



## Airspace Guidelines to 23 CFR 710.405 - 710.407

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The Federal Highway Administration (FHWA) has prepared this series of questions and answers to guide those who administer lands and property rights acquired as a result of a Federally-funded highway or transportation project under Title 23 U.S.C. For specific situations and project level guidance, we encourage the reader to contact the State Department of Transportation or Highway Agency (SDOT/SHA) or the FHWA Division Office located in your State or the District of Columbia.

### Introduction

In this guidance document, we will use the term "airspace lease" (lease) to cover the range of leases for highway air rights. "Air rights" is a legal term used in highway terminology to describe that area above or below the plane of the transportation facility and located within the right-of-way boundaries. The right to use this area by public entities or private parties for interim non-highway uses may be granted in airspace leases, as long as such uses will not interfere with the construction, operation or maintenance of the facility; anticipated future transportation needs; or the safety and security of the facility for both highway and non-highway users. Private or public uses of airspace may occur, but the protection and preservation of the nation's highway capacity is essential.

An airspace lease may range from a short term use with few or no tenant improvements to a long-term use with substantial structures. Lands held by the SDOT/SHA that are excess to highway needs are subject to different rules and are not discussed in this document. This guidance also does not apply to railroads and public utilities which cross or otherwise occupy Federal-aid highway rights-of-way; relocations of railroads or utilities for which reimbursement is claimed; or use of real property for bikeways and pedestrian walkways as covered in part 652 of 23 CFR.

The common element for successful airspace leasing activities is coordination among the various interested participants. A good highway airspace agreement must reflect legal, planning, environmental, design, construction, maintenance, insurance, safety, and security requirements. Participants involved in evaluating a leasing proposal may include the proposed airspace user, affected sections of the SDOT/SHA, Local Public Agencies (LPA), and as appropriate, the FHWA. The following guidance sets forth the Federal requirements for use of airspace on the Federal-aid highway systems and ideas on how to most effectively protect this valuable public investment.

### Federal Statutes and Regulations

This guidance is published in response to the revised 23 CFR Part 710 Subpart D on Real Property Management, as published on December 21, 1999, and is subject to the requirements of that regulation and other applicable requirements. For more information on these regulations and related issues see the FHWA web site at

[https://www.fhwa.dot.gov/real\\_estate](https://www.fhwa.dot.gov/real_estate)

Additional Federal requirements that affect the potential leases of airspace are found within 23 U.S.C. and implementing regulations in 23 CFR. For example, some pertinent citations include 23 U.S.C. 109(a) {Standards}, 23 U.S.C. 116 {Maintenance} and 23 U.S.C. 156 {Proceeds from the Sale or Lease of Real Property}, as well as their implementing regulations in 23 CFR 1.23, 1.27 and elsewhere. Additional requirements may include the Manual on Uniform Traffic Control Devices (MUTCD) and other guides incorporated by reference in 23 CFR. For specific guidance on these requirements, contact your FHWA Division or SDOT/SHA.

#### **Question 710.405\_1: What is highway airspace?**

Air space is that area located above or below the highway's established grade line, beneath an elevated highway structure, or adjacent to the roadway, and located within the approved right-of-way boundary. As used in these Guidelines, this includes the land and related rights held by the SDOT/SHA or LPA and available for such uses, subject to limitations under State law and procedures.

#### **Question 710.405\_2: Who may lease highway airspace?**

An individual, company, organization, or public agency may lease airspace upon approval from the SDOT/SHA and where appropriate, FHWA. All non-highway use of airspace will be covered by a properly written and approved airspace agreement (lease).

#### **Question 710.405\_3: Does FHWA have final approval on leases of all airspace?**

The FHWA has final approval on leases of airspace on Interstate systems. It is a very interested party on the lease of airspace on other highway systems, particularly on other roads on the National Highway System (NHS). (See discussion in Statutes & Regulations). When mentioned in this document, FHWA approval is normally required only for airspace leases on the Interstate system, unless the FHWA and State Oversight Agreement provides otherwise.

