



Title		Policy No.
<b>Process for New or Revised Interchanges</b>		<b>500.15</b>
Responsible Office		Related Policies and Procedures
Office of Location and Environment Office of Systems Planning		
Effective/Revision Dates	Approval(s)	
7-17-02/ 1-25-07	Kevin M. Mahoney Neil Volmer	

**Authority:** Directors of the Highway Division and the Planning and Programming Division.

**Contents:** This policy sets out the process to be used to obtain approval to add or revise access points (interchanges) to interstate and other Priority I highways.

**Affected Offices:** All Highway Division Offices and District Offices; Office of Systems Planning.

**Who to Contact for Policy Questions:** Director of the Highway Division or the Office of Systems Planning.

**Definitions:**

Access – For the purposes of an IJR and this policy and procedure, an access is any entrance or exit point (including locked gate access) to the mainline. (See **Section II.**)

District – Any of the DOT's six Highway Division districts.

DOT – Iowa Department of Transportation.

FHWA – Federal Highway Administration.

IJR – Interchange Justification Report.

Interchange – A system that provides for the movement of traffic between intersecting roadways via one or more grade separations.

Interstate – A highway that is part of the Dwight D. Eisenhower National System of Interstate and Defense Highways.

LOS – Level of Service. LOS is a qualitative measure describing operational conditions within a traffic stream, based on service measures such as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience (definition from the *Highway Capacity Manual* 2000, Chapter 5, Glossary). LOS "A" is the best and LOS "F" is the worst.

LRTP – Long Range Transportation Plan adopted by the DOT, a Metropolitan Planning Organization or a Regional Planning Affiliation. For the purposes of an IJR and this policy and procedure, only the currently approved LRTP will be considered.

MPO – Metropolitan Planning Organization.

NEPA – National Environmental Policy Act of 1969, as amended.

PMT – Project Management Team.

Priority I Highway – A primary road (interstate or non-interstate) constructed as a fully controlled access highway. Permanent access to the facility is allowed only at interchange locations. No permanent at-grade access is allowed.

Requesting Agency – The public road jurisdiction (state, county, or city) requesting a change in access to a Priority I highway.

RPA – Regional Planning Affiliation.

**Forms:** None.

**Policy and Procedure:**

**I. Introduction**

- A. Under ideal conditions, traffic on a fully controlled access highway operates at a high level of service. Limiting access to the facility is a major contributing factor in maintaining this high level of service.

This policy establishes a process for obtaining approval to add a new interchange or to modify an existing interchange on a Priority I highway. Central to this process is the preparation, review and approval of an **Interchange Justification Report (IJR)**. An IJR should document the inability of the current roadway system in the vicinity of the proposed access revision to accommodate, or be improved to accommodate, the projected traffic and how the proposed new or modified interchange will resolve the problem. An IJR should also determine if the proposed new or modified interchange would adversely affect the safety and operation of the highway. In general, IJR's should not be developed until the interchange project is identified in and is consistent with an approved LRTP.

For interstate highways, FHWA approval of the final IJR is required (see **Appendix A** for FHWA's policy statement).

Approval of IJR's for non-interstate primary roads that are, or are targeted to be, Priority I highway corridors is explained in **Section B.** below.

- B. Sections II. through V. and the appendices of this policy and procedure are written to apply specifically to interstate highways. However, they also apply to non-interstate primary roads that are Priority I highways with the following modifications:
- FHWA approval of the IJR is not required. However, the FHWA's Iowa Division Office should be provided the opportunity to be involved in the process for all National Highway System projects where the FHWA may have oversight.
  - Substitute the phrase "Priority 1 non-interstate highway" for "interstate highway" and substitute the phrase "District Engineer" for "FHWA" throughout this policy whenever this policy is used to develop an IJR for a non-interstate facility.
  - The Director of the Highway Division in coordination with the District Engineer and the Director of the Planning and Programming Division are responsible for final approval of IJR's for non-interstate Priority I projects.

Note: All federal environmental requirements must be satisfied when required.

## II. Need for IJR

An IJR must be prepared and approved for any new or revised access point to the interstate system in Iowa, regardless of the project funding source. For the purpose of applying these IJR procedures, each entrance or exit point (including locked gate access) to the mainline is considered to be an access point. For example, a diamond interchange configuration has four access points.

Generally, revised access to an interstate highway is considered to be a change in an existing interchange ramp configuration, even though the number of points of access may not change. Replacing one of the direct ramps of a diamond interchange with a loop, or changing a cloverleaf interchange into a fully directional interchange, are examples of access revisions.

