared and circulation began in March 1980. The final EIS was prepared to address the comments raised during circulation of the draft EIS and at the public hearing on the project. The final EIS was circulated on December 3, 1980.

Third Period

In the spring of 1981, the SEMTA board selected UTDC as the DPM system supplier. A contract between SEMTA and UTDC was signed April 23, 1982. A notice to proceed was issued in August 1982, and the work is currently under way. Construction of the fixed facilities should begin early in the spring of 1983, and the start-up of revenue service is planned for December 1985.

SYSTEM DESCRIPTION

The Detroit DPM as described in the EIS will be a single-lane, elevated-loop alignment 2.94 miles long. The system will have 13 elevated stations. The route follows existing city streets in circumscribing an area within the CBD of approximately 0.3 mile². The guideway will be constructed primarily within the street right-of-way, in the curb lanes, or on existing street medians. It will be elevated throughout its entire length. The average travel

speed for the automated vehicles, including stops, will be 12.6 mph. The entire loop will be traveled in approximately 14 min.

Of the 13 stations, 8 are planned to be free standing; the remaining 5 will be integrated into existing developments (Renaissance Center and Cobo Hall) or will be designed as an integral part of new developments (Cadillac Square, Millender Center, Joe Louis Arena). It is planned that two of the stations (Grand Circus Park and Renaissance Center) will connect directly to stations of the proposed regional light rail transit system. The total (escalated) cost of the DPM system is estimated to be \$135 million.

ENVIRONMENTAL PROCESS OVERVIEW

The environmental analysis, including the preparation of the draft EIS and the final EIS, was undertaken under the framework of state and federal regulations. The city of Detroit had no comprehensive environmental review regulations, but the state of Michigan was actively involved in the environmental review through its agency, the Michigan Environmental Review Board. The environmental review process was structured by federal laws and regulations. The project was also subject to the dictates of the DPM demonstration program as well as the various federal environmental protection laws and regulations.

UMTA Demonstration Program Requirements

SEMTA was required to follow UMTA's federal DPM demonstration guidelines during the preliminary engineering phase of the project. The most significant of these guidelines required that the DPM cities develop performance specifications that would allow a number of different suppliers to compete for the system contract. To accomplish this, preliminary engineering was conducted for a generic design that accommodated the features of most of the currently available DPM systems. The technologies that were accommodated in the design ranged from bottom-supported vehicles to vehicles suspended from overhead; from vehicles with air-cushion suspension to rubber-tire suspension to steel-wheel on steel-rail suspension; and from vehicles with capacities of 20 to those that carried 130 passengers. This wide range of possible technologies and guideway configurations caused difficulties in precisely defining potential impacts. The system description of the DPM alternatives contained a discussion of the range of vehicle and guideway technologies and included many illustrations.

Michigan Environmental Review Board Requirements

In 1974 the governor of Michigan adopted a program of comprehensive review of the potential environmental impacts for all major projects in the state. The executive order created the Michigan Environmental Review Board (MERB). The membership of MERB is drawn from state agencies and from the private sector through appointments by the governor. MERB has a full-time executive director and has promulgated regulations requiring the preparation of environmental assessment reports for major projects within the state. The regulations closely follow the requirements of the National Environmental Policy Act (NEPA) and apply to local as well as federally funded projects. MERB has the power to review the environmental documents, request additional information if necessary, and ultimately report to the governor on the environmental consequences or merits of the projects under review.

For the DPM, MERB requirements resulted in another layer of regulations and another agency to meet with for approval of outlines, study plans, draft EIS, and final EIS. All formal submissions of documentation to UMTA were also supplied to MERB. MERB regulations did, however, provide for circulation of a single document to satisfy both state and federal requirements, provided that all state concerns were adequately addressed.

