EXHBIT 2, ATTACHMENT 1: PERFORMANCE AND MEASUREMENT TABLE

Performance and Measurement Table									
MAINTENANCE ELEMENT CATEGORY	**REF**	**MAINTENANCE ELEMENT**	**PERFORMANCE REQUIREMENT**	**DEFECT REMEDY PERIOD**			**INSPECTION AND MEASUREMENT METHOD**	**MEASUREMENT RECORD**	**TARGET**
				Category 1 **Hazard Mitigation**	**Category 1** **Permanent Remedy**	**Category 2** **Permanent Repair**			
1) PAVEMENT									
							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	Ruts	All roadways are free from surface depressions in wheel path.	24 hrs	28 days	6 months	Depth as measured using an automated device in compliance with TxDOT Standards.	(i) Percentage of wheel path length with ruts greater than ¼" in depth in each Performance Section • Mainlanes, shoulders and ramps - equal to or more than 3% • Frontage roads – equal to or more than 10%	Nil
							10 ft straight edge used to measure rut depth for localized areas.	(ii) Depth of rut at any location greater than 0.5"	Nil
	1.2	Ride quality	All roadways have a smooth surface course (including bridge decks, covers, gratings, frames and boxes).	24 hrs	28 days	6 months	Measurement of International Roughness Index (IRI) according to TxDOT standard Tex-1001-S, Operating Inertial Profilers and Evaluating Pavement Profiles	(i) For 80% of all Performance Sections measured, IRI throughout 98% of each Performance Section is less than or equal to: • Mainlanes, ramps - 95" per mile • Frontage roads - 120" per mile	100%
							(Renewal Work and new construction subject to construction quality IRI standards, refer to Section 8.3.2 of Technical Provisions)	(ii) IRI measured throughout 98% of Performance Section is less than or equal to: • Mainlanes, ramps - 120" per mile • Frontage roads - 150" per mile • Mainlanes, ramps, 0.1 mile average - 150" per mile • Frontage roads, 0.1 mile average - 180" per mile	100%
								(iii) IRI measured throughout 98% of each lane containing a bridge deck in any Performance Section, 0.1 mile average - 200" per mile	100%
							10-ft straightedge used to measure discontinuities	(iv) Individual discontinuities greater than 1/4"	Nil

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	1.3	Failures	All roadways are free from failures.	2 hrs	28 days	N/A	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
	1.4	Edge drop-offs	All roadways are free from edge drop-offs	24 hrs	28 days	6 months	Physical measurement of edge drop-off level compared to adjacent surface	Instances of edge drop-off greater than 2"	Nil
	1.5	Skid resistance	All roadways have adequate skid resistance	24 hrs	28 days	6 months	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.	(i) Sections investigated as to potential risk of skidding accident where average Skid Number for 0.5-mile section is below: • Mainlanes, shoulders and ramps – 30 • Frontage roads – 30	100%
								(ii) Perform a site investigation and 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		(iii) Instances where road Users warned of potential skidding hazard where remedial action is identified.	100%
	1.6	Crossovers and other paved areas	Crossovers and other paved areas are free of defects based on visual survey	2 hrs	28 days	N/A	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
	1.7	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
2) DRAINAGE									
	2.1	Pipes, ditches, and channels	Each element of the drainage system is maintained in its proper function by cleaning, clearing and/or emptying as appropriate including any vegetation, debris and silt 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

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	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%
	2.6	Erosion	Address erosion greater than 12" deep along ditches, swales, ponds, and channels	24 hrs	28 days	3 months	Visual inspection and records	Compliance with the requirement	100%
	2.7	Channels and ditches – Permanent Erosion Control Measures	Where permanent erosion control measures such as rock or concrete riprap are utilized: repair undermined or damaged erosion control measures	24 hrs	28 days	3 months	Visual inspection	Inspection records showing compliance	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: • undesirable vegetation • debris and bird droppings • blocked drains, weep pipes manholes and chambers • blocked drainage holes in structural components • defects in joint sealants • defects in pedestrian protection measure • scour damage • corrosion of rebar • paint system failures • impact damage (ii) Expansion joints free of: • dirt, debris and vegetation • defects in drainage systems • loose nuts and bolts • defects in gaskets (iii) The deck drainage system is free of all debris and operates as intended. (iv) Parapets free of: • loose nuts and bolts • blockages of hollow section drain holes • graffiti • vegetation • accident damage (v) Bearings and bearing shelves are clean. (vi) Sliding and roller surfaces are clean and greased to ensure satisfactory performance. Additional advice contained in bearing manufacturers' instructions in the Structure Maintenance Manual is followed. (vii) Special finishes are clean and perform to the appropriate standards. (viii) 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.	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 Occurrences of condition rating below seven (7) for any deck, superstructure or substructure	100% Nil

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	3.2	Non-bridge class culverts	Non-bridge-class culverts are free of: • vegetation and debris and silt • defects in sealant to movement joints • scour damage	24 hrs	28 days	6 months	Visual inspection	Number with vegetation, debris and silt Number with defects in sealant and movement joints Number with scour damage	Nil Nil 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. 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: • loose nuts and bolts • defects in surface protection systems	24 hrs	28 days	6 months	Visual inspection	Number with loose assemblies Number with defects in surface protection	Nil 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: • blocked weep holes • undesirable vegetation • defects in joint sealants • defects in pedestrian protection • scour damage • corrosion of reinforcing bars • paint system failure • concrete spalling • impact damage Parapets free of: • loose nuts and bolts • blockage of drain holes • undesirable vegetation • impact damage • concrete spalling	24 hrs	28 days	6 months	Perform inspection and assessment using Good Industry Practice of all mechanically stabilized earth and retaining walls	Mechanically stabilized earth and retaining walls are 95% free of blocked weep holes, undesirable vegetation, defects in joint sealants, defects in pedestrian protection, scour damage, corrosion of reinforcing bars, paint system failure, concrete spalls and impact damage Number of parapet areas with loose nuts & bolts, blockage, undesirable vegetation, impact damage or concrete spalling in the Performance Section.	100% Nil
4) PAVEMENT MARKINGS, OBJECT MARKERS, BARRIER MARKERS AND DELINEATORS									
	4.1	Pavement markings	Pavement markings are: • clean and visible during the day and at night • whole and complete and of the correct color, type, width and length • placed to meet the TMUTCD and TxDOT's Pavement Marking Standard Sheets	24 hrs	28 days	6 months	a) Markings - General Maintain pavement markings and perform annual Mobile Retroreflectivity Data Collection (MRDC) in accordance with TxDOT's Special Specification 8094 Mobile Retroreflectivity Data Collection for Pavement Markings. Physical measurement	Length meeting the minimum retroreflectivity 175 mcd/m^2/lx for white Length meeting the minimum retroreflectivity 125 mcd/m^2/lx for yellow Length with more than 5% loss of area of material at any point	100% 100% Nil

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	4.1 cont.			24 hrs	28 days	6 months	b) Profile Markings Visual inspection	Length with spread more than 10% of specified dimensions. Length performing its intended function and compliant with relevant regulations	Nil 100%
	4.2	Raised reflective markers	Raised reflective pavement markers are: • clean and clearly visible • of the correct color and type • reflective or retroreflective as TxDOT standard • correctly located, aligned and at the correct level • are firmly fixed • 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) A minimum of four markers should be visible at 80' spacing when viewed under low beam headlights Uniformity (replacement raised reflective pavement markers have equivalent physical and performance characteristics to adjacent markers).	Nil 100% 100%
	4.3	Delineators & markers	Object markers, mail box markers and delineators are: • clean and visible • of the correct color and type • legible and reflective • straight and vertical	24 hrs	28 days	6 months	Visual inspection	Less than 5% of object markers or delineators defective or missing	100%
5) CURBS, GUARDRAILS, SAFETY BARRIERS AND IMPACT ATTENUATORS									
	5.1	Curbs	Curbs are free of cracks, chips and separation and are in good alignment.	24 hrs	28 days	6 months	Visual inspection Physical measurement 10 feet straight edge will be used to measure each curb alignment	Continuous curb lengths where more than 10% of the length has defects such as cracks and chips Continuous curb lengths where more than 5% of the length has a separation exceeding 0.25" between curb face and adjacent roadway surface Deviation from original alignment greater than 1"	Nil Nil Nil
	5.2	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 Length free from defects Length at correct height Length at correct distance from roadway and obstacle	100% 100% 100% 100%
	5.3	Impact attenuators	All impact attenuators are appropriately placed, correctly installed, and free of damage.	24 hrs	7 days	6 months	Visual inspection	Number correctly placed and installed	100%

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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 (ii) Identification markers are provided, correctly located, visible, clean and legible (iii) Sign mounting posts are vertical, structurally sound and rust free (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 (v) Obsolete and redundant signs are removed or replaced as appropriate (vi) Visibility distances meet the stated requirements (vii) Sign information is of the correct size, location, type and wording to meet its intended purpose and any statutory requirements (viii) All structures and elements of the signing system are kept clean and free from debris and have clear access provided. (ix) All replacement and repair materials and equipment are in accordance with the requirements of the TMUTCD	24 hrs	28 days	6 months	a) Retroreflectivity Coefficient of retroreflectivity b) Face damage Visual inspection c) Placement Visual inspection d) Sign Information Visual inspection	Number of signs with reflectivity below the requirements of TxDOT's TMUTCD Number of signs with face damage greater than 5% of area Signs are placed in accordance with TxDOT's Sign Crew Field Book including not twisted or leaning Sign information is of the correct size, location, type and wording to meet its intended purpose	Nil Nil 100% 100%
	6.2	General - Safety critical signs	Requirements as 6.1, Plus: "Stop," "Yield," "Do Not Enter," "One Way" and "Wrong Way" signs are clean legible and undamaged.	2 hrs	7 days	N/A	Visual inspection	Number of damaged safety critical signs	Nil
7) TRAFFIC SIGNALS									
	7.1	General	(i) Traffic Signals and their associated equipment are: • clean and visible • correctly aligned and operational • free from damage caused by accident or vandalism (ii) Signal timing and operation is correct (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 Visual inspection b) Damage Visual inspection c) Signal timing Timed measurements d) Contingency plans Records review	Signals are clean and visible Signals are undamaged Installations have correct signal timings Full contingency plans are in place	100% 100% 100% 100%

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	7.2	Soundness	Traffic signals are structurally and electrically sound	24 hrs	28 days	6 months	a) Structural soundness Visual inspection b) Electrical soundness Testing to meet NEC regulations	Inspection records showing safe installation and maintenance	100% 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 (ii) Lanterns are clean and correctly positioned (iii) Lighting units are free from accidental damage or vandalism (iv) Columns are upright, correctly founded, visually acceptable and structurally sound	24 hrs	28 days	6 months	a) Mainlane lights operable Night time inspection or automated logs b) Mainlane lights out of action Night time inspection or automated logs	Performance Sections with less than 90% of lights functioning correctly at all times Instances of more than two consecutive lights not functioning	Nil 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	28 days	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	28 days	Visual inspection	Instances of missing access panels	Nil
	8.5	High mast lighting	(i) All high mast luminaries functioning on each pole (ii) All obstruction lights are present and working (if required) (iii) Compartment door is secure with all bolts in place (iv) All winch and safety equipment are correctly functioning and maintained without rusting or corrosion (for structural requirements refer to Maintenance Element Category 3)	24 hrs	7 days	28 days	Night time inspections or automated logs	Instances of two or more lamps not working per high mast pole Identification of other defects	Nil 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 in each Performance Section	100%
	9.2	Construction - fences	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 in each Performance Section	100%
	9.3	Construction - walls	Integrity and structural condition of the walls are maintained	24 hrs	28 days	6 months	Structural assessment if visual inspection warrants	Inspection records showing compliance in each Performance Section	100%

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	9.4	Operation	Fences, Walls, and Sound Abatement elements free of: • blocked weep holes • undesirable vegetation • defects in joint sealants • defects in pedestrian protection • scour damage • corrosion of reinforcing bars • paint system failure • concrete spalling • impact damage	24 hrs	28 days	6 months	Structural assessment if visual inspection warrants	Inspection records showing compliance in each Performance Section	100%
10) ROADSIDE MANAGEMENT									
	10.1	Vegetated areas – Except landscaped areas – General	Vegetation is maintained so that: (i) Height of grass and weeds is kept within the limits described for rural areas. Mowing begins before vegetation reaches the maximum height. (ii) Spot mowing at intersections, ramps or other areas maintains visibility of appurtenances and sight distance. (iii) Grass or vegetation does not encroach into or on paved shoulders, mainlanes, sidewalks, islands, riprap, traffic barrier or curbs. (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. (v) A full width mowing cycle is completed after the first frost (vi) Wildflowers are preserved utilizing the guidelines in the mowing specifications and TxDOT Roadside Vegetation Manual.	24 hrs	7 days	28 days	a) Rural areas Physical measurement of height of grass and weeds b) Encroachment Visual inspection of instances of encroachment of vegetation c) Wildflowers Visual inspection with audit of process. d) Sight lines Visual inspection	Individual measurement areas to have 95% of height of grass and weeds between 5" and 30" Occurrences of vegetation encroachment in each Performance Section Adherence to vegetation management manuals Instances of impairment of sight lines or sight distance to signs	100% Nil 100% Nil
	10.2	Landscaped areas	(i) All landscaped areas are maintained to their originally constructed condition. Landscaped areas are as designated in the Plans. (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. (iii) The height of grass and weeds is kept between 2" and 8". Mowing begins before vegetation reaches 8" (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

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	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. (ii) Trees, brush and ornamentals are trimmed to insure they do not interfere with vehicles or sight distance, or inhibit the visibility of signs. (iii) Dead trees, brush, ornamentals and branches are removed. Potentially dangerous trees or limbs are removed. (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
	10.6	Sidewalks and pedestrian curb ramps	Maintain at a standard to be free of defects as follows: (i) unsealed cracks or joints (ii) broken sections (iii) vertical displacement or misalignment	24 hrs	7 days	28 days	Visual inspection	Inspection records showing compliance with TxDOT Design Standards and Americans with Disabilities Act (ADA) requirements.	100%
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	Visual inspection	Inspection records showing compliance	100%
	12.3	Slopes – Erosion	Slopes are maintained to prevent erosion leading to further deterioration	24 hrs	28 days	3 months	Visual inspection	Length of erosion greater than six inches (> 6") deep	Nil
	12.4	Slopes - Permanent Erosion Control Measures	Where permanent erosion control measures such as rock or concrete riprap are utilized: repair undermined or damaged erosion control measures	24 hrs	28 days	3 months	Visual inspection	Inspection records showing compliance	100%

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13) ITS EQUIPMENT									
	13.1	ITS Equipment	All ITS equipment is fully functional and housing is functioning and free of defects. (i) All equipment and cabinet identification numbers are visible, sites are well drained and access is clear (ii) Steps, handrails and accesses are kept in a good condition (iii) Access to all communication hubs, ground boxes, cabinets and sites is clear (iv) All drainage is operational and all external fixtures and fittings are in a satisfactory condition (v) All communication cable markers, cable joint markers and duct markers are visible and missing markers are replaced (vi) Backup power supply system is available at all times	24 hrs	14 days	28 days	Visual inspection	Inspection records showing compliance with requirements for maintenance of ITS equipment in each Performance Section.	100%
	13.2	Dynamic message sign equipment	Dynamic message signs are free from faults such as: (i) Any signal displaying a message which is deemed to be a safety hazard (ii) Failure of system to clear sign settings when appropriate. (iii) 2 or more contiguous sign failures that prevent control office setting strategic diversions (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: (i) Failure of CCTV Systems to provide control offices with access and control of CCTV images (ii) Failure of a CCTV camera or its video transmission system. (iii) Failure of a pan / tilt unit or its control system. (iv) Moisture ingress onto CCTV camera lens (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%
	13.4	Vehicle detection equipment	All equipment free of defects and operational problems such as; (i) Inoperable loops. (ii) Malfunctioning camera controllers.	2 hrs	24 hrs	28 days	Defect measurement dependent on equipment Traffic detector loops: Loop circuit's inductance to be > 50 and < 1,000 micro henries. Insulation resistance to be > 50 meg ohms.	Inspection records showing compliance Instances of loops out of compliance	100% Nil
14) TOLLING Facilities and Buildings (Not Used)									

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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	4 hrs	7 days	N/A	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	3 days	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	1 hr or 2 hrs as noted.	N/A	N/A	Maximum 1 hr response time to complete manning and loading of spreading vehicles Maximum 2 hrs from departure from loading point to complete treatment and return to loading point 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	2 hrs	N/A	N/A	MMP and SICP 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.	2 hrs	N/A	N/A	MMP and SICP 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 and IEMP.	1 hr	N/A	N/A	Response times met for 98% of Incidents measured on a 1 year rolling basis. 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	Inspection reports showing compliance	100%
	17.4	Temporary and permanent remedy	Propose and implement temporary measures and permanent remedies or repairs to Defects arising from the Incident. Ensure the structural safety of any structures affected by the Incident	24 hrs	28 days	N/A	Review and inspection of the Incident site	Performance Section inspection records showing compliance	100%
18) CUSTOMER RESPONSE									

Performance and Measurement Table									
MAINTENANCE ELEMENT CATEGORY	**REF**	**MAINTENANCE ELEMENT**	**PERFORMANCE REQUIREMENT**	**DEFECT REMEDY PERIOD**			**INSPECTION AND MEASUREMENT METHOD**	**MEASUREMENT RECORD**	**TARGET**
				Category 1 **Hazard Mitigation**	**Category 1** **Permanent Remedy**	**Category 2** **Permanent Repair**			
	18.1	Response to inquiries	Timely and effective response to customer inquiries and complaints.	48 hrs	14 days	N/A	Contact the customer within 48 hours following initial customer inquiry. All work resulting from customer requests is scheduled within 48 hours of customer contact. Follow-up contact with the customer within 72 hours of initial inquiry. 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	N/A	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	Obstructions and debris	Roadway and clear zone free from obstructions and debris including at a minimum objects, luminaire poles, and tires.	2 hrs	N/A	N/A	Visual Inspection	Number of obstructions and debris	Nil
	19.2	Sweeping	(i) Keep all channels, hard shoulders, gore areas, ramps, intersections, islands and frontage roads swept clean, (ii) Clear and remove debris from traffic lanes, hard shoulders, verges and central reservations, footways and cycle ways (iii) Remove all sweepings without stockpiling in the right of way and dispose of at approved tip.	24 hrs	3 days	N/A	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%
	19.3	Litter	(i) Keep the Project in a neat condition, remove litter regularly (ii) Pick up large litter items before mowing operations. (iii) Dispose of all litter and debris collected at an approved solid waste site.	24 hrs	3 days	N/A	No more than 20 pieces of litter per roadside mile shall be visible when traveling at highway speed.	Inspection records showing compliance	100%

NOTES FOR PERFORMANCE AND MEASUREMENT TABLE

[1] "Category 1 Hazard Mitigation" shall be an action taken by DB Contractor to mitigate a hazard to Users or imminent risk of damage or deterioration to property or the environment.

