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SEP 26 2008

Ref: EPR-N

David Beckhouse
Federal Transit Administration Region VIII
12300 W. Dakota Avenue
Suite 310
Lakewood, CO 80228-2583

RE: Denver Union Station, Denver, Colorado
Final EIS CEQ# 20080311

Dear Mr.Beckhouse:

In accordance with our responsibilities under the National Environmental Policy Act (NEPA), 42 U.S.C. Section 4321, et. seq., and Section 309 of the Clean Air Act, the Environmental Protection Agency, Region 8 office (EPA) has reviewed the referenced Final EIS for Denver Union Station, in Denver, Colorado. Section 309 of the Clean Air Act directs EPA to review and comment in writing on the environmental impacts of any major federal action. EPA commented on the Draft EIS for this project on May 8, 2006. We sent a subsequent letter on April 23, 2008. Below is a reiteration of some of our comments, and some additional information on sustainability issues.

Air Quality and Construction Impacts

EPA commends FTA and RTD for the quantitative analysis of particulate matter (PM) and mobile source air toxics, and the quantification of CO_2 emissions included in the document. The air quality section in the FEIS states that the project will not violate the National Ambient Air Quality Standards (NAAQS). There are still, however, air quality impacts from construction of the project, and the document contains a very good list of mitigation measures for these air quality construction impacts (see section 5.19.11). EPA believes that these measures should be listed in the ROD as RTD construction specifications requirements for construction contracts.

Ozone: As you are aware, in November, 2007 the Denver metropolitan area was designated as nonattainment for the 8-hour ozone standard. Many parties are working on the revised State Implementation Plan, which will contain additional control measures to ensure that in the future the area meets the 8-hour ozone standard. Although the document did not analyze future ozone precursor trends, it states that NOx and VOC emissions will decrease as a result of federal mandatory emissions reduction programs. The document did not provide evidence supporting this conclusion. Plans for this project should include measures that ensure that the development will not contribute to the ozone problem, i.e., that levels of NOx and VOCs will be minimized.

As state above, EPA believes the ROD should require mitigation measures to ensure low emissions of criteria pollutants and mobile source air toxic, including a requirement for locomotives to meet the most current emission standards at the time of purchase.

Stormwater Runoff

Section 5.21.16 states that the volume of runoff in the study area could affect the water quality of surface and groundwater resources. The mitigation measures specified in Table 5-20 for water quality impacts should be stated clearly in the ROD.

Sustainability Goals

In our letter of April 23, 2008, EPA expressed interest in assisting with green building principles and sustainability. We understand that Union Station Neighborhood Company (USNC), Master Developer for this project, has as its goal, LEED Certification for all the new buildings. This effort is commendable, and we encourage you to proceed in the direction of gold or platinum certification. Regardless of the level of certification you pursue, we strongly encourage you to focus on energy efficiency and green construction principles. As you know, a thorough, integrated design process can greatly reduce the amount of energy needed. We note the sustainability principles built into the Master Plan for the various entities associated with the plan. There are many good concepts mentioned that we hope to see incorporated into development plans and contracts. Here are some additional suggestions:

- The EIS, ROD, or future documents on this project should recognize Denver's Climate Action Plan as it affects requirements for the DUS project. The Denver Climate Action Plan was signed on October 24, 2007, by Mayor Hickenlooper and requires the use of high-performing green concrete in all public and private construction projects in the city. At a 20% mix with concrete, the use of fly ash (a byproduct from coal-fired power plants) will save up to 25% of the carbon emissions associated with concrete, while making a highly durable, less expensive, and eco-efficient product. The product's environmental safety has been demonstrated and the Colorado Department of Transportation already mandates 10% fly ash in concrete for infrastructure. The Mayor's Greenprint Council conducted an inventory of sources of greenhouse gas emissions (GHG) in Denver, and found that materials have a significant contribution to that inventory. If the project team can incorporate the environmentally safe recycling of industrial materials, such as fly ash, into construction, the redevelopment project will be more sustainable and lessen its impact on city emissions contributing to climate change.

- Although the EIS recognizes impacts from the project from hazardous materials that might be present in the study area as well as hazardous materials that the project itself could generate, it does not recognize explicitly the large volume of solid waste materials that will be generated and need to be managed safely, efficiently, and sustainably as a result of demolition and removals of old infrastructure and new construction. Efficient materials management, such as waste reduction and materials recycling, will save energy and conserve natural resources, and in many cases lower project costs. The ROD should

require minimization and sustainable management of hazardous materials generated by this project

