NOTIFICATION OF ADDENDUM

ADDENDUM NO. 2

DATED 2/29/2016

Control	**6298-21-001**
Project	**RMC - 629821001**
Highway	**IH0045**
County	**WALKER**

Ladies/Gentlemen:

Attached please find an addendum on the above captioned project. Included in the attachment is an adendum notification which details the changes and the respective proposal pages which were added and/ or changed.

Except for new bid insert pages, it is unnecessary to return any of the pages attached.

Bid insert pages must be returned with the bid proposal submitted to the Department, unless your firm is submitting a bid using a computer print out. The computer print out must be changed to reflect the new bid item information.

Contractors and material suppliers, etc. who have previously been furnished informational proposals are not being furnished a copy of the addendum. If you have a subcontractor on the above project, please advise them of this addendum. Acknowledgment of this addendum is not requested if your company has been issued a proposal stamped “This Proposal Issued for Informational Purposes.”

You are required to acknowledge receipt of this addendum on the Addendum Acknowledgement form contained in your bid proposal by placing a mark in the box next to the respective addendum.

Failure to Acknowledge receipt of this addendum in your bid proposal will result in your bid not being read.

04/99

SUBJECT: PLANS AND PROPOSAL ADDENDUMS

PROJECT: RMC - 629821001 CONTROL: 6298-21-001

COUNTY: WALKER

LETTING: 03/03/2016

REFERENCE NO: 0229

PROPOSAL ADDENDUMS

_ PROPOSAL COVER

_ BID INSERTS (SH. NO.:)

_ GENERAL NOTES (SH. NO.:)

X SPEC LIST (SH. NO.: 2-2)

_ SPECIAL PROVISIONS:

ADDED:

DELETED:

X SPECIAL SPECIFICATIONS:

ADDED: 7081

DELETED:

_ OTHER:

DESCRIPTION OF ABOVE CHANGES
(INCLUDING PLANS SHEET CHANGES)

ADDED MOST RECENT REVISED SPECIAL SPECIFICATIONS 7081.

REVISED PLAN SHEET 2.

ADDEND PLAN SHEET 44.

CONTROL : 6298-21-001
PROJECT : RMC - 629821001
HIGHWAY : IH0045
COUNTY : WALKER

TEXAS DEPARTMENT OF TRANSPORTATION

GOVERNING SPECIFICATIONS AND SPECIAL PROVISIONS

ALL SPECIFICATIONS AND SPECIAL PROVISIONS APPLICABLE TO THIS PROJECT ARE IDENTIFIED AS FOLLOWS:

STANDARD SPECIFICATIONS: ADOPTED BY THE TEXAS DEPARTMENT OF TRANSPORTATION NOVEMBER 1, 2014. STANDARD SPECIFICATIONS ARE INCORPORATED INTO THE CONTRACT BY REFERENCE.

ITEMS 1 TO 9 INCL., GENERAL REQUIREMENTS AND COVENANTS
ITEM 316 SEAL COAT (210)(300)(302)(340)(520)
ITEM 500 MOBILIZATION <506>
ITEM 662 WORK ZONE PAVEMENT MARKINGS (666)(668)(672)(677)
ITEM 666 RETROREFLECTORIZED PAVEMENT MARKINGS (316)(502)(662)(677)(678)
ITEM 672 RAISED PAVEMENT MARKERS (677)(678)
ITEM 712 CLEANING AND SEALING JOINTS AND CRACKS (ASPHALT CONCRETE) (300)(340)

SPECIAL PROVISIONS: SPECIAL PROVISIONS WILL GOVERN AND TAKE PRECEDENCE OVER THE SPECIFICATIONS ENUMERATED HEREON WHEREVER IN CONFLICT THEREWITH.

SPECIAL PROVISION "SCHEDULE OF LIQUIDATED DAMAGES" (000---001)
SPECIAL PROVISION "NONDISCRIMINATION" (000---002)
SPECIAL PROVISION "IMPORTANT NOTICE TO CONTRACTORS" (000---010)
SPECIAL PROVISION TO ITEM 2 (002---004)
SPECIAL PROVISION TO ITEM 3 (003---008)
SPECIAL PROVISION TO ITEM 4 (004---002)
SPECIAL PROVISION TO ITEM 6 (006---001)
SPECIAL PROVISIONS TO ITEM 7 (007---001)(007---003)(007---004)
SPECIAL PROVISION TO ITEM 300 (300---009)
SPECIAL PROVISION TO ITEM 506 (506---003)

SPECIAL SPECIFICATIONS:

ITEM 6001 PORTABLE CHANGEABLE MESSAGE SIGN
ITEM 7080 SNOW AND ICE CONTROL
ITEM 7081 PERFORMANCE BASED MAINTENANCE OF HIGHWAYS <104><134><162>
<169><192><361><400><416><421><429><431><432><438><440>
<454><471><476><506><550><666><668><672><677><700><712>
<720><730><734><735><738>

GENERAL: THE ABOVE-LISTED SPECIFICATION ITEMS ARE THOSE UNDER WHICH
------- PAYMENT IS TO BE MADE. THESE, TOGETHER WITH SUCH OTHER PERTINENT ITEMS, IF ANY, AS MAY BE REFERRED TO IN THE ABOVE-LISTED SPECIFICATION ITEMS, AND INCLUDING THE SPECIAL PROVISIONS LISTED ABOVE, CONSTITUTE THE COMPLETE SPECIFICATIONS FOR THIS PROJECT.

Special Specification 7081
Performance Based Maintenance of Highways

1. DESCRIPTION

Perform maintenance work, as described herein, on mainlane roadways, frontage roads, shoulders, ramps, intersections, cross streets, roadsides, high-occupancy vehicle (HOV) lanes, bridges, picnic areas, weigh stations, pump stations, truck parking, traffic operations, toll collection facilities, etc., within the limits of work shown on the plans.

Provide resources for identifying (evaluations and reporting), plan for addressing, and resolution of deficiencies in accordance with this Item and the Contract.

1.1. **Existing Agreements.** The Department has agreements with others concerning the highways included in this Contract. A summary of existing agreements indicating locations and responsibilities of others within these areas are provided on the plans.

1.2. **Department Standards.** Unless otherwise approved, work performed and materials used under this Item must conform to the most current version of Department standards.

1.3. **Current, Ongoing, and Proposed Construction Projects.** A list of current, ongoing, and proposed construction and maintenance projects performed by others are shown on the plans. Schedules for these projects will be provided at the Contractor's request. The Contractor will be notified of any additional projects not on this list as they become known.

2. MATERIALS

Furnish materials in accordance with the following:

- Item 134, "Backfilling Pavement Edges,"
- Item 162, "Sodding for Erosion Control,"
- Item 169, "Soil Retention Blankets,"
- Item 192, "Landscape Planting,"
- Item 361, "Repair of Concrete Pavement,"
- Item 416, "Drilled Shaft Foundations,"
- Item 429, "Concrete Structure Repair,"
- Item 432, "Riprap,"
- Item 438, "Cleaning and Sealing Joints,"
- Item 454, "Bridge Expansion Joints,"
- Item 471, "Frames, Grates, Rings, and Covers,"
- Item 506, "Temporary Erosion, Sedimentation, and Environmental Controls,"
- Item 550, "Chain Link Fence,"
- Item 610, "Roadway Illumination Assemblies,"
- Item 613, "High Mast Illumination Poles,"
- Item 614, "High Mast Illumination Assemblies,"
- Item 618, "Conduit,"
- Item 624, "Ground Boxes,"
- Item 628, "Electrical Services,"

- Item 680, “Highway Traffic Signals,”
- Item 618, “Conduit,”
- Item 620, “Electrical Conductors,”
- Item 624, “Ground Boxes,”
- Item 636, “Signs,”
- Item 644, “Small Roadside Sign Assemblies,”
- Item 647, “Large Roadside Sign Supports and Assemblies,”
- Item 650, “Overhead Sign Supports,”
- Item 654, “Sign Walkways,”
- Item 656, “Foundations for Traffic Control Devices,”
- Item 658, “Delineator and Object Marker Assemblies,”
- Item 666, “Retroreflectorized Pavement Markings,”
- Item 668, “Prefabricated Pavement Markings,”
- Item 672, “Raised Pavement Markers,”
- Item 677, “Eliminating Existing Pavement Markings and Markers,”
- Item 678, “Pavement Surface Preparation for Markings,”
- Item 682, “Vehicle and Pedestrian Signal Heads,”
- Item 684, “Traffic Signal Cables,”
- Item 686, “Traffic Signal Pole Assemblies (Steel),”
- Item 687, “Pedestal Pole Assemblies,”
- Item 688, “Pedestrian Detectors and Vehicle Loop Detectors,”
- Item 690, “Maintenance of Traffic Signals,”
- Item 700, “Pothole Repair,”
- Item 720, “Repair of Spalling in Concrete Pavement,”
- Item 730, “Roadside Mowing,”
- Item 734, “Litter Removal,”
- Item 735, “Debris Removal,”
- Item 738, “Cleaning and Sweeping Highways,”
- Item 740, “Graffiti Removal and Anti-Graffiti Coating,”
- Item 764, “Pump Station and Drainage System Cleaning,”
- Item 770, ”Guard Fence Repair,”
- Item 771, “Repair Cable Barrier System
- Item 772, “Post and Cable Fence,”
- Item 774, “Attenuator Repair,”
- Item 776, “Metal Rail Repair,”
- Item 778, “Concrete Rail Repair,”
- Item 780, “Concrete Crack Repair,”
- Item 785, “Bridge Joint Repair or Replacement,”
- Item 6002, “Video Imaging Vehicle Detection System,”
- Item 6025, “Radar Presence Detection Device,”
- Item 6054, “Spread Spectrum Radios for Traffic Signals,”
- Item 6057, “Radar Advance Detection Device (RADD),” and
- Item 6058, “Battery Back-up System for Signal Cabinets.”

Materials must conform to the Contract referenced standard specifications, special specifications, special provisions, or plan standards. Furnish all materials necessary to complete the work. Furnish the Engineer with documentation indicating material compliance with Department specifications prior to installation. New

innovative or alternative materials may be used, if approved. Failure of all materials is the responsibility of the Contractor.

In accordance with Article 9.5, "Progress Payments," progress payments may be withheld for not furnishing material compliance documentation.

3. EQUIPMENT

Furnish all equipment, tools, and machinery necessary for proper execution of the work.

4. WORK METHODS

4.1. **General.** Perform all work described herein whether deficiencies exist at the date time charges begin or occur afterwards.

