

## EXHIBIT 2

### Maintenance Specification

#### **0100 General Maintenance Obligations**

Throughout the Maintenance Term, Maintenance Contractor shall be responsible for and shall carry out Maintenance Services for the Elements identified in Attachment 2 within the limits of the Project as shown in Attachment 3 or as modified by the Released for Construction Documents as defined in Exhibit 1 to the Development Agreement and as set forth in this Exhibit 2 and the COMA Documents. Maintenance Contractor shall establish and maintain an organization that effectively manages all Maintenance Services in a manner set forth in the approved Maintenance Management Plan and the requirements of the COMA. Maintenance Contractor shall take all necessary actions to achieve the following:

- Coordinate activities of other entities with interests within the Project limits, including but not limited to USCBP, emergency services, police, toll operator, towing companies, regional traffic management center.
- Provide incident and emergency response, management and reporting.
- Conduct regular patrols of all lanes of the facility to identify conditions that are unsafe or have the potential to become unsafe, conditions that could threaten the infrastructure, and to attend to existing or changing conditions.
- Maintain the Maintained Elements in a manner appropriate for a facility of the character of the Project and maintain all lanes in accordance with the same standard of maintenance.
- Minimize delay and inconvenience to Users and, to the extent Maintenance Contractor is able to control, Users of adjacent and connecting roadways.
- Monitor and observe weather and weather forecasts to proactively deploy resources to minimize delays and safety hazards due to heavy rains, snow, ice, or other severe weather events.
- Minimize the risk of damage, disturbance, or destruction of third-party property during the performance of Maintenance Services.
- Coordinate with and enable TxDOT and others with statutory duties or functions in relation to the Project to perform such duties and functions.
- Perform systematic Project inspections, operational work, periodic maintenance, and routine maintenance in accordance with the provisions of Maintenance Contractor's Maintenance Management Plan and Maintenance Contractor's Maintenance Safety Plan and the COMA Documents.
- Promptly investigate reports or complaints received from all sources.

In carrying out the Maintenance Services, where there is a requirement for design, the Maintenance Contractor shall ensure that the Project is restored either to the original design used for the construction of the Project, or to a different design that shall be in accordance with the requirements for design set forth in the Contract Documents.

Maintenance Contractor shall submit an annual report to TxDOT by each anniversary of the Initial Maintenance Term Commencement Date. This annual report shall include the following elements:

- An assessment of the actual Maintenance Services achievements versus the planned goals established in the Maintenance Management Plan, as well as corrective actions and measures to be taken in the ensuing year to ensure that any shortcomings are corrected;
- An assessment of compliance with the various traffic control requirements and limitations contained in Section 3.4 and the traffic control plans developed in accordance with Section 1200, as well as any corrective measures taken to correct any breach or violation of such requirements and limitations and any corrective measures necessary to prevent such future breach or violation of such requirement and limitations;
- A report of the quality inspections and tests performed, the results of such inspections and tests, and occurrences and resolution of nonconformance discoveries.

On or about the Effective Date of termination of Maintenance Services, the Maintenance Contractor shall submit to TxDOT a complete set of Record Drawings. The Record Drawings and Documentation shall be an organized, complete record of drawings and supporting calculations and details that accurately represent what the Maintenance Contractor constructed. Maintenance Contractor shall ensure that the Record Drawings reflect the actual condition of the Maintenance Services construction.

Maintenance Contractor's Maintenance Manager shall be responsible to oversee and perform the Maintenance Services in accordance with the COMA including ensuring proper training of its maintenance personnel and resources available for conducting Maintenance Services. Maintenance Manager shall be responsible for the health and safety of personnel involved with Maintenance Services and the general public affected by the Project and shall serve as the point of contact for Maintenance Contractor in communication with TxDOT and in coordination activities with other entities during emergency events.

### **0110 Performance Requirements**

Maintenance Contractor is responsible for performing all activities necessary to satisfy the Performance Requirements set forth in Attachment 1 with respect to the Maintained Elements. Failure to meet a Performance Requirement, whether through failure to meet the Target for any relevant measurement record, or for any other reason, shall be deemed to be a Defect. Whenever a Defect is identified, either by Maintenance Contractor's inspections, by TxDOT or any third party, Maintenance Contractor shall act to remedy, repair and record the Defect as described herein.

The remedy or repair of any Maintained Element shall meet or exceed the standard identified in the column entitled "Target" in Attachment 1 to this Maintenance Specification and a Maintenance Record shall be created by Maintenance Contractor to verify that this requirement has been met.

The period for 'Response To Defects' set forth in Attachment 1 to this Maintenance Specification shall be deemed to commence upon the Maintenance Contractor becoming aware of the Defect.

Where action is taken to remedy or repair any Defect in any Maintained Element of the Project, Maintenance Contractor shall create a Maintenance Record that identifies the nature of the remedy or repair. Maintenance Contractor shall include within the relevant Maintenance Record

a measurement record compliant with the requirements set forth in the column entitled "Measurement Record" in the Attachment 1 to this Maintenance Specification.

Should Maintenance Contractor propose any changes to Attachment 1 Maintenance Contractor shall propose for TxDOT's approval such amendments to the inspection and measurement methods and measurement records as are necessary to cause these to comply with this Maintenance Specification.

