

A Uniform Protocol for Private Entities

Arizona Department of Transportation
Private Infrastructure
Development Process
Guidance Handbook



Private Infrastructure Development Process Guidance Handbook

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Letter to Users

Dear Applicant:

The Arizona Department of Transportation (ADOT) has established this handbook for the private sector as a uniform protocol for requesting new privately funded infrastructure or modifications to existing infrastructure. The policy requires that private entities proposing the change adequately assess and mitigate impacts of their development on the state highway transportation system. Applicants shall be required to conduct the appropriate level of technical and environmental analysis, public outreach, community engagement and government relations as determined by ADOT.

The objective of this policy is to ensure responsible long-term planning and optimal operations given projected future traffic conditions and reduce the possibility of future improvements that would be required to future retrofits of the state highway facilities, as well as minimize the impact to highway funds and other ADOT resources.

We look forward to building partnerships, fostering multi-agency collaborations and strengthening relationships between ADOT developers and the community. This process requires developers and other relevant entities to evaluate impacts of development on the state system early in the planning process.

If you have not yet contacted the District Administrator/Engineer relevant to your request (see map enclosed), that should be your first step.

This handbook provides the instructions you will need to complete the development process. The technical contacts/requirements, Encroachment Permit Application and reports are available online for your convenience at: azdot.gov.

We look forward to partnering with you in building a greater Arizona.

Sincerely,



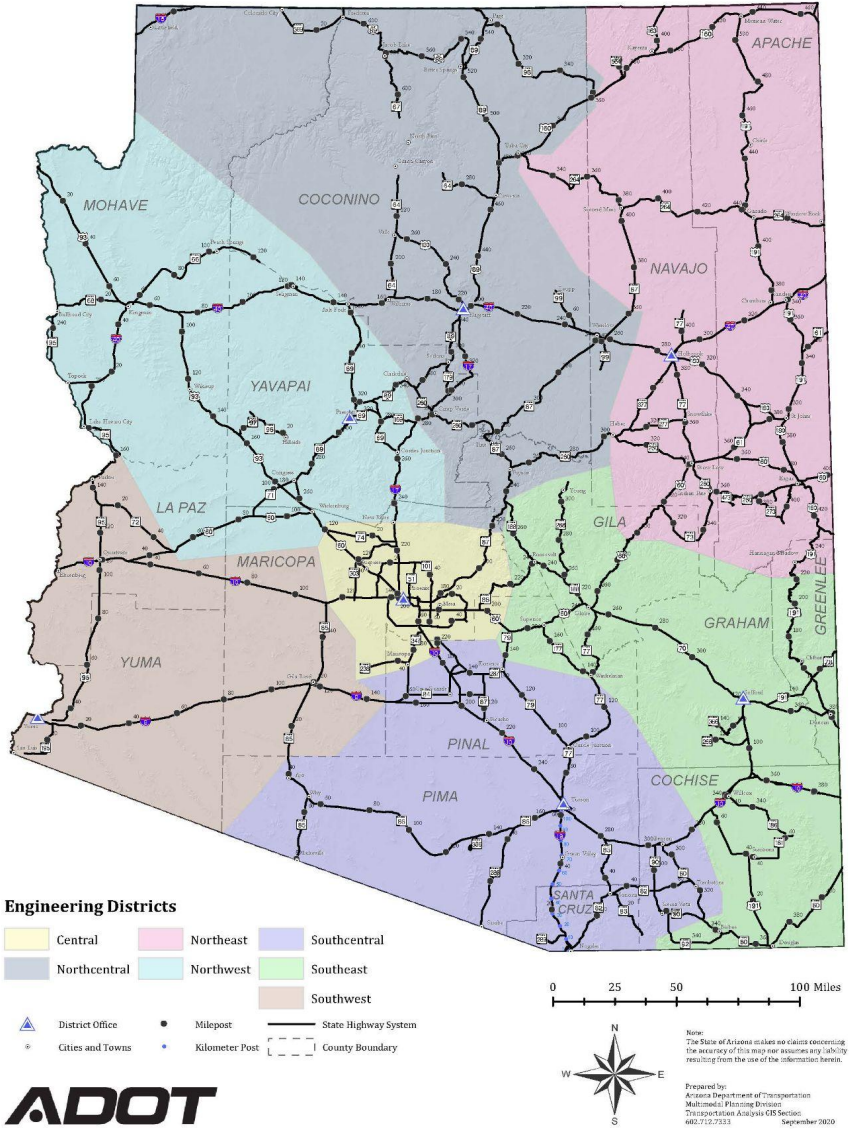
6E1FE8D8FEEF421...
Greg Byres

Deputy Director/State Engineer
Arizona Department of Transportation

ADOT District Map

[District Contacts | ADOT](#)

