Summary Report

FHWA Alternative Uses of Right-of-Way Study
September 2018 – September 2021

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Alternative Uses of Right-of-Way

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The Federal Highway Administration conducted research and analysis on alternative uses of right-of-way (ROW). This report summarizes and presents the research, which included a nationwide survey, interviews with selected survey respondents, and a literature search. The report focuses primarily upon: 1) property management including methods State Departments of Transportation (SDOTs) use to track, manage, and update ROW, and 2) the types of alternative use requests SDOTs receive, and how they are evaluated.
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Executive Summary

The purpose of the property acquired for a Federal-aid Highway project or program is for the construction, safety, operation, and maintenance of public highway facilities, in other words, the safe and efficient movement of people and goods. There are times when property acquired for a highway project is excess to the highway needs. Excess property can be the result of acquiring some property which was determined to be uneconomic to the property owner (uneconomic remnants), the need for space during construction for storage and staging, and changes in project alignments or construction methods. These excess properties can be put to interim or concurrent uses that FHWA defines as alternative uses. Alternative uses are those non-highway uses of excess properties and rights-of-way that are not currently needed for the highway facility. In fact, the overhead burden of managing and maintaining these fallow parcels may be a consideration of State Departments of Transportation (SDOTs) who in many instances have many demands on their transportation budgets. Consequently, there is an increasing interest in how States can leverage their right-of-way (ROW) through interim or concurrent uses to help meet the increasing demands on already strained transportation budgets. Many SDOTs are focusing on identifying allowable alternative transportation uses of the ROW which are consistent with the safety and operation of its highways. To support this evaluation, property management should be reframed as an exercise in asset management. The Federal Highway Administration (FHWA) has a robust program in asset management which in many cases does not include consideration of all the real property rights and ROW owned by a SDOT.

This project has been conducted to provide a detailed analysis of practices used by SDOTs to manage ROW inventory. Inventory management is the administrative component of maintenance of records and acquired properties. The project was conducted along two distinct, but parallel lines:

1. Identification of best practices in property management
2. Identification of best practices in alternative uses of ROW

FHWA surveyed SDOTs to gather information about their best practices. FHWA sent 60 surveys to SDOTs as some SDOTs had more than one identified contact. Of the original 60 surveys sent, 43 (72%) were complete. Eight (13%) of the surveys were incomplete, but the information was included in other surveys provided by the same SDOT. The FHWA followed up after the surveys with interviews, choosing 10 SDOTs based on their survey responses. The SDOTs were interviewed to gain a more nuanced understanding of their ROW processes. The survey and interviews were supplemented with a review of the literature about real property management (as defined in 23 CFR §710.403) approaches and alternative uses programs (as defined in 23 CFR Part 710.405, et.al.).

Most of the respondents to the survey describe a reactive property management system in which they respond to requests for use or disposition of excess ROW. Most of the interviewees operating under this reactive paradigm report that they have sufficient personnel to deal with the requests they receive. A small number of the interviewees describe a proactive property management system. Interviewees operating under a proactive paradigm report a lengthy and multiple-staged process to achieve a spatially enabled property management system that could also serve as a transaction (sale or lease) management system and a use (license or permitting) management system. At least one interviewee describes this investment as necessary to meet an increasing number of requests with fewer personnel. These proactive property management systems provide opportunities for financial gain, but they also provide opportunities to improve the image of the SDOT with local partners and the public by ensuring that SDOT owned properties are actively managed, maintained and are not allowed to become attractive nuisances. In any case, the ultimate goal is to ensure that all SDOT owned excess property and ROW exists in its highest and best use, optimizing the stewardship of the highway system.
Requests for alternative uses of ROW have become quite varied in recent years. Requests for installation of solar facilities, or agricultural or carbon sequestration uses have decades of history, but the literature on their valuation is mixed. Uses such as electrification and public-private partnership co-locations, including for-profit uses, are currently underway in a few States. In Massachusetts, the use of long-term licensing or ground-leasing of ROW provide significant annual sources of revenue. Other uses, such as truck parking, have garnered recent attention because of new hours of service limitations, but specific examples could not be identified. Likewise, with the COVID-19-related lockdowns experienced in 2020, the use of ROW for broadband communications has been a popular idea. The FHWA Office of Real Estate Services on April 27, 2021, released a memorandum regarding alternative uses of ROW (included in Appendix B. Memorandum on Guidance for Alternative Uses). This memorandum provides SDOTs with added flexibility by allowing them to accommodate certain alternative uses as either utilities or alternative uses, whichever is more advantageous to them under their own regulatory structures. This demonstrates a willingness on the part of FHWA to support alternative uses, but because guidance was issued recently, it is not known yet how SDOTs will choose to make use of this added flexibility.

It is recommended that FHWA re-frame the concept of property management as a part of the asset management plan (23 CFR § 515.7), develop appropriate performance measures (in compliance with 2 CFR § 200.301), and identify resources to help SDOTs develop and integrate spatially enabled property management platforms. Transportation Performance Management is the subject of an FHWA web page and guidance for inclusion of property management can begin with those resources. A primary motivation for this recommendation is the information revealed through the survey and interviews that many SDOTs are unclear how much “excess” (unused) ROW they hold. Also, they understand that they have overhead administrative and maintenance expenses for this excess ROW, and expect that these costs will rise, but find it isn’t possible to quantify this burden, much less manage it. Advantages of including property management in the SDOTs asset management plan are:

1. Providing greater return on investment for public funds expended for ROW acquisition.
2. Decreasing annual property management administration and maintenance by proactively seeking use or release of parcels not needed for future transportation needs.
3. Deepening the integration of ROW in the SDOTs mission to administer the surface transportation system.

Challenges to framing property management as asset management include:

1. The costs necessary to set up a spatially enabled property management system may exceed the resources of a typical SDOT.
2. While three interviewees (Massachusetts, Minnesota, and Utah) described the processes they used to develop spatially enabled property management systems, the processes they followed are multifaceted, making the costs difficult to quantify. A follow-on effort to this project would be necessary to better analyze available resources and costs of development.

The FHWA may also consider how to incorporate property management as part of the basic structure of the Stewardship and Oversight Agreement that it has with each SDOT. In this context, “property management” is the overall responsibility for the acquisition, management, and disposal of real property. (23 CFR § 710.201(h)) “Asset management” means a strategic and systematic approach for the operation, maintenance, and improvement of physical assets that uses engineering and economic analyses to identify actions that will achieve and sustain a desired state of good repair over the lifecycle of the asset at a minimum cost. (23 CFR § 515.7) Follow-on work that will identify the off-the-shelf software platforms available and the costs to customize and integrate these platforms is also
recommended. This effort should also include a pilot development for a SDOT to carefully measure costs, revenue received from alternative uses of the ROW, and lessons learned for other SDOTs. It is also recommended that SDOTs prioritize the identification of opportunities to dispose of excess ROW.

Background

Government agencies that acquire real property for a Federal-aid highway project that use Federal funds in any phase are charged with managing the acquired property after the project is completed, as described in 23 CFR 710 Subpart D – Real Property Management. As part of this consideration, any excess or available ROW for potential disposal must be determined and inventoried as described in 23 CFR 710.201(e)(2).

Each SDOT, in accordance with 23 CFR 710.201(e)(2), must track, manage, and update its inventory continually until the property is disposed of. SDOTs may use several methods to track and document available ROW. Methods include computer software platforms that track inventory and any use or disposal of property. The method should include documentation of any State requirements that influence the disposal process. There has always been interest from private parties and public entities to use available ROW for alternative uses. This interest has increased in recent years as SDOTs look for new ways to generate revenue and funds that can be used for Title 23 activities.

One of the challenges of property management is the effort required to maintain reliable information on each parcel and determining its best use and fair market value. In interviews conducted for this study, some SDOT staff describe concerns within their own organizations about the risk of allowing disposition or alternative use. Some describe a deeply ingrained philosophy that highways are for highway purposes only, and broadening the lens is a challenge for them. Interviewees describe efforts to accommodate requests for alternative use that are challenged by concerns over compliance, liability, or other legal issues. Some interviewees describe conflicts between competing interests for a particular parcel without objective procedures to determine the best value for the parcel, which often requires the balancing of quantitative (money) and qualitative (community desire) considerations.

The SDOTs interviewed all described how much they value their partnerships with their respective FHWA Division Office but felt some frustration over the confusion about what is considered to be Title 23 eligible. The confusion may be due to a lack of understanding as to how Federal regulations and State regulations intersect regarding alternative uses of rights-of-way. Finally, while SDOT’s are required by 23 CFR 710.201(e)(2) to track their inventory, most SDOTs struggle to gain a complete understanding of what they own and what the clear boundaries are for all their properties. Many or most of our highways were developed before the age of geographic information systems (GIS) and precise electronic records; given this uncertainty around ownership interests and boundaries, and possible future needs, State or Federal officials often hesitate at the disposition or long-term lease of a parcel. Specifically, it can take weeks to go through old county records to determine the ownership and boundaries of the parcels. Without a compelling offer in hand, many SDOTs do not want to incur that cost for a speculative sale. On the other hand, if a SDOT knows what leasable or saleable properties it owns and has characterized each parcel’s highest and best use for either disposition or alternative use, then a decision to dispose or allow an alternative use can be made more efficiently.

Project Purpose and Need

The purpose of the project is to provide a detailed analysis of the practices and tools SDOTs currently use to inventory and track ROW and provide information on existing flexibilities to States interested in
alternative uses. To learn more about alternative uses of ROW, FHWA conducted research including a survey of SDOTs, follow-up interviews, and an extensive literature search. Other efforts included identifying the types of alternative use requests SDOTs receive and any safety, operational, or legal issues related to alternative uses, as well as any additional opportunities for improving existing processes and tools for identifying and tracking ROW that can streamline agencies’ property management programs.

The three parts of the research collected specific information to support the analysis:

- The team conducted a survey of SDOTs to collect information about property management and use of ROW.
- The team conducted interviews of 10 SDOTs to collect detailed information regarding their ROW practices, including asset management methods and costs.
- The team conducted an extensive literature search and review to collect information on alternative uses of ROW.

Research Approach

FHWA conducted the survey of SDOTs (including territories) from July 2020 through October 2020. The survey was designed to answer two primary questions:

- What is the current state of the practice and what are the best practices regarding property management?
- What are the best practices regarding accommodation of alternative uses of the ROW?

The survey collected data to identify current processes and tools used by SDOTs to identify and track ROW available for alternative uses; the number and types of requests for alternative uses they receive; and any safety, operational, or legal issues related to alternative uses.

The survey results were used to identify SDOTs for follow-up interviews. Ten SDOTs were interviewed between December 2020 and January 2021 to gain a more nuanced understanding of their ROW processes. Criteria used to select subjects for the interviews included:

- SDOTs with strong and/or unique partnerships to make innovative uses of ROW.
- SDOTs with a culture of innovation.
- Broad geographic coverage.
- Mixture of strongly innovative SDOTs, SDOTs with emerging innovation programs, and SDOTs experiencing challenges with innovation.

The interviews were designed to help identify best practices and common challenges as well lessons learned and suggestions for improvement.

Finally, a literature search was conducted to collect additional information about issues raised in the survey and interviews. The search included State regulations and statutes related to alternative use of ROWs. The search included information about costs and effectiveness of electronic ROW inventory tools, but little information was discovered. It also included searches for ROW manual language or internal agency memos that directly answer survey questions, as well as recommended solutions and best practices.
Findings from the Survey of SDOTs

A total of 60 surveys were sent to SDOTs. Some SDOTs had more than one contact who received the survey. Of the original 60 surveys sent, 43 (72%) were complete. Eight (13%) of the surveys were started but not completed because other surveys from the same SDOT completed the survey on behalf of the entire State or territory. The survey responses were generally completed by the ROW manager and are summarized in Appendix A. Survey Responses.

A substantial number of respondents were not at all familiar or only somewhat familiar with Federal regulations regarding management of ROW or regulations that authorize alternative uses (Question 1). More than 80 percent of respondents have an active program for the identification, tracking, management, and disposition of ROW; however, the interviews revealed that few such programs are spatially enabled (Question 5). Among the eight respondents that reported that they do not have an active program, four reported the cost was too high to include in their budget, two said their inventory was too small to justify a program, and four maintain compliance through other means, including manual tracking or use of spreadsheets (Question 7).

Sixty percent of the respondents reported that their State has legislation or regulations related to alternative uses of ROW (Question 11). A plurality of States – 42 percent – reported that State laws limit or prohibit alternative uses of ROW, but 23 percent also reported that they did not know if laws or regulations limit alternative uses of ROW (Question 13). Ninety percent of the respondents indicated their States have policies, standard procedures, or written guidelines in place that describe how alternative uses and excess ROW are considered, identified, used, or disposed of (Question 14).

Most respondents (36 of the 43) have full-time staff dedicated to property management. Three of the remaining respondents have staff that have property management as a part of their responsibilities (Question 2). The majority of respondents (39 of 43) reported that their staff spends less than 50 percent of their time on inventory and verification of ROW available for alternative uses (Question 4).

More than 60 percent reported that they received fewer than 50 requests for disposition of excess ROW from 2013 through 2018 (Question 8). Nearly 50 percent had between one and 25 requests for alternative uses of ROW during the same period (Question 9). More than 80 percent of the requests for dispositions and alternative uses were made at the State level (Question 10). Permits are the most common form of ROW use agreements (used by 80 percent of respondents), followed by leases (78 percent), and licenses (56 percent of respondents) (Question 12).

Nearly 70 percent of respondents reported that resource constraints are one of the challenges they face in identifying and inventorying alternative uses and disposition of excess ROW. Nearly 60 percent report that they lack the tools needed, and 54 percent report they do not have enough people (Question 17).

Findings from the Interviews of SDOTs

The research team interviewed staff at the following 10 SDOTs:

- Colorado
- Massachusetts
- Minnesota
- New Mexico
- Oregon
- Pennsylvania
The SDOTs interviewed included a geographically diverse set of respondents as well as a mixture of active programs and programs experiencing challenges. With the two primary focus areas of property management and innovative use in mind, five major themes came out of the interviews and are explored in further detail below.

