Bus Rapid Transit Environmental Assessment and Section 4(f) Evaluation Summary

September, 2001

S.0 SUMMARY

As a grantee of the Federal Transit Administration (FTA), the Greater Cleveland Regional Transit Authority (GCRTA) has prepared a revised Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) for the proposed Bus Rapid Transit (BRT) (Build Alternative) element of the Euclid Corridor Transportation Project (ECTP). This EA has been prepared to address concerns that were submitted following the publication of the August 25, 2000, version of this EA. This EA identifies the project revisions that have occurred since August 2000, along with the potential environmental effects associated with the BRT project construction and operation, and provides agencies and the public the opportunity to review and comment on the potential effects of the proposed project. The document contains information necessary to determine if the project will result in significant impacts with regard to social, economic, environmental, and transportation factors in the project area, and what further actions or mitigation are required to address identified potential impacts.

This summary of the ECTP Bus Rapid Transit EA addresses the following:

- Purpose and Need;
- Alternatives Considered;
- Summary of Environmental Impacts (Social, Transportation, Environmental, and Economic);
- Section 4(f) Evaluation; and
- Public Involvement and Coordination.

The Bus Rapid Transit element of the Euclid Corridor Transportation Project is located within the cities of Cleveland and East Cleveland, Ohio. The Federal Transit Administration (FTA) is the Federal lead agency for the ECTP BRT Environmental Assessment and the Greater Cleveland Regional Transit Authority (GCRTA) is the local lead agency.

Based upon the conclusions of this report, comments from the public, and findings by FTA, GCRTA will determine whether additional environmental studies are necessary, and whether to proceed with implementation of the proposed action evaluated in this document. **Figure S-1** shows the location of project study area and proposed BRT Alternative with bus stations.

S.1 Purpose and Need

The GCRTA currently provides transit service to over 200,000 riders each weekday. Of those boardings, over 60 percent occur within the 6.6-mile Euclid corridor from downtown Cleveland to the Stokes Rapid Transit Station in East Cleveland. The purpose for the improvements within the Euclid Avenue Corridor has resulted from the need for expanded transit service along this important east/west connection between Downtown Cleveland, University Circle and the Stokes Rapid Transit Station.

The following goals were established to guide the ECTP:

- Improve service to GCRTA customers by increasing transit system efficiency;
- Promote concurrent long-term economic and community development and growth in and adjacent to the Euclid Avenue Corridor; and
- Improve the quality of life for those visiting, working or living in the Euclid Avenue Corridor.

S.2 Alternatives Considered

The transportation issues within the Euclid Corridor have been examined through multiple studies, all with the challenge of connecting the City of Cleveland's two largest employment centers, Downtown and University Circle. As a result of the completion of the Dual Hub Corridor Transitional Analysis (December 1995), a Bus/Transportation System Management (TSM) Alternative was adopted by GCRTA and the Northeast Ohio Areawide Coordinating Agency (NOACA) as the Locally Preferred Alternative. This alternative became known as the Euclid Corridor Transportation Project (ECTP). The ECTP includes project elements, such as the BRT project, the St. Clair/Superior Avenue Transit Zone, and Red Line Station Improvements. This Environmental Assessment addresses the Euclid Avenue BRT and the supportive components of the St. Clair/Superior Avenue Transit Zone.

S.2.1 Alternatives

The Alternatives Considered in this EA include a No Build Alternative and a BRT Alternative (Build Alternative) with design options.

A. No Build Alternative

The No Build Alternative undertakes no major transit system investments in the Euclid Corridor, but rather maintains the existing system. It consists of all the projects that are underway or those to which funding has been committed in the current regional NOACA Long Range Plan, *Framework for Action 2025* and the 2010 GCRTA Long Range Plan. This Alternative serves as a baseline against which the effects of the BRT Alternative can be evaluated.

B. BRT Alternative

17thThe two components of the Proposed Action include the installation of BRT on Euclid Avenue, and the creation of a Downtown Transit Zone, and improvements to East and East 18th Streets.

Bus Rapid Transit technology is the alternative that was selected during the *Transitional Study* by GCRTA, the City of Cleveland, and the Northeast Ohio Areawide Coordinating Agency (NOACA) for the Build Alternative that will serve the Euclid Corridor. The BRT system is a transit system that includes all or some of the following characteristics:

- Dedicated bus lanes;
- Signal prioritization for buses;
- Fast loading/unloading vehicles;
- Improved fare collection system to minimize delay; and/or
- Reduced number of stops for faster service.