Since the events of 9/11, security has become a significant issue to be considered when making decisions regarding transportation infrastructure. This is true of the decision process for airspace leasing. All airspace lease requests should

be evaluated by SDOT/SHA, other state agencies with security expertise or responsible for the state's critical infrastructure protection, and (when appropriate per the Stewardship Agreement) FHWA staff with expertise in safety and security matters. In certain instances, due to the design, configuration, and complexity of the airspace facility, it may be appropriate to obtain an independent safety and security analysis to assist the SDOT/SHA and the FHWA in making a determination whether to approve the airspace lease request.

**Question 710.405\_4: Are there fundamental restrictions against the lease of highway airspace?**

Airspace cannot be leased if it is required currently or in the foreseeable future for safe and secure operation and maintenance of the highway facility. If such conflicts exist, the existing airspace would be considered unavailable. The only exception may be for interim uses which are terminated when the airspace is needed for highway purposes.

Under no conditions shall airspace be used for the manufacture or storage of flammable, explosive, or hazardous material or for any occupation which is deemed by the SDOT/SHA or the FHWA to be a hazard to highway or non-highway users. This would include the use/storage of gas in the airspace under, above or near the highway facility. This prohibition should not be construed to preclude the transverse or longitudinal installation of such items as petroleum pipelines that have been approved by the SDOT/SHA and where appropriate, FHWA.

To the extent possible and within the scope of the proposed use of the facility, structures, buildings or facilities which utilize combustible materials (such as wood, wood fiber, etc.) that may be fire hazards should be prohibited.

**Question 710.405\_5: What is the basic requirement for an airspace lease?**

A SDOT/SHA may approve non-highway airspace leases where it has acquired sufficient legal right, title, and interest in the right-of-way of a highway on a Federal-aid system to grant such usage.

**Question 710.405\_6: When is it necessary to determine the fair market value of airspace?**

A SDOT/SHA should always determine the fair market value of airspace, and certainly if Federal funds have been used to acquire the highway right-of-way. The SDOT/SHA may receive fair market income from airspace leases, and use it for Title 23 (Transportation) purposes.

If sufficient available airspace exists within the publicly acquired rights-of-way of an Interstate highway, FHWA may authorize a SDOT/SHA to lease such airspace without charge to a publicly owned mass transit authority, or to another public agency for non-proprietary use for social, environmental or economic mitigation purposes.

**Question 710.405\_7: What can the SDOT/SHA do with the net income from airspace leases?**

Income received from the authorized use of airspace shall be the SDOT/SHA's responsibility. Credit to Federal funds is not required as long as the Federal pro-rata share of the project income is used for Title 23 (Transportation) eligible projects. (See 23 CFR 710.403 (e) for more details.)

**Question 710.405\_8: Can airspace be leased for public purposes?**

Available airspace may be leased to a public agency for interim uses such as green strips, small parks, play areas, parking, public or quasi-public use which would integrate the highway into the local environment and enhance other publicly supported programs. Normally, the SDOT/SHA should retain supervision and jurisdiction over these interim land uses, but could enter into management agreements with local political subdivisions.

**Question 710.405\_9: What information must be included in an airspace agreement?**

The airspace agreement should be very specific and limited as to the exact rights and uses granted. Each of the following items must be included in an application:

1. Identification of the party responsible for developing and operating the airspace
2. A general statement of the proposed use
3. The proposed design for the use of the space, including any facilities to be constructed.
4. Maps, plans, or sketches to adequately demonstrate the relationship of the proposed project to the highway facility.
5. Provision for vertical and horizontal access for maintenance purposes.
6. Other general requirements as term of use, insurance requirements, design limitations, safety mandates, accessibility, and maintenance as outlined further in this guidance.