The following new or revised access points require FHWA approval under these procedures:

- New interstate-to-interstate interchange
- Major modification of interstate-to-interstate interchange configuration; e.g., adding new ramps, abandoning/removing ramps, completing basic movements
- New partial interchange or new ramps to/from a continuous frontage road, resulting in a partial interchange
- New interstate-to-crossroad interchange
- Modification of existing interstate-to-crossroad interchange configuration
- Completion of basic movements at an existing partial interchange
- Abandonment of ramps or interchanges
- Locked gate access

On a case-by-case basis, minor modifications to access points shall be reviewed with the District Engineer and FHWA, and file documentation shall be provided to all affected offices. An example of this would be capacity improvements or geometric modifications at side roads or ramp intersections.

## III. IJR Development and DOT Approval Process

What follows is the basic framework for IJR development in Iowa. A flow chart detailing this procedure is shown in **Appendix B**.

Generally, the level of effort required to complete an IJR will depend upon the location on the interstate system of the proposed access change. In a rural area, an IJR may be prepared in less time, with less data collection. Any proposed change in an urban area would require more data collection, research and time to document. The time required to create an IJR can vary; rural IJR's can take from 2-12 months while urban IJR's can take longer to complete. A table showing typical levels of effort required for different types of IJR's is shown in **Appendix C**.

The primary purpose of an IJR is to provide sufficient data and analysis to justify the recommended new or revised access point(s) on the interstate. The document should be organized in such a way that its focus is addressing each of FHWA's eight criteria. The document should clearly refer to and provide relevant data and analysis for each criterion. There may be an introduction, a general description, etc., but the core of the document should sequentially and directly address each of the eight criteria.

The procedure for creating IJR's in Iowa is divided into two phases:

- In Phase 1, the DOT reviews a Letter of Request from the Requesting Agency. This review is intended to identify problems early and to convey to the Requesting Agency the level of analysis needed to satisfy FHWA's eight IJR criteria.
- In Phase 2, the Requesting Agency collects data and prepares an IJR. The DOT reviews the IJR and, if it approves the document, submits it to the FHWA.

#### A. Phase 1

**Note: For IJR's requested by the DOT, skip Phase 1 and move to Phase 2.**

Letter of Request. To initiate the process, the Requesting Agency must send a Letter of Request to the District Engineer for the DOT district in which the proposed project is located. In order to qualify as a Requesting Agency, the requester must have public road jurisdictional authority, i.e., city, county or state. The District Engineer shall forward the request to the District Transportation Planner. The District Transportation Planner shall review the request to determine if it is complete.

Issues to be Addressed in Request. A complete request must address the following issues:

- Location
- Purpose and need
- Project development and construction schedule
- Funding strategy
- Logical termini of the project
- Compatibility with the existing and future road network
- Coordination with and support from the local government and the respective MPO/RPA

District Transportation Planner Review. If the District Transportation Planner determines that the request is incomplete, the District Transportation Planner shall return it (forwarded through the District Engineer) to the Requesting Agency, with an explanation of issues or concerns that made the request incomplete. If the District Transportation Planner determines that the request is complete, the District Transportation Planner shall form and chair an Advisory Group.

Advisory Group Makeup. Members of the Advisory Group typically include staff from:

- District Office
- Office of Design
- Office of Systems Planning
- Office of Traffic and Safety
- Office of Location and Environment
- FHWA
- MPO/RPA

Others may be included depending on the nature of the request.

Advisory Group Review. The Advisory Group shall review the request to determine how well the request addresses the issues listed above. From this analysis, the Advisory Group shall then evaluate the request based upon the following three criteria:

- Long Range Transportation Plan (LRTP) – Is the project identified in and consistent with the current corresponding LRTP?

- Funding Plan – Are logical funding sources identified? (This is a basic list of potential funding sources; none are necessarily committed at this point.)
- Basic Concept and Design – Is this a feasible project? Will interchange spacing criteria be met?

Following review of the request, the Advisory Group shall provide a written response (forwarded through the District Engineer) to the Requesting Agency. If the Advisory Group determines that the request does not satisfactorily address all three criteria, the Requesting Agency may either discontinue the request or address the shortcomings and begin the Phase 1 review again.

If the Advisory Group determines that the request satisfactorily addresses the three criteria, the process continues to Phase 2.

## **B. Phase 2**

In Phase 2, the Requesting Agency undertakes the necessary data collection and studies and prepares the IJR. The key area of focus is meeting the FHWA criteria for IJR's (see **Section III.C.** below).

