Memo

New Mexico Department of Transportation

SUBJECT: Infrastructure Design Directive IDD-2006-09 (Guidance on Interstate Access Request Policy, Design Directive)

DATE: 9-08-2006

TO: Office of Infrastructure Divisions
Transportation Design Community

FROM: Steven P. Harris, Chief Engineer
Office of Infrastructure Divisions

FILE REFERENCE:
PSESHARE:Design Directives

A formal policy statement has been prepared by the Federal Highway Administration regarding guidance for justifying and documenting the need for additional or modified access to the existing sections of the Interstate System. The intent of the policy serves in the nation's interest to maintaining the Interstate System at the highest level of service possible in terms of safety and mobility.

Attached to this memo is the Guidance on Interstate Access Request Policy as approved by the FHWA Division Administrator and the Secretary of the Department. You will be required to conform to this policy as it applies to access requests on the Interstate System.

As a reminder, the Design Directives reside in the PSESHARE drive. General Office staff is to utilize the \\asgopinon\pseshare drive to access the Directive. District and Regional Office staff can access the Directive utilizing the appropriate District drive as indicated below:

District 1	\\d1flsv03\design$
District 2	\\d2flsv01\public\pse_section
District 3	\\d3-blade1\district3\ps&e_section
District 4	\\d4flsv04\designshared
District 5	\\D5flsv02a\D5Design
District 6	\\d6flsv02\pse_section

DISTRIBUTION LIST
Andres Aragon-Viamonte
Robert D. Ortiz
Ken Fischer/Mickey Beisman
Ernest Archuleta
Muffet Cuddy

PROJECT DEVELOPMENT NORTH ("PDN")
Joe Garcia/Tammy Serna
Benny Martinez
Rusty Rodke
David Quintana/Mike Martinez
Ed Escudero/Antonio Valdez
Armando Aremndariz/Greg Hagman
Mike Kirby
Daniel Maes
Andrew Gonzales
Charlie Ortiz/Richard Salazar
Steve Ader

PROJECT DEVELOPMENT CENTRAL
Dennis Valdez
Mark Fahey/Larry Vigil
Mohamad Assaad/Priscilla Benavides
Jerry Trujillo
Steve Lopez
Paul LIndberg
Hooshang Tavanaiepour
Ozvaldo Reyes-Alicea

PROJECT DEVELOPMENT SOUTH
Gabriela Contreras-Apodaca
Michael Smelker
Arthur Romero

DEVELOPMENT SUPPORT SERVICES
Max Valerio

PROJECT SCHEDULING UNIT
Virginia Jaramillo
Edwin Varela
Rebecca Sena

DRAINAGE SECTION
Raymunda Van Hoven
Farshad Omidvaran/Jeff Lowry
Reza Afaghpour/Andrew Nowak
Parviz Eftekhari/Jose Silva
Scott Lowe/David Trujillo

BRIDGE SECTION
Jimmy Camp
Ted Barber
Zann Jones
Ray Trujillo
Tim Marrs
Sherman Peterson

P. S. & E. SECTION
Ron Trujillo/Jeff Martinez
Ron Romero/Patrick Romero
Daniel Bustamante/Dean Serna
Bob Bachicha
Christine Griego/Sally Gomez
Jeri Romero
Norbert Baca/Phillip Romo

TRAFFIC TECHNICAL SUPPORT SECTION
Steve Rodriguez
Jawadi Salahuddin
Kathleen Garcia
Brad Julian
Rhonda Lopez
Tammy Haas
Greg Clarke

CONTEXT SENSITIVE SOLUTION
Joe Sanchez
Louie Pacheco
Ricardo Roybal
Carlos Ruiz

STATE CONSTRUCTION BUREAU
Lee Onstott
Steve Hemphill
Robert Salazar
Robert Garcia
David Trujillo
Farzad Omidvaran
Eric Rush
Mike Pope
Sixto Martinez

