LOS ALAMOS
NATIONAL LABORATORY
Parking and Transportation Services

TRANSPORTATION PLAN FY24

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Date

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EXECUTIVE SUMMARY

Transportation planning at Los Alamos National Laboratory (LANL) is more important than ever. The Lab is expanding at an unprecedented pace, having hired over 2,000 new employees over the last year.

That growth has presented some challenges on campus, where physical expansion is limited by the Lab's hilltop setting. Where space exists, LANL must prioritize building mission-specific facilities and work sites.

The growth has already taxed existing infrastructure, such as roadways and parking lots. There will simply not be enough parking to accommodate the influx of new hires; in some areas of campus–particularly on the evolving Pajarito Corridor–demand for parking has already surpassed supply.

There is a concerted effort to find solutions, with a dedicated transportation staff now working to manage the parking inventory and provide employees with alternatives to the single-occupant vehicle (SOV) commute.

The Parking & Transportation Services (PATS) team has in the last year rolled out a new vanpool program, initiated the Lab's first express park-and-ride service, and begun a trip-planning service to help employees better understand their transit options. A 2023 commuter survey showed that most Lab employees would consider commuting alternatives if a SOV substitute met their needs. That feedback, combined with studies done by external partners, will inform PATS' fiscal year 2024 (FY24) plans that include adding new express bus routes, improving internal transit, and pursuing incentives.

In FY24, the Lab will also continue efforts to ease employee parking frustrations, from developing a proposal for an assigned lot program to expanding internal shuttle service between lesser-used parking areas and common work sites.

Building an efficient, effective transportation and parking network requires a multi-faceted approach—collaboration across the Lab will be essential as LANL continues to grow.

1 Challenges and Existing Conditions

Transit and transportation planning begins with understanding an agency's transportation objectives (including leadership and employee sentiment); its organizational structure; its projected growth and existing constraints; and what resources, like staff and vehicles, are available.

1.1 Traffic Congestion Observations

The LANL transportation program must address the increasing traffic congestion resulting from the Lab's unprecedented growth. LANL's workforce is 75% larger than just a decade ago, with 17,000 current employees (badge holders) compared to 9,500 in 2013. Backups and delays getting into and out of the Lab negatively impact both that workforce and the Lab's business operations.

LANL's rapid growth has served to exacerbate some preexisting issues. Even before the COVID-19 pandemic began in 2020 and forced a temporary Lab closure, afternoon bottlenecks were common on Diamond Drive and along East Jemez Road, just west of NM4.

Since the pandemic, employees are increasingly telecommuting, working hybrid schedules or, as in TA-55, staggering their shifts. Those trends have two key benefits: mitigating traffic and allowing LANL to better manage its limited supply of on-site parking.

However, varied work schedules are not sufficient to solve the traffic challenges. Modeling has demonstrated the need to also provide alternative transportation options. The Texas A&M Transportation Institute's microscopic traffic model of Los Alamos National Laboratory found the Lab lacks sufficient parking to accommodate continued growth and that a large influx of new employees would greatly tax the existing roadway system, even if LANL had enough parking.

The VISSIM model, that simulates multi-modal traffic flows, was used to show the importance of providing alternative transportation options in the event a high influx of new employees arrived onsite via by single-occupant vehicles, or SOVs.

In this case, the model assumed 3,000 more employees in the Pajarito Corridor, each representing an inbound and outbound trip. The model added those 6,000 new trips to a daily base of 45,000 trips, bringing the total to 51,000 trips. The study assumed the trips approached the Lab from NM 502.

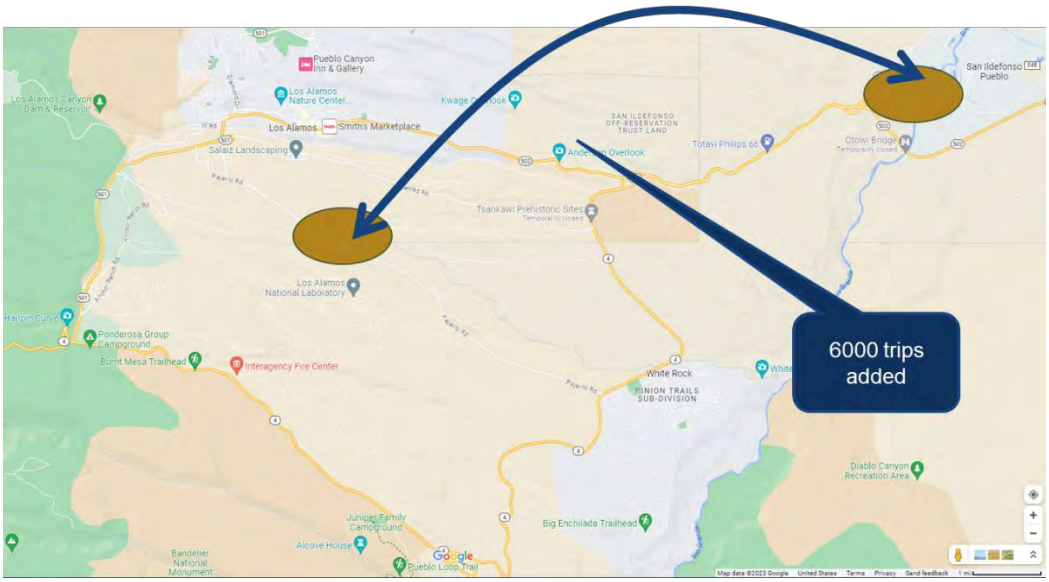

Figure 1. VISSIM model development

The model allowed for the traffic to balance throughout the network. The routes with the shortest travel time (through the Town Site, NM 4, or Jemez) will be loaded with traffic as the model iterations are completed. The results of this analysis show the impact of these additional trips on the roadway network with particularly heavy impact on critical locations such as the East Jemez/NM 4 intersection and the Trinity roundabout.

In addition to the congestion and parking concerns, the safety implications of this additional SOV traffic are a key concern. The greater the exposure (number of cars) with the infrastructure not changing significantly (risk) will certainly yield more crashes. Using an alternative transportation program to reduce the number of cars on the road will help lower the risk. One analysis found that the Lab could avoid 72 crashes–one of them fatal–over a three-year period if transit is favored over SOV commuting. That is significant for a safety-focused organization like LANL.

The model results show large impacts to the network and that the roadway system has a limit, or "tipping point," as more vehicles start using the already stressed system.

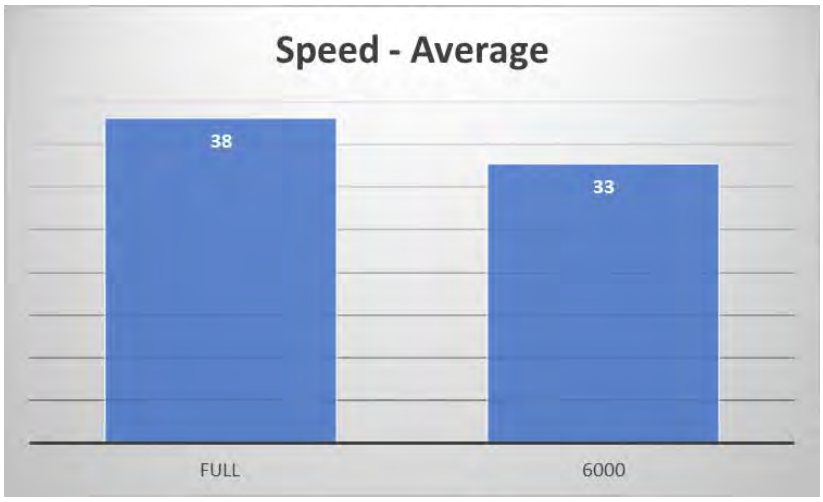

Figure 3. Average speed (MPH)

The additional trips would reduce the average speed by 15% (see above chart), while the average number of stops in traffic would increase by 149% (see below).

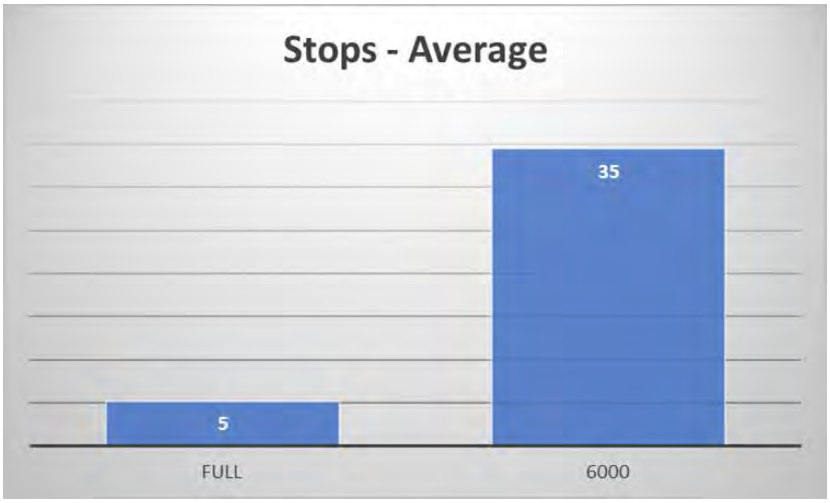

Figure 4. Average stops

1.2 Parking Observations

The Laboratory's parking inventory constantly fluctuates because construction projects and the associated material laydowns routinely consume parking spaces, sometimes temporarily and sometimes permanently. Regardless of construction activity, the overall number of available parking spaces (7,840) across TA-3 and the upper Pajarito Corridor is inadequate if all 17,000 Lab employees arrive at work in SOVs. Even taking into account the approximately 20% of employees on a telework or hybrid schedule, the level of parking is still inadequate and alternative solutions are needed.