[2] "Category 1 Permanent Remedy" shall be an action taken by DB Contractor to restore the condition of a Maintenance Element following "Category 1 Hazard Mitigation" of a Category 1 Defect: (a) to the standard required for new construction / Renewal Work; or (b) to a condition such that the Target is achieved for each Measurement Record.

[3] "Category 2 Permanent Repair" shall be an action taken by DB Contractor to restore the condition of a Maintenance Element for which a Category 2 Defect has been recorded: (a) to the standard required for new construction / Renewal Work; or (b) to a condition such that the Target is achieved for each Measurement Record.

ATTACHMENT 2: NOT USED

ATTACHMENT 3: MAINTENANCE LIMITS

[SEE ATTACHED]

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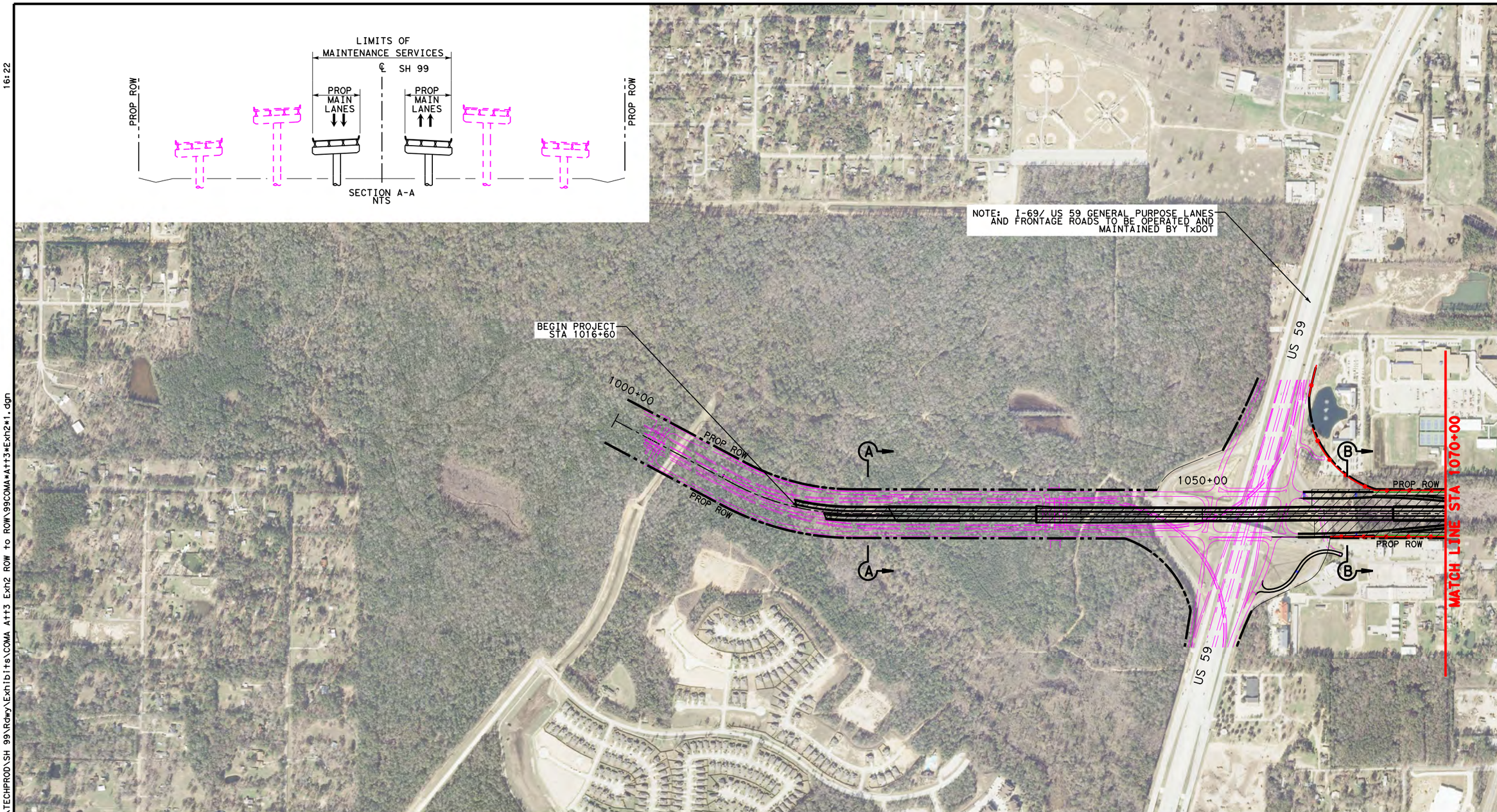

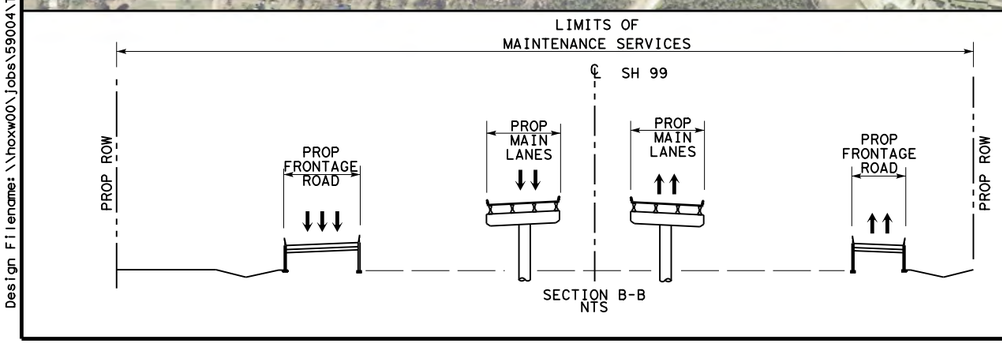

LEGEND

- 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
MAINTENANCE LIMITS

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:						1

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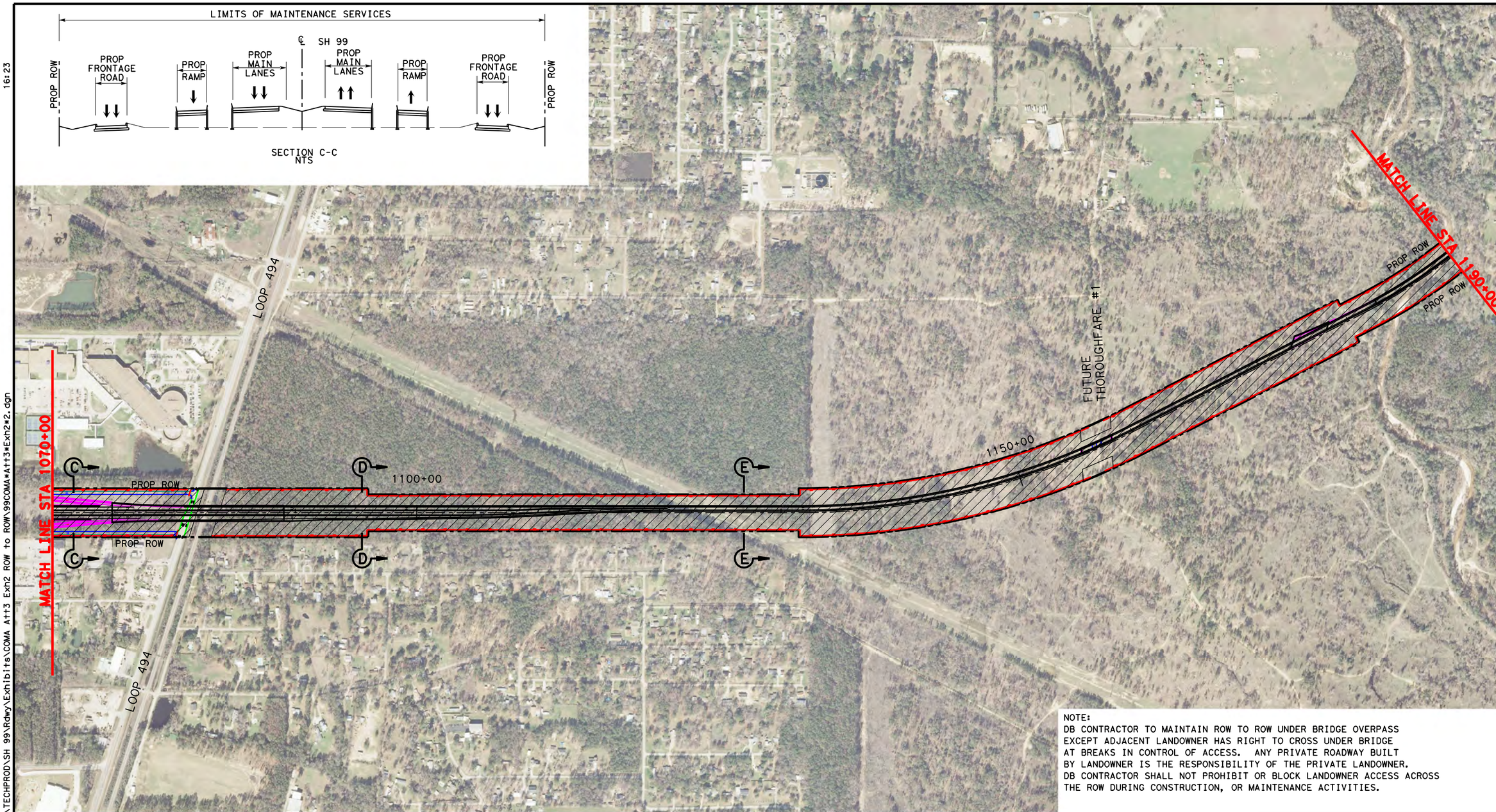

NOTE:
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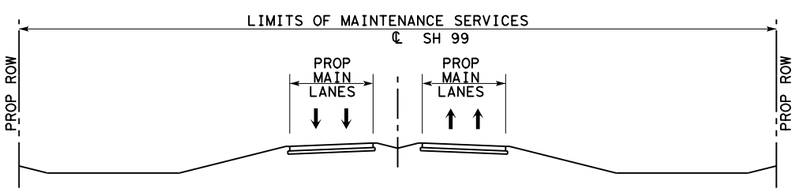

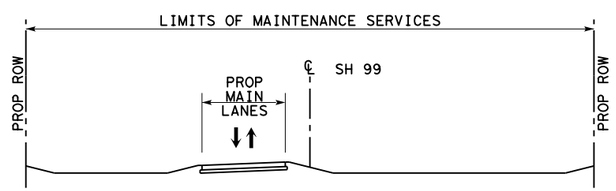

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CK:						2

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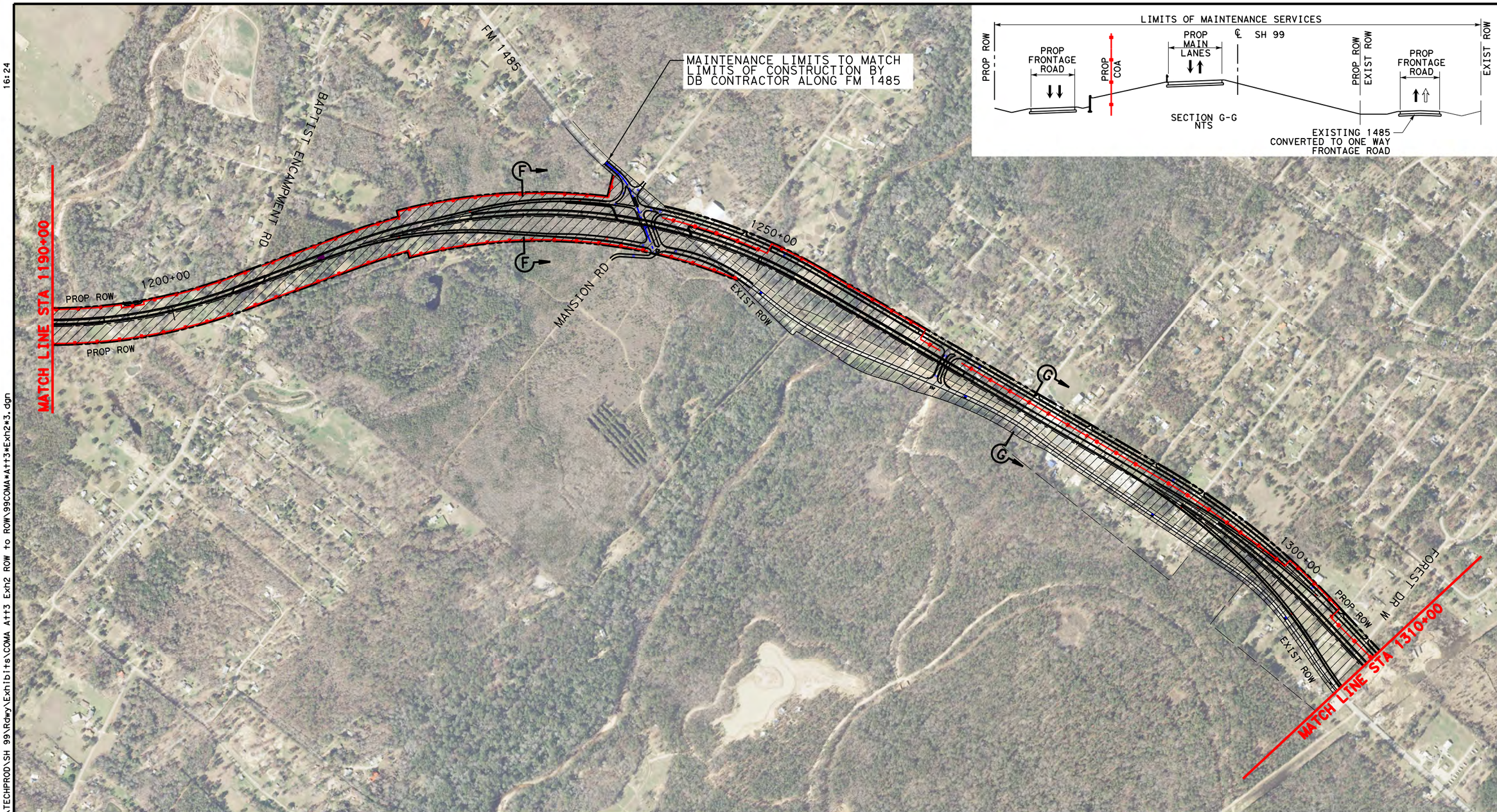

