# RFP R1804 Requirements Fulfillment Matrix

This document maps requirements from the **RFP R1804 Transportation Management System** against the implementation strategies and plans detailed in the HTML documents within the project workspace.

The '**Present in Implementation strategy and plans (Yes/No)**' column indicates whether the content addressing the specific RFP requirement was found within the reviewed workspace HTML files.

'**If Yes...**' column lists the HTML file(s) where the relevant information is located. Section identification is general.

'**If No...**' column indicates 'Potential Gap' if coverage could not be confirmed in the targeted file review, or 'Identified Gap' if the requirement type is clearly outside the scope of the strategy documents (e.g., Minimum Vendor Qualifications).

Status, Assigned To, ETA, and Comments/Next Steps columns are intentionally left blank for future project tracking.

## Minimum Qualifications (Section 2)

Mapping vendor qualification requirements against implementation strategy documents. These are generally not expected to be present in strategy files.

| **Serial Number** | **ID / Sub-Id/Section from the RFP** | **Full requirement mentioned here** | **Present in Implementation strategy and plans (Yes/No)** | **If Yes, mention the exact file or files and the section in that file or files where this requirement has been considered for implementation** | **If No, then either mention Potential Gap... or Identified Gap...** | **Current Status** | **Assigned To** | **ETA** | **Comments and Next Steps** |
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| 1 | RFP-S2.1 | Proposer(s) may be a for-profit or not-for-profit institution. Individuals are not eligible to submit proposals for this RFP. | **No** | N/A | **Identified Gap (Vendor Qualification)** |  |  |  |  |
| 2 | RFP-S2.2 | Proposer(s) must provide evidence that the Proposer has been actively engaged for a minimum of three (3) years in providing each of the following services: GPS service, dynamic routing, and ridership, all to the scale of similar size and complexity to the DOE in their proposal. Proposer(s) must provide three (3) letters of reference on company letterhead, complete with contact information, from corporations, municipalities, and/or educational organization(s) for projects or services of a similar nature and scope as required in this RFP. Each reference must state the dates, locations, description of the services provided, and volume and quality of GPS, routing, and ridership services provided. If the reference is from the DOE, the SCA or any other Federal, State or City agency does not provide references, please provide contact information in lieu of the reference. | **No** | N/A | **Identified Gap (Vendor Qualification / Experience)** |  |  |  |  |
| 3 | RFP-S2.3 | The vendor must have a dedicated, local software development team based in New York City. This team should include, but not be limited to, the following roles: software development, product management, quality assurance/testing, and other relevant technical experts and teams. The vendor should demonstrate the ability to provide on-site support, collaboration, and engagement, with a clear commitment to the local presence of key technical staff in NYC. | **No** | N/A | **Identified Gap (Vendor Qualification / Location)** |  |  |  |  |
| 4 | RFP-S2.4 | Proposer(s) must have and provide evidence of at least a minimum of five million dollars ($5 MM) in annual revenue. Examples of financial statements that may be included but are not limited to: balance sheets, income statements and statements of earnings. | **No** | N/A | **Identified Gap (Vendor Qualification / Financial)** |  |  |  |  |
| 5 | RFP-S2.5 | If unable to provide such evidence, Proposer must provide information on the Proposer’s creditworthiness, amounting to at least a minimum of five million dollars ($5) including details with regard to any existing lines of credit which the Proposer holds and revocations of previous lines of credit. | **No** | N/A | **Identified Gap (Vendor Qualification / Financial Alt.)** |  |  |  |  |
| 6 | RFP-S2.6 | The Proposer(s) must have at least a minimum of two and a half million dollars ($2.5 MM) of annual revenue specifically obtained from the provision of the services described herein. Proposer may provide evidence of their annual revenue in the form of letter from clients, statements that identify the earnings from the elements referred to, and brief description of the project completed or any other method that can be verified by the DOE. | **No** | N/A | **Identified Gap (Vendor Qualification / Specific Revenue)** |  |  |  |  |
| 7 | RFP-S2.Note | Proposers may join other organizations to submit a proposal. In the event a proposer submits a proposal and is awarded a contract on behalf of a group of organizations, the contract would be between the NYCDOE and the proposer. Those other participating organizations are designated subcontractors. Payment would be made to the awarded vendor only, and in turn the awarded vendor would be responsible for payment to their subcontractors (e.g., the other participating organizations), as well as for their compliance with all the terms and conditions of the contract. | **No** | N/A | **Identified Gap (Informational / Contractual)** |  |  |  |  |

## System & Operational Requirements (Section 3)

| **Serial Number** | **ID / Sub-Id/Section from the RFP** | **Full requirement mentioned here** | **Present in Implementation strategy and plans (Yes/No)** | **If Yes, mention the exact file or files and the section in that file or files where this requirement has been considered for implementation** | **If No, then either mention Potential Gap... or Identified Gap...** | **Current Status** | **Assigned To** | **ETA** | **Comments and Next Steps** |
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| **3.1 System Overview** | | | | | | | | | |
| 8 | RFP-S3.1.1 | Provide a single, completely integrated solution for: 1. Near Real-time Location Tracking (GPS + Ridership), 2. Near Real-time notification system (connecting all stakeholders), 3. Adaptive/Dynamic vehicle routing. | **Yes** | Architecture.html; Solution\_Functional\_Non Functional.html |  |  |  |  |  |
| 9 | RFP-S3.1.2 | Solution to be OPT’s new system of record for GPS service, routing, and ridership. | **Yes** | Architecture.html; Solution\_Functional\_Non Functional.html; Data\_governance\_compliance\_controls\_plan.html |  |  |  |  |  |
| 10 | RFP-S3.1.3 | Augment or be integrated into other existing antiquated OPT systems. All relevant OPT data must be seamlessly integrated into the new system. | **Yes** | Architecture.html; GIS\_Data\_Mgmt\_Integration\_Strategy.html; DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  |  |
| 11 | RFP-S3.1.4 | Solution may be configurable/customizable COTS or custom-built. | **Yes** | Architecture.html; Solution\_Functional\_Non Functional.html; Development\_Strategy.html |  |  |  |  |  |
| 12 | RFP-S3.1.5 | System must be robust enough to handle the enterprise size/complexity of OPT’s operations and expand for growth/new technologies. | **Yes** | Architecture.html; Solution\_Functional\_Non Functional.html; Operational\_Excellence\_BCP\_DR\_Plan.html |  |  |  |  |  |
| 13 | RFP-S3.1.6 | Proposed solution may include options for an in-house customized build/develop component. | **Yes** | Development\_Strategy.html; Architecture.html |  |  |  |  |  |
| 14 | RFP-S3.1.7 | Seek a collection of systems integrated into a single platform to allow ease of data flow and reduce troubleshooting across several contractors. | **Yes** | Architecture.html; Solution\_Functional\_Non Functional.html |  |  |  |  |  |

| **3.2 GPS** | | | | | | | | | |
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| 15 | RFP-S3.2.1 | Must be independent of any bus inventory with its own identity that can be tracked to the device without the reliance of a bus or route association. The device should be portable so that it may be used daily on any route by any driver, on any vehicle. (High) | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Architecture.html; Solution\_Functional\_Non Functional.html |  |  |  |  | Portability is a key feature. |
| 16 | RFP-S3.2.2 | Every bus transporting a NYCPS Student must have an operational GPS; a failure of the driver’s GPS should not preclude the bus from service. The driver simply needs a replacement GPS that will work on his or her assigned bus. (High) | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Operational\_Excellence\_BCP\_DR\_Plan.html |  |  |  |  | Requires robust logistics for spares/replacements. |
| 17 | RFP-S3.2.3 | GPS data must be available in near real-time for all components of the overall solution, including but not limited to the Routing Software (overlay of proposed route versus the actual path the driver took, turn by turn, customizable by date/time frame that the user selects to view, in addition to reporting features for on-demand reports- ability to search addresses/intersections) and the Bus Driver Module. (High) | **Yes** | Architecture.html; Solution\_Functional\_Non Functional.html; Observability\_Monitoring\_IncidentManagement.html |  |  |  |  | Core NFR related to performance/data flow. |
| 18 | RFP-S3.2.4 | Must have an up-to-date map capable of providing dynamically generated turn-by-turn sequential stop navigation for any route, bus, and driver combination for planned routes, and the actual route itinerary based on GPS data for any selection of specific days and or time ranges. The driver must be able to divert from the planned sequence for turn-by-turn purposes. We need an overlay to display the planned/OPT route turn-by-turn compared to the actual GPS turn-by-turn. Visually able to see any deviation from planned route/sequencing. Ability to export reports for a full route, students not riding, or a student's AM/PM travel time | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html; GIS\_Data\_Mgmt\_Integration\_Strategy.html; DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Details mapping, nav, overlay, reporting functions. |
| 19 | RFP-S3.2.4.a | The system shall implement an interactive visualization overlay that enables real-time and historical comparison between planned routes and actual GPS-tracked route execution data. This overlay system shall provide comprehensive route analysis capabilities with turn-by-turn comparisons, detailed deviation reporting, and customizable export functionality. | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html; DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Specific visualization requirement. |
| 20 | RFP-S3.2.4.b | The visualization component shall render both the planned optimal route and actual GPS route data on the same map interface, using distinct visual indicators to clearly differentiate between them. The system shall implement color-coding to highlight route deviations, with severity indicators based on the magnitude of deviation from the planned route. | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html |  |  |  |  | UI detail for visualization. |
| 21 | RFP-S3.2.4.c | For turn-by-turn analysis, the system shall display synchronized waypoint data showing planned versus actual route execution, including arrival times, dwell times, and sequence adherence. Each turn or stop shall be clearly marked with interactive elements that reveal detailed timing and deviation metrics upon user interaction. | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html; DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Detailed data points for analysis. |
| 22 | RFP-S3.2.4.d | The system should maintain real-time tracking of student ridership status, displaying clear visual indicators for students who have not boarded as expected. The interface shall provide filtering capabilities to focus on specific segments of the route or particular time windows of interest. | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html |  |  |  |  | Ridership integration into visualization. |
| 23 | RFP-S3.2.5 | Must have the capability to use LION ArcGIS, which is a single-line representation of New York City streets containing address ranges and other information. (High) | **Yes** | GIS\_Data\_Mgmt\_Integration\_Strategy.html; Architecture.html |  |  |  |  | Specific GIS data integration. |
| 24 | RFP-S3.2.6 | Time and location must be transmitted at intervals not to exceed one minute. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html (NFR Section); Architecture.html |  |  |  |  | Performance NFR. |
| 25 | RFP-S3.2.7 | Bus location must be transmitted in near real-time without latency issues. (High) | **Yes** | Solution\_Functional\_Non Functional.html (NFR Section); Architecture.html; Observability\_Monitoring\_IncidentManagement.html |  |  |  |  | Performance NFR. |
| 26 | RFP-S3.2.8 | Must provide an estimated time of arrival (ETA) to all destinations (student home/stop, school). (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html; DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html (potentially) |  |  |  |  | Core functional requirement. |
| 27 | RFP-S3.2.9 | Must automatically un-assign the driver from the route upon route completion. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Workflow) |  |  |  |  | Automation feature. |
| 28 | RFP-S3.2.10 | GPS should support the memory of the previous event user and prepopulate all fields, limiting the Driver's responsibility to a single action: Driver Route Vehicle and Garage association and Single-entry logon. (High) | **Yes** | Solution\_Functional\_Non Functional.html (Usability); User\_Onboarding\_Training\_Comms\_Strategy.html (Driver Experience) |  |  |  |  | Usability requirement for drivers. |
| 29 | RFP-S3.2.11 | GPS units should be supported by an intelligent device monitoring system that lists all current GPS units in OPT possession and provides the inventory fields that include Make, Model, and Identification number. (High) | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Architecture.html (Asset Management); Solution\_Functional\_Non Functional.html |  |  |  |  | Asset management system requirement. |
| 30 | RFP-S3.2.12 | School Bus Company (SBC) name assigned, SBC yard assigned, sent to the location, recipient name, sent to date, verification of operational date, name of person performing GPS operational concurrence, GPS operational license number, name of the carrier, the status of the device in service or not in service (in repair, sim card issue. | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Solution\_Functional\_Non Functional.html (Asset Data Fields) |  |  |  |  | Specific data fields for asset tracking. |
| 31 | RFP-S3.2.13 | GPS is to have an SBC vendor certification of all devices were delivered and functioning as expected within 72 hours of receiving the GPS or associated hardware with 100% efficiency for all device features (software and hardware) at its shipped destination. (High) | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Vendor\_3rdParty\_mgmt\_logistics\_plan.html |  |  |  |  | Process requirement involving SBCs. |
| 32 | RFP-S3.2.14 | OPT Operational team to be provided with test tools, including GPS Driver applications for creating a Route, driver, Vehicle association, along with GPS Dispatcher application GPS features application. (High) | **Yes** | Test\_Strategy.html; Development\_Strategy.html |  |  |  |  | Testing/Support requirement for OPT. |
| 33 | RFP-S3.2.15 | Must provide a detailed history of the time associated with bus motion: start, MPH, heavy braking, idle, and stop. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html; DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Data logging requirement. |
| 34 | RFP-S3.2.16 | Must maintain functionality if the initial bus power source is lost and cannot entirely rely on device power as the redundant power source. (High) | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Solution\_Functional\_Non Functional.html (NFR - Reliability) |  |  |  |  | Hardware reliability feature. |
| 35 | RFP-S3.2.17 | All devices must be inventoried, and current possession and history must be recorded and tracked, GPS data must be archived for 7 years. | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Data\_governance\_compliance\_controls\_plan.html; Solution\_Functional\_Non Functional.html (NFR - Audit/Data Retention) |  |  |  |  | Asset Management & Data Retention NFR. |
| 36 | RFP-S3.2.18 | Must deliver a detailed data retention policy as part of the proposal. The proposal must comply with the data retention section of Information Security Requirements version 1.5 (See Attachment A1). DOE reserves the right to release an updated data retention policy during the life of this contract. The proposer will need to adhere to this policy based on mutually agreed-upon terms within a prescribed timeline. (High) | **Yes** | Data\_governance\_compliance\_controls\_plan.html; Compliance\_Audit\_Strategy.html |  |  |  |  | Policy & Compliance NFR. Proposal requirement noted. |
| 37 | RFP-S3.2.19 | Must track student-level ridership information for CTS school age, STS, and CTS PreK/EI student base (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Ridership Module) |  |  |  |  | Core ridership scope. |
| 38 | RFP-S3.2.20 | Must be able to indicate that an individual student’s ridership should not be tracked if a parent/caregiver informs NYCPS that they wish their student to not participate. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html; Data\_governance\_compliance\_controls\_plan.html |  |  |  |  | Privacy/Consent feature. |
| 39 | RFP-S3.2.21 | Vendors must submit a detailed rollout plan for the expedited installation of any GPS service-related devices, followed by the simultaneous rollout of routing software with routing integration. (High) | **Yes** | Project\_Implementation\_Game\_Plan.html; Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html |  |  |  |  | Proposal/Planning requirement. |
| 40 | RFP-S3.2.22 | Must include the capability for an efficient and automated or semi-automated request process for installing, repairing, or transferring a device. (High). | **Yes** | Solution\_Functional\_Non Functional.html; Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; DevOps\_Strategy.html (Automation) |  |  |  |  | Workflow efficiency requirement. |
| 41 | RFP-S3.2.23 | Must have the ability to handle a minimum of 100 geofences for each GPS device and deliver near real-time alerts of the device entering and exiting of geofences. The geofence setup will allow the administrator to notify (alert) others when buses go into or out of a defined perimeter. Must record time, date and geofence name, even if near real-time alerting is not activated. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Geofencing/Alerting Service) |  |  |  |  | Geofencing functional and performance req. |
| 42 | RFP-S3.2.24 | Must be designed to have the capability to accept GIS-related configuration changes to improve Route Planning processes. (High) | **Yes** | Architecture.html; GIS\_Data\_Mgmt\_Integration\_Strategy.html; Solution\_Functional\_Non Functional.html (NFR - Adaptability) |  |  |  |  | Extensibility/Configurability NFR. |
| 43 | RFP-S3.2.25 | Must have the capability to accept GIS-related configuration changes to improve ETA calculations for, e.g., average speed of routes in a road segment, official speed limits, etc. and must have the ability to update parameters as road conditions change. (High) | **Yes** | Architecture.html; GIS\_Data\_Mgmt\_Integration\_Strategy.html; Solution\_Functional\_Non Functional.html (NFR - Adaptability); DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Extensibility/Configurability NFR for ETA. |
| 44 | RFP-S3.2.26 | Devices requiring SIM cards to be missing or to be replaced must be exclusively managed by the Device vendor and not by OPT or third-party user. | **Yes** | Vendor\_3rdParty\_mgmt\_logistics\_plan.html; Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html |  |  |  |  | Support responsibility definition. |
| 45 | RFP-S3.2.27 | Must have interactive web map capability to lay multiple map layers (maps must display geographical district lines, display OPT codes, etc. on existing map capability of the software (e.g., Hospitals, specific areas impacted by a disaster etc.). (High) | **Yes** | Solution\_Functional\_Non Functional.html; GIS\_Data\_Mgmt\_Integration\_Strategy.html; Architecture.html |  |  |  |  | Map layer functional requirement. |

| **3.3 GPS Ground Support** | | | | | | | | | |
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| 46 | RFP-S3.3.1 | Vendors must have a trained technical work force to respond to field conditions requiring remote assistance or on-site technical work. Help desk facility capable of assisting driver/SBC Administrator/Mechanic to resolve an issue, or if unable to clear a problem, create a maintenance trouble ticket. (High) | **Yes** | Team\_Structure\_And\_Processes\_Plan.html; User\_Onboarding\_Training\_Comms\_Strategy.html; Vendor\_3rdParty\_mgmt\_logistics\_plan.html; Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html |  |  |  |  | Requires trained staff and help desk process. |
| 47 | RFP-S3.3.2 | The trained technical workforce must be sized and located within the five (5) borough boundaries or close proximity (10 miles), enabling timely responses to school bus vendors' hardware and software issues. (High) | **Yes** | Team\_Structure\_And\_Processes\_Plan.html; Vendor\_3rdParty\_mgmt\_logistics\_plan.html; Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html |  |  |  |  | Location and staffing level requirement. |
| 48 | RFP-S3.3.3 | Vendor must have ample spare installation and repair equipment/s covering a minimum of 10 business days to repair any related field condition related to SBC GPS service. (High) | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Vendor\_3rdParty\_mgmt\_logistics\_plan.html |  |  |  |  | Logistics requirement for spare parts inventory. |
| 49 | RFP-S3.3.4 | The vendor must be able to offer next-day repair for up to 30 vehicles, three-day appointment for projects up to 30 vehicles, and a max of five-day appointment for projects greater than 30 vehicles for field conditions in all locations covered in this proposal. (High) | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Vendor\_3rdParty\_mgmt\_logistics\_plan.html (SLAs) |  |  |  |  | Specific repair SLA targets. |
| 50 | RFP-S3.3.5 | The vendor must have a manned assistance desk that can be contacted via mobile device, web access, text, or phone for remote support 24/7, 365 days. (High) | **Yes** | Vendor\_3rdParty\_mgmt\_logistics\_plan.html (Support); Operational\_Excellence\_BCP\_DR\_Plan.html (Availability) |  |  |  |  | 24/7 support availability requirement. |
| 51 | RFP-S3.3.6 | Vendor GPS Ground Support must be available to offer and schedule work at opportunities when school buses are mostly available during shift 9AM to 1 PM and after 4PM during normal school days, Saturday, Sunday, and Holidays. (High) | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Vendor\_3rdParty\_mgmt\_logistics\_plan.html (Scheduling) |  |  |  |  | Scheduling constraints for support work. |
| 52 | RFP-S3.3.7 | Unresolved service issues impacting service will escalate to tier II support in 3 hours and will follow to tier III level support in 6 hours. (High) | **Yes** | Vendor\_3rdParty\_mgmt\_logistics\_plan.html (Support SLAs); Observability\_Monitoring\_IncidentManagement.html |  |  |  |  | Support escalation SLA (Service Impact). |
| 53 | RFP-S3.3.8 | Unresolved service issues affecting the business will escalate to tier III support immediately and will follow executive-level support in 6 hours. (High) | **Yes** | Vendor\_3rdParty\_mgmt\_logistics\_plan.html (Support SLAs); Observability\_Monitoring\_IncidentManagement.html; Communications\_Governance\_Reporting\_Strategy.html |  |  |  |  | Support escalation SLA (Business Impact). |

| **3.4 Service Level Agreements (SLAs)** | | | | | | | | | |
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| 54 | RFP-S3.4.1 | Vendor will provide methodologies for proof of quality verification for workmanship and performance metrics that meet OPT standards. SLAs will be determined and agreed that failure to meet Quality verification and/or substandard craftsmanship or performance will result in penalties. (High) | **Yes** | Vendor\_3rdParty\_mgmt\_logistics\_plan.html (SLAs); Test\_Strategy.html (Metrics); Project\_And\_Change\_And\_Risk\_Management\_Plan.html (Quality) |  |  |  |  | Defines need for quality metrics, SLAs, and penalties. |
| 55 | RFP-S3.4.2 | SLAs should include Installation and maintenance work actions, duration receipt to assignment, receipt to resolution group, Receipt to clear (customer informed service restored. | **Yes** | Vendor\_3rdParty\_mgmt\_logistics\_plan.html (SLAs); Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Observability\_Monitoring\_IncidentManagement.html (Ticketing) |  |  |  |  | Specific metrics for support SLAs. |
| 56 | RFP-S3.4.3 | There is an operational expectation that the GPS service will be continuous with minimal disruption or loss of service. For this purpose, a Quality Service Level of 99.999999% for the GPS integrated system function availability is mandated by an SLA. (High) | **Yes** | Solution\_Functional\_Non Functional.html (NFR Availability); Architecture.html; Operational\_Excellence\_BCP\_DR\_Plan.html; Vendor\_3rdParty\_mgmt\_logistics\_plan.html (SLA) |  |  |  |  | Extremely high availability target ("eight nines"). |
| 57 | RFP-S3.4.4 | Remote response time (receive the call and take corrective action by creating a ticket) within 5 minutes of request, 5:30 AM to 8:00 PM during days of regular NYC school operation, and 15 minutes of request outside of NYC school operations. (Medium) | **Yes** | Vendor\_3rdParty\_mgmt\_logistics\_plan.html (Support SLAs); Observability\_Monitoring\_IncidentManagement.html |  |  |  |  | Support response time SLA. |
| 58 | RFP-S3.4.5 | The vendor will provide a comprehensive post-mortem report with corrective actions to be taken to ensure the incident shall be avoided in the future. The report shall be produced within 48 hours of event resolution. | **Yes** | Observability\_Monitoring\_IncidentManagement.html; Project\_And\_Change\_And\_Risk\_Management\_Plan.html |  |  |  |  | Incident analysis and reporting requirement. |
| 59 | RFP-S3.4.6 | NYCPS expects that over 99% of buses in use will have fully functional GPS-enabled devices. (High) | **Yes** | Operational\_Excellence\_BCP\_DR\_Plan.html; Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Observability\_Monitoring\_IncidentManagement.html |  |  |  |  | Operational target for device functionality. |
| 60 | RFP-S3.4.7 | Device must be supported with Primary (Device in-built power), Secondary (on-board Power) and tertiary (Portable Charger) (High) | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Solution\_Functional\_Non Functional.html (NFR Reliability); Architecture.html |  |  |  |  | Redundant power sources requirement. Links to 3.2.16. |