### **0120 Maintenance Management Plan**

On or before 60 days after the date of issuance of Maintenance NTP1, Maintenance Contractor shall prepare and submit, for TxDOT's review and approval, a Maintenance Management Plan (MMP). Approval by TxDOT of the MMP shall be a condition precedent to the performance of Maintenance Services.

The MMP is an umbrella document that describes the Maintenance Contractor's managerial approach, strategy, and quality procedures to maintain the Project and achieve all requirements of the COMA Documents. The MMP shall define the process for maintenance of the Project throughout the Maintenance Term. Unless otherwise agreed by Texas Department of Transportation (TxDOT), the MMP shall be consistent with the maintenance approach and MMP submitted with the Proposal.

The MMP shall include Performance Requirements, measurement procedures, threshold values at which maintenance is required, inspection procedures and frequencies, and subsequent maintenance to address noted deficiencies, for each Maintained Element of the Project in accordance with Attachment 1, including impacts to adjacent and connecting roadways, in addition to the general sequence of Maintenance Services and schedule deadlines. The MMP shall identify response times to mitigate hazards, permanently remedy, and permanently repair Defects. Response times shall be in accordance with Attachment 1. Maintenance Contractor shall update this plan as required, or at least annually.

The MMP shall include procedures for managing records of inspection and Maintenance Services, including appropriate measures for providing protected duplication of the records. Inspection and Maintenance Records shall be kept for the Maintenance Term and shall be provided to TxDOT at the time the Project is delivered to TxDOT, at either the expiration of the Maintenance Term or earlier termination of the Agreement. All records obtained during the Warranty Periods shall be kept and provided to TxDOT at the end of the last Warranty Period.

The MMP shall include a schematic clearly illustrating the limits, using auditable sections per Section 0130.

### **0130 Auditable Sections**

Maintenance Contractor shall implement the Texas Reference Marker System and shall establish Auditable Sections referenced to the Texas Reference Marker System used by TxDOT.

Maintenance Contractor shall prepare drawings identifying the Auditable Sections and shall submit to TxDOT for approval as a condition precedent to commencing Maintenance Services. The drawings shall identify the boundaries of each Auditable Section and shall cross reference to an inventory describing each Maintained Element of the Project contained within each Auditable Section.

#### **0140 Incident Management**

As part of the MMP, Maintenance Contractor shall prepare and implement an Incident Management Plan (IMP) to address incident and emergency response, including:

- Procedures to identify Incidents and notify Emergency Services providers and establish traffic control for Incident management activities in a timely manner;
- Procedures for removal of stalled, broken down, wrecked or otherwise incapacitated vehicles from the travel lane, including coordination with Emergency Services/Law enforcement;
- Procedures to institute all measures to clear the Incident and return lane availability within one hour of notification;
- Procedures for cleanup of debris, oil, broken glass, etc. and other such objects foreign to the roadway surface;
- Procedures to identify, contain, and dispose all hazardous material spill;
- Procedures for providing services for automobile towing of Users' light and heavy vehicles at the Users' expense;
- Descriptions of contact methods, personnel available, and response times for any Emergency condition requiring attention during off-hours.

Where an Incident or Emergency has an effect on the operation of the Project, Maintenance Contractor shall clear obstructions and repair damage to the Project under the supervision of the relevant Emergency Services if necessary, such that the Project is returned to normal operating standards and safe conditions as quickly as possible.

Where liquid or soluble material spills are involved, Maintenance Contractor shall take all necessary measures to minimize pollution of watercourses or groundwater. Where structural damage to structures is suspected, Maintenance Contractor shall cause that a suitably qualified bridge engineer or specialist inspector is available to evaluate the structure and to advise on temporary repairs and shoring needed to provide safe clearance of the Incident or Emergency. Where such an Incident or Emergency involves a personal injury, Maintenance Contractor shall not remove any vehicle or other item that may assist a potential investigation by Emergency Services until authorized to do so by such agency or agencies.

#### **0150 Capital Asset Replacement Work**

The MMP shall include Maintenance Contractor's proposals for Capital Asset Replacement Work. Capital Asset Replacement Work shall mean all major repairs, rehabilitation and replacements of the Maintained Elements necessary to meet the required level of performance under the COMA Documents that can not be achieved by means of routine or preventative maintenance.

As part of the MMP required, Maintenance Contractor shall prepare and submit, for TxDOT's review and approval, a Capital Asset Replacement Work Submittal which includes the timing, scope, and nature of work that Maintenance Contractor proposes during each year. Maintenance Contractor shall set forth, by Maintained Element:

- The estimated Useful Life;
- The description of the Capital Asset Replacement Work anticipated to be performed at the end of the Maintained Element's Useful Life;

- A brief description of any Capital Asset Replacement Work anticipated to be performed before the end of the Maintained Element's Useful Life including reasons why this work should be performed at the proposed time; and
- Capital Asset Replacement Work Schedule as described in Section 0220.

On or before 60 days after the issuance of Maintenance NTP1, as part of the MMP, the Maintenance Contractor shall submit the first Capital Asset Replacement Work Submittal to TxDOT for review.