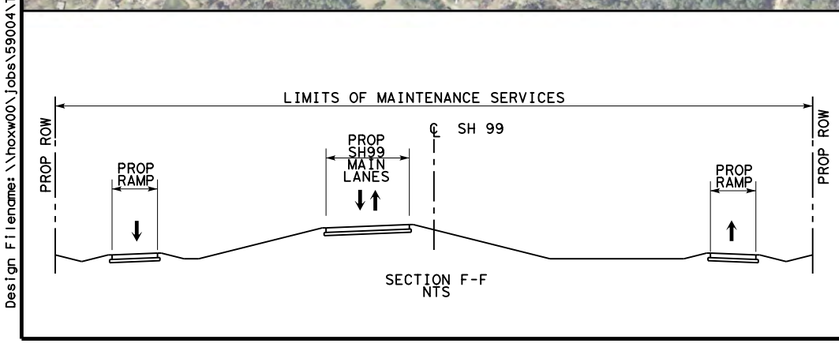

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CK:						3

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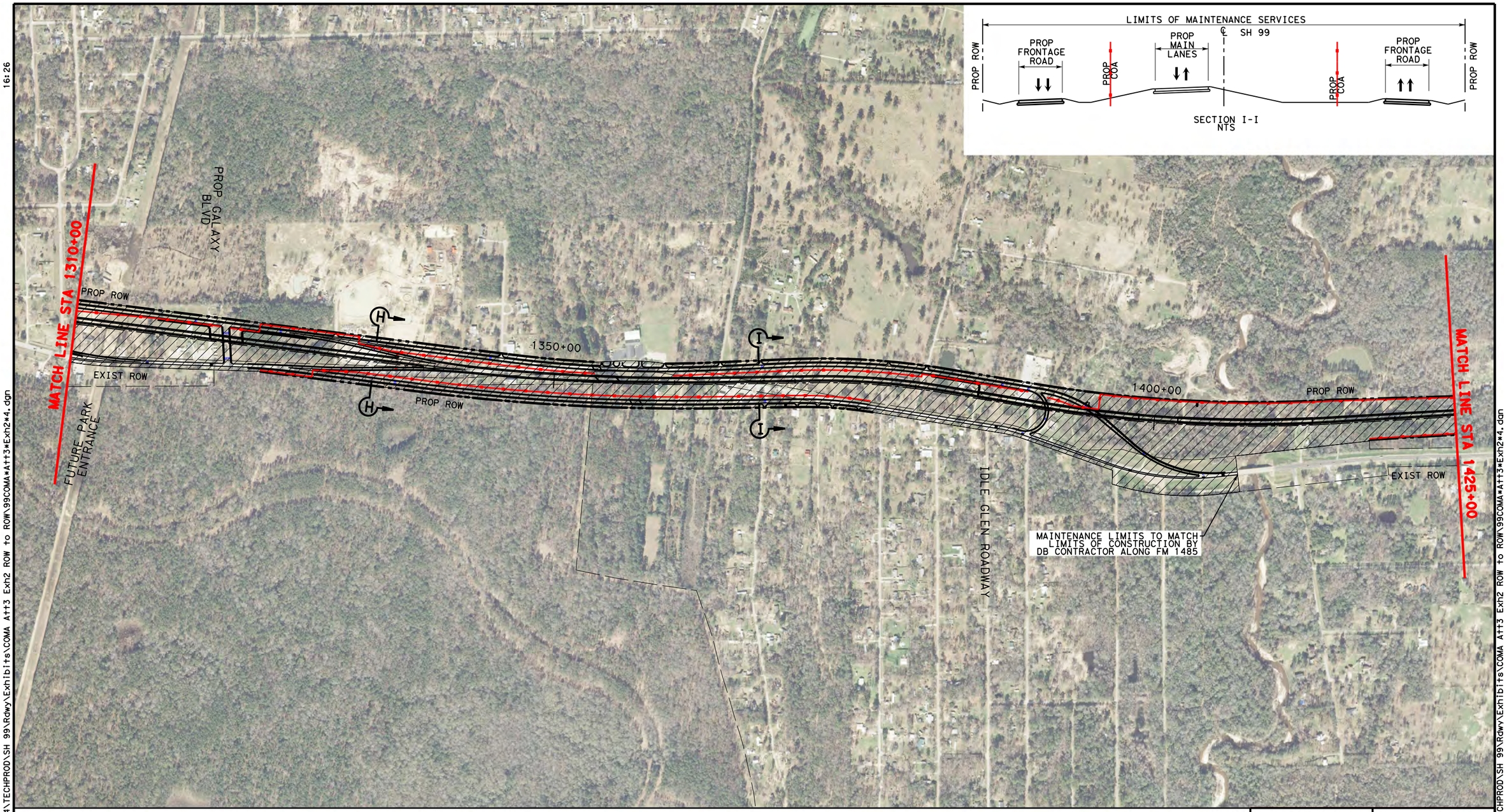

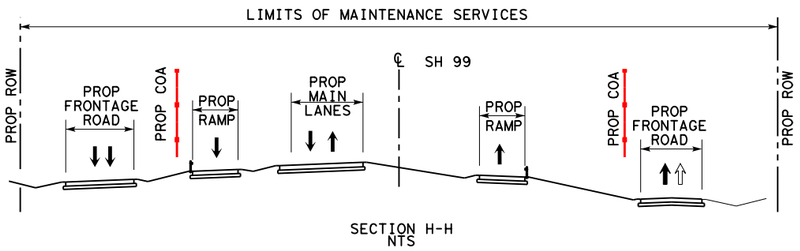

LEGEND

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SH99 GRAND PARKWAY
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DRN:	STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:						4

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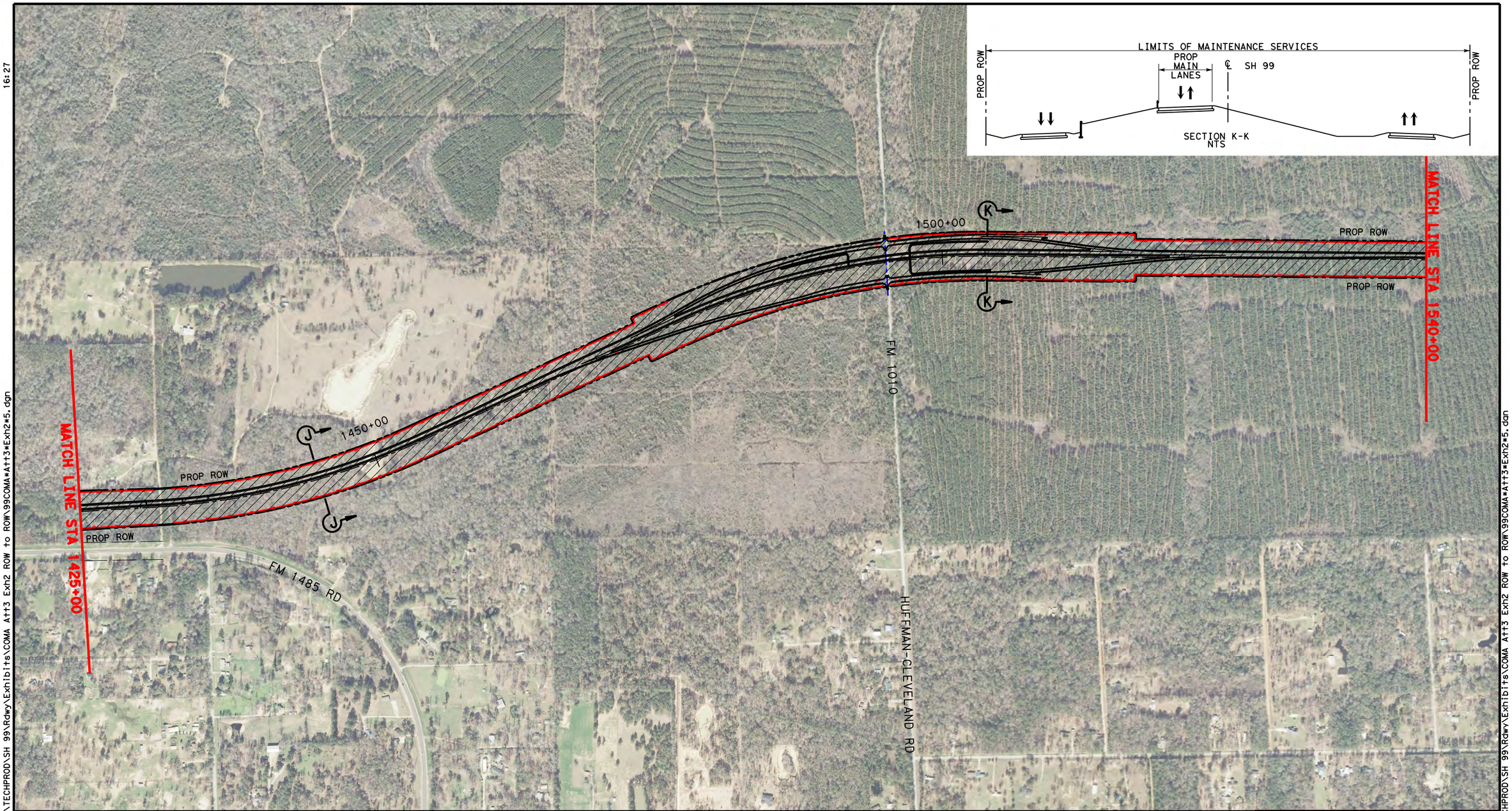

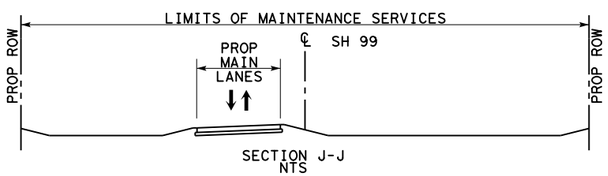

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CK:						5

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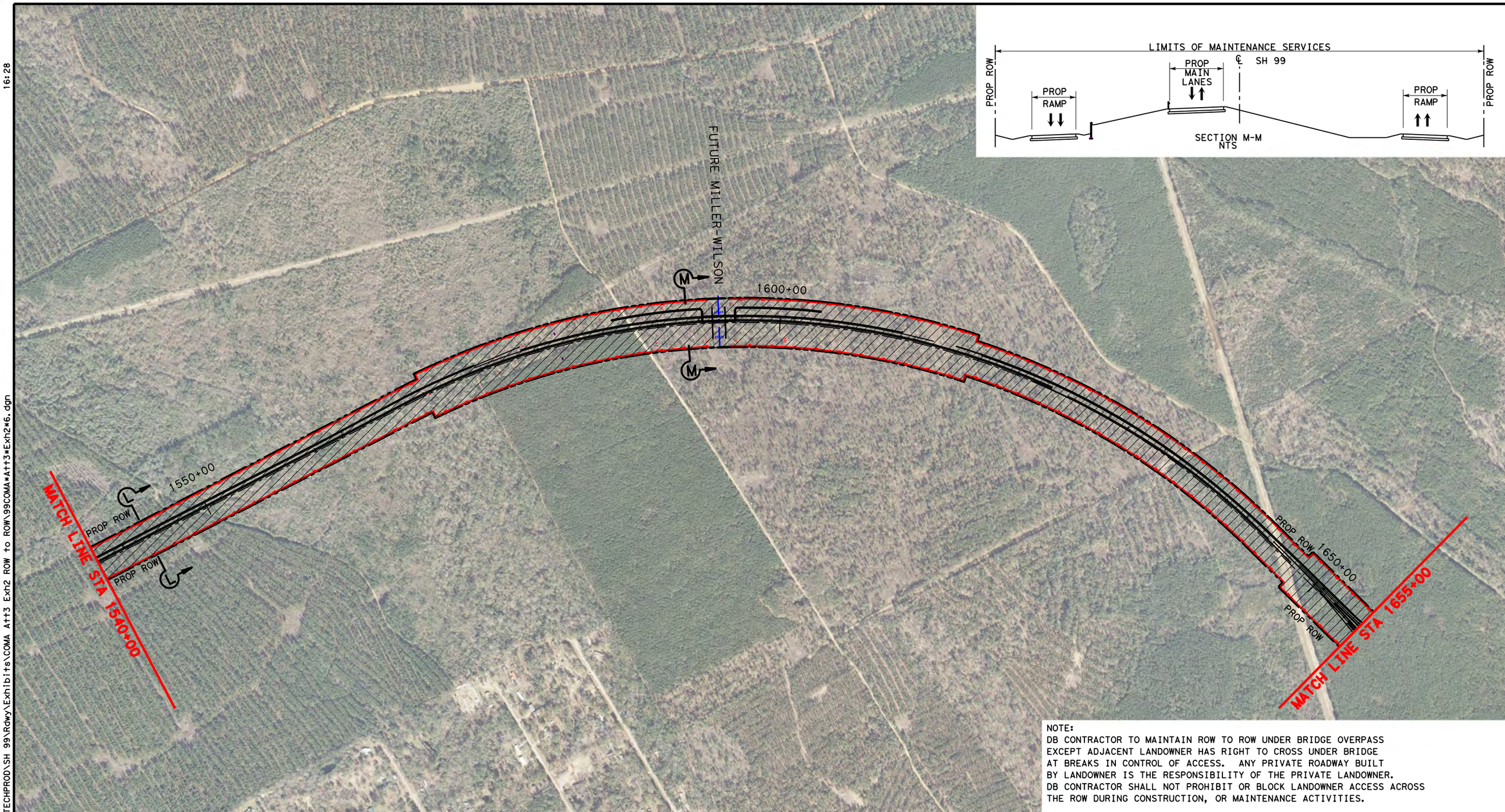

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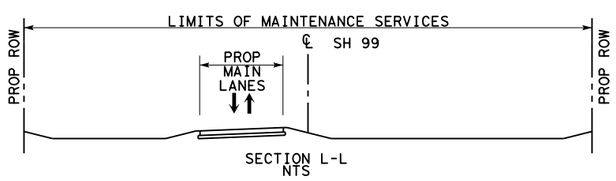

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DRN:	STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
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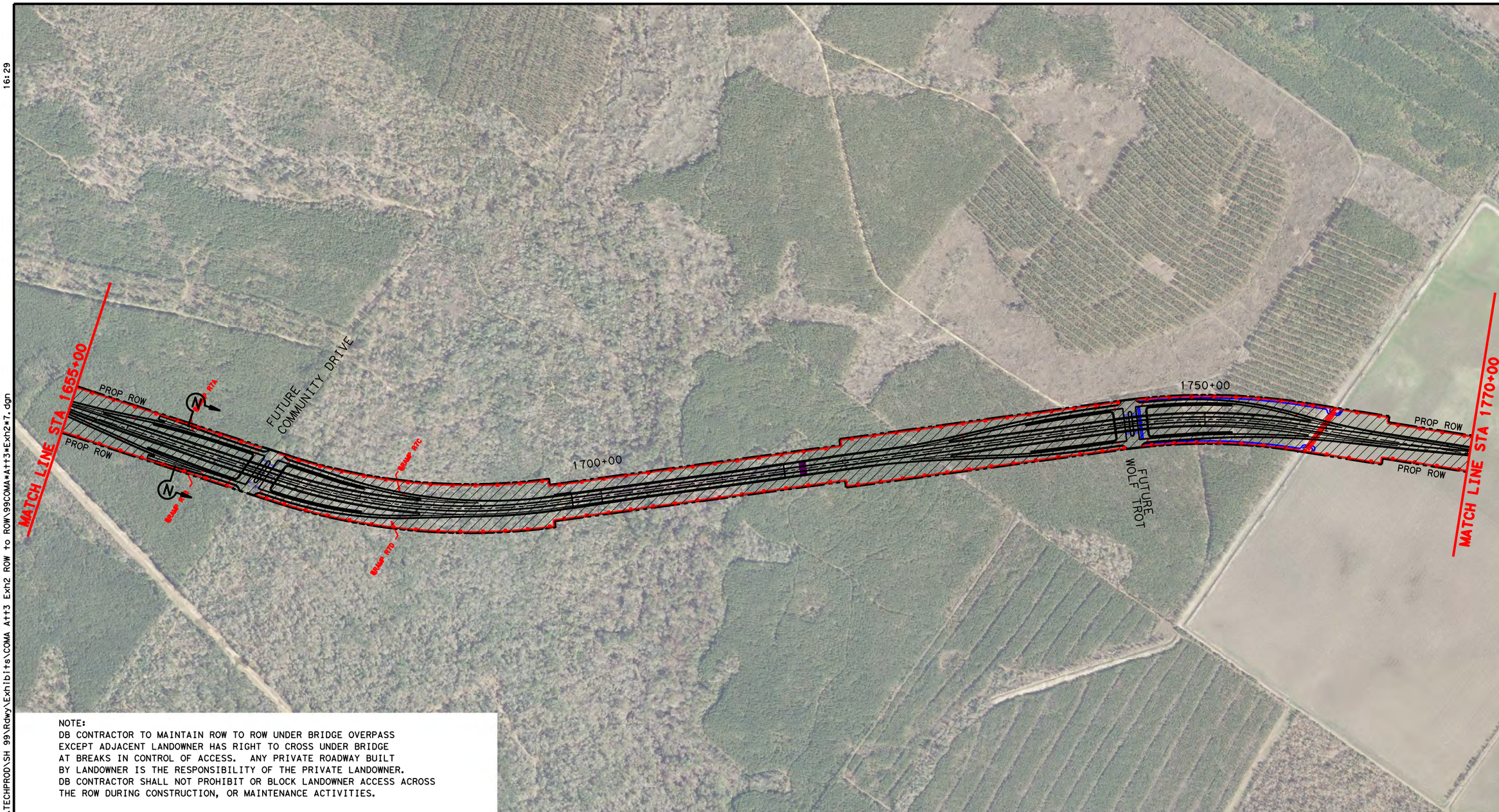

