

NV TRUCK PARKING IMPLEMENTATION PLAN

EXECUTIVE SUMMARY



AUGUST 2019

Why Truck Parking?

Safe and sufficient truck parking has long been a need in the United States. Whether for a quick stop near an urban area to wait for congestion to clear or a business' delivery window, or an overnight break to sleep in the middle of a long-haul trip, truck parking is a key concern for all commercial truck drivers. More than 80 percent of Nevada goods are transported to, from, and within Nevada by truck, making safe and available parking options critical to the State's economy, quality of life, and residents. Freight movement in Nevada and across the United States is projected to continue to grow, and trucks will play a large role in moving the additional goods.

In response to this need, the Nevada Department of Transportation (NDOT) developed the Nevada Truck Parking Implementation Plan. This plan identifies opportunities to expand and improve existing facilities and integrate truck parking technology in response to rising demand, changing hours of service requirements and safety standards noted in Jason's Law, and rapid advancements in technology. When implemented, these improvements will help truck drivers by providing improved public truck parking where it is most needed and enhanced by real-time truck parking availability information.

How the Plan was Developed

The Truck Parking Implementation Plan builds on previous work completed by the State of Nevada, particularly the One Nevada Plan and the Nevada Statewide Freight Plan. The latter plan was developed using a data-driven approach to assess parking supply and demand. Through the use of a sample of Global Positioning System (GPS) truck parking data, the study identifies where trucks currently are parking; identifies the gap between supply and demand; and prioritizes infrastructure, policy, and technology solutions to close the gap. Projects were prioritized following a multi objective decision-making process based on statewide goals and evaluation criteria modified from the One Nevada Plan. Six Technical Memoranda provide additional details and methodology behind the analysis conducted in this study, and are available at <https://www.nevadadot.com/mobility/freight-planning>.

Truck Parking is a key concern for:

- Commercial Motor Vehicle drivers.
- Industries that rely on efficient truck deliveries.
- Consumers who increasingly order goods online and demand expedited delivery service.
- Residents and communities along truck corridors.
- Government agencies who regulate the industry, enforce statutes, pass zoning ordinances, and build and maintain highways and parking infrastructure.



Who Assisted with the Plan

Integral to the development of this plan was the initiation of ongoing dialogue with key industry leaders and local and State agency stakeholders, including Nevada's Freight Advisory Committee (FAC). Extensive outreach through project meetings, workshops, community events, surveys, and stakeholder interviews was used to:



Identify stakeholder needs



Verify supply and demand



Generate potential truck parking solutions



Confirm project prioritization process

The input received was instrumental in fully understanding the issues that drivers face, and in developing recommendations for moving forward. Stakeholders were involved early in the project to discuss the demand for truck parking and issues surrounding it. Later in the study, various strategies were explored with stakeholders for addressing unmet demand.

Understanding the Issues

Nearly **50** phone and in person meetings & interviews were held with **over 20** public & private agencies and organizations to more fully understand the parking issues facing truck drivers.

Freight Advisory Committee Participants

- Carson Area MPO
- Cast Transportation
- CBRE Brokerage Services
- Churchill County
- City of Henderson
- City of Las Vegas
- City of North Las Vegas
- Clark County
- Dielco Crane Service, Inc.
- National Association of Trucker Stop Operators
- NDOT District engineers and maintenance staff
- NDOT Planning and ITS
- Nevada Highway Patrol Commercial Enforcement Section
- Nevada Trucking Association
- Nye County
- RTC of Southern Nevada
- RTC of Washoe County
- Travel Centers of America
- Truck Specialized Parking Services
- DOT and enforcement personnel from California, Colorado, and Utah

What's Driving Demand?

The demand for truck parking is influenced by a number of factors, including Hours of Service (HOS) regulations, mandatory use of electronic logging devices (ELD), driver preferences for stopping location and amenities, and shipper/receiver delivery needs.

Hours of Service Regulations

HOS, regulated by the Federal Motor Carrier Safety Administration, have a significant impact on truck parking because they require drivers to carefully time deliveries and schedule adequate rest, making sufficient parking critical on their routes and deliveries. HOS regulations are strongly enforced by State agencies, and fines for non-compliance can be high. To avoid the steep fines, drivers are under pressure to find parking as quickly and efficiently as possible to avoid violating HOS regulations while trying to meet stringent delivery schedules.

Electronic Logging Devices

The mandatory use (in most commercial vehicles) of ELD is adding to the parking demand concern by making it more difficult to "game the system." For example, with paper logs, drivers recorded their activities in 15-minute increments and were provided a grace period to find a parking space, once their HOS were up. The grace period did not count towards driving time. ELDs erase that grace period and can track a truck's location. This means that drivers either need to search for and find parking before their HOS are up (thus sacrificing driving time and decreasing productivity), or park immediately once their time is up, regardless of location.

The Truck Parking Challenge



"Long-Haul"

They are on a long-distance stretch of their trip and need to find a parking location, which maximizes their driving distance for the day, but will not be full when they arrive.

Challenge: Drivers want to maximize their HOS, but the private sector can't build parking everywhere.



