



FHWA Colorado Division

Guidance for the Preparation of a FHWA

INTERSTATE ACCESS REQUEST

August 2001

Background:

The Federal Highway Administration (FHWA) has retained all approval rights to the control of access to the interstate system. This is necessary to protect the integrity of interstate system and the extensive investment associated with it. To obtain approval from FHWA to access the interstate a request for access, in conformance with this guidance, must be submitted to FHWA through the Colorado Department of Transportation (CDOT).

FHWA access approval is required when access on the interstate system is added or modified. This applies to all access changes on the interstate system regardless of funding and oversight. Each entrance or exit point, including “locked gate” and temporary construction access, to the mainline interstate is considered to be an access point. This guidance is limited to:

- New Interchanges

- Modifications to existing interchanges involving access control revisions for new ramps or relocation or elimination of existing ramps

Interchange reconfiguration is considered to be a change in access even though the number of actual points of access may not change; for example, replacing one of the direct ramps of a diamond interchange with a loop, or changing a cloverleaf interchange into a fully directional interchange is considered as revised access.

Access approval is a two-step process that was developed to help the state manage risk and provide flexibility. It is intended to identify fatal flaws and to help ensure the investment in the Environmental document is not wasted. The first step is a finding of operational and engineering “acceptability.” The second step is the final “approval.” Often these are done at the same time, however it is not necessary. The finding of operational and engineering acceptability is the most lengthy and time consuming of the two steps; it requires consideration of the eight policy points addressed hereinafter. All new partial interchanges, new interchanges in the transportation management area (TMA), as defined in 23 USC 134(i), and new or major modifications to Freeway to Freeway interchanges go to FHWA HQ in Washington, DC, for this determination of “acceptability.” Because both the Division Office and HQ review the document, this could be a lengthy process. Final approval is relatively quick once the operational and engineering acceptability has been determine.

The FHWA approval constitutes a federal action, and, as such, requires that National Environmental Policy Act (NEPA) procedures are followed. Compliance with the NEPA procedures need not precede the determination of engineering “acceptability.” However, final “approval” of access cannot precede the completion of NEPA. Once NEPA has been completed, “approval” of access is granted as long as no changes resulted to the “accepted” concept.

Access Request:

The access request must be submitted by CDOT to the FHWA Division Office regardless of who is initiating the request. Prior to submittal to FHWA the request shall be reviewed by CDOT Regional Traffic Office and the Region's access manager.

The request should be a stand-alone document. The referencing of information in other documents (Feasibility Study, Environmental Documents) is discouraged. The information from these documents should be provided in the appropriate section of the access request. Excerpts may be included as appendices.

It should consist of an introduction that describes the project and its need. The document should be clearly written for someone that is not familiar with the project, the area, or the state. Vicinity maps are very helpful. There are many cases where the request will be reviewed and approved by someone that is not familiar with the project or the area.

The request shall address the eight policy points italicized below. Some general guidance on what is expected is provided. Typically, the better access request packages have taken each requirement and dedicated a section of the request to illustrate how that requirement is met. Example: Chapter 1 is policy point 1 with its attachments.

Policy requirements:

1. *The existing interchanges and/or local roads and streets in the corridor can neither provide the necessary access nor be improved to satisfactorily accommodate the design-year traffic demands while at the same time providing the access intended by the proposal.*

Describe the proposed new or revised access and explain the need for the access point. Need must be established by showing: 1) that the current or future traffic cannot be accommodated by improvements to the existing roadway network and the existing interchanges/ramps, and 2) that the traffic demanding the new/revised access is regional traffic (longer trips) rather than local traffic circulation. Capacity required for local traffic (shorter trips) is not an adequate need explanation.

2. *All reasonable alternatives for design options, location and transportation system management type improvements (such as ramp metering, mass transit, and HOV facilities) have been assessed and provided for if currently justified, or provisions are included for accommodating such facilities if a future need is identified.*

Describe the different alternatives considered and why the selected alternative was chosen. This description should include why the layout for the selected alternative was chosen, include the other configurations and if something is prohibiting the use of an alternative design. (Example: Considered a flyover but jurisdictional wetlands prohibits its construction, a loop ramp was considered but it can't handle the volume of traffic required.) Cost is usually not the only reason, it plays in the decision but is not justification for a poor design.

Answer the question, why this design?