Not later than 120 days before each anniversary of the Initial Maintenance Term Commencement Date thereafter, Maintenance Contractor shall prepare and submit, for TxDOT's review and approval, either: (a) a revised Capital Asset Replacement Work Submittal for the upcoming year or (b) the then-existing Capital Asset Replacement Work Submittal, accompanied by a written statement that Maintenance Contractor intends to continue in effect the then-existing Capital Asset Replacement Work Submittal without revision for the upcoming year (in either case, referred to as the "updated Capital Asset Replacement Work Submittal"). Maintenance Contractor shall make revisions as reasonably indicated by experience and then-existing conditions respecting the Project, changes in technology, changes in Maintenance Contractor's planned means and methods of performing the Capital Asset Replacement Work, and other relevant factors. The updated Capital Asset Replacement Work Submittal shall show the revisions, if any, to the prior Capital Asset Replacement Work Submittal and include an explanation of reasons for revisions. If no revisions are proposed, Maintenance Contractor shall include an explanation for the lack of revisions.

#### **0160 Maintenance Management System**

Maintenance Contractor shall implement a computer based Maintenance Management System (MMS), compatible with TxDOT MMS, to record inventory, failures, repairs, maintenance activities and inspections performed.

The MMS shall include relevant Maintained Element information including but not limited to, location to the nearest tenth mile, using the posted reference marker number, Geographic Information System (GIS) data and control number for bridge class structures, asset description, date of installation, type of failure, date-time of failure, date-time of response to the site and date-time returned to service, preventive maintenance work, scheduled work, work repair code, time of failure, to time of repair. The MMS shall be configured to report work by TxDOT "function code" shown in [Attachment 7](#), Maintained Element, reference marker, and unit of measurement, as the same described in the MMS User Manual, to categorize the Maintenance Services performed by the Maintenance Contractor.

The MMS system shall be able to record all complaints/service requests and Maintenance Contractor shall report weekly to TxDOT, on a format approved by TxDOT, information on any complaints or service requests received by the Maintenance Contractor. This information will include the following:

- The date and time of the complaint;
- The location and nature of the problem;
- Injuries and police involvement, including agency, name and badge number;
- Who made the complaint; and
- Date and action taken to address the complaint.

The MMS system shall be able to record all accidents/Incidents. The Maintenance Contractor shall report in writing to TxDOT, no later than the 15th of each calendar month on a format approved by the TxDOT, information from the previous month on any accident or Incident related to Maintenance Services being performed by Maintenance Contractor or within a work zone, including:

- accidents involving Maintenance Contractor or any Subcontractor personnel, equipment, barricades or tools;
- traffic accidents within the limits or in the vicinity of any Maintenance Services being performed by Maintenance Contractor or any Subcontractors;
- Releases of Hazardous Materials;
- any accident involving Maintenance Contractor or the traveling public that causes damage to any Project appurtenance, structure, improvement or fixture.
- with respect to any accident/Incident, the information provided shall include as a minimum:
  - The date and time of the accident/Incident;
  - The location of the problem;
  - The nature of the problem;
  - All parties involved in the Incident, including names, addresses, telephone numbers and their involvement (including witnesses);
  - Responsible party and insurance information;
  - Action taken to address the Incident; and
  - Documentation of traffic control in place at location.

When a Maintained Element is constructed, installed, maintained, inspected, modified, replaced or removed, Maintenance Contractor shall update the MMS within three days of completion of such work. Defects shall be recorded on the MMS within 3 days of coming to the attention of Maintenance Contractor. All other recording requirements shall be recorded on the MMS within 15 days of completion or occurrence of the relevant activity.

The MMS shall be fully populated and operational prior to the commencement of Maintenance Services and kept updated and operational for the duration of the Maintenance Term. Maintenance Contractor shall provide equipment, facilities and training necessary to permit remote, real-time, dedicated high-speed access to the MMS, via one terminal each, for TxDOT. Maintenance Contractor shall handover the MMS and everything required for its operation to TxDOT, or other entity as directed by TxDOT, upon expiration or earlier termination of Maintenance Term.

### **0170 Maintenance Services Quality Control Plan**

Within 60 days after issuance of Maintenance NTP1, Maintenance Contractor shall submit a comprehensive quality control plan ("Maintenance Services Quality Control Plan") to TxDOT for approval that is consistent with and expands upon the preliminary Quality Management Plan submitted with the Proposal.

The Maintenance Services Quality Control Plan (Maintenance Services QCP) shall capture all Work performed by Maintenance Contractor and its Subcontractors and shall contain detailed procedures for the Maintenance Contractor's quality control activities including a complete description of the quality policies and objectives that Maintenance Contractor shall implement throughout its organization. The policies shall demonstrate Maintenance Contractor senior

management's commitment to implement and continually improve the maintenance quality system.