"Staging"

They are at an origin or destination and have to wait for access to a facility where they are loading or unloading, and the facility does not provide a truck staging area.

Challenge: Need is in or near urban areas with higher land prices, municipal restrictions, and community opposition.



"Emergency"

They are in the middle of their driving period, but an incident in front of them has either closed or severely congested the highway, and they need a place to park for either a short period until the road opens, or longer if they need to reset their HOS status.

Challenge: Unpredictable demand for a very large amount of parking.



"Time Off"

They are done with their work week and need a place to park their truck while off-duty, but do not have access to a lot (often impacts independent owner-operators).

Challenge: Independent drivers don't have a "base" to park. Municipal restrictions can make parking near home difficult and private long-term parking can be expensive (if available).

Statewide Needs

The truck parking analysis was conducted at the freight corridor level, county level, and the local level (at specific parking facilities where data are available).

Parking Gap on Key Freight Corridors

Four key freight corridors, Interstate 15 (I-15), I-80, U.S. 93, and U.S. 95, were the focus of this study. These are the main east-west and north-south corridors in the State supporting interstate commerce and have a higher volume of trucks. These routes typically require trips between origins and destinations further apart than the maximum daily driving limit and, therefore, generate greater parking demand. The truck parking supply, demand, and gap along these corridors is shown in Figure 1. The greatest concentra-

tions of authorized parking are in the Southern Nevada/Las Vegas and Northwest Nevada/Reno-Sparks-Carson City metropolitan areas along I-15 (1,584 spaces) and I-80 (2,246 spaces).

I-15 was the only route identified with a parking shortage, with a deficit of approximately 130 spaces. This finding is consistent with stakeholder input, indicating that I-15 is the most difficult route on which to locate parking. In particular, I-15 in the southwest portion of Las Vegas was identified as an area of particular need given the origin-destination patterns in the region and the important trade ties to Southern California. The remaining routes have a parking surplus—(260 spaces on I-80), (460 spaces on U.S. 93), and (1,020 spaces on U.S. 95).