Perform Contractor assessments. Perform daily monitoring of the roadway and its appurtenances to the extent necessary to discover work prior to discovery by the Department.

Baseline condition will mean the condition established by the baseline condition assessment to the extent described within Table 1 – Assessment Scoring System and calculated according to Table 2 – Sample Condition Assessment Inspection Scoring. The roadway and appurtenances condition on the date time charges begin does not establish any exception to the Contractor's requirement to perform work required in this Item. If roadway or appurtenance improvements are made through other work performed by, or on behalf, of the Department, perform work described herein without additional cost to the Department to maintain in the improved condition.

The Department will obtain environmental permits when required. Display permits at the work location. Do not initiate work in or near creeks, streams, wetlands, or work that will disturb over 1 acre of land without previous approval.

Implement best management practices (BMPs) associated work to comply with environmental commitments per the Department's maintenance programs. Refer to the following link for a summary of BMPs that apply: https://ftp.dot.state.tx.us/pub/txdot-info/env/bmp_summary.pdf.

The safety of the traveling public is of the utmost importance and must take priority in performing work. Repair of damage that is an imminent threat to the traveling public must be initiated with appropriate resources (traffic control, materials, personnel, equipment, etc.) immediately (e.g. less than 1 hr.) upon becoming aware of the damage. Work toward removing the imminent threat and repair of the damage must be scheduled as soon as possible.

Coordinate with other contractors, cities, counties, state, and local law enforcement, utilities, fire departments, health services and other state and federal agencies.

If the Contractor fails to perform work resulting in excessive and unanticipated deterioration of the roadway or its appurtenances, the Contractor will be responsible for all repair to a condition commensurate with the roadway or its appurtenance characteristics, traffic volume, and age at no additional cost.

Time requirements listed in this Item will be measured from deficiency occurrence until the work is completed. Days are defined as calendar days.

4.2. **Submit Work Plans.** Submit monthly and annual work plans to the Engineer. Work plans must include all work identified in the Contractor's assessment (e.g. specifically identified by type, location, and detailed enough to locate) of the roadway and its appurtenances, normal operation/cyclical work, other unit price Contract work directed by the Engineer, work resulting from bridge inspections, and work related to public

service requests or customer complaints. The work plans must be in sufficient detail to provide adequate information to the Engineer of the date, time, work to be performed, traffic control plans to be implemented for each respective work activity, specific location along each roadway, and specific duration of work activities. Submit the monthly work plan by the end of each month for work planned during the following month. Submit the annual work plan within 60 days following the date time charges began as stated in the written notice of authorization to begin work and by the end of August of each year.

4.3. **Perform Maintenance of the Roadway, Bridges and Roadway Appurtenances.** Work required in referenced standard specifications or other special specifications in this Item are required to be performed with exception to the "Measurement" and "Payment" Articles of those Items.

4.3.1. **Traffic Control.** Perform traffic control for all work, condition assessments, accident reconstruction, and emergency operations. Perform traffic control in conformance with the Texas Manual on Uniform Traffic Control Devices (TMUTCD), TxDOT Barricade and Construction Standards (BC), Work Zone Standards (WZ), and TxDOT Traffic Control Plan Standard Sheets (TCP). Unique work situations may require the preparation of individual traffic control plans (TCPs). Submit Contractor-proposed TCP changes, signed and sealed by a licensed professional engineer, for approval. The Engineer may develop, sign, and seal Contractor-proposed changes. Changes must conform to guidelines established in the TMUTCD using approved products from the Department's Compliant Work Zone Traffic Control Device List.

Locations that could pose a hazard to the traveling public must be signed and delineated using appropriate traffic control devices, such as signs, drums, cones, etc.

When the BC, WZ, TCP, or TMUTCD uses the word "should," the word is considered to be replaced with "must" under this Item. The Contractor must present requests for deviation of this replacement prior to implementation for approval.

Any work activity requiring the implementation of temporary traffic control (TTC), as indicated within the TMUTCD, within the traveled way must be limited to the hours indicated in the plans for lane closures including mobile operations except TTC required for incidents. Report all Contractor work scheduled lane closures within the timeframes shown in the plans. If a lane is closed without notifying the Department or extends into hours outside the hours permitted in the plans, it will be considered as non-performance and subject to reduction in payment as stated in Section 6 except TTC required for incidents.

4.3.2. **Pavement Maintenance.** Perform pothole repair, spall repair, isolated pavement rutting, and edge drop off or build up correction.

A pavement maintenance quantity is shown in the plans and applies to all mainlane, direct connector, ramps, frontage roads, and other roadways, including shoulders and bridge approach slabs. The total quantity of repairs applied towards the quantity shown in the plans cap is not cumulative for the term of the Contract and will be reset each year.

Repair potholes, depressions, and raveled or damaged pavement edges in flexible pavement surfaces in accordance with Item 700, "Pothole Repair." Perform standard and saw-cut repair. If the repair area fails perform the saw-cut repair. Temporary repairs do not count towards the quantity shown in the plans.

Perform repairs of rutting when 25% or more of the wheel path width has rutting 3/4 in. or greater. Unless otherwise directed or shown in the plans, rut repair may be performed by level up with approved material or removal of the surface. Surface removal will be by the saw-cut repair method under Item 700, "Pothole Repair." Replace any failed pavement structure below the surface with like material.

Perform repair of spalls and partial-depth failures in concrete pavement and approach slabs in accordance with Item 720, "Repair of Spalling in Concrete Pavement." Perform temporary repairs using materials meeting TxDOT's 9000 series material specifications.

Permanently repair potholes, spalled areas, depressions, and raveled or damaged pavement edges in roadway surfaces, regardless of the number of occurrences, up to the quantity as shown in the plans. The Contractor must notify the Engineer when any 0.10 lane mile that has patches on more than 30% of the area. Upon notification TxDOT will review the site and schedule repairs through its on-call paving contractor (or other resources). The Contractor must continue to maintain the site until TxDOT's repairs are performed.

Cleaning and Sealing Joints and Cracks of asphalt concrete and concrete pavement is not part of this specification and is paid separately by pertinent bid items.

Perform roadway repairs to prevent entry of rainfall runoff from entering under approach slab.

Correct any ponding of water on the roadway, to include travel lanes and shoulder. This includes the removal of edge build up.

Maintain edges to less than a 2 in. drop off from the pavement. Backfill and compact the pavement edges in accordance with Item 134, "Backfilling Pavement Edges" with Type A materials shown on the plans unless approval is given for Type B materials. Backfill and compact the pavement edges to produce a smooth surface adjacent to the pavement with no vertical edges prior to opening to traffic.

Perform cleaning and sealing, when seal is damaged or no longer bonding, of expansion joints between approach slabs and concrete pavement in accordance with Item 438, "Cleaning and Sealing Joints." Repair polymer concrete expansion joints with material meeting DMS-6140, "Polymer Concrete for Bridge Joint Systems" and DMS-6310, "Joint Sealants and Fillers," unless otherwise approved. If permanent repairs cannot be initiated within 1 hr., fill hole created by failed expansion joint with containerized asphalt. If the expansion joint is:

- greater than 1/2 in. wide, but the seal is damaged, remove the existing seal, clean, and seal the joint; or
- less than 1/2 in. wide, resize the joint to the appropriate dimension shown in Department standard JS-94, Concrete Paving Details Joint Seals, unless otherwise approved, by sawing concrete on sliding side of joint and clean and seal joint.

4.3.3. **Litter and Debris.** Perform cleaning and sweeping of highways in accordance with Item 738, "Cleaning and Sweeping Highways," at the minimum frequency as shown in the plans, if stated, and at spot locations prior to accumulation greater than 18 in. wide or 1/2 in. deep. Perform litter and debris removal in accordance with Item 734, "Litter Removal," and Item 735, "Debris Removal" respectively.

Perform hand sweeping or vacuuming in areas which restrict the use of sweeping equipment and other hard to reach areas including, but not limited to: attenuators, high curbed areas, bullpens, behind and next to retaining walls, behind and underneath guardrail, around bridge and structure columns, sidewalks on structures, sidewalks along the roadway (in the right of way), concrete riprap, behind concrete safety barriers and other areas under structures prior to accumulation greater than 18 in. wide or 1/2 in. deep.

Clean drain openings (barrier drain slots) in concrete traffic barrier (CTB) and inlet openings. Remove any obstructions or blockage behind CTB drain openings prior to it prohibiting the flow of runoff drainage.

Do not stockpile debris, etc. on the right of way prior to disposal.

Remove litter, debris, trees and brush in picnic areas by:

- providing an adequate number of trash barrels and frequency of trash removal from barrels to avoid having any barrel more than 80% full;
- removing trash placed outside of barrels within 24 hr. ; and
- removing damaged or dead trees, branches and brush.

Conceal dead animals from view of the traveling public during transport.

Perform cleaning and removal of transient encampments through prior coordination with law enforcement, local governments, and the Engineer after population is removed. Planning should take into consideration the pending weather effects upon the transient population.

4.3.4. **Vegetation Management.** Perform vegetation management within the right of way including, but not limited to, the roadside, landscaped areas, green ribbon programs (GRP), mitigation areas, channel easements, retention ponds, water quality ponds, and picnic areas, etc.

Mow the vegetation and spot mow vegetation near intersections, ramps and other areas impacting driver sight distances to regulatory and warning signs, signals, intersecting roads and drives, etc. in accordance with Item 730, "Roadside Mowing."

Maintain vegetation height between (limits of rural, metro or urban areas as shown on plans):

- 7 and 18 in. in height in metro and urban areas except as indicated below,
- 7 and 30 in. in height in rural areas, except as indicated below,
- 5 and 8 in. in landscaped areas and picnic areas, and
- 5 and 24 in. in GRP areas. 24 in. grass height within 6 in. of a tree or shrub base, in a GRP area, to avoid damage to the tree or shrub.

Herbicide and remove grass or noxious weeds encroaching upon and along edges of pavements, sidewalks, riprap, signs, any paved roadway surface, retaining walls, sidewalk, mow strip, concrete barrier, curbs, culverts, light poles, guardrail, cable, etc. within 14 days of germination.

Control noxious weeds and trees prior to them reaching 30 in. in height during the seasons with the materials and application rates in the latest version of the Department's Herbicide Operations Manual, unless otherwise approved. Conduct all herbicide operations by a licensed pesticide applicator in the appropriate use category and in accordance to Texas Department of Agriculture requirements. Provide the Department with documentation of licenses prior to beginning the work. Licensed personnel must be responsible for mixing, transporting, handling, spraying, and disposal of materials. Spray equipment must be in good operating condition and calibrated to deliver a spray solution of 20 to 40 gal. per acre. Sufficiently agitate tank to keep dry substance herbicides in spray suspension. Periodically check the equipment is delivering the calibrated spray solution.

