

Development of Guidelines for Establishing Shared-Use Park and Ride Lots

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Final Report VTRC 22-R1

Standard Title Page - Report on Federally Funded Project

1. Report No.: FHWA/VTRC 22-R1		2. Government Accession No.:		3. Recipient's Catalog No.:	
4. Title and Subtitle: Development of Guidelines for Establishing Shared-Use Park and Ride Lots				5. Report Date: January 2022	
				6. Performing Organization Code:	
7. Author(s): Lance E. Dougald and Eric S. Williams				8. Performing Organization Report No.: VTRC 22-R1	
9. Performing Organization and Address: Virginia Transportation Research Council 530 Edgemont Road Charlottesville, VA 22903				10. Work Unit No. (TRAIS):	
				11. Contract or Grant No.: 116908	
12. Sponsoring Agencies' Name and Address: Virginia Department of Transportation Federal Highway Administration 1401 E. Broad Street 400 North 8th Street, Room 750 Richmond, VA 23219 Richmond, VA 23219-4825				13. Type of Report and Period Covered: Final	
				14. Sponsoring Agency Code:	
15. Supplementary Notes: This is an SPR-B report					
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17 Key Words: Park and ride, shared-use parking, contract parking, leased parking, multimodal transportation			18. Distribution Statement: No restrictions. This document is available to the public through NTIS, Springfield, VA 22161.		
19. Security Classif. (of this report): Unclassified		20. Security Classif. (of this page): Unclassified		21. No. of Pages: 104	22. Price:

FINAL REPORT
**DEVELOPMENT OF GUIDELINES FOR ESTABLISHING SHARED-USE
PARK AND RIDE LOTS**

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In Cooperation with the U.S. Department of Transportation
Federal Highway Administration

Virginia Transportation Research Council
(A partnership of the Virginia Department of Transportation
and the University of Virginia since 1948)

Charlottesville, Virginia

January 2022
VTRC 22-R1

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ABSTRACT

Due primarily to the expense associated with constructing new park and ride facilities, the Virginia Department of Transportation (VDOT) is interested in the concept of leasing underused parking from private lot owners to supplement construction of new or expansion of existing park and ride facilities. Limited guidance exists to address capacity-constrained park and ride lots, a significant issue that affects many major metropolitan regions with well-developed transit and park and ride systems. In addition, there have been limited studies to explore the role of shared-use park and ride lots for users and stakeholders. The purpose of this study was to examine the benefits, opportunities, issues, and concerns regarding shared-use park and ride lots in Virginia.

Based on the study findings, the researchers concluded the following: although the core objective of park and ride lots remains consistent (e.g., reducing the number of vehicles traveling on roadways), the manner in which park and ride lots are implemented can vary; most departments of transportation own park and ride lots whereas few participate in leasing arrangements with private lot owners; lease fees are variable and depend primarily on maintenance negotiations; there are documented lessor concerns with leasing arrangements but leasing of lots provides many benefits and the majority of agencies in Virginia and other states that lease parking spaces from private lot owners have had positive experiences; although VDOT's Transportation Mobility and Planning Division (TMPD) maintains a detailed and comprehensive park and ride database, there are discrepancies specific to private lots with informal agreements; and VDOT districts report a need for more park and ride lots and there is great interest in using shared-use parking arrangements.

The study recommends the following: (1) the TMPD should update its inventory of park and ride lots and remove private lots that are identified as having informal agreements from its public facing interactive map; (2) the TMPD should work with the VDOT districts to update its park and ride investment strategy methodology to include consideration of shared-use lots in each district; (3) with the assistance of the Virginia Transportation Research Council, the TMPD should coordinate with the districts to initiate one or two pilot studies of leasing private lots following elements provided in the guidance developed as part of this study; and (4) upon completion of the pilot studies and documentation of lessons learned, the TMPD should coordinate with the districts to develop a park and ride leasing program.

This study and the resulting guidance provide VDOT with a framework for establishing shared-use park and ride lots. Following the framework provided for initiating park and ride lease agreements will provide VDOT with more cost-effective means to increase its inventory of park and ride lots. The traveling public would benefit from increased multimodal opportunities and transit agencies would benefit from increased ridership opportunities. In addition, private lot owners could benefit from increased patronage.

FINAL REPORT

DEVELOPMENT OF GUIDELINES FOR ESTABLISHING SHARED-USE PARK AND RIDE LOTS

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INTRODUCTION

Efforts to manage travel behavior have become an increasingly important element of transportation policy in the United States. Legislation such as the Clean Air Act, Intermodal Surface Transportation Efficiency Act (ISTEA), Transportation Equity Act for the 21st Century (TEA-21), and Fixing America's Surface Transportation Act (FAST) have stimulated significant voluntary and regulatory attempts to reduce the rate of solo driving. In addition, transportation control measures as a part of the Clean Air Act have attempted to mitigate the effects of solo driving on the environment through programs such as carpooling, park and ride, ridesharing, high occupancy vehicle lanes, and telecommuting.¹ A 2019 State of the Commute survey by the Metropolitan Washington Council of Governments² revealed that single-occupant-vehicle commuters continued to represent the highest percentage of commuters but the percentage had fallen from 70% in 2001 to 58% in 2019. The reason for this decrease in solo driving was that there were more options for commuters to share a ride or take transit.

Park and ride lots comprise one of the primary changes in mode facilities where individuals meet and then group-travel to their destinations via vanpool, carpool, or transit.³ The American Association of State Highway and Transportation Officials (AASHTO)⁴ defines a *shared-use park and ride lot* as, “a parking lot used for a specific activity but also used to accommodate commuter vehicles from the beginning of the morning peak period until the end of the evening peak period.” These facilities can be vacant lots where commuters predetermine to meet or large multimodal transportation facilities that link individuals to many other modes of transportation, including bus and rail.³ Such lots are thus a critical part of a multimodal transportation system, providing benefits to users (in the form of reduced travel costs); the roadway network (by increasing vehicle occupancy rather than the number of vehicles); and the environment by reducing emissions.⁵

A healthy park and ride system can be used strategically to encourage urban development. It can, however, also lead to continued sprawl, depending on the location and design of the individual facilities in the system.⁶ Poorly planned park and ride lots and those that lack promotional campaigns can suffer from lack of use. In Alabama, a newly constructed \$800,000 park and ride lot in Calera has sat empty for years. The county hopes that usage will increase with promotional signage.⁷ Constructing new lots or expanding existing lots to meet demand is an expensive and a slow process. The Potomac and Rappahannock Transportation

Commission recently held a groundbreaking ceremony for a 683-space park and ride commuter lot in Spotsylvania County, Virginia, at a cost of \$16.5 million,⁸ and a cursory review of new park and ride lots in the Virginia Department of Transportation's (VDOT) Smart Scale project portal suggested costs of \$45,000 per parking space in some cases. The time from initial project scoping to completed construction is typically 6 years.

Due to the expense of building or expanding park and ride lots, many agencies are looking for increased opportunities for private investment and public-private partnering⁶ to share existing parking lots for park and ride, such as those owned by shopping centers, churches, movie theatres, sporting facilities, or municipalities. *Shared-use park and ride* (or joint-use parking) is defined as park and ride spaces that can be used to serve two or more individual land uses without conflict or encroachment.¹ It represents a unique approach for addressing parking problems. It can offer substantial savings in land and development costs, and given that some developments have been built with excessive parking minimums (often far over what was actually needed), surplus parking may be available.

The shared-use park and ride approach can have disadvantages, including design limitations affecting the number of parking spaces that can be used for park and ride operations, conflicts in use of the spaces (e.g., during the peak retail season), increased liability for lessors, and the fact that leases that are not permanent can be terminated if problems are encountered or if the property is sold, affecting the users of the lot. For these reasons, formal agreements delineating lease terms are considered advisable.

Leasing involves entering into an agreement with an existing parking lot owner to dedicate certain spaces for park-and-ride use. These arrangements generally work best when the peak parking demand for the land owner does not coincide with the peak park-and-ride demand (e.g., at churches where services are typically held on weekends).⁹ Leases can range from simple agreements, such as a lease for a voluntary shared-use facility with little or no compensation, to complex lease agreements that may include payment and contract provisions to cover operations of the parking facility.⁴

Due primarily to the expense associated with constructing new park and ride facilities, VDOT is interested in the concept of leasing parking from private lot owners to supplement construction of new or expansion of existing park and ride facilities. Limited guidance exists to address the overutilization of capacity-constrained park and ride lots, a significant issue that affects many major metropolitan regions with well-developed transit and park and ride systems.¹⁰ In addition, there have been limited studies performed to explore the role of shared-use park and ride for users and stakeholders.¹ A study by Arnold (1989) at the Virginia Transportation Research Council (VTRC)¹¹ identified the positive and negative aspects of joint-use park and ride lots as part of a study to determine whether VDOT should promote or fund such lots; however, no recommendations for VDOT were provided.

PURPOSE AND SCOPE

The purpose of this study was to examine the benefits, opportunities, issues, and concerns regarding shared-use park and ride lots. The scope encompassed examining best practices in Virginia and other states; developing an inventory of potential shared-use lots in Virginia; and based on lessons learned, developing practical shared-use park and ride guidance for VDOT.

METHODS

The following tasks were performed to achieve the study objectives:

1. Conduct a literature review examining best practices.
2. Conduct a survey of other states.
3. Conduct a review of existing park and ride lessors and lessees in Virginia.
4. Develop an inventory of candidate lease locations.
5. Develop guidance for shared-use park and ride engagement.

Literature Review

Due primarily to the expense associated with constructing new park and ride facilities, this study focused on the concept of utilizing existing parking (such as spaces owned and maintained by churches, businesses, or municipalities) to supplement construction of new park and ride facilities or expansion of existing park and ride facilities. The objective of the literature search was to locate case studies and best practices pertaining to “shared-use” or “joint” use parking used to supplement the practice of designing and building park and ride facilities from the ground up. The researchers also attempted to locate credible studies or publications that pointed to the benefits, opportunities, challenges, and concerns regarding the shared-use approach, especially those articulated by state departments of transportation (DOTs). In addition, since formal agreements delineating lease terms are considered advisable, several items found in the search included examples of agreement terms.

The literature search was not limited to peer-reviewed studies or research reports. Search terms included all forms of the following: Park and ride, PNR, P&R, Park and pool, shared-use, joint-use, land use, mixed use, shared parking, joint, lot, commuters, parking, lease, leased, leasing, opportunistic, business, shared parking, contract lot, liability, liable, car parks, and parking spaces. Databases used included TRID, BTS, State DOT Search Engine, NTRL, Compendex, Civil Engineering Abstracts, ASCE Library, Business Source Corporate Plus, Hein Online, Lexis Nexis, Urban Studies Abstracts, SocINDEX, RiP, Google, Google Scholar, and WorldCat.

Survey of States

The purpose of this task was to identify DOTs and other agencies participating in shared-use park and ride lease arrangements and obtain information on contract agreement language,

terms, funding sources, and lessons learned. The survey of states involved a two-step procedure. First, a survey was developed in Google Forms and distributed to all 49 state DOTs including the District of Columbia. The process involved searching DOT websites for planning staff; an initial contact list for each DOT was established that included a telephone number and email address. Job titles for the contacts were generally planning chiefs, directors, and managers. A telephone call was made to each contact and an introduction to the project was presented either by speaking to the contact directly (a few cases) or leaving a message (most cases). The telephone call was followed up with an email that described the intent of the survey with a survey link provided. The survey form for state DOTs is shown in Appendix A.

Second, a survey for other agencies was developed based on information received from the state DOT survey. A total of 21 agencies were identified as potential lessees for park and ride lots, including transit agencies, councils of governments, and localities. A process similar to that used for the state DOT survey was undertaken where a telephone call was made to each contact and an introduction to the project was presented either by speaking to the contact directly or leaving a message. The telephone call was followed up with an email that described the intent of the survey with a survey link provided. The survey form for other state agencies is shown in Appendix B.

Review of Existing Park and Ride Lessors and Lessees in Virginia

When the tasks were scoped for this study, it was known that the George Washington Regional Commission (GWRC) leased four lots from private owners in the Fredericksburg District where federal Congestion Mitigation and Air Quality (CMAQ) funds were used to lease three of the four lots. It was also known that there were approximately 20 leased lots in the Northern Virginia District whereby 2 of the 20 lots, Lowes Island and Broadlands/Moorefield, were under VDOT-administered leases and were federally funded through an arrangement with Loudoun County (the lessee). The leasing arrangements at the majority of the other privately owned lots in the Northern Virginia District and other districts were largely unknown. Therefore, the purpose of this task was to develop an inventory of contract lots in Virginia where the lessor was a private owner and the lessee was a locality, a regional planning commission, or a transit agency. The elements of the inventory included determining the number of operational private lots in each VDOT district and the type of agreement in place (e.g., informal, contract, or proffer). For contract lots, the inventory involved determining the lessor and lessee, contact information of the lessor and lessee for survey distribution, and formal agreement language including terms and specific contract clauses.

Determine Privately Owned Lots

VDOT maintains an inventory of park and ride lots and a public facing website with an interactive park and ride map. The most recent update to the inventory was conducted in 2019 (hereinafter “the 2019 inventory”). Based on the 2019 inventory, Figure 1 shows the number and percentage of park and ride lots that are owned by VDOT, transit agencies, private entities, colleges/universities, localities and those lots labeled as “unofficial.” Unofficial lots are those that are typically located on VDOT right of way but were never formally processed as an official

park and ride lot and are not maintained. In some cases, spaces were created by commuters immediately adjacent to a roadway or on the shoulders. Figure 2 shows an example of an unofficial lot on the shoulder of Hunter Village Drive in the Northern Virginia District.

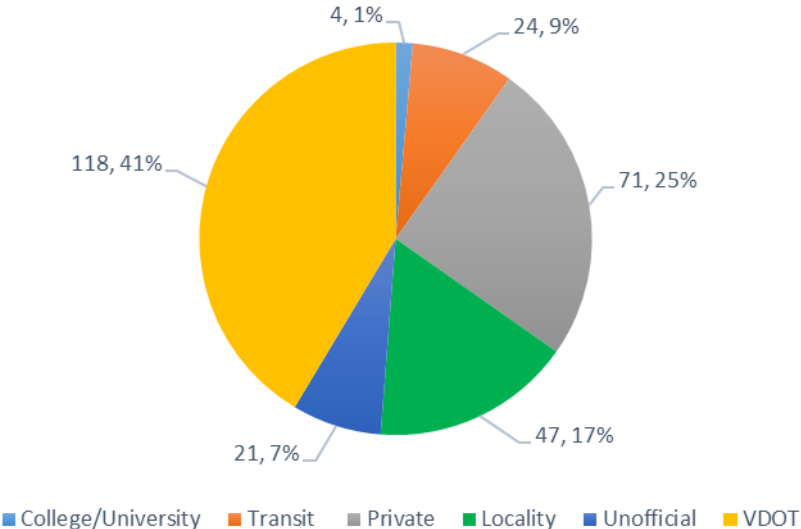


Figure 1. Entities Owning Park and Ride Lots in Virginia



Figure 2. Unofficial Lot on Hunter Village Drive in the Northern Virginia District

For each district, the inventory database was sorted based on the “Ownership” field in the spreadsheet. For example, Table 1 shows the types of information for each district under the ownership field. Based on conversations with staff of VDOT’s Transportation Mobility and Planning Division (TMPD), the focus of the effort to determine private ownership should be based on the field of “Private.”

Using the data from the 2019 inventory, TMPD staff assisted with determining discrepancies in the database. For the majority of the districts, the data in the 2019 inventory were accurate with respect to private ownership; however, in some cases, lots were added and/or removed to rectify discrepancies. Table 2 shows where these additions and/or removals occurred in the Fredericksburg, Hampton Roads, and Northern Virginia districts.

Table 1. Park and Ride Ownership Fields in the 2109 Inventory for Each VDOT District

Bristol	Culpeper	Fredericksburg	Hampton Roads	Lynchburg	Northern Virginia	Richmond	Salem	Staunton
Locality	Locality	Col/Univ	Col/Univ	Private	Locality	Locality	Private	Locality
Private	Private	Locality	HRT	Unoff.	M. Corps	Private	Unoff.	Private
Unoff.	Unoff.	Private	Locality	VDOT	Private	VDOT	VDOT	Unoff.
VDOT	VDOT	VDOT	Private		Unoff.			VDOT
		VRE	VDOT		VDOT			
					VRE			
					WMATA			

Unoff. = Unofficial; Col/Univ = College/University; VDOT = Virginia Department of Transportation; VRE = Virginia Railway Express; HRT = Hampton Roads Transit; M. Corps = Marine Corps Base; WMATA = Washington Metropolitan Area Transit Authority.

Table 2. Private Park and Ride Lots Removed and Added From 2019 Inventory Data

District	No. of Private Lots (From Inventory)	No. of Actual Private Lots	Lots Removed	Lots Added
Bristol	4	4	-	-
Culpeper	9	9	-	-
Fredericksburg	12	15	VRE Lot B ^a	Chatham Heights ^b Claiborne Run Shopping Center ^b Fredericksburg Field House ^b Ladysmith Professional Building
Hampton Roads	4	5	-	Chesapeake Square Mall
Lynchburg	3	3	-	-
Northern Virginia	33	34	PRTC Transit Center ^c	Purcellville Park and Ride Circuit City (Old Keene Mill)
Richmond	2	2	-	-
Salem	2	2	-	-
Staunton	2	2	-	-

VRE = Virginia Railway Express; PRTC = Potomac and Rappahannock Transportation Commission; - = no lots removed or added.

^a Owner is City of Fredericksburg.

^b Agreements were in place with the Fredericksburg Area Metropolitan Organization (FAMPO) at the beginning of the study but funding discontinued June 30, 2021.

^c Owner is PRTC.

Determine Type of Agreement

After the list of private lots, which included four community colleges, was developed, the next step was to ascertain the functionality of the lot (e.g., whether or not the lot still operated as a park and ride lot) and if the lot was found to be operational, the type of agreement in place at each lot. There are three types of agreements that exist for private park and ride lots in Virginia.

1. *Informal*: an informal or voluntary agreement is one where the two parties agree on a park and ride arrangement but there is no legally binding arrangements and no responsibilities placed on either party.
2. *Contract*: a contract agreement is legally binding where terms and conditions are set in a written and signed document.
3. *Proffer*: a proffer is a voluntary agreement where developers offer contributions to offset the impact of developments by authorizing conditional rezoning proffers. In some cases, offsetting the impact of a development is the establishment of spaces for park and ride purposes. The concept of proffers is embedded in the *Code of Virginia* as “conditional zoning” under Title 15.2, Sections 15.2-2296 through 15.2-2303.4.¹²

To determine the functionality of the lot, localities, district planning commissions, and transit agencies were contacted to ascertain if contract or proffered agreements were in place with private lot owners. Once this information was obtained, telephone calls were made to all of the other private lot owners for whom agreement information was unknown. In some cases contact information for these lots was easily obtained (i.e., the private lot was on church property) whereas in other cases contact information was more difficult to obtain (i.e., the private lot was in a shopping center). For those for which information was difficult to obtain, land and deed records were accessed from county real estate sources.

Document Contract Details

Leasing contracts were requested as part of this study, and seven contracts were received and reviewed. Specific contract terms such as period of lease and compensation were documented as was agreement language that assigned responsibilities to the lessor and lessee.

Develop and Distribute Lessee and Lessor Surveys

Once all contract park and ride lots were identified and contact information was obtained for both the lessee and lessor, a survey was developed and distributed using Google Forms. The purpose of the survey was to identify the specifics of the terms and to gauge opinions about the leasing experience. The form of the survey for the lessee and lessor is shown in Appendices C and D, respectively. The questions asked for both the lessee and lessor included the following.

Lessee Survey

1. Could you please briefly describe why your leased park and ride lots were chosen for leasing?
2. Besides the lots currently leased, were other leasing locations considered?
3. What funding source(s) are used for leasing park and ride lots? (If grants, please indicate name of grant).
4. What are the typical duration terms for the leased lots?
5. What is the average lease price (per year) for a leased parking space? (If there is a range in lease price/space depending on location, please provide that range.)
6. Was there a negotiation process with the private lot owners when developing the terms of the leasing agreements?
7. How were the terms developed in the leasing agreement with private lot owners?
8. Do you collect occupancy data on your leased lots?
9. What is the typical frequency of collecting occupancy data?
10. Are there any leased lots that collect occupancy data continuously using real-time technology?
11. Are there leased lots where 80% or more of spaces are typically occupied?
12. Approximately, how many of your leased lots are typically occupied at a rate of 80% or more?
13. Do any of your leased lots require parking permits to use the lot as a park & ride?
14. Have there ever been concerns about your leased lots brought to your attention by the lessor, users of the lot, and/or others? Please briefly describe the concerns brought to your attention.
15. Have there ever been cases where a lot owner has terminated a lease? Please describe the reason(s) for lease termination(s).
16. Is your agency seeking to expand its inventory of leased park and ride lots?
17. On a scale of 1 (low satisfaction) to 5 (high satisfaction) how would you rate your agency's overall satisfaction with park and ride leasing arrangements with private lot owners?

Lessor Survey

1. Approximately how long have you been leasing your lot for park and ride purposes?
2. Is the parking lot used solely for park and ride purposes?
3. Is there a designated park and ride location in the parking lot with signage and/or markings?
4. Who is responsible for maintenance of the park and ride lot?
5. What are the current duration terms of the lease?
6. What is the lease price (per year) for the park and ride lot?
7. If known, how were the agreement terms developed or negotiated?
8. Have you ever received complaints from the public about the park and ride lot?
Please describe the complaints you have received.
9. On a scale of 1 (low satisfaction) to 5 (high satisfaction), how satisfied are you with the leasing experience with the lessee?
10. Do you plan to continue leasing the lot space for park and ride after the current terms expire?
11. If available, would you be willing to provide a copy of the leasing agreement with the lessee? (If so, we will follow up to obtain a copy).

Develop Inventory of Candidate Lease Locations

As part of VDOT's Transportation Demand Management Program, the TMPD developed a database of park and ride investment strategies¹³ for each district. The investment strategies include construction of new lots, creation of enhancements to existing lots (e.g., improvements to accessibility, lighting, landscaping, pavement, markings, etc.), expansion of existing lots, and development of lease agreements for use of private lots). The process used to develop the database was a spreadsheet-based methodology that used a scoring mechanism to rank and prioritize future projects. Elements in the spreadsheet for each investment strategy included the following:

- Major routes served
- Average daily traffic (ADT) of route served
- Level of Service (LOS) of route served
- Jobs within 10, 10-24, 25-50, and greater than 50 miles radii

- Number of workers within 3-mile radius
- Number of workers living in selection area but employed outside area
- Total number of workers that travel ≥ 25 miles
- Percent of workers that travel outside area for work (travel ≥ 25 and 50 mile radius)
- Inside Priority Investment Area (Yes/No).

To obtain a score and subsequent ranking of the park and ride strategies, weights are applied to variables and the following calculation is performed:

$$ADT (route\ served)*2 + LOS (route\ served)*2 + Total\ Workers (travel\ \geq\ 50\ mi)*2 + \%Workers (travel\ \geq\ 50\ mi) + Inside\ Priority\ Investment\ Area (1=Y, 0=N)*3$$

[Eq. 1]

where

LOS F = 1.0
 LOS E = 0.8
 LOS D = 0.6
 LOS C = 0.4
 LOS B = 0.2
 LOS A = 0.

An example of a summary sheet showing the output for one of the investment strategies (lot enhancement) in the Bristol District is shown in Figure 3. The technical score for this project based on Equation 1 was 8.825, and it ranked first among the district's investment strategies. Other than commuter/roadway demand elements, components for each strategy included indications of local support (locality, metropolitan planning organization [MPO], and planning district commission [PDC]), land availability, and investment costs and benefits. Figure 4 shows the type of enhancement strategies for all districts combined. Plans for newly constructed lots accounted for the majority of strategies (78 of 139 projects, or 56%) followed by leased lots (21 projects), expansion (20 projects), and enhancement (18 projects).

A breakdown of strategies by district is shown in Table 3. The Lynchburg District had the highest number of investment strategies, including 11 strategies that involved leasing lots. The three other districts that included leasing strategies were Hampton Roads (8), Salem (1), and Staunton (1).

One of the primary objectives of this study was to investigate shared-use park and ride opportunities and according to the TMPD, the investment strategies provided on the VDOT web portal are in need of updating. Therefore, the purpose of this task was to develop an updated inventory of potential lease opportunities in each district.



Bristol District Park & Ride Investment Strategy



US 19 at Russell Road

Major Corridors Served: US 19
 Jurisdiction: Washington County
 Improvement Type: Expansion
 Recommendation ID: BRI-3
 Technical Score (Ranking): 8.825 (1st)

PROJECT DESCRIPTION

P&R lot expansion to increase capacity and upgrade lighting at the existing P&R lot along US 19 near the intersection of US 19 and Russell Road.

