Fleet Modernization – Facility Preparedness for Electric Vehicles at the Topeka Sorting and Delivery Center

AUDIT REPORT

Report Number 24-056-R25 | January 8, 2025

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Highlights

Background

The U.S. Postal Service selected the Topeka Sorting and Delivery Center (S&DC) as one of the first facilities for fleet electrification. To support its planned electric vehicle (EV) roll out, the Postal Service contracted for the design and installation of 95 parking spaces with charging ports. To conduct the commissioning, they hired external contractors to perform electrical, network, charging, and safety testing. Carriers began using 25 EVs for delivery on June 6, 2024.

What We Did

Our objective was to assess whether the Topeka S&DC was prepared to utilize EVs in delivery operations. We conducted observations at the Topeka S&DC and worked with contractors to perform electrical testing and evaluate the operating and safety features of the infrastructure.

What We Found

We found the Postal Service took appropriate steps to ensure the Topeka S&DC was prepared to utilize EVs. However, we identified opportunities to enhance infrastructure security, safety, and communication between headquarters and local management. Specifically, we found the delivery vehicle parking lot was unsecured and electrical panels were unlocked with keys inside their boxes; one panel had several holes patched with tape; and the facility lacked readable signage. Moreover, we found 12 of 35 (34 percent) sampled stalls were less than the required dimensions; and bollard spacing did not provide adequate protection for electrical equipment from vehicular traffic. Lastly, local management did not receive written communication about the protocols for operation and maintenance of EVs. Unsecured equipment may be subject to vandalism, theft, and financial loss. Additionally, increasing focus on infrastructure safety can prevent unsafe work environments. Furthermore, inadequate communication could interfere with delivery operations and potentially result in delayed mail.

Recommendations and Management's Comments

We made seven recommendations to address the issues identified in the report. Postal Service management agreed with six recommendations and disagreed with one. We consider management's comments responsive to recommendations 1, 2, 3, 4, 6, and 7 as corrective actions should resolve the issues in the report. Management disagreed with recommendation 5, and we will work with them through the formal audit resolution process. Management's comments and our evaluation are at the end of each finding and recommendation. See Appendix B for management's comments in their entirety.

Transmittal Letter

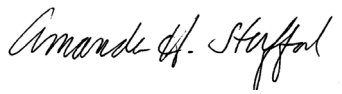
OFFICE OF INSPECTOR GENERAL
UNITED STATES POSTAL SERVICE

January 8, 2025

MEMORANDUM FOR: RONNIE J. JARRIEL
CHIEF LOGISTICS AND INFRASTRUCTURE OFFICER AND
EXECUTIVE VICE PRESIDENT

MICHAEL W. RAKES
VICE PRESIDENT, RETAIL AND DELIVERY OPERATIONS – CENTRAL
AREA

RAJINDER SANGHERA
VICE PRESIDENT, RETAIL AND POST OFFICE OPERATIONS



FROM: Amanda H. Stafford
Deputy Assistant Inspector General
for Retail, Marketing & Supply Management

SUBJECT: Audit Report – Fleet Modernization – Facility Preparedness for Electric Vehicles at the Topeka Sorting and Delivery Center (Report Number 24-056-R25)

This report presents the results of our audit of Topeka Sorting and Delivery Center's preparedness to utilize electric vehicles in delivery operations.

All recommendations require U.S. Postal Service Office of Inspector General (OIG) concurrence before closure. Consequently, the OIG requests written confirmation when corrective actions are completed. Recommendations 1, 2, 3, 4, 6, and 7 should not be closed in the Postal Service's follow-up tracking system until the OIG provides written confirmation that the recommendations can be closed. We will work with management through the audit resolution process on recommendation 5.

We appreciate the cooperation and courtesies provided by your staff. If you have any questions or need additional information, please contact Shirian Holland, Director, Infrastructure and Supply Management, or me at 703-248-2100.

Attachment

cc: Postmaster General
Chief Processing and Distribution Officer and Executive Vice President
Secretary of the Board of Governors
Corporate Audit Response Management

Results

Introduction/Objective

This report presents the results of our self-initiated audit of the Topeka Sorting and Delivery Center's (S&DC) preparedness to receive and use electric vehicles (EV) (Project Number 24-056). Our objective was to assess whether the Topeka S&DC was prepared to use EVs in delivery operations.[1] See Appendix A for additional information about this audit.

Background

To manage its aging fleet,[2] while supporting financial and environmental sustainability strategies from its Delivering for America (DFA) 10-year plan,[3] the U.S. Postal Service is investing $9.6 billion, including $3 billion in congressional funding,[4] to partially electrify its delivery fleet and procure related charging stations (chargers). As part of the Postal Service's DFA plan, by 2028, the Postal Service will acquire over 106,000 new delivery vehicles. These will be a mix of commercial-off-the-shelf (COTS) vehicles and custom-built Next Generation Delivery Vehicles (NGDV). The Postal Service will deploy these vehicles to a select number of facilities.

Additionally, the Postal Service purchased COTS chargers and conducted a first article test to verify the supplier's equipment met all the requirements specified in the Postal Service's EV charging equipment statement of work. In a prior audit, we reported Postal Service's June 2023 test showed the equipment performed as expected and passed all specified requirements identified in the contracts' statement of work. Additionally, we found the Postal Service effectively conducted performance monitoring to evaluate the charging stations' short-term reliability.[5]

Fleet Electrification Planning Efforts at Topeka S&DC

The Postal Service selected the Topeka S&DC as one of the first facilities for fleet electrification. To prepare for EV deployment, the Postal Service developed site designs, site plans, and electric utility plans to prepare for charging station infrastructure and vehicle deployment. During the planning phase, the Postal Service identified 94 routes[6] as eligible for battery-operated EVs and selected 66 electric NGDVs and 28 COTS EVs to replace existing vehicles on those routes.