Remove damaged or dead trees, branches and brush unless shown on the plans as a non-maintenance area. Non-maintenance areas include native forests and wetlands.

Protect wildflowers. Vegetation height will be allowed to exceed 30 in. until wildflowers mature and drop their seeds. After wildflower season, begin and continuously mow vegetation to meet the requirements of this Item.

Prune trees and brush, in accordance with American National Standards Institute (ANSI) guidelines, to optimize their health and growth and prohibit interference with vehicles, pedestrians, sight distance, drainage within channels or visibility of signs and signals.

Perform mowing, litter pickup, irrigation system operation and maintenance, plant maintenance, pruning, insect, disease, and pest control, fertilization, mulching, bed maintenance, watering, and electrical maintenance, etc. in landscape areas. Landscape areas are designated on the plans.

Remove and replace damaged or dead plants, trees, and brush in landscaped areas. Remove all vines from trees and shrubs prior to applying herbicide. Use plants, trees, and brush of the original size at the time of replacement, species, and characteristics, or an approved substitute.

Perform landscape irrigation system maintenance and repair with personnel possessing an irrigator's license issued by the Texas Commission on Environmental Quality (TCEQ) supervising the work. Submit current

valid license and certification documentation prior to performing work. Maintain current license and certification through the Contract term.

Perform mechanical or chemical trimming (chemical trimming is allowed where shown on the plans), plant bed maintenance, pruning, plant removal, insect, disease, and pest control, litter and debris pickup, and herbicide application, unless otherwise noted in the plans in GRP landscape areas.

4.3.5. **Drainage, Excavation, Embankment and Related Appurtenances.** Perform maintenance of embankment, excavation, drainage in the right of way, and drainage appurtenances (culverts, pipes, channels, easements, inlets, grates, storm drain systems, bridge drains, pump station wells and baskets, mitigation sites, detention, retention, and water quality ponds, hazardous material traps, ditches, traffic barrier drainage slots, etc.).

Repair erosion before it is deeper than 18 in. in depth. Provide sodding, in accordance with Item 162, "Sodding for Erosion Control," and seeding for erosion control, fertilizer, erosion control devices, and soil retention blankets, in accordance with Item 169, "Soil Retention Blankets," as necessary to allow natural vegetation to re-establish after repairs. Perform temporary erosion, sedimentation, and environmental controls in accordance with Item 506, "Temporary Erosion, Sedimentation, and Environmental Controls."

Maintain water quality ponds, designated in the plans, in accordance with the plans and:

- inspect and release, as stated in the plans, stormwater after an event;
- close valves upon release;
- prevent standing water after 48 hr. of a rain event;
- clean sediment traps and hazardous material traps prior to sediment accumulating to 20% of the capacity;
- repair broken drainage appurtenances, damaged fencing or gates; and
- repair or replace clogged or damaged sand filtration systems, rock gabion baskets, or broken valves.

Investigate and remediate any drainage related issue that could affect the health and welfare of the public.

Keep drainage appurtenances clear, functioning, and free of debris, trees, and brush.

Repair or replace separated, collapsed, or crushed pipes and culverts, and damaged and undermined riprap in accordance with Section 9.7, "Payment for Extra Work and Force Account Method" when approved.

Monitor roadway conditions (including on the road monitoring) during weather conditions that could cause flooding; report status to the Engineer; respond and implement traffic control; and remedy, to the extent practicable, flooding of roadways associated with rainfall events including removal of debris from the roadway and channels to an approved place in the roadside to the extent necessary to restore the roadway to safe travel.

Maintain pump stations in accordance with Item 764, "Pump Station and Drainage System Cleaning."

Replace or repair any damaged or missing frames, grates, rings, and covers in accordance with Item 471, "Frames, Grates, Rings, and Covers."

4.3.6. **Roadside Traffic Safety Appurtenances.** Perform maintenance of roadside traffic safety appurtenances (e.g. concrete traffic barrier, metal beam guard fence, etc.), including cleaning, replacing or tightening bolts, repairing or adjusting to maintain proper operation, in accordance with:

- Item 770, "Guard Fence Repair,"
- Item 772, "Post and Cable Fence,"
- Item 776, "Metal Rail Repair,"
- Item 774, "Attenuator Repair," and

- Item 778, “Concrete Rail Repair.”

Repairs of roadside traffic safety appurtenances must be straight, in the original alignment, and made with the same material as original fabrication to provide an adjoining color and finish match and minimize damaged appearance unless otherwise approved or directed.

TxDOT will provide Portable Concrete Traffic Barrier (PCTB) when damages to existing barrier require replacement, in the opinion of the Engineer. Department-furnished barrier sections will be at a stockpile location or an existing traffic barrier installation shown on the plans.

After use, stockpile barrier sections and connection hardware that are to be retained by the Department at the location shown on the plans or as otherwise directed.

Repair or replace any pavement damaged in the process of installing, moving, or removing barrier sections at the Contractor’s expense.

4.3.7. **Chain Link Fence.** Perform maintenance of chain link fence in accordance with Item 550, “Chain Link Fence.”

4.3.8. **Miscellaneous.** Perform maintenance of miscellaneous roadside items.

Remove signage and any non-standard mailbox assembly right of way encroachments not authorized by TxDOT. Notify the Engineer when other right of way encroachments are discovered.

Install approved resident supplied mailboxes on Contractor furnished, and approved, post, mounting hardware, and delineation.

Perform maintenance of sidewalks and pedestrian ramps including sweeping, debris removal, vegetation removal, and tree trimming. Maintain a clear path and vertical clearance in accordance with state, local, and federal regulations.

4.3.9. **Graffiti.** Perform removal of graffiti and application of anti-graffiti coating in accordance with Item 740, “Graffiti Removal and Anti-Graffiti Coating.”

4.3.10. **Bridges.** Perform bridge inspection and maintenance.

4.3.10.1. **Inspections.** Perform inspections and submit inspection findings:

- within the first 90 days after date time charges begin as stated in the written notice of authorization to begin work.
- with personnel that have taken and passed NHI Course FHWA-NHI-134029, or approved equivalent. Submit evidence of successful course completion within 60 days after the date time charges begin as stated in the written notice of authorization to begin work or 30 days after course completion, applicable to the date of course completion; and
- when notified that damage has occurred; after a rainfall event that may have caused damage to the bridge, as determined by the Engineer; and every 24 mo. or as stated in the plans.

Provide inspection reports on Department form MNT BG-4 within 14 days following each inspection.

Measure and report the bridge clearance measurements for “Actual Clearance,” “Signed Clearance,” nature of any sign work performed, and when it was done annually. Maintain records indicating dates of and observations during inspections.

Notify the Engineer when there is any question about the ability of the structure to function in a safe manner within 1 hr. Establish detours when directed by the Engineer.

4.3.10.2. **Maintenance.** Perform bridge maintenance.

Perform vacuuming of bridge joints to remove debris during roadway sweeping operations.

Perform cleaning and sealing, when seal is damaged or no longer bonding, of bridge deck armor and expansion joints. If the expansion joint is greater than 1/2 in. wide, but the seal is damaged, remove the existing seal, clean and seal the joint in accordance with Item 785, "Bridge Joint Repair or Replacement." Repair polymer concrete expansion joints with material meeting DMS-6140, "Polymer Concrete for Bridge Joint Systems" and DMS-6310, "Joint Sealants and Fillers," in accordance with Item 454, "Bridge Expansion Joints" unless otherwise approved. If permanent repairs cannot be initiated within 1 hr., fill hole created by failed expansion joint with containerized asphalt.

Repair concrete spalls, punch-outs, or asphalt raveling on bridge decks. When asphalt ravels, remove asphalt and inspect the surface and underside of deck at problem area. If no surface spall is detected, replace asphalt. Report findings to the Engineer.

Repair deck surface spalls and damage in accordance with Item 429, "Concrete Structure Repair," unless otherwise approved. If permanent repair cannot be initiated within 2 hr., perform temporary repair and monitor effectiveness to provide safe travel for the public. Repair permanently at the next allowable time period for lane closures. Implement necessary measures including, but not limited to, implementation of traffic control to protect the traveling public. Perform repairs to:

- shallow surface spalls not exposing reinforcing steel with materials meeting DMS-4655, "Concrete Repair Materials," Type A-1 or A-2 or materials meeting DMS-6140, "Polymer Concrete for Bridge Joint Systems," Type II, III, or IV, if deck thickness exceeds 7-1/2 in.;
- surface spalls exposing top mat of reinforcing steel, but not bottom mat, with materials meeting DMS-4655, "Concrete Repair Materials," Type A-2, and monitor upper and lower surface condition, if temporarily patched, and take immediate action, if condition worsens; and
- surface spalls exposing both mats of reinforcing steel and shallow spalls with extensive cracking on the underside of the deck.

Obtain full depth repair design from the Engineer and repair with rapid strength gaining Class K concrete, Type CAC Concrete in accordance with Special Specification 4003, "Type CAC Concrete," or an approved concrete repair material meeting DMS-4655, "Concrete Repair Materials," Type A-2 unless otherwise shown in the plans.

Restore asphalt over repairs with asphalt where existing previously unless otherwise directed.

Perform removal and disposal of debris from bridge drains, caps, bearings, substructure, riprap, etc. including, but not limited to, bat guano and other animal droppings.

Perform maintenance and repair of bridge curbs, parapets, sidewalks, sidewalk joints, rails, beam protection system, illumination, signage including mounting hardware, etc.

Perform sweeping, vacuuming, and removal of deicing chemicals, rock, debris, etc. from bridge deck, parapets, railing, joints, backwalls, caps, joints, and bearings annually and within 30 days from the last application of deicing chemicals unless another ice event is predicted within 2 weeks of the 30 day deadline.

Perform concrete crack repair in accordance with Item 780, "Concrete Crack Repair."

Perform maintenance of channels or water crossings including, but not limited to:

- repair channel erosion, scour, sediment buildup, culvert end treatment safety features, and slope or channel stabilization measures (e.g. riprap, gabions, etc.);
- vegetation management to include control of encroachment on bridges; and
- removal of debris.

Correct, repair, resolve, and eliminate unless otherwise identified in this Item with another timeframe:

- safety deficiencies, determined by the Engineer, within 7 days; and
- non-safety deficiencies within 60 days.