COMMUTER/ROADWAY DEMAND

ADT (Route Served): 41,022
 LOS (Route Served): D
 Workers within 3 mile radius: 4,536
 % Workers traveling outside 3 mile radius: 69%
 % Workers traveling outside 25 mile radius: 45%
 % Workers traveling outside 50 mile radius: 21%
 Average commute length: 21 miles
 Number of Spaces*: 20
 Inside Priority Investment Area: Corridor



Land Available	District Support	Local Support	MPO Support	PDC Support
✓	✓	-	✓	✓

Investment Costs and Benefits	
Planning Estimate	\$200,000 – \$300,000
Total Annual Cost Savings (All Users)	\$86,000
Annual Cost Savings (Per User)	\$4,300
Annual VMT Reduction	155,713 miles

Figure 3. Bristol District Park and Ride Investment Inventory Summary Sheet

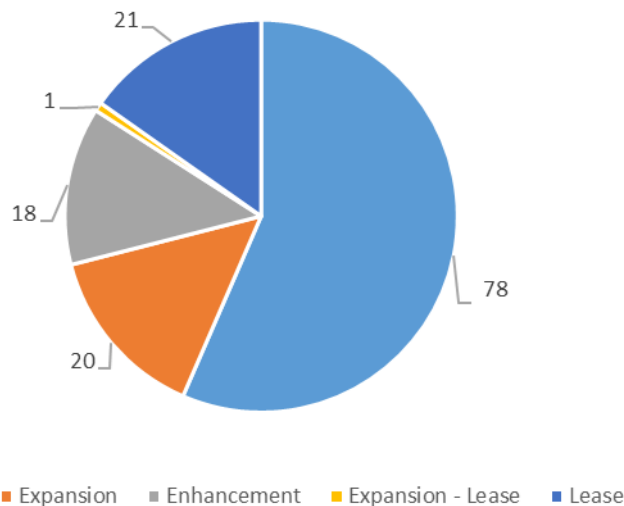


Figure 4. Types of Park and Ride Lot Investment Strategies Across All VDOT Districts

Table 3. Type of Park and Ride Lot Investment Strategies by District

District	New	Enhancement	Expansion	Lease
Bristol	6	-	1	-
Culpeper	7	3	4	-
Fredericksburg	8	2	4	-
Hampton Roads	4	8	4 ^a	8
Lynchburg	20	3	2	11
Northern Virginia	5	1	1	-
Richmond	17	-	1	-
Salem	5	-	1	1
Staunton	6	1	3	1

- = No strategies provided.

^a One expansion is of an existing leased lot (Greenbrier Mall).

In consultation with VDOT district planners, feedback was requested via email correspondence about each district’s future park and ride plans. Information on the following topics was requested from each district planner:

- need for more park and ride facilities
- future plans to construct new park and ride facilities
- current barriers for constructing new park and ride facilities
- opportunities for leasing privately owned lots for park and ride purposes.

Develop Guidance for Shared-Use Park and Ride Engagement

Based on the findings from each study task, guidance was developed for VDOT to engage in shared-use park and ride leasing arrangements. The following topics are covered in the guidance:

- Agreement templates
- Potential leasing locations
- Interest from private lot owners
- Funding mechanisms
- Lessons learned.

RESULTS AND DISCUSSION

Literature Review

A review of the literature revealed that a large number of DOTs, localities, PDCs, and MPOs have developed guidance for implementing park and ride lots. These guidance documents typically include design and location considerations, and some provide methodologies for estimating demand and ranking potential park and ride projects. At the most basic level, park and ride design guidance includes the following.¹

- Each parking space should be usable by all parkers.
- The facility should be designed to accommodate significant inbound and outbound traffic flow at one or more periods of the day.
- Because of the variety in types of parkers, the facility must have effective signing, markings, and other communications tools.

With respect to ideal locations for park and ride lots, new facilities should be in areas with high levels of travel demand to major activity centers,³ and under the assumption that areas with high levels of travel demand would increase demand at nearby park and ride facilities, a number of studies have developed methods to estimate demand.¹⁴⁻²⁰ Song and He²¹ proposed an integrated planning methodology for locating park and ride facilities. The authors found that the attractiveness of park and ride services not only relied on strategically deployed park and ride facilities but also depended on the level of transit services offered through these park and ride facilities. Wambalaba et al.²² described locations where park and ride lots are the most appropriate, including the following:

- at the edge of town to capture traffic directly from inter-urban and rural road networks before it enters the built-up area
- close to main access routes to avoid added mileage by users diverting to reach the site
- away from residential areas to avoid disturbance to residents and obstruction of passengers from local buses
- where land is available since car parks take up a lot of space; good access to town center that is direct and not congested with bus priority as necessary.

The principles for ideal locations of park and ride lots apply not only to newly constructed lots but also to initiatives that involve choosing appropriate locations for shared-use park and ride facilities. The Florida Department of Transportation (FDOT)²³ noted that the typical types of compatible land uses for shared-use lots included movie theatres, bowling alleys, dinner restaurants, or other uses with predominantly night-time business patterns. Other locations included shopping centers, churches, gas stations, and sporting venues. FDOT postulated that shopping centers most likely to participate in shared-use arrangements include those with low patronage or that are newly developed, typically located on the urban fringes.

Although some park and ride guidebooks referenced shared- or joint-use lots as a potential solution to capacity problems at traditional park and ride lots, there are a limited number of studies specific to shared-use facilities. The primary elements found in the literature centered on the following topics: benefits of shared-use arrangements, challenges and concerns with shared-use arrangements, lease elements, and funding mechanisms.

Benefits of Shared-Use Arrangements

Gabourel and Wambalaba¹ concluded that shared-use lots were, in general, beneficial to the traveling public, the leasing agency (the lessee), and the owner (the lessor). For the traveling public, contract lots integrated with the surrounding land uses and promoted pedestrian and street activity that enhanced the safety of the facility. For public agencies (the lessee), the benefits included increased flexibility to meet shifting transit markets, less impact on the capital budget, and reduced environmental impacts from new construction.²⁴ In addition, these lots involved quick implementation as the parking area already existed¹ and could help alleviate issues at existing nearby lots that were reaching capacity.²⁵

For lot owners, a Franklin County (Greenfield, Massachusetts) park and ride study²⁶ found that lot owners, especially for commercial uses, experienced an increase in business sales by allowing commuters to use their parking lot. Another study conducted by the California Department of Transportation (Caltrans) used surveys of park and ride users at a shopping center to find that 69% of respondents shopped at the shopping center at least once a week when using the park and ride lot, spending a weekly average of \$38 per shopper.² Wambalaba et al. conducted additional research on the impacts of shared-use lots on properties. The three research objectives were to determine the following: (1) the influence on shopping behavior patterns of users; (2) the generation of retail revenues for the business owners; and (3) the generation of ridership for transit service providers. These results showed that the shared-use park and ride lots studied increased the shopping center's customer base and that transit agencies had increases in ridership.

In their regional park and ride strategy toolkit,²⁷ the Riverside County Transportation Commission (RCTC) and the San Diego Association of Governments (SANDAG) noted that participants of shared-use park and ride arrangements wanted to be more informed about the benefits they could receive. Based on this feedback, a recommendation was to provide accessible digital and printed marketing material to inform the private sector of the benefits that could be received. In addition, as pointed out by Wambalaba et al.,²² transit agencies can provide ridership data to lot owners showing the potential for increased customer base and revenues.

Challenges and Concerns With Shared-Use Arrangements

A number of literature sources identified challenges with shared-use park and ride arrangements. The most commonly referenced challenge was that contract agreements may not be renewed whereby either the owner (lessor) or the lessee can terminate a contract by giving as little as a 30-day notice although most contracts stipulated a 60- or 90-day notice. In addition to the risk of lease cancellation, the American Public Transit Association²⁴ mentioned fluctuating lease prices over time, locations not ideal for ridership or access, and staff time needed to manage negotiations and contracts. With respect to location challenges, a Savannah (Georgia) Metropolitan Planning Commission (SMPC) study²⁸ suggested that there may be space or design limitations that affect the number of parking spaces and that bus access and conflicts in use of the spaces may also arise, particularly during peak retail seasons. A 2017 San Luis Obispo

Council of Governments (SLOCOG) study³ identified the following additional location challenges:

- Expansion opportunities may be unavailable.
- Problems may be created when users expand into non-designated spaces.
- Spaces may be placed in remote or other undesirable areas of the lot if the contract is not specific (lot owners need to be informed of where desirable spots would best benefit users while not interfering with the day-to-day operations of the business).
- Traffic may intensify in lots where there is an evening peak hour commercial use.

With respect to private lot owners, major concerns included excessive trash, perceived high levels of crime and vandalism, ridership that was not part of their customer base, and damage to asphalt.¹ In 2016, the Allegheny Valley Fire Company in Pennsylvania ended its park and ride lease with the port authority because some residents in the area were concerned that bus drivers and park and ride users were increasing traffic in the area, often while driving too fast and rolling through stop signs. In addition, damage to the parking lot and winter snow removal services cost more than the authority lease brought in.²⁹

The RCTC and SANDAG study²⁷ suggested that most owners of leased lots do not mind high utilization if it does not exceed the allocated spaces whereas commercial property owners are less likely to accommodate park and ride arrangements because of perceived liability, hassle, and wanting to maintain their capacity regardless of actual usage. The same study²⁷ concluded that lack of signage and significant enforcement at nearby parking spaces can be very discouraging to park and ride users. There was a consensus that property managers do not effectively promote the location of park and ride spaces at sites with shared uses (i.e., shopping malls) but robustly enforce adjacent spaces not available to park and ride users.

Wambalaba et al.²² noted most private lot owners perceived that users of park and ride facilities took up space that could be used by their customers and, to some extent, may engage in criminal activity at their business. Further findings included poor communication between stakeholders. In some cases, new management at shopping centers was not aware of the park and ride lot arrangements and because lessees were hesitant to bring attention to the arrangement, the lot owner opted to discontinue operation of the shared-use park and ride lot.

Lease Elements

A lease is a contract that conveys a facility or real estate with specific rent and conditions regarding its use. This type of agreement may be a formal document signed by the parties who agree to the terms. Noel³⁰ noted that transportation departments in states that have not sanctioned their involvement in park and ride facilities via legislation may not have the legal authority to enter formal lease agreements. As a rule, a park and ride program should be advised by the state's general counsel on legal and liability issues regarding the use of public/private property for park and ride facilities and on necessary arrangements for implementing their use.

Arnold¹¹ stated that the Virginia Office of the Attorney General had advised that it is legal for state agencies (in this case VDOT) to enter into an agreement with a private party.

Lease agreements for contract lots are always required to establish conditions to which the lot owner agrees with regard to how the land will be used for park and ride facilities. These agreements are typically temporary and either party may cancel the contract per the requirements of the agreement. In establishing a lease agreement, SLOCOG³ found that it is considerably easier to reach an agreement with a single owner rather than with multiple owners, as fewer stakeholders are likely to make demands when developing the contract details. In a New York park and ride study, Holguin-Veras et al.³¹ referred to three fundamental methods of arranging agreements (commercial negotiation, persuasion, and administrative fiat) and suggested that a commercial lease in which there is a negotiated exchange of parking rights for a contracted price is the most practical arrangement. Negotiation of a commercial lease can provide the lessee with considerably more latitude in negotiation of maintenance standards, term (duration) of the agreement, and the ability to improve the property with certain amenities.

Gabourel and Wambalaba¹ described the need for lease agreements that included liability insurance costs. Leasing agreements should contain certain elements, including the following:

- Specific location of the site
- Time period of agreement and minimum termination notice periods
- Use of property and specific improvements to be made (e.g., lighting, signing, signals, markings, and shelters)
- Access for vehicles and pedestrians
- Parking permitting system
- Maintenance of facility
- Liability for injuries and damages
- Payment of leasing costs to property manager/owner
- Security.

The Iowa DOT's policy related to park and ride facilities³² noted that lease agreements must, at a minimum, include the name of the property owner, a contact person and contact information, terms of the agreement, use of the facility, responsibility and schedule for maintenance and inspection, consent to advertise/promote the property as a park and ride facility, security, and signage. Noel³⁰ stated that at a minimum, lease elements should cover premises, term, improvements, maintenance, and liability insurance; however, it is recommended by Noel that all of the following primary elements be included:

- *Purpose*: what the lot is to be used for.
- *Premises*: a separate attachment detailing the lot or area of the lot to be used for park and ride.
- *Access*: if only a certain area is to be used for park and ride, guaranteed access for those spaces.
- *Term*: how long the agreement is for, the cancellation procedures, the status of any improvements made to the lot by the lessee in case of cancellation.
- *Improvements*: the types of improvements that will be made to the lot, the notification procedure if the agency needs to go beyond the initial agreement (this could be a separate document detailing the improvements that will be effected or could a part of the maintenance agreement).
- *Maintenance*: the designation of who will perform specific duties. Such sections generally ask the owner of the lot to notify the agency of any maintenance that needs to be performed. For added flexibility, specific detailed maintenance responsibilities should be listed in a separate agreement.
- *Liability insurance*: the types of insurance, if any, that will be provided. If none is to be provided, it should first be ascertained that the agency is legally not responsible for liability claims, and this should be made clear in the agreement.
- *Use of premises (nondiscrimination)*: Some agreements stipulate that the lot shall be open for use by anyone without discrimination by the lot owner. In some cases this appears to be required by law when a government agency is involved.
- *Examination of property*: an agreement attesting that the agency has examined the property and found it to be in good condition or that it accepts the property in its existing condition.
- *Licensing*: in cases where only a license is granted by the lot owner, it must be made clear that no legal title or leasehold interest is created in the property.
- *Governmental charges*: a clause stating that the agreement imposes no obligation on the sponsoring agency to pay the lot owner's taxes and the like.

With respect to the terms of the lease and early termination, Holguin-Veras et al.³¹ stated that clauses should be carefully constructed because if there is a short-term termination clause and if it is determined that commuter parking has increased congestion in the lot, increased vandalism and litter, or taken up needed parking for shoppers, then the owner could terminate all arrangements and severely disrupt commuting with relatively little notice. In addition, an early

termination clause may make it unwise for transit agencies (as the lessee) to invest in improvements such as shelters, additional lighting, or other customer amenities.

Maintenance and liability insurance are typically the responsibility of the public agency (lessee); the American Public Transit Association²⁴ suggested that all maintenance activities be factored into park and ride facility decisions. This included ongoing maintenance and repair, trash pickup, snow removal, asphalt repair, restriping, and signage. For any unforeseen repairs, lessees typically self-insure for the repairs and the implicit cost of that insurance should be included as a facility cost. Contract lots arranged by SLOGOG³ have not historically included rent for the use of the property, but the agency typically provides paving, striping, and maintenance costs in exchange. These improvements, and the length of contract, are determined during the negotiating phase between the public agency (lessee) and the owner (lessor). As Wambalaba et al.²² pointed out, pavement maintenance is one of the most important incentives to developers and also one of the most frequently given incentives provided by transit agency lessees.

Funding Mechanisms

Funding mechanisms for park and ride lots are drawn from a variety of revenue sources. Based on a survey of state DOTs, public transit authorities, and transportation districts, NCHRP Project 20-65, Task 32,³³ found the following:

The most common state funds (used to match federal grants) include gas tax, sale use tax, bond proceeds, state infrastructure bank (SIB) loans, Grant Anticipation Revenue Vehicle (GARVEE) loans, and Transportation Infrastructure and Innovation Act (TIFIA) loans. Local funding sources (used to match federal or state grants) are typically drawn from either a local transit agency or local government capital or operating funds. Agencies that generate their own revenue have the option of allocating a portion of parking or fare revenue to the project or program. The agency may also have the authority to levy local taxes or issue bonds.

The Iowa DOT³² uses three primary funding sources for its park and ride facilities: CMAQ, surface transportation program, and public transit infrastructure grants. Iowa receives approximately \$10 million to \$11 million in CMAQ funding annually and has maximum flexibility with these funds due to the state's attainment status. Surface transportation program funds are available for programming not only through the Iowa DOT but also primarily through Iowa's MPOs and regional planning affiliations. Public transit infrastructure grant funds are eligible to be used for park and ride facilities, but they require a vertical component and a public transit agency sponsor to qualify.

The SMPC study²⁸ suggested that Federal Transit Authority (FTA) funds may be used to lease, rather than purchase, transit equipment and facilities. Funds from the FTA 5307-Urbanized Area Formula Grants may be used to cover the costs of new and pre-existing leases as long as leasing is more cost-effective than a direct purchase. Another form of funding, specifically for park and ride leases, is capital and interest costs of contracting for services, referred to as "capital cost of contracting." The SMPC²⁸ stated:

Under a lease structure (provided the grantee demonstrated that a lease was more cost-effective than direct purchase) the equipment or facility could be purchased by a leasing company, and then leased to the grantee. The grantee would make lease payments from a combination of federal funds and local matching funds. The primary benefit of such a structure is that it allows the grantee to arrange its cash flow needs on a more level basis. Secondary benefits include the ability to bank the local share, allowing it to earn interest pending its use for making lease payments, as well as the ability to reprogram some of the current formula grant funds to other projects.

A City of Las Cruces study³⁴ mentioned the use of federal funds to improve church parking lots for use as park and ride facilities; however, it cautioned that the use of federal or state grant funds has significant constraints when the private sector is involved. The private property owner must be willing to commit the use of the property in the program for multiple years in order for the federal government to amortize capital costs. If the private property owner exits the program prior to completion of the amortization period, the owner must reimburse the government an appropriate prorated share.

Survey of States

DOT Survey

A summary of the results of the DOT survey is provided in the following sections:

- Response Rate
- Total Number of Park and Ride Lots
- DOT-Owned Lots
- DOT Leasing of Lots
- Leasing Agreements
- DOTs Not Leasing Lots
- Other Agency Leases.

Response Rate

A total of 50 surveys were distributed, 1 to each state DOT (excluding Virginia) and the District of Columbia DOT. Responses were received from 35 DOTs, for a response rate of 70%. All survey responses received were fully completed (i.e., no partial responses were received). Table 4 shows the DOTs that participated in the survey.

Total Number of Park and Ride Lots

A survey question asked for an approximate total number of park and ride lots in a respondent's state including those owned by DOTs, transit agencies, and private entities. Figure 5 shows the totals as reported by each responding state DOT. California, Michigan, New York, Pennsylvania, Utah, and Washington indicated at least 200 or more park and ride lots, with New York having the highest number, at 457 lots. California (296 lots), Michigan (266 lots), and Washington (248 lots) indicated a number of lots similar to that of Virginia (285 lots). Wyoming

and the District of Columbia specified having no park and ride lots, and Montana and North Dakota (which are not shown) specified an unknown number of park and ride lots.

Table 4. DOTs Participating in the Park and Ride Survey

DOT
Alabama
Arkansas*
California*
Colorado*
District of Columbia
Florida*
Georgia*
Hawaii*
Iowa*
Idaho
Illinois*
Kansas
Kentucky*
Massachusetts*
Maine*
Michigan*
Minnesota*
Mississippi
Montana
North Dakota
Nebraska
New Hampshire*
New Mexico*
New York*
Oregon*
Pennsylvania*
Rhode Island*
South Carolina*
South Dakota
Utah*
Vermont*
Washington*
Wisconsin*
West Virginia*
Wyoming

* = DOTs that own lots.

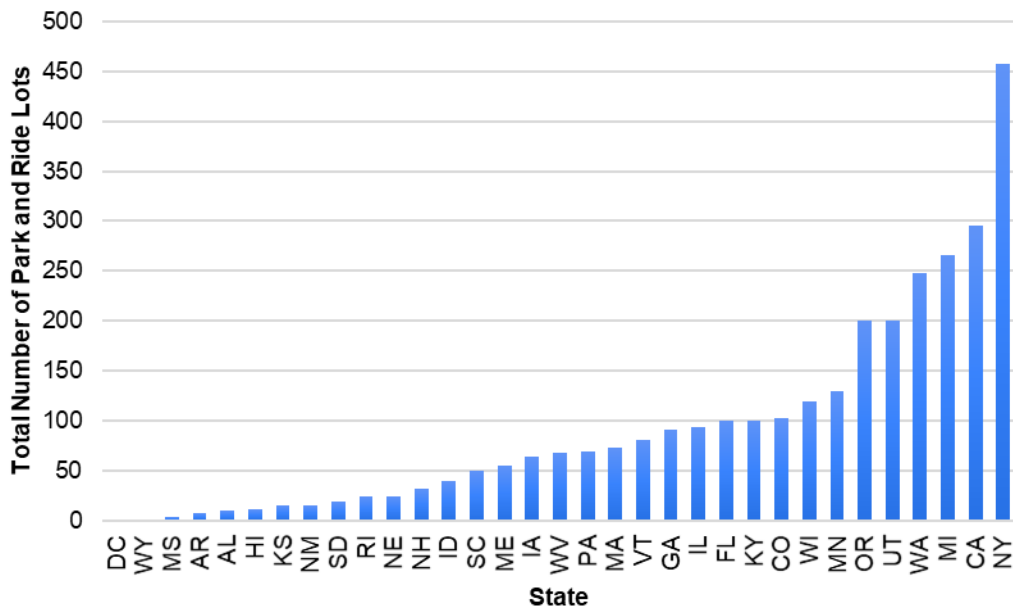


Figure 5. Total Number of Park and Ride Lots

DOT-Owned Lots

Figure 6 shows that 25 of 35 (71%) respondents indicated DOT ownership of park and ride lots. The state DOTs that own lots are shown in Table 5 with an asterisk. As depicted in Figure 7, Michigan and California own the most lots with 244 and 213, respectively. Washington owns 124 lots, which is similar to Virginia’s ownership of 118 lots. The Hawaii DOT owns 1 lot, and Wisconsin indicated owning lots but the number was unknown and therefore not represented in Figure 7.

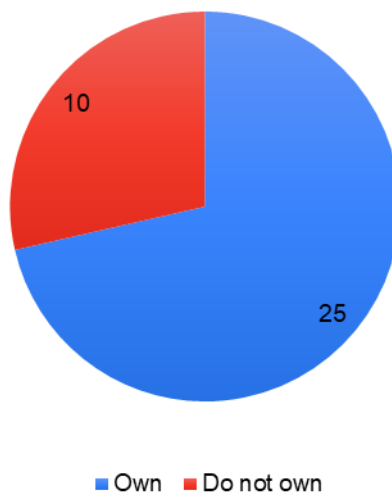


Figure 6. DOTs That Own vs. Do Not Own Lots

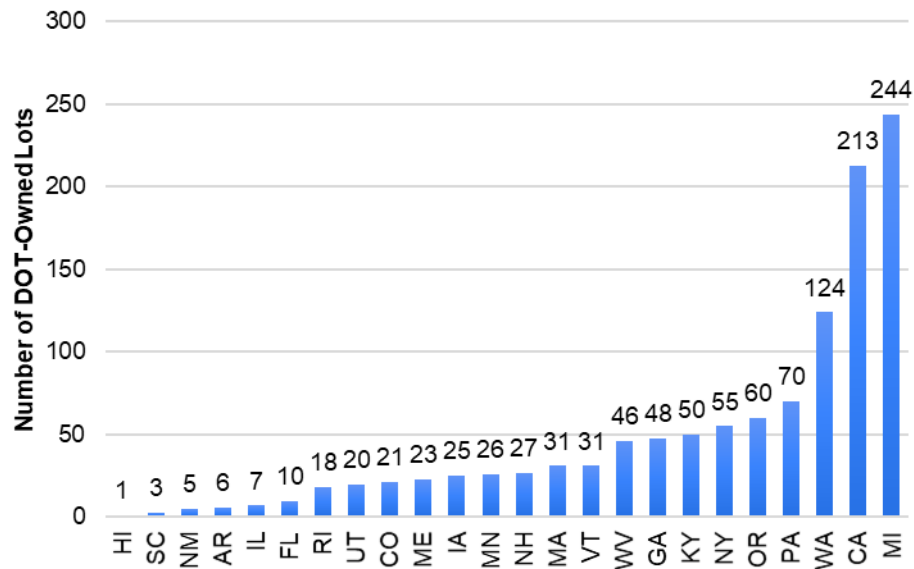


Figure 7. Number of DOT-Owned Lots

Of the state DOTs that own lots, Figure 8 shows that 25% employ a park and ride manager (6 of 19 DOTs). These DOTs include New Mexico, Maine, Iowa, West Virginia, California, and Michigan. Figure 9 shows that 12 of the 25 DOTs (48%) that own lots indicated collecting occupancy data on their lots. Ten specified not collecting occupancy data, and 3 did not know if these data were collected (Arizona, Massachusetts, and Wisconsin). The frequency of collecting occupancy data is shown in Figure 10. Four states (Florida, Maine, Minnesota, and New Hampshire) collect data once per year, and three states collect quarterly (Georgia, Washington, and Michigan). No established frequency, varies per district, once every 1.5 years, two times per year, and three times per year were responses provided by West Virginia, California, Iowa, Rhode Island, and Vermont, respectively. Although Maine indicated a typical occupancy data collection of once per year, it is the only state DOT that confirmed collecting continuous occupancy data at some lots using real-time technology.