Next, in July 2023, the Postal Service awarded contracts[7] for the installation of charging station infrastructure. These contracts included the design and remodeling of the facility's employee parking lot to support new delivery vehicles, including the addition of 95 parking spaces with charging infrastructure for EVs. The contractors managed the entire installation effort, including working with the local utility company to install a new transformer and provide electrical service.

Topeka S&DC EV Infrastructure Implementation

The parking lot underwent renovations from September 2023 through March 2024. The renovations included 123 total delivery vehicle parking spaces, of which 95 spaces were built for EVs and their charging infrastructure, while the remaining 28 spaces were set aside for the gasoline-powered NGDVs. Of the 95 EV parking spaces, 67[8] are

1 To assist in our review, we engaged two contractors to perform electrical testing and observations of electrical infrastructure to evaluate the operation and safety of equipment.
2 The Postal Service's delivery fleet of Long-Life Vehicles (LLV) has a lifespan of 24 years. As of the end of fiscal year 2023, the Postal Service had approximately 130,000 right-hand-drive LLVs. All LLVs have exceeded their projected 24-year life span and account for over 52 percent of the Postal Service's vehicle fleet.
3 The Postal Service's 10-year plan is officially named Delivering for America: Our Vision and Ten-Year Plan to Achieve Financial Sustainability and Service Excellence. The plan was developed to transform financial performance and customer service through significant investments in people, technology, and infrastructure.
4 $1.29 billion was designated for the purchase of zero-emission vehicles and $1.71 billion for the purchase, design, and installation of the requisite infrastructure to support zero-emission delivery vehicles. Inflation Reduction Act of 2022, Pub. L. No. 117-169 (August 16, 2022).
5 Fleet Modernization – Electric Vehicle Charging Stations Acquisition, 23-059-R24, dated December 29, 2023.
6 The Postal Service has one spare, which makes the total number 95.
7 The Postal Service awarded multiple contracts which include subcontractors.
8 Of these 67 spaces, one is a spare which was provided as a contingency should any individual charger be inoperable. This space is not intended to have an EV permanently assigned to it.

designed for the electric NGDVs and 28 for COTS EVs. Depending on the EV parking stall design, chargers are located at either the rear or front of the stalls. The parking spaces are supported by dual port chargers.[9]

Commissioning Process and Activation of Topeka S&DC

The charging station infrastructure installation was completed and commissioned[10] from March 20 through March 22, 2024. The Postal Service hired an external firm that specializes in site commissioning to perform electrical, safety, and network testing of the chargers in the same month. During the commissioning, 36 action items, such as inoperable, defective chargers or chargers failing to connect to the network, were identified. Four chargers were inoperable and had to be replaced. On May 14, 2024, the external commissioning firm fully verified that the EV infrastructure installation was completed and conducted a virtual walk through with the NDGV Project Management Office (PMO).[11] Between May 2 through May 7, 2024, the Topeka S&DC received 25 COTS EVs and following a month of training, staff started utilizing the vehicles for delivery on June 6, 2024.

EV Equipment Support

Mail carriers are typically the first to identify issues with the EV infrastructure, as they are responsible for charging the EVs daily. If the EV charging station fails to work, carriers should provide local management with the serial number to initiate a service request by contacting the National Facilities Response Line[12] (NFRL). The request is then routed to the appropriate department to address the concern. Additionally, the PMO has access to a supplier dashboard that can provide a real time visual to identify if the chargers are functioning, which it employs on an ad-hoc basis.

Findings Summary

While we acknowledge that the Postal Service's preparedness efforts allowed the Topeka S&DC to utilize EVs, we identified opportunities to enhance infrastructure security and safety, and communication between headquarters and local management.

9 One single port charger is used for the contingency parking space.
10 A site commissioning is complete when the NGDV Project Management Office team approves the contractor oversight processes, the EV infrastructure deployment is complete, and the facility is ready to receive EVs.
11 The team responsible for providing oversight and support related to the electric vehicle infrastructure integration.
12 This is the same process to report any issues at the facility, such as with a furnace or other piece of equipment. Therefore, to alleviate any confusion and ensure consistency, the PMO is using this line to report EV infrastructure issues.

Finding #1: Topeka Sorting and Delivery Center's Preparedness

The Postal Service effectively implemented EV infrastructure for delivery operations at the Topeka S&DC. Despite improvement opportunities regarding security, safety, and communications discussed in the following findings, the EV infrastructure was generally sufficient to charge and use vehicles. The U.S. Postal Service Office of Inspector General (OIG) confirmed that the Postal Service oversaw contractors performing construction. For example, they conducted weekly meetings and hired an independent external firm to verify the EV infrastructure was functioning properly before the site was commissioned.

> "The Postal Service effectively implemented EV infrastructure for delivery operations at the Topeka S&DC. Despite improvement opportunities regarding security, safety, and communications discussed in the following findings, the EV infrastructure was generally sufficient to charge and use vehicles."

To confirm the infrastructure functionality, the OIG verified the design implementation and performed electrical, safety, and cellular tests of the charging infrastructure. Specifically, we tested a representative sample of 38 chargers as well as performed a load test to confirm the capability of 16 chargers simultaneously charging vehicles. Additionally, every component identified on the design criteria blueprints, from the utility transformer down to each charger, was physically inspected. The results of the electrical test plan suggest that the chargers are performing at the designed current and voltage levels. As such, we are not making any recommendations regarding the overall preparedness for EV use at the Topeka S&DC.

Postal Service Response

Management agreed with the finding and concurred that the Postal Service effectively implemented EV infrastructure.

OIG Evaluation

The OIG considers management's comments responsive.