Variations in Best Practice

All interviewees stated unequivocally how much they value their relationship with their respective FHWA Division Offices. SDOTs understand the requirement in 23 CFR 1.23 that all real property within the ROW boundaries of a project shall be devoted exclusively to public highway purposes. However, the interviews revealed that some SDOTs perceived that there is inconsistency regarding how Division Offices treat alternative uses, and some SDOTs expressed frustration over perceived rigid limitation. This may be addressed by FHWA emphasizing that while FHWA has one Federal regulatory environment, each State has different State laws that affect how uses of the ROW are accommodated. In addition, each State develops agreements and processes with FHWA regarding how they will manage the Federal-aid program. Through the interviews and the review of the literature, it became clear that the concern may be addressed if FHWA provides guidance on accommodating alternative uses of the ROW, and if the SDOT approaches ROW as an element of asset management. Significant amounts of Federal and State monies have been invested into acquisition of rights-of-way, yet most SDOTs have only the most general knowledge of how much they own. Per the interviews, to respond to a request to utilize or to release a parcel typically involves a very time and labor-intensive process. Instituting an asset management plan for ROW property management will assist the SDOTs by allowing them to develop more efficient decision-support systems and enhance stewardship. In the literature review, a wide net was cast for asset management with a special emphasis on land. The U.S. General Services Administration (GSA) was found to have the largest library of documents on asset management; however, these documents speak almost exclusively to depreciating-value assets and consumable inventory such as buildings, vehicles, office equipment, and supplies. Land does not appear. Likewise, the FHWA site was searched and documents regarding asset management of improvements to the highway system (pavements, signs, markings, etc.) were found via the “Asset Management and Every Day Counts” Web pages. However, again, the management of the ROW itself (land) is absent. Further information on this is found in the Literature Review section of this report. It is hypothesized that the incorporation of the ROW (land) into the asset management plan will address this oversight and will, as more SDOTs implement proactive asset management plans for ROW, increase comfort with alternative uses.

Improvements to the land, including pavements, structures, signs, and markings, may be viewed as diminishing-value assets (they have a finite economic life and depreciate in value). The FHWA invests considerable resources into asset management as an important platform for responsible stewardship of resources. ROW (the land itself) is the one appreciating-value asset in the portfolio, but it does not appear to receive the same effort in terms of asset management. An asset management approach helps to frame the discussion regarding highest and best use of the ROW, helps to identify classes of use that are acceptable to FHWA, and segues into the discussion of property management that follows.
Conversion from a reactive property management paradigm to a proactive paradigm requires significant championing within a SDOT. Although not interviewed, the Georgia DOT (GDOT) is recognized as a best-practice example of a property management program in a state of transition from a reactive paradigm of responding only to requests for release of ROW to a proactive paradigm of actively seeking opportunities for release or alternative use. This effort is underway through the implementation of NCHRP Report 917 – Right-Sizing Transportation Investments: A Guidebook for Planning and Programming. (Published by the National Academies of Sciences, Engineering, and Medicine in 2019. See the bibliography in Appendix D.) The application for the remnant parcel inventory managed by the GDOT Real Estate Services department was developed because the inventory of more than 8,000 parcels is growing and is becoming an unacceptable administrative burden for GDOT. The goal of NCHRP Report 917 that is featured most prominently in this application is the notion that, like adjacent private properties, public ROW, when not needed for highway purposes, should be either disposed or put to alternative use, whatever is in the public interest. A remnant parcel that is not needed for future highway purposes carries annual costs to administer and maintain but is not in any use (it is not even on the tax rolls), and so by definition is not in its highest and best use. The process developed by GDOT begins with assigning each remnant parcel to one of five categories:

- **Category 1** – Parcels that have a marketable highest-and-best use of their own and can be transacted in an open market.
- **Category 2** – Parcels that have their own best and highest use but cannot be conveyed arm’s-length because of limited potential uses or buyers.
- **Category 3** – Parcels that do not have their own best and highest use and must be conveyed non-arm’s length.
- **Category 4** – Parcels that do not have their own best and highest use but may be conveyed for transportation enhancement uses to a local partner.
- **Category 5** – Parcels that do not have their own best and highest use but have been identified as needed for future uses by GDOT or a local partner.

Though this effort is championed by the GDOT Real Estate Services department, the assignment of remnant parcels is handled by an internal decision clinic (a group of internal key stakeholders) including:

- Office of Performance-Based Management and Research
- Office of Legal Services
- Office of Utilities
- Office of Maintenance
- Office of Environmental Services

This newly developed process elevates remnant parcel property management to a much more enterprise-wide effort.

**Property Management is Resource Intensive**

Very few States report having a complete understanding of how much ROW they own and/or manage. All interviewees report that they know approximately how much they own, but relatively few have spatially enabled (GIS-based) inventories of ROW. While approximately 80% of survey respondents reported having a system in place to track and manage ROW, the interviews revealed that relatively few
of these systems are spatially enabled and capable of supporting proactive identification and pursuit of innovative uses. More than one interviewee reported having a database, but also relying on “courthouse research” to respond to specific requests. Many States expressed that they could manage and maintain a program with the resources they had if they could “get over the hump” of the first inventory and characterization of the properties. More than one interviewee mentioned that their program would benefit from FHWA support to develop and implement spatially enabled proactive property management systems.

The Massachusetts DOT (MassDOT) is recognized as a best practice example of investment in a spatially enabled property management system. According to the interview conducted, MassDOT purchased an off-the-shelf software platform then invested heavily in customizing this platform to its purposes. It has become not just a property management platform, but is also a sale and lease (transaction) platform. This platform has been developed in multiple steps over multiple years, and a development cost was not available. Lease management is handled outside of MassDOT, and property management has taken on an enterprise-wide scope encompassing multiple State agencies.

Reactive Vs. Proactive Paradigms

With rare exception, most interviewees describe their program for dealing with requests to release or use ROW as reactive – they respond to requests received from outside the agency. Most of the interviewees that describe a reactive paradigm report they are adequately staffed to respond to the requests they receive. The programs interviewees describe as proactive – ones that actively identify and pursue highest and best use of ROW (through either disposal or alternative use) – are the exception. Interestingly, development and implementation of these spatially-enabled software platforms were described by the interviewees as necessary to maintain their proactive property management paradigm in the face of increasing pressures to reduce headcount. These systems are viewed as archives of institutional knowledge and decision support, alike.

The Minnesota DOT (MnDOT) is a best practice example of proactive application of public-private partnerships. An area under highway viaducts in downtown Minneapolis was held up as the crown jewel of common area and green space (i.e., a walkable area). It is part of a significant redevelopment of mixed-use properties included in a revitalization effort supported by the City. Significant challenges concerning acceptable private uses and liability were encountered but have been addressed. A primary concern of MnDOT has been to protect the safety and the integrity of the highway. The result is that areas under bridge viaducts in this area will be subject to limited, private, for-profit uses that do not interfere with the safe operation of the highway. This is also a best practice example of public ROW being elevated to its highest and best use through a thoughtful balancing of highway uses, active (walking, bicycling) uses, and alternative (for profit) uses.

Increasing Variety in the Nature of Requests

The number of requests received by States to release or make innovative uses of ROW have not necessarily increased; however, the variety of requests has expanded. New economic realities recently revealed include:

- The economic impacts from the COVID-19 pandemic have demonstrated significant shortcomings in telecommunications capacities, particularly broadband infrastructure to support distance-learning, telecommuting, and tele-medicine. Interviewees report significantly increased interest in accommodation of wireless towers or 5G small-cell nodes within ROW.
Fiber-optic cables are a closely related topic; however, this is significantly complicated by the fact that some States define them as utilities, and other States do not.

- The new Federal Motor Carrier Safety Administration hours of service limitations now in force have driven increased interest in use of ROW for truck parking. Related support facilities including power, telecommunications, restroom, and other support facilities complicates this issue.
- Many States have been approached regarding solar installations.
- There is significant interest in use of areas (particularly under viaducts) for active transportation or other “open-space” public uses. Mixtures of public and private-for-profit uses of such spaces raise significant policy and legal challenges.
- At least one interviewee has described park-and-ride uses that are electrified to support electric vehicle (EV) charging. There are anticipated increases in EV adoption and there is an increasing need to manage demand in urban core areas. The Utah DOT (UDOT) is recognized as a best practice example of electrification of ROW programs.

Right-of-Way is an Enterprise Effort

The best practice examples of property management and innovative use alike are enterprise-wide programs that are not “pigeonholed” within a specific office or department. They are not limited to the ROW departments, but also incorporate legal, planning, environment, project development, innovative partnership, and economic development offices within the SDOT, and in one case involved multiple public agencies outside the SDOT. If ROW is to be reframed as an appreciating-value asset, then there are several common best practices:

- A reframing of ROW on the part of FHWA and the SDOT as an undertaking of asset management.
- Developing inventories of the properties with proper characterization to separate them into opportunity categories. For example, what alternative uses may be suitable for this property?
- Involving other offices. The effort will be naturally based in the SDOTs ROW office; however, there are various activities (such as legal work or public-private partnership work) in which other offices within the SDOT will take the lead.
- Recognizing the primary mission of the ROW is the safe and efficient movement of people and goods on the surface transportation infrastructure. Innovative uses become an exercise in balancing the demands for the highway facility and alternative uses in ways that do not compromise the safety or integrity of the facility.
- Identifying performance measures that essentially amount to raising all parts of the ROW to its highest and best use. In some cases, these measures are quantitative in nature (such as return on investment or value capture) and some are qualitative in nature (such as livability or resilience). It is possible for programs to include both quantitative and qualitative performance measures.
Findings from the Literature Search

Property/Asset Management

All survey respondents and interviewees described having a property management system; however, only Massachusetts, Minnesota, and Utah described a proactive management program that may be classified as an asset management endeavor. A search for real property asset management was conducted using Google and returned approximately 306,000,000 results. Refining this search to the most relevant results yields:

- The General Services Administration (GSA) website for Real Property Asset Management Tools can be found at https://www.gsa.gov/policy-regulations/policy/real-property-policy/asset-management/real-property-asset-management-tools. It includes multiple tools such as:
  - The Federal Real Property Profile Management System (FRPP MS)
  - The Data-to-Decisions (D2D) Tool
  - The Real Property Management Tool
  - The Asset Consolidation Tool
- The FHWA website on the topic of asset management is https://www.fhwa.dot.gov/asset/.
  - The site includes a link to Case Study 7 – Managing Assets Beyond Pavements and Bridges. Although the case study could be relevant, it does not include land and appears to focus on other depreciating-value assets.
- Executive Order 13327 on Federal Real Property Asset Management, which was published in the Federal Register Vol. 69, No. 25 February 6, 2004.
- The Commonwealth of Massachusetts website dedicated to the sale or leasing of publicly owned ROW: https://www.mass.gov/topics/real-estate-transactions-on-behalf-of-the-commonwealth.
- The MnDOT web pages on:
  - Land Management
  - Public-Private Partnerships
- The UDOT website on online property asset management that includes pages on:
  - Surplus Land Sales
  - Property Management (leasing, demolition, maintenance, etc.)
  - Property Inventory and Mapping
  - Statewide Permitting

Information regarding the costs and administrative burdens to develop the property management programs in Massachusetts, Minnesota, and Utah is not readily available. Likewise, annual
administrative burdens are difficult to ascertain, as they sometimes include efforts from multiple offices. A bibliography is in Appendix D. Bibliography.

Alternative Use Programs

An internet search for alternative use programs implemented by SDOTs was categorized into the following topics:

- **Renewable Energy**: Solar SDOT projects have generated considerable interest over the past decade as a method of generating alternative revenue streams or reducing costs while reducing greenhouse gas emissions. Despite this interest, few SDOTs have been able to implement broad efforts that result in continued profitability and internal agency support and prioritization. MassDOT was the first SDOT to successfully deploy a coordinated set of financially viable solar projects in the ROW. Second to Massachusetts, Maryland DOT is coordinating two-phased programmatic effort for solar that will generate 46,000 MWh per year, close to 12 percent of its annual electricity usage.

- **Electrification of the ROW**: Nearly every automobile manufacturer has committed to EVs and SDOTs may therefore believe that they need to support the transition while not competing with the private sector for providing transportation energy. UDOT’s program for electrification is identified as a best practice for its efforts to electrify State highway ROW within the Salt Lake Basin (which contains over 80% of the State’s population).

- **Park-and-Ride Facilities**: Considerable attention is being given to congestion and air quality, and park-and-ride facilities provide the opportunity to support other modes and multimodal travel. Federal funds can be used to develop EV charging at these facilities. Fees can be levied for the EV charging stations, but they may not exceed the total cost of operating and maintaining the stations. Furthermore, the intent of a park-and-ride is to reduce congestion and improve air quality. EV charging is a courteous amenity, but the trip to the park-and-ride likely is under 10 miles and does not require charging to get to and from the park-and-ride station. Although a parked EV at the transit facility is a reduction in vehicles on the road, charging is not required for the typical commute radius of 2 miles – 10 miles from the transit facility and may not be necessary to use the park-and-ride facility.

- **Truck Parking**: While similar to park-and-ride facilities, the geometric and space requirements for truck parking are very different. Costs can vary a great deal depending upon the services provided. New hours-of-service rules of operation and requirements for automated trip logging are in effect and have elevated interest in this topic; however, no specific examples could be identified. The Kentucky Transportation Cabinet has undertaken a study to identify areas that could serve such a purpose along their major truck routes, and there are initiatives in the Mississippi and Ohio Valley regions to dynamically sign for available truck parking along truck routes, but these do not appear to be public-private partnership ventures as contemplated here. Other examples, such as truck staging areas near hubs, are also distinct from this because they are typically located on private property.

- **Agricultural Uses and Carbon Sequestration**: Many SDOTs have implemented projects and best practices intended to support native plants and pollinators rather than harvestable crops. SDOTs do not want harvestable crops planted in the ROW, but this does not preclude haying of native grasses in the ROW. Carbon uptake in SDOT-owned lands has been calculated and monitored in multiple States, but literature showing positive income-producing offsets to date has not been
identified. Ohio DOT’s pollinator program stands out because it has set clear targets, used creative thinking about suitable lands, and presents opportunities for increased attention on remnant prairie and vulnerable species like the monarch butterfly. For carbon sequestration, recent work in ROW includes the planting of the patented perennial grain Kernza (intermediate wheat grass) developed for carbon sequestration and nutrient load reduction along highways in Georgia. As another example, Kansas DOT routinely issues haying permits along State Highway ROW to adjacent property owners at no cost to them.