UMTA and Other Federal Requirements

The main requirements that guided the preparation of the environmental analysis of the DPM were the federal environmental regulations. These included

1. NEPA,
2. The regulations of the Council on Environmental Quality,
3. U.S. Department of Transportation (DOT) regulations, and
4. UMTA regulations and guidelines.

These legal and administrative provisions dictated that an EIS was required for the DPM project and specified the timing, organization, content, and processing of the documentation. Because the DPM will have impacts on cultural resources, the provisions of Section 106 of the Historic Preservation Act and Section 4(f) of the Department of Transportation Act of 1966 had to be considered. Both sections deal with additional documentation and processing requirements for projects affecting cultural resources, in this case, historic properties in the CBD.

In summary, it was necessary to complete an environmental document that met the requirements of the DPM demonstration program guidelines, the federal environmental regulations, and requirements promulgated to ensure the state a prominent role in environmental review. The expected impacts on cultural resources triggered parallel processes involving the U.S. Department of Interior (Section 106) and the Secretary of Transportation [Section 4(f)].

MAJOR ENVIRONMENTAL ISSUES

The EIS for the DPM was somewhat unique in that it dealt with the expected impacts of a generically defined technology operating in a densely urban setting where no such system had ever operated. The DPM program was a demonstration program to test the impacts of automated transit operations in a CBD. The program included provisions for a before-and-after study of operations of the DPM to determine precisely what impacts had occurred. The EIS, however, had to present the expected impacts with little empirical back-up data from operating systems. The DPM technology was defined only in general terms at the time of preparation of the EIS. In some cases this lack of specificity made it difficult to be precise in defining the impacts of the system. Each candidate DPM technology had its own noise, energy, and guideway specifications.

The issues that were selected for emphasis in the EIS were

1. Traffic and circulation,
2. Economics,
3. Noise,
4. Visual issues, and
5. Cultural resources.

The projected impacts of the DPM in each of these areas are summarized in the remainder of this section.

Traffic and Circulation

The DPM was conceived as a means to improve circulation in the CBD and to help alleviate traffic problems. It was estimated that the DPM would have a generally positive, but not overwhelming, impact on existing transportation systems. The capability of the downtown transportation system to move people would be increased, but benefits would not extend outside the CBD. The mobility of travelers with trip ends inside the DPM loop would be increased because of reduced congestion and direct use of the DPM. Persons traveling to the CBD would be more likely to park in fringe areas, an action that would reduce congestion in the CBD core and lower the cost of parking. Relocation of existing parking lots to the edges of the CBD would become an attractive alternative and would allow buildings to be constructed on vacated parking areas in the CBD core. The overall impact of the DPM would be to improve mobility within the CBD and improve access to the CBD core.

Predicted passenger volumes on the system are 71,000 passengers per weekday in 1990; 11,500 passengers are predicted in the noon peak hour. The average length of a trip is expected to be about 1.2 miles or slightly less than half the distance around the alignment. With vehicles traveling at 94-sec headways around the system, average passenger waiting times of about 47 sec could be expected under normal conditions. When combined with the average time passengers spend on a vehicle (5.4 min), the average station-to-station trip time for passengers is slightly more than 6 min.

Economics

A key issue in Detroit was the impact the DPM would have on the ongoing efforts to revitalize the central city. It was predicted that the DPM's major impact would be on land use and urban development. It was also predicted that construction of the DPM would increase investment in office, retail, hotel, and residential land uses within the CBD. Construction of a grade-separated transportation system would encourage all station areas to become activity centers due to their improved accessibility. Downtown employees and visitors would begin to make greater use of downtown retail and office businesses because of the convenient access afforded by the DPM.

Since 1966 the downtown area has been losing a substantial amount of office business. Projections indicate that the DPM system would decrease the rate at which the CBD has been losing its share of the office market. Between 1983 and 1990, it is expected that the DPM will increase total office space by 5 to 5.5 percent (compared with projected demand without the DPM). With the DPM system in operation, demand for additional downtown office space is expected to increase by 450,000 gross ft²/yr.