Advisory Group/PMT. When the DOT is not the Requesting Agency, the Advisory Group shall continue from Phase 1 to Phase 2. The makeup of the group may either remain the same as in Phase 1 to provide continuity or may be modified if specific expertise is needed.

When the DOT is the Requesting Agency, the District Transportation Planner shall form and chair a Project Management Team (PMT) consisting of the District Office; the Offices of Design, Systems Planning, Traffic and Safety, and Location and Environment; and the FHWA. Others may be included as appropriate.

Communication. This phase requires a certain degree of communication between the Requesting Agency and the Advisory Group/PMT. It is important that the submittal to FHWA be as comprehensive as possible, especially when addressing the FHWA's IJR criteria. The Advisory Group/PMT's main function during Phase 2 is to provide guidance and definition to the Requesting Agency. The Advisory Group/PMT shall be available for consultation and progress review throughout the entire Phase 2 process.

Communication concerning the level of analysis required to satisfy FHWA's eight IJR criteria is critical. Prior to beginning Phase 2, the Requesting Agency shall discuss in detail the required level of analysis with the Advisory Group/PMT and the Office of Systems Planning. The discussion shall also identify any potential environmental issues serious enough to modify or stop the project.

Submission of Preliminary IJR. Once work on an IJR progresses to the point where a preliminary report is produced, the Requesting Agency shall submit the report to the District Transportation Planner.

Advisory Group/PMT Review. The District Transportation Planner shall convene the Advisory Group/PMT to review the Requesting Agency's preliminary report. Following review of the report, the Advisory Group/PMT shall provide a written response (forwarded through the District Engineer) to the Requesting Agency. If the Advisory Group/PMT determines that the IJR needs more work, the response shall include an explanation of the issues or concerns that make the report incomplete.

Submission of IJR. If the Advisory Group/PMT determines that the IJR is satisfactory, the Requesting Agency shall finalize the IJR and formally submit it to the District Engineer. The District Engineer shall submit the IJR for review to the DOT's Project Review Committee. An IJR shall be provided to the Transportation Commission only if so directed by the Director of the Highway Division. The District Engineer shall then submit the IJR to the FHWA for approval. An IJR which is not endorsed by the DOT should not be submitted to the FHWA.

### C. **IJR Criteria**

Following is a list of the eight FHWA criteria for IJR, and a discussion of the information that should be included in the IJR to address each criterion:

- 1. FHWA policy states: 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.**

Discussion: It should be demonstrated that an access point will satisfy regional traffic needs and will not be a substitute for reasonable improvements or additions to the local municipal street, secondary road or primary highway system. The interstate highway should function as a route carrying longer-distance interregional traffic and should not be allowed to become a substitute for a well-planned and developed local street and highway system designed to handle local traffic circulation.

If a new interchange or a new ramp is being considered, it should be demonstrated that existing or possible future roads or streets generally parallel to the interstate facility cannot not be used or improved to provide the access intended by the proposal in lieu of adding a new interchange or ramp.

- 2. FHWA policy states: 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.**

Discussion: It should be demonstrated that all reasonable design alternatives (interchange configurations, ramp designs, etc.) have been assessed, all reasonable interchange locations have been considered and assessed, and all nondesign-type alternative modal solutions, such as mass transit and other travel demand management-type improvements, have been assessed.

- 3. FHWA policy states: 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 an analysis of sections of interstate to and including at least the first adjacent 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.**

Discussion: The response to this criterion will in most cases be technical, consisting of traffic forecasts, capacity and operational analysis, and accident data and analysis.

The extent and complexity of the analyses will vary, depending on the nature and location of the new or revised access. Responses will range from straightforward capacity analysis for a rural interchange, to a complex operational analysis for multiple system interchanges in an urban area using MPO travel demand models and traffic operations models. In urban areas, it may be necessary to carry out traffic analyses on a system-wide basis, expanding the traffic model to the point where traffic on the interstate is undisturbed by the proposed access.

The Advisory Group/PMT shall advise the Requesting Agency of the level of analysis needed for the IJR. A more detailed list of potential requirements for responding to this criterion is described in **Appendix D** of this policy.

4. **FHWA policy states: The proposed access connects to a public road only and will provide for all traffic movements. Less than "full interchanges" for special purpose access for transit vehicles, for HOVs, 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.**

Discussion: With very few exceptions, all proposed new or revised interchanges shall provide for all turning movements. Exceptions will be determined on a case-by-case basis. Special purpose accesses for HOVs, transit vehicles, park and ride lots or locked gate access should be treated as special cases, and the movements to be provided will be decided on a case-by-case basis.