| **3.5 GPS Service and System Support Reporting and Ticketing** | | | | | | | | | |
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| 61 | RFP-S3.5.1 | Vendors must provide a ticketing system that must integrate with NYCPS’ ticketing system to manage all inquiries for assistance related to GPS service, including installation, removal, transfer, maintenance, and system support. (High) | **Yes** | Architecture.html (Integration); Observability\_Monitoring\_IncidentManagement.html; Solution\_Functional\_Non Functional.html |  |  |  |  | Ticketing system and integration requirement. |
| 62 | RFP-S3.5.2 | System should include analytic data for resolution that includes, elements of ticket transfers, complete report close out issue details i.e., trouble found, (hardware, software,) trouble cause (defect type, software bug, user, install, accident, weather, maintenance, neglect, unknown) fix applied (No trouble found, reprogramed, replaced part (identify), replaced unit, etc. (High) | **Yes** | Observability\_Monitoring\_IncidentManagement.html; DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html; Solution\_Functional\_Non Functional.html |  |  |  |  | Detailed data fields for ticket resolution analysis. |
| 63 | RFP-S3.5.3 | Every request must be given an appointment confirmation at the time of ticket entry. (High) | **Yes** | Observability\_Monitoring\_IncidentManagement.html (Ticketing Process); Solution\_Functional\_Non Functional.html |  |  |  |  | Ticketing workflow requirement. |
| 64 | RFP-S3.5.4 | Every request requires a separate ticket. If a request relates to Multiple units (devices/vehicles) in a single ticket, there must be a way to distinguish a ticket with multiple units' vs one unit (High) | **Yes** | Observability\_Monitoring\_IncidentManagement.html (Ticketing Process/System Design); Solution\_Functional\_Non Functional.html |  |  |  |  | Ticketing system design detail. |
| 65 | RFP-S3.5.5 | Must have the capability to create a project for sets of 8 or more tickets for contracted School Bus vendors in a Borough, for which the date for work completion would be expected within SLA negotiable based on work. (High) | **Yes** | Observability\_Monitoring\_IncidentManagement.html (Ticketing System Features); Project\_And\_Change\_And\_Risk\_Management\_Plan.html |  |  |  |  | Project ticketing feature requirement. |
| 66 | RFP-S3.5.6 | Must have a capability to include a description, comment, or other informative notation such as devices/vehicles and their components. These include: the unique identifying number of the device, the bus contractor fleet to which it was assigned, who made the request, the garage location where issue exist, ticket creation date, commitment date (i.e., time for ticket resolution), ticket closure date, request disposition, interim ticket status, and final ticket status for any ticket that would remain as part of the ticket history. (High) | **Yes** | Observability\_Monitoring\_IncidentManagement.html (Ticketing Data Fields); Solution\_Functional\_Non Functional.html |  |  |  |  | Specific required data fields for tickets. |
| 67 | RFP-S3.5.7 | Must be a capability for tickets to be modified in the event of an update to the request. Transfers between internal departments, i.e., call center to field support, field support to dispatch, dispatch to technical support ID, to resolution, for the full life cycle of the issue. (High) | **Yes** | Observability\_Monitoring\_IncidentManagement.html (Ticketing Workflow/Audit); Solution\_Functional\_Non Functional.html |  |  |  |  | Ticket modification and workflow tracking requirement. |
| 68 | RFP-S3.5.8 | All tickets must be archived for the term of the contract or 7 years whichever comes first, whether completed or canceled. (High) | **Yes** | Data\_governance\_compliance\_controls\_plan.html (Data Retention); Solution\_Functional\_Non Functional.html (NFR - Data Retention) |  |  |  |  | Data retention requirement for tickets. |
| 69 | RFP-S3.5.9 | Must have the capability to report on the duration time from ticket creation and intermediate status to closure. (High) | **Yes** | Observability\_Monitoring\_IncidentManagement.html (Reporting); DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html; Solution\_Functional\_Non Functional.html |  |  |  |  | Reporting requirement for SLA tracking. |
| 70 | RFP-S3.5.10 | Must have the capability for a daily dashboard of previous day results of: a. Total pending, total pending future, pending active for the day, completed for the day. b. Present day: total pending, total pending future, pending active for the day, and must have the capability of viewing ticket details for each group and issuing and completing the day before. (High) | **Yes** | Observability\_Monitoring\_IncidentManagement.html (Dashboard); DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html; Solution\_Functional\_Non Functional.html |  |  |  |  | Specific dashboard content requirement. |
| 71 | RFP-S3.5.11 | Must be able to report on the disposition (problem, fix, cause) for the request. (High) | **Yes** | Observability\_Monitoring\_IncidentManagement.html (Reporting); DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html; Solution\_Functional\_Non Functional.html |  |  |  |  | Reporting requirement linking to ticket data fields. |
| 72 | RFP-S3.5.12 | Must be able to report the total number of tickets for the Month to Date. And Year to Date by ticket type and current status. (High) | **Yes** | Observability\_Monitoring\_IncidentManagement.html (Reporting); DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html; Solution\_Functional\_Non Functional.html |  |  |  |  | Trend reporting requirement. |
| 73 | RFP-S3.5.13 | Capability to sort and filter ticket reports including but not limited to by request description, school bus vendor, location of issue (garage), interim status, final status, disposition, date reported, and date closed, etc. (High) | **Yes** | Observability\_Monitoring\_IncidentManagement.html (Reporting); DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html; Solution\_Functional\_Non Functional.html |  |  |  |  | Reporting usability requirement. |
| 74 | RFP-S3.5.14 | Must be able to export ticket reports in a format compatible with 3rd party software. (Medium) | **Yes** | DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html; Architecture.html (Interoperability) |  |  |  |  | Interoperability requirement. |
| 75 | RFP-S3.5.15 | Must record each trouble call event in Trouble Ticket History as a status that is retrievable for analysis with trouble defect and cause. (High) | **Yes** | Observability\_Monitoring\_IncidentManagement.html (Ticketing Audit/History); Solution\_Functional\_Non Functional.html |  |  |  |  | Data logging within ticket history. |

| **3.6 Software Requirements - Parent / Caregiver and Student Module** | | | | | | | | | |
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| 76 | RFP-S3.6.Intro | All end-authorized user modules must be built mobile-first and accessible on Android, iOS and other operating systems with responsive, user centric device agnostic, and other operating systems with a responsive, user-centric, device-agnostic design. | **Yes** | Architecture.html; Development\_Strategy.html; Solution\_Functional\_Non Functional.html (NFR Usability/Accessibility) |  |  |  |  | Overall design principle for user-facing modules. |
| 77 | RFP-S3.6.1 | Must provide a means for creating, removing, and changing authorized user’s authentication and authorization as per the Authentication and Authorization subsections of Non-Functional Requirements. (High) | **Yes** | Security\_Strategy.html; Architecture.html (User Mgmt); Solution\_Functional\_Non Functional.html (NFR AuthN/AuthZ) |  |  |  |  | User management functions linked to NFRs. |
| 78 | RFP-S3.6.2 | Sign up functionality providing two separate levels of access, one for parents/caregivers, and one for students. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (User Mgmt); User\_Onboarding\_Training\_Comms\_Strategy.html |  |  |  |  | Functional requirement for user roles. |
| 79 | RFP-S3.6.3 | Parents/caregivers must have the ability to send requests to the OPT Administrative Module for updates to student information, including but not limited to address changes or alternate PM drop-off address. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Workflow) |  |  |  |  | Workflow between Parent and Admin modules. |
| 80 | RFP-S3.6.4 | Parents/caregivers must have the ability to indicate that the student will not be riding the bus on a given day. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Workflow/Ridership Integration) |  |  |  |  | Absence reporting feature. |
| 81 | RFP-S3.6.5 | Parents/caregivers must be able to receive a notification when the student boards or disembarks. Parents/caregivers must be able to opt in and out of this functionality. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Notification Service); Data\_governance\_compliance\_controls\_plan.html (Consent) |  |  |  |  | Ridership notification feature with opt-out. |
| 82 | RFP-S3.6.6 | Students must have the ability to display a scannable code as their “boarding/bus pass” to record when they board or disembark. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Student Module); Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html (Implies Reader) |  |  |  |  | Student boarding pass feature. |
| 83 | RFP-S3.6.7 | Parents/caregivers and students must be able to view a map display of the School Bus route and near real-time bus location, including the estimated time of arrival of the bus at the pickup point. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Mapping/ETA Service) |  |  |  |  | Core real-time tracking and ETA feature. |
| 84 | RFP-S3.6.8 | Parents/caregivers and students must be able to receive notifications when the School Bus approaches the pickup location. They must be able to opt in or out of this functionality, as well as control the frequency of these notifications (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Notification/Geofencing Service); Data\_governance\_compliance\_controls\_plan.html (Consent) |  |  |  |  | Proximity alert feature with configuration. |
| 85 | RFP-S3.6.9 | Parents/caregivers and students must have the ability to provide feedback through the solution on either technical or routing issues. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Feedback System); Observability\_Monitoring\_IncidentManagement.html |  |  |  |  | In-app feedback mechanism. |
| 86 | RFP-S3.6.10 | There must be optional web-based functionality for parents/caregivers and students who cannot access a smartphone. (High) | **Yes** | Architecture.html (Web Portal); Solution\_Functional\_Non Functional.html (NFR Accessibility) |  |  |  |  | Accessibility requirement via web. |
| 87 | RFP-S3.6.11 | Must include options for multi-language selection (High) | **Yes** | Solution\_Functional\_Non Functional.html (NFR Accessibility); Architecture.html (i18n) |  |  |  |  | Multi-language support NFR. |
| 88 | RFP-S3.6.12 | Must have troubleshooting and self-help options, including an FAQ for reference, in case of module malfunction, to minimize need for support. (High) | **Yes** | User\_Onboarding\_Training\_Comms\_Strategy.html; Solution\_Functional\_Non Functional.html (Usability) |  |  |  |  | Self-service support requirement. |

| **3.7 Bus Driver Module** | | | | | | | | | |
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| 89 | RFP-S3.7.Intro | The primary means for bus drivers and attendants to validate their details with a unique identifier and associate with a route. Other capabilities include alerts, messaging, and student tracking and troubleshooting. | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Driver Module) |  |  |  |  | Overview of Driver Module purpose. |
| 90 | RFP-S3.7.1 | The authentication system shall provide an enhanced login experience through intelligent credential management (certified or not certified) and biometric authentication integration. Upon initial user interaction, the system shall capture and securely store the username, with subsequent login attempts automatically populating this information to reduce user friction as per the Authentication and Authorization subsections of Non-Functional Requirements. (High) | **Yes** | Solution\_Functional\_Non Functional.html (NFR AuthN/Usability); Security\_Strategy.html; Architecture.html |  |  |  |  | Enhanced authentication requirement. |
| 91 | RFP-S3.7.2 | The system shall offer users the option to "Remember Me," which, when enabled, shall securely store both username and encrypted password for future authentication sessions and clear stored credentials. To ensure authorized access, the system shall integrate with the device's native biometric authentication capabilities, including facial recognition and fingerprint verification where available. This integration shall occur through platform-specific APIs, maintaining compatibility with both iOS and Android operating systems while adhering to their respective security frameworks. | **Yes** | Solution\_Functional\_Non Functional.html (NFR AuthN/Usability); Security\_Strategy.html; Architecture.html |  |  |  |  | Details on "Remember Me" and Biometrics. |
| 92 | RFP-S3.7.3 | The system shall implement an intelligent driver monitoring and analysis platform leveraging on-device machine learning capabilities to assess and evaluate driver behavior patterns in real-time. The system shall continuously collect and analyze behavioral telemetry data through device sensors and vehicle integration to identify driving patterns that may impact safety and efficiency. | **Yes** | DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html; Architecture.html; Solution\_Functional\_Non Functional.html |  |  |  |  | Advanced driver behavior monitoring (ML). |
| 93 | RFP-S3.7.4 | The system shall process and analyze the behavioral parameters including but not limited to vehicle dynamics including acceleration, deceleration, speed patterns relative to posted limits and road conditions, braking force, turning behavior and cornering speeds, lane change patterns and frequency, traffic signal and stop sign compliance. | **Yes** | DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html; Solution\_Functional\_Non Functional.html |  |  |  |  | Specific parameters for behavior analysis. |
| 94 | RFP-S3.7.5 | The system shall utilize on-device machine learning models to create individualized driver behavior profiles based on historical patterns, generate real-time risk assessments based on current driving behavior, identify behavioral anomalies that deviate from established safe driving patterns, and provide predictive insights for potential safety concerns. | **Yes** | DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html; Architecture.html; Solution\_Functional\_Non Functional.html |  |  |  |  | Specific ML model outputs/goals. |
| 95 | RFP-S3.7.6 | Route display (map view and text view) including turn-by-turn navigation (both audio and visual), constantly optimized to account for traffic conditions, emergencies, and changes in schedule (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Routing/Navigation); GIS\_Data\_Mgmt\_Integration\_Strategy.html |  |  |  |  | Core navigation feature with dynamic optimization. |
| 96 | RFP-S3.7.7 | The system shall provide dispatchers with override capabilities to manage driver route compliance and authentication issues. The dispatchers must have the ability to intervene when: • A driver deviates from their assigned route • Authentication failures occur during biometric or facial recognition verification • The system shall notify the dispatchers in real-time when a driver deviates from their assigned route. a. The system shall enable dispatchers to: o View the assigned route and actual route taken by the driver o Approve or reject route deviations o Document the reason for intervention o Override authentication failures for both biometric and facial recognition systems o Reset driver authentication parameters when necessary | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Admin/Dispatcher Module); Observability\_Monitoring\_IncidentManagement.html |  |  |  |  | Dispatcher override functionalities. |
| 97 | RFP-S3.7.8 | Two-way communication ability for alerts about traffic, bus breakdown, bad weather, or student misconduct from/ to NYCPS call center administrators and routers (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Messaging/Alerting Service); Communications\_Governance\_Reporting\_Strategy.html |  |  |  |  | Two-way communication feature. |
| 98 | RFP-S3.7.9 | Proactively inform stakeholders like OPT, or school about delays or other instances that may disrupt service. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Alerting Service); Communications\_Governance\_Reporting\_Strategy.html |  |  |  |  | Proactive delay notification feature. |
| 99 | RFP-S3.7.10 | Transmit bus GPS location without latency. (High) | **Yes** | Solution\_Functional\_Non Functional.html (NFR Performance); Architecture.html |  |  |  |  | Performance NFR (Latency). |
| 100 | RFP-S3.7.11 | Display must include options for multi-language selection (Medium). | **Yes** | Solution\_Functional\_Non Functional.html (NFR Accessibility); Architecture.html (i18n) |  |  |  |  | Multi-language support NFR. |
| 101 | RFP-S3.7.12 | Must have troubleshooting and self-help FAQs available in the official languages recognized by the NYCPS including but not limited to Arabic, Bengali, Chinese (Traditional and Simplified), French, Haitian Creole, Korean, Russian, Spanish, and Urdu and English to module malfunction, to minimize need for support, etc. while maintaining consistent functionality across including but not limited to Chrome, Safari, and Edge web browsers (High) | **Yes** | User\_Onboarding\_Training\_Comms\_Strategy.html; Solution\_Functional\_Non Functional.html (NFR Usability/Accessibility) |  |  |  |  | Self-help support with specific languages. Browser req seems misplaced for driver module (likely app). |

| **3.8 Ridership Recording** | | | | | | | | | |
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| 102 | RFP-S3.8.Intro | A system of digitally recording driver, attendant, roster of passengers, interface to GPS, recording boarding, disembarking, and attendance with required details listed below: | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Ridership Module) |  |  |  |  | Overview of Ridership Recording system. |
| 103 | RFP-S3.8.1 | Drivers require a simplified interface to account for student presence/absence. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html (Usability); User\_Onboarding\_Training\_Comms\_Strategy.html (Driver Experience) |  |  |  |  | Usability requirement for driver interface. |
| 104 | RFP-S3.8.2 | Capture the name of the bus driver and attendant with their unique identifiers, and assigned bus route number, along with a timestamp for the record. List the pick- up stops of each student on the route and estimated time for pick up. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Data Model/Integration) |  |  |  |  | Data capture requirement for context. |
| 105 | RFP-S3.8.3.a | Special Education Category: Capture the name of the student boarding the bus via a device that does not require the intervention of the driver or attendant. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html (ID Reader); Architecture.html |  |  |  |  | Automated capture (scan) requirement for SE. |
| 106 | RFP-S3.8.3.b | Special Education Category: Capture the name of the student boarding the bus manually (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Driver Module UI) |  |  |  |  | Manual capture requirement (fallback) for SE. |
| 107 | RFP-S3.8.3.c | Special Education Category: Capture the actual time a student boards the bus, noting estimated time and tracking the difference. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Data Model); DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Time capture and variance tracking for SE. |
| 108 | RFP-S3.8.3.d | Special Education Category: Capture the location of the student boarding bus. If the student does not board the bus, note the absence of the student. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (GPS Integration) |  |  |  |  | Location capture and absence marking for SE. |
| 109 | RFP-S3.8.3.e | Special Education Category: List the student on arrival for school, home, or bus stop with all details specified in the four preceding requirements. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Workflow) |  |  |  |  | Disembarking data capture requirement for SE. |
| 110 | RFP-S3.8.4.a | GE/Pre-K-EI category: Capability to read a physical ID presented by students as they board or disembark the bus, maintaining a record of location and time. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html (ID Reader); Architecture.html |  |  |  |  | Automated capture (scan) requirement for GE/PreK. |
| 111 | RFP-S3.8.4.b | Record the name of the student boarding the bus manually (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Driver Module UI) |  |  |  |  | Manual capture requirement (fallback) for GE/PreK. |

| **3.9 School Module** | | | | | | | | | |
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| 112 | RFP-S3.9.Intro | Map interface for school administrators, providing the following capabilities: | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (School Module) |  |  |  |  | Overview of School Module purpose. |
| 113 | RFP-S3.9.1 | Must provide a means for creating, removing, and changing authorized user authentication and authorization as per the Authentication and Authorization subsections of Non-Functional Requirements. (High) | **Yes** | Security\_Strategy.html; Architecture.html (User Mgmt); Solution\_Functional\_Non Functional.html (NFR AuthN/AuthZ) |  |  |  |  | User management for school users. |
| 114 | RFP-S3.9.2 | Access to view student route assignment and account information (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (School Module/Data Access); Security\_Strategy.html (RBAC) |  |  |  |  | Data view requirement for schools. |
| 115 | RFP-S3.9.3 | Displays all bus route location and time for all vehicles, drivers, and students for a school destination in near real-time as defined in the Performance subsection of the Non-functional Requirements. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (School Module/Mapping/Real-time Data) |  |  |  |  | Real-time view for school admins. |
| 116 | RFP-S3.9.4 | Ability to isolate a bus route and view location of vehicle, drivers, and ridership of students (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (School Module UI/Filtering) |  |  |  |  | Filtering/drill-down capability. |
| 117 | RFP-S3.9.5 | Near real-time alerts to the module (both audio and visual) for any unexpected issues: bus delays, missed pickups, etc., including clear indication of vehicle(s) and students affected for routes assigned to travel to or from a school. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Alerting Service); Observability\_Monitoring\_IncidentManagement.html |  |  |  |  | Alerting requirement for schools. |
| 118 | RFP-S3.9.6 | Display near real-time system KPIs, including number of buses on active routes to school, or returning home from school, number of students on board, number of students waiting for pick up, school service on-time performance etc. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Dashboard/KPI Service); DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | KPI dashboard for schools. |
| 119 | RFP-S3.9.7 | Ability to report issues or problems to and accept replies from the OPT Administrative module. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Workflow/Messaging); Observability\_Monitoring\_IncidentManagement.html |  |  |  |  | Communication workflow School <-> OPT Admin. |
| 120 | RFP-S3.9.8 | Must have troubleshooting and self-help options (multi-language), including an FAQ for reference, in case of module malfunction, to minimize need for support. (High) | **Yes** | User\_Onboarding\_Training\_Comms\_Strategy.html; Solution\_Functional\_Non Functional.html (NFR Usability/Accessibility) |  |  |  |  | Self-service support requirement. |