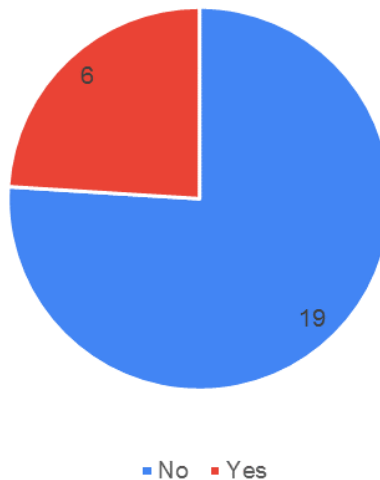


Figure 8. DOTs That Employ vs. Do Not Employ a Park and Ride Manager

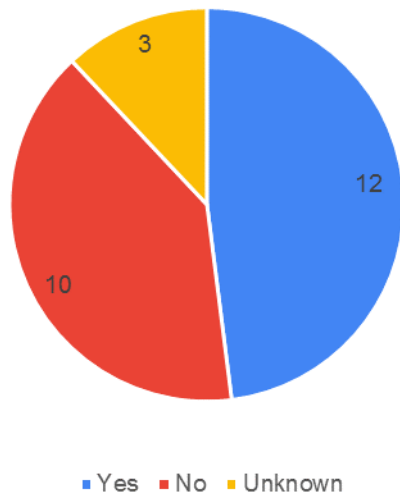


Figure 9. DOTs Collecting Occupancy Data

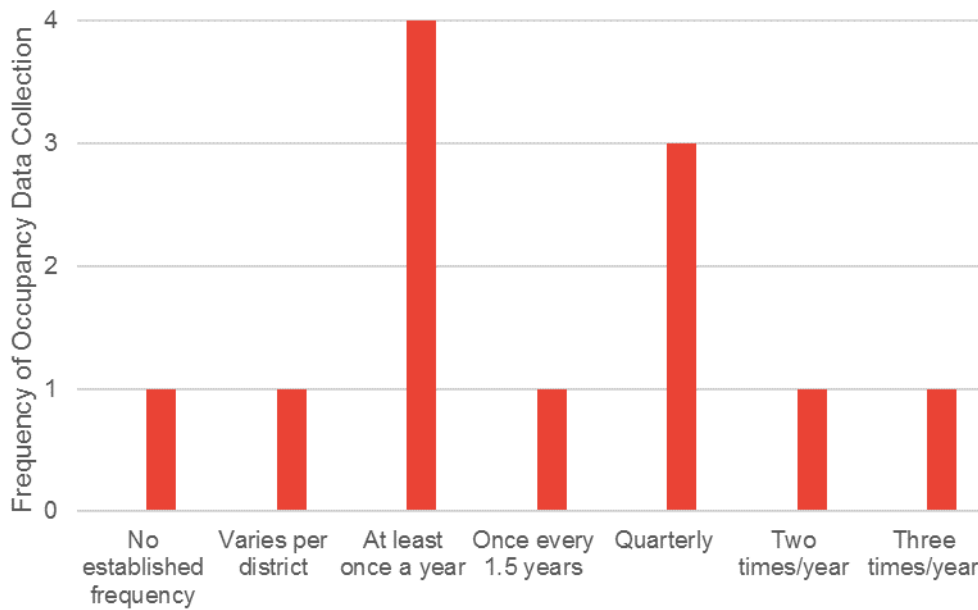


Figure 10. Frequency of Collecting Occupancy Data

Figure 11 shows the states that indicated lots typically being 80% occupied and the number of lots that meet this threshold (shown in blue bars). Most states indicated that between roughly 10% to 20% of their owned lots typically have 80% or more spaces occupied (shown with red line). The one lot the Hawaii DOT owns meets the 80% occupied threshold. It should be noted that Hawaii, Colorado, New Mexico, New York, and Pennsylvania do not collect occupancy data but provided a response to this question, possibly based on anecdotal evidence. Six states responded not knowing if lots are 80% occupied (Arizona, Florida, Illinois, Kentucky, Oregon, and Wisconsin).

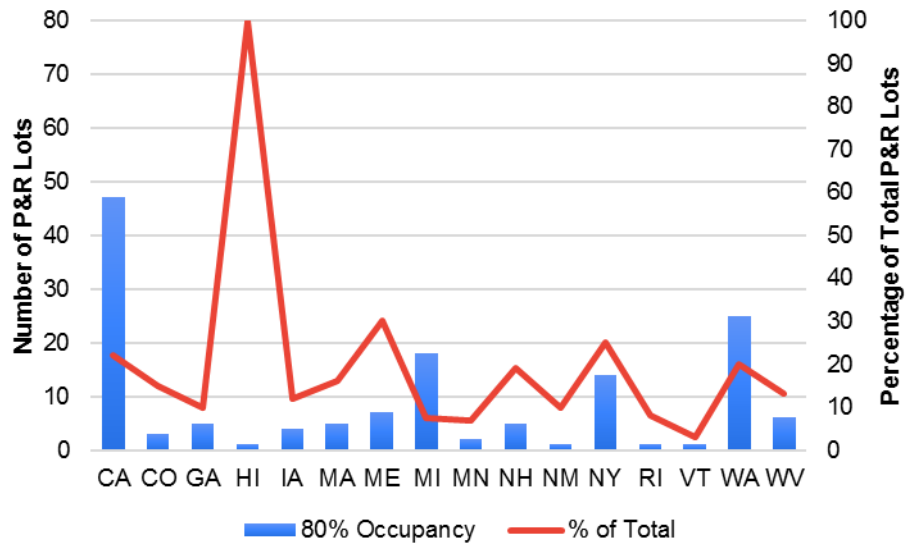


Figure 11. Number of DOT-Owned Lots 80% Occupied (blue bars) and Percent of Total DOT-Owned Lots (red line). P&R = park and ride.

Leasing of Lots

Figure 12 shows that 23% (8 of 35) of DOTs lease park and ride lots and 20% (7 of 35) indicated not knowing if their DOT leases park and ride lots. Figure 13 shows the DOTs that lease lots and the total number of lots leased. Caltrans has the highest number of leases with 77, with Caltrans District 11 leasing 13 lots. The DOTs indicating not knowing if they lease lots included Illinois, Kentucky, Massachusetts, Mississippi, North Dakota, Wisconsin, and West Virginia.

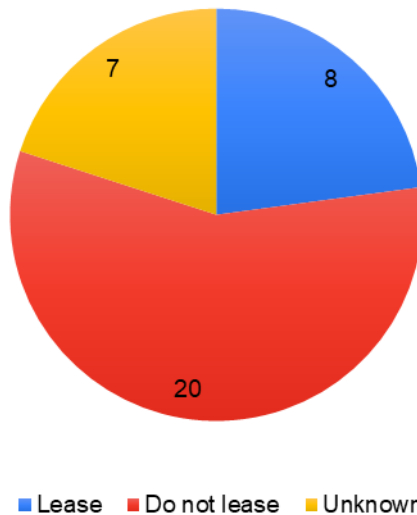


Figure 12. Proportion of DOTs Leasing Park and Ride Lots

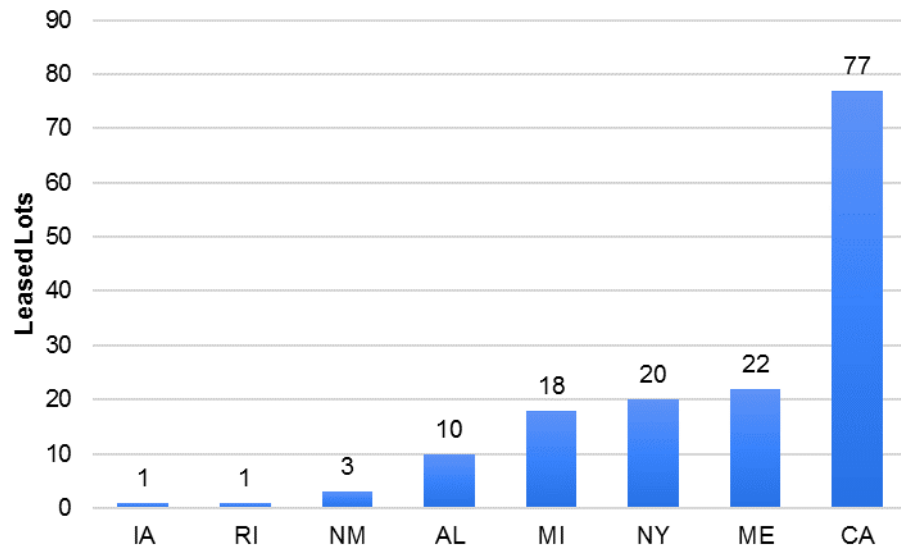


Figure 13. DOTs Leasing Park and Ride Lots and the Number of Lots Leased

Figure 14 shows the locations of leased lots. The majority of lease locations (61%) did not fit the prescribed survey answers of shopping center, church, sporting facility, or development, and respondents selected “other.” The various locations mentioned for “other” included the following:

- community colleges
- turnpike authorities
- municipal lots
- schools
- individual businesses
- other state agencies
- gas stations
- college campuses
- counties.

Of the prescribed answers, the highest number of lease locations were shopping centers (32 leases) and churches (30 leases).

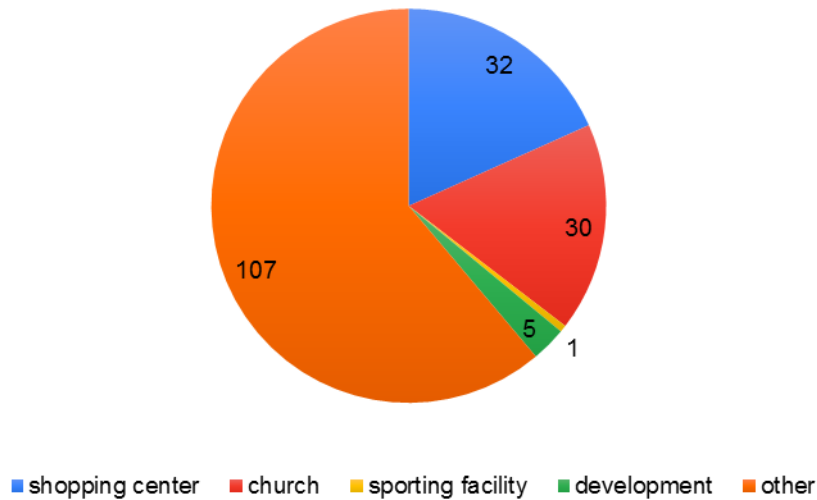


Figure 14. Location of Leased Lots

Table 5 provides additional information obtained from the DOTs that indicated leasing lots. All of the DOTs specified a willingness to share examples of lease agreements except for Rhode Island and Alabama because examples are not available. No DOT-leased lots require a parking permit and two DOTs (Iowa and New Mexico) indicated studies performed on the leased lots.

With regard to lessor concerns, DOTs from four states (California, Iowa, Maine, and Michigan) indicated lessor complaints about the DOT-leased lots. These complaints included the following (answers as stated by respondent):

- *California (District 11)*: “Pavement wear and tear, litter, and homeless activity.”
- *Iowa*: “Overnight parking and/or parking for multiple days; liability; surface damage (maintenance) responsibility; not enough parking for primary users of the parking lot (customers vs. commuters).”
- *Maine*: “Illegal activity, overextended parking, snow removal, trash, abandoned vehicles, theft.”
- *Michigan*: “Some semi truckers have illegally stored their vehicles outside of agreed upon easement area near lots. Other incidents include cars being parked for extended periods of time.”

Table 5. Additional Information From DOTs That Lease Lots

State	Duration of Lease	Parking Space Cost per Year	Funding Source	Permits?	Lessor Concerns?	Termination of Leases?	Studies?
California	Varies ^a	Unknown ^b	Unknown ^c	No	Yes	Yes	No
Iowa	Indefinite	\$0	N/A	No	Yes	No	Yes
Maine	>2 years	\$0	N/A	No	Yes	Yes	No
Michigan	20 years	\$1 plus insurance costs up to \$700 annually	State	No	Yes	Yes	No
New Mexico	>2 years	\$3,000-\$6,000	State funds	No	No	Unknown	Yes
New York	>2 years	Unknown	FHWA/FTA/state	No	No	Unknown	No
Rhode Island	>2 years	fair market value as determined by property management section	State	No	Unknown	Unknown	No
Alabama	Unknown	Unknown	MPO federal funds	No	Unknown	Unknown	No

N/A = not applicable; FHWA = Federal Highway Administration; FTA = Federal Transit Authority; MPO = metropolitan planning organization.

^a Caltrans District 11 indicated 5 years for their 13 leased lots, and they renew yearly after that unless either party wants to cease the agreement.

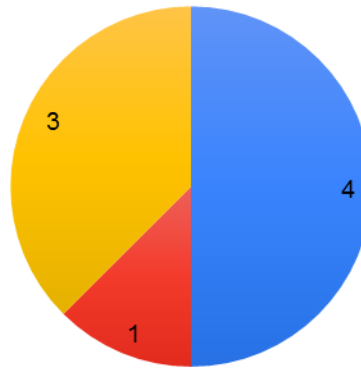
^b Caltrans District 11 indicated zero cost for their 13 leased lots other than maintenance responsibilities.

^c Caltrans District 11 indicated using maintenance funds to maintain their 13 leased lots.

Three states (California, Maine, and Michigan) indicated termination of leases for the following reasons (answers as stated by respondent

- *California (District 11)*: “According to the lessor, Caltrans was not able to adequately maintain the lot.”
- *Maine*: “Homeless people created an encampment in the woods behind the parking area—I don’t know why they felt the park and ride created this situation. They were there before and they are still there now.”
- *Michigan*: “At least one lessor terminated due to excess amounts of trash being left on the property and vandalism. Other agreements have been terminated simply because the business wished to reclaim the lot space for more general purposes such as customer parking.”

Figure 15 shows the proportions of DOTs that are definitely planning to expand their inventory of leased lots in the future (California, Iowa, Maine, and Michigan); are interested in expanding their inventory but have no definite plans (New York); and are not seeking to expand their inventory at this time (Alabama, New Mexico, and Rhode Island).



■ Definitely plan to expand in the future ■ Interested but no definite plans
 ■ Not seeking to expand at this time

Figure 15. Proportion of Interest in Expanding Inventory of Leased Lots

Leasing Agreements

Follow-up inquiries were made to those DOTs indicating a willingness to share lease agreements. Table 6 shows the five state DOTs that shared lease agreements, including the lessee, lessor, year of lease agreement, spaces leased, term, and fee.

California provided six examples of lease agreements and two lease templates: one for a church property, and the other for a non-church property. Of the six lease agreements, three are joint lease arrangements with Riverside, Stanislaus, and Amador counties. Leasing terms vary from 1 to 10 years and the leasing fee per space per year at Grace Presbyterian Church is \$108 per space per year and at American Meals is \$144 per space per year. Lease fees were not provided in the agreements for Penasquitos Church of the Nazarene or Kmart. Caltrans and RCTC’s arrangements with OH Properties and City of Jackson are no cost agreements.

The New Mexico DOT provided two lease examples: one with Good Shepherd Lutheran Church of Edgewood, and one with Lowe’s Pay and Save. Interestingly, the Lowe’s Pay and Save agreement is the only lease example where a DOT made arrangements with a private entity outside of state borders. Both leases are currently active with 5-year terms. Space fee per year could not be determined because specific space counts were not provided in the lease agreement. Whereas most lease agreements provided elements of maintenance responsibilities, the New Mexico DOT’s lease agreement with Good Shepherd Lutheran Church specified a maximum of \$3,000 per term for snow removal.

The Michigan DOT provided a lease template showing a 20-year term and a \$1.00 fee arrangement where the DOT is responsible for maintenance and insurance. The Michigan DOT also provided a signed lease with Meijer, Inc., for 14 stores and 50 spaces per store. The term of the Meijer agreement is 10 years, and no fee was specified.

Table 6. DOT Lease Agreement Specifics

State	Lessee	Lessor	Year	Spaces	Term	Fee
California	Caltrans and RCTC	Non-church property ^a	N/A	N/A	N/A	N/A
	Caltrans and RCTC	Church property ^a	N/A	N/A	N/A	N/A
	Caltrans and RCTC	Grace Presbyterian Church	2020	64	2 years	\$13,824 over term
	Caltrans and Stanislaus County	American Meals	2008 (original); 2019 (renewal)	50	2 years	\$1,810.35 (quarterly from July 2020-June 2021)
	Caltrans	Penasquitos Church of the Nazarene	2000	88	5 years	N/A
	Caltrans	Kmart	1993	35	1 year	N/A
	Caltrans and ACTC	OH Properties	2011	8	10 years	\$0
	Caltrans and ACTC	City of Jackson	2011	8	10 years	\$0
New Mexico	New Mexico DOT	Good Shepard Lutheran Church of Edgewood	2017	N/A	5 years	\$500/month and up to \$3,000 per term for snow removal
	New Mexico DOT	Lowe's Pay and Save Littlefield, Texas	2020	N/A	5 years	\$250/month
Michigan	Michigan DOT	Owner of lot ^a	N/A	N/A	20 years	\$1.00
	Michigan DOT	Meijer, Inc.	2010	50 spaces/store (14 stores)	10 years	N/A
Maine	Maine DOT	Brettun's Variety Livermore, Maine	2019	20	10 years	N/A
Iowa	Iowa DOT	Owner of lot ^a	N/A	N/A	N/A	\$0.00

RCTC = Riverside County Transportation Commission; ACTC = Amador County Transportation Commission; N/A = not available.

^a Template.

The contract allowed Michigan to set up multiple leased locations under a single agreement. The Maine DOT provided a lease agreement with Brettun's Variety of Livermore for 20 spaces, and similar to Michigan's agreement with Meijer, Inc., the term is for 10 years with no fee specified.

The Iowa DOT provided a lease template specifying a \$0.00 fee arrangement, and this template was used to develop contracts with Thunderbay and Kirkwood College. In the Thunderbay agreement, the Iowa DOT owns the lot and operates it as a park and ride lot and Thunderbay is granted permission to use the lot for overflow parking of their restaurant in exchange for basic maintenance of the park and ride lot (snow removal, trash pickup, etc.). In the Kirkwood College agreement, the college technically owns the lot but expressed interest in supporting the Iowa DOT's efforts to provide options to commuters using I-380 between Cedar

Rapids and Iowa City. The agreement is to use a portion of one of Kirkwood's larger parking lots, free of charge, for park and ride purposes. The college painted the parking lines blue in the designated portion of the lot to differentiate it from other parking spaces. The lot is situated on a Cedar Rapids Transit route with a bus stop in the lot. The Kirkwood lot is also the only free park and ride location along a recently established I-380 Express bus service route between Cedar Rapids and Iowa City park, and ride usage has increased since the route was established.

DOTs Not Leasing Lots

The DOTs that are not leasing lots or are unaware of DOT-leased lots accounted for 77% of the respondents (see Figure 8). When asked if there were legal barriers preventing the DOT from engaging in lease arrangements, all states except one (Pennsylvania) indicated "no." Pennsylvania pointed to "state laws and regulations and FHWA requirements."

Figure 16 shows the proportion of responses to a question about primary barriers to engaging in a leasing program. The majority of respondents indicated liability (14 respondents) followed by lack of need and funding (both indicated by 12 respondents). One survey answer option in the "select all that apply" question was "other." The following states provided the following additional barriers (answers as provided by respondents):

- *Hawaii*: "Policy - Park-n-Ride lots are deferred to counties, since each county operates their public transit system."
- *Illinois*: "Not a priority for the department at this time. Truck parking is a high priority and the DOT is evaluating how to work with private entities to provide truck parking."
- *Minnesota*: "Operational/procedural—we have several lots on private property that the transit agency leases from the owner. There are also some that the transit operator leases from the DOT. There aren't any where the DOT is the lessee."
- *New Hampshire*: "Contracting process, maintenance & parking abuse/parking enforcement issues."
- *Oregon*: "Need has not been identified, which is different than a lack of need."
- *Washington*: "Inability to charge for use of the stalls. Most park and rides were developed as part of a project's EIS, requiring the stalls to be available to the motoring public at no cost."

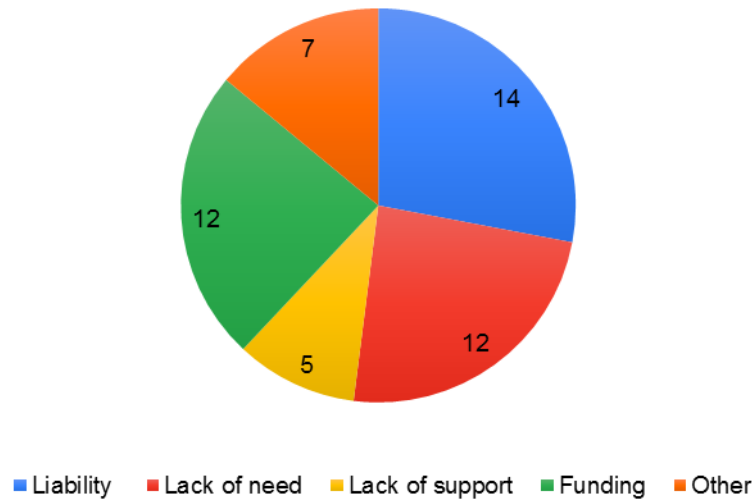


Figure 16. Primary Barriers to Leasing

When asked about the probability of engaging in a park and ride lot leasing program in the future, respondents provided answers on a scale of 1 (low probability) to 5 (high probability). Figure 17 shows that the majority indicated a low probability (19 respondents) whereas 7 respondents indicated a medium probability (3 on a scale of 1 to 5). No respondents indicated a probability greater than 3.

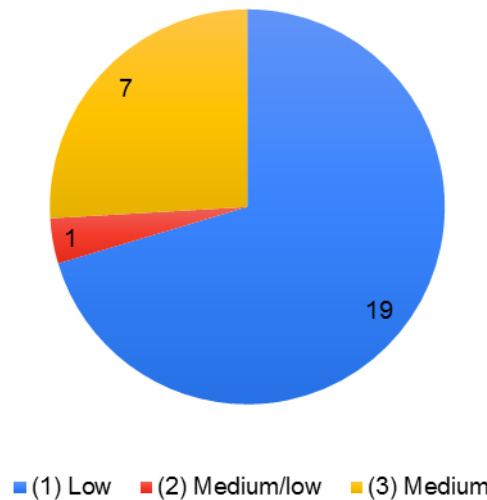


Figure 17. Probability of Engaging in a Leasing Program in the Future

Other Agency Leases

As depicted in Figure 18, 10 states indicated knowledge of other agencies that engage in leasing arrangements for park and ride lots; Table 7 provides the names of the agencies. Most are affiliated with transit agencies. Massachusetts did not provide specific agency information.

Four DOTs (California, Iowa, Oregon, and South Carolina) indicated knowledge of studies performed on other agency-leased lots.

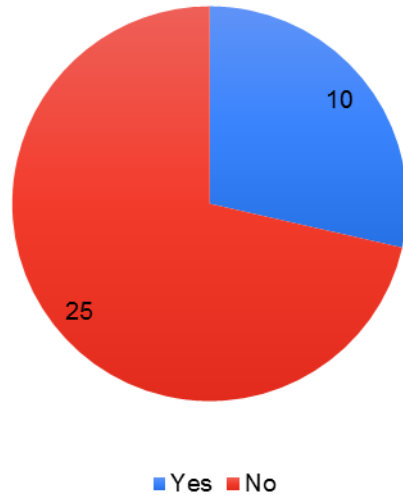


Figure 18. DOTs With Knowledge of Other Agency Lease Arrangements

Table 7. Other Agencies That Lease

Responding DOT	Other Agency	Known Studies
Alabama	CommuteSmart, Nashville Metropolitan Transit Authority and Regional Transportation Authority	No
California	San Diego MTS, SANDAG	Yes
Iowa	Des Moines Area Regional Transit Authority (DART)	Yes
Illinois	Metra Commuter Rail, Suburban Bus Service, Chicago Transit Authority	No
Massachusetts	N/P	No
Minnesota	Metro Transit	No
Oregon	Cherriots, OCWCOG	Yes
Rhode Island	Rhode Island Public Transit Authority	No
South Carolina	Charleston Area Regional Transportation Authority	Yes
Utah	Utah Transit Authority	No

MTS = metropolitan transit system; SANDAG = San Diego Association of Governments; N/P = not provided; OCWCOG = Oregon Cascades West Council of Governments.

Other Agency Survey

Based on information received from the survey of DOTs and responses from the survey of other agencies, a total of 21 agencies were contacted for participation in the survey. Of the 21 agencies that were contacted and delivered a survey, 11 (52%) responded with completed surveys (shown in Table 8 with “X” under “Survey Received”). A summary of results is provided in the following sections:

- Agency-Owned Lots
- Agency-Leased Lots
- Lease Agreements
- Agencies Not Leasing Lots.

Table 8. Other Agencies Contacted With a Survey

State	Agency Contacted	Survey Received
Alabama	CommuteSmart	
	Baldwin Regional Area Transit System	X
	Regional Planning Commission of Greater Birmingham	X
California	San Diego Association of Governments	
	Riverside County Transportation Commission	X
	San Diego Metropolitan Transit System	
	North County Transit District	
	San Luis Obispo Council of Governments	X
Idaho	Ada County Highway District Commuteride	X
Illinois	Metra Commuter Rail	X
	Pace Suburban Bus Service	X
	Chicago Transit Authority	
Iowa	Des Moines Area Regional Transit	
Minnesota	Metro Transit	X
Oregon	Cherriots	X
	Lane Transit District	
	Oregon Cascades West Council of Governments	X
Rhode Island	Rhode Island Public Transit Authority	
South Carolina	Charleston Area Regional Transportation Authority	
Tennessee	Nashville Metropolitan Transit Authority	X
Utah	Utah Transit Authority	

X = survey received.

Agency-Owned Lots

Figure 19 shows that of the 11 responding agencies, 6 own park and ride lots. Metro Transit in Minnesota and Metra Commuter Rail in Illinois have the highest number of owned lots with 46 and 40, respectively.