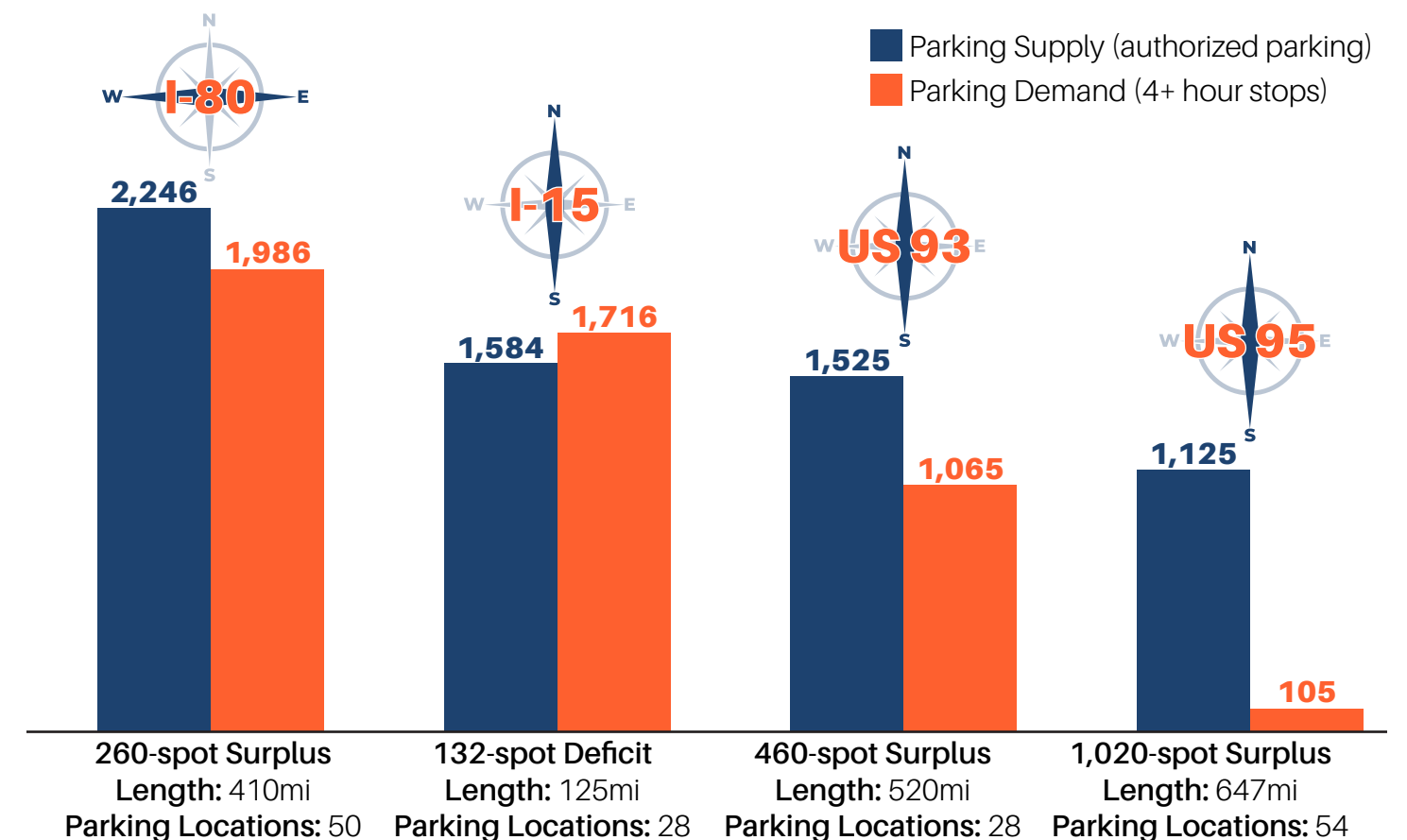


Figure 1. Truck Parking Supply, Demand, and Gap by Freight Corridor

Parking Gap by County and Location

The parking data also were aggregated for each of Nevada’s 16 counties to broadly assess parking needs at the county level. The analysis was conducted in combination with evaluating parking demand at all authorized parking locations throughout the State. Figure 2 shows the parking gap by county and at authorized parking locations. For the authorized locations, an analysis of the actual number of trucks parked was conducted using a combination of ATRI truck GPS data to identify trucks parked at specific truck parking locations and smartphone application data to validate parking at specific facilities. Data were collected from a sampling of 59 publicly and privately owned sites, which are located on the 4 major freight corridors.

Based on the parking demand analysis and stakeholder outreach conducted, the largest gaps in truck parking occur in the two major urban areas in Nevada: Las Vegas (Clark County) and Reno/Sparks (Washoe County).

Clark County has a gap of more than 550 parking spaces and includes I-15, the only route identified with a shortage of parking, particularly near Las Vegas. The presence of U.S. 93 and U.S. 95 in Clark County also adds to the total demand. Washoe County has a deficit of approximately 250 spaces, with the primary need identified on I-80 near Reno/Sparks. Beyond these two urban areas, truck parking

gaps are limited and widely distributed across the remainder of the Interstate system with some limited need identified in Churchill County and near Carlin on I-80. On the U.S. route system, small gaps on U.S. 6 near the California border, on U.S. 95 near Indian Springs, and on U.S. 93 near the U.S. 93/93A split in Lincoln County exist. One additional gap—Storey County—is likely driven by a combination of trucks on longer Interstate routes, as well as trucks serving the Tahoe-Reno Industrial Center, which may make the need more closely related to staging parking concerns than long haul. Pershing, Elko, and Nye Counties have a surplus of more than 100 parking spaces.

Technology Gap

Beyond physical infrastructure, there also is a technology and information gap to assist long-haul drivers with finding parking. Of the nearly 4,085 authorized private parking spaces in Nevada, only one-half of the spaces has availability information, which is maintained and updated by the parking facilities themselves by visual inspection and publicized through the “Park My Truck” application. None of the public parking locations in Nevada are equipped with truck counters or space detection technology, which would notify drivers of available spaces.