STATE MAINTENANCE BUREAU
Tom Raught

ENVIRONMENTAL DESIGN BUREAU
Kathy Kretz

HUMAN & NATURAL RESOURCES SECTION
Steve Reed

ENVIRONMENTAL GEOLOGY SECTION
Audrey Moore

LAND MANAGEMENT
Ed Rios

SURVEY & LANDS SECTION
Rick Fencl

ROW/UTILITIES SECTION
Ron Noedel

PROJECT PLANNING BUREAU
Ray Alexander
Steve Eagan
Brian Danielson

DISTRICT ENGINEERS
1/Alvin Dominguez
2/Gary Shubert
3/Larry Velasquez
4/Paul Gray
5/John McElroy
6/Larry Maynard

ASSISTANT DISTRICT ENGINEERS
1/Paul Little/Harold Love
2Ralph Meeks
3/Mike Plese/Kathy Trujillo
4/Tim Chavez/Abel Esquibel
5/James Gallegos/Miguel Gabaldon
6/Fernando Trujillo/Lisa Vega

ENGINEERING SUPPORT
1/Frank Guzman
2/Robert Kurtz
3/Terry Doyle
4/Dennis Peralta
5/Phil Gallegos
6/

DISTRICT TECH SUPPORT ENGINEERS
1/Filiberto Castorena
2/Betty Helgeson
3/Ken Murphy
4/Heather Sandoval
5/David Martinez
6/Bryan Peters/Joan Bowser

DISTRICT TRAFFIC ENGINEERS
1/Maria Hinojos
2/ Richard Weed
3/Tony Abbo
4/Adam Romero
5/Ruben Garcia
6/Barry J. Lytle

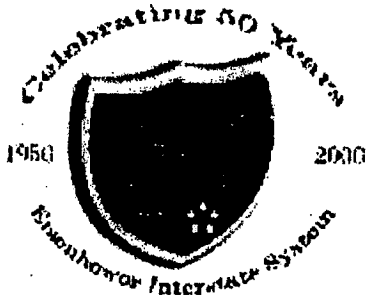
STATE MATERIALS
Robert McCoy
Bob Meyers

FHWA
Kathy Walker
Eric Worrell
Carl Lovato
Frank Lozano
Ryan Beach

ACTIVE CONSULTANTS
Albert Thomas, Bohannan-Huston, Inc.
Paul Waters, BPLW
Mike Brazie, CH2MHILL
Charles Stubbs, Chavez-Grieves
Luis Duffy, DMJM & Harris
Dave Maxwell, Engineers Inc.
Mike Malloy, Gannett-Fleming West, Inc.
Peter Brakenhoff, HDR Engineering Inc.
Kim Kemper, Huitt Zollars, Inc.
Lawrence Ortega, Lawrence Ortega
Thomas Densford, Louis Berger Group
Kent Freier, Molzen-Corbin & Associates (Albuquerque)
John Montoya, Molzen-Corbin & Assoc. (Las Cruces)
Joann English, North Sound Consulting, Inc.
Chris Baca, Parsons Brinckerhoff Quade & Douglas
Fernando Quiroga, Quiroga-Pfeiffer Engr.Corp.
Joseph Chato, REM-Santa Fe Engineering LLC
Elvidio Diniz, Resource Technology
Robert Smith, Smith Engineering Co. (Albuquerque)
Tom Dick, Smith Engineering Co. (Roswell)
Jim Smith, Souder Miller & Associates
Kim Stelzer, Tampa Bay Engineering
Jim Dolbear, The Larkin Group
Jim Witkowski, TransCore ITS, Inc.
Peter Hinckley, URS Greiner Woodward Clyde
William Ventry, Ventry Engineering
Scott Perkins, Wilson & Company

FHWA New Mexico Division

Federal Highway Administration



Guidance on Interstate Access Request Policy

February 2006

Approved:

Date 3/23/06
J. Don Martinez, Administrator
Federal Highway Administration

Date 8/7/06
Rhonda G. Faught P.E.
Cabinet Secretary

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
NEW MEXICO DIVISION
604 West San Mateo Road
Santa Fe, New Mexico 87505

March 23, 2006

In Reply Refer To:
HDA-NM

SUBJECT: Interstate Access Policy Guidelines

Ms. Rhonda G. Faught
Cabinet Secretary, NMDOT
PO Box 1149
Santa Fe, New Mexico 87504

Dear Ms. Faught:

Enclosed for your signature is an original copy of Guidance on Interstate Access Request Policy developed by this office to provide clarification of requirements for approval to add or modify access to the Interstate System in New Mexico.