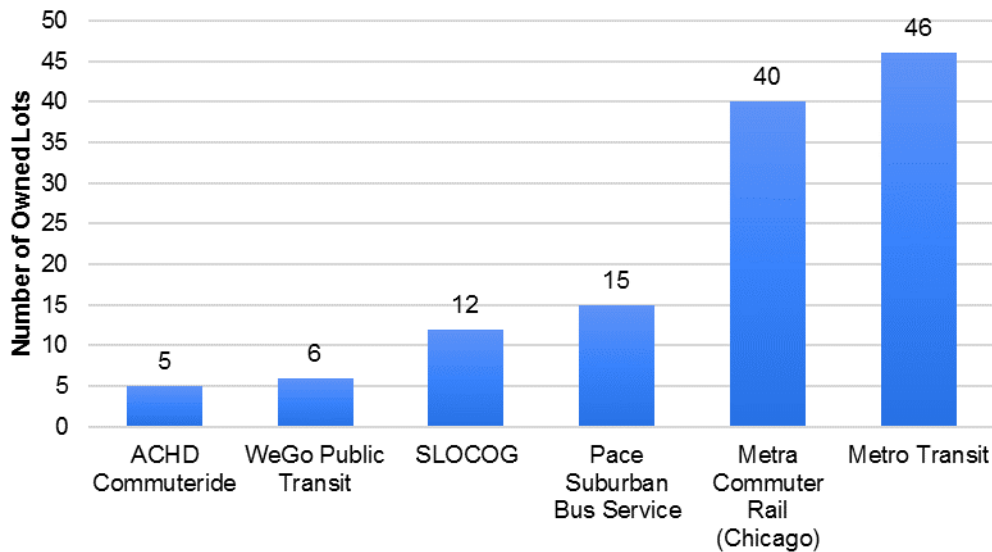


Figure 19. Agencies Owning Lots. ACHD = Ada County Highway District; SLOCOG = San Luis Obispo Council of Governments.

Table 9 shows information on lot occupancy for the agencies that own lots. All collect occupancy data with the exception of Pace Suburban Bus Service (Pace). The frequency of collecting these data is at least once a year for three of the agencies and at least quarterly for the Ada County Highway District (ACHD). WeGo Public Transit (WeGo) indicated no established frequency. Metro Transit is the only agency surveyed (both from the DOT survey and other agency survey) that collects occupancy data continuously. All agencies except ACHD indicated that they have lots that are typically 80% occupied. SLOCOG had the highest number of lots that are 80% occupied—expressed as a percentage of total owned lots (100%), whereas the rest of the agencies indicated fewer than 50% of their lots were 80% percent occupied. Although Metro Transit collects occupancy data and indicated lots at or exceeding 80% occupancy, they do not document the number of lots because of the variability in lot size and usage.

Table 9. Agency Input on Lot Occupancy

Organization	Occupancy?	Frequency	Continuous?	80% Occupied?	No. of Lots
SLOCOG	Yes	At least once a year	No	Yes	12
Metro Transit	Yes	At least once a year	Yes	Yes	Do not look at this measure because of variability in lot size and usage
Suburban Bus Service	No	N/A	N/A	Yes	5
ACHD	Yes	At least quarterly	No	No	N/A
Metra Commuter Rail	Yes	At least once a year	No	Yes	13
WeGo	Yes	No established frequency	No	Yes	2

SLOCOG = San Luis Obispo Council of Governments; N/A = not applicable; ACHD = Ada County Highway District; WeGo = WeGo Public Transit.

Agency-Leased Lots

Of the 11 agencies that completed the survey, 8 engage in a leasing program, as shown in Figure 20. The 2 agencies with the highest number of leased lots are Metro Transit and WeGo with 30 and 27 leased lots, respectively. It should be noted that shared-use park and ride agreements or leases can involve a monetary transaction for renting parking spaces or agreements in the form of a memorandum of understanding (MOU) where absent monetary transactions, an MOU may involve agreements on maintenance or promotion of a lessor’s business with signage or other forms of advertisement. For example, WeGo does not have formal leases for park and ride lots. For the ones they do not own, they typically negotiate use of a property without a cost to the agency. Their MOUs with property owners allow riders to park there at their own risk, and both parties agree not to hold each other liable. WeGo’s one monetary lease is for a regional park and ride that has a long-term lease with a member city that owns the property at \$1/year cost to the agency.

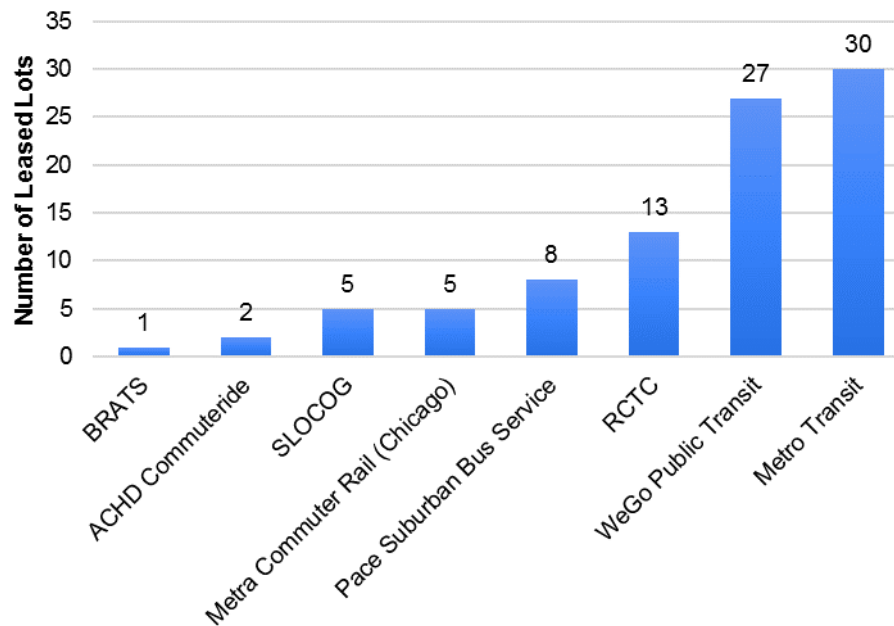


Figure 20. Agencies That Lease Lots. BRATS = Baldwin Regional Area Transit System; ACHD = Ada County Highway District; SLOCOG = San Luis Obispo Council of Governments; RCTC = Riverside County Transportation Commission.

Figure 21 shows the location of the leases as provided by the agencies surveyed. Churches had the highest number of leases at 29, followed by shopping centers with 26. The various locations mentioned for “other” included the following:

- Movie theater
- Racetrack
- Mini golf/arcade
- Undeveloped intersection
- Parks
- Schools.

Table 10 provides additional information obtained from agencies that leased lots. The majority of leasing dollars come from operating funds, and Metra Commuter Rail is the only agency that uses a permit system. All agencies specified a willingness to share examples of lease agreements, and three—SLOCOG, Metro Transit, and RCTC—had knowledge of studies on leased lots, but the material provided was more of a general park and ride study or toolkit.

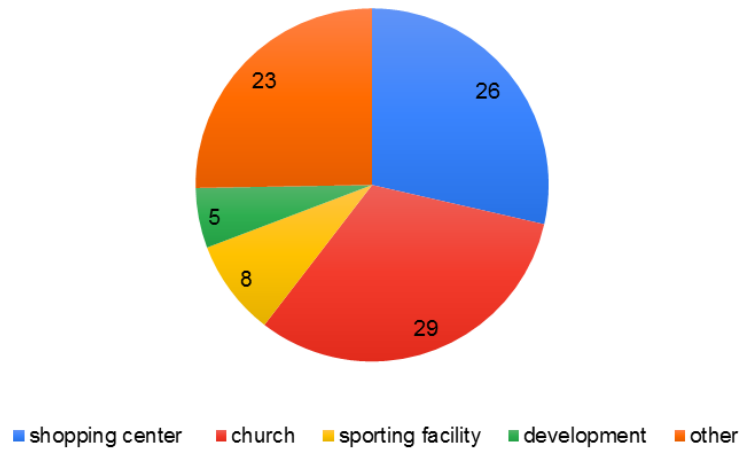


Figure 21. Location of Agency-Leased Lots

Table 10. Other Information From Agencies Leasing Lots

Agency	Typical Duration of Lease	Parking Space Cost per Year	Funding Source	Permits?	Lessor Concerns?	Termination of Leases?
BRATS	1 year	\$0	N/A	No	No	Yes
RCTC	>2 years	Avg. = \$9.72; shopping location = \$10-\$15; churches = \$7-\$13	Riverside County Measure A (1/2 cent sales tax)	No	Yes	Yes
SLOCOG	2 years	Unknown	SHA	No	Yes	No
ACHD	5+ years	\$600-\$1,800/year	Vanpool fares	No	Yes	Yes
Metra Commuter Rail	2 years	Average cost/space \$235; range is \$120-\$270	Operating	Yes	No	No
Suburban Bus Service	1 year	\$0.50/space	Local operating funds	No	Yes	No
Metro Transit	>2 years	We pay for actual costs of snow removal and non-routine maintenance	Operating budget dollars	No	No	Yes
WeGo	No determination (MOA)	\$0	N/A	No	Yes	Yes

BRATS = Baldwin Regional Area Transit System; N/A = not applicable; RCTC = Riverside County Transportation Commission; SLOCOG = San Luis Obispo Council of Governments; SHA = state highway account; ACHD = Ada County Highway District; WeGo = WeGo Public Transit; MOA = memorandum of agreement.

With regard to lessor concerns, five agencies (SLOCOG, Pace, RCTC, ACHD, and WeGo) indicated lessor complaints about their leased lots. These complaints included (answers as stated by respondent) the following:

- *SLOCOG*: “People parking in the wrong spaces, people parking on the weekends and during events.”

- *Pace*: “Proper snow removal, trash.”
- *RCTC*: “Illegal activity, overextended parking, snow removal, trash, abandoned vehicles, theft.”
- *ACHD*: “We get concerns very rarely, but in the past there have been a couple: vandalism, theft, loitering, trash and issues with users not parking in designated spaces.”
- *WeGo*: “Trash in the lot, damage to the lot's pavement, passengers not parking on designated areas, lot capacity for customers.”

Five agencies indicated termination of leases (*Metro Transit*, *RCTC*, *ACHD*, Baldwin Regional Area Transit System [BRATS], and *WeGo*) for the following reasons (answers are as stated by respondent):

- *Metro Transit*: “Need for parking for property owner use.”
- *RCTC*: “They sold their property.”
- *ACHD*: “Redeveloping the land—six months later, we saw it was being used for storage.”
- *BRATS*: “The previous owner of a lot terminated a lease due to construction. BRATS then leased from another location.”
- *WeGo*: “Sometimes has been change in administration/ownership, concerns with reduction of lot capacity for customers, damage to the property (pavement), construction/expansion projects on property that will hinder operations.”

Lease Agreements

Follow-up inquiries were made to those agencies indicating a willingness to share lease agreements. Table 11 shows 9 examples of lease agreements including the lessee, lessor, year of lease agreement, spaces leased, term, and fee.

The Baldwin County Commission provided a newly extended 2020 lease agreement of shopping center space owned by Cyprus Spanish Fort III, LLC. The original lease was executed in 2015. The agreement uses the terms “licensor” and “licensee” as opposed to “lessor” and “lessee.” The agreement stipulates that the licensee (Baldwin County) is responsible for any repairs needed at the shopping center and that the licensor (Cyprus Spanish Fort III) is responsible for routine maintenance of the common areas. No fee was provided in the agreement; however, the terms state that if the licensee remains in possession of the premises after the expiration or early termination of the term, the licensee shall be liable for a \$50 fee on a daily basis. Renewal of the agreement is provided for subsequent 6-month periods.

Table 11. Agency Lease Agreement Specifics

State	Lessee	Lessor	Year	Spaces	Term	Fee
Alabama	Baldwin County Commission	Cyprus Spanish Fort III, LLC	2020	32	1 year	N/A
California	SLOGOG	Roman Bishop Catholic Church of Monterey	2016	65	5 years	Initial \$9,600 (sealcoating and restriping) plus \$13,503 for maintenance (by Church) over term
	SBCOG	City of Lompoc	2012	N/A	3.5 Years	\$1,620/month (lot at airport and lot adjacent to a street)
Idaho	ACHD Commuteride	Owner of lot ^a	N/A	N/A	Indefinite	N/A
Illinois	Metra Commuter Rail	Community Christian Church	2013	75	5 Years	\$9,000/year
	Metra Commuter Rail	Wheatland Salem United Methodist Church	2013	95	5 Years	\$15,200/year (base) with \$300 increase/year
Tennessee	RTA of Middle Tennessee	City of Gallatin	2014	105	50 Years	\$0.00
	MTA of Nashville	Anchor Investments	2020	N/A	2 Years	N/A
Washington	C-Tran	City of Battle Ground	2014	N/A	2 Years	\$1/year

N/A = not available; SLOGOG = San Luis Obispo Council of Governments; SBCOG = Santa Barbara Council of Governments; ACHD = Ada County Highway District; RTA = Regional Transportation Authority; MTA = Metropolitan Transit Authority.

^a Template.

Two lease examples from California councils of governments were provided by SLOGOG and the Santa Barbara Council of Governments (SBCOG) for the Roman Bishop Catholic Church of Monterey and the City of Lompoc, respectively. The church lease’s term is for 5 years and includes an initial cost of \$9,600 for the lessee (SLOGOG) to sealcoat and stripe the parking surface. In addition, the lessee is to pay the church \$13,503 over the term of the agreement for maintenance. The SBCOG agreement with the City of Lompoc was drafted as an MOU whereby 2 locations were leased: one at a lot adjacent to a street at \$1185 per month, and the other at the Lompoc airport at \$435 per month. No space counts were documented in the MOU.

Metra Commuter Rail in Illinois provided two church agreements executed in 2013 with 5-year terms. In both agreements, the church is responsible for maintenance and Metra is responsible for installing and maintaining signage. Both agreements have options for renewal.

In Tennessee, WeGo provided two agreements. The agreement made between RTA of Middle Tennessee and the City of Gallatin has the longest term of any agreements reviewed at 50 years at no cost to the lessee (RTA). The lessee operates and maintains improvements (paved parking area and passenger loading area) and the lessor is responsible for general maintenance, repair, and utilities. The agreement between MTA of Nashville (also branded as WeGo Public Transit) and Anchor Investments is an MOU for use of property near Gallatin Road. The term is 2 years with no fees indicated in the MOU. WeGo is responsible for signage and damage, whereas Anchor Investments is responsible for general maintenance.

Idaho's ACHD Commuteride provided a template of their agreements with terms expressed as "indefinite" with ACHD responsible for marking and signage at the property. Washington's C-Tran agreement with the City of Battle Ground showed a term of 2 years and a fee of \$1/year. The City of Battle Ground is responsible for maintenance, whereas C-Tran is permitted to perform maintenance and repairs with owner approval. The lease explicitly notes a no extension clause to the terms.

With regard to interest in expanding inventory of leased lots, SLOCOG is the only agency that indicated a definite plan to expand in the future. Four agencies (Pace, RCTC, ACHD, and WeGo) indicated an interest but no definite plans, and three agencies (Metro Transit, Metra Commuter Rail, and BRATS) indicated they are not seeking to expand at this time.

Agencies Not Leasing Lots

Three agencies indicated not owning or leasing park and ride lots: the Regional Planning Commission of Greater Birmingham in Alabama; Oregon Cascades West Council of Governments, and Cherriots in Oregon. All three agencies expressed not being aware of legal barriers and that liability, lack of funding, and lack of support are the primary barriers for engaging in a leasing program. The Oregon Cascades West Council of Governments has had discussions about leasing but when asked about the probability of engaging in a park and ride lease program in the future, they indicated a 2 on a scale of 1 (low probability) to 5 (high probability). Cherriots and the Regional Planning Commission of Greater Birmingham rated the probability as 1 and 3, respectively.

It should be noted that although the Regional Planning Commission of Greater Birmingham indicated not leasing lots, and therefore were not asked questions about leasing, they did mention having agreements with five churches to use their lots when asked about primary barriers to leasing. It is unclear if these are formal agreements that include church and planning commission responsibilities or if they are less formal with no documentation. Follow-up attempts with the respondent were not successful.

Elements of Leases

Park and ride shared-use arrangements can be written as an agreement or an MOU that stipulates terms in the form of a contract between a department or agency (also signified as a lessee or licensee) and a lot owner (also signified as a lessor or licensor). The most common elements of reviewed agreements received from DOTs, transit agencies, localities, and regional COGs included the following:

- *Terms*: a clause that typically identifies the effective date of the contract and in some cases provides options to renew, extend, or terminate contract terms.
- *Use of Site*: a clause that provides language about operating a park and ride at a site including space reservations for the lot.

- *Signs*: a clause that assigns responsibility for signage at a site. The lessee is typically responsible for erecting and maintaining signage. Some contracts include requirements for marking and signing handicap spaces.
- *Early Termination*: a clause in most contracts that states that either party may terminate the agreement at any time upon written notice. Written notices are typically no less than 30 days prior to termination, whereas some contracts note 60 or 90 days. , the clause typically states that Upon termination the premises be returned to a condition similar to that when the agreement was granted including sign removal.
- *Maintenance*: a clause that varies per agreement regarding maintenance. Most agreements state that the owner is responsible for routine maintenance and normal wear and tear of the lot, whereas the lessee is responsible for maintenance of any site improvements specific to the park and ride lot. In some cases, the lessee will pay the owner for maintenance. For example, SLOCOG pays \$13,500 in maintenance costs over a 5-year term for one of their leased lots and the owner (The Roman Catholic Church of Monterey) performs the maintenance. Similarly, The Good Shepherd Lutheran Church performs routine surface maintenance such as snow and litter removal and bills the lessee (New Mexico DOT) up to a limit of \$3,000 over the contract term. The owner may be responsible for maintenance such as snow removal and litter removal and the cost is billed to the lessee as in the case of New Mexico DOT’s contract with The Good Shepherd Lutheran Church.
- *Restrictions of Use*: a clause that stipulates rules for use. For example, a Caltrans lease agreement states: “the lot shall not to be used in any manner which would violate any license, permit or other governmental authorization which is required for the lawful use of all or any portion of the Park and Ride Lot.”
- *Right of Entry*: a clause that stipulated rightful entry of lessee and lessor. Some agreements use the term “inspection.”
- *Taxes and Assessments*: a clause provided in many lease agreements that discusses responsibility for taxes and assessments. In all agreements reviewed, this responsibility is assigned to the owner of the lot.
- *Insurance*: a common clause in agreements that assigns responsibility for insurance, which in most cases is to be kept at the lessee’s expense. This typically includes public liability insurance and property damage liability. The premiums for both vary; e.g., Caltrans’ premiums for both public and property liability are \$5 million, the Maine DOT has premiums of \$2 million for both in its agreement with Brettun’s Variety, and SLOCOG has premiums for both set at \$4 million in its agreement with a church. SBCOG also has insurance stipulations for workers’ compensation insurance with limits of at least \$1 million and automobile liability insurance against claims with limits of bodily and property damage limits not less than \$1 million.

- *Property Damage*: a common clause in agreements that assigns responsibility to the lessee for property damage resulting from the use of the park and ride lot. Caltrans' lease agreements stipulate that the "[d]epartment is responsible for property damage payable to owner to \$10,000 per occurrence for installation, maintenance and use of park and ride lot."
- *Indemnity*: a common clause in agreements where both parties agree to hold each other harmless from any claims, judgments, damages, penalties, fines, costs, liabilities (including sums paid in settlement of claims), or loss including attorneys' fees, consultant fees, and expert witness fees that arise as a result of any negligent acts or omissions or willful misconduct in connection with the operation of the park and ride lot. The New Mexico DOT uses the clause heading of "New Mexico Tort Claims Act" to address hold harmless language.
- *Surrender of Site*: a clause that addresses conditions of premises upon surrender and states that, other than normal "wear and tear," the premises should be surrendered in the condition present upon activation of the agreement.
- *Waiver of Default*: a clause that states that both parties agree that no waiver of any default shall constitute a waiver of any other breach or default and that no waiver shall give any other party any contractual right.
- *Assignment*: a clause that states, as stated in the Michigan DOT's lease with Meijer, that the lease license shall not be assigned, transferred, relinquished, or conveyed by the DOT.

Other less common contract clauses were provided in agreements where the Michigan DOT, New Mexico DOT, Maine DOT, Iowa DOT, ACHD, and Baldwin County were identified as the lessee. For example, in its agreement with Meijer, the Michigan DOT agrees to promote Meijer's logo. Similarly, in its contract with Brettun's, the Maine DOT, "shall advertise and promote to the public the location and availability of the park-and-ride lot." Other less common clauses include the following:

- *Security*: a clause that typically assigns to the owners of the site.
- *Lighting*: a clause that assigns the responsibility of security. The New Mexico DOT required a church to maintain lighting over certain hours during the week (1 hour after sunrise and 1 hour after sunset).
- *Hazardous Wastes and Substances*: a clause directed to the owner of a lot. For example, in its contract with the Maine DOT, Brettun's (owner), "has not or allowed suffered or permitted the discharge dumping or maintenance of any hazardous waste or toxic substances."

- *Towing*: a clause regarding towing. The Iowa DOT's lease template provides a clause that the owner retains the right to tow vehicles from the property at its own expense or risk.
- *Attorney's Fees*: a clause regarding attorney's fees. The ACHD's lease template stipulates the following:

In the event of any controversy, claim or action being filed or instituted between the parties to enforce the terms and conditions of this Agreement, or arising from the breach of any provision hereof, the prevailing party will be entitled to receive from the other Party all costs, damages, and expenses, including reasonable attorneys' fees including fees on appeal, incurred by the prevailing party. The prevailing party will be that party who was awarded judgment as a result of trial or arbitration.

- *Condemnation*: a clause in Baldwin County's agreement with Cypress Spanish Fort that if during the term, all or any part of the premises or shopping center are taken for any public use under any government law, ordinance, or regulation, or by right of eminent domain or by purchase/exchange, the licensor (Cypress Spanish Fort) may, at its option, terminate the lease.
- *Fire and Casualty*: a clause in Baldwin County's agreement with Cypress Spanish Fort that the licensor (Cypress Spanish Fort) may terminate agreement in the event that the property is destroyed by fire or other casualty.
- *Acts of God*: another clause specific to Baldwin County's agreement with Cypress Spanish Fort where neither party is under obligation or be held liable for damages by an act of God.

Interest in the Research

The last question in both the DOT and other agency surveys asked respondents if they would like a copy of the report. The majority (87%) of respondents wanted to receive a copy of the final report, indicating an interest in the study findings (29 of 35 DOTs and 11 of 11 agencies).

Existing Lessors and Lessees in Virginia

The following sections provide the results of determining existing lessors and lessees in Virginia for privately owned lots (based on the 2019 inventory), the type of agreement in place, and lot functionality (i.e., whether the lot is still operational) for each VDOT district. For districts where contract lots exist, contract details and survey results are provided from responding participants.

Bristol District

2019 Inventory

The 2019 inventory revealed 28 park and ride facilities in the Bristol District. Figure 22 shows the distribution of lot ownership. Fourteen lots are VDOT owned (50%). Compared to other districts, the Bristol District has the highest number of unofficial (9) lots and with respect to total lots, the highest percentage of unofficial lots (32%). Four lots are privately owned, and one lot is owned by a locality (Town of Lebanon).

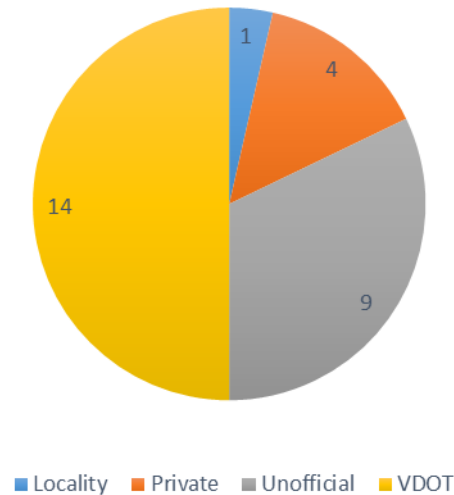


Figure 22. Distribution of Lot Ownership in the Bristol District

Agreement Type

The four privately owned park and ride lots are listed in Table 12. One potential discrepancy with the 2019 inventory is noted with the Rosedale lot where the inventory indicated the lot being classified as unofficial.

Table 12. Privately Owned Lots in the Bristol District

Lot Name	VDOT Lot ID	Coordinates		Spaces ^a	Agreement Type			Operational?
		Latitude	Longitude		I	C	P	
Rosedale ^b	164	36.959502	-81.932059	20	√			Yes
Hansonville	171	36.82409	-82.14217	35	√			Yes
Gate City	176	36.64381	-82.56902	80	√			Yes
Lebanon Shell	474	36.895073	-82.095904	12	√			Yes

I = informal or voluntary agreement; C = contract agreement; P = proffer agreement.

^a From 2019 inventory.

^b Previous inventory indicated that the lot is “unofficial.” Bristol District staff indicated that the property is on the edge of the VDOT right of way; however, Riggs Oil Company owns the adjacent property but not the land where the park and ride is located. This lot is potentially on the VDOT right of way.