Key takeaways include:

- There is increasing attention in the literature for more innovative renewable energy production capacities in the ROW.
- The literature points out the need for public-private partnerships to make electrification of the ROW, park-and-ride facilities, and truck parking facilities economically viable.
- Agricultural uses and carbon sequestration, as found in the literature, seem to be site-specific though the literature does reflect that measuring and inventorying the carbon in the ROW has become common practice.
- Though the idea of utilizing the ROW to boost broadband telecommunications capacities (particularly in rural areas) has received a great deal of attention, the concept is new enough that no specific research could be identified in the literature.

Legal Analysis

Specialized legal resources (Lexis-Nexis, Westlaw, etc.) identified documents related to the use and disposition of ROW on Federal-aid highways. As this is an expansive topic, the search was narrowed to Federal statutes and regulations and State statutes and regulations for the SDOTs that were interviewed.

Federal Laws and Regulations

The general Federal law is that property on highways that has received Federal aid must be used exclusively for highway purposes. There are some exceptions, such as the use of airspace; vending machines operated by the visually impaired; utilities; temporary use for non-highway purposes; and use for railroads, mass transit, and other related public transportation purposes. Specific Federal laws include:

- 23 USC 111
- 23 CFR 1.23
- 23 CFR 710.403 Management
- 23 CFR 710.405 ROW use agreements
- 23 CFR §710.409 Disposal of excess real property
- USC §156. Proceeds from the sale or lease of real property
- 23 USC §137
- 23 USC §142
- 23CFR 810
As a general proposition, the primary purpose of a public highway is the safe and efficient movement of people and goods. All other occupancy or use is secondary and subordinate to the public use of the highway. The focus of this discussion is on alternative uses of highways under the direct jurisdiction of SDOTs, including Federal-aid Highways eligible for financial assistance under Chapter 23, United States Code. The referenced Federal code for currency through January 1, 2021 as provided in https://uscode.house.gov/currency(currency.shtml was reviewed.

A supplement to the reference to the full text of 23 USC 111 to show the previously allowed limited use of rest areas, vending machines, and call boxes on the Interstate System that were not quoted in the 2018 document is included as Appendix C. Concession Agreements Under 23 CFR 710.701 – 710.709. The references to the Code of Federal Regulations through March 24, 2021 as provided in the Electronic Code of Federal Regulations at https://www.ecfr.gov/cgi-bin/ECFR?page=browse were also reviewed. There has been a change to the concession regulations in 23 CFR 710.701 to 710.709 that were referenced but not quoted in the 2018 document.

**State Laws and Regulations for States Interviewed**

Examples of State statute/regulation from interviewed SDOTs include:

- **Colorado**: Adopts federal regulations regarding property management.
- **Massachusetts**: Property management is not centralized and sometimes handled outside the SDOT.
- **Minnesota**: Has enacted enabling legislation regarding the management and leasing of ROW not required for highway purposes.
- **New Mexico**: Property management function is contained entirely within the ROW department.
- **Oregon**: Alternative uses of highway property are managed by mode to bring focus to non-highway uses.
- **Pennsylvania**: No ROW manual is readily accessible and the interview indicated concerns about alternative uses of ROW.
- **Texas**: There is a standalone “Manual on The Use of Right of Way by Others.”
- **Utah**: There is an established procedure for the analysis and selection of potential alternative uses.
- **Virginia**: The ROW manual allows non-highway use of the ROW after project construction under limited circumstances if the use is consistent with highway safety, operation and maintenance.
- **Washington State**: Leases are generally used for a proposed alternative use that is compatible with the transportation use.

Variations are noted in the literature regarding State implementation of Federal laws and regulations. These variations are found in State constitutions and statutes that have different definitions of “public purposes” for which property may be acquired or subsequently used for temporary private purposes or even retained if surplus. States have a mixture of highway property acquired in fee or in easement with
various restrictions for highway purposes with phrases such as “for so long as so used” or for “public highway use only.” A variety of statutes and court decisions allow temporary use for other purposes until needed for highway purposes. States may consider “alternative uses” of highway ROW to fall within ongoing public highway purposes such as privately erected cell towers on highway ROW used jointly for State and local police and traffic communications and control operations. Other States may consider “alternative uses” to mean only non-highway temporary leases of otherwise surplus highway ROW to private entities for eligible private purposes. Others may consider public utility wind turbines eligible to locate on ROW under the State DOT utility accommodation policy as a normal use of a highway ROW but not accommodate or even allow privately owned wind turbines even if part of the privately generated power contributes to a public electric grid. Others may negotiate a lease or an in-kind electric service contribution for the alternative use.

Some States have enacted statutes that preclude reversion of the underlying unburdened fee interest to the abutting owner or to the owner of the original parcel from which it was carved for highway easement use. States may also convey or lease property with reversion or termination clauses that are triggered when a defined and approved alternative use ceases and the property interest returns to the State for highway transportation purposes.

The real estate and related manuals of the 10 States selected for interviews were reviewed to determine how they go about approving “alternative uses” for highway property and to identify the breadth of permitted alternative uses allowed as a matter of Federal law, State law and policy. Findings include:

1. COLORADO:


Colorado follows the Federal law and regulations by reference with minor State law limitations specific to mineral rights restrictions and quality of title. Legal authority is referenced as follows:

“The purpose of this chapter is to clarify the existing statutes, rules, policies, and procedures related to the Property Management Program. This chapter is also to establish uniform procedures for each of the Property Management activities and their implementation to ensure an effective program. Federal regulations for the property management function are found in 23 CFR, Part 710 and 23 CFR, Part 620. These regulations prescribe Federal Highway Administration (FHWA) policies and procedures for the management of real property acquired in connection with Federal-aid highway projects. The policies in 23 CFR Part 710 and 23 CFR Part 620 apply to the State and all political subdivisions that manage real property acquired for any highway or highway related project in which federal funds will participate in any part of the right-of-way costs of the project. FHWA may participate in net costs incurred in leasing, rental, maintenance, disposal of improvements, protection, rodent control and clearance of real property.

§ 43-1-210 Acquisition and Disposition of Property
§ 43-2-106 Abandoned State Highways
§ 43-2-301 through § 43-2-304 Vacation Proceeding: Roads, Streets, Highways
§ 43-1-111 Chief Engineer to Acquire Property
§ 43-1-212 Departmental Rental Agreements
23 CFR 710.401 Real Property Management - General  
23 CFR 710.403 Real Property Management - Management  
23 CFR 710.405 Real Property Management - Air Rights on Interstate  
23 CFR 710.407 Real Property Management - Leasing  
23 CFR 710.409 Real Property Management - Disposals  
23 CFR 620.201 through 23 CFR 620.203 Relinquishment of Highway Facilities  
23 CFR 713 Subpart C Right of Way – The Property Management Function  
Transportation Commission Resolution 271”

2. MASSACHUSETTS:

MassDOT’s management of highway property and uses is decentralized, and, in some cases, ultimate disposition is handled by non-DOT State agencies. MassDOT’s Division of Highways does not issue permits for conducting business, vending operations, or activities that involve the revenue-generating leases in its ROW. In these instances, the revenues generated are long-term ground lease payments for use of leasehold improvements on the rights-of-way. There are some 2,500 permits issued by its Division of Highways that are focused on maintaining the safety of all roadway users and the integrity of the infrastructure and surrounding environment. https://shaps.massdot.state.ma.us/DoINeedPermit.aspx

Alternative uses likely require a separate license or lease agreement issued by the MassDOT’s Office of Real Estate and Asset Development (OREAD). As of Jan 13, 2020 this Office managed 188 revenue-generating leases for MassDOT-owned property. The lease process is manual and decentralized, making information not easily available for OREAD to track and reconcile. MassDOT does have a solar energy program that allows use of land for installation of solar grids in service plazas and park-and-ride facilities at no cost to the MassDOT in return for discounted use of the energy produced and association with charging stations. https://www.mass.gov/info-details/massdot-renewable-energy-projects#highway-right-of-way-solar-project-

However, this MassDOT program is portrayed as a part of a separate entity’s program, the Massachusetts statewide Solar Massachusetts Renewable Target (SMART) program that offers benefits to Massachusetts residents who install solar panels on their homes. https://www.mass.gov/info-details/solar-massachusetts-renewable-target-smart-program

3. MINNESOTA:


MnDOT clearly implements the pertinent Federal laws and regulations and enabling Minnesota statutes and rules with no evidence of any conflict. Chapter 5 [500 series] covers the details of property management and alternative uses. In the online version of the document, all of the statutory references are hyperlinked to the actual text of the statutes:

“502.1 Introduction; Leasing MnDOT Property
Land owned in fee and in some cases, owned in easement by MnDOT may be eligible for lease under Minn. Stat. §161.23, Minn. Stat. §161.433 and Minn. Stat. §161.431. MnDOT acquires land throughout the State, and in many cases, the land may be leased before or after construction of a highway project. Occasionally surplus land is sold, but leasing the property allows MnDOT to have flexibility for future expansions and changing needs. In an effort to maximize the value of MnDOT’s acquisitions some land may be available for lease by various stakeholders when it is not a part of current MnDOT development plans.

502.2 Leasing Authority

The authority for leasing out highway land owned in fee title comes from Minn. Stat. §161.23, Subd.3, Minn. Stat. §161.433, Subd.1-3 and for Eminent Domain Land in Minn. Stat. §117.135, Subd.3. OLM charges rent on the date immediately succeeding the title and possession date. 1. Easement Land: Highway easement land is not covered by the above leasing statutes. Leasing out land over which the State has acquired a highway easement creates special difficulties. The authority for leasing such land is contained in Minn. Stat. §161.431 and will be discussed in Section 502.13."

MnDOT applies the relevant Federal laws and regulations regarding leases of highway property as stated in:

502.11 FHWA Involvement

Environmental Requirements

The National Environmental Policies Act (NEPA) requires that environmental consequences be evaluated wherever a Federal approval is required. For conveyances, temporary use permits, leases, and access control changes, which have little or no impact on the environment, this was satisfied by the Programmatic Environment Assessment (EA) prepared by MnDOT and the FONSI issued by FHWA on May 18, 1984. "Little or no impact on the environment" means the proposed action will not affect an environmentally sensitive area, such as a wetland, floodplain, archeological or historical site, or critical habitat for rare or threatened and endangered species. By issuing the FONSI, the FHWA has determined, in advance, that these types of actions will not significantly impact the environment. For actions which do involve environmentally sensitive areas, and therefore do not fall under the above-mentioned EA and FONSI, an environmental analysis must be made of the proposed action by MnDOT and concurred in by FHWA.

Lease Approval

Federal regulations allow FHWA approval actions to be delegated to MnDOT. Under this program, FHWA has delegated to MnDOT approval action for leases on the Federal-aid highways other than highways on the Interstate system and Less than Fair Market Value determinations.

502.13 Leasing Out Highway Easement Land

The leasing laws which have previously been discussed in this Section 502 all pertain to leasing out land which the State owns in fee simple, i.e., complete ownership. However, much of the highway land acquired prior to the late 1950s was in the form of an easement for highway purposes, and generally, the highway easement could not be leased out. To remedy this, in 1983 the legislature permitted MnDOT to lease out land acquired in easement upon complying with certain prerequisites cited as: Minn. Stat. §161.431.

Volume VI of the handbook is a separately printable 38-page elaboration on all Property Management functions including alternative uses of the property. Although the document references some of the applicable Federal laws and regulations, the overall tone of the document encourages permanent disposition of surplus highway ROW [non-ROW NRW parcels] by sale or competitive fair market lease.

The document describes the Property Management Unit [PMU] in Chapter 3 of Volume VI as the unit handling all transactions involving highway ROW as follows:

“Chapter 3: Organization

SECTION 1- GENERAL

The Property Management Unit (PMU) is part of Right-of-Way and is responsible for the management of all transactions made in connection with highway right-of-way and non-right-of-way (NRW) parcels and improvements. An NRW parcel is a parcel acquired in excess of highway right-of-way needs. An NRW parcel is purchased because it was damaged due to a highway project and was determined to be an uneconomic remnant or has been determined to be excess to the needs of the highway facility.

SECTION 2 – DUTIES

The management of Department real properties include the activities listed below which are the basic responsibilities of PMU: Maintain up-to-date inventories of all right-of-way and non-right-of-way properties and improvements acquired by the Department for all highway, as well as transit and rail programs. Prepare documentation for the sale of excess real properties, including NRW parcels and associated improvements which have been approved for sale through the Department’s internal review process. (Sec. 7) Prepare and negotiate airspace agreements and leases of excess property and improvements, including improvements awaiting disposal. Maintain accurate and up-to-date records of all transactions, including sales and leases of lands, improvements, fixtures and equipment obtained through the acquisition process. Process information and prepare documentation on illegal encroachments for Department’s enforcement of Rule 18.20.5 NMAC. This process for handling illegal encroachments may be initiated by PMU, or at the request of other units of the Department, other agencies of the State, or the general public. Process documentation for the vacation and abandonment of right-of-way or non-right-of-way properties in response to requests initiated by other Department units within NMDOT, other agencies of the State, and/or the general public, through the prescribed Department internal review process. Coordinate Department reviews of proposed land subdivisions presented to local government agencies where Department property may be affected or where access to State highways is required for the proposed subdivision. Formulate, implement, and manage PMU policies and procedures.”

Chapter 4 of Volume VI of the manual explains that the procedures are based on both State law and Federal regulations:

“Chapter 4, Procedures

SECTION 1- GENERAL Procedures described in this Volume are based on both State law and federal regulation. The federal requirements contained in 23 CFR 710, 23 CFR 1.23 and any other regulations that apply are applicable to all State and local political subdivisions that
manage real property acquired for any highway or highway related projects in which federal funds participated which includes any part of the right-of-way costs of the project. (23 CFR Part 710.203) When federal interest exists in a Department property which is sold or leased, PMU shall direct the Department’s Financial Control Unit to deposit the related proceeds into an account from which funds must be used for future Title 23 eligible projects. The proceeds from Department property which is sold or leased and has a federal interest will be accounted for and the federal percentage of the original acquisition may be utilized for the non-federal matching share of project costs. PMU activities are performed in a manner that is consistent with the public interest and designed to realize the maximum long term public benefit. Pertinent provisions of 23 CFR 710 to which the Handbook makes reference are for the convenience of Department employees and anyone who is concerned with highway, transit and rail related right-of-way.”