Retail businesses would also benefit from construction of the DPM. Although development of the Renaissance Center and the Woodward and Washington Street Malls has stimulated retail development, retail sales still declined an average of 4.4 percent per year between 1972 and 1978. Construction of the DPM would connect the Renaissance Center with the older retail core, office buildings, and the convention area. All retail sales in the CBD are projected to increase from \$295 million in 1978 to between \$350 and \$370 million in 1990, as measured in constant 1976 dollars.

For two other land use elements, residential housing and hotel and motel units, substantial increases are forecast. It is estimated that con-

struction of a DPM would create demand for an additional 1,250 to 1,500 residential units in the CBD between 1985 and 1990. Furthermore, it is projected that the DPM will result in the demand for an additional 600 new hotel rooms by 1990—an increase of about 20 percent in the total number of hotel rooms in the CBD. With this expected growth in development, the DPM would create 2,900 additional jobs in the CBD. The projected growth in housing would increase the population of the CBD, benefitting the economy and enabling more efficient use of vacant land on the edges of the CBD.

Construction of the DPM is to be paid for by federal and state tax funds, benefitting southeastern Michigan by returning funds to the area. Operating costs would be met entirely by passenger fares, advertising income, and participation in joint development by private businesses. The employment and cost analyses clearly indicate a net benefit to be gained by the downtown business region from implementation of a DPM system.

When considered with the city of Detroit's proposed redevelopment plans, the DPM is an important element. Major downtown redevelopment or expansion projects sponsored or supported by the city have included phases 2 and 3 of the Renaissance Center, a new riverfront arena with housing and a major parking garage located nearby, rehabilitation and redevelopment of properties along Washington Boulevard, and smaller developments near Greektown and the financial district. All of these projects would have DPM stations on or near the site. It appears certain that each station would stimulate new development, which would support the city's objectives for downtown growth.

Noise

Noise was originally perceived to be a major environmental issue. However, this concern was not borne out by the analyses or by public comments. Ambient noise levels were monitored at 25 locations along the DPM alignment. Most locations were noise sensitive, such as auditoriums, churches, parks, offices, and residential areas. Maximum passby noise levels (L_{max}) were estimated for the DPM, and the impact of the system on ambient levels (L_{max} and L_{10}) was calculated. At 23 locations, it was predicted that L_{10} levels with the DPM in operation would increase over ambient levels but the judicious use of noise barriers would reduce noise to within acceptable levels all along the alignment.

Visual Issues

The compatibility of the DPM with the visual character of the CBD was addressed by the preparation of artist's renderings and photomontages. With these aids it was determined that the DPM would only have slight adverse effects on visual resources.

Guideway crossings in front of buildings along the route could detract from the building's appearance. Also, the views from the lower floors of some adjacent buildings would be altered. To mitigate this impact, the guideway and station facilities would be designed to harmonize with existing horizontal and vertical lines of buildings wherever feasible. Changes in vertical grade would be minimized to produce a smooth, flowing appearance. All storm drains, heating system components, and power-supply and train-control cables would be hidden. The drawings and photographs were invaluable in assessing impacts and in presenting the project to the public.

Cultural Resources

The Detroit CBD has a rich historical heritage; many fine buildings remain from its past. At the beginning of the DPM study, research led to compilation of a list of more than 120 places in the Detroit CBD that possessed some degree of historic significance. A major environmental issue was the DPM's potential impact on historic properties or other cultural resources in the CBD.