Staff of the Bristol District mentioned that the property is on the edge of the VDOT right of way and that Riggs Oil Company owns the property. Riggs Oil Company was contacted, and the company indicated that they own the adjacent property but not the land where the park and ride is located. Each lot is currently operational, and usage is based on an informal or voluntary agreement.

Culpeper District

2019 Inventory

The 2019 inventory revealed 29 park and ride facilities in the Culpeper District. Figure 23 shows the distribution of lot ownership where the majority of lots are VDOT owned (52%) followed by privately owned lots (32%). The counties of Albemarle and Greene own three lots and one lot, respectively.

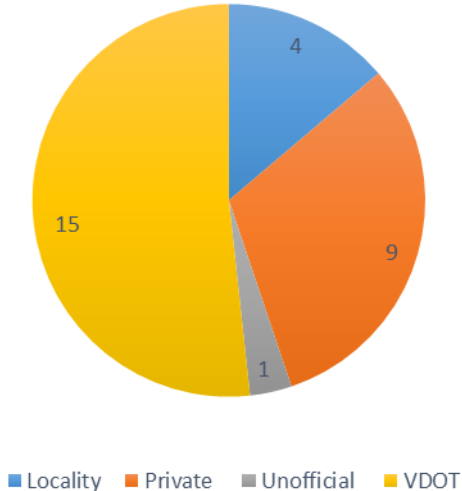


Figure 23. Distribution of Lot Ownership in the Culpeper District

Agreement Type

When the type of agreement for each of the private lots was determined, there were a number of discrepancies with the 2019 inventory, as shown in Table 13. The lot names changed for two of the nine lots, and the business owner of one lot (Piedmont Vet Service, VDOT Lot ID 345) indicated that the park and ride lot is on state property. In addition, based on communication with the owners of the property or the business owners, four of nine private lots are not operational. The five remaining privately owned lots have informal or voluntary agreements for use.

Table 13. Privately Owned Lots in the Culpeper District

Lot Name	VDOT Lot ID	Coordinates		Spaces ^a	Agreement Type			Operational?
		Latitude	Longitude		I	C	P	
Rixeyville	4	38.57990231	-77.9788274	7	-	-	-	No ^b
Restoration Church ^c	86	38.174901	-78.409598	15	-	-	-	No
Wal-Mart at Hilton Heights / Charlottesville	89	38.096303	-78.466322	22	√			Yes
Beaver Dam Baptist Church	91	37.98421	-78.29239	33	√			Yes ^d
Crescent Inn & Restaurant	95	37.97144	-78.22009	30	-	-	-	No ^e
Keene (Piedmont Vet Service) ^f	345	37.865008	-78.555244	7	√			Yes
English Meadows ^g	346	38.069344	-78.701345	16	√			Yes
Forest Lakes North	348	38.130788	-78.425742	25	-	-	-	No ^h
Jefferson Center	422	37.9043	-78.34034	19	√			Yes

I = informal or voluntary agreement; C = contract agreement; P = proffer agreement; - = no agreement.

^a From 2019 inventory.

^b Owner stated that cars have parked there but illegally. Parking is only for employees.

^c Previously named Grace United Methodist Church.

^d Pastor indicated this is not an official lot and has no signs but that they allow parking.

^e Lot owner indicated that there is no longer a park and ride lot at this location.

^f Park and ride lot exists but owner maintains that the park and ride lot is on state property.

^g Formerly Mountainside Senior Living.

^h Owner of business said there is no park and ride lot at that facility.

Fredericksburg District

2019 Inventory

The 2019 inventory revealed 36 park and ride facilities in the Fredericksburg District where Figure 24 shows that 14 (39%) are owned by VDOT and 12 (33%) are privately owned. Six lots are owned by localities, 3 lots are owned by Virginia Railway Express (VRE), and 1 lot is owned by Rappahannock Community College.

Agreement Type

For the private lots in the Fredericksburg District, 1 lot was removed and 4 were added (see Table 2), thus bringing the total number of private lots to 15. Upon investigation of agreement types, it was found that 6 of the 15 lots are no longer operational. Table 14 shows that the Aquia Harbour 1-3, Chatham Heights, Claiborne Run, and Fredericksburg Field House lots have been discontinued. Of the remaining 9 lots, 6 lots have contract agreements (5 with VRE as the lessee, and 1 with GWRC as the lessee) and 3 lots have informal or voluntary agreements.

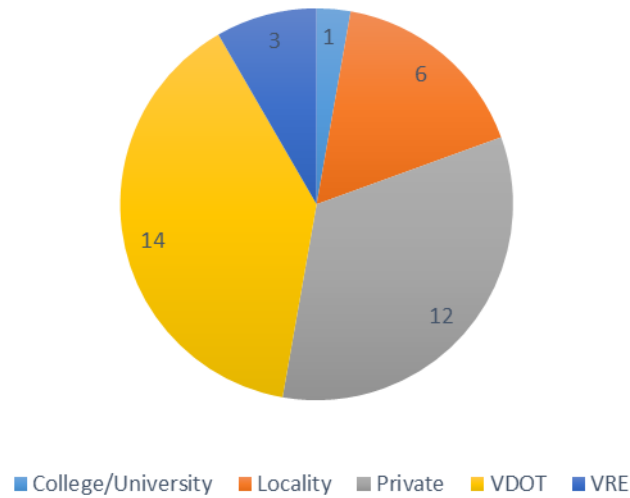


Figure 24. Distribution of Lot Ownership in the Fredericksburg District. VRE = Virginia Railway Express.

Table 14. Privately Owned Lots in the Fredericksburg District

Lot Name	VDOT Lot ID	Coordinates		Spaces ^a	Agreement Type			Operational?
		Latitude	Longitude		I	C	P	
Ames Warsaw Supermarket ^b	236	37.96347	-76.78393	22	√	-	-	Yes
Bradley Mart Amoco	300	37.80425	-77.05631	30	√	-	-	Yes
Aquia Harbour 1	303	38.457267	-77.387782	15	-	-	-	No ^c
Aquia Harbour 2	304	38.466467	-77.387485	85	-	-	-	No ^c
Aquia Harbour 3	305	38.470102	-77.380696	25	-	-	-	No ^c
Watts Supermarket / Millie's Tavern	306	37.82896	-76.94367	40	√	-	-	Yes
VRE Commuter Lot A	299A	38.298901	-77.45591	23		√		Yes
VRE Commuter Lot C	299C	38.297009	-77.45857	30		√		Yes
VRE Commuter Lot D	299D	38.297664	-77.45773	33		√		Yes
VRE Commuter Lot E	299E	38.297329	-77.45933	25		√		Yes
VRE Commuter Lot H	299H	38.29586	-77.45903	127		√		Yes
Chatham Heights	466	38.312523	-77.452188	20	-	-	-	No ^d
Claiborne Run	467	38.315111	-77.450306	10	-	-	-	No ^d
Fredericksburg Field House	468	38.267578	-77.453292	35	-	-	-	No ^d
Ladysmith Professional Building	469	38.019935	-77.510305	10 ^e		√		Yes

I = informal or voluntary agreement; C = Contract agreement; P = proffer agreement; - = no agreement.

^a From 2019 inventory.

^b Owner, Rappahannock Church of Christ, is interested in entering into an agreement.

^c Privately owned by neighborhood. Outside residents can use the lot only if they are registered as a guest

^d Per George Washington Regional Commission (GWRC), lots ceased to be available to commuters on July 1, 2021.

^e On July 1, 2020, the spaces were reduced from 25 to 10.

Hampton Roads District

2019 Inventory

Figure 25 shows the distribution of the park and ride lot inventory in the Hampton Roads District. Twelve of the lots (43%) are owned by VDOT. Hampton Roads Transit (TRAFFIX) owns 5 lots, and the 3 college/university lots are Tidewater Community College–Virginia Beach campus, Tidewater Community College–Portsmouth campus, and Thomas Nelson Community College. Localities and private entities account for the remaining 8 lots.

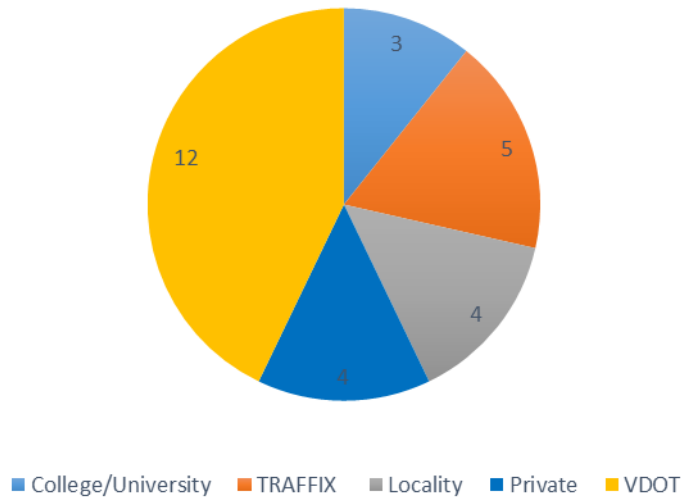


Figure 25. Distribution of Lot Ownership in the Hampton Roads District

Agreement Type

When agreement types were investigated, it was found that all of the private lots in the 2019 inventory were operational. In addition, the three community colleges and the lot at the Old DMV–Williamsburg were operational and all had contract agreements. (Even though these lots are not considered private, they are shown in Table 15 because they have contract agreements.) The private lots with contract agreements include Greenbrier Mall, Lynnhaven Mall, and Chesapeake Square Shopping Center. Chesapeake Square Mall was the one additional lot added that was not in the 2019 inventory. Of these lots, five require a TRAFFIX permit for parking. The two lots with informal agreements are Chesapeake Shopping Center and Riverdale Shopping Center.

Lynchburg District

2019 Inventory

There were eight park and ride lots in the Lynchburg District according to the 2019 inventory. The lot owner distribution is shown in Figure 26; four lots are VDOT owned, three are privately owned, and one is classified as unofficial.

Table 15. Privately Owned Lots in the Hampton Roads District

Lot Name	VDOT Lot ID	Coordinates		Spaces ^a	Agreement Type			Operational?
		Latitude	Longitude		I	C	P	
Greenbrier Mall	261	36.77965	-76.22499	50		√		Yes
Lynnhaven Mall– Parking Deck Level 2	453	36.815161	-76.068586	10		√		Yes ^b
Tidewater Community College–Virginia Beach	454	36.78566	-76.097138	30		√		Yes ^b
Thomas Nelson Community College	455	37.062375	-76.416404	24		√		Yes ^b
Chesapeake Shopping Center	456	36.822072	-76.421564	59	√			Yes
Riverdale Shopping Center	457	37.043256	-76.385465	66	√			Yes
Old DMV– Williamsburg	470	37.285886	-76.686321	20		√		Yes ^b
Chesapeake Square Mall	471	36.8278	-76.41662	16		√		Yes
Tidewater Community College - Portsmouth	472	36.807228	-76.348504	25		√		Yes ^b

I = informal or voluntary agreement; C = contract agreement; P = proffer agreement.

^a = From 2019 inventory.

^b = Hampton Roads Transit (TRAFFIX) permit required.

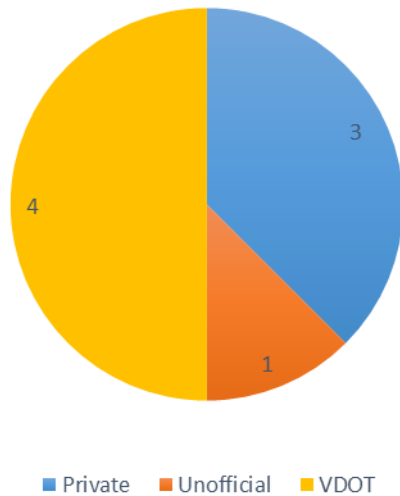


Figure 26. Distribution of Lot Ownership in the Lynchburg District

Agreement Type

When agreement type was investigated, it was found that all three private lots were operational and had informal agreements, as shown in Table 16.

Table 16. Privately Owned Lots in the Lynchburg District

Lot Name	VDOT Lot ID	Coordinates		Spaces ^a	Agreement			Operational?
		Latitude	Longitude		I	C	P	
Lovingston Volunteer Fire Station	230	37.76094	-78.874546	48	√			Yes
Brookneal	277	37.047897	-78.941642	20	√			Yes
Lanes Ford Park & Ride	459	37.753675	-78.985439	6	√			Yes

I = informal or voluntary agreement; C = contract agreement; P = proffer agreement.

^a = From 2019 survey.

Northern Virginia District

2019 Inventory

Compared to other districts, the Northern Virginia District has the most park and ride lots, with 107 lots. This was expected because of the high-density urban corridors in the district and proximity to the Washington metropolitan area. Figure 27 shows that privately owned lots account for the largest number of park and ride lots with 33, followed by locality owned (30), VDOT owned (23), and transit agency owned (16).

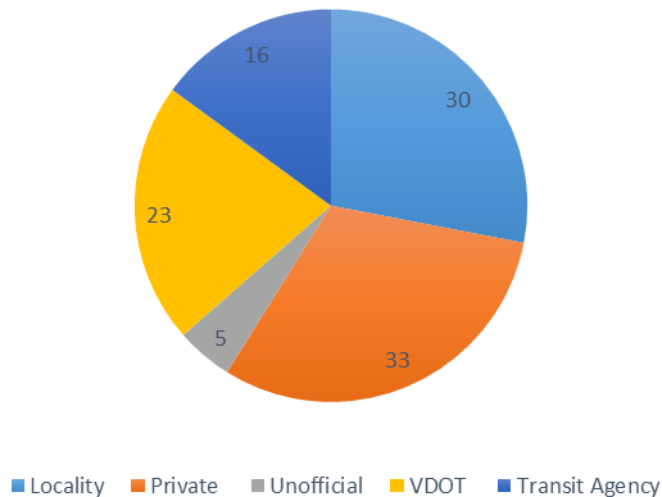


Figure 27. Distribution of Lot Ownership in the Northern Virginia District

Agreement Type

The following provides documentation of agreement types for the privately owned lots in each county in the Northern Virginia District.

Fairfax County. Based on the review of agreement types in Fairfax County, it was found that 3 of the 10 private lots are no longer operational: AMF Centreville Lane, Apple Federal Credit Union, and Circuit City. As Table 17 shows, this leaves 7 lots that have either an informal agreement (3 lots) or a contract agreement (4 lots).

Table 17. Privately Owned Lots in Fairfax County

Lot Name	VDOT Lot ID	Coordinates		Spaces ^a	Agreement			Operational?
		Latitude	Longitude		I	C	P	
AMF Centreville Lane	110	38.83970224	-77.4251675	21	-	-	-	No ^b
Parkwood Baptist Church	115	38.811084	-77.248534	28	√			Yes
Springfield Methodist Church	122	38.77692926	-77.1885549	53		√		Yes
Springfield Plaza	126	38.779874	-77.188333	240		√		Yes
St. Paul Chung Catholic Church	129	38.86163224	-77.4032275	100	√			Yes
American Legion Post 176	322	38.777298	-77.186722	110		√		Yes
Springfield Mall	323	38.772346	-77.173744	842		√		Yes
Apple Federal Credit Union	371	38.769883	-77.134219	12	-	-	-	No ^b
Lorton Market Street	376	38.702207	-77.221264	68	√			Yes
Circuit City Site; Springfield (Old Keene Mill)	377	38.777984	-77.187208	10	-	-	-	No ^b

I = Informal or voluntary agreement; C = contract agreement; P = proffer agreement; - = no agreement.

^a From 2019 inventory.

^b Park and ride lot no longer exists per Fairfax County.

Loudoun County. In Loudoun County, the review of agreement type revealed that 1 lot was no longer operational: Broad Run Farms. As Table 18 shows, all of the other private lots have either a proffered agreement with developers (8 lots) or a contact agreement (4 lots). Per Fairfax County, the Broadlands 772 lot (VDOT Lot ID 419) will cease to exist once the Metrorail revenue service begins operation in Loudoun County in 2022.

Prince William County. Prince William County is the only county in the Northern Virginia District that does not have any contract agreements with private lot owners. As Table 19 shows, of the 10 private lots in the county, 6 lots have informal agreements and 4 lots have proffered agreements with developers. Prince William County provided examples of the language in the proffered agreements for the Old Bridge Festival and Prince William Square Shopping Centers:

- *Old Bridge Festival Shopping Center:* “The Developer will designate 75 parking spaces within the commercial area as commuter parking spaces, and will mark these spaces as such, except during peak shopping periods of the year when the Developer will have the right to remove the commuter designation and use the spaces for customer parking. Additional temporary spaces for commuter parking will be provided in the area of the temporary soccer fields.”

Table 18. Privately Owned Lots in Loudoun County

Lot Name	VDOT Lot ID	Coordinates		Spaces ^a	Agreement			Operational?
		Latitude	Longitude		I	C	P	
Ashburn Village	53	39.0459322	- 77.4814375	51			√	Yes
Cascades Lot (Cascades Community Lutheran Church)	131	39.0344822	- 77.3935475	55			√	Yes
Our Lady of Hope Catholic Church	385	39.0503122	- 77.3820575	150		√		Yes
Crossroads United Methodist Church	386	39.0345222	- 77.4990475	85		√		Yes
Brambleton	388	38.97103222	- 77.5225075	106			√	Yes
Broadlands	390	39.017335	-77.514992	30			√	Yes
Dulles South Stone Ridge I	393	38.93949331	- 77.5506322	186			√	Yes
Lowes Island	395	39.0409522	- 77.3573776	69		√		Yes
Broadlands 772	419	39.00988221	- 77.4987975	159			√	Yes ^b
Goose Creek Village (NoVa No. 113)	420	39.0416469	- 77.5236984	87			√	Yes
Broad Run Farms	421	39.0457922	- 77.4281975	48	-	-	-	No ^c
Loudoun Station	430	39.00654019	- 77.4888997	301			√	Yes ^b
Purcellville Park & Ride	447	39.143114	-77.720107	221		√		Yes

I = Informal or voluntary agreement; C = contract agreement; P = proffer agreement; - = no agreement.

^a From 2019 inventory.

^b Lot will cease to exist when Metrorail revenue service begins in Loudoun County.

^c Park and ride lot no longer exists per Loudoun County.

- *Prince William Square Shopping Center*: “The applicant agrees to construct and maintain a commuter parking lot in surplus Smoketown Road right of way on the west side of State Rte 642 as more specifically shown on the development plan and as permitted by the Virginia Department of Highways and Transportation access to this lot shall be from the proposed shopping center and from Smoketown Road.”

Table 19. Privately Owned Lots in Prince William County

Lot Name	VDOT Lot ID	Coordinates		Spaces ^a	Agreement			Operational?
		Latitude	Longitude		I	C	P	
Manassas Mall	58	38.77579226	-77.5051575	311	√			Yes
Bethel United Methodist Church	62	38.656003	-77.308724	50	√			Yes
Prince William Square Shopping Center	64	38.638685	-77.299147	64			√	Yes
Cherrydale at Dale Blvd	68	38.631321	-77.318019	39	√			Yes
Good Shephard United Methodist Church	69	38.627987	-77.311017	57	√			Yes
Potomac Mills Outlet Mall	133	38.64049865	-77.2935141	200 ^b			√	Yes
Tackett's Mill Specialty Center ^c	137	38.6763563	-77.2792853	237	√			Yes
Old Bridge Festival Shopping Center	138	38.683994	-77.316944	107			√	Yes
Church of the Brethren (Woodbridge)	139	38.660058	-77.264906	42	√			Yes
Limestone Road ^d	402	38.781057	-77.59979	125 ^b			√	Yes

I = informal or voluntary agreement; C = contract agreement; P = proffer agreement.

^a From 2019 inventory.

^b Lot spaces differ from 2019 survey.

^c Commuter parking is restricted on Tuesdays for the Farmers Market.

^d Proffer is from the Virginia Gateway development and provides offsite commuter parking at the church property. The church became the permeant commuter parking site once the development hit 1 million square feet.

Richmond District

2019 Inventory

Figure 28 shows that there are 11 park and ride lots in the Richmond District. The majority of lots are VDOT owned (8), 2 lots are owned by private entities, and 1 lot is owned by a locality.

Agreement Type

The two privately owned lots are shown in Table 20. Both of these lots are operational and have informal agreements.

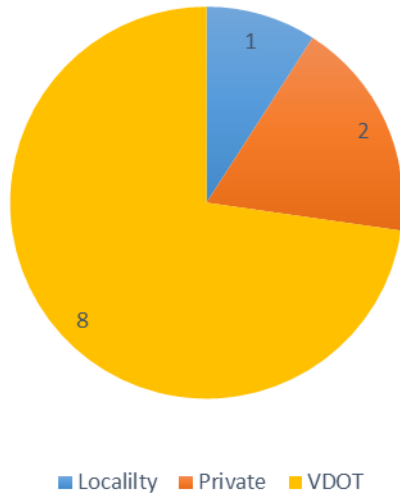


Figure 28. Distribution of Lot Ownership in the Richmond District

Table 20. Privately Owned Lots in the Richmond District

Lot Name	VDOT Lot ID	Coordinates		Spaces ^a	Agreement			Operational?
		Latitude	Longitude		I	C	P	
Bon Air Baptist Church	460	37.533295	-77.558585	72	√			Yes
Huguenot United Methodist Church ^b	461	37.535052	-77.591194	12	√			Yes

I = informal or voluntary agreement; C = contract agreement; P = proffer agreement.

^a From 2019 inventory.

^b Spaces are used by members of the church and members have to provide vehicle information to the church so that they can be contacted when parking is not offered due to events (e.g., a funeral).

Salem District

2019 Inventory

The distribution of lot ownership in the Salem District is shown in Figure 29 where 2019 inventory data showed that 10 lots are VDOT owned, 2 lots are private lots, and 1 lot is unofficial.

Agreement Type

The two private lots are shown in Table 21. Both of these lots are operational and have informal agreements.

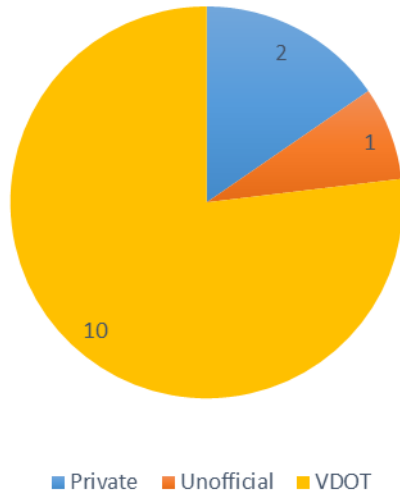


Figure 29. Distribution of Lot Ownership in the Salem District

Table 21. Privately Owned Lots in the Salem District

Lot Name	VDOT Lot ID	Coordinates		Spaces ^a	Agreement			Operational?
		Latitude	Longitude		I	C	P	
Deli Mart (I-81 Exit 114)	253	37.11813	-80.42085	23	√			Yes
Maybrook	254	37.3034	-80.5292	17	√			Yes

I = informal or voluntary agreement; C = contract agreement; P = proffer agreement.

^a From 2019 inventory.

Staunton District

2019 Inventory

The Staunton District has the highest percentage of VDOT-owned lots at 72% (18 of 25 total lots). Figure 30 shows that there are 2 privately owned lots, 4 unofficial lots, and 1 locality-owned lot.

Agreement Type

Similar to the Richmond and Salem districts, Table 22 shows that the two private lots are operational and have informal agreements.

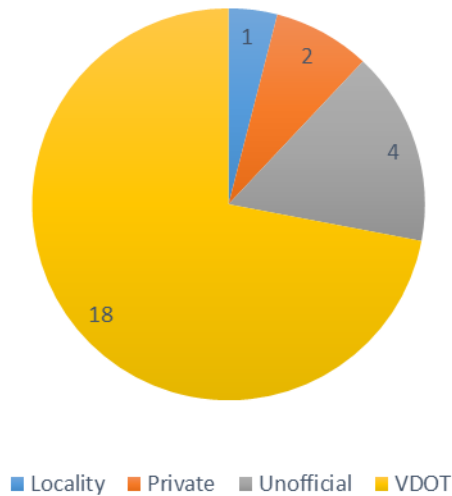


Figure 30. Distribution of Lot Ownership in the Staunton District

Table 22. Privately Owned Lots in the Staunton District

Lot Name	VDOT Lot ID	Coordinates		Spaces ^a	Agreement			Operational?
		Latitude	Longitude		I	C	P	
Chevron Station at Linden	237	38.91273225	-78.0991773	88	√			Yes
Riverside Mini-Mart	242	38.58863233	-78.5634372	15	√			Yes

I = informal or voluntary agreement; C = contract agreement; P = proffer agreement.

^a From 2019 inventory.

Contract Details

The investigation of agreement types resulted in a list of private lots that have contract agreements. Table 23 shows lessees and lessors for these lots in each VDOT district. In total, there are 17 contract agreements with private lot owners across three VDOT districts: Fredericksburg, Northern Virginia, and Hampton Roads. The basis for developing this list was threefold: (1) identify contract agreements with private lot owners; (2) obtain copies of contracts for a review of agreement language; and (3) develop and distribute surveys to the lessees and lessors.

Agreement Terms

Table 24 shows the contracts received from either the lessee or the lessor (seven contracts were received for review). Four contracts were recently developed or renewed (e.g., three contracts were signed in 2019 and one contract was signed in 2021). The Claiborne Run Shopping Center lease in Fredericksburg was dated 2011 and as previously mentioned, in June 2021 the lease was not renewed; however, since the contract was provided, agreement details are noted. Lease terms were from 1 year (at three locations), 3 years (two locations), and 5 years (one location). Terms could not be found in the American Legion Post 176 contract with Fairfax County.