Finding #2: Charging Station Infrastructure Was Not Secured

Local management at the Topeka S&DC failed to secure EV infrastructure. Specifically, management did not secure the delivery vehicle parking lot at the end of the day (see Figure 1) and left all the electrical panels unlocked with the keys inside their box (see Figure 2). In addition to being unlocked, one panel had several taped drill marks within the enclosure (see Figure 3), which if not properly sealed could possibly compromise the National Electrical Manufacturer Association[13] 3R[14] rating, potentially allowing water into the enclosure. Additionally, the facility lacked readable signage to restrict public access to the delivery vehicle parking lot, chargers, transformers, or electrical panels as required (see Figure 4).

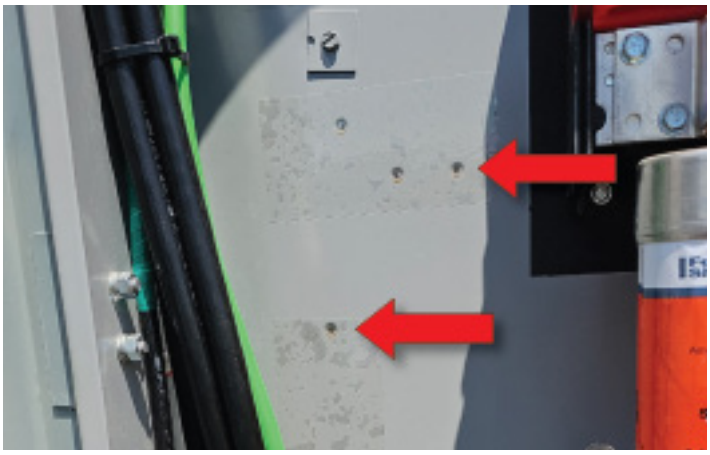
Figure 1. Unlocked Delivery Parking Lot Gate

Source: Picture taken by OIG at the Topeka S&DC June 5, 2024.

Figure 2. Electrical Panels Were Unlocked with Keys Inside

Source: Picture taken by OIG at the Topeka S&DC June 5, 2024.

Figure 3. Taped Drill Marks Inside Electrical Panel



Source: Picture taken by OIG at the Topeka S&DC June 5, 2024.

Figure 4. No Readable Signage to Restrict Public Access

Source: Picture taken by OIG at the Topeka S&DC June 5, 2024.

Postal Service policy[15] states gates must have a hardened steel chain secured with a padlock to prevent the opportunity for burglary or vandalism. It is the responsibility of all Postal Service employees to practice good security habits to prevent such crimes from taking place. Additionally, policy[16] indicates security signage must be provided at 100-foot intervals using standard signage, which specifies parking regulations, towing enforcement, and restricted Postal Service property areas, and it

13 The National Electrical Manufacturer Association defines standards used in North America for various grades of electrical enclosures typically used in industrial applications.
14 This provides a degree of protection of the equipment inside the enclosure from the ingress of solid foreign objects and water.
15 Blueprint for Facility Security Publication 266, January 2014.
16 Handbook RE-5, *Building and Site Security Requirements*, Section 2-2.4, dated September 2009.

is a regulatory requirement that signage indicate vehicles in nonpublic areas may be subject to inspection.[17] Furthermore, Occupational Safety and Health Administration (OSHA) regulations[18] state, where nonmetallic or metal-enclosed equipment is accessible to the general public and the bottom of the enclosure is less than eight feet above the floor or grade level, the enclosure door or hinged cover must be kept locked.

> "We identified $1.85 million in assets at risk."

These issues occurred for a variety of reasons. Regarding the unlocked gates, because the Topeka S&DC previously operated as a 24-hour facility, local management did not need to lock the delivery operation gates. Since its transition to an S&DC on June 3, 2023, and the cessation of round-the-clock operations, it is now necessary to secure the delivery gates daily. However, local management stated they never got into the habit of locking the gates once the facility stopped operating as a 24-hour facility. The facility's deteriorated signage, indicating vehicles are subject to search in the employee parking areas, resulted from prolonged exposure to sunlight and was not monitored or reported by local management as required. During the commissioning process, the drill holes in the panels were identified; however, the Postal Service contractor determined that the National Electrical Manufacturer Association 3R rating was intact.

Further, local management stated they were aware of the unlocked electrical panels; however, they were too busy to lock them and would be locking them in the future. The Postal Service took corrective action and reiterated guidelines for managing locks and keys.[19] Therefore, we are not making any recommendations pertaining to the unlocked electrical panels.

If the Postal Service does not secure their parking lot and charging station infrastructure equipment, they may be subject to individuals other than qualified staff gaining unauthorized access, which could lead to vandalism or theft. In addition, unsecure infrastructure could result in the potential for OSHA fines. As such, we identified $1.85 million in assets at risk.

Recommendation #1

The **Vice President, Retail and Delivery Operations – Central Area**, reiterate policy to ensure local management adheres to security protocols for asset protection and lock the delivery gates nightly.

Recommendation #2

The **Vice President, Retail and Delivery Operations – Central Area**, require local management to replace deteriorated exterior signage throughout the facility.

Recommendation #3

The **Chief Logistics and Infrastructure Officer and Executive Vice President**, require the contractor to validate the National Electrical Manufacturer Association 3R rating is not compromised.

Postal Service Response

Management disagreed with the finding but agreed with recommendations 1, 2, and 3. Regarding the finding, management acknowledged that the audit found that the entrance gates and electrical panels were not padlocked. They noted another OIG audit where the findings overlap and are duplicative. Additionally, management stated the current audit did not acknowledge the other extensive layers of security provisions that are built into the charging infrastructure or the vehicles. Management also stated that the Topeka S&DC has been unlocked with these assets in place for more than six months without any incidents.