4.3.11. **Traffic Operations Devices.** Perform traffic operations device maintenance. Work excludes responsibility for utility costs.

4.3.11.1. **Traffic Signals.** Perform maintenance of highway traffic signals in accordance with:

- Item 690, "Maintenance of Traffic Signals,"
- Item 6002, "Video Imaging Vehicle Detection System,"
- Item 6025, "Radar Presence Detection Device,"
- Item 6054, "Spread Spectrum Radios for Traffic Signals,"
- Item 6057, "Radar Advance Detection Device (RADD)," and
- Item 6058, "Battery Back-up System for Signal Cabinets."

For signals the Department maintains, perform all signal system inspection within the first 60 days after date time charges begin as stated in the written notice of authorization to begin work, and every 12 mo. thereafter. Maintain signals so that they perform as they were originally designed. Perform repair work with equivalent material, or as approved, in accordance with the Items listed above. Report all findings and work performed to the Engineer. Respond to locations when notices are received of operational malfunctions and damage within the time frames established in Table 3.

Check controllers, MMU or conflict monitors, detector units (conventional, VIVDS, and radar), relays, uninterruptible power supplies, railroad pre-emption devices, pedestrian push buttons, pedestrian and signal heads, and APS (accessible pedestrian signal) units for proper function with certified testers. Repair and replace as necessary.

Repair signal pole and controller cabinet damage. Perform tightening of bolts on foundations.

Perform traffic signal and pedestrian heads repair, proper alignment, cleaning, etc. for proper operation. Repair or replace back plates as needed.

Repair traffic signal safety lighting for proper alignment and operation.

Document all inspections and corrective actions for each intersection in a separate log book. Provide log books for review as requested.

The Department will be responsible for providing signal timing and phasing diagrams. Program the signal timing and operational phasing as directed.

Perform maintenance, annual cleaning or replacement of filters in the cabinet, repairs or replacement of traffic detection devices.

Raise, remove, and turn traffic signal cables or mast arms for the passage of oversized vehicles as required.

4.3.11.2. **Signs, Assemblies, and Overhead Supports.** Perform maintenance, repairs or replacement of signs, assemblies and overhead supports. Signs, placement, sign posts, sign foundations, and sign supports must

be in accordance with the applicable Department's Sign Mounting Detail (SMD) and Typical Sign Requirements (TSR) standard sheets, Item 636, "Signs," Item 644, "Small Roadside Sign Assemblies," Item 647, "Large Roadside Sign Supports and Assemblies," Item 650, "Overhead Sign Supports," and Item 654, "Sign Walkways."

The Department will provide details for all non-standard signs.

Perform sign inspections on 6 mo. intervals, using a retroreflectometer, starting from the date of date time charges begin as stated in the written notice of authorization to begin work and 2 months prior to the end of the Contract. Keep a log of inspection findings, sign location by GPS, type, roadbed, etc., and submit to the Department by the 15th of the month following the inspection. Replace all signs not meeting minimum maintained retroreflectivity levels shown in the TMUTCD.

Install new signs as directed. The Department will provide sign, sign support and hardware.

Repair or remove overhead sign structures and signs that present a safety hazard.

Remove large roadside signs greater than 32 sq. ft. that have been knocked down and move them to a location off the right of way or 30 feet beyond the edge of the travel lane.

Replace bridge vertical clearance signs when measurements do not reflect signed clearance following bridge inspection. The Department will provide sign, sign support and hardware.

Where riprap exists, replace damaged riprap around reconstructed large sign foundations as shown on the applicable standard sheet. Install riprap around new large sign foundation installations.

Replace damaged sign mounts with the same type of mount as on the existing sign being replaced or as approved.

All damaged materials replaced will become the property of the contractor for proper disposal.

4.3.12. **Illumination.** Perform inspection and maintenance of highway illumination (roadway, high mast lighting, and underpass lighting). The Contractor is not responsible for utility costs.

4.3.12.1. **Inspection.** Perform monthly day and night inspections of all luminaires, whether within boundaries covered by an Illumination Agreement or not, and submit a report in a format acceptable to the Engineer. Identify each outage, knockdown, or other deficiency by pole number, if present, roadway designation, mainlane, ramp, frontage road, direction, mile marker with offset, and global positioning system (GPS) coordinates on an approved inspection report. Perform the first inspection within the first week after the date time charges begin.

4.3.12.2. **Maintenance.** Repair or replace all deficiencies, including electrical services, noted in the monthly inspection report, with equivalent material found on the material producer list (MPL). Material not found on the MPL will not be allowed. Maintenance of illumination assemblies will include, but not be limited to, replacement of lamps, LED optics, fuses, fuse holder, starting aid, surge protection device, photocells, ballasts, drivers and other work required to keep lights operational. Conform to the latest edition of the National Electric Code (NEC) as adopted by the Texas Department of Licensing and Regulation, local utility requirements, the requirements of this Item, and the pertinent requirements of the following Items:

- Item 104, "Removing Concrete,"
- Item 400, "Excavation and Backfill for Structures,"
- Item 416, "Drilled Shaft Foundations,"
- Item 421, "Hydraulic Cement Concrete,"
- Item 431, "Pneumatically Placed Concrete,"
- Item 432, "Riprap,"

- Item 440, “Reinforcing Steel,”
- Item 476, “Jacking, Boring or Tunneling Pipe or Box”
- Item 610, “Roadway Illumination Assemblies,”
- Item 613, “High Mast Illumination Pole”s,
- Item 614, “High Mast Illumination Assemblies,”
- Item 616, “Performance Testing of Lighting Systems,”
- Item 618, “Conduit,”
- Item 620, “Electrical Conductors,”
- Item 621, “Tray Cable,”
- Item 622, “Duct Cable,”
- Item 624, “Ground Boxes,”
- Item 627, “Treated Timber Poles,” and
- Item 628, “Electrical Services.”

Perform cleaning of reflectors, glass lenses and refractors, or LED optics (clean the reflector and inside and outside of lens or optics with an approved cleaning solution) at the same time any maintenance or repair work is performed on an illumination assembly. Relevel roadway illumination fixtures. Re-aim high mast illumination.

Provide the portable power drive assembly for any high mast lighting work.

Secure all access panels and covers. Replace all missing and damaged panels and covers with equivalent material.

Repair breaks or shorts in electrical conductors and cables, including, but not limited to, all concrete ground boxes, wire mesh, conduit, conductors, and pipe casing.

Repair, replace, and re-aim illumination assemblies, induction fluorescent fixtures, luminaire poles, luminaire arms, wiring, highmast luminaires, lamps, fuses, fuse holder, starting aid, photocells, ballasts, overhead sign lighting, underpass fixtures, etc. to maintain operation.

Perform the following, but not limited to, to maintain operation:

- maintenance of all foundation anchor bolts, nuts, and washers;
- prep and touch up rust spots with cold galvanizing spray;
- plumb fixture;
- repair or replace damaged ground boxes;
- repair or replace damaged conduit;
- replace damaged foundations;
- replace damaged transformer bases and covers;
- repair shorts or open circuits;
- replace damaged or missing hand hole covers;
- install or replace fused disconnect;
- fill gearbox lubrication reservoir;
- lubricate grease fittings;
- adjust brake mechanism to proper torque;
- repair cable drum deficiencies;
- repair or replace all wire rope and cables with deterioration;
- repair welds around baseplate and ground sleeve for visible cracks;
- prep and touch up rust spots with cold galvanizing spray;
- replace lamps and clean fixtures;

- replace ballasts;
- replace aviation warning lamps;
- repair short or open circuits; and
- raise high mast ring to proper position.

4.3.13. **Pavement Markings.** Perform placement and maintenance of pavement markings. Place temporary pavement markings immediately on pavement repair locations and place permanent markings within 14 days after completion of pavement repair.

Remove existing longitudinal pavement markings, in accordance with Item 677, "Eliminating Existing Pavement Markings and Markers," use the mechanical method unless otherwise approved, prior to placing new pavement markings that will result in 180 or more mils (not including glass beads).

Place materials, as applicable to the existing longitudinal pavement markings, and perform work in accordance with Item 666, "Retroreflectorized Pavement Markings," or Item 668, "Prefabricated Pavement Markings," unless otherwise required in the plans to be alternate materials governed by another special specification included in the Contract.

4.3.13.1. **Placement of Longitudinal Pavement Markings (centerline, lane line, and edge line).** Place pavement markings:

- after the date time charges begin as stated in the written notice of authorization to begin work, where shown on the plans;
- when retroreflectivity, performed during annual Mobile Retroreflectivity Data Collection (MRDC), does not meet the minimum reflectivity requirements (MRR) of 150 mcd/m^2/lx for white and 100 mcd/m^2/lx for yellow prior to each anniversary of the date time charges began;
- replace damaged or missing no later than the timeframe in Table 3 or as shown in the plans.

New type I marking retroreflectivity must be measured by the contractor and meet minimum retroreflectivity values for edgeline markings, centerline or no passing barrier-line, and lane lines as stated in Item 666, "Retroreflectorized Pavement Markings."

Maintain length, width, shape, size, color, and configuration to the Department's standard plan sheets.

Place new contrast or shadow markings when placing new markings, if they currently exist.

4.3.13.2. **Placement of Non-Longitudinal Pavement Markings (Stop bars, crosswalks, arrows, symbols, shapes, graphics, channel lines, exit and entrance gores, etc.)**

Place new non-longitudinal pavement markings when 30% or more of a marking is damaged or missing (e.g. length, width, shape, configuration, lack of reflectivity, etc.).

4.3.13.3. **Annual MRDC.** Perform annual MRDC for all lane line, edge line, and centerline or no passing barrier-line pavement markings 60 days before each anniversary of the date time charges began, as stated in the written notice of authorization to begin work. Perform MRDC in accordance with Special Specification 6040, "Mobile Retroreflectivity Data Collection for Pavement Markings," unless otherwise superseded by an alternate Special Specification included in the contract. Provide data to the Engineer within seven (7) days of completion.

A marking will be considered to meet the MRR if:

- the combined average retroreflectivity measurement for a one mile segment meets the MRR; and
- no more than 30% of the retroreflectivity measurement values are below the MRR value within the 1 mi. segment.

The Engineer may accept failing one (1) mi. segments, if no more that 20% of the retroreflectivity measurements within that mile segment are below the MRR values.

The one (1) mi. segment will start from the beginning of the data collection and end after a mile worth of measurements have been taken; each subsequent mile of measurements will be a new segment. Centerlines with two (2) stripes (either solid or broken) will result in two (2) mi. of data for each mile segment. Each centerline stripe must be tested for compliance as a stand-alone stripe.