5. **FHWA policy states: 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 transportation conformity requirements of 40 CFR parts 51 and 93.**

Discussion: The IJR must include a statement of consistency from the appropriate MPO/RPA, asserting that the proposed new or revised access considers and is consistent with its respective long-range land use and transportation plans. The request must include a discussion of how the proposed new or revised access fits into the overall long-range plans for the area. Any proposal must be considered in view of currently known plans for transportation facilities and land use. This is especially important when several new or revised interchanges are anticipated.

6. **FHWA policy states: 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.**

Discussion: If there are other proposed new or revised interchanges adjacent to or in close proximity to the new or revised interchange being considered, all proposed changes in access should be analyzed as a system at the same time. In an urbanized area, the MPO traffic models should be used to conduct a comprehensive traffic study of the multiple interchanges being considered.

7. **FHWA policy states: 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.**

Discussion: The ability of a proposed new or revised interchange to function as planned may depend on the implementation of related non-interstate improvements to the local transportation system. This may include, for example, construction or widening of connecting streets, parallel routes, and intersection improvements including turn lanes and signalization, or other construction or traffic engineering projects necessary to make the added or revised access fully functional. State, city or county sponsors of new or revised interchange access requests are required to demonstrate coordination of the proposed new or revised interchange project with all such related projects. It should be demonstrated that the public or private entities responsible for construction of those related projects are fiscally capable of completing the projects in a timely manner.

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

Discussion: Information relative to the status of the planning and NEPA processes with regard to the access request should be reported. This includes, but is not limited to: anticipated schedule dates, public hearing dates, public support or opposition, recent activities, and future activities. It is expected that the NEPA process will be underway at this point.

#### **IV. FHWA Approval of IJR**

FHWA approvals for IJR are conditional upon compliance with all applicable federal rules and regulations including the NEPA process. Because FHWA approval constitutes a federal action, NEPA guidelines must be followed for the development of the proposed new or revised access. Following approval of the IJR by the DOT and FHWA, NEPA procedures must be completed as part of the normal project development process.

IJR are approved at either the FHWA Iowa Division Office level or at the FHWA Washington, D.C., Office level, depending on the type of access change being requested.

FHWA Iowa Division Office Level. The FHWA Iowa Division Office approves IJR for the following types of interstate access revisions:

- New interstate-to-crossroad interchange not located in a Transportation Management Area (TMA\*)
- Modification of existing interstate-to-crossroad interchange configuration
- Completion of basic movements at existing partial interchanges
- Abandonment of ramps or interchanges
- Locked gate access

\* *A Transportation Management Area (TMA) is defined as an urbanized area with a current population of more than 200,000 as determined by the latest decennial census, or other area when the TMA designation is requested by the governor and the MPO (or affected local officials) and is officially designated by the administrators of the FHWA and the Federal Transit Administration. The following cities are part of TMAs in Iowa: Des Moines (Des Moines Area Metropolitan Planning Organization), Council Bluffs (Metropolitan Area Planning Agency), and Davenport (Bi-State Regional Planning Commission).*

FHWA Washington, D.C., Office Level. The FHWA Washington, D.C., Office approves IJR for the following types of interstate access revisions:

- New interstate-to-interstate interchange
- Major modification of interstate-to-interstate interchange configuration
- New partial interchange or new ramps to/from continuous frontage road that create a partial interchange
- New interstate-to-crossroad interchange located in a TMA

When approval is required from the FHWA Washington, D.C., Office, the District Engineer shall submit the IJR to the FHWA Iowa Division Office for coordination with the FHWA Washington, D.C., Office. Advance coordination with the Washington Office may be necessary and appropriate on complex or controversial projects, especially during the project's environmental phase. In these cases, the DOT should coordinate directly with the FHWA Iowa Division Office.

Effects on the Life Span of an IJR Approval. As noted in **Section I., Introduction**, an IJR generally should not be processed until the project has been identified in and is consistent with an approved LRTP. However, should construction be delayed, an FHWA-approved IJR would remain valid unless either the project concept has changed or the conditions in the area of the proposed new or revised access have changed. Conditions which could change include, but are not limited to, adoption of an updated LRTP, changes to the interstate route beyond the location of the proposed access that could affect the operation of the proposed access, the introduction of unanticipated new traffic generators that impact traffic in the access area, or simply the passage of time requiring that the analysis and inputs be verified or updated. If it is possible that any condition has changed, the IJR requester should contact the District Engineer to determine if a new IJR approval by the FHWA is required.