ADOT Engineering and Maintenance Districts with State Milepost System



Chapter 1

Policy and Development Process

1.1 Background

ADOT recognizes that state highways are important to meeting the mobility needs of the public and that it is important to the quality of life and economic health of the state of Arizona for the state highway system to provide safe and efficient interregional and interstate movement of people and goods. To that end, ADOT must manage the location, design, operation and maintenance of infrastructure on the state highway system. Access management provides a systematic approach to balancing the access and mobility necessities of a roadway. Access management can be defined as the process of managing access to land development, while simultaneously preserving the flow of traffic on the surrounding public road system.

1.2 Policy

- A. ADOT shall review and evaluate, in a fair and consistent manner, all requests for new infrastructure or modifications to an existing infrastructure located on the interstate and state highway system and shall ensure sufficient information is provided for the purpose of making an informed decision. ADOT may deny any request that may cause a negative impact on the state and/or interstate highway system and regional traffic.
- B. Each request for a new infrastructure or modifications to an existing infrastructure interchange located on the interstate and/or state highway system has its own unique circumstances. ADOT will take into account these circumstances in judging the relative merits of each request for a new infrastructure or modifications to an existing infrastructure. To that end, ADOT recognizes that there must be flexibility to ensure a level of analysis appropriate to the circumstances surrounding each proposal. The location of traffic interchanges will be determined by the expected traffic demand for access to the facility. In urban areas, the minimum spacing of interchanges should be one mile. In rural areas, the spacing should be no less than two miles. A minimum spacing of two miles should be provided between system interchanges and service interchanges. If required, access to more closely spaced crossroads in urban areas may be attained by using collector-distributor roads, braided ramps, auxiliary lanes or other techniques. All connections to controlled-access highways are through interchanges. Interchanges may also be used to connect non-controlled access highways where traffic volumes or other considerations preclude the use of normal at-grade intersections.

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- C. A private entity wishing to construct a new infrastructure or make modification to an existing infrastructure located on the interstate and/or state highway system using exclusively private funds, shall make its formal request by issuing a Letter of Intent to the Director of ADOT. Upon receipt of this letter, the review process outlined herein will commence. ADOT will assign a project manager to oversee all activities associated with each request. All information shall flow through the project manager.
- D. The cost estimate of a new infrastructure or modifications will, when completed, be included in ADOT financial statements. To meet this requirement, the ADOT Project Manager shall provide the ADOT Fixed Assets Manager with the following:
 - 1. A detailed cost estimate prepared and provided by the developer's consultant, as described in the sections "Joint Project Agreements Requirements" and "Subsequent Joint Project Agreements".
 - 2. A statement confirming completion of the new infrastructure or modification project, transfer of ownership and transfer of maintenance responsibility to ADOT, at such time as these events are agreed to by all applicable parties.

1.3 Connections to the State Highway System

- A. Interchange connections to the state highway system are intended to serve regional travel and provide access to regional destinations. Therefore, interchange connections from state highways must be to regionally significant roadways or regionally significant facilities.
- B. A regionally significant roadway is a roadway that is classified as a principal arterial or higher classification in the most recently adopted Metropolitan Planning Organization (MPO) transportation plan in urban areas. ADOT may identify a roadway as being regionally significant if identified as such within an adopted Regional Transportation Plan, a National Environmental Policy Act (NEPA)/environmental study, a feasibility study, a corridor plan or an access management plan on which ADOT staff have participated and approved.
- C. The proposed improvements must be compatible with regional growth/traffic demand and the approved Access Management Program Guidelines.

1.4 Project Development and Report Requirements

The project development, design and public/agency involvement process shall follow the state's project development process.

- A. ADOT may require the developer to submit the following reports and other submittals for review and approval prior to the design of improvements:

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1. Design Concept Report or Project Assessment Report
 2. Traffic Report/Impact Analysis
 3. Environmental Documentation and Report
 4. Geotechnical Report
 5. Drainage Report
 6. Bridge Selection Report
 7. Change of Access Requests (FHWA Standard Operating Procedure)
 8. Proposed Development/Design/Construction Schedules
 9. Public Involvement Plan/Report (See Chapter 2)
 10. AASHTO Controlling Criteria Report
 11. Crash/Safety Analysis and Report
- B. The designated ADOT Project Manager will arrange and host a pre-application project scoping meeting or a series of pre-application meetings with the applicant, appropriate ADOT representatives and relevant local, state or federal agencies for the purpose of determining the scope and anticipated process and schedule for any proposed infrastructure project. ADOT staff from the following offices should participate in the pre-application meeting with the applicant: District, Project Management Group, Joint Project Administration Group, Traffic Engineering Group, Multimodal Planning Division (MPD), Environmental Planning, Right of Way, Roadway Engineering Group, Bridge Group, Construction and Materials Group, Utilities and Railroad Group, Contracts and Specifications, Communications, Civil Rights Office, Traffic Systems Management and Operation (TSM&O) Division, Federal Highway Administration (FHWA) and other parties as deemed appropriate by the District Engineer. FHWA shall be invited to participate when an access request affects the interstate system. The purpose of the pre-application meeting(s) is to:
1. Determine whether the proposed infrastructure is consistent with the most current version of the [ADOT Roadway Design Guidelines](#) and discuss the requirements of all ADOT sections with regard to the applicant's proposal.
 2. Identify key or critical issues: Evaluate the general feasibility of a proposed project, including early identification of any anticipated operational, environmental, air quality conformity, access management, public concern and other technical and/or controversial issues. ADOT staff will determine if any recently adopted and/or approved corridor plans, access control plans or other related studies, which department staff deems relevant to the potential application, can contribute to the analysis required for the application.
 3. Discuss plan consistency: Review the proposed project for consistency with the Regional Transportation Plan and the applicable corridor vision, goals and strategies in the Statewide Long Range Transportation Plan.

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4. Identify the appropriate scope of studies required. Scope of studies will be determined in accordance with the Project Development Process Manual and as directed by the Project Manager.
5. Discuss right of way requirements, including survey and right of way plans preparation, disposition of the ownership of land to be donated and the timing of the submission to the Arizona Transportation Board for the final resolution, approval and acceptance into the State Highway System.
6. Discuss an initial determination of the level of environmental analysis required. ADOT staff will provide an initial assessment of whether the proposal should be classified as a Categorical Exclusion (CE), Environmental Assessment (EA), or Environmental Impact Statement (if the project has a federal nexus) or a State Environmental Determination for activities that do not have a federal connection. In addition, any other permits that may be required will be discussed. This initial assessment is subject to revision and modification if additional environmental issues arise at a later stage.
7. Discuss public and agency involvement requirements. The applicant shall be required to conduct and document an agency and public involvement program appropriate to the type of project proposed. At the initial meeting, ADOT staff will review the public and agency involvement requirements with the applicant.
8. Identify access permitting requirements. ADOT staff will outline access permitting procedures and circumstances when modifications to existing access permits are necessary.
9. Discuss the cost of application processing. The applicant is responsible for all costs associated with the preparation and processing of the application. An initial estimate of ADOT costs associated with the application review and its processing will be prepared by the department and provided to the applicant following this step in the process.
10. Discuss FHWA consultation and involvement. The FHWA representative shall be consulted to determine if the proposal requires federal involvement and if so, the necessary level of detail and the most appropriate time to submit a formal request for a determination of engineering and operations acceptability.

1.5 Joint Project Agreements Requirements

The private entity is responsible for all costs associated with the development, construction administration and evaluation of proposals for the private infrastructure or modifications to the existing infrastructure. ADOT may require multiple, joint project agreements (JPA) to cover development, design, construction, right of way and maintenance, as applicable. ADOT will develop an initial JPA with the applicant and any other relevant agencies, addressing responsibility for the following:

- Anticipated administrative and application costs

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- Anticipated level of pre-design documents
- Anticipated schedule
- Environmental analysis and documentation
- Ensuring consistency with Regional and Statewide Transportation Plan(s)
- Access Permitting Requirements
- Other necessary issues identified in the pre-application scoping meeting previously discussed in this policy under Project Development and Report Requirements B(1)
- Funding transfer to ADOT

1.6 Subsequent Joint Project Agreements

Additional JPA shall address a funding plan that identifies all sources of funding necessary to construct the proposed improvement, the costs and responsibility for design, right-of-way requirements, construction, construction administration, quality control, environmental mitigation, operations and long-term maintenance. This funding plan must clearly identify the costs associated with each of the elements identified below, which are the responsibility of the applicant unless otherwise agreed to. The applicant is responsible for all costs associated with development, design, construction, and construction administration including departmental costs for plan reviews, right-of-way administration, and construction management. ADOT will develop the JPA with the applicant and any other relevant agencies, which address the following, but are not limited to:

- A. Designation of ownership, maintenance and operation of all physical features and related transportation facilities including, but not limited to the following:
 - 1. infrastructure, including associated signing, lighting, striping, culverts, etc.
 - 2. Right-of-way and access control limits associated with the interchange
 - 3. Ramps associated with the interchange
 - 4. Other related transportation facilities such as signals, traffic control devices, pedestrian transportation facilities and park and ride transportation facilities, environmental mitigation, landscaping, enhancements, etc.
- B. The costs associated with the development and construction of the interchange to standards prescribed by ADOT including, but not limited to the following categories:
 - 1. Review and completion of all environmental studies and permits
 - 2. Costs for any environmental mitigation (including long-term monitoring) identified in the environmental document and applicable permits and public/agency involvement throughout design and construction
 - 3. Preliminary design
 - 4. Final design

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5. Purchase of any required right of way, including purchase or dedication of control of access rights and any required easements
 6. Utility relocation and railroad mitigation costs
 7. Actual construction costs
 8. Costs for all landscaping including mitigation measures identified in the environmental document
 9. Costs for lighting
 10. Traffic signals, signing and pavement markings
 11. Temporary traffic control
 12. Additional improvements to the corridor/future capacity improvements
 13. ADOT staff costs for processing JPA, design reviews, construction management/administration, construction inspection and monitoring and quality control material acceptance testing
- C. Maintenance of Special Features - Enhancements, special design components and special aesthetics not in accordance with ADOT standards shall require maintenance by the developer and/or local government. The maintenance responsibilities of the liable entity must be outlined in the JPA. Examples include, but are not limited to: decorative fencing, architectural light poles and fixtures, multiple colored painting of structures and landscaping densities.

1.7 Bidding Requirements

All projects shall be bid in accordance with the Arizona Revised Statutes §28-6923. Traditional Design, Bid, Build or Alternative Contracting Procedures may be implemented as directed by the Department. Projects that receive joint funding shall be advertised, awarded and administered in accordance with department policy, procedures and applicable state laws. Arizona Revised Statute §28-6923 requires that a private entity:

- A. Must, before advertising for bids, submit to ADOT a bond that is issued by a surety insurer authorized to do business in the state of Arizona and that is in an amount equal to 125% of the anticipated construction cost of the project, plus construction management and contractor costs.
- B. Solicit sealed bids from at least four contractors who are pre-qualified by ADOT to perform a contract of the anticipated dollar amount of the proposed construction.

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- C. Award the contract to the best bidder taking into account price and other criteria as provided in the bid documents.
- D. Obtain bonds from the selected contractor that provide the same coverage as performance and payment bonds issued under title 34, chapter 2, article 2.
- E. Use ADOT construction standards.
- F. Pay all costs of ADOT reviews of the contract and inspections of the project.

For the purposes of this section, a project is funded completely with private monies if all of the following apply:

- The contractor is paid entirely with monies from private entities
- The private entities hire a competent construction manager and contractor who do not have an affiliation with each other
- The private entities either pay all costs of design or reimburse ADOT for all costs of design

Chapter 2

Communications

2.1 Contact Information

Communications Director
1655 W. Jackson, MD 126F
Phoenix, AZ. 85007
602-712-7070

azdot.gov/planning/transportation-planning/public-involvement-plan

2.2 Communications Requirements

ADOT requires a public involvement plan, created in alignment with agency's Public Involvement Plan as approved by FHWA, to be implemented as part of the local conceptual planning project submittal, general plan amendment or initial development approval process that is required by a city, town or county. Documentation of public involvement is required prior to ADOT approving private infrastructure. ADOT Communications will provide further direction and guidance regarding the public involvement process, requirements and staff contacts at the initial pre-application meeting.

The public involvement plan will outline outreach notification to the community, any public meetings, coordination with local agencies, construction communication (stakeholder communications, construction phone number, signage, etc.) mitigation of regional traffic impacts during construction, traffic control coordination with other projects and a process for regular communication with ADOT regarding the progress/traffic impacts on the project. ADOT requires a public involvement report be submitted to document the public involvement process, project notification efforts and public meetings held. All costs associated with this plan are the responsibility of the private entity. Initial requirements for the public involvement process or plan are outlined below.

2.2.1 Developer Requirements

The developer is required to provide written information about the project, delivered by first class letter or postcard, to all individuals and agencies of potential impact. Information needs to be provided in other languages as appropriate to the impacted public, in accordance with the ADOT Public Involvement Plan.