4.3.14. **Raised Pavement Markers.** Perform inspection, replacement, and maintenance of raised pavement markers.

Perform an initial inspection of all raised pavement markers within 30 days of date time charges begin as stated in the written notice of authorization to begin work. Perform inspection, both during the day and at night, every 6 mo. after date time charges begin as stated in the written notice of authorization to begin work and 60 days prior to the end of the contract. Night inspections must be performed using a passenger vehicle with headlights set on low beam and 4 markers must be reflective when placed on 80 ft. spacing or 8 markers must be reflective when placed on 40 ft. spacing. RPMs (including traffic buttons where placed) must be functional when viewed at a minimum distance of 400 ft. in the daytime. A functional marker is both visible and conspicuous.

Replace all broken, missing, sunken, and non-reflective markers after each inspection in accordance with Item 672, "Raised Pavement Markers."

4.3.15. **Raised Traffic Curb Guidance Systems (RTSCGS), Barrier Markers, Object Markers, Delineators, and Object Marker Assemblies.** Repair or replace deficient raised RTSCGS, barrier markers, object markers, delineators, and object marker assemblies in accordance with Item 658, "Delineator and Object Marker Assemblies" and current standard plan sheets. RTSCGS must be maintained or replaced in accordance with the plans and standard plan sheet. Deficient will mean not reflective, not vertical, or missing.

4.3.16. **Incident Management.** Perform incident management. An incident will be defined as an event that disrupts the normal operations of the roadway and flow of traffic. Examples include, but are not limited to accidents, utility line failures, flooding, lane blockage, etc.

When receiving initial notification, obtain information about incident to determine the necessary equipment for traffic control, debris removal, etc. and respond to the incident.

Provide an incident scene commander at all major incidents. A major incident, unless otherwise defined by the Engineer, is any incident resulting in the need for the Contractor to close a lane of traffic.

The incident scene commander must be certified as a traffic control supervisor (TCS) by the ATSSA, or approved equal, and:

- participate in scheduled meetings with law enforcement, fire departments, wrecker services, environmental cleanup crews, etc. to develop close cooperation between these entities, improve response and incident clearance time; and debrief after major events;
- serve as the Department's point of contact for response to the incident scene(s);
- provide support to the lead agency;
- obtain necessary information to mobilize equipment and personnel, upon contact, to clear or repair the roadway and roadside to return the roadway to normal traffic flow; and initiate equipment and personnel response upon notification;
- report to the scene of major incidents and remain on the scene overseeing the Contractor's resources assisting the lead agency in the clearance of incidents;
- supervise implementation of traffic control;
- maintain contingency plans for incidents involving live animals;

- coordinate detour routes for freeway closures so that traffic movement is accommodated;
- communicate condition updates to the Engineer upon notification and each hour thereafter until the incident is resolved or cleared; and.
- oversee implementation of traffic control at incidents.

4.3.17. **Hazardous Material.** When hazardous materials are dispersed at an incident or discovered on the right of way, provide support to the lead agency and notify the appropriate local, state, or federal governmental regulatory agency.

Provide the responsible party, of the hazardous material, the opportunity to perform the removal of the hazardous material. If the responsible party does not initiate steps to remove the material, re-notify the appropriate local, state, or federal governmental regulatory agency for direction. If the responsible party of the hazardous material does not remove the material, remove the material in accordance with local, state, and federal regulations off the right of way.

4.3.18. **Roadway and Appurtenance Damage Caused by Third Parties.** Perform repair, and replacement, of roadway and roadway appurtenance, damage caused by third parties. Replacement must be made if the appurtenance no longer functions as designed, when damaged, at the discretion of the Engineer. Repairs and replacement must be completed to meet the performance standard. Obtain local or state law enforcement participation in pursuit of action against the third party supporting the claim, if necessary. The Department will provide the Contractor with access to the Crash Records Information System (CRIS) upon the Contractor's execution of related request for access.

Provide documentation to the Department supporting a claim within 60 days after completion of repairs. Documentation must include date of the incident or accident; location of the damage (e.g. city, county, highway); description of the damage; at least 2 clear digital photographs of the damage to show the location of the accident with date stamped in the photographs, extent and damage to highway appurtenances, and other factors that may have contributed to the accident; all parties involved including name, address, telephone number, and their involvement (including witnesses); responsible party and insurance information; description of vehicles involved; copy of the incident or accident report(s) (police, fire, sheriff, DPS, eyewitness, etc.); actions taken to address the incident or accident, documentation of traffic control in place; and the repair invoice with details, cost breakdown, and a summary, including total price, of work performed signed as certified correct by the Contractor's project manager.

4.3.19. **Environmentally Sensitive Areas.** Perform maintenance in environmentally sensitive areas.

4.3.19.1. **Karst Preserve Areas.** Karst preserve areas in, or adjacent to, the right of way will be shown on the plans. Maintain the right of way in accordance with the requirements shown on the plans. Take particular care to avoid disturbance of the right of way in these areas.

4.3.19.2. **Control of Pests & Non-Native species.** Avoid the use of potential contaminants (e.g. fertilizers, pesticides, herbicides, etc.). Avoid the introduction of non-native species, primarily fire ants.

Implement actions specified as shown in the plans to control fire ants in the right of way. Report the presence of red imported fire ants to the Engineer. Upon confirmation of red imported fire ant mounds by the Engineer, submit plans to treat fire ant mounds consistent with the U.S. Fish and Wildlife Service protocol for approval prior to implementation. The use of topsoil or sod from offsite must be minimized to limit the spread of fire ants and the introduction of non-native species. Certify in writing that each load of off-site topsoil, compost, and sod is free of red imported fire ants prior to placement. The certification must contain the following as a minimum: the date, supplier, materials, truck number, location of placement, and signature of the Contractor's agent or representative.

Limit seeding or sodding to native vegetation. Recommended plant species are shown in the plans. Other species may be used upon approval.

4.3.19.3. **Wetland Mitigation Areas and Waters of the U.S.** If wetland mitigation areas exist in the right of way, as shown in the plans, all required maintenance must be performed so that the native characteristics of the vegetative community are retained.

Limit active maintenance practices such as herbicides and pesticide application within 500 ft. of the mitigation areas. Maintain, replace, or place "No Mow" signs at the edge of the wetland areas to prohibit mowing in the wetland areas within 30 days of date time charges begin as stated in the written notice of authorization to begin work.

Limit any necessary seeding, or sodding, of grasses or planting of woody vegetation in these mitigation areas to the species as shown in the plans. Other species may be used upon approval.

4.3.19.4. **Migratory Bird Treaty & Endangered Species Acts.**

4.3.19.4.1. **Migratory Bird Treaty Act.** Woody vegetation clearing and tree trimming throughout the designated areas may occur only between September 1 and February 28, outside the nesting season. Submit a plan (including description of work, proposed dates, and location) 2 weeks prior to the trimming or clearing date. Obtain approval for woody vegetation removal from March 1 to August 31.

Notify the Engineer, if any occupied bird nests are identified in the path of any vegetation removal or trimming. According to the Migratory Bird Treaty Act, it is unlawful to pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product manufactured or not.

4.3.19.4.2. **Endangered Species Act.** Limits subject to the Endangered Species Act are shown in the plans. Submit a plan (including description of work, proposed dates, and location) 2 weeks prior to the trimming or clearing date and obtain approval for any woody vegetation removal throughout the year in the areas designated as endangered species habitats. Maintain the native characteristic of the vegetative community.

4.3.19.5. **Recharge and Contributing Zones.** Implement water quality protections and coordinate with the TCEQ, as required by law.

Regulated activities include, but are not limited to, installation of aboveground or underground storage tanks, modification of existing water quality structures, and ground soil disturbing activities such as clearing and excavation within the recharge or contributing zones. Special restrictions apply as shown in the plans. Refer to regulations for the aquifer areas for compliance requirements.

4.3.20. **Construction Work Zones.** Perform reduced maintenance in construction work zone limits within the limits covered by this Contract. Maintenance will be limited to incident management, unless other work is shown in the plans.

Once construction or reconstruction project(s) are completed or partially accepted for maintenance or performance periods, resume work along those portions of the highway for the remainder of the Contract term.

The Contractor will be given opportunity to provide a punch list on construction projects prior to the acceptance of the construction project.

4.4. **Report the following to the Engineer.**

4.4.1. **Work Accomplished.** Implement, maintain and use a computerized maintenance management system (CMMS) to track and validate work performed, compliance with timeliness, and other Contract requirements. Allow, and maintain, access to Department personnel to review and input data in live time. The Department

will separately track compliance with meeting contract requirements. The CMMS must include the following required data, at a minimum, input at the end of the work day or the end of the next work day for after-hours work: All work, using the function codes, units of measurement in the Department's Function Code Chart 12, and Department's function Code Chart 12 Guidelines, including: date, location (roadway designation (e.g. IH, NH, FM, etc.) with GPS Coordinates within 10 feet and whether it is mainlane, frontage road, direct connector, ramp, etc.), beginning and ending reference marker, travel direction, the county, time of notification or discovery, automated date and time of entry into the system, asset, activity; type, quantity, source, and invoice of materials used; quantity of work performed, associated asset damage details for third party claims, including documentation required for supporting the claim, date and time stamped pictures of before and after work completion, and where the Contractor is called to perform traffic control, clean up or damage repair including, but not limited to: accidents involving any Contractor or subcontractor personnel, equipment, barricades or tools, traffic accidents within the limits, or in the vicinity, of any work being performed by the Contractor or their subcontractors, or any accident involving the Contractor or the traveling public that causes damage to an appurtenance on the right of way.

Separate entries for the time of Contractor discovery, with objective evidence to support discovery prior to Department notification, time of notification to Contractor, notifying party name and organization affiliation, time to respond, description and quantity of work performed, and time of work completion.

All customer service inquiries and outcomes, complaints or service requests received from the public, cities, counties, etc. must be documented. This information must include, at a minimum, the date and time of the complaint or request; the location of the concern; the nature of the complaint or request; who made the complaint or service request, name, address, and contact info; and date, time, and action taken to address the issue.

4.4.2. **Accidents.** Report accidents to the Engineer involving: 5 or more deaths; 10 or more vehicles involved in a chain collision; a school bus incident resulting in 1 or more fatalities/disabling injuries; major damage to a highway facility; a commercial vehicle incident with extensive property damage, etc.; a road closure that lasts 8 hr. or more; an evacuation; and creation of significant media interest.