17 39 CFR § 232, *Conduct on Postal Property.*
18 OSHA 1910.303(h)(2)(v)(D), Subpart S, Electrical – General.
19 Lock and Key Schedule was reiterated for all designers to adhere to in the October 2024 Design Guidelines.

Regarding recommendation 1, management stated it will reinforce the existing policy with the local management team. The target implementation date is February 28, 2025.

Regarding recommendation 2, management stated it will require local management to replace deteriorated exterior signage throughout the facility. The target implementation date is March 31, 2025.

Regarding recommendation 3, management stated it will require the contractor to validate that the National Electrical Manufacturer Association 3R rating is not compromised. The target implementation date is February 28, 2025.

OIG Evaluation

Regarding finding 2, while we acknowledge management's disagreement, the OIG's auditing process ensures that we address any potential security and safety issues at reviewed Postal facility locations and immediately inform management of any emergency or critical situations as necessary. As such, the referenced audit does not overlap and is not duplicative of this audit because it does not address issues found at the Topeka S&DC. Regarding the other security cybersecurity and technological measures mentioned by management, while this information was shared during the Exit Conference, they were not in the scope of our work, and therefore, their efficacy and sufficiency were not tested in this audit. Rather, we tested whether the Postal Service established policy to deter potential theft and safeguard accountable assets, which requires facility gates to be chained and locked daily. We found this policy was not followed by local management, and all electrical panels had their keys taped inside, which could further allow for theft and vandalism.

Regarding recommendations 1, 2, and 3, the OIG considers management's comments responsive, and corrective actions should resolve the issues identified in the report.

Finding #3: Safety Controls Need Improvement

The Postal Service did not confirm the parking lot construction met the design criteria blueprints.[20] During a site visit on June 5, 2024, we statistically selected 35 of the 95 EV parking spaces and found 12 of the 35 (34 percent) spaces were less than the 20 feet in length as outlined in the design specifications. This — along with the size of the COTS EVs and the width of a parking lot drive aisle being shorter than the specified 24 feet (see Figure 5) — did not provide sufficient space for maneuvering. The OIG witnessed and multiple Postal Service delivery carriers stated it takes six-to-eight attempts to safely maneuver the vehicles in and out of the parking spaces. Additionally, bollard spacing at one electrical panel frame did not meet design criteria blueprints for protecting critical electrical equipment from vehicular traffic (see Figure 6).

Figure 5. Insufficient Space for Maneuvering of COTS EVs

Source: Picture taken by OIG at the Topeka S&DC August 22, 2024.

Figure 6. Insufficient Number of Bollards Near Electrical Panels

Source: Picture taken by OIG at the Topeka S&DC June 5, 2024.

20 Titled, "Issued For Construction" (IFC), dated September 27, 2023, which were the same design criteria blueprints the Postal Service used during commissioning.

These issues occurred because Postal Service management did not always provide adequate oversight to ensure that work performed by contractors met the dimensions specified in the design criteria blueprints. Instead, per the PMO team, a limited review of the blueprints was performed and only confirmed the parking spaces were in the right location. The PMO team also stated many sites (including the Topeka S&DC) have space constraints and therefore, some areas, such as parking, may be adjusted to accommodate site specific limitations. As such, on November 22, 2024, Postal Service management stated they are willing to accept the current parking lot layout due to space constraints. Therefore, we are not making any related recommendation. Lastly, the Postal Service's blueprints for this site did not include enough bollards to protect electrical panels from potential damage.

We also identified three additional potential safety issues in the parking lot such as visible rust, chipped concrete slabs, and the deterioration of pavement (see Figure 7). These issues were discussed with management during our audit and not previously reported to the NFRL or locally on a Postal Service Form 1767 – *Record of Hazard, Unsafe Working Condition or Practice.* Local management was not aware they had to report EV Infrastructure issues as they were not involved in the installation process.

> "Postal Service management did not always provide adequate oversight to ensure that work performed by contractors met the dimensions specified in the design criteria blueprints."

The drive aisle spacing constraints create a risk of damage to charging station infrastructure and the newly acquired EVs and could result in accidents or delivery service impacts. Additionally, not ensuring that work performed by the contractor is in accordance with the required specifications before a site commissioning is completed can create an unsafe work environment for Postal Service personnel.

Figure 7. Rust, Chipped Concrete, and Sinking Asphalt in Parking Lot.

Source: Pictures taken by OIG at the Topeka S&DC June 5, 2024.

Recommendation #4

The **Chief Logistics and Infrastructure Officer and Executive Vice President**, require the contractor to either stripe the space near the electrical panel or add an additional bollard to protect the panel from potentially being damaged.

Recommendation #5

The **Chief Logistics and Infrastructure Officer and Executive Vice President**, in coordination with **Retail and Post Office Operations Vice President**, communicate to locations with electric vehicle infrastructure that policy regarding reporting safety hazards also includes electric vehicle infrastructure.

Postal Service Response

Management disagreed with finding 3 and recommendation 5 but agreed with recommendation 4. Regarding the finding, management stated the audit report references the "design specifications," when in fact management was referring to the EV Infrastructure Design Guidelines. Management also stated Topeka is space-constrained, and therefore, cannot accommodate the preferred 10' x 20' parking stall for every vehicle. As such, when a site has physical constraints, the design team must make the best possible fit to meet the design intent. Management stated it is not clear how the audit team assessed that one third of the spaces in Topeka did not meet the design specifications. Management also stated the parking spaces were all verified as part of the civil inspection during the commissioning process, and yet, was not flagged in the commissioning report as failing to meet the requirements. Additionally, management refutes the OIG's statement that the tight spacing in the parking lot risks damage to the charging stations and vehicles due to bollard placement, wheel stops, and the vehicles' technology that helps alert drivers about proximity.