Table 23. Park and Ride Lessees and Lessors in VDOT Districts

District	Lot Name	Lessee	Lessor
Fredericksburg	VRE Commuter Lot A	VRE	Lafayette Blvd, LLC
	VRE Commuter Lot C		Thomas J. Wack Co.
	VRE Commuter Lot D		Joe Wilson, Wilson Realty
	VRE Commuter Lot E		John Janney, John Janney Builder, Inc.
	VRE Commuter Lot H		New City Fellowship of Fredericksburg
	Ladysmith Professional Building	GWRC	Danny Carter
Hampton Roads	Greenbrier Mall	TRAFFIX	CBL Properties
	Lynnhaven Mall		General Growth Properties
	Chesapeake Square Mall		KM of Chesapeake, Va, L.P.
Northern Virginia	Springfield Methodist Church	Fairfax County	Springfield Methodist Church
	Springfield Plaza		Springfield Plaza, LLC
	American Legion Post 176		American Legion Post 176
	Springfield Mall		PREIT
	Our Lady of Hope Catholic Church	Loudoun County	Our Lady of Hope Catholic Church
	Crossroads United Methodist Church		Crossroads United Methodist Church
	Lowes Island		KLNB Retail, Inc.
	Purcellville		Virginia Regional Transit

VRE = Virginia Railway Express; GWRC = George Washington Regional Commission; TRAFFIX = Hampton Roads Transit.

Table 24. Lease Details From Contracts Received

District	Lessee	Lessor	Year	Spaces	Term	Compensation
Fredericksburg	VRE	Lafayette Blvd LLC (VRE Lot A)	2021	23	1 year	\$1,578/month (\$68.60/space/month)
	GWRC	Schooler Properties of Bulter Road I, LLC (Claiborne Run Shopping Center)	2011	15	1 year	\$1/space/week
Northern Virginia	Fairfax County	Springfield United Methodist Church	2016	54	1 year	\$1,104.30/month (\$20.45/space/month)
		Springfield Plaza	2019	127	3 years	\$6,283.30/month (\$49.47/space/month) and 3% increase every year.
		American Legion Post 176	2013	100	N/P	\$3,000/month (\$30/space/month)
	Loudoun County	Virginia Regional Transit (Purcellville Lot)	2019	140	3 years (with 5 additional 1-year periods thereafter)	\$3,500 per month (\$25/space/month)
		Our Lady of Hope Catholic Church	2019	150	5 years; thereafter on a month-to-month basis	\$1/year

VRE = Virginia Railway Express; GWRC = George Washington Regional Commission ; N/P = not provided.

With respect to compensation, the highest lease price is for VRE Lot A (\$68.60/space/month), and the lowest lease price is for the Our Lady of Hope Catholic Church lot (\$1/year). (As described in the next section, maintenance responsibilities assigned to the

lessee can provide for lower lease prices.) Fair market value of adjacent land is generally the benchmark for determining lease prices.

Contract Language

Contracts that were received from lessees and/or lessors (see Table 24) were reviewed for common elements. In general, the following contract elements were ubiquitous:

- *Terms.* In addition to compensation, period of lease, and clauses on extensions, the majority of the contracts specifically stipulated times of the day that the terms were enforceable. For example, commuter use of lot spaces were typically Monday through Friday from 5 AM to 8 PM with some variation in time of day (e.g., parking at the American Legion Post 176 and Purcellville lots is from 5 AM to 10 PM and 4:30 AM to 9:30 AM, respectively).
- *Maintenance, Improvements, and Responsibilities.* In most cases where a monetary consideration exists, maintenance activities are the responsibility of the lessor (owner). Contract clauses typically include language relating to the general sweeping, trash clean up, landscaping, lighting, and snow removal. In some cases, if improvements are deemed necessary for the operation of a park and ride lot, the lessor will be responsible for providing those improvements with reimbursement from the lessee. For example, reimbursement is stipulated for the Springfield Plaza and Purcellville lots where the amounts are not to exceed \$61,000 and \$72,000, respectively. In cases where there is a minimal monetary consideration, as in the case of the contract between Loudoun County (lessee) and Our Lady of Hope Catholic Church (lessor), maintenance is stipulated as a responsibility of the lessee. This includes installation of signage, offsite direction signs, striping of parking spaces, bus shelters, and other improvements. In addition, the lessee is responsible for providing snow removal and ice treatment on the premises at an established schedule for the duration of the license. Similar maintenance arrangements exist where the lessor is a public entity and the lessee is a transit agency, as in the case with the Tidewater Community College and Thomas Nelson Community College.
- *Insurance.* Commercial general liability insurance and comprehensive general liability insurance are the two types of insurance that are stipulated in the contracts for the lessee to obtain and keep in force. Commercial general liability is required for Fairfax County for the Springfield Plaza and Springfield United Methodist Church lots at limits of \$1 million. Loudoun County is required to obtain comprehensive general liability insurance as stipulated in the contracts for the Our Lady of Hope Catholic Church and Purcellville lots with limits of \$2 million. The Claiborne Run lot in Fredericksburg required GWRC to obtain commercial general liability insurance with limits of \$5 million. The contract with VRE (lessee) and Lafayette Blvd, LLC (lessor) does not explicitly state limits. The contract states: “Lessor shall procure and maintain all insurance deemed necessary for its protection against loss of or damage to the leased premises; Lessee shall be self-insured against loss of or damage to any of its property situated on the leased premises.”

- *Liability and Indemnity.* In general, neither party can hold the other party liable. For example, the Our Lady of Hope Catholic Church contract states that the County (Loudoun as the lessee) cannot indemnify or hold the Church harmless. The Springfield Plaza contract with Fairfax County (lessee) states: “Nothing shall give rise to any personal liability on any official, employee, or agent of the County.”
- *Termination.* All contracts reviewed provide that termination can occur with or without cause by either party given a time period of notice. For example, the notification period for the American Legion Post 176 and Springfield United Methodist Church lots is 30 days and the notification period for the Springfield Plaza lot is 90 days.
- *Inspection.* The lessee is permitted to inspect the property. In cases where conditions need attention (such as hazardous conditions exist or repairs need to be made), the lessor is given a time period to correct the condition—typically between 15 and 30 days.

Other less common clauses or elements found in some of the contracts reviewed included the following:

- *Promotions.* In the Springfield Plaza and Fairfax County contract, there is the following clause: “[the] County shall be permitted to include the availability of the Commuter Parking Area in its promotional literature about commuter parking lots located in Fairfax County.”
- *Waivers.* As stipulated in the Springfield Plaza and Fairfax County contract:

Nothing shall be construed as waiving a party's right to pursue breach of contract remedies, whether for monetary damages, interest and/or injunctive relief, against the breaching party for breach of the agreement. Neither party will be held liable for any speculative, consequential, or punitive damages for any such breach of contract. Nothing shall be construed by the parties or any third party as a waiver of the sovereign immunity of the County of Fairfax.
- *Alternate Parking.* A provision in the contract between Our Lady of Hope Catholic Church and Loudoun County states: “The Church shall provide equivalent number of parking spaces elsewhere on the premises if church’s use interferes with county’s use.”
- *Assignment and Subletting:* typically not allowed unless written consent by owner.
- *Environmental Requirements:* prohibiting storage or disposal of hazardous waste.

Lessee and Lessor Survey

Surveys were sent to the five lessees of private lots (see Table 23). Responses were received from three lessees representing a transit agency, a regional planning commission, and a locality: TRAFFIX, GWRC, and Loudoun County. In addition, surveys were sent to the current 17 lessors of private lots (see Table 23) and former lessors in the Fredericksburg District where contracts were recently terminated (Claiborne Run, Fredericksburg Field House, and Chatham Heights). Of the 20 surveys sent, 10 responses were received. This section provides the lessee and lessor respondent answers to the questions asked in the survey.

Lessee Survey

1. Could you please briefly describe why your leased park and ride lots were chosen for leasing?
 - TRAFFIX: Leasing was considered an economical alternative to building parking and took less time to implement.
 - GWRC: The location of our Park and Ride lots were primarily chosen based on their proximity to HRT service routes and lot availability.
 - Loudoun County: A combination of location, need, zoning and willing partners.
2. Besides the lots currently leased, were other leasing locations considered? (If yes, what was the reason those lots were not leased?)
 - TRAFFIX: Yes, Owners were not interested in participating and did not want to be held liable.
 - GWRC: Unknown.
 - Loudoun County: Unknown.
3. What funding source(s) are used for leasing park and ride lots?. (If grants, please indicate name of grant).
 - TRAFFIX: HRT Operating funds.
 - GWRC: The county where the lot is located pays for the spaces.
 - Loudoun County: The majority of the leased lots are basically free (\$1.00 per year). Loudoun does fund one lease with CMAQ funding and another lot with Commuter Choice grant funding.
4. What are the typical duration terms for the leased lots?
 - TRAFFIX: Typical duration terms are for up to 3 years, but Park and Ride agreements can be cancelled after 30 days by either party.
 - GWRC: One year with option to extend.
 - Loudoun County: They are usually for three years with unlimited annual auto renewals.

5. What is the average lease price (per year) for a leased parking space? (If there is a range in lease price/space depending on location, please provide that range.)
 - TRAFFIX: The consideration fee for lot usage is one dollar (\$1.00).
 - GWRC: \$261 per year (\$1.00 per weekday).
 - Loudoun County: \$25 - \$35 per space per month.

6. Was there a negotiation process with the private lot owners when developing the terms of the leasing agreements? (If yes, how were the terms developed with private lot owners?)
 - TRAFFIX: Yes, HRT Legal department consulted on term agreement.
 - GWRC: Unknown, the terms were developed in the 2009 time frame prior to my employment. The lot owner is responsible for marking the leased spaces and for maintenance including snow removal. Vehicles must exhibit a free parking permit that is issued through the regional ridesharing program.
 - Loudoun County: Unknown – the leases are old.

7. Do you collect occupancy data on your leased lots? (If yes, what is the typical frequency of collecting occupancy data?)
 - TRAFFIX: Yes, no established frequency.
 - GWRC: Yes, at least quarterly.
 - Loudoun County: Yes, monthly.

8. Are there any leased lots that collect occupancy data continuously using real-time technology?
 - TRAFFIX: No.
 - GWRC: No.
 - Loudoun County: No.

9. Are there leased lots where 80% or more of spaces are typically occupied? (If yes, approximately, how many of your leased lots are typically occupied at a rate of 80% or more?)
 - TRAFFIX: No.
 - GWRC: No.
 - Loudoun County: No.

10. Do any of your leased lots require parking permits to use the lot as a park & ride? (If yes, what lots require a parking permit?)
 - TRAFFIX: Yes, all commuters are provided with TRAFFIX parking hang tags to display on their registered vehicles.

- GWRC: Yes, Ladysmith Professional Building at 8051 Prosperity Way in Ruther Glen.
 - Loudoun County: No.
11. Have there ever been concerns about your leased lots brought to your attention by the lessor, users of the lot, and/or others? (If yes, please briefly describe the concerns brought to your attention.)
- TRAFFIX: Yes, the most common concerns from property owners not wanting their lots used were due to abandoned vehicles, vandalism, and spaces not being utilized by preferred customers (commuters not patrons of shops near and around retail lots).
 - GWRC: Yes, vehicles other than commuters using the spaces. (non-permitted vehicles can be towed at vehicle owner's expense).
 - Loudoun County: Yes, Maintenance of the lot (re-striping, snow removal damage).
12. Have there ever been cases where a lot owner has terminated a lease? (If yes, please describe the reason(s) for lease termination(s).)
- TRAFFIX: No.
 - GWRC: No.
 - Loudoun County: Yes, properties were sold.
13. Has there ever been a case where your organization terminated a lease? (If yes, please describe the reason(s) for lease termination(s).)
- TRAFFIX: No.
 - GWRC: Yes, the metropolitan planning organization did not vote to continue CMAQ funding so the leases were not renewed.
 - Loudoun County: Yes, the county needed a bigger lot for transit use.
14. Is your agency seeking to expand its inventory of leased park and ride lots?
- TRAFFIX: Interested but no definite plans.
 - GWRC: Not seeking to expand at this time.
 - Loudoun County: Not seeking to expand at this time.
15. On a scale of 1 (low satisfaction) to 5 (high satisfaction) how would you rate your agency's overall satisfaction with park and ride leasing arrangements with private lot owners?
- TRAFFIX: 4.
 - GWRC: 5.
 - Loudoun County: 5.

Lessor Survey

Table 25 shows the 10 lessor respondents including the lessee, lot name, and VDOT Lot ID number. Lessees represented include a transit agency (VRE), two localities (Loudoun and Fairfax counties), and a regional planning commission (GWRC). Lessor-owned lots included shopping centers, business developments, churches, and a sports complex.

Table 25. Lessor Survey Respondents

Lessor	Lessee	Lot Name	VDOT Lot ID
Lafayette Blvd, LLC	VRE	VRE Lot A	299A
Joe Wilson, Wilson Realty	VRE	VRE Commuter Lot D	299D
KLNB Retail, Inc	Loudoun	Lowes Island	395
Our Lady of Hope Catholic Church	Loudoun	Our Lady of Hope Catholic Church	385
VRT	Loudoun	Purcellville	447
Crossroads United Methodist Church	Loudoun	Crossroads United Methodist Church	386
American Legion Post 176	Fairfax	American Legion Post 176	322
Springfield Plaza, LLC	Fairfax	Springfield Plaza	126
Danny Carter	GWRC	Ladysmith Professional Building	468
John Wack	GWRC	Fredericksburg Field House	469

VRE = Virginia Railway Express; GWRC = George Washington Regional Commission.

1. Approximately how long have you been leasing your lot for park and ride purposes?

- Figure 31 shows the number of years that lessors have been leasing lots. The majority of leases have existed for 10 or more years. More recent lease agreements developed within the last 5 years include the Purcellville (VDOT Lot ID 447) and Our Lady of Hope Catholic Church (VDOT Lot ID 385) lots (see Table 25 for association of lot names and VDOT Lot ID numbers).

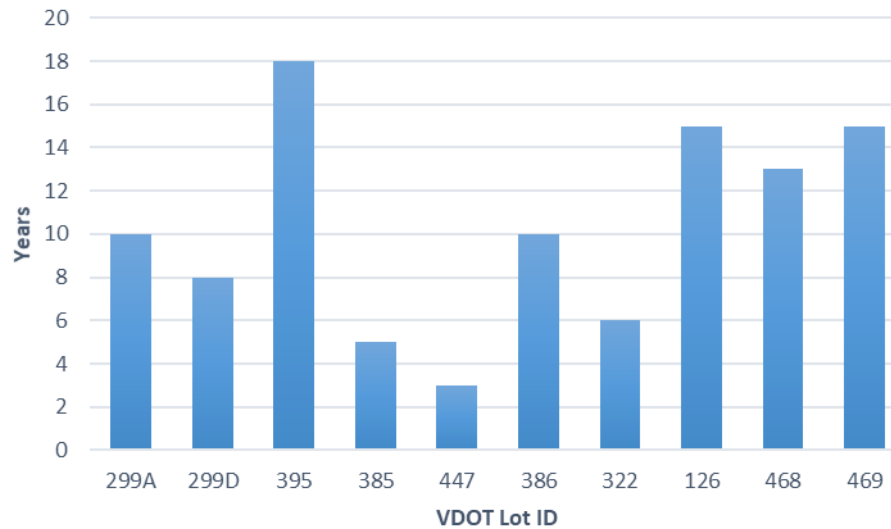


Figure 31. Number of Years Lessors Have Leased Lots

2. Is the parking lot used solely for park and ride purposes?
 - Of the 10 lots, only 2 are used specifically for park and ride purposes. These lots include American Legion Post 176 and Purcellville.
3. Is there a designated park and ride location in the parking lot with signage and/or markings?
 - Of the locations that have shared-use arrangements, six lots have a designated park and ride location with signage and/or markings. The two lots that do not have a designated park and ride location include Fredericksburg Field House and Crossroads Methodist Church.
4. Who is responsible for maintenance of the park and ride lot?
 - For all lots, the lot owner indicated responsibility for maintenance with the exception of Crossroads United Methodist Church, which indicated a shared responsibility with the lessee. A discrepancy is noted with the Our Lady of Hope Catholic Church respondent (response was that lot owner is responsible for maintenance) and the contract language, which was reviewed as part of this study (stating that the lessee is responsible for maintenance). It could be the case that shared responsibilities exist at this location.
5. What are the current duration terms of the lease?
 - The majority of respondents indicated 1-year lease terms. The lessor of American Legion Post 176 indicated the lease runs “until the county finds an alternate parking solution for commuting to the Pentagon.” As previously mentioned, the lease for the Fredericksburg Field House lot has expired and is not being renewed. The contract for VRE Lot D is set to expire in December 2021, and it is unknown if this lease will be renewed. Other respondents reported ongoing lease terms (Springfield Plaza) and multiple-year lease terms at Purcellville (3 years with 5 additional 1-year periods) and VRE Lot A (2 years).
6. What is the lease price (per year) for the park and ride lot?
 - Figure 32 shows the variation of the lease price per year for the lots (shown with blue bars). Because of the variability in lot spaces, Figure 32 also shows the lease price per year per space (shown with a red line). (See Table 25 for an association of lot names with VDOT Lot ID numbers.) Other than a few lot outliers, the average price per year per space is approximately \$300. The outliers include VRE Lot A (VDOT Lot ID 299A); VRE Lot D (VDOT Lot ID 299D); and Lowes Island (VDOT Lot ID 395) at yearly rates per space of \$823, \$42, and \$482, respectively. Crossroads United Methodist Church and Our Lady of Hope

Catholic Church were not included in the figure because lease fees are \$0 and \$1, respectively.

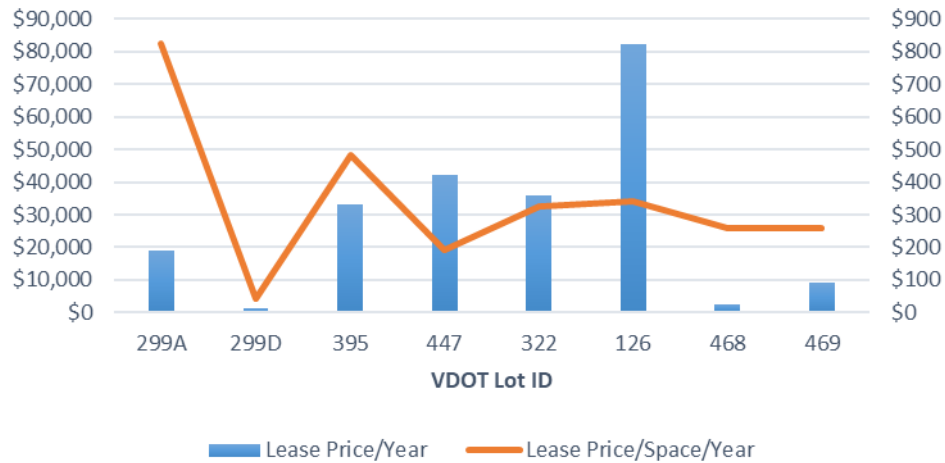


Figure 32. Lease Price per Year (blue bars) and per Space (red line)

7. If known, how were the agreement terms developed or negotiated?
 - One-half of the respondents indicated not knowing how the agreement terms were developed or negotiated. In some cases, this is due to the respondent being a management company overseeing lease arrangements for the lot owner. All of the other respondents indicated that the lease terms were negotiated but did not provide specifics on development of terms.

8. Have you ever received complaints from the public about the park and ride lot?
 - All of the respondents with the exception of one indicated no complaints received from the public about the park and ride lot. The one exception is Lowes Island where the complaints included “not enough spaces and people parking overnight.” These complaints led to the lessor (Rappaport Management Company for KLN B Retail, Inc.) to have discussions with the lessee about adding signage and parking enforcement.

9. On a scale of 1 (low satisfaction) to 5 (high satisfaction), how satisfied are you with the leasing experience with the lessee?
 - The average rating score was 4.8 (eight lessors rated a “5” and two lessors rated a “4”), indicating a high satisfaction with the leasing experience.

10. Do you plan to continue leasing the lot space for park and ride after the current terms expire?

- Eight respondents indicated “definitely plan to continue,” and two respondents indicated “interested but no definite plans.”

Lease Funding Discussion

The lessee and lessor responses to the survey provided perspective on current lease agreements and opinions on the arrangements. One key area of interest was funding mechanisms for leases.

In the early stages of this study, GWRC was leasing four lots in the Fredericksburg District. For three lots (Chatham Heights, Claiborne Run, and Fredericksburg Field House), GWRC administered the leases that were federally funded through the CMAQ program under an arrangement with the Fredericksburg Area Metropolitan Planning Organization. Under prior federal funding requirements, each was “grandfathered” to use CMAQ funds indefinitely. Current CMAQ funding requirements stipulate that any newly initiated leases are subject to the operational expense time limitation of 3 years or are spread over a longer period for a total of up to 5 sequential years of support. In June 2021, the leases of these three lots expired and were not renewed because the Fredericksburg Area Metropolitan Planning Organization pulled the CMAQ funding for these lots. The one lot that GWRC currently leases (Ladysmith Professional Center) is funded through Virginia’s Department of Rail and Public Transportation / a Transportation Demand Management Grant under arrangements with Caroline County.

The funding sources for two of Loudoun County’s leases are CMAQ (Lowe’s Island) and Commuter Choice grants (Purcellville). The Commuter Choice program³⁵ is a partnership between the Northern Virginia Transportation Commission and the Commonwealth of Virginia. The program invests toll revenues in public transit and other multimodal projects along two expressway corridors, I-66 and I-395/95, in Northern Virginia.

Although Fairfax County did not complete the survey, communication with county planning staff indicated that funding for leases comes from a combination of sources including the Northern Virginia Transportation Commission, the Northern Virginia Transit Authority, and the Department of Rail and Public Transit. For the lots owned by transit agencies, TRAFFIX uses its own operating funds and it is unclear what funding sources are used by VRE (attempts were made to obtain this information via the survey and subsequent follow-up emails).

Inventory of Candidate Lease Locations

All nine VDOT district planners were contacted via email with questions pertaining to the need for more park and ride lots, future plans and barriers for constructing new lots, and interest in and opportunities for leasing privately owned space for park and ride purposes. Input was received from the Fredericksburg, Staunton, Lynchburg, and Bristol districts.

Need for More Park and Ride Facilities

The four district respondents indicated a need for more park and ride lots. In the Staunton District, there were needs in the Winchester and Harrisonburg metropolitan areas. The Fredericksburg District indicated a projected need for more park and ride lots along the I-95 corridor but not an immediate need. Projected needs for new lots along the I-95 corridor included the following:

- *Exit 136*: anticipated need with future development.
- *Exit 130*: served by multiple lots but additional capacity may be needed in the future in the area of Celebrate Virginia South.
- *Exit 118*: will be the next development area for Spotsylvania County and a new park and ride lot will be needed; the timing of the need depends on the pace of the development.
- *Exit 110*: due to the exit's midpoint location between Fredericksburg and Richmond, a lot will eventually be needed.
- *Exit 104*: possible future expansion of existing underused lot.

Outside the I-95 corridor, there are a number of existing VDOT-owned lots in the Fredericksburg District. The larger lots are in King William County (for commuters to Richmond) and Gloucester (for commuters to Hampton Roads), whereas smaller lots exist throughout the district. It is anticipated that the King William County lot and a lot in Essex County will need to be expanded and improved.

The Lynchburg District provided long-term projected needs from its updated investment strategies spreadsheet. Thirty-five lots are projected as a future need with designations of improvement type (i.e., new, enhance, or expand). Of the 35 lots, 24 are new (20 were provided in VDOT's investment strategies database) and 2 are expansions of existing lots.

Future Plans to Construct New Lots

Three districts indicated plans to construct new lots: Fredericksburg, Staunton, and Bristol. The Lynchburg District indicated no immediate plans to build new park and ride lots, but based on their long-term investment strategies, expansion of existing lots and use of existing space is a long-term projection.

Fredericksburg District

Recently constructed and soon to be constructed lots (lot construction has been funded) in the Fredericksburg District off I-95 include the following:

- *Exit 140*: lot recently relocated and expanded.
- *Exit 133*: newly funded but yet to be constructed lot with 500 to 550 spaces.
- *Exit 126*: new park and ride lot with construction to begin soon.

Staunton District

The Staunton District provided information on new park and ride lots that are being considered; park and ride lot expansions that are funded and programmed to be constructed; and park and ride lot expansions that are desired but unfunded:

- *New*: Harrisonburg City at I-81 Exit 247; Frederick County at I-81 Exit 317 or 313 (currently under evaluation through Project Pipeline studies).
- *Funded expansions*: Orlando at I-81 Exit 298; Mt. Crawford at I-81 Exit 240; Waynesboro at I-64 Exit 94; Verona at I-81 Exit 227.
- *Expansions desired but unfunded*: Front Royal/Crooked Run at I-66 Exit 13; Linden at I-66 Exit 6.

Bristol District

The Bristol District responded that the district just finalized construction of a park and ride facility on Rte 23 in Gate City, and the City of Bristol built a new facility off I-81 at Exit 5. In addition, a park and ride project in Dickenson County was recently approved in VDOT's SMART SCALE (Virginia's method of scoring planned projects included in VTrans that are funded by House Bill 1887³⁶).