If there are any questions from the media, call the Department's Contract manager to discuss the accident and the need for reporting.

4.4.3. **Highway Condition Report (HCR).** The Contractor is required to have a personal computer that will connect to the Department's information systems and must input requirements of the highway conditions reporting system (HCRS) in the limits of this Contract into the Department's HCR System each morning before 9 a.m. and at 5 p.m. Updates will be required immediately before extended closures and when said closures are opened.

4.5. **Exceptions.** The following items are excluded from the Contract:

- roadside assistance (courtesy patrol) to the traveling public,
- all intelligent transportation system (ITS),
- executing agreements, such as utility permits, driveway permits, multiple use agreements, construction and maintenance agreements, and other similar type agreements,
- logo signing,
- safety rest areas, and
- management of HOV lane operations (e.g. movement of devices for ingress and egress).

5. MEASUREMENT

This Item will be measured by the highway mainlane mile including each mainlane (e.g. opposite directions are combined for measurement), frontage roads, cross streets, ramps, collector distributors, direct connectors, turnarounds, easements, etc. as shown on the plans being maintained each month.

The Department will measure the Contractor's performance through the performance of condition assessments and attainment of performance standards.

5.1. **Condition Assessment.** Condition assessments will be performed using the criteria in Table 1 – Assessment Scoring System. Table 2 - Sample Condition Assessment Scoring contains a sample of the calculation used for these assessments. The header of Table 1 shows the criteria description with the rating numbers within parenthesis in the columns.

In the calculation of element scores within Table 2, a rating of 1, 2, 3, 4 and 5 will receive a raw score of 0, 25, 50, 75 and 100 respectively. Elements that are not present within the assessment location will be blank within Table 2 and not contribute to the element score column.

5.1.1. **Baseline Assessment.** The Department will perform a baseline condition assessment of the existing facility using the criteria in Table 1 – Assessment Scoring System. The baseline is intended to notify the bidders where deficiencies exist at the time of the assessment. The baseline condition assessment will be established no more than 3 months before letting. The baseline condition scores will be shown in the plans. Bidders should expect degradation in the facility's condition prior to beginning work. The Engineer, at the Contractor's request, will make available the data used to establish the baseline condition score(s).

5.1.2. **Condition Assessments.** The Department will perform a condition assessment monthly. The Contractor will be notified at least 7 working days prior to the date of condition assessments and is encouraged to accompany the Department during the assessment. The condition assessment will randomly sample at least 10% of the centerline mile length of all roadways broken into 10 mile sections or portions thereof starting at the southern or western most project limits.

Bridge condition will be assessed separate from the roadway. At least 10% of the bridges will be randomly selected for assessment in conjunction with the monthly condition assessment.

Assessments will include mainlanes, frontage roads, ramps, roadsides, etc. (e.g. from right-of-way to right-of-way) that are under contract all in one condition assessment scoring for the month. Portions reduced from payment for construction or reconstruction that add capacity or totally reconstruct the pavement on portions of highways will be excluded. Contracts other than those adding capacity or total reconstruction will be considered during the condition assessment with respect to their impact on the condition not under the control of the Contractor. The Department will randomly select the sections to be assessed using a random number generator selected by the Department. These sections will be approximately one roadbed mile length segments.

5.2. **Performance Standards.** The Contractor must meet the performance standards listed in Table 3 – Performance Standards or as shown in the plans. Table 3 must not be considered a list of all performance standards. A performance standard will not be considered complete until all requirements are met (e.g. time, material compliance, work compliance, specification compliance, etc.). The fact that the performance standards are met will not relieve the Contractor of the responsibility to constantly monitor and maintain the roadway and all of its appurtenances prior to discovery by the Department.

The Department will inspect or evaluate the work on a continuing basis.

Table 1 – Assessment Scoring System

	Description (Rate #) >	Perfect (5)	Above Average (4)	Average (3)	Below Average (2)	Poor (1)
Pavement & Approach Slabs	Rutting (R) (do not count associated with Failures)	No R.	Minor R < 1/4 in. Flushing, Rock wearing	1/4 < R ≤ 1/2 in. May be able to feel when crossing in vehicle	1/2 < R < 1 in.	R > 1 in.
	Failures (potholes and spalls)	No repairs of any type. New or like new.	All smooth and level. Small depressed areas.	Small areas that have minor pavement movement. Several small depressed areas or deficient repairs. Un-level repairs.	Many areas that have pavement movement or cracking.	Severe movement, loose pavement, or missing pavement.
	Drains (surface, barrier slots, slotted & grate drains, curb inlets, rip rap, flumes, etc.)	No debris	Very minor debris. No damaged or missing frames, grates or covers.	Some debris, dirt and/or minor rock. Potential for blocking drains and minor ponding. Minor damaged/missing frames, grates or covers.	Alot of dirt or debris blocking drainage & causing ponding. More than 2 damaged /missing frames, grates or covers.	Alot of dirt or debris built up causing a hazard or drainage problem. Multiple damaged /missing frames, grates or covers.
	Edges (drop offs or edge build up only.)	No drop-off or build up.	Minor drop-offs or build up (lengths < 50' & < 1").	Moderate drop-offs or build up (lengths < 50' and 1" < 2").	Major drop-offs or build up (over 2" < 4").	Severe drop-offs or build up (over 4").
	Grass or noxious weeds (sdwlks, riprap, rdwy surf., ret. walls, mow strip, barrier, curbs, guardrail, cable, etc.)	No grass or noxious weeds.	Minor grass or noxious weeds with no sign of treatment.	1 or 2 areas with grass or noxious weeds with signs of treatment, but not removed.	Many areas with grass or noxious weeds with signs of treatment, but not removed.	Excessive areas with grass or noxious weeds with signs of treatment, but not removed.
	Sweeping & Debris (roadway, under guardrail, attenuators, or sidewalks; on riprap, gores, & ret. walls)	Clean, no dirt, debris, mowed grass or rock debris.	accumulation less than 18 in. wide or 1/2 in. deep. > 5 pieces of debris per centerline mile.	accumulation greater than 18 in. wide or 1/2 in. deep. No greater than 10 pieces of debris per centerline mile.	accumulation greater than 24 in. wide or 1/2 in. deep. 10 < 30 pieces of debris per centerline mile.	accumulation greater than 30 in. wide or 1 in. deep. > 30 pieces of debris per centerline mile.
Bridges & Direct-Traffic Culverts	Curbs, sidewalks, railing, & beam protection system.	Like new, no damage, vegetative encroachment or debris.	All functional. Minor concrete damage, but not considered structural.	Minor damage, but still functional with minor vegetation encroachment.	Damaged and not functional needs repairs. Vegetation encroachment.	Major damage needs replacing/repair. Excessive vegetation encroachment or debris.
	Drains (surface, barrier slots, grate drains, caps, joints, bearings, rip rap, substructure, etc.)	No debris, damaged or missing frames, grates or covers.	Very minor debris. No damaged or missing frames, grates or covers.	Some debris, dirt and/or minor rock. Potential for blocking drains and minor ponding or joint damage. Minor damaged/missing frames, grates or covers.	Substantial quantities of dirt, debris and/or rock blocking some of drainage and causing ponding or joint damage. More than 2 damaged/missing frames, grates or covers.	Substantial quantities of debris built up causing a hazard, drainage problem or joint damage. Multiple damaged/missing frames, grates or covers.
	Joints	Like new with no damage. Clean.	Minor damage to joint. Seal is bonded & intact. Clean.	Minor damage to joint. Seal is damaged and needs repair. Less than 1/4 in. debris.	Joint is damaged & seal no longer bonding. More than 1/4 in. debris.	Joint may cause a safety problem. More than 1/2 in. debris.
	Grass or noxious weeds (sdwlks, riprap, rdwy surf., ret. walls, mow strip, barrier, curbs, guardrail, cable, etc.)	No grass or noxious weeds.	Minor grass or noxious weeds with no sign of treatment.	1 or 2 areas with grass or noxious weeds with signs of treatment, but not removed.	Many areas with grass or noxious weeds with signs of treatment, but not removed.	Excessive areas with grass or noxious weeds with signs of treatment, but not removed.
	Sweeping & Debris (roadway, under guardrail, attenuators, or sidewalks; on riprap, gores, & ret. walls)	Clean, no dirt, debris, mowed grass or rock debris.	accumulation less than 18 in. wide or 1/2 in. deep. < 2 pieces of debris on deck.	accumulation greater than 18 in. wide or 1/2 in. deep. No greater than 5 pieces of debris on deck.	accumulation greater than 24 in. wide or 1/2 in. deep. 5 < 10 pieces of debris on deck.	accumulation greater than 30 in. wide or 1 in. deep. > 10 pieces of debris on deck.

Table 1 – Assessment Scoring System

Description (Rate #) >		Perfect (5)	Above Average (4)	Average (3)	Below Average (2)	Poor (1)
Traffic Operations	Signs	Signs like new, with all back ground, lettering, borders & shields clean. All straight.	Signs generally good; background, lettering, borders and shields may be slightly faded. Most are straight.	Signs borderline acceptable; background, lettering, borders & shields may be slightly faded or mildewed. Less than 25% leaning.	Signs unacceptable with dirt or mildew. May be faded.	Signs totally unacceptable with severe dirt, mildew or fading.
	Roadside Traffic Safety Appurtenances (Guardrail, GET, barrier system, etc.)	Like new, appropriately placed, in correct alignment.	Functional. May have 1 minor dent / damaged area. < 25% damaged pylons with diminished reflectivity. No missing pylons or damaged bases / O.M.	Functional with several minor dents/damaged areas or out of alignment. < 25% damaged pylons with diminished reflectivity or missing pylons & damaged bases. Slight leaning.	Not functional. End treatment is not present. Low, leaning or out of alignment. 25%-50% damaged pylons/O.M. or diminished reflectivity, missing pylons & damaged bases.	Either diminished reflectivity, missing pylons, damaged bases, or O.M.
	Delineators & Mailboxes (M)	Like new, straight, installed to standards. No repairs needed. M - Straight, all on standard supports & hardware, with standard delineation.	Posts < 50% slightly leaning or with some damaged & non-reflective. M - All on standard supports & hardware, with standard delineation. Some leaning.	Posts <50% slightly leaning & <50% delineators damaged/non-reflective, or most post slightly leaning or delineators non-reflective. M - All on standard supports & hardware.	Most post slightly leaning & non-reflective or one or two post bent, broken, down or missing. M - 1 or 2 on nonstandard supports. Most are standard. Missing/incorrect delineation, or leaning.	Several bent, broken damaged or missing. Not installed in accordance with standards. M - Several on non-standard supports, some are safety problems, most other not to standard.