Project notification shall be provided to the following parties:

- All property owners including, but not limited to: residential, commercial, industrial and agricultural properties and homeowners associations (HOAs) within a certain range of miles (to be determined at

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the pre-application meeting)

- All adjacent (adjoining) property owners, which are an individual legally, holding a land title right adjacent to the project. This could be the property owner, tenant, farmer, easement holder, lessee, lien holder, HOA, etc.
- Schools and school districts within a certain range of miles (to be determined at the pre-application meeting)
- Public and private universities and colleges within a certain range of miles (to be determined at the pre-application meeting)
- The Arizona Department of Public Safety, the appropriate county sheriff's department and local law enforcement, fire departments and other first responders who service the immediate area and the area with a certain range of miles (to be determined at the pre-application meeting)
- Public agencies (Flood Control District, municipalities, public utilities, etc.) impacted by the project (as determined at the pre-application meeting)
- Private utility companies impacted by the project (as determined at the pre-application meeting)
- Special event venues within a certain range of miles (to be determined at the pre-application meeting)

Project notification shall include the following information:

- Project description
- Location and project specifics
- Ownership
- Site plan
- City or County applicant contact names and phone numbers
- Scheduled public meeting time(s), date(s) and location(s)
- Title VI Nondiscrimination language, Americans with Disabilities Act advisory and other required legal disclaimers, as outlined in the ADOT Public Involvement Plan.

The developer is required to post a "Project Under Consideration" sign on the site 10 calendar days prior to the public meeting. The following information should be included on the sign:

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- Project description
- Location and project specifics
- Ownership
- Public meeting time(s), date(s) and location(s)
- Local government and applicant contact names and phone numbers/email/website (if available)
- Statement regarding information being available in other languages as required by the impacted public

2.2.2 Public Meetings

The developer is required to have at least one public meeting regarding the project that adheres to the ADOT Public Involvement Plan and federal regulations. The developer must provide the meeting date, time and location to the ADOT Project Manager **at least** 14 calendar days prior to the meeting. The developer must also coordinate the public meeting with the city/town/county in which the proposed interchange is located. If the city/town/county has specific public meeting requirements or guidelines they should supplement these requirements.

The location of the public meeting must be in the vicinity of the project, near public transit facilities, at a facility that meets the requirements of the Americans Disability Act (ADA) and be scheduled at convenient times to accommodate work schedules.

Public meetings should provide the opportunity for non-English speaking members of the public to be accommodated by providing interpreters. The developer is required to provide a translator for written materials and/or an interpreter for verbal information, based on an assessment of the surrounding community based on a four-factor analysis.

2.2.3 Public Involvement Program Report

The developer is required to submit a Public Involvement Program (PIP) Report to the ADOT Project Manager with the application. The PIP must include:

Documentation of project notification efforts as follows:

- Provide names, phone numbers, addresses and email addresses if available of all parties contacted in advance, such as neighbors, HOAs, property owners in the project vicinity, representatives from schools, educational institutions, first responders, etc.
- Provide the dates and number of times each aforementioned party was contacted.

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- Indicate how the aforementioned parties were contacted.
- Provide copies of the materials to the aforementioned parties, such as letters, postcards, flyers, etc.
- Indicate which, if any, of the aforementioned parties were provided information in a language other than English and, if so, specify which language.
- Provide original copies of all comments, letters and correspondence received.
- Provide a map showing the contact area.
- Provide affidavit(s) of mailing(s).

Verify the “Project Under Consideration” sign posting as follows:

- Provide affidavit of posting and/or
- Include date and time-stamped photographs of the sign.

Document the public meeting(s) as follows:

- List dates, times and locations of the public meeting(s).
- List dates, times and locations of any follow-up meetings, discussions or other contact with interested parties.
- Provide the sign-in sheets and a legible list of meeting attendees, comment cards and a written summary of the comments, issues, concerns or other input provided by meeting attendees.
- If follow-up feedback was provided via any electronic communications methods, provide copies of all such feedback.
- List the method by which the applicant has addressed, or intends to address, the comments, issues or concerns identified during the process.
- Document any accommodations under ADA or Limited English Proficiency (LEP) that were requested and/or provided.

Chapter 3

Project Management Group

3.1 Contact Information

Project Management Group Manager

205 S. 17th Ave., MD 614E

Phoenix, AZ. 85007

602-712-7545

azdot.gov/business/project-management-services/project-management-group

3.2 Project Management Group Requirements

The Project Management Group provides services in support of the ADOT Construction Program and Local Governments' Federal-Aid Transportation Programs on projects throughout the state of Arizona including planning and programming of the Maricopa Association of Governments (MAG) Regional Freeway System.

Project Management Group is responsible for quality project management services and management support during project design and development, including determining and maintaining project scopes, schedules and budgets from scoping through construction and into maintenance; team building with ADOT and outside stakeholders; developing and administering consultant contracts; sustaining communication throughout all project phases with all interested parties.