**Question 710.405\_10: What are the primary lease terms for an airspace agreement?**

Each agreement should contain:

1. Provision to prohibit the transfer, assignment, or conveyance of the airspace rights to another party without prior SDOT/SHA approval *with* FHWA concurrence on Interstates.
2. Provision to revoke the agreement in the event that the airspace facility ceases to be used or is abandoned, or becomes necessary for highway purposes.
3. Provision to revoke the agreement if the terms of the lease are breached and such breach is not corrected within a reasonable length of time after written notice of noncompliance has been given. In the event the agreement is revoked, the SDOT/SHA *may* request the removal of the facility occupying the airspace. The removal shall be accomplished by the responsible party in a manner prescribed by the SDOT/SHA at no cost to the FHWA. An exception to facility removal is permitted when the improvements revert to the State upon termination of the agreement and the SDOT/SHA chooses to accept them.
4. Provision to allow SDOT/SHA and authorized FHWA representatives to enter the airspace facility for the purpose of inspection, maintenance, or reconstruction of the highway facility when necessary. The manner of when and how these inspections are to be made should be specified in the airspace agreement.
5. Provision that the facility to occupy the airspace will be maintained so as to assure that the structures and the area within the highway right-of-way boundaries will protect the highway's safety and appearance, and that such maintenance will cause no unreasonable interference with highway use.
6. Provisions assuring that the airspace user will be responsible for any resulting hazardous waste contamination without liability to the SDOT/SHA and FHWA.
7. Provisions to assure full understanding that the airspace user will not qualify for relocation benefits under the Uniform Act.

**Question 710.405\_11: How specific must the maps or plans be?**

An adequately detailed three-dimensional presentation must be prepared of the space to be used and the facility to be constructed. Maps and plans may not be required if the available airspace is to be used for leisure activities (such as walking or biking), beautification, parking of motor vehicles, public mass transit facilities, and similar uses. In such cases, an acceptable metes and bounds description of the surface area, and appropriate plans or cross sections clearly defining the vertical use limits may be furnished in lieu of a three-dimensional description, at the SDOT/SHA's discretion.

**Question 710.405\_12: What are the insurance requirements?**

Adequate liability insurance shall be required by the responsible party for the payment of any damages which may occur during construction and then use of the airspace facilities, thus holding the SDOT/SHA (or LPA) and FHWA harmless.

**Question 710.405\_13: Are there any exceptions to the insurance requirement?**

Insurance may not be required if the airspace is to be leased by a self-insured public or quasi-public agency. In such cases the requesting agency is assigned the responsibility for payment of any related damages occurring to the highway facility and to the public for personal injury, loss of life, and property damage.

**Question 710.405\_14: What if revisions need to be made to the original proposal?**

Any significant revision in the design or construction of a proposed facility shall require prior approval by the SDOT/SHA. When the revision impacts an Interstate highway facility, the SDOT/SHA will obtain concurrence from the FHWA.

**Question 710.405\_15: Are there design requirements for leasing of highway airspace?**

Design requirements are generally in the SDOT/SHA's manuals, FHWA regulations and guidance from organizations such as American Association of State Highway and Transportation Officials (AASHTO). Detailed guidance on design requirements is contained in SDOT/SHA manuals and FHWA regulations in 23 CFR Part 625, et. Seq. For guidance and interpretation on specific proposals, contact your SDOT/SHA and FHWA Division Office.

The following are major design criteria to be covered on a proposed airspace use:

1. Consideration shall be given to seismic design criteria to assure the future safety of the highway facility and of the airspace use.
2. Use of air space beneath the established gradeline of the highway shall provide sufficient vertical and horizontal clearances for the construction, operation, maintenance, ventilation, and safety of the highway facility.
3. The proposed use of airspace above the established gradeline of the highway shall not, at any location between two points established 2 feet beyond the two outer edges of the shoulder, extend below a horizontal plane which is at least 16 feet 6 inches above the gradeline of the highway, or the minimum vertical clearance plus 6 inches as approved by the State, except as necessary for columns, foundations or other support structures.
4. Where control and directional signs needed for the highway are to be installed beneath an overhead structure, vertical clearance will be at least 20 feet from the gradeline of the highway to the lowest point of the soffit of the

overhead structure. Exceptions to the lateral limits set forth above, when justified by the SDOT/SHA, may be considered on an individual basis by the FHWA as appropriate.

