ATTACHMENT 1 – TECHNICAL REQUIREMENTS

Funding for any agreement resulting from this Request for Proposal (RFP) will be paid entirely from National Electric Vehicle Infrastructure (NEVI) Formula Program funds. All applicable requirements of Title 23 United States Code (U.S.C.) and 2 Code of Federal Regulations (CFR) Part 200 apply to the administration of these funds, which include, but are not limited to: ***23 CFR 680, the Davis-Bacon Act***; the ***Americans with Disabilities Act of 1990 (ADA)***; ***Title VI of the Civil Rights Act of 1964***; the ***National Environmental Policy Act of 1969 (NEPA),*** including an initial NEPA meeting before NEPA process starts; ***the National Electric Code (NEC)***; and ***the Build America, Buy America (BABA) Act.*** EV chargers funded under any agreement resulting from this RFP will be covered by the ***Build America, Buy America Implementation Plan to Enhance Buy America for Electric Vehicle (EV) Chargers.*** The Awardee must also comply with all other standards and requirements required by federal, state, and local laws.

In addition to the above, Awardees must comply with the following technical requirements.

1	ADDITIONAL CHARGER REQUIREMENTS AND SPECIFICATIONS	
1.1	**Distance from AFC**	The project site shall be within a maximum driving distance of 1 mile from the Alternative Fuel Corridor (AFC). The measurement of the distance shall begin from the end of the nearest interstate off-ramp to the charging station and conclude at the charging station entrance. For clusters covering multiple AFCs, the project site shall meet this requirement for all applicable AFCs.
1.2	**Site Accessibility**	The project site shall be accessible to the public and reachable from a public road 24/7/365. Access to the project site must have adequate traffic control measures, such as signage, signals, striping, etc. These sites may be situated on private property.
1.3	**Access to Food and Drink**	The project site shall have access to food and drink. Vending machines, restaurants, water fountains, or a convenience store providing access to food and drink shall be included in the project site or within 500 feet walking distance from the charging ports.
1.4	**Access to Restrooms**	The project site shall include publicly accessible, ***ADA-compliant restrooms*** located at the project site or within 500 feet walking distance from the charging ports. The restrooms must be reachable via accessible sidewalks or pavement. If there is no sidewalk or pavement present, applicant will be responsible for its construction.

1	ADDITIONAL CHARGER REQUIREMENTS AND SPECIFICATIONS	
1.5	**ADA Compliance**	All site facilities, amenities, or other project features shall be ***ADA compliant*** and located within 500 feet walking distance of the chargers. The project site shall adhere to ADA requirements, incorporating a minimum of one ADA-compliant EV charging space equipped with access to one ADA-compliant electric vehicle supply equipment (EVSE) pedestal. The ADA-compliant EV charging space and EVSE pedestal are encouraged adhere to the design recommendations specified by ***the US Access Board.*** In addition, the ADA EV charging space and EVSE shall meet the following requirements: The ADA EV charger must be located on an accessible route and shall provide: • A vehicle charging space at least 11 feet wide and 20 feet long • Adjoining access aisle at least 5 feet wide • Clear ground space at the same level as the vehicle charging space • Bollards positioned to not interfere with access Accessible EV chargers shall provide accessible operable parts that: • Are no higher than 48 inches above the ground space and no farther than 10 inches away • Provide a display screen visible from a point located 40 inches above the clear ground space • Provide a cable management system
1.6	**Site Signage**	The project site shall have clear signage that indicates the site's location and the locations of the charging ports within the site. Signage offering directional guidance to the charging site shall also be deployed along the roadway, following ***the Manual on Uniform Traffic Control Devices (MUTCD),*** as applicable. Applicant is responsible for obtaining all permits and approvals related to signage.
1.7	**Safety Lighting**	The project site shall provide lighting to illuminate all EV chargers and corresponding EV charging spaces. Lighting levels and requirements shall be consistent with existing jurisdictional and zoning requirements.
1.8	**Cell Phone Service**	The Awardee shall make certain there is adequate cell phone service available at the project site. This may include an open access Wi-Fi hotspot.
1.9	**Trash Cans**	The project site shall have trash and recycling receptacles available to site users. The trash and recycling receptables shall be emptied and maintained on a regular basis to prevent overflow of contents.
1.10	**Snow and Ice Removal**	The Awardee shall provide snow and ice removal service at the project site when snow accumulates above 1 inch and/or ice accumulates above 0.25 inch.

1	ADDITIONAL CHARGER REQUIREMENTS AND SPECIFICATIONS	
1.11	**Physical Security**	All EV chargers, electrical infrastructure, and other equipment at the project site shall be physically secured to prevent unauthorized access and must be protected from being hit by vehicles from inside and outside of the site, including bollards. Fire extinguishers and appropriate fire protection must also be included at the project site.

