

16th Street Mall Alternatives Analysis and Environmental Assessment

ERRATA SHEET



Federal Transit Administration

Regional Transportation District

November 2019

Errata Sheet

The *16th Street Mall Alternatives Analysis and Environmental Assessment (EA)* was published for public review in April 2019 by the Federal Transit Administration (FTA) and Regional Transportation District (RTD), in partnership with the City and County of Denver (CCD) and the Downtown Denver Partnership (DDP). Following the April 15, 2019 to May 14, 2019 public review period, the following text changes were made in response to public and agency comments and to provide clarifications/corrections where necessary. New or substituted text is shown by underlined text, and text deletions are shown in strikethrough (~~strikethrough~~).

Corrections to the EA

The following corrections fix factual errors and mistakes made in the EA. Corrections to the 'Summary of Adverse Impacts and Mitigation Commitments for the Locally Preferred Alternative (LPA)' tables are also reflected in Appendix B, Mitigation Measures, of the *16th Street Mall Alternatives Analysis and Environmental Clearance Finding of No Significant Impact (FONSI)*, issued by FTA in November 2019.

Visual and Aesthetic Resources

EA Pages ES-19 and 3-45, 'Summary of Adverse Impacts and Mitigation Commitments for the Locally Preferred Alternative' tables:

Direct Impacts: "Change in appearance of the Mall when viewed from the street level on the Mall and buildings lining the Mall."

Public Safety and Security

EA Page ES-22, 'Summary of Adverse Impacts and Mitigation Commitments for the Locally Preferred Alternative' table:

Duplicate mitigation bullet deleted: "~~Operations and maintenance training manuals, CIL, or checklist~~"

Noise and Vibration

EA Pages ES-22 and 3-67, 'Summary of Adverse Impacts and Mitigation Commitments for the Locally Preferred Alternative' tables, and EA Page 3-60 text:

Mitigation for noise temporary construction impacts on weekends: "Construction noise limited on weekends between 5 p.m. ~~9 p.m.~~ and 8 a.m. to ordinance thresholds."

Utilities and Infrastructure

EA Page 3-61:

Characterization of utilities: "Most of tThe utilities under 16th Street were renewed during the construction of the Mall completed in 1982; water and steam lines were not renewed."

Transit Operations

The EA stated that ridership loss on the Free MallRide during construction would result in a loss of FTA operational grant funds associated with fixed-guideway funding. These statements are incorrect, as FTA’s fixed-guideway funding would not be affected by temporary, construction-related ridership loss, and the following text is corrected accordingly.

EA Pages ES-28 and 4-15, ‘Summary of Adverse Impacts and Mitigation Commitments for the Locally Preferred Alternative’ tables:

Temporary Construction Impacts: ~~“FTA grant funding loss: \$75,000 to \$500,000 per year”~~

EA Page 4-9, Section 4.1 Transit Operations, text in paragraph 3 (construction option 1):

~~“This option is anticipated to result in a potential loss of 15 to 20 percent of total would result in a negligible loss of FTA operational grant funds associated with fixed-guideway funding, because the ridership reduction would be considered a temporary, construction-related reduction, which does not affect grant funds estimated at \$75,000 to \$100,000 annually. This is directly proportionate to the projected losses in annual ridership.”~~

EA Page 4-9, Section 4.1 Transit Operations, text in paragraph 6 (construction option 2):

~~“Because of the assumed 3-year timeline, the construction cost, ridership loss, or FTA fixed-guideway funding and mitigation cost for replacement transit service are also assumed to be somewhat more favorable than Option 1.”~~

EA Page 4-10, Section 4.1 Transit Operations, Table 4-5 ‘Summary of Impacts by Phasing Option,’ ‘FTA Grant Funding’ column:

Option	FTA Grant Funding ^b
1	<u>Negligible loss \$75,000 to \$100,000</u>
2	<u>Negligible loss \$75,000 to \$100,000</u>
3	<u>Negligible loss Up to \$200,000/year</u>
4A	<u>Negligible loss \$500,000/year</u>
4B	<u>Negligible loss \$500,000/year</u>

^b ~~FTA grant funds are not affected by temporary, construction-related ridership reductions. RTD receives \$500,000 per year from FTA for fixed-guideway funding.~~