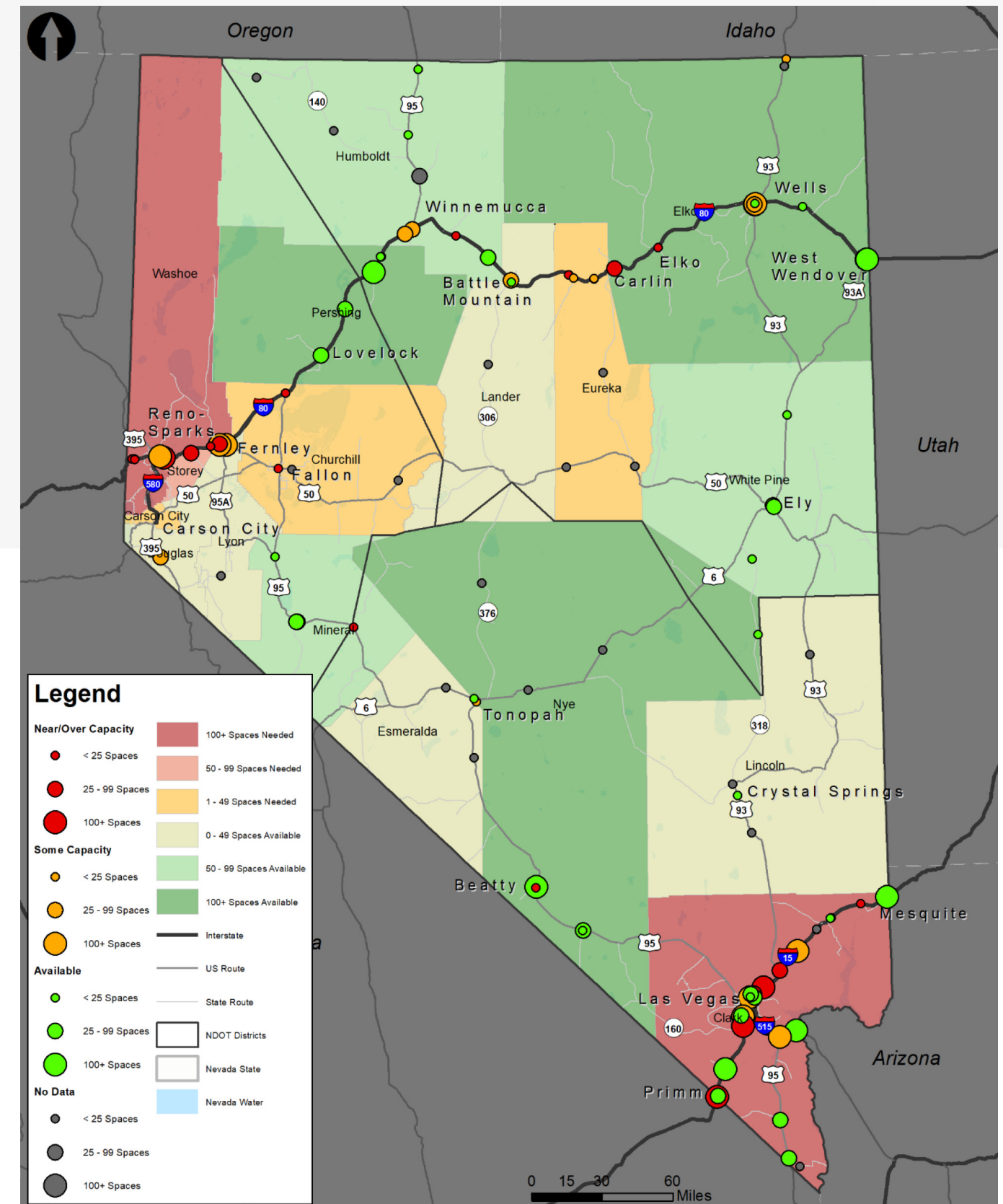
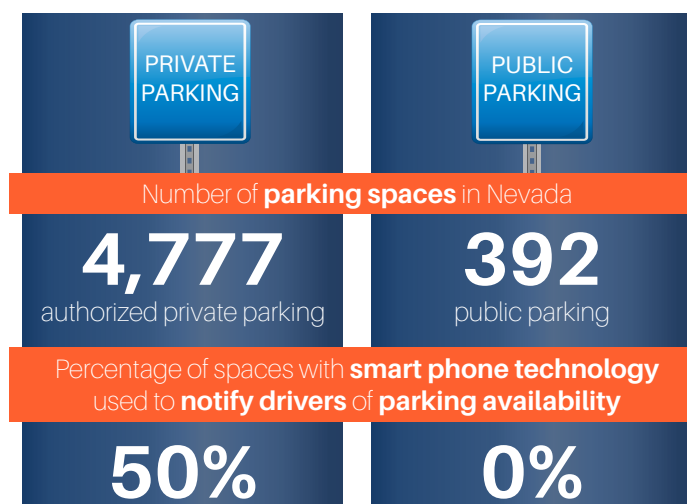


Figure 2. Truck Parking Gap by County and at Authorized Parking Sites
Source: NDOT, ATRI, Analysis by Cambridge Systematics, 2018.

Emergency Truck Parking Gap

The need to accommodate truck parking during unforeseen events—especially winter weather closures at Donner Pass on I-80 in California—was repeatedly mentioned by stakeholders during this study. The decision to close this vital artery is made by authorities in California and Nevada, and impacts travelers in both states on either side of the pass. This is especially true for trucks as there are few if any authorized locations to park between Reno and Donner Pass, and the truck parking capacity in Washoe County already is reaching capacity during normal conditions. In particular, during closures of I-80, sites on I-80 west of Sparks were found to have more trucks parked compared to days with regular operation of I-80.



I-80 at Donner Pass during a closure
Source: NDOT.