“Chapter 4. Procedures

SECTION 6-REQUESTS TO PMU

PMU receives requests, from the public, other State agencies, or local governments for action regarding State owned real property. These requests are generally made in connection to the use and conveyance of State right-of-way or other Department real properties. They may include requests for airspace agreements, leases, sales, donations, abandonments, encroachments, subdivision reviews on behalf of local governments, relinquishments and road exchanges or research.”

5. OREGON


Property Management is addressed in Chapter 9, pages 248 to 290. Oregon DOT’s manual makes truly clear distinction between managing project related real estate activities and non-project real estate activities. It goes further in clearly distinguishing operating property from excess ROW.

“9.100 Introduction

The Oregon Transportation Commission (OTC) requires properties acquired by the Oregon Department of Transportation (ODOT) for right of way, or other related purposes be managed in a manner that will maximize any long-range public benefit. To achieve this goal, the Technical Services Branch, Right of Way Section maintains an inventory of real property acquired, and an accounting of related costs and expenses in the management and disposition of those properties. The Right of Way Section, Property Management Unit is responsible for the methods used in managing property data and certain excess properties. The Right of Way Section’s property management activities are divided into two parts: project related activities and non-project related activities. Project related activities are the responsibility of, and conducted under, the supervision of the Region Right of Way Manager/Program Managers with some support provided by the Property Management Unit. Non-project related activities are the responsibility of, and conducted under, the supervision of the Right of Way Section, Programs Manager who is located in Headquarters (HQ) in Salem.”

Oregon has a modal definition of what it considers alternative use of highway property by focusing on non-highway alternative uses of Oregon DOT property within the ROW limits. See pages 265 and 266:
FHWA must approve Right of Way Use Agreements that affect right-of-way for interstate highways. An individual, company, organization, or public agency desiring to use real property interests shall submit a written request to ODOT, together with an application supporting the proposal. If FHWA approval is required, ODOT will forward the request, application, the proposed Right of Way Use Agreement, and ODOT’s recommendation with any necessary supplemental information, to FHWA. The submission must include the following:

1. Identification of the party responsible for developing and operating the proposed use
2. A general statement of the proposed use
3. A description of why the proposed use would be in the public interest
4. Information demonstrating the proposed use would not impair the highway or interfere with the free and safe flow of traffic
5. The proposed design for the use of the space, including any facilities to be constructed
6. Maps, plans, or sketches to adequately demonstrate the relationship of the proposed project to the highway facility
7. Provision for vertical and horizontal access for maintenance purposes
8. A description of other general provisions such as the terms of use, insurance requirements, design limitations, safety mandates, accessibility, and maintenance.
9. An adequately detailed three-dimensional presentation of the space to be used and the facility to be constructed, if required by FHWA or ODOT. Maps and plans may not be required if the available real property interest will 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 ODOT’s discretion.

Oregon DOT has entered a robust “Oregon Department of Transportation Federal-Aid Highway Program Stewardship and Oversight Agreement April 2010 Revised Feb 2012” beginning at Page 310 as an Appendix with numerous duties cross referenced to specific provisions of Title 23 USC and 23 CFR. Other than its public policy statements of maximizing the public benefits of all Oregon DOT property, Oregon DOT appears guided entirely by the applicable Federal law and regulations.

6. PENNSYLVANIA

PennDOT does not have a readily accessible guide to alternative uses of highway property. PennDOT Publication 378, the Right-of-Way Manual is not available on its website, but is written to comply with both the Federal Uniform Act as well as the Pennsylvania Eminent Domain Code to acquire property for transportation projects. Instead, the following are found on the PennDOT website to promote multimodal projects to benefit from the Federal Transit Administration and Federal Aviation Administration regulations that encourage commercial use of transportation property. See attached white paper: “Commercial Use of Transportation Property Under Federal and State Law” in Appendix C.

Publication 774, Property Acquisition Guide for Multimodal Transportation Projects Undertaken by PennDOT

https://www.dot.state.pa.us/public/pubsforms/Publications/PUB%20774.pdf
http://www.dot.state.pa.us/public/pubsforms/publications/pub%20282/pub%20282.pdf

7. TEXAS

Texas DOT has a “Manual on The Use of Right of Way by Others”: http://onlinemanuals.txdot.gov/txdotmanuals/use/utility_policy.htm

It contains three Chapters as follows:

   Chapter 1, Utility Policy: Summarizes procedures for utility companies to obtain permits for the placement of utilities on the right of way. Policies governing the placement of utilities are contained in Title 43, Chapter 21, Sub-chapter C of the Texas Administrative Code.

   Chapter 2, Uses of Right of Way (Long Term): Describes circumstances in which the public, adjacent landowners or other governmental entities can use the right of way on the State system on a long-term basis. Section 5 deals with Lease of Right of Way. TxDOT may lease highway right of way if it is not needed for highway purposes. Any person desiring to lease highway right of way should submit a written request to lease to the district engineer. The procedures are outlined in Texas Administrative Code, Title 43 Rule §21.606.

   Chapter 3, Uses of Right of Way (Temporary): Describes circumstances in which the public, adjacent landowners, local civic organizations, or commercial companies may temporarily use the right of way. Temporary uses of the right of way may last from several hours to several years. This chapter includes guidelines for the many minor temporary uses: Sections 2 temporary Agricultural Vendor Stands Title 43, Rule §22.14, and Section 7 Coffee Rest Stops are marginally relevant.

For alternative use of ROW purposes, both Chapters 2 and 3 are applicable, but Chapter 2 is most relevant.

8. UTAH


Utah points to multiple levels of complexity to the property management of its 16,000 miles and related parcels of property. Its published documents do not encourage alternative uses of ROW.

The property management division must work closely with various project management teams to ensure that properties purchased for a project are cleared in the appropriate manner for the project needs. This can include leasing parcels to allow for good stewardship of the lands and structures owned to demolition work to clear the ROW.

At a high level, any surplus land transaction (lease requests or surplus sales) requires walking through several important steps, including:

- Understanding any other encumbrances or property rights that may be associated with the land at issue.
- Analyzing the potential and actual future needs for the land at issue for transportation purposes. UDOT has a fiduciary responsibility to the public to not dispose of any real property interests that it may need for future transportation purposes.
• If a parcel can be declared available to lease, a market study of the land based on the intended use must be performed, and a lease offered with that market study rate in mind. Lease terms can be as short as a few months, or as long as a few years, depending on project needs.

• A few things to note: Leasing does not make any warranty on the suitability of the property in question, it is up to the requesting party to ensure the business model and zoning are compatible. Leasing does not grant access to the parcel beyond what exists, no new access is granted by the request submission.

UDOT’s Property Manager is dedicated to helping interested parties navigate these complex processes. The UDOT leasing process can take from 2 months to 10 months to navigate and is not without risk. A decision of “not advisable” and “no lease option available” may be made at any time. UDOT also has a business property management link that has more information than the general public site: https://www.udot.utah.gov/connect/business/property-management/.


Finally, there is a Real Property Disposal Guide with statutory references: https://drive.google.com/file/d/11BSQ7f9chI0d0g_tFiweq0N9P2wnyM4/view.

A key point is that lands must be declared excess before they may be formally designated as surplus and only thereafter may it be sold. Utah law provides a first right of refusal or consideration to the original grantor/condemnee.

https://www.udot.utah.gov/connect/business/permits/small-wireless-facilities-5g/

9. VIRGINIA


The portion relevant to alternative uses of ROW is Chapter 7 Property Management and Sections 4, 5, and 6 relating leasing, disposal, and conveyance of property. The Leasing Section 4 is the most relevant:

“Section 4 – Lease of Property

7.4.1 General

The Virginia Department of Transportation (VDOT) purchases real property primarily for the expansion and upgrading of Virginia’s transportation system. Lease of property is subordinate to this purpose. Property purchased incidental to project construction, improved or unimproved, can be leased prior and subject to project construction. Residue property not needed for transportation purposes can generally be leased for a longer term. Leasing of residue property should be secondary to efforts to sell the property.

Allowing continued use of property beyond the expiration of the original vacation date through formal or informal extensions, lease or otherwise, shall not conflict with project advertisement date or utility adjustments. Any use should be extinguished at least 90 days prior to project advertisement or, in the case of utility relocation conflicts, no later than the timeframe established by the Regional Utility Manager for utility adjustments to meet project advertisement. In all cases of utility relocation conflicts, the Regional Utility Manager will be consulted.
Non-highway use of operating right of way after project construction is allowed under limited circumstances if consistent with highway safety, operation and maintenance. A public agency or public service use (such as a utility or a short-term temporary use) is generally addressed through VDOT’s permit process through the Residency Area Maintenance Manager’s Office (Section 7.1.2). When the use is by a private (for profit) purpose or in other circumstances, a lease agreement is appropriate for use of operating right of way. A land use permit will still be required to document said use. The Right-of-Way Use Department (RWUD) serves in a review and advisory role in the permit process and is typically the lead section in leasing of operating right of way.

Leasing of right of way for any advertising purpose is not allowed (Section 33.1-373 (33.2-1224 effective October 1, 2014) of the Code of Virginia, as amended). Situations where signs and/or other advertising rights are acquired but are being considered for remaining in place until needed for project construction should be addressed on an individual basis in a written request to the State Right of Way and Utilities Director (Director). Any continued, approved use will be by formal lease at fair market rent.

Lease of real property generates revenue for the Commonwealth. There are other potential benefits to a prudent lease of property:

1. Continued occupancy of property deters vandalism and blight that can occur when vacant.
2. Leasing for commercial uses may promote the economic health of the surrounding area.
3. Leasing to the occupant at the time of acquisition may lend support to the relocation program by solving short-term housing needs.
4. VDOT is relieved of property maintenance and security costs by transfer of these responsibilities to a lessee.
5. Leasing may be a beneficial alternative to disposal by sale if the local real estate sales market is depressed.

The decision to lease property should be made with consideration of the specific circumstances that apply, including the factors listed above. Leasing of residential property formally places the department in the status of a landlord, and as such, the requirements of the Virginia Residential and Landlord Tenant Act (copy not included in manual) are applicable.

10. WASHINGTON


“11-8 Leasing

11-8.1 General. FHWA recently changed the definition of “air rights” to a wider category called Right of Way Use Agreements, also referred to as ROW use agreements. 23 CFR 710.105 defines these as: real property interests, defined by an agreement, as evidenced by instruments such as
a lease, license, or permit, for use of real property interests for non-highway purposes where the use is in the public interest, consistent with the continued operation, maintenance, and safety of the facility, and such use will not impair the highway or interfere with the free and safe flow of traffic. Further details, definitions, and requirements are contained in 23 CFR 710.105, 710.403, and 710.405.”

Although the title ‘Right of Way Use Agreement’ encompasses many forms of agreements, Real Estate Services processes and grants temporary rights only in the form of leases and agreements as further detailed in this section 11.8 below. Other offices in WSDOT may issue Right of Way Use Agreements in the form of permits and licenses.

Leases are generally used when an applicant’s proposed use is for a nonhighway purpose that is compatible with the transportation use.

A. Types of Leases Used by WSDOT

“1. Residential/Commercial Displacee Lease (NA) – Used when WSDOT acquires an occupied property and the displaced grantor or tenant remains in tenancy until relocated. The tenant-signed displacee lease should be sent to HQ as soon as it is signed by the tenant. (Residential Displacee Lease – RES-415, Commercial Displacee Lease – RES-416)

2. Airspace Lease (AA, AC) – Used when tenancy lies within the right of way lines of the constructed facility. Be sure to check the approved right of way plan instead of using fence location or maintained area to denote constructed facility. “Airspace” is defined as the space above, at, and below the gradeline of all completed highways, as well as the area alongside the traveled way, which would Chapter 11 Property Management Page 11-46 WSDOT Right of Way Manual M 26-01.25 September 2020 include any proposal to lease property that straddles the right of way line. RESER Review Required. (Standard Airspace Lease – RES-420)

3. Ground Lease (RA, RC) – Used when premises lies outside the operating right of way or lies within unconstructed right of way. Note: Operating right of way is that land lying within the right of way lines of a constructed highway facility. Therefore, ground leases will be used when leasing pit sites, stockpile sites, unconstructed rights of way and other similar properties. RES-ER Review Required (RES-418).

4. Trail Lease (AA, RA, TR) – Used when an applicant wishes to place a trail on WSDOT-owned property, either inside or outside the operating right of way. RES-ER Review Required (RES-419). Refer to Appendix 11-7 for Trail Lease information. Note: If a trail is constructed by WSDOT as part of its highway project and the trail is operated and maintained by an outside entity, even though the obligation to maintain that trail is WSDOT’s, a Maintenance and Operation Agreement (M&O) is acceptable. If the trail is constructed after the highway is complete and the local jurisdiction will own the trail, then a trail lease is required. Additionally, funding sources must be confirmed in trail or recreational leases as there has been an increase in Recreation and Conservation Office (RCO) grants approved that impact WSDOT right of way. Allowing project construction using RCO grant dollars can have a significant impact on future WSDOT projects. These costs include increased environmental review and mitigation (including the expense of relocating the trail if impacted by 6f), denial of federal funds relating to additional construction activity required as a result of allowing an RCO funded project, and additional review and overall project timelines. For these reasons, FHWA and the AAG strongly recommend against WSDOT allowing any construction within right of way using these funds. If WSDOT makes the business decision to allow these uses of these funds within the right of way, specific grant information
must be included in lease documents to make it clear WSDOT does not have any financial or legal obligations regarding the grant.

5. Commercial Lease (AA, AC, RA, RC) – Used when a commercial use is proposed by the applicant. The Airspace Lease Short Form format is used; however, the title of the lease is changed to fit the use. RES-ER Review Required (RES-441 – change the header to read “Commercial Lease”)

6. Cooperative Agreements (CA) – Used pursuant to RCW 47.28.140. Primarily used in Real Estate Services when writing an agreement with a Transit Organization to operate and maintain a Park and Ride Lot in exchange for operating their transit amenities on the Park and Ride. RES-ER Review Required. (RES-428)

7. Event Lease (EV) – Used for short term (for an event up to five days in duration). The minimum rental rate is $100 per day up to five days. WSDOT may charge more for rent depending on individual event details. (RES-433)

8. Monitoring Well Agreement (MW) – This lease type will no longer be used by the Department. Future requests for the placement of “Subterranean Monitoring Devices” on WSDOT owned land will be processed as permits through each Region’s Development Services Office. Executed monitoring well agreements are still valid. Region PM can make the decision to convert to a permit at the end of a payment cycle, or keep the Monitoring Well Agreement in place until the term expires. For more information on the new processes/procedures for these Subterranean Monitoring Devices, please see the Development Services Manual under Chapter 5, (5.4.05 - Subterranean Monitoring Permits).