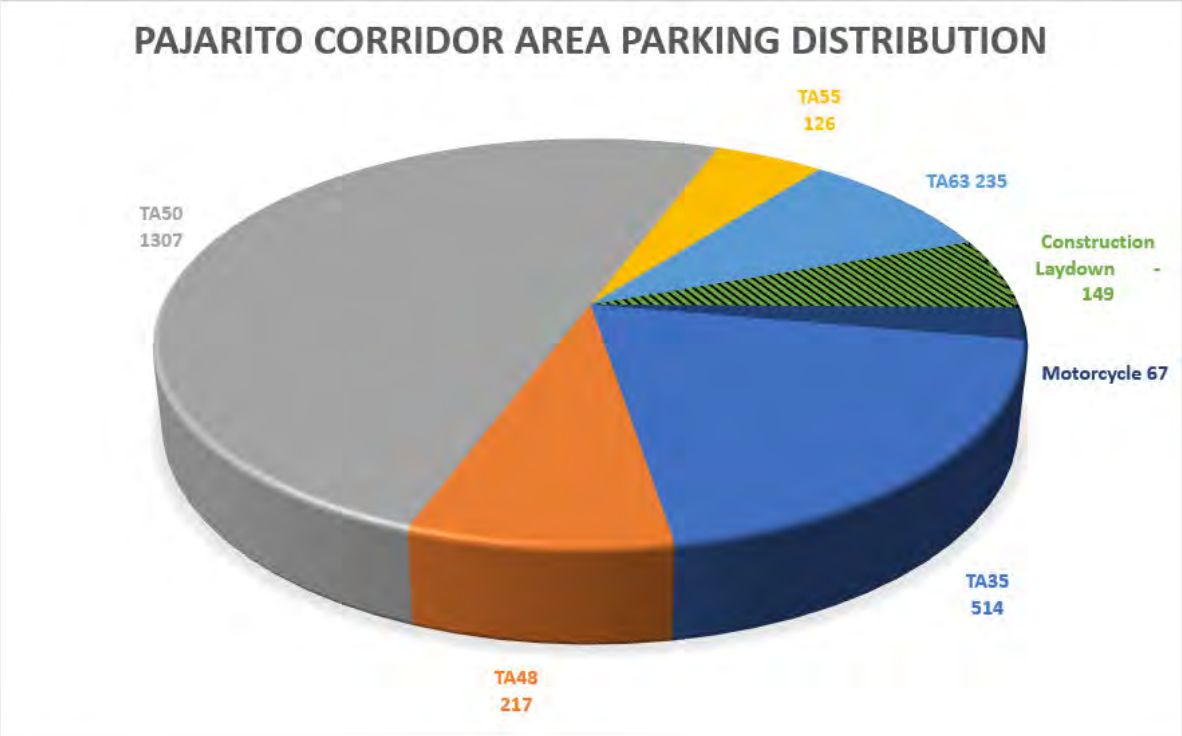

Figure 5. Pajarito Corridor parking as of FY23 Q2

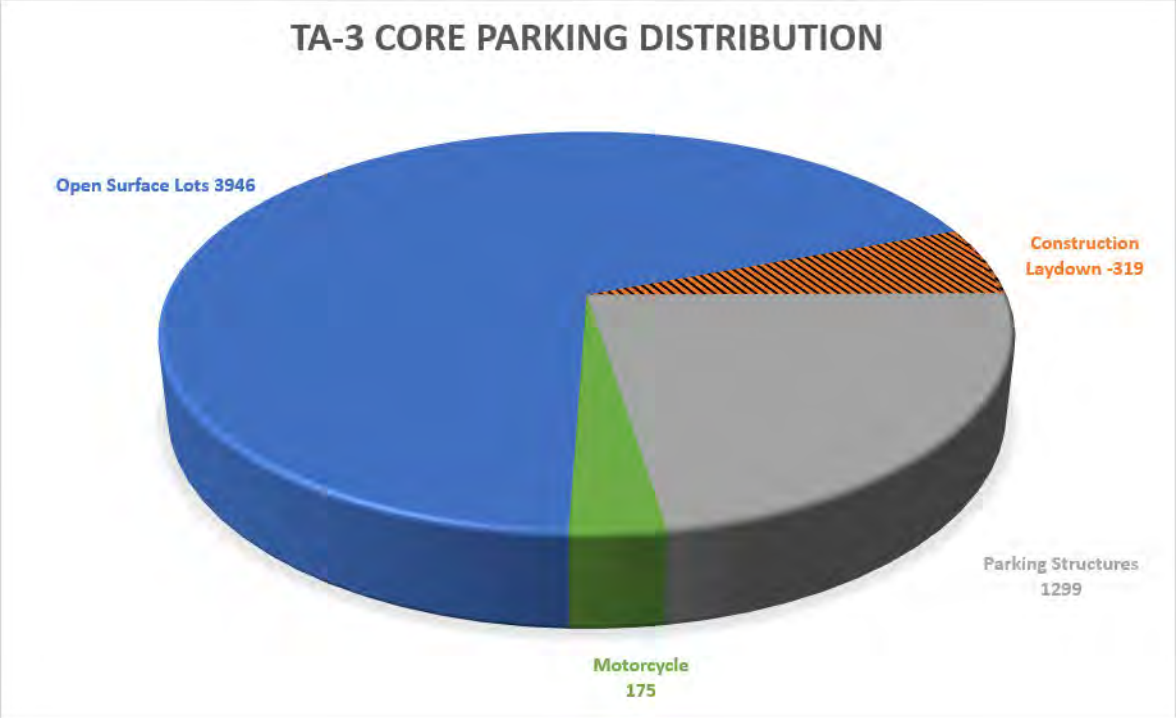

Figure 6. TA-3 Core parking as of FY23 Q2

1.3 Mission Requirements and Growth Expectations

Transportation planning will remain critical as the Lab's workforce expansion is slated to continue in the years ahead. The National Nuclear Security Administration (NNSA) has directed LANL to develop the capacity in TA-55 to produce at least 30 pits-per-year. As shown in LANL's Campus Master Plan, this growth is expected to add 1,500 staff for direct mission support into the Pajarito Corridor over the next several years. However, the parking deficit will be much greater due to new structures being added where existing parking is located. Figure 7 shows the buildout for planning areas along the Pajarito Corridor.

Figure 7. Updated Pajarito Corridor Campus Master Plan

1.4 Staff and Leadership Engagement

To develop and execute an effective long-term transportation plan, it is critical to keep employees informed and to solicit their feedback. The newly established Parking & Transportation Services (PATS) team routinely seeks stakeholder input while crafting and implementing new programs and processes. The PATS team is also making a concerted effort to communicate the Lab's various commuting options, new services, and policy updates.

The PATS team gave over 110 presentations between February and September of 2023, reaching more than 2,500 employees. Topics varied depending on the audience but included the Lab's transportation plan, alternative transportation options for employees, and the 2023 parking policy update.

Employees can contact the team via a new, one-stop-shop email address, pats@lanl.gov, if they have questions about transit, parking or other related matters. The team received 374 emails between February and September 2023.

1.5 Key Successes/Performance in FY23

In FY23, LANL advanced several initiatives called for in last year's transportation plan. Some are detailed later in this report, but a summary of the key successes includes the following:

- **Establishing the Parking & Transportation Services Team:** The Lab hired its first transportation director in FY22 and spent much of FY23 building a team to support the program, which is now known as Parking & Transportation Services, or PATS.
- **Launching the Pojoaque Express bus service:** In conjunction with the Pueblo Alliance, LANL began offering employees free and direct bus service to TA-35 and TA-55 from a park-and-ride lot at Pojoaque's Cities of Gold Casino. Ridership grew from 12 passenger trips per day in May to nearly 100 passenger trips per day in September.
- **Starting a vanpool program:** LANL and its partner, Commute with Enterprise, collaborated to unveil a new vanpool program. Vanpooling brings together five or more employees who live near one another to split the costs of renting a new van or SUV for commuting purposes. Two vanpools were active in FY23, and more are expected to come online in FY24 after the New Mexico Department of Transportation rolled out a new statewide subsidy.
- **Updating the parking policy:** PATS staff worked with other organizations around the Lab to develop a new parking policy intended to better manage available space and promote safety, efficiency, and fairness. The policy clarified driver responsibilities, increased parking fines and created new penalties for nonpayment.
- **Conducting an employee commute survey:** PATS conducted a survey in the spring of 2023 to better understand how and when employees currently get to work and what they are looking for in alternatives to single-occupant vehicles. The survey helped establish a baseline drive-alone rate, which PATS will use to measure future success.
- **Transit implementation study:** LANL and its regional transportation partners worked with the Nelson\Nygaard firm on specific strategies to get more employees to use public transportation and Lab shuttles. The study will help inform the transportation plans moving forward.
- **Economic impact analysis:** The Texas Transportation Institute (TTI) and partners from the Texas A&M University System assessed the Lab's economic impact throughout eight counties in northern/central New Mexico and how 3,000 more LANL employees would contribute to each community.
- **VISSIM traffic model analysis:** LANL collaborated with Texas A&M Transportation Institute to model traffic impacts of 3,000 employees being added to the campus.
- **Receipt of GSA short-term rental buses:** PATS worked closely with Logistics shuttle services and Fleet to fill the gap in bus order delays by ordering and receiving six 24-seat passenger shuttle buses via short-term leases. The buses will remain at the Lab until the permanent bus orders arrive.
- **Customized trip plans for employees:** To make employees more comfortable using transit, the PATS team began a custom trip-planning service. PATS offers point-by-point instructions so employees know which services/routes to use based on where they live, where they work and their schedule.

- **Communications and video productions:** The Lab has released multiple videos updating the workforce on the Pajarito Corridor construction, including information about parking and transportation solutions for employees in that area.
- **New-hire orientation:** PATS is now part of the Lab's new-employee orientation program, providing a presentation explaining various transportation options to new hires.

1.6 Roles and Responsibilities

The PATS team was established in FY23. As part of the Utilities & Infrastructure Division (UI) per the organizational chart, PATS provides services to employees across the Laboratory. Other groups and organizations also provide services to support these transportation functions. The functional organizational chart below involves working groups from across the Lab that include Utilities & Infrastructure, Logistics, Capital Projects, and Security. In most cases, there is a planning function and an operational function; which group executes each of those functions will depend on the work. All groups will need to work together closely to accomplish goals.

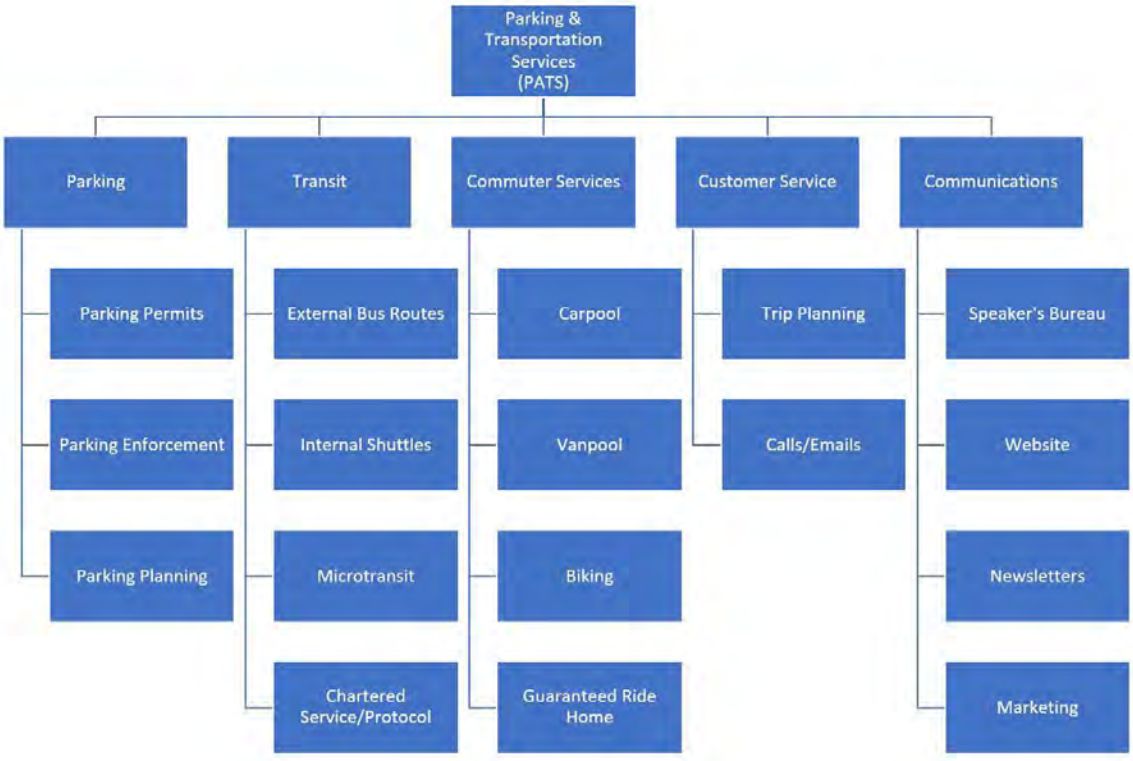

Figure 8. Parking and Transportation Services functions

Organizations that play a role in the overall transportation plan include the following:

- The **UI Facility Operations Director (FOD)** is responsible for program and funding development, staffing the Parking & Transportation Services and Traffic System Engineer functions, establishing performance objectives, overseeing transportation real property, modeling, route planning, parking enforcement, and traffic performance management.
- The **Infrastructure Projects & Programs Office (IPPO)** is responsible for verifying that transit and transportation plans align with the Campus Master Plan and with mission requirements.
- The **Logistics (LOG) Division** is responsible for the on-site transit operations and work execution. LOG- **Heavy Equipment**, **Roads**, **Grounds**, **Hoisting** and **Rigging** (HERG) accesses the resources required to implement and execute the service requests from the PATS team. These responsibilities include but are not limited to procuring and managing rolling stock; staffing the operations manager role; and supporting staff functions, including all craft employees, vehicle maintenance, service route schedules, service delivery; and managing the operation in its entirety.
- **The Security Division (SEC)** is responsible for parking enforcement and adjudication.