3. *The proposed access point does not have a significant adverse impact on the safety and operation of the Interstate facility based on an analysis of current and future traffic. The operational analysis for existing conditions shall, particularly in urbanized areas, include analysis of sections of Interstate to and including at least the first adjacent existing or proposed interchange on either side. Crossroads and other roads and streets shall be included in the analysis to the extent necessary to assure their ability to collect and distribute traffic to and from the interchange with new or revised access points.*

A traffic and operational analysis needs to be performed that includes an analysis of adjacent segments of the freeway as well as nearby existing and proposed interchanges. The results must demonstrate at year of implementation and design year the adequacy of:

- Freeway mainline

- Freeway weaving

- Freeway diverge

- Ramp merge

- Ramp/Crossroad intersection

- Crossroads and other local streets ability to effectively collect and distribute traffic from the new or revised interchange.

Analysis results should be presented in the request at critical points (e.g., weave, merge, diverge, accident sites, HOV lanes) along the affected section of Interstate (mainline and ramps) and on the surface street system for both the AM and PM. Show new congestion points which would be introduced by the proposal, and congestion points which should be improved or eliminated, any locations at which congestion is compounded, and any surface street conditions which would affect traffic entering or exiting the Interstate. This should be presented for existing, year of implementation, and design year.

The limits of the analysis on the Interstate shall at a minimum be through the adjacent interchanges on either side of the proposed access. In urban areas it is often necessary to consider the two adjacent interchanges in both directions. Distances to and projected impacts on adjacent interchanges should be provided in the request.

The limits of the analyses on the existing or improved surface street system will be the extent of the system necessary to show that the surface street system can safely and adequately handle any new traffic loads resulting from the new/revised access point.

The analysis at a minimum needs to be based on the current "Highway Capacity Manual" operational analysis procedures. If other procedures are used, include data sufficient and compatible with HCM to allow verification of the results using HCM procedures at the extent possible (see attached).

The request must contain Freeway mainline and crossroad/local street traffic volumes (ADT and DHV) including turning movements for current year, implementation year, and design year, and the number of mainline and crossroad lanes including auxiliary lanes or collector distributor roads.

The attached drawings LOS, Volume, Roadway Network are examples of graphics provided for a new interchange at 144th Ave. It should be noted how the analysis has extended beyond the minimum recommended adjacent interchange. This was done

because there are traffic impacts on 128th over three miles away caused by the access of 144th to I-25. They also serve as good examples of data presentation. These drawings were also provided for time of implementation and when compared against them it is very easy to access the impacts to the Interstate and the local street network.

An accident analysis must identify accident history and rates in the freeway section and surface streets affected and project the rates which will result from traffic flow and geometric conditions imposed by the proposed access.

4. *The proposed access connects to a public road only and will provide for all traffic movements. Less than “full interchanges” for special purposes access for transit vehicles, for HOV’s, or into park and ride lots may be considered on a case-by-case basis. The proposed access will be designed to meet or exceed current standards for Federal-aid projects on the Interstate System.*

It should be illustrated that the access connects to a public road and will provide all traffic movements. If a less than “full interchange” is being requested, justification must be provided. It must be shown why the missing traffic movements are not being provided and are not required.

If the interchange is being built in phases where there will be a time where a less than “full interchange” is provided, the phasing and operations should be described in detail.

5. *The proposal considers and is consistent with local and regional land use and transportation plans. Prior to final approval, all requests for new or revised access must be consistent with the metropolitan and/or statewide transportation plan, as appropriate, the applicable provisions of 23 CFR part 450 and the transportation conformity requirements of 40 CFR parts 51 and 93.*

The proposed new/revised access will affect adjacent land use and vice versa with respect to traffic demand generated. Therefore, the request, including transportation management strategies incorporated, shall reference and demonstrate the consistency of the proposed access with: land use plans, zoning controls and transportation ordinances, and regional and local transportation plans which include the proposal.

6. *In areas where the potential exists for future multiple interchange additions, all requests for new or revised access are supported by a comprehensive Interstate network study with recommendations that address all proposed and desired access within the context of a long-term plan.*

If the access request is occurring in a developing area or in an area that has the potential for future interchange additions, it should be shown how this access has been part of a comprehensive Interstate network study and is consistent with it. The request must demonstrate that the proposed new/revised access is compatible with other feasible new access points. A reference to the study and brief summary of the study and its recommendations should be provided. Do not attach the study.

7. *The request for a new or revised access generated by new or expanded development demonstrates appropriate coordination between the development and related or otherwise required transportation system improvements.*

When the request for a new or revised access is generated by new or expanded development, demonstrate appropriate coordination between the development and related or otherwise required transportation system improvements.

Show that those proposed new/revised access points driven by private development include commitments to complete the non-interchange improvements which are necessary for the interchange to work as proposed.

8. *The request for new or revised access contains information relative to the planning requirements and the status of the environmental processing of the proposal.*

The request should conform to the plan. The status of the environmental processing should include the type of environmental document and when it was signed. If it has not yet been signed, briefly describe the status and schedule of the document along with its anticipated completion.