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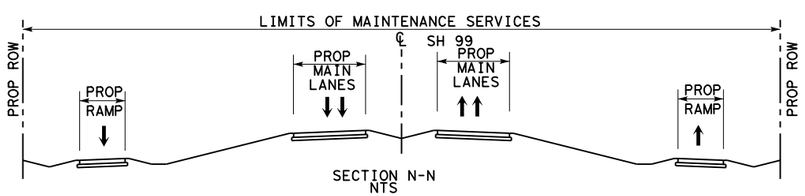

LEGEND

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STATE HIGHWAY 99 GRAND PARKWAY H&I

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DRN:	STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
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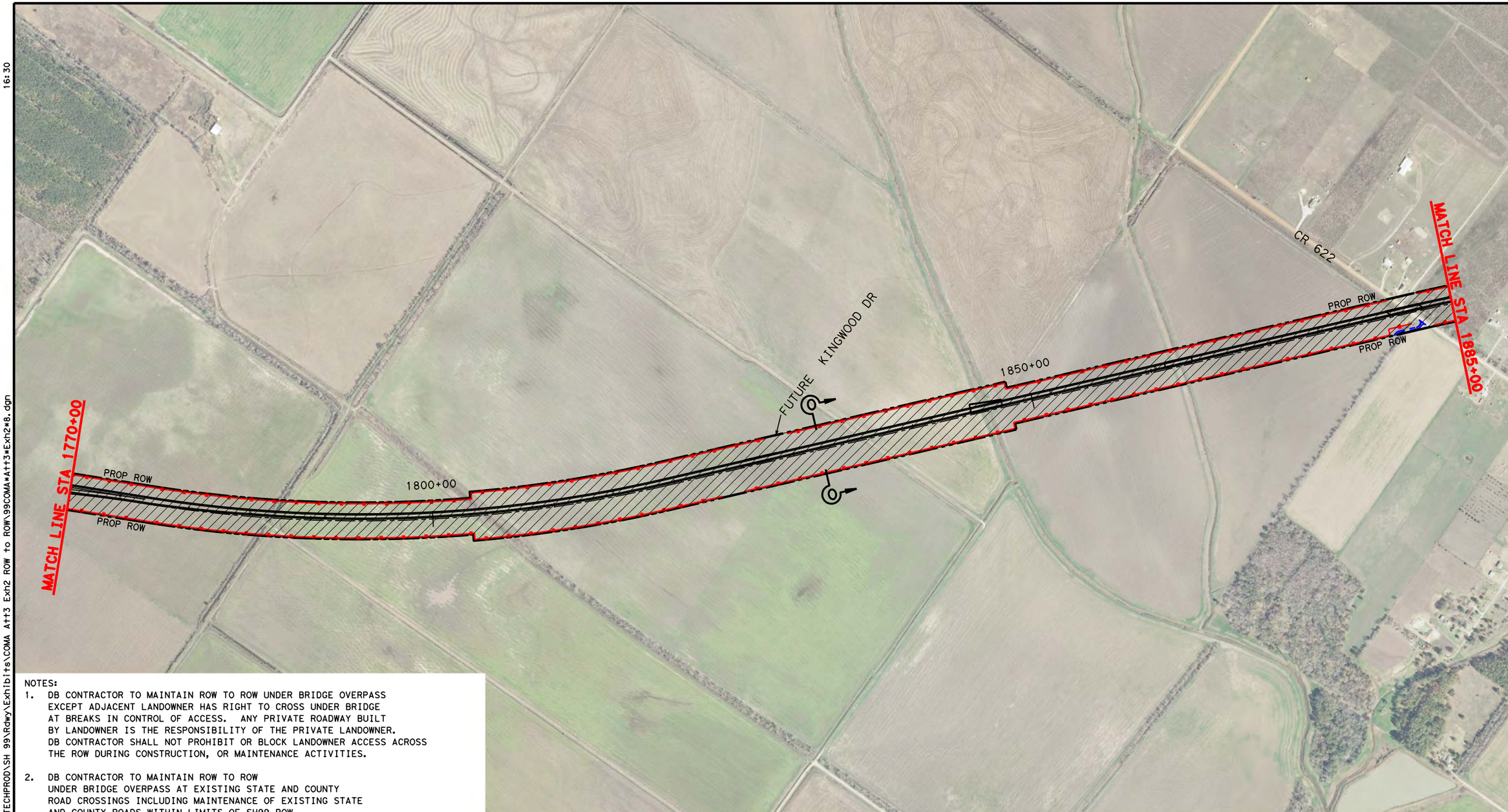

NOTES:

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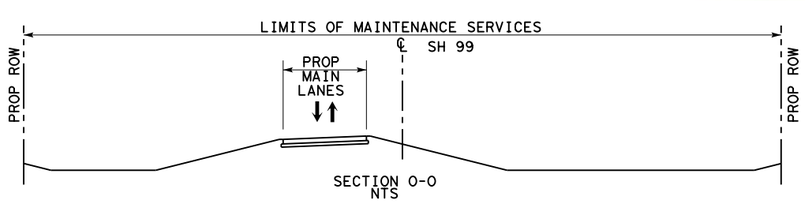
2. DB CONTRACTOR TO MAINTAIN ROW TO ROW UNDER BRIDGE OVERPASS AT EXISTING STATE AND COUNTY ROAD CROSSINGS INCLUDING MAINTENANCE OF EXISTING STATE AND COUNTY ROADS WITHIN LIMITS OF SH99 ROW



LEGEND

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STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
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CK:	6	TEXAS				SH 99
DRN:	STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:						8

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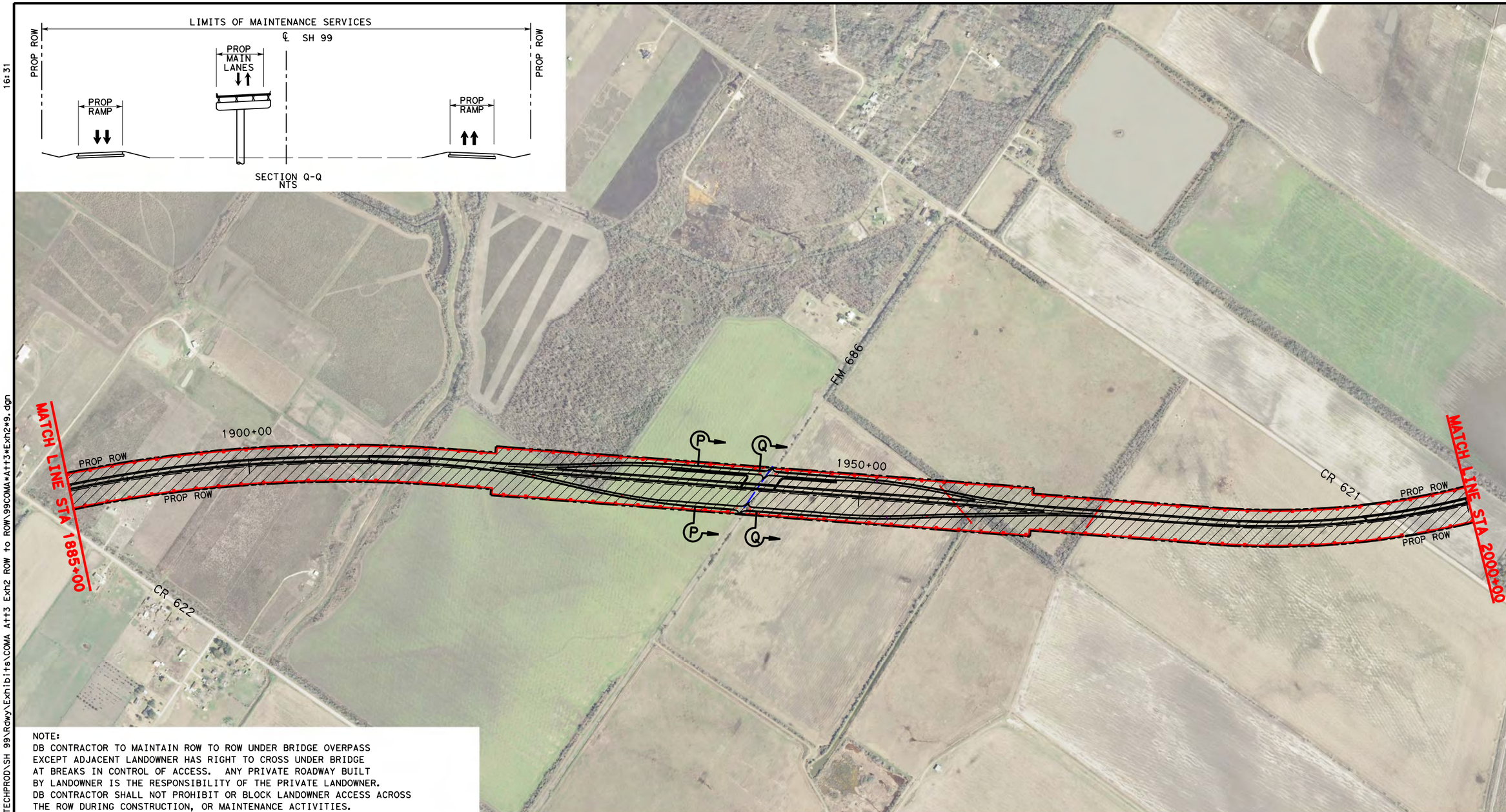

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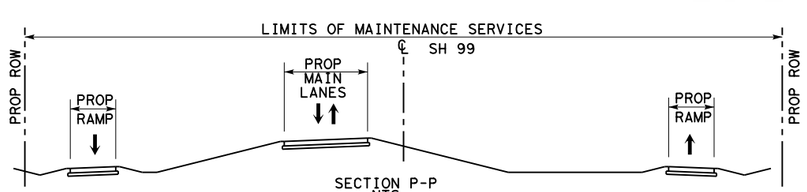

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DRN:	STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
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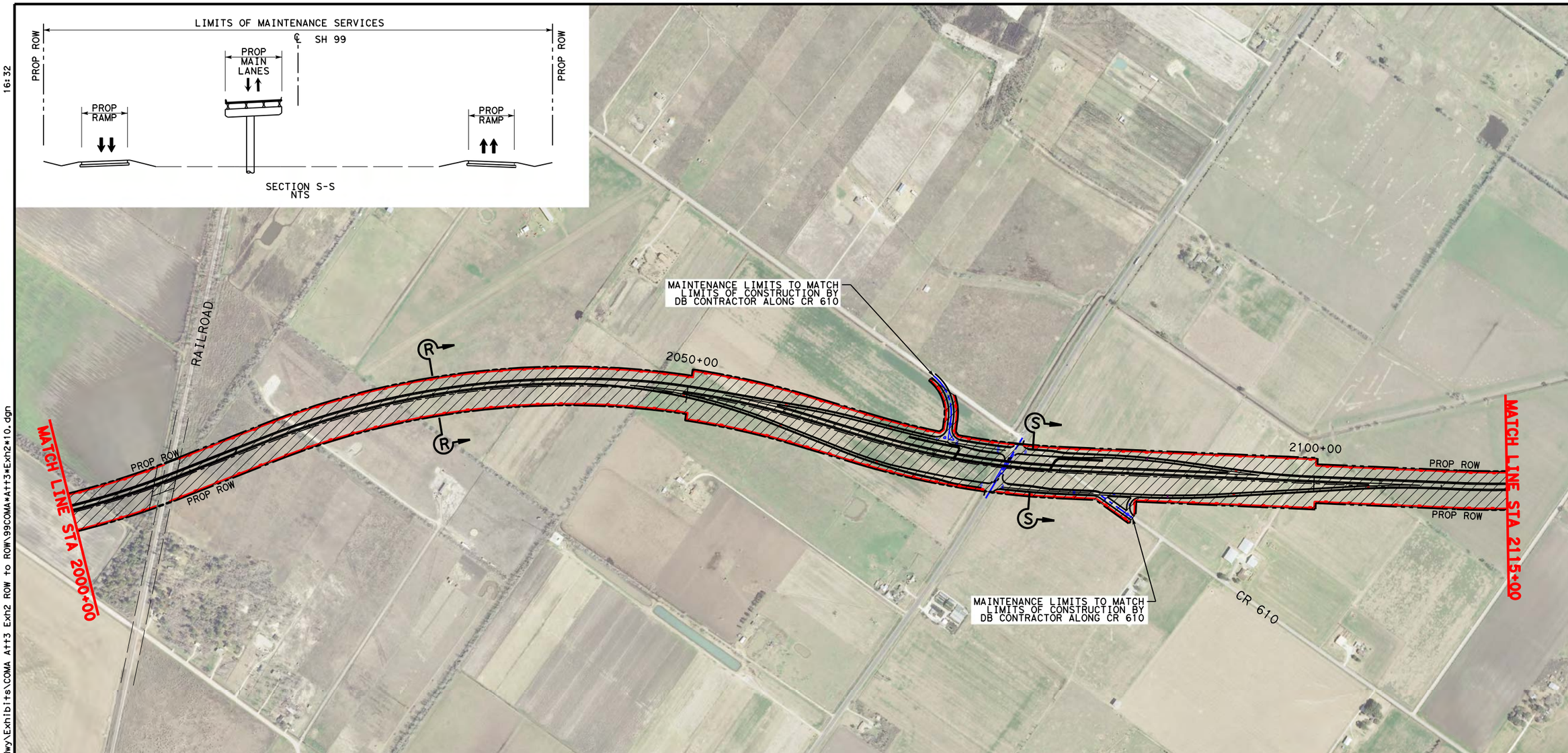
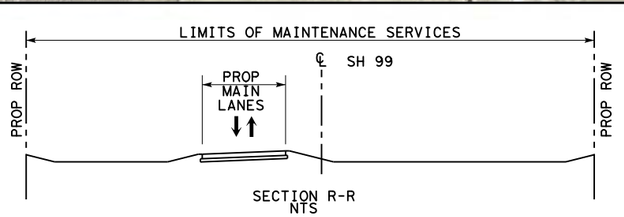


NOTE:
DB CONTRACTOR TO MAINTAIN ROW TO ROW UNDER BRIDGE OVERPASS EXCEPT ADJACENT LANDOWNER HAS RIGHT TO CROSS UNDER BRIDGE AT BREAKS IN CONTROL OF ACCESS. ANY PRIVATE ROADWAY BUILT BY LANDOWNER IS THE RESPONSIBILITY OF THE PRIVATE LANDOWNER. DB CONTRACTOR SHALL NOT PROHIBIT OR BLOCK LANDOWNER ACCESS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

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:						10

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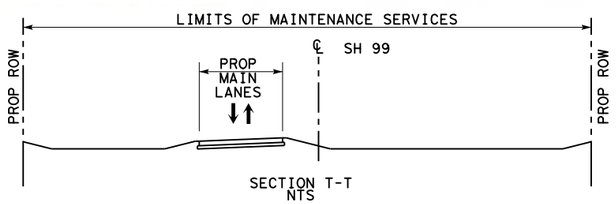