| **3.10 OPT Administrative Module** | | | | | | | | | |
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| 121 | RFP-S3.10.Intro | Map interface for call center representatives, OPT administrators, and School Bus vendor employees, providing the following capabilities: | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Admin Module) |  |  |  |  | Overview of Admin Module purpose and users. |
| 122 | RFP-S3.10.1 | Must provide a means for creating, removing, and changing authorized user authentication and authorization as per the Authentication and Authorization subsections of Non-Functional Requirements. This approach simplifies the management of permissions by assigning roles to users, which in turn have specific permissions associated with them. It ensures that only authorized users have access to the systems and if they leave the role or the organization, their access is withdrawn. (High) | **Yes** | Security\_Strategy.html; Architecture.html (User Mgmt/RBAC); Solution\_Functional\_Non Functional.html (NFR AuthN/AuthZ) |  |  |  |  | User/Role management for Admin module users. |
| 123 | RFP-S3.10.2 | Must have the ability to differentiate users by persona (level) and scope (the data they are permissioned to view/update within the application). (High) | **Yes** | Security\_Strategy.html (RBAC/Scope); Architecture.html (User Mgmt) |  |  |  |  | Granular access control requirement. |
| 124 | RFP-S3.10.3 | Ability to display all bus and trip routes and the type and location of all vehicles, drivers, and students in near real-time as defined in the Performance subsection of the Non-functional Requirements. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Admin Module UI/Real-time Data) |  |  |  |  | Global real-time monitoring view. |
| 125 | RFP-S3.10.4 | Ability to efficiently communicate with drivers, parents/caregivers, students, and school administrators directly from the administrative module to their respective modules (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Messaging Service); Communications\_Governance\_Reporting\_Strategy.html |  |  |  |  | Central communication hub feature. |
| 126 | RFP-S3.10.5 | Near real-time alerts to the module (both audio and visual) for any unexpected issues: bus delays, missed pickups, etc., including a clear indication of which vehicle(s) and students are affected. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Alerting Service); Observability\_Monitoring\_IncidentManagement.html |  |  |  |  | Global alerting dashboard requirement. |
| 127 | RFP-S3.10.6 | Record of vehicle idle time for buses with assigned bus routes designated to the school (High) | **Yes** | Solution\_Functional\_Non Functional.html; DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Data logging for idle time. |
| 128 | RFP-S3.10.7 | System administrators should be able to determine frequency options for “approaching vehicle” notifications in the Parent/Caregiver and Student Module. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html (Configurability); Architecture.html (Admin UI/Config Mgmt) |  |  |  |  | Configuration setting for parent notifications. |
| 129 | RFP-S3.10.8 | Must be able to display near real-time data within the application including but not limited to KPIs, including the number of buses on active routes, number of students on board, number of students waiting for pick up, system-wide on-time performance, etc. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Dashboard/KPI Service); DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Global KPI dashboard requirement. |
| 130 | RFP-S3.10.9 | Near real-time ‘Newsfeed’ of all events occurring across the service, i.e. pickups, drop-offs, no-shows, etc. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Event Stream/UI) |  |  |  |  | Activity feed requirement. |
| 131 | RFP-S3.10.10 | Route “replay” capability for a specific set of days. The solution must return turn- by-turn replay of the route along with all information associated with the route (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Data Query/Visualization) |  |  |  |  | Route replay analysis tool. |
| 132 | RFP-S3.10.11 | Administrative ability to create and configure alerts based on specific GIS related events including but not limited to traffic, accidents and weather prescribed by DOE administrators. These alerts will be delivered to internal OPT operations so that they can respond to these events. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Alerting/GIS Integration); GIS\_Data\_Mgmt\_Integration\_Strategy.html |  |  |  |  | Internal alerting based on external GIS events. |
| 133 | RFP-S3.10.12 | Administrative ability to create and configure alerts, including robocalls, based on specific GIS-related events, including but not limited to traffic, accidents, and weather prescribed by DOE administrators. These alerts will be delivered to external stakeholders like authorized Parents/caregivers, drivers, and students so that they can respond to these events. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Alerting/GIS Integration/External Comms); Communications\_Governance\_Reporting\_Strategy.html |  |  |  |  | External alerting (incl. robocalls) based on external GIS events. |
| 134 | RFP-S3.10.13 | Ability to configure speed limits, add new street segments, and update street directions (for e.g. one-way streets) to optimize route planning, bus stop ETA calculations etc. (High) | **Yes** | Solution\_Functional\_Non Functional.html; GIS\_Data\_Mgmt\_Integration\_Strategy.html; Architecture.html (Admin UI/Config Mgmt) |  |  |  |  | Map data editing/configuration capability. |
| 135 | RFP-S3.10.14 | Create geo fences and provide start and end time as inputs to this capability. The solution must return all routes which would pass through one of more geo fences during that period. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html; GIS\_Data\_Mgmt\_Integration\_Strategy.html; DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Geofence-based route analysis query. |
| 136 | RFP-S3.10.15 | T Administrator capability to deny or grant access to other users including Data of other companies. | **Yes** | Security\_Strategy.html (RBAC/Permissions); Architecture.html (Admin UI/User Mgmt) |  |  |  |  | Admin access control over other users/company data. |
| 137 | RFP-S3.10.16 | User Access list that contains Username, Company, Agency, Department, Title, PET PRI/ EIN for identification, Address/location, reach Number, and email address | **Yes** | Security\_Strategy.html; Architecture.html (User Profile Data Model) |  |  |  |  | Specific user profile data fields required. |
| 138 | RFP-S3.10.17 | Vendor and user access to review and reset Driver ID capability and credential (password) capability. | **Yes** | Security\_Strategy.html; Architecture.html (Admin UI/User Mgmt) |  |  |  |  | Driver credential management by admins. |
| 139 | RFP-S3.10.18 | Display driver, route association, and vehicle, in near real-time | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Admin UI/Real-time Data) |  |  |  |  | Real-time display requirement. |
| 140 | RFP-S3.10.19 | Display driver route association status (i.e., not active, route activated) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Admin UI) |  |  |  |  | Status display requirement. |
| 141 | RFP-S3.10.20 | Display notification list in near real time of failed route association attempts identifying SBC, Driver and interaction time. | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Admin UI/Alerting); Observability\_Monitoring\_IncidentManagement.html |  |  |  |  | Real-time error notification display. |
| 142 | RFP-S3.10.21 | Maintain exportable data history for Driver route association details. | **Yes** | Solution\_Functional\_Non Functional.html; DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Data logging and export requirement. |
| 143 | RFP-S3.10.22 | Real Time display of Driver Route association that includes Student Ridership engagement or missed/absent rider, | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Admin UI/Integration) |  |  |  |  | Integrated real-time display (Association + Ridership). |
| 144 | RFP-S3.10.23 | Remote capability by SBC or OPT Administrator to modify a Drivers, Route association, or vehicle | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Admin UI/Workflow); Security\_Strategy.html (RBAC) |  |  |  |  | Operational intervention capability. |
| 145 | RFP-S3.10.24 | Ability to search for Driver, Route Vehicle or Student independently and retrieve system details | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Search Service) |  |  |  |  | Search functionality requirement. |
| 146 | RFP-S3.10.25 | List active vehicles with route association breakdowns (out of service) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Admin UI/Asset Integration) |  |  |  |  | Vehicle status display requirement. |
| 147 | RFP-S3.10.26 | Display GPS with route association with battery power lower than 15% charged | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Admin UI/Monitoring); Observability\_Monitoring\_IncidentManagement.html |  |  |  |  | Device low battery display/alert. |
| 148 | RFP-S3.10.27 | Display GPS with route association that have lost communication longer then 5 minutes during route start through completion | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Admin UI/Monitoring); Observability\_Monitoring\_IncidentManagement.html |  |  |  |  | Device connectivity loss display/alert. |
| 149 | RFP-S3.10.28 | Provide Map where SBC OPT Administration can visually select and view all Routes GPS locations, or select a Route with GPS associated details (speed, direction, next scheduled destination) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Admin UI/Mapping); GIS\_Data\_Mgmt\_Integration\_Strategy.html; Security\_Strategy.html (RBAC for SBC view) |  |  |  |  | Map-based monitoring UI for Admins/SBCs. |
| 150 | RFP-S3.10.29 | GPS data allowing for history search a specific address or intersection at a determined time or time frame | **Yes** | Solution\_Functional\_Non Functional.html; DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html; Architecture.html (Search/GIS) |  |  |  |  | Historical spatial-temporal search. |
| 151 | RFP-S3.10.30 | Real Time view of Routes scheduled for the day | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Admin UI/Routing Integration) |  |  |  |  | Operational overview display. |
| 152 | RFP-S3.10.31 | Display count of all Driver associated routes that are in progress | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Dashboard/KPI Service) |  |  |  |  | Real-time KPI. |
| 153 | RFP-S3.10.32 | Near time real time display count of all Driver associated routes that are pending activation | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Dashboard/KPI Service) |  |  |  |  | Real-time KPI. |
| 154 | RFP-S3.10.33 | Near real time display count of all Driver associated routes that have been completed | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Dashboard/KPI Service) |  |  |  |  | Real-time KPI. |
| 155 | RFP-S3.10.34 | Near real time display of total count and percentages for all Driver associated routes pending activation, in progress, and have been completed. | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Dashboard/KPI Service) |  |  |  |  | Real-time KPI dashboard summary. |
| 156 | RFP-S3.10.35 | All Real time display data for total count and percentages for all Driver associated routes pending activation, in progress, and have been completed emailed to SBC at AM designated time and PM designated time | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Reporting/Email Service); Communications\_Governance\_Reporting\_Strategy.html |  |  |  |  | Automated email reporting to SBCs. |
| 157 | RFP-S3.10.36 | Driver details displaying all associated routes historical data showing routes started and uncompleted and routes completed. | **Yes** | Solution\_Functional\_Non Functional.html; DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Historical reporting per driver. |
| 158 | RFP-S3.10.37 | Driver details for affiliated SBC with associated management name, reach number and email | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Data Integration/User Profile) |  |  |  |  | Data integration/display requirement. |
| 159 | RFP-S3.10.38 | SBC list of all affiliated Drivers names, ID, and associated routes | **Yes** | Solution\_Functional\_Non Functional.html; DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html; Security\_Strategy.html (RBAC) |  |  |  |  | Reporting requirement for SBCs. |
| 160 | RFP-S3.10.39 | Display all current KPI Prior day, Week to date, Month to date year to date for Operational data (Installation Tickets, Routes for overall OPT performance for each individual SBC. | **Yes** | Solution\_Functional\_Non Functional.html; DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html; Architecture.html (Dashboard/KPI) |  |  |  |  | KPI dashboard with historical trends and SBC filter. |
| 161 | RFP-S3.10.40 | Search Engine that provides statistical performance history data for Driver associated route completion. | **Yes** | Solution\_Functional\_Non Functional.html; DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Search/Reporting for driver performance analysis. |
| 162 | RFP-S3.10.41 | Search capability that provides statistical performance report history for Driver associated with a route experiencing Lost Signal from GPS device | **Yes** | Solution\_Functional\_Non Functional.html; DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html; Observability\_Monitoring\_IncidentManagement.html |  |  |  |  | Search/Reporting linking performance to connectivity issues. |
| 163 | RFP-S3.10.42 | Search capability that provides performance report history for Driver associated with a route experiencing low battery from GPS device | **Yes** | Solution\_Functional\_Non Functional.html; DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html; Observability\_Monitoring\_IncidentManagement.html |  |  |  |  | Search/Reporting linking performance to low battery issues. |
| 164 | RFP-S3.10.43 | Must have troubleshooting and self-help options (multi-language), including an FAQ for reference, in case of module malfunction, to minimize need for support. Must have the capability to override this functionality in the other modules (High) | **Yes** | User\_Onboarding\_Training\_Comms\_Strategy.html; Solution\_Functional\_Non Functional.html; Architecture.html (Config Mgmt) |  |  |  |  | Self-help support for Admin module with override capability. |
| 165 | RFP-S3.10.44 | Must include an interface for generating and reviewing canned and customized reports, with the following requirements. For additional information regarding OPT’s reporting needs, please refer to NYC Council Legislation (see Attachment 6): | **Yes** | Solution\_Functional\_Non Functional.html; DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Reporting interface requirement, references external legislation. |
| 166 | RFP-S3.10.45 | All reports and live (near real-time) data must be able to be filtered by SBC, garage, school, geographic district of the school (High) | **Yes** | Solution\_Functional\_Non Functional.html; DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Universal filtering requirement for reports/data. |
| 167 | RFP-S3.10.45.a.i | Canned Reports: All data required for such reports must reside within the proposed solution. (High) | **Yes** | Architecture.html (Data Strategy); DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Data source constraint for canned reports. |
| 168 | RFP-S3.10.45.a.ii | Canned Reports: The data for the reports must be retrievable, filterable, and sortable by attribute, including but not limited to: Garage associated to route, Student Name, Pick-up Location, Destination, Time of Arrival, Time of Departure, Estimate Arrival Time (ETA) (High). | **Yes** | Solution\_Functional\_Non Functional.html; DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Specific filter/sort attributes for canned reports. |
| 169 | RFP-S3.10.45.a.iii | Canned Reports: Data available to DOE in a format of NYCPS choosing, data fields including but not limited to Vendor Name, Route Type, Route Number, Vehicle Type, Start Time, End Time, the actual path covered to complete the route and Miles travelled for route completion. (High) | **Yes** | Solution\_Functional\_Non Functional.html; DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Specific data fields and format flexibility for DOE export. |
| 170 | RFP-S3.10.45.a.iv | Canned Reports: Reports and the underlying data must be exportable for use in third-party analytical applications. (High) | **Yes** | Solution\_Functional\_Non Functional.html; DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html; Architecture.html (Interoperability) |  |  |  |  | Export capability requirement. |
| 171 | RFP-S3.10.45.a.v | Canned Reports: Reporting must be mechanized and derived daily, weekly, monthly and yearly. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Scheduler); DevOps\_Strategy.html (Automation); DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Automated report generation requirement. |
| 172 | RFP-S3.10.45.b.i | Customized reports: All requirements specified under section 3.3.5.16.a Canned Reports. (High) [Typo in RFP, likely means 3.10.45.a] | **Yes** | Solution\_Functional\_Non Functional.html; DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Baseline requirements for custom reports. |
| 173 | RFP-S3.10.45.b.ii | Customized reports: Must have the capability to report at a finer level of granularity. (High) | **Yes** | Solution\_Functional\_Non Functional.html; DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Flexibility requirement for custom reports. |
| 174 | RFP-S3.10.45.b.iii | Customized reports: Must have the capability to limit report-generating functionality to authorized users. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Security\_Strategy.html (RBAC); DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Access control requirement for custom reporting. |

| **3.11 Student Management (and backend) System** | | | | | | | | | |
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| 175 | RFP-S3.11.Intro | A system that maintains student details to ensure transportation attributes required for accurate service. Must include required data modifications as listed below: | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Student Data Model/Service) |  |  |  |  | Overview of Student Management system purpose. |
| 176 | RFP-S3.11.1 | Synchronized as needed with the NYCPS’ student, parent, and other databases (NYC School Account, OPT DBs, OPT Administrative Application including but not related to NYCPS Administrative Systems) (High) | **Yes** | Architecture.html (Integration Strategy); Data\_governance\_compliance\_controls\_plan.html |  |  |  |  | Data synchronization requirement with multiple NYCPS systems. |
| 177 | RFP-S3.11.2 | Seamlessly integrated with the Parent/Caregiver and Student Module: Parents/caregivers can update School Bus enrollment through the module. (High) | **Yes** | Architecture.html (Integration); Solution\_Functional\_Non Functional.html |  |  |  |  | Integration with Parent module for updates. |
| 178 | RFP-S3.11.3.a | Simple interface for updating student transportation needs throughout the year including: Adjustments made by NYCPS administrators, such as home location changes for students living in City shelters (High) | **Yes** | Solution\_Functional\_Non Functional.html (Admin UI); Architecture.html (Admin Module) |  |  |  |  | Admin interface for student data updates. |
| 179 | RFP-S3.11.3.b | Simple interface for updating student transportation needs throughout the year including: Adjustments made by parents/caregivers through their app pertaining to same day cancellations due to absences (High) | **Yes** | Solution\_Functional\_Non Functional.html (Parent Module Feature); Architecture.html (Integration) |  |  |  |  | Parent app feature integration (absence reporting). |
| 180 | RFP-S3.11.3.c | Simple interface for updating student transportation needs throughout the year including: Adjustments made by school administrators for children who have joined/ left the school (High) | **Yes** | Solution\_Functional\_Non Functional.html (School Module Feature?); Architecture.html (School Module/Admin Module) |  |  |  |  | School admin interface for enrollment updates. |
| 181 | RFP-S3.11.4 | Must continuously analyze all student information (home location, school location, targeted arrival time, special student instructions, etc.) to create and suggest optimized routes that serve all student populations (Medium) | **Yes** | Architecture.html (Routing Engine/Data Analysis); DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html; Solution\_Functional\_Non Functional.html |  |  |  |  | Backend analysis for route optimization input. |

| **3.12 Adaptive/Dynamic Routing Software** | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 182 | RFP-S3.12.Intro | Route creation as a result of a known established base of ridership and available route intelligence, capable of implementing an override during a route run time due to mapping data, ridership change, AI learned behavior, or other information that warrants a route change. The software attributes include historical route and student retention, data analysis, reporting, simultaneously managing multiple scheduled routing sessions, and storage of the calendars for each school. Dynamic routing is always executed to the advantage or improvement of the student transportation experience and the stability of the student’s service. If the Vendor’s solution necessitates a change in the roles and responsibilities of OPT, schools, or bus contractors, the Vendor will work with OPT to facilitate the transition. | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Routing Engine); DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html; Project\_And\_Change\_And\_Risk\_Management\_Plan.html (Change Mgmt) |  |  |  |  | Overview of the dynamic routing system goals and capabilities. |
| **3.12.1 Core Functionality - General** | | | | | | | | | |
| 183 | RFP-S3.12.1.a.i | Authorized users will not need to leave the routing system to locate ridership or student information. This includes home addresses, grades, medical needs, all pertinent data fields, turn by turn GPS, route overlay, etc. (High) | **Yes** | Solution\_Functional\_Non Functional.html (Usability/UI); Architecture.html (Admin Module Integration) |  |  |  |  | "Single pane of glass" UI requirement for routers. |
| 184 | RFP-S3.12.1.a.ii | Must design the solution to be able to automatically assign an itinerary type for each trip, such as AM, PM, ALT PM, Field Trips, After-school etc. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Data Model/Workflow) |  |  |  |  | Automated trip type assignment. |
| 185 | RFP-S3.12.1.a.iii | Must be capable of routing all students together, including but not limited to categories such as GE, SE, STH, Foster, PSC, Capping, After-School, Pre-K/EI, Field Trips etc. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Routing Engine Capabilities) |  |  |  |  | Unified routing across all student types. Core complexity. |
| 186 | RFP-S3.12.1.a.iv | Must be capable of integrating existing Field Trip application or assign Field Trips based on current routes that are available. The system must show the availability of routes to be used for each trip while keeping in mind early dismissals / conflicts / business rules (district rules) built into Field Trips. | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Integration/Routing Logic); Project\_Implementation\_Game\_Plan.html (Integration Approach) |  |  |  |  | Field trip routing integration or functionality. |
| 187 | RFP-S3.12.1.a.v | Must be capable of creating a Pre-K routing platform for vendors to manage Pre-K routes, and transportation users must have the visibility to view all Pre-K routes / students. | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Vendor Portal/Integration); Vendor\_3rdParty\_mgmt\_logistics\_plan.html |  |  |  |  | Separate Pre-K platform for vendors with OPT visibility. |
| 188 | RFP-S3.12.1.a.vi | Must provide SBC staff with ability to view routes assigned to the SBC (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Vendor Portal/Admin Module); Security\_Strategy.html (RBAC) |  |  |  |  | SBC view-only access to routes. |
| 189 | RFP-S3.12.1.a.vii | The system shall implement a secure, SBC-specific mapping interface that provides real-time visualization and dynamic route modification capabilities exclusively for vehicles within each vendor's fleet, enabling rapid response to emergency situations and changing road conditions. The interface shall sync with the school administer console to minimize the friction between schools and SBCs. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Vendor Portal Features); Security\_Strategy.html; Vendor\_3rdParty\_mgmt\_logistics\_plan.html |  |  |  |  | Advanced SBC interface with modification rights & sync. |
| 190 | RFP-S3.12.1.a.viii | Must have the ability for contracted vendors to view routes and suggest changes to headcounts and stop times. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Vendor Portal Features); Vendor\_3rdParty\_mgmt\_logistics\_plan.html |  |  |  |  | SBC feedback mechanism on routes. |
| 191 | RFP-S3.12.1.a.ix | Must have the ability for contracted vendors to view and print route sheets. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Vendor Portal Features); Vendor\_3rdParty\_mgmt\_logistics\_plan.html |  |  |  |  | Basic SBC functionality (print route sheets). |
| 192 | RFP-S3.12.1.a.x | Must have the ability to adjust the routes that the driver is performing dynamically in near real-time to respond to live realities on the streets, such as traffic conditions, road closures, extreme weather conditions, etc., without deviating from OPT scheduling/sequencing. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Routing Engine/Real-time Adjustments) |  |  |  |  | Core dynamic routing capability. |
| 193 | RFP-S3.12.1.a.xi | Must have the ability to retain 7 years of historical student and routing data to generate predefined reports and inquiries that support day-to-day operations and management analysis of trends. Must be able to provide reports on present data as well as future data. (High) | **Yes** | Data\_governance\_compliance\_controls\_plan.html (Data Retention); Architecture.html (Data Model/Reporting); DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Data retention and reporting requirement for routing data. |
| 194 | RFP-S3.12.1.a.xii | Must have the ability to accommodate students who require transportation to multiple locations within the same day (i.e., Alternate PM locations, for example, picked up at home, attends school at one location, attends an after-school program at another location (ALT PM), and requires transportation home from the after-school program at the end of the day). (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Routing Logic/Data Model) |  |  |  |  | Complex routing scenario (multi-leg). |
| 195 | RFP-S3.12.1.a.xiii | Must have the ability to accommodate students who require transportation to/from multiple addresses based on time of day or day of the week due (for example, students who are picked up at one parent’s address in the morning but dropped off at their other parent’s address in the afternoons or are picked up/dropped off at one address Monday through Thursday and another address on Fridays). (Dual Custody agreements) (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Routing Logic/Data Model) |  |  |  |  | Complex routing scenario (conditional addresses). |
| 196 | RFP-S3.12.1.a.xiv | Must be capable of integrating with upstream systems (e.g. vehicle, contract, vehicle information, student record, SSO apps) to utilize the master data as input for routing planning. (High) | **Yes** | Architecture.html (Integration Strategy); Project\_Implementation\_Game\_Plan.html |  |  |  |  | Upstream data integration requirement. |
| 197 | RFP-S3.12.1.a.xv | Must have the capability of managing Fall and Summer routes separately for different programs such as After School programs, Field Trips, Pre-k/EI as the 2 (two) are separate processes with often overlapping timelines. The user must have the ability to select the term they would like to work in. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Data Model/UI) |  |  |  |  | Data partitioning by term (Fall/Summer). |
| 198 | RFP-S3.12.1.a.xvi | Must be able to configure notifications according to the routing workflow. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Alerting/Workflow Config) |  |  |  |  | Configurable workflow notifications. |
| 199 | RFP-S3.12.1.a.xvii | Must be able to store each school's calendar for internal users, schools, finance, and vendors (Medium) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Data Model/Integration) |  |  |  |  | School calendar storage requirement. |
| 200 | RFP-S3.12.1.a.xviii | Must have the ability to store student and parent/caregiver contact information for regular and summer school staff. (Low) Needed | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Data Model) |  |  |  |  | Requirement phrasing is ambiguous (student/parent info for staff?). Addressed as storing contact info. |
| 201 | RFP-S3.12.1.a.xix | Must have an ability to display number, types, and attributes of vehicles serving each school OPT Code. (Low) Needed | **Yes** | Solution\_Functional\_Non Functional.html; DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html; Architecture.html (Integration/UI) |  |  |  |  | Display requirement for vehicle info per school. |
| 202 | RFP-S3.12.1.a.xx | Must have an ability to automatically display all schools located at a single physical location with their session times when displaying the routes of one of the schools and all schools within a district, region or borough. | **Yes** | Solution\_Functional\_Non Functional.html (UI Feature); GIS\_Data\_Mgmt\_Integration\_Strategy.html; Architecture.html (UI/Data Query) |  |  |  |  | UI feature for co-located schools / area context. |
| **3.12.1 Core Functionality - Map** | | | | | | | | | |
| 203 | RFP-S3.12.1.b.i | Must have a map-based platform to geocode and display points (schools, stops, students), lines (routes, streets) and polygons (borough boundaries, district boundaries). (High) | **Yes** | GIS\_Data\_Mgmt\_Integration\_Strategy.html; Architecture.html (Mapping Component); Solution\_Functional\_Non Functional.html |  |  |  |  | Core GIS mapping capability requirement. |
| 204 | RFP-S3.12.1.b.ii | Must be able to display updated stop arrival times based on actual patterns derived from the GPS data. (High) | **Yes** | Solution\_Functional\_Non Functional.html; DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html; Architecture.html (ETA/Data Analysis) |  |  |  |  | Predictive ETA based on historical GPS. |
| 205 | RFP-S3.12.1.b.iii | Must be able to derive information from existing internally generated spatial data. (High) | **Yes** | GIS\_Data\_Mgmt\_Integration\_Strategy.html; Architecture.html (Integration) |  |  |  |  | Integration with potentially custom internal GIS data. |
| 206 | RFP-S3.12.1.b.iv | Must have the ability to display street names and allow for dynamic labeling of other spatial data. (High) | **Yes** | GIS\_Data\_Mgmt\_Integration\_Strategy.html; Solution\_Functional\_Non Functional.html (Mapping UI) |  |  |  |  | Map usability requirement (labels). |
| 207 | RFP-S3.12.1.b.v | Must have the ability for authorized users to filter what is displayed on the map based on customizable parameters (such as specific medical alert codes, out-of- item routes, routes served by specific vehicle types). Additionally, the system must provide a means of turning the view of spatial data elements on and off to see data in different combinations. (High) | **Yes** | Solution\_Functional\_Non Functional.html (Mapping UI); Architecture.html (UI/Filtering) |  |  |  |  | Map filtering and layer control requirement. |
| 208 | RFP-S3.12.1.b.vi | Must allow the authorized users to perform attribute/tabular queries in addition to spatial queries (e.g., near, within, contained, least cost path). (High) | **Yes** | Solution\_Functional\_Non Functional.html; GIS\_Data\_Mgmt\_Integration\_Strategy.html; Architecture.html (Search/Query Engine) |  |  |  |  | Advanced spatial and attribute query capability. |
| 209 | RFP-S3.12.1.b.vii | Must have the ability to display all medical alert codes and other codes on the map. (High) | **Yes** | Solution\_Functional\_Non Functional.html (Mapping UI); GIS\_Data\_Mgmt\_Integration\_Strategy.html |  |  |  |  | Map display requirement for coded data (e.g., student needs). |
| 210 | RFP-S3.12.1.b.viii | Must allow authorized users to regularly edit the base maps with new polygons, roads, updated street speeds, roadblocks, travel and location restrictions and other data that influences routing. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html; GIS\_Data\_Mgmt\_Integration\_Strategy.html; Architecture.html (Admin UI/Config Mgmt) |  |  |  |  | Map editing capability requirement. |
| 211 | RFP-S3.12.1.b.ix | Must have the ability to display 7 years of student and routing data on the map- based viewing platform. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Data\_governance\_compliance\_controls\_plan.html; Architecture.html (Data Archival/Query); GIS\_Data\_Mgmt\_Integration\_Strategy.html |  |  |  |  | Historical data visualization on map. Performance challenge. |
| 212 | RFP-S3.12.1.b.x | Must have the ability to display district, borough, and county boundaries, and use existing boundary data. (High) | **Yes** | GIS\_Data\_Mgmt\_Integration\_Strategy.html; Solution\_Functional\_Non Functional.html (Map Layers) |  |  |  |  | Map layer requirement for boundaries. |
| 213 | RFP-S3.12.1.b.xi | Must have an ability to view the maps for New York, New Jersey, and Connecticut that are continuously maintained and updated on a street level by the contracted vendor. (High) | **Yes** | GIS\_Data\_Mgmt\_Integration\_Strategy.html; Vendor\_3rdParty\_mgmt\_logistics\_plan.html (Map Data Provider) |  |  |  |  | Base map coverage and update requirement. |
| 214 | RFP-S3.12.1.b.xii | Must have the ability for contracted vendors to view routes on the map. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Vendor Portal); Security\_Strategy.html (RBAC) |  |  |  |  | SBC map view requirement. |
| **3.12.1 Core Functionality - Authorized users Access/Accounts** | | | | | | | | | |
| 215 | RFP-S3.12.1.c.i | Must provide a means for creating, removing, and changing authorized user authentication and authorization as per the Authentication and Authorization subsections of Non-Functional Requirements (High) | **Yes** | Security\_Strategy.html; Architecture.html (User Mgmt); Solution\_Functional\_Non Functional.html (NFR AuthN/AuthZ) |  |  |  |  | User management for routing users. |
| 216 | RFP-S3.12.1.c.ii | Must allow multiple authorized users to view, modify, and retrieve information simultaneously, with a limitation of one authorized user modifying records/routes at a given time. (High) | **Yes** | Architecture.html (Concurrency Control); Solution\_Functional\_Non Functional.html (NFR) |  |  |  |  | Concurrency control / Record locking requirement. |
| 217 | RFP-S3.12.1.c.iii | Must have an ability to capture and display an audit trail (authorized users, timestamp, and description of change) for any changes made to a route (added or deleted stops, sequence changes, changes in schools served, etc.) or any other data. (High) | **Yes** | Solution\_Functional\_Non Functional.html (NFR Audit Trail); Architecture.html (Auditing Service); Data\_governance\_compliance\_controls\_plan.html |  |  |  |  | Audit trail for all routing data changes. |
| 218 | RFP-S3.12.1.c.iv | Must have the ability to configure alerts according to the authorized users’ specific needs. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Alerting Config UI) |  |  |  |  | User-configurable alerts. |
| 219 | RFP-S3.12.1.c.v | Must provide the ability to support secure public access by external stakeholders, such as parents/caregivers. (Medium) | **Yes** | Architecture.html (Parent Module); Security\_Strategy.html |  |  |  |  | Likely met via Parent Module (3.6), not direct routing access. |
| **3.12.1 Core Functionality - System and Data Integration** | | | | | | | | | |
| 220 | RFP-S3.12.1.d.i | Must be capable of integrating with relevant NYCPS administrative systems for students requiring stop-to-school transportation / curb to school transportation or provide another means for importing student data requiring a school bus transportation service for the details part of the service record. (High) | **Yes** | Architecture.html (Integration Strategy); Project\_Implementation\_Game\_Plan.html |  |  |  |  | Student data integration (STS/CTS). |
| 221 | RFP-S3.12.1.d.ii | Must integrate with any NYCPS OPT existing applications and systems for student enrollment, data, IEPs, non-public schools, and NYC Department of Health data networks for students requiring Curb-to-School transportation or provide another means for importing student data. (High) | **Yes** | Architecture.html (Integration Strategy); Project\_Implementation\_Game\_Plan.html; Data\_governance\_compliance\_controls\_plan.html (IEP/Health Data) |  |  |  |  | Broader data integration (IEP, DOHMH etc.). |
| 222 | RFP-S3.12.1.d.iii | Must be capable of integrating onboard GPS, ridership reporting, vendor and bus staff information, and video technologies from multiple contracted vendors to know actual stop times, route paths, and numbers of students utilizing the bus so that necessary adjustments can be made. (High) | **Yes** | Architecture.html (Integration Strategy); Vendor\_3rdParty\_mgmt\_logistics\_plan.html; Solution\_Functional\_Non Functional.html |  |  |  |  | Integration with operational data feeds (GPS, ridership, future video). |
| 223 | RFP-S3.12.1.d.iv | The system shall implement a data integration platform that processes and exports specified operational data elements to support NYCPS' payment processing requirements. This integration shall enable automated data extraction and transformation according to NYCPS' requested formats while maintaining data accuracy and completeness. | **Yes** | Architecture.html (Integration Strategy - Outbound); DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html; Budget\_Financial\_Mgmt\_Plan.html (Ref Payment) |  |  |  |  | Outbound data integration for payment processing. |
| 224 | RFP-S3.12.1.d.v | Must be capable of integrating multiple session times of a school. (High) | **Yes** | Architecture.html (Data Model); Solution\_Functional\_Non Functional.html |  |  |  |  | Data model requirement for session times. |
| 225 | RFP-S3.12.1.d.vi | Must provide a capability to integrate students’ stop assignments with the downstream system(s) such that a student’s stop assignment can be viewed by schools, parents/caregivers, and customer service staff. (High) | **Yes** | Architecture.html (Integration Strategy - Downstream); Solution\_Functional\_Non Functional.html |  |  |  |  | Downstream integration for stop assignment visibility. |
| 226 | RFP-S3.12.1.d.vii | It must provide the capability to integrate with both upstream and downstream systems NYCPS administrative systems. (High) | **Yes** | Architecture.html (Integration Strategy) |  |  |  |  | General reiteration of broad integration need. |
| 227 | RFP-S3.12.1.d.viii | Must be able to send emails to schools and parents/caregivers regarding students’ route assignments and changes to routes. (High) | **Yes** | Architecture.html (Notification/Email Service); Communications\_Governance\_Reporting\_Strategy.html |  |  |  |  | Outbound email notification requirement. |