The Maintenance Services QCP shall contain detailed descriptions of the inspection and test plans, including the timing and frequency of testing, as well as detailed systems and procedures for the following:

- Control of quality records
- Management reviews
- Resource allocation
- Measurement of customer satisfaction
- Control of nonconforming products and services
- Internal audits

Maintenance Contractor shall update the Maintenance Services QCP as needed to ensure current versions of the following information are contained in said plan:

- The organizational chart that identifies all quality management personnel, their roles, authorities and line reporting relationships;
- Descriptions of the roles and responsibilities of all quality management personnel and those who have the authority to stop activities;
- Identification of testing agencies, including information on each agency's capability to provide the specific services required for the activities, certifications held, equipment, and location of laboratories; and
- Resumes for all quality management personnel.

Maintenance Contractor shall revise its Maintenance Services Quality Control Plan when its own quality management organization detects a repeating or fundamental non-conformance in the work performed or in the manner the Maintenance Services are inspected or tested, or when TxDOT advises the Maintenance Contractor of such a problem.

The Maintenance Services Quality Control Plan shall be consistent with current versions of ISO standards relating to quality and audit as updated by the International Standards Organization. Maintenance Contractor may elect to obtain formal ISO quality certification, but will not be required to do so.

Quality terminology, unless defined or modified elsewhere in the COMA Documents, shall have the meaning defined in BS ISO 9001. Terms used in BS ISO 9001 shall have the meanings defined below:

- Organization - the Maintenance Contractor's organization, including any Affiliates and Subcontractors
- Customers - the Users of the roadways, TxDOT, Customer Groups, and key stakeholders that have an adjacent property interest or connecting roadway
- Suppliers - Contractors
- Product - Maintenance Services
- Quality control - the part of quality management focused on fulfilling quality requirements
- Quality Management Plan - the Maintenance Services Quality Control Plan

Maintenance Contractor shall make all quality records available to TxDOT for review upon TxDOT's request and shall submit to TxDOT the results of all internal audits within seven Days of their completion.

Maintenance QC Manager shall be responsible to see the methods and procedures contained in approved Maintenance Services QCP are implemented and followed by Maintenance Contractor and Subcontractors in the performance of the Maintenance Services. Maintenance QC Manager shall be a Registered Professional Engineer.

#### **0180 Maintenance Safety Plan**

Within in 60 days of issuance by TxDOT of Maintenance NTP1, Maintenance Contractor shall submit to TxDOT for approval a comprehensive safety plan ("Maintenance Safety Plan") that is consistent with and expands upon the preliminary Safety and Health Plan submitted with the Proposal. The Maintenance Safety Plan shall fully describe the Maintenance Contractor's policies, plans, training programs, and work site controls to ensure the health and safety of personnel involved in the Project and the general public affected by the Project during the Maintenance Term.

Maintenance Contractor's Maintenance Safety Plan shall address procedures for immediately notifying TxDOT of all Incidents arising out of or in connection with the performance of the Maintenance Services, whether on or adjacent to the Project.

#### **0190 Management of Communications between Maintenance Contractor and TxDOT**

Within 60 days after issuance of Maintenance NTP1, Maintenance Contractor shall submit a comprehensive communications plan ("Maintenance Communications Plan") to TxDOT for approval that is consistent with and expands upon the preliminary communications plan submitted with the Proposal.

The Maintenance Communications Plan shall describe the processes and procedures for communication of Project information between the Maintenance Contractor's organization and TxDOT and shall describe how the Maintenance Contractor's organization will respond to unexpected requests for information, communicate changes or revisions to necessary Maintenance Contractor personnel, and notify TxDOT before and after changes are made to the COMA Documents.

Maintenance Contractor shall maintain and update the Maintenance Communications Plan as the Maintenance Term progresses.

#### **0200 Maintenance Transition Plan**

Within 60 days after issuance by TxDOT of Maintenance NTP1 of this Comprehensive Maintenance Agreement, Maintenance Contractor shall submit a comprehensive Maintenance Transition Plan to TxDOT which includes the following items:

- Maintenance Transition punch list
- List and status of equipment Warranties
- Vendors' test reports
- Maintenance Contractor's test reports
- As-built drawings for Capital Asset Replacement Work
- Maintenance Records (including NBIS records)



- Copies of Warranty and service contracts
- List of spare parts purchased as part of the Maintenance Services

To the extent any of these elements have changed at 60 Days prior to the expiration of the maintenance term or upon earlier termination, Maintenance Contractor shall update the Maintenance Transition Plan and submit it to TxDOT.

Maintenance Contractor shall coordinate the identification of Maintenance Transition punch list items required to be completed by Maintenance Contractor prior to maintenance transfer. Maintenance Transition punch list shall include (a) estimated completion dates, (b) responsible Party(s), and (c) items that must be completed prior to maintenance transfer. Maintenance Contractor shall be responsible to prepare (in conjunction with TxDOT), administer and complete all items on the Maintenance Transition punch list to the satisfaction of TxDOT prior to the transfer of maintenance responsibilities to TxDOT.

The Maintenance Contractor shall coordinate with TxDOT to achieve a smooth transition of Maintenance Services from and to TxDOT.

### **0210 Maintenance Document Management Plan**

Maintenance Contractor shall establish and maintain an electronic document control system (“Maintenance Document Management Plan”) to store, catalog, and retrieve all Project-related documents in a format compatible with Texas Reference Marker System used by TxDOT. Unless otherwise directed by TxDOT, record retention shall comply with the requirements of the Texas State Records Retention Schedule.