EA Page 4-11, Section 4.1 Transit Operations, last sentence of paragraph 4 (construction option 3):

~~“Possible losses of FTA operating funds for fixed-guideway transit with detours could be as much as \$200,000 per year.”~~

EA Page 4-12, Section 4.1 Transit Operations, last sentence of paragraph 2 (construction option 4):

~~“In addition, none of the Free MallRide fixed guideway passenger miles would be eligible for FTA operational funding, resulting in a loss of approximately \$500,000 per year in assistance.”~~

Section 106 Consultation

EA Page 5-3:

Organizations participating in the Section 106 consultation process:

- LoDo District, Inc.
- ~~Lower Downtown Historic District~~

Clarifications and Updates to the EA

The following clarifications and updates to the EA resulted from public and agency comments on the EA and subsequent agency and public coordination. Clarifications and updates to the ‘Summary of Adverse Impacts and Mitigation Commitments for the Locally Preferred Alternative’ table are also reflected in Appendix B, Mitigation Measures, of the *16th Street Mall Alternatives Analysis and Environmental Clearance FONSI*, issued by FTA in November 2019.

Purpose and Need

EA Page 1-5, a new sentence is added to the last paragraph as follows:

“The original planting of two monocultures on the Mall contributed to death of the red oaks on the asymmetrical blocks, as insect disease moved from one tree to the next without species breaks between trees.”

LPA

EA Page 2-12, Section 2.4.1.3 Trees and Tree Infrastructure, is clarified as follows:

“The LPA would remove the existing trees and replace them with a variety of tree species that fit within the context of the design and thrive in Colorado’s climate. Tree placement would honor the existing character of the Mall by retaining geometric and spatial relationships and the colors and aesthetic qualities of the existing tree species. The original monoculture design of red oak trees on the asymmetrical blocks and honey locusts on the symmetrical blocks would be replicated as closely as possible ~~while maintaining current CCD tree diversity standards, which require multiple tree species to be planted in a single block.~~ CCD’s tree diversity standards prevent single-species diseases from destroying entire blocks of trees, such as the disease that killed the majority of red oak trees on the Mall. New trees would be installed in a variety of tree species that come closer to meeting CCD forestry requirements for tree diversity than the current monoculture on the Mall, but do not fully meet CCD’s requirements for good overall diversity of tree species to avoid preventable loss due to disease and insect issues. Due to the need to plant trees similar to the historical design intent, new tree species are limited to trees with similar structure or

leaf color, which do not fully meet CCD requirements. ~~Tree species have been selected using both current CCD forestry requirements and similar criteria to those used to select tree species during design of the original Mall.~~

The LPA would also remove the existing tree boxes with 300-cubic-foot soil capacity and replace them with new suspended tree infrastructure that provides approximately three times more 1,000 cubic feet of soil volume than the current tree infrastructure, such as a silva cell or equivalent system. The exact soil volume and suspended tree system will be determined during subsequent design phases. Landscape irrigation would be removed and replaced. CCD and DDP will be responsible for providing regular maintenance to ensure tree health on the Mall.”

Comments received from the public on the EA indicate uncertainty over the ability of the textured changes in the pavement to assist visually impaired users. In response to these comments, EA Page 2-12, Section 2.4.1.4 Edge Delineation, text in paragraph 2 is clarified as follows:

“Outreach with the ~~ADA/Disability Advisory Committee~~ disabled community will be conducted as part of the mitigation for this project during a subsequent design phase and will determine the viability of textured pavement in wayfinding for visually impaired users and what the material and contrast will be for the truncated domes and directional indicators.”

EA Page 2-14, Section 2.4.1.7 Lighting, Signage, and Furnishings is clarified as follows:

“The existing lighting on the Mall was replicated and replaced in 2016. The LPA would reuse the existing lighting or manufacture new fixtures that are replicas of the historic globe light fixtures, as well as provide additional lighting, as needed. New pole-based lighting fixtures would replicate the existing light fixtures. Other types of light fixtures could be incorporated into the design using CPTED principles.