LEGEND

- 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
MAINTENANCE LIMITS

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:						11

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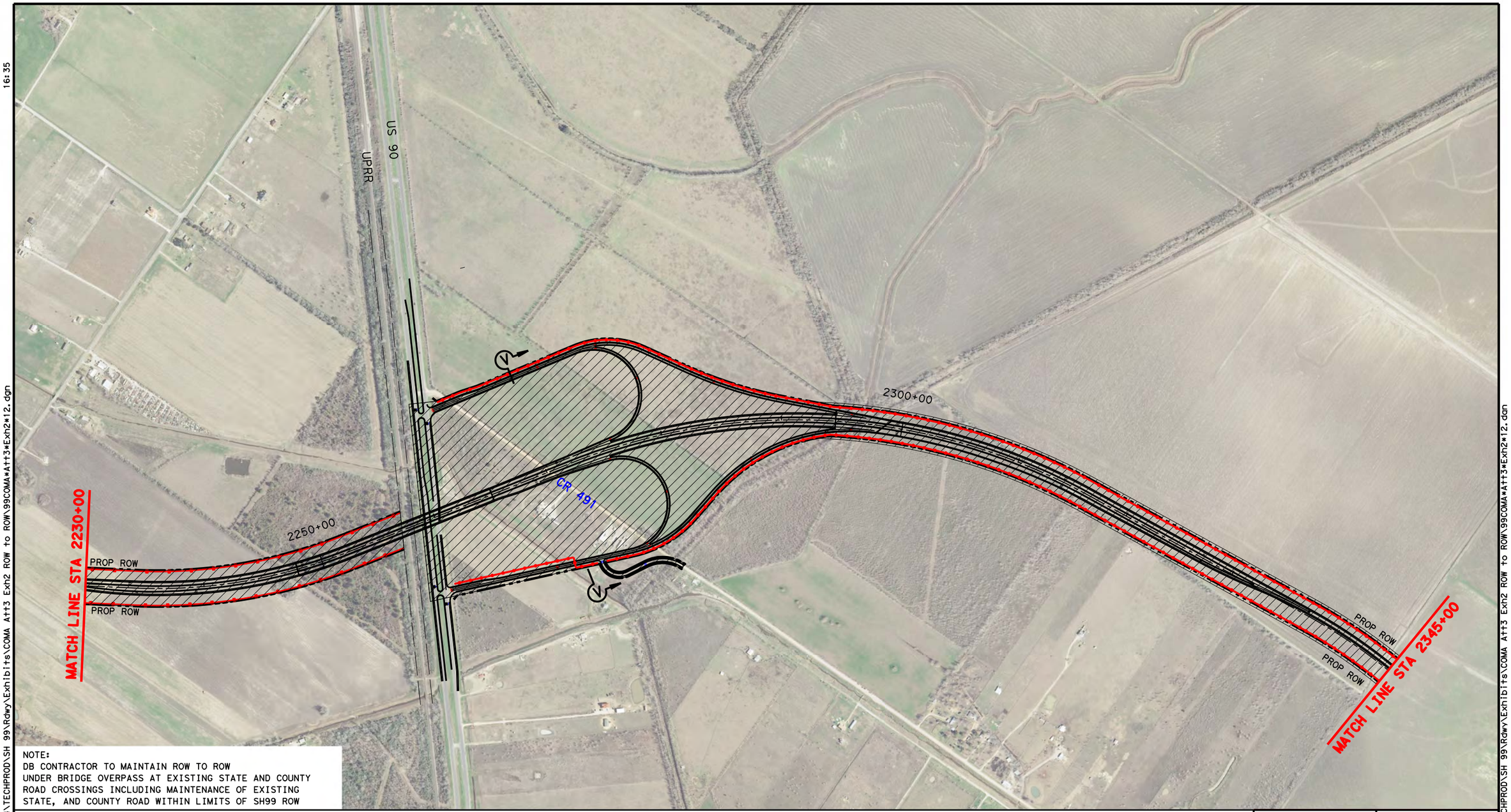
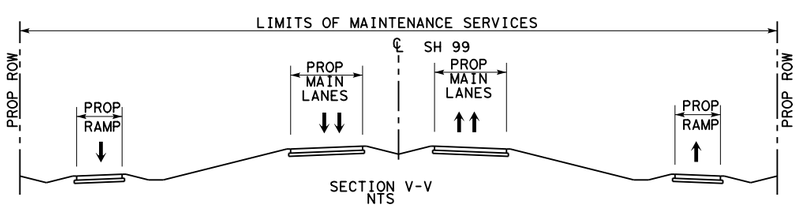


NOTE:
DB CONTRACTOR TO MAINTAIN ROW TO ROW
UNDER BRIDGE OVERPASS AT EXISTING STATE AND COUNTY
ROAD CROSSINGS INCLUDING MAINTENANCE OF EXISTING
STATE, AND COUNTY ROAD WITHIN LIMITS OF SH99 ROW



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
MAINTENANCE LIMITS

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:						12

dnaillon
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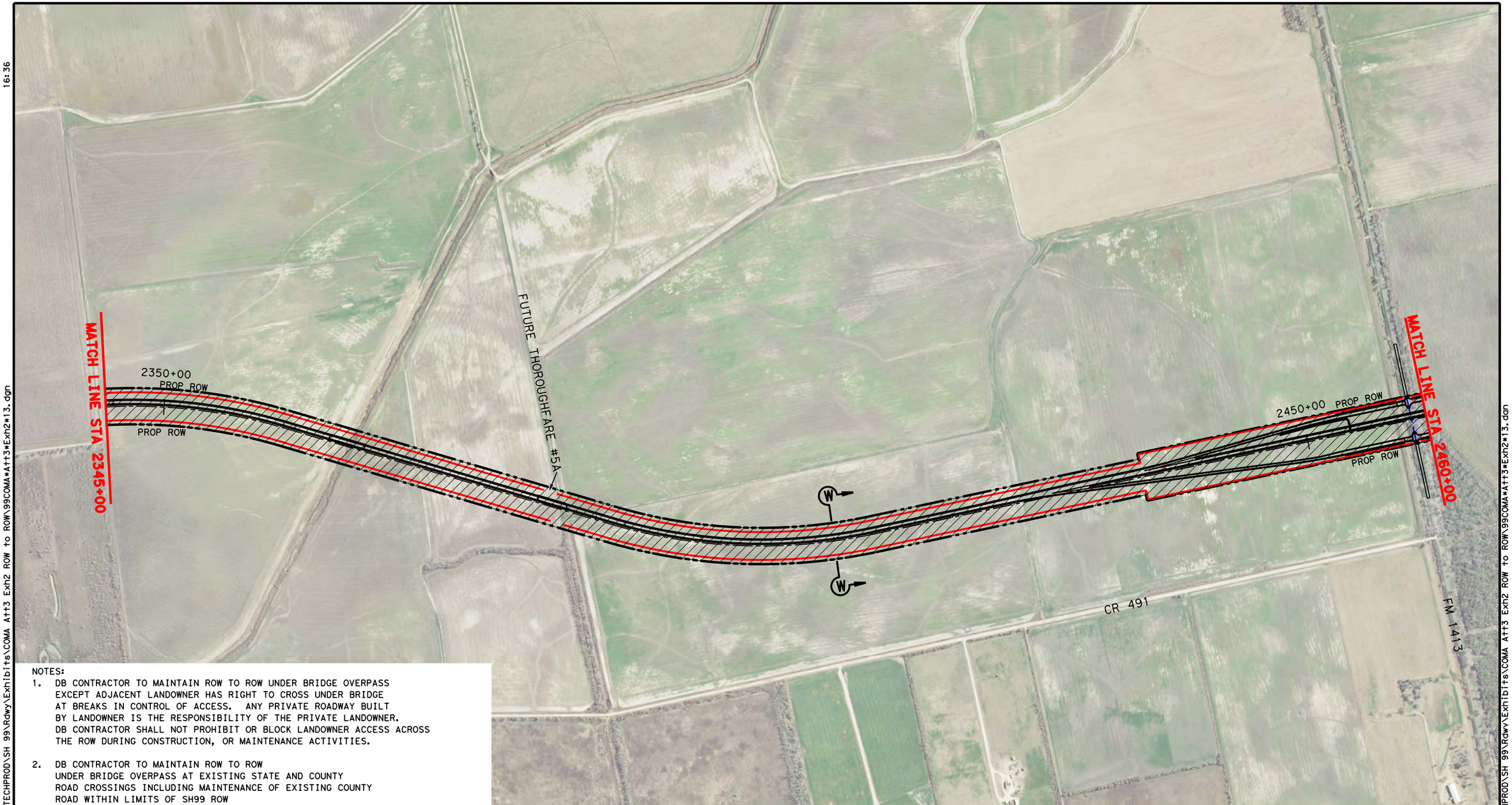
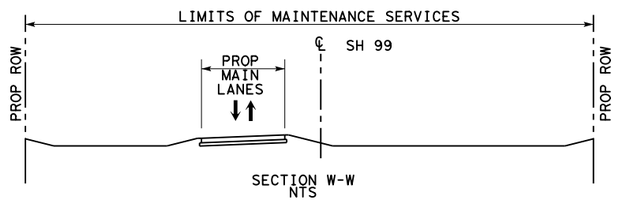


NOTES:

1. DB 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. DB CONTRACTOR SHALL NOT PROHIBIT OR BLOCK LANDOWNER ACCESS ACROSS THE ROW DURING CONSTRUCTION, OR MAINTENANCE ACTIVITIES.

2. DB CONTRACTOR TO MAINTAIN ROW TO ROW UNDER BRIDGE OVERPASS AT EXISTING STATE AND COUNTY ROAD CROSSINGS INCLUDING MAINTENANCE OF EXISTING COUNTY ROAD WITHIN LIMITS OF SH99 ROW



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
MAINTENANCE LIMITS

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:						13

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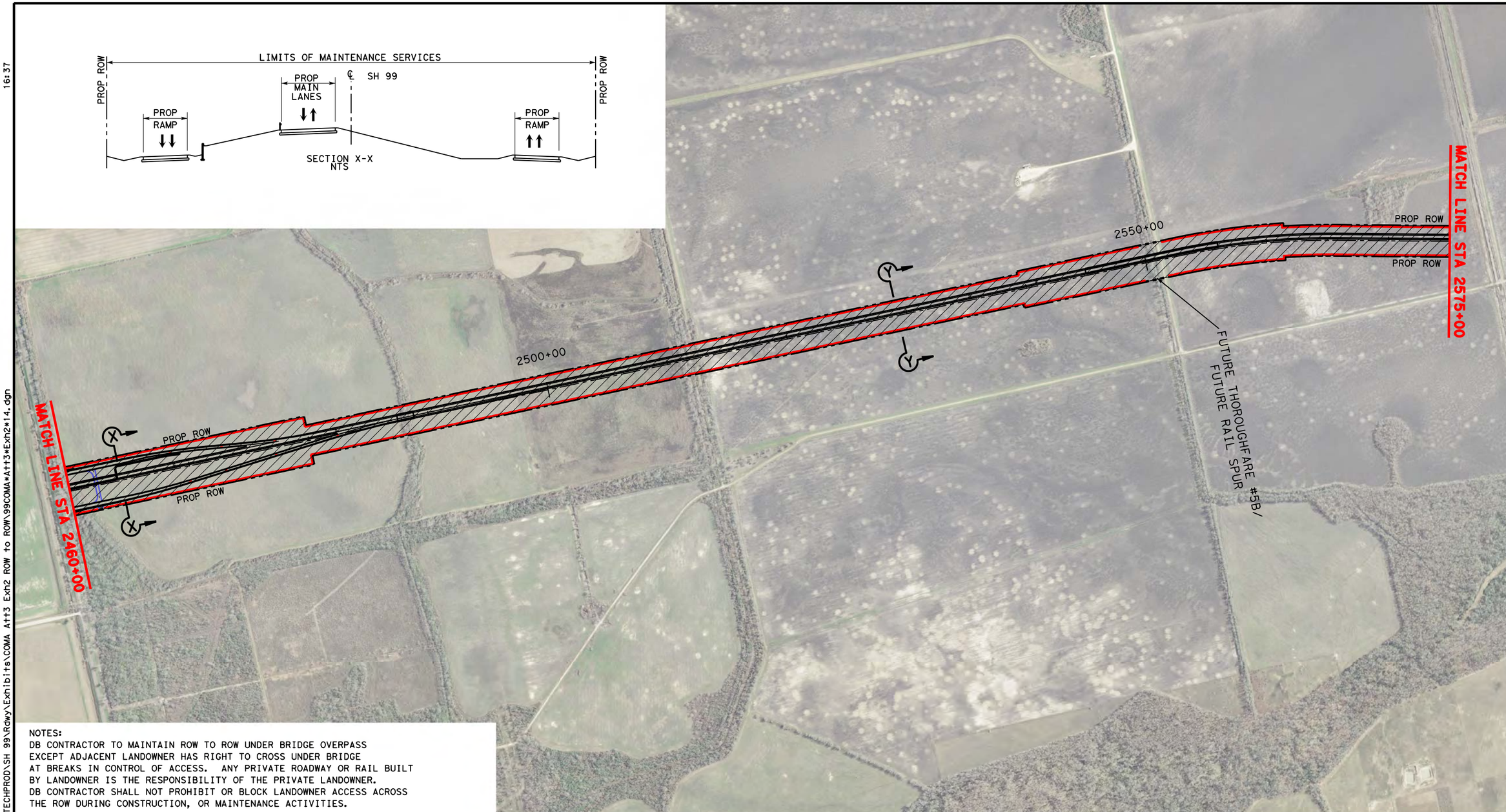
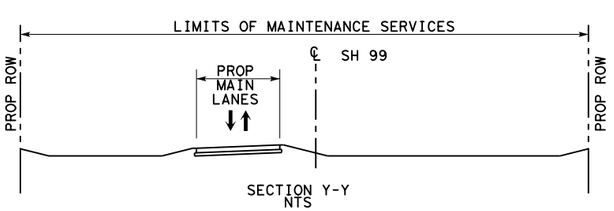


NOTES:
DB CONTRACTOR TO MAINTAIN ROW TO ROW UNDER BRIDGE OVERPASS EXCEPT ADJACENT LANDOWNER HAS RIGHT TO CROSS UNDER BRIDGE AT BREAKS IN CONTROL OF ACCESS. ANY PRIVATE ROADWAY OR RAIL BUILT BY LANDOWNER IS THE RESPONSIBILITY OF THE PRIVATE LANDOWNER.
DB CONTRACTOR SHALL NOT PROHIBIT OR BLOCK LANDOWNER 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
MAINTENANCE LIMITS

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:						14

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NOTE:
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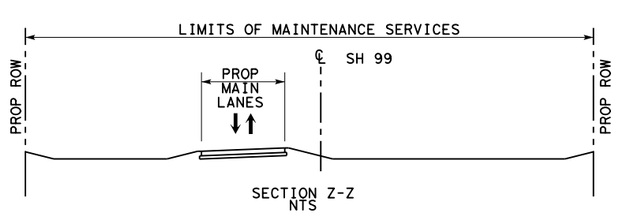

LEGEND

- 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
MAINTENANCE LIMITS

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:						15

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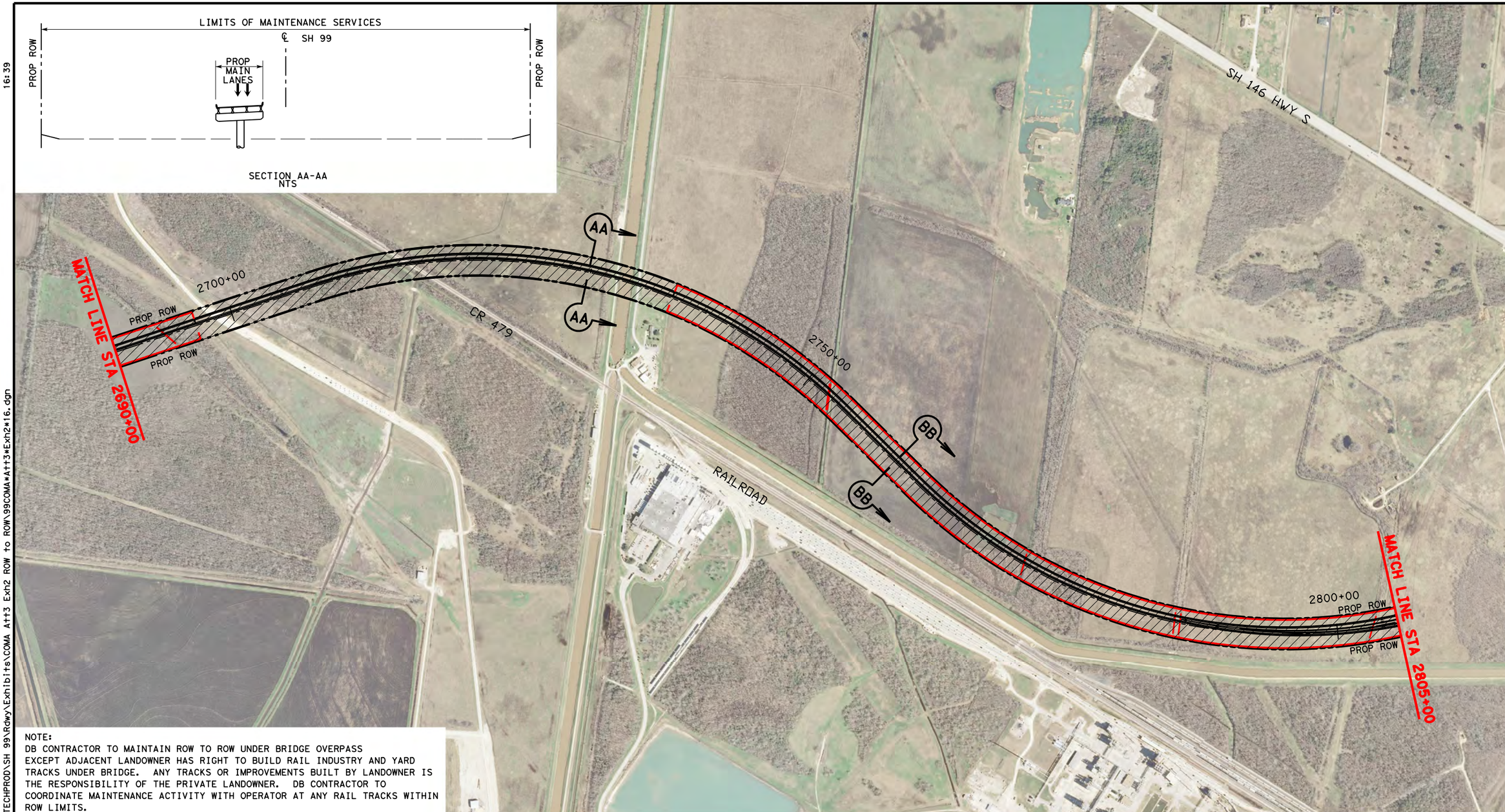
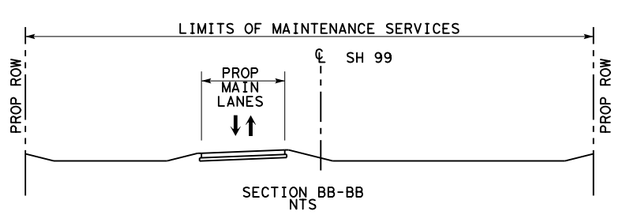


NOTE:
DB CONTRACTOR TO MAINTAIN ROW TO ROW UNDER BRIDGE OVERPASS EXCEPT ADJACENT LANDOWNER HAS RIGHT TO BUILD RAIL INDUSTRY AND YARD TRACKS UNDER BRIDGE. ANY TRACKS OR IMPROVEMENTS BUILT BY LANDOWNER IS THE RESPONSIBILITY OF THE PRIVATE LANDOWNER. DB CONTRACTOR TO COORDINATE MAINTENANCE ACTIVITY WITH OPERATOR AT ANY RAIL TRACKS WITHIN ROW LIMITS.