5. Piers, columns, or any other portion of the airspace structure shall not be erected in a location which will interfere with visibility or reduce sight distance or in any other way interfere materially with the safety and free flow of traffic on the highway facility.
6. The structural supports for the airspace facility shall be located to clear all horizontal and vertical dimensions established by the SDOT/SHA. Supports shall be clear of the shoulder or safety walks of the outer roadway. However, supports may be located in the median or outer separation when the SDOT/SHA determines and the FHWA concurs that such medians and outer separations are of sufficient width.
7. All supports are to be back of or flush with the face of any wall at the same location. Supports shall be adequately protected by means acceptable to the SDOT/SHA and the FHWA. No supports shall be located in the ramp gores, or in a position so as to interfere with the signing necessary for the proper use of the ramp.
8. To the extent possible and within the scope of the proposed use of the facility, vehicular access should be designed and managed to restrict vehicles capable of carrying explosives or of a type that might be used for terrorist activities. For example, bollards may be installed to limit the width of vehicles accessing the site. In situations where the use of the facility is for purposes other than vehicular access (such as a bike path or dog-walk for adjacent property owners), the design should use fencing, bollards, and/or other appropriate methods to restrict vehicular access.
9. Proposals may involve coordination with multiple offices within the SDOT/SHA such as Planning, Environment, Traffic, Operations, and Maintenance. Details of required approvals should be incorporated into the airspace agreement as appropriate.

**Question 710.405\_16: What are the safety requirements for a lease of airspace?**

Full safety requirements are found in the SDOT/SHA's manuals, FHWA guidance and in national professional organization guidelines. For specific guidance and interpretation, contact your SDOT/SHA and FHWA Division Office. Examples of some key areas to consider include:

1. The design, occupancy, and use of any structure over or under a highway facility shall not interfere with the use, safety, appearance, or the enjoyment of the facility nor produce fumes, vapors, odors, drippings, droppings, or discharges of any kind.
2. The use of airspace shall not result in either highway or nonhighway users being unduly exposed to hazardous conditions because of highway location, design, maintenance, and operation features.
3. Appropriate safety precautions and features must be incorporated in the design to minimize the possibility of injury to users of either the highway facility or airspace due to highway or non-highway incidents.
4. Highway airspace facilities shall not be approved unless the plans contain adequate provisions, acceptable to the SDOT/SHA and the FHWA, for evacuation of the structures or facilities in case of a major incident endangering the occupants of such structures or facilities.
5. Any airspace facility shall be fire resistant in accordance with the provisions of applicable local codes or nationally accepted standards found acceptable by the SDOT/SHA and the FHWA.
6. Adequate security measures shall be in place to ensure the safety of the facility from both natural disasters and human actions (whether accidental or intended). Examples of such measures include the use of bollards to restrict vehicular traffic to the site and pier protection devices.

**Question 710.405\_17: Is it necessary to provide light and ventilation?**

For detailed guidance on specific proposals, refer to SDOT/SHA manuals or FHWA regulations in 23 CFR Part 625, and then direct specific inquiries to the SDOT/SHA's specialists. Generally, however:

1. No structure or structures built over a highway facility shall occupy more length of the highway than will permit adequate natural ventilation of the enclosed section of the highway for the conditions at the location, assuming a volume of traffic equal to capacity. Each such covered length shall be preceded and followed by uncovered lengths of a highway that will safely affect natural ventilation.
2. The SDOT/SHA shall determine such lengths for each particular case, subject to FHWA concurrence on Interstates. Exceptions may be considered when complete tunnel ventilation is provided. Unless tunnel ventilation is provided, structures over highways shall be so designed and constructed as to facilitate natural ventilation of the highway.
3. The underside and any supports for such structures shall have smooth and easily cleanable surfaces. Supports for such structures shall leave as much open space on the sides of the highway as feasible. Such space shall be appropriately graded where deemed necessary or desirable by the SDOT/SHA.

**Question 710.405\_18: Can a lease of highway airspace change the alignment of the highway?**

Construction of any structure above or below a highway facility shall not require any temporary or permanent change in alignment or profile of an existing highway without prior approval by the SDOT/SHA and the FHWA as required.

**Question 710.405\_19: What if it is beneficial to change the highway alignment?**

The SDOT/SHA or the FHWA may approve a proposed airspace facility that alters but improves existing highway operation and maintenance, but such changes will be provided without cost to Federal funds.