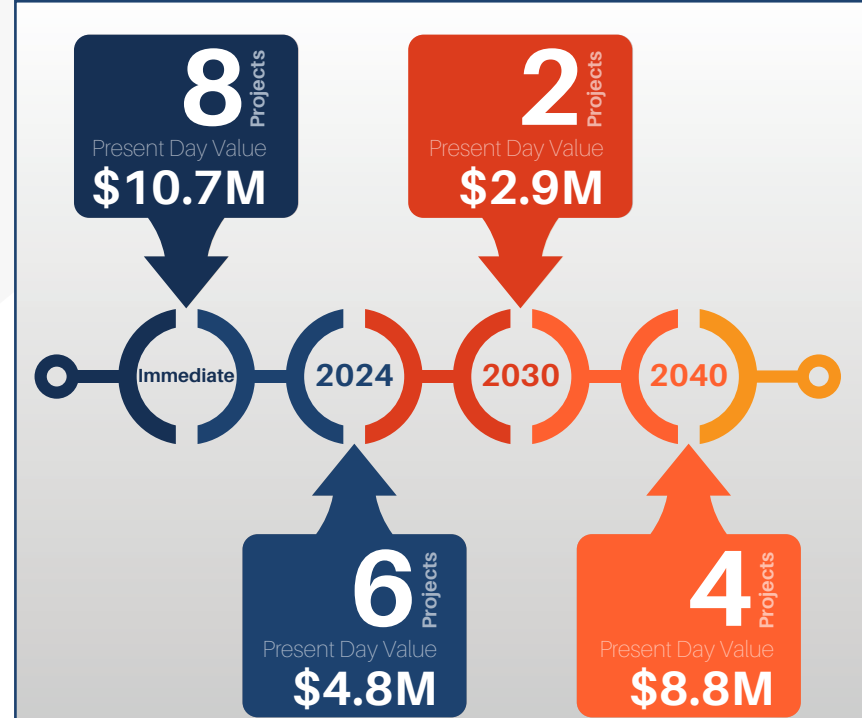
Closing the Parking Gap

Long-haul truck parking was the key need examined throughout the course of this study. This type of parking is found throughout Nevada, and the analysis conducted identified a number of areas where additional investment—either public or private—would help improve conditions and support the operations of drivers across the State. The need for truck parking for long-haul trips in Nevada is greatest on the I-15 and I-80 corridors, with smaller needs on U.S. 93 and U.S. 95. In addition, parking during emergency closures, especially in the western I-80 corridor, and parking for urban staging needs especially in the Las Vegas metro area also were identified as key concerns.

Long-haul truck parking in most of the rural areas of the State appears to be relatively well covered by existing public and private facilities, with known expansions of private parking facilities in a number of locations. However, at the county level, demand still exceeds supply mostly near urban or industrial areas in Clark, Washoe, and Storey Counties, with limited gaps noted in other counties along I-80 between Wells and Winnemucca. Using this information, in combination with the feedback received from stakeholders, a strategic implementation plan to address truck parking issues in the State was developed.

Solutions and Opportunities

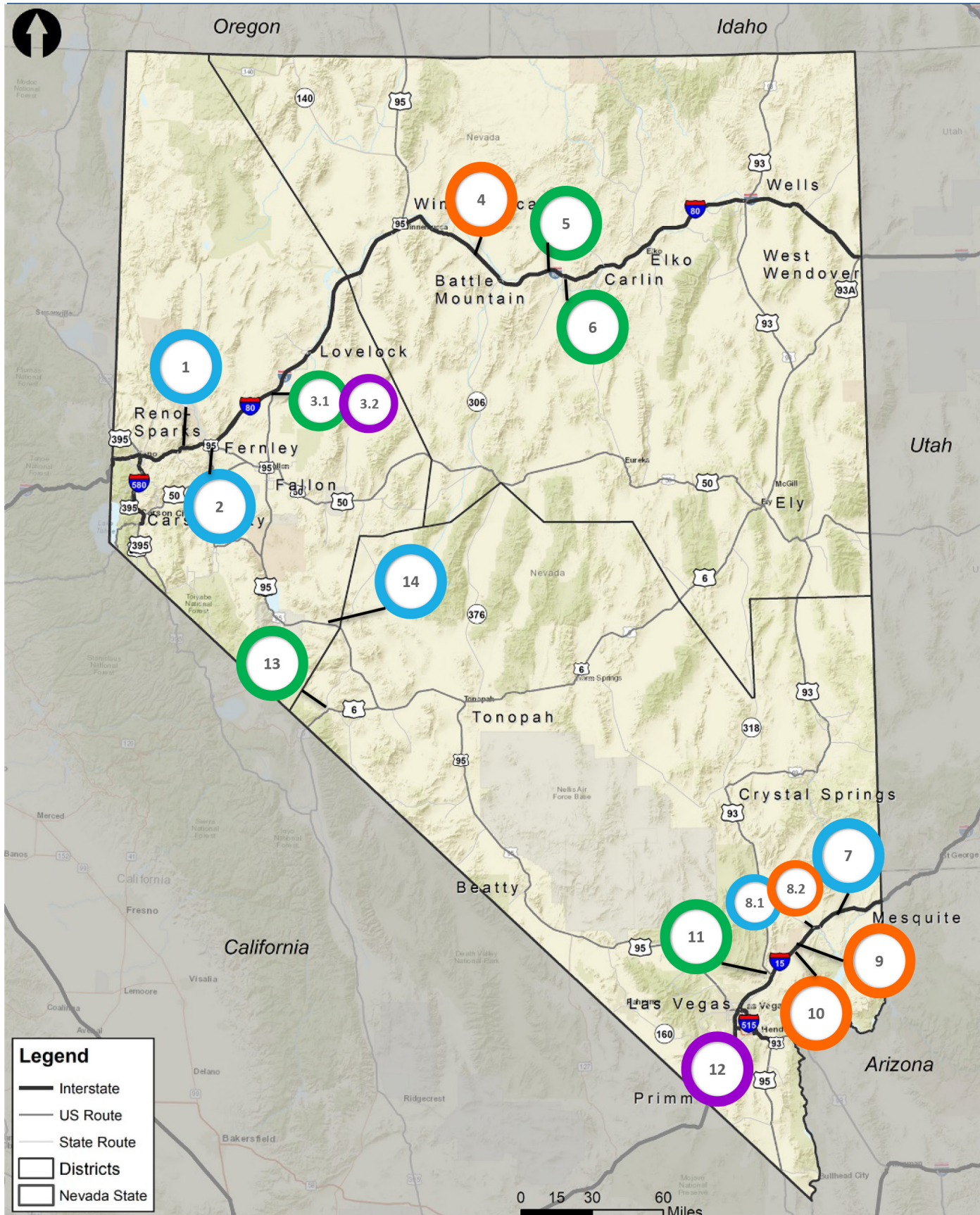
This study recommends 20 infrastructure projects for advancement, with 1,153 new spaces added. These projects were prioritized through a comprehensive evaluation process and identified as those that will best meet the statewide truck parking needs, with a focus on projects that NDOT can lead. Figure 3 provides an overview of the recommended projects; and Table 1 presents the timing for project implementation based on its priority score, ability to be obligated by September 2020, and the timing of adjacent projects. The total cost of all projects in present day value is \$27,212,000. Planning-level concept drawings and cost estimates, similar to Figure 4, for all of the recommended projects can be found in the Final Report (<https://www.nevadadot.com/mobility/freight-planning>).