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
MAINTENANCE LIMITS

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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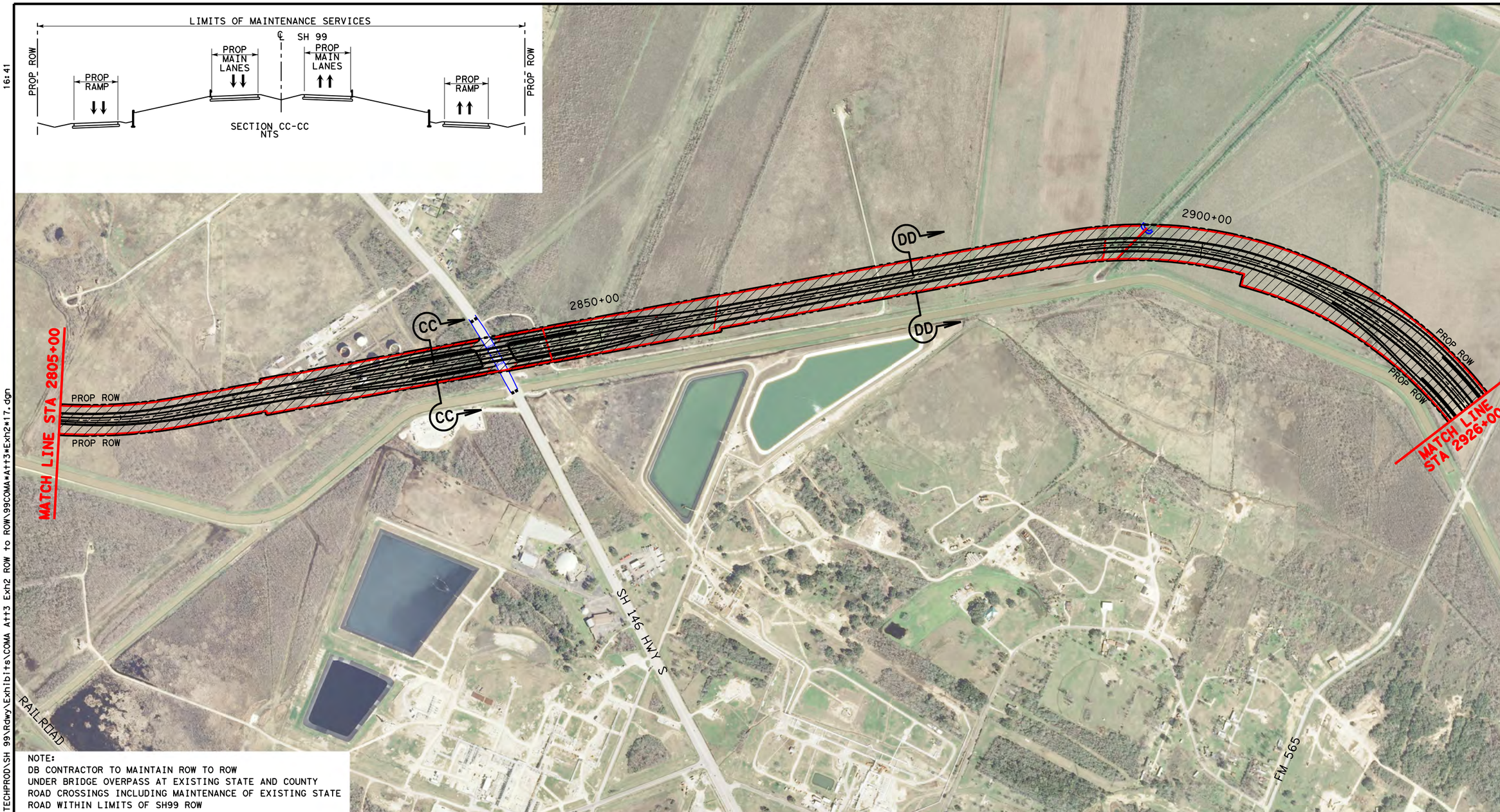
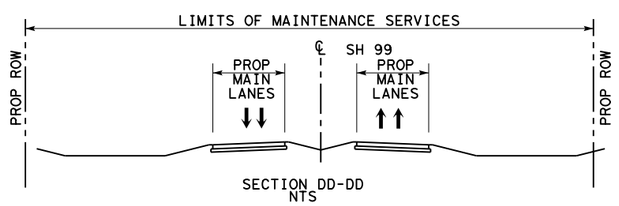


NOTE:
DB CONTRACTOR TO MAINTAIN ROW TO ROW
UNDER BRIDGE OVERPASS AT EXISTING STATE AND COUNTY
ROAD CROSSINGS INCLUDING MAINTENANCE OF EXISTING STATE
ROAD WITHIN LIMITS OF SH99 ROW



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
MAINTENANCE LIMITS

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:						17

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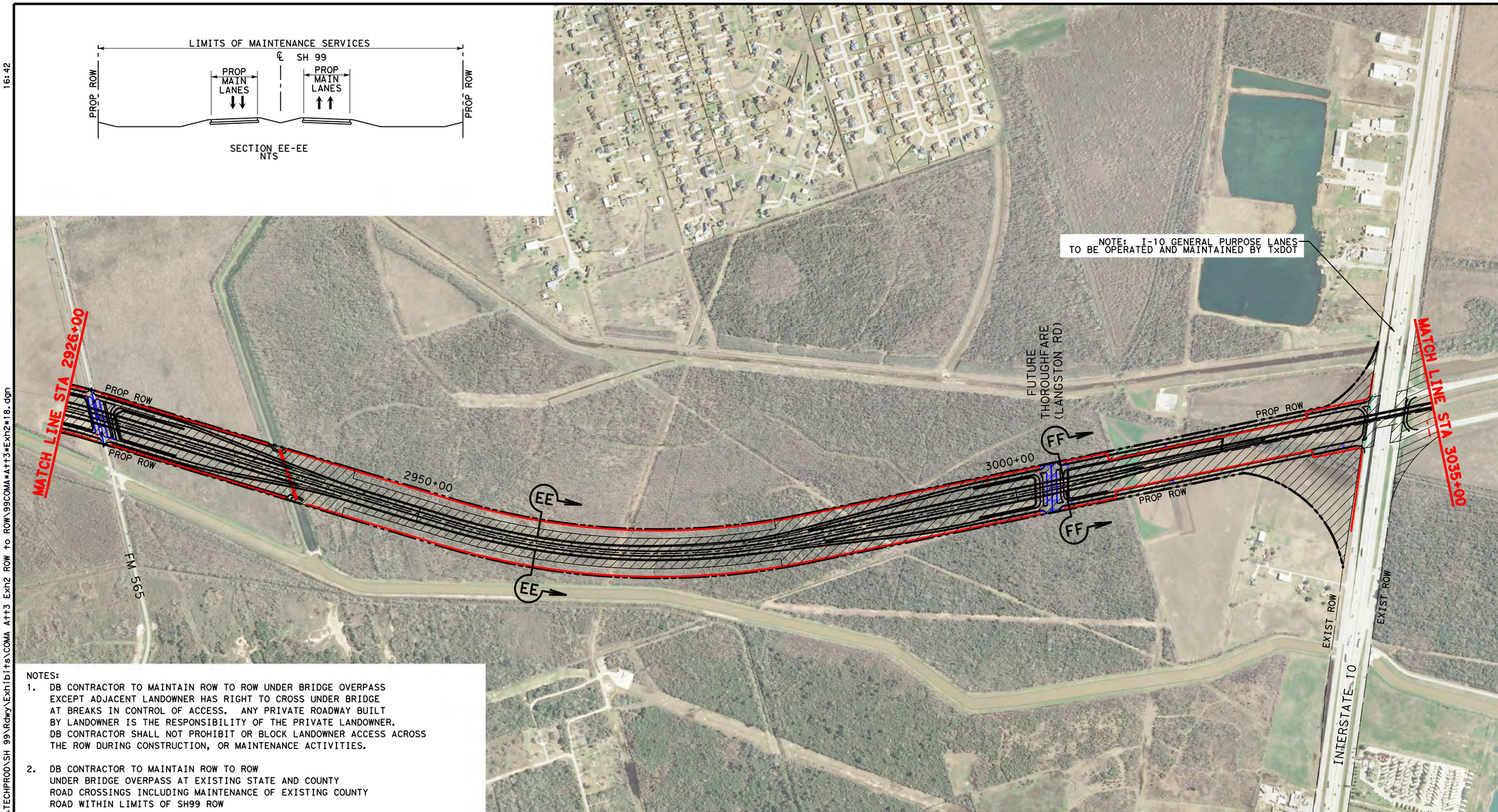
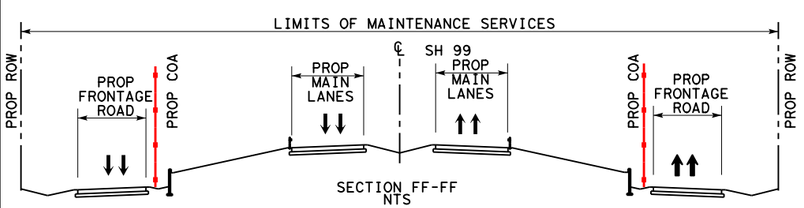


NOTES:

1. DB 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. DB CONTRACTOR SHALL NOT PROHIBIT OR BLOCK LANDOWNER ACCESS ACROSS THE ROW DURING CONSTRUCTION, OR MAINTENANCE ACTIVITIES.

2. DB CONTRACTOR TO MAINTAIN ROW TO ROW UNDER BRIDGE OVERPASS AT EXISTING STATE AND COUNTY ROAD CROSSINGS INCLUDING MAINTENANCE OF EXISTING COUNTY ROAD WITHIN LIMITS OF SH99 ROW



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
MAINTENANCE LIMITS

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:						18

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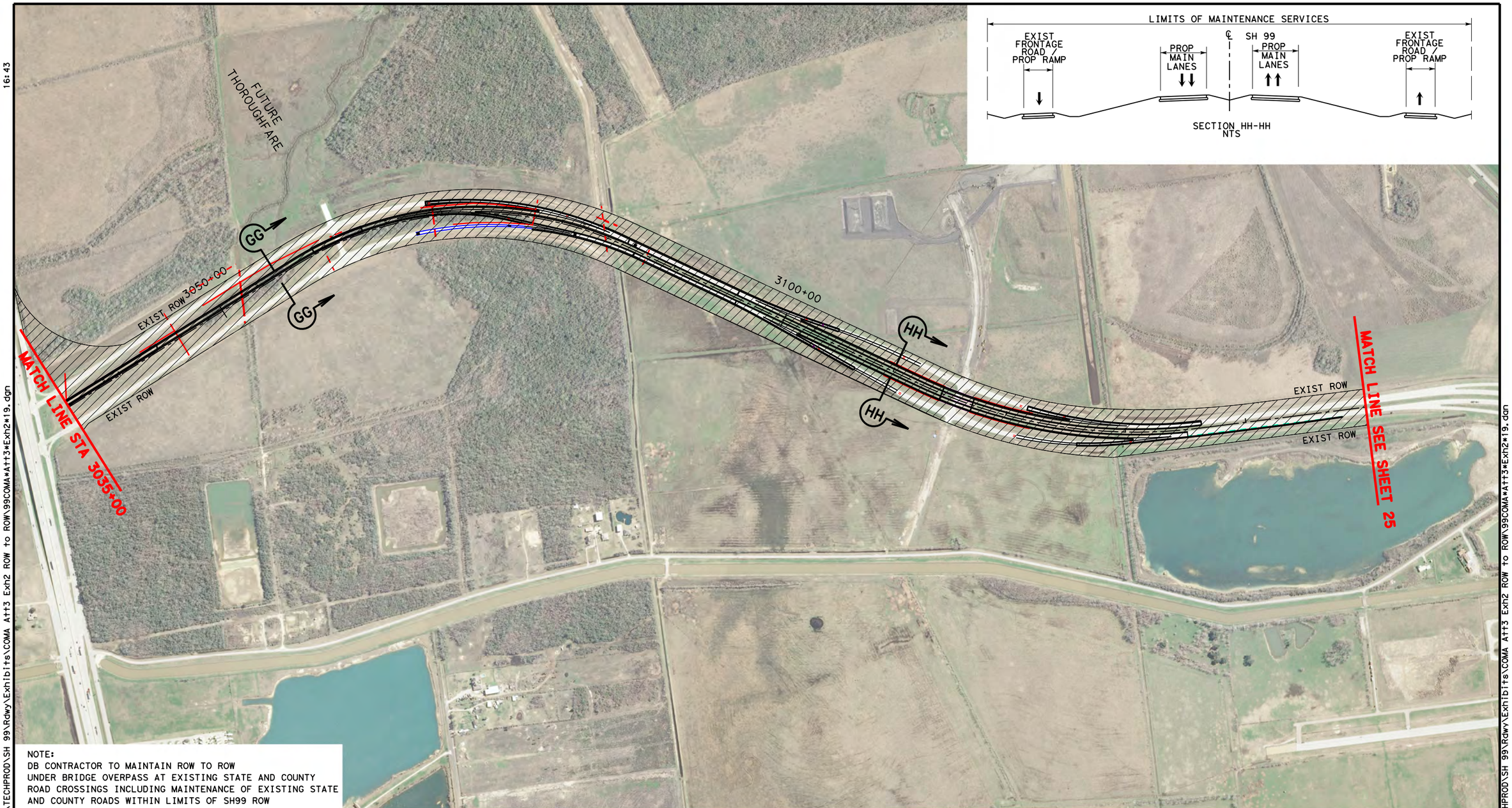
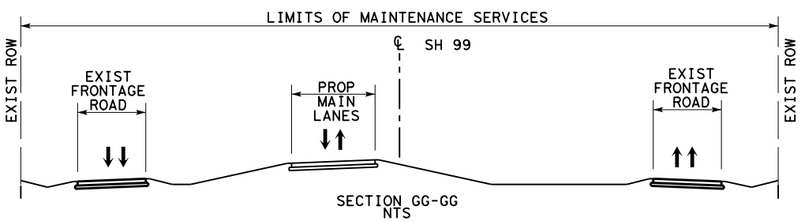


NOTE:
DB CONTRACTOR TO MAINTAIN ROW TO ROW
UNDER BRIDGE OVERPASS AT EXISTING STATE AND COUNTY
ROAD CROSSINGS INCLUDING MAINTENANCE OF EXISTING STATE
AND COUNTY ROADS WITHIN LIMITS OF SH99 ROW



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
MAINTENANCE LIMITS

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:						19

dnaillon
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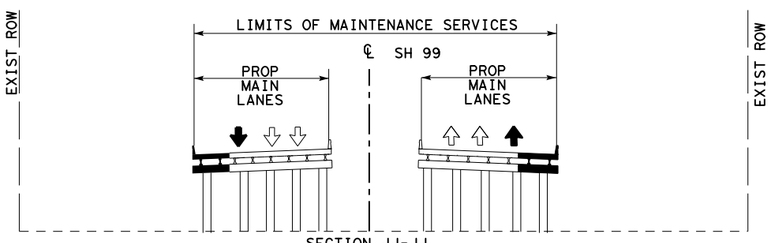
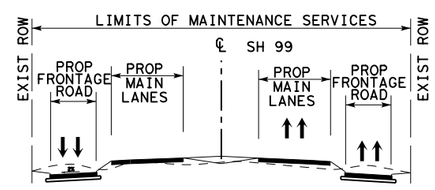