This group will provide further direction and guidance regarding the process, requirements and personnel contacts at the initial pre-application meeting.

Chapter 4

Right of Way Group

4.1 Contact Information

Right of Way Group Administrator
205 S. 17th Ave., MD 612E
Phoenix, AZ. 85007
602-712-7316

azdot.gov/business/right-way-properties/booklets-and-manuals-right-way-properties

4.2 Right of Way Group Requirements

The Right of Way Group functions as the acquiring agency of ADOT in acquiring all real property and real property rights required for the construction and maintenance of all federal and state highways and other highway-related purposes.

The ADOT Right of Way Group will provide further direction and guidance regarding right-of-way requirements and personnel contacts at the initial pre-application meeting. All right-of-way tasks and deliverable products associated with this project will be developed according to the instructions and policies contained herein and according to the Right of Way Procedural Manual found on line under ADOT Right of Way Group and at apps.azdot.gov/files/row/manuals/table_of_Contents.pdf.

Background information on items that are to be submitted to the ADOT Right of Way Group are:

- All owner(s) shall waive the right to receive just compensation and donate by deed, or dedication by plat, the real property for the referenced project in fee title or easement to the State of Arizona, by and through the Department of Transportation.
- The developer shall deliver the Deeds and/or Easements to the Right of Way Group for review, along with a standard Title Insurance Policy reflecting the current ownership of the property and confirming that the developer and/or all other owner(s) donating the real property needed for the project are legally entitled to donate and are in legal possession of said property. The developer will deliver to ADOT copies of all documents referenced in said Title Insurance Policy.
- The property must be free and clear of all liens, encumbrances and judgments, including real estate taxes. Following construction, ADOT District approval on all constructed transportation facilities and the Right of Way Group's approval of all deeds and/or easements, including plans and surveys, ADOT

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will submit a Resolution of Establishment to the State Transportation Board for legal establishment. Upon approval by Resolution from the State Transportation Board, the state will accept ownership, jurisdiction and maintenance of the donated/dedicated right-of-way and will record all deeds and easements and said Resolution of Establishment, simultaneously with the appropriate county recorder. The developer will be responsible for recording the Plat of Dedication, if any, and providing a copy to the ADOT Right of Way Group.

- The developer shall prepare all necessary surveys, plans and documents required by the ADOT Right of Way Group. These can include the following: right-of-way surveys, right-of-way plans, existing right-of-way exhibits, supplemental surveys, legal descriptions, right-of-way staking plans and right-of-way monumentation surveys.

All right-of-way surveys, right-of-way plans and legal descriptions will be developed according to current ADOT Right of Way Group standards, policies and procedures. The developer will deliver all the above documents to the Right of Way Group, at specified development stages, to ensure conformance with said standards, policies and procedures. Prior to commencement of any work in preparation of any of the items listed herein, the developer or its agents, will meet with the Right of Way Group to receive more detailed items and instructions regarding said standards, policies and procedures. The following links provide ADOT Right of Way Plan Standards and requirements for development to assist the Developer:

- [Tech Memo](#)
- [Standards, part 1](#)
- [Standards, part 2](#)
- [Standards, part 3](#)

Until the above items are met to ADOT's satisfaction, all newly constructed transportation facilities will not be accepted, nor established, into the state highway system by the State Transportation Board.

Chapter 5

Environmental Planning

5.1 Contact Information

Environmental Planning Group Manager
205 S 17th Ave., MD EM02
Phoenix, AZ. 85007
602-712-7767
azdot.gov/business/environmental-planning

5.2 Environmental Planning Requirements

ADOT Environmental Planning provides environmental services for transportation activities through compliance with regulatory requirements, providing the highest level of professional technical support and education to our agency and customers, while building cooperative relationships with other government agencies and the public.

Environmental Planning will provide further direction and guidance regarding its process, requirements and personnel contacts at the initial pre-application meeting. Contact ADOT Environmental Planning staff members (planner and technical specialists) early in the process in order to reach concurrence regarding the level of documentation required for the environmental analysis.

ADOT has been assigned FHWA's environmental review responsibility for environmental decisions made under the National Environmental Policy Act (NEPA). The environmental review, consultation and other actions required by applicable Federal environmental laws for NEPA and other applicable environmental laws are carried out by ADOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated April 16, 2019, and executed by FHWA and ADOT.

An FHWA approval of a change of access on the Interstate system requires federal environmental review and approval under NEPA regardless of project construction funding. ADOT will notify FHWA that NEPA has been approved with any change in access request on an Interstate highway.