Exceptions to the cost requirement may be made if the lease improvements of a proposed facility or other interim uses are for public or quasi-public purposes and would assist in integrating the highway into the local environment and enhance other publicly supported programs. This provision is not intended to expand existing limitations upon expenditures from the highway trust fund.

**Question 710.405\_20: Does the SDOT/SHA need to access airspace after construction is complete?**

Yes. Proposed airspace facilities will be designed and constructed in a manner which will permit access to the highway facility for the purpose of inspection, maintenance, and reconstruction when necessary. In the event the responsible party fails in its maintenance obligations, there will be provision for the SDOT/SHA to enter the premises to perform such work.

**Question 710.405\_21: Can highway airspace be used to park motor vehicles?**

To the extent possible and within the scope of the proposed use of the facility, vehicular access should be designed and managed to restrict vehicles capable of carrying explosives or of a type that might be used for terrorist activities. For example, bollards may be installed to limit the width of vehicles accessing the site. Tanker trucks or vehicles carrying flammable, explosive, or hazardous material are prohibited from parking in highway airspace. In addition to the security considerations noted above, approval for the use and occupancy of highway airspace for the parking of motor vehicles may not be granted unless proper consideration has been given to the need for the following:

1. Parking design or arrangement to assure orderly and functional parking.
2. Plantings or screening measures to improve the esthetics and appearance of the area.
3. Surfacing, lighting, fencing, striping, curbs, wheel stops, pier protection devices, etc.
4. Access for fire protection and fire fighting equipment.

**Question 710.405\_22: Can advertising signs be displayed within highway airspace?**

On-premise signs, displays, or devices may be erected on structures occupying highway airspace, but only those indicating ownership and type of on-premise activities. Any signs are subject to regulation by the SDOT/SHA and the FHWA for number, size, location, design, and other limitations of the MUTCD, the Highway Beautification Act (HBA) and the State-Federal sign control agreement. Local ordinances and requirements may also apply.

**Question 710.405\_23: What other types of compliance issues apply to highway airspace?**

There are a number of additional provisions that must be met when considering a proposed highway airspace use. Coordination within the SDOT/SHA, and with local government and other responsible agencies should be undertaken early in the airspace proposal consideration process to allow for adequate reviews and required approvals. The SDOT/SHA would be the best source for requirements under State law, as well as information on where to determine other applicable requirements. Some examples of essential Federal concerns about compliance include:

1. Appropriate provisions within your State's Civil Rights requirements with respect to Title VI of the Civil Rights Act of 1964 and 49 CFR part 21.
2. Conformity with the Americans with Disabilities Act (ADA).
3. Conformity with the governing provisions of the Federal Aviation Administration, Federal Rail Administration, Federal Transit Administration, and other Federal agencies whose approvals may be required.
4. Environmental clearances under the National Environmental Policy Act (NEPA) {such as for air and water quality, wetlands, etc.}, to the degree these apply, as well as historical and other Federally-protected issues related to a proposed airspace lease.
5. To the extent appropriate, as determined by the SDOT/SHA and/or the FHWA, coordination with the U.S. Department of Homeland Security (DHS) to ensure adequate security of the facility may be necessary. Prior to any contact with DHS, the FHWA Division Office will coordinate with the Program Manager for Transportation Security, Office of the Administrator, FHWA Headquarters.

**Question 710.405\_24: What are the SDOT/SHA obligations for management of airspace use?**

The SDOT/SHA should maintain an inventory of all authorized uses of airspace. This inventory should include at least the following items for each authorized use of airspace:

1. Location by project, survey station, or other appropriate method.
2. Identification of the authorized user of the airspace.
3. A three-dimensional description or a metes and bounds description.
4. As-built construction plans of the highway facility at the location where the use of airspace was authorized.
5. Pertinent construction plans of the facility authorized to occupy the airspace.
6. A copy of the executed airspace agreement.

Additionally, the SDOT/SHA should periodically inspect airspace facilities to ensure that the safety and security requirements specified in the lease are being properly maintained.