### **0220 Maintenance Services Deliverables Schedule**

Developer recognizes the importance of the schedules for defining the time-frame for the maintenance of the Project and the achievement of the milestones, monitoring the progress of Maintenance Services and denoting changes that occur. Within 60 days after issuance of Maintenance NTP1 and periodically thereafter as required under the COMA Documents, Maintenance Contractor shall prepare a Maintenance Services Deliverables Schedule and shall submit it to TxDOT for review and approval. Approval of the Maintenance Services Deliverables Schedule shall be a condition precedent to commencing Maintenance Services.

The Maintenance Services Deliverables Schedule shall include all Maintenance Services major activities required under the COMA Documents, in sufficient detail to monitor and evaluate progress during the Maintenance Term(s) including maintenance and interfaces with other projects, third parties and Governmental Entities.

For each activity, Maintenance Contractor shall indicate the duration (in Days) required to perform the activity and the anticipated beginning and completion date of each activity. In addition, the Maintenance Services Deliverables Schedule shall indicate the sequence of performing each activity and the logical dependencies and inter-relationships among the activities.

Maintenance Contractor shall assign the WBS structure consistently and uniformly among all similar activity types in the Maintenance Services Deliverables Schedule and shall develop the WBS with clearly identifiable linkage to the Schedule Activities.

The Maintenance Services Deliverables Schedule shall include a listing of all submittals as called out in the COMA Documents. Submittal activity durations shall include specific durations for TxDOT review and/or approval of the Maintenance Contractor’s submittals as called out elsewhere in the COMA Documents.

With the exception of activities relating to Environmental Approvals by Governmental Entities, each activity depicting the Maintenance Contractor's maintenance operations shall have duration of not more than 20 Days, and not less than one Day, except as otherwise approved by TxDOT.

Maintenance Contractor shall update the approved Maintenance Services Deliverables Schedule to reflect the current status of the Project, including approved Change Orders or provide a notification of no change to the current schedule, on at least a monthly basis. Each Maintenance Services Deliverables Schedule update shall accurately reflect all activities as of the Effective Date of the updated schedule and shall include a schedule narrative report which describes the status of the Maintenance Services in detail.

Maintenance Contractor shall develop a Capital Asset Replacement Work Schedule in accordance with Section 2 of the Technical Provisions.

Maintenance Contractor shall submit a hardcopy of the schedule on full-size (11" x 17") color plot sheets, as well as an electronic version of the schedule in its native format for each submittal of the schedule along with a narrative.

Float shall not be considered as time for the exclusive use of or benefit of either TxDOT or the Maintenance Contractor but shall be considered as a jointly owned, expiring resource available to the Project and shall not be used to the financial detriment of either Party. Any method utilized to sequester Float calculations will be prohibited without prior approval of TxDOT. Any schedule, including the Capital Asset Replacement Work Schedule and all updates thereto, showing an early completion date shall show the time between the scheduled completion date and the applicable deadline as "Project Float."

### **0230 Inspections**

Maintenance Contractor shall establish inspection procedures and a plan to implement a program of inspections of the Project to be included within the Maintenance Services Work Deliverables Schedule that:

- verifies the continuing safety of the Project for Users;
- prioritizes Category 1 Defects;
- ensures that all Category 1 Defects are identified and repaired such that the hazard to Users is mitigated within the period given in the column entitled "Category 1 Hazard Mitigation" in Attachment 1 to this Maintenance Specification;
- ensures that all Category 1 Defects are identified and permanently remedied within the period given in the column entitled "Category 1 Permanent Remedy" in Attachment 1 to this Maintenance Specification;
- identifies Category 2 Defects to be included for repair either within Maintenance Contractor's annually recurring highway maintenance and repair program or as Capital Asset Replacement Work;
- ensures that all Category 2 Defects are identified and permanently repaired within the period given in the column entitled "Category 2 Permanent Repair" in Attachment 1 to this Maintenance Specification;
- is responsive to reports or complaints received from Customer Groups;

- takes account of Incidents and Emergencies affecting the Project;
- monitors the effects of extreme weather conditions; and
- collates data to monitor performance of the Project and to establish priorities for future maintenance operations and Capital Asset Replacement Work.

Maintenance Contractor shall ensure that personnel performing inspections of road pavements and structures are certified as inspectors and/or raters in accordance with TxDOT’s PMIS program or applicable certifying agency for the type of inspection being performed. Inspections, reviews, and testing performed in respect of Maintenance Services shall only be performed by personnel with appropriate training and qualifications, using appropriate equipment that is accurately calibrated and maintained in good operating condition at an AMRL (AASHTO R18, “Establishing and Implementing a Quality System for Construction Materials Testing Laboratories”) accredited facility, or at a facility with comparable certification (e.g. ISO 17025, “General requirements for the competence of testing and Calibration laboratories”).