The following may be considered in evaluating the environmental impacts for a project involving private infrastructure:

- Preparation of the appropriate Environmental Document under NEPA
- Categorical Exclusion (CE)

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- Environmental Assessment (EA)
- Biological Resources
- Section 4(f) Requirements
- ADOT Noise Requirements
- Air Quality/conformity determination
- Hazardous Materials
- Environmental Justice
- Cultural Resources
- Public Involvement/Public Meetings
- Contractor-Furnished Material Sources
- Geotechnical Clearance

Chapter 6

Utility and Railroad Engineering

6.1 Contact Information

Utility and Railroad Engineering Manager

205 S. 17th Ave., MD 618E

Phoenix, AZ. 85007

602-712-8161

azdot.gov/business/engineering-and-construction/utility-and-railroad-engineering

6.2 Utility and Railroad Engineering Requirements

The Utility and Railroad Engineering Section will provide further direction and guidance regarding its process, requirements and personnel contacts at the initial pre-application meeting. Utility coordination and design aspects of a highway construction project are covered within the two following documents, which shall be followed to design a state highway or transportation-related facility:

The ADOT Utility Coordination Guide for Design Consultants is intended primarily to provide guidance for the design consultants responsible for utility coordination for highway projects involving ADOT facilities. Although it is not possible to cover all situations, an effort has been made to make the manual detailed enough to provide guidance for those not familiar with the utility coordination process.

The ADOT Guide for Accommodating Utilities on Highway Rights of Way is intended primarily to provide guidance for the accommodation of utilities on highway rights-of-way. All utility installations above or below ground, within state right-of-way are regulated through the guidelines contained within the manual.

For projects that involve a new highway or roadway crossing a railroad or the widening of an existing railroad crossing, the design consultant should be made aware of a separate series of requirements by Burlington Northern Santa Fe and Union Pacific Railroad. For projects involving a new rail/highway grade separation structure, the railroad will need to formally approve the horizontal and vertical distances from the track to the structure found in the Bridge Selection Report, including the overall span length of the structure. Once approved these values cannot diminish.

If widening of an at-grade crossing is anticipated, a diagnostic meeting must be held involving members from the railroad, the road authority and the Corporation Commission to discuss and agree upon crossing safety features required by the project. At the railroad's discretion they will contract with either the developer or the road authority to perform any railroad-related work for the project. For any additional

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easement area required from the railroad, the railroad will contract with the road authority only.

Anyone building a private interchange, who intends to turn back the completed facilities to ADOT, will acquire the necessary easement from the railroad, which will later be transferred to ADOT. The process is similar for the many short-haul railroads in the state. Completion of a crossing agreement to affect railroad work or additional crossing easement area with the railroad must occur before access to railroad right-of-way will be granted to affect construction.

Chapter 7

Traffic Engineering Group

7.1 Contact Information

State Traffic Engineer
205 S. 17th Ave., Mail Drop 272
Phoenix, AZ 85007
602-712-8888

azdot.gov/business/engineering-and-construction/traffic-engineering

7.2 Traffic Engineering Group Requirements

The Traffic Engineering Group is responsible for administering a statewide traffic engineering program to provide for design of all traffic-related features including signing, striping, traffic signals and lighting. The Traffic Engineering Group is divided into three teams: Urban, Northern and Southern. These teams will provide further direction and guidance regarding their process, requirements and personnel contacts at the initial pre-application meeting.

The Traffic Engineering Group operates in accordance with chapters 1 and 3 of this handbook, the United States Department of Transportation Manual on Uniform Traffic Control Devices (MUTCD), the National Electrical Manufacturers Association (NEMA), the International Municipal Signal Association (IMSA) and the ADOT Traffic Guidelines and Processes (TGP).

Chapter 8

Transportation Systems Management & Operations (TSMO)

8.1 Contact Information

TSMO Division Office
1801 W Jefferson St, Suite 120, MD 102M
Phoenix, AZ. 85007
602-712-6466

[Transportation Systems Management and Operations](#)

8.2 Transportation Systems Management and Operations (TSMO) Requirements

ADOT TSMO focuses on the transportation operations, intelligent transportation systems (ITS) and traffic safety of the highway system. Within TSMO, there are several groups that will need to be coordinated with during a private infrastructure project.

The **Operational Traffic and Safety** group will primarily be focused on level of service, intersection layouts and operations. A Traffic Impact Analysis will be a primary submittal to this group, which consists of the three Regional Traffic Engineers (RTE), Northern, Central and Southern. The three RTE groups also set speed zoning, prepare traffic signal warrants and other operational studies. The Traffic Safety Group focuses on safety analysis and reviews historic data and recommends improvements and countermeasures for traffic-related issues on the state highways.