Closing the Truck Parking Gap

Source: NDOT, ATRI, Analysis by Cambridge Systematics, 2018.





Recommended Projects

- 1 Mustang Check Station
- 2 Wadsworth Rest Area Expansion
- 3.1 3.2 Trinity/Fallon Rest Area Expansion
- 4 Golconda Summit Expansion
- 5 Beowawe Rest Area Expansion
- 6 SR 306 @ I-80 New Parking – Regular Parking
- 7 I-15 MP 110 (Mormon Mesa) Expansion
- 8.1 8.2 I-15 MP 96 Expansion
- 9 I-15 MP 88 Expansion
- 10 I-15 MP 84 New Parking
- 11 Las Vegas Blvd. Relocation & New Parking @ Loves
- 12 I-15 South Check Station
- 13 SR 360 @ US 6 Expansion – Regular Parking
- 14 Luning Rest Area Expansion – Regular Parking
- 15.1 15.2 TPAS Phase I & II (Statewide- not shown)

Figure 3. Recommended Projects

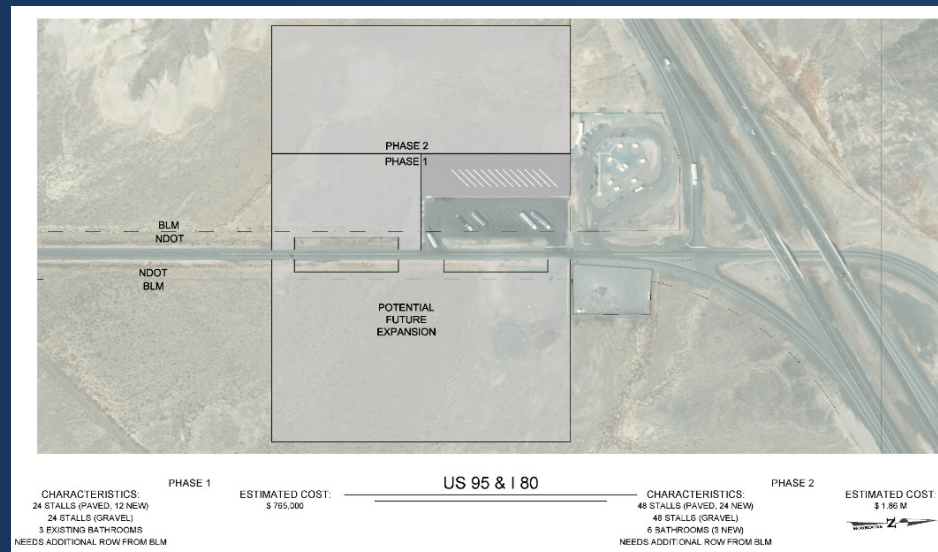
Table 1. Implementation Schedule for Recommended Projects

ID	Route	Project	Type	Spaces Added	Estimated Capital Cost	Packaged with Other Projects		Can Obligate by September 2020	Proposed Timing
						Adjacent Projects	Date		
1.1	I-80	Mustang Check Station—WB	R	51	\$1,400,000	I-80 Widening	2030	Y	By 9/2020
1.2	I-80	Mustang Check Station—EB	E	51	\$1,500,000	I-80 Widening	2030	Y	By 9/2020
2.1	I-80	Wadsworth Rest Area Expansion	R	10	\$646,000		2021	Y	By 9/2020
2.2	I-80	Wadsworth Rest Area Expansion	E	41	\$581,000		2021	N	By 9/2020
7	I-15	I-15, MP 110 (NB and SB)	R	41	\$1,600,000	SB Site Expansion	2021	Y	By 9/2020
8.1	I-15	I-15, MP 96 (NB and SB), Phase 1	R	20	\$2,740,000			Y	By 9/2020
14	U.S. 95	Luning Rest Area Expansion (in house striping)	R	4	\$—			Y	By 9/2020
15.1	All	TPAS—Phase I (6 sites + Backbone)	—	125	\$2,260,000			Y	By 9/2020
3.1	I-80/U.S. 95	Trinity Rest Area Expansion—Phase 1	B	36	\$765,000	RE Upgrade and 3R on U.S. 95	2022	Y	2020–2024
5	I-80	Beowawe Rest Area Expansion	R	32	\$1,200,000	RE Upgrade	2023	N	2020–2024
6	I-80	SR 306 @ I-80	R	14	\$414,000	Interchange Upgrade	2021	Y	2020–2024
11	I-15/U.S. 93	Relocate Las Vegas Boulevard and add parking @ Loves	R	116	\$—	City of North LV Relocate LVB		N	2020–2024
13	U.S. 6	SR 360 @ U.S. 6 Expansion (gravel)	R	14	\$226,000	3R	2021 or 2022	Y	2020–2024
15.2	All	TPAS—Phase 2 (all NDOT sites on Interstates)	—	175	\$2,220,000		2022	Y	2020–2024
3.2	I-80/U.S. 95	Trinity Rest Area Expansion—Phase 2	B	48	\$1,860,000	RE Upgrade and 3R on U.S. 95	TBD	Y	2025–2030
12	I-15	I-15 South Check Station	R	20	\$1,000,000	New Check Station		N	2025–2030
4	I-80	Golconda Summit Expansion	R	19	\$1,600,000			Y	2031–2040
8.2	I-15	I-15, MP 96 (NB and SB), Phase 2	R	256	\$4,730,000			Y	2031–2040
9	I-15	I-15, MP 88	R	26	\$1,150,000			Y	2031–2040
10	I-15	I-15, MP 84	R	54	\$1,320,000			Y	2031–2040
Total					\$27,212,000				