## **V. Future Actions**

Upon IJR approval by the FHWA, project development may begin, with the respective District Office taking the lead for an Iowa DOT-initiated project, or monitoring the development of a locally initiated project. Other actions include, but are not limited to:

- Programming and funding
- Environmental documentation (note: the NEPA process must be completed prior to final design or right of way acquisition)
- Design
- FHWA project authorization
- Right of way acquisition

## Appendix A

### FHWA Policy Statement Additional Interchanges to the Interstate System

The following *Notice of Policy Statement* was published in the Federal Register on February 11, 1998 (pages 7045 to 7047). The policy may also be found on the FHWA's Web site at <http://www.fhwa.dot.gov/legsregs/directives/fapg/access.htm>.

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SUMMARY: This document issues a revision of the FHWA policy statement regarding requests for added access to the existing Interstate System. The policy includes guidance for the justification and documentation needed for requests to add access (interchanges and ramps) to the existing Interstate System. The policy statement was originally issued in the Federal Register on October 22, 1990 (55 FR 42670).

DATES: The effective date of this policy is February 11, 1998.

FOR FURTHER INFORMATION CONTACT: (omitted)

SUPPLEMENTARY INFORMATION:

#### Background

Section 111 of title 23, U.S.C., provides that all agreements between the Secretary and the State highway department for the construction of projects on the Interstate System shall contain a clause providing that the State will not add any points of access to, or exit from, the project in addition to those approved by the Secretary in the plans for such project, without the prior approval of the Secretary. The Secretary has delegated the authority to administer 23 U.S.C. 111 to the Federal Highway Administrator pursuant to 49 CFR 1.48(b)(10). A formal policy statement including guidance for justifying and documenting the need for additional access to the existing sections of the Interstate System was published in the Federal Register on October 22, 1990 (55 FR 42670).

The FHWA has adopted the AASHTO publication "A Policy on Design Standards--Interstate System" as its standard for projects on the Interstate System. This publication provides that access to the Interstate System shall be fully controlled by constructing grade separations at selected public crossroads and all railroad crossings. Where interchanges with selected public crossroads are constructed, access control must extend the full length of ramps and terminals on the crossroad.

Summary of Changes (omitted)

#### Policy

It is in the national interest to maintain the Interstate System to provide the highest level of service in terms of safety and mobility. Adequate control of access is critical to providing such service. Therefore, new or revised access points to the existing Interstate System should meet the following 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.
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.

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 an 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.
4. The proposed access connects to a public road only and will provide for all traffic movements. Less than "full interchanges" for special purpose 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.
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.
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.
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.
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.

#### Application

This policy is applicable to new or revised access points to existing Interstate facilities regardless of the funding of the original construction or regardless of the funding for the new access points. This includes routes incorporated into the Interstate System under the provisions of 23 U.S.C. 139(a) or other legislation. Routes approved as a future part of the Interstate System under 23 U.S.C. 139(b) represent a special case because they are not yet a part of the Interstate System and the policy contained herein does not apply. However, since the intention to add the route to the Interstate System has been formalized by agreement, any proposed access points, regardless of funding, must be coordinated with the FHWA Division Office.

This policy is not applicable to toll roads incorporated into the Interstate System, except for segments where Federal funds have been expended, or where the toll road section has been added to the Interstate System under the provisions of 23 U.S.C. 139(a).

For the purpose of applying this policy, each entrance or exit point, including "locked gate" access, to the mainline is considered to be an access point. For example, a diamond interchange configuration has four access points. Generally, revised access is considered to be a change in the interchange configuration 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 would be considered revised access for the purpose of applying this policy.

All requests for new or revised access points on completed Interstate highways must be closely coordinated with the planning and environmental processes. The FHWA approval constitutes a Federal action, and as such, requires that the National Environmental Policy Act (NEPA) procedures are followed. The NEPA procedures will be accomplished as part of the normal project development process and as a condition of the access approval. This means the final approval of access cannot precede the completion of the NEPA process. To offer maximum flexibility, however, any proposed access points can be submitted in accordance with the delegation of authority for a determination of engineering and operational acceptability prior to completion of the NEPA process. In this manner, the State highway agency can determine if a proposal is acceptable for inclusion as an alternative in the environmental process. This policy in no way alters the current NEPA implementing procedures as contained in 23 CFR part 771.

Although the justification and documentation procedures described in this policy can be applied to access requests for non-Interstate freeways or other access controlled highways, they are not required. However, applicable Federal rules and regulations, including NEPA procedures, must be followed.