Section 111 of title 23, U.S.C., provides that all agreements between the Secretary of the United States Department of Transportation and State Highway Departments 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. 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). The New Mexico Division of the Federal Highway Administration is further delegated the responsibility of administering the provisions of 23 U.S.C. 111 in New Mexico.

A formal policy statement including guidance for justifying and documenting the need for additional or modified access to the existing sections of the Interstate System was published in the Federal Register on February 11, 1998 (Volume 63, Number 28, Page 7045-7047). That policy statement lists eight points that must be addressed before interstate access requests can be approved. The enclosed guidance is based on that publication. The document has been reviewed by your staff and the American Consulting Engineers Council/NMDOT Liaison Committee and relevant comments have been addressed.

NMDOT should now establish procedures to ensure that every project that modifies or adds access points to the interstate complies with this guidance. The guidance identifies the types of projects that require an Interstate Justification Report. Projects that improve interstate operations will require only minimal documentation to obtain approval. However, projects that add new access points or increase the amount of traffic on the interstate and potentially reduce safety will require adequate justification if approval is to be obtained.

Celebrating 50 Years 1956 2006 Eisenhower Interstate System

BUCKLE UP AMERICA

After providing your signature, please return a copy of the cover sheet for our records. Please do not hesitate to contact me or Carl Lovato of my staff if you have any questions. Thank you.

Sincerely yours,

/s/J. Don Martinez
J. Don Martinez
Division Administrator

cc:
Mr. Andres Aragon Viamonte, NMDOT, w/enclosure
Mr. Steve Harris, NMDOT, w/enclosure

FHWA New Mexico Division

Guidance on Interstate Access Request Policy

Table of Contents

1. Purpose

It is in the national interest to maintain the Interstate System at the highest level of service possible in terms of safety and mobility. In order to achieve this goal, federal laws and regulations have established policies regarding interstate access requests. This guidance was developed to establish procedures for processing requests by NMDOT for new or revised Interstate accesses that are consistent, reasonable and comply with federal requirements.

2. Background

Section 111 of title 23, U.S.C., provides that all agreements between the Secretary of the United States Department of Transportation and state highway departments 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.

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). The New Mexico Division of the Federal Highway Administration is further delegated the responsibility of administering the provisions of 23 U.S.C 111 in New Mexico.

A formal policy statement including guidance for justifying and documenting the need for additional or modified access to the existing sections of the Interstate System was published in the Federal Register on February 11, 1998 (Volume 63, Number 28, Page 7045-7047). That policy statement lists eight points that must be addressed before interstate access requests can be approved. This guidance is based on that publication.

3. Legislation and Regulations

- 23 USC 111
- Federal Register: February 11, 1998 (Volume 63, Number 28, Page 7045-7047)
- 23 CFR 625

4. Applicability of FHWA Policy

In accordance with 23 USC 111, FHWA must approve all requests for new or revised Interstate access. This requirement applies to requests to add a new interchange to the Interstate System or to add or modify access points to an existing interchange including ramp / frontage road junctions. Maintenance activities that do not change existing geometric or operational features of the roadway are exempted.

The policy applies to all proposed changes to an Interstate facility regardless of whether or not they are being financed partly or in whole by the state, tribal government, local municipality, or private developer. Regardless of which party initiates the proposal, all requests for proposed changes in access must be submitted to FHWA by the NMDOT with a recommendation for approval.

For the purposes 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. The limits of an interchange as applied to this policy are defined as within the Interstate right-of-way and within the limited access of the interchange including the entire length of all ramps and portion of the cross street within the Interstate right–of-way or 300 feet beyond the ramp terminal at the cross-street or frontage road (100 feet may be acceptable in urban areas).