Barriers for Constructing New Lots

The following provides responses from each district respondent.

Fredericksburg District

"We have not seen significant 'barriers' beyond funding (which is a need that could be identified as a barrier to ALL construction projects). We have built or expanded (or are about to build or expand) park and ride facilities at Exit 143, 140, 133, 130, 126 on I-95, so we have been successful at getting these through various sources. The most likely source ahead will be SMART SCALE. So, establishing a need and having an eligible applicant show interest will be the key."

Staunton District

"Availability of suitable sites at an affordable cost and cost of construction. Sites within cities near the interstate are desirable, but difficult to find, as these sites are also the most desirable for commercial development and fetch a high purchase price. Land that is still available is often of limited suitability for parking lot construction due to difficult terrain, awkward access to a primary roadway, and/or right of way challenges due to limited space or conflicts with adjacent land uses such as residential neighborhoods."

Lynchburg District

“SMART SCALE qualification and competition with other projects. Unless a park and ride recommendation is adjacent to a new highway improvement project, identified in VTrans and can tie into a SMART SCALE project, it is very hard for stand-alone park and ride projects to compete for SMART SCALE funding with other higher need projects. Another barrier is that there are also plenty of informal Park and Ride lots around Lynchburg District located in grocery store and gas station lots, but there is often a reluctance from property owners to turn these over to VDOT/[Department of Rail and Public Transit] as full time officially designated park and ride lots or develop any kind of formal agreement for use of their spaces.”

Bristol District

“Topography in our region can be a major barrier in regard to constructing new park and ride facilities. Also, funding is a barrier as the only real funding source for this type of improvement is with SMART SCALE.”

Opportunities for Leasing Lots From Private Owners

Based on VDOT’s Park and Ride Investment Strategy database, leases were indicated as strategies in four districts: Hampton Roads (8 leases), Lynchburg (11 leases), Salem (1 lease), and Staunton (1 lease). For the Hampton Roads District, many of the lots in the database currently have lease agreements with TRAFFIX as discussed in the *Existing Lessors and Lessees in Virginia* section of this report; however, a formal agreement is sought with the Chesapeake Shopping Center—it is currently an informal agreement. Other leasing strategies in the Hampton Roads District include AMC Hampton Towne Centre 24 and Huntington Park. For the Salem District, the lone leasing strategy is for Bedford County near the intersection of Rte 460 Bypass & Rte 122/Burkes Hill Rd where potential opportunities exist at nearby privately owned lots. Based on the survey of districts for this effort, four districts provided updated information on opportunities for leasing privately owned lots: Fredericksburg, Staunton, Lynchburg, and Bristol.

Fredericksburg District

The Fredericksburg District indicated that the district’s needs are being met on current and upcoming facilities but that there might be unused private parking capacity around I-95 at Exits 130 and 143 that could be used to supplement VDOT lots.

Staunton District

The Staunton District indicated that there are opportunities at underused shopping center parking lots for I-81 at Exits 313 and 317 and that other opportunities likely exist at other locations. One location is near the Crooked Run Park and Ride lot off I-66 where the lot is approaching capacity and leasing nearby private lots is a potential strategy. In addition, the district indicated that a framework for leasing opportunities would be helpful in generating a more informed planning and public outreach processes for the district.

Lynchburg District

The Lynchburg District identified a number of potential leasing opportunities for leasing. The effort to identify locations included field visits and analyses of commuting trends / activity centers in the region. The district indicated that the biggest barrier is obtaining agreements from the property owners to utilize excess parking space as official park and ride lots. The following is a list of the most beneficial and top-ranked locations (list shows order of rank) for potential leases:

1. The Shoppes of Appomattox, Town of Appomattox; 7643 Richmond Highway, Appomattox, VA 24522 (lat/long: 37.365090, -78.848020).
2. Town and Country Shopping Center, Altavista (Campbell County); 1301 Main Street Altavista, VA 24517 (lat/long: 37.121250, -79.272806).
3. Ambriar Plaza, Town of Amherst; South Main Street, Amherst, VA (lat/long: 37.564410, -79.063610).
4. New lot near Rte 29 & S Main St, near Rte 1443 (lat/long: 36.808420, -79.393250).
5. Farmville/Prince Edward County Lowe's Home Improvement Parking Lot (lat/long: 37.266000, -78.409694).
6. New lot near Rte 29 Business/Main St & Rte 29, near Sycamore Creek in Hurt, VA (lat/long: 37.089560, -79.317810).

Bristol District

Although the Bristol District did not show any leased lot strategies in the investment strategy database, the district indicated a number of privately owned lots that have the potential to be utilized as park and ride facilities. Table 26 shows the lots and location along I-81 (if applicable), lot details, and county and tax assessed land value per acre. Additional details provided by the district (but not shown in the table) included the following:

- County Parcel Number
- Deed Book
- Deed Page
- In Flood Zone (yes/no)
- Notes
- Google Street View link.

Table 26. Potential Shared-Use Private Lots in the Bristol District

I-81 Exit	Lat/Long	Details	Ownership	County	Tax Assessed Land Value per Acre
10	36°39'12.2"N 82°05'07.5"W	Abandoned Lot on Rte 11	Private	Washington	\$41,311
19	36°42'48.6"N 81°55'54.9"W	Old Bakery (Adjacent to Ice Cream Stop)	Private	Washington	\$816,800
19	36°42'53.6"N 81°56'20.3"W	Old Highlands Ski & Outdoor Center	Private	Washington	\$522,667
29	36°46'07.9"N 81°46'49.8"W	Gravel Lot Rte 91 & Rte 11	Private	Washington	\$261,351
19	36°42'34.5"N 81°55'32.0"W	Abandoned Lot Adjacent to WCSA	Private	Washington	\$27,498
35	36°47'36.4"N 81°40'51.6"W	Abandoned Lot Adjacent to Motel 6	Private	Smyth	N/A
45	36°49'37.2"N 81°30'34.8"W	Abandoned Lot Adjacent to Smyth County Sheriff's Office	Private	Smyth	\$15,000
47	36°50'48.6"N 81°29'33.4"W	Tractor Supply Lot	Private	Smyth	\$130,700
44	36°49'21.9"N 81°32'13.7"W	Abandoned Lot	Private	Smyth	N/A
N/A	36°35'54.08"N 82°34'15.26"W	Uplift Church Parking Lot in Weber City	Private (Church)	Scott	\$141,609
N/A	36°34'39.49"N, 80°54'22.83"W	Intersection of Rte 613 and Rte 89 in Grayson County	Private (Church)	Grayson	N/A
N/A	36°42'4.05"N, 81° 0'50.19"W	North of the Intersection of Rte 94 and Rte 805 in Grayson County	Private	Grayson	N/A

WCSA = Washington County Service Authority; N/A = not applicable; N/P = not provided.

Guidance for Shared-Use Park and Ride Engagement

The following guidance was developed based on the findings of this study and is organized in a five-step process for engaging in shared-use park and ride leasing arrangements.

Step 1. Develop Agreement Templates

The study's findings suggest that two types of agreement templates would be suitable for VDOT. One template should include language about lessee responsibility for maintenance, and the other template should include language about lessor responsibility for maintenance. In some instances, church property leases have very low compensation fees (e.g., \$1.00 per year for the Our Lady of Hope Catholic Church); however, the lessee is typically responsible for maintenance duties. In cases where compensation fees are higher (e.g., compensation is based on market value of neighboring land), maintenance responsibilities are typically the responsibility of the lessor.

For each agreement template, specific lease elements need to be included. As part of this study, lease agreements in both Virginia and other states were shared with TMPD staff. These leases should be reviewed when the templates are developed. At a minimum, the following lease elements are recommended:

- Terms
- Maintenance
- Improvements
- Responsibilities
- Insurance
- Liability/Indemnity
- Termination
- Inspection.

Depending on the type of property being leased and negotiations with the property owner, lease elements may vary and additional elements may be needed. Addendums to the core lease language developed for the templates can be made on a case-by-case basis. Once the templates are developed, it is recommended that the TMPD have the templates reviewed by the Office of the Attorney General for legal consideration.

Step 2. Identify Potential Leasing Locations

District Scoring Tools

As part of this study, potential leasing locations were identified in the Bristol, Lynchburg, and Staunton districts. The Lynchburg District used results from the investment strategy methodology where park and ride operations at three private lots were ranked in the top 5 of the 35 park and ride strategies scored in the district. This methodology, or similar criteria-based scoring schemes, should be used in all districts to identify top-ranked potential leasing opportunities.

Other Scoring Tools

Whereas the VDOT Park and Ride Investment Strategy uses a weighted scoring method of ADT, LOS, travel to job, and area type, there are other scoring strategies that may be considered if VDOT chooses to revise or restructure its project ranking methodology. For example, SMPC²⁸ developed criteria for determining the success of potential park and ride lots using geographic, demographic, and other relevant factors. The scoring method is as follows:

1. Geographic Factors
 - Relative Distance to Major Employment/Activity Centers (20%)
 - 10 Points = 24 to 36 miles from employment center
 - 9 Points = 23 or 37 miles from employment center
 - 8 Points = 22 or 38 miles from employment center
 - 7 Points = 21 or 39 miles from employment center

- 6 Points = 20 or 40 miles from employment center
 - 5 Points = 19 or 41 miles from employment center
 - 4 Points = 18 or 42 miles from employment center
 - 3 Points = 17 or 43 miles from employment center
 - 2 Points = 16 or 44 miles from employment center
 - 1 Point = any other distance
 - Number of Employment Centers Served (10%)
 - Two points are assigned for each employment center identified to a maximum of 10 points.
2. Area Roadway Factors
- Proximity to Major Commuter Corridor Ramps (10%)
 - 10 Points = 0.0-1.0 miles from major commuter corridor
 - 8 Points = 1.0-2.0 miles from major commuter corridor
 - 5 Points = 2.0-3.0 miles from major commuter corridor
 - 3 Points = 3.0-5.0 miles from major commuter corridor
 - 1 Points = greater than 5 miles from major commuter corridor
 - Proximity to Local Arterials (5%)
 - 10 Points = lot located on arterial
 - 5 Points = lot located within 0.25 miles of arterial
 - 1 Points = lot located 0.26-0.5 miles from arterial
 - 0 Points = lot located more than 0.5 miles from arterial
 - Highway Corridor Level of Service (5%)
 - 10 Points = level of service E and F
 - 5 Points = level of service D
 - 2 Points = level of service C, B and A
 - Highway Corridor Average Annual Daily Traffic Volumes (5%)
 - 10 Points = 50,000 and greater AADT
 - 8 Points = 49,999 to 30,000 AADT
 - 4 Points = 29,999 to 15,000 AADT
 - 2 Points = less than 15,000 AADT
3. Area Factors
- Visibility (5%)
 - 10 Points = lot is visible from adjacent arterials
 - 5 Points = lot is visible, but some visibility may be blocked by vegetation or surrounding structures
 - 0 Point = lot is difficult to see with poor visibility from surrounding arterials
 - Residential Dwellings (5%)
 - 10 Points = 2,000 dwelling units within two miles of location
 - 5 Points = less than 2,000 dwelling units within two miles of location
 - Safety and Security (5%) The score is a comparison to the national average. A score of 200 is double the national average and a score of 50 is half the national average.
 - 10 Points = 0 to 20 crime risk

- 9 Points = 21 to 40 crime risk
 - 8 Points = 41 to 60 crime risk
 - 7 Points = 61 or 80 crime risk
 - 6 Points = 81 or 100 crime risk
 - 5 Points = 101 to 120 crime risk
 - 4 Points = 121 to 140 crime risk
 - 3 Points = 141 to 160 crime risk
 - 2 Points = 161 to 180 crime risk
 - 1 Point = 181 or more crime risk
4. Transit Factors
- 10 Points = one or more round trip express routes
 - 8 Points = one or more round trip fixed-route service
 - 5 Points = circulator service available at the potential park-and-ride lot
 - 3 Points = circulator service available at the destination
 - 0 Points = no transit services
5. Site Factors
- Trail and/or Bike Access (4%)
 - 10 Points = there is trail access
 - 5 Points = there is bike lane access
 - 0 Points = there is no trail or bike lane access
 - Sidewalk Access (1%)
 - 10 Points = there is sidewalk access
 - 0 Points = there is no sidewalk access
 - Right of Way (5%)
 - 10 Points = there is right of way available
 - 0 Points = there is no right of way available.

Step 3. Gauge Interest From Private Lot Owners/Managers

For the highest ranked private park and ride lot strategies, the districts and/or the TMPD should initiate contact with the property owners or managers to gauge interest in a shared-use partnership. Adapted from Gabourel and Wambalaba,¹ the following are survey question suggestions that can be given to property owners/managers either in person, on the telephone, or via mail/email. Based on responses and the level of perceived interest, follow-up communication should be undertaken with the prospective lessor to share the lease template and negotiate contract terms.

1. What type of private property (ies) do you manage/own?
 - a. Regional shopping center
 - b. Community-level shopping center (Walmart, Kmart)
 - c. Neighborhood-level shopping center (supermarket and minor tenants)
 - d. Regional office parks
 - e. Mixed-use development/industrial parks
 - f. Other

2. Please rank the level of importance of the following issues in deciding whether to allow a Park & Ride lot on your property.
 - a. Liability
 - b. Limited # of parking spaces
 - c. Bus/auto accidents
 - d. Vehicle weight
 - e. Dripping fluids
 - f. Garbage associated with riders
 - g. Fumes from bus
 - h. Perceived threat of crime
 - i. Complaints from tenants/customers
 - j. Other
3. Please rank the level of importance of incentives that could be offered by the lessee to improve the cooperative working relationship.
 - a. Liability insurance
 - b. Installation of concrete pads
 - c. Free advertisement space
 - d. Maintenance agreements
 - e. Installation of amenities
 - f. Periodic cleaning
 - g. Maintenance of bus stops on site
 - h. Other.

Step 4. Secure Funding Mechanisms

Prior to signing lease agreements, the TMPD, in coordination with the districts, should leverage partnerships with localities, PDCs, and/or transit agencies to secure funding for the leases. Funding opportunities should be explored with SMART SCALE through the Office of Intermodal Planning and Investment and federal and state grant programs. Table 27 shows a list of potential federal and state grants that can be used to supplement funding of park and ride lots. The table was adapted from the San Diego and Western Riverside Counties' Park and Ride Strategy and Toolkit²⁷ with amendments (e.g., updated grant names), deletions (e.g., obsolete grants), and additions based on findings from other sources. Program descriptions are included with URLs that were active at the writing of this report. With respect to competing for matching federal and state grants, it is recommended that applicants requesting funds for a park and ride lot include other critical transportation components and elements such as improvements and amenities for bikeways, pedestrian access, transit, freeway, and roadway safety. This will allow the application to be more competitive but potentially improve the conditions of the park and ride lots near other transportation assets.²⁷

Table 27. Potential Funding Programs and Descriptions

Program	Agency	Description and URL^a
Federal Lands Access Program (FLAP)	FHWA	FLAP provides funds for projects on federal lands access transportation facilities that are located on or adjacent to or that provide access to federal lands. (URL: https://highways.dot.gov/federal-lands/programs-access)
Federal Lands Transportation Program (FLTP)	FHWA	FLTP funds projects that improve access within the federal estate (national forests, national parks, national wildlife refuges, national recreation areas, and other federal public lands) on transportation facilities in the national federal lands transportation inventory and owned and maintained by the federal government. (URL: https://highways.dot.gov/federal-lands/programs/transportation)
Highway Safety Improvement Program (HSIP)	FHWA	HSIP is a core federal-aid program with the purpose of achieving a significant reduction in fatalities and serious injuries on all public roads, including non-state-owned public roads and roads on tribal lands. (URL: https://safety.fhwa.dot.gov/hsip/)
National Highway Performance Program (NHPP)	FHWA	NHPP provides support for the condition and performance of the National Highway System (NHS), for the construction of new facilities on the NHS, and for ensuring that investments of federal-aid funds in highway construction are directed to support progress toward the achievement of performance targets established in a state's asset management plan for the NHS. (URL: https://www.fhwa.dot.gov/specialfunding/nhpp/)
Buses and Bus Facilities Program	FTA	The grants for the Buses and Bus Facilities Program make federal resources available to states and direct recipients to replace, rehabilitate, and purchase buses and related equipment and to construct bus-related facilities. Eligible recipients include direct recipients that operate fixed route bus service or that allocate funding to fixed route bus operators; state or local governmental entities; and federally recognized Indian tribes that operate fixed route bus service. (URL: https://www.transit.dot.gov/bus-program)
Rural Public Transportation Program	FTA	This program provides capital, planning, and operating assistance to states to support public transportation in rural areas with populations less than 50,000, where many residents often rely on public transit to reach their destination. Funds may be used for public transit services operating within small urban and rural communities, among small urban and rural communities, or between small urban and rural communities and urbanized areas (cities of 50,000 or more). (URL: https://www.transit.dot.gov/rural-formula-grants-5311)
Rural Transit Assistance Program (RTAP)	FTA	RTAP provides a source of funding to assist in the design and implementation of training and technical assistance projects and other support services tailored to meet the needs of transit operators in non-urbanized areas. Eligible recipients include states, local governments, and providers of rural transit services. (URL: https://www.transit.dot.gov/funding/grants/rural-transportation-assistance-program-5311b3)
Surface Transportation Block Grant Program (STBGP)	FHWA	STBGP provides flexible funding that may be used by states and localities for projects to preserve and improve the conditions and performance on any federal-aid highway, bridge, and tunnel projects on any public road; pedestrian and bicycle infrastructure; and transit capital projects, including intercity bus terminals. (URL: https://www.fhwa.dot.gov/specialfunding/stp/)
RAISE Discretionary Grant Program	U.S. DOT	The Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Discretionary Grant Program provides a unique opportunity for the DOT to invest in road, rail, transit, and port projects that promise to achieve national objectives. (URL: https://www.transportation.gov/RAISEgrants)

Transportation Alternatives Set-Aside (TA Set-Aside) Program	FHWA	The TA Set-Aside Program helps states fund a variety of activities related to improving transportation assets, including on- and off-road pedestrian and bicycle facilities, environmental mitigation, and creating or improving recreational trails projects. (URL: https://www.fhwa.dot.gov/environment/transportation_alternatives/)
Urbanized Area Formula Grants	FTA	These federal resources are available to urbanized areas and to governors for transit capital and operating assistance in urbanized areas and for transportation-related planning. (URL: https://www.transit.dot.gov/funding/grants/urbanized-area-formula-grants-5307)
Capital Investment Grants	FTA	These fund transit capital investments, including heavy rail, commuter rail, light rail, streetcars, and bus rapid transit. (URL: https://www.transit.dot.gov/capital-investment-grants-5309)
Community Development Block Grants	HUD	This is a flexible program that provides communities with resources to address a wide range of unique community development needs. (URL: https://www.hudexchange.info/programs/cdbg/)
State Transportation Improvement Program (STIP)	State Transportation Investment Funds	STIP is a multi-year capital improvement program of transportation projects on and off the State Highway System funded with revenues from the Transportation Investment Fund and other funding sources. STIP programming generally occurs every 2 years. Local agencies work through their regional planning district commissions or metropolitan planning organizations to nominate projects for inclusion in the STIP. (URL: https://www.transit.dot.gov/regulations-and-guidance/transportation-planning/statewide-transportation-improvement-program-stip)
CMAQ Program	FHWA, FTA	The Congestion Mitigation and Air Quality Improvement (CMAQ) Program provides funds to states for transportation projects designed to reduce traffic congestion and improve air quality, particularly in areas of the nation that do not attain national air quality standards. (URL: https://www.transportation.gov/sustainability/climate/federal-programs-directory-congestion-mitigation-and-air-quality-cmaq)
Accelerated Innovation and Deployment (AID) Demonstration Program	FHWA	Funding through the AID Demonstration Program promotes the deployment of proven innovations that can deliver road and bridge projects more cost-effectively among state, local, and tribal governments. (URL: https://www.fhwa.dot.gov/innovation/grants/)
Clean Cities Program	U.S. DOE	As part of the U.S. DOE's Vehicle Technologies Office, Clean Cities coalitions foster the nation's economic, environmental, and energy security by working locally to advance affordable, domestic transportation fuels; energy efficient mobility systems; and other fuel-saving technologies and practices. (URL: https://cleancities.energy.gov)

FHWA = Federal Highway Administration; FTA = Federal Transit Authority; HUD = Housing and Urban Development; U.S. DOT = U.S. Department of Transportation; U.S. DOE = U.S. Department of Energy.

^a URLs were active at the writing of this report.

Step 5. Document Lessons Learned

Once leases are secured and the shared-use parking lot is operational, in coordination with the TMPD, the districts should continue outreach to the lessors. This can be done with periodic surveys to obtain feedback on experiences and issues related to the park and ride lot and to document lessons learned for future shared-use engagements. Sample questions adapted from Gabourel and Wambalaba¹ include the following:

1. Since allowing a Park & Ride on your property, rank the level of your experience with the following:
 - a. Customer Base
 - b. Revenues from leasing
 - c. Transit service to the property
 - d. Criminal activity
 - e. Vandalism
 - f. Littering/trash
 - g. Space problems
 - h. Other
2. Please rank the level of importance of the following issues in deciding whether to continue a park & ride lot on your property.
 - a. Liability
 - b. Limited # of parking spaces
 - c. Bus/auto accidents
 - d. Vehicle weight
 - e. Dripping fluids
 - f. Garbage associated with riders
 - g. Fumes from bus
 - h. Perceived threat of crime
 - i. Complaints from tenants/customers
 - j. Other
3. Have you incurred any added financial costs due to the park & ride?
4. Please share any “Lessons Learned” from relationships with public transportation systems.

Conducting periodic surveys of the users of the lot is also a good way to obtain useful, qualitative information on travel and commute patterns and demographic information regarding those using a particular park and ride facility. In addition, surveys can provide data for analysis that may not otherwise exist, including user opinions on possible improvements or where a new facility would be most useful and valuable to the community. FDOT²³ recommends in-person interviews or windshield surveys conducted from 5:30 AM until 8:30 AM, and from 3:30 PM until 6:30 PM on Tuesday through Thursday in weeks with no holidays or other major events. Example of questions as suggested by FDOT²³ include the following:

1. Where did you begin your trip today?
2. How many miles and minutes did you travel to reach the park and ride lot?
3. I use this park and ride lot to:
 - a. Ride the bus
 - b. Meet my carpool
 - c. Meet my vanpool
 - d. Walk to my destination
 - e. Other
4. What is your destination today?
5. How many miles and minutes does it take you to travel to your final destination from this park and ride lot?

6. How did you travel to this park and ride lot?
7. If you arrived by auto, did you:
 - a. Drive alone
 - b. Share a ride
 - c. Get dropped off
8. If you shared a ride, how many were in the vehicle with you?
9. If you take the bus to your final destination, how satisfied are you with the convenience of service?
10. If you take the bus from this park and ride lot, or have in the past, how could this bus service be improved?
11. If you don't take the bus from this lot to your final destination, please tell us why.
 - a. My destination is close enough to walk to
 - b. The bus does not drop-off near my destination
 - c. The bus takes too long to get to my destination
 - d. The bus costs too much
 - e. There is nowhere to wait for the bus
 - f. I don't feel safe waiting for the bus
 - g. No bus route is connected with this park and ride lot
12. If you carpool or vanpool to your destination, how many others ride with you?
13. How did you learn about this park and ride lot?
14. How did you make this trip before you found out about the park and ride lot?
15. How many times per week do you use this park and ride lot?
16. How long have you been using this park and ride lot?
17. What do you think about this lot?
18. How could this lot be improved?

