**EXHBIT 2, ATTACHMENT 1: PERFORMANCE AND MEASUREMENT TABLE BASELINE**

| Performance and Measurement Table Baseline | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **MAINTENANCE ELEMENT CATEGORY** | **REF** | **MAINTENANCE ELEMENT** | **PERFORMANCE REQUIREMENT** | **RESPONSE TO DEFECTS** | | | **INSPECTION AND MEASUREMENT METHOD*** | **MEASUREMENT RECORD*** | **TARGET** |
| | | | | **Cat 1** | **Cat 1** | **Cat 2** | | | |
| | | | | **Hazard Mitigation** | **Permanent Remedy** | **Permanent Repair** | | | |
| **1) ROADWAY** | | | | | | | | | |
| | | | | | | | **Unless stated otherwise, measurements shall be conducted using procedures, techniques, and measuring equipment consistent with TxDOT's *Pavement Management Information System Rater's Manual.* Unless otherwise stated, pavement performance measurement records relate to 0.1-mile sections as described in the *Pavement Management Information System Rater's Manual*.** | | |
| | 1.1 | Obstructions and debris | Roadway and clear zone free from obstructions and debris | 2 hrs | N/A | N/A | Visual Inspection | Number of obstructions and debris | Nil |
| | 1.2 | Pavement | All roadways have a smooth surface course (including bridge decks, covers, gratings, frames and boxes) with adequate skid resistance and free from Defects. | 24 hrs | 28 days | 6 months | **a) Ruts – Mainlanes, shoulders & ramps**<br>Depth as measured using an automated device in compliance with TxDOT Standards. | Percentage of wheel path length with ruts greater than ¼" in depth in each Auditable Section<br>• Mainlanes, shoulders and ramps - 3%<br>• Frontage roads - 10% | <br>Nil<br>Nil |
| | | | | | | | 10-ft straight edge used to measure rut depth for localized areas. | Depth of rut at any location greater than 0.5" | Nil |
| | | | | | | | **b) Ride quality**<br>Measurement of International Roughness Index (IRI) according to TxDOT standard Tex-1001-S, Operating Inertial Profilers and Evaluating Pavement Profiles<br>** To allow for measurement bias, an adjustment of -10 (minus ten) is made to IRI measurements for concrete pavements before assessing threshold compliance<br>(Renewal Work and new construction subject to construction quality standards) | (i) For 80% of all Auditable Sections Measured, IRI throughout 98% of each Auditable Section is less than or equal to:<br>• Mainlanes, ramps - 95" per mile**<br>• Frontage roads - 120" per mile** | <br>100%<br>100% |
| | | | | | | | | (ii) IRI measured throughout 98% of Auditable Section of less than or equal to:<br>• Mainlanes, ramps - 120" per mile**<br>• Frontage roads - 150" per mile**<br>• Mainlanes, ramps, 0.1 mile average - 150" per mile**<br>• Frontage roads, 0.1 mile average - 180" per mile** | <br>100%<br>100%<br>100%<br>100% |
| | | | | | | | | (iii) IRI measured throughout 98% of each lane containing a bridge deck in any Auditable Section, 0.1 mile average - 200" per mile** | 100% |
| | | | | | | | 10-ft straightedge used to measure discontinuities | Individual discontinuities greater than 1/4" | Nil |

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| | 1.2 cont | | | | | | **c) Failures** | | |
| | | | | | | | Instances of failures exceeding the failure criteria set forth in the TxDOT PMIS Rater's Manual, including potholes, base failures, punchouts and jointed concrete pavement failures | Occurrence of any failure | Nil |
| | | | | | | | **d) Edge drop-offs** | | |
| | | | | | | | Physical measurement of edge drop-off level compared to adjacent surface | Instances of edge drop-off greater than 2" (Number) | Nil |
| | | | | | | | **e) Skid resistance** | | |
| | | | | | | | ASTM E274/E274M-11 Standard Test Method for Skid Resistance Testing of Paved Surfaces at 50 MPH using a full scale smooth tire meeting the requirements of ASTM E524-08. | • Mainlanes, shoulders and ramps –Sections investigated as to potential risk of skidding accident where average Skid Number for 0.5-mile section of mainlanes, shoulders and ramps is below 30. | 100% |
| | | | | | | | | • Frontage roads – Sections investigated as to potential risk of skidding accident where average Skid Number for 0.5-mile section of frontage roads is below 30. | 100% |
| | | | | | | | | • The Maintenance Contractor shall perform a site investigation and perform required corrective action when the skid number is below 25 and/or when required by the Wet Weather Accident Reduction Program for areas categorized as high risk. | 100% |
| | | | Road Users warned of potential skidding hazards | 24 hrs | 7 days | N/A | **Skid resistance** (as above) | Instances where road Users warned of potential skidding hazard where remedial action is identified. | 100% |
| | 1.3 | Crossovers and other paved areas | Crossovers and other paved areas are free of Defects | 24 hrs | 28 days | 6 months | **a) Potholes** | Potholes of low severity or higher (Number) | Nil |
| | | | | | | | **b) Base failures** | Base failures of low severity or higher (Number) | Nil |
| | 1.4 | Joints in concrete | Joints in concrete paving are sealed and watertight | 24 hrs | 28 days | 6 months | Visual inspection of joints | Length unsealed joints greater than ¼" | Nil |
| | | | Longitudinal joint separation | | | | Measurement of joint width and level difference of two sides of joints | Joint width more than 1" or faulting more than ¼" | Nil |
| | 1.5 | Curbs | Curbs are free of Defects | 24 hrs | 28 days | 6 months | 10-ft straightedge will be used to measure each curb alignment | Deviation from original alignment greater than 1 inch | Nil |
| **2) DRAINAGE** | | | | | | | | | |

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| | | | | **Hazard Mitigation** | **Permanent Remedy** | **Permanent Repair** | | | |
| | 2.1 | Pipes and channels | Each element of the drainage system is maintained in its proper function by cleaning, clearing and/or emptying as appropriate from the point at which water drains from the travel way to the outfall or drainage way. | 24 hrs | 28 days | 6 months | Visual inspection supplemented by CCTV where required to inspect buried pipe work | Length with less than 90% of cross-sectional area clear (feet) | Nil |
| | 2.2 | Drainage treatment devices | Drainage treatment and balancing systems, flow and spillage control devices function correctly and their location and means of operation is recorded adequately to permit their correct operation in Emergency. | 24 hrs | 28 days | 6 months | Visual inspection | Devices functioning correctly with means of operation displayed | 100% |
| | 2.3 | Travel way | The travel way is free from water to the extent that such water would represent a hazard by virtue of its position and depth. | 24 hrs | 28 days | 6 months | Visual inspection of water on surface | Instances of hazardous water build-up | Nil |
| | 2.4 | Discharge systems | Surface water discharge systems perform their proper function and discharge to groundwater and waterways complies with the relevant legislation and permits. | 24 hrs | 28 days | 6 months | Visual inspection and records | Non-compliances with legislation | Nil |
| | 2.5 | Protected species | Named species and habitats are protected. | 24 hrs | 28 days | 6 months | Visual inspection | Compliance with the requirement | 100% |
| **3) STRUCTURES** | | | | | | | | | |
| | 3.1 | Structure components (Structures having an opening measured along the center of the roadway of more than 20 feet between undercopings of abutments or springlines of arches or extreme ends of openings or multiple boxes) | (i) Substructures and superstructures are free of:<br>• graffiti<br>• undesirable vegetation<br>• debris and bird droppings<br>• blocked drains, weep pipes manholes and chambers<br>• blocked drainage holes in structural components<br>• defects in joint sealants<br>• defects in pedestrian protection measure<br>• scour damage<br>• corrosion of rebar<br>• paint system failures<br>• impact damage<br><br>(ii) Expansion joints free of:<br>• dirt, debris and vegetation<br>• defects in drainage systems<br>• loose nuts and bolts<br>• defects in gaskets<br><br>(iii) The deck drainage system is free of all and operates as intended.<br>(iv) Parapets free of:<br>• loose nuts and bolts<br>• blockages of hollow section drain holes<br>• graffiti<br>• vegetation<br>• accident damage | 24 hrs | 28 days | 6 months | Inspection and assessment in accordance with the requirements of federal National Bridge Inspection Standards (NBIS) of the Code of Federal Regulations, 23 Highways – Part 650, the TxDOT Bridge Inspection Manual, and the Federal Highway Administration's Bridge Inspector's Reference Manual. | Records as required in the TxDOT Bridge Inspection Manual<br><br>Occurrences of condition rating below six (6) for any deck, superstructure or substructure<br><br>Auditable Sections with structure components with condition states of one | 100%<br><br>Nil<br><br>100% |

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| | | | | **Hazard Mitigation** | **Permanent Remedy** | **Permanent Repair** | | | |
| | 3.1 Cont. | | (v) Bearings and bearing shelves are clean.<br>(vi) Sliding and roller surfaces are clean and greased to ensure satisfactory performance.<br>Additional advice contained in bearing manufacturers' instructions in the Structure Maintenance Manual is followed.<br>Special finishes are clean and perform to the appropriate standards.<br>(vii) All non-structural items such as hoists and electrical fixings, operate correctly, are clean and lubricated as appropriate, in accordance with the manufacturer's recommendations and certification of lifting devices is maintained. | | | | | | |
| | 3.2 | Non-bridge class culverts | Non-bridge-class culverts are free of:<br>• vegetation and debris and silt<br>• defects in sealant to movement joints<br>• scour damage | 24 hrs | 28 days | 6 months | Visual inspection | Number with vegetation, debris and silt<br>Number with defects in sealant and movement joints<br>Number with scour damage | Nil<br>Nil<br>Nil |
| | 3.3 | Load ratings | All structures maintain the design load capacity. | 24 hrs | 28 days | 6 months | Load rating calculations in accordance with the Manual for Bridge Evaluation and the TxDOT Bridge Inspection Manual.<br>Load restriction requirements as per the TxDOT Bridge Inspection Manual | Number of load restrictions for Texas legal loads (including legally permitted vehicles) | Nil |
| | 3.4 | Gantries and high masts | Sign signal gantries, high masts are structurally sound and free of:<br>• loose nuts and bolts<br>• defects in surface protection systems<br>• graffiti | 24 hrs | 28 days | 6 months | Visual inspection | Number with loose assemblies<br>Number with defects in surface protection<br>Number with graffiti | Nil<br>Nil<br>Nil |
| | 3.5 | Access points | All hatches and points of access have fully operational and lockable entryways. | 24 hrs | 28 days | 6 months | Visual inspection | Number of Defects in locks or entryways | Nil |
| | 3.6 | Mechanically stabilized earth and retaining walls | Mechanically stabilized earth and retaining walls free of:<br>• blocked weep holes<br>• undesirable vegetation<br>• defects in joint sealants<br>• defects in pedestrian protection<br>• scour damage<br>• corrosion of reinforcing bars<br>• paint system failure<br>• concrete spalling<br>• impact damage<br>Parapets free of:<br>• loose nuts and bolts<br>• blockage of drain holes<br>• undesirable vegetation<br>• impact damage<br>• concrete spalling | 24 hrs | 28 days | 6 months | Inspection and assessment in accordance with the requirements of federal National Bridge Inspection Standards (NBIS) of the Code of Federal Regulations, 23 Highways - Part 650, the TxDOT Bridge Inspection Manual and the Federal Highway Administration's Bridge Inspector's Reference Manual. | Records as required in the TxDOT Bridge Inspection Manual | 100% |

**Performance and Measurement Table Baseline**

| MAINTENANCE ELEMENT CATEGORY | REF | MAINTENANCE ELEMENT | PERFORMANCE REQUIREMENT | RESPONSE TO DEFECTS | | | INSPECTION AND MEASUREMENT METHOD* | MEASUREMENT RECORD* | TARGET |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Cat 1 | Cat 1 | Cat 2 | | | |
| | | | | Hazard Mitigation | Permanent Remedy | Permanent Repair | | | |
| **4) PAVEMENT MARKINGS, OBJECT MARKERS, BARRIER MARKERS AND DELINEATORS** | | | | | | | | | |
| | 4.1 | Pavement markings | Pavement markings are:<br>• clean and visible during the day and at night<br>• whole and complete and of the correct color, type, width and length<br>• placed to meet the TMUTCD and TxDOT's Pavement Marking Standard Sheets | 24 hrs | 28 days | 6 months | a) Markings - General<br>General Portable retroreflectometer, which uses 30 meter geometry meeting the requirements described in ASTM E 1710<br>Physical measurement<br>b) Profile Markings<br>Visual inspection | Length meeting the minimum retroreflectivity 175 mcd/m$^2$/lx for white<br>Length meeting the minimum retroreflectivity 125 mcd/m$^2$/lx for yellow<br>Length with more than 5% loss of area of material at any point<br>Length with spread more than 10% of specified dimensions.<br>Length performing its intended function and compliant with relevant regulations | 100%<br>100%<br>Nil<br>Nil<br>100% |
| | 4.2 | Raised reflective markers | Raised reflective pavement markers, object markers and delineators are:<br>• clean and clearly visible<br>• of the correct color and type<br>• reflective or retroreflective as TxDOT standard<br>• correctly located, aligned and at the correct level<br>• are firmly fixed<br>• are in a condition that will ensure that they remain at the correct level. | 24 hrs | 28 days | 6 months | Visual inspection | Number of markers associated with road markings that are ineffective in any 10 consecutive markers. (Ineffective includes missing, damaged, settled or sunk)<br>A minimum of four markers should be visible at 80' spacing when viewed under low beam headlights<br>Uniformity (replacement raised reflective pavement markers have equivalent physical and performance characteristics to adjacent markers). | Nil<br>100%<br>100% |
| | 4.3 | Delineators & markers | Object markers, mail box markers and delineators are:<br>• clean and visible<br>• of the correct color and type<br>• legible and reflective<br>• straight and vertical | 24 hrs | 28 days | 6 months | Visual inspection | Less than 5% of object markers or delineators defective or missing | 100% |
| **5) GUARDRAILS, SAFETY BARRIERS AND IMPACT ATTENUATORS** | | | | | | | | | |
| | 5.1 | Guard rails and safety barriers | All guardrails, safety barriers, and concrete barriers are maintained free of Defects. They are appropriately placed and correctly installed at the correct height and distance from roadway or obstacles. Installation and repairs shall be carried out in accordance with the requirements of NCHRP 350 standards. | 24 hrs | 28 days | 6 months | Visual inspection | Length of road restraint systems correctly installed<br>Length free from Defects<br>Length at correct height<br>Length at correct distance from roadway and obstacle | 100%<br>100%<br>100%<br>100% |
| | 5.2 | Impact attenuators | All impact attenuators are appropriately placed and correctly installed | 24 hrs | 7 days | 6 months | Visual inspection | Number correctly placed and installed | 100% |

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| | | | | **Hazard Mitigation** | **Permanent Remedy** | **Permanent Repair** | | | |
| **6) TRAFFIC SIGNS** | | | | | | | | | |
| | 6.1 | General – All signs | (i) Signs are clean, correctly located, clearly visible, legible, reflective, at the correct height and free from structural and electrical defects<br>(ii) Identification markers are provided, correctly located, visible, clean and legible<br>(iii) Sign mounting posts are vertical, structurally sound and rust free<br>(iv) All break-away sign mounts are clear of silt or other debris that could impede break-away features and shall have correct stub heights<br>(v) Obsolete and redundant signs are removed or replaced as appropriate<br>(vi) Visibility distances meet the stated requirements<br>(vii) Sign information is of the correct size, location, type and wording to meet its intended purpose and any statutory requirements<br>(viii) All structures and elements of the signing system are kept clean and free from debris and have clear access provided.<br>(ix) All replacement and repair materials and equipment are in accordance with the requirements of the TMUTCD<br>(x) Dynamic message signs are in an operational condition | 24 hrs | 28 days | 6 months | **a) Retroreflectivity**<br>Coefficient of retro -reflectivity<br>**b) Face damage**<br>Visual inspection<br>**c) Placement**<br>Visual inspection<br>**d) Sign Information**<br>Visual inspection<br>**e) Dynamic Message Signs**<br>Visual inspection | Number of signs with reflectivity below the requirements of TxDOT's TMUTCD<br>Number of signs with face damage greater than 5% of area<br>Signs are placed in accordance with TxDOT's Sign Crew Field Book including not twisted or leaning<br>Sign information is of the correct size, location, type and wording to meet its intended purpose<br>Dynamic message signs are fully functioning | Nil<br>Nil<br>100%<br>100%<br>100% |
| | 6.2 | General - Safety critical signs | Requirements as 6.1, Plus:<br>"Stop," "Yield," "Do Not Enter," "One Way" and "Wrong Way" signs are clean legible and undamaged. | 2hrs | 1 week | 6 months | Visual inspection | Number of damaged safety critical signs | Nil |
| **7) TRAFFIC SIGNALS** | | | | | | | | | |
| | 7.1 | General | (i) Traffic Signals and their associated equipment are:<br>• clean and visible<br>• correctly aligned and operational<br>• free from damage caused by accident or vandalism<br>(ii) Signal timing and operation is correct<br>(iii) Contingency plans are in place to rectify Category 1 defects not immediately repairable to assure alternative traffic control is provided during a period of failure | 2 hrs | 24 hrs | 6 months | **a) General condition**<br>Visual inspection<br>**b) Damage**<br>Visual inspection<br>**c) Signal timing**<br>Timed measurements | Signals are clean and visible<br>Signals are undamaged<br>Installations have correct signal timings | 100%<br>100%<br>100% |

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| | | | | **Hazard Mitigation** | **Permanent Remedy** | **Permanent Repair** | | | |
| | 7.1 Cont. | | | | | | **d) Contingency plans**<br>Records review | Full contingency plans are in place | 100% |
| | 7.2 | Soundness | Traffic signals are structurally and electrically sound | 24 hrs | 28 days | 6 months | **a) Structural soundness**<br>Visual inspection<br>**b) Electrical soundness**<br>Testing to meet NEC regulations | Inspection records showing safe installation and maintenance | 100%<br>100% |
| | 7.3 | Identification marking | Signals have identification markers and the telephone number for reporting faults are correctly located, clearly visible, clean and legible | N/A | 28 days | 6 months | Visual inspection | Inspection records showing identification markers and other information are easily readable | 100% |
| | 7.4 | Pedestrian elements and vehicle detectors | All pedestrian elements and vehicle detectors are correctly positioned and fully functional at all times | 24 hrs | 28 days | 6 months | Visual Inspection | Inspection records showing compliance | 100% |
| **8) LIGHTING** | | | | | | | | | |
| | 8.1 | Roadway lighting – General | (i) All lighting is free from defects and provides acceptable uniform lighting quality<br>(ii) Lanterns are clean and correctly positioned<br>(iii) Lighting units are free from accidental damage or vandalism<br>(iv) Columns are upright, correctly founded, visually acceptable and structurally sound | 24 hrs | 28 days | 6 months | **a) Mainlane lights operable**<br>Night time inspection or automated logs<br>**b) Mainlane lights out of action**<br>Night time inspection or automated logs | Number of sections with less than 90% of lights functioning correctly at all times<br>Instances of more than two consecutive lights out of action | Nil<br>Nil |
| | 8.2 | Sign lighting | Sign lighting is fully operational | 24 hrs | 28 days | 6 months | Night time inspection or automated logs | Instances of more than one bulb per sign not working | Nil |
| | 8.3 | Electrical supply | Electricity supply, feeder pillars, cabinets, switches and fittings are electrically, mechanically and structurally sound and functioning | 24 hrs | 7 days | 1 month | Testing to meet NEC regulations, visual inspection | Inspection records showing safe installation and maintenance | 100% |
| | 8.4 | Access panels | All access panels in place at all times. | 24 hrs | 7 days | 1 month | Visual inspection | Instances of missing access panels | Nil |
| | 8.5 | High mast lighting | (i) All high mast luminaries functioning on each pole<br>(ii) All obstruction lights are present and working (if required)<br>(iii) Compartment door is secure with all bolts in place<br>(iv) All winch and safety equipment is correctly functioning and maintained without rusting or corrosion<br>(for structural requirements refer to Maintenance Element Category 3) | 24 hrs | 28 days | 6 months | Yearly inspection and night time inspections or automated logs | Instances of two or more lamps not working per high mast pole<br>Identification of other defects | Nil<br>Nil |
| **9) FENCES, WALLS AND SOUND ABATEMENT** | | | | | | | | | |
| | 9.1 | Design and location | Fences and walls act as designed and serve the purpose for which they were intended | 24 hrs | 28 days | 6 months | Visual inspection | Inspection records showing compliance | 100% |
| | 9.2 | Construction | Integrity and structural condition of the fence is maintained | 24 hrs | 28 days | 6 months | Structural assessment if visual inspection warrants | Inspection records showing compliance | 100% |