5. Procedures for Interstate Access Requests

a. Compliance with Federal Regulations

All FHWA approvals for additional or modified access are conditional upon compliance with applicable Federal rules and regulations. Applicable design standards listed in 23 CFR 625.4 must be used and final project designs are subject to review and approval by FHWA. The FHWA approval of new or modified access constitutes a federal action and requires that National Environmental Policy Act (NEPA) procedures be followed. NEPA approval is a condition to receiving final access approval. The level of environmental analysis required will be determined by FHWA in consultation with the NMDOT.

b. Interstate Justification Report (IJR)

The request to add a new interstate access point or modify an existing interstate access point, including locked gate access, must come from the New Mexico Department of Transportation. Such a request for approval shall unless otherwise agreed upon be in the form of an **Interstate Justification Report (IJR).** An IJR is a report that includes the information described in this guidance.

An IJR for approval to add or modify access points to an existing Interstate interchange may be a separate document or included as part of a Phase A or Phase B report as defined in NMDOT Location Study Procedures manual provided that each of the eight policy points is addressed.

Temporary locked gate access requests for construction or other purposes should be referred to the State Access Control Committee and FHWA Field Operations (Area) Engineer and shall be via locked gates only.

c. Determination of when an IJR is required

An IJR is always required when the change in access involves a new interchange, new partial interchange, new ramps to or from frontage roads or a new locked gate access.

The following modifications to an existing interstate access location always requires submittal of an IJR (or an analysis of the eight policy points must be included in the Phase A or Phase B location study report)

- Major modification of an existing interchange (i.e., adding new ramps, removing ramps, changing the interchange configuration, completing basic movements at a partial interchange)
- Locked gate access (i.e., Interstate access via locked gate)
- Abandonment of ramps or interchanges
- Decreasing the length of any deceleration lane or acceleration lane on any existing ramp
- Modifications involving frontage roads, which also serve as ramps, where the ramp is not affected.

The following modifications do not require an IJR:

- Modifications involving frontage roads which do not also serve as ramps or where the ramps are not affected

- Modifications involving new or revised (widen, replace etc.) crossings over or under Interstate freeways where there are no ramps (i.e. grade separations)

- Modifications involving improvements to the crossroads over or under the interstate at existing interchanges where the ramps are not affected.

- Modifications involving ramp metering

- Additions of an auxiliary lane between two (2) adjacent interchange ramps.

- Increasing the length of any deceleration lane or acceleration lane on any existing ramps provided that there is sufficient space between the next adjacent interchanges

If the proposed action does not fall under one of the categories above, FHWA will determine whether or not an IJR is required. NMDOT should provide FHWA with a description of the action in enough detail to make this determination. The level of information needed can be obtained by contacting the appropriate FHWA Field Operations Engineer.

If FHWA determines that an IJR is not required, then that determination by itself constitutes FHWA approval for the access modification. If FHWA determines that an IJR is required, then FHWA approval of the IJR is the FHWA approval for the access modification. FHWA's determination that a modification does not require an IJR must be made in writing .For relatively simple projects a checklist format may be acceptable as documentation for approval.

d. FHWA Internal Delegation of Authority for Approving an Access Request

The FHWA New Mexico Division Office may approve the following types of new or revised Interstate access requests:

- New freeway-to-crossroad interchanges not located within a Transportation Management Area (as defined in 23 USC 134).

- Modifications of freeway-to-crossroad interchanges

- Minor modifications of freeway-to-freeway interchanges
- Completion of basic movements at partial interchanges
- Locked gate access
- Abandonment of ramps or interchanges
- All other types of access not defined below

The following types of new or revised Interstate access requests must be approved at FHWA Headquarters, Washington, D.C., after a recommendation for approval from the Division Office.

- New freeway-to-freeway interchanges
- Major modifications of freeway-to-freeway interchanges
- New partial interchanges or ramps to/from continuous frontage roads that create a partial interchange
- New freeway-to-crossroad interchanges located within a TMA.

e. Timing of submittal of an IJR

Early project development usually consists of activities identified in the NMDOT Location Study Procedures Manual, which includes Phase A and B reports as well as Phase C, NEPA documentation. IJR analyses should take place concurrently with these activities, however in every case, the IJR must be approved prior to starting final design. Approval is normally a two-step process, which consists of (1) approval of engineering and operational acceptability, and (2) final approval after NEPA process. Engineering and operational approval may be given at the Phase B report stage but final approval cannot be given until completion of the NEPA process.