Lastly, management disagreed that these issues occurred in the absence of adequate USPS oversight of the work performed by contractors. Management stated the Topeka S&DC was constructed according to the construction documents, and this work was validated to industry construction standards by an independent third party. Also, management stated that Topeka was an early site, and as such, there were no "Design Criteria Blueprints" but rather "Design Guidelines" that informed the development of the design.

Management acknowledged that the items flagged in Figure 7 may represent minor quality or workmanship issues, so it was not concerned about failing to meet construction standards or design requirements. Management stated notable issues should be captured in either the construction punch list or in the commissioning process (which the field personnel participate in) for remediation by the installation supplier.

Regarding recommendation 4, management stated it would act on this recommendation to the extent that it will perform an assessment and determine the next steps. The target implementation date is February 28, 2025.

Regarding recommendation 5, management stated that it is unnecessary since it does not communicate with the field to report safety hazards on every new system deployed. Instead, management stated existing policies are sufficient.

OIG Evaluation

Regarding finding 3, we acknowledge management's disagreement. However, the OIG team used the dimensions in the design drawings and measurement methodology provided by Facilities management — which both indicated the carrier spaces should be 10' x 20' — and measured a selected sample of parking lot stalls. Once completed, the team discussed

and provided the results to the Project Manager and the NGDV Project Management Office team four times during the duration of the audit (July 29, 2024, October 4, 2024, November 6, 2024, and November 25, 2024). Postal Service management stated that these spaces were verified as part of the civil inspection during the commissioning process and not flagged as failing to meet the requirements. However, the Postal Service was unable to provide supporting documentation to show that the independent, third-party commissioning agent performed any subsequent testing to ensure that the parking lot stalls met the design specifications during the commissioning process.

Furthermore, while management stated that Figure 5 demonstrates that USPS drivers successfully maneuvered into the parking spaces, it did not: 1) acknowledge that the OIG witnessed, and multiple carriers stated, that it takes six to eight attempts to safely maneuver the vehicles in and out of the parking spaces; and 2) consider additional safety challenges if employees' personal vehicles (parked in front of the EVs) extend beyond the yellow striping.

Regarding oversight sufficiency, the PMO team confirmed that only a limited review of the blueprints and the parking spaces' correct location were completed. The Postal Service did not require the commissioning agent or contractor to verify the accuracy of any dimensions. As such, neither the PMO team nor Facilities were aware of the parking lot stall measurement deficiencies until the audit team brought it to their attention. Also, management stated there are no "design criteria blueprints." The OIG presented this term to management in the days leading up to the Exit Conference to represent the red-line design blueprints that the Postal Service used during the commissioning process and the OIG used during fieldwork.

Lastly, regarding the three additional potential safety issues, we acknowledge that local management does not have the skillset to identify construction issues. However, it is everyone's responsibility to report any potential safety issues via a PS Form 1767, informing local management, or via the NFRL.

Regarding recommendation 4, the OIG considers management's comments responsive, and corrective actions should resolve the issues identified in the report.

Regarding recommendation 5, we acknowledge management disagreed with communicating that the policy to report safety hazards also applies to electric vehicle infrastructure. However, our audit work confirmed that local management did not know how to report EV infrastructure issues. Communicating that the existing policy applies to EV infrastructure issues regarding safety hazards would ensure that Facilities and PMO management can quickly address any deficiencies. We view the disagreement as unresolved and will work with management through the audit resolution process.

Finding #4: Inadequate Communication Between Headquarters and Local Management

Adequate communication between headquarters and local management did not always occur. Specifically, local management did not know who to contact when issues occurred with the charging station infrastructure.

During our site visit in June 2024, local management identified five chargers that were offline. While this did not affect delivery operations, as there were multiple chargers available due to extra capacity prior to all EVs being delivered, local management was unsure of the protocol for reporting these issues for service. To locate a contact and report the issue, they searched through related paperwork and emails received during construction. They identified the PMO team as a point of contact and informed them of the nonfunctioning chargers. The PMO team contacted the supplier, who investigated the issue on June 6, 2024.

> "Local management did not know who to contact when issues occurred with the charging station infrastructure."

When we returned in August 2024, the same five chargers malfunctioned. Local management contacted the PMO team, who used the supplier's charger dashboard[21] and confirmed the chargers were offline. The PMO team worked with the supplier on a corrective action plan to repair the inoperable chargers. As of September 26, 2024, the chargers were fully functional and regularly checked by the PMO team. In October 2024, the Postal Service ordered labels for chargers, for Topeka and future facilities, that included contact information for reporting charging station infrastructure issues.

We also observed the COTS EVs incorrectly parked headfirst into stalls designed for NGDV EVs, which would require carriers to load vehicles in traffic (see Figure 8). We informed local management that the vehicles should be backed into the space to allow for carriers to safely load delivery vehicles from the rear in the loading zone instead of the drive aisles. During our follow-up visit in August 2024, we noticed management took corrective action and parked the COTS EVs correctly. Furthermore, on October 17, 2024, the Postal Service updated the NGDV program website to include a resource center for field personnel that includes EV policies, procedures, and how-to videos, including parking instructions.

Figure 8. Incorrectly Parked COTS EVs

Source: Picture taken by OIG at the Topeka S&DC June 5, 2024.

21 This dashboard includes useful charging station details and tools such as reports, smart charging, notifications, and EV management for a selected facility. It is not accessible by local management.

These issues occurred because the PMO team did not provide written instructions to local management on the use of EV infrastructure. Although training was provided on how to use the vehicles, they were not instructed on how to park. Furthermore, local management was only provided verbal instructions to contact the NFRL when issues arose with the chargers. This protocol awareness was lost due to turnover within local management.

When there is inadequate communication between headquarters and the field, EV processes and procedures may not be fully understood or adhered to, which could interfere with delivery operations and potentially result in delayed mail.