SECTION JJ-JJ
NTS



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
MAINTENANCE LIMITS

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:						20

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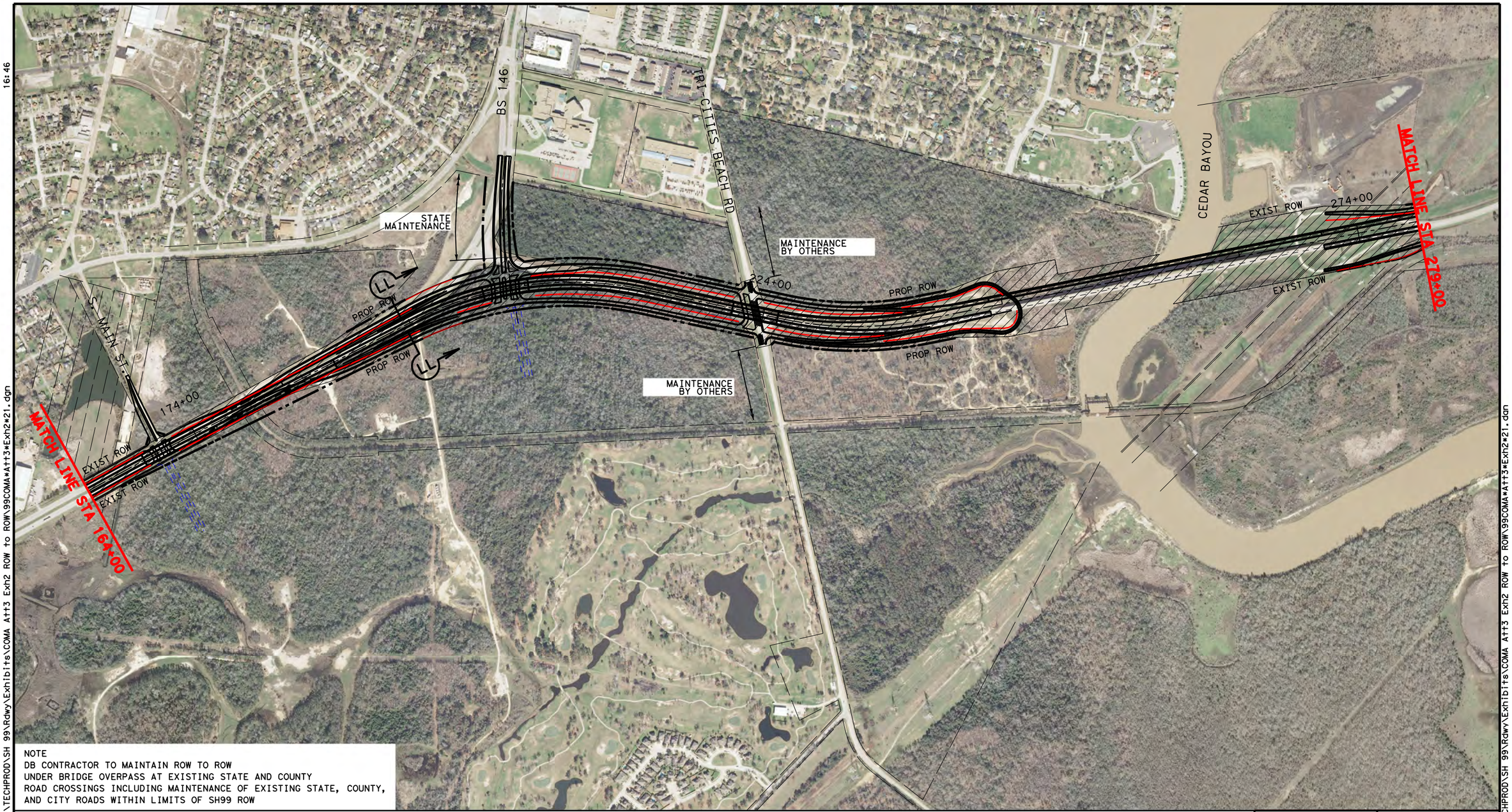
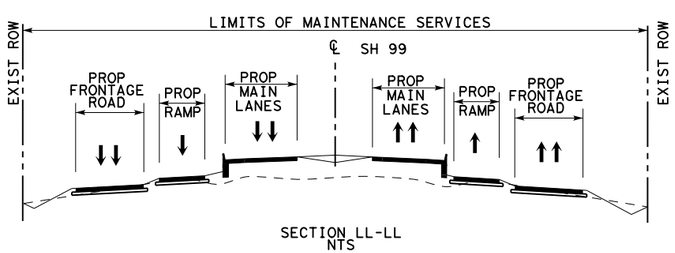


NOTE
DB CONTRACTOR TO MAINTAIN ROW TO ROW
UNDER BRIDGE OVERPASS AT EXISTING STATE AND COUNTY
ROAD CROSSINGS INCLUDING MAINTENANCE OF EXISTING STATE, COUNTY,
AND CITY ROADS WITHIN LIMITS OF SH99 ROW



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DRN:	STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:						21

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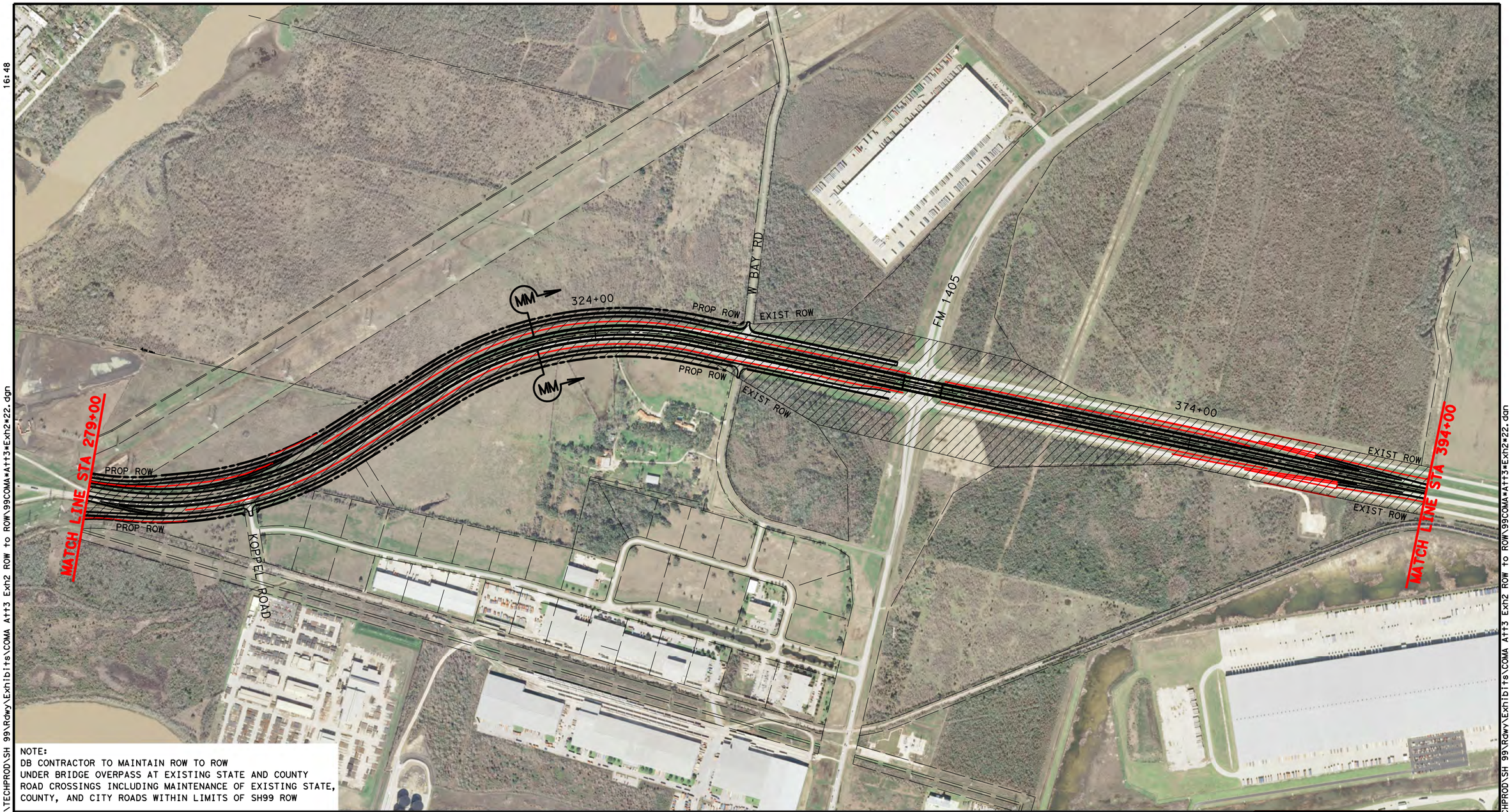

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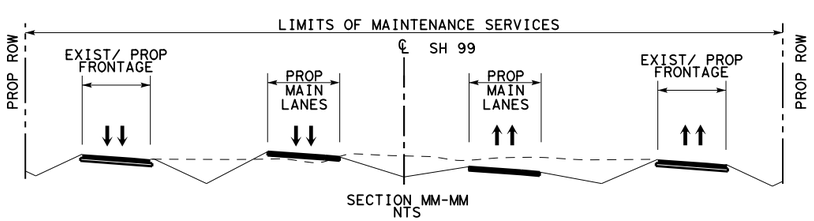

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CK:						22

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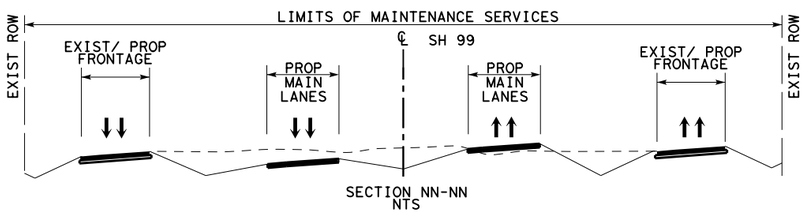

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CK:						23

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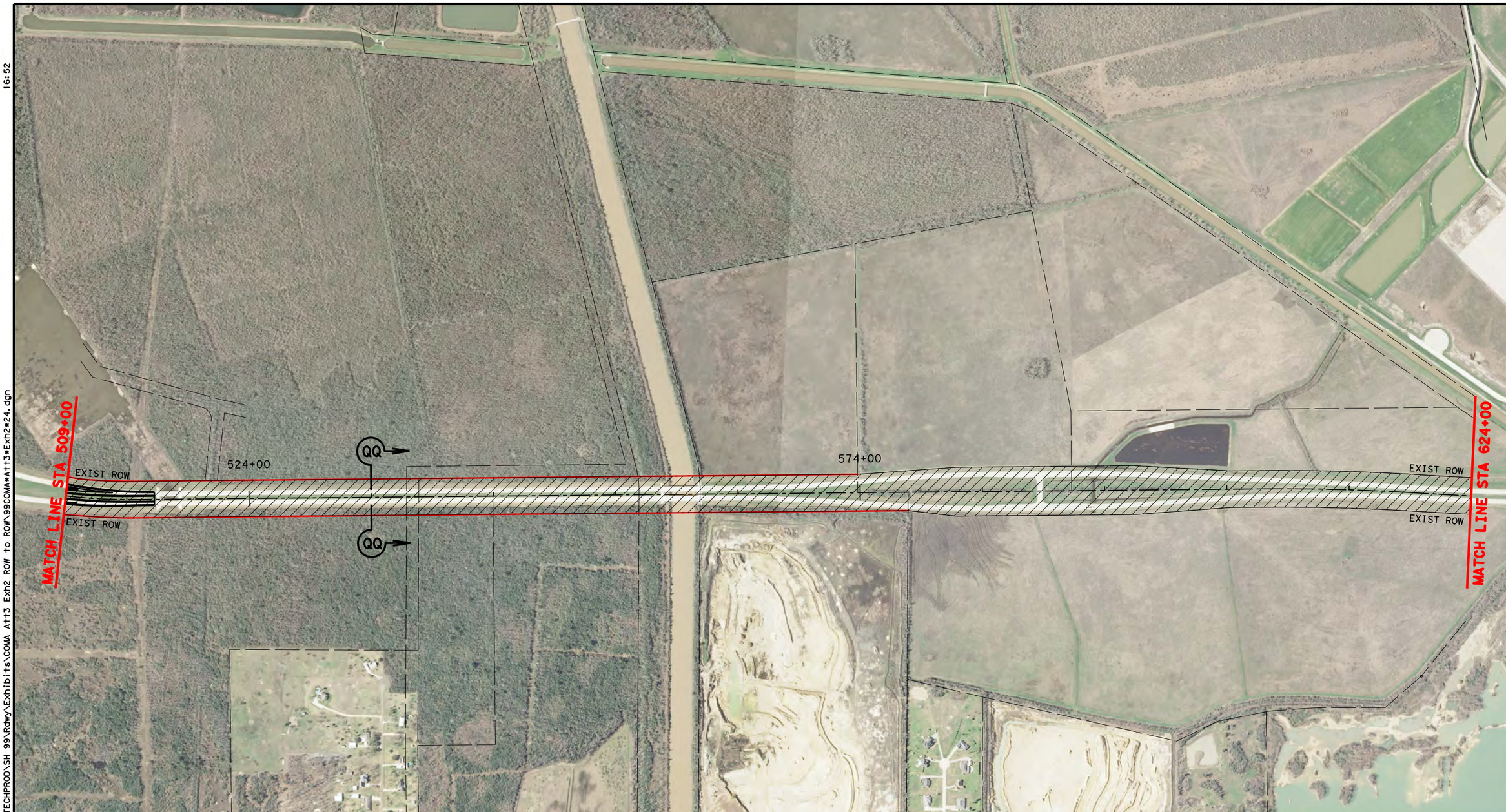

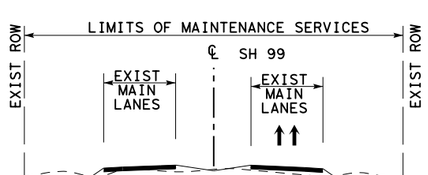

SECTION QQ-QQ
NTS

LEGEND

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SH99 GRAND PARKWAY
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DRN:	STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:						24

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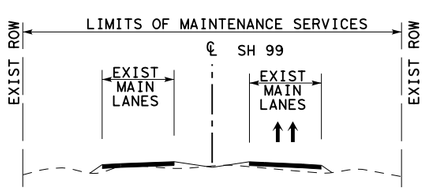

SECTION RR-RR
NTS

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DRN:	STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
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ATTACHMENT 4: MAINTENANCE MANAGEMENT PLAN CONTENTS

Part	Reference	Section	Contents
1. General Management and Administration			
	1.1	Organization	DB Contractor's main contractual arrangements
			Organizational structure covering the activities to be performed in accordance with the COMA Documents
	1.2	Personnel	DB Contractor's approach to provide experienced personnel for the maintenance of the Project including a training program for personnel and Subcontractors
			Arrangements for coordinating and managing staff interaction with TxDOT and its consultants
			Names and contact details, titles, and job roles of personnel for Subcontractors and any third party with which DB Contractor will coordinate its activities
			Names and contact details, titles, and job roles of personnel
			Procedures for providing training for personnel involved with environmental mitigation activities and Hazardous Materials handling
	1.3	Maintenance Communications Plan	Procedures for communication of Project information between DB Contractor's organization and TxDOT and for communication with other Governmental Entities, Utilities, and third parties as appropriate
	1.4	Project Meetings	List of regularly scheduled meetings including frequency and personnel
	1.5	Maintenance Document Management Plan	Procedures for maintaining Maintenance Records and Project-related documents
	1.6	Procurement	Procedures for procurement of services, materials and products including methods to ensure best value
	1.7	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
	1.8	Resources	Procedures for maintaining equipment
			Tools and equipment list
			Maintenance and service manuals
	1.9	Insurances	The checklist of all required insurances required for the Maintenance Services with dates on which policies were renewed and dates proof of insurance was provided to TxDOT
2. Emergency Response			
	2.1	Incident and Emergency Management Plan	Procedures setting out how DB Contractor will respond to accidents and Incidents on the Project
			Procedures to establish protocols with Emergency Services and others during Emergencies
	2.2	Snow and Ice Control Plan	Procedures for performing snow and ice control