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| | | | | **Hazard Mitigation** | **Permanent Remedy** | **Permanent Repair** | | | |
| **10) ROADSIDE MANAGEMENT** | | | | | | | | | |
| | 10.1 | Vegetated areas – Except landscaped areas – General | Vegetation is maintained so that:<br>(i) Height of grass and weeds is kept within the limits described for urban and rural areas. Mowing begins before vegetation reaches the maximum height.<br>(ii) Spot mowing at intersections, ramps or other areas maintains visibility of appurtenances and sight distance.<br>(iii) Grass or vegetation does not encroach into or on paved shoulders, mainlanes, sidewalks, islands, riprap, traffic barrier or curbs.<br>(iv) A herbicide program is undertaken in accordance with the TxDOT Herbicide Manual to control noxious weeds and to eliminate grass in pavement or concrete.<br>(v) A full width mowing cycle is completed after the first frost<br>(vi) Wildflowers are preserved utilizing the guidelines in the mowing specifications and TxDOT Roadside Vegetation Manual. | 24 hrs | 7 days | 28 days | **a) Urban areas**<br>Physical measurement of height of grass and weeds<br>**b) Rural areas**<br>Physical measurement of height of grass and weeds<br>**c) Encroachment**<br>Visual inspection of instances of encroachment of vegetation<br>**d) Wildflowers**<br>Visual inspection with audit of process.<br>**e) Sight lines**<br>Visual inspection | Individual measurement areas to have 95% of height of grass and weeds between 5 in. and 18 in<br>Individual measurement areas to have 95% of height of grass and weeds between 5 in. and 30 in<br>Occurrences of vegetation encroachment in each auditable section<br>Adherence to vegetation management manuals<br>Instances of impairment of sight lines or sight distance to signs | 100%<br>100%<br>Nil<br>100%<br>Nil |
| | 10.2 | Landscaped areas | (i) All landscaped areas are maintained to their originally constructed condition. Landscaped areas are as designated in the Plans.<br>(ii) Mowing, litter pickup, irrigation system maintenance and operation, plant maintenance, pruning, insect, disease and pest control, fertilization, mulching, bed maintenance, watering is undertaken as per MMP.<br>(iii) The height of grass and weeds is kept between 2“ and 8”. Mowing begins before vegetation reaches 8 in<br>(iv) Damaged or dead vegetation is replaced. | 24 hrs | 7 days | 28 days | Visual inspection | Inspection records showing compliance | 100% |
| | 10.3 | Fire hazards | Fire hazards are controlled | 24 hrs | 7 days | 28 days | Visual inspection | Instances of dry brush or vegetation forming fire hazard | Nil |
| | 10.4 | Trees, brush and ornamentals | (i) Trees, brush and ornamentals on the right of way, except in established no mow areas, are trimmed in accordance with TxDOT standards.<br>(ii) Trees, brush and ornamentals are trimmed to insure they do not interfere with vehicles or sight distance, or inhibit the visibility of signs.<br>(iii) Dead trees, brush, ornamentals and branches are removed. Potentially dangerous trees or limbs are removed.<br>(iv) All undesirable trees and vegetation are removed. Diseased trees or limbs are treated or removed by licensed contractors. | 24 hrs | 7 days | 28 days | Visual inspection | Inspection records showing compliance | 100% |
| | 10.5 | Wetlands | Wetlands are managed in accordance with the permit requirements | 24 hrs | 7 days | 28 days | Visual inspection, assessment of permit issuers | Instances of permit requirements not met | Nil |

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| | | | | **Cat 1** | **Cat 1** | **Cat 2** | | | |
| | | | | **Hazard Mitigation** | **Permanent Remedy** | **Permanent Repair** | | | |
| **11) REST AREAS AND PICNIC AREAS (Not Used)** | | | | | | | | | |
| **12) EARTHWORKS, EMBANKMENTS AND CUTTINGS** | | | | | | | | | |
| | 12.1 | Slope failure | All structural or natural failures of the embankment and cut slopes of the Project are repaired | 24 hrs | 28 days | 6 months | Visual inspection by geotechnical specialist and further tests as recommended by the specialist | Recorded instances of slope failure | Nil |
| | 12.2 | Slopes - General | Slopes are maintained in general conformance to the original graded cross-sections, the replacement of landscaping materials, reseeding and re-vegetation for erosion control purposes and removal and disposal of all eroded materials from the roadway and shoulders | 24 hrs | 28 days | 6 months | | Inspection records showing compliance | 100% |
| **13) ITS EQUIPMENT** | | | | | | | | | |
| | 13.1 | ITS Equipment | All ITS equipment is fully functional and housing is functioning and free of defects.<br>(i) All equipment and cabinet identification numbers are visible, sites are well drained and access is clear<br>(ii) Steps, handrails and accesses are kept in a good condition<br>(iii) Access to all communication hubs, ground boxes, cabinets and sites is clear<br>(iv) All drainage is operational and all external fixtures and fittings are in a satisfactory condition<br>(v) All communication cable markers, cable joint markers and duct markers are visible and missing markers are replaced<br>(vi) Backup power supply system is available at all times | 24 hrs | 14 days | 1 month | Visual inspection | Inspection records showing compliance with requirements for maintenance of ITS equipment in each auditable section. | 100% |
| | 13.2 | Dynamic message sign equipment | Dynamic message signs are free from faults such as:<br>(i) Any signal displaying a message which is deemed to be a safety hazard<br>(ii) Failure of system to clear sign settings when appropriate.<br>(iii) 2 or more contiguous sign failures that prevent control office setting strategic diversions<br>(iv) Signs displaying an incorrect message. | 2 hrs | 24 hrs | 14 days | Defect measurement dependent on equipment | Inspection records showing compliance | 100% |
| | 13.3 | CCTV equipment | CCTV Systems are free from faults that limit the availability of the operators to monitor the area network, such as:<br>(i) Failure of CCTV Systems to provide control offices with access and control of CCTV images<br>(ii) Failure of a CCTV camera or its video transmission system.<br>(iii) Failure of a pan / tilt unit or its control system.<br>(iv) Moisture ingress onto CCTV camera lens<br>(v) Faults that result in significant degradation of CCTV images | 2 hrs | 24 hrs | 14 days | Defect measurement dependent on equipment | Inspection records showing compliance | 100% |

| Performance and Measurement Table Baseline | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **MAINTENANCE ELEMENT CATEGORY** | **REF** | **MAINTENANCE ELEMENT** | **PERFORMANCE REQUIREMENT** | **RESPONSE TO DEFECTS** | | | **INSPECTION AND MEASUREMENT METHOD*** | **MEASUREMENT RECORD*** | **TARGET** |
| | | | | **Cat 1** | **Cat 1** | **Cat 2** | | | |
| | | | | **Hazard Mitigation** | **Permanent Remedy** | **Permanent Repair** | | | |
| | 13.4 | Vehicle detection equipment | All equipment free of defects and operational problems such as;<br>(i) Inoperable loops.<br>(ii) Malfunctioning camera controllers. | 2 hrs | 24 hrs | 1 month | Defect measurement dependent on equipment<br>Traffic detector loops:<br>Loop circuit's inductance to be > 50 and < 1,000 micro henries.<br>Insulation resistance to be > 50 meg ohms. | Inspection records showing compliance<br>Instances of loops out of compliance | 100%<br>Nil |
| **14) TOLLING Facilities and Buildings (Not Used)** | | | | | | | | | |
| **15) AMENITY** | | | | | | | | | |
| | 15.1 | Graffiti | Graffiti is removed in a manner and using materials that restore the surface to a like appearance similar to adjoining surfaces | 24 hrs | 28 days | 6 months | All graffiti is considered a Category 1 defect | Inspection records showing compliance | 100% |
| | 15.2 | Animals | All dead or injured animals are removed | 2 hrs | N/A | N/A | Visual inspection | No dead or injured animals are present | 100% |
| | 15.3 | Abandoned vehicles and equipment | All abandoned vehicles and equipment are removed | 1 hr | 72 hrs | N/A | Visual inspection | No abandoned vehicles or equipment present | 100% |
| **16) SNOW AND ICE CONTROL** | | | | | | | | | |
| | 16.1 | Travel lanes | Maintain travel way free from snow and ice | 2 hrs | N/A | N/A | Maximum 1hr response time to complete manning and loading of spreading vehicles<br>Maximum 2 hrs from departure from loading point to complete treatment and return to loading point<br>Maximum 1 hr response time for snow and ice clearance vehicles to depart from base | Inspection records showing compliance | 100% |
| | 16.2 | Weather forecasting | Weather forecast information is obtained and assessed and appropriate precautionary treatment is carried out to prevent ice forming on the travel way | 2hrs | N/A | N/A | Operations plan details the process and procedures in place and followed | Inspection records showing compliance | 100% |
| | 16.3 | Operational plans | Operate snow and ice clearance plans to maintain traffic flows during and after precipitation resulting in snowfall or ice and restore the travel way to a clear condition as soon as possible. | 2hrs | N/A | N/A | Operations plan details the process and procedures in place and followed | Inspection records showing compliance | 100% |
| **17) INCIDENT RESPONSE** | | | | | | | | | |
| | 17.1 | General | Respond to Incidents in accordance with the MMP | 1 hr | N/A | N/A | Response times met for 98% of Incidents measured on a 1 year rolling basis.<br>No complaints from Emergency Services. | Inspection records showing compliance | 100% |
| | 17.2 | Hazardous Materials | For any Hazardous Materials spills, comply with the requirements of the MMP. | 1 hr | N/A | N/A | MMP details the process and procedures in place and followed. | Inspection records showing compliance | 100% |
| | 17.3 | Structural assessment | Evaluate structural damage to structures and liaise with Emergency Services to ensure safe working in clearing the Incident | 1 hr | N/A | N/A | Inspections and surveys as required by Incident | Incident reports showing compliance | 100% |

| Performance and Measurement Table Baseline | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **MAINTENANCE ELEMENT CATEGORY** | **REF** | **MAINTENANCE ELEMENT** | **PERFORMANCE REQUIREMENT** | **RESPONSE TO DEFECTS** | | | **INSPECTION AND MEASUREMENT METHOD*** | **MEASUREMENT RECORD*** | **TARGET** |
| | | | | **Cat 1** | **Cat 1** | **Cat 2** | | | |
| | | | | **Hazard Mitigation** | **Permanent Remedy** | **Permanent Repair** | | | |
| | 17.4 | Temporary and permanent remedy | Propose and implement temporary measures or permanent repairs to Defects arising from the Incident.<br>Ensure the structural safety of any structures affected by the Incident | 24 hrs | 28 days | N/A | Review and inspection of the Incident site | Auditable inspection records showing compliance | 100% |
| **18) CUSTOMER RESPONSE** | | | | | | | | | |
| | 18.1 | Response to inquiries | Timely and effective response to customer inquiries and complaints. | 48 hrs | 28 days | N/A | Contact the customer within 48 hours following initial customer inquiry.<br>All work resulting from customer requests is scheduled within 48 hours of customer contact.<br>Follow-up contact with the customer within 72 hours of initial inquiry.<br>All customer concerns/requests are resolved to TxDOT's satisfaction within 2 weeks of the initial inquiry. | Number of responses within specified times | 100% |
| | 18.2 | Customer contact line | Telephone line manned during business hours and 24 hour availability of messaging system. Faults to telephone line or message system rectified | 24 hrs | 28 days | N/A | Instances of line out of action or unmanned | Operations records showing non availability including complaints from public. | nil |
| **19) SWEEPING AND CLEANING** | | | | | | | | | |
| | 19.1 | Sweeping | (i) Keep all channels, hard shoulders, gore areas, ramps, intersections, islands and frontage roads swept clean,<br>(ii) Clear and remove debris from traffic lanes, hard shoulders, verges and central reservations, footways and cycle ways<br>(iii) Remove all sweepings without stockpiling in the right of way and dispose of at approved tip. | 24 hrs | 28 days | 6 months | Buildup of dirt, ice rock, debris, etc. on roadways and bridges not to accumulate greater than 24" wide or 1/2" deep | Inspection records showing compliance | 100% |
| | 19.2 | Litter | (i) Keep the Project in a neat condition, remove litter regularly<br>(ii) Pick up large litter items before mowing operations.<br>(iii) Dispose of all litter and debris collected at an approved solid waste site. | 24 hrs | 28 days | 6 months | No more than 20 pieces of litter per roadside mile shall be visible when traveling at highway speed. | Inspection records showing compliance | 100% |

## ATTACHMENT 2: ELEMENTS FOR WHICH MAINTENANCE SERVICES ARE TO BE PROVIDED

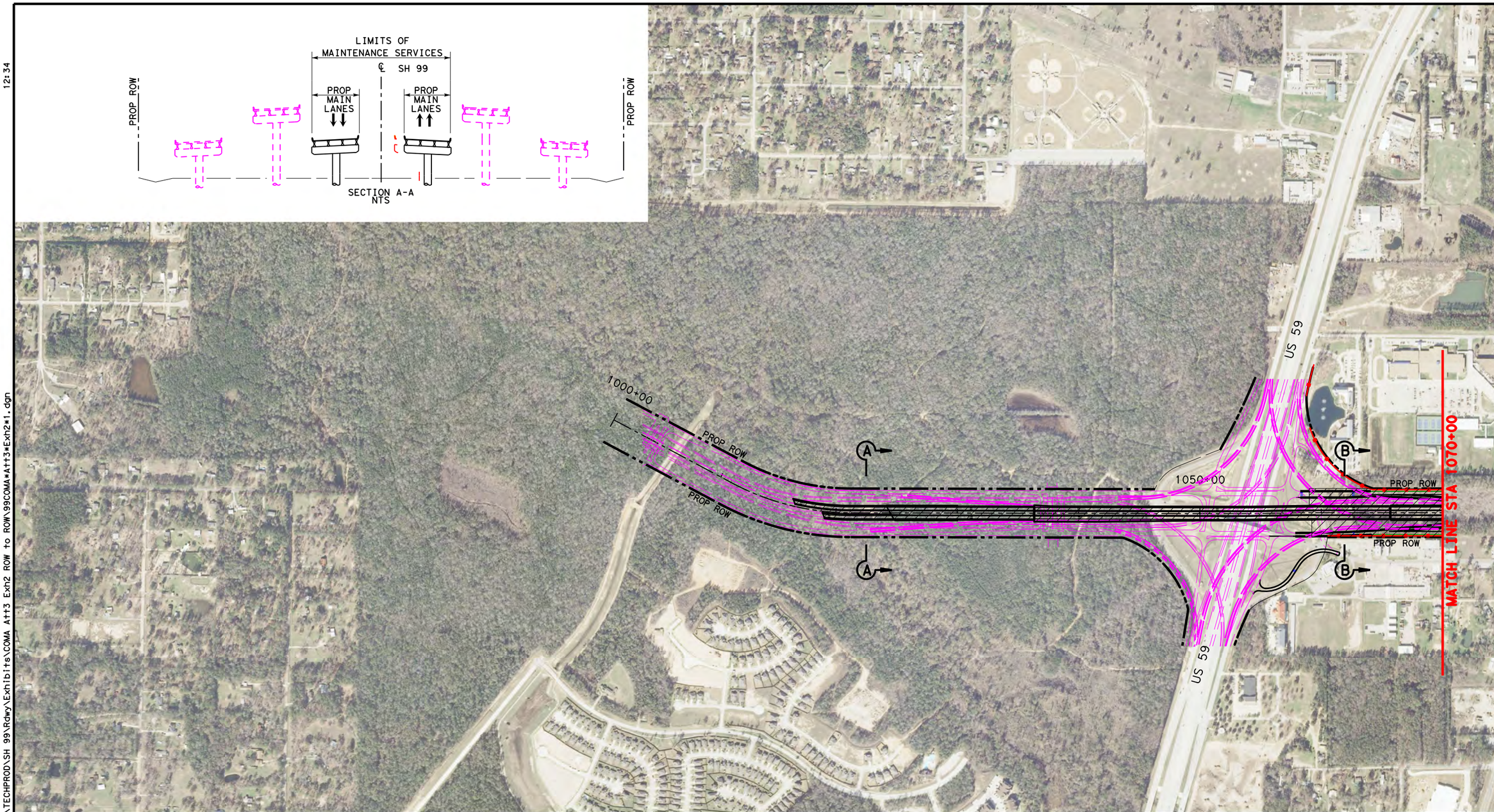
| ELEMENT CATEGORY | | MAINTENANCE TYPES | | | | |
|---|---|---|---|---|---|---|
| | | Routine | Preven-tive | Major | Emergen-cy | Operation-al Items |
| **1) ROADWAY** | | | | | | |
| 1.1 | Obstructions and debris | x | | | | |
| 1.2 | Pavement | x | x | x | | |
| 1.3 | Crossovers and other paved areas | x | x | x | | |
| 1.4 | Joints in concrete | x | x | x | | |
| 1.5 | Curbs | x | x | x | | |
| **2) DRAINAGE** | | | | | | |
| 2.1 | Pipes and channels | x | x | x | | |
| 2.2 | Drainage treatment devices | x | x | x | | |
| 2.3 | Travel way | x | x | x | | |
| 2.4 | Discharge systems | x | x | x | | |
| 2.5 | Protected species | x | | | | |
| **3) STRUCTURES** | | | | | | |
| 3.1 | Structure components | x | x | x | | |
| 3.2 | Non-bridge class culverts | x | x | x | | |
| 3.3 | Load ratings | x | x | x | | |
| 3.4 | Gantries and high masts | x | x | x | | |
| 3.5 | Access points | x | x | x | | |
| 3.6 | Mechanically stabilized earth and retaining walls | x | x | x | | |
| **4) PAVEMENT MARKINGS, OBJECT MARKERS, BARRIER MARKERS AND DELINEATORS** | | | | | | |
| 4.1 | Pavement markings | x | x | x | | |
| 4.2 | Raised reflective markers | x | x | x | | |
| 4.3 | Delineators & markers | x | x | x | | |
| **5) GUARDRAILS, SAFETY BARRIERS AND IMPACT ATTENUATORS** | | | | | | |
| 5.1 | Guard rails and safety barriers | x | x | x | | |
| 5.2 | Impact attenuators | x | x | x | | |
| **6) TRAFFIC SIGNS** | | | | | | |
| 6.1 | General – All signs | x | x | x | | |
| 6.2 | General – Safety critical signs | x | x | x | | |
| **7) TRAFFIC SIGNALS** | | | | | | |
| 7.1 | General | x | x | x | | |
| 7.2 | Soundness | x | x | x | | |
| 7.3 | Identification marking | x | x | x | | |
| 7.4 | Pedestrian elements and vehicle detectors | x | x | x | | |