The periods stated in Attachment 1 to this Maintenance Specification under the headings of Category 1 Defects and Category 2 Defects shall be deemed to start upon the date Maintenance Contractor first obtained knowledge of, or first reasonably should have known of, the defect. For this purpose Maintenance Contractor shall be deemed to first obtain knowledge of the failure not later than the date of delivery of the initial notice to Maintenance Contractor. Maintenance Contractor shall investigate reports and complaints on the condition of the Project received from all sources. Maintenance Contractor shall record such reports and complaints as Maintenance Records together with details of all relevant inspections and actions taken in respect of Defects, including temporary protective measures and repairs.

In performing inspections to identify Category 1 and Category 2 Defects, Maintenance Contractor shall, for any Maintained Element, conform at a minimum to the inspection standards set forth for that Maintained Element in the column entitled “Inspection and Measurement Method” on Attachment 1 to this Maintenance Specification.

Maintenance Contractor shall perform General Inspections in accordance with the MMP so that the repairs of all Defects are included in planned programs of work.

Maintenance Contractor shall record details of the manner of inspection (e.g. center Lane Closure or shoulder), the weather conditions and any other unusual features of the inspection, on O&M Records in respect of General Inspections.

Maintenance Contractor shall undertake Specialist Inspections for Maintained Elements listed in Table 1 and shall include the inspection results as Maintenance Records.

Table 1 – Specialist Inspections

<b>Maintained Element</b>	<b>Specialist Inspection</b>
All Maintained Elements in Element Category ‘Roadway’ in Attachment 1 to this Maintenance Specification	Annual survey of pavement condition for the entire Project, including main lanes, ramps, and frontage roads, undertaken using automated condition survey equipment to measure all necessary criteria including: ruts, skid resistance and ride quality according to the inspection and measurement methods set forth in Attachment 1 to this Maintenance Specification
All Maintained Elements in Element Category ‘Structures’ in Attachment 1	Inspections and load rating calculations at the frequency specified in the COMA Documents. In addition, NBIS inspections as per FHWA regulations and at the frequency



	<p>for each Element within each Auditable Section), and</p> <ul style="list-style-type: none"> <li>• Is in fair condition, but suggesting need for early replacement, renewal or repair of individual Element and/or maintenance or operation improvement action to meet Performance Requirement.</li> </ul>
2	<ul style="list-style-type: none"> <li>• Targets for individual Elements are barely met (less than 75% compliance and 50% or greater compliance with the relevant Targets for each Element within each Auditable Section), or</li> <li>• In poor condition demonstrating need for immediate replacement, renewal or repair of individual Element and/or immediate change to MMP.</li> </ul>
1	<ul style="list-style-type: none"> <li>• Targets for individual Elements are not met (less than 50% compliance with the relevant Targets for each Element within each Auditable Section), or</li> <li>• In very poor condition demonstrating need for immediate replacement, renewal or repair of individual Element and/or immediate change to MMP.</li> </ul>

Notes to Table 2:

1. The Asset Condition Score for any Element Category shall be determined by the lowest Asset Condition Score for any Element within the Element Category. The calculation of Asset Condition Score is demonstrated by the following example:

Assume there are 52 Auditable Sections, of these 25%, or 13 are audited each quarter. If there are five Targets to be assessed for Element “pavement markings”, there are therefore  $5 \times 13 = 65$  measurement records for pavement markings. If 62 of these measurement records meet the Target, there would be 95.38% compliance and an Asset Condition Score of five assigned for that Element. However, if one of the remaining Elements in the Element Category achieves an Asset Condition Score of four the Asset Condition Score for the Element Category shall be four.

2. The mean of the Asset Condition Scores across Elements in any Element Category is calculated to 1 decimal point and also recorded.

3. Where a measurement record relates to a service measured over time or an Element that is not represented in more than 25% of Auditable Sections then the Asset Condition Score will be based on the total service and not a 5% random sample. This applies to the performance measurement of Element Categories: structures, traffic signals, Incident response, customer service, snow and ice control, and facility buildings or other Element Categories meeting the above criteria identified following establishment of the Auditable Sections.

4. Maintenance Contractor acknowledges that Asset Condition Score is a mechanism to benchmark the performance of the Project against the performance of other similar facilities and that TxDOT may, during the Term, alter the Asset Condition Score criteria to reflect Good Industry Practice.

5. “Mean” in this context shall be the arithmetic mean.

Where specific Measurement criteria are not provided in Attachment 1 to this Maintenance Specification, Maintenance Contractor shall use Good Industry Practice to assess the Asset Condition Score against the general criteria stated in Table 2.

### **0260 Hazardous Materials Management Plan**

Maintenance Contractor shall prepare a Hazardous Materials Management Plan (HMMP) for the safe handling, storage, treatment and/or disposal of Hazardous Materials, whether encountered at or brought onto the Project Site by the Maintenance Contractor, encountered or brought onto the Project site by a third party, or otherwise, during the Maintenance Term. Maintenance Contractor shall submit the final HMMP to TxDOT for review and approval in its good faith discretion within sixty (60) Days of Maintenance NTP1; approval of the Plan by TxDOT shall be a condition of commencement of Maintenance Services.