1.7 Branding

As the Lab moves to a municipal-type transit structure, the term “taxi” no longer fully describe the services offered. LANL's Multimedia Production group will prepare and launch a brand that fully embraces the different services provided within Parking & Transportation. Sub-brands within the group will include LANL Transit, Commuter Services, and Parking.

Figure 16. LANL Transit includes several different services. This is a sample rendering of a vehicle wrap or paint scheme.

- **LANL Transit:** includes all LANL transit on or off campus that is contracted or operated by LANL personnel. This could include internal shuttle routes, external express routes, microtransit or on-demand service, and chartered/protocol service.
- **LANL Commuter Services:** includes vanpool, carpool, biking, and emergency ride home.
- **LANL Parking:** includes parking permits and parking enforcement.

2 Alternative Transportation Analysis

2.1 Key Observations and Recommendations from the Texas Transportation Institute (TTI)

- Available parking is constrained in the Pajarito Corridor and TA-3; remote parking is an essential part of the plan going forward (ranging from designated park-and-ride lots to the employee's home in the case of carpool/vanpool).
- A major behavioral change for LANL employees is necessary, and positive commute opportunities are key to recruiting and retention efforts. This is particularly important with limited housing options close to LANL.
- Leveraging federal (non-NNSA), state, and local funding is critical to allow LANL transportation resources to go further, as is maximizing use of NMDOT commuter buses and carpool/vanpool options.
- The LANL internal circulation program must shift from a taxi service to a municipal transit system model (LANL Shuttle).
- Balance must be maintained between parking availability, traffic performance, and transit services.
- LANL may have to move beyond incentives and messaging alone and incorporate assigned/restricted parking and enforcement to achieve the desired change in worker travel and parking behaviors necessary to attain program objectives.

2.2 Analysis

Transportation demand management

Transportation demand management (TDM) refers to a set of strategies and policies aimed at optimizing and improving transportation system efficiency while reducing negative impacts such as traffic congestion, air pollution, and energy consumption. TDM's primary goal is encouraging people to make more sustainable and efficient transportation choices, thereby reducing the demand for single-occupant vehicle trips, and simultaneously reducing parking needs.

Transit

In TDM, transit's role is to concentrate ridership and reduce parking demand. Transit options can run the gamut; they may include dial-a-ride and fixed-route shuttles, vans, low-entrance city buses, and even motor coaches for long trips.

High-occupancy vehicles

Carpools are commute arrivals with three or more passengers. Vanpools are commute arrivals with five or more passengers in an authorized van or SUV. These vehicles concentrate ridership to a lesser degree than buses but at a lower capital cost. Carpools and vanpools provide more

convenient solutions in lower-density areas that are not cost-effectively served by a bus-oriented transit solution. High-occupancy vehicle (HOV) parking spaces near the destination or work location can serve as an incentive for employees to try these options.

Other modes

Motorcycle, bicycle, other wheeled-vehicle, and pedestrian travel reduce traffic congestion and parking demand.

Shift operations and telecommute/hybrid work

The peak hour in the morning and afternoon frames traffic capacity and parking performance. Measures that shift the traffic burden away from the peak hour contribute to demand management. A shift schedule with a staggered arrival is one way to reduce demand. Where business conditions allow, telecommuting or adoption of a hybrid work plan is also a demand-reducing measure.

Parking demand management

This plan addresses parking as a finite resource. Parking supply must first satisfy Americans with Disabilities Act (ADA) code requirements, government-owned vehicle (GOV) assignments, and HOV demands. Remaining available parking can be occupied by electric vehicle (EV) SOVs and standard SOVs. Commute arrivals other than SOVs reduce parking demand for spaces within the Pajarito Corridor and TA-3 Core. Parking management will be needed to enforce the limited parking availability in densely populated areas. Parking in remote lots outside of these parking-limited areas does not contribute to parking demand and provides an alternative that can be coupled with transit or HOV solutions.

Incentives

Financially incentivizing employees not to drive SOVs to work could have a sweeping impact. Triad National Security, which operates LANL, is engaged with NNSA Los Alamos Field Office (NA-LA) leadership in evaluating the allowability and implications of financial incentives, including total compensation and applicable Internal Revenue Service (IRS) regulations.

2.3 Two Commute Mode Strategies

This plan considers two main commute mode strategies, and each still greatly depends on the other for the entire program to succeed.

1. **Carpool/vanpool** – The 2023 employee commute survey indicates that 11% of LANL employees are commuting by carpool or vanpool. Our goal is to increase carpool/vanpool commutes to 25% over the next five years.
2. **Bus** – The 2023 employee commute survey indicates that 6.1% of employees are commuting by bus transit. Our goal is to increase bus transit commutes to 25% over the next five years.

2.4 LANL Survey Results

There exists great potential to increase the number of Lab employees using alternative transportation to get to work, according to a 2023 commuting survey.

Seventy percent of survey participants said they are willing to try commuting alternatives as long as these alternatives work with their schedule. Riding a dedicated LANL shuttle was the most popular option among survey respondents, with telecommuting a close second, and the public bus coming in third.

The survey also provided key schedule data to help craft transportation solutions that meet employees' expectations of a convenient commute. Responses showed that a plurality of Lab employees start their day between 7 a.m. and 7:29 a.m. but nearly all start somewhere between 6 a.m. and 8:30 a.m. Workers in the Pajarito Corridor tend to begin working earlier, as do LANL workers who commute from Albuquerque and Española.

Most surveyed (74%) said their start time is at least somewhat flexible.

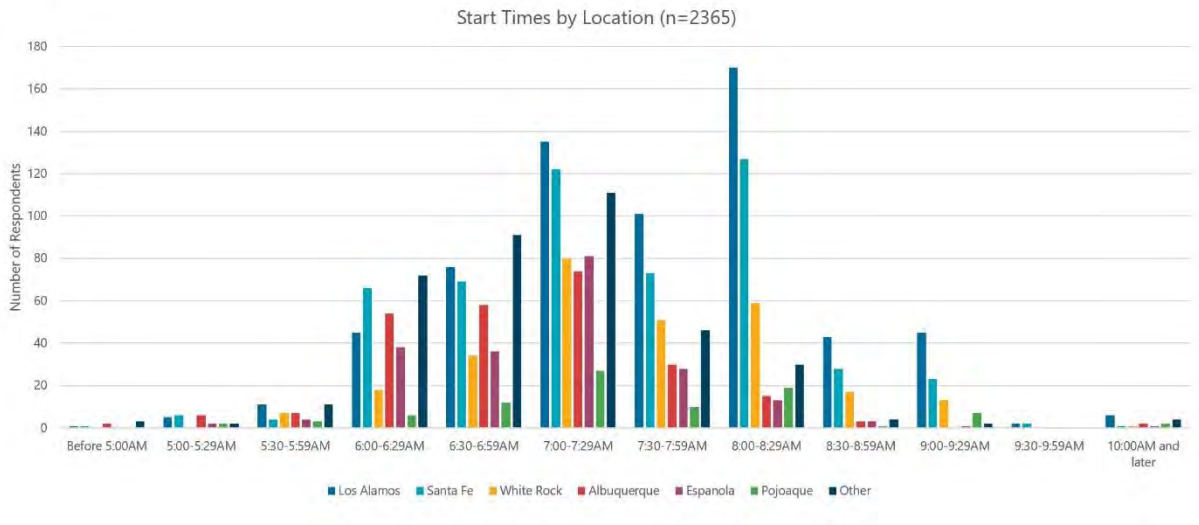

Figure 9. Employees from Albuquerque and Española tend to start work earlier.

The survey offered a window into motivations; respondents who already use alternative transportation most frequently cite cost savings as the reason, though they also mentioned environmental concerns, their desire to avoid traffic, and the difficulty of searching for a parking spot.

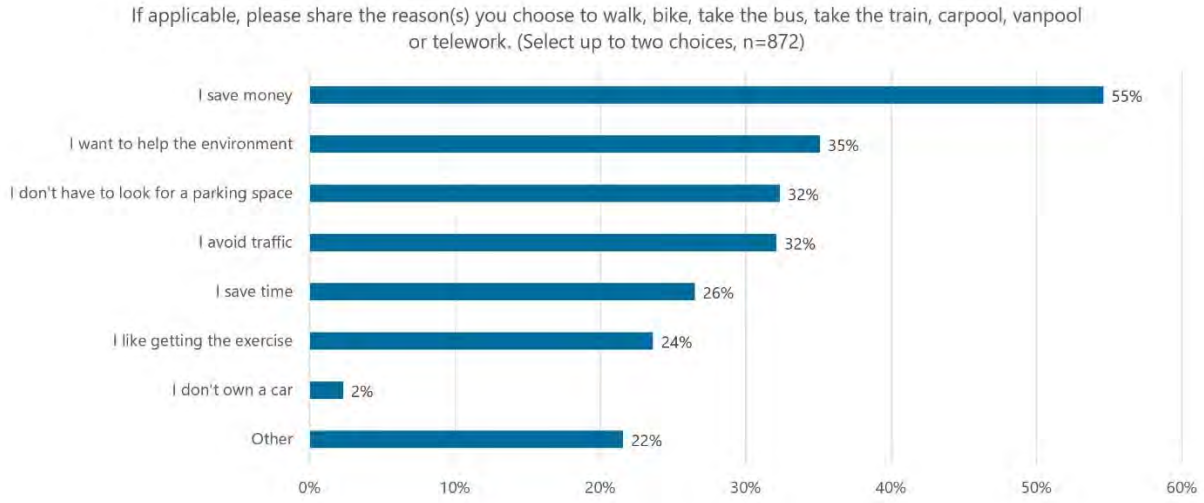

Figure 10. A plurality of employees who use alternative transportation say they are motivated by financial considerations.

The top reasons given for why other employees don't currently use alternative transportation include the need to get home in case of an emergency, the extra time it takes to ride the bus, and that transit schedules don't suit their hours. A cash incentive could change some minds; over half of those surveyed said cash would encourage them not to drive to work each day. Many also wanted a way to get home in case of emergency, the ability to count some of their time on the bus as time worked, and a way to get around LANL without a car. The Lab has developed solutions to all of these concerns and has either implemented the relevant changes or has sought NNSA approval to do so.