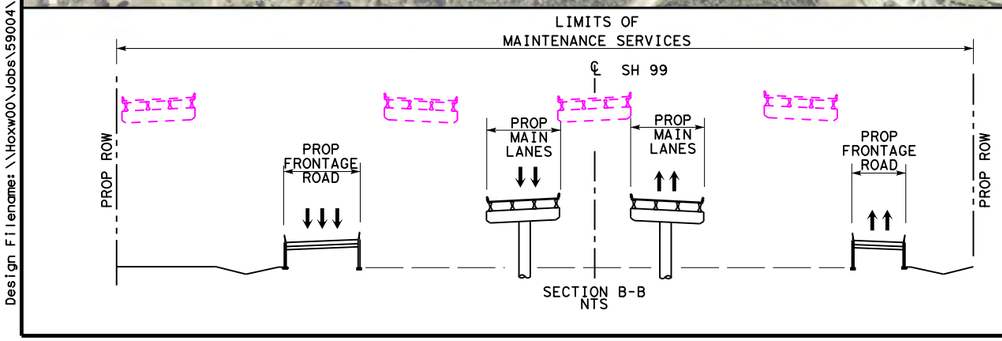
| ELEMENT CATEGORY | | MAINTENANCE TYPES | | | | |
|---|---|---|---|---|---|---|
| | | Routine | Preven-tive | Major | Emergen-cy | Operation-al Items |
| **8) LIGHTING** | | | | | | |
| 8.1 | Roadway lighting – General | x | x | x | | |
| 8.2 | Sign lighting | x | x | x | | |
| 8.3 | Electrical supply | x | x | x | | |
| 8.4 | Access panels | x | x | x | | |
| 8.5 | High mast lighting | x | x | x | | |
| **9) FENCES, SOUND WALLS AND ABATEMENT** | | | | | | |
| 9.1 | Design and location | x | x | x | | |
| 9.2 | Construction | x | x | x | | |
| **10) ROADSIDE MANAGEMENT** | | | | | | |
| 10.1 | Vegetated areas – Except landscaped areas – General | x | | | | |
| 10.2 | Landscaped areas | x | | | | |
| 10.3 | Fire hazards | x | | | | |
| 10.4 | Trees, brush and ornamentals | x | | | | |
| 10.5 | Wetlands | x | | | | |
| **11) REST AREAS AND PICNIC AREAS (Not Used)** | | | | | | |
| **12) EARTHWORKS, EMBANKMENTS AND CUTTINGS** | | | | | | |
| 12.1 | Slope failure | x | x | x | | |
| 12.2 | Slopes - General | x | x | x | | |
| **13) ITS EQUIPMENT** | | | | | | |
| 13.1 | ITS Equipment | x | x | x | | |
| 13.2 | Dynamic message sign equipment | x | x | x | | |
| 13.3 | CCTV equipment | x | x | x | | |
| 13.4 | Vehicle detection equipment | x | x | x | | |
| **14) TOLLING Facilities and Buildings (Not Used)** | | | | | | |
| **15) AMENITY** | | | | | | |
| 15.1 | Graffiti | x | | | | |
| 15.2 | Animals | x | | | | |
| 15.3 | Abandoned vehicles and equipment | x | | | | |
| **16) SNOW AND ICE CONTROL** | | | | | | |
| 16.1 | Travel lanes | | | | x | |
| 16.2 | Weather forecasting | | | | x | |
| 16.3 | Operational plans | | | | x | |
| **17) INCIDENT RESPONSE** | | | | | | |
| 17.1 | General | | | | x | |
| 17.2 | Hazardous Materials | | | | x | |
| 17.3 | Structural assessment | | | | x | |
| 17.4 | Temporary and permanent remedy | | | | x | |

| ELEMENT CATEGORY | | MAINTENANCE TYPES | | | | |
|---|---|---|---|---|---|---|
| | | Routine | Preven-tive | Major | Emergen-cy | Operation-al Items |
| **18) CUSTOMER RESPONSE** | | | | | | |
| 18.1 | Response to inquiries | | | | | x |
| 18.2 | Customer contact line | | | | | x |
| **19) SWEEPING AND CLEANING** | | | | | | |
| 19.1 | Sweeping | x | | | | |
| 19.2 | Litter | x | | | | |

## ATTACHMENT 3: MAINTENANCE LIMITS

[SEE ATTACHED]




## LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800 (H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
LIMITS OF MAINTENANCE SERVICES

| DSN: | FED. RD. DIV. NO. | STATE | PROJECT NO. | | | HIGHWAY NO. |
|---|---|---|---|---|---|---|
| CK: | 6 | TEXAS | | | | SH 99 |
| DRN: | STATE DISTRICT | COUNTY | CONTROL NO. | SECTION NO. | JOB NO. | SHEET NO. |
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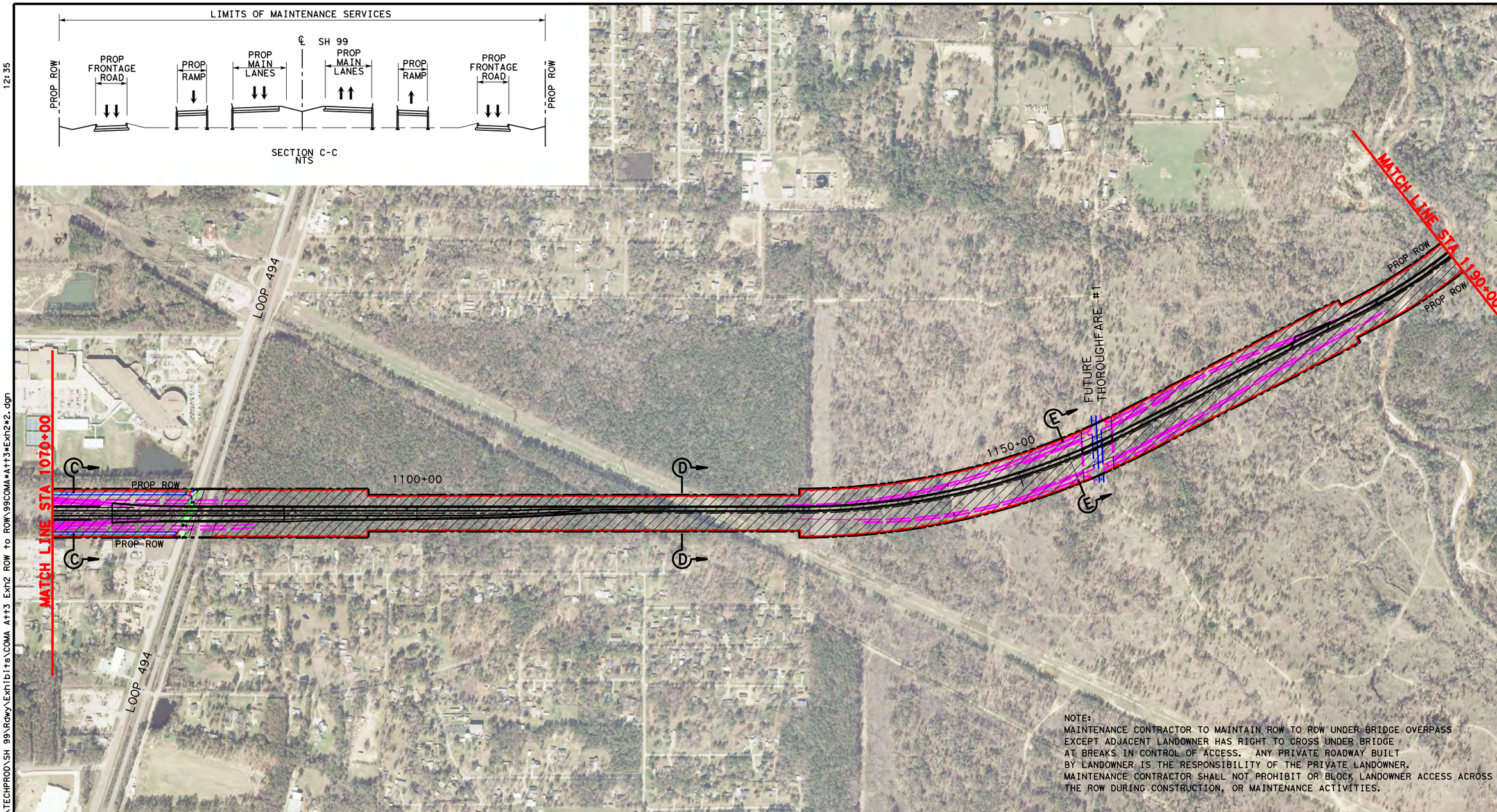


NOTE:
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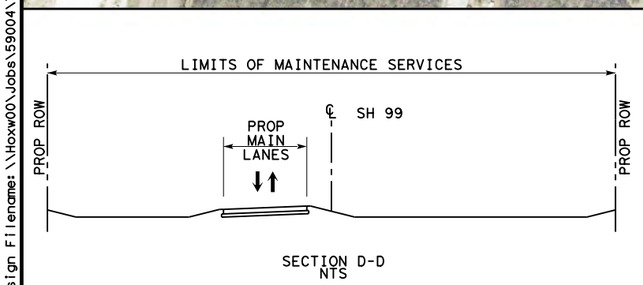


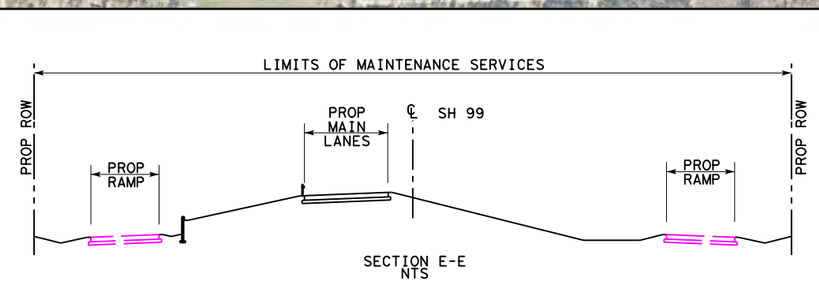


## LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800 (H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
LIMITS OF MAINTENANCE SERVICES

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|---|---|---|---|---|---|---|
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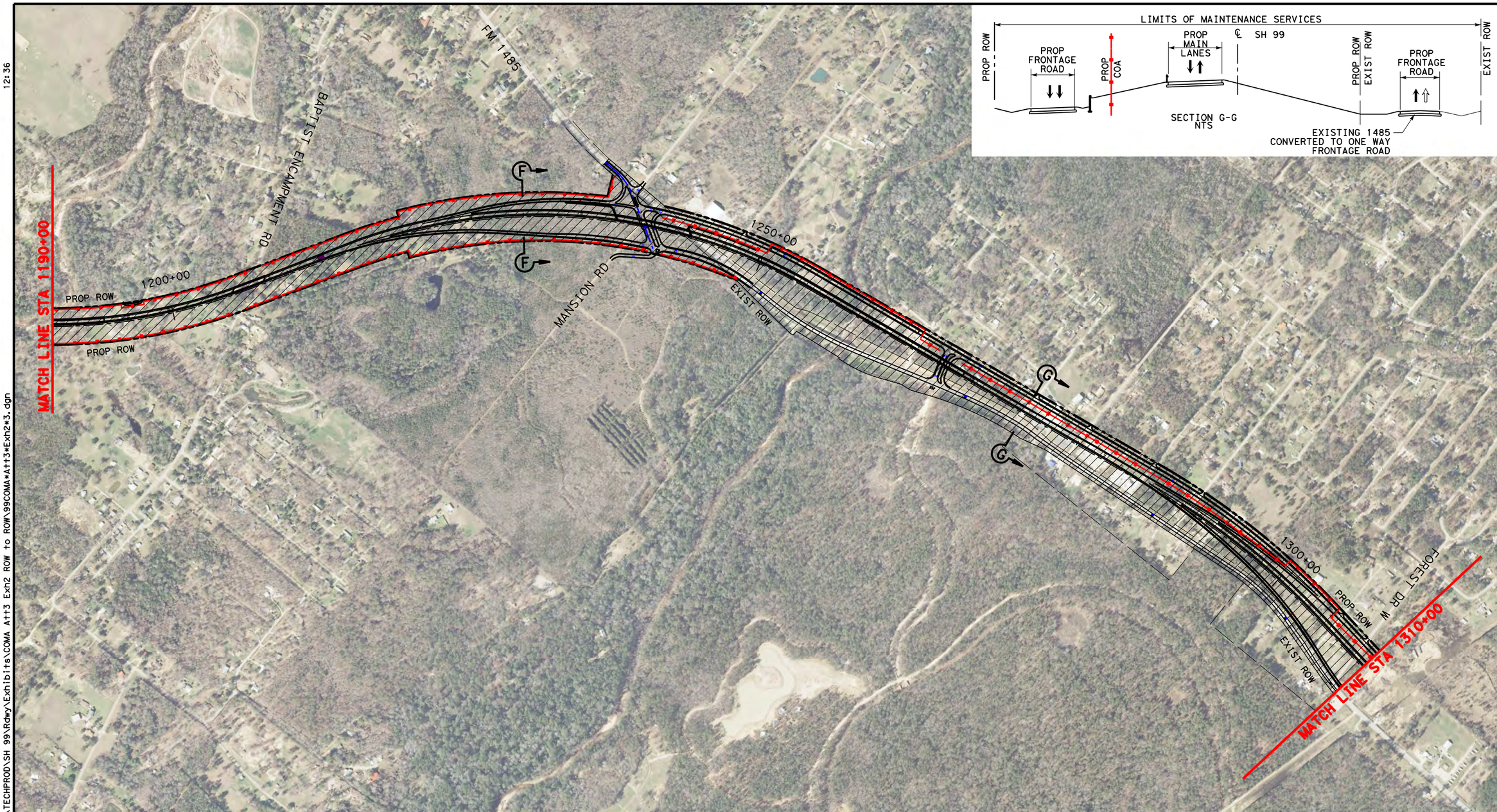


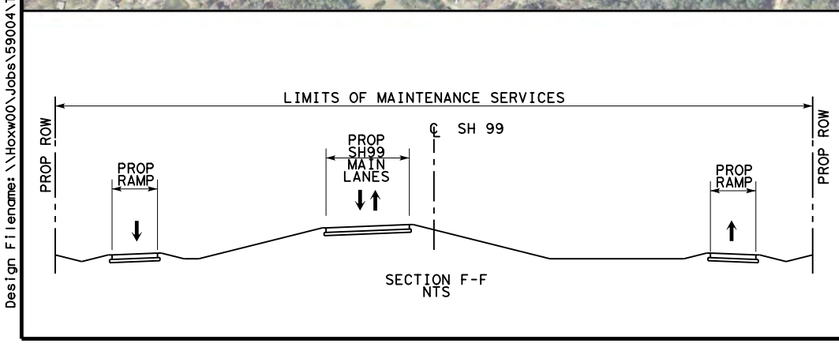


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STATE HIGHWAY 99 GRAND PARKWAY H&I

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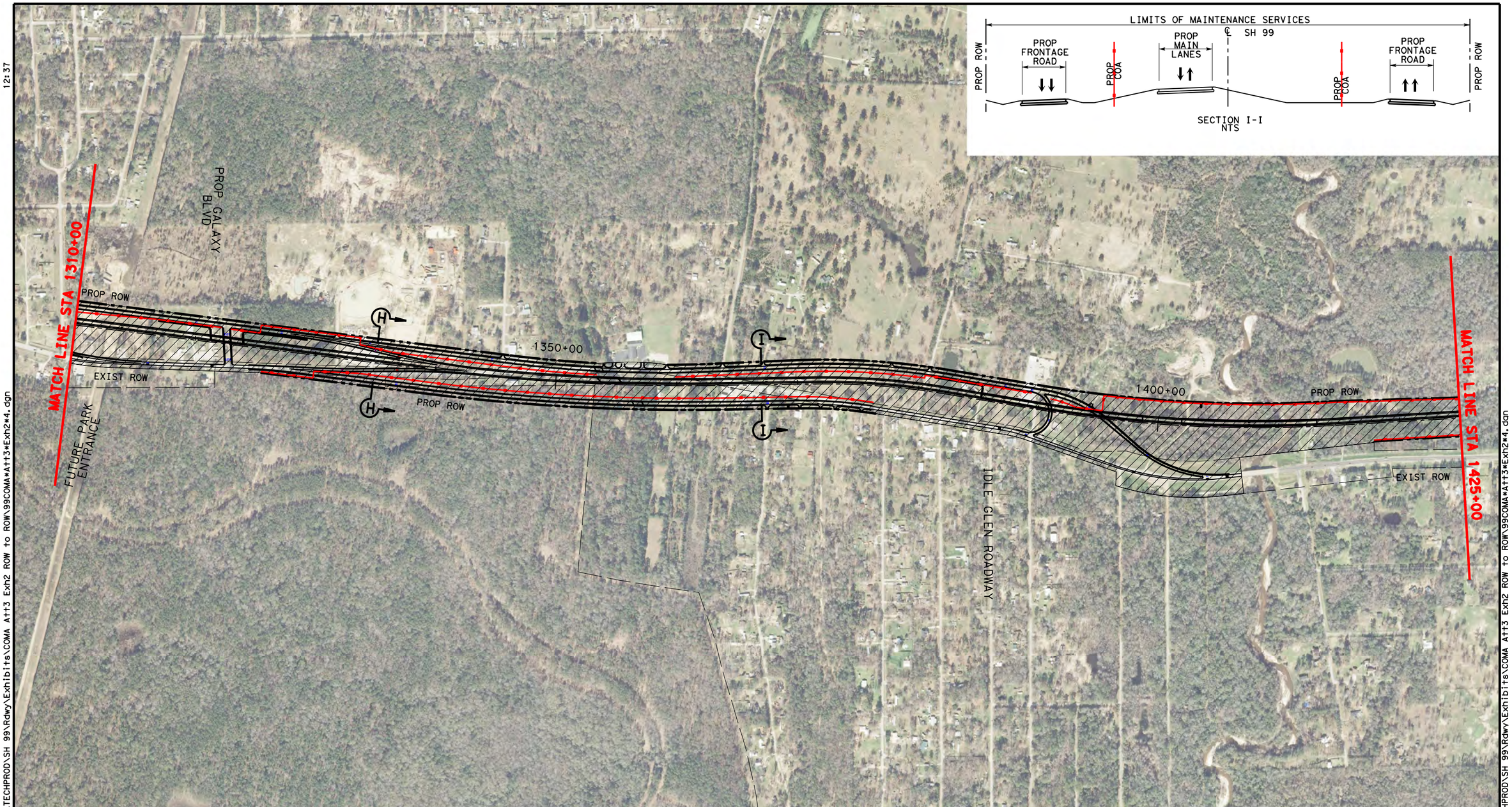