Recommendation #6

The **Chief Logistics and Infrastructure Officer and Executive Vice President**, disseminate communication regarding the updated Next Generation Delivery Vehicles program website — which contains electric vehicle policies, procedures, and how-to videos, including parking instructions — to local management at the Topeka Sorting and Delivery Center and future facilities.

Recommendation #7

The **Chief Logistics and Infrastructure Officer and Executive Vice President**, verify the contact labels are installed at the Topeka Sorting and Delivery Center and establish a plan to verify their installation at future facilities.

Postal Service Response

Management disagreed with finding 4 but agreed with recommendations 6 and 7. Regarding the finding, management stated that the Topeka S&DC was one of the very early infrastructure deployment sites, with work completed months before the EVs were deployed. Management added that the PMO and OIG were already well aware of non-functioning chargers, and that the PMO was already pursuing a firmware solution with the supplier. The solution was deployed two months later, and there were enough stations available to support the EVs until the issue was resolved. Regarding training or written instructions, management stated the PMO provided several resources to the local team, both on-site and via email at the time of commissioning or along with vehicle deployments. Lastly, management commented on the reference to communication issues that could interfere with delivery operations and potentially result in delayed mail. Management stated it seemed like the OIG extraordinarily extrapolated the potential risk to tie the issue of potential service failure when no such observations of the risk were encountered.

Regarding recommendation 6, management stated it will disseminate communication regarding the updated NGDV program website to local management at the Topeka S&DC and future facilities. The target implementation date is June 30, 2025.

Regarding recommendation 7, management will verify the contact labels are installed at the Topeka S&DC and establish a plan to verify their installation at future facilities. The target implementation date is March 31, 2025.

OIG Evaluation

Regarding finding 4, we acknowledge management's disagreement. OIG recognizes that the Topeka S&DC was one of the very early infrastructure deployment sites. Although the PMO stated it was aware of the EV infrastructure issues, the OIG team found that this was the cause of the non-functioning chargers, and therefore, reported it along with the Postal Service's remediation efforts. Regarding training or written instructions, the PMO stated it provided several resources to local management both verbally and via email at time of commissioning. However, the Topeka S&DC underwent management changes; therefore, the new postmaster and manager were not aware nor was there a centralized resource for reference. Instead, they searched through

related paperwork and emails received during construction to locate a point of contact. Lastly, as with all audits, the OIG identifies potential risks associated with the issues identified during fieldwork. As such, we do not infer that it is going to happen, but rather state that it could occur, and therefore management should be made aware of the potential risks.

Regarding recommendations 6 and 7, the OIG considers management's comments responsive, and corrective actions should resolve the issues identified in the report.

Looking Forward

In its updated DFA[22] plan, the Postal Service stated it remains committed to being the greenest way to ship by reducing emissions throughout their operations, electrifying their fleet, and optimizing their nationwide transportation and delivery network of S&DCs. Modernizing and electrifying its delivery vehicle fleet also remains a key Postal Service initiative for providing high-quality and reliable service to customers; safer working environments for carriers; and more cost-effective, sustainable operations. As the Postal Service continues with the delivery fleet electrification, it can apply the lessons learned from this audit to future sites, which the OIG will continue to monitor.

22 *Delivering for America 2.0, Fulfilling the Promise*, dated September 30, 2024.

Appendices

Appendix A: Additional Information

Scope and Methodology

Our audit scope included EV infrastructure deployment and operations at the Topeka S&DC from September 2023 to October 2024.

To accomplish our objective, we:

- Interviewed Postal Service officials and supervisors responsible for key aspects of the EV infrastructure design and installation process.
- Researched, reviewed, and analyzed applicable laws, regulations, and Postal Service policies, procedures, and manuals related to EV infrastructure design and installation.
- Visited the Topeka S&DC to observe EV infrastructure and readiness to utilize EVs in June 2024 and August 2024.
- Engaged two contractors to perform electrical testing and observations of electrical infrastructure to evaluate the operation and safety of equipment.
- Obtained and reviewed documentation related to EV infrastructure design and installation.

We conducted this performance audit from March 2024 through December 2024 in accordance with generally accepted government auditing standards and included such tests of internal controls as we considered necessary under the circumstances. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective. We discussed our observations and conclusions with management on November 26, 2024, and included their comments where appropriate.

In planning and conducting the audit, we obtained an understanding of the internal control structure within the NGDV PMO to help determine the nature, timing, and extent of our audit procedures. We reviewed the management controls for overseeing the program and mitigating associated risks. Additionally, we assessed the internal control components and underlying principles, and determined that the following two components were significant to our audit objective:

- Information and Communication
- Monitoring

We developed audit work to ensure that we assessed these controls. Based on the work performed, we identified significant internal control deficiencies related to security and safety controls, and communication. Our recommendations, if implemented, should correct the weaknesses we identified.

We did not assess the reliability of any computer-generated data for the purposes of this report.

Prior Audit Coverage

The OIG did not identify any prior audits or reviews related to the objective of this audit within the last five years.

Appendix B: Management's Comments

UNITED STATES POSTAL SERVICE

December 20, 2024

JOHN CIHOTA
DIRECTOR, AUDIT SERVICES

SUBJECT: Management Response - *Fleet Modernization - Facility Preparedness for Electric Vehicles at the Topeka Sorting and Delivery Center (24-056)*

Thank you for the opportunity to review and comment on the findings contained in the subject draft audit report, *Fleet Modernization - Facility Preparedness for Electric Vehicles at the Topeka Sorting and Delivery Center*.

In this subject audit, the OIG found the Postal Service "took appropriate steps to ensure the Topeka S&DC was prepared to utilize electric vehicles." Postal Service management fully concurs with this assessment and would not otherwise have initiated vehicle deployment activities.