EA Page 2-15, Section 2.4.1.8 Changes to Cross Streets, new text is added to the end of the section as follows:

“The LPA may install or move bus stops at cross-streets. Current bus stop locations being considered for alterations are Tremont, Glenarm, California, Stout, Champa, and Curtis. The proposed bus stops may be flag stops or bus islands.”

Resource Impacts

EA Page 3-32, Section 3.2 Cultural Resources, is updated to reflect the executed Section 106 Programmatic Agreement (PA). A new paragraph is added at the bottom of the page stating:

The Programmatic Agreement executed on September 18, 2019 and included in Appendix C of the *16th Street Mall Alternatives Analysis and Environmental Clearance FONSI*, issued by FTA in November 2019 includes design commitments to retain historic materials and design concepts.

Additionally, several of the LPA design commitments listed on EA Page 3-32 are revised in accordance with the executed PA, as follows:

- Retain ~~the existing~~ two-way transit way service along the Mall.
- Maintain ~~spatial relationship between~~ alternating trees and light standards within rows.
- Retain a granite paver surface in ~~the same~~ similar three colors as the original design.
- ~~Retain permeability of pedestrians throughout each block~~
- ~~Minor changes to the overall pattern of the granite pavers from existing design.~~

EA Page 3-39, Section 3.3 Visual and Aesthetic Resources, last paragraph is clarified as follows:

“Material and design considerations for the LPA included durability and longevity, specifically in pavement and tree selection. This is particularly important for the vertical, strongest visual element – the trees. The LPA proposes to remove the existing 143 trees and plant two rows of trees on symmetrical blocks and three rows of trees on the asymmetrical blocks (approximately 1.5 times more trees than the original design on these blocks) ~~249 trees between Market Street and Broadway~~, for a total estimated canopy of 58,000 square feet in 10 years. There is currently approximately 95,000 estimated square feet of existing tree canopy between Market Street and Broadway. The LPA includes more trees than exist today, with the goal of expanding the tree canopy, in line with the CCD *2017 Outdoor Downtown Plan*. Ultimately, the Project would improve the tree canopy over existing conditions due to healthier trees with a larger tree canopy and an additional row of trees on five of the blocks. Tree removal and planting would be consistent with Denver’s Executive Order 123, Chapter 8, City Tree Preservation requirements.”

EA Page 3-40, Section 3.3 Visual and Aesthetic Resources, paragraph 2 is clarified as follows:

“The trees proposed (listed in Attachment A of the *Visual and Aesthetic Resources Assessment* in Appendix B) are ~~both~~ adaptable to the urban environment conditions, ~~including heavy pruning, and are tall enough that they would~~ and will be maintained to not interfere with passing transit vehicles. The selected tree-types have a wide-spreading canopy and range in height from 30 to 50 feet high at maturity. Because of the improved tree infrastructure, ~~varied species consistent with Denver forestry standards,~~ and improved nursery practices for growing trees, the new trees are expected to be larger stronger and more vigorous than those previously planted.”

EA Page 3-52, Section 3.4 Public Safety and Security, text in paragraph 3 is clarified as follows:

“Transit operations within the Project limits would be disrupted when emergency, security or safety providers access the Mall, in the same way operations are disrupted under existing conditions on asymmetrical blocks. Police, emergency, and maintenance vehicles would no longer be able to park in the Mall medians as they do today, due to the removal of the medians. Transit operations can be configured block-by-block to facilitate space for emergency response service, as needed.”

EA Page 3-59, Section 3.5.3 Noise and Vibration; a new sentence is added to the last paragraph as follows:

“RTD may modify the noisemakers in the future to address accessibility concerns.”

EA Page 4-9, Section 4.1 Transit Operations, text in paragraphs 4–5 (construction option 2) is clarified to indicate the number of shuttle stops temporarily closed during construction would be one to three:

“The only change would be that ~~one two~~ to three shuttle stops would be temporarily closed to accommodate construction, and there would be disruption to the Mall pedestrian flow in the area where the work is being completed.

Considering the closure of ~~one two~~ to three stops and the general confusion associated with the single-lane bi-directional operation, the loss of ridership is estimated to be similar to the 15 to 20 percent associated with Option 1.”