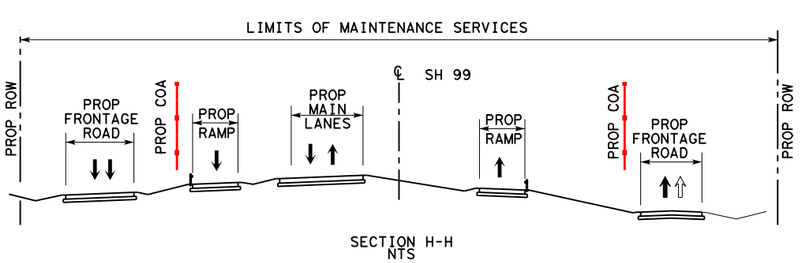


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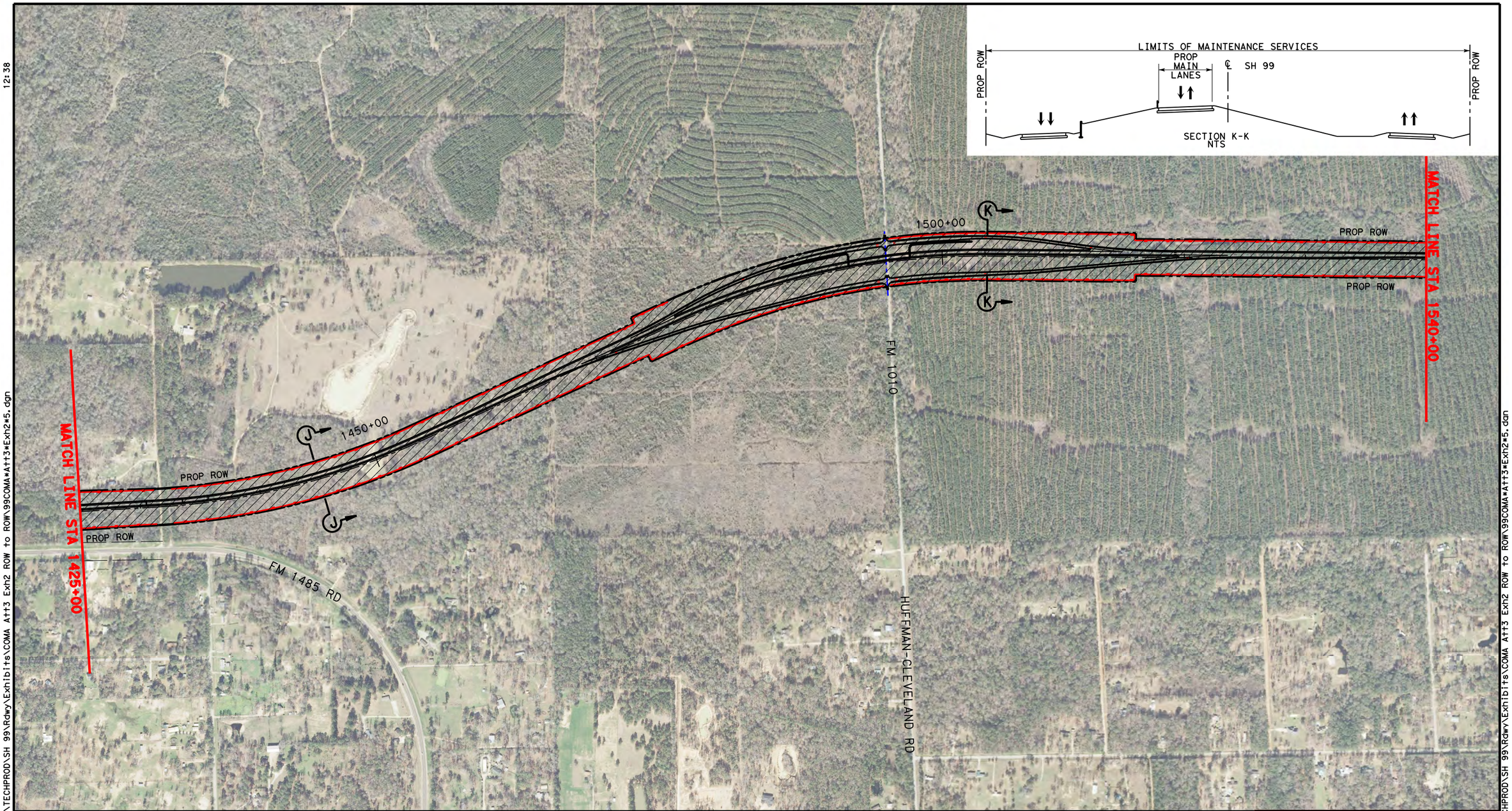


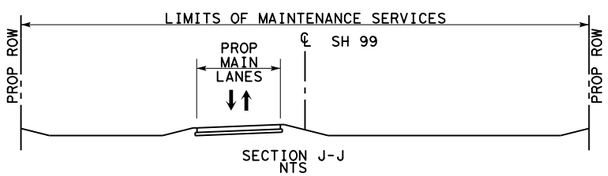


## LEGEND

- LIMITS OF MAINTENANCE SERVICES
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- PROP ROW
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Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
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| DRN: | STATE DISTRICT | COUNTY | CONTROL NO. | SECTION NO. | JOB NO. | SHEET NO. |
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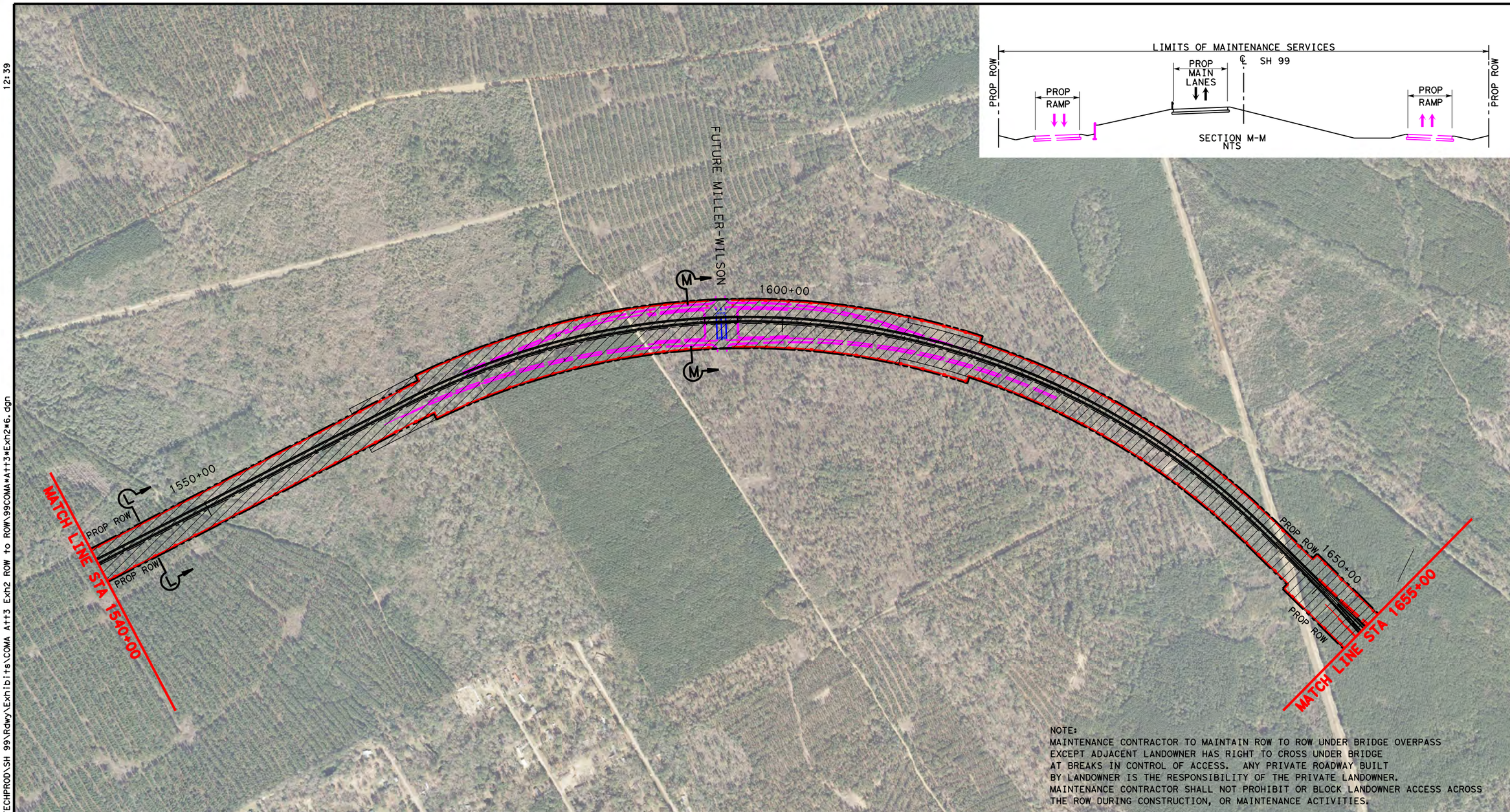


NOTE:
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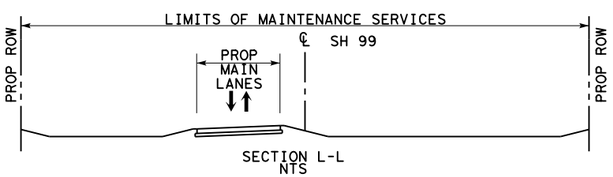


## LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800 (H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
LIMITS OF MAINTENANCE SERVICES

| DSN: | FED. RD. DIV. NO. | STATE | PROJECT NO. | | | HIGHWAY NO. |
|---|---|---|---|---|---|---|
| CK: | 6 | TEXAS | | | | SH 99 |
| DRN: | STATE DISTRICT | COUNTY | CONTROL NO. | SECTION NO. | JOB NO. | SHEET NO. |
| CK: | | | | | | 6 |

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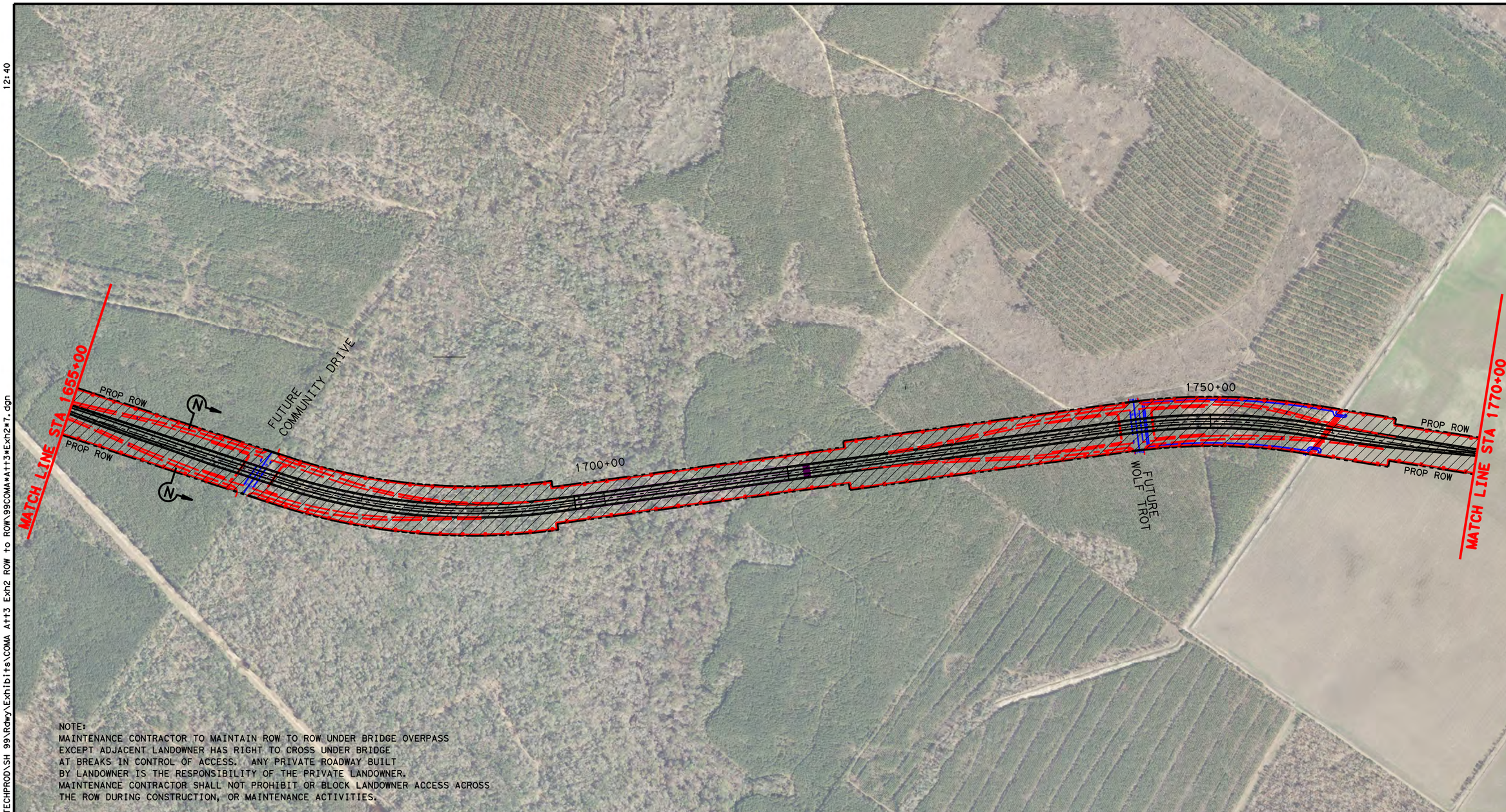
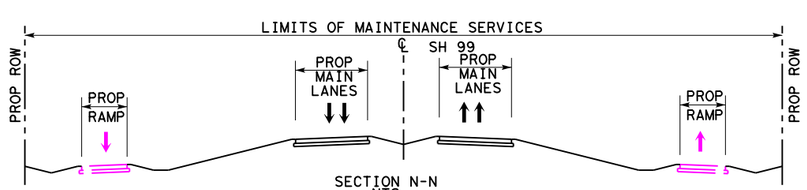



NOTE:
MAINTENANCE CONTRACTOR TO MAINTAIN ROW TO ROW UNDER BRIDGE OVERPASS EXCEPT ADJACENT LANDOWNER HAS RIGHT TO CROSS UNDER BRIDGE AT BREAKS IN CONTROL OF ACCESS. ANY PRIVATE ROADWAY BUILT BY LANDOWNER IS THE RESPONSIBILITY OF THE PRIVATE LANDOWNER. MAINTENANCE CONTRACTOR SHALL NOT PROHIBIT OR BLOCK LANDOWNER ACCESS ACROSS THE ROW DURING CONSTRUCTION, OR MAINTENANCE ACTIVITIES.




SECTION N-N
NTS

## LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800(H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
LIMITS OF MAINTENANCE SERVICES

| DSN: | FED. RD. DIV. NO. | STATE | PROJECT NO. | | | HIGHWAY NO. |
|---|---|---|---|---|---|---|
| CK: | 6 | TEXAS | | | | SH 99 |
| DRN: | STATE DISTRICT | COUNTY | CONTROL NO. | SECTION NO. | JOB NO. | SHEET NO. |
| CK: | | | | | | 7 |

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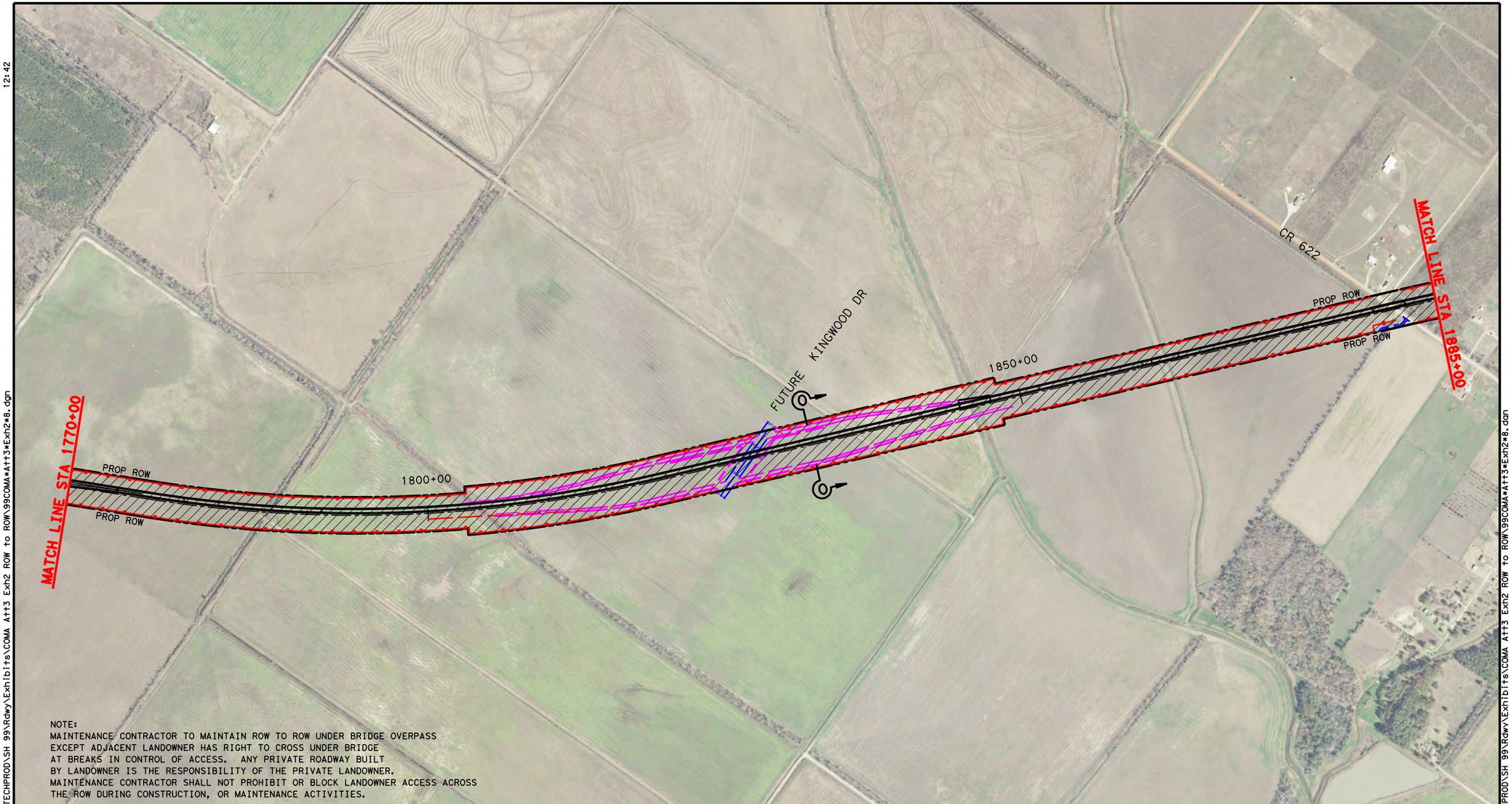


NOTE:
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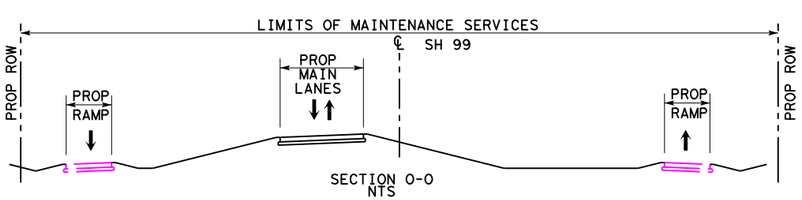


## LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800 (H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
LIMITS OF MAINTENANCE SERVICES

| DSN: | FED. RD. DIV. NO. | STATE | PROJECT NO. | | | HIGHWAY NO. |
|---|---|---|---|---|---|---|
| CK: | 6 | TEXAS | | | | SH 99 |
| DRN: | STATE DISTRICT | COUNTY | CONTROL NO. | SECTION NO. | JOB NO. | SHEET NO. |
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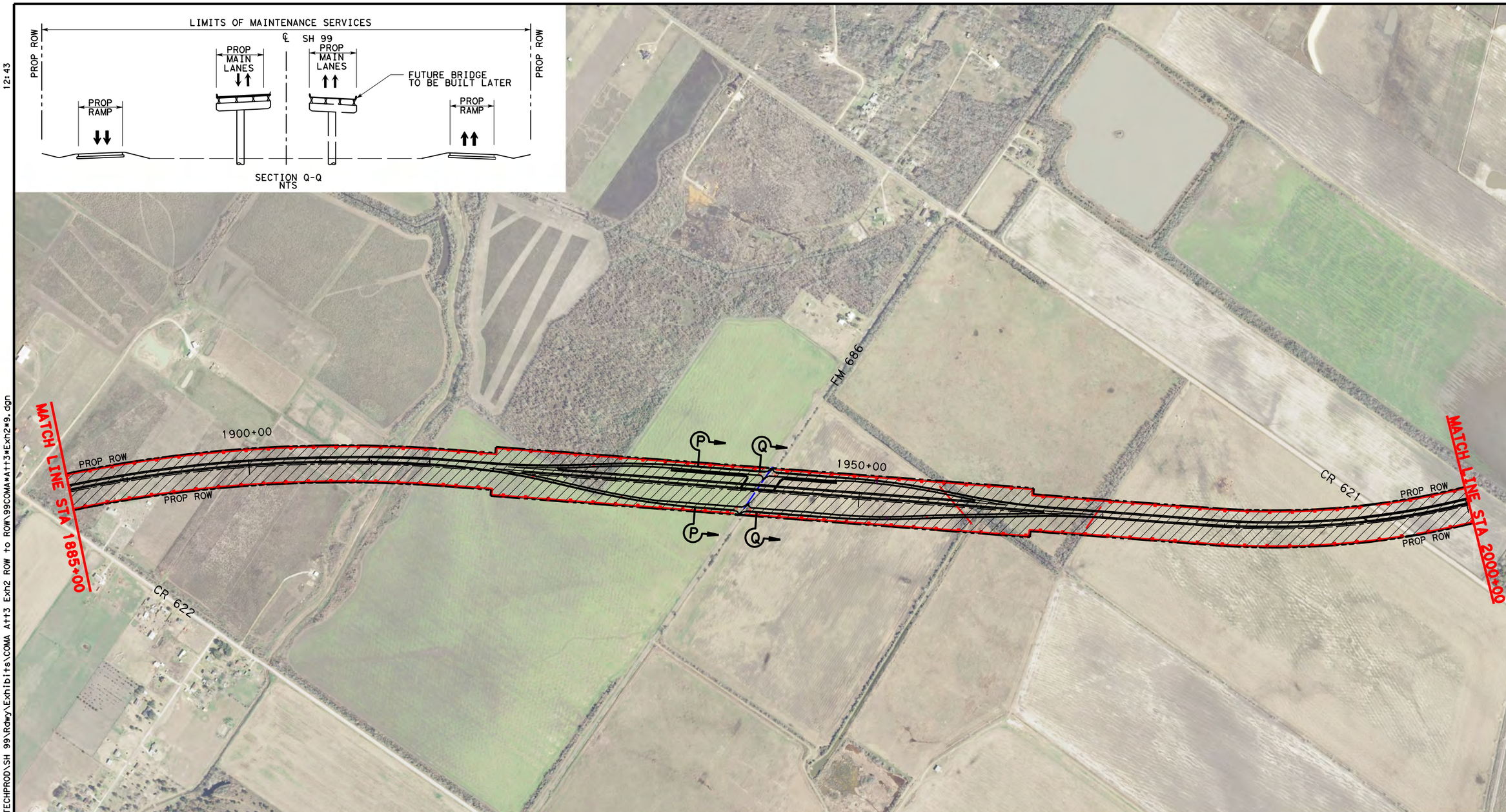


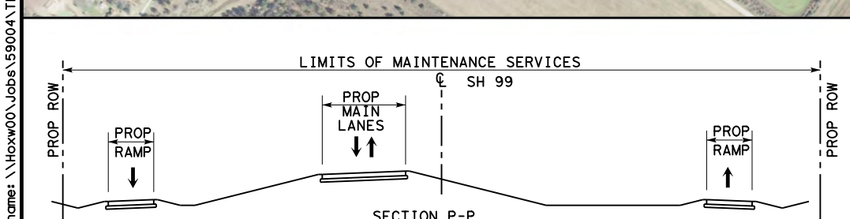


## LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800 (H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
LIMITS OF MAINTENANCE SERVICES

| DSN: | FED. RD. DIV. NO. | STATE | PROJECT NO. | | | HIGHWAY NO. |
|---|---|---|---|---|---|---|
| CK: | 6 | TEXAS | | | | SH 99 |
| DRN: | STATE DISTRICT | COUNTY | CONTROL NO. | SECTION NO. | JOB NO. | SHEET NO. |
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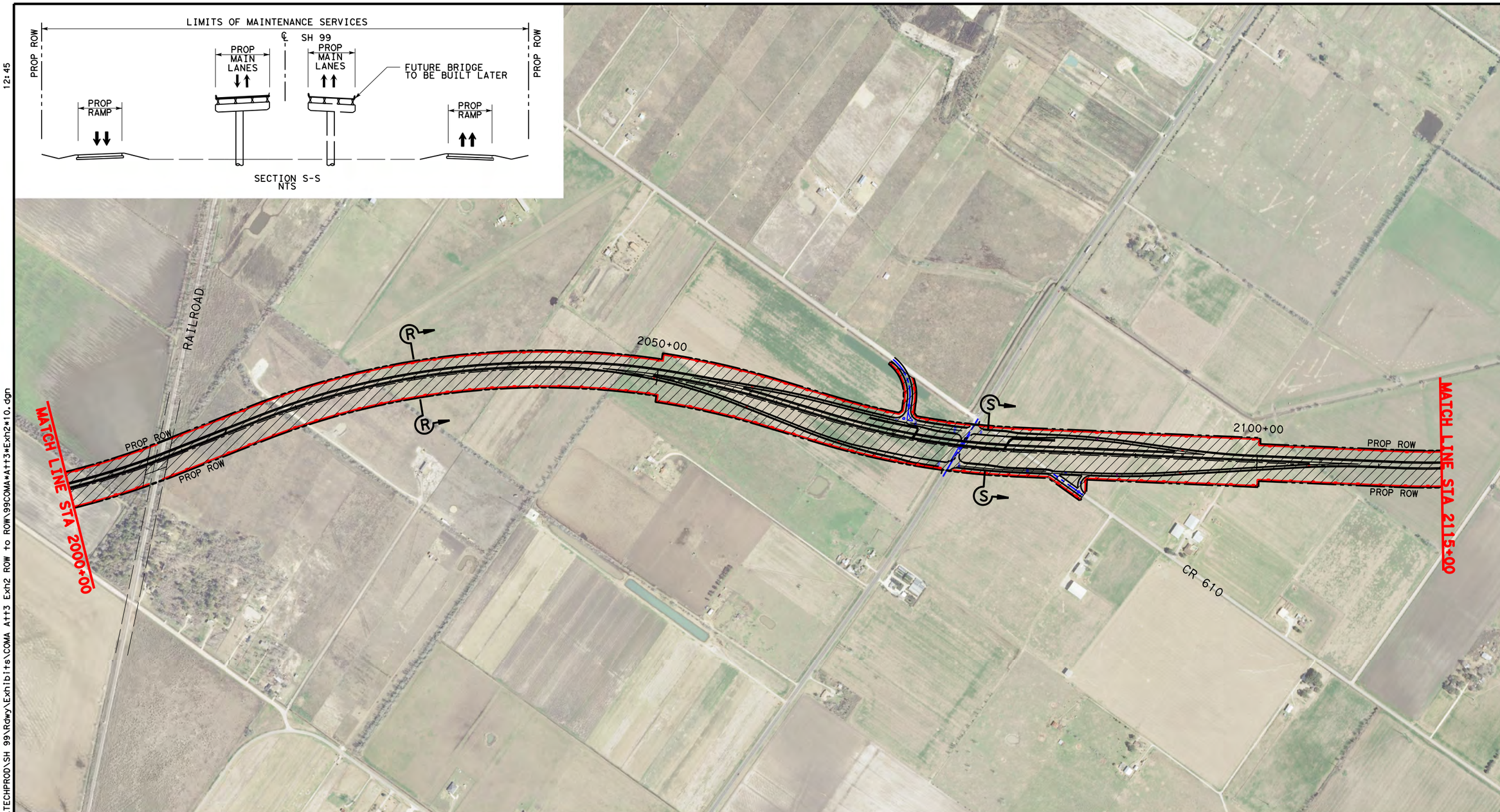


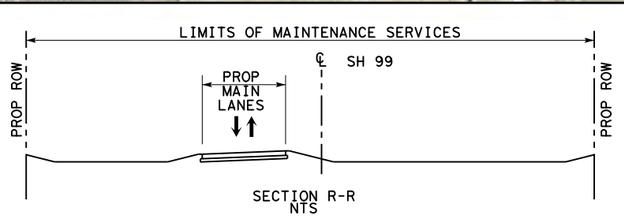


## LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800 (H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
LIMITS OF MAINTENANCE SERVICES

| DSN: | FED. RD. DIV. NO. | STATE | PROJECT NO. | | | HIGHWAY NO. |
|---|---|---|---|---|---|---|
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| DRN: | STATE DISTRICT | COUNTY | CONTROL NO. | SECTION NO. | JOB NO. | SHEET NO. |
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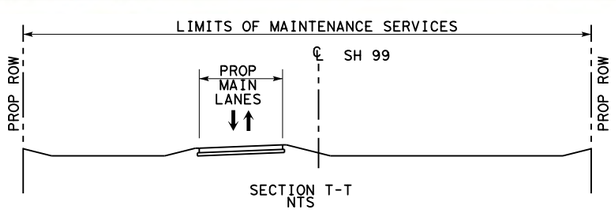


## LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
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- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800 (H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
LIMITS OF MAINTENANCE SERVICES

| DSN: | FED. RD. DIV. NO. | STATE | PROJECT NO. | | | HIGHWAY NO. |
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| DRN: | STATE DISTRICT | COUNTY | CONTROL NO. | SECTION NO. | JOB NO. | SHEET NO. |
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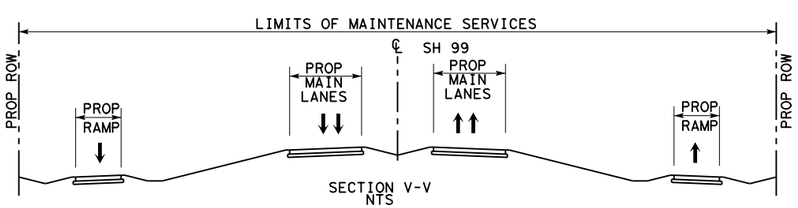


## LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800(H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
LIMITS OF MAINTENANCE SERVICES

| DSN: | FED. RD. DIV. NO. | STATE | PROJECT NO. | | | HIGHWAY NO. |
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| DRN: | STATE DISTRICT | COUNTY | CONTROL NO. | SECTION NO. | JOB NO. | SHEET NO. |
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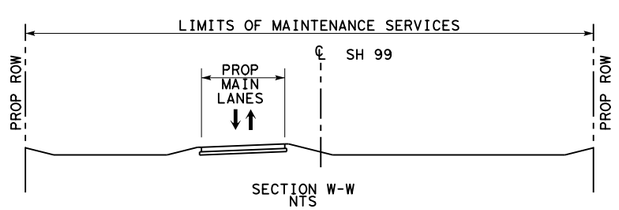


## LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800 (H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
LIMITS OF MAINTENANCE SERVICES

| DSN: | FED. RD. DIV. NO. | STATE | PROJECT NO. | | | HIGHWAY NO. |
|---|---|---|---|---|---|---|
| CK: | 6 | TEXAS | | | | SH 99 |
| DRN: | STATE DISTRICT | COUNTY | CONTROL NO. | SECTION NO. | JOB NO. | SHEET NO. |
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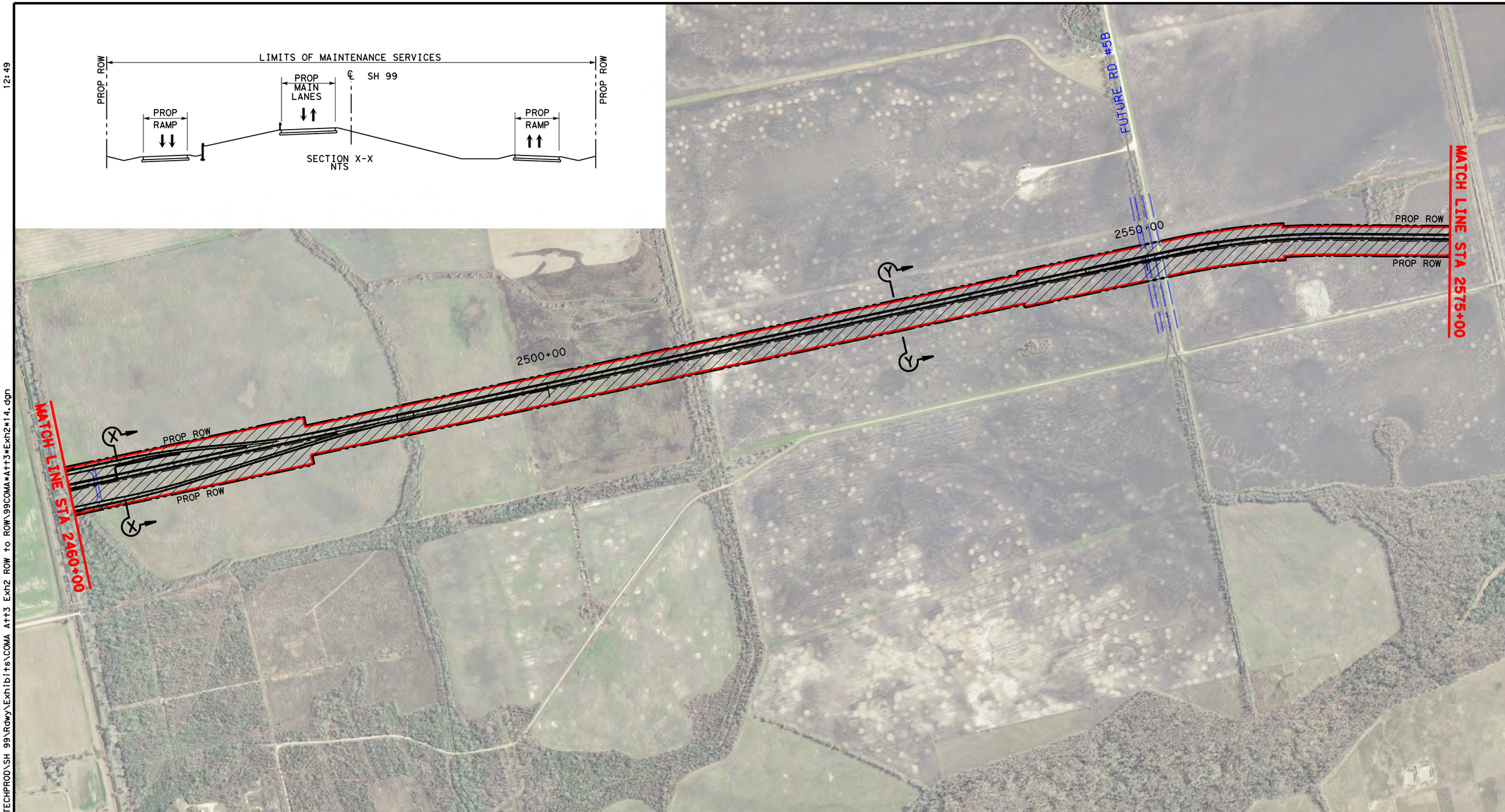


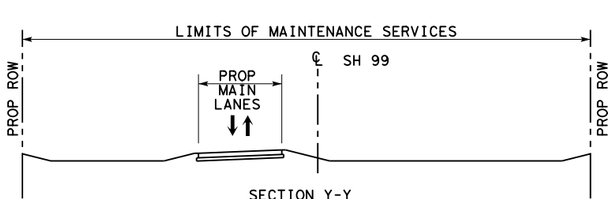


## LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800 (H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
LIMITS OF MAINTENANCE SERVICES

| DSN: | FED. RD. DIV. NO. | STATE | PROJECT NO. | | | HIGHWAY NO. |
|---|---|---|---|---|---|---|
| CK: | 6 | TEXAS | | | | SH 99 |
| DRN: | STATE DISTRICT | COUNTY | CONTROL NO. | SECTION NO. | JOB NO. | SHEET NO. |
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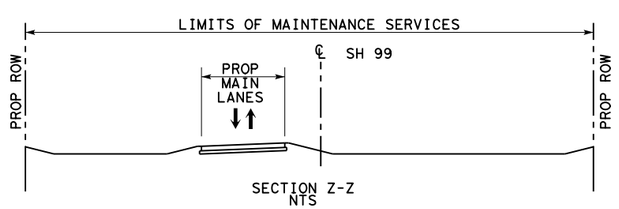


## LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800 (H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
LIMITS OF MAINTENANCE SERVICES

| DSN: | FED. RD. DIV. NO. | STATE | PROJECT NO. | | | HIGHWAY NO. |
|---|---|---|---|---|---|---|
| CK: | 6 | TEXAS | | | | SH 99 |
| DRN: | STATE DISTRICT | COUNTY | CONTROL NO. | SECTION NO. | JOB NO. | SHEET NO. |
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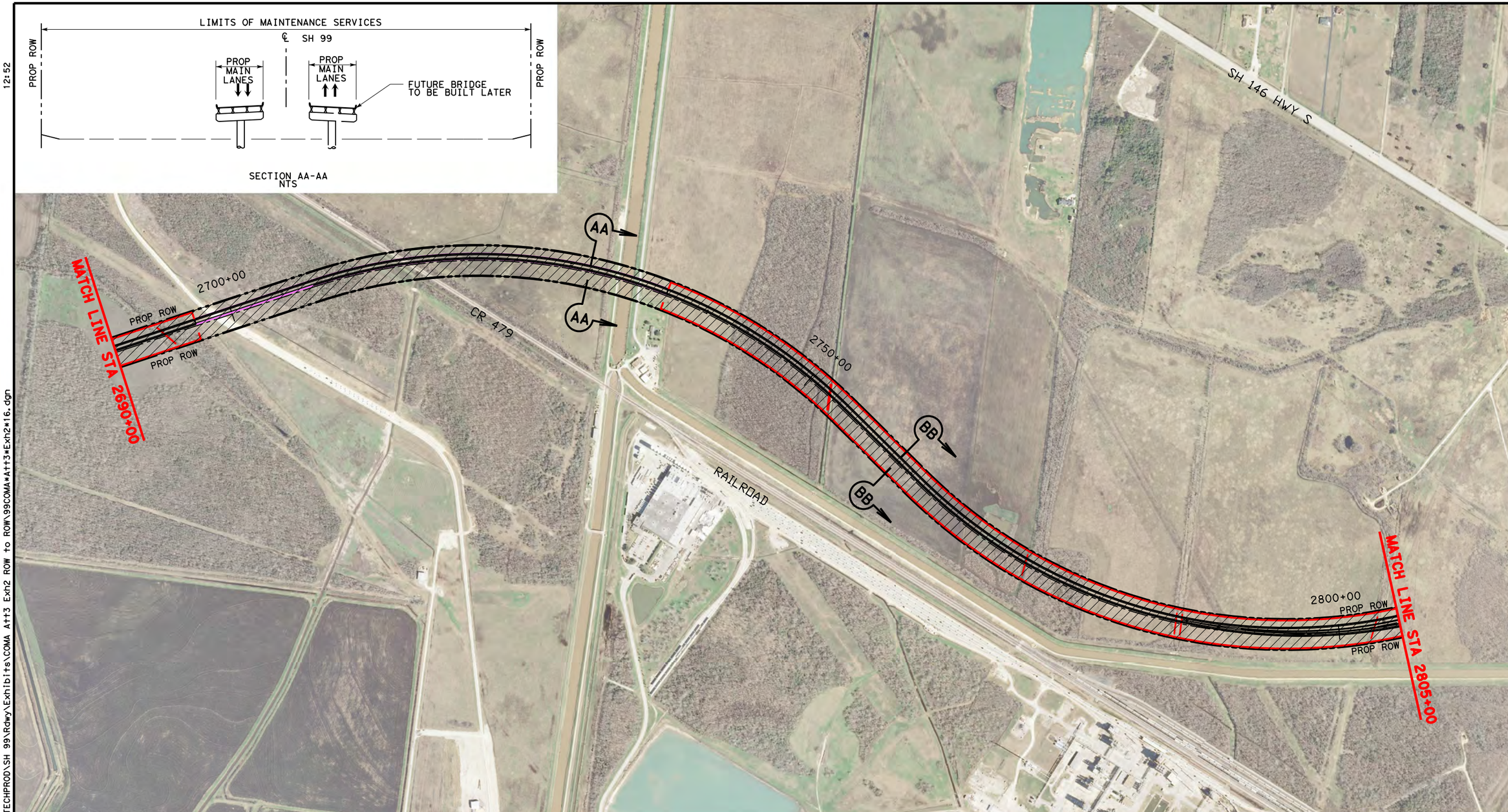