- Section 5.11 and other sections on energy consider direct energy demands of the project such as electricity and fuel consumption, but the connection of materials use to energy consumption and GHG mitigation is not established. When considering cumulative environmental impacts, it is helpful to take a lifecycle view of the "embodied" energy of materials, accounting for the sum total of the energy necessary to produce a product to its final end-point -- from the raw material extraction, to transport, manufacturing, assembly, and finally its ultimate management/disposition. This is helpful when weighing the benefits of material choices. For example, using high-performing green concrete that uses fly ash in place of Portland cement has the potential to significantly reduce the quantity of greenhouse gases emitted and the amount of fuel and energy used. Typically, between 15% to 30% of Portland cement in concrete can be replaced with fly ash. Using one ton of fly ash as a replacement for cement (1) conserves enough landfill space to hold about 1,200 pounds of waste, or the amount of solid waste produced by one American over 270 days, (2) reduces the equivalent of 2 months of an automobile's carbon dioxide emissions, (3) saves enough energy to provide electricity to an average American home for 19 days, and (4) reduces the need for 1 ton of virgin resources (U.S. EPA, Using Coal Ash in Highway Construction: A Guide to Benefits and Impacts, April 2005, EPA-530-K-05-002).

- Although the EIS recognizes the intent to use recycled or recycled materials in construction of the transportation components to the extent possible and make accommodations for recycling, specific practices for doing so are not described nor included in the mitigation sections for the various alternatives. Please include requirements for the use of recycled materials in the ROD wherever you are able.

- RTD, FTA, and other participating parties should integrate industrial materials recycling and construction and demolition materials recycling into the design and construction of the project to the greatest extent possible. Coal combustion products can be used in concrete, road base, embankments, flowable fill, and other beneficial applications. Other materials such as reclaimed asphalt, slags, and tires can be used in beneficial roadway applications.

- A resource that may be helpful to the project team is the Colorado Department of Transportation's (CDOT) study on the use of alternative materials in roadway applications at http://www.dot.state.co.us/Publications/PDFFiles/epagrant.pdf. The project examines successful applications of materials and recommends specification changes to enable greater materials recycling. The research manager for this project was Pat Martinek of CDOT at (303) 757-9787 or patricia.martinek@dot.state.co.us.

- The EIS states that accommodations will be made for recycling. It is unclear what this is specifically referring to (space for accumulation and storage, local markets, or public recycling). If this refers to public recycling, the project team may want to consider the

information, tools, and resources that EPA's Recycle On The Go (ROGO) initiative offers. ROGO encourages recycling in public places such as parks, stadiums, convention centers, airports and other transportation hubs, shopping centers, and at special events. The ROGO website has information on how to set up a program, and specific tips for transportation hubs.

Other resources for helpful information on green building and recycling are included in the enclosure to this letter. We appreciate the consideration you have given EPA's comments in the past, and welcome an opportunity to review the ROD before it is final, if possible. If you have any questions on these comments, please contact Deborah Lebow Aal of my staff at 303 312-6223, and for sustainability issues, please contact Cynthia Cody at 303 312-6228.

Sincerely,

Larry Svoboda
Director, NEPA Program
Ecosystems Protection and Remediation

cc: Gena McAfee, Jacobs, Carter Burgess
Lizzy Kemp, CDOT Region 6
Melinda Urban FHWA
Cynthia Cody, EPA
Pat Martinek, CDPHE

Additional Sources of Information on Sustainability

EPA's Industrial Materials Recycling Homepage: Provides a general overview of industrial materials and their opportunities for reuse and recycling: www.epa.gov/industrialmaterials/.

EPA's Construction and Demolition Materials Homepage: Provides an overview of C&D materials and their opportunities for reuse and recycling: www.epa.gov/cdmaterials/.

EPA's Comprehensive Procurement Guidelines: For products designated by EPA, procuring agencies using federal funds are required to purchase products containing the greatest recycled content practicable. The guidelines are also useful for the private sector: www.epa.gov/cpg/.

Construction Industry Compliance Assistance (CICA) Center: www.cicacenter.org/.

Green Highways Partnership: A multi-sector initiative that seeks to incorporate environmental sustainability into all surface transportation infrastructure, including using industrial materials: www.greenhighways.org/.

Recycled Materials Resource Center: The RMRC is a federal-university partnership that serves as a research and outreach facility for the highway community, and a catalyst for beneficial use of recycled materials: www.rmrc.unh.edu/.

Industrial Resources Council: The IRC is composed of industry trade associations representing coal combustion products, foundry sands, iron and steel slag, wood and pulp materials, rubber materials, and construction and demolition materials. Their website contains information about industrial materials and their applications: www.industrialresourcescouncil.org/.

The University of North Dakota's "Buyer's Guide for Coal Ash-Containing Products": Provides links to suppliers of construction materials containing coal combustion products: www.undeerc.org/carrc/BuyersGuide/.

The Federal Highway Administration (FHWA) Office of Pavement Technology's Recycling Webpage: Has current projects and activities, research and references, publications, policies, and information on the Pavement Recycling Team: www.fhwa.dot.gov/pavement/recycling/.

Texas Department of Transportation Recycling Website: This comprehensive and easy-to-use website has information on materials, demonstration projects, and procurement: www.dot.state.tx.us/services/general_services/recycling/.