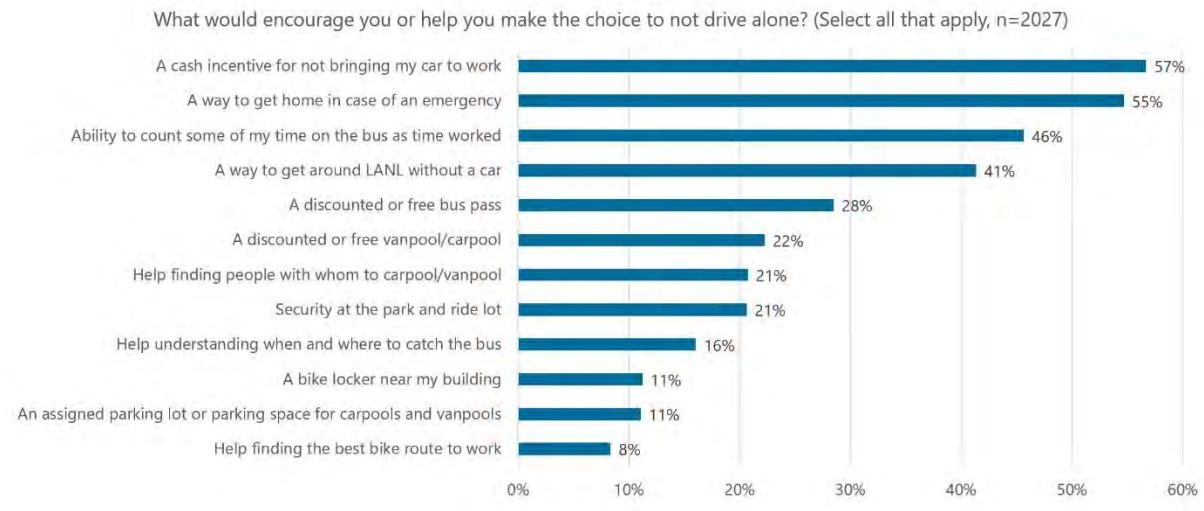

Figure 11. Most employees surveyed said cash would motivate them to not drive to work.

Drive-alone rate goals

The survey provided baseline data about LANL employee commutes, including the rates for driving alone and using alternative transportation. As a whole, 62% of Lab employees drive alone on any given day, while 11% carpool, 6% take transit, and 4% bike. Some areas have higher drive-alone rates than others. The survey results established a baseline for each TA, and the goal for FY24 is to reduce the drive-alone rate in the Pajarito Corridor and TA-3 areas.

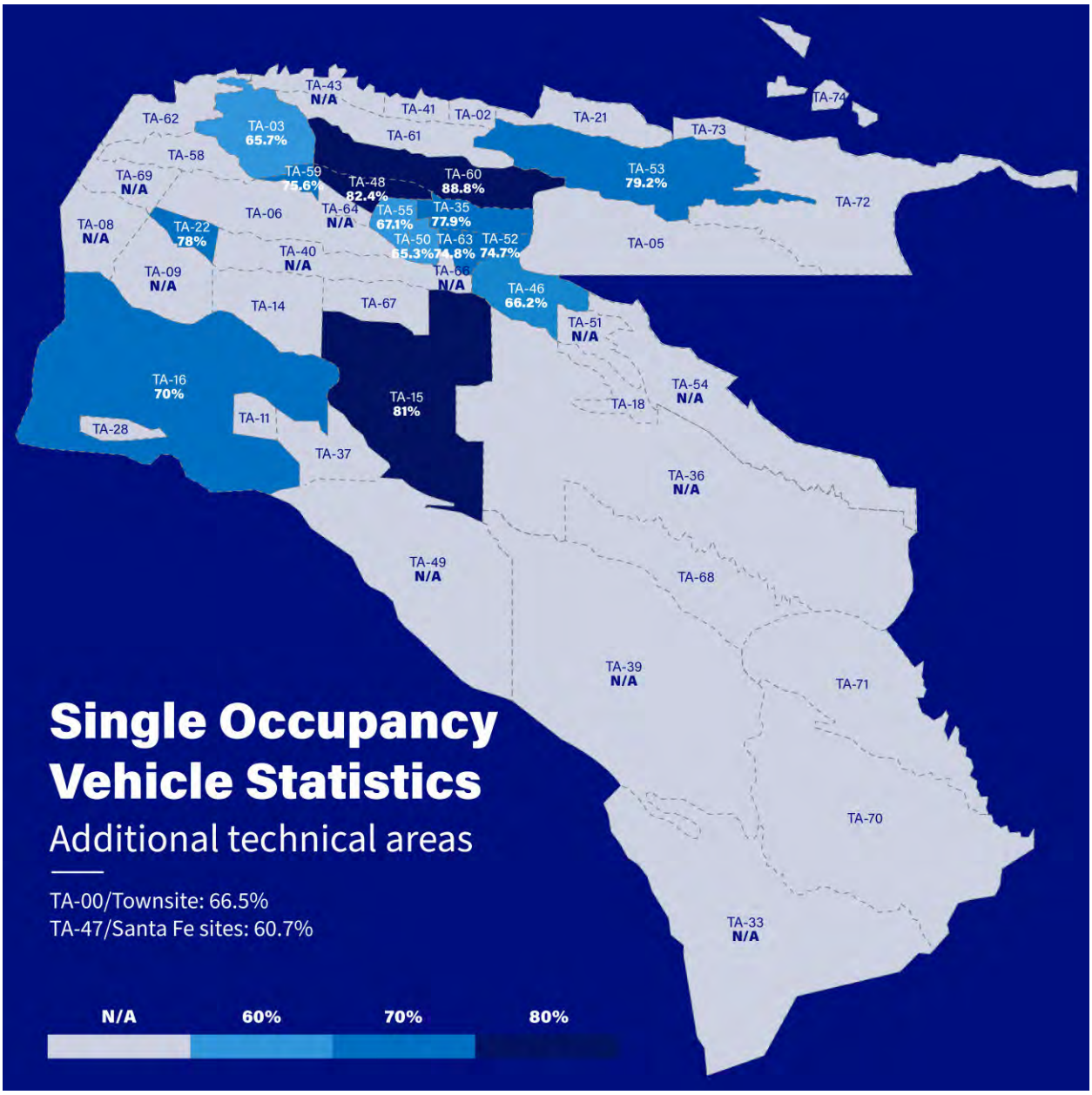

Figure 12. The drive-alone rate based on 2023 employee survey results.

2.5 North Central Regional Transit District Transit Implementation Study Summary

In 2021, the Lab partnered with Nelson\Nygaard Consulting Associates and regional transit agencies to conduct the LANL Transit Options Study in preparation for Laboratory expansion plans.

The Transit Options Study reviewed transit options already serving LANL and analyzed travel markets around Los Alamos County and northern New Mexico. The project team then identified strategies to increase usage of public transit and modes other than single-occupant private vehicles. These strategies were grouped into three categories:

- **Getting employees to LANL** – including improvements to existing public transit services, development of LANL long-distance express routes, and expansion of vanpooling and carpooling
- **Getting employees around LANL** – including improvements to the LANL shuttle services, expansions of transit centers, and connections to White Rock
- **Programs and incentives that encourage alternative commuting** – including program staffing, education programs, incentives, and tools.

The Transit Service Implementation Study expands on the work completed in the Transit Options Study; it specifically prepares LANL to implement the strategies related to public and LANL-run transit services and facilities.

The study indicates it is vital that more employees take public transit, but the majority of transit service will need to be operated by LANL. This includes service to White Rock, Española, Pojoaque, Santa Fe, Albuquerque/Rio Rancho, and possibly Los Alamos. Nelson\Nygaard estimates that LANL will need to provide 100 vehicle trips each morning and afternoon peak periods by the time all planned buildings are constructed and full. Should carpool and vanpool usage grow, fewer bus trips would be needed.

3 Fiscal Year 2024 Priorities

3.1 Plan Goals and Objectives

Early in the Pajarito Corridor development planning process, it became clear that LANL could not build its way out of traffic and parking issues. It is not possible to create enough SOV parking near new office buildings to accommodate the flow of new employees or to sufficiently expand the existing roadways and infrastructure to handle the added traffic. This is due to several factors: on-site land constraints, construction resources and the timeliness and availability of indirect infrastructure investment funding.

Goal: Expand the availability of offsite parking, capacity, and use of transit to balance parking adequacy and manage traffic congestion during peak-hour commuting periods.

- **Objective 1: Prepare and implement elements of the transportation plan**
  Finalize the FY24 Transportation Plan and continue implementing projects and services that will address planned growth, parking challenges, and traffic congestion with comprehensive transportation solutions that include transit, carpool, vanpool, biking, and transportation infrastructure improvements. Update the transportation plan for FY 25 and beyond.
- **Objective 2: Improve transit options for Lab employees**
  Work with internal and external transit partners to plan, develop, and operate an expanded transit program. Expand the express bus pilot to include White Rock and San Felipe. Increase internal transit service to meet employee needs.
- **Objective 3: Grow the commuter services programs**
  Evaluate the vanpool program for potential growth options and formalize the carpool program to help employees find ride matches, add incentives, and reduce SOV use by 100 vehicles per day by the end of FY24.
- **Objective 4: Improve bike infrastructure and amenities**
  Work with stakeholders to plan for bike lanes, dedicated bike paths, improved bike parking, and bike share options.
- **Objective 5: Develop a parking management strategy**
  Develop a program to manage sitewide parking, which will include uniform permitting, enforcement, and future parking solutions.
- **Objective 6: Communicate transportation plans and initiatives**
  Work with internal and external customers to ensure new projects and updates are communicated to the appropriate audiences. Engage employees to solicit feedback and allow them to be part of the process.

We expect to meet this goal and these objectives incrementally and in stride with planned mission and workforce expansion. We will use a combination of equipment acquisitions, effective regional transit partnerships, infrastructure investment, and adoption of business rules and strategies.

Fiscal Year 2024 Priorities

Transit	Details
LANL Express Bus Pilots	Continue the Pojoaque Express bus service; evaluate schedule as needed. Expand the express bus pilot model to include service from a remote parking lot at Black Mesa Casino in San Felipe. Plan for future express bus service beyond FY24.
Bus Route Planning & Analysis	Study shuttle routes for efficiencies, hours of service, and plan for new service.
Bus stop signs and shelters	Ensure all bus stops are signed and begin to add shelters at the most used locations.
Purchase bike racks for buses	Plan for bike racks to be added to shuttles in FY25.
Trip Shot	Complete procurement and implementation of new bus operations software that will allow passengers to request rides and see live tracking of vehicles.
Blue Route Operations	Continue operations of the Blue Route service between remote lots and TA-35. Study whether more stops should be added or altered as Campus Master Plan construction begins.
Green Route Operations	Continue operations of the Green Route service between TA-50 and TA-55.
Platinum & Gold Routes (Circulators)	Transition the Platinum and Gold Routes into a regular circulator between TA-3 and the Pajarito Corridor.
White Rock Bus Pilot	Begin shuttle service between the Pajarito Corridor and the White Rock Training Center.
Townsite Pilot	Plan for new shuttle service to begin in FY25 between the main campus and leased sites in Los Alamos.
Bus Purchases/Leases	Develop a vehicle replacement strategy and determine how many additional buses will be needed to meet long-term goals.
TA-3 Transit Center	Create a scope of work for improvements to the TA-3 Transit Center.
Passenger Notification System	Purchase and implement a notification system to keep passengers informed about transportation delays or cancellations.
Hydrogen Fueling Mobile Unit	Release a request for proposals (RFPs) for a fueling system for the new hydrogen fuel cell bus.
Parking Lot Leases	Prepare a request to lease offsite park-and-ride lots to help with campus parking challenges.
Transportation	Details
Travel Time Message Board	Engineering designs, installation, and implementation of Bluetooth readers to measure travel time between Pajarito Corridor and NM 4 via the Truck Route. This includes a travel-time display board to be installed on Pajarito Road near Gamma Ray.
Radar Cameras	Purchase and installation of radar cameras to count daily traffic at main VAP and Pajarito VAP.
Engineering Designs	Development of standard engineering designs for bus stop pull outs, bus shelters, and separated bike paths.