In some cases, in the past, the NM Division of FHWA has approved Phase A or Phase B reports and NEPA documents without having required or approved a formal IJR. However, in cases where these were submitted to FHWA without a complete analysis, which addressed the eight policy points described in the Federal Register, it must be clear that FHWA's signature on such a report or NEPA Document does not constitute interstate access approval. In such cases FHWA may request that NMDOT follow up with a formal IJR report. (approval is not guaranteed)

f. Policy information required in an IJR

The IJR needs to address each of the following eight policy requirements listed in the Federal Register:

- 1) FHWA policy point one 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.* "

  The intent of this requirement is to demonstrate that an access point is needed for regional traffic needs and not to solve local system needs or problems. The Interstate facility should not be allowed to become part of the local circulation system but should be maintained as the main regional and interstate highway it was intended to be.

  In the case of adding a new interchange or new ramp(s), the IJR needs to analyze whether existing or proposed roads parallel to the Interstate facility could be used as a connection to existing adjacent interchange ramps in lieu of adding a new interchange or ramps.

- 2) FHWA policy point two 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.*"

  The intent is to assure that all reasonable alternatives, including improvements to the existing local roads and streets in lieu of new access, have been fully considered. The IJR should contain a description of the design alternatives considered, (e.g., diamond interchange, single-point, directional ramps, collector-distributor roads, alternate locations, no-build, HOV, transit, park and ride lots, signal timing modifications, etc.) and why the proposed alternative was selected.

  The IJR must make the case that all reasonable alternatives have been considered and that the alternative being recommended is the best.

- 3) FHWA policy point three 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 existing or proposed interchange on each 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 the new or revised access points."

The intent of this requirement is to assure that sufficient operational and safety analyses are made to determine the impact of the revised or new access on the Interstate operation. It should be noted that it is estimated that 25% of Interstate fatalities occur at interchanges. For consistency, it is anticipated that the current Transportation Research Board (TRB) "Highway Capacity Manual" (HCM) analysis procedures will be used. Other analysis tools may be used to supplement the HCM when appropriate. The operational impact on the mainline Interstate between the proposed new or revised access and the adjacent existing interchanges on either side is a critical item that must be analyzed. The analysis may need to extend farther along the mainline and include additional existing interchanges if necessary to establish the extent and scope of the impacts. This could be critical in urban areas with many closely spaced interchanges. The spacing between interchanges must safely accommodate weaving, diverging, merging maneuvers, and good directional signing.

- 4) FHWA policy point four 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 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.*"

  The intent of this requirement is that, except in the most extreme circumstances, all interchanges should provide for all basic movements. Partial interchanges usually have undesirable operational characteristics. If circumstances exist where a partial interchange is considered appropriate as an interim design, then commitments should be made for providing the ultimate future design, such as purchasing necessary right-of-way, during the initial project stage. Special purpose access for HOV's, for transit vehicles, or for park and ride lots should be treated as special cases and decided on a case-by-case basis.

- 5) FHWA policy point five 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.*"

The intent of this requirement is that the request must include a discussion as to how the current proposal fits into the transportation plan for the area and its implications to air quality conformity. Although requests for engineering and operational approval of access may be made prior to being included in transportation plans, final approval cannot be given if the project is not included in the appropriate plan (i.e. approved by MPO in the Long Range Plan). Such coordination should be made as part of the normal project development process.

- 6) FHWA policy point six 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.*"

  The intent of this requirement is to cause sufficient review and coordination so as not to have piece-meal consideration of added access and to avoid future conflict as much as possible with other proposed access points. It is usually best to consider all proposed changes in access for an area at the same time. If a new or revised interchange is being proposed and another new or revised adjacent interchange is being planned and programmed, then both changes should be analyzed together. The expectation here is that any proposal is considered in view of currently known plans for transportation facilities and/or land use planning and is especially important when several new interchanges are anticipated.

- 7) FHWA policy point seven 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.*"

  The intent of this requirement is to assure that highway facilities are developed in an orderly and coordinated manner to serve the public. Therefore, when private development is clearly the driving force behind the need for access, it is only reasonable that the State and the developer work closely together in order to develop the access to achieve mutual benefits with minimal adverse impact on the Interstate travelers. Stage construction should be considered where extensive private development is not expected to be completed for several years. As a condition of approval, the developer may be required to have certain parts of the local circulation system ready before ramps can be constructed or opened to traffic. Coordination and cooperation is essential where different entities (NMDOT, developers, local governments, etc.) are each responsible for a portion of the proposed project.