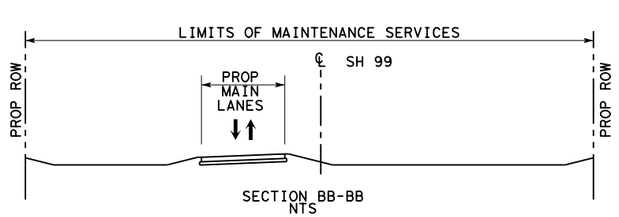


## LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800 (H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
LIMITS OF MAINTENANCE SERVICES

| DSN: | FED. RD. DIV. NO. | STATE | PROJECT NO. | | | HIGHWAY NO. |
|---|---|---|---|---|---|---|
| CK: | 6 | TEXAS | | | | SH 99 |
| DRN: | STATE DISTRICT | COUNTY | CONTROL NO. | SECTION NO. | JOB NO. | SHEET NO. |
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dnallion
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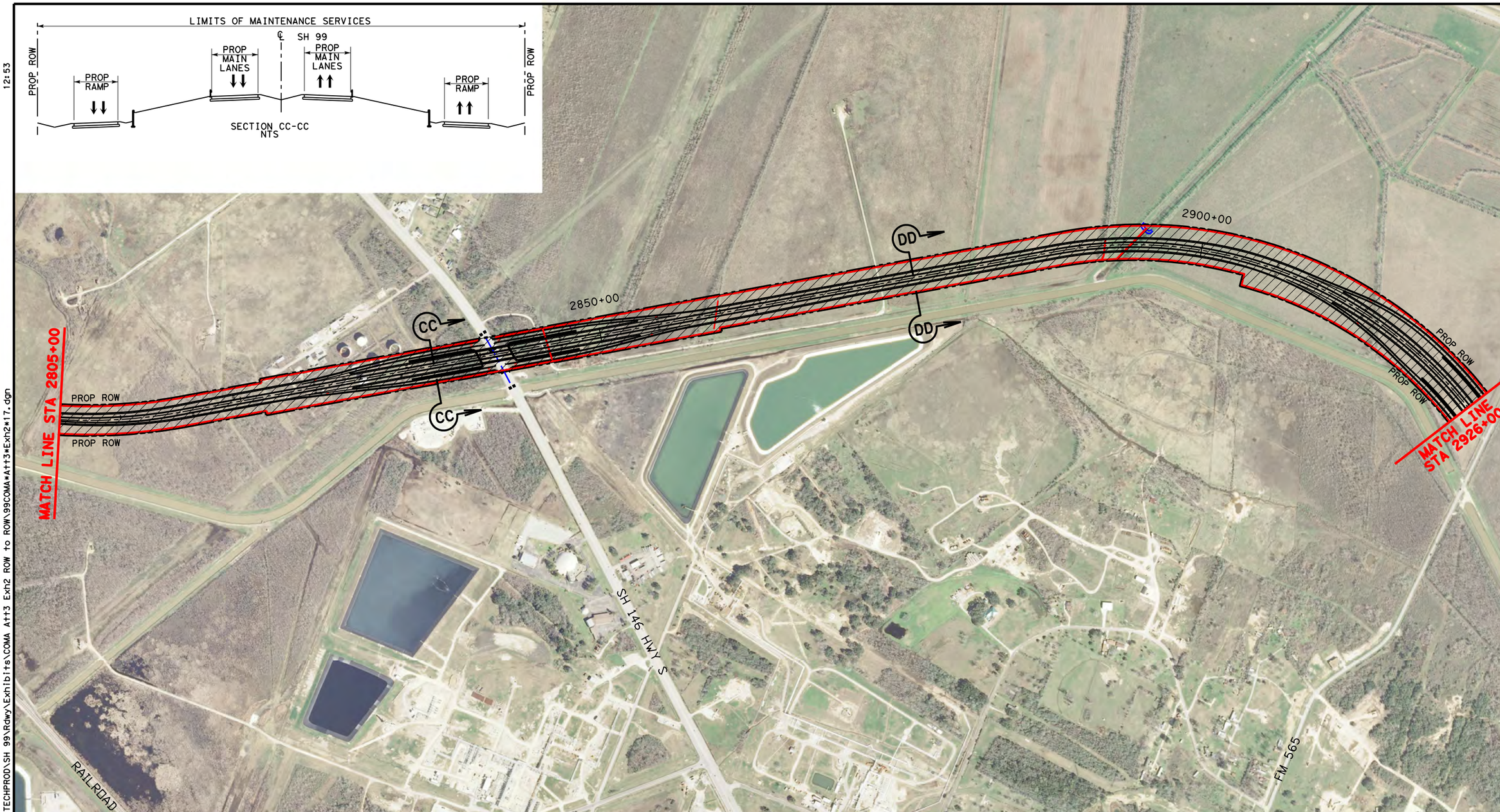


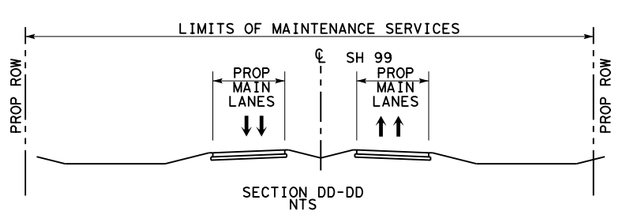


## LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
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0 200 400 800 (H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
LIMITS OF MAINTENANCE SERVICES

| DSN: | FED. RD. DIV. NO. | STATE | PROJECT NO. | | | HIGHWAY NO. |
|---|---|---|---|---|---|---|
| CK: | 6 | TEXAS | | | | SH 99 |
| DRN: | STATE DISTRICT | COUNTY | CONTROL NO. | SECTION NO. | JOB NO. | SHEET NO. |
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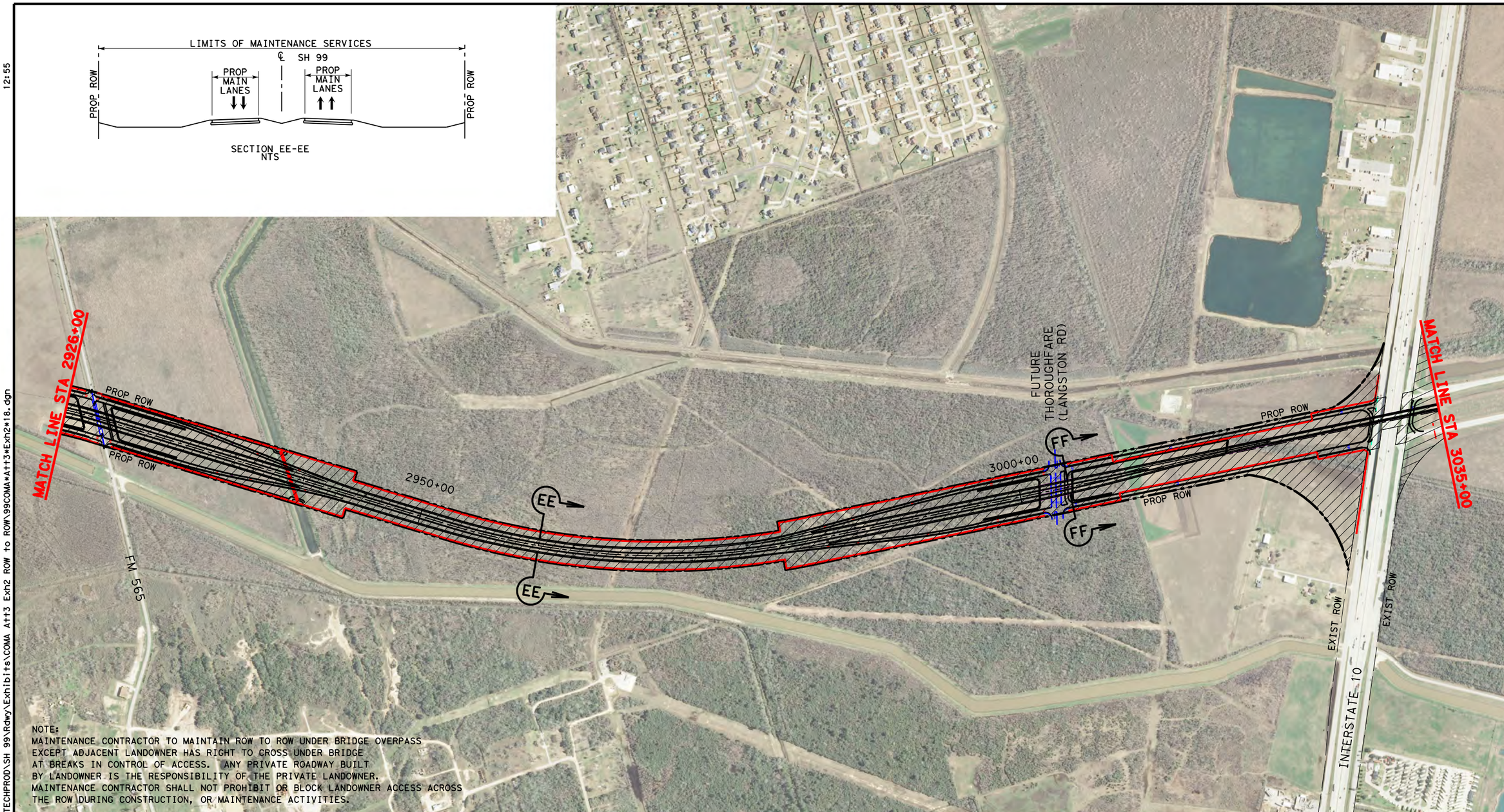
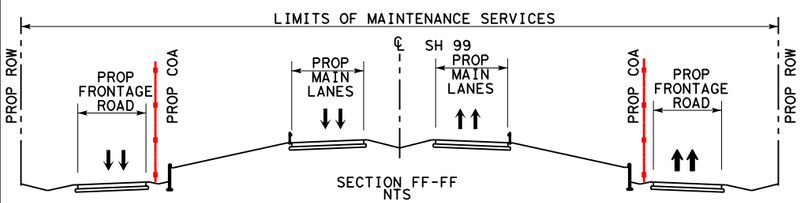



NOTE:
MAINTENANCE CONTRACTOR TO MAINTAIN ROW TO ROW UNDER BRIDGE OVERPASS EXCEPT ADJACENT LANDOWNER HAS RIGHT TO CROSS UNDER BRIDGE AT BREAKS IN CONTROL OF ACCESS. ANY PRIVATE ROADWAY BUILT BY LANDOWNER IS THE RESPONSIBILITY OF THE PRIVATE LANDOWNER. MAINTENANCE CONTRACTOR SHALL NOT PROHIBIT OR BLOCK LANDOWNER ACCESS ACROSS THE ROW DURING CONSTRUCTION, OR MAINTENANCE ACTIVITIES.




## LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800 (H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
LIMITS OF MAINTENANCE SERVICES

| DSN: | FED. RD. DIV. NO. | STATE | PROJECT NO. | | | HIGHWAY NO. |
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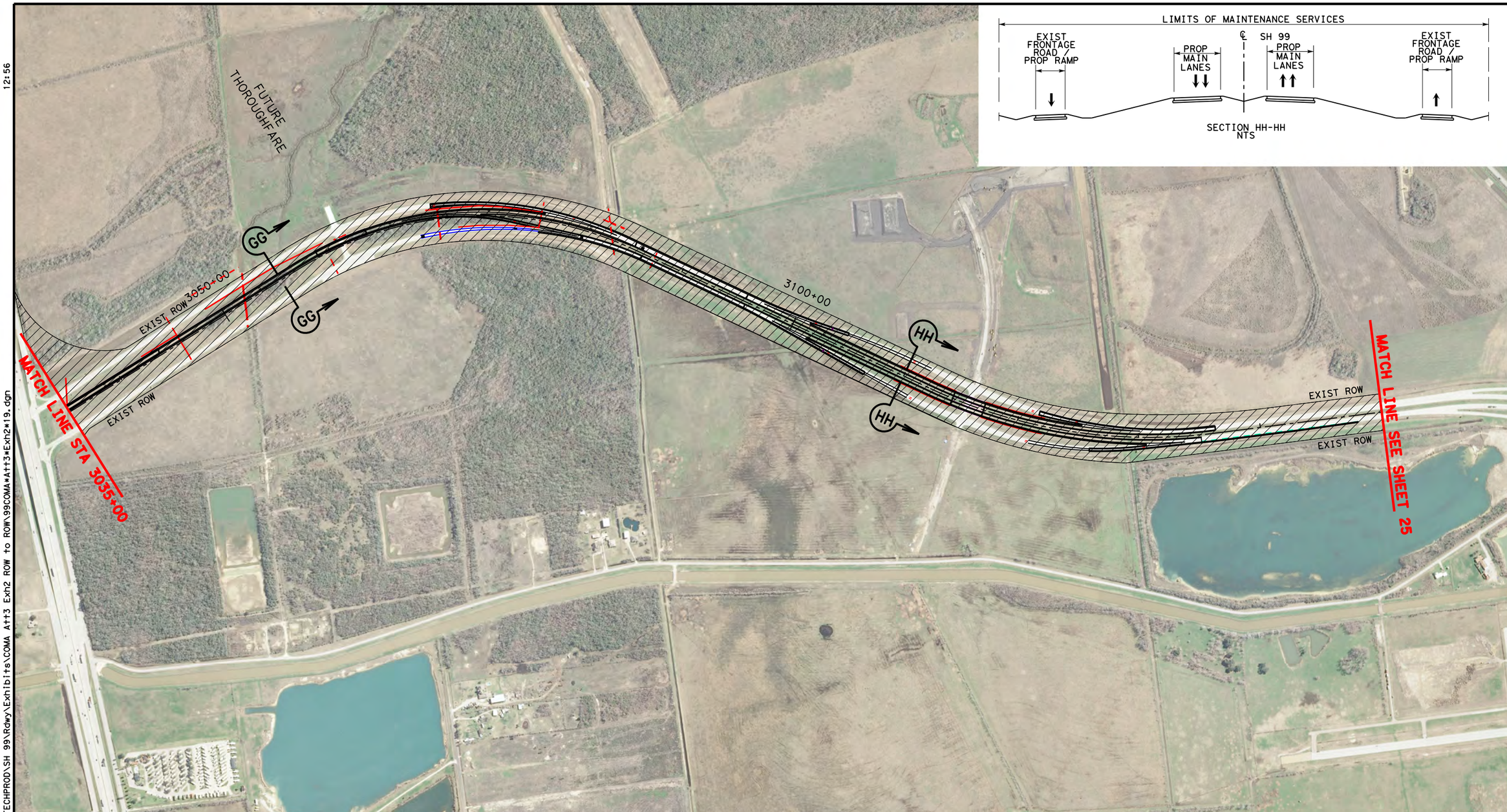


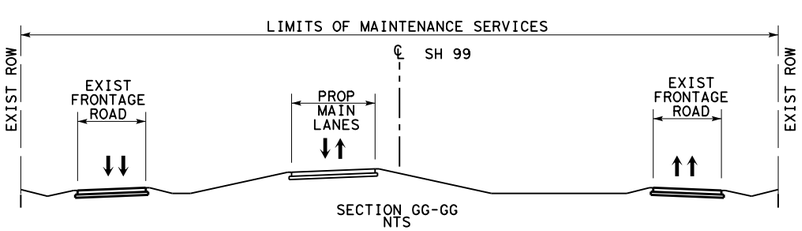


## LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800 (H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
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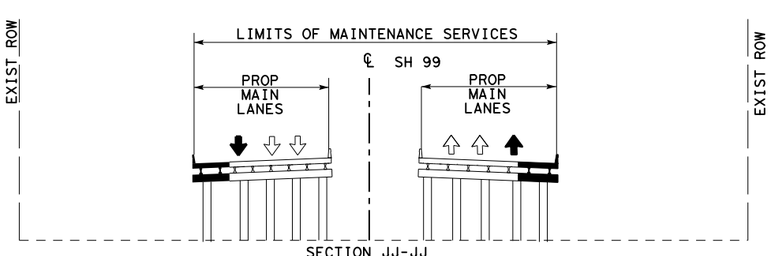
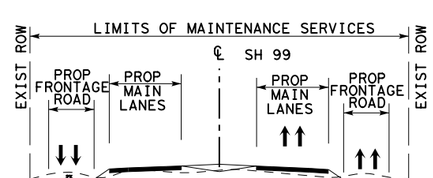