| **3.13 Stops** | | | | | | | | | |
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| **3.13 Stops - General** | | | | | | | | | |
| 228 | RFP-S3.13.a.i | All stops must align with current / existing routed / un-routed stops per OPT code citywide. | **Yes** | GIS\_Data\_Mgmt\_Integration\_Strategy.html; Data\_governance\_compliance\_controls\_plan.html (Data Migration/Alignment) |  |  |  |  | Data consistency/migration requirement for stops. |
| 229 | RFP-S3.13.a.ii | The stop management platform OPT199, its core functionality, and its policy algorithm will need to be integrated or replaced. | **Yes** | Architecture.html (Integration/Replacement Strategy); Project\_Implementation\_Game\_Plan.html |  |  |  |  | Legacy system (OPT199) handling requirement. |
| 230 | RFP-S3.13.a.iii | The system must automatically approve or deny stop requests made by schools that align with OPT regulations/policy/algorithm, but the parameters can easily be updated as policies shift. | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Rules Engine/Workflow); Data\_governance\_compliance\_controls\_plan.html |  |  |  |  | Automated stop request processing based on configurable rules. |
| 231 | RFP-S3.13.a.iv | For STS, different stop types will require an identifier, or the existing stop numbers will be carried over. | **Yes** | Architecture.html (Data Model); GIS\_Data\_Mgmt\_Integration\_Strategy.html |  |  |  |  | Data modeling requirement for STS stop types. |
| 232 | RFP-S3.13.a.v | STS stops are generally created as intersections. | **Yes** | Architecture.html (Routing/Stop Creation Logic); Solution\_Functional\_Non Functional.html |  |  |  |  | Business rule for STS stop placement. |
| 233 | RFP-S3.13.a.vi | The system must propose routes for the un-routed stops to a compatible route automatically or manually by authorized OPT staff based on selection criteria, such as session time of the school being served, seating capacity of the route, number of students on the bus at that time, number of the students at the stop, etc. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Routing Suggestion Engine) |  |  |  |  | Route assignment suggestion feature for new stops. |
| 234 | RFP-S3.13.a.vii | New stops should be available to route immediately and all stops, students and route changes such as stops added, stop times changed, stops switched, etc. must be visible immediately in the routing system and communicate with integrated/related applications. (High) | **Yes** | Architecture.html (Real-time Data Propagation); Solution\_Functional\_Non Functional.html (NFR Performance) |  |  |  |  | Real-time data consistency requirement. |
| 235 | RFP-S3.13.a.viii | Must provide a means to change the location of an existing stop rather than adding a new stop to better accommodate students; while ensuring OPT policies and regulations are built into the stop management solution. (High) | **Yes** | Solution\_Functional\_Non Functional.html (Stop Mgmt UI); Architecture.html (Workflow/Rules Engine); GIS\_Data\_Mgmt\_Integration\_Strategy.html |  |  |  |  | Stop location editing feature with policy checks. |
| 236 | RFP-S3.13.a.ix | Must prevent any student that is entered into the system from being accidentally assigned to a deactivated stop, the wrong transportation type, or an unapproved stop/exception stop. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Validation Rules); Data\_governance\_compliance\_controls\_plan.html |  |  |  |  | Validation rule for student stop assignment. |
| 237 | RFP-S3.13.a.x | Must have the ability to send a notification to schools and parents/caregivers about new, changed, or deleted stops. (Medium) | **Yes** | Architecture.html (Notification Service); Communications\_Governance\_Reporting\_Strategy.html |  |  |  |  | Communication requirement for stop changes. |
| 238 | RFP-S3.13.a.xi | Must allow the authorized users to perform stop searches based on customizable buffers. (Low) | **Yes** | Solution\_Functional\_Non Functional.html; GIS\_Data\_Mgmt\_Integration\_Strategy.html; Architecture.html (Search/Query Engine) |  |  |  |  | Spatial search feature (buffer search). |
| 239 | RFP-S3.13.a.xii | Must have the ability to define start and end dates for temporary stops, and to provide future start dates. (Low) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Data Model - Effective Dating) |  |  |  |  | Stop lifecycle management (temporary/future stops). |
| 240 | RFP-S3.13.a.xiii | School users and transportation users must have the ability or platform to manage/view bus stops per OPT code. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (School/Admin/Vendor Modules); Security\_Strategy.html (RBAC) |  |  |  |  | Role-based access to stop management/viewing. |
| 241 | RFP-S3.13.a.xiv | Transportation users must be able to display all assigned students, unassigned students, stops, and routes per the OPT code on the map. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html (Admin Module UI); Architecture.html (Mapping/Data Query) |  |  |  |  | Detailed map view for transportation users (per school). |
| 242 | RFP-S3.13.a.xv | The system must have the capability to have default “effective dates” for new stops, students, and routes that transportation users can edit. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html (UI/Config); Architecture.html (Data Model - Effective Dating) |  |  |  |  | Default effective dating with override capability. |
| **3.13 Stops - Optimization Capabilities** | | | | | | | | | |
| 243 | RFP-S3.13.b.i | STS must be able to auto-create stops in the most optimal location based on student addresses (primarily located at intersections) and configurable parameters (such as distance between stops, distance between school and nearest stop, etc.) without the need for outside input. | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Routing/Stop Generation Algorithm); GIS\_Data\_Mgmt\_Integration\_Strategy.html |  |  |  |  | Automated STS stop generation based on optimization. |
| 244 | RFP-S3.13.b.ii | Transportation users must be able to display existing stops for a specific OPT code on the map for stop planning, route optimization, and search/ filter capabilities. | **Yes** | Solution\_Functional\_Non Functional.html (Admin Module UI); Architecture.html (Mapping/Data Query) |  |  |  |  | Map view for planning/optimization context. |
| 245 | RFP-S3.13.b.iii | The system shall implement a route optimization engine (dynamic routing) that evaluates and modifies existing driver routes to accommodate additional ride requests while maintaining optimal routing. This dynamic routing capability shall analyze current routes, evaluate modification opportunities, and implement route changes based on new student(s) pick up requests that fall outside the driver's standard route. | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Routing Engine) |  |  |  |  | Core dynamic routing insertion logic. |
| 246 | RFP-S3.13.b.iv | The route optimization engine shall perform continuous analysis of active route to determine optimal modification points by evaluating multiple factors: current traffic conditions, estimated arrival times, students' time constraints, and overall journey efficiency. When processing new route requests, the system shall calculate the most efficient pickup sequence while ensuring minimal impact on existing commitments. | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Routing Engine); DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Detail on dynamic routing algorithm inputs/logic. |
| 247 | RFP-S3.13.b.v | The system must have different filters and map layers where users can hide/ unhide data on the map. | **Yes** | Solution\_Functional\_Non Functional.html (Mapping UI); Architecture.html (UI/Filtering) |  |  |  |  | Map layer/filter control. |
| 248 | RFP-S3.13.b.vi | There must be a “comments” section for internal users to update and for bus companies and drivers to view. | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Comments Feature/Module); Communications\_Governance\_Reporting\_Strategy.html |  |  |  |  | Communication feature (comments). Context needed (stop/route?). |
| 249 | RFP-S3.13.b.vii | Users must be able to perform “bulk actions” manually or automatically for stop assignments, routing stops, un-routing stops, creating routes, etc. The OPT public and non-public calendars must be integrated into the application in some form. Users must be able to search by OPT code, student ID#, route number, district, borough, ambulatory code, MA code, exceptions, etc. | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Bulk Actions/Search/Calendar Integration); DevOps\_Strategy.html (Automation) |  |  |  |  | Bulk actions, calendar integration, and specific search criteria requirement. |
| 250 | RFP-S3.13.b.viii | Users must be able to review headcounts for STS and a capacity breakdown for CTS (N, L, W, V, CK, para, etc.) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (UI/Data Query); DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Headcount and capacity review feature. |
| 251 | RFP-S3.13.b.ix | The system must be able to propose new stop times, re-sequencing routes, and propose compatible combinations of schools, stops/students for new routes. | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Routing Engine Optimization Features) |  |  |  |  | Routing optimization suggestion capabilities. |
| 252 | RFP-S3.13.b.x | For new stops/students that have yet to be routed, there must be a district flag or “un-routed” queue. The system must track the days these records are on the “flag.” | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Workflow/Queue Management) |  |  |  |  | Workflow management tool for unrouted items. |
| 253 | RFP-S3.13.b.xi | Each OPT code can only view its stops, routes, and student data. Schools shall not share stops; all existing stops will be grandfathered/imported into the system. | **Yes** | Security\_Strategy.html (RBAC/Data Scoping); Architecture.html; Data\_governance\_compliance\_controls\_plan.html (Data Migration) |  |  |  |  | Data access control rule by OPT code / School. Stop sharing rule. |
| 254 | RFP-S3.13.b.xii | For CTS, the system must automatically create stops at the home address of any students requiring Curb-to-School transportation, which includes Alternate PM locations that may be subject to change throughout a given week. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Stop Creation Logic); GIS\_Data\_Mgmt\_Integration\_Strategy.html |  |  |  |  | Automated CTS stop creation at home/Alt PM address. |
| 255 | RFP-S3.13.b.xiii | ALT PM drop-offs are for CTS students with IEPs only and can only be approved if the address is within the same borough as the school or home residence. OPT reviews these requests on a case-by-case basis. | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Workflow/Rules Engine); Data\_governance\_compliance\_controls\_plan.html |  |  |  |  | Business rules and workflow for Alt PM stop approval. |
| 256 | RFP-S3.13.b.xiv | Using OPT’s parameters, one must be able to calculate walking distances (grade/distance eligibility) to determine optimal stop locations and determine whether a student can be assigned to an existing stop. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Eligibility/Assignment Logic); GIS\_Data\_Mgmt\_Integration\_Strategy.html |  |  |  |  | Walking distance calculation for eligibility/assignment. |
| 257 | RFP-S3.13.b.xv | Must be able to locate the closest existing stops to a student's address. (High) | **Yes** | Solution\_Functional\_Non Functional.html; GIS\_Data\_Mgmt\_Integration\_Strategy.html; Architecture.html (Spatial Query Engine) |  |  |  |  | Nearest neighbor spatial search requirement. |
| 258 | RFP-S3.13.b.xvi | Must be able to automatically assign new students to the existing stops available for that OPT Code based on business rules that apply to the specific type of stop (i.e., STH, PSC, capping, etc.). (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Assignment Logic/Rules Engine) |  |  |  |  | Automated student-to-stop assignment based on rules. |
| 259 | RFP-S3.13.b.xvii | Must be able to flag stops for deactivation when it detects that the stop is not being used. The system must automatically remove all stops that do not have active riders or students assigned. The system must alert the transportation user, and the application must autogenerate the stop times automatically. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Data Analysis/Workflow/Alerting); DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Automated stop cleanup based on ridership. Auto stop time generation needs clarification. |
| 260 | RFP-S3.13.b.xviii | Must be able to flag stops when it detects that a stop is being used but does not have students assigned to it. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Data Analysis/Alerting); DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Data inconsistency detection requirement. |
| **3.13 Stops - Manual Capabilities** | | | | | | | | | |
| 261 | RFP-S3.13.c.i | All new stops proposed by the software must be approved by authorized DOE staff within 24hrs. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Workflow/Approval UI) |  |  |  |  | Manual approval workflow for suggested stops. |
| 262 | RFP-S3.13.c.ii | Must allow authorized users to create and manually adjust stops. (High) | **Yes** | Solution\_Functional\_Non Functional.html (Admin UI); Architecture.html |  |  |  |  | Manual stop creation/adjustment capability. |
| **3.13 Stops - Stop-Level Information** | | | | | | | | | |
| 263 | RFP-S3.13.d.i | Must be able to store and display individual student’s special transportation accommodations as identified in their IEP, as well as any special handling instructions that affect how they are routed. There are specific data fields/data sets that must be stored or displayed, along with the icons required for different codes. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Data Model/UI); Data\_governance\_compliance\_controls\_plan.html |  |  |  |  | Storage/display of detailed student accommodation data (incl. icons). |
| 264 | RFP-S3.13.d.ii | Must have the ability to store and display other student data, such as the school they attend, grade level/date of birth, stop assignment(s), intersection/stop location, stop time, session time, sequence, and route assignment(s). (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Data Model/UI) |  |  |  |  | Additional student data display requirement at stop/route level. |
| 265 | RFP-S3.13.d.iii | Must provide a means of capturing and displaying key data at the stop level, such as location, the total number of pupils assigned to the stop, route number, school(s) served, etc. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Data Model/UI/Aggregation) |  |  |  |  | Stop summary information display requirement. |

| **3.14 Session Times** | | | | | | | | | |
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| **3.14 Session Times - General** | | | | | | | | | |
| 266 | RFP-S3.14.a.i | Must be able to capture session times for each day of week. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Data Model) |  |  |  |  | Data model requirement for daily session times. |
| 267 | RFP-S3.14.a.ii | Must be able to view session times for schools on the map, edit session times for individual HS students / edit the entire school’s session time. (High) | **Yes** | Solution\_Functional\_Non Functional.html (UI Features); Architecture.html (Admin UI); GIS\_Data\_Mgmt\_Integration\_Strategy.html |  |  |  |  | UI/Edit capability for session times (map view, individual override). |
| 268 | RFP-S3.14.a.iii | Must be capable of integrating session times from an existing Session Time Application as well as the session times of individual students based on their IEPs or on an exception basis. (High) | **Yes** | Architecture.html (Integration Strategy); Project\_Implementation\_Game\_Plan.html |  |  |  |  | Data integration requirement (legacy app & student exceptions). |
| 269 | RFP-S3.14.a.iv | Must have the ability to display a list of all schools that have requested a session time change. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html (Admin UI); Architecture.html (Workflow/Queue) |  |  |  |  | Workflow monitoring requirement for change requests. |
| 270 | RFP-S3.14.a.v | Must be able to display the school that has requested a session time change, any schools that are served by the same routes, and whether those schools have submitted session times for the upcoming school year yet. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html (Admin UI); Architecture.html (Data Query/Analysis) |  |  |  |  | Contextual display requirement for evaluating change requests. |
| **3.14 Session Times - Optimization Capabilities** | | | | | | | | | |
| 271 | RFP-S3.14.b.i | The system must automatically adjust route start times and subsequent stop times based on the school session time range. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Routing Engine Logic) |  |  |  |  | Automated routing time adjustment based on session time. |
| 272 | RFP-S3.14.b.ii | Super users must have the ability to update student data, session time data, locations of stops, etc. If data is not appearing correctly. Data quality work around. | **Yes** | Solution\_Functional\_Non Functional.html (Admin UI); Architecture.html (User Mgmt/Permissions); Security\_Strategy.html (RBAC) |  |  |  |  | Super user data correction capability. |
| 273 | RFP-S3.14.b.iii | Must be able to display nearby schools with compatible session times. (High) | **Yes** | Solution\_Functional\_Non Functional.html (Planning Tool); Architecture.html (Spatial/Temporal Query); GIS\_Data\_Mgmt\_Integration\_Strategy.html |  |  |  |  | Route planning assistance feature. |
| 274 | RFP-S3.14.b.iv | The system shall implement a route evaluation solution that automatically assesses the impact of session time changes on existing routes and establishes end-to-end communication flow between the adaptive/dynamic system and driver applications. | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Routing Engine Analysis/Workflow); Communications\_Governance\_Reporting\_Strategy.html |  |  |  |  | Impact analysis and communication workflow for session time changes. |
| 275 | RFP-S3.14.b.v | Must be able to allow authorized users to experiment with alternate session times within planning mode. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html (Planning Mode); Architecture.html (Scenario Planning Feature) |  |  |  |  | "What-if" scenario planning feature for session times. |

| **3.15 Routing Requirements** | | | | | | | | | |
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| **3.15 Routing Requirements - General** | | | | | | | | | |
| 276 | RFP-S3.15.a.i | Must display the route as a line depicting the shortest path with distance in miles between stops through the streets- there should be turn by turn directions or the ability to switch to “crows flight”. (High) • The foundation of STS busing includes stops, OPT codes, headcounts per stop, runs, and routes. • The foundation of CTS busing includes students, various student codes/data fields, OPT codes, vehicle capacity runs and routes. • The vehicle capacities depend upon the contractual items. STS and CTS have different contractual items. • Users must be able to update the start time/ end time, number of attendants, item, effective date, etc. When changing a route, adding a route, or deleting a route. Contract system Integration. | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Routing Engine/UI/Data Model/Integration); GIS\_Data\_Mgmt\_Integration\_Strategy.html |  |  |  |  | Route display, data foundations (STS/CTS), capacity rules, route editing, contract integration. Foundational routing requirements. |
| 277 | RFP-S3.15.a.ii | Must have the ability to display nearby schools and transportation sites on the map. (High) | **Yes** | Solution\_Functional\_Non Functional.html (Mapping UI); GIS\_Data\_Mgmt\_Integration\_Strategy.html |  |  |  |  | Map context requirement for routers. |
| 278 | RFP-S3.15.a.iii | Must display the entirety of the route from the first stop through the last school or transportation site served. (High) | **Yes** | Solution\_Functional\_Non Functional.html (Mapping UI); Architecture.html |  |  |  |  | Route visualization requirement. |
| 279 | RFP-S3.15.a.iv | Must have the ability to route students attending after-school programs. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Routing Logic) |  |  |  |  | Specific routing scenario requirement (After-school). |
| 280 | RFP-S3.15.a.v | Must include the sequence that the schools or transportation sites will be served as part of the route itinerary. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Data Model/Routing Logic) |  |  |  |  | Route data requirement (multi-school sequence). |
| 281 | RFP-S3.15.a.vi | Must have the ability to integrate one-way street information so that the AM/PM directions can be routed differently. (High) | **Yes** | GIS\_Data\_Mgmt\_Integration\_Strategy.html; Architecture.html (Routing Engine Logic) |  |  |  |  | Routing constraint based on time-dependent street data. |
| 282 | RFP-S3.15.a.vii | Must have the ability to save, print, and email planned and actual routes. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Output Features) |  |  |  |  | Basic output functionality for routes. |
| 283 | RFP-S3.15.a.viii | Must have the ability to save all planned routes for further evaluation. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Scenario Planning Feature) |  |  |  |  | Scenario planning support. |
| 284 | RFP-S3.15.a.ix | Must have the ability for authorized users to make comments on routes that the SBC could view. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Comments Feature); Communications\_Governance\_Reporting\_Strategy.html |  |  |  |  | Route-level communication feature. |
| 285 | RFP-S3.15.a.x | Must have the ability to assign students to different AM and PM routes based on the day of the week. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Assignment Logic/Data Model) |  |  |  |  | Complex assignment logic (day-specific). |
| 286 | RFP-S3.15.a.xi | Must have the ability to indicate the direction of the route. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Data Model) |  |  |  |  | Route data attribute (directionality). |
| 287 | RFP-S3.15.a.xii | Must be capable of planning unlimited possible scenarios for the routes. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html (NFR Scalability/Performance); Architecture.html (Scenario Planning Feature) |  |  |  |  | Scalability for planning mode. |
| 288 | RFP-S3.15.a.xiii | Must allow shuttle routes that make multiple trips to the same stop and school. During the summer for example, we provide transportation from the home school to the summer school, and large groups of students are shuttled from one OPT code to another. During the fall a driver can provide service to the same intersection/stop multiple times due to high ridership, ultimately shuttling students to/from the school multiple times. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Routing Logic/Data Model) |  |  |  |  | Specific route type requirement (shuttles). |
| 289 | RFP-S3.15.a.xiv | Must be able to provide a list of available vehicles with their route number association by “item” type. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Integration/UI); Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html |  |  |  |  | Resource availability view (vehicles). |
| 290 | RFP-S3.15.a.xv | Must have an ability to allow authorized users to “check in” and “check out” the routes they are working on so that they are locked from any other changes. (High) | **Yes** | Architecture.html (Concurrency Control); Solution\_Functional\_Non Functional.html (NFR) |  |  |  |  | Concurrency control / Locking mechanism. |
| 291 | RFP-S3.15.a.xvi | Must support a workflow for supervisor approval of any new, deleted, or modified routes. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Workflow); Team\_Structure\_And\_Processes\_Plan.html |  |  |  |  | Route approval workflow requirement. |
| 292 | RFP-S3.15.a.xvii | Must detect when a routing change requires a contract modification and automatically push the changes to Contract Management Unit for action. (Medium) | **Yes** | Architecture.html (Integration/Workflow); Solution\_Functional\_Non Functional.html |  |  |  |  | Integration with contract management process. |
| 293 | RFP-S3.15.a.xviii | Must have the ability to restore a previous version of a route or use an archived version of a route in case of emergency. (Low) | **Yes** | Architecture.html (Versioning/Backup); Operational\_Excellence\_BCP\_DR\_Plan.html; Solution\_Functional\_Non Functional.html |  |  |  |  | Route version control / Rollback capability. |
| **3.15 Routing Requirements - Optimization Capabilities** | | | | | | | | | |
| 294 | RFP-S3.15.b.i | Must be able to auto-create/auto-optimize routes in the most efficient manner based on configurable parameters. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Routing Engine) |  |  |  |  | Core route optimization algorithm requirement. |
| 295 | RFP-S3.15.b.ii | Must be capable of identifying existing routes that could best serve stop(s) to be routed (i.e. feasible route search) based on configurable parameters. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Routing Engine) |  |  |  |  | Route suggestion feature for unrouted stops. |
| 296 | RFP-S3.15.b.iii | Must have the ability to suggest more optimal sequences for existing routes. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Routing Engine) |  |  |  |  | Route re-optimization feature. |
| 297 | RFP-S3.15.b.iv | Must have the ability to adjust route start time automatically based on changes to the route. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Routing Engine) |  |  |  |  | Automated time adjustment requirement. |
| 298 | RFP-S3.15.b.v | Must be able to create and display routing scenarios consisting of existing routes, new routes, and changes to existing routes along with key summary data on the map-based platform and in tabular format. (High) | **Yes** | Solution\_Functional\_Non Functional.html (Scenario Planning); Architecture.html (UI/Data Query); DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Scenario planning visualization requirement. |
| 299 | RFP-S3.15.b.vi | Must account for extra boarding time needed for certain medical conditions (such as use of wheelchair) and for stops that have a large number of students assigned to board at the same time. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Routing Engine Constraints/Data Model) |  |  |  |  | Routing constraint requirement (variable dwell times). |
| 300 | RFP-S3.15.b.vii | Must have an ability to calculate weighted ridership or available capacity based on extra space requirements for older students, students accompanied by paras, students requiring an extra seat for medical equipment, and other reasons. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Routing Engine Constraints/Capacity Logic) |  |  |  |  | Complex capacity calculation requirement. |
| 301 | RFP-S3.15.b.viii | Must have an ability to automatically assign route numbers to newly created routes based on OPT naming conventions (i.e. borough, AM vs. PM, etc.) and contract terms. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Automation/Naming Convention Logic) |  |  |  |  | Automated route numbering based on rules. |
| 302 | RFP-S3.15.b.ix | Must attempt to assign routes to a specific vehicle type based on available inventory. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Routing Engine Assignment Logic) |  |  |  |  | Vehicle type assignment constraint/preference. |
| **3.15 Routing Requirements - Manual Capabilities** | | | | | | | | | |
| 303 | RFP-S3.15.c.i | Must provide authorized users with the ability to make manual adjustments to stop arrival times, start times, end times, number of attendants, etc. (High) | **Yes** | Solution\_Functional\_Non Functional.html (Admin UI); Architecture.html |  |  |  |  | Manual override capability for route details. |
| 304 | RFP-S3.15.c.ii | Must allow the authorized users to evaluate and approve all new routes. (High) | **Yes** | Solution\_Functional\_Non Functional.html (Workflow); Architecture.html (Admin UI/Workflow) |  |  |  |  | Manual approval step for new routes. |
| 305 | RFP-S3.15.c.iii | Must have the ability to adjust route start date for any new or changed routes. (High) | **Yes** | Solution\_Functional\_Non Functional.html (Admin UI); Architecture.html (Data Model) |  |  |  |  | Effective dating for route changes. |
| 306 | RFP-S3.15.c.iv | Must have the ability to un-route one or more stops on the route with ease. (High) | **Yes** | Solution\_Functional\_Non Functional.html (Admin UI); Architecture.html |  |  |  |  | Manual route modification (stop removal). |
| 307 | RFP-S3.15.c.v | Must have the ability to easily swap one or more stops between routes. (High) | **Yes** | Solution\_Functional\_Non Functional.html (Admin UI); Architecture.html |  |  |  |  | Manual route modification (stop move). |
| 308 | RFP-S3.15.c.vi | Must support advanced and customizable searches/queries to select and display routes. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Search Engine); DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Advanced search capability for routes. |
| **3.15 Routing Requirements - Route-Level Information** | | | | | | | | | |
| 309 | RFP-S3.15.d.i | Must be able to display key route details, such as the total number of pupils and others on the route (attendants, paras, nurses, etc.), start time, end time, number of stops, estimated arrival time to the stops, length of the route in miles and walking distance, distance between stops and overall distance in Miles, and overall travel time. (High) | **Yes** | Solution\_Functional\_Non Functional.html (UI Display); Architecture.html (Data Query/Aggregation); DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Route summary information display requirement. |
| 310 | RFP-S3.15.d.ii | Must be able to display vehicle-related information such as vehicle type (item), seating capacity, contracted vendor name, ambulatory code breakdown N, L, W students assigned, total students assigned, paras assigned, OPT codes assigned, route number, etc . (High) | **Yes** | Solution\_Functional\_Non Functional.html (UI Display); Architecture.html (Data Query/Integration); DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Vehicle/Capacity information display linked to route. |
| 311 | RFP-S3.15.d.iii | Based on vehicle size and type, users must have the ability to display maximum loads for each route. (High) | **Yes** | Solution\_Functional\_Non Functional.html (UI Display); Architecture.html (Data Query/Logic) |  |  |  |  | Vehicle capacity display requirement. |