NM 4/East Jemez Construction	Complete the widening project at the intersection of NM 4 and East Jemez (Truck Route).
Pajarito Roundabout	Construction of the Pajarito Roundabout at the intersection of Diamond and Pajarito.
Diamond Drive Construction	Finalize plans and select a subcontractor to widen Diamond Drive to two lanes in each direction with a bike lane between Diamond Drive and West Jemez. Most of the construction work will take place in FY25.
Parking	Details
Parking Enforcement	Subcontract to supplement parking enforcement services in FY24. Develop plan to manage all of the Lab's parking enforcement in FY25.
Parking Management Software	Evaluate software and hardware vendors to assist with the Lab's parking management after FY24.
Commuter Services	Details
Vanpool Services	Continue to work with the NMDOT vendor Commute with Enterprise to promote vanpool options. Evaluate the FY23 launch and explore options for increasing usage to include more dynamic vanpooling, hybrid options, and potential incentives.
Carpool Services	Develop a scope of work and explore software vendors for a carpool matching service for employees.
Biking Infrastructure	Develop designs and estimate for a separated bike path between East Jemez Road and LANSCE.
Bike Racks & Bike Lockers	Purchase and install bike racks and bike shelters to encourage more bike use. Evaluate locations and install bike lockers. Develop a plan to centralize bike parking operations.
E-Bike Pilot	Evaluate the E-Bike pilot, write a plan for expansion, and purchase more bikes to be used by spring 2024.
Emergency Ride Home	Simplify process that allows employees who use alternative transportation to get a ride home in case of an emergency.
Incentives	Explore incentives that will encourage employees to choose an alternative commute.
Communications	Details
Branding	Work with LANL's Multimedia Production group to create a PATS brand that can be used on buses, bus stops, bike lockers, parking garages, promotional materials, website, etc. Develop a plan for implementation/installation.
Video	Release a series of videos and productions to explain how employees can use alternative transportation options such as transit, carpool, vanpool, cycling, etc.
Website	Design and launch a new Transportation Hub website where employees can go to get all their parking and transportation information in one place.

Employee Commute Survey	Design, distribute, and analyze the annual employee commute survey. Communicate the results to employees.
Marketing & Communications	Provide transportation presentations to work groups and new hire orientations, write newsletter articles, and distribute flyers to promote services.

3.2 Road Improvements

Several road improvement projects are planned for FY24 and FY25. The dates associated with the projects are preliminary and are subject to change. While not under the purview of PATS, these projects will help reduce congestion and improve safety and are a critical part of the long-term solution.

East Jemez Road/NM 4

Construction on this $15.5 million project began in Spring 2023 and will be complete in early FY24. When finished, the intersection will be able to handle nearly twice the capacity. There will be two left-turn lanes from East Jemez Road onto NM 4, one straight lane through the intersection to a new parking lot for the National Park Service, and a right-hand slip ramp to White Rock. From White Rock, there will be an extended left-turn lane to East Jemez Road, two straight lanes through the intersection, and one right-turn lane into the new parking lot for the National Park Service.

Figure 13. Redesign of the NM4/East Jemez Road intersection will be complete in FY24.

Pajarito roundabout

A roundabout is planned for the intersection of Diamond Drive and Pajarito Road. Construction of a temporary bypass road is scheduled between December 2023 and March 2024, and main

intersection work should begin in April 2024. The project is scheduled to be complete by February 2025.

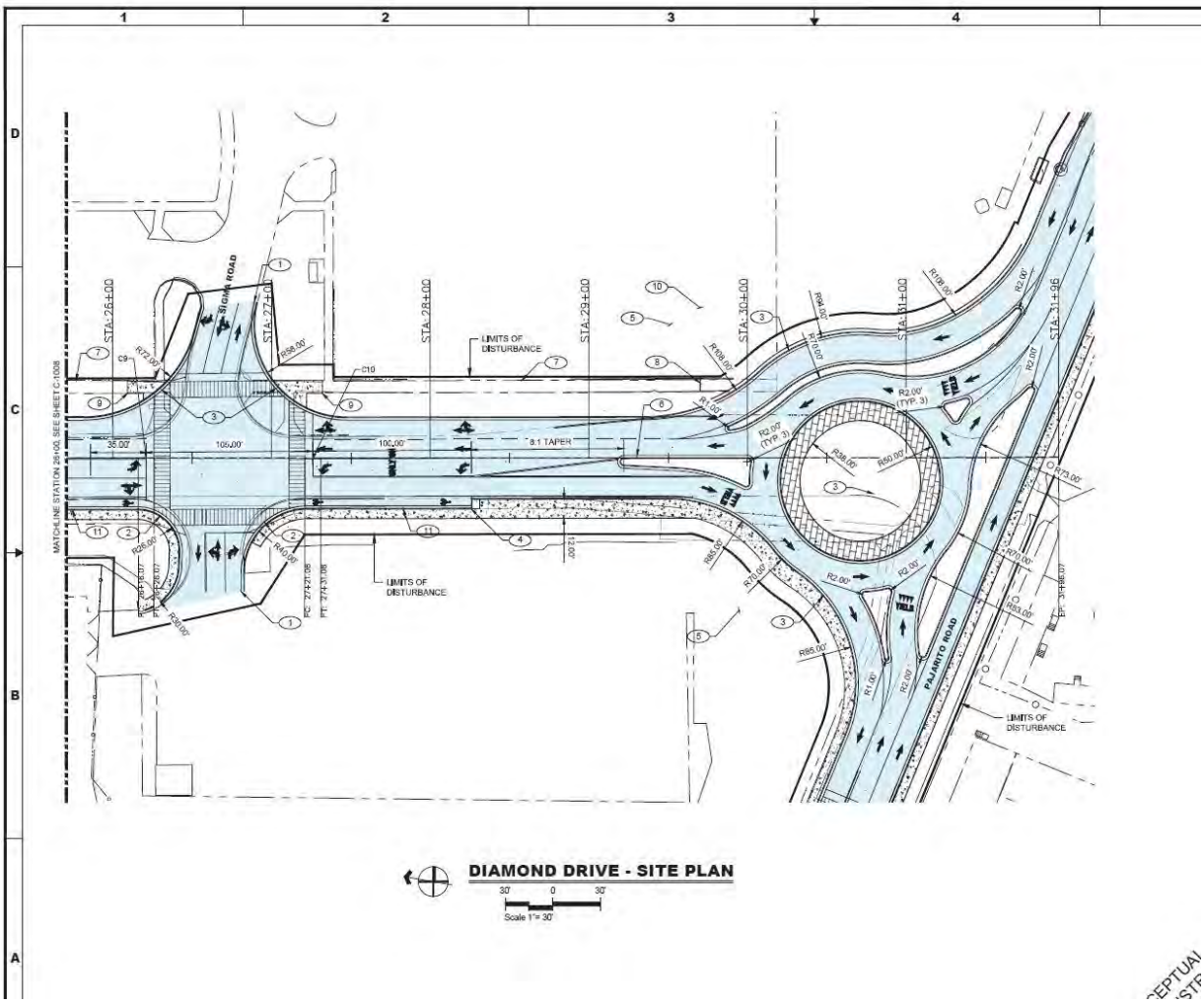

Figure 14. The planned roundabout at Pajarito Road and Diamond Drive.

Diamond Drive widening

This project is expected to take place between November 2024 and September 2026. When complete, this project will widen Diamond Drive to two lanes in each direction between West Jemez Road and Pajarito Road. A bike lane in both directions will also be included for this project and will tie into new bike lanes on Pajarito Road.

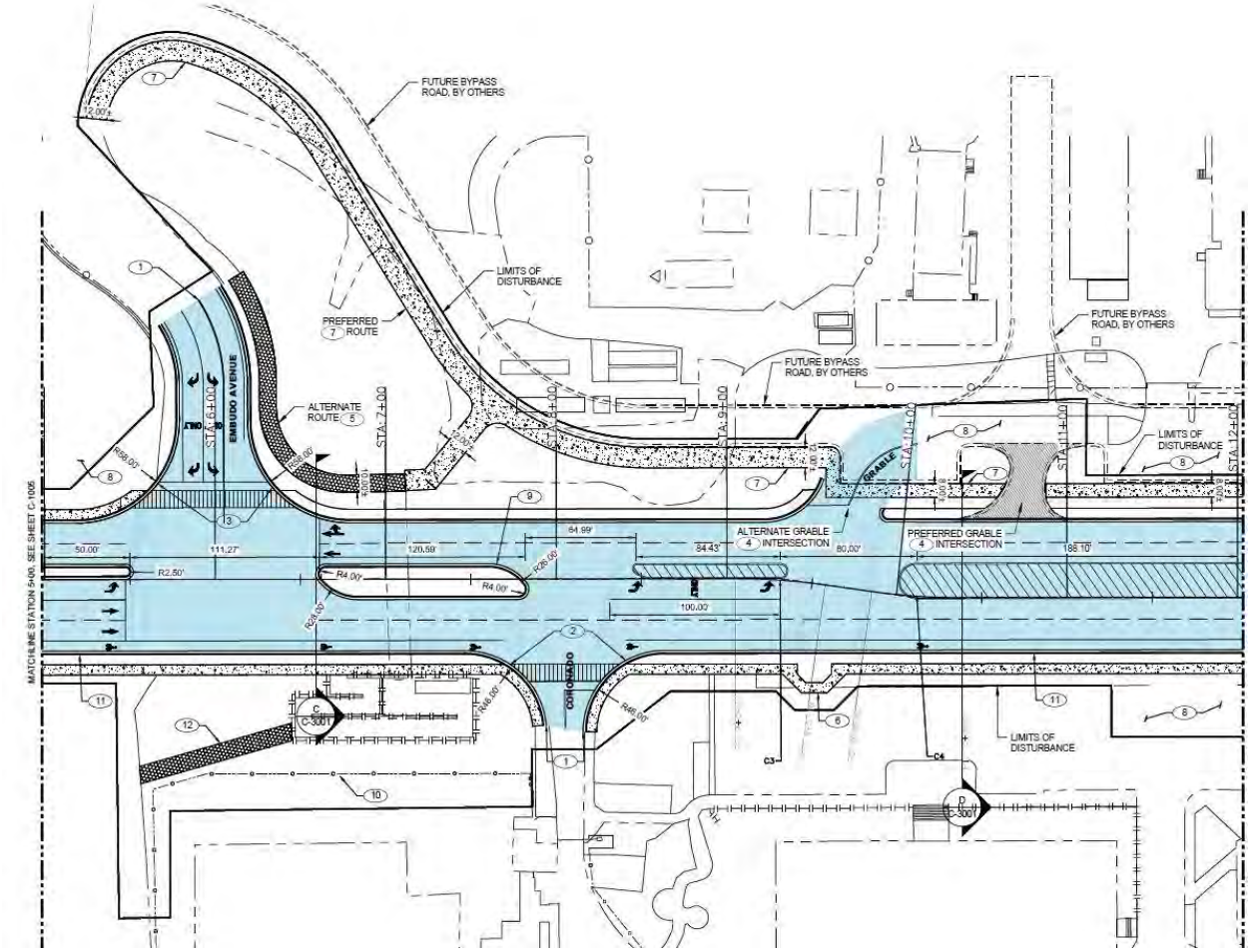

Figure 15. The Lab will widen Diamond Drive.

3.3 Continued Modeling and Analysis

In FY24, LANL will continue to work with TTI to use the VISSIM micro–simulation model to inject planned traffic changes to the calibrated baseline. VISSIM will model future conditions including temporary detours, lane additions, intersection phases of construction, and changes to the vehicle mix (trade SOVs for carpools, vanpools, buses, bicycles, or pedestrians); and visualize the effects on travel time, and length of the queue at intersections and turning lanes, etc.

3.4 Transit

The LANL internal transit system is operated and maintained by Logistics (LOG) and has been known as Taxi. During FY24, PATS will work closely with LOG to expand a fixed-route transit system to meet the growing demand from staff with limited parking options and increased transit

ridership. This will include expanding internal routes on the LANL campus, and external routes to bring employees from remote parking lots directly to their locations on campus.