Height (H), metro (M), urban (U), rural (R), landscaped (L), litter (Lt), rubber (Rb), Green Ribbon Programs areas (GRP)						
Roadside	Vegetation Management (not including "non-mow" areas.)	H = 7 in. in M & U areas, = 7 in. in R areas, = 5 in. in L & picnic areas, & = 5 in. in GRP. Recently mowed or of uniform H. No noxious weeds.	H = 12 in. in M & U areas, = 15 in. in R areas, = 5 in. in L & picnic areas, & = 12 in. in GRP. Generally good, of uniform H & with little noxious weeds. Signs of herbicide application.	H: 7 < 18 in. in M & U areas, 7 < 30 in. in R areas, 5 & 8 in. in L & picnic areas, & 5 < 24 in. in GRP. Noxious weeds < 30 in. No sight distance problems.	H: > 18 in. in M & U areas, > 30 in. in R areas, > 8 in. in L & picnic areas, & > 24 in. in GRP. Large stands Noxious weeds ≥ 30 in. with no signs of herbicide application. Minor sight distance problems.	H: > 24 in. in M & U areas, > 36 in. in R areas, > 12 in. in L & picnic areas, & > 30 in. in GRP. Unacceptable large stands noxious weeds ≥ 30 in. No sign of herbicide application. Severe sight distance problems.
	Litter	ROW clean with no or very minor litter. Lt not visible.	< 10 Lt R or 15 Lt M / mile; < 5 Rb /roadside mile; < 6 Lt visible / 1000 ft. of roadbed in landscape & GRP.	10 < 30 Lt R or 50 Lt M/mile; < 10 Rb/roadside mile; < 12 Lt visible/ 1000 ft. of roadbed in landscape & GRP.	No more than 50 Lt R or 70 Lt M/mile; < 20 Rb/roadside mile; < than 24 Lt visible / 1000 ft. of roadbed in landscape & GRP.	In excess of 50 Lt R or 70 Lt M/mile; > 20 Rb/roadside mile; > 24 Lt visible/ 1000 ft. of roadbed in landscape & GRP.
	Trees and Brush	Trimmed to allow mowing beneath. No sight restrictions or sign obstructions. ROW neat. No trees in clear zone	Generally trimmed. No sight restrictions or one non-regulatory sign obstructions. May have some in need of trimming.	May have big growth. No sight restrictions or 2 non-regulatory sign obstructions. May have a few trees within clear zone.	Encroaching over pavement or large trees > 5" within clear zone. May have sight restrictions or regulatory sign obstructions.	Encroaching over travel lanes or large trees > 5" within clear zone. Sight restrictions &/or regulatory sign obstructions.
	Drainage (streambed, ditches, and channels)	Clean & free of obstructions. Clear of silt, debris or erosion.	No erosion or obstructions. Protection system(s) functioning properly. Trees not encroaching. No debris. No vegetation in riprap.	Some silt or erosion (pipes < 20% full). Minor obstructions. Trees & vegetation present, but not encroaching or catching debris.	Big erosion, siltation, or scour. Potential for more erosion. Washouts present. Trees & vegetation present & obstructing, encroaching or catching debris.	Extreme erosion or siltation. Potential exists for additional erosion. Undermining occurring &/or obstruction of channel.
	Encroachments (E) (illegal signs only)	No E on highway ROW.	One E. Does not cause a safety problem.	A few E on ROW, but not causing a safety problem. Seem to have been there for a long time.	Many E on ROW causing a safety problem.	Excessive E on ROW causing a safety problem.

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Table 2 - Sample Condition Assessment Scoring

		Condition Assessment Inspections												
Roadway Component[1]	Element	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	Element Score[2]	Weighted Factor[5]	Element Composite Score[3]
Pavement & Appr. Slabs	Rutting	75	75	75	50	0	75	50	75	75	75	62.5	7	437.5
	Failures	50	50	50	50	50	25	0	0	50	0	32.5	7	227.5
	Drains	0	25	0	50	0	0	50	50	50	0	22.5	6	135.0
	Edges	75	0	75	75	50	25	25	50	0	75	45.0	7	315.0
	Grass or noxious weeds	0	0	50	0	0	50	50	50	50	0	25.0	4	100.0
	Sweeping	50	50	50	0	50	0	25	0	0	0	22.5	4	90.0
													Component Score[4]	37.3
Bridges	Curbs, sdwks, drains, inlets, rip rap, flumes, etc.	75	75	75	50	75	75	75	75	75	50	70.0	4	280.0
	Drains	50	50	50	75	75	75	75	50	75	75	65.0	7	455.0
	Joints	75	75	75	0	50	0	75	75	75	75	57.5	6	345.0
	Grass or noxious weeds	0	0	25	0	0	25	50	0	0	0	10.0	4	40.0
	Sweeping	0	50	50	50	50	0	0	25	0	25	25.0	4	100.0
													Component Score[4]	48.8
Traffic Operations	Signs	75	75	50	75	75	75	50	75	75	75	70.0	7	490.0
	Roadside Traffic Safety Appurtenances	75	75	25	75	50	75	75	50	75	75	65.0	10	650.0
	Delineators & Mailboxes	75	75	75	25	75	75	75	50	75	75	67.5	3	202.5
													Component Score[4]	67.1
Roadside	Vegetation Management	75	75	75	75	25	75	50	50	50	75	62.5	6	375.0
	Litter	75	75	75	25	75	50	50	75	75	75	65.0	5	325.0
	Trees and Brush	75	75	75	75	75	75	75	75	25	75	70.0	3	210.0
	Drainage	75	75	50	50	75	75	25	75	75	50	62.5	4	250.0
	Encroachments	75	75	75	25	75	75	75	75	75	50	67.5	2	135.0
													Component Score[4]	64.8
													Overall Score[6]	51.6

Notes:

1. Weight of Roadway Components – Pavement & Appr. Slabs (35%), Bridges (25%), Traffic Operations (20%), Roadside (20%)
2. Element Score - Average of Element Scores
3. Element Composite Score - Element Score X Weighted Factor
4. Component Score = Sum of Element Composite Scores/Sum of Weighted Factor
5. If there are no ratings for an Element then the Weighted Factor will not be included in the component calculation
6. Overall Score = Weight of Roadway Component X Component Score

	Table 3 – Performance Standards	Time Frame(1)	Penalty (1)
Bridge inspection and maintenance	Repair deck spalls exposing reinforcement with temporary patch.(4)	4 hr.	$100/hr.
	Repair deck spalls exposing top mat of reinforcement permanently no later than 30 days.	30 days	$250/day
	Repair deck spalls exposing both mats of reinforcement and shallow spalls with extensive cracking on the underside of the deck permanently. (4)	7 days	$250/day
	Repair shallow deck spalls not exposing reinforcing steel.	90 days	$100/day
	Repairs for any damage that is determined to result in load posting the bridge initiated. (4)	4 hr.	$100/hr.
	Bridge maintenance as a result of Contractor performed inspections completed following inspection.	45 days	$100/day
	Upon notification, complete repairs associated with TxDOT, or on behalf of TxDOT, inspections condition rating of 4 or less.	30 days	$100/day
	Repair loose armor joints on bridges. (4)	7 days	$250/day
	Repair polymer concrete bridge expansion joints temporarily. (4)	4 hr.	$100/hr.
	Repair polymer concrete bridge expansion joints permanently within 30 days.	30 days	$250/day
	Repair damaged bridge sealed expansion joints.	30 days	$250/day
Pavement	Standard/temporary repair of spalls, potholes, punch-outs, & joint failures that are deemed by the Engineer as hazardous to the traveling public. (4)	4 hr.	$100/hr.
	Standard/temporary repair of spalls, potholes, punch-outs, & joint failures.	7 days	$250/day
	Saw-cut repair of spalls, potholes, punch-outs, & joint failures. See Note (2)	30 days	$250/day
	Temporarily repair pavement hump/heave failures greater than 2 in. (4) See Note (2)	48 hr.	$200/hr.
	Repair pavement rutting greater than 1 in. in depth. See Note (2)	15 days	$250/day
	Clean and continuously seal expansion joint between approach slab and concrete pavement that are not a minimum of 1/2 wide or continuously sealed.	30 days	$100/day
Illumination	Remove knocked down luminaire poles from the roadway. (4)	48 hr.	$200/hr.
	Repair or replace non-functional illumination, including electrical services, for roadway and high mast lighting.	30 days	$100/day
	Repair or replace knocked down luminaire pole, broken arms, damaged transformer bases, and other deficiencies.	90 days	$100/day
	Repair or replace all illumination deficiencies, including electrical services, noted in the monthly inspection report, with equivalent material found on the material producer list (MPL).	30 days	$100/day
Incidents	Respond to incident scene to determine the personnel and equipment necessary to implement temporary traffic control and restore normal traffic flow. (4)	45 min.	$50/min.
	Upon initial notification begin implementation of necessary temporary traffic control. (4)	2 hr.	$250/qtr.hr.
	Report accidents, as described within this Special Specification, Section 4.4.2, within 1 hr. (4)	1 hr.	$100/hr.
Pavement markings	Place as shown on the plans.	60 days	$100/day
	Place prior to each anniversary of the date time charges began.	30 days	$100/day
	Replace damaged or missing.	30 days	$100/day
	Replace damaged or missing (as defined by specification) specialty pavement markings, including stop bars, crosswalks, etc.	30 days	$100/day
	Complete placement of all pavement markings, including long line and specialty, when damaged or missing due to winter weather operations no later than timeframe of each year.	May 1st	$100/day
Raised Pavement Markers (RPMs)	Complete placement of all pavement markers, when damaged or missing due to winter weather operations no later than timeframe of each year.	May 1st	$100/day
	Replace broken, missing, sunken, or non-reflective RPMs after each inspection.	30 days	$100/day
Traffic Control	Make corrections to noncompliant TCPs. (4)	1 hr.	$100/hr.
	Install warning signs and traffic control devices at damaged roadside traffic safety devices. (4)	4 hr.	$100/hr.