| **3.16 Notifications and Alerts** | | | | | | | | | |
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| **3.16 Notifications and Alerts - New or Updated Information** | | | | | | | | | |
| 312 | RFP-S3.16.a.i | Must have the ability to generate a notification for internal users if there is a change in student information that may affect routing (i.e. change in address, school, medical alert, ambulatory code, etc.). (High) | **Yes** | Architecture.html (Alerting Service/Workflow); Solution\_Functional\_Non Functional.html |  |  |  |  | Change detection and notification requirement (student data). |
| 313 | RFP-S3.16.a.ii | Must have the ability to generate a notification for un-routed stops that need to be routed. (High) | **Yes** | Architecture.html (Alerting Service/Workflow); Solution\_Functional\_Non Functional.html |  |  |  |  | Workflow notification (un-routed stops). |
| 314 | RFP-S3.16.a.iii | Must have the ability to generate a notification of the students who are not yet assigned to stops. (High) | **Yes** | Architecture.html (Alerting Service/Workflow); Solution\_Functional\_Non Functional.html |  |  |  |  | Workflow notification (unassigned students). |
| 315 | RFP-S3.16.a.iv | Must have the ability to generate a notification of the students requesting alternative pick-up and/or drop-off locations. (High) | **Yes** | Architecture.html (Alerting Service/Workflow); Solution\_Functional\_Non Functional.html |  |  |  |  | Workflow notification (Alt PM requests). |
| 316 | RFP-S3.16.a.v | Must have the ability to generate a notification once a school submits a request for transportation for new and moving sites. (High) | **Yes** | Architecture.html (Alerting Service/Workflow); Solution\_Functional\_Non Functional.html |  |  |  |  | Workflow notification (New/moving site requests). |
| 317 | RFP-S3.16.a.vi | Must have the ability to generate a notification once school submits a request for a session time change. (High) | **Yes** | Architecture.html (Alerting Service/Workflow); Solution\_Functional\_Non Functional.html |  |  |  |  | Workflow notification (Session time change requests). |
| **3.16 Notifications and Alerts - Potential Routing Conflicts** | | | | | | | | | |
| 318 | RFP-S3.16.b.i | Must have an ability to generate an alert for students routed on incorrect vehicle type based on medical needs. (High) | **Yes** | Architecture.html (Alerting Service/Validation); Solution\_Functional\_Non Functional.html; Data\_governance\_compliance\_controls\_plan.html |  |  |  |  | Conflict detection alert (student need vs. vehicle type). |
| 319 | RFP-S3.16.b.ii | Must have the ability to generate an alert for routes that are arriving to school late. (High) | **Yes** | Architecture.html (Alerting Service/Performance Monitoring); Observability\_Monitoring\_IncidentManagement.html; Solution\_Functional\_Non Functional.html |  |  |  |  | Performance monitoring alert (lateness). |
| 320 | RFP-S3.16.b.iii | Must have the ability to generate an alert for the routes that exceed travel time guidelines. (High) | **Yes** | Architecture.html (Alerting Service/Performance Monitoring); Observability\_Monitoring\_IncidentManagement.html; Solution\_Functional\_Non Functional.html |  |  |  |  | Performance monitoring alert (travel time). |
| 321 | RFP-S3.16.b.iv | Must have the ability to generate an alert for the routes that are overcrowded. (High) | **Yes** | Architecture.html (Alerting Service/Capacity Monitoring); Solution\_Functional\_Non Functional.html |  |  |  |  | Capacity violation alert. |
| 322 | RFP-S3.16.b.v | Must have the ability to generate an alert for the routes that are significantly underutilized. (Medium) | **Yes** | Architecture.html (Alerting Service/Efficiency Monitoring); Solution\_Functional\_Non Functional.html; DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Efficiency monitoring alert (underutilization). |
| 323 | RFP-S3.16.b.vi | Must have the ability to generate an alert for the routes that exceed length (distance) guidelines. (High) | **Yes** | Architecture.html (Alerting Service/Route Analysis); Solution\_Functional\_Non Functional.html |  |  |  |  | Route characteristic violation alert (distance). |
| 324 | RFP-S3.16.b.vii | Must have the ability to generate an alert for out-of-item routes. (Medium) | **Yes** | Architecture.html (Alerting Service/Validation); Solution\_Functional\_Non Functional.html; Data\_governance\_compliance\_controls\_plan.html |  |  |  |  | Contract compliance / Vehicle mismatch alert? Definition needed. |
| 325 | RFP-S3.16.b.viii | The system shall implement an integrated incident management solution that generates alerts for routing-related customer service tickets and maintains an incident history linked to specific routes, enabling end-to-end tracking and resolution management. (Medium) | **Yes** | Architecture.html (Integration/Alerting); Observability\_Monitoring\_IncidentManagement.html; Solution\_Functional\_Non Functional.html |  |  |  |  | Integration between ticketing and routing for alert/history linkage. |
| 326 | RFP-S3.16.b.ix | Must have the ability to generate an alert if ridership tracking indicates that no students are using a particular stop. (High) | **Yes** | Architecture.html (Alerting Service/Data Analysis); Solution\_Functional\_Non Functional.html; DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Stop usage monitoring alert based on ridership. |
| 327 | RFP-S3.16.b.x | Must have the ability to hide/ignore an alert if the router has evaluated and determined it is not an active issue. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html (Admin UI); Architecture.html (Alerting UI/Workflow) |  |  |  |  | Alert management usability feature. |

| **3.17 Reports and Dashboards** | | | | | | | | | |
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| **3.17 Reports and Dashboards - General** | | | | | | | | | |
| 328 | RFP-S3.17.a.i | External applications must be allowed to consume snapshots of routing information from a given date. (High) | **Yes** | Architecture.html (API/Integration Strategy); DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Data export/API requirement for external use. |
| 329 | RFP-S3.17.a.ii | Must allow the definition and business rules of front-end reports, KPI and BI measures for usage in DOE internal downstream applications (for example, ranking contracted vendors). (High) | **Yes** | DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html; Architecture.html (Metadata Export/Config) |  |  |  |  | Configuration/Extensibility for reporting definitions. |
| 330 | RFP-S3.17.a.iii | Must allow for integration of BI measures developed outside of the routing system (for example, use symbology to highlight problematic routes) (High) | **Yes** | Architecture.html (Integration Strategy - Inbound); DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html; Solution\_Functional\_Non Functional.html (UI) |  |  |  |  | Data import/integration for displaying external BI results. |
| 331 | RFP-S3.17.a.iv | Must feed a data warehouse with the routing information required by consumers of routing data. (High) | **Yes** | Architecture.html (Integration Strategy - Outbound); DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Data export (ETL) to data warehouse requirement. |
| 332 | RFP-S3.17.a.v | In addition to having its own suite of reporting features, should be easy to integrate with third party analytical and reporting tools (High), such as but not limited to: | **Yes** | Architecture.html (Interoperability/API Strategy); DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Interoperability requirement for reporting. |
| 333 | RFP-S3.17.a.vi | customized reports on a variety of route data to allow for year-to-year comparisons. (High) | **Yes** | DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html; Solution\_Functional\_Non Functional.html |  |  |  |  | Specific reporting requirement (historical comparison). |
| 334 | RFP-S3.17.a.vii | route statistics reports by router. (High) | **Yes** | DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html; Solution\_Functional\_Non Functional.html |  |  |  |  | Specific reporting requirement (by router). |
| 335 | RFP-S3.17.a.viii | report based on alert types (i.e. all routes that arrive to school late, out- of-item routes, etc.). (Medium) | **Yes** | DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html; Solution\_Functional\_Non Functional.html; Observability\_Monitoring\_IncidentManagement.html |  |  |  |  | Reporting requirement based on alert data. |
| 336 | RFP-S3.17.a.ix | reports filtered by district or borough. (Medium) | **Yes** | DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html; Solution\_Functional\_Non Functional.html |  |  |  |  | Filtering requirement for reports. |
| 337 | RFP-S3.17.a.x | reports by STS/CTS school that changed session time. (Low) | **Yes** | DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html; Solution\_Functional\_Non Functional.html |  |  |  |  | Specific reporting requirement linking school type and session changes. |
| 338 | RFP-S3.17.a.xi | Should provide parents/caregivers informational view into routes by mobile access (Medium) | **Yes** | Solution\_Functional\_Non Functional.html (Parent Module); Architecture.html |  |  |  |  | Parent view requirement. |
| 339 | RFP-S3.17.a.xii | Must allow authorized users to override the suggested locations (within parameters). (High) | **Yes** | Solution\_Functional\_Non Functional.html (Admin UI); Architecture.html (Workflow) |  |  |  |  | Manual override for suggested stop locations. Seems misplaced here. |
| 340 | RFP-S3.17.a.xiii | Must have the ability to automatically assign eligible students to the closest existing stop for that specific OPT Code. | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Assignment Logic) |  |  |  |  | Automated student assignment. Seems misplaced here. |
| 341 | RFP-S3.17.a.xiv | Must have the ability to flag students for schools where the closest stop is not within reasonable walking distance. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Alerting/Analysis Logic) |  |  |  |  | Exception flagging based on walking distance. Seems misplaced here. |
| 342 | RFP-S3.17.a.xv | Must be flexible enough to support routing from scratch or modification of existing routes. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Routing Engine) |  |  |  |  | Routing system flexibility. Seems misplaced here. |
| 343 | RFP-S3.17.a.xvi | When routing from the ground up, routers must be able to utilize an auto-route function to create optimal routes based on configurable parameters as well as the ability to create and modify routes manually. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Routing Engine/Admin UI) |  |  |  |  | Workflow combining auto-route and manual editing. Seems misplaced here. |
| 344 | RFP-S3.17.a.xvii | The router must also be able to modify existing routes by utilizing a feasible route search functionality that will provide optimal alternatives to the existing route. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Routing Engine/Admin UI) |  |  |  |  | Route modification workflow using feasible search. Seems misplaced here. |

| **3.18 Hardware Requirements** | | | | | | | | | |
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| 345 | RFP-S3.18.Intro | NYCPS OPT is required to meet future student transportation expectations of providing timely and predictable quality service to students using bus transportation. These expectations include one hundred percent working GPS on all buses transporting NYCPS Students. It is anticipated that the proposer will be able to comply with all Hardware Requirements specified in this RFP (High) | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Operational\_Excellence\_BCP\_DR\_Plan.html |  |  |  |  | Introductory statement setting expectation for hardware reliability and compliance. |

| **3.19 Mobile Device (Tablets or Smart Phone) with GPS and Display** | | | | | | | | | |
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| 346 | RFP-S3.19.1 | Tethering a device on the bus similar to Geotab must include the SBC arrangement that the selected device will follow the same Standard Operating Procedures in place for Install and Maintenance of Geotab. (High) | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Vendor\_3rdParty\_mgmt\_logistics\_plan.html |  |  |  |  | Applies if a tethered solution is proposed. Requires SBC agreement on SOPs. |
| 347 | RFP-S3.19.2 | Requires a rugged secure mobile device that remains operational on a School Bus in the seasonal weather of New York City (High) | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Solution\_Functional\_Non Functional.html (NFR - Reliability); Security\_Strategy.html |  |  |  |  | Hardware durability and security requirement. |
| 348 | RFP-S3.19.3 | Mobile On-Bus is a GPS mobile (Tablet or Smart Phone) device that is fitted in a secure casing that has locking capability and remains locked with the intention of long-term use on the bus. The mounting must be secured in a way that cannot be removed without tools or lock. Mountings for Mobile On-Bus must allow for the Driver to view the device display screen and allow room for passengers to pass and activate their Identification credentials when boarding the bus. (High) | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Solution\_Functional\_Non Functional.html |  |  |  |  | Specification for permanently mounted device option. |
| 349 | RFP-S3.19.3.a | On-Bus-Mobile devices (Tablet or Smart Phone) must be rugged and mountable for easy access for maintenance and a deterrent to theft. Mountable in accordance with NYDMV School Bus Safety Regulations Devices requiring | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Compliance\_Audit\_Strategy.html |  |  |  |  | Detail for On-Bus mounting and compliance. |
| 350 | RFP-S3.19.3.b | On-Bus-Mobile device power must not depreciate the vehicles power source | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Architecture.html |  |  |  |  | Power consumption constraint for hardwired devices. |
| 351 | RFP-S3.19.4 | Mobile off -Bus is a GPS mobile (Tablet or Smart Phone) device that is portable and allows for the bus driver to transport the GPS device on and off the bus. These devices need to be easily but securely affixed to a GPS mobile mounting bracket. Mountings for Mobile Off-Bus must allow for the Driver to view the device display screen and allow room for passengers to scan the pass and activate their Identification credentials when boarding the bus. (High) | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Solution\_Functional\_Non Functional.html |  |  |  |  | Specification for portable device option (preferred per 3.2.1). |
| 352 | RFP-S3.19.4.a | Off-Bus Mobile device (Tablet or Smart Phone) must be rugged and mountable with ability to be mounted in accordance with NYDMV School Bus Safety Regulations | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Compliance\_Audit\_Strategy.html |  |  |  |  | Detail for Off-Bus mounting and compliance. |
| 353 | RFP-S3.19.5 | Mobile Devices (Tablet or Smart Phone) to fit in a Tablet or Smart Phone Mounting system supplied by vendor or previously equipped mounting existing and established on the vehicle (applicable to Off Bus Solution only). | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html |  |  |  |  | Mounting compatibility requirement. |
| 354 | RFP-S3.19.6 | Installation of GPS Equipment – Install GPS hardware, wiring and all associated parts for fully functional GPS On-Board or Off-Board unit installation within the guidelines of the vehicle manufacture, NYCPS specifications, and NYDMV Vehicle safety guidelines. Vendors provisioning Off-Board GPS solution will have the option of utilizing existing Mounting equipment currently resident and in place on the vehicle. | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Project\_Implementation\_Game\_Plan.html |  |  |  |  | Installation service requirement and guidelines. |
| 355 | RFP-S3.19.7 | Maintenance of GPS Equipment – Repair of GPS hardware, wiring and all associated parts of a fully functional GPS On-Board or Off-Board GPS unit within the guidelines of the vehicle manufacture, DOE specifications, and NYDMV Vehicle safety guidelines. | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Vendor\_3rdParty\_mgmt\_logistics\_plan.html (Support) |  |  |  |  | Maintenance service requirement and guidelines. |
| 356 | RFP-S3.19.8 | After initial Install of GPS equipment On-Board it is optional that SBC’s may assume responsibility for following Standard Operating Procedures in place for Install and Maintenance of other established On-Board Equipment. | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Vendor\_3rdParty\_mgmt\_logistics\_plan.html |  |  |  |  | Optional maintenance model for On-Bus solution involving SBCs. |
| 357 | RFP-S3.19.9 | The device needs to be operational for all active buses (currently 10,350 buses). (High) | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Project\_Implementation\_Game\_Plan.html |  |  |  |  | Scale requirement for device deployment. |
| 358 | RFP-S3.19.10 | Vendor must include a 5% buffer to address issues including but not limited to device malfunction or operator accident. (Total of 11,250 total devices) to be delivered to School Bus vendor (High) | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Budget\_Financial\_Mgmt\_Plan.html |  |  |  |  | Spare device (attic stock) quantity requirement. |
| 359 | RFP-S3.19.11 | To ensure consistent device functioning, the vendor must commit to replacing up to 20% of the devices annually on an as-needed basis. (High) | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Vendor\_3rdParty\_mgmt\_logistics\_plan.html (Contract/SLA) |  |  |  |  | Hardware refresh/replacement commitment. |
| 360 | RFP-S3.19.12 | All devices must have protective cases and maximum data security features. (High) | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Security\_Strategy.html |  |  |  |  | Device durability (cases) and security requirement. |
| 361 | RFP-S3.19.13 | The device needs to be operational based on an existing source of power, without the need for a charge during operating hours described in the Availability section of Non-functional Requirements. (High) | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Solution\_Functional\_Non Functional.html (NFR Availability/Reliability) |  |  |  |  | Device battery life / Power management requirement. |
| 362 | RFP-S3.19.14 | The device must have a touch screen (High) | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Solution\_Functional\_Non Functional.html |  |  |  |  | Basic hardware interface requirement. |
| 363 | RFP-S3.19.15 | If a device cannot transmit data - there must be a method by which the data can be downloaded (High) | **Yes** | Solution\_Functional\_Non Functional.html (Offline Capability); Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Architecture.html |  |  |  |  | Offline data recovery requirement. |
| 364 | RFP-S3.19.16 | The device must be able to store data in its internal storage for a minimum of 3 days if it cannot transmit its data. (High) | **Yes** | Solution\_Functional\_Non Functional.html (Offline Capability); Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Architecture.html |  |  |  |  | Offline data buffering requirement. |
| 365 | RFP-S3.19.17 | The device's brightness needs to be adjusted to optimize the viewing experience under different conditions of natural light. (High) | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Solution\_Functional\_Non Functional.html (Usability) |  |  |  |  | Usability requirement (screen brightness). |

| **3.20 Student ID Reader** | | | | | | | | | |
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| 366 | RFP-S3.20.1 | Scanning capability for reading student IDs based on various mechanisms, such as Barcode, QR code, RFID, etc. delivered to the School Bus contracted vendors. (High) | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Solution\_Functional\_Non Functional.html; Architecture.html (Integration) |  |  |  |  | Hardware requirement for ID scanning, needs tech flexibility. |

| **3.21 Warranty** | | | | | | | | | |
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| 367 | RFP-S3.21.1 | The vendor shall maintain device operating systems no older than a version level that is one major release behind the current public release, ensuring both stability and security. This requirement applies to all devices, ancillary hardware, and equipment integral to the proposed solution. The vendor shall manage the OS version control process, including testing, validation, and deployment of approved updates. | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Vendor\_3rdParty\_mgmt\_logistics\_plan.html; Solution\_Functional\_Non Functional.html (NFR Maintainability/Security) |  |  |  |  | OS version management requirement (N-1). |
| 368 | RFP-S3.21.2 | The vendor shall provide a comprehensive warranty program covering all hardware components, including devices and ancillary equipment. This warranty shall protect against manufacturing defects, hardware failures, and performance degradation outside of normal wear parameters. The warranty service shall include replacement or repair of defective components with minimal disruption to operations. | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Vendor\_3rdParty\_mgmt\_logistics\_plan.html (Contract/Warranty Terms) |  |  |  |  | Comprehensive hardware warranty requirement. |

| **3.22 Human Capital Requirements** | | | | | | | | | |
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| **3.22.1 Project Management and Implementation** | | | | | | | | | |
| 369 | RFP-S3.22.1.Intro | Full-time project management on site is required throughout the transition and implementation completion. The project manager will be accountable for all aspects of vendor and OPT test plans, product installations, processes, methods and procedures, communications and training, and OPT product acceptance. | **Yes** | Team\_Structure\_And\_Processes\_Plan.html; Project\_Implementation\_Game\_Plan.html; Project\_And\_Change\_And\_Risk\_Management\_Plan.html |  |  |  |  | Requirement for on-site PM with broad accountability. |
| 370 | RFP-S3.22.1.1 | Vendor must provide a full-time Business Analyst and Technical Lead who will be located on-site daily for transition, possible cloning of legacy system(s), and through completion of all aspects of implementation or remote technical support from other technology services including data, Product Development, System Architecture, Trainers, Testers. Call Center equipped to handle Tier 1,2,3. (High) | **Yes** | Team\_Structure\_And\_Processes\_Plan.html; Project\_Implementation\_Game\_Plan.html; Vendor\_3rdParty\_mgmt\_logistics\_plan.html (Support) |  |  |  |  | Key personnel requirement (on-site BA/TL or remote support). Legacy cloning needs clarity. |
| 371 | RFP-S3.22.1.2 | Vendor solution to include all policies, processes, and procedures for implementation enterprise-wide (drivers, attendants, dispatchers, routers, operations personnel, administrators, schools, and any other departments and units within the scope of work). Policies, processes, and procedures must guide in using the solution, maintaining and creating reports. (High) | **Yes** | Project\_Implementation\_Game\_Plan.html; User\_Onboarding\_Training\_Comms\_Strategy.html; Team\_Structure\_And\_Processes\_Plan.html; [Various specific strategy docs] |  |  |  |  | Requirement for vendor to provide comprehensive process documentation. |
| 372 | RFP-S3.22.1.3 | Vendors must provide an organizational chart of the overall company responding to this RFP showing the specific titles and, if available, employees who will be slated to work on this project, including trainers. (Medium) | **No** | N/A (Proposal deliverable) | **Identified Gap (Proposal Content)** |  |  |  | Proposal submission requirement (Org Chart). Not expected in strategy HTMLs. |
| 373 | RFP-S3.22.1.4 | Vendors must submit resumes for key personnel of subcontractors who will be working on the program and, where required, appropriate licenses. (Medium) | **No** | N/A (Proposal deliverable) | **Identified Gap (Proposal Content)** |  |  |  | Proposal submission requirement (Sub resumes/licenses). Not expected in strategy HTMLs. |
| 374 | RFP-S3.22.1.5 | The DOE anticipates that these services will be rolled out in phases and should be deployed via a small test group before launching system wide. The vendor’s proposal must include a phased plan in their timeline and project plan. Each should outline a clear, detailed plan. (High) | **Yes** | Project\_Implementation\_Game\_Plan.html; Project\_Plan-12 month.html; Test\_Strategy.html |  |  |  |  | Phased rollout and pilot requirement. Plan expected in proposal. |

| **3.23 Training** | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 375 | RFP-S3.23.1 | Products, processes, methods, and procedures are to be trained to a large population of approximately 11,000 drivers, 27,4009,000 attendants, 60 routers, 50 OPT staff members, 300 dispatchers, 3202 school administrators, 450,000 parents/ caregivers, 170,000 students. (High) | **Yes** | User\_Onboarding\_Training\_Comms\_Strategy.html; Advanced\_Enhanced\_User\_Adoption\_Strategy.html |  |  |  |  | Scope of training audience (large and diverse). Note: Attendant # seems like a typo in RFP (27,4009,000). Used 9,000 based on later ref. |
| 376 | RFP-S3.23.2 | Vendor must provide all training should be done in such a way that there must be 99.99% participation rate and communications for device, device components, device software, routers, drivers, attendants, dispatchers, operations, administrators, School Bus administrators, school administrators, and any other departments and units within the Scope of Services section. (High) | **Yes** | User\_Onboarding\_Training\_Comms\_Strategy.html; Communications\_Governance\_Reporting\_Strategy.html |  |  |  |  | Training responsibility, scope, and extremely high participation target. |
| 377 | RFP-S3.23.3 | Vendor must supply effective training and communications for parents, students, and administrators in the use of any system applications, hardware applications, or processes associated within the scope of work. (High) | **Yes** | User\_Onboarding\_Training\_Comms\_Strategy.html; Advanced\_Enhanced\_User\_Adoption\_Strategy.html; Communications\_Governance\_Reporting\_Strategy.html |  |  |  |  | Specific focus on training/comms for parents, students, admins. |
| 378 | RFP-S3.23.4 | Vendor must include a clear and detailed training plan to deploy initial implementation, annual training, and train-the-trainer program. To meet the needs of the vast population to be trained (11,000 drivers, 9,000 attendants, 60 routers, 50 OPT staff members, 300 dispatchers, 3202 school administrators, 450,000 parents/ caregivers, 170,000 students) OPT envisions the most efficient and effective training mechanism available, including by not limited to, electronic virtual or in-person training session. (High) | **Yes** | User\_Onboarding\_Training\_Comms\_Strategy.html; Project\_Implementation\_Game\_Plan.html |  |  |  |  | Training plan requirements (structure, delivery methods). Plan expected in proposal. Audience numbers reiterated. |
| 379 | RFP-S3.23.5 | Vendor must create a complete comprehensive training program that details processes, workflow diagrams, methods and procedures, and an electronic copy of all training material, videos, and communications required, delivered to the OPT Training Director prior to start of implementation. (High) | **Yes** | User\_Onboarding\_Training\_Comms\_Strategy.html; Project\_Implementation\_Game\_Plan.html (Deliverables) |  |  |  |  | Training material deliverable requirements. |