3.5 External Transit Plans (Express Routes)

To develop needed transit operational plans and implementation strategies, LANL worked with Nelson\Nygaard to conduct the second phase of the Transit Operations Study. The study encompasses LANL and its transit partners, such as the New Mexico Department of Transportation, the Los Alamos County-operated Atomic City Transit, and the North Central Regional Transit District. The study covers suggested service levels (such as spans and frequencies) and possible sites for future LANL-specific park-and-ride operations. Securing remote parking lots in FY24 is essential to establishing more express routes that will transport employees from off-site directly into the Pajarito Corridor.

Express buses

The Lab piloted its first express bus during FY23. The Pojoaque Express provides direct service to the Pajarito Corridor for employees who live outside of Los Alamos County. The pilot began in May 2023 and the initial phase required developing security protocols that enable direct busing into the Pajarito Corridor from off-site. By the end of FY24, the Pojoaque Express aims to have removed 200 vehicles per day from the road. By the end of FY23, the service was recording over 80 passenger trips per day.

The Lab intends to duplicate the express bus model and pursue remote parking lot leases with the following expansion projects:

Figure 17. Projected timeline for new LANL express bus routes

San Felipe Express: The Lab is currently awaiting NNSA approval to start bus service from San Felipe, which is located about halfway between Albuquerque and Santa Fe. The San Felipe Express will target employees living in the Albuquerque area and is expected to start during the second quarter of FY24.

White Rock Express: This will be different from most express options as it will be operated by the Logistics team using existing LANL shuttle buses. Its primary role in FY24 is to provide regular connection between the Pajarito Corridor and the White Rock Training Center, though LANL employees living in White Rock may be able to use this service to get to work in the Pajarito Corridor. The FY24 plan includes shuttles between White Rock and TA-55/TA-35 every half-hour during peak times. During mid-day, the service will transition to a shuttle route and offer one-hour frequencies between the Pajarito Corridor and the White Rock Training Center. It is expected to launch in early 2024.

Rio Rancho Express: The Rio Rancho Express will target employees Northwest of Albuquerque. The location of the remote parking lot has yet to be determined. This service is expected to begin by FY26.

Española Express: The Española Express will target employees in Española and the surrounding communities. No parking site has been selected yet. This service is expected to begin by FY26.

The following tables represent a five year build up of the external express bus trips to the Lab. The goal is to provide transit service for 1,500 employees on approximately 50 bus trips with each trip reaching 75% capacity. The number of buses and specific stops (i.e., Pojoaque vs. Sante Fe) will need to be responsive to demand, and the utilization of other options such as carpool and vanpool may increase/decrease the need for the number of bus trips.

2024	Los Alamos	White Rock	Española	ABQ	Rio Rancho	Santa Fe/ Pojoaque	Total
Bus Trips	0	5	0	2	0	4	11
Total Seats	0	120	0	100	0	200	420
75% Capacity	0	90	0	75	0	150	315

2025	Los Alamos	White Rock	Española	ABQ	Rio Rancho	Santa Fe/ Pojoaque	Total
Bus Trips	2	5	0	4	2	6	19
Total Seats	48	120	0	200	100	300	768
75% Capacity	36	90	0	150	75	225	576

2026	Los Alamos	White Rock	Española	ABQ	Rio Rancho	Santa Fe/ Pojoaque	Total
Bus Trips	4	10	2	8	4	8	36
Total Seats	96	240	100	400	200	400	1436
75% Capacity	72	180	75	300	150	300	1077

2027	Los Alamos	White Rock	Española	ABQ	Rio Rancho	Santa Fe/ Pojoaque	Total
Bus Trips	8	10	4	10	6	8	46
Total Seats	192	240	200	500	300	400	1832
75% Capacity	144	180	150	375	225	300	1374

2028	Los Alamos	White Rock	Española	ABQ	Rio Rancho	Santa Fe/ Pojoaque	Total
Bus Trips	8	10	6	10	6	10	50
Total Seats	192	240	300	500	300	500	2032
75% Capacity	144	180	225	375	225	375	1524

Figure 18. The Laboratory's estimated build up of bus trips on each express route. The charts assume 24-seat capacity for each Los Alamos and White Rock trip and 50-seat capacity for the others.

3.6 On-Site Transit (Shuttles)

The on-site transit service will play a pivotal role in the Lab's transportation strategy in FY24. Efforts to expand service will start with addressing four key areas: operating hours, staffing levels, bus fleet, and efficiency of service.

3.6.1 *Operating hours*

In FY24, LANL will explore options for expanding on-site transit service hours, so transportation can be provided during the times when most employees are on campus. Shuttle service currently starts around 6 a.m. to meet the first public buses that arrive at the TA-3 Transit Center. While only 3.1% of LANL employees start work before 6 a.m., another 12.2% start right at 6 a.m. Earlier operating times for the shuttle services will greatly depend on the arrival times of public buses or LANL express routes. Currently, every morning, nearly all available resources–buses and drivers–are devoted to meeting the rush of employees arriving on public buses who need rides to their worksites. Employees who arrive that early and need to use on-demand services to get somewhere outside of TA-3 and the Pajarito Corridor can't reserve a ride until after 8:30 a.m. when buses and drivers are more available.

In the evening, on-demand service ends at 3:00 p.m. so the drivers and buses can be used to bring employees back to the transit center to catch evening public buses home. The shuttle services between the transit center and TA-55, TA-35, and TA-03 end at 5:30 p.m. Since 23.5% of employees work until 5:30 p.m. or later, LANL will explore options for expanding later shuttle service. Only two routes within the Pajarito Corridor operate until 7 p.m. and there is currently one route serving the swing shift between 7 p.m. and 3:30 a.m. All of the routes operating after 5:30 p.m. are limited to serving TA-35, TA-55 and nearby parking lots.

3.6.2 *Staffing Levels*

In the second quarter of FY23, the on-site transit operation employed 27 craft union employees. At the beginning of FY24, the on-site transit operation added six more drivers to the operation totaling 33 drivers, a 25% increase. Although transit agencies across the country are experiencing a staffing shortage, the Lab has been able to attract the specialized drivers needed for operational growth. All drivers must possess and maintain a commercial driver's license (CDL) with the passenger endorsement and obtain a security clearance. With the expected continued growth of the on-site transit operation in FY24, the Lab will explore options to attract, train, and retain drivers while also being a good neighbor and partner with the regional transit agencies.

3.6.3 *Fleet Management*

At of the end of FY23, LANL had 42 vehicles in the transit fleet, including eight temporary, short-term rentals. The vehicles range in size from 7- and 15-seat passenger vans to larger shuttles and full-sized buses. LANL has ordered 16 additional vehicles over the last couple of years, but the manufacturing and delivery of some of those vehicles has been delayed or, in some cases, put on hold due to supply chain or other availability issues. For that reason, GSA has provided eight 24-seat shuttle buses as short-term rentals until more of the new, permanent fleet of vehicles arrives. As LANL grows the transit program, adds more routes, and expands service time, more short-term leases may be needed to help fill the gap. Additionally, LANL is working on a plan to place orders for vehicles ahead of their planned replacement dates and ensure it maintains an appropriate spare ratio. Transit agencies typically have an additional 15-20% of vehicles on hand in case several are simultaneously out of service. LANL will build up to a 15% spare ratio over the next several years. Adequate spares are essential to providing a resilient and dependable system.

Vehicle Number	Vehicle Type	Passenger Seats
1	Van	7
2	Van	15
3	Van	15
4	Van	15
5	Van	15
6	Van	15
7	Van	15
8	Van	15
9	Van	15
10	Van	15
11	Van	15
12	Van	15
13	Van	15

14	Van	15
15	Van	15
16	Van	15
17	Van	15
18	Van	15
19	Van	15
	SUV	4
	SUV	4
20	Bus	36
21	Bus	44
22	Bus	36
23	Bus	28
24	Bus	26
25	Bus	26
26	Bus	28
27	Bus	20
28	Bus	20
29	Bus	20
36	Bus	28
37	Bus	28
40	Bus	12
30	Short Term Bus	24
31	Short Term Bus	24
32	Short Term Bus	24
33	Short Term Bus	24
34	Short Term Bus	24
35	Short Term Bus	24
38	Short Term Bus	24
39	Short Term Bus	24

Figure 19. Lab's current bus inventory

The Lab has 16 new buses in various stages of ordering or production. Those buses, once in hand, represent a 19% increase in the LANL fleet and 25% more seating capacity.

New bus orders

Vehicle Type	Passenger Seats	Status	New/ Replacement
Bus	24	To be placed at GSA Level	New
Bus	24	To be placed at GSA Level	New

Bus	28	To be placed at GSA Level	New
Bus	28	To be placed at GSA Level	New
Bus	16	To be placed at GSA Level	New
Bus	16	To be placed at GSA Level	New
Bus	16	To be placed at GSA Level	New
Bus	49	On hold at the GSA level	New
EV Bus	20	On hold at the GSA level	New
EV Bus	20	On hold at the GSA level	New
Bus	20	Scheduled for production	New
Bus	24	Scheduled for Production	New
Hydrogen Bus	34	Delay – July 2024 arrival	New
Bus	28	Scheduled for production	New
Bus	28	Ordered by GSA	Replacement
Bus	28	Ordered by GSA	Replacement

Figure 20. The vehicles LANL has on order

3.6.4 *Level of Service*

In FY24, PATS will study potential efficiencies to determine if there are improvements that can be made to better serve a growing number of employees using public transportation. Reviews will consider service hours, duplicative routes, vehicle needs, and existing or new stops.

LANL will study the existing route schedules and determine if schedule alterations can improve efficiencies. Maintaining connections with public buses and LANL express services will remain important so employees have last-mile service to their work areas.

The internal shuttle service can help mitigate parking challenges that come with increased construction around campus, particularly in the Pajarito Corridor. New and improved routes will shuttle employees who work in the corridor from underutilized parking lots elsewhere on campus.

In FY23, the Gold and Platinum Routes expanded to serve that purpose. Each added stops at underutilized parking lots.

3.6.5 *Current Shuttle Routes*

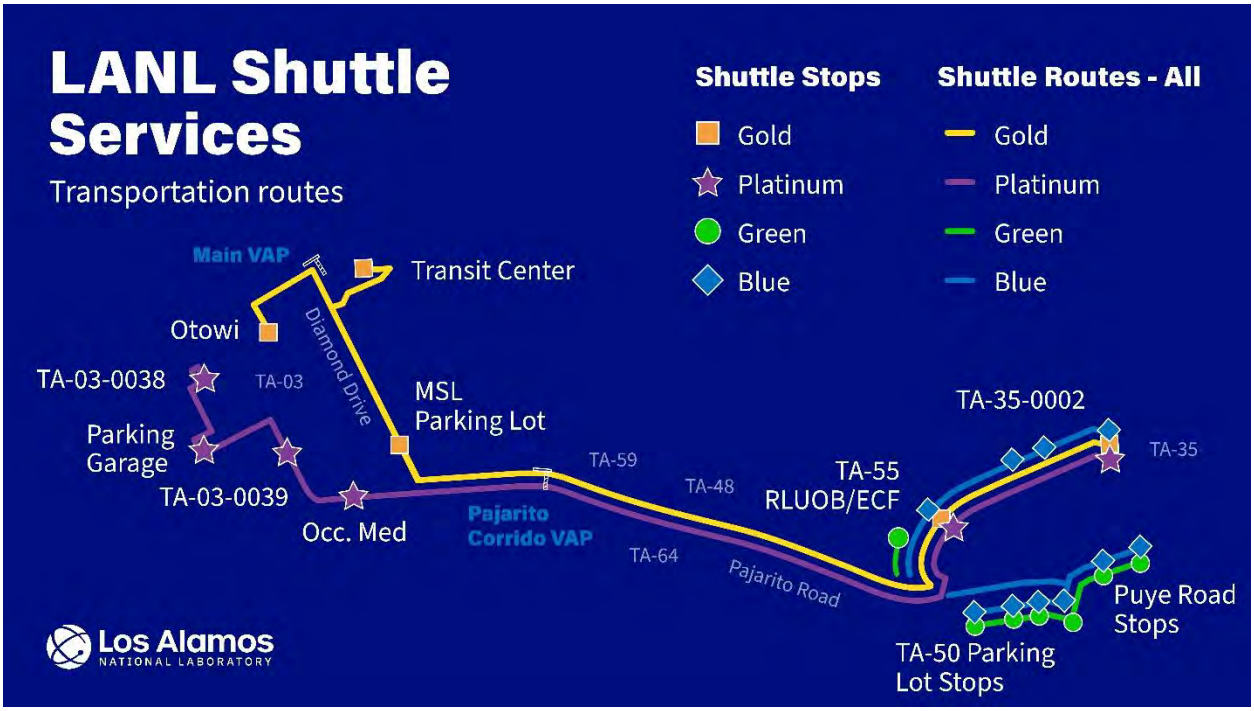

Figure 21. Shuttle Services map

Gold Shuttle Route: The Gold Route is a service between the east side of TA-3 and TA-35/TA-55 with several stops at parking lots along the way. This route provides an opportunity for employees to park at the TA-3 Transit Center or the MSL South parking lot and get shuttled to their offices in TA-3 or the Pajarito Corridor. Employees are also encouraged to use this route to attend meetings during the day. The ridership for this route is approximately 2,500 passenger trips per month (200 per day). Service is as frequent as every 12 to 18 minutes during peak times. In FY24, ridership is expected to increase on this route by 15%.