Note: R= Regular, E= Emergency, B= Adds both regular and emergency spaces.

Figure 4. Trinity/Fallon Rest Area Expansion, I-80/US 95

Located at the intersection of I-80 and U.S. 95, this rest area has striped parking for 13 trucks and an unauthorized gravel area across the street that can accommodate 10 vehicles. The overflow lot is commonly used and parking demand was higher at this location than any other public rest area sampled. The strategic location of this site on both I-80 and U.S. 95 and its ability to provide spaces during emergency closures of I-80 make expansion here desirable. NDOT has also identified this location for expansion and enhancement to a welcome center, which would include numerous upgrades. Improved amenities will likely make this location a larger draw for both truck drivers and other motorists, increasing the need to add truck parking. The conceptual design shows expansion of regular truck parking (11 new spaces) and an overflow lot (20 spaces) for emergencies.



Source: Horrocks Engineers.

Technology Solution

Statewide Truck Parking Availability System

Truck Parking Availability Systems (TPAS) leverage technology to provide real-time information to drivers and dispatchers about the availability of parking. They make finding parking easier and less stressful by accurately counting and disseminating information about the number of available spaces at connected facilities. This increases the efficient use of existing capacity, increases driver productivity, and reduces travel time and fuel costs. With more advanced technologies, TPAS also can help predict when future additional parking may become available at a site. The development of a statewide TPAS system is proposed and would cover all existing public authorized parking areas.

TPAS deployment on I-15 and I-80 would include 20 public sites, can begin as soon as funding is secured, and requires limited coordination outside of NDOT. In the full build-out of the system, information also would be made available on the NDOT 511 website, and would be available to private smartphone application developers who could integrate the information with their own systems.

According to the Mid America Association of State Transportation Officials (MAASTO), nationally, every 15-minute search for parking by truck drivers, costs the economy \$4.4 billion annually (MAASTO, 2019).

Policy Solutions and Other Actions

There are a number of policy changes, education and outreach opportunities, and coordination efforts that can help close the truck parking gap. The actions, timeframe, lead agency, and partnerships recommended to implement these policies are described in Table 2.

Table 2. Policy Solutions

Policy/Program	Action	Timeframe	Lead Agency	Partner(s)
Expand existing public truck stops and rest areas.	Consider expansion with any rest area upgrade.	Ongoing	NDOT	
Sponsorship of public truck stops and rest areas.	Monitor FDOT's efforts and consider for future inclusion in any truck parking system designs.	1-5 years	NDOT	FAC, FHWA
Add truck parking to weigh stations.	Consider adding truck parking to any new or renovated weigh station.	Ongoing	NDOT	NHP
Repurpose NDOT or NHP facilities for truck parking.	Consider converting all rest areas and weigh stations that are planned to be closed to truck parking.	Ongoing	NDOT	NHP, FHWA
Allow parking at chain-up, brake check, inspection sites during off season.	Conduct a safety assessment of subject locations to determine if overnight parking would be safe and operationally feasible.	1-5 years	NDOT	NHP
Add truck parking to rural highways.	Consider adding simple truck parking areas, (i.e. a truck pull-off/turnout), with highway expansion or improvement projects. Sites should be added where NDOT has sufficient ROW along critical corridors to help close gaps between existing parking facilities. Small truck parking facilities should be located every 20-30 miles. Key corridors include: <ul style="list-style-type: none"> U.S. 95 between Las Vegas and Amargosa Valley; between Beatty and Tonopah; and between Tonopah and Luning. U.S. 93 between I-15 and Alamo/Crystal Springs. SR 318 between Crystal Springs and Sunny Side Rest Area. U.S. 93 between U.S. 93/93A junction and Wells; and between Wells and Jackpot. U.S. 93A between U.S. 93/93A junction and West Wendover. 	Ongoing	NDOT	
Enforcement.	Encourage more active enforcement of HOS regulations in areas with viable, authorized, parking alternatives. Reevaluate in future after immediate and short-term projects have been implemented.	2025	NHP	Local law enforcement, NDOT, FAC
Modify freight performance measures.	Consider modifying freight performance measures during the next Nevada State Freight Plan update.	1-5 years	NDOT	FAC
Multistate coordination.	Continue multi-state coordination, particularly with the Western States Freight Coalition, the I-15 Mobility Alliance, and the National Economic Partnerships grant award for the I-15 Freight Mobility Enhancement Plan.	Ongoing	NDOT	
Public-private partnerships (P3).	Identify a P3 pilot project, secure funding commitments from public and private partners, and request U.S. DOT funding support via BUILD or INFRA grants.	1-5 years	NDOT	Applicable local jurisdiction