While the audit report notes several minor issues that were not directly related to EVs or the charging infrastructure itself, these issues can be addressed operationally by reinforcement of existing policies. Beyond these minor issues, the audit report includes a series of observations or assertions that do not accurately reflect the project or the process of implementation. These issues were highlighted both in writing and in several discussions with the audit team but have not been appropriately addressed in this report. It is important for these issues to be fully and mutually understood, as this is the first in an expected series of audits, and we do not want a series of misunderstandings and inaccuracies to perpetuate through these audits.

Factual Inaccuracies for Correction:

The audit report includes factual inaccuracies which the Postal Service requests be corrected prior to the publication of the final audit report, some of which were previously highlighted to the auditors and have not yet been corrected. For example, in the Background section, the report states that the Postal Service will acquire "106,000 new EVs." However, the Postal Service is in the process of acquiring over 106,000 *new delivery vehicles*, with 66,230 being electric vehicles, not all 106,000. Additionally, on page 1, the report states there are "95 routes". As noted previously, there are 94 routes to which 66 NGDV BEVs and 28 COTS BEVs were assigned, but there are 95 EVSE *ports* so there is an available "hot spare". Also, on page 2, the Postal Service provided

previous feedback to correct the prior draft noting that the contract for installation did NOT include the design work as stated in the report – this was handled under a separate contract by another company.

Written Report:

In terms of the written content within the report, Postal Service management provided extensive feedback about several aspects of this report, few of which are addressed in the final version. Following is a summary of these issues by Finding:

Finding #1: Topeka S&DC Preparedness: Management concurs with this finding – the Postal Service effectively implemented EV infrastructure for delivery operations.

Finding #2: Charging Station Infrastructure Was Not Secured: Management disagrees with this finding. The audit found that the entrance gates and electrical panels were not padlocked. EVSE and physical security is *also* being closely scrutinized under another OIG audit actively underway. This area of findings directly overlaps and is duplicative with the content from audit 24-020, yet the current audit did not acknowledge any of the other extensive layers of security provisions that are built into the EVSE or the vehicles themselves when considering the assessment of the level of risk for the EV Infrastructure or the assets at this site. The audit report considers ONLY whether the gate is padlocked – which is the single easiest measure to defeat with a bolt cutter. It ignores the software security of the EVSE, the alerts for intrusion, the hardwiring of the units into the ground, the tamper-proof hardware, the need for extensive electrical knowledge, skills and protective equipment to safely remove and preserve useful functionality of these assets, as well as the locking and alarm mechanisms of the vehicles themselves. It also ignores that this location has been unlocked with these assets in place for more than six months without any incidents whatsoever. All of this information was disclosed to the OIG in extensive detail – both in the Security audit, and again to the audit team for the Topeka audit – but the audit report still reflects that the single effective means of securing the EV infrastructure and these assets is via a single padlock at the gate.

Finding #3: Safety Controls Need Improvement: Management disagrees with this finding. The audit report references the "design specifications," when in fact they are referring to the EV Infrastructure Design Guidelines. This document is used to guide the development process for the architectural/engineering firms who prepare the EV Infrastructure Site Designs. Topeka, like thousands of other USPS locations, is space constrained, so cannot accommodate the preferred 10' x 20' parking stall for every vehicle within the usable space on this site. When a site has physical constraints, as many do, the design team must make the best possible fit to meet the design intent. These designs are reviewed through a series of formal design reviews with the A/E firm and approved by Facilities and the PMO. The OIG stated that one third of the spaces in Topeka didn't meet the design specs – but it is still not clear how the audit team arrived at this assessment: how were the measurements taken, or by how much did the

measurements differ from the design drawings? By inches? By feet? These parking spaces were all verified as part of the civil inspection during the commissioning process and yet were not flagged in the commissioning report by our independent, third-party commissioning agent as failing to meet the requirements – and the OIG did not note this point.

In addition, the audit report states there is not sufficient space for maneuvering – followed immediately by a photo of COTS EVs all properly backed in from the maneuvering aisle into their designated parking spaces and plugged into the charging stations – demonstrating that in fact, USPS drivers successfully maneuvered into these spots as they do every day. If more space were available, it would certainly make this process easier – but this is not a reflection of a poor design or a poor installation process as inferred in the report: it is a reflection of the reality of the space constraints that the Postal Service faces in a significant proportion of our field sites. The report later states that this tight spacing creates a risk of damage to the charging stations and the vehicles – this is also not accurate, as this same photo shows how the bollards protect the EVSE; the wheel stops also prevent the vehicles from backing too closely to loading aisles or other equipment, and the technology within the vehicles helps alert the drivers with proximity alerts and backing cameras if they are getting too close to an impediment so they can adjust.

Page 7 of the report asserts that these issues occurred in the absence of adequate USPS oversight of the work performed by contractors. To this point, we most strenuously disagree. This site was constructed properly according to the construction documents, and this work was validated to industry construction standards by an independent third party. The OIG took no exception with the commissioning report findings. Even the single bollard that that the OIG referenced as "missing" in a photo was not in the design drawing – this is not a failure of construction process nor the contract oversight as implied in the report – it simply was not in the design. As noted previously, this was an early site, and the Design Guidelines in use at that point in time did not specifically address guarding for the transformers and electrical gear – this was added in later versions of the Design Guidelines as experience was gained – so this also was not a failure of the design process. The audit report states that there was not adequate oversight "to ensure that work performed by contractors met the dimensions specified in the *design criteria blueprints*." There *are no* "Design Criteria Blueprints." There are Design Guidelines that inform the development of the design; and there are Construction Documents that are issued contractually to manage the construction process. The audit report does not reflect an accurate understanding of the process, requirements or what is needed to effectively and contractually manage the process at key project development phases.