9. Transit Facility Lease (TF) – Used for transit facilities over 1000 square feet (do not include the bus pullout area when calculating). These requests are typically more elaborate transit facilities (in-line stations, transfer stations or hubs). These are not standard single bus shelters found typically on managed access highway facilities. Real Estate Services electronic review is required. (Standard Airspace Lease - RES 420).

10. Transit facilities less than 1000 square feet will be processed as permits through each Region’s Development Services Office. Executed leases for transit shelters under 1000 square feet are still valid. Region PM can make the decision to convert to a permit at the end of a payment cycle, or keep the lease in place until the term expires. For more information on the processes/procedures for Transit Stop Permits, please see the Development Services Manual under Chapter 5, (5.4.06 - Transit Stop Permits).

11. Interagency Agreement (IA) – Typically used when dealing with another governmental agency. Used primarily (at this time) for arrangements between WSDOT and WSP. RES-ER Review Required (This lease type uses the appropriate form for the location – Airspace or Ground. Does not have its own RES form.)

12. Single Family Residential Lease (RA, RC) – Used for nondisplaced residential occupancy. RES-ER Review Required. (RES-417). Rental of State-owned housing must comply with RCW 59.18 Residential Landlord Tenant Act. Deposits shall be collected from tenants to help cover any cleaning and damage repair expenses incurred during the tenancy. All residences leased after the initial 90 day displacee tenancy will need proper smoke and carbon monoxide detectors, as well as asbestos, lead, and mold notifications. Note: Rental of State-owned housing to State employees is the same as for any rental of any other improved property. A State employee who
rents a State-owned rental may not be obligated to pay Leasehold Excise Tax (LET) if it is determined that the State benefits from the employee residing on the leased premises.

13. Wireless Lease (WF) (see Section 11-8.8.3) – (Wireless Lease with Attachments (RES-421), Wireless Lease for Utility Pole Attachment (RES-432), Wireless Ground Lease (RES-424), Wireless Lease Application with process instructions (RES-429)) RES-ER Review required, unless the request comes from an internal WSDOT office.

14. Crane Weathervaning Lease (AA) – Used when free swinging, unloaded cranes enter into the right of way. This form is to be used only when the swing of the crane is outside of traveled lanes and clear zones. If the crane’s swing enters either of these areas, this form will need to be modified to include additional protective language that fits the situation RES-ER Review Required.

15. Aviation Lease (AR, AV) – Used when preparing a lease document for the Aviation Division of WSDOT. Typically will be either a Hangar Lease or Tiedown Lease. (Again use appropriate lease document related to where the premises is located, but classify as AV. AR is only for those leases written prior to IRIS.) (Tiedown Lease (RES-440)

16. Ferries Lease (MA) – Used when preparing a lease document for the Ferries Division. Since they typically do their own leasing, there is not a large call for these types of lease documents. They typically do their leasing activity as concessions. Contact the Ferries Division. (Again use appropriate lease document related to where the premises is located, but classify as MA.)

17. Rail Lease (RL) – Typical document used is a Ground Lease format. (These are used very rarely.)

18. During the 2011 legislative session, the legislature passed into law RCW 47.04.295. This law has specific language related to leases impacting park and ride lots. Most of the leases written here in RES utilize RCW 47.12.120 for leasing authority. RES does not anticipate a situation where the authority will change to the new statute. However, public transportation has advertised for formal proposals. Further updates regarding policy will follow.”

There is also an Electric Vehicle Charging in Right of Way Permit Pilot Program launched by the Seattle DOT:
https://www.itskrs.its.dot.gov/its/benecost.nsf/ID/84dca143506ad9e2852584f8004eb8c.”

Conclusions and Recommendations

Conclusions

A fundamental conclusion resulting from this project is that the primary use of the land used by the surface transportation system is for highway purposes (the safe and efficient movement of people and goods). However, there is increasing emphasis upon how to balance the highway uses with alternative uses of the ROW. There are often parcels of property that are acquired as uneconomic remnants, for construction staging or materials storage, or through the process of good-faith negotiation with the property owner. Where these parcels are “excess” (i.e., not needed for highway purposes) then, by definition, they are fallow and available for disposal or other uses.

All survey respondents and interviewees identified a property management component, generally within their ROW offices; however, most describe a reactive program that responds to requests for use or disposal of excess parcels. The programs that are described as proactive, that is they proactively
identify excess parcels and identify possibilities for their use, are typically still championed within the ROW office but are enterprise-wide in their application. Interviewees that describe their programs as reactive generally state they have sufficient personnel to handle the requests received, while the proactive programs typically report that they developed as they did to continue to meet an increasing volume of requests in the face of limited staffing. The proactive programs include spatially enabled inventories of parcels and often also include transaction (sale or lease) management or use (license/permit) management. Costs for the development of these programs were sought, but they reportedly include a combination of purchase of off-the-shelf software platforms with significant investments of time and resources to customize. The efforts took place over multiple projects and years, and efforts to document the costs to develop and implement have proven elusive.

The interest in innovative uses of excess real property and ROW has increased in recent years in the form of the variety of uses requested, if not the actual number of formal requests. There are well-studied applications of solar power collection, carbon sequestration, and accommodation of transportation enhancements, though the literature on their financial benefit is mixed. Efforts toward the electrification of ROW are currently underway, as are efforts to co-locate active transportation features (walking, bicycling) within ROW. Opportunities to allow private for-profit companies to use the ROW without compromising the safety or functional integrity of the highway also are being investigated. There is strong interest in applications such as truck parking, but none of the survey respondents or interviewees reported any implementation of this use. The same is true for accommodation of wireless communications infrastructure within the ROW.

Recommendations

The principal recommendations derived from this study are as follows:

- FHWA and SDOTs alike should re-frame ROW as an application of asset management. Unlike the various improvements to the land (structures, pavements, signs, markings, etc.), the land itself is an appreciating-value asset and it is in the public’s interest to identify and manage it as such.
- FHWA should publish additional best-practice examples of property management and alternative uses acceptable to FHWA to better guide the collaboration of SDOTs and FHWA Division Offices.
- FHWA should explore opportunities to include property (asset) management into the basic structure of the Stewardship and Oversight Agreements it has with SDOTs.
- SDOTs should re-frame property management and alternative use as an enterprise-wide application that includes performance measures, legal vetting, intergovernmental agreements, and public-private partnerships. Though such efforts will likely continue to be championed within the ROW office of a SDOT, full implementation of such programs goes beyond any single office. Creation of an internal decision clinic (see NCHRP Report 917) of internal stakeholders will accelerate the mainstreaming of property management by more visibly aligning property management with the agency’s strategic goals and objectives and by providing opportunities for the SDOT to advertise its successes in managing overhead and maintenance burdens and strengthened relationships with political subdivisions of the State and the public.
- FHWA should initiate a follow-on market survey to identify availability and costs of software platforms that can provide a basis for spatially enabled property asset management and transaction/use management. This effort should also examine anticipated levels of effort to
customize these platforms and incorporate their use into mainstream SDOT business processes. An effort was made in this project to gather such information, but the implementation costs for the limited number of examples were not available. It was difficult for the States that developed software to provide costs because they developed the programs over several years through multiple projects for both highway and non-highway applications.

- With the market survey above completed, FHWA should initiate a follow-on pilot implementation with a SDOT partner that will include tracking of development and implementation costs, the availability of dashboards or visualizations tools for decision support, analysis of expected return on investment (is there greater value in disposition or utilization?), and documentation of lessons learned.
Appendix A. Survey Responses

Responses to each survey question are provided below. Note that all open field responses are included verbatim and may contain errors.

### Question 1. Before receiving this survey, how familiar were you with the following?

<table>
<thead>
<tr>
<th>Answer</th>
<th>Federal regulation regarding management of ROW</th>
<th>Regulation that authorizes alternative non-highway use of ROW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all familiar</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Somewhat familiar</td>
<td>15</td>
<td>23</td>
</tr>
<tr>
<td>Very familiar</td>
<td>27</td>
<td>17</td>
</tr>
<tr>
<td>Total Responses</td>
<td>43</td>
<td>43</td>
</tr>
</tbody>
</table>

#### Counts

<table>
<thead>
<tr>
<th>Answer</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all familiar</td>
<td>2%</td>
</tr>
<tr>
<td>Somewhat familiar</td>
<td>35%</td>
</tr>
<tr>
<td>Very familiar</td>
<td>63%</td>
</tr>
<tr>
<td>Total Responses</td>
<td>100%</td>
</tr>
</tbody>
</table>

### Question 2: Does your agency have staff dedicated to property management?

<table>
<thead>
<tr>
<th>Answer</th>
<th>Responses</th>
<th>Percentage</th>
<th>Average Number of Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, but we have staff that have property management as a small part of their responsibilities</td>
<td>36</td>
<td>84%</td>
<td>9.3</td>
</tr>
<tr>
<td>No, but we have staff that have property management as a small part of their responsibilities</td>
<td>4</td>
<td>9%</td>
<td>14.0</td>
</tr>
<tr>
<td>No</td>
<td>3</td>
<td>7%</td>
<td>N/A</td>
</tr>
<tr>
<td>Total Responses</td>
<td>43</td>
<td>100%</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Question 3: What barriers prevent you from dedicating staff to property management?

<table>
<thead>
<tr>
<th>Answer</th>
<th>Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not enough demand</td>
<td>3</td>
<td>43%</td>
</tr>
<tr>
<td>Cost</td>
<td>3</td>
<td>43%</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>43%</td>
</tr>
<tr>
<td>Total Responses</td>
<td>7</td>
<td>100%</td>
</tr>
</tbody>
</table>
# Question 4: On average, how much time does your staff spend on inventory and verification of ROW available for alternative uses?

<table>
<thead>
<tr>
<th>Answer</th>
<th>Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 10 percent</td>
<td>13</td>
<td>30%</td>
</tr>
<tr>
<td>10 to 24 percent</td>
<td>14</td>
<td>33%</td>
</tr>
<tr>
<td>25 to 50 percent</td>
<td>12</td>
<td>28%</td>
</tr>
<tr>
<td>More than 50 percent</td>
<td>4</td>
<td>9%</td>
</tr>
<tr>
<td>Total Responses</td>
<td>43</td>
<td>100%</td>
</tr>
</tbody>
</table>

# Question 5: Does your agency have an active program for the identification, tracking, management, and disposition of right-of-way?

<table>
<thead>
<tr>
<th>Answer</th>
<th>Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>8</td>
<td>19%</td>
</tr>
<tr>
<td>Yes</td>
<td>34</td>
<td>81%</td>
</tr>
<tr>
<td>Total Responses</td>
<td>42</td>
<td>100%</td>
</tr>
</tbody>
</table>

# Question 6: In general, what tool does the program use to identify, track, manage, and dispose of right-of-way?

<table>
<thead>
<tr>
<th>Answer</th>
<th>Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual (paper forms and maps)</td>
<td>7</td>
<td>21%</td>
</tr>
<tr>
<td>An off-the-shelf software package (such as a GIS platform)</td>
<td>2</td>
<td>6%</td>
</tr>
<tr>
<td>A commercial software platform that has been customized for your use</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>A software platform you developed from the ground up</td>
<td>4</td>
<td>12%</td>
</tr>
<tr>
<td>A hybrid of one or more of the above</td>
<td>20</td>
<td>59%</td>
</tr>
<tr>
<td>Total Responses</td>
<td>34</td>
<td>100%</td>
</tr>
<tr>
<td>Question 6: Software used</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Google Earth Pro</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AARS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARC-GIS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AppGeo</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bemsystems PAECETrak Database system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Digital files and microfilm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Document management System(previously Hummingbird)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ERSI GIS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excess Lands Management System (ELMS)--Cobol system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excess Property Tracking (XPT)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IRIS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LaGov ERP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Microsoft Excel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Microsoft Excel and hard copy files</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NDOT ARMS - developed by BEM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NORWAY (Access Database)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oasis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Platform used is ROWA (Java based application.).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>READS Real Estate Automated Data System</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REALMS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REM/ArcGIS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Real Estate Sale and Leasing (RESALE)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Right of Way Management System (RWMS)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SQL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sesame</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VUEWORKS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word</td>
<td></td>
<td></td>
</tr>
<tr>
<td>arc gis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>network drives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remis</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question 7: What prevents your agency from having an active program to identify, track, manage, and dispose of right-of-way?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answer (check all that apply)</td>
</tr>
<tr>
<td>The cost is too high to include in the budget</td>
</tr>
<tr>
<td>Agency’s inventory of federal-aid right-of-way is too small to justify the cost of property management</td>
</tr>
<tr>
<td>We maintain compliance via (please describe)</td>
</tr>
<tr>
<td>Some other reason (please describe)</td>
</tr>
<tr>
<td>Total Responses</td>
</tr>
</tbody>
</table>
### Question 7: We maintain compliance via (please describe)

- Manual tracking system of property disposal and formal monthly committee meetings to determine disposal.
- Tracking via spreadsheets, etc.
- We use acquisition charts as inventory and adjust chart as remnants are sold.
- We submit an annual report to DLNR/OHA for all remnant sales.

### Question 7: Some other reason (please describe) (text)

- Staff consists of manager and ROW specialist for all functions
- The Agency is understaffed to handle inventory.
- Resources, data loss, having funding and resources to update or begin anew

### Question 8: On average, how many requests did your Department of Transportation receive per year for disposition of “excess” ROW from 2013-2018?