CONCLUSIONS

- *Although the core objective of park and ride lots remains consistent (e.g., reducing the number of vehicles traveling on roadways), the manner in which park and ride lots are implemented can vary. Outside of new construction where vacant land or unused right of way is transformed by public agencies into custom multimodal solutions, leased lots (through informal or formal agreements) with private property owners and proffered lots (or conditional zoning agreements) where park and ride facilities are required to be a part of a new development are two valuable tools to provide parking while promoting the success of development through induced demand at the businesses on the adjoining land.*
- *Most DOTs own park and ride lots whereas few DOTs participate in leasing arrangements with private lot owners. This is evidenced by the survey results where 71% of respondents indicated DOT ownership of park and ride lots and 23% of respondents indicated DOT leasing of park and ride lots. Although the location of leased park and ride lots varies considerably for both DOT and non-DOT agencies, the majority of leased lots are at shopping centers and churches. The DOTs with some of the highest numbers of leasing arrangements (California, Michigan, and New York) are also those with the highest number of DOT-owned lots that are routinely at or in excess of 80% capacity.*

- *Lease fees are variable and primarily depend on maintenance negotiations.* In most cases where lease agreements contain provisions for the lessee to provide maintenance, lease fees are negligible, whereas in lease agreements where the lessor provides maintenance, lease fees are typically higher and based on land values from tax assessments. Negotiations are a critical component of developing agreements, and in some cases, inclusion of incentives (such as repaving of lots) and promotional activities (i.e., marking materials to promote lots) can result in greater satisfaction and benefits to both the lessors and lessees.
- *There are documented lessor concerns with leasing arrangements; however, leasing of lots serves many benefits and the majority of agencies in both Virginia and other states that lease parking spaces from private lot owners have had positive experiences.* Documented concerns include pavement wear, overcrowding, litter, illegal parking, vandalism, theft, and snow removal. Lessors for the California, Maine, and Michigan DOTs terminated leases because of these issues, but these instances appear rare and have not affected interest in leasing as all three DOTs indicated interest in expanding their inventory of leased lots. In Virginia, both lessees and lessors indicated very positive experiences. Of interest, very few DOTs that lease lots require permits to park in leased spaces and TRAFFIX is the only agency in Virginia that requires permit parking in leased lots. Permit parking is one method to manage overcrowding and illegally parked cars, and contracts with solid enforcement mechanisms and maintenance agreements can help in alleviating these lessor concerns.
- *Although the TMPD maintains a detailed and comprehensive park and ride database, there are discrepancies specific to private lots with informal agreements.* A number of informal lots (i.e., lots without contract agreements) shown in the database in the Culpeper, Fredericksburg, and Northern Virginia districts are no longer operational. In some cases, private lot managers or owners had no idea that a park and ride lot existed on their property, which was the case with the Rixeyville, Restoration Church, and Forest Lakes North lots in the Culpeper District. In other cases, property managers or owners claimed that the users of the parking lot were parking illegally as found with the Crescent Inn and Restaurant lot in the Culpeper District and the Aquia Harbour and Rappahannock Community College lots in the Fredericksburg District. In addition, in the Northern Virginia District, based on information received from localities, there are a number of informal park and ride lots that have been discontinued but still exist in the VDOT database.
- *VDOT districts report that they need more park and ride lots, and there is interest in using shared-use parking arrangements.* All district respondents to the survey indicated that barriers exist for constructing new VDOT lots or expanding existing lots, which primarily include expense and land availability; thus, there is a need to explore other options. The VDOT Park and Ride Investment Strategy database revealed that lease agreements are a top priority in the Lynchburg District as exhibited by the scores and subsequent rankings of park and ride initiatives. Such methods to determine priority locations based on existing commute structure and potential impact are beneficial in identifying the most promising locations for initiating lease agreements. A park and ride lot must be conveniently located near an already popular route of travel and provide a significant enough advantage over single vehicle occupancy travel in order to attract user demand. Locating lots near HOV lanes and transit

routes can make a lot successful if the interfaces between the modes of travel are handled properly.

RECOMMENDATIONS

1. *VDOT's TMPD should update its inventory of park and ride lots and remove private lots that are identified as having informal agreements from its public facing interactive map. Due to the frailty and unreliable elements of informal agreements, removing lots with informal agreements from the VDOT park and ride interactive map will provide the traveling public with more reliable information on operational park and ride locations.*
2. *The TMPD should work with the districts to update its park and ride investment strategy methodology to include consideration of shared-use lots in each district. This should involve re-applying the methodology in each district to include privately owned lots as candidate locations similar to what the Lynchburg District developed. Consideration should also be given to developing a new scoring methodology similar to the one established by the SMPC. Whereas the VDOT Park and Ride Investment Strategy methodology used a weighted scoring scheme using four key criteria (i.e., ADT, LOS, travel to job, and area type), the SMPC scoring methodology includes several more criteria that may provide a more accurate depiction of priority projects. Upon updating of the VDOT Park and Ride Investment Strategy methodology, an inventory of the highest scoring candidate private lot locations should be developed with attributes similar to those that the Bristol District created, including the following:*
 - Nearest Interstate Exit
 - Latitude/Longitude
 - Ownership
 - County
 - County Parcel Number
 - Deed Book
 - Deed Page
 - Tax Assessed Land Value per Acre
 - In Flood Zone (yes/no)
 - Notes
 - Google Street View link.
3. *With the assistance of VTRC, the TMPD should coordinate with the districts to initiate one or two pilot studies of leasing private lots following elements provided in the guidance developed as part of this study. Ideally, two pilot study locations should be identified: one where a contract provision specifies that maintenance is the responsibility of the lessee (VDOT), and the other where a contract provision specifies that maintenance is the responsibility of the lessor. These two types of maintenance provisions were found to be common throughout public-private lease contracts, and a pilot study would offer the ability to document lessons learned from these two types of arrangements. Based on responses from*

the VDOT districts, initial consideration for pilot studies should be focused on the Lynchburg District where it was shown, based on priority rankings, that there is a documented and validated need. The Bristol and Staunton districts are other options, as they indicated interest in shared-use arrangements, with the Bristol District providing specific locations.

4. *Upon completing the pilot studies and documenting lessons learned, the TMPD should coordinate with the districts to develop a park and ride leasing program.* VDOT has the ability to enter into private lease arrangements and should do so with careful consideration of the details provided in the guidance, which included (1) developing agreement templates; (2) identifying potential leasing locations; (3) gauging interest from private lot owners or managers; (4) securing funding mechanisms; and (5) documenting lessons learned.

IMPLEMENTATION AND BENEFITS

Researchers and the technical review panel (listed in the Acknowledgments) for the project collaborate to craft a plan to implement the study recommendations and to determine the benefits of doing so. This is to ensure that the implementation plan is developed and approved with the participation and support of those involved with VDOT operations. The implementation plan and the accompanying benefits are provided here.

Implementation

With regard to Recommendation 1, VDOT’s TMPD will implement this recommendation by the summer of 2022. Based on the findings discussed in the “Existing Lessors and Lessees in Virginia” section of this report, lots with informal agreements and lots that have been discontinued as park and ride facilities are identified.

With regard to Recommendation 2, the TMPD, in consultation with its on-call consultant, will work with the districts to develop an updated park and ride investment strategy database to include candidate private lot locations (by using the current VDOT Park and Ride Investment Strategy methodology or other methods) by the end of 2023 (this would coincide with the end of the pilot studies described in Recommendation 3).

With regard to Recommendation 3, with the assistance of VTRC, the TMPD will engage with one or two districts to initiate pilot leasing studies by the end of 2022. This would include following elements provided in the guidance including drafting lease agreements and gauging interest from prospective lessors through interviews or surveys.

With regard to Recommendation 4, the TMPD will begin development of a private park and ride leasing program by the end of 2023. This timeframe coincides with the completion of the pilot studies and the updating of the VDOT Park and Ride Strategy database.

Benefits

Shared-use park and ride lots have many benefits and some limitations; however, the limitations can be overcome, and the benefits outweigh the limitations.²⁶ This study and resulting guidance provide VDOT with a framework for establishing shared-use park and ride lots. The economic benefits of utilizing existing lots compared to securing land and building new lots could be significant and the traveling public, lot owners, and transit agencies can benefit from these additional park and ride spaces.

Formal lease contracts with private lot owners are necessary and ensure parking privileges for a specific period provided the contract terms are not violated. With respect to implementing Recommendation 1, informal or voluntary agreements provide no such assurance and spare all parties of obligations normally written into contracts; therefore, by removing lots with informal agreements from the park and ride inventory, VDOT will be able to maintain consistency with its database of operational park and ride lots.

With respect to implementing Recommendation 2, by updating its park and ride investment strategy database in each district to include private lots, the TMPD can develop an inventory of potential shared-use park and ride locations and rank them based on specific criteria. This information will be valuable as VDOT continues to seek cost-efficient methods to expand mobility options to the traveling public.

With respect to implementing Recommendation 3, pilot studies can provide benefits by evaluating performance metrics of the shared-use strategy with short-term implementation costs and without long-term commitment. In addition, they offer the ability to document lessons learned (including from the perspectives of the lessor and the users of the park and ride lot) that will ultimately improve all aspects of a newly initiated park and ride leasing program.

By following the framework provided in the guidance for initiating park and ride lease agreements, implementing Recommendation 4 will provide VDOT with more cost-effective means to increase its inventory of park and ride lots, will provide the traveling public with increased multimodal opportunities, and will provide transit agencies with increased ridership opportunities. In addition, private lot owners can benefit from increased patronage. Finally, contract lots can be helpful as a preliminary determinant to test if a lot would be successful in a given area. Prior to acquisition and construction of a new park and ride lot, it should be confirmed that there is suitable demand for the lot. In areas where appropriate, contract lot usage may serve as an indicator.³⁰

ACKNOWLEDGMENTS

The authors are thankful to the following individuals who served on the technical review panel for this study: Shane Sawyer (Project Champion and Multimodal Planning Programs Manager, VDOT TMPD), Heidi Mitter (Bike/Pedestrian and Park and Ride Lot Coordinator, VDOT Northern Virginia District), Stephen Haynes (Fredericksburg District Planning Manager, VDOT Fredericksburg District), John O’Keeffe (Account Executive, Ridefinders), Kelly

Hitchcock (Planning and Development Director, Central Virginia Planning District Commission), and Noah Goodall (Senior Research Scientist, VTRC). The authors also thank the following individuals for their assistance: Blake Ailor, David Cook, and Brad Reed from VDOT; Amy O’Leary, Ramkumar Venkatanarayana, Kevin Wright, and Linda Evans from VTRC; Scott Gross from Loudoun County; Randall Keeys from Fairfax County; Meagan Landis from Prince William County; Kristin Nutter from VRE; Emily Cass and Monique Lynch from TRAFFIX; Leigh Anderson and Kate Gibson from GWRC; all survey respondents from state DOTs/agencies; and the lessor survey respondents from Virginia.

REFERENCES

1. Gabourel, K., and Wambalaba, F. *Commuter Choice Managers and Parking Managers Coordination: Public Transportation Synthesis Series*. National Center for Transportation Research, Center for Urban Transportation Research, University of South Florida; Office of Special Programs, U.S. Department of Transportation and Florida Department of Transportation, 2002.
2. Metropolitan Washington Council of Governments. *Three Big Takeaways From the 2019 State of the Commute Survey*. <https://www.mwcog.org/newsroom/2019/09/24/three-big-takeaways-from-the-2019-state-of-the-commute-survey/>. Accessed June 20, 2021.
3. San Luis Obispo Council of Governments. *2017 Park & Ride Lot Study*, San Luis Obispo. San Luis Obispo, Calif., 2017.
4. American Association of State Highway and Transportation Officials. *Guide for Park-and-Ride Facilities*. Washington, D.C., 2004.
5. Virginia Department of Transportation. *Park and Ride in Virginia*, 2019. <http://www.virginiadot.org/travel/parkride/about.asp>. Accessed September 6, 2019.
6. Spillar, R.J. *Park-and-Ride Planning and Design Guidelines*. Parsons Brinckerhoff, New York, 1997.
7. Burch, E. \$800,000 Park & Ride Lot Still Not Being Utilized. <https://abc3340.com/news/local/800000-park-ride-lot-still-not-being-utilized>. Accessed May 15, 2020.
8. The Free Lance Star. Editorial: A New Park & Ride What? Lot. https://fredericksburg.com/opinion/editorial-a-new-park-ride-what-lot/article_be7dcd13-a6ed-555f-86d5-ef335ec772a5.html. Accessed September 30, 2021.
9. Cherrington, L.K., Brooks, J., Cardenas, J., Elgart, Z., Galicia, L.D., Hansen, T., Miller, K., Walk, M.J., Ryus, P., Semler, C., and Coffel, K. *Decision-Making Toolbox to Plan and Manage Park-and-Ride Facilities for Public Transportation: Guidebook on Planning and*

- Managing Park-and-Ride*. TCRP Research Report 192. Transportation Research Board, Washington, D.C., 2017.
10. Stieffenhofer, K.E., Barton, M., and Gayah, V.V. Assessing Park-and-Ride Efficiency and User Reactions to Parking Management Strategies. *Journal of Public Transportation*, Vol. 19, No. 4, 2016, pp. 75-92.
 11. Arnold, E.D. Joint-Use Park-and-Ride Lots. VTRC 89-TA5. Virginia Transportation Research Council, Charlottesville, 1989.
 12. Virginia Proffer Solutions. The Proffer System in Virginia. <https://www.virginiaproffersolutions.com/the-law>. Accessed April 5, 2020.
 13. Virginia Department of Transportation. VDOT Park and Ride Lot Investment Strategy. <https://www.arcgis.com/apps/MapTour/index.html?appid=e1350a00284e46428a535a18d4451aaf>. Accessed September 15, 2021.
 14. Jacobs. FEIS Parking *Demand*. Colorado Department of Transportation, Denver, 2010.
 15. Nordstrom, J., and Christiansen, D.L. *Guidelines for Estimating Park-and-Ride Demand*. UMTATX81-1064 IF. Texas Transportation Institute, College Station, 1981.
 16. Nungesser, L.G., and Ledbetter, N.P. *Procedures for Estimating Park-and-Ride Demand in Large Texas Cities*. Research Report 339-7. Texas Transportation Institute, College Station, 1987.
 17. Peng, C., and Mohamad, D. The Development of Model Estimation to Determine Parking Needs at LRT Stations in Suburban Area. In *Proceedings of the Eastern Asia Society for Transportation Studies*, Vol. 5, 2005, pp. 877-890.
 18. Vincent, M. *Park and Ride: Characteristics and Demand Forecasting*. Research Report 328. Land Transport New Zealand, Waterloo Quay, Wellington, 2007.
 19. Turnbull, K. *NCHRP Synthesis 213: Effective Use of Park and Ride Facilities*. Transportation Research Board, Washington, D.C., 1995.
 20. Xu, Y., Dougald, L.E., and Miller, J.S. *Development of Demand Estimation Models for the Virginia Department of Transportation's Park and Ride Facilities*. VTRC 21-R19. Virginia Transportation Research Council, Charlottesville, 2021.
 21. Song, Z., and He, Y. *Innovative Park-and-Ride Management for Livable Communities*. TRCLC 14-10. Transportation Research Center for Livable Communities, Kalamazoo, Mich., 2015.

22. Wambalaba, W.F., Gabourel, K., and Goodwill, J. *Shared Use Park & Ride Strategy: Opportunities for Coordination Between Stakeholders*. Center for Urban Transportation Research, University of South Florida, Tampa, 2011.
23. Florida Department of Transportation. *State Park-and-Ride Guide*. Tallahassee, 2012.
24. American Public Transit Association. Transit Parking 101. APTA Standards Development Program, Sustainability and Design Working Group. APTA SUDS-UD-RP-008-15. Washington, D.C., 2015.
25. Gayah, V.V., Stieffenhofer, K., and Shankar, V. How Can We Maximize Efficiency and Increase Person Occupancy at Overcrowded Park and Rides? WA-RD 830.1. The Thomas D. Larson Pennsylvania Transportation Institute, University Park, 2014.
26. Franklin Regional Council of Governments and Franklin County Transportation Planning Organization. Franklin County Park and Ride Study. Greenfield, Mass., 2008.
27. Riverside County Transportation Commission, San Diego Association of Governments, and California Department of Transportation. Park & Ride Strategy and Toolkit: Park & Ride Regional Strategy for San Diego and Western Riverside Counties, July 2019.
28. Savannah Metropolitan Planning Commission and the Coastal Region MPO. *Regional Park and Ride Initiative: Technical Memorandum #5, Financial Analysis and Management Options*. 2014.
29. Walton, M. Allegheny Valley Fire Company Ending Park and Ride Lease With Port Authority. TribLive.com, June 20, 2016.
30. Noel, E.C. Implementation and Operation of Park and Ride Lots. *Transportation Research Record: Journal of the Transportation Research Board*, No. 1232, 1989, pp. 76-83.
31. Holguin-Veras, J., Hart, W.H., Reilly, J., and Aros-Vera, F. *New York City Park and Ride Study*. Report No. C-07-66. University Transportation Research Center, Rensselaer Polytechnic Institute, New York, 2012.
32. Iowa Department of Transportation. *IOWA DOT Park and Ride System Plan*. Office of System Planning, Ames, 2014.
33. National Academies of Sciences, Engineering, and Medicine. Models to Support State-Owned Park and Ride Lots and Intermodal Facilities. *Research Results Digest 359*. The National Academies Press, Washington, D.C., 2012.
34. City of Las Cruces. *Park and Ride Plan for the Las Cruces Urban Area*. Transit Department, 2005.

35. Northern Virginia Transportation Commission. Commuter Choice.
<https://novatransit.org/programs/commuterchoice/>. Accessed September 5, 2021.
36. Virginia's Legislative Information System. Session 2015: HB 1887 Commonwealth Transportation Board; Membership, Funding, Updates Annual Reporting, and Allocations.
<https://lis.virginia.gov/cgi-bin/legp604.exe?151+sum+HB1887>. Accessed September 12, 2021.

APPENDIX A

STATE DOT SHARED USE PARK AND RIDE SURVEY

Thank you for participating in this survey about park-and-ride lots. Your responses will inform a Virginia Department of Transportation (VDOT) research effort. Before we begin, please provide your contact information so that we may contact you if we have follow-up questions.

* Required



1. Name: *

2. State DOT: *

3. Email address: *

4. Phone number:

5. Approximately how many park-and-ride lots do you have in your state (including lots owned by your DOT, transit agencies, and private entities)? *

6. Does your DOT own any park-and-ride lots? *

Mark only one oval.

Yes

No *Skip to question 15*

7. Approximately, what percentage of park-and-ride lots is owned by your DOT? *

8. Does your DOT employ a park-and-ride manager/coordinator? *

Mark only one oval.

Yes

No *Skip to question 10*

9. Could you provide contact information for your DOT's park-and-ride manager/coordinator including name, title, email address, and phone number? If this is yourself, please indicate "myself".

10. Do you collect occupancy data on your DOT owned lots? *

Mark only one oval.

Yes

No *Skip to question 13*

Unknown *Skip to question 13*

11. What is the typical frequency of collecting occupancy data? *

Mark only one oval.

At least quarterly

At least once a year

Every other year

No established frequency

Other: _____

12. Are there DOT owned lots that collect occupancy data continuously using real-time technology? *

Mark only one oval.

- Yes
- No
- Unknown

13. Are there DOT owned lots where 80% or more of spaces are typically occupied? *

Mark only one oval.

- Yes
- No *Skip to question 15*
- Unknown *Skip to question 15*

14. Approximately, what percent of your lots are typically occupied at a rate of 80% or more? *

15. Does your DOT lease park-and-ride lot spaces from private entities (such as a shopping center, church, sporting facility, or development)? *

Mark only one oval.

- Yes
- No *Skip to question 33*
- Unknown *Skip to question 33*

16. Approximately, how many lots does your DOT lease? *

17. Approximately, what percentage of those leased lots are located in shopping centers? *

18. Approximately, what percentage of those leased lots are located at churches? *

19. Approximately, what percentage of those leased lots are located at sporting facilities? *

20. Approximately, what percentage of those leased lots are located in developments (such as business parks, apartment complexes, etc.). *

21. Are there any other locations where your DOT leases park-and-ride lots? If yes, please indicate where.

22. What are the typical duration terms for your DOT's leased lots? *

Mark only one oval.

1 year

2 years

More than 2 years

Other: _____

23. What is the average lease price (per year) for a DOT leased parking space? If there is a range in lease price/space depending on location, please provide that range. *

24. What funding source(s) are used by your DOT for leasing park-and-ride lots? (If grants, please indicate the type of grants) *

25. Do any of your DOT leased lots require parking permits to use the lot as a park & ride? *

Mark only one oval.

Yes

No

Unknown

26. Would you be willing to provide copies or examples of terms/agreements for your DOT's leased park-and-ride lots? (If yes, we will follow up to obtain copies) *

Mark only one oval.

- Yes
- Examples not available

27. Have there ever been concerns about DOT leased lots brought to your attention by the lessor, users of the lot, and/or others? *

Mark only one oval.

- Yes
- No *Skip to question 29*
- Unknown *Skip to question 29*

28. Please briefly describe the concerns brought to your attention. *

29. Have there ever been cases where a lot owner has terminated a lease? *

Mark only one oval.

- Yes
- No *Skip to question 31*
- Unknown *Skip to question 31*

30. Please describe the reason(s) for lease termination(s). *

31. Is your DOT seeking to expand its inventory of leased park-and-ride lots? *

Mark only one oval.

- Definitely plan to expand in the future
- Interested but no definite plans
- Not seeking to expand at this time

32. Are you aware of any studies performed on your DOT leased lots? (If yes, we will follow up to obtain information on the studies) *

Mark only one oval.

Yes

No *Skip to question 38*

33. Are you aware of any legal barriers that prevent your DOT from entering into a park-and-ride leasing agreement with private lot owners? *

Mark only one oval.

Yes

No *Skip to question 35*

34. Please provide information on the legal barriers (e.g., state codes, etc.). *

35. What do you consider the primary barriers to private lot lease agreements? (select all that apply) *

Check all that apply.

Legality

Liability

Funding

Lack of need

Lack of support

Other: _____

36. Have there ever been any discussions from your DOT about leasing park-and-ride lots form a private entity? *

Mark only one oval.

Yes

No

Unknown

APPENDIX B

OTHER STATE AGENCY SHARED USE PARK AND RIDE SURVEY

Thank you for participating in this survey about park-and-ride lots. Your responses will inform a Virginia Department of Transportation (VDOT) research effort. Before we begin, please provide your contact information so that we may contact you if we have follow-up questions.

* Required



1. Name: *

2. Agency name: *

3. Email address: *

4. Phone number:

5. Does your agency own any park-and-ride lots? *

Mark only one oval.

Yes

No *Skip to question 12*

6. Approximately, how many park-and-ride lots are owned by your agency? *

7. Do you collect occupancy data on your agency owned lots? *

Mark only one oval.

Yes

No *Skip to question 10*

Unknown *Skip to question 10*

8. What is the typical frequency of collecting occupancy data? *

Mark only one oval.

At least quarterly At

least once a year

Every other year

No established frequency

Other: _____

9. Are there lots your agency owns that collect occupancy data continuously using real-time technology? *

Mark only one oval.

Yes

No

Unknown

10. Are there lots your agency owns where 80% or more of spaces are typically occupied? *

Mark only one oval.

- Yes
- No *Skip to question 12*
- Unknown *Skip to question 12*

11. Approximately, what percent of your lots are typically occupied at a rate of 80% or more? *

12. Does your agency lease park-and-ride lot spaces from private entities (such as a shopping center, church, sporting facility, or development)? *

Mark only one oval.

- Yes
- No *Skip to question 30*
- Unknown *Skip to question 30*

13. Approximately, how many lots does your agency lease? *

14. Approximately, how many of those leased lots are located in shopping centers? *

15. Approximately, how many of those leased lots are located at churches? *

16. Approximately, how many of those leased lots are located at sporting facilities? *

17. Approximately, how many of those leased lots are located in developments (such as business parks, apartment complexes, etc.). *

18. Are there any other locations where your agency leases park-and-ride lots? If yes, please indicate where.

19. What are the typical duration terms for your agency's leased lots? *
Mark only one oval.

- 1 year
- 2 years
- More than 2 years
- Other: _____

20. What is the average lease price (per year) for a leased parking space? If there is a range in lease price/space depending on location, please provide that range. *

21. What funding source(s) are used by your agency for leasing park-and-ride lots? (If grants, please indicate the type of grants) *

22. Do any of your agency leased lots require parking permits to use the lot as a park &ride? *

Mark only one oval.

- Yes
- No
- Unknown

23. Would you be willing to provide copies or examples of terms/agreements for your agency's leased park-and-ride lots? (If yes, we will follow up to obtain copies) *

Mark only one oval.

- Yes
- Examples not available

24. Have there ever been concerns about leased lots brought to your attention by the lessor, users of the lot, and/or others? *

Mark only one oval.

- Yes
- No *Skip to question 26*
- Unknown *Skip to question 26*

25. Please briefly describe the concerns brought to your attention. *

26. Have there ever been cases where a lot owner has terminated a lease? *

Mark only one oval.

- Yes
- No *Skip to question 28*
- Unknown *Skip to question 28*

27. Please describe the reason(s) for lease termination(s). *

28. Is your agency seeking to expand its inventory of leased park-and-ride lots? *

Mark only one oval.

- Definitely plan to expand in the future
- Interested but no definite plans
- Not seeking to expand at this time

29. Are you aware of any studies performed on your leased lots? (If yes, we will followup to obtain information on the studies) *

Mark only one oval.

- Yes
- No *Skip to question 35*

30. Are you aware of any legal barriers that prevent your agency from entering into a park-and-ride leasing agreement with private lot owners? *

Mark only one oval.

- Yes
- No *Skip to question 32*

31. Please provide information on the legal barriers (e.g., state codes, etc.). *

32. What do you consider the primary barriers to private lot lease agreements? (select all that apply) *

Check all that apply.

- Legality Liability
- Funding
- Lack of need
- Lack of support
- Other: _____

33. Have there ever been any discussions from your agency about leasing park-and-ride lots from a private entity? *

Mark only one oval.

- Yes
- No
- Unknown

34. On a scale of 1 (low probability) to 5 (high probability) what is the probability of your agency engaging in a park-and-ride lot leasing program in the future? *

Mark only one oval.

	1	2	3	4	5	

Low probability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	High probability

35. Are you aware of park-and-ride leasing arrangements made by other agencies such as regional commissions, local agencies, and/or transit agencies? *

Mark only one oval.

- Yes
- No *Skip to question 38*

36. Please provide the agency names and contact information if available.

37. Are you aware of any studies performed by other agencies on their leased lots? (If yes, we will follow up to obtain information on the studies) *

Mark only one oval.

Yes

No

38. Would you like to receive a copy of this study's final report when it is published? *

Mark only one oval.

Yes

No

Thank You!

Your participation in this survey is appreciated!