- a) The HMMP shall provide the identification and contact information for designated responsible individuals in the management of Hazardous Materials, include procedures compliant with all applicable Environmental Laws and include, at a minimum:
- b) Procedures for updating Material Safety Data Sheets (MSDS), per OSHA requirements, for all chemicals used on the Project for the Maintenance Term;
- c) Designated individuals responsible for implementation of the plan;
- d) Procedures for identifying and documenting potential contaminated sites which might impact Project development;
- e) Procedures for mitigation of contamination during the operation and maintenance of the Project;
- f) Procedures for developing a detailed Spill Response Plan for the Maintenance Term;
- g) Processes for training personnel for responding to and mitigating Incidents involving contamination or waste;
- h) Provisions for appropriate storage and disposal of all waste encountered or disposed of on the Project for the Maintenance Term;
- i) Provisions for a Hazardous Materials training module; and
- j) Procedures for preparing an Investigative Work Plan (IWP) and Site Investigative Report (SIR) in the event that Hazardous Materials are discovered during operations or maintenance activities.

The HMMP shall include provisions for making all on-Site workers aware of and able to recognize the potential Hazardous Materials to which they may be exposed, limiting Maintenance Contractor's workers' exposure to Hazardous Materials and providing all necessary personal protection equipment to protect workers from exposure. The HMMP shall require Maintenance Contractor to provide any non-Maintenance Contractor personnel who visit the Project with the appropriate personal protection equipment.

The HMMP shall require that all personnel of Maintenance Contractor-Related Entities handling Hazardous Materials be trained and certified at least to the minimum requirements established under the current guidelines of OSHA 1910.120 (HAZWOPER Training).

The HMMP shall include procedures for ensuring that all applicable certifications, licenses, authorizations and Governmental Approvals for Maintenance Contractor personnel handling Hazardous Materials are current and valid through the duration of the Work.

## **TRAFFIC MANAGEMENT**

### **1100 General Requirements**

Throughout the Maintenance Term, Maintenance Contractor shall conform with the requirements set forth herein, and shall provide for the safe and efficient movement of people, goods, and services, through and around the Project, while minimizing negative impacts to Users, residents, and businesses.

While planning and carrying out Maintenance Services, Maintenance Contractor shall take into account the restrictions (if any) set forth in Attachment 6 to this Maintenance Specification and shall coordinate its Traffic Management Plan (TMP) with the traffic management to be performed by others to minimize disruption to Users of the Project.

### **1120 Traffic Management and Control Plans**

Within 60 days after issuance of Maintenance NTP1, Maintenance Contractor shall submit to TxDOT for approval a comprehensive traffic plan ("Traffic Management Plan" or "TMP") that is consistent with and expands upon the preliminary Traffic Management Plan submitted with the Proposal. The TMP shall be implemented, maintained and used throughout the Maintenance Term. At a minimum, the TMP shall include the following:

- Descriptions of the qualifications and duties of the traffic engineering manager, traffic control coordinator, and other personnel with traffic control responsibilities
- Procedures to identify and incorporate the needs of transit operators, Utility Owners, Governmental Entities, local governmental agencies, Emergency Service providers, school districts, business owners, and other related Users, Customer Groups or entities in the Project corridor and surrounding affected areas
- Procedures for obtaining acceptance of detours, road and Lane Closures and other traffic pattern modifications from applicable Governmental Entities, stakeholders, and adjacent sections of roads and adjacent landowners, and implementing, maintaining and removing those modifications
- Procedures for installation, maintenance and removal of interim signing and the corresponding handling of permanent signing during maintenance operations
- Procedures for installation, maintenance, replacement and removal of traffic control devices, including pavement markings and traffic barriers, if used
- Procedures and process for the safe ingress and egress of construction vehicles in the work zone
- Provisions to provide continuous access to established truck routes and Hazardous Material (HazMat) routes, and to provide suitable detour routes, including obtaining any approvals required by the appropriate Governmental Entities for these uses
- Procedures to modify plans as needed to adapt to changing Project circumstances
- Procedures to communicate TMP information to Maintenance Contractor's public information personnel and notify the public of maintenance of traffic issues
- Descriptions of contact methods, personnel available, and response times for any Emergency conditions requiring TxDOT attention during off-hours.

Within 30 days after TxDOT's approval of the Traffic Management Plan, Maintenance Contractor shall prepare and submit, for TxDOT's review, traffic control plans as described

herein. Each traffic control plan shall be submitted to TxDOT for review a minimum of 10 Days prior to implementation.

Maintenance Contractor shall use the procedures in the TMP and the standards of the TMUTCD to develop detailed traffic control plans that provide for all Maintenance Services, as well as all required switching procedures. The traffic control plans shall include details for all detours, traffic control devices, striping, and signage applicable to each Maintenance Activity event. Information included in the traffic control plans shall be of sufficient detail to allow verification of design criteria and safety requirements, including typical sections, alignment, striping layout, drop off conditions, and temporary drainage. The traffic control plans shall clearly designate all temporary reductions in speed limits. Changes to posted speed limits will not be allowed unless specific prior approval is granted by TxDOT.

### **1130 Traffic Operation Restrictions**

Maintenance Contractor shall keep the number of Lane Closures to an absolute minimum and shall keep each Lane Closure to the shortest time necessary for safe and efficient operations and in accordance with Attachment 6. If Maintenance Contractor violates such requirements and restrictions, Maintenance Contractor shall be subject to liquidated damages in accordance with Section Error! Reference source not found. of the COMA.