Recommended Attachments:

Layout of interchange (existing and future)

Layout of interchange showing LOS and Traffic Volumes

HCS data output/ or output from software used for analysis for policy point

Recommendations to Expedite FHWA Approval

Attached illustrations are clear and cover an adequate area.

All information is provided in the request and it is a stand-alone document. The referencing of information in other documents is discouraged so the reviewer does not have to spend time reviewing other documents for required information (Feasibility Study, Environmental Documents).

Basic Information for Traffic Analysis of Added Access to Interstate

Note: Data must be sufficient so that FHWA can do independent analysis.

Sketch/Layouts, etc., to show relationship to adjacent interchanges and ramps along with lane configuration.

Distances between ramps.

Design speed.

Grades.

Truck percentages – mainline/ramps/other.

Adjacent factors (peak factor, etc.).

Traffic volumes – mainline, ramps, impacted intersections/roadways for each option (including no-build).

- a.m./p.m. peaks, ADTs
- current (open to traffic) and design year

Traffic analysis (minimum – HCM procedures)

- mainline/ramp capacities
- weave sections
- merge diverge checkpoints (including adjacent interchanges)
- impacted intersections/roadways capacity

Specific situations may require additional information. In urban area with closely spaced interchanges, it may be necessary to go beyond the adjacent interchanges.

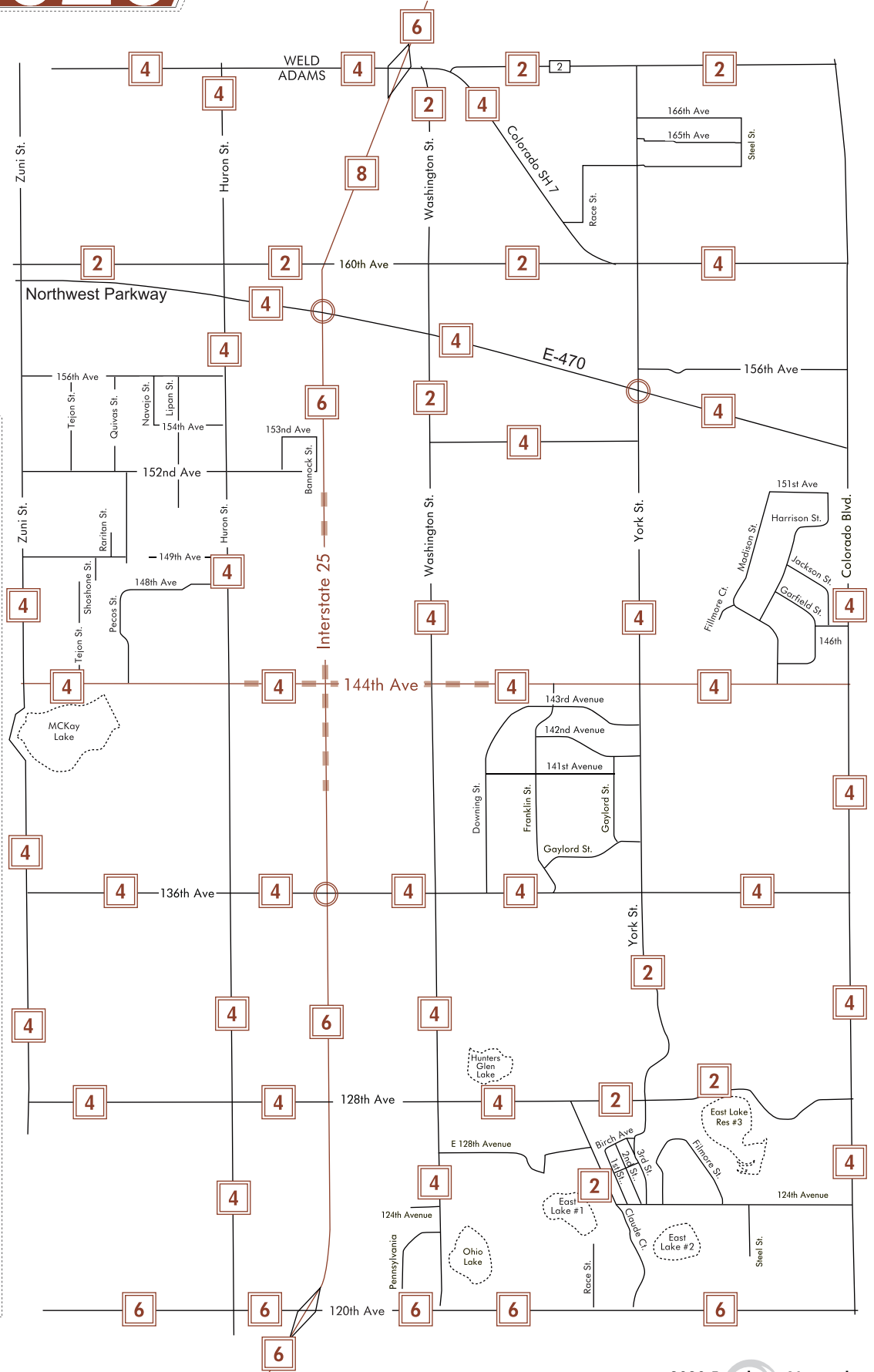
2020 Roadway Network

Legend



 Number of Lanes
(Two-way total)