| **3.24 Incident Management (Customer Service/Complaints)** | | | | | | | | | |
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| 380 | RFP-S3.24.1 | All support tiers to be managed by vendor | **Yes** | Vendor\_3rdParty\_mgmt\_logistics\_plan.html (Support Model); Team\_Structure\_And\_Processes\_Plan.html |  |  |  |  | Vendor responsibility for tiered support. |
| 381 | RFP-S3.24.2 | Vendor to schedule repairs and organize quick replacements for SBC vendors | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Vendor\_3rdParty\_mgmt\_logistics\_plan.html |  |  |  |  | Vendor responsibility for repair/replacement logistics. |
| 382 | RFP-S3.24.3 | A detailed Service Level Agreement and Standard Operating Procedures must be submitted as part of this proposal | **No** | N/A (Proposal deliverable) | **Identified Gap (Proposal Content)** |  |  |  | Proposal deliverable requirement (SLA/SOPs for Incident Mgmt). Links to 3.26.1. |

| **3.25 Non-functional Requirements (NFRs)** | | | | | | | | | |
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| 383 | RFP-S3.25.Intro | The proposer must comply with all information technology policies stipulated by OTI, NYC3 (including the Software Security Assurance Program or equivalent), DIIT’s 3rd party solution, infrastructure, data center etc review and approval and other related agencies, within the prescribed timeline. Any exception to these rules, along with mitigation, must be submitted by the Proposer along with the Proposal and must be approved by authorized DOE technical staff. | **Yes** | Compliance\_Audit\_Strategy.html; Security\_Strategy.html; Data\_governance\_compliance\_controls\_plan.html |  |  |  |  | Overarching compliance requirement for IT policies. |
| **3.25.1 Accessibility** | | | | | | | | | |
| 384 | RFP-S3.25.1.a | This solution must be compliant with Web Content Accessibility Guidelines (WCAG 2.0 AA). This needs to be certified by an accredited third-party vendor selected by NYCPS. Every release of the software needs to go through this accreditation before deployment so that the solution stays compliant with WCAG 2.0 AA. The solution must have responsive design features that allow it to automatically scale to display screens of various sizes (desktops, tablets, mobile devices, etc.) (High) | **Yes** | Solution\_Functional\_Non Functional.html; Compliance\_Audit\_Strategy.html; Test\_Strategy.html; Development\_Strategy.html |  |  |  |  | WCAG 2.0 AA compliance, 3rd party cert, responsive design. |
| 385 | RFP-S3.25.1.b | Public-facing content must be available in the nine (9) official languages recognized by NYCPS including Arabic, Bengali, Chinese (Traditional and Simplified), French, Haitian Creole, Korean, Russian, Spanish, Urdu, and English while maintaining consistent functionality across including but not limited to Chrome, Safari, and Edge web browsers. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (i18n); Test\_Strategy.html (Browser Testing) |  |  |  |  | Multi-language and browser compatibility NFR. |
| **3.25.2 Adaptability** | | | | | | | | | |
| 386 | RFP-S3.25.2.a | The solution must be able to adapt, and handle system changes due to update in government regulations, policies, procedures and due to version upgrade due to features and or security guidelines. NYCPS’ technical team should be trained to perform enhancement, customization and configuration activities with no support or minimum support from the proposer. (High) | **Yes** | Architecture.html (Extensibility); Solution\_Functional\_Non Functional.html; Development\_Strategy.html; User\_Onboarding\_Training\_Comms\_Strategy.html (KT) |  |  |  |  | System flexibility and NYCPS self-sufficiency requirement. |
| **3.25.3 Audit Trail** | | | | | | | | | |
| 387 | RFP-S3.25.3.a | The proposer must implement the appropriate measures to track the usage of the system and the events happening within it. This information will be critical for both diagnosis purposes and operation support activities. Auditing design should ensure that all the authorized users and system actions are thoroughly recorded and stored properly so that it is easy to trace and identify the exact sequence of events in the system. The solution should also store the data change (old data vs. new data) along with the timestamp and details of the authorized users who induced the change (High). | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Auditing Service); Security\_Strategy.html; Data\_governance\_compliance\_controls\_plan.html |  |  |  |  | Comprehensive audit logging requirement. |
| 388 | RFP-S3.25.3.b | All mobile devices with NYCPS student data must be inventoried, and both current possession and history recorded and tracked. This step is important to wipe off student data from the mobile device if it is lost or stolen. Tracking the devices are necessary to achieve the goal (High). | **Yes** | Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html; Security\_Strategy.html (MDM); Solution\_Functional\_Non Functional.html |  |  |  |  | Mobile Device Management (MDM) requirement. |
| **3.25.4 Architecture** | | | | | | | | | |
| 389 | RFP-S3.25.4.a | The solution must be built on industry standard, robust architecture that is reliable and scalable in the following areas: b. hardware infrastructure including production and disaster recovery; c. operating system; d. network topology; e. application software; f. database; g. security; h. systems deployment and management; i. data loss protection processes including backup and restore operations; j. any other external security, firewalls, virus protection, etc. in accordance with Information technology policies stipulated by OTI, DIIT and other related agencies. It is also the responsibility of the proposer to keep the solution in compliance with any future updates to the policies within the prescribed timelines. (High) | **Yes** | Architecture.html; Solution\_Functional\_Non Functional.html; Security\_Strategy.html; Operational\_Excellence\_BCP\_DR\_Plan.html; Terraform\_Infra\_Setup\_Guide.html; DevOps\_Strategy.html |  |  |  |  | Overall architectural quality and compliance NFR. Covers many domains. |
| **3.25.5 Authentication** | | | | | | | | | |
| 390 | RFP-S3.25.5.a | The solution must use an authentication mechanism approved by NYCPS as per NYCPS information security requirements for vendors Version 1.5. Please note the NYCPS and related city agencies update their information security requirements regularly. The solution will need to comply with all updated information security requirements from OTI, NYC3, DIIT and other related city agencies within prescribed timelines. Any exception to this rule needs to be reviewed and agreed upon by authorized NYCPS personnel. (High) | **Yes** | Security\_Strategy.html; Architecture.html; Solution\_Functional\_Non Functional.html; Compliance\_Audit\_Strategy.html |  |  |  |  | Compliance with NYCPS approved AuthN mechanism. |
| **3.25.6 Authorization** | | | | | | | | | |
| 391 | RFP-S3.25.6.b | The solution must use authorization mechanism approved by NYCPS as per NYCPS information security requirements for vendors Version 1.5. Please note the NYCPS and related city agencies update their information security requirements regularly. The solution will need to comply with all updated information security requirements from OTI, NYC3, NYCPS and other related city agencies within prescribed timelines. Any exception to this rule needs to be reviewed and agreed upon by authorized NYCPS personnel. (High) | **Yes** | Security\_Strategy.html (RBAC); Architecture.html; Solution\_Functional\_Non Functional.html; Compliance\_Audit\_Strategy.html |  |  |  |  | Compliance with NYCPS approved AuthZ mechanism (likely RBAC). |
| **3.25.7 Availability** | | | | | | | | | |
| 392 | RFP-S3.25.7.1.a | Must be available at least 99.99% of the time (Peak Business Season: ~100 days between middle of June to middle of September, 24x7). (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (HA Design); Operational\_Excellence\_BCP\_DR\_Plan.html |  |  |  |  | High availability SLA (Peak Season). |
| 393 | RFP-S3.25.7.2.a | The solution must be available at least 99.9 % of the time during NYCPS business days only (120 days - 16 hours x 5 days a week), (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (HA Design); Operational\_Excellence\_BCP\_DR\_Plan.html |  |  |  |  | High availability SLA (Normal Business Days). |
| 394 | RFP-S3.25.7.3.a | The solution must be available at least 99 % of the time all year long (145 days - 7 hours x 5 days a week) (Medium) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (HA Design); Operational\_Excellence\_BCP\_DR\_Plan.html |  |  |  |  | Availability SLA (Other Days). |
| 395 | RFP-S3.25.7.4 | The solution must not have any single point of failure components within its operating environment. Any exception should be clearly documented along the risk mitigation plan. Both exception and risk mitigation plans need to be approved by authorized NYCPS Personnel. (High) | **Yes** | Architecture.html (HA/Redundancy Design); Operational\_Excellence\_BCP\_DR\_Plan.html; Project\_And\_Change\_And\_Risk\_Management\_Plan.html |  |  |  |  | No SPOF requirement. |
| 396 | RFP-S3.25.7.5 | All data originating from this Solution is property of NYCPS. NYCPS should have ability to extract and store all business data along with metadata on demand through APIs or equivalent industry standard technologies. (High) | **Yes** | Data\_governance\_compliance\_controls\_plan.html; Architecture.html (API Strategy/Data Export); Solution\_Functional\_Non Functional.html |  |  |  |  | Data ownership and export requirement. |
| 397 | RFP-S3.25.7.6 | 99% of data stream from data ingestion end points must reach solution hosting environment within 30 seconds of the operation. Remaining 1% of the Data stream must reach hosting environment within 3 minutes. Any exception should be clearly documented along the risk mitigation plan. Both exception and risk mitigation plans must be approved by authorized NYCPS DIIT Personnel. (High) | **Yes** | Solution\_Functional\_Non Functional.html (NFR Performance); Architecture.html (Data Ingestion); Observability\_Monitoring\_IncidentManagement.html |  |  |  |  | Data ingestion latency SLA. |
| 398 | RFP-S3.25.7.7 | All data collected by a vehicle must be readily available for active use (searching, display, reporting) for at least 12 months in a production system environment. (High) | **Yes** | Solution\_Functional\_Non Functional.html (NFR Data Retention); Architecture.html (Data Lifecycle); Data\_governance\_compliance\_controls\_plan.html |  |  |  |  | Active data retention requirement (12 months). |
| **3.25.8 Business Continuity** | | | | | | | | | |
| 399 | RFP-S3.25.8.1.a | Recovery Point Objective (RPO): No loss of data will be tolerated for near real-time GPS Tracking data (High) | **Yes** | Operational\_Excellence\_BCP\_DR\_Plan.html; Architecture.html (DR/Backup Strategy); Solution\_Functional\_Non Functional.html |  |  |  |  | RPO=0 for GPS data. |
| 400 | RFP-S3.25.8.1.b | Recovery Point Objective (RPO): Up to one hour of loss is acceptable for Route Planning data (High) | **Yes** | Operational\_Excellence\_BCP\_DR\_Plan.html; Architecture.html (DR/Backup Strategy); Solution\_Functional\_Non Functional.html |  |  |  |  | RPO<=1hr for Routing data. |
| 401 | RFP-S3.25.8.1.c | Recovery Point Objective (RPO): Up to 1 hour of data loss acceptable for Notification related data sets (High) | **Yes** | Operational\_Excellence\_BCP\_DR\_Plan.html; Architecture.html (DR/Backup Strategy); Solution\_Functional\_Non Functional.html |  |  |  |  | RPO<=1hr for Notification data. |
| 402 | RFP-S3.25.8.2.a | Recovery Time Objective (RTO): 0 minutes in recovery of GPS Route actuals component (High) | **Yes** | Operational\_Excellence\_BCP\_DR\_Plan.html; Architecture.html (HA/Failover Design); Solution\_Functional\_Non Functional.html |  |  |  |  | RTO=0 (Instant Failover) for GPS actuals processing. |
| 403 | RFP-S3.25.8.2.b | Recovery Time Objective (RTO): Up to 15 minutes in recovery of Route planning component (High) | **Yes** | Operational\_Excellence\_BCP\_DR\_Plan.html; Architecture.html (DR Strategy); Solution\_Functional\_Non Functional.html |  |  |  |  | RTO<=15min for Routing system. |
| 404 | RFP-S3.25.8.2.c | Recovery Time Objective (RTO): Up to 15 minutes in recovery of Notification component (High) | **Yes** | Operational\_Excellence\_BCP\_DR\_Plan.html; Architecture.html (DR Strategy); Solution\_Functional\_Non Functional.html |  |  |  |  | RTO<=15min for Notification system. |
| **3.25.9 Collaboration Messaging Platform** | | | | | | | | | |
| 405 | RFP-S3.25.9.1 | Solution must be able to interoperate with messaging collaboration platform currently used by NYC agencies for all notifications/messages for targeted audience. The solution should use an industrial standard interface like Rest API or equivalent technology for information exchange between these systems. The Proposal shall discuss the interface strategy and include a typical Interface Plan that shall describe the methodology and implementation approach with collaboration messaging platform. | **Yes** | Architecture.html (Integration Strategy); Communications\_Governance\_Reporting\_Strategy.html; Solution\_Functional\_Non Functional.html |  |  |  |  | Integration with existing NYC messaging platform. Plan expected in proposal. |
| **3.25.10 Data Integration** | | | | | | | | | |
| 406 | RFP-S3.25.10.1 | This solution must integrate with all necessary data originating from NYCPS enterprise system through an industry standard mechanism like Rest APIs, SQL Server Integration Services, Enterprise Service Bus or equivalent technology. All data originating from this solution is property of NYCPS. NYCPS should have ability to extract and store all business data along with metadata on demand through APIs or equivalent technology. (High) | **Yes** | Architecture.html (Integration Strategy/API Strategy); Data\_governance\_compliance\_controls\_plan.html |  |  |  |  | General inbound integration + data ownership/export requirement. |
| 407 | RFP-S3.25.11.1 | Solution must be able to interoperate with existing applications currently used by NYCPS and OPT. The Proposal shall discuss the interface strategy and include a typical Interface Plan that shall describe the methodology and phased implementation approach to providing required interfaces with systems outside of the solution. Specific interface specifications will be determined during the analysis and design process after the choice of a solution. The solution should use an industrial standard interface like Rest API for reading/writing the data from different in-house systems. (High) | **Yes** | Architecture.html (Integration Strategy); Project\_Implementation\_Game\_Plan.html; Solution\_Functional\_Non Functional.html |  |  |  |  | General interoperability requirement with existing apps via standard APIs. Plan expected in proposal. |
| **3.25.12 Data Integrity** | | | | | | | | | |
| 408 | RFP-S3.25.12.Intro | The solution must adhere and comply with all local, state and federal laws including but not limited to FERPA, COPA, HIPAA and CIPA rules and regulations. The solution will need to comply with all updated information technology policies from OTI, NYC3, DIIT, OPT and other related city agencies. (High) | **Yes** | Compliance\_Audit\_Strategy.html; Data\_governance\_compliance\_controls\_plan.html; Security\_Strategy.html |  |  |  |  | Overall legal and policy compliance NFR for data. |
| 409 | RFP-S3.25.12.1 | The solution must adhere to the New York City Department of Education’s data classification policy within NYCPS information security requirements for vendors Version 1.5. Highly restricted or confidential data may not be stored and/or transmitted across any communication mechanism unless it is protected using approved data encryption technology prescribed in the above policy. (High) | **Yes** | Data\_governance\_compliance\_controls\_plan.html; Security\_Strategy.html; Architecture.html |  |  |  |  | Data classification and encryption requirement based on policy. |
| 410 | RFP-S3.25.12.2 | Cryptographic algorithms and supporting processes as defined in the Citywide Encryption Standard must be used to protect business critical information and ensure interoperability with New York City Department of Education and other city agencies (High) | **Yes** | Security\_Strategy.html; Architecture.html; Compliance\_Audit\_Strategy.html |  |  |  |  | Compliance with specific Citywide Encryption Standard. |
| 411 | RFP-S3.25.12.3 | The solution’s input data must be validated to ensure it is correct and appropriate. Validity and parameter checks must be performed on both the client-side and server-side to ensure data integrity. Data that have been entered correctly can be corrupted by processing errors or through deliberate acts. Validation checks must be incorporated into the solution to detect this type of activity and protect critical business data. (High) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Validation Logic); Development\_Strategy.html (Coding Standards) |  |  |  |  | Input validation (client & server side) requirement. |
| 412 | RFP-S3.25.12.4 | Passwords, tokens or similar technologies must be treated as confidential information and must not be disclosed. Transmission of such authentication information must use secure mechanisms. (High) | **Yes** | Security\_Strategy.html; Architecture.html |  |  |  |  | Secure handling and transmission of credentials. |
| 413 | RFP-S3.25.12.5 | The system must include a mechanism for locking master data entities (schools, routes, etc.) while they are being worked on/updated so transactional data integrity is maintained within the solution. (High) | **Yes** | Architecture.html (Concurrency Control); Solution\_Functional\_Non Functional.html |  |  |  |  | Record locking for data integrity. |
| **3.25.13 Dependability** | | | | | | | | | |
| 414 | RFP-S3.25.13.1 | The solution must allow authorized users to view maps and navigation offline. This feature is extremely important to help drivers operate buses efficiently even in the area where GPS signals are not available or low. (High) | **Yes** | Solution\_Functional\_Non Functional.html (Offline Mode); Architecture.html (Driver Module Caching) |  |  |  |  | Offline capability requirement for Driver Module. |
| **3.25.14 Documentation** | | | | | | | | | |
| 415 | RFP-S3.25.14.1 | Should include complete technical documentation of the solution including, but not limited to, the following: ER model, data dictionary, data life cycle policy (including disposal of PII data after business need is accomplished), data flow diagrams, technical API documentation, component architecture and component design diagrams, standard operating procedures for operating and supporting the solution. (High) | **Yes** | Project\_Implementation\_Game\_Plan.html (Deliverables); [Multiple specific strategy docs imply content] |  |  |  |  | Comprehensive technical documentation requirement. |
| 416 | RFP-S3.25.14.2 | Provide security information (for vendor-hosted applications): (High) a. Security architecture, Placement of data, servers, and firewalls other network security devices (IPS, monitoring, logging) Host site security Personnel with access to servers Other applications/sites co-hosted on servers Data security Encryption methodology of sensitive data at rest, in process, and in transit Backup media handling (including 3rd party backup solution). If there is any data breach, vendor should report details to OPT Platform security b. List of operating system(s), database(s), web server(s), etc., including current version numbers and patch levels c. List any known incompatibility or exclusions required with endpoint security software such as Symantec Endpoint Protection and CrowdStrike d. Patch management process and frequency. In addition, specify how new, major, or emergency patches for the platform and application will be subjected to testing and verification prior to installation on production | **Yes** | Security\_Strategy.html; Architecture.html; Compliance\_Audit\_Strategy.html; Operational\_Excellence\_BCP\_DR\_Plan.html; DevOps\_Detailed.html |  |  |  |  | Detailed security posture documentation requirement (if vendor-hosted). |
| **3.25.15 Efficiency** | | | | | | | | | |
| 417 | RFP-S3.25.15.1 | The software components should be designed and optimized to efficiently use scarce computational resources such as CPU memory, disk space, buffers and communication channels (High) | **Yes** | Solution\_Functional\_Non Functional.html (NFR Performance); Architecture.html; Development\_Strategy.html |  |  |  |  | Resource efficiency NFR. |
| **3.25.16 Extensibility** | | | | | | | | | |
| 418 | RFP-S3.25.16.1 | Consistent with NYCPS's focus on interoperability, the proposer must use modern frameworks and software development methodologies which will ensure their solution will be adaptable to evolving business requirements. Proposer's solution design should consider the fast pace of technological change and therefore adopt forward-thinking strategies in order to accommodate future growth. (Medium) | **Yes** | Architecture.html; Development\_Strategy.html; Solution\_Functional\_Non Functional.html (NFR Adaptability) |  |  |  |  | Future-proofing / Adaptability requirement using modern tech. |
| **3.25.17 Interoperability** | | | | | | | | | |
| 419 | RFP-S3.25.17.1 | The proposer must design the solution to be Interoperable with existing and future NYC systems. To that end, the proposer must use modern front-end and back-end frameworks to ensure that solution is scalable and able to seamlessly interface with other systems such as NYCPS internal NYCSA, Student Profile, School Finder, applications, ESRI ArcGIS software, etc. This is for UX design and all aspects of coding. (High) | **Yes** | Architecture.html (Integration Strategy/API Strategy); Development\_Strategy.html; GIS\_Data\_Mgmt\_Integration\_Strategy.html |  |  |  |  | Broad interoperability NFR with named systems and modern tech stack. |
| **3.25.18 Information Security** | | | | | | | | | |
| 420 | RFP-S3.25.18.1 | Solutions must comply and adhere to NYCPS Information Security Requirements for Vendors Version 1.5. The solution will need to comply with all updated information security requirements from OTI, NYC3, DIIT and other related city agencies within prescribed timelines. (High) | **Yes** | Security\_Strategy.html; Compliance\_Audit\_Strategy.html |  |  |  |  | Overall security policy compliance requirement. |
| 421 | RFP-S3.25.18.2 | Solution must comply and adhere to NYCPS Secure Coding Standards for Vendors Version 1.5. The solution will need to comply with all updated information security requirements from OTI, NYC3, DIIT and other related city agencies within prescribed timelines. (High) | **Yes** | Security\_Strategy.html; Development\_Strategy.html; Detailed\_SDLC.html |  |  |  |  | Secure coding standards compliance requirement. |
| 422 | RFP-S3.25.18.3 | Proposer must complete and submit NYCPS Quick Risk Evaluation Rubric Version 1.5 as part of the proposal. This rubric will enable NYCPS to assess the risk profile of the solution and prepare security testing plan requirements/approach. (High) | **No** | N/A (Proposal deliverable) | **Identified Gap (Proposal Content)** |  |  |  | Proposal submission requirement (Risk Rubric). |
| 423 | RFP-S3.25.18.4 | Proposer needs to provide complete details on student information that will be stored on mobile device. The proposer must also provide full data management life cycle for data temporarily stored in the mobile device to demonstrate that data is removed completely from mobile device after synchronization with hosting environment. (High) | **Yes** | Security\_Strategy.html; Data\_governance\_compliance\_controls\_plan.html; Architecture.html |  |  |  |  | Mobile data security and lifecycle requirement. |
| 424 | RFP-S3.25.18.5 | The proposer must provide a system capability to wipe out all data from mobile devices as soon as it is discovered that device is missing or lost or retired from service. (High) | **Yes** | Security\_Strategy.html (MDM); Solution\_Functional\_Non Functional.html; Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html |  |  |  |  | Remote wipe capability requirement. |
| 425 | RFP-S3.25.18.6 | The proposer must provide a system capability to wipe out all data from mobile devices as soon as it is discovered that incorrect authorized username and/or password are used to access the solution for 10 times consecutively. (High) | **Yes** | Security\_Strategy.html (MDM/Policy); Solution\_Functional\_Non Functional.html |  |  |  |  | Automated wipe on failed logins requirement. |
| **3.25.19 Maintainability** | | | | | | | | | |
| 426 | RFP-S3.25.19.1.a | The solution must have a documented, prescribed maintenance schedule, which shall not fall within the regular operating hours of OPT. All unplanned maintenance activities shall be performed only after communication with and approval of authorized NYCPS personnel. The solution must have a clear definition of various alert notification schedule prior to maintenance window. a. This standard will apply for all updates mandated by OTI, NYC3, DIIT, and other related city agencies (High) | **Yes** | Operational\_Excellence\_BCP\_DR\_Plan.html; DevOps\_Strategy.html; Communications\_Governance\_Reporting\_Strategy.html |  |  |  |  | Maintenance window policy and communication NFR. |
| 427 | RFP-S3.25.19.1.b | Requirements for the 'Maintenance page' during solution downtime must be defined. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html; Communications\_Governance\_Reporting\_Strategy.html |  |  |  |  | Downtime maintenance page requirement. |
| 428 | RFP-S3.25.19.1.c.i | Factors to consider: Appropriate message on the page. | **Yes** | Communications\_Governance\_Reporting\_Strategy.html |  |  |  |  | Detail for maintenance page message. |
| 429 | RFP-S3.25.19.1.c.ii | Factors to consider: The message can be generic or configurable custom message. | **Yes** | Solution\_Functional\_Non Functional.html (Configurability); Architecture.html |  |  |  |  | Flexibility for maintenance page message. |
| 430 | RFP-S3.25.19.2 | The proposer needs to plan, provide knowledge transfer and documentation to the NYCPS Infrastructure support and application support teams to be able to support, configure and customize the solution independently with minimum or no support from the proposer’s technical team. (High) | **Yes** | User\_Onboarding\_Training\_Comms\_Strategy.html (KT); Project\_Implementation\_Game\_Plan.html (Transition); Solution\_Functional\_Non Functional.html (NFR Adaptability) |  |  |  |  | Knowledge transfer for NYCPS self-sufficiency. |
| 431 | RFP-S3.25.19.3 | The proposer must provide clear and complete documentation of various technical components used in the solution along with the relationship between components. The components should be clearly marked on whether they are open-source components, third party components etc. Complete technology stack for each component should be clearly documented. (High) | **Yes** | Architecture.html; Development\_Strategy.html; Solution\_Functional\_Non Functional.html (NFR Documentation) |  |  |  |  | Detailed technical component documentation requirement. |
| 432 | RFP-S3.25.19.4 | The system must make use of industry standard technology and skillsets as much as possible. (High) | **Yes** | Architecture.html; Development\_Strategy.html |  |  |  |  | Use of standard technology for maintainability. |
| 433 | RFP-S3.25.19.5 | The proposer must provide a complete and detailed disengagement plan to reduce the reliance on the proposer. The proposer needs to provide complete documentation necessary to support and enhance various technical components used in the solution along with relationship between components. NYCPS's technical team should be trained to perform enhancement, customization and configuration activities with no support or minimum support from the proposer. (High) | **Yes** | Project\_Implementation\_Game\_Plan.html (Transition/Exit); User\_Onboarding\_Training\_Comms\_Strategy.html (KT); Solution\_Functional\_Non Functional.html (NFR Adaptability) |  |  |  |  | Disengagement plan and knowledge transfer for long-term NYCPS independence. |
| **3.25.20 Performance** | | | | | | | | | |
| 434 | RFP-S3.25.20.1 | Maximum load/transaction time for a page should be a maximum of 3 seconds for parents and a maximum of 5 seconds for NYCPS staff and Vendor staff (High) | **Yes** | Solution\_Functional\_Non Functional.html (NFR Performance); Test\_Strategy.html |  |  |  |  | Response time SLA under load. |
| 435 | RFP-S3.25.20.2 | The solution must have burst capability to meet peak operation load if it goes beyond the concurrency requirements established at this time. (High) | **Yes** | Architecture.html (Scalability); Solution\_Functional\_Non Functional.html (NFR Scalability/Performance); Cloud\_Cost\_Mgmt\_FinOps\_Strategy.html (Elasticity) |  |  |  |  | Burst scalability requirement. |
| 436 | RFP-S3.25.20.3 | All on-demand reports should complete their execution in less than 10 seconds (High) | **Yes** | Solution\_Functional\_Non Functional.html (NFR Performance); DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html; Test\_Strategy.html |  |  |  |  | Reporting performance SLA. |
| 437 | RFP-S3.25.20.4 | Any report whose execution time is greater than or equal to 10 seconds should be delivered as a scheduled report (Medium) | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Reporting/Scheduler); DataEngineering\_Analytics\_Reporting\_ML\_AI\_Strategy.html |  |  |  |  | Handling long-running reports asynchronously. |
| 438 | RFP-S3.25.20.5 | The proposer should perform end-to-end benchmarking of their solution to demonstrate that the solution meets all required performance standards under peak load conditions. Every Major release of the software needs go through bench marking assessment at least once a year. (High) | **Yes** | Test\_Strategy.html; Project\_Implementation\_Game\_Plan.html |  |  |  |  | Performance testing and benchmarking requirement. |
| 439 | RFP-S3.25.20.6 | The Proposer needs to make sure that the solution complies with Citywide Policy for Performance Testing of Public-Facing Applications (Appendix K). (High) | **Yes** | Test\_Strategy.html; Compliance\_Audit\_Strategy.html |  |  |  |  | Compliance with specific performance testing policy (Appendix K). |
| **3.25.21 Reliability** | | | | | | | | | |
| 440 | RFP-S3.25.21.1 | The solution must be extremely reliable during peak usage time. Reliability is a measure of probability that an item will perform its intended function for a specified interval under stated conditions. The solution, including interface components, should perform at peak efficiency during Peak Business Season & Business Day requirements as defined in the Availability subsection of the Non- functional Requirements. (High) | **Yes** | Solution\_Functional\_Non Functional.html (NFR Reliability/Availability); Architecture.html; Operational\_Excellence\_BCP\_DR\_Plan.html |  |  |  |  | Overall reliability requirement linked to availability SLAs. |
| 441 | RFP-S3.25.21.a | During Peak Business Season, the solution must perform all intended functions at peak efficiency all the time with the allowed exception of maximum 15 minutes in a calendar year. (High) | **Yes** | Solution\_Functional\_Non Functional.html (NFR Reliability); Test\_Strategy.html; Operational\_Excellence\_BCP\_DR\_Plan.html |  |  |  |  | Strict reliability target (functional failure time) during Peak Season. |
| 442 | RFP-S3.25.21.b | During the Normal Business Day period, the solution must perform all intended functions at peak efficiency all the time with the allowed exception of maximum 216 minutes in a calendar year. (High) | **Yes** | Solution\_Functional\_Non Functional.html (NFR Reliability); Test\_Strategy.html; Operational\_Excellence\_BCP\_DR\_Plan.html |  |  |  |  | Reliability target during Normal Business Days. |
| 443 | RFP-S3.25.21.c | During other periods, the solution must perform all intended functions at peak efficiency all the time with allowed exception of maximum 1656 minutes in a calendar year (Medium) | **Yes** | Solution\_Functional\_Non Functional.html (NFR Reliability); Test\_Strategy.html; Operational\_Excellence\_BCP\_DR\_Plan.html |  |  |  |  | Reliability target during Off-Peak times. |
| 444 | RFP-S3.25.21.d | The solution must have failure rates less than 10 failures per calendar year. The time between two failures cannot be less than one week. Any exception to this rule needs to be reviewed and agreed upon by authorized NYCPS personnel. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html (NFR Reliability); Test\_Strategy.html; Observability\_Monitoring\_IncidentManagement.html |  |  |  |  | Failure rate / MTBF target. |
| **3.25.22 Reusability** | | | | | | | | | |
| 445 | RFP-S3.25.22.1 | The solution will be designed to have reusable components that can be replicated to enhance existing or future systems. The code repository will be annotated, archived, and documented so that it can be easily referenced in future projects involving GPS data, bus routes, and other transportation considerations. We will also evaluate the architecture and interoperability of existing systems to determine if they may be used in some capacity as part of our solution. (Medium) | **Yes** | Architecture.html (Modularity); Development\_Strategy.html; DevOps\_Detailed.html (Code Repo) |  |  |  |  | Design for reusability requirement. |
| **3.25.23 Scalability** | | | | | | | | | |
| 446 | RFP-S3.25.23.1 | The solution must be designed to dynamically scale up and scale down based on the near real-time load on the environment. The solution must be capable of horizontal and vertical scaling to accommodate load. All design decisions need to be submitted and approved by the authorized NYCPS technical team. (High) | **Yes** | Architecture.html (Scalability/Elasticity); Solution\_Functional\_Non Functional.html (NFR Scalability); Cloud\_Cost\_Mgmt\_FinOps\_Strategy.html |  |  |  |  | Elastic scalability requirement (horizontal/vertical). |
| **3.25.24 Security** | | | | | | | | | |
| 447 | RFP-S3.25.24.1 | All unplanned security updates shall be performed only in the production environment, after communication with and approval by authorized NYCPS personnel. The update needs to be tested and validated in a non-production environment so that updates do not cause operational down time. The proposer is responsible for maintaining security of NYCPS student information by notification and performance of all necessary Software/ Framework assessments & updates as soon as it is necessary and at least once every six months. (High) | **Yes** | Security\_Strategy.html; DevOps\_Strategy.html (Patching Process); Compliance\_Audit\_Strategy.html |  |  |  |  | Security patching process and responsibility NFR. |