Platinum Shuttle Route: The Platinum Route is a service between the west side of TA-3 and TA-35/TA-55 with several stops at parking lots along the way. This route provides an opportunity for employees to park at the Mercury parking garage and the Physics South parking lot. Employees are also encouraged to use this route to attend meetings during the day. A key stop on this route is the Occupational Medicine office. This route provides approximately 1,300 passenger rides per month. Peak-hour service is between 12 and 18 minutes.

The Gold and Platinum Routes will continue to evolve in FY24; with more ridership, they will transition to a circulator model for maximum frequency.

Green Shuttle Route: Currently, this route provides an average of 16,000 passenger rides per month (800 per day) which is about 62% of all passenger rides for the on-site operation. The

Green Shuttle Route picks up from four stops in the TA-50 parking lot and two stops at the TA-63 overflow parking lot. The shuttle drops off employees at TA-55 building 400. This route operates approximately every 6 minutes from 5:30 a.m. to 7 p.m. After 7 p.m. service continues for swing shift employees until 3:30 a.m. In FY24, ridership on this route is expected to increase by approximately 10%.

Blue Shuttle Route: The Blue Route was initially developed to provide service between TA-35 and TA-55. However, an increase in demand for transportation from the TA-50 parking lot and TA-63 overflow lot to TA-35 and TA-55 has made it necessary for the Blue Route to deviate from the original schedule and service these areas. The Blue Route continues to see increased ridership because of the heavy traffic congestion and parking challenges in that area. Currently the route is averaging about 700 passenger rides per month. The Blue Route runs from 5:30 a.m. until 6:30 p.m. with a service frequency of 16 minutes. In FY24, ridership on this route is expected to increase by approximately 10%.

Dial-a-ride: The on-demand operation provides dispatch services between 8:30 a.m. and 3 p.m. The service is available for all badged employees and services all laboratory tech areas and some local off-site locations. The on-demand service responds to an average of 372 on-demand calls per week and currently operates with 16 drivers and two working Foremen who can drive when needed. If the current hours of operation are increased in FY24, it is expected that the number of on-demand calls will increase by approximately 37 calls per week, a rate of 10%.

The LANL Transit team is in the process of procuring TripShot, a bus dispatch application that will provide better communication for dispatch, drivers, and passengers. The TripShot app will have the following features:

- Websites and mobile apps for users to share logistical data
- Digital passenger counting
- 2-way messaging between the driver and dispatch foreman
- Route management
- On-demand dispatch used to schedule rides
- CAD/AVL & GPS playback to provide real-time information on vehicle locations

Morning and evening transit shuttles: The LANL Shuttle service provides connections from public transit at the TA-3 Transit Center to various areas of the Lab. The LANL Shuttles are timed to meet arrivals and departures of the New Mexico Park & Ride and Atomic City Transit. When the public buses arrive at the Transit Center, passengers simply walk across the platform and look for signs to take a shuttle to their area of the Lab. Passengers tell the driver their TA and building number and are dropped off as close to their site as possible. In the afternoon, passengers consult a schedule and catch the shuttle at a set time at one of the stops in their TA. Routes are scheduled to serve the following areas:

- TA-3 Right (circulation of TA-3 from west to east)

- TA-3 Left (circulation of TA-3 from east to west)
- Pajarito Corridor
- TA-53/LANSCE
- R&S Sites

3.6.6 *New Routes Planned for FY24 and Beyond*

White Rock Shuttle Route: As mentioned in Section 3.6, LANL plans to start a new route between White Rock and the Pajarito Corridor in FY24. It is intended to transport employees between LANL's main campus and the White Rock Training Center. The service will run as an express route in the morning and evening peak periods at 30-minute frequencies, and it will transition to an hourly service between 9 a.m. and 3 p.m.

Los Alamos Shuttle Route: In FY24, LANL will begin planning a new route to service the townsite leased locations such as the Badge Office, the NET Academy, and the Canyon Road Complex. As envisioned, the new route will begin with one-hour frequencies timed to attend meetings, with arrivals before the top of the hour and departures shortly after the top of the hour. This service will likely begin in FY25 unless funding becomes available in FY24.

On demand/microtransit service: In FY24, the Lab will work to improve its on-demand shuttle service by enhancing efficiency. LANL is currently working to install Tripshot hardware and software. Tripshot will enable better fleet management and improve the customer experience by allowing riders to use an app to order rides (instead of calling dispatch) and to see the location of their vehicle and fixed-route shuttles. Tripshot will also be used for protocol or chartered services for scheduling purposes.

3.7 Transit Infrastructure

The more LANL maximizes existing public transportation services, the less transit it has to provide on its own. The Lab is in the process of determining the best way to link to those options.

The TA-3 Transit Center currently serves as the Lab's gateway to public buses. In FY24, Los Alamos County plans to commission a study to evaluate whether the transit center should be relocated or remain where it is, and what improvements it needs. The study will also look at siting a transit center in White Rock to enable connections from the North Central Regional Transit District (NCRTD).

TA-3 Transit Center

In FY24, LANL will determine if it should expand the existing TA-3 Transit Center. The current footprint is limited and would preclude adding more buses to serve growing transit ridership. However, since the county is considering relocating its main bus terminal to downtown, additional bus space may not be needed. Either way, LANL will still use the transit center for

bus connections and will explore adding amenities such as shelters, restrooms, improved bus pull outs, and bike parking.

Figure 22. TA-3 Transit Center rendering

The Lab plans to add new transit centers in TA-48, TA-55, and TA-63 over the next several years to accommodate coach bus arrivals and provide facilities for use by shuttles and buses as well as waiting riders.

TA-48 plans

Work will ramp up in TA-48 during FY24. During the second half of the fiscal year, construction will close several parking lots. Therefore, shuttle services will be added to bring employees to this location from available parking lots elsewhere at LANL or from offsite lots. Beyond FY24, a mini transit center will be constructed on the east end of TA-48, near the West Entry Control Facility. When complete, the transit center will be able accommodate three 45-foot buses or several smaller shuttles.

The Lab anticipates this area will house 2,650 employees and 535 subcontractors (3,185 total). It will include a new 430-space parking garage at the corner of Gamma Ray and Pajarito Road. With the additional surface parking, TA-48 will have a maximum of 630 parking spaces. Shift timing, flexible schedules, and other factors will alleviate some of the parking shortages, but long-term plans should include 2,020 people taking some form of alternative transportation. The future growth of these transportation solutions will be critical in the short and long terms.

Parking & Transportation Stats

Anticipated staff at full build	3,185
Total number of parking spaces	630
Number of staff using alternative transportation	2,020

Figure 23. TA-48 transit area

TA-55 and TA-35 plans

Express bus service has already started in the TA-55/TA-35 area, and the frequency of this service will increase over the next several years. Additionally, LANL shuttle service frequency has grown over the last year and will continue increasing. It will be important to time bus arrivals so bus parking space will be available and so passengers can easily make connections to other services. Plans are being developed for a mini transit center near the East Entrance Control Facility in the future. When complete, the transit center will be able accommodate four, 45-foot buses or several smaller shuttles. Two additional bus spaces could be constructed at the end of Pecos Road in TA-35 where buses and shuttles currently have a stop.

This area will house an estimated 3,280 employees. TA-55/TA-35 will have a maximum of 1,467 parking spaces. The Lab should make long-term plans for 1,750 employees to use some form of alternative transportation. The future growth of these transportation solutions will be critical in the short term and long term.

Parking & Transportation Stats	
Anticipated staff at full build	3,280
Total number of parking spaces	1,531
Number of staff using alternative transportation	1,749

Figure 24. TA-55 transit area

Figure 25. TA-35 transit area

TA-63/TA-52 plans

Construction of the mini transit center in TA-63 will feature a shuttle drop-off on the west side of the northeast parking lot that will accommodate four 45-foot buses at a time. The shuttle buses will enter on the west side of the parking lot and exit on the east end of the parking lot. There may be a temporary solution for a bus drop-off area either on Puye Road or on Mortandad Road.

An expected 832 employees will be housed in this area, where there will be no more than 557 parking spaces. The Lab should make long-term plans for 375 of those employees to take some form of alternative transportation. The future growth of these transportation solutions will be critical in the short term and long term.

Parking & Transportation Stats	
Anticipated staff at full build	832
Total number of parking spaces	557
Number of staff using alternative transportation	375

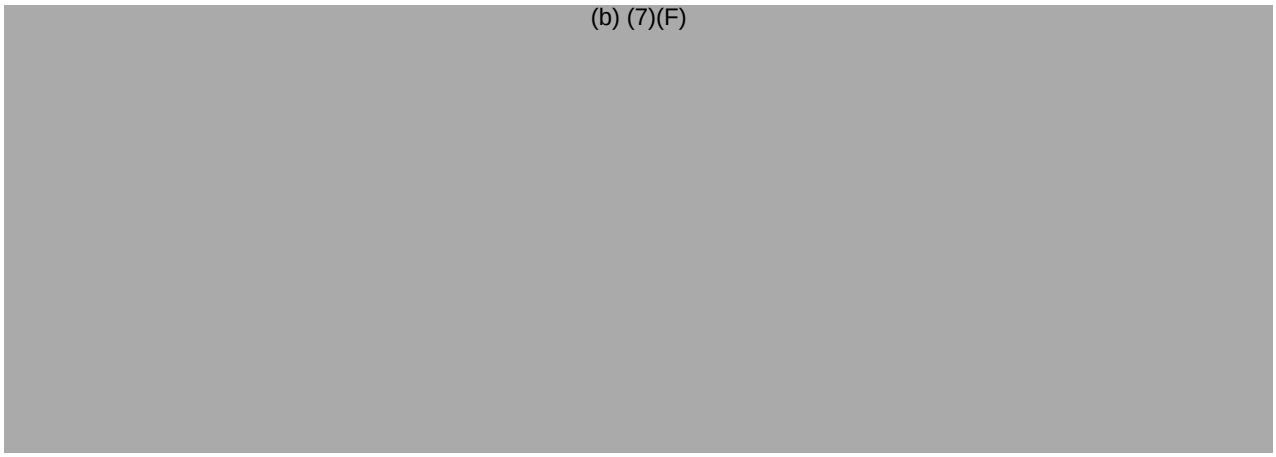

Figure 26. TA-63 Transit Center

3.8 Vanpool

Vanpool is an essential piece of the LANL transportation strategy. The TTI projected the Lab will need up to 2,000commuting via vanpool by 2028 to achieve commuting goals and manage parking availability. This number will fluctuate depending how many people utilize transit or other alternative modes.