Part	Reference	Section	Contents
	2.3	Severe Weather Evacuation Plan	Procedures for evacuation during severe weather
3. Environmental Compliance			
	3.1	Governmental Approvals and Permits	The required permits for Governmental Entities and third parties as part of the Maintenance Services
	3.2	Hazardous Materials Management Plan	Procedures for handling Hazardous Materials
	3.3	SW3P Implementation	Procedures for implementation of SW3P
	3.4	Spill Prevention and Countermeasures Plan	Procedures and information per Section 4.6.3 of this Exhibit 2
	3.5	Pollution Prevention Plan	Procedures for pollution prevention, waste management, and recycling
	3.6	Environmental Compliance and Mitigation Plan	Compliance strategies and procedures to be employed in accordance with the requirements of applicable Environmental Laws and Environmental Approvals
4. Maintenance Limits & Schedules			
	4.1	Maintenance Limits	Maintenance Limits as set forth in Section 3.1.1.1 of the Comprehensive Maintenance Agreement
	4.2	Performance Sections	Performance Section drawings as set forth in Section 1.5.1 of Exhibit 2
	4.3	Maintenance Services Deliverable Schedule	Schedule to include all principal submittals in connection with the Maintenance Services
	4.4	Renewal Work Submittal	See Section 2.2 of this Exhibit 2
5. Compliance with Performance Requirements			
	5.1	Principal Activities	Procedures for how the principal activities will be performed during the Maintenance Period: to include Routine O&M, Renewal Work, and inspections regime
			Procedures and proposed cycle times for safety patrols, sweeping, litter pickup, and debris pickup within the Maintenance Limits
	5.2	Performance Requirements	Procedures to meet the Performance Requirements, measurement procedures, threshold values at which maintenance is required, inspection procedures and frequencies, and subsequent maintenance to address Defects, as well as thresholds for rehabilitation in accordance with the Performance and Measurement Table and Good Industry Practice
			Performance and Measurement Table
	5.3	Maintenance Management System	Procedures for establishing Maintenance Management System
			Software including sample reports and links to MMS training
			Software updates
			Documentation and forms
	5.4	Defects	Process for handling and processing Defects including training, notification, categorization, action, remedy and documentation set forth in Section 1.2.2 of Exhibit 2
	5.5	Complaints	Procedures to respond to comments and/or complaints received from Users and others

Part	Reference	Section	Contents
	5.6	Noncompliance Events	Procedures for tracking and reporting Noncompliance Events
6. Maintenance Safety Plan			
	6.1	Procedures	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 throughout the Maintenance Period
7. Maintenance Services Quality Management Plan			
	7.1	Organization	Quality organization and staffing plan
	7.2	Procedures	Procedures for quality control activities including a complete description of the quality policies and objectives
8. Traffic Management Plan			
	8.1	Personnel	Qualifications and responsibilities of personnel
	8.2	Procedures	Procedures for setting out how DB Contractor will coordinate Lane Closure, and traffic control for conducting Maintenance Services
9. Maintenance Transition Plan			
	9.1	Procedures	Procedures for preparing list of items to be transferred to TxDOT
10. Close-Out Requirements			
	10.1	Procedures	Procedures for implementation of Close-Out Requirements
11. Required Key Appendices			
	11.1	Contact List	Refer to 1.2 Personnel of this Attachment 4
	11.2	Resources and Manuals	Refer to 1.8 Resources of this Attachment 4
	11.3	Insurance Verification	Refer to 1.9 Insurances of this Attachment 4
	11.4	Maintenance Limits & Performance Sections	Refer to 4.1 Maintenance Limits and 4.2 Performance Sections of this Attachment 4
	11.5	Maintenance Services Deliverable Schedule	Refer to 4.3 Maintenance Services Deliverable Schedule of this Attachment 4
	11.6	Renewal Work Submittal	Refer to 4.4 Renewal Work Submittal of this Attachment 4
	11.7	Performance and Measurement Tables	Refer to 5.2 Performance Requirements of this Attachment 4
	11.8	Maintenance Management System Details	Refer to 5.3 Maintenance Management System of this Attachment 4

ATTACHMENT 5: NOT USED

ATTACHMENT 6: LANE CLOSURE REQUIREMENTS

6.1 General Requirements

Lane Closures will be permitted as part of a traffic control plan when DB Contractor can demonstrate that the Lane Closure is necessary to complete Maintenance Services and complies with the restrictions set forth in Table 6-1 (for which the maximum number of lanes closed at any time during the Lane Closure does not exceed the "maximum lanes permitted for closure" for the applicable roadway type and time period). TxDOT will approve additional Lane Closures only if DB Contractor can demonstrate that the Lane Closure is essential for the safe performance of Maintenance Services and will subject to an approval of a traffic control plan.

Lane Closures must be coordinated with adjacent projects. Where multiple requests for traffic control are received from the DB Contractor and Governmental Entities that would adversely affect Users if implemented simultaneously, TxDOT will give priority 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.

DB Contractor shall coordinate Lane Closures that may affect any roadways adjacent to, connecting with or crossing under or over the Project with TxDOT and Governmental Entities, to ensure that no conflicts occur.

The DB Contractor shall provide traffic control plans and advance notification of all Lane Closures as shown below:

- The traffic control plan for a Partial Lane Closure should be submitted to TxDOT for review no later than 10 days before implementation.
- The traffic control plan for a Full Lane Closure should be submitted for TxDOT approval no later than 14 days before implementation.

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 Lane Closure requirements in Section 6.2 to 6.5 supplement the above list of manuals and references for the Project.

6.2 Lane Closure Restrictions

Table 6-1 defines the restrictions applicable to Lane Closures for the Project. In addition,

- DB 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 thirty (30) consecutive days or more than forty-five (45) days in a ninety (90) day period.
- DB Contractor shall not close two consecutive entrance ramps or two consecutive exit ramps at the same time.

Table 6-1: Lane Closure Restrictions

Roadway	**Roadway Lanes** (one direction)	**Lane Closure Types (**Maximum Lanes Permitted for Closure **)***		
		Peak Periods Monday-Friday (5:00 a.m. - 9:00 p.m.) and Major Events and Holidays	Off-Peak Periods Monday-Friday (9:00 p.m. to 10:30 p.m.) and Saturday	Lowest Volume Periods Monday-Friday (10:30 p.m. - 5:00 a.m.) and Sunday
Mainlanes	3 (if applicable)	None	Type 3	Type 4
	2	None	Type 2	Type 3
	1	None	Type 1	Type 2
Ramps	3 (if applicable)	None	Type 4	Type 5
	2	None	Type 3	Type 4
	1	None	Type 2	Type 3
Direct Connectors (if applicable)	3 (if applicable)	None	Type 4	Type 5
	2	None	Type 3	Type 4
	1	None	Type 2	Type 3
Frontage Roads	3 (if applicable)	None	Type 4	Type 5
	2	None	Type 3	Type 4
	1	None	Type 2	Type 3
Cross Streets	3 (if applicable)	None	Type 4	Type 5
	2	None	Type 3	Type 4
	1	None	Type 2	Type 3

* Lane Closure Types (Type 1 with least lanes closed and Type 5 with most lanes closed):

- Type 1: Close 1 shoulder only
- Type 2: Close 1 travel lane or 1 shoulder but not both
- Type 3: Close 1 travel lane or 1 shoulder or 1 travel and 1 shoulder
- Type 4: Close 2 travel lanes or 2 travel lanes and 1 shoulder
- Type 5: Close 3 travel lanes or 3 travel lanes and 1 shoulder

6.3 Emergency Closures

Additionally, the following events are considered Emergency Closures and will not be subject to Lane Closure restrictions in Table 6-1.

- a Lane Closure due to a TxDOT-Directed Change;
- a Lane Closure specified, caused or ordered by, and continuing only for so long as required by, TxDOT or any Governmental Entity, or a Utility Owner performing work under a permit issued by TxDOT;
- a Lane Closure required due to a Force Majeure Event; or
- a Lane Closure required solely for the hazard mitigation of a Category 1 Defect and persisting for no longer than the Defect Remedy Period.

For each event set forth above, the Lane Closure will be an Emergency Closure only if DB Contractor is using commercially reasonable efforts to: (i) mitigate the impact of such event, (ii) reopen the affected segment to traffic, and (iii) minimize the impact of DB Contractor's activities and the Lane Closure to traffic flow.

6.4 Detour Usage

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

DB 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 and changeable message signs to divert traffic around the Project. Motorist guidance to and along detour routes shall be provided, together with regional guidance.

6.5 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)

B. Major Event Restrictions

DB Contractor shall coordinate with TxDOT regarding Lane Closures during regional events. TxDOT has the right to lengthen, shorten, or otherwise modify these restrictions as actual traffic conditions may warrant. TxDOT also has the right to modify the list of major events as they are added, rescheduled or warranted.

ATTACHMENT 7: FUNCTION CODES AND DESCRIPTIONS

Code Chart 12 - Segment 78
Function Codes and Descriptions by FIMS Segments

Function Code	Description
	BASE AND SUBGRADE (TRAVEL LANE AND SHOULDERS)
110+	**Base Removal and Replacement (UM = CY)**
	The removal of base and/or subgrade materials from distressed or failed areas and replacement with suitable material. (Includes resurfacing.)
120+	**In Place Repair (UM = CY)**
	In place repair of existing base and/or subgrade material (Includes resurfacing, may or may not include additional stabilizing material).
135+	**Install and/or Maintain Under-drains (UM=EA)**
	Installation, repair and maintenance of all types of under-drains.
145+	**Unpaved Road Maintenance (UM = SY)**
	Repair of gravel or dirt roads, including blading, additon of base, etc.
	ASPHALTIC SURFACES (Travel Lane and Shoulders)
211+	**Leveling or Overlay with Laydown Machine (UM = SY)**
	The application of asphaltic tack coat and placing asphaltic concrete material to improve the ride qualities or level up low spots.
212+	**Leveling or Overlay with Maintainer (UM = SY)**
	The application of asphaltic tack coat and placing layers of asphaltic concrete material
213+	**Leveling by Hand (UM = SY)**
	The application of asphaltic tack coat and placing layers of asphaltic concrete material. This includes repair of pavement areas greater than one square yard.
214+	**Leveling or Overlay with Dragbox (UM=SY)**
	The application of asphaltic tack coat and placing layers of asphaltic concrete material.
225+	**Sealing Cracks (UM = LM)**
	Cleaning, filling and sealing cracks in the pavement using asphaltic rubber or other sealants.
231+	**Seal Coat (UM = SY)**
	Application of a single layer of asphaltic material followed by the application of a single layer of aggregate over the full width of the travel lane or shoulder (greater than 6' in width) for a minimum of 1000 continuous feet.
232+	**Strip or Spot Seal Coat (UM = SY)**
	Application of a single layer of asphaltic material followed by the application of a single layer of aggregate over areas that are not full width of the travel lane or shoulder (6' or less in width), or the full width of the lane or shoulder but less than 1000 feet in length.
233+	**Fog Seal (UM = SY)**
	Retain aggregate, enliven surface and/or seal hairline cracks by the application of a thin layer of asphaltic material.
235+	**Microsurfacing (UM = SY)**
	The application of a polymer modified high performance emulsion coupled with fine graded aggregate, mineral fillers and special additives in a slurry, to fill ruts or to provide a new wearing surface. (Caution: Should not be used to seal cracked pavements.)
241+	**Pothole Repair (UM = EA)**
	The repair of holes with a area less than or equal to one square yard. Charge to Function 213 if greater than one square yard.
245+	**Adding or Widening Pavement (UM = SY)**
	Widening travel lanes up to two (2) feet or adding shoulders up to four (4) feet to correct a maintenance problem (includes subgrade, base and surfacing, or adding turn lanes to improve safety).
252+	**Milling or Planing (UM = SY)**
	The removal of the pavement surface by planing or milling.
253+	**Spot Milling (UM=SY)**
	The removal of pavement surface by milling using a small milling machine (drum width is 4 feet or less).
265+	**Treat Bleeding Pavement (UM = SY)**

Code Chart 12 - Segment 78
Function Codes and Descriptions by FIMS Segments

Function Code	Description
	Treatment of excess asphalt on the pavement surface.
270+	**Edge Repair (UM = LF)**
	Repair of raveled, low or damaged pavement edges with aspaltic materials.
	CONCRETE PAVEMENT (Travel Lanes and Shoulders)
315	**Slab Stabilization/Jacking (UM=SY)**
	Leveling concrete pavement through the use of hydraulically placed material.
325+	**Cleaning and Sealing Joints and Cracks (UM = LF)**
	Cleaning, filling and sealing of joints in concrete pavement.
330	**Blowouts and Stress Relief (UM=SY)**
	Repair of blowouts and cutting pavement for stress relief.
345+	**Repair Spalling (UM = SY)**
	Clean and fill spalled areas (not full depth of concrete slab).
360+	**Full Depth Removal and Replacement (UM = SY)**
	The removal and replacement of failed areas for the full depth of the concrete slab.
	APPROACHES AND MISCELLANEOUS SHOULDER MAINTENANCE
455+	**Reshaping unpaved shoulders. (UM = LF)**
	Restore sod or flexible base shoulders to original sections. Includes reshaping frontslope to eliminate low pavement edges along a paved shoulder.
480+	**Side Road Approaches, Crossover and Turnouts (UM = SY)**
	The installation or maintenance of side road approaches, crossovers, historical markers, mailbox and litter barrel turnouts, etc.
488+	**Concrete Appurtenance Installation and Maintenance (UM=SY)**
	The maintenance, installation, or removal of concrete appurtenances which include curbs and/or gutters, raised medians, sidewalks and sound barriers.
495+	**Parking Area Maintenance (UM = SY)**
	Repair of subgrade, base or surface of areas including parking lots, park and ride lots and camping pads.
	ROADSIDE AND OTHER
511+	**Mowing (UM = AC)**
	Mowing of the right-of-way
513+	**Spot Mowing (UM = HR)**
	Spot mowing of the right-of-way.
520+	**Illegal Dumpsite Removal and Disposal (UM=CY)**
	Removal and dispoal of debris discarded or deposited in an unauthorized area in the right of way, such as under a bridge, overpass, culvert, etc.
521+	**Litter (UM = AC)**
	Removal and disposal of litter from the entire right-of-way, excluding paved areas, picnic and rest areas.
522+	**Street Sweeping (UM = MI)**
	Routine street sweeping. Units are the actual miles swept regardless of the centerline miles.
523+	**Debris (UM=MI)**
	Routine patrolling to remove and dispose of debris, including dead animals.
524+	**Spot Litter (UM = AC)**
	Spot removal and disposal of litter, including dead animals, from the right-of-way.
525	**Adopt-A-Highway (UM = HR)**
	Installation of posts and signs, materials furnished to groups, personnel and equipment used to assist in removal and disposal of collected litter.

Code Chart 12 - Segment 78
Function Codes and Descriptions by FIMS Segments

Function Code	Description
527	**Hand Sweeping (UM=SY)** Hand sweeping of riprap, islands, medians, curb & gutter, bullpens, driveways, etc.
530+	**Removal of Graffiti (UM= SF)** Removal of graffiti from fixtures, wingwalls, bridge structures, etc. Not to be used in lieu of Function 733, Maintain Vandalized Signs, Function 731 or 732, Sign Maintenance
531+	**Picnic Area Maintenance (Without Restrooms) (UM = HR)** Work performed in maintaining picnic areas, including mowing, litter pickup, emptying litter barrels, paved areas, maintenance of plantings, graffiti removal, etc.
532+	**Rest Area Facility Maintenance (UM = HR)** Work performed in janitorial and grounds maintenance, including mowing, litter pickup, emptying litter barrels, maintenance of plantings, cleaning restrooms, cleaning arbors, graffiti removal, minor painting, etc. This item shall also include special maintenance required to repair buildings, repair/replace arbors, picnic tables, fixtures, litter barrels, paved areas, etc. (including maintenance of treatment plants and dump stations).
533+	**Rest Area Facility Maintenance through Regional Contracts (UM = HR)** (Maintenance Division Use Only)
535	**Maintenance of Specialty Facilities (UM = HR)** All maintenance costs to speciality facilities including border safety inspection facilities (BSIFs), toll booths, service plazas, fences and associated appurtenances. The highway class code will determine the type of facility.
536	**Toll Road System Operations** All operating costs for all system toll roads. Maintenance costs should be charged to the appropriate segment 78 function.
538	**Pest Control (UM=AC)** Activities related to the use of predatory animal and insect control whether in turf and ornamental sites or on the ROW.
540	**Hand Vegetation Control (UM = HR)** Hand cleaning vegetation out of islands, medians, riprap, drainage channels, etc. by chemical, manual or mechanical means.
541+	**Chemical Vegetation Control, Edges (UM = AC)** Complete control of vegetation encroaching in pavement edges, shoulders, medians, islands and curbs with herbicides.
542+	**Chemical Vegetation Control, Overspray (UM = AC)** Control of undesirable vegetation growth by overspraying the right-of-way including fixtures (i.e. signs, delineator, guardrails, culverts, etc) with herbicides.
544+	**Chemical Vegetation Control, Ropewick (UM = AC)** Control of tall vegetation (i.e. Johnson grass) in the