#### Implementation

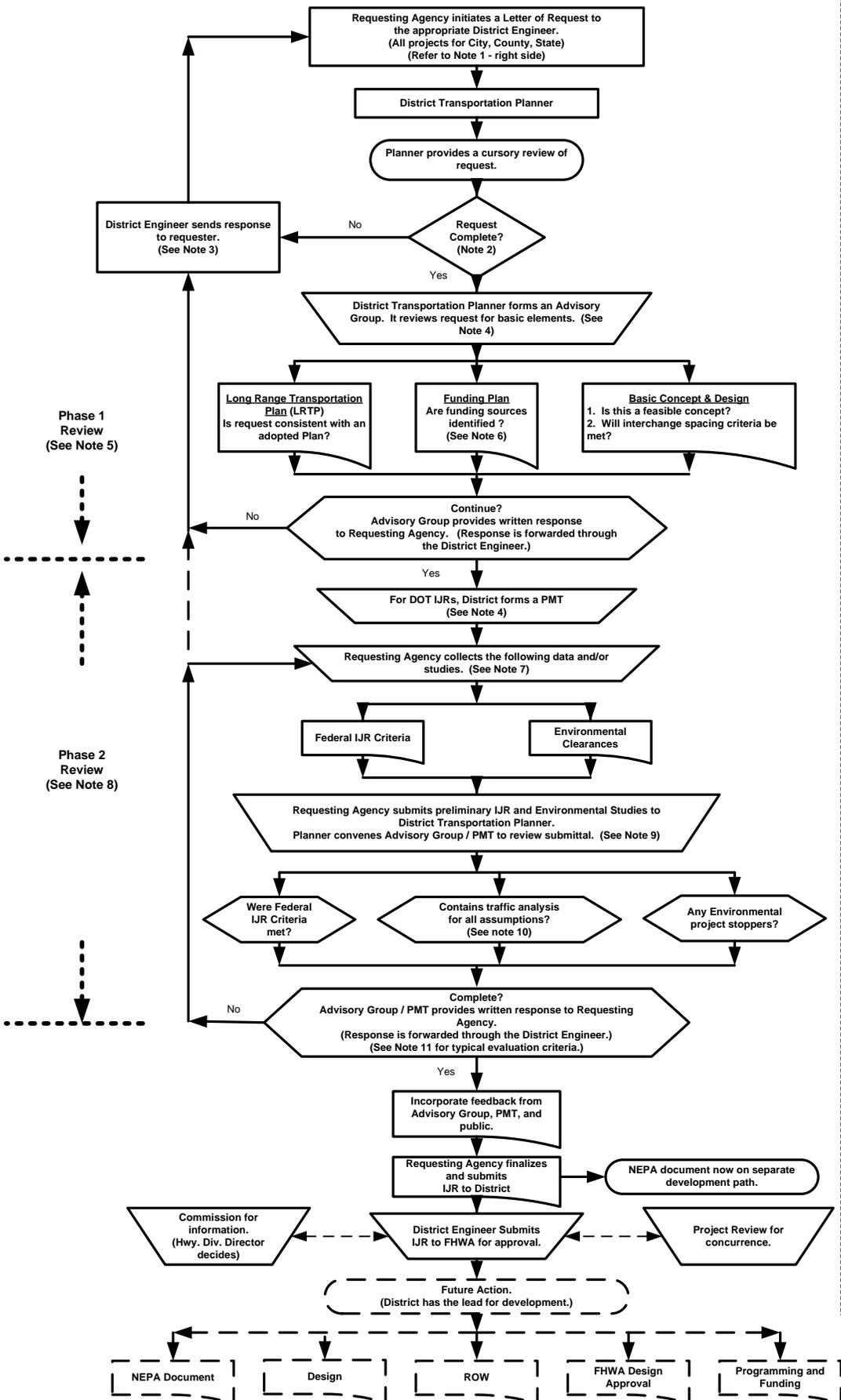
The FHWA Division Office will ensure that all requests for new or revised access submitted by the State highway agency for FHWA consideration contain sufficient information to allow the FHWA to independently evaluate the request and ensure that all pertinent factors and alternatives have been appropriately considered. The extent and format of the required justification and documentation should be developed jointly by the State highway agency and the FHWA to accommodate the operations of both agencies, and should also be consistent with the complexity and expected impact of the proposals. For example, information in support of isolated rural interchanges may not need to be as extensive as for a complex or potentially controversial interchange in an urban area. No specific documentation format or content is prescribed by this policy.

#### Policy Statement Impact

The policy statement, first published in the Federal Register on October 22, 1990 (55 FR 42670), describes the justification and documentation needed for requests to add or revise access to the existing Interstate System. The revisions made by this publication of the policy statement reflect the planning requirements of the ISTEA as implemented in 23 CFR part 450, clarify coordination between the access request and environmental processes, and update language at various locations. The States will have to take these factors into consideration when making future requests for new or revised access points, but the overall effort necessary for developing the request will not be significantly increased.