Deisel/Electric Buses were identified as a BRT vehicle concept that would meet the desired characteristics identified in previous studies. The BRT vehicles will run on rubber tires and be electrically powered, aided by an onboard deisel generator.

BRT vehicles and motorcoach buses will operated along a dedicated bus lane form Public square in downtown Cleveland to East 107th Street, and in mixed traffic lanes, from East 107th Street to the Stokes Rapid Transit Station at Winderemere, in the city of East Cleveland.

A turn back loop will also be necessary to provide efficient service throughout Downtown Cleveland. The turn back loop will be located along East 21st and East 22nd Streets and Euclid and Prospect Avenues. The BRT vehicles will be stored in a new storage area which is located east of the Hayden Garage as shown in **Figure S-1.**

Bus stations will enable passengers to embark and disembark in a safe, comfortable and efficient manner. Bus stations included in the BRT Alternative will be composed of one or more bus shelters, and contain passenger information displays and bus communications equipment. Bus shelters are structures which provide waiting passengers with a semi-enclosed space and seating surfaces. They are designed to be modular in construction for easy combination into larger groupings, as required. Bus shelters located outside of the Euclid avenue BRT would be designed as conventional bus stops.

The Proposed Action will also involve streetscape and roadway improvements within the existing or proposed right-of-way lines from Public Square to East 120th Street. From East 120th Street to the City of Cleveland/ City of East Cleveland boundary, roadway and minimal streetscape improvements are proposed as part of this project. This project will be consistent with the Euclid Avenue Rehabilitation Project (EARP) which will provide roadway improvements, streetscape enhancements and sidewalks through the City of East

Cleveland. The ECTP project will provide BRT stations in the areas made available through the EARP.

The ECTP roadway and streetscape improvements will include:

- Enhancements to pedestrian zones that encourage transit usage, including: sidewalks, crosswalks at intersections designed to clearly identify pedestrian zones, passenger shelters, pedestrian lighting, street lighting, street trees, and street furniture, as appropriate;
- Reconstruction and/or relocation of certain underground utilities within the Euclid Avenue busway;
- Identification of pedestrian and vehicular signage to clearly identify the availability of transit service;
- Installation of public art;
- Incorporation of cultural resource identification and interpretive signage; and
- Enhancements to pedestrian safety and compliance with the requirements of the Americans with Disabilities Act (ADA).

Design Options

Two design options have been developed for the BRT Alternative in the area between East 55th Street and East 69th Street, as described below.

Design Option A includes the reconstruction of Euclid Avenue with both exclusive bus and automobile travel lanes. It requires the acquisition of additional right-of-way to maintain a consistent right-of-way width of 100 feet. This additional right-of-way allows the streetscape improvements to be consistent with the surrounding segments between Public Square and East 105th Street.

Design Option B includes the reconstruction of Euclid Avenue with exclusive bus and automobile travel lanes within the existing right-of-way width which varies between 80 and 100 feet. This design option would not provide sidewalks at certain locations between East 55th and East 69th Streets, and would provide substandard sidewalks for the remainder of the corridor. No streetscape improvements would be provided in this area.

BRT Only Zone

An "BRT Only Zone" is proposed between Public Square and East 17th Street within the Euclid Avenue BRT. This zone will exclude motorcoach bus service and accommodate general automobile traffic. This zone was created to reduce traffic and help the downtown neighborhoods promote more residential development. BRT vehicles are quieter than regular motorcoach buses and are more compatible with planned residential development. Streetscape enhancements including pedestrian scale sidewalk lighting will enhance the pedestrian character of the Downtown and complement the recent redevelopment efforts within this area.

Transit Zone

A Transit Zone bound by West 3rd Street, St. Clair Avenue, East 22nd Street, Prospect Avenue, and Superior Avenue will help provide expanded and more visible bus routes in Downtown Cleveland. This Transit Zone will also provide dedicated streets for most GCRTA buses traveling in Downtown, centralizing all bus stops for westbound and eastbound vehicles. These dedicated lanes will minimize conflicts between private vehicles and buses and will reduce maintenance costs for roadway repairs resulting from continued bus operations. GCRTA motorcoach buses will use East 12th Street, East 13th Street, East 17th Street, East 18th Street, East 21st Street, and East 22nd Street, Payne Avenue, and Chester Avenue as a connector street between the dedicated bus lanes on either St. Clair or Superior Avenues and the GCRTA service area.