EA Page 4-10, Section 4.1 Transit Operations, Table 4-5 ‘Summary of Impacts by Phasing Option,’ “Number of Stops (Mall)” column is revised as follows:

Option	Number of Stops (Mall)
1	No change
2	Reduced by 1 2 to 3
3	Reduced by 3 to 4
4A	All stops are removed from Mall
4B	All stops are removed from Mall

EA Page 4-11, Section 4.1 Transit Operations, paragraph 4 (construction option 3) is clarified as follows:

~~“While not designed for operation off the Mall because of their right hand driving position, the new electric shuttles could maneuver the required detour. It is assumed that the current number of electric shuttles would be sufficient to operate the detour, avoiding the need to purchase additional vehicles. The existing Mall shuttle buses may be temporarily taken out of service during the detour operation, and the Free MallRide service may be run using other buses during construction; the driver being on the right-hand side creates challenges for operating off the Mall and making turns from and to the Mall. However,~~
the need to supplement service on the Free MetroRide may also require additional buses.”

EA Page 4-17, Section 4.2 Traffic Operations, Table 4-7 is clarified as follows:

Table 4-7. Summary of Traffic Impacts by Construction Phasing Option

Option	Impacts to Parallel and Cross Street Operations	
		Impacts to Mall Deliveries
1	Negligible	Delivery times may be impacted
2	Negligible	Delivery times may be impacted

Option	Impacts to Parallel and Cross Street Operations	Impacts to Mall Deliveries
3	Increase in travel times during peak hours (<u>cross streets, 14th, 15th and 17th streets</u>)	Delivery times may be impacted, but for a shorter construction period
4A ^a	Increase in travel times during peak hours (<u>cross streets, 18th and 19th streets or 14th, 15th, and 17th streets</u>)	Delivery times may be impacted, but for a shorter construction period
4B ^b	More significant increase in travel times during peak hours; possible loss of on street parking (<u>cross streets (travel time increase only), 18th and 19th streets or 14th, 15th, and 17th streets</u>)	Delivery times may be impacted, but for a shorter construction period

^a Assumes that the Free MallRide detour operations would occur in mixed flow with general traffic.

^b Assumes that the Free MallRide detour operations would occur in a dedicated lane.

EA Page 4-18, Section 4.2 Traffic Operations, paragraph 5 is clarified as follows:

“The LPA and LPA Design Option are not anticipated to result in long-term impacts to traffic operations, as the current Free MallRide service plan would remain in place after Project construction, ~~and the operational characteristics of intersections of the Mall and cross streets will not change.~~ The new design of the intersections of the Mall and cross streets would slow vehicles crossing the Mall and turning onto the Mall, which would not affect traffic operations overall, but would improve pedestrian safety at intersections due to slightly slower vehicle speeds.”

EA Pages ES-28 and 4-15, ‘Summary of Adverse Impacts and Mitigation Commitments for the Locally Preferred Alternative’ tables – temporary ridership loss due to construction impacts is better explained in the text in Section 4.1 Transit Operations, and is deleted from the summary table:

Temporary construction impacts: ~~“Ridership loss along Mall and to the RTD System: 15 to 100 percent”~~

Summary of Adverse Impacts and Mitigation Commitments Tables

EA Pages ES-16 and 3-8, the Project Management Plan mitigation measure, Communication sub-bullet, found in Economic Conditions, is clarified as follows:

Communication: Communicate regularly with businesses, ~~and~~ property owners, and system users about the construction schedule.

EA Pages ES-18 and 3-33, mitigation in the Cultural Resources section regarding the Programmatic Agreement is updated as follows:

Measures to mitigate the adverse effect are detailed in the ~~draft~~ Programmatic Agreement (PA) executed on September 18, 2019 and included in Appendix C of the 16th Street Mall Alternatives Analysis and Environmental Clearance FONSI, issued by FTA in November 2019. ~~The PA includes and include~~ design commitments to retain historic materials and design concepts as well as outlines a process for developing mitigation in ongoing

consultation as the design progresses. ~~The Programmatic Agreement will need to be executed prior to completing a NEPA decision document, should FTA determine to approve the Project.~~

EA Pages ES-18 and 3-33, mitigation in the Cultural Resources section regarding the Unanticipated Discovery Plan for archaeological resources is clarified as follows:

The Unanticipated Discovery Plan included with the PA will be followed for archaeological resources and requires that activities be ceased and an appropriate course of action be determined with FTA and SHPO [State Historic Preservation Officer], if any resources are discovered during construction.