<table>
<thead>
<tr>
<th>Answer</th>
<th>Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fewer than 50 per year on average over the last 5 years</td>
<td>26</td>
<td>62%</td>
</tr>
<tr>
<td>More than 50 and less than 100 per year on average over the last 5 years</td>
<td>10</td>
<td>24%</td>
</tr>
<tr>
<td>More than 100 per year on average over the last 5 years</td>
<td>6</td>
<td>14%</td>
</tr>
<tr>
<td>Total Responses</td>
<td>42</td>
<td>100%</td>
</tr>
</tbody>
</table>

### Question 9: On average, how many requests did your Department of Transportation receive per year for alternative use of ROW from 2013-2018?

<table>
<thead>
<tr>
<th>Answer</th>
<th>Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 and 25 per year on average over the last 5 years</td>
<td>20</td>
<td>48%</td>
</tr>
<tr>
<td>Between 26 and 50 per year on average over the last 5 years</td>
<td>10</td>
<td>24%</td>
</tr>
<tr>
<td>More than 50 per year on average over the last 5 years</td>
<td>12</td>
<td>29%</td>
</tr>
<tr>
<td>Total Responses</td>
<td>42</td>
<td>100%</td>
</tr>
</tbody>
</table>

Note: survey participants could select more than one answer. The total is the total number of participants that answered the question.
**Question 10: At what government level are requests for dispositions and alternative uses tracked?**

<table>
<thead>
<tr>
<th>Answers</th>
<th>Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local level</td>
<td>13</td>
<td>31%</td>
</tr>
<tr>
<td>Regional level</td>
<td>8</td>
<td>19%</td>
</tr>
<tr>
<td>State level</td>
<td>36</td>
<td>86%</td>
</tr>
<tr>
<td>They are not tracked</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
<td>12%</td>
</tr>
<tr>
<td>Total Responses</td>
<td>42</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Note: survey participants could select more than one answer. The total is the total number of participants that answered the question.

**Question 11: Does your state have legislation or regulation related to alternative uses of right-of-way?**

<table>
<thead>
<tr>
<th>Answers</th>
<th>Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>8</td>
<td>19%</td>
</tr>
<tr>
<td>Yes</td>
<td>26</td>
<td>60%</td>
</tr>
<tr>
<td>Do not know</td>
<td>9</td>
<td>21%</td>
</tr>
<tr>
<td>Responses</td>
<td>43</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Question 12: What form(s) of alternative right-of-way use agreements do you use? (Mark all that apply)**

<table>
<thead>
<tr>
<th>Answers</th>
<th>Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Licenses</td>
<td>23</td>
<td>56%</td>
</tr>
<tr>
<td>Franchise Agreements</td>
<td>3</td>
<td>7%</td>
</tr>
<tr>
<td>Permits</td>
<td>33</td>
<td>80%</td>
</tr>
<tr>
<td>Leases</td>
<td>32</td>
<td>78%</td>
</tr>
<tr>
<td>Other</td>
<td>12</td>
<td>29%</td>
</tr>
<tr>
<td>Total Responses</td>
<td>41</td>
<td></td>
</tr>
</tbody>
</table>

Note: survey participants could select more than one answer. The total is the total number of participants that answered the question.

**Question 13: Are there state laws or regulations that limit or prohibit alternative uses of right-of-way?**

<table>
<thead>
<tr>
<th>Answers</th>
<th>Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>15</td>
<td>35%</td>
</tr>
<tr>
<td>Yes</td>
<td>18</td>
<td>42%</td>
</tr>
<tr>
<td>Do not know</td>
<td>10</td>
<td>23%</td>
</tr>
<tr>
<td>Total Responses</td>
<td>43</td>
<td>100%</td>
</tr>
</tbody>
</table>
### Question 14: Does your state have policies, standard procedures, or written guidelines in place that describe how alternative use of ROW or “excess” right-of-way is considered, identified, utilized, or disposed of?

<table>
<thead>
<tr>
<th>Answers</th>
<th>Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>2</td>
<td>5%</td>
</tr>
<tr>
<td>Yes</td>
<td>37</td>
<td>90%</td>
</tr>
<tr>
<td>Do not know</td>
<td>2</td>
<td>5%</td>
</tr>
<tr>
<td>Total Responses</td>
<td>41</td>
<td>100%</td>
</tr>
</tbody>
</table>

### Question 15: What types of entities makes these ROW requests (Mark all that apply)

<table>
<thead>
<tr>
<th>Answers</th>
<th>Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other public agencies</td>
<td>38</td>
<td>93%</td>
</tr>
<tr>
<td>Private, for-profit groups or corporations</td>
<td>38</td>
<td>93%</td>
</tr>
<tr>
<td>(describe)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-profit groups (describe)</td>
<td>26</td>
<td>63%</td>
</tr>
<tr>
<td>Other (describe)</td>
<td>8</td>
<td>20%</td>
</tr>
<tr>
<td>Total Responses</td>
<td>41</td>
<td></td>
</tr>
</tbody>
</table>

Note: survey participants could select more than one answer. The total is the total number of participants that answered the question.

### Question 15: Descriptions of Private, Non-profit, and other Agencies who request alternative uses of the ROW.

<table>
<thead>
<tr>
<th>Other Agencies</th>
<th>Number of for-Private</th>
<th>Number of Not-for-Profit</th>
<th>Number of Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Billboard Companies</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Churches</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Community Groups</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Construction companies</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Individuals</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Local Community</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Numerous</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Organizations such as business improvement district organizations</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>PATH Foundation</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Private Citizens</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Private owners</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Skatepark</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Abutting businesses</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ada ramps</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>All of the above and tourists traveling the Alaska road system</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Bids</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Bikeshare</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Cellular</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
**Question 15: Descriptions of Private, Non-profit, and other Agencies who request alternative uses of the ROW.**

<table>
<thead>
<tr>
<th>Other Agencies</th>
<th>Number of for-Private</th>
<th>Number of Not-for-Profit</th>
<th>Number of Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Churches</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Civic Associations</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Commercial profit entities</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Developers</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Farmers</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Fences</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>General public</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Hotel</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Individuals</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Museum</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Neighborhood organizations and originations focused on equity and reconnecting communities impacted by transportation</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Neighboring landowners/business</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Pipeline</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Private businesses/property owners</td>
<td>10</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Random requests</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>residents (no business capacity)</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Rock walls</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Signage/parking</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Telecom companies</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Use of air spaces in metro areas</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Utilities</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Volunteer for departments</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>
## Question 16: What types of requests for alternative uses of the ROW is your agency receiving?

<table>
<thead>
<tr>
<th>Use</th>
<th>Count</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parking</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Commercial</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Solar</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>Parks</td>
<td>18</td>
<td>Greenspace, skate parks, dog parks, parklets</td>
</tr>
<tr>
<td>Beautification</td>
<td>10</td>
<td>Gateways, Art</td>
</tr>
<tr>
<td>Cell Towers/Antennas</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Farming</td>
<td>10</td>
<td>Haying, grazing, nursery stock</td>
</tr>
<tr>
<td>Landscaping</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Local signage</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Storage</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Events</td>
<td>5</td>
<td>Festivals, farmers markets, alcohol serving</td>
</tr>
<tr>
<td>Food</td>
<td>5</td>
<td>Courts, trucks and farm stands</td>
</tr>
<tr>
<td>Bike Ped Trails</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>EV Charging</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Airspace</td>
<td>3</td>
<td>Overhangs, Sky bridges</td>
</tr>
<tr>
<td>Car and Bike share</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Construction Staging</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Covid restaurant seating</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Fiber Optics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Homeless Housing</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Industrial</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Land Bridges</td>
<td>3</td>
<td>Wildlife and livestock</td>
</tr>
<tr>
<td>Utilities</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Encroachments</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Lighting</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Municipal Uses</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Sidewalks</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Storm Drainage</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Weed Control</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

Billboards, Boat docks and ramps, Camping, Cemetery, Church, CDL License testing, Commercial signage, DOD, Encroachments, Fencing, Fish passage, Gaming, Helipads, Ice timers, Joint use development, Mining, Monitoring wells, Oil pipelines, Pollinator sites, Police use, Saltwater pipeline, Schools, Septic Systems, Speed control cart, Tie backs, Transit hubs, Tree clearing, Tunnels, Turtle fences, Weed control
Question 17: How would you describe the challenges your agency has faced when identifying and inventorying alternative utilization of ROW, and disposition of “excess” right-of-way (Mark all that apply)

<table>
<thead>
<tr>
<th>Answers</th>
<th>Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not enough people to handle the inventory</td>
<td>21</td>
<td>54%</td>
</tr>
<tr>
<td>Lack of enabling law/regulation</td>
<td>12</td>
<td>31%</td>
</tr>
<tr>
<td>Gaps or holes in policies or procedures</td>
<td>10</td>
<td>26%</td>
</tr>
<tr>
<td>Lack of tools (i.e. inventory or management software)</td>
<td>23</td>
<td>59%</td>
</tr>
<tr>
<td>Quality of title or uncertain ownership in some areas</td>
<td>12</td>
<td>31%</td>
</tr>
<tr>
<td>Resources constrained by more pressing priorities/obligations</td>
<td>27</td>
<td>69%</td>
</tr>
<tr>
<td>Other (describe)</td>
<td>6</td>
<td>15%</td>
</tr>
<tr>
<td>Total Responses</td>
<td>39</td>
<td></td>
</tr>
</tbody>
</table>

Note: survey participants could select more than one answer. The total is the total number of participants that answered the question.

Question 17: Other (descriptions)

Even with an inventory, the potential use must be vetted, with ever changing environmental regs requiring holding land for storm water uses.

NCDOT does not typically consider any right of way as excess until the Department is asked to sell a piece of the right of way. Then, the Division Engineer will determine if it can be sold, or if the Department needs to keep it for project purposes.

Small staff
all of the above and limitations under 23 CFR 1.23
historic background and political issues/barriers
reverter clauses and/or restrictions contained within FDOT’s deeds/ownership documents
We grouped the responses to question 18 into several main categories in the following table. We provide the verbatim in the next table.

<table>
<thead>
<tr>
<th>Change</th>
<th>Count</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tracking tool/Software</td>
<td>12</td>
<td>Visual inventory or GIS map that shows all properties owned by VDOT with title info in the meta data, RWMS database upgrade, GIS mapping</td>
</tr>
<tr>
<td>Need enabling laws/remove prohibitions</td>
<td>10</td>
<td>23 CFR 1.23 (removal of general prohibition to monetize the federally-funded right of way, Example EV charging)</td>
</tr>
<tr>
<td>Streamline the process</td>
<td>7</td>
<td>Sale take 18 months, Checklists</td>
</tr>
<tr>
<td>More resources more staff, so they can move to proactive position</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>FHWA Support</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Better source data on properties</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Encroachments</td>
<td>1</td>
<td>Need rules, authority and funding for removal and/or a lease</td>
</tr>
<tr>
<td>Guidance for Community Enhancements</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Quality control for procedure follow through</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Ability to charge fees for appraisal, process etc.</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Faster Categorical Exclusion</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Can negotiate Fair Market Value</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Regions should use consultants to assist in ROW disposal</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Verbatim responses to question 18**

A dedicated software tool for tracking and processing request plus an inventory of parcels.

A system for review and inspection by responsible administrative personnel to assure established procedure are followed.

A visual inventory or gis map that shows all properties owned by VDOT with title info in the meta data would significantly expedite the disposal process.

Definitive Source Data

Department is adopting new ROW management software.

Federal restrictions for interstate rest areas need to be removed.

GIS mapping system and better enabling laws

I know that NCDOT has been asked about putting on solar charging stations for electric vehicles in our rest areas. We are not allowed to profit from these stations, so our Legislature has refused to allow them to be installed.

Improvement of business processes since this is an interdisciplinary function with the Department.
Verbatim responses to question 18

In Mississippi, we have one employee dedicated to this and as a result, the tendency is to focus on selling property that’s requested rather than actively identifying and marketing available properties to potential buyers. This approach works well for our state but if there was ever a desire to take an alternate approach, we’d need additional personnel and resources to do so.

Inventory or management software personnel dedicated to property management.

Lack of FHWA support, new database system (in the works) since ours is from the 70's, increased resources

Less complicated and lengthy regulations and processes

MnDOT’s Office of Land Management had great success establishing our Property Conveyance unit in 2014 for the disposition of excess and surplus property.

Our current statutes preventing commercial activity are a major barrier to activated public space projects with partners requesting public-private models of operations and maintenance. This business model of pseudo public-private community spaces that may include limiting ROW occasionally for ticketed or private events to generate revenue to support operations and maintenance activities is not widely used at the State DOT level.

MnDOT’s Highway Sponsorship program is exploring public-private partnership for landscaping, pollinator habitat and other right of way enhancement projects to reduce MnDOT’s maintenance liabilities, leverage public resources and produce better aesthetic or environmental outcomes for communities.

MnDOT does not have guidance for incorporating community, social, environmental and economic development criteria into current property management tools such as leases, limited use permits or property disposition. Additional guidance, case studies and sample projects focused on the intersection of non-highway alternative uses of right of way with equity, quality of life, livability, and public health are desired. MnDOT is grappling with competing interests, a desire for strong risk mitigation and a long culture of opposition to alternative uses of ROW, especially alternative uses led by non-government agencies. Regardless, requests for creative uses of ROW are increasing from both developers and community-based nonprofits, and units of government with limited resources may not have capacity to respond to these proposed uses.

More Staff to process requests and a streamlined procedure to approve disposals.

More training and a dedicated staff to Property Management

Need a property management database

None

"Policy states that MDOT is to identify property for long term leasing if not available for leasing then it is required to dispose of property.

Better incorporation of technology (such as GIS, document storage, document processing, and record retention) in our current systems to streamline operations."

Quicker CAT EX approval process, PA for alternative uses, computerized inventory to track and report sales

Regions should use consultants to assist in ROW disposal.

See answer to Q21.