2	ADDITIONAL CHARGER REQUIREMENTS AND SPECIFICATIONS	
2.1	**Range of Operating Temperature**	EV chargers shall be capable of operating over an ambient temperature range of minus 22 degrees to 122 degrees Fahrenheit.
2.2	**Charger Locks and Tamper Prevention**	The EV chargers shall incorporate security features to deter tampering. Features shall include the use of locks on enclosures and tamper-resistant screws.
2.3	**Weather Resistance**	The EV chargers shall be constructed to withstand harsh weather conditions, such as snow, ice, heavy rains, extreme temperatures, and high winds. All above-ground structures, cabinets, and enclosures shall be designed in accordance with local building code standards, and EV charger enclosures shall have a minimum rating of IP54 or equivalent.
2.4	**Range of Output Current**	All charging ports shall be able to provide output currents up to at least 350 amps of direct current (ADC).

2	ADDITIONAL CHARGER REQUIREMENTS AND SPECIFICATIONS	
2.5	**Output Current Limit**	The output current may be the lower of 350 ADC or the current required to reach 150 kW based on the output voltage. EVSE shall be capable of outputting at least one voltage and current combination that reaches 150 kW. This is satisfied by operating at any point along the line in Figure 1 below. ***Figure 1**: Required Operating Output*
2.6	**NACS Connectors**	The direct current fast charging (DCFC) charger(s) must be capable of charging any Combined Charging Standard (CCS1) and North American Charging Standard (NACS) compliant vehicle. The project site shall have a minimum of 4 permanently attached NACS connectors and 4 permanently attached CCS1 connectors.
2.7	**Emergency Shut Off**	All EVSE must have an emergency stop (E-Stop) button that will stop power from the charging port when activated. All E-Stop buttons should be labeled so they are clearly visible and marked.
2.8	**Minimum Power Supply**	The utility feed to the project site shall have a minimum power capacity of at least 150 kW per port, and the EVSE shall have an input power rating of at least 150 kW per port.

2	ADDITIONAL CHARGER REQUIREMENTS AND SPECIFICATIONS	
2.9	**NEVI Port Power Sharing**	The project site shall have a minimum of 4 NEVI compliant charging ports. Additional charging ports that do not meet the NEVI requirements are allowed, but these additional, non-NEVI ports are ineligible for NEVI funding. Power sharing between the NEVI ports and the non-NEVI ports is allowed as long as the 150-kW continuous and simultaneous power requirements for the NEVI ports are met. The full cost of the utility upgrades to support all charging ports is an eligible expense. The cost of any equipment that supports only the non-NEVI ports are an ineligible expense. The cost eligibility of any shared equipment that supports both the NEVI and non-NEVI ports shall be prorated based on the proportion of the power rating of the equipment that can supply the NEVI ports simultaneously. If the site contains both NEVI ports and non-NEVI ports, signage shall be provided to clearly identify the NEVI ports.

3	CYBERSECURITY AND DATA MANAGEMENT REQUIREMENTS	
3.1	**Cybersecurity and Data Management Plan**	The Awardee shall develop a written cybersecurity plan. The plan shall adhere to the National Institute of Standards and Technology (NIST) Cybersecurity Framework (CSF). The plan shall outline cybersecurity best practices to be used through all phases of the project and include the EVSE and supporting infrastructure. The plan shall include security and privacy measures to be implemented, a description of how the entire system will be safeguarded against cyberattacks, and a description of how data will be securely stored, transmitted, and protected from unauthorized access, modification, or destruction. In addition, the document will detail the expected threat surface and specify the NIST 800-53 controls to be implemented for risk reduction. The plan shall establish roles for project governance and oversight.
3.2	**Cybersecurity Incident Response Team**	The Awardee shall establish a Cybersecurity Incident Response Team (CIRT) made of Awardee staff members who will be responsible for responding to any cybersecurity events that may occur during any phase of the project. The Awardee shall develop an Incident Response Plan (IRP) that outlines the processes that will be followed in response to an event, including notifying the CIRT of an event.
3.3	**Data Segmentation**	Data networks used by the charging network shall be segmented to minimize the risk of unintended damage, unauthorized access, data loss, lack of service, privacy breaches, or other issues resulting from unprotected, unauthorized, non-compliant connections. The Awardee shall certify that the charging network will conform to the requirements as listed to be in compliance with ***§680.114 – Charging network connectivity of electric vehicle charging infrastructure***.
3.4	**Cybersecurity Operations**	Awardees shall maintain an acceptable, current, independent, third-party security assessment report of any of the following types: • Federal Risk and Authorization Management Program (FedRAMP) Certification • State Risk and Authorization Management Program (StateRAMP) Certification • SOC 2 Type II • ISO 27001