EA Pages ES-19, ES-30, 3-55, and 4-24, mitigation regarding Americans with Disabilities Act (ADA) compliance and coordination with the disabled community has been revised in the Public Safety and Security sections:

~~CCD, and RTD, and DDP~~ will conduct outreach to organizations representing the disabled community an ADA/Disability Advisory Committee during subsequent design phases to receive input on delineating features and other components of the Mall design related to accessibility.

EA Pages ES-19, ES-20, and 3-56, mitigation in the Public Safety and Security section regarding implementation of the FTA Safety and Security Certification process has been revised to reflect FTA's definitions of safety and security:

CCD, in coordination with RTD, will implement the FTA Safety and Security Certification process, which identifies and minimizes ~~threats to the public~~ intentional and unintentional harm to people, property and the environment during operation of the LPA.

CCD, in coordination with RTD, will implement the FTA Safety and Security Certification process, which identifies and minimizes ~~threats to the public~~ intentional and unintentional harm to people, property and the environment during construction.

EA Pages ES-19 and 3-55, a new impact is added under the Public Safety and Security "Direct Impacts" heading to reflect the clarified text, described above, in EA Page 3-52 paragraph 3:

Police, emergency, and maintenance vehicles no longer able to park in medians.

EA Pages ES-20, 3-52 at the end of paragraph 3, and 3-56, a new mitigation commitment for direct impacts is added in the Public Safety and Security section to address the impact of police, emergency, and maintenance vehicles no longer being able to park in the medians on the Mall, as follows:

CCD will coordinate with RTD, DDP, and the Denver Police Department during subsequent design phases to explore options for the parking of police, emergency, and maintenance vehicles as necessary for ongoing operations on the Mall.

EA Pages ES-23 and 3-68, air quality construction mitigation is revised as follows:

CCD will ensure the contractor submits an Air Pollutant Emissions Notice and is in compliance with federal and state air quality standards for fugitive dust control, as

required in *CCD Standard Specifications for Construction, General Contract Conditions* (2011). Examples of fugitive dust control measures that may be implemented are watering exposed soils and stockpile areas, and covering trucks hauling soil or fine materials.

EA Pages ES-28, ES-29, and 4-15, transit operations temporary construction impacts are clarified as follows:

- The range of impacts for the Free MallRide transit service options during construction are as follows:
 - Light rail service across the Mall: negligible to very limited impacts
 - Increase in travel time for Free MallRide and bus routes crossing the construction on the Mall: negligible to significant
 - Stops removed from the Mall: from ~~two one~~ to ~~three stops~~ to all stops removed
 - ~~Ridership loss along Mall and to the RTD System: 15 to 100 percent~~
 - ~~FTA grant funding loss: \$75,000 to \$500,000 per year~~
 - Impact to RTD users, including people with disabilities: ~~none~~ negligible to full interruption in direct Mall access via the Free MallRide
 - Impact to RTD fleet: ~~none to requirement for new bus acquisitions for detours~~ The existing Mall shuttle buses may be temporarily taken out of service as the driver being on the right-hand side creates challenges for operating off the Mall and making turns from and to the Mall
 - Free MallRide service may be run using other buses
 - Cost to provide transit service during construction: \$1.8 million to \$5.0 million per year, or temporarily reconfiguring bus operations through Downtown

EA Pages ES-30 and 4-24, mitigation regarding Americans with Disabilities Act (ADA) compliance and coordination with the disabled community has been revised in the pedestrian facilities section as follows:

~~CCD, and RTD, and DDP will~~ conduct outreach to organizations representing the disabled community meet with an ADA/Disability Advisory Committee during subsequent design phases to receive input on delineating features and other components of the Mall design related to accessibility. CCD and RTD will establish design criteria ~~during the preliminary design phase~~. CCD and RTD, in coordination with the contractor, will evaluate design elements like directional indicators and tactile warning strips during the final design phase prior to accepting the design for construction.

~~ADA access~~ Accommodations for people with disabilities will be included in RTD's Safety Certification Process.