- 8) FHWA policy point eight 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.*"

  The intent of this requirement is to confirm and report information relative to the status of the planning and NEPA processes in regard to the access request. Final approval of an IJR is contingent upon approval of the NEPA and planning processes. Also, the development of final plans, right-of-way acquisition, and physical construction may be performed only after approval of the environmental document.

g. General information required in an IJR

FHWA policy states that all requests for new or revised access must include sufficient supporting information to allow FHWA to independently evaluate the request and ensure that all pertinent factors and alternatives have been appropriately considered. The following is a description of what information may typically be required in an IJR :

- Purpose and need for the new or modified access.

- A clear description of the location and type of proposed new or modified access. Maps, schematic diagrams, or functional preliminary design plans should be included as needed to clearly describe the proposal. Drawings and plans should include (as applicable): project limits and footprint, adjacent interchanges, frontage roads, proposed interchange configuration, typical sections, ramps to be added or removed, ramp geometry and grades, acceleration and deceleration lane lengths, taper lengths, auxiliary lane lengths, and adjacent collector/distributor roads. A large-scale layout of the project on an aerial photograph is helpful in reviewing the request.

- Current and design year traffic projections for the Interchange, ramps and ramp junctures as well as projections for adjacent cross street intersections. Level of service and capacity analyses shall be included as well as schematic drawings showing current and design year ADT and DHV for mainline traffic volumes, ramp volumes, cross road volumes, and intersection turning movements. Traffic generated from anticipated changes to land use in the immediate area of the interchange, either known or expected as a result of the improvements must be accounted for.

- Any background or supporting information that further explains the basis for the proposal (i.e., new highway proposed, planned private developments, political support, etc.)

- Known issues of concern or controversy (e.g., environmental issues, public opposition, etc.).

- Estimated costs of the project, proposed funding sources (i.e., private development, local funds, State or Federal-aid funds), and implementation schedule.

- Relationship and distance of the interchange to adjacent interchanges and the ability to provide proper weaving distance and adequate signing.

- Any necessary design exceptions from currently adopted AASHTO Interstate design standards.

- Existing and proposed limits of access

- Additional proposed traffic signalization and signing (if applicable).

- Crash data and safety issues regarding the existing conditions and proposed alternatives. The crash data shall be well organized and analyzed in sufficient detail to demonstrate the types and probable causes for the crashes. Raw data alone is not acceptable.

h. Operational analysis required in an IJR

Depending on the complexity of the modifications, an IJR may require an operational analysis. The operational analysis must clearly demonstrate that there will be no impact to the safety and operation of the Interstate facility. The methodology from the current TRB Highway Capacity Manual (HCM), or current version of the Highway Capacity Software (HCS) shall be used to perform the engineering analyses. Other analysis tools, such as Corsim or Synchro, may be used to supplement the HCS analysis and for some complex projects, may be required. The operational analysis should use traffic data based on a design year 20 years from the date when the project is scheduled to be complete and open to the traveling public. Alternate analysis tools for determining operational acceptability will need prior approval by FHWA.

The operational impact on the mainline Interstate between the proposed new/revised access and the adjacent existing interchanges on either side must be analyzed. The analysis should be extended as far along the mainline and include as many existing interchanges as is necessary to establish the scope of the impacts. In some cases in urban areas, the

effects of a new interchange may be felt several miles downstream where a bottleneck occurs. If this is the case, then it must be addressed in the analysis. If there are multiple planned projects on a corridor, the corridor should be analyzed.

The engineering analysis shall include as a minimum all of the following, as applicable, unless agreed otherwise by FHWA:

- *Existing* Peak Hour Volumes/ Plan View: map with ramps and Interstate through lanes labeled with existing "AM Peak Hour" and "PM Peak Hour" volumes.