LANL will continue its formal vanpool program in FY24, promoting it as a cost-effective, flexible, and direct commuting alternative.

The Lab works with Enterprise, the vanpool vendor for the NMDOT, to help pool five or more employees who live near one another and work similar schedules. Together they rent a new model minivan or SUV on a month-to-month basis. A newly finalized statewide subsidy helps lower vanpool expenses, covering 33% of the base rental rate, which generally reduces monthly costs by $300-$500. The Lab itself is further incentivizing vanpools by providing them with a dedicated High Occupancy Vehicle (HOV) parking spot near their worksite.

In FY23, the Lab had two registered vanpools with a total of nine passengers. That amounts to a reduction of 34,200 monthly passenger miles. (See more details in Section 3.14 Incentives and Section 3.15 Parking management.)

In FY24, PATS will evaluate its FY23 vanpool program experience and develop new tactics for forming vanpools, communicating with employees, and developing incentives such as additional vanpool-designated parking spaces close to buildings.

In FY24, Enterprise is expected to launch a dynamic vanpool model. This will allow employees who work a hybrid schedule to choose to pay for a vanpool just on the days they report to the office. The lack of a program such as this has hampered the growth of this program so far.

3.9 Carpool

Carpooling is a great option for employees who have trouble meeting the minimum occupancy requirements for a vanpool or for those who want to use their own vehicle. As noted in Section 3.14, LANL will issue new parking placards that will enable carpoolers to park in specific, preferred lots.

According to the 2023 Commute Survey, 11% of LANL employees currently carpool with other co-workers at least some of the time. The 2023 survey also shows that 28.5% of employees would be interested in driving or riding in a carpool provided they could find carpool partners and a schedule that works. To help employees find carpools that work for their schedule, LANL has begun looking into software applications that would enable LANL employees to connect with other LANL employees and establish a carpool. In FY24, LANL will solicit for a carpool matching application with likely implementation in early FY25. In the meantime, PATS staff will assist employees with carpool matches via online forms, commuter boards, and a phone line.

3.10 Biking

Improving the Laboratory's biking infrastructure will take time, but with improved lanes, trails, and parking options, biking can be a feasible transportation option both for commuting and inter-LANL mobility. This can be accomplished in part by evaluating future repaving projects and adding dedicated bike lanes when possible.

Recent examples of this include the repaving of Pajarito Road between Diamond Drive and Pecos Drive. The project added a dedicated bike lane to Pajarito Road in both directions.

The Diamond Drive widening project scheduled to begin in FY24 also includes adding a dedicated bike lane between West Jemez Road and Pajarito Road in each direction. This will tie into the new Pajarito Road bike lane.

Dedicated bike trails or paths away from traffic are the safest ways to travel by bike and encourage more people to use bikes. In FY24, PATS will work with the Bicycle Safety Committee and other organizations to determine where paved bike trails will be most beneficial.

PATS will also further evaluate the bike parking options on LANL property and help determine where new bike racks and bike lockers should be located. Recommended TA-3 Transit Center upgrades include a group bike parking station, or an enclosed facility that can house 20 to 40 bikes. Users will receive an electronic key card to access the facility and can then lock their bikes up to one of the racks inside the structure.

PATS will also study the effectiveness of the e-bike program launched in FY23. The program will expand beyond the first four pilot participants and establish policies and procedures that will allow other groups to join in the program in FY24.

3.11 Telework

During the pandemic, LANL adopted new telework policies that allowed more employees to work from home or on a hybrid schedule. This shift significantly reduced traffic congestion and parking capacity. According to the 2023 Employee Commute Survey, about 8.1% of LANL employees telework on any given day. Other surveys have shown as many as 20% of employees may be working from home on particular days.

Even though more people are now reporting to the office, it is recommended that teleworking remains an option that management can use to help reduce traffic congestion during large construction projects, such as the NM4 and East Jemez Road intersection work or the Diamond Drive widening project. The increased use of telecommuting where feasible will also be important to manage parking constraints and on-campus traffic congestion during on-campus Master Plan construction projects.

3.12 Incentives

Carpool/vanpool parking spaces

LANL's revised parking policy stipulates all participants in a carpool (three or more people) or vanpool (four or more participants) must be registered with PATS to receive preferred parking. In FY24, PATS will identify and post signage at parking spaces reserved for Vanpool and pilot a new Carpool program that includes a registration process, new placards, and the development of a parking plan that provides priority parking for carpools and anticipates growth in their use over time.

Guaranteed ride home program

One of the top reasons employees cite for not using an alternative commute is wanting to have access to their personal vehicle in case of an emergency. In FY23, PATS and the LANL Fleet team worked together to strengthen and clarify an existing policy that permits employees to take a government vehicle home and keep it there overnight in the event of such an emergency. The resulting effort will be communicated in early FY24.

For those employees who leave their car at an unsecured park-and-ride lot, use of a GOV vehicle may be problematic because the GOV vehicle may not be left in such areas. PATS will continue to explore options for this group of employees.

Subsidized bus passes

Subsidizing bus passes is a proven and relatively inexpensive tool that large employers can use to address congestion and parking constraints at work sites. If LANL were to subsidize NMDOT bus passes, more employees would choose to leave their cars at home or at a NMDOT Park & Ride lot and use one of the four NMDOT routes already serving LANL. With increased LANL

employee ridership on these existing routes, bus pass subsidization effectively becomes a remote parking solution at a fraction of the cost of building or leasing remote lots and developing service from those lots to LANL. Moreover, by showing NMDOT that LANL can provide increased ridership, NMDOT may be more likely to offer increased service in support of LANL's transportation goals over the longer term.

In FY24, LANL will continue to explore the possibility of providing employees with a subsidized transit pass for use on the New Mexico Park & Ride or a cash incentive to help pay for the cost of a pass. The cost of a monthly Park & Ride pass is currently $90.

Vanpool subsidy

NMDOT provides a 33% subsidy for vanpools, which amounts to approximately $300-$500/month depending on the vehicle and the distance traveled. Vanpool leases typically cost between $1,200 and $1,500/month. The lease includes the cost of fuel, insurance, and roadside assistance.

To help encourage vanpool participation in FY24, LANL will explore the possibility of an employer subsidy to help lower Lab employees' vanpool costs even further. Federal government employees are eligible for the Transportation Incentive Program, which provides up to $300/month to each employee to help cover transit, vanpool, and parking expenses. Because LANL is part of Triad and staff are not federal employees, they are not currently eligible for this benefit. It will likely take legislative action to change that. In the meantime, LANL will explore how our funding sources can be used to enable employees to leave their cars off campus and still get to their jobs to meet mission requirements.

Cash incentive

The strategy with this incentive is to offer a set amount (such as $5) to each employee for every day they do not bring their vehicle to work. Given the parking challenges that have manifested during FY23, this could be a critical incentive for employees to leave their personal cars at home. Over the course of a month, a $5 incentive could amount to approximately $100, which would be enough to cover the New Mexico Park & Ride monthly pass or further reduce employees' share of the cost of vanpooling. In FY24, LANL will continue exploring possibilities to add this incentive.

Pre-tax transportation incentive

In FY24, LANL is rolling out a new benefit for employees to set aside pretax dollars to pay for eligible expenses such as parking, transit, and vanpool. The availability of this benefit will be included in promotional materials PATS develops to motivate employees to switch from driving to using vanpool and public transportation.

3.13 Parking Management

Parking policy

The Lab updated its parking policy effective Aug. 1, 2023, making changes to help better manage the campus' limited parking at a time of rapid growth. The policy was intended to promote safety, efficiency, and fairness.

The updated policy raised the cost of a standard parking citation to $50 and set the fine for a safety-related parking violation at $100. To ensure violations are taken seriously, the Lab imposed new penalties for unpaid citations. Lab employees who do not pay the fine within 60 days are subject to losing badge access, thus removing their ability to perform their work and requiring that they either use paid time off or go on unpaid leave until they pay the fine.

The changes prompted a great deal of employee feedback, and the PATS team fielded every inquiry. The PATS email proved especially helpful in responses. Interestingly, the most common theme in the emails was not to complain about the harsher fines and penalties but rather to ask about enforcement or suggest areas that warranted more enforcement attention.

Parking enforcement

Additional enforcement resources are necessary to bring about compliance to the revised parking policy. In late FY23, LANL issued a RFP for supplemental parking enforcement and anticipates that the supplemental resources provided by this subcontract will begin issuing parking tickets in the first quarter of FY24. These additional resources will be critical to assist PATS in effectively administering the designated lot program pilot planned for FY24 as well enforcing compliance with other provisions of the parking policy. In FY25, it is anticipated that PATS will take over parking enforcement entirely and continue to add resources as necessary.

Designated lot parking

The revised parking policy makes a provision for a designated lot program; this allows for permitted drivers to park in assigned lots. In FY24, PATS will develop a designated lot pilot program aimed at eventually introducing the program across campus. These pilots may include HOV specific designations, student designations, and/or a revamp to LANL's commuter overnight parking program.

Enforcement will happen at the lot level; all employees participating in these pilots will be asked to register their vehicles in order to receive permits. This will help enforcement be more efficient when patrolling designated lots.

Parking management software

In FY24, the Lab will issue a RFP for a parking management system that streamlines or eliminates the management of physical parking permits, streamlines enforcement of the LANL parking policy, provides for parking reservations, and generates reports and provides data that can be used for both operational management and strategic planning.

3.14 Performance Metrics

In FY23, the PATS team developed key performance indicators (KPIs) that measure the success of crucial transportation projects. FY24 metrics will include: public transit ridership, LANL shuttle ridership, on-time performance, bus seating capacity, parking lot capacity, HOV parking permits issued, number of vanpools, number of carpools, number of passengers per carpool/vanpool, vehicle miles reduced (VMT), GHG emissions reduced, miles of bike lanes available, miles of bike lanes added, bike rack and bike locker capacity, bike rack and bike locker usage, e-bike use, incentives implemented, incentives used, and employee satisfaction.

These metrics will continue in FY 24 and will be reported out on a monthly or quarterly basis.

3.15 Communication and Outreach

The PATS team has significantly increased efforts to communicate transportation- and parking-related information to the Laboratory workforce. Reaching employees throughout the campus requires a multi-faceted approach, including the Lab's internal website and newsletter, group presentations and open feedback channels.

In FY23, a "Transportation Hub" page was added to the LANL Inside website. It includes details about the various ways employees can commute to the Lab without driving their SOV, such as public transit, the Pojoaque Express, carpooling, and vanpooling. Work is underway to create a more formal page with additional information.

The Lab's internal daily e-newsletter, LANL Today, has been used to introduce and highlight new transportation-related services and alert employees to parking alternatives. When the topic is particularly pertinent to specific areas of campus, the PATS communicator works through communicators in those areas to help get information to the target audience, including to craft workers who do not have access to email.

PATS is now a featured presenter during new employee orientations, providing information about ways to get to the Lab without having to use a SOV. The "Transportation Options" presentation is one of several stock presentations PATS staff has ready to give upon request. Other topics include the transportation plan and the parking policy. More will be created nd offered in FY24.

PATS has a centralized email for employee feedback and questions, and an assignment system to ensure each message is tracked and answered. There are plans to staff a PATS phone number as well.