Project Revisions since august 2000

The two alternatives that are evaluated in this EA, are a result of project revisions that have occurred since the circulation of the August 25, 2000 EA. The No Build Alternative was not affected by the project revisions. There are four key project revisions in the BRT Alternative that have occurred since August 25, 2000. All components of the BRT Alternative are described in Section S.2.1. Revisions to the BRT Alternative include the following:

- The electric trolley bus has been revised to a more environmental friendly vehicle;
- Roadways within the Transit zone have been revised;
- Potential parking and access impacts have been addressed;
- Station design and locations have been revised: and
- Potential impacts to the historic Dunham Tavern have been eliminated.

S.2.2 Evaluation of Alternatives

The purpose of the evaluation process is to summarize benefits, cost, and environmental consequences for each alternative against the stated goals and objectives of the ECTP. The analysis of the BRT Alternative, summarized below, facilitates the decision-making process for GCRTA, Ohio Department of Transportation (ODOT), City of Cleveland, City of East Cleveland, public officials, interested residents, institutions, businesses, and other organizations.

For each goal a set of objectives and evaluation measures were developed. These measures have been used to compare the No Build and the BRT Alternative. **Figure S-2** outlines the goals and objectives of the ECTP BRT project, and illustrates the degree to which each alternative supports the goals and objectives of the ECTP. Three degrees of support were used to summarize the performance of each alternative.

- Strongly Supports;

- Supports; or
- Does Not Support

Overall, the No Build Alternative does not support the goals and objectives of the ECTP. The BRT Alternative supports the goals and objectives, with Design Option A illustrating stronger support than Design Option B in the areas of encouraging investment and development opportunities and livability as it relates to the pedestrian environment.

S.3 Environmental Impacts

The effects of the Alternatives were categorized into four areas: social, transportation, environmental, and economic.

S.3.1 Social Impact Assessment

The social impact analysis completed for the Alternatives included an evaluation of the potential benefits and adverse impacts related to land use, acquisitions/displacements, neighborhoods, environmental justice, community facilities, visual and aesthetics, historic/archaeological resources, public parklands, safety, and security.

The existing land use throughout the corridor is mixed use and consists of residential, institutional, commercial, industrial, open space, parking and vacant lands. Euclid Avenue is a major commercial and transportation thoroughfare in the Cleveland region. The BRT Alternative has been incorporated into various local land use plans and is consistent with both the plans and goals of the local jurisdictions.

In general the improvements included in the BRT Alternative are located within or directly adjacent to existing roadways, therefore the Proposed Action would have a limited amount of acquisition and displacement impacts. Under Design Option A, the project would displace four commercial buildings. Approximately 20 feet of additional right-of-way will be required between East 55th Street and East 69th Street in order to meet the City of Cleveland's standards for streetscape and sidewalks. Design Option B uses variable right-of-way which results in no building displacements. Design Option B will also result in substandard sidewalks and no landscape improvements provided between East 55th and East 69th Streets. GCRTA will coordinate with adjacent property owners to provide opportunities for landscape and sidewalk improvements, but this design option will also require a design exception from the City of Cleveland. For both design options, an additional 20 feet of right-of-way easements will also be required to accommodate these improvements between East 79th and East 107th Street. Coordination with the Cleveland Clinic Foundation and other property owners within this area has been initiated regarding acquisition of easements in this area.

The BRT Alternative is expected to improve access for local neighborhoods as well as patrons to local community facilities and parks. The project is not anticipated to cause any disproportionate impacts to minority or low-income communities. The visual and aesthetic environment along the corridor is expected to change slightly with the streetscape improvements. GCRTA will continue to coordinate with the City of East Cleveland to ensure consistency with the Euclid Avenue Rehabilitation Project (EARP) which will provide bus stations and sidewalks on Euclid Avenue through the City of East Cleveland. A landscape buffer will be provided between the BRT vehicle storage area east of the Hayden Garage and nearby residences.

Throughout the corridor there are a significant number of historical and archaeological resources. These resources were researched and presented to the Ohio Historic Preservation Office (OHPO) to determine their eligibility to be listed on the National Register of Historic Places (NRHP). As of September 7, 2001, the OHPO has concurred with most of the determinations of eligibility as noted in Section 3 of this EA.