| 448 | RFP-S3.25.24.2 | The proposer needs to submit detailed security testing procedures (Penetration, SAST, DAST, IAST, etc.) to be followed by them as part of the proposal. The proposer should allow OTI, NYC3, DIIT and other related city agencies or an approved external vendor to perform security testing of the solution with advance notice less or equal than 15 days. Every release of the software needs to go through security testing before deployment so that solution stays secured to protect Personally Identifiable Information managed by NYCPS. (High) | **Yes** | Security\_Strategy.html; Test\_Strategy.html; Compliance\_Audit\_Strategy.html |  |  |  |  | Security testing requirements (internal & external). Procedures expected in proposal. |
| **3.25.25 Server/Storage** | | | | | | | | | |
| 449 | RFP-S3.25.25.1 | All solution designs must document the answers to the following questions if the solution will be hybrid or on-premises. (High) a. What is the estimated storage? b. What is the storage growth over two years? c. What are the specifications for the server? d. What arethe network/bandwidth requirements? e. What archival requirements are there, if any? | **Yes** | Architecture.html; Terraform\_Infra\_Setup\_Guide.html; Solution\_Functional\_Non Functional.html |  |  |  |  | Infrastructure estimation requirement (if hybrid/on-prem). |
| **3.25.26 Service Level Agreement (General NFRs)** | | | | | | | | | |
| 450 | RFP-S3.25.26.1 | As part of this proposal, the vendor is requested to submit a comprehensive Service Level Agreement (SLA) and Standard Operating Procedures (SOP) specifically addressing incident management for customer service and engagement. The SLA shall define key performance metrics, including but not limited to response times, resolution times, and escalation procedures for various types of incidents. The SOP shall include comprehensive workflows, roles and responsibilities, and communication procedures to ensure efficient and effective management of customer service incidents and technical support. These documents must ensure alignment with NYCPS' operational standards, meet the industry’s best practices, and support the timely resolution of customer issues while maintaining high service quality. The proposer must provide clear documentation of various levels of technological assistance required to support the solution. For example: Tier 1 support will be handled by the Proposer help desk. Tier 2 support will be provided by the Proposer technical team. Tier 3 support will be provided by the Proposer. (High) | **No** | N/A (Proposal deliverable) | **Identified Gap (Proposal Content)** |  |  |  | Proposal deliverable requirement (SLA/SOP for Incident Mgmt/Support). Defines Tier structure. Links to 3.24.3. |
| 451 | RFP-S3.25.26.2 | The data consumed and generated by the Vendor shall be available for NYCPS operations daily without any lag and in NYCPS Administrative Systems. | **Yes** | Solution\_Functional\_Non Functional.html (NFR Availability/Performance); Architecture.html (Integration) |  |  |  |  | Data availability/timeliness requirement. |
| 452 | RFP-S3.25.26.3 | The proposer must ensure that all data transmitted to NYCPS is delivered without any lag or disruption. Data should flow in real-time or near-real-time (within 10 seconds of generation or update) in accordance with the operational requirements of NYCPS data integration. | **Yes** | Solution\_Functional\_Non Functional.html (NFR Performance); Architecture.html (Integration/API Strategy) |  |  |  |  | Data transmission latency SLA (< 10 sec). |
| 453 | RFP-S3.25.26.4 | The proposer must implement and maintain a robust data transmission protocol with automated monitoring to guarantee data integrity and availability and provide immediate notification to the consumer party in the event of any disruption or delay. | **Yes** | Architecture.html (Integration Strategy); Observability\_Monitoring\_IncidentManagement.html |  |  |  |  | Data transmission reliability/monitoring requirement. |
| 454 | RFP-S3.25.26.5 | All time stamps or time-sensitive data provided to the consumer party must be converted and displayed in the local time zone of NYCPS, ensuring accuracy. The proposer is required to use a reliable and standardized method for time zone conversion and must validate the correctness of this conversion periodically. | **Yes** | Solution\_Functional\_Non Functional.html; Architecture.html (Data Handling); Development\_Strategy.html |  |  |  |  | Time zone handling requirement. |
| 455 | RFP-S3.25.26.6 | The proposer should have a backup mechanism in place to ensure data continuity in case of system failure and must provide regular testing and reporting to NYCPS on the reliability of data transmission systems. | **Yes** | Operational\_Excellence\_BCP\_DR\_Plan.html; Architecture.html (Integration/HA); Test\_Strategy.html |  |  |  |  | Data transmission resilience/testing requirement. |
| **3.25.27 Serviceability** | | | | | | | | | |
| 456 | RFP-S3.25.27.1 | Vendor software should have a maintenance contract to ensure technical support personnel are available to monitor and manage the solution operation according to that contract. A vendor should provide annual resource needs for support for 7 years after which the solution will be considered to have reached the end of its life. (High) | **Yes** | Vendor\_3rdParty\_mgmt\_logistics\_plan.html (Support Contract); Project\_Implementation\_Game\_Plan.html (Lifecycle) |  |  |  |  | Long-term support contract and resource planning requirement. |
| **3.25.28 Solution Lifecycle Management** | | | | | | | | | |
| 457 | RFP-S3.25.28.1 | The proposer must have Standard Operating Procedures agreed with the NYCPS in place for the implementation of upgrades to equipment and software. (High) | **Yes** | DevOps\_Strategy.html; Project\_Implementation\_Game\_Plan.html; Hardware\_Lifecycle\_Logistics\_Mgmt\_Plan.html |  |  |  |  | SOP requirement for upgrades. |
| 458 | RFP-S3.25.28.2 | The implementation of all upgrades must be carefully planned and scheduled, with notice sent to all relevant parties well in advance. (High) | **Yes** | DevOps\_Strategy.html; Communications\_Governance\_Reporting\_Strategy.html; Project\_Implementation\_Game\_Plan.html |  |  |  |  | Planning and communication requirement for upgrades. |
| 459 | RFP-S3.25.28.3 | The implementation of all upgrades must be tested in a vendor managed non- production environment (replica of the production environment) and implemented efficiently at times that cause as little disruption as possible to authorized users of the solution. (High) | **Yes** | Test\_Strategy.html; DevOps\_Detailed.html; Operational\_Excellence\_BCP\_DR\_Plan.html |  |  |  |  | Testing and deployment requirement for upgrades (min disruption). |
| 460 | RFP-S3.25.28.4 | The timetable for the implementation of all upgrades must be approved in writing by the NYCPS. (Medium) | **Yes** | Project\_Implementation\_Game\_Plan.html; Communications\_Governance\_Reporting\_Strategy.html |  |  |  |  | Approval requirement for upgrade schedule. |
| 461 | RFP-S3.25.28.5 | The proposer must implement in a timely manner all available, proven operating system, database and system software upgrades. If the Proposer does not consider it appropriate to implement a new release within the agreed upon period, the proposer must promptly notify the NYCPS in writing that they are delaying implementation and provide a reason that is acceptable to the NYCPS. (Medium) | **Yes** | DevOps\_Strategy.html; Security\_Strategy.html (Patching); Communications\_Governance\_Reporting\_Strategy.html |  |  |  |  | Proactive platform patching requirement. |
| 462 | RFP-S3.25.28.6 | The proposer must incorporate any bug fixes and/or enhancements specifically implemented for NYCPS as part of the next major release of the solution. (High) | **Yes** | Development\_Strategy.html; DevOps\_Detailed.html (Branching/Release Mgmt) |  |  |  |  | Customization persistence requirement during upgrades. |
| **3.25.29 Stability** | | | | | | | | | |
| 463 | RFP-S3.25.29.1 | Solutions must be designed and developed to run in a stable state irrespective of the modifications made to the solution over a period of time. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html (NFR Reliability); Development\_Strategy.html; Test\_Strategy.html (Regression) |  |  |  |  | Long-term stability NFR despite changes. |
| **3.25.30 Supportability** | | | | | | | | | |
| 464 | RFP-S3.25.30.1 | The solution design and code shall adhere to the NYCPS Secure Coding Standard as per NYCPS information security requirements for vendors Version | **Yes** | Security\_Strategy.html; Development\_Strategy.html; Detailed\_SDLC.html |  |  |  |  | Secure coding standard compliance. |
| 465 | RFP-S3.25.30.2 | The solution must be designed and developed to create an alert as soon as an error occurs so they can be followed up by NYCPS support teams. (High) | **Yes** | Observability\_Monitoring\_IncidentManagement.html; Architecture.html (Alerting) |  |  |  |  | Proactive error alerting for support NFR. |
| **3.25.31 Technical Support** | | | | | | | | | |
| 466 | RFP-S3.25.31.1 | The proposer shall provide access to OEM technical support to assist NYCPS engineering staff in resolving technical issues and requests. (High) | **Yes** | Vendor\_3rdParty\_mgmt\_logistics\_plan.html (Support Model); Team\_Structure\_And\_Processes\_Plan.html |  |  |  |  | Access to vendor core technical team for NYCPS engineers. |
| **3.25.32 Testability** | | | | | | | | | |
| 467 | RFP-S3.25.32.1 | All components of the solution (including internal and external interfaces) must be testable by independent testing teams in testing environments (non- production). (High) | **Yes** | Test\_Strategy.html; Architecture.html (Design for Testability); DevOps\_Detailed.html (Environments) |  |  |  |  | Design for testability NFR. |
| 468 | RFP-S3.25.32.2 | The scope of testing will include unit testing, integration testing, regression testing, business functions testing, security testing as well as performance testing. The proposer needs to submit complete documentation (including but not limited to testing plans and results) to show that a thorough testing process has been followed during execution of the contract. (High) | **Yes** | Test\_Strategy.html; Project\_Implementation\_Game\_Plan.html (Deliverables) |  |  |  |  | Comprehensive testing scope and documentation requirement. |
| 469 | RFP-S3.25.32.3 | The security testing/audit needs to be based on a widely recognized industry standard, for e.g. TOP 20 OWASP Web vulnerabilities as well as security requirements from OTI, NYC3, DIIT and other related city agencies information security policies. Any or all the above testing activities may be performed by NYCPS either directly or through an authorized service provider at NYCPS’s discretion. (High) | **Yes** | Test\_Strategy.html; Security\_Strategy.html; Compliance\_Audit\_Strategy.html |  |  |  |  | Specific standards for security testing; allows NYCPS testing. |
| 470 | RFP-S3.25.32.4 | It is the responsibility of the proposer to provide necessary environments as well as knowledge transfer required by NYCPS to perform this testing. Proposers should submit their most recent audit findings in this area. The audit results should contain: i. Overview of the most recent security audit findings (must not include specific findings of vulnerabilities but must include an overall summary of findings of general security posture). (High) ii. Summary of recent penetration test(s) – including 3rd party scans of exposed websites, pages, and exposed services (must not include specific findings of vulnerabilities but must include a count by severity of each risk level of all vulnerabilities discovered). (High) | **No** | N/A (Proposal deliverable) | **Identified Gap (Proposal Content)** |  |  |  | Vendor responsibility for enabling NYCPS testing + Proposal submission requirement (Audit/Pen Test Summaries). |
| 471 | RFP-S3.25.32.5 | The solution delivered must include unit tests that ensure 100% branch coverage as well as documentation to support their successful completion. (High) | **Yes** | Test\_Strategy.html; Development\_Strategy.html; Detailed\_SDLC.html |  |  |  |  | Unit testing coverage requirement (100% branch). |
| **3.25.33 Training (NFR)** | | | | | | | | | |
| 472 | RFP-S3.25.33.1 | The solution should include technical training to monitor, maintain and/or operate the solution with no or minimum intervention from the proposer on a daily basis. (High) | **Yes** | User\_Onboarding\_Training\_Comms\_Strategy.html (KT); Project\_Implementation\_Game\_Plan.html (Transition) |  |  |  |  | Technical training for NYCPS operational self-sufficiency. |
| **3.25.34 Usability** | | | | | | | | | |
| 473 | RFP-S3.25.34.1 | The solution must be accessible and optimally useable on desktops and mobile devices like tablets and cell phones. (High) | **Yes** | Solution\_Functional\_Non Functional.html (NFR Usability/Accessibility); Architecture.html (Responsive Design) |  |  |  |  | Cross-device usability NFR. |
| 474 | RFP-S3.25.34.2 | The solution must support all modern web browsers, including Microsoft Edge, Internet Explorer, Firefox, Chrome, and Safari. The Solution must support the most recent version and the previous two (2) versions of each browser. NYCPS constantly upgrades its approved browsers list. The solution must support all approved browsers within prescribed timeline provided by NYCPS. (High) | **Yes** | Solution\_Functional\_Non Functional.html (NFR); Test\_Strategy.html |  |  |  |  | Browser compatibility NFR (N-2 versions). IE mention likely outdated. |
| 475 | RFP-S3.25.34.3 | The solution should support state of the art authorized users’ experience (UX) design standards followed in the industry. The solution provided must clearly indicate required, optional fields and other required messages to protect authorized users against making errors. The solution must use responsive design for all authorized users’ interfaces. (High) | **Yes** | Solution\_Functional\_Non Functional.html (NFR Usability); Architecture.html (UI/UX Design); Development\_Strategy.html |  |  |  |  | User experience quality requirement (modern standards, clarity, responsive). |
| 476 | RFP-S3.25.34.4 | Solution error messages must be expressed in plain language (no codes), precisely indicate the problem, and constitutively suggest a solution or next steps that authorized users need to take to resolve the error. (High) | **Yes** | Solution\_Functional\_Non Functional.html (NFR Usability); Development\_Strategy.html |  |  |  |  | Error message quality NFR. |
| 477 | RFP-S3.25.34.5 | The solution must have consistent labeling of authorized user controls. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html (NFR Usability); Development\_Strategy.html (UI Standards) |  |  |  |  | UI consistency requirement (labels). |
| 478 | RFP-S3.25.34.6 | Solution must follow established authorized users control standards. (High) | **Yes** | Solution\_Functional\_Non Functional.html (NFR Usability); Development\_Strategy.html (UI Standards) |  |  |  |  | Adherence to UI control standards. |
| 479 | RFP-S3.25.34.7 | Solution must be designed such that all content must have 9th grade reading level. The proposer needs to make sure that the solution will be upgraded to meet any new reading level standards developed by NYCPS within prescribed timelines. (Medium) | **Yes** | Solution\_Functional\_Non Functional.html (NFR Usability/Accessibility); User\_Onboarding\_Training\_Comms\_Strategy.html (Content) |  |  |  |  | Content readability requirement. |
| 480 | RFP-S3.25.34.8 | The solutions must follow the website style guide prescribed by NYCPS. See attachment #4 (High) | **Yes** | Solution\_Functional\_Non Functional.html (NFR Usability); Development\_Strategy.html (UI Standards); Architecture.html |  |  |  |  | Visual design compliance with NYCPS style guide (Att 4). |
| **3.26 Vendor Availability and Location Requirements** | | | | | | | | | |
| 481 | RFP-S3.26.1 | The Vendor's project and support teams are required to be available to support and perform services during the following business hours: • Project team: 5:00 AM to 8:00 PM (local time) • Ground support: 5:00 AM to 8:00 PM (local time) • Technical support: 5:00 AM to 8:00 PM (local time) | **Yes** | Team\_Structure\_And\_Processes\_Plan.html; Vendor\_3rdParty\_mgmt\_logistics\_plan.html (Support Hours) |  |  |  |  | Support coverage hours requirement. |
| 482 | RFP-S3.26.2 | While the specific time zone of the Vendor's project team is not a limiting factor, it is expected that all project resources align their working hours to meet this requirement. | **Yes** | Team\_Structure\_And\_Processes\_Plan.html |  |  |  |  | Working hours alignment requirement. |
| 483 | RFP-S3.26.3 | In addition, project resources may be required to provide support outside of these standard hours on an as-needed basis, in response to urgent needs, critical issues, or project milestones. These instances will not be the norm and decided upon with the DOE Project Lead/Stakeholder and Vendor’s Project Lead. | **Yes** | Team\_Structure\_And\_Processes\_Plan.html; Vendor\_3rdParty\_mgmt\_logistics\_plan.html (On-call) |  |  |  |  | Off-hours support requirement for exceptions. |
| 484 | RFP-S3.26.4 | All project resources, data and data centers must be based within the continental United States. | **Yes** | Architecture.html (Hosting Location); Security\_Strategy.html; Team\_Structure\_And\_Processes\_Plan.html |  |  |  |  | Data residency and personnel location requirement (CONUS). |
| 485 | RFP-S3.26.5 | Work can be conducted either onsite or virtually, as determined by the DOE. The DOE may request that key personnel attend onsite meetings as necessary. | **Yes** | Team\_Structure\_And\_Processes\_Plan.html; Project\_Implementation\_Game\_Plan.html |  |  |  |  | Work location flexibility requirement (DOE decides). |
| 486 | RFP-S3.26.6 | When onsite presence is required, it will take place at the following locations (or where needed): • 44-36 Vernon Blvd LIC, NY 11101 6th floor • 335 Adams St, Brooklyn NY 11201 Alternate DIIT locations within the five boroughs of New York City, as determined by the DOE. | **Yes** | Team\_Structure\_And\_Processes\_Plan.html |  |  |  |  | Specific potential on-site locations. |
| 487 | RFP-S3.26.7 | Please note that travel expenses will not be reimbursed by the DOE. Vendors are responsible for covering any costs associated with travel to and from DOE locations. | **Yes** | Budget\_Financial\_Mgmt\_Plan.html |  |  |  |  | Financial constraint (no travel reimbursement). |
| 488 | RFP-S3.26.8 | All project resources must be legally entitled to work in the United States. In accordance with Federal law, the DOE reserves the right to request documentation from the Vendor attesting to the legal work eligibility of each consultant assigned to work on the project. The DOE does not discriminate on the basis of national origin or citizenship but requires compliance with applicable employment authorization regulations. | **Yes** | Team\_Structure\_And\_Processes\_Plan.html; Compliance\_Audit\_Strategy.html |  |  |  |  | Legal work eligibility requirement (US). |
| **3.27 Business Continuity** | | | | | | | | | |
| 489 | RFP-S3.27.1 | In the event of unforeseen circumstances, including but not limited to natural disasters, technological failures, or changes in business ownership, the vendor must maintain and implement a comprehensive Business Continuity Plan (BCP) to ensure the continued functionality and availability of the solution provided to NYCPS throughout the contract term. This plan should be designed to proactively address potential risks and minimize service disruptions. | **Yes** | Operational\_Excellence\_BCP\_DR\_Plan.html; Vendor\_3rdParty\_mgmt\_logistics\_plan.html |  |  |  |  | Overall BCP requirement. |
| 490 | RFP-S3.27.2 | Scope and Critical Functions: Identify and prioritize all critical functions, processes, and business areas essential to the solution as outlined in the Scope of Services and Service Level Agreements (SLAs). This includes but is not limited to customer service operations, data management, technical infrastructure, and communication channels. | **Yes** | Operational\_Excellence\_BCP\_DR\_Plan.html; Architecture.html |  |  |  |  | BCP content requirement (Critical Function Identification). |
| 491 | RFP-S3.27.3 | Risk Assessment and Mitigation: Include a detailed risk assessment to identify potential threats (e.g., environmental, technical, operational, and human factors) and establish mitigation strategies. This should address risks such as system failures, data breaches, and personnel disruptions. A clear framework for evaluating and monitoring emerging risks must also be included. | **Yes** | Operational\_Excellence\_BCP\_DR\_Plan.html; Project\_And\_Change\_And\_Risk\_Management\_Plan.html; Security\_Strategy.html |  |  |  |  | BCP content requirement (Risk Assessment & Mitigation). |
| 492 | RFP-S3.27.4 | Operational Continuity and Recovery Procedures: Outline specific recovery strategies to ensure minimal service downtime in the event of an incident. This should include, but not be limited to: • Data backup and redundancy protocols • Clear escalation paths and response times • Detailed recovery time objectives (RTO) and recovery point objectives (RPO) Alternative service delivery mechanisms, if applicable, to ensure that critical functions remain operational | **Yes** | Operational\_Excellence\_BCP\_DR\_Plan.html; Architecture.html (DR/Backup); Observability\_Monitoring\_IncidentManagement.html (Escalation) |  |  |  |  | BCP content requirement (Recovery Strategies, RTO/RPO). |
| 493 | RFP-S3.27.5 | Communication and Reporting: Define communication protocols to ensure timely and transparent updates to OPT in the event of an incident. This should include real-time reporting on the status of incident resolution, potential impacts to service levels, and proactive communication regarding any necessary actions taken to restore service. | **Yes** | Operational\_Excellence\_BCP\_DR\_Plan.html; Communications\_Governance\_Reporting\_Strategy.html |  |  |  |  | BCP content requirement (Incident Communication Plan). |
| 494 | RFP-S3.27.6 | Testing and Validation: Demonstrate a plan for periodic testing and validation of the Business Continuity Plan to ensure its effectiveness. This should include regular drills, simulation of potential disruptions, and updates to the plan based on lessons learned and evolving business needs. | **Yes** | Operational\_Excellence\_BCP\_DR\_Plan.html; Test\_Strategy.html |  |  |  |  | BCP lifecycle requirement (Testing & Validation). |
| 495 | RFP-S3.27.7 | Third-Party Dependencies: Account for third-party dependencies that may impact the continuity of services and include mitigation strategies for each identified critical third-party supplier or partner. | **Yes** | Operational\_Excellence\_BCP\_DR\_Plan.html; Vendor\_3rdParty\_mgmt\_logistics\_plan.html; Project\_And\_Change\_And\_Risk\_Management\_Plan.html |  |  |  |  | BCP content requirement (Supply Chain Risk). |
| 496 | RFP-S3.27.8 | Change Management: Define processes for maintaining and updating the Business Continuity Plan in the event of changes in business operations, technological advancements, or contract amendments. The plan must be kept current and aligned with any changes in OPT’s operational needs or the vendor’s service delivery model. | **Yes** | Operational\_Excellence\_BCP\_DR\_Plan.html; Project\_And\_Change\_And\_Risk\_Management\_Plan.html |  |  |  |  | BCP lifecycle requirement (Maintenance & Updates). |
| 497 | RFP-S3.27.9 | The Business Continuity Plan must be submitted as part of the proposal, and the vendor should be prepared to provide periodic updates or demonstrate its effectiveness upon request by NYCPS. | **No** | N/A (Proposal deliverable) | **Identified Gap (Proposal Content)** |  |  |  | Proposal deliverable requirement (BCP). |
| **3.28 System and Web-Based Application Requirements** | | | | | | | | | |
| 498 | RFP-S3.28.Intro | These requirements are geared for third-party developers who develop applications for the NYCDOE. The requirements ensure that the applications will work correctly in the NYCDOE environment and are supportable by the NYCDOE. | **Yes** | [General: Architecture, Development, Compliance, Security docs] |  |  |  |  | Intro statement for specific NYCDOE dev requirements. |
| **3.28.1 Integrated System Components** | | | | | | | | | |
| 499 | RFP-S3.28.1.1 | Proposers will be required to provide the NYCDOE with all required services, including system features of the proposed OPT Transportation Management System as described in Section 3 – Scope of Services. Proposers must detail in their Program Plan (Appendix E2) how they will develop and/or implement the required features. | **No** | N/A (Proposal deliverable - Appendix E2) | **Identified Gap (Proposal Content)** |  |  |  | Proposal requirement linking proposal plan to Scope of Services. |
| 500 | RFP-S3.28.1.2 | Vendor will be required to comply with NYCDOE policy on systems and security requirements and NY State policy on web-based applications, please refer to Appendix I – Information Security Requirements for Vendors and Appendix J – Requirements for Web Applications. | **Yes** | Compliance\_Audit\_Strategy.html; Security\_Strategy.html; [Referencing Appendices I & J] |  |  |  |  | Compliance requirement referencing specific Appendices. |
| 501 | RFP-S3.28.1.3 | The proposed system should be web-based and capable of running without error on PC and MAC systems, compatible with Microsoft Edge, Google Chrome, and Apple Safari, at a minimum. | **Yes** | Architecture.html; Solution\_Functional\_Non Functional.html (NFR); Test\_Strategy.html |  |  |  |  | Platform/Browser compatibility requirement. |
| 502 | RFP-S3.28.1.4 | The system must provide accommodations to ensure Universal Access. The high-level accessibility requirement is to ensure that the system provides persons of all abilities equal access to the system. | **Yes** | Solution\_Functional\_Non Functional.html (NFR Accessibility); Development\_Strategy.html |  |  |  |  | High-level accessibility principle. |
| 503 | RFP-S3.28.1.5 | The system shall comply with the Web Content Accessibility Guidelines (WCAG) 2.0, Level AA (Intermediate). These guidelines are published by the Web Accessibility Initiative (WAI) of the World Wide Web Consortium (W3C) and are available at: http://www.w3.org/TR/WCAG20/. The WCAG 2.0 Level AA checklist is provided in the table below and is also available at: https://www.wuhcag.com/wcag-checklist/. WCAG 2.0 Checklist Level AA (Intermediate) [Checklist omitted for brevity] | **Yes** | Solution\_Functional\_Non Functional.html; Compliance\_Audit\_Strategy.html; Test\_Strategy.html; Development\_Strategy.html |  |  |  |  | Specific accessibility standard (WCAG 2.0 AA). Checklist details in RFP text. |
| **3.28.2 Minimum Client Platform Requirements** | | | | | | | | | |
| 504 | RFP-S3.28.2.1 | Applications should be developed to support versions of the following web browsers released within the last two (2) years: A. Microsoft Edge B. Google Chrome C. Apple Safari | **Yes** | Solution\_Functional\_Non Functional.html (NFR); Test\_Strategy.html |  |  |  |  | Browser version support requirement (last 2 years). |
| 505 | RFP-S3.28.2.2 | The application must function on machines with the following specifications: A. Microsoft Windows 10 version 21H1 and higher with 4GB RAM and at least two CPU cores B. Apple Macintosh with OS 12 (Monterey) and higher C. iOS 16 and higher D. Android 13 and higher E. Chromebooks running ChromeOS 101 and higher | **Yes** | Solution\_Functional\_Non Functional.html (NFR); Test\_Strategy.html |  |  |  |  | Minimum client OS/hardware specs. |
| 506 | RFP-S3.28.2.3 | The application may not use client-side Java or Flash. | **Yes** | Architecture.html; Development\_Strategy.html |  |  |  |  | Technology constraint (no Java/Flash applets). |
| **3.28.3 Performance** | | | | | | | | | |
| 507 | RFP-S3.28.3.1 | Performance should be acceptable using wireless or wired connections. | **Yes** | Solution\_Functional\_Non Functional.html (NFR Performance); Test\_Strategy.html |  |  |  |  | Network performance expectation. |
| 508 | RFP-S3.28.3.2 | Applications should perform over wireless cellular networks using personal hot spots and broadband cards. | **Yes** | Solution\_Functional\_Non Functional.html (NFR Performance); Test\_Strategy.html |  |  |  |  | Cellular network performance requirement. |
| **3.28.4 Solution Documentation** | | | | | | | | | |
| 509 | RFP-S3.28.4.1 | The following information must be provided for the web-based application: Service-level agreements (SLAs) for application and service availability. | **Yes** | Solution\_Functional\_Non Functional.html (NFR Availability); Vendor\_3rdParty\_mgmt\_logistics\_plan.html (SLAs) |  |  |  |  | Documentation requirement (Availability SLAs). |
| 510 | RFP-S3.28.4.2 | The following information must be provided for the web-based application: Data backup and recovery commitments including Recovery Point Objectives (RPO) and Recovery Time Objectives (RTO). | **Yes** | Operational\_Excellence\_BCP\_DR\_Plan.html; Solution\_Functional\_Non Functional.html (NFR BCP) |  |  |  |  | Documentation requirement (RPO/RTO). |
| **3.28.5 Compliance with NY State Policy and NYCDOE Guidelines** | | | | | | | | | |
| 511 | RFP-S3.28.5.1 | Any web-based information and applications development, or programming delivered pursuant to the contract or procurement, will comply with New York State Enterprise IT Policy NYS-P08-005, Accessibility of Web-Based Information and Applications as such policy may be amended, modified, or superseded, which requires that state agency web-based information and applications are accessible to persons with disabilities. Web-based information and applications must conform to New York State Enterprise IT Policy NYS-P08-005 as determined by quality assurance testing. Such quality assurance testing will be conducted by the NYCNYCPS Division of Instructional and Informational Technology Program Management Office and/or the Digital Communications office and the results of such testing must be satisfactory to the NYCDOE before web-based information and applications will be considered a qualified deliverable under the contract or procurement. | **Yes** | Compliance\_Audit\_Strategy.html; Solution\_Functional\_Non Functional.html (NFR Accessibility); Test\_Strategy.html |  |  |  |  | NYS Accessibility Policy compliance (NYS-P08-005) + NYCDOE QA testing. |
| **3.28.6 License and Ownership** | | | | | | | | | |
| 512 | RFP-S3.28.6.1 | Proposer must represent and warrant that the license to any software it proposes to provide under any contract entered into as a result of this solicitation conforms in all respect with the software specifications and that it has the authority to license the software. | **Yes** | Vendor\_3rdParty\_mgmt\_logistics\_plan.html (Contract Terms) |  |  |  |  | Legal/Contractual requirement (Licensing Authority). |
| 513 | RFP-S3.28.6.2 | Proposer must transfer, assign, and convey a nonexclusive, perpetual and irrevocable license for any and all materials delivered under any contract that is entered into as a result of this solicitation to the NYCDOE, free and clear of any liens, claims or other encumbrances, The NYCDOE may use any work product prepared by the proposer in such manner, for such purposes, and as often as the NYCDOE may deem advisable, in whole, in part or in modified form, in all formats now known or hereafter to become known, without further employment of or additional compensation to the contractor. | **Yes** | Vendor\_3rdParty\_mgmt\_logistics\_plan.html (Contract Terms/IP) |  |  |  |  | Broad licensing rights grant to NYCDOE for deliverables. |
| 514 | RFP-S3.28.6.3 | The NYCDOE may consider other licensing and/or ownership arrangements at its discretion. | **Yes** | Vendor\_3rdParty\_mgmt\_logistics\_plan.html (Contract Terms) |  |  |  |  | Flexibility clause regarding licensing. |
| 515 | RFP-S3.28.6.4 | The NYCDOE would retain ownership of all data. | **Yes** | Data\_governance\_compliance\_controls\_plan.html; Vendor\_3rdParty\_mgmt\_logistics\_plan.html (Contract Terms) |  |  |  |  | Data ownership clarification. |
| 516 | RFP-S3.28.6.5 | Upon request by the NYCDOE, the Proposer shall provide a copy of the software license for any software that the Proposer includes in its proposal. | **Yes** | Vendor\_3rdParty\_mgmt\_logistics\_plan.html; Compliance\_Audit\_Strategy.html |  |  |  |  | Transparency requirement (License review). |
| 517 | RFP-S3.28.6.6 | Any data, reports, evaluation documents, work papers, notes, correspondence, visual and/or sound recordings, and other forms of documentation generated under any contract entered into as a result of this solicitation, as well as any materials the Proposer is required to furnish the NYCDOE, including drafts and reproduction copies thereof, shall be the exclusive property of the NYCDOE. | **Yes** | Vendor\_3rdParty\_mgmt\_logistics\_plan.html (Contract Terms/IP); Data\_governance\_compliance\_controls\_plan.html |  |  |  |  | Broad NYCDOE ownership of generated documentation/materials. |
| 518 | RFP-S3.28.6.7 | Upon request by the NYCDOE, the Proposer shall deliver all materials to the NYCDOE. Except in connection with the performance of its obligations under any contract entered into as a result of this solicitation, the Proposer shall not publish, cause or allow to be published, or license the use or re-use of all or any portion of the above-expressed documentation and/or recordings without prior written approval from the Chancellor or his/her designee(s). The Proposer may otherwise keep copies of such materials for internal use in connection with performance of any contract entered into as a result of this solicitation only. | **Yes** | Vendor\_3rdParty\_mgmt\_logistics\_plan.html (Contract Terms/IP); Data\_governance\_compliance\_controls\_plan.html |  |  |  |  | Material delivery and usage restriction requirement for vendor. |
| **3.28.7 End-User License Agreement** | | | | | | | | | |
| 519 | RFP-S3.28.7 | Any end-user license agreement, “clickwrap,” “click-through,” “click and accept,” “web-wrap,” or other form of agreement requiring the individual user to accept terms in order to use or benefit from the Services herein shall not be enforceable by the Contractor and shall be non-binding and null and void as against any individual user, including, but not limited to, a student, a parent/guardian, a teacher, or any other NYCDOE employee. Contractor agrees that all terms and conditions regarding the Services are contained within the Agreement between the Contractor and NYCDOE. | **Yes** | Vendor\_3rdParty\_mgmt\_logistics\_plan.html (Contract Terms); Solution\_Functional\_Non Functional.html (Design consideration) |  |  |  |  | Legal requirement invalidating individual EULAs. Main contract governs. |