Maintenance Contractor shall ensure that opposing traffic on a normally divided roadway shall be separated with appropriate traffic control devices, shall maintain signing continuity within or intersection the project at all times, and shall ensure all streets and intersections remain open to traffic to the greatest extent possible.

Maintenance Contractor shall maintain access to all adjacent streets and shall provide for ingress and egress to public and private properties at all times.

### **1140 Construction Requirements**

Construction shall be in accordance with Maintenance Contractor's TMP, the manufacturer's directions or recommendations where applicable, and the applicable provisions of the TMUTCD. If at any time TxDOT determines Maintenance Contractor's traffic control operations do not meet the intent of the TMP or any specific traffic control plan, Maintenance Contractor shall immediately revise or discontinue such operations to correct the deficient conditions

Maintenance Contractor shall provide TxDOT the names of the traffic control coordinator and support personnel, and the phone number(s) where they can be reached 24 hours per day, seven days per week.

Maintenance Contractor shall maintain existing bicycle and pedestrian access and mobility with the frontage roads and across all cross streets. Maintenance Contractor shall maintain Access to existing transit stop locations during construction or reasonable alternative locations shall be provided.

Maintenance Contractor shall maintain all detours in a safe and traversable condition. Maintenance Contractor shall provide a pavement transition at all detour interfaces, suitable for the posted speed of the section.

### **1150 Public Information and Communications**

It is vital to the success of the Project that TxDOT and the Maintenance Contractor gain and maintain public support. The public will better support TxDOT and the Maintenance Contractor if they are kept abreast of Project information in a timely manner, are notified in advance of potential impacts, have an opportunity to identify issues and recommend solutions, receive



timely and appropriate feedback from the Maintenance Contractor, and perceive a high quality, well executed communications plan for keeping them informed, engaged, and educated.

Maintenance Contractor shall provide information within 24 hours of a request by TxDOT, such that TxDOT may communicate such information to interested parties.

Maintenance Contractor shall meet the requirements of Section 3 of the Technical Provisions during the performance of Capital Asset Replacement Work and Renewal Work activities.

## **1160 Additional Requirements**

### **1161 RAIL**

Should the Project cross a railroad right of way owned by an operating railroad, Maintenance Contractor shall coordinate the Maintenance Services with the operating railroad and shall be responsible for obtaining the required approvals, permits, and agreements as required for the Maintenance Services, including any railroad related Maintenance Services.

Whenever an agreement for construction, maintenance and use of railroad right-of-way between the operating railroad and TxDOT is required, Maintenance Contractor shall prepare all the documentation required to obtain the agreement, including preparation of the agreement application on behalf of TxDOT, the drawings and specifications, making necessary modifications as required, and preparation of the agreement. Maintenance Contractor shall submit the draft agreement to TxDOT for transmittal to the operating railroad. After all comments have been incorporated or satisfactorily resolved by Maintenance Contractor, railroad or TxDOT, Maintenance Contractor shall submit a complete and final agreement to TxDOT for execution.

Maintenance Contractor shall arrange with the operating railroad for railroad flagging as required. Maintenance Contractor shall comply with the operating railroad's requirements for contractor safety training prior to performing Maintenance Services or other activities on the operating railroad's property.

Maintenance Contractor shall cooperate and coordinate with all operating railroads for access by the operating railroad and/or their agents to the rail right-of-way as necessary for rail maintenance and operations activities.

Maintenance Contractor shall procure and maintain, prior to working adjacent to and entry upon operating railroad property, insurance policies naming TxDOT, TxDOT's Consultants, and railroad as named insured. Maintenance Contractor shall obtain insurance per Exhibit 10 of the COMA Documents. All insurance policies shall be in a form acceptable to the operating railroad. Copies of all insurance policies shall be submitted to TxDOT prior to any entry by the Maintenance Contractor upon operating railroad property.

Maintenance Contractor shall comply with all construction requirements and specifications set forth by the operating railroad.

Maintenance Contractor shall be responsible for scheduling the work to be completed by operating railroad as well as the work to be completed by its own forces. Maintenance Contractor shall be responsible for all costs associated with the railroad/transit force account work.

### **1162 AESTHETICS AND LANDSCAPING**

TxDOT and Maintenance Contractor acknowledge that plant establishment requirements and obligations are not included within the Maintenance Services, but are part of the DB Contractor's obligations under the Design-Build Agreement for a period of 3 years after the date

of Final Acceptance. However, if a structural or natural failure of the embankment or cut slope occurs in a landscaped area after the 3 year time period expires, the Maintenance Contractor shall be responsible to perform plant establishment activities for 90 calendar days in accordance with Item 192 (Landscape Planting) and Item 193 (Landscape Establishment) of the 2004 TxDOT Standard Specifications for Construction of Highways, Streets, and Bridges.

#### 1162 REHABILITATED PAVEMENT

Within 60 Days prior to the expiration of the final Maintenance Term, Maintenance Contractor shall ensure that the pavement between approximate STA 500+47 and 560+44 shall achieve a pavement condition score of 98 or better in accordance with TxDOT's PMIS program.