From the outset of the project, every effort was made to avoid impacts on historic resources. The State Historic Preservation Office (SHPO) was involved from the beginning to review preliminary alternatives and to adjust the final alignment to minimize impacts. It was eventually determined that 15 properties on, or eligible for, the National Register of Historic Places were located near the DPM alignment. By using the criteria of effect and adverse effect from the regulations of the Advisory Council on Historic Preservation, UMTA in consultation with SHPO determined that the DPM would have no effect on four of the properties. A finding of no adverse effect was made for eight of the properties. At the time of the final EIS, the DPM was judged to have an adverse effect on three properties:

1. Buckland-Van Wald Building,
2. Grand Circus Park Historic District, and
3. Detroit street plan.

The Buckland-Van Wald Building was designed and constructed in the 1880s and consists of two buildings with a common wall. This building is located on the site of the proposed maintenance facility. Following studies of alternative maintenance sites and the possibility of incorporating the existing buildings into the maintenance facility, demolition of the structure was determined to be the only feasible option. SEMTA agreed to record the building following the standards of the National Architectural and Engineering Record before demolition.

The DPM's adverse impact on the Grand Circus Park Historic District and the Detroit street plan would be less severe. The DPM would pass through the Grand Circus Park Historic District but would not require the demolition of any historic property or the taking of any part of the park. Members of the Grand Circus Park Development Association believe that any negative effects would be offset by economic benefits that would revitalize this historic area. The DPM would interrupt the broad avenues and views of open spaces originally designed as part of the Detroit street plan. An overhead structure such as the DPM would have some negative effect on the view of Grand Circus Park from Woodward Avenue and the Detroit River from Woodward Avenue. SHPO has noted that the location of a station across Woodward Avenue near Grand Circus Park could create the impression that the street terminates at the station. For both Woodward Avenue crossings, SEMTA planners and engineers have indicated that these locations are the best options. Alternative locations for the Grand Circus Park station would have more severe impacts than the location at the northern end of Woodward Avenue.

PROBLEMS ENCOUNTERED

Several problems were encountered during the environmental review process. The most significant of these were the problems in finalizing the outline of the EIS document; the resolution of the alternatives to be addressed in the document; the high turnover of UMTA staff, resulting in discontinuity of super-

vision; and the many difficulties in conforming with the overlapping Section 106 and 4(f) requirements. Each of these problems is discussed below.

EIS Outline

Considerable difficulty and frustration was caused by a number of changes to the basic outline of the EIS document. Early in the project SEMTA developed an outline for the EIS. UMTA approved the early outline but, later, during preparation of the individual chapters, made major changes that required fairly extensive rewrites. These major changes continued through the completion of the draft EIS. Some of these changes resulted from turnover in UMTA staff but many resulted from the review of submissions by UMTA supervisors late in the process. This review resulted in major changes and rewrites, which could have been minimized had these supervisors been involved earlier in the process. Because the changes occurred late in the draft EIS development process when the environmental work involved the DPM project's critical path, they caused considerable frustration and resulted in delays.

Analysis of Alternatives

Another of the initial problems in the EIS process was the treatment of alternatives to the DPM system. DPM demonstration program guidelines from UMTA did not discuss the development and analysis of alternatives other than the DPM. From the guiding environmental regulations, however, it was clear that the EIS would have to contain a discussion of alternatives. UMTA wanted consideration given to such alternatives as the CBD portion of the light rail system being planned in a parallel study, a light rail loop in the CBD, and the CBD component of a regional expansion in the surface bus system. Early work on the EIS included these alternatives, but there were major difficulties with each. The light rail loop in the CBD would have required considerable engineering work that was clearly outside the scope of the DPM demonstration program. All three of the alternatives did a poor job of circulating people within the CBD in a cost-effective manner, which was the intended purpose of the DPM. Because the alternatives did not serve the stated goals of the DPM, they were not viable alternatives within the intent of the National Environmental Policy Act.

Another problem concerning alternatives was that of a do-nothing or no-action alternative: an alternative or base condition against which the impacts of the preferred alternative are measured. The only existing circulator service in the CBD was a shuttle bus. Again, this was a poor alternative because it did not provide service comparable with that of the DPM.

After weeks of discussions, UMTA agreed that a single alternative to the DPM should be included in the EIS: a circulator bus. This alternative was designed to closely match the routing and level of service of the DPM. In this way a lower alternative capital cost could be analyzed. The compatibility of service made the circulator bus a more valid alternative base-line against which the DPM impacts could be measured.