The items flagged in Figure 7 may represent minor quality or workmanship issues, but again, were not flagged in the Commissioning Report, so did not rise to the level of concern that they failed to meet construction standards or design requirements. Incidentally, these types of issues should not, as the OIG suggests, be reported on a PS

Form 1767 during an active construction project. If they are notable issues, they should be captured in either the construction punch list or in the commissioning process (which the field personnel participate in) for remediation by the installation supplier – not through a separate safety review process when the construction contract is not yet complete. These issues should also not be flagged by local site personnel as the audit report suggests, as this is not local management's area of expertise or responsibility. The commissioning agent's report and USPS's follow-up and close-out of punch list and commissioning action items ensures contractual completion of all noted items, so there is no risk of creating an unsafe work environment as suggested by the audit report.

Finding #4: Inadequate Communications: Management disagrees with this finding. Again, as noted, this was one of the very early infrastructure deployment sites, with work completed months before the EVs were deployed to the sites. The PMO was already well-aware of non-functioning chargers, and the OIG was also aware of the work the PMO was already pursuing with the EVSE supplier, which had been initiated two months prior before this audit was even announced. The EVSE firmware solution to this issue was developed and deployed two months later, and as the report notes, affected only a subset of the EVSE, so there were enough stations available to support the EVs until the issue was resolved.

With regards to training or written instructions, as stated previously, the PMO provided several resources to the local team, both on-site and via email at the time of commissioning. Formal EVSE training occurred when the vehicles were deployed, as it would make no sense to train the team on equipment they couldn't use for a few months until the vehicle deployments began. That's why the training on EVSE occurs along with the vehicle deployments – so that it is fresh and useful at the time when it is needed.

This section also makes references to communication issues that could interfere with delivery operations and potentially result in delayed mail. When asked, the OIG stated that they did not directly observe any evidence of delayed mail, or any indication that the communication gaps they observed in the months before vehicle deployments might have led to any delays. It seems like extraordinary extrapolation of potential risk to tie this issue to a potential service failure when there were no such observations of this risk encountered on site.

Recommendations:

Following are management's comments on each of the seven recommendations contained in the report:

Recommendation 1: We recommend the Vice President, Retail and Delivery Operations – Central Area, reiterate policy to ensure local management adheres to security protocols for asset protection and lock the delivery gates nightly.

Management Response/Action Plan:
Management **agrees** with this recommendation. This is existing policy which will be reinforced with the local management team.

Target Implementation Date: 2/28/2025

Responsible Official:
Vice President, Retail and Delivery Operations – Central Area

Recommendation 2: We recommend the Vice President, Retail and Delivery Operations – Central Area, require local management to replace deteriorated exterior signage throughout the facility.

Management Response/Action Plan:
Management **agrees** with this recommendation. The local management team will order replacement exterior signage.

Target Implementation Date: 3/31/2025

Responsible Official:
Vice President, Retail and Delivery Operations – Central Area

Recommendation 3: We recommend the Chief Logistics and Infrastructure Officer and Executive Vice President, require the contractor to validate the National Electrical Manufacturer Association 3R rating is not compromised.

Management Response/Action Plan:
Management **agrees** with this recommendation, to the extent that we will perform an assessment and determine if additional actions by the contractor are necessary.

Target Implementation Date: 2/28/2025

Responsible Official:
Chief Logistics and Infrastructure Officer

Recommendation 4: We recommend the Chief Logistics and Infrastructure Officer and Executive Vice President, require the contractor to either stripe the space near the electrical panel or add an additional bollard to protect the panel from potentially being damaged.

Management Response/Action Plan:
Management **agrees** with this recommendation, to the extent that we will perform an assessment and determine the next steps.

Target Implementation Date: 2/28/2025

Page 5

Responsible Official:
Chief Logistics and Infrastructure Officer

Recommendation 5: We recommend the Chief Logistics and Infrastructure Officer and Executive Vice President, in coordination with Retail and Post Office Operations Vice President, to communicate to locations with electric vehicle infrastructure that policy regarding reporting safety hazards also includes electric vehicle infrastructure.

Management Response/Action Plan:
Management **disagrees** with this recommendation.
This is unnecessary. We do not put out communications to tell the field to report safety hazards on every new system deployed. Existing policies are sufficient.

Target Implementation Date: N/A

Responsible Official: N/A

Recommendation 6: We recommend the Chief Logistics and Infrastructure Officer and Executive Vice President, disseminate communication regarding the updated Next Generation Delivery Vehicles program website — which contains electric vehicle policies, procedures, and how-to videos, including parking instructions — to local management at the Topeka Sorting and Delivery Center and future facilities.

Management Response/Action Plan:
Management **agrees** with this recommendation, to the extent that this work was already underway as the OIG is aware.

Target Implementation Date: 6/30/2025

Responsible Official:
Chief Logistics and Infrastructure Officer

Recommendation 7: We recommend the Chief Logistics and Infrastructure Officer and Executive Vice President verify the contact labels are installed at the Topeka Sorting and Delivery Center and establish a plan to verify their installation at future facilities.

Management Response/Action Plan:
Management **agrees** with this recommendation, to the extent that this work was already underway as the OIG is aware.

Target Implementation Date: 3/31/2025

Responsible Official:
Chief Logistics and Infrastructure Officer

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E-SIGNED by VICTORIA.K STEPHEN
on 2024-12-20 16:20:00 EST

for

Ronnie Jarriel
Chief Logistics and Infrastructure Officer

E-SIGNED by MICHAEL.W RAKES
on 2024-12-23 09:26:59 EST

Michael Rakes
Vice President, Retail and Delivery Operations – Central Area

E-SIGNED by RAJINDER SANGHERA
on 2024-12-23 10:21:37 EST

Rajinder Sanghera
Vice President, Retail and Post Office Operations

cc: Corporate Audit Response Management

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