# Interchange Justification Report (IJR)

## Process to Add or Modify an Interchange on the Interstate System in Iowa



**Commentary:**

**Note 1**  
 • Requesting Agency must have Public Road jurisdictional authority.  
 • For DOT initiated projects, go directly to Phase 2.

**Note 2**  
Letter of Request contains proposed:  
 o Location  
 o Purpose & Need  
 o Project development & construction schedule  
 o Funding strategy  
 o Logical termini of the project  
 o Compatibility with existing & future road network  
 o Coordination with, and support from, local Government and RPA/MPO

**Note 3**  
Response letter addresses issues or concerns which made the submittal incomplete.

**Note 4**  
Advisory Group / PMT Members  
 District  
 Design  
 Systems Planning  
 Traffic & Safety  
 FHWA  
 Location & Environment  
 MPO/RPA (for Advisory Group only.)  
 Others as appropriate and as necessary to ensure good decisions are made.

**Note 5**  
Phase I Review is intended to identify early problems and to convey to the Requesting Agency the level of analysis needed.

**Note 6**  
Funding Plan is a basic listing of potential funding sources. None are necessarily committed at this point.

**Note 7**  
 As Requesting Agency / consultant collects data for analysis, communication takes place with the Advisory Group / PMT to ensure the desired analysis and level of detail are accomplished.

**Note 8**  
Phase 2 Review is to gather necessary support data and develop a draft IJR.

**Note 9**  
Advisory Group / PMT response is to give guidance and definition to Requesting Agency as to what is expected from the data gathering and preliminary design phase.

**Note 10**  
 Consultant traffic forecasting and traffic modeling shall be coordinated throughout the process with the Office of Systems Planning and the MPO (if appropriate).

**Note 11**  
 Fatal flaws would be identified at this point based on the following criteria.

Federal IJR Criteria  
 63 FR 7045-7047  
 Feb. 11, 1998

Environmental Clearances  
 23 CFR 450, 650, 710, 771, 772, 777  
 36 CFR 60, 61, 800  
 40 CFR 50, 93, 210, 1500  
 16 USC 407(f)  
 42 USC 7509  
 Executive Order 12898 (1994)  
 Iowa Code 314.23, .24  
 ASTM E1527, E1903

Advisory Group / PMT available for consultation and progress reviews.

## Appendix C

### Level of effort by IJR type

Type of Study		Types of IJR's			
		Rural		Urban (**)	
Category	Sub-Category	New	Modified	New	Modified
<b>1. Location</b>					
	Purpose & Need	X	X	X	X
	Compatible w/ LRTP	X		X	
	Land-Use (Existing & Future)	X	X	X	X
	Street and Road System (Existing & Future)	X	X	X	X
<b>2. Traffic Operations</b>					
	Traffic Forecast: Design Year (A)	X	X	X	X
	Level of Service: Design Year (A)	X	X	X	X
	Systems Analysis (Computer Modeling)			X	X (B)
	Highway Capacity Manual	X	X		X
<b>3. Traffic Safety</b>					
	Crash History (Location Specific)		X		X
	Crash Rates (System)		X		X
	Safety Benefits	X	X	X	X
<b>4. Environmental</b>					
	Air Quality Study			X	X
	Noise Study			X	X
	T & E Study	X	X	X	X
	Archaeology - 106	X	X	X	X
	Architecture - 106	X	X	X	X
	Wetlands Impacts	X	X	X	X
	Regulated Materials	X	X	X	X
	4 & 6 (f) Impacts	X	X	X	X
	Farm Land Impacts	X	X	X	X
<b>5. Engineering Feasibility</b>					
	ROW Impacts & Needs	X	X	X	X
	Interchange Spacing	X		X	
	Alignment	X	X	X	X
	Sight Distance	X	X	X	X
	Roadway X-Section	X	X	X	X
	Drainage	X	X	X	X
	Utility Accommodations	X	X	X	X
	Multi-Modal Accommodations	X	X	X	X
	Estimated Cost	X	X	X	X

X Denotes need for evaluation.

(A) May also involve traffic forecasts or LOS for opening-day on a case-by-case basis as established by Advisory Group/PMT.

(B) Computer modeling may be required depending upon level or complexity of modification.

(\*\*) "Urban" is defined as interchanges within an urban area boundary with greater than 50,000 population.