Potential adverse effects of the BRT Alternative include increased traffic near NRHP-listed Trinity Cathedral at 2200 Euclid Avenue, due to the BRT turn back loop on East 21st and East 22nd Streets, and the disturbance of vaults under the sidewalks, due to the removal of existing decorative pavers during sidewalk reconstruction. The discussion of potential adverse effects is ongoing with the OHPO. Mitigation will be negotiated and implemented as outlined in the draft Programmatic Agreement between GCRTA, FTA, and OHPO. This draft Programmatic Agreement (located in Appendix D) is expected to be executed following the publication of this EA.

As the project advances, any undisturbed land that is discovered throughout the corridor which has the potential for archaeological resources to exist, will be assessed according to the Programmatic Agreement for preservation in place.

The proposed BRT Alternative will involve new infrastructure that will require the implementation of current safety and security provisions. The BRT Alternative will be managed according to the procedures within this plan. GCRTA will also negotiate either an Authorizing Agreement with the respective municipality for the Exercise of Mutual Aid, or a protocol with its division of police. This will allow local police to assist transit police whenever necessary. All design features of the BRT Alternative will employ Crime Prevention Through Environmental Design (CPTED) concepts.

S.3.2 Transportation Impact Assessment

The transportation impact analysis of the Alternatives includes changes to traffic, parking and access.

Due to the reduction of travel lanes associated with the project design, there are several intersections, which are predicted to experience a reduction in Level of Service (LOS). These intersections would be reduced from LOS A and B to LOS C, which is considered

acceptable in the urban environments. No mitigation will be necessary for these minor reductions in LOS.

The parking and access analysis concluded that there would be a reduction of parking along Euclid Avenue. However, new parking spaces are being provided in the ECTP design plans, and there is a considerable amount of off-street parking on the side streets which is currently underutilized that will be sufficient to accommodate the loss of on street parking. Coordination with stakeholders and the City of Cleveland will be conducted to develop a strategy for providing additional replacement parking. Access or delivery zones which would be impacted by the BRT Alternative will be addressed and mitigated during the final design phase of this project, or would have a minor impact to existing businesses.

S.3.3 Environmental Impact Assessment

The environmental impact analysis of the Alternatives include air quality, energy, noise and vibration, wetlands, floodplains and drainage, water quality, endangered species, hazardous materials, geotechnical, and snow removal.

The air quality analysis was conducted at intersections with potential for high traffic volume and vehicular delay. No violations of the National Ambient Air Quality Standards were encountered under either Alternative. The BRT Alternative would result in a net decrease in transportation energy consumption relative to the No Build Alternative. Seven (7) noise-sensitive receivers could be impacted as a result of the introduction of additional transit vehicles associated with the BRT Alternative. Mitigation could include building insulation techniques such as caulking gaps in the building envelops, installation of multi-layer glass windows and sealing of ventilation openings. Mitigation can also be applied to the transit vehicles; these include, efficient muffler systems, engine body panels, quiet efficient ventilation systems, forced air engine cooling systems, noise absorbing vehicle panels, and vehicle wheel skirts. Roadway treatments include the reconstruction and continued maintenance of the roadways adjacent to the noise receivers.

Impacts to wetlands, floodplains, water quality, and endangered species are not expected due to the current urban environment along the corridor. Initial hazardous materials investigations concluded that there is a potential for hazardous materials within the project area. Hazardous materials mitigation will be recommended for acquired properties with contamination, if confirmed by Phase II investigations. The cost of site cleanup would be considered in the appraisal of properties to be acquired.

S.3.4 Economic Impact Assessment

The economic impact analysis of the Alternatives include economic development, influence of public transportation improvements and regional market share.

Economic development is expected to increase dramatically due in part to the BRT Alternative. Economic conditions could benefit in the short term due to construction. Long term development proposed by local development corporations could be realized through project coordination and design in designated growth areas along the corridor.

The BRT Alternative would also influence improved access to employment opportunities and consumer markets for area residents and users. Using future development projections and existing land use patterns, populations and employment densities are shown to support public transportation which will also support increased levels of development and result in increased regional market share for the Euclid Corridor.