The time that was lost choosing alternatives to include in the EIS did have a detrimental impact on the early stages of the project. It caused some floundering in finalizing the planning and engineering work programs, added to the cost of the project, and resulted in a one- to two-month delay in circulation of the draft EIS.

UMTA Staff Supervision

Another problem was turnover in the UMTA personnel responsible for reviewing the EIS. Four different UMTA staff members were responsible for guiding preparation of the EIS. Each change in personnel resulted in delays and changes in the document. This high rate of turnover of personnel also led to problems with internal communications at UMTA. After issues with staff members had been resolved and the instructions had been received and acted on, these instructions were often overturned or modified by the new project monitor or supervisor at a higher level, who had particular sensitivities in certain areas. This problem would have been greatly mitigated had there been more continuity of UMTA staff supervision.

Section 106 and 4(f) Compliance

There was much duplication of effort required to satisfy both the provisions of the DOT Act [Section 4(f)] and those of the National Historic Preservation Act (Section 106). With both acts, the issue was the adverse effects of the DPM on the three properties eligible for the National Register.

Section 106

Section 106 and the implementing regulations of the Advisory Council on Historic Preservation (ACHP) required the preparation of preliminary case reports on each of the three properties. Key elements required in the case reports were

1. Description and significance of affected property,
2. Application of the criteria of adverse effect,
3. Views of SHPO,
4. Views of others,
5. Alternatives that would avoid adverse effect,
6. Alternatives that would mitigate adverse effect, and
7. Determinations.

The case reports were completed and circulated to ACHP. Subsequently, a memorandum of agreement was negotiated with ACHP that allowed the adverse effects provided that certain mitigation measures were adopted. The measures included

1. Completing a feasibility study on alternative sites for the maintenance facility and on alternative designs that would preserve the Buckland-Van Wald Building;
2. Completing a feasibility study on moving the Buckland-Van Wald Building;
3. Recording the Buckland-Van Wald Building for the National Architectural and Engineering Record;
4. Preserving representative architectural elements of the Buckland-Van Wald Building for curatorial or other use in projects;
5. Allowing SHPO to review and comment on the final design of the alignment and station at Grand Circus Park Historic District;
6. Studying the Grand Circus Park station to investigate the possibility of using elevators instead of escalators to reduce the structural mass at street level, finding alternative locations for the vertical circulation system off Woodward Avenue, and reviewing the feasibility of incorporating the station into an existing building; and
7. Conducting an historic land use survey and limited subsurface testing program to identify potential archaeological resources.

Section 4(f)

Separate documentation was necessary to satisfy Section 4(f), which required that the Secretary of Transportation certify that there were no prudent or feasible alternatives to the adverse effects and that all possible planning had been undertaken to minimize the harm. The requirements for the Section 4(f) statements were almost identical to those for the preliminary case reports:

1. Description and significance of property,
2. Proposed use,
3. Alternatives,
4. Mitigation, and
5. Coordination.

Even though the requirements of both acts are similar, two separate sections had to be written for the final EIS and each section processed through different channels. Significant delay was experienced in the duplicative work. The greatest delay, however, came when DOT requested that additional work be done on alternatives to the demolition of the Buckland-Van Wald Building. At the time, the Section 106 process had been completed and a memorandum of agreement had been signed. The Office of the Secretary failed to accept the same detailed consideration of alternatives that had been accepted by ACHP. The additional work delayed completion of the final EIS by more than a month. In the end, the Secretary of Transportation finally approved demolition of the building as proposed by SEMTA.

It should be noted that revisions are under consideration that would reduce the duplication of effort now experienced in complying with Sections 106 and 4(f).