The **Traffic Maintenance** group provides a variety of traffic operations services, including:

- Provides technical expertise and maintains electrical equipment on highways and freeways
- Pays electrical costs for the operation of signals, lighting and related equipment
- Responsible for fabricating all freeway and highway signs
- Maintains roadway striping and signing for all freeways and provides support to the three RTE groups on all highways
- Responsible for the research and development of traffic control device specifications and provides the technical expertise to develop and evaluate contracts for these devices

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The **Traffic Management** group is largely responsible for the Traffic Operations Center (TOC) and the communication/use of intelligent transportation systems (ITS). The Traffic Management group maintains all the ITS equipment, disseminates information to the public, develops traffic signal coordination systems and signal progression timing plans.

Chapter 9

Roadway Engineering Group

9.1 Contact Information

Roadway Engineering Group

Assistant State Engineer

205 S. 17th Ave., MD 611E

Phoenix, AZ. 85007

602-712-7558

azdot.gov/business/engineering-and-construction/roadway-engineering

9.2 Roadway Engineering Group Requirements

As an integral part of ADOT's Infrastructure Delivery and Operations Division, the Roadway Engineering Group is an organization consisting of several functional sections, including: Roadway Predesign, Drainage Design, Pavement Design, Engineering Survey, Roadside Development and Roadway Design. Requirements pertaining to the sections, the Roadway Design Guidelines and C-Standards can be found at: azdot.gov/business/engineering-and-construction/roadway-engineering. The Roadway Engineering Group will provide further direction and guidance regarding its process, requirements and personnel contacts at the initial pre-application meeting.

- **Roadway Predesign** will provide guidance on project scoping documents, change of access requests, roadway/interchange design criteria and requirements and design exceptions/variances.
- **Drainage Design** will provide guidance and direction to consultants and outside entities involved with drainage design activities for ADOT, to enable compliance with applicable policy, criteria and procedures.
- **Pavement Design** will provide guidance and direction to consultants and outside entities involved with pavement design activities for ADOT, to enable compliance with applicable policy, criteria and the Pavement Design Manual.

The following items are to be submitted to the ADOT Pavement Design Section for review, comment and approval:

1. Soil information, including soil classification, soil profile for new alignments and log of core samples
2. Geotechnical Report approved by ADOT Geotechnical Design Section

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3. Pavement Design Summary
 4. Initial Pavement Design Report
 5. Preliminary pavement structure cost estimate
 6. Final Pavement Design Report
- **Engineering Survey** will provide survey data and mapping guidance for design level use in the design of infrastructure and associated roadway improvements.
 - **Roadside Development** will provide landscape architectural and environmental technical design direction and expertise for ADOT projects statewide, including the development of plans and specifications and the review of consultant plans involving: aesthetic enhancements and design, environmental mitigation and ecological restoration, stormwater quality and erosion control, seeding and revegetation, native plant salvage and replanting and landscape and irrigation design.
 - **Roadway Design** will provide review of plans, specifications and estimates for highway construction contracts and project scoping documents.

Chapter 10

Bridge Group

10.1 Contact Information

ADOT Bridge Group

205 S. 17th Ave., MD 613E

Phoenix, AZ. 85007

E-mail: Bridgemail@azdot.gov

602-712-7481

azdot.gov/business/engineering-and-construction/bridge/bridge-design-guidelines

10.2 Bridge Group Requirements

The ADOT Bridge Group is responsible for the design, construction and semi-annual inspections necessary to provide and maintain safe and functional bridges and drainage facilities on Arizona streets and highways. In general, bridges, drainage structures and all other highway infrastructure, structural in nature, shall be designed and constructed in accordance with the ADOT Bridge Design Guidelines (link provided above). The ADOT Bridge Group will provide guidance regarding its processes and development requirements at the initial pre-application meeting.

The ADOT Bridge Group will review project designs for compliance with required standards and guidelines, including the use of ADOT Standard Drawings for infrastructure such as reinforced concrete box culverts (RCB's), sound and/or retaining walls, pipe headwalls and tubular sign supports. Items involving special design will be given a more detailed oversight review. Such items might include light poles, sign supports, tubular signs, Transportation Systems Management and Operations (TSMO) signs, retaining walls, RCB's, miscellaneous structural items and sound walls. The Bridge Group will also review project plans and designs to verify consistency between the bridge plans and the roadway and traffic plans.

The Geotechnical section is part of Bridge Group. The final version of the Geotechnical Report must be signed and sealed by an Arizona Registered Professional Engineer.