	Table 3 – Performance Standards	Time Frame[1]	Penalty [1]
Signals	Respond to operational malfunctions. [4]	2 hr.	$100/hr.
	Repair operational malfunctions. [4]	4 hr.	$100/hr.
	Repair damage. [4]	48 hr.	$100/hr.
	Repair vehicle detection device operational problems. [4]	24 hr.	$100/hr.
	Repair railroad pre-emption issues. [4]	3 days	$100/day
	Repair or replace inoperable vehicle detection devices and controllers. [4]	5 days	$100/day
	Repair or replace non-operational lighting. [4]	7 days	$100/day
	Replace weak or failed batteries.	14 days	$100/day
	Replace defective uninterruptible power supply units replaced.	14 days	$100/day
	Permanent replace damaged signal poles or controller cabinets.	60 days	$100/day
Signs	Replace all signs with more than 5% of the face damaged, vandalized signs, and without minimum maintained retroreflectivity levels.	30 days	$100/day
	Remove damaged overhead signs present a safety hazard. [4]	4 hr.	$200/hr.
	Replace overhead sign structures and signs that were removed due to damage.	90 days	$100/day
	Place temporary signs, which may include changeable message signs, where damaged overhead signs present a safety hazard. [4]	4 hr.	$100/hr.
	Delineate damaged signs, if left within the clear zone, with appropriate traffic warning devices. [4]	4 hr.	$100/hr.
	Place temporary ground-mounted signs for damaged exit gore signs. [4]	4 hr.	$100/hr.
	Place clearance signs on temporary mounts when permanent mounts are damaged. [4]	4 hr.	$100/hr.
	Install temporary signs for damaged stop, yield, do not enter, one way and wrong way signs. [4]	4 hr.	$100/hr.
	Make permanent repair, or replacement, for all regulatory and warning signs.	14 days	$200/day
	Make permanent repair, or replacement, for all other signs.	30 days	$100/day
	Replace bridge vertical clearance signs when measurements do not reflect signed clearance.	30 days	$100/day
Traffic Safety Appurtenances	Repair or replace guardrail, impact attenuators, raised traffic separator curb guidance systems, cable barrier systems and all other traffic barriers no longer functioning as designed.	14 days	$250/day
	Repair all other damaged, but functional, barrier.	30 days	$100/day
	Repair or replace barrier markers, object markers, delineators, object marker assemblies no longer functioning as designed.	30 days	$100/day
Litter and Debris	Remove within mitigation areas & water quality ponds.	30 days	$100/day
	Remove large debris from bullpens.	14 days[3]	$100/day
	Remove from abutment and bent caps.	30 days	$100/day
	Remove debris in travel lanes. [4]	4 hr.	$100/hr.
	Remove debris from roadway paved surfaces. [4]	8 hr.	$100/hr.
Vegetation Management	Remove damaged or dead trees, brush, and ornamentals, or prune branches; and mow or trim vegetation, trees and shrubs impacting sight distance to regulatory and warning signs, signals, intersecting roads/drives, pose a potential hazard to traffic. [4]	7 days	$100/day
	Safety mowing of areas where vegetation impacts sight distance. [4]	1 day	$100/day
	Trim trees overhanging into roadway or causing limitation of access in pedestrian paths.	14 days	$100/day
	Remove damaged or dead trees and tree trimmings within timeframe, if they are not a potential hazard to the driving public unless the Engineer determines that weather conditions or seasonal characteristics indicate replacement should be deferred.	30 days	$100/day
	Replace damaged or dead plants, trees, brush, and ornamentals in landscaped areas within timeframe, unless the Engineer determines that weather conditions or seasonal characteristics indicate replacement should be deferred.	30 days	$100/day
Graffiti	Remove apparent gang related or highly visible graffiti. [4]	4 hr.	$100/hr.
	Remove other graffiti.	7 days	$100/day

	Table 3 – Performance Standards	Time Frame(1)	Penalty (1)
Miscellaneous	Install mailboxes. (4)	4 days	$100/day
	Repair chain link fence.	30 days	$100/day
	Non-compliance of specification issues given in writing by letter.	As shown in Letter	$500/day

(1) Time Frame and Penalties shown apply unless otherwise shown on the plans. Any portion there of a Time Frame will be rounded up to the next whole number.
(2) Penalties will only apply up to quantity shown on plans.
(3) When pending inclement weather conditions warrant removal sooner as determined by the engineer the Time Frame will be 2 days upon notification from the engineer.
(4) Table 5 – Ramp Up Performance Penalty Limitations do not apply to this performance standard.
Abbreviations: hr. = hour, mo. = month, qtr. = quarter, qtr.hr. = quarter hour

6. PAYMENT

Work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Performance Based Maintenance of Highway" within the right-of-way including mainlanes, frontage roads, cross streets, ramps, collector distributors, direct connectors, turnarounds, easements, etc. as shown on the plans. This price will be full compensation for furnishing all labor, equipment, materials, fuel, tools and incidentals necessary to complete the work. Exceptions to these payments are stated below in this Article.

Contractor monthly payments will be reduced in the event construction, or reconstruction, project(s) that add capacity or totally reconstruct the pavement on portions of highways covered by this Contract occur or are ongoing where incident management is the only work performed by the Contractor. The payment will be reduced by 70% for each mile, or portion thereof. If additional areas of roadway in the project limits are added to the maintenance requirements, it will be paid for at centerline mile unit price bid.

6.1. **Damage Caused by Others.** Submit proposed third party claim for review and approval where the third party can be identified. Submit all required documentation within 60 days after the completion of repairs. Failure to submit documentation within 60 days may result in no payment. Once approved, the Department will file the claim in the Department's name.

Submit actual repair costs, including necessary traffic control implementation, signed and certified by the Contractor's project manager in an approved format. Damage claims submitted with incomplete or incorrect documentation will be returned to the Contractor.

Payment for repairs for damage caused by others will be made in accordance with Section 9.7, "Payment for Extra Work and Force Account Method," only when documentation provided by the Contractor is sufficient for the Department to file a claim.

When the third party cannot be identified, the Contractor's liability will be limited to a maximum of $10,000 per incident and an annual cap of $100,000 each year of the Contract. Only incidents with costs of $10,000 and above will apply to the annual cap. Thereafter incidents with a cost of $10,000 and above will be reimbursed to the Contractor less $1,000. The Contractor will be required to show objective evidence that the third party cannot be identified and detailed costs of repair subject to approval of the Engineer within 60 days of damage in order to apply towards the annual cap.

6.2. **Pavement Maintenance.** Pothole repair, repair of spalls, and partial depth failures over the quantity shown in the plans may be compensated in accordance with Section 9.7, "Payment for Extra Work and Force Account Method," when approved.

6.3. **Contractor Performance.** The Contractor's failure to meet any of the Item requirements will result in deductions from the Contractor's monthly payments. Such deductions are considered non-payment for work not accomplished as required by this Item.

The Department reserves the right not to assess any or all deductions if, in the Department's sole discretion, the Department determines that the circumstances surrounding any such failures warrants that such deduction be waived. The waiver of any current deductions will not affect the Department's right to enforce future deductions or take any other necessary actions.

6.3.1. **Condition Assessments.**

6.3.1.1. Improvement to Baseline Condition Assessment. Improvements to the baseline condition assessment may be shown in the plans by element, component, and/or overall. When shown, payment will be made by pertinent bid items. Complete improvement work before the end of the 3rd month after the notice to begin work. Upon completion of the improvement work the Department will perform a condition assessment on the completed work. When improvement is made, the Contractor must maintain to the improved condition score.

If the Department performs work that improves the condition of the roadway, either through other contracts or with Department resources, the Contractor will be required to maintain the condition to the improved condition. The Department will perform a condition assessment upon completion of the work and use these scores for future condition assessments.

6.3.1.2. Condition Assessments. The Department's condition assessments will formulate the basis for a potential reduction in monthly payment for "Performance Based Maintenance of Highway." A 1% reduction will be applied for each 2% that the Department's condition assessment is below the baseline condition assessment or improved condition when shown in the plans, in each criteria (element, component, and overall) to the maximum % shown in Table 4. Reductions will apply for each Item each month until a new condition assessment is performed.

Table 4

Criteria	%(1)
Element Score	20 (2)
Component Score	
Pavement	6 (2)
Bridges	6 (2)
Traffic Operations	6 (2)
Roadside	6 (2)
Overall Score	6 (2)

1. % represents the potential percentage reduction in payment each month.
2. The total reduction for the summary of all Criteria reductions is limited to the % shown

6.3.2. **Other work to be completed on Time.**

- Failure to report scheduled lane closures for the work within the required timeframes with the required supporting information as shown in the plans may result in 0.5%, of the unit price for "Performance Based Maintenance of Highway" multiplied by the respective quantity, reduction in payment per failure.
- A lane closure assessment fee will be applied to the Contractor for closures or restrictions, implementation of TTC in the travel lanes or traveled way that extend into restricted hours, as stated in the plans, on a per lane basis per hour regardless of length of the lane closure or restriction except for closures related to major incidents. This lane closure assessment fee may be prorated based on the actual time that lanes are closed into restricted hours and be in addition to other reductions in payment.

6.3.3. **Failure to Meet Performance Standards.** If the work is not in compliance with reference specifications, standard details, this Item and/or Table 3 – Performance Standards or as shown in the plans, penalties will be assessed per performance standard per location per occurrence as a payment reduction each month until the work is completed. Penalties will be assessed by the penalty column unless otherwise shown in the plans. If the plans do not allow lane closure(s) and lane closure(s) is required to perform the work, as determined by the Engineer, the timeframe will begin upon allowance of the lane closure instead of the time of notification or discovery, unless the Engineer allows the lane closure(s) to proceed.

6.3.4. **Ramp Up Period.** A ramp up period will be allowed that limits penalty assessments as calculated in Table 3-Performance Standard and Table 4 – Contractor Performance in accordance with Table 5.

Table 5

Ramp Up Performance Penalty Limitations (1)

Estimate Month	Performance Penalty Limit (% Maximum)
1	10
2	25
3	40

(1) Except as noted in Table 3 - Performance Standards.

6.3.5. **Failure to Complete Work.** The Department may take steps to have the work corrected. The Contractor will be notified in writing in advance of this intent providing the Contractor the opportunity and timeframe to make corrections, prior to the Department implementing actions. This may include the use of state forces, other contract agreements, or emergency contracts. Once notified that the Department is taking corrective action, refrain from performing work on the item in question, unless otherwise approved. The costs associated with these measures will be deducted from any monies due to the Contractor.

6.3.6. **Illumination Inspection.** The initial illumination inspection, within the 1st week after time charges begin, will be paid for at the unit price bid for "Performance Based Initial Illumination Inspection."

6.3.7. **Structural Bridge Repair.** Permanent structural bridge repair work will be paid for by Article 9.7, "Payment for Extra Work and Force Account Method."