Shorter review process, support to pursue the legal use of using row for Department
**Verbatim responses to question 18**

<table>
<thead>
<tr>
<th>Response</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard procedures developed to address occupancy of right-of-way for non-highway purposes. Examples include parklets or street level tables/seating to allow additional space for social distancing in response to COVID-19.</td>
<td>Streamline the process, current time frame to dispose of property takes an average of 18 months</td>
</tr>
<tr>
<td>The ability to charge fees for appraisal, title and mapping services to make smaller parcels more economic and to move the process along as it competes for resources with the highway building program.</td>
<td>The ability to sell excess ROW for less than fair market value or room for negotiation.</td>
</tr>
<tr>
<td>The biggest issues are encroachments. Maintenance identifies and asks for removal and notifies Property Management. If they are able to safely stay we offer a lease agreement. Property Management cannot force a lease and although state statute, allows for fines and removal it is a cumbersome statute with little teeth. That coupled with lack of funding for maintenance to actually remove any encroachment and the lack of staff to chase these things down is a source of frustration for both Property Management and Maintenance.</td>
<td>&quot;Updated FHWA-required forms and checklists for submitting concurrence of non-highway use determinations, clearer allowances under 23 CFR 1.23 (removal of general prohibition to monetize the federally-funded right of way). Currently we are highly resistant to disposition of ROW in deference to future planning.&quot;</td>
</tr>
<tr>
<td>Updates to the RWMS database to allow more customizable reporting capabilities; clarifications to the relevant policies and procedures.</td>
<td>We have internal restraints that slow the process down. Also regulatory constraints from the legislature. If we could speed up these processes and loosen the constraints and would help a lot.</td>
</tr>
<tr>
<td></td>
<td>cut down on the circulation process of approval.</td>
</tr>
<tr>
<td></td>
<td>funding, personnel, data research and development, tracking system, inventory, technological resources,</td>
</tr>
<tr>
<td></td>
<td>Remove some of the barriers listed in the above question, apply logic within legal parameters/within reason</td>
</tr>
</tbody>
</table>
We divided the responses to question 19 into several categories in the following table.

<table>
<thead>
<tr>
<th>Accomplishment</th>
<th>Count</th>
<th>Detail</th>
</tr>
</thead>
</table>
| Environment           | 4     | • TXDOT Development and Implementation of our Saltwater Pipeline Leasing Program - We currently have 400-600 saltwater pipeline leases in place, some are for temporary (< 180 days) installations, and some are longer term  
  • "The Ray" along I-85 in Troup County, Georgia. Many green initiatives for solar, pollinator gardens, charging stations and tire pressure monitoring systems.  
  • Wildflower planting NCDOT  
  • Pollinator Site/Program, sites supporting local/state/federal programs. |
| Air rights            | 3     | • Air rights lease over sidewalk to avoid acquiring retail building  
  • Airspace for pharmacy over Interstate Hwy also airspace for gaming under Interstate Hwy.  
  • Air and ground rights (leases) for development which has created housing, economic development, jobs, open space |
| Cell towers           | 3     | • TX Dot - Development and Implementation of our Small Cell (5G) leasing program - We currently have approx. 900 approved sites and are expecting as many as 5,000 site applications.  
  • MDOT also created public guidelines for requesting certain alternative uses of the ROW based on existing laws Small Cell Wireless Facilities, and Billboard Vegetation Management.  
  https://www.michigan.gov/mdot/0,4616,7-151-9623_26662_26679_27267_48606-491336--,.00.html  
  https://www.michigan.gov/mdot/0,4616,7-151-9625_28993-171391--,00.html  
  • We use our right of way to get revenue through leasing cell site locations. We have $1.9 mil in revenue annually from these cell sites. ADOT |
| Parks                 | 3     | • FDOT - Parking under I-4 converted to a city linear park,  
  • Limited Use Permits to local government agencies for trails MNDOT  
  • Establishing a ‘Permit for Use’ with the Chicago Park District to allow for the development of a skatepark beneath Interstate 90/94 in Chicago. |
<p>| Community Enhancements| 2     | • Multiple features that provide alternate safe highway crossings. |</p>
<table>
<thead>
<tr>
<th>Question 19: Describe your agency’s best accomplishment in facilitating an alternative use of right-of-way.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Covid restaurants</strong> 2</td>
</tr>
<tr>
<td>• To assist with municipal recovery during the COVID-19 Pandemic, PennDOT has been working with the Federal Highway Administration (FHWA) PA Division Office on processes to allow municipalities to use right-of-way (ROW) for non-highway uses such as temporary tables and seating to allow room for social distancing. This type of use is not typically approved for federal aid routes, but FHWA has agreed to waive the requirement for FMV lease for a 120-day period and consider these requests on a case by case basis. A request for this kind of use was recently approved through this process for the Borough of West Chester near Philadelphia. We are finalizing a policy which will be issued very soon to provide guidance to our Engineering District Offices on this process.</td>
</tr>
<tr>
<td>• MnDOT Outdoor Dining Permits during COVID-19</td>
</tr>
<tr>
<td><strong>Development</strong> 2</td>
</tr>
<tr>
<td>• The Department, whenever possible, will trade surplus Real Property for other property that will be needed for new ROW on a new project</td>
</tr>
<tr>
<td><strong>Parking</strong> 2</td>
</tr>
<tr>
<td>• Alaska DOT&amp;PF worked with business owners to identify and clear an area of ROW adjacent to some businesses for overflow RV and general parking under a ROW Use Agreement. There is an annual use fee. The practice improved safety by helping to minimize cars on the shoulder of the road and RVs backing into the highway. We also permitted a private, non-profit to install large fish passage culvert in ROW.</td>
</tr>
<tr>
<td><strong>Disposition</strong> 1</td>
</tr>
</tbody>
</table>
Question 19: Describe your agency’s best accomplishment in facilitating an alternative use of right-of-way.

<table>
<thead>
<tr>
<th>Events</th>
<th>1</th>
<th>• Streamlined the Occupancy Permit Process to make it more efficient for the customer and State Employees. Reduced the time to issue a permit from 25 days to 4 days.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiber Optics</td>
<td>1</td>
<td>• Agency has devoted extensive resources to issuing permits for fiber optic use of the ROW.</td>
</tr>
<tr>
<td>Process</td>
<td>1</td>
<td>• MDOT worked with FHWA to create workflows to identify the steps necessary to obtain MDOT and FHWA approval for alternative uses of limited access right of way</td>
</tr>
<tr>
<td>CDL testing</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Yard for Vehicle Safety Division</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

In the following table, we divided the responses to question 20 into several categories of obstacles.

Question 20. Describe your agency’s greatest obstacle in facilitating an alternative use of right-of-way.

<table>
<thead>
<tr>
<th>Obstacle</th>
<th>Count</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>FHWA/Process</td>
<td>7</td>
<td>• Executing an Alternative Use Agreement with FHWA. • The time in acquiring and clearing the necessary rights of way for construction projects in an orderly and efficient manner. • Understanding the scope and context of alternate non-highway uses and lack of State policies for facilitation. • Length of time to prepare a parcel. The number of people and agencies involve, potential party and their attorney, FHWA, OGC, the region involved, the central office. • Complicated and lengthy regulations and processes • The application of both State and Federal laws and regulations. The application of these laws are subjected to the interpretation of many, potentially creating disagreements and stalling plan. • Gap or holes in policies and procedures</td>
</tr>
<tr>
<td>Resource constraints</td>
<td>6</td>
<td>• Reduced staffing necessitates prioritizing capital program needs • Limited Staff 2) Lack of ROW plans for territory • Understaffed • Currently the biggest obstacle would be having staff available but overall, we need dedicated staff and agents working in the property management section that solely focus on property management. • Resources constrained by other priorities and obligations</td>
</tr>
</tbody>
</table>
### Question 20. Describe your agency’s greatest obstacle in facilitating an alternative use of right-of-way.

<table>
<thead>
<tr>
<th>Agency</th>
<th>Priority</th>
<th>Obstacles</th>
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</table>
| 23 CFR 1.23                   | 5        | - Our Legislature wants the State to profit from alternative uses, and currently the State is unable to do so. As stated before, NCDOT has not allowed installation of electric car solar charging stations at rest areas, because North Carolina is not allowed to profit from this use.  
- Confusion over ‘grey’ areas not specifically addressed by current regulations, policies and procedures.  
- Restrictions on non-commercial uses of the ROW  
- Statute prohibiting Commercial use; internal cultural barriers to alternative uses of right of way;  
- Lack of enabling law/regulation |
| SDOT Internal Culture         | 5        | - Our greatest obstacle is MDT's resistance to consider alternate use of ROW.  
- Obtaining clearance for alternative use  
- Being able to make small improvements to property before it is sold. These small improvements have the potential to increase the value of the land. Currently our legislature will not allow us to invest money into property to increase the value to sell.  
- Cultural barriers for structures in the right of way for alternative uses. There is a precedent and desire to pass all risk on to local governments, this limits entering into agreements with private developers or non-profits to manage - dog parks, public art, public spaces, trails etc. Agreements with non-government entities - such as developers or community-based nonprofits are considered extremely risky and culturally, there is significant opposition to alternative use projects - even when there are great community benefits to doing so.  
- Transportation management... |
| Fair Market Value             | 3        | - Determining value through the appraisal process. It's expensive and delays the time necessary to complete this lease obtaining surveys on the leased area  
- Getting the user to pay fair market value for the lease.  
- FMV lease rates. Many interested parties will decline the opportunity to lease when informed of the annual FMV lease rate, which they feel is too expensive. Having to pay FMV, in addition to the cost to improve the lease area (grading, drainage concerns, asphalt / concrete, lighting, fencing, etc.) as well as the 90-day cancellation clause, most interested parties, small businesses, will walk away. |
| Public Benefit                | 3        | - The Department is often approached by municipalities and other agencies such as the NH Housing Finance Authority to... |
Question 20. Describe your agency’s greatest obstacle in facilitating an alternative use of right-of-way.

<table>
<thead>
<tr>
<th></th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tools and Data</td>
<td>3</td>
</tr>
<tr>
<td>Safety</td>
<td>2</td>
</tr>
</tbody>
</table>

> acquire properties at less than fair market value. However, we have not received a lot of guidance as to what meets criteria of "public interest based on social, environmental, or economic benefits." 23 CFR 710.403 (e) (1)
  - Ensuring that unique uses are made available to a larger share of the public
  - Requestors believing, they have an absolute right or entitlement to use the public ROW for private commercial use.

Tools and Data
- Lack of tools,
- Lost inventory,
- Quality of title or uncertain ownership,

Safety
- Balancing public safety and state and federal requirements with municipal demands.
- Strong concern for risk management and mitigation (example: in areas without expertise such as alcohol and event permits).

Question 21. Describe your agency’s greatest accomplishments and obstacles in disposition of “excess” ROW for alternative use.

"We have an active portfolio of ground leases (150), small cell leases (900), saltwater pipeline leases (500) that we manage every day. We also sell ""excess"" property to requestors, turnback roadways to local governmental authorities, and honor reverter clauses in vesting deeds where we no longer need to use the property for a state highway purpose.

Every deal is different - each has its own smiles and aggravations."

"Accomplishments - MDOT has implemented ProjectWise workflows for the review and disposal of excess property and document storage which has allowed us to go paperless. We have also utilized an on-line auction website to market and sell our excess property which has saved time and money for MDOT. MDOT has also updated the Real Estate Procedure Manual and provided training to staff on excess property processes.

Obstacles - With an outdated IT system, it has been difficult to accurately identify property we own that may be excess to our operational needs."

Disposition of contaminated property to facilitate environmental clean up.

For a small rural state, our greatest accomplishment, in my opinion, is the voluminous amount of properties we’ve been able to sell over the years thus placing them back onto the tax rolls and generating revenue. We have also been able to use some of these properties we own as a site for radio transmission towers to assist law enforcement. Our system works well but again, the only way to do more with what we have is more personnel and resources. To me, that’s our greatest obstacle although there may be statutory guidelines that may limit our options as well those of which I’m not necessarily privy to at this time and would depend upon the situation.

Greatest accomplishment is the management and disposal of the Hunting Towers in Alexandria. Greatest obstacle is the available resources to track inventory.
<table>
<thead>
<tr>
<th>Question 21. Describe your agency’s greatest accomplishments and obstacles in disposition of “excess” ROW for alternative use.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greatest obstacle is obtaining fair market value.</td>
</tr>
<tr>
<td>In addition to the examples in Q19-20, there is the accomplishment of a lease with Rowstar for the placement of communication towers. FDOT has also been able to dispose of several “High dollar value” sights. Challenges have included reverter clauses involving other state agencies, and the areas within current regulations that remain somewhat unclear.</td>
</tr>
<tr>
<td>&quot;In reality, any sale we close on is an accomplishment. Very few ROW inquiries are approved for release and those that are almost never get to the public auction stage. The FMV deters the interested parties from going forward. This is likely an internal IDOT / State of Illinois issue, but having to appraise excess parcels for highest and best use, which inevitably means for assemblage purposes, increases the FMV well above a value that the interested party is willing to pay. Of our prospective excess land sales, 9 out of 10 parcels have only one (1) logical buyer, the adjacent property owner. They are willing to pay a modest/reasonable value but walk away when the FMV is 4,5 or sometimes as much as 10 times the value they are willing to pay. Requiring FMV is the greatest obstacle in the disposition of excess ROW.&quot;</td>
</tr>
<tr>
<td>Initiative to dispose of excess property by leadership to recoup funds.</td>
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<tr>
<td>It is always a great accomplishment when we have successfully completed the disposition of a complex dispositions. The greatest obstacle is the application of both State and Federal laws and regulations. The application of these laws are subjected to the interpretation of many, potentially creating disagreements and stalling the overall disposition plan. Leasing on a temporary basis of long term. Multi step procedures due to State Regulations</td>
</tr>
<tr>
<td>None</td>
</tr>
<tr>
<td>&quot;Not necessarily greatest but an example of an accomplishment would be the City of Soldotna Downtown Revitalization project a (both NHS and Non). We work closely with local agencies. Obstacles: Borough Platting Authority/ Borough-Level Cooperative Use Agreements; lack of resources to devote to identifying “excess” ROW in inventory, limitations in State regulations; applicants/land owners requesting vacations and not following through in a timely manner with the surveying, appraising, and other things required on their part.&quot;</td>
</tr>
<tr>
<td>&quot;Our agency has implemented a pro-active sale program where we pro-actively identify surplus property and offer it up for sale. this is in addition to our re-active sale program where we process requests received from outside of the Dept. Lack of staff is the biggest obstacle we face that limits the amount of requests we are able to process.&quot;</td>
</tr>
<tr>
<td>Our greatest accomplishment is when we sold a property that needed to have the ends of 3 of the buildings cut off. We wrote into the purchase agreement that whomever purchased the property would be responsible for the cut, demo, and reconstruction of the property. We sold the property for $5 million more than it was purchased for and we did not have to incur the cost for demo and clearing the ROW. Our biggest obstacle is Legislation that restricts usage and the sale process. Requirement (State Law) to offer any property of value to more than one owner to any entity with taxing authority over the property at FMV for 30 days.</td>
</tr>
</tbody>
</table>
Question 21. Describe your agency’s greatest accomplishments and obstacles in disposition of “excess” ROW for alternative use.