SECTION JJ-JJ
NTS




SECTION KK-KK
NTS

## LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800(H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
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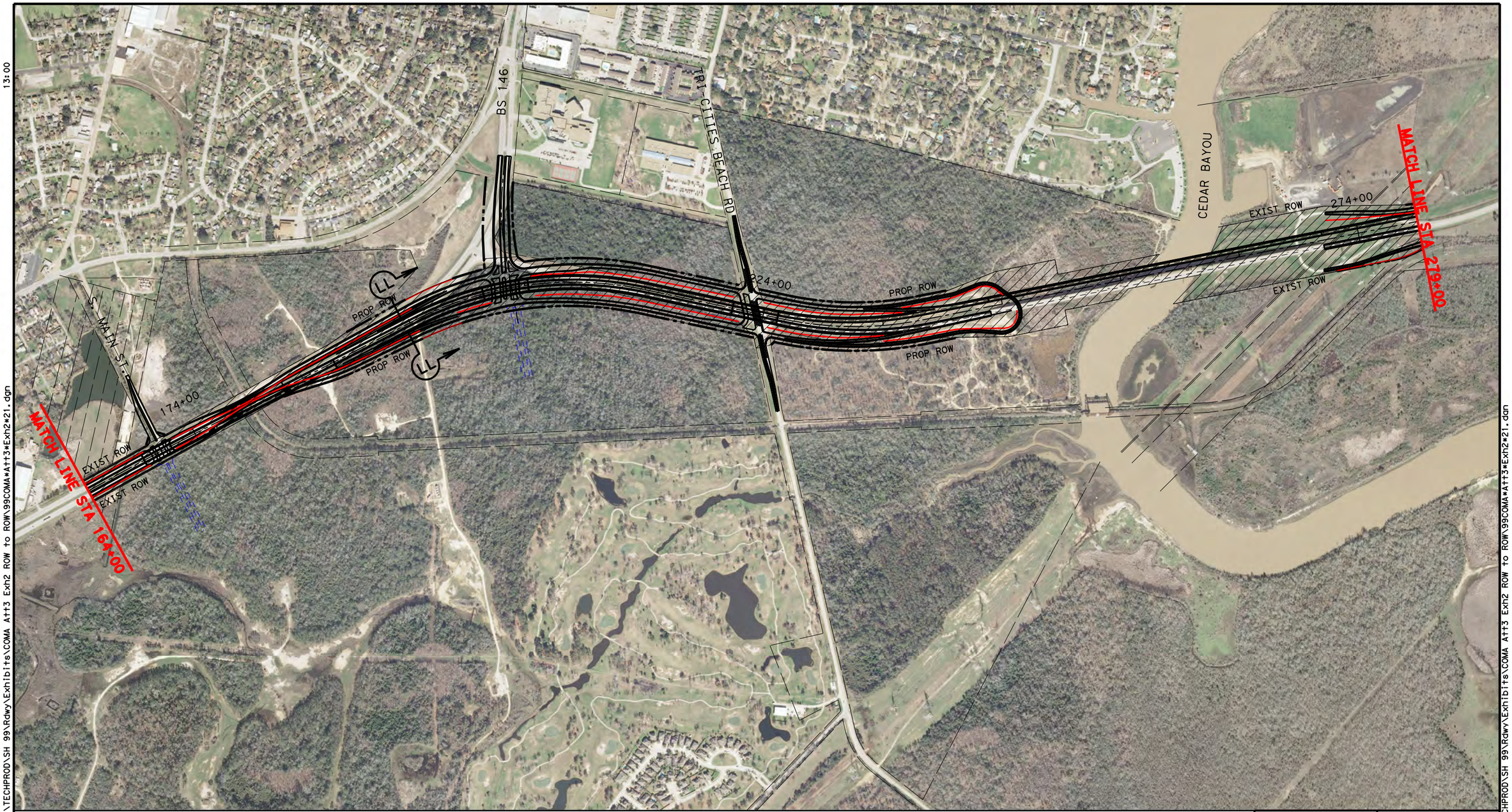


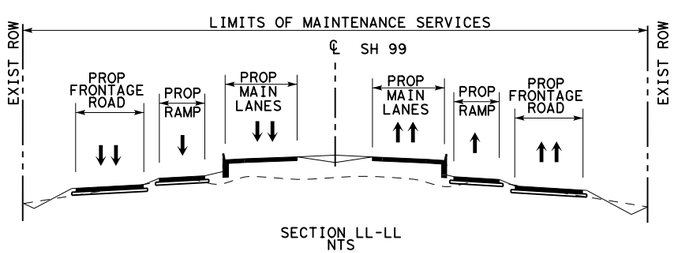


## LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
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- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800 (H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
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LIMITS OF MAINTENANCE SERVICES

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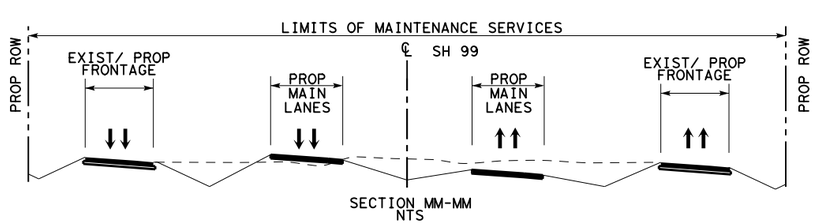


## LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
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- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800(H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
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LIMITS OF MAINTENANCE SERVICES

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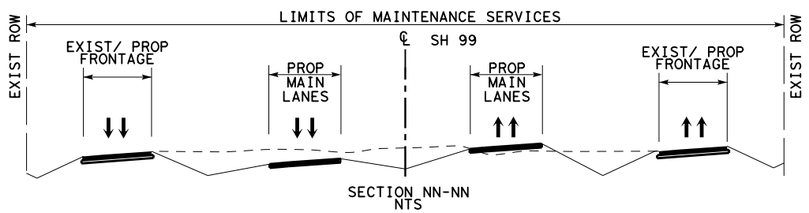


## LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
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- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800 (H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
LIMITS OF MAINTENANCE SERVICES

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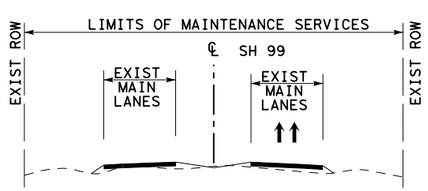


SECTION QQ-QQ
NTS

## LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800 (H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
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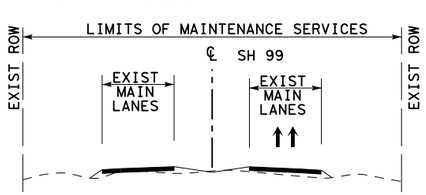


SECTION RR-RR
NTS

## LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

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Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
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# ATTACHMENT 4: CONTENT OF PLANS FOR COMA

| Part | Ref | Section | Contents |
|---|---|---|---|
| 1. Maintenance Management Plan | | | |
| 1.1. Project Administration | | | |
| | 1.1.1 | Organization | Maintenance Contractor's main contractual arrangements |
| | | | Organizational structure covering the activities to be performed in accordance with the COMA Documents |
| | 1.1.2 | Personnel | Maintenance Contractor's approach to provide experienced personnel for the maintenance of the Project including Subcontractors |
| | | | Arrangements for coordinating and managing staff interaction with TxDOT and its consultants including collocation of Key Personnel and description of approach to coordinating work of off-site personnel |
| | | | Names and contact details, titles, job roles of principal personnel for Contractors and any third party with which Maintenance Contractor will coordinate its activities |
| | | | Names and contact details, titles, job roles of Key Personnel |
| | | | Procedures for providing training for personnel involving with environmental mitigation activities and hazardous materials handling |
| | 1.1.3 | Procurement | Procedures for procurement of services, materials and products including methods to ensure best value |
| | 1.1.4 | Subcontractors | Overall control procedures for Subcontractors, including consultants and subconsultants |
| | | | Responsibility of Subcontractors and Affiliates |
| | | | Steps taken to ensure Subcontractors and Suppliers meet the obligations imposed by their respective Subcontracts |
| | | | Procedures for providing training for employees of Subcontractors involving with environmental mitigation activities and Hazardous Materials handling |
| | 1.1.5 | Offices and Equipment | Description of the necessary offices and office equipment to be provided by Maintenance Contractor during the Maintenance Term |
| 1.2. Maintenance Schedule | | | |
| | 1.2.1 | Schedule | Maintenance Service Deliverables Schedule |
| | | | Renewal Work Schedule |
| 1.3. Emergency Response | | | |
| | 1.3.1 | Incident and Emergency Management Plan | Procedures setting out how Maintenance Contractor will respond to accidents and Incidents on the Project |
| | | | Procedures to establish protocols with Emergency Services and others in Emergency |
| | 1.3.2 | Snow and Ice Control Plan | Procedures for performing snow and ice control |
| 1.4. Operation and Maintenance | | | |
| | 1.4.1 | Maintenance | Procedures for how the principal activities will be performed during the Maintenance Term: to include routine maintenance, Renewal Work, traffic management, and inspections regime |

| Part | Ref | Section | Contents |
|---|---|---|---|
| | | | Procedures to address Maintenance Contractor's performance requirements, measurement procedures, threshold values at which maintenance is required, inspection procedures and frequencies, and subsequent maintenance to address noted deficiencies, as well as thresholds for rehabilitation in accordance with Attachment 1 to Exhibit 2 of the COMA and Good Industry Practice |
| | 1.4.2 | Traffic Management and Control Plans | Procedures for setting out how contractor will coordinate lane closure, and traffic control for conducting maintenance services |
| | 1.4.3 | Complaints | Procedures to respond to comments and/or complaints received from Users and others |
| 1.5. Environmental | | | |
| | 1.5.1 | Hazardous Materials Management Plan | Procedures for handling Hazardous Materials |
| | 1.5.2 | Environmental Compliance and Mitigation Plan | Compliance strategies and procedures to be employed in accordance with in accordance with the requirements of applicable Environmental Laws and Environmental Approvals |
| 1.6. Safety | | | |
| | 1.6.1 | Maintenance Safety Plan | Policies, plans, training programs, and work site controls to ensure the health and safety of personnel involved in the Project and the general public affected by the Project during the Maintenance Term. |
| | | | Procedures for notifying TxDOT of Incidents arising out of or in connection with the performance of the Maintenance Services |
| 1.7. Communication | | | |
| | 1.7.1 | Maintenance Communications Plan | Procedures for communication of Project information between the Maintenance Contractor's organization and TxDOT |
| 1.8. Document Management | | | |
| | 1.8.1 | Maintenance Document Management Plan | Procedures for maintaining maintenance records |
| 2. Maintenance Services Quality Management Plan | | | |
| | 2.1 | Procedure | Procedures for quality control activities including a complete description of the quality policies and objectives |
| | 2.2 | Document Management | Procedures for maintaining quality records |
| 3. Maintenance Transition Plan | | | |
| | 3.1 | Procedure | Procedures for preparing list of items to be transferred to TxDOT |
| 4. Handback Plan | | | |
| | 4.1 | Procedure | Procedures for Residual Life Methodology Plan including performing Residual Life inspections and Renewal Work needed to meet Residual Life requirement at handback. |

## ATTACHMENT 5: RESIDUAL LIFE AT HANDBACK (YEARS)

| Ref. | Maintained Element | Residual Life at handback (yrs) |
|---|---|---|
| **1** | **Structures** | |
| | Bridges (Structural Elements) | 25 |
| | Reinforced Concrete | 25 |
| | Pre-Stress Concrete | 25 |
| | Structural Steelwork | 25 |
| | Weathering Steel | 25 |
| | Corrugated Steel | 25 |
| | Corrosion protection for structural steelwork | 10 |
| | Deck surfacing | 10 |
| | Deck joints | 10 |
| | Bearings | 25 |
| | Railing | 25 |
| **2** | **Road Pavement** | |
| | Main lanes | 5 |
| | Ramps / direct connectors | 5 |
| | Frontage Roads | 5 |
| | Local Roads | 5 |

## ATTACHMENT 6: RESTRICTIONS ON TRAFFIC MANAGEMENT

6.1 Allowable Lane Closures

Lane Closures will only be permitted when Maintenance Contractor can demonstrate that the closure will provide clear benefit to the progress of the Maintenance Services. Lane Closures must be coordinated with adjacent projects and priority shall be given to the closure submitted first.

The safety of workers and the traveling public must be the first consideration when determining the appropriate time to implement a Lane Closure.

At a minimum, Maintenance Contractor shall inform the TxDOT public information officer by 3:15 p.m. on the previous day of all road closures or major lane closures that will affect mobility so they can inform the public, Emergency Services, schools, etc. as needed.

Prior to implementing any Lane Closure, Maintenance Contractor shall input Lane Closure information into the Highway Conditions and Reporting System.

The following TxDOT policy and procedure manuals and references apply for all lane closures:

- Texas Manual of Uniform Traffic Control Devices (TMUTCD)
- TxDOT Traffic Control Plan Standards
- TxDOT Barricade and Construction Standards
- TxDOT Standard Specifications "Item 502 (Barricades Signs and Traffic Handling)

The following Lane Closure requirements for the mainlane, frontage roads, and cross streets are intended to supplement the above list of manuals and references for the Project:

Table 6-1: Lane Closure Requirements

| **Roadway** | **Roadway Lanes** (one direction) | **Permitted Lane Closures** | | |
|---|---|---|---|---|
| | | Peak Times Monday-Friday (6:00 a.m. - 9:00 a.m.) (3:30 p.m. - 7:00 p.m.) and Major Events and Major Holidays | Off-Peak Times Monday-Friday (9:00 a.m. - 3:30 p.m.) (7:00 p.m. to 10:30 p.m.) and Saturday | Lowest Volume Times Monday-Friday (10:30 p.m. - 6:00 a.m.) and Sunday |
| Mainlanes and Ramps | 3 | None | 1 | 1 |
| | 2 | None | None | 1 |
| | 1 | None | None | 1* |
| Frontage Roads | 3 | None | 1 | 2 |
| | 2 | None | 1 | 1 |
| Cross Streets | 3 | None | 1 | 2 |
| | 2 | None | 1 | 1 |
| | 1 | None | None | 1 |

*Traffic shifted to shoulder

Additional requirements:
Any complete roadway closure will require a Traffic Control Plan with appropriate detour routing to be submitted and approved by TxDOT.

- Maintenance Contractor shall seek TxDOT's approval for all required Lane Closures at least 48 hours in advance for temporary Lane Closures and fourteen (14) days for complete closures.
- If reasonable mobility can be maintained, or exceptional circumstances exist, additional lanes may be closed during Off-Peak Times or Lowest Volume Times with written permission of TxDOT. In such event, with the express written permission of TxDOT, Maintenance Contractor will not be subject to Lane Rental Charges for failure to comply with the Lane Closure requirements. Off-Peak Times may be started earlier or be extended later, subject to obtaining such express written permission, if reasonable mobility can be maintained.
- If at any time backups become unreasonable, (>20 min.), Maintenance Contractor shall immediately undertake modifications to alleviate the congestion. Contingency plan of how this will occur should be in place and approved by TxDOT.
- Use off duty uniformed peace officers as directed by the Maintenance Contractor.
- Inclement weather should be considered when planning closures.

6.2 Driveway Closures
Maintenance Contractor shall maintain a minimum of one driveway per business at all times. For businesses with multiple driveways, when driveway closure is necessary to progress Maintenance Services, no driveway may be closed for more than three (3) consecutive days.

6.3 Ramp Closures
No two adjacent ramp closures may occur at the same time.

6.4 Detour Usage
Maintenance Contractor shall use State routes for detour routes, wherever applicable. If State routes are unavailable, Maintenance Contractor shall use local roadways, provided that Maintenance Contractor has obtained TxDOT approval and the necessary permits from the Governmental Entity having jurisdiction.

Maintenance Contractor shall provide motorists with guidance on the use of alternate routes to divert traffic around the construction, detouring around specific construction sites, and traveling through the construction areas. This shall include the installation and maintenance of temporary regional signs. Motorist guidance to and along detour routes shall be provided, together with regional guidance.

6.4 Restricted Hours

A. Holiday Restrictions
No Lane Closure that restricts or interferes with traffic shall be allowed from 12:00 PM (noon) on the day proceeding to 10:00 PM on the day after the following holiday schedule. No additional lane or ramp closure that restricts or interferes with traffic shall be allowed. TxDOT has the right to lengthen, shorten, or otherwise modify these restrictions as actual traffic conditions may warrant.

- New Year's Eve and New Year's Day (December 31 through January 1)

- Easter Holiday Weekend (Friday through Sunday)
- Memorial Day Weekend (Friday through Monday)
- Independence Day (July 3 through noon on July 5)
- Labor Day Weekend (Friday through Monday)
- Thanksgiving Holiday (Wednesday through Sunday)
- Christmas Holiday (December 23 through December 26)