| **Section 4 Proposal Requirements** | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 520 | RFP-S4.Intro | Your proposal must fully address all of the Scope of Services listed in Section 3, above. Proposals will be evaluated on the basis of their content, not length. Using Appendices E1, E2, F, and G, plus Attachment B (also see Section 6 below), organize your proposal to address the following four (4) sections. | **No** | N/A (Proposal structure) | **Identified Gap (Proposal Content/Structure)** |  |  |  | Instruction for overall proposal organization and content linkage. |
| **4.1 Organizational Capacity (Appendix E1)** | | | | | | | | | |
| 521 | RFP-S4.1 | In this section, Proposer must show evidence of adequate human, organizational, technical, and professional resources, and abilities to meet the needs of this RFP. Organizational capacity shall include compliance with NYCDOE and other relevant administrative and operating policies and procedures, in addition to the capacity to provide services. Include, but do not limit to the following: | **No** | N/A (Proposal content - Appendix E1) | **Identified Gap (Proposal Content)** |  |  |  | Requirement for content in Proposal Appendix E1. |
| 522 | RFP-S4.1.1 | An organizational chart of the overall company responding to this RFP. Include subcontractor(s) information, if any, within the organizational chart in Appendix E1. Be sure to designate information as subcontractor titles and not as the submitting organization’s personnel. | **No** | N/A (Proposal content - Appendix E1) | **Identified Gap (Proposal Content)** |  |  |  | Specific deliverable (Org Chart) in Proposal Appendix E1. |
| 523 | RFP-S4.1.2 | A program specific organizational chart showing the specific titles and, if available, employees who will be slated to work on this project. Also, if applicable, include an approximate percentage of the award that will be allotted to any subcontractor(s) contributing to work on the program (see Section 8 for further detail). | **No** | N/A (Proposal content - Appendix E1) | **Identified Gap (Proposal Content)** |  |  |  | Specific deliverable (Program Org Chart) in Proposal Appendix E1. |
| 524 | RFP-S4.1.3 | Resumes and, if applicable, copies of appropriate licenses/certifications of key personnel who will provide the proposed services. Include information for subcontractors, if any, who will be working on the program within the Program Plan in Appendix E2 (see Section 8 below for more information). | **No** | N/A (Proposal content - Appendix E1/E2) | **Identified Gap (Proposal Content)** |  |  |  | Specific deliverable (Resumes/Licenses) in Proposal Appendix E1/E2. |
| 525 | RFP-S4.1.4 | Your organization’s maximum capacity, in terms of number of schools and students or staff that your organization can provide services to within a school year and/or summer, based on current staffing levels. | **No** | N/A (Proposal content - Appendix E1) | **Identified Gap (Proposal Content)** |  |  |  | Specific information request (Max Capacity) in Proposal Appendix E1. |
| 526 | RFP-S4.1.5 | Personnel available for the various components of proposed services, such as speakers, consultants, on-site mentors, and workshop presenters who are not full-time employees. | **No** | N/A (Proposal content - Appendix E1) | **Identified Gap (Proposal Content)** |  |  |  | Specific information request (Non-FTE resources) in Proposal Appendix E1. |
| **4.2 Demonstrated Effectiveness (Appendix E1)** | | | | | | | | | |
| 527 | RFP-S4.2 | Proposer shall include a description of all prior experience in the execution of the proposed services or similar services and, in addition to the information submitted to meet the Minimum Qualifications required in Section 2, above, include: | **No** | N/A (Proposal content - Appendix E1) | **Identified Gap (Proposal Content)** |  |  |  | Requirement for content in Proposal Appendix E1. |
| 528 | RFP-S4.2.1 | Details of Proposer’s background, qualifications, and experience in providing these specific or related services as described in Section 3 of this RFP. | **No** | N/A (Proposal content - Appendix E1) | **Identified Gap (Proposal Content)** |  |  |  | Specific content requirement (Relevant Experience) in Proposal Appendix E1. |
| 529 | RFP-S4.2.2 | Details on the methods used and objectives, and the results obtained by those methods. Provide objective data, if available. (The NYCDOE reserves the right to verify any experience presented). | **No** | N/A (Proposal content - Appendix E1) | **Identified Gap (Proposal Content)** |  |  |  | Specific content requirement (Methods/Results/Data) in Proposal Appendix E1. |
| 530 | RFP-S4.2.3 | Any experience working in public schools or with a public school system. | **No** | N/A (Proposal content - Appendix E1) | **Identified Gap (Proposal Content)** |  |  |  | Specific content requirement (Public School Exp.) in Proposal Appendix E1. |
| 531 | RFP-S4.2.4 | Proposer must submit three (3) letters of reference from organizations that have paid the proposer directly for the same or similar services as detailed in this RFP. Each reference must state the date(s), location(s), and description of the service(s) provided. Please also refer to the requirement under Section 2.3, Minimum Qualifications. | **No** | N/A (Proposal deliverable - References) | **Identified Gap (Proposal Content)** |  |  |  | Specific deliverable (References) for Proposal. Links to Min Qual 2.2. |
| 532 | RFP-S4.2.5 | If any, list of government contracts, including with the NYCDOE, awarded to the proposer in the past ten (10) years. The NYCDOE reserves the right to verify a proposer’s performance in the execution of such contracts. | **No** | N/A (Proposal content - Appendix E1) | **Identified Gap (Proposal Content)** |  |  |  | Specific information request (Govt Contracts List) in Proposal Appendix E1. |
| **4.3 Program Plan / Narrative (Appendix E2)** | | | | | | | | | |
| 533 | RFP-S4.3.1 | The Program Plan must be a clear, detailed, rational, and concise description of the overall program content, structure and methodology on how the Proposer’s program will provide the services required in the Scope of Services in Section 3, above. | **No** | N/A (Proposal content - Appendix E2) | **Identified Gap (Proposal Content)** |  |  |  | Requirement for content in Proposal Appendix E2 (Methodology linking to Sec 3). |
| 534 | RFP-S4.3.2 | The Program Plan must show a clear understanding of the services required in this RFP and demonstrate how the proposed plan will meet the goals and objectives of the RFP. The proposal must contain a work plan indicating approximate dates and frequency of the services you will provide. Also, the proposal must include how the proposer will assess and report its successfulness in providing these services. | **No** | N/A (Proposal content - Appendix E2) | **Identified Gap (Proposal Content)** |  |  |  | Specific content requirements (Understanding, Work Plan, Success Metrics) in Proposal Appendix E2. |
| 535 | RFP-S4.3.3 | Proposers must provide a separate program plan for each component proposed. The supplied proposal form (Appendix E1) includes a table that you must use to indicate the components you are proposing. | **No** | N/A (Proposal structure - Appendices E1/E2) | **Identified Gap (Proposal Content/Structure)** |  |  |  | Structural requirement for Proposal Appendix E2 (component-based). |
| 536 | RFP-S4.3.Note | Please note: Proposer must include in the proposal whether or not Proposer will be using an automobile during the provision of services. If applicable, evidence of the appropriate motor vehicle liability insurance coverage will be required. | **No** | N/A (Proposal content - Appendix E2) | **Identified Gap (Proposal Content)** |  |  |  | Specific information request (Vehicle Use/Insurance) in Proposal Appendix E2. |
| **4.4 Pricing and Cost Budget (Appendices F and G)** | | | | | | | | | |
| 537 | RFP-S4.4 | Proposers must submit a Pricing Form (Appendix F) that provides line-item pricing for the proposed services. The unit prices in this form will be the basis for your invoices. Proposers must also submit a Cost Budget Summary Form (Appendix G), which will provide a breakdown of the cost elements (e.g., labor, materials, etc.) for the proposed prices depicted in Appendix F. Proposers must download each appendix from the NYCDOE vendor portal. It is recommended that both pricing appendices be completed by the Proposer’s accounting/finance department. Prior to entering into a contract, the NYCDOE reserves the right to review the records used to calculate the costs associated with the prices depicted in Appendices F and G for the selected proposal. | **No** | N/A (Proposal content - Appendices F/G) | **Identified Gap (Proposal Content)** |  |  |  | Requirement for proposal content (Pricing/Cost in Appendices F/G). |
| 538 | RFP-S4.4.1.1 | Proposers must complete the line-item pricing form in accordance with the instructions in Appendix F. | **No** | N/A (Proposal content - Appendix F) | **Identified Gap (Proposal Content)** |  |  |  | Instruction to complete Proposal Appendix F. |
| 539 | RFP-S4.4.1.2 | The Pricing Form requires unit prices. Unit prices must include all of the costs associated with the services in the proposal for which a Proposer will be charging the NYCDOE. Proposers will not be able to invoice for items not included on the finalized budget. | **No** | N/A (Proposal content - Appendix F) | **Identified Gap (Proposal Content)** |  |  |  | Detail on Appendix F content (Unit prices, all-inclusive). |
| 540 | RFP-S4.4.1.3 | Any materials offered through this contract must be ancillary to the services provided. | **No** | N/A (Proposal content - Appendix F) | **Identified Gap (Proposal Content)** |  |  |  | Constraint on selling materials via Appendix F. |
| 541 | RFP-S4.4.2.1 | Proposers must complete the cost budget form in accordance with the instructions in Appendix G. | **No** | N/A (Proposal content - Appendix G) | **Identified Gap (Proposal Content)** |  |  |  | Instruction to complete Proposal Appendix G. |
| 542 | RFP-S4.4.2.2 | Proposers must complete an Appendix G form for every contract year. Proposers may, however, submit one Appendix G to combine years in which the annual budget amount is the same for multiple years; in which case, Proposers should enter 1) the annual amount, 2) contract years for which the costs are applicable and 3) total amount for all the years in the space provided: Total Amount Proposed for Services. Additionally, Proposers that submit Best and Final Offers may be required to complete an Appendix G for each line item or specific line items depicted in Appendix F. | **No** | N/A (Proposal content - Appendix G) | **Identified Gap (Proposal Content)** |  |  |  | Instruction on structure for Proposal Appendix G (per year or combined). |
| 543 | RFP-S4.4.2.3 | Proposers must include a breakdown of all the costs associated with the services in the proposal for which a Proposer will be charging the NYCDOE; including, but not limited to, labor, materials, rental/equipment, general and administrative costs, and profit, as applicable. Additionally, itemize any services that will not be charged to the NYCDOE in Section F, In-Kind Contribution. | **No** | N/A (Proposal content - Appendix G) | **Identified Gap (Proposal Content)** |  |  |  | Content requirement for Proposal Appendix G (Cost breakdown, In-kind). |
| 544 | RFP-S4.4.2.4 | Appendix G must be detailed and accurately reflect the corresponding totals included in Appendix F. The totals in Appendix G must match the totals in Appendix F. | **No** | N/A (Proposal content - Appendices F/G) | **Identified Gap (Proposal Content)** |  |  |  | Consistency requirement between Proposal Appendices F & G. |
| 545 | RFP-S4.4.Note | Note: In addition to Appendices F and G, Proposers may also include additional pricing information or budget narrative, if necessary, to further clarify pricing/cost structure. | **No** | N/A (Proposal content - Optional) | **Identified Gap (Proposal Content)** |  |  |  | Allows optional additional pricing clarification in Proposal. |