<table>
<thead>
<tr>
<th>Same as above?</th>
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<tbody>
<tr>
<td>See other two questions.</td>
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<tr>
<td>Still working on streamlining the process.</td>
</tr>
</tbody>
</table>

"The biggest obstacle is determining whether or not the ""excess"" is truly an ""excess,"" or if it will be needed for the current, or even a future, project. This is typically the biggest hurdle, as NCDOT strives to only acquire the land necessary for the current project.

NCDOT’s biggest accomplishment would be the selling of our uneconomic remnants. These are not considered as ""excess,"" but the State is allowed to make a profit off of these sales, so the Legislature has enacted law to allow for the sale of these uneconomic remnants through the use of realtors and auctioneers."

"The establishment of the Property Conveyance unit, and their subsequent expansion to 3 Million a year in sales has been a great accomplishment. The unit is self-sustaining with 9 staff at the central office level.

We have many other documents we could share with you - please ask.""

We formed a group to review the situation for sale of the right-of-way which meets once a month. This meeting has shortened review times and minimized questions regarding the sale.

We sold a building to a local business for almost twice what it was appraised for.

Wisconsin has a great relationship with working with the local FHWA office.

abandoning old rights of way that are no longer in use due to realignments.

"determining value through the appraisal process. It's expensive and delays the time necessary to complete the sale

obtaining surveys on the sell area"

"obstacles are that the remnants can only be sold to abutters which results in limited marketability and ability to sell accomplishments - selling remnants to interested parties"

we have an elaborate process for excess land, which can take a considerable amount of time to finalize.
Appendix B. Memorandum on Guidance for Alternative Uses

Memorandum

Subject: State DOTs Leveraging Alternative Uses of the Highway Right-of-Way Guidance

From: Stephanie Pollack
Acting Administrator

To: Directors of Field Services
Division Administrators
Division Directors

Date: April 22, 2021

PURPOSE

The purpose of this guidance document is to provide clarification to FHWA Division Offices who work with State departments of transportation (State DOTs) on certain uses of the highway right-of-way (ROW) that can be leveraged by State DOTs for pressing public needs relating to climate change, equitable communications access, and energy reliability. This guidance document supports the consistent utilization of the ROW for renewable energy generation, electrical transmission and distribution projects, broadband projects, vegetation management, inductive charging in travel lanes, alternative fueling facilities, and other appropriate uses as identified herein. FHWA Division Offices should share this memo with their State DOTs for their consideration for these alternate uses of highway ROW.

These uses of the highway ROW, including the development of renewable energy projects, enable breakthrough transportation technology related to electrification and connected and autonomous vehicles. These uses of the highway ROW also better utilize the full value and productivity of the existing asset while also reducing or eliminating the ongoing maintenance expenses for State DOTs. For example, State DOTs may create new revenue opportunities through participation in public-private-partnerships to develop renewable energy projects and negotiating agreements that include land lease or land license payments and power purchase agreements that reduce the States’ energy costs, both actual and over the life cycle of the renewable energy project.

This guidance document first addresses renewable energy generation facilities, such as solar arrays and wind turbines, and alternative fueling facilities (e.g., electric vehicle (EV) charging within the highway ROW). The lands State DOTs manage can be suitable locations for renewable energy and alternative fueling applications. Such projects can:

- Better leverage the full value and productivity of existing highway ROW assets;
Summary Report
FHWA Alternative Uses of ROW
September 2018 – September 2021

- Reduce greenhouse gas and other pollutant emissions;
- Promote energy security by diversifying energy generation and delivery methods;
- Foster the creation of a local green job market that enhances the viability of the Nation's renewable energy industry;
- Create a potential revenue source for State DOTs to develop projects and negotiate agreements that include land lease or land license payments and power purchase agreements; and
- Reduce or eliminate ongoing maintenance expenses for State DOTs.

Additionally, this guidance document provides relevant information on the use of certain vegetation management practices within the highway ROW to address climate change.

In considering requests pertaining to these ROW uses, FHWA Division Offices are encouraged to develop programmatic approaches, where appropriate, to processing such requests under the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act.

Coordination with State Departments

Division offices of the Federal Highway Administration should collaborate as frequently as practicable with State departments of transportation in reviewing utility accommodation policies under section 645.205 of title 23, Code of Federal Regulations. Division offices should foster an enhanced consideration of right-of-way and utility accommodation interests as part of the transportation planning process.

Additionally, FHWA Division Offices should encourage State DOTs to consider practices that can further broadband deployment initiatives, such as resource sharing. Best practices include minimizing repeated excavation of the roadway, coordinating with broadband utilities during highway construction, and integrating trenchless technologies into construction practices, as appropriate.

RENEWABLE ENERGY, ALTERNATIVE FUELING FACILITIES, ELECTRICAL TRANSMISSION AND DISTRIBUTION, AND BROADBAND PROJECTS

There are two methods for addressing renewable energy, alternative fueling, electrical transmission and distribution, and broadband projects (hereinafter known as “Clean Energy and Connectivity” (CEC) projects) in the ROW of a Federal-aid highway:

1. Accommodation as a utility under 23 CFR Part 645; or
2. Approval as an alternative use of the highway ROW under 23 CFR Part 710.

The FHWA Division Offices should encourage State DOTs to consider addressing these facilities through accommodation as a utility to the extent practicable and consistent with State law.
Accommodation as a Utility

As stated in 23 CFR 645.205, it is in the public interest to accommodate utility facilities on the highway ROW of a Federal-aid or direct Federal highway project when such use and occupancy of the highway ROW does not adversely affect highway or traffic safety, or otherwise impair the highway or its aesthetic quality, and does not conflict with the provisions of Federal, State or local laws or regulations.

The Federal definition of a utility facility in 23 CFR 645.207 is broad and intended to cover the extensive array of uses that are defined by the States. State laws/regulations can be narrower in scope than the Federal definition. As such, States may broaden their applicable State laws/regulations to cover the full scope of the Federal definition should they wish these facilities to be accommodated in the highway ROW as a utility. In determining whether a proposed installation is a utility or not, the most important consideration is how the State DOT views it under its own State laws and/or regulations (23 CFR 645.209(m)).

Accommodation of these CEC projects as a utility should be reflected in the State DOT Utility Accommodation Policy (UAP). For example, for renewable energy generation, the State DOT UAP should be updated to include language: (1) acknowledging renewable energy generation as a utility facility when consistent with State law, establish the proper form of written agreement or permit, (2) discussing the means by which utility accommodation can be better integrated into the transportation planning process at the State, regional, and corridor levels, and (3) addressing applicable terms and conditions, pursuant to 23 CFR 645 Subpart B. Federal regulations provide each State DOT with flexibility regarding utility accommodation and FHWA must give programmatic approval of the UAP. For broadband projects, similar updates to the State DOT UAP can help accommodate utilities within the Federal-aid ROW.

However, a State DOT UAP that does not specifically mention CEC projects, such as renewable energy generation or broadband, but uses the FHWA definition of a utility, or is in a State where State law allows for renewable energy generation or broadband to be considered as a utility facility, can proceed with a permit for a facility so long as the permit addresses the applicable terms and conditions, including but not limited to the rights and interests being permitted, the terms of the agreement, and the roles and responsibilities of the parties.

State DOTs are not required to charge fair market rent or other fees for use of the ROW if accommodating the facility as a utility, and fees may be set at the discretion of the State. State DOTs are encouraged but not required to allocate collected fees for transportation uses, purposes, and services.

The State DOT's UAP outlines the procedures, criteria and standards to evaluate and approve applications for utility facilities within the highway ROW. Each State DOT must submit a UAP in accordance with 23 CFR 645.211 and 645.215, addressing how the State DOT will consider applications for utility accommodation within the access control lines of a freeway. State DOTs may accommodate utility facilities in the Interstate or non-Interstate highway ROW in accordance with 23 CFR 645.209.
If a State does not view renewable energy, electric vehicle charging stations, other alternative fueling facilities, or broadband as utilities under State laws and/or regulations, these facilities may also be approved in the highway ROW as an alternative use of ROW under Federal regulations, 23 CFR Part 710.

No Secondary Access Requirements for Renewable Energy Projects

There is no Federal requirement for secondary access to renewable energy generation facilities located adjacent to ramps, interchanges, corridor parking facilities, or within rest areas.

No Commercial Activity Restrictions for CEC Projects

A CEC project in the Interstate or non-Interstate ROW that is being accommodated as a utility facility serving the public is not a prohibited commercial activity under 23 U.S.C. 111 unless such project also qualifies as an automotive service station or other commercial establishment pursuant to 23 U.S.C. 111.

Alternative Use of the ROW

As a separate path from accommodation as “utilities”, the FHWA may approve alternative uses of the highway ROW if it is determined that such occupancy, use, or reservation is in the public interest and will not impair the highway or interfere with the free and safe flow of traffic thereon (23 CFR 1.23(c)).

The FHWA has determined that CEC projects provide an opportunity to reduce carbon emissions and are an important tool to address climate change. The FHWA has also determined that broadband installation can assist with equitable communications access. These non-highway alternative uses of highway ROW are in the public interest.

The FHWA will consider the installation of solar panels, electric vehicle charging stations, broadband deployment, and other CEC projects as acceptable alternative uses of the Interstate or non-Interstate highway ROW if they comply with Federal property management regulations at 23 CFR 1.23, 23 CFR Part 710, and 23 U.S.C. 111.

Certain provisions must be incorporated in ROW Use Agreements for a time-limited alternative use of a Federal-aid highway (23 CFR 710.405), including planning and design details about the project and provisions for maintenance access, terms of use, maps, plans, and sketches.

Fair Market Value (FMV) Exceptions for Renewable Energy and Alternative Fuel Facilities

Alternative uses of the highway ROW, meaning any non-transportation uses, are subject to 23 U.S.C. 156 requirements to charge FMV for the lease or disposal of highway ROW if the property was acquired with Federal-aid highway funding. The FHWA can approve an exception for a social, environmental, or economic purpose (23 U.S.C. 156(b)) and 23 CFR 710.403(e)).
Based on the environmental benefits that would result from these installations, FHWA has determined that CEC projects located on Interstate or non-Interstate highway ROW qualify for an exception to the FMV requirement under 23 U.S.C. 156(b).

**Location of Alternative Fuel Facilities**

States are encouraged to consider an alternative fuel facility’s proximity to off-highway travel centers and fuel retailers when siting these facilities along the highway ROW.

**BIOLIGIC CARBON SEQUESTRATION PRACTICES**

**Environmental Benefits**

Vegetation management practices along the highway ROW can affect the amount of carbon that is biologically sequestered, or removed from the atmosphere. Treatments, such as increased mowing heights and planting native grasses, can increase the amount of carbon that is absorbed from the atmosphere and stored in the soil. These practices are consistent with ROW maintenance and safety considerations, but also may be carried out by others under agreements for an alternate use of the ROW. These practices may provide other environmental benefits such as reducing erosion from stormwater runoff, reducing peak flow and runoff velocity, enhancing stormwater infiltration, and reducing dust. Additionally, the FHWA encourages State DOTs to use highway ROW to develop habitat and forage for Monarch butterflies, other native pollinators, and honey bees through plantings of native forbs (e.g., flowering plants) and grasses, including noninvasive, native milkweed species that can serve as migratory way stations for butterflies and facilitate migrations of other pollinators.

Vegetation management, as well as habitat and forage for Monarch butterflies, other native pollinators, and honey bees, can improve the affected environment and foster opportunities that support native habitat. It can provide: stream bank stabilization, wetland mitigation, water quality improvement, air pollution mitigation, noise abatement, and wildlife habitat. Further, vegetation management provides habitat for pollinators such as bees and butterflies. Pollinators are essential to agricultural production and ecosystem health.

The contents of this memorandum do not have the force and effect of law and are not meant to bind States or the public in any way, however, all cited statutes and regulations must be complied with. This memorandum is intended only to provide clarity to FHWA Division Offices regarding existing requirements under the law or agency policies. Questions may be directed to Nicholas Thornton at (202) 366-1352, Nicholas.thornton@dot.gov, or Lindsey Svendsen at (202) 366-2035, lindsey.svendsen@dot.gov.
Appendix C. Concession Agreements Under 23 CFR 710.701 – 710.709

23 CFR 710.701 to 710.709  March 25, 2021

Subpart G—CONCESSION AGREEMENTS

§710.701  Purpose.
§710.703  Definitions.
§710.705  Applicability.
§710.707  Fair market value.
§710.709  Determination of fair market value.

23 USC 156

23 USC §156. Proceeds from the sale or lease of real property

(a) Minimum Charge.-Subject to section 142(f), a State shall charge, at a minimum, fair market value for the sale, use, lease, or lease renewal (other than for utility use and occupancy or for a transportation project eligible for assistance under this title) of real property acquired with Federal assistance made available from the Highway Trust Fund (other than the Mass Transit Account).

(b) Exceptions.-The Secretary may grant an exception to the requirement of subsection (a) for a social, environmental, or economic purpose.

(c) Use of Federal Share of Income.-The Federal share of net income from the revenues obtained by a State under subsection (a) shall be used by the State for projects eligible under this title.
Appendix D. Bibliography

Federal Highway Administration Publications


**Manuals**


National Academies Publications


DOT Reports and Case Studies


Journal Articles


Industry Publications

https://files.stoel.com/files/books/LawofSolar.PDF.

Policy Documents

Presentations

Websites


Codes and Statutes

United States Code (USC)

23 USC §111 - Agreements relating to use of and access to rights-of-way—Interstate System
23 USC §156 - Proceeds from the sale or lease of real property

Code of Federal Regulations (CFR)

23 CFR §1.23 - Rights-of-way

23 CFR §710.403 - Management

23 CFR §710.405 - ROW use agreements

23 CFR §710.409 - Disposal of excess real property

23 CFR §645 Subpart B - Accommodation of Utilities

23 CFR §710 - ROW and Real Estate

23 CFR §752.5 - Safety Rest Areas

49 CFR §18.31(b) (Real Property)