- Design Year "*No-Build*" Peak Hour Volumes /Plan View: map with ramps and Interstate through lanes labeled with the Design Year No-Build "AM Peak Hour" and "PM Peak Hour" volumes.

- Design Year "*Build*" Peak Hour Volumes/ Plan View: map with ramps and Interstate through lanes labeled with the Design Year Build Peak "AM Peak Hour" and "PM Peak Hour" volumes.

- Summary Of Operational Analysis: Preferably, a table listing the "Freeway LOS", "Ramp LOS", and "Weave LOS" for the corresponding *Existing* AM/PM Peak Hour, Design Year "*No-Build*" AM/PM Peak Hour, and Design Year "*Build*" AM/PM Peak Hour for the appropriate Interstate through lane sections, on-ramps, off-ramps, and weave areas.

- *Existing* Peak Hour LOS/Plan View: map with ramps, Interstate through lanes, and crossroads labeled with calculated Existing "AM and PM Peak Hour Level of Service" values.

- Design Year "*No-Build*" Peak Hour LOS /Plan View: map with ramps, Interstate through lanes, and crossroads labeled with calculated Design Year No-Build "AM and PM Peak Hour Level of Service" values.

- Design Year "*Build* "Peak Hour LOS/Plan View: map with ramps, Interstate through lanes, and crossroads labeled with calculated Design Year Build "AM and PM Peak Hour Level of Service" values.

- Basic Freeway Segments Analyses of *Existing* Conditions, Design Year "*No-Build*" Conditions, and Design Year "*Build*" Conditions.

- Ramp Junction Analyses of the *Existing* Conditions, Design Year "*No-Build*" Conditions (including queue analysis), and the Design Year "*Build*" Conditions (including queue analysis).

- Weave Area Analyses of the *Existing* Conditions, Design Year "*No-Build*" and "*Build*" Conditions

- Depending on the complexity of the proposed interchange construction or modifications, adjacent surface street intersections may also require comparable operational analysis.

- A copy of the raw input and output data used in the traffic analyses, both in hard-copy form and electronic form.

If a software such as Corsim or Synchro is used to supplement the HCM, the following information needs to be provided with that analysis:

- A description of the method used to calibrate the model.
- An explanation of what default values were changed and why.
- An explanation of the number of runs and random seeds used to develop the final model results.
- A summary of the results in graphical or tabular format.
- A copy of the electronic files.

6. A note on Locked Gate Accesses (LGA).

New Mexico Interstate highways have an unusually large number of locked gate accesses to the Interstate form private lands. NM Interstates also have an unusually high fatality rate when compared to Interstates in other states.

FHWA, NM Division assumes that all landowners were fully compensated for all impacts, past, present, and future at the time the Interstate system was constructed. Permanent improvements to existing LGA's that could be seen as facilitating any increase in future traffic levels will generally not be approved except when safety to the traveling public is an overriding concern and then shall require a full response to the 8 points in part 5.f. As a minimum, the IJR shall include an area-wide map or aerial photo showing all private property boundaries (all sides of the property), nearby public and private roadways and interchanges, and horizontal and vertical alignment data for the freeway or applicable cross-street.

Safety to the traveling public is a paramount concern of the FHWA, however, there is also a concern with past failure to ensure that LGA remain "locked" and for establishing a precedent where other previously compensated private owners along a stretch of Interstate may want equal improvements at other LGA points.

Temporary Locked Gate Access.

The NMDOT Access Control Committee and Field Operations may approve improvements to LGA's or new LGA's for temporary purposes such as highway construction or maintenance. However when the temporary need expires, improvements inside the Interstate right-of-way must be removed and temporary "new" locked gates shall be fully removed and the adjacent fence and right-of-way restored to its original condition.

7. NMDOT Access Control Committee Role

NMDOT has established the Access Control Committee and the State Access Management Manual to facilitate management of access to and from the state highway system. That manual is based on rules promulgated in the New Mexico Administrative Code and are identified as 18.31.6 NMAC.

Modification of interstate access typically involves access breaks or relocation of existing access control lines. The NMDOT Access Control Committee can approve breaks or relocation of access control lines on interstate facilities however this process occurs after IJR approval has been determined and is contingent on such approval. Interstate access approvals are based on federal requirements as listed in this guidance.