## Appendix D

### Detailed Guidance for Response to FHWA Criterion No. 3

Operational analysis should be conducted that sufficiently demonstrates that the new or revised access will not adversely affect traffic operations on the interstate facility. For consistency, the current Transportation Research Board *Highway Capacity Manual* analysis procedures (or equivalent procedures) should be used. The analysis should be extended along the mainline to include as many existing and future interchanges as necessary to establish the extent and scope of the impacts. This is critical in urban areas that may have relatively closely spaced interchanges (i.e., interchanges spaced at less than 3.2 km or 2 miles apart). The operational analysis should be conducted for a design year, which is at least 20 years after the date of construction of the proposed new or revised interchange project.

The operational analysis should include the following information as applicable:

1. Interchange Drawings. Scaled drawings of the design elements of the existing and revised interchanges should be provided, including (as applicable):
  - Project limits, adjacent interchange(s), added ramps, removed ramps, relocated ramp gores, interchange configuration, travel lanes and shoulder widths, ramp radii, mainline and ramp grades, acceleration lane lengths, deceleration lane lengths, taper lengths, auxiliary lane lengths, "taper" or "parallel" type exit ramps, truck climbing lane(s), auxiliary/operational lane(s), and collector/distributor road(s). Also, a description of the terrain type; either qualitative (level, rolling, mountainous) or quantitative (percent, grade, and length).
  - All presently known pertinent engineering design details of the proposed change. Design exceptions from the current Iowa DOT Design Manual and AASHTO standards should be clearly identified.
2. Diagram of Traffic Volumes. A diagram should be provided showing the traffic volumes for all turning movements as well as mainline, ramp, and local road traffic volumes. The traffic analysis should include, but is not limited to, the following:
  - Existing ADT and Peak Hour Volumes: Plan view drawings with ramps and interstate through lanes labeled with existing "ADT," "AM Peak Hour" and "PM Peak Hour" volumes.
  - Design Year No Build ADT and Peak Hour Volumes: Plan view drawings with ramps and interstate through lanes labeled with existing "ADT," "AM Peak Hour" and "PM Peak Hour" volumes.
  - Design Year Build ADT and Peak Hour Volumes: Plan view drawings with ramps and interstate through lanes labeled with existing "ADT," "AM Peak Hour" and "PM Peak Hour" volumes.

For all movements, the truck traffic percentage should be included.

3. Highway Capacity Analysis. The current *Highway Capacity Manual* (or equivalent) or operations modeling software such as CORSIM should be used as appropriate. The analysis should include a narrative identifying the assumptions used, the basis for all data inputs, and, when applicable, what changes were made to default values. An acceptable analysis for

determining engineering acceptability and feasibility will need to be determined by the IJR Advisory Group/PMT. The engineering analysis should include, but is not limited to, the following:

- Existing ADT and Peak Hour Volumes: Plan view drawings with ramps and interstate through lanes labeled with existing "ADT," "AM Peak Hour" and "PM Peak Hour" volumes.
- Design Year No Build ADT and Peak Hour Volumes: Plan view drawings with ramps and interstate through lanes labeled with existing "ADT," "AM Peak Hour" and "PM Peak Hour" volumes.
- Design Year Build ADT and Peak Hour Volumes: Plan view drawings with ramps and interstate through lanes labeled with existing "ADT," "AM Peak Hour" and "PM Peak Hour" volumes.
- Summary Of Operational Analysis: Preferably, a table that shows the LOS or vehicle density where applicable for the basic freeway sections, weaving area and ramp merges, diverges and terminals. The table should provide peak hour data for existing AM/PM, Design Year No Build AM/PM, and Design Year Build AM/PM for all necessary interstate on-ramps, off-ramps, and through lanes.
- Basic Interstate Segments Analyses of Existing Conditions: Preferably, program outputs from the latest release of the Highway Capacity Software for all adjacent interstate segments.
- Basic Interstate Segments Analyses of the Design Year No Build Conditions.
- Basic Interstate Segments Analyses of the Design Year Build Conditions.
- Ramp Junction Analyses of the Existing Conditions.
- Ramp Junction Analyses (including Queue Analysis) of the Design Year No Build Conditions.
- Ramp Junction Analyses (including Queue Analysis) of the Design Year Build Conditions.
- Weave Area Analyses of the Existing Conditions as applicable.
- Weave Area Analyses of the Design Year No Build Conditions as applicable.
- Weave Area Analyses of the Design Year Build Conditions as applicable.
- An appendix or referenced technical report that provides input and output data for all analyses.

NOTE: Consultant traffic forecasting and traffic modeling shall be coordinated (early and throughout the process) with the Office of Systems Planning and the MPO (if appropriate).