S.3.5 Construction Impacts

Potential construction impacts were also evaluated within this EA. Temporary impacts associated with construction will be mitigated through the use of best management practices. All work will also be subject to *State of Ohio DOT Handbook - Construction and Material Specification, January 1997*.

S.4 Section 4(f) Evaluation Section

4(f) of the US Department of Transportation (USDOT) Act of 1966 as amended declares that it is a national policy to make a special effort to preserve the natural beauty of the countryside, public park and recreation lands, wildlife and waterfowl refuges, and historic sites. Section 4(f) permits the Secretary of Transportation to approve a project that requires the use of any publicly-owned land from a park, recreation area, wildlife refuge, or any land from a historic site of national, state or local significance only where it is shown that:

- there is no feasible or prudent alternative to the use of the land; and
- the action includes all possible planning to minimize harm to the property resulting from such use.

Section 4(f) applies to public resources when a "use" occurs. Use can be permanent, temporary adverse, or constructive.

Due to the high number of historic architectural properties along the corridor there is a potential for adverse impacts to certain properties. There are four general impacts that could occur in proximity to an historic property. These impacts include:

- Landscaping in front of historic building such that view of the building is blocked;
- Modifications to the site element (such as changes to driveway alignments);
- BRT station located in front of an historic building so that the view of the building is blocked; and

- Reduction in sidewalk width due to the addition of turn lanes on Euclid Avenue.

Historic resources have been avoided to the maximum extent possible. Measures to minimize harm to potential archaeological resources will include the implementation of a predictive archaeological model and pursuing data recovery to the extent possible.

The proposed BRT Alternative also passes directly adjacent to Wade Park, which is a National Register Listed Historic District. Within the BRT Alternative the existing curb line would be reconstructed in the current location however the existing tree lawn and sidewalk would also be reconstructed in their current location. This construction would occur within the Historic District which may result in a Section 4(f) impact. The City of Cleveland has concurred with this alternative, via a letter that is included in Appendix E, of this EA. The City also stated that no mitigation would be required as a result of the reconstruction of the sidewalk and tree lawn within the Wade Park Historic District.

Mitigation will be coordinated with the Ohio Historic Preservation Office (OHPO). Mitigation measures will be outlined and agreed upon by the OHPO, FTA, and GCRTA. The process by which mitigation will be negotiated and implemented is outlined in the draft Programmatic Agreement located in Appendix D. The Programmatic Agreement will be executed by GCRTA, FTA, and OHPO following the publication of this Environmental Assessment.

S.5 Public Involvement and Coordination

Public outreach efforts and events undertaken during ECTP environmental process include both formal and informal activities, designed to engage a diverse population.

Public engagement activities that took place over the last several years include the formation of a Euclid Corridor Committee (ECC), project stakeholder meetings, community meetings, and individual briefings. Agencies and organizations involved in the ECC include the heads of development corporations, representatives from the educational, medical and cultural institutions, the Cities of Cleveland and East Cleveland, Cuyahoga County, the Ohio Department of Transportation and the GCRTA. This Committee met during the course of the project for briefings and to provide comments and suggestions. The project stakeholders include the ten development corporations with private business or institutional interests in the Euclid Corridor Community. Letters of support for this project can be found in Appendix C.

Tools and techniques used during the project process include a directory of stakeholders, mailing list, newsletters, media list, web site, flyers and letters.

Formal public meetings designed to solicit public comment about the ECTP and the subsequent EA were held in October 2000. To facilitate public comfort in giving comments, the public meetings included an informal open house session, a formal

presentation and a formal comment session. These public meetings were designed to meet the intent of and fulfill the requirements of NEPA and were advertised in local newspapers, and in the project newsletter. The meetings took place at the following times and locations.

- October 2, 2000 11:30am - 2pm Downtown Cleveland
  Cleveland Public Library, Stokes Wing Auditorium
  325 Superior Avenue
- October 3, 2000 5pm - 8pm East Cleveland
  East Cleveland Public Library
  14101 Euclid Avenue

  Following the formal public meetings, a period of project revision began that has resulted in the public circulation of this EA. During this period project staff has organized a series of Design Review Meetings with various design committees throughout the corridor. These committees include representatives of the City Planning Commission, Midtown, Historic Gateway Neighborhood, Landmarks Commission, Streetscape Advisory Committee, along with other interested groups. The formal 30% design approval of these groups is currently underway and project staff will continue to work with these groups as the project design moves forward.