3	CYBERSECURITY AND DATA MANAGEMENT REQUIREMENTS	
3.5	**Risk Assessment Schedule**	The Awardee shall provide a schedule for regular risk assessments and process reviews. Risk assessment read-out reports shall be provided to NCDOT at a minimum of twice per year. A baseline risk assessment shall be part of Task 3 of the Scope of Work (RFP, Attachment 2) and shall include external penetration testing results and remediation plans. The Awardee shall perform an annual external penetration test, providing results, remediation plan, and schedule to NCDOT annually. Risk assessments shall include vulnerability scans using, at a minimum, the MITRE or Cybersecurity and Infrastructure Security Agency (CISA) Common Vulnerability and Exposures (CVE) database and a report summarizing results and actions for mitigating new or existing vulnerabilities, including the Common Vulnerability Scoring System (CVSS) value for each finding. Software patching shall be managed based on risk and performed at least monthly or more frequently as required based on risk rating. Vulnerability and patching remediation must meet the following criteria and timelines:

Rating	CVSS Score	Remediation
Low	0.1–3.9	90 days
Medium	4.0–6.9	60 days
High	7.0–8.9	30 days
Critical	9.0–10.0	7 days

3.6	**Cybersecurity Event Notification**	The Awardee shall inform NCDOT of any cybersecurity event that requires notification to any person under federal or state law, including data breaches or incidents affecting an electric utility, within 24 hours of the Awardee's discovery of the event. The Awardee shall contact a designated NCDOT Point of Contact and ***security@ncdot.gov*** via email for incident and/or breach notification. The Awardee shall provide the full details of the incident and/or breach to NCDOT.
3.7	**Annual PCI-DCC Compliance Reporting**	Vendor will provide with their response an annual PCI-DSS Attestation of Compliance (AoC) and passing Report on Compliance (RoC) for their own and/or their PCI payment processing service provider's PCI DSS credit card payment processing compliance.

4	OPERATION & MAINTENANCE REQUIREMENTS	
4.1	**Regular Preventative Maintenance**	The Awardee shall perform monthly preventative maintenance and appropriate updates to firmware systems on the EVSE infrastructure. This shall include checking for damage and vandalism and replacing any damaged or deteriorated cables or connectors. EV Charging stations must be checked regularly for tampering (e.g., card skimmers, damage near or around the internal access panel).

4	OPERATION & MAINTENANCE REQUIREMENTS	
4.2	**Customer Service**	The Awardee shall provide a customer service phone line. The Awardee shall also provide a website or text message number to report problems or issues with the EV chargers or project site. These shall be available 24 hours a day, 7 days a week, and posted clearly and visibly at the charging stations. All contact methods must connect the customer to the Awardee or their designee and must provide access for users that have limited English proficiency and for people with disabilities. All awardees must report to the State when the stations are non-operational during a declared state-of-emergency.
4.3	**Workforce Development Plan**	The Awardee must provide a workforce development plan that details how the Awardee plans to recruit, train, and maintain a qualified workforce during the construction and operations of the project. This includes (1) identifying the use of interns and apprentices from existing State and/or local workforce development programs and partners and (2) identifying the use of local businesses; small, women-owned, minority-owned, or veteran-owned businesses; and/or a diverse workforce. Applicants should also describe hiring polices and supportive services, such as cash assistance, relevant to disadvantaged communities (DAC) and the Justict40 Initiative.

5	EMERGENCY MANAGEMENT REQUIREMENTS	
5.1	**Emergency Management Plan**	The Awardee shall develop an Emergency Management Plan outlining actions the Awardee will take in the event of a natural disaster or other declared emergency.

6	TRAINING REQURIMENTS	
6.1	**Annual Safety Training**	The Awardee shall provide a site safety walk through with local emergency personnel prior to the station commencing operations. The Awardee shall also provide annual safety training to all on-site staff and staff operating and maintaining the EVSE infrastructure. The training shall address subjects like electrical safety, shutdown procedures, and firefighting techniques relevant to EVs and/or EV charging emergencies.
6.2	**Qualified Workforce Training and Technician Documentation**	The Awardee shall verify that the workforce installing, maintaining, and operating chargers has appropriate licenses, certifications, and training to verify that charger installation and maintenance is performed safely by a qualified and increasingly diverse workforce of licensed technicians and other laborers per 23 CFR 680. Workforce training is encouraged to target recruiting, training, and hiring individuals from local, federally designated disadvantaged communities.
6.3	**Annual Cybersecurity Training**	The Awardee shall conduct annual cybersecurity training for all staff members working on the project. This shall include job specific cybersecurity awareness training to all staff operating and maintaining the EV charging infrastructure.

7	COMMUNITY ENGAGEMENT	
7.1	**Community Engagement Outcomes Report**	NCDOT has a Community Engagement Plan that is outlined in the NCDOT's ***Electric Vehicle (EV) Infrastructure Deployment Plan.*** The Awardee must supply any relevant information regarding community engagement to support NCDOT's development of ***Community Engagements Engagement Outcomes Report per 23 CR 680.112(d).*** This includes any coordination with community organizations, non-profits, or institutions located in a DAC.