# ATTACHMENT 7 : MAINTENANCE PLANNING ACTIVITIES & ASSOCIATED FUNC. CODES

All segment 78 functions are trackable

## DISTRICT CROSS REFERENCE CODE CHART 12 (FIMS SEGMENT 78, AND PORTIONS OF 70, 71 AND 72)

**Effective September, 2012 (Rev Date: July, 2011)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 110 | P03 | CY | Removal and Replacement<br>Removal of base and/or subgrade materials from distressed or failed areas and replacement with suitable materials. (Includes resurfacing.) | 522 | R0 | MI | Street Sweeping<br>Routine street sweeping. Units are the actual miles swept regardless of centerline miles. |
| 120 | P03 | CY | In Place Repair<br>In place repair base and/or subgrade material. (Includes resurfacing, and may or may not include additional stabilizing material.) | 523 | R1 | MI | Debris<br>Routine **patrolling** to remove and dispose of debris, including dead animals. |
| 135 | R05 | EA ~~LF~~ | Install and/or Maintain Underdrains<br>Installation, repair and maintenance of all types of underdrains. | 524 | R0 | AC | Spot Litter<br>Spot removal and disposal of litter, including dead animals, from the right of way. |
| 145 | S06 | SY | Unpaved Road Maintenance<br>Repair of gravel or dirt roads, including blading, addition of base, etc. | 525 | R0 | HRS | Adopt-A-Highway<br>Installation of posts and signs, materials furnished to groups, and the personnel and equipment used to assist in removal and disposal of collected litter. |
| | | | | 526 | | | Deleted replaced by 522 |
| 211 | P01 | SY | Leveling or Overlay with Laydown Machine<br>The application of asphaltic tack coat and placing of asphaltic concrete materials to improve the ride qualities or level up low spots. | 527 | R0 | SY | Hand Sweeping<br>Hand sweeping of riprap, islands, medians, curb & gutter, bullpens, driveways, etc. |
| 212 | P01 | SY | Leveling or Overlay with a Maintainer<br>The application of asphaltic tack coat and placing layers of asphaltic concrete material. | 530 | S10 | SF | Removal of Graffiti<br>Removal of graffiti from fixtures, wing walls, bridge structures, etc. Not to be used in lieu of function 733 (Vandalized Signs), 731 or 732 (Sign Installation). |
| 213 | P01 | SY | Leveling by Hand<br>The application of asphaltic tack coat and placing layers of asphaltic concrete material by hand. This includes repair of pavement areas greater than one squard | 531 | S06 | HRS | Picnic Area Maintenance (Without Restrooms)<br>Refer to function 532 for description. |
| 214 | P01 | SY | Leveling or Overlay with Drag Box<br>The application of asphaltic tack coat and placing layers of asphaltic concrete material. | 532 | S06 | HRS | Rest Area Maintenance (With Restrooms)<br>Work performed in janitorial and grounds maintenance, including mowing, litter pickup, emptying litter barrels, maintenance of plantings, cleaning restroom, cleaning arbors, graffiti removal, minor paintings, etc. This item shall also include special maintenance required to repair/replace arbors, picnic tables, fixtures, litter barrels, paved areas, etc. (including maintenance of treatment plants and dump stations). |
| 225 | P06 | LM | Sealing Cracks<br>Cleaning, filling and sealing cracks in the pavement using asphaltic rubber or other sealants. | 533 | S06 | HRS | Rest Area Facility Maintenance through Regional Contracts<br>(Maintenance Division Use Only) |
| | | | | 535 | S0 | HRS | Maintenance of Specialty Facilities |
| 231 | P05 | SY | Seal Coat<br>Application of a single layer of asphaltic material followed by the application of a single layer of aggregate over the full width of the lane or a shoulder (greater than 6' in width) for a minimum of 1000 continuous feet. | | | | All maintenance costs to specialty facilities including border safety inspection facilities (BSIFs), toll booths, service plazas, fencing and associated appurtenances. This includes both temp and perm facilities. The highway class code will determine the type of facility. |
| 232 | P04 | SY | Strip or Spot Seal Coat<br>Application of a single layer of asphaltic material followed by the application of a single layer of aggregate over areas less than the full width of the lane or shoulder (6' or less in width), or the full width of the lane or shoulder but less than 1000 feet in length. | 538 | R0 | AC | Pest Control<br>Activities related to use of predatory animal and insect control whether in turf and ornamental sites or on the ROW. |
| | | | | 540 | R0 | HRS | Hand Vegetation Control<br>Hand cleaning vegetation out of islands, medians, riprap, drainage channels, etc. by chemical, manual or mechanical means. |
| 233 | P04 | SY | Fog Seal<br>Retain aggregate, enliven surface and/or seal hairline cracks by the application of a thin layer of asphaltic material. | 541 | R0 | AC | Chemical Vegetation Control, Edges<br>Complete control of vegetation encroaching in pavement edges, shoulders, medians, islands and curbs with herbicides. |
| 235 | P04 | SY | Microsurfacing<br>The application of a polymer modified high performance emulsion coupled with fine graded aggregate, mineral fillers and special additives in a slurry, to full ruts or to a new wearing surface. (Caution: Should not be used to seal cracked pavements.) | 542 | R0 | AC | Chemical Vegetation Control, Overspray<br>Control of undesirable vegetation growth by overspraying wide areas of the right of including fixtures (i.e. signs, delineators, guardrails, culverts, etc.) with herbicides. |
| 241 | P09 | EA | Pothole Repair<br>The repair of holes with an area of less than or equal to one square yard.<br>Charge to Function 213 if greater than one square yard. | 544 | R0 | AC | Chemical Vegetation Control, Rope-wick<br>Control of tall vegetation (i.e. Johnsongrass) in the right of way with a wick applicator. |
| 242 | | | Replaced by Function 241 | 545 | R0 | HRS | Chemical Vegetation Control, Basal Application<br>Control of undesirable brush species in the right of way with a low volumne basal bark application. |
| 245 | P10 | SY | Adding or Widening Pavement<br>Widening travel lanes up to 2 feet, adding shoulders up to 4 feet **to correct a maintenance problem** (includes sub-grade, base & surfacing), or adding turn lanes to improve safety. | 548 | R0 | SY | Seeding, Sodding, Hydromulching and Blanketing<br>Seeding, sodding, hydromulching and/or placing soil retention blankets. |
| 252 | P02 | SY | Milling and Planing<br>The removal of pavement surface by milling or planing. | 551 | R0 | AC | Landscaping<br>The installation or maintenance of landscape plantings and their facilities including planter walls, borders, sprinkler systems, etc. (excluding picnic and rest areas). |
| 253 | P02 | SY | Spot Milling<br>The removal of pavement surface by milling using a small milling machine (4 feet or less drum width). | 552 | R0 | CL | Tree and Brush Control<br>The trimming, pruning and disposal of shrubs, vines, and trees (excluding picnic and rest areas). |
| 265 | P04 | SY | Treat Bleeding Pavement<br>Treatment of excess asphalt on the pavement surface. | 558 | R0 | LF | Storm Water Pollution Protection<br>Maintenance or installation of storm water pollution protection plan (SW3P) in accordance with EPA regulations on projects designated by area engineers. |
| 270 | P07 | LF | Edge Repair<br>Repair of raveled, low or damaged pavement edges with asphaltic materials. | 560 | R06 | SY | Riprap Installation and Maintenance<br>Installation and maintenance of ditch liners, retards, down drains, riprap, flumes, concrete mowing strips, gabions, retaining walls and other erosion protection. |
| 315 | P08 | SY | Slab Stabilization / Jacking<br>Leveling concrete pavement through the use of hydraulically placed material. | | | | |
| 325 | P06 | LF | Cleaning and Sealing Joints and Cracks<br>Cleaning, filling and sealing joints and cracks in concrete pavement. | 561 | R04 | CY | Ditch Maintenance<br>Removal and hauling of silt, drift, and/or filling eroded areas. Not to be used for work at culverts or bridges (see functions 570 or 620). |
| 330 | P08 | SY | Blowouts and Stress Relief<br>Repair of blowouts and cutting pavement for stress relief. | | | | |
| 345 | P08 | SY | Repair Spalling<br>Clean and repair spalled areas (not full depth of concrete slab). | 562 | R04 | LF | Reshaping Ditches<br>Reshaping ditches using maintainer and/or gradall, etc. Not to be used for work at culverts or bridges (see functions 570 or 620). |
| 360 | P08 | SY | Full Depth Removal and Replacement<br>The removal and replacement of failed areas for the full depth of the concrete slab. | 563 | R06 | SY | Slope Repair/Stabilization<br>Slope repair and/or stabilization. Not to be used for work at culverts or bridges (see functions 570 or 620). |
| 455 | P07 | LF ~~SY~~ | Reshaping Unpaved Shoulders<br>Restore sod or flexible base shoulders to original sections. Includes reshaping front slope to eliminate low pavement edges along a paved shoulder. | 570 | R0 | EA | Culvert and Storm Drain Maintenance<br>The installation, repair and maintenance of culverts up to bridge classification (twenty feet measured along centerline of roadway). This work includes silt and debris removal from inlet, storm drains, retention ponds and culverts (except those costs associated with function 571). |
| 480 | S08 | SY | Side Road Approaches, Crossovers and Turnouts<br>The installation or maintenance of side road approaches, crossovers, historical markers, mailbox and litter barrel turnouts, etc. | | | | |
| 488 | S08 | SY | Concrete Appurtenance Installation and Maintenance<br>The maintenance, installation, or removal of concrete appurtenances which include curbs and/or gutters, raised medians, sidewalks and sound barriers. | 571 | R0 | EA | Storm Water Pump Station Maintenance<br>Repair and maintenance of motors, pumps, generators, wet wells, dry wells, debris screening baskets, buildings, etc., including costs of utility services. |
| 495 | S06 | SY | Parking Area Maintenance<br>Repair of sub-grade, base or surface of areas including parking lots, park and ride lots and camping pads. | 580 | T03 | EA | Removal of Illegal Signs on ROW, TEMP<br>(Temporary, no special handling required.) Removal of illegal signs on right of way, including disposal and written notice to owners. |
| 511 | R02 | AC | Mowing<br>Mowing of the right of way. | 581 | T03 | EA | Removal of Illegal Signs on ROW, PERM<br>(Permanent, special handling required.) Removal of illegal signs on right of way, including disposal and to written notice to owners. |
| 513 | R02 | HRS | Spot Mowing<br>Spot mowing of the right of way. | 582 | S10 | HRS | Removal of Encroachments, Other than Signs<br>Removal of illegal encroachments (other than signs) on the ROW, including disposal and written notice to owners. |
| 520 | R10 | CY | Illegal Dumpsite Removal and Disposal<br>Removal and disposal of debris discarded or deposited in an unauthorized area in the right of way such as under a bridge, overpass, culvert, etc. | 585 | S08 | SY | Driveway Installation/Removal and Maintenance<br>See access management policy. |
| 521 | R03 | AC | Litter<br>Removal and disposal of litter from the entire right of way, excluding paved areas, picnic and rest areas. | 591 | S09 | HRS | Utilities and Driveway Inspection |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 593 | T04 | LF | Cable Median Barrier<br>Installation and maintenance of high tension cable median barrier systems, including the cable, posts and end treatments. | 733 | T03 | EA | Vandalized Signs<br>Replacement or repair of signs damaged by vandalism. |
| 594 | T04 | LF | Concrete Barrier<br>Installation, removal and maintenance of concrete barriers, including attached headlight barrier fence. | 738 | T11 | EA | Installation and Maintenance of Flashing Beacons<br>Installation and maintenance of overhead flashing beacons, pedestal or sign mounted flashing beacons, etc. |
| 595 | T04 | LF | Guard Fence<br>Installation and maintenance of guard fence, MBGF, turn down ends, headlights barrier fence, including posts, metal beams, etc. (End treatment other than turn down ends, see function 596.) | 742 | T07 | EA | Illumination<br>Installation, maintenance and operation of illumination systems, including continuous lighting, safety lighting and sign illumination. |
| | | | | 743 | T06 | EA | Installation and Maintenance of Isolated Traffic Signals<br>Maintenance and operation of isolated traffic signals, diamond interchange signals, etc. |
| 596 | T05 | EA | Guardrail End Treatment Systems | ~~744~~ | | | Replaced by Function Code 743 |
| | | | | 745 | T08 | CL M | Traffic Management System<br>Maintenance and operation of traffic management systems on freeways or non-freeways, entrance/exit ramps, motorist information (e.g. changeable message signs, highway advisory radio, etc.) surveillance and related communications equipment. (ITS Control Center personnel should charge to segment 70, detail 0570.) |
| 597 | T03 | EA | Mailboxes, Installation and Maintenance<br>Installation and maintenance of guardrail end treatment systems. (For attenuators other than GETS, see function 725). | | | | |
| 598 | S06 | HRS | Boat Ramp Maintenance<br>Work performed in maintaining boat ramps, including mowing, litter removal, emptying litter barrels, maintenance of paved and unpaved areas, etc. | 750 | T09 | EA | Installation and Removal of Pavement Markers<br>Installation and/or removal of traffic buttons or reflective pavement markers. |
| 610 | S04 | HRS | Bridge, Movable Span<br>Operation, routine maintenance and inspection of movable span bridges (swing barge, lift or turn). Restricted use: Beaumont, Houston, Pharr and Yoakum Districts only. | 790 | S07 | HR | Miscellaneous Traffic Services<br>All traffic surveys (including all motor vehicle and pedestrian counts at intersections and directly related locations) and other traffic services not covered elsewhere. |
| 611 | S04 | HRS | Bridge, Portable<br>Installation, removal, maintenance and inspection of portable bridges. | | | | **Note**: Traffic control performed during the pavement evaluation process should be charged to segment 71, detail 3214 and the appropriate function (600 thru 690). |
| 620 | S05 | CY | Bridge Channel Maintenance<br>Removal of silt and drift, filling eroded areas, channel maintenance (including easements) and maintenance and repair of jetties and dikes. | 799 | S07 | HR | Traffic Control<br>The placement, maintenance and removal of barricades, signs, cones, lights and other such devices needed to handle traffic during emergencies or special events. |
| 628 | S02 | LF | Bridge Rail<br>Maintenance of bridge rail, posts & post connections to deck, including painting. | ~~806~~ | | | This includes flaggers.<br>Replaced by Function Code 799 |
| 645 | S02 | LF | Bridge Joint Maintenance<br>Repair of bridge joints, including cleaning and sealing | ~~807~~ | | | Replaced by Function Code 799 Accident Flag selected |
| 646 | S02 | LF | Bridge Joint Replacement<br>Replacement of bridge joints | ~~809~~ | | | Replaced by Function Code 799 Disaster Project;Task number |
| | | | | ~~810~~ | | | Replaced by Function Code 523 Disaster Project;Task number |
| 650 | S01 | SF | Bridge Deck<br>Repair to bridge decks. | 811 | S07 | HR | Snow and Ice Response<br>Emergency response to clear roads during or after a snow/ice event. Includes sanding, deicing, clearing and removal, etc. |
| 660 | S01 | SF | Bridge Superstructure, Concrete<br>Routine maintenance of the concrete components of the bridge superstructure, including bearings, concrete diaphragms, and beams. | ~~813~~ | | | Replaced by Function Code 799, 523 Disaster Project;Task number |
| | | | | ~~814~~ | | | Replaced by Function Code 563 Disaster Project;Task number |
| | | | | ~~820~~ | | | Deleted |
| 665 | S01 | SF | Bridge Superstructure, Steel<br>Routine maintenance of the steel components of the bridge superstructure, including stell diaphragms and beams. | ~~821~~ | | | Replaced by Function Code 110, 120 Disaster Project;Task number |
| | | | | ~~822~~ | | | Replaced by Function Code 360 Disaster Project;Task number |
| | | | | ~~823~~ | | | Replaced by Function Code 360 Disaster Project;Task number |
| 670 | S03 | SF | Bridge Substructure, Concrete<br>Routine maintenance of the concrete components of the bridge substructure, including caps, columns, abutments, wingwalls, pilings, etc. | | | | Replaced by Function Code 211, 212, 213, 214 |
| | | | | ~~824~~ | | | Replaced by Function Code 231, 232 Disaster Project;Task number |
| | | | | ~~825~~ | | | Replaced by Function Code 560,561,562,563 |
| 675 | S03 | SF | Bridge Substructure, Steel and Timber<br>Routine maintenance of the steel or timber components of the bridge substructure, including caps, abutments, pile extensions, etc. | | | | Appropriate Bridge, Disaster Project;Task number |
| | | | | ~~826~~ | | | Replaced by whatever Function Code; Disaster or Damage Claim Project;Task number |
| | | | | ~~827~~ | | | Replaced by Function Code 743; Disaster or Damage Claim Project;Task number |
| 680 | S03 | SF | Bridge Painting<br>Cleaning and painting of superstructure or substructure. | ~~828~~ | | | Replaced by Function Code 721,731,732; Disaster or Damage Claim Project;Task number |
| | | | | ~~829~~ | | | Replaced by Function Code 742; Disaster or Damage Claim Project;Task number |
| 690 | S04 | HRS | Bridge, Mechanical and Electrical<br>Maintenance and repair of the electrical & mechanical components of a bridge. | 830 | R1 | HR | Hazardous Material Clean up, Spills or Leaking Storage Tanks<br>Investigations, testing, clean up, removal, disposal and restoration work associated with a spill or leaking storage tanks. |
| 695 | S04 | HRS | Fender Systems<br>Installation and maintenance of fender systems. | 831 | R1 | HR | Hazardous Material Clean up, Abandoned Materials<br>Investigations, testing, clean up, removal, disposal and restoration work associated with abandoned hazardous materials of unknown ownership. |
| 711 | T01 | LF | Paint and Bead Striping<br>Striping or re-striping lane lines, centerlines and edge lines using paint and beads. | **Segment 70** | | | **Maintenance Section Overhead Costs**<br>**Detail 08XX (XX = Office No.)**; not reasonably identifiable to a roadway |
| | | | | 400 | | | Training (informal or on-the-job training) |
| 712 | T02 | LF | High Performance Striping<br>Striping or re-striping lane lines, centerlines and edge lines using thermoplastic or other high performance materials. | 401 | | | Meetings (non-coded meetings; Safety Banquets) |
| | | | | 402 | | | Yard Maintenance and Inspections (maintenance/inspections to facilities or yard) |
| | | | | 403 | | | Office/Section Administration (pick up/purchase supplies, HR admin., office tech duties) |
| 713 | T02 | EA | Specialty Markings<br>Medians, islands and other pavement markings not covered under function 711 or 712. (Including make-ready operations for all stripe alignment, such spotting, tabs, temporary tape, etc.) | 404 | | | Section Support (customer support, contractor support, damage claims) |
| | | | | 405 | | | Section Management (checking on crews, supervisor admin, meeting with local govts.) |
| | | | | 406 | | | Material Management (inventory mgmt, material deliveries from WH to yard, hauling) |
| | | | | 407 | | | Standby Time (weekend and weekday) |
| | | | | 408 | | | General Overhead |
| 715 | T02 | LF | Removal of Pavement Striping<br>Use when striping is not going to be replaced. | | | | **District Contract Management - Roadway Maintenance (not reasonably identifiable to a roadway)** |
| 716 | S11 | LM | Performance Based Contract Distribution (Contract Payments ONLY)<br>These contracts are set up to pay the contractor a fixed price on a periodic basis of type of work performed and/or amount of work performed | | | | **Detail 0585**<br>All district costs of roadway maintenance contract development and management not reasonably identifiable to a specific roadway or other accounts. |
| 721 | T03 | EA | Delineators<br>Installation, maintenance and/or replacement of damaged or missing reflectors and/or posts. This function shall include straightening of posts. Measured by each post and each reflector replaced. | **Segment 71** | | | **Direct District Charges (No specified road location)**<br>**Detail 1305, function 020**; field inspections not identifiable to a roadway, including damage assessments, night inspections, permit inspections, bridge inspections |
| 724 | T04 | LF | Roadway Access Control<br>Installation and maintenance of barriers (other than those covered by functions 594 or 595) designed to control access on highways, including post and cable fences, ROW fences and cattle guards. | | | | **Detail 1310, function 020**; special services not identifiable to a roadway, including cleaning stockpile locations, collectiong ditch grade data, and counting loads of RAP for county assistance.<br>**Detail 1315, function 020**; Courtesy Patrol |
| 725 | T05 | EA | Vehicle Attenuators<br>Installation and maintenance of vehicle attenuators, crash cushions, etc. (**Excludes** the end treatment devices on guard fence.) | | | | **Roadway Evaluation**<br>**Detail 3214, function codes 600 thru 690**; functions related to Pavement Management, including traffic control while performing pavement evaluation |
| 731 | T03 | EA | Installation/Maintenance of Small Signs<br>The installation and maintenance of signs (less than 4 ft. X 4 ft.). Includes the installation of an old sign on a new post, the installation of a new sign on an existing post, removing or straightening of signs and posts. Not to be used in lieu of function 732 (Installation of Large Signs), function 733 (Vandalized Signs), or function 525 (Adopt-A-Highway). Measured by each post and each sign maintained. | **Segment 72** | | | **Off-System Disaster Cleanup**<br>**Detail 000470001**; off-system assistance that has been approved by the Disaster District Chairman |
| | | | | 500 | | | Debris Removal |
| | | | | 501 | | | Fire Control |
| | | | | 505 | | | Evacuee Assistance |
| 732 | T10 | EA | Installation/Maintenance of Large Signs<br>The installation or maintenance of signs (equal to or greater than 4 ft. X 4 ft.) Includes the installation of an old sign on a new post, the installation of a new sign on an existing post, removing or straightening of signs and posts. Not to be used in lieu of function 731 (Installation of Small Signs), function 733 (Vandalized Signs), or function 525 (Adopt-A-Highway) | 510 | | | Traffic Control for Disasters |
| | | | | 515 | | | Sign and Signal Repair for Disasters |
| | | | | 520 | | | Repairs to Roads for Disasters |

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|---|---|---|---|---|---|---|---|
| | P01 | Pavement Leveling | | R01 | Sweeping | S01 | Bridge Superstructure Maintenance |
| | P02 | Milling | | R02 | Mowing | S02 | Bridge Rial and Joints |
| | P03 | Base Repair | | R03 | Litter Control | S03 | Bridge Substructure Maintenance |
| | P04 | Spot Seal Coat | | R04 | Drainage Maintenance | S04 | Specialty Bridge Maintenance |
| | P05 | Full Width Seal Coat | | R05 | Drainage Structures | S05 | Bridge Channel Maintenance |
| | P06 | Cracl Sea; | | R06 | Erosion Control | S06 | Specialty Maintenance |
| | P07 | Edge Maintenance | | R07 | Vegetation and Pest Control | S07 | Traffic Control Services |
| | P08 | Concrete Pavement Maintenance | | R08 | Tree and Brush Control | S08 | County Road Approaches, Crossovers, & Turnouts |
| | P09 | Pothole Repair | | R09 | Landscape Maintennace | S09 | Utility & Driveway Inspection |
| | P10 | Adding or Widening Pavement | | R10 | Debris and Cleanup | S10 | Graffiti & Encroachment Removal |

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| | T01 | Paint and Bead Striping | |
| | T02 | High Performance Striping | |
| | T03 | Sign Maintenance | |
| | T04 | Safety Barrier Maintenance | |
| | T05 | Crash Attenuators | |
| | T06 | Traffic Signal Maintenance | |
| | T07 | Illumination Maintenance | |
| | T08 | Traffic Management Systems | |
| | T09 | Raised Pavement Markings | |
| | T10 | large Sign Maintenance | |
| | T11 | Beacon Maintenanee | |