 Future Interchange

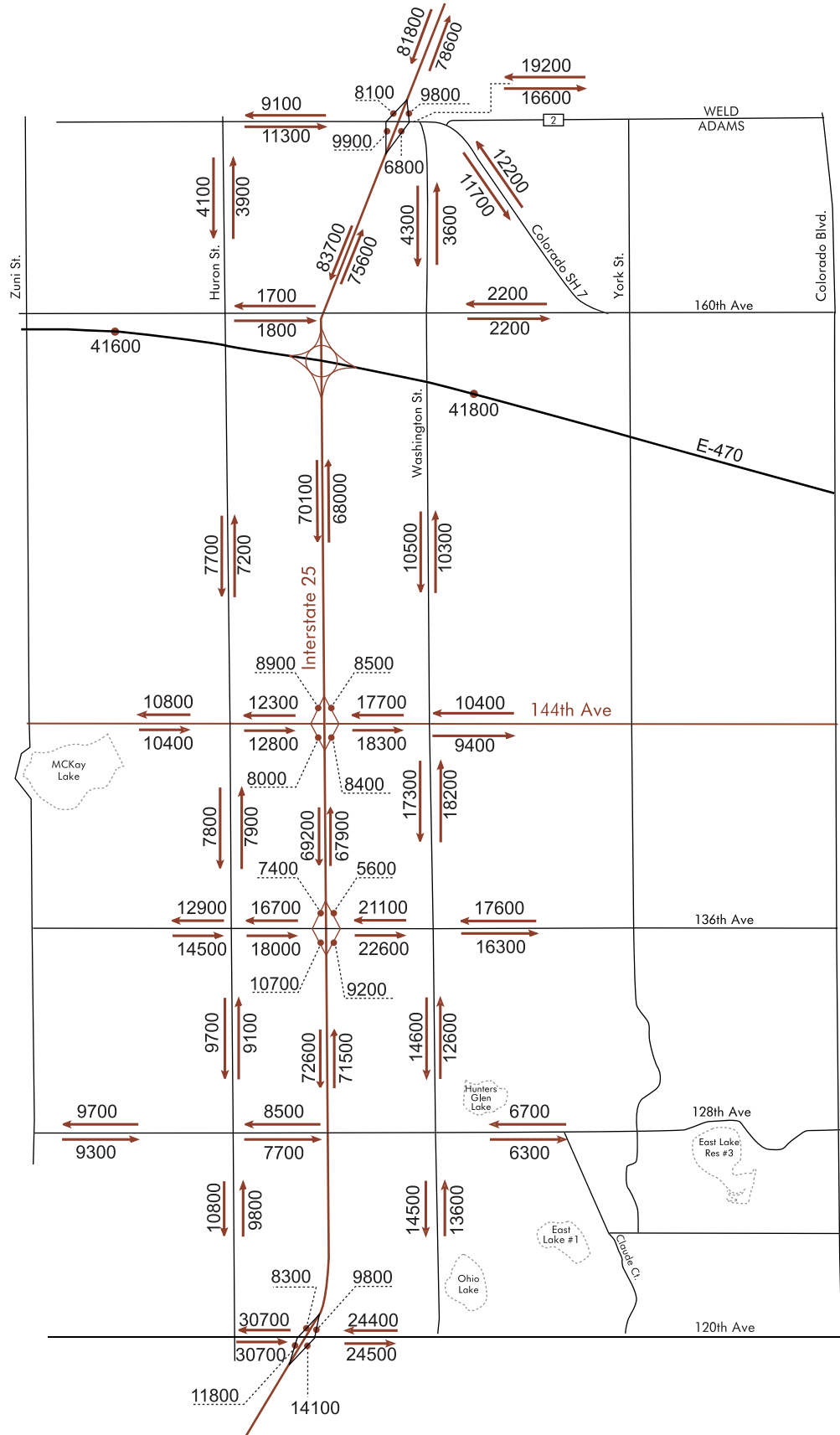


2020 Build Daily Traffic

Legend



One-way
Daily Volume



Build Peak Hour Level of Service

Legend



Freeway Design
Hour LOS



Merge/Diverge
Design Hour LOS



Intersection
AM/PM Peak
Hour LOS