Policy/Program	Action	Timeframe	Lead Agency	Partner(s)
Truck parking ordinance	Require facilities that receive and dispatch large numbers of trucks to provide onsite and/or contribute to the construction, operations, and maintenance of staging/parking areas (likely developed as a P3).	1-5 years	Urban cities and counties	NDOT
Public urban truck parking facility	No action required at this time. Consider investigating a P3 urban truck parking facility first.	N/A		
Convention Marshalling Yard	Develop a consolidated marshalling yard for the use of all service providers within the Las Vegas Resort Corridor.	1-5 years	TBD	Clark County, RTCSNV, LVCVA, major convention service providers
Competitive loan/grant program	No action recommended at this time. Reevaluate in future.	2025	NDOT	FAC
Statewide TPAS deployment	Implement phased approach (see implementation schedule for recommended projects). Phase 2 would be a good candidate for a multi-state BUILD or INFRA grant.	2019-2025	NDOT	FAST

Funding and Financing Options

Construction of a new truck parking facility or expansion of existing facilities not entirely within the private sector will require local, State, and/or Federal funding resources. Although traditional procurement mechanisms and funding sources can be used for such investments, available public financial resources may not always be adequate. Con-

sideration of new revenues sources and use of innovative financing mechanisms may be necessary. Most truck parking funding comes from Federal sources in addition to a limited number of local programs. A description of these sources can be found in Nevada Truck Parking: Draft Recommendations available on NDOT's Freight Planning website and are summarized below.

Federal Funding

PROGRAMS

- Surface Transportation Block Grant Program (STBG)
- National Highway Freight Program (NHFP)
- Highway Safety Improvement Program (HSIP)
- National Highway Performance Program (NHPP)
- Congestion Mitigation and Air Quality (CMAQ)

GRANT OPPORTUNITIES

- Infrastructure for Rebuilding America (INFRA)
- Better Utilizing Investments to Leverage Development (BUILD)
- Innovative Technology Deployment (ITD)
- Accelerated Innovation Deployment (AID)
- Diesel Emissions Reductions Act (DERA)
- Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD)
- Volkswagen (VW) settlement payments

State and Local Funding Programs

Nevada has various transportation funding sources at the State and local level including:

- State gas taxes.
- State special fuel taxes.
- Motor vehicle registration taxes.
- Driver's license fees.
- Motor carrier fees.
- Formula and discretionary Federal transportation funds (primarily derived from Federal fuel taxes).
- Local gas taxes.
- Local special fuel taxes.
- Sales and use taxes.
- Property taxes.
- Impact fees.
- Assessments through improvement districts.
- Development tax.
- Government services tax supplemental

Fuel Revenue Indexing

Fuel Revenue Indexing (FRI) in Clark County is an example of a local fee used to fund road transportation projects. This approach ties fuel taxes to the inflation rate, dedicating a portion of the additional revenue raised on each gallon of gas purchased to road construction, maintenance, and repair. FRI is anticipated to generate \$3 billion between 2016 and 2026.¹ Washoe County has had a similar system in place since 2003 and had raised approximately \$302.5 million through December 2017.²

SB 48 Rural Diesel Tax Bill

SB 48 passed by the Nevada Legislature and signed by the Governor in 2019, is another example of a local fee used to fund road transportation projects, and specifically truck parking projects. SB 48 enables a rural Board of County Commissioners the ability to enact up to a 5 cent diesel tax by a 2/3rds majority vote of their members, or to decide to take the diesel tax to a vote of the people at a general election. Rural counties which implement the 5 cent tax and have more than 10 million gallons of diesel sales annually will be required to contribute up to 10% of the tax proceeds to NDOT for truck parking projects within the county. It is believed this will set a national precedent for local governments to assist in funding truck parking. Currently, only the following four rural counties meet the 10 million gallon threshold.

County	Estimated Annual Proceeds Earmarked for Truck Parking
Elko	\$211,000
Humboldt	\$109,000
Lyon	\$260,000
Pershing	\$ 60,000

¹ https://www.rtcnv.com/fri/docs/FRI_FAQs.pdf.

² <https://www.rtcwashoe.com/wp-content/uploads/2018/04/Item-3.2-Indexed-Fuel-Taxes-Report-FY-19.pdf>.

NEVADA NDOT

SAFE AND CONNECTED