LESSONS LEARNED

What Was Right About the Process

In general the EIS process on UMTA projects is efficient. The UMTA regulations and guidelines were clear and were followed by the UMTA staff. Throughout the DPM project, the UMTA staff were accessible and prompt in their responses to inquiries. Submissions to UMTA were reviewed in a reasonable amount of time and comments were, for the most part, pertinent to the larger issues.

The element that had the greatest positive impact on the process was the early and continued involvement of SHPO in the project. All preliminary alternatives were reviewed by SHPO, and their comments were seriously weighed by SEMTA. The coordination with SHPO resulted in numerous alignment changes (e.g., guideway moved across the street from a National Register property) to minimize the impacts on cultural resources. When formal determinations were requested, few historic properties were affected and there were no surprises to SHPO or to SEMTA.

Where adverse effects did occur, SHPO had been sufficiently involved with the planning process to know that there were no feasible alternatives and that SEMTA would plan for appropriate mitigation. The Section 106 process for the DPM did not become an adversary relationship as so often happens. Rather, it was a joint effort of SEMTA and SHPO to preserve cultural resources and to improve mobility in the CBD. This relationship of trust and involvement with SHPO greatly minimized the impacts on historic properties and facilitated the entire EIS process.

The broad acceptance that the EIS has received is in large part due to the numerous, high-quality photomontages and drawings included in the document.

These were effective in providing a quick visual overview of the DPM project and its impacts without the necessity of reading the entire document. The readability of the document was also greatly enhanced by summarizing most of the technical and numerical data into tabular matter and graphs and addressing only the most significant points in the text.

What Was Wrong with the Process

The parts of the EIS process that resulted in the most difficulty and delay stemmed primarily from questions of form and management rather than strictly technical or environmental issues. The changing direction received about alternative actions and alignments to be presented in the EIS and the numerous structural changes to the EIS document caused the majority of the problems. These problems were further exacerbated by turnover and communication problems within the UMTA staff. The actual technical contents of the EIS were questioned in few instances. Thus, the most time-consuming part of the process was that of expediting the document through the approval process rather than concentrating on technical issues and the actual system impacts.

What We Would Do Differently

Although we were careful to maintain a close, ongoing relationship with the federal representative responsible for the EIS, next time we would expend even more effort early in the development process to develop a detailed outline for the EIS. After completing this outline, we would attempt to get a formal, written approval from the UMTA division chief or associate administrator responsible. Following this approval, we would attempt to stick as closely to this outline as possible and resist all changes from this basic structure. (These changes cost time and money.) In a similar way, we would identify the alternatives early and attempt to get an approval in writing. Action in these two areas, if carefully addressed early in the process, would have substantially reduced our problems.

Recommendations for Change

After having experienced the EIS process for the Detroit DPM, we would recommend changes to the EIS process in two areas: a better definition in the EIS guidelines of the alternatives to the proposed action that must be presented in the EIS and a consolidation of the overlapping Section 106 and Section 4(f) requirements relative to impacts on historical and archaeological resources.

The EIS development guidelines were quite vague on the type of alternative actions and level of detail to which these must be addressed in the EIS. These vague guidelines were subject to a variety of interpretations and resulted in considerable uncertainty. This in turn resulted in contradictory direction, rewriting, and delay. This situation was further clouded because during the development of the EIS for the DPM, many cities (including Detroit) were involved in alternatives analysis for regional systems. UMTA's involvement in these extensive analyses of alternatives led to further confusion over the type of alternatives that needed to be addressed and the level of detail required for this, a demonstration project. Many of these problems could be reduced or eliminated if further clarification of the alternatives that must be addressed were included in UMTA's guidelines for EIS development.

Finally, we believe that there is considerable overlap between Section 106 and Section 4(f) regulations; both place significant (and overlapping) requirements on projects that have an adverse impact on historic or archaeological resources. We realize that these are two different laws, but in our judgment, these two overlapping sets of regulations offer no additional protection for these resources and cause significant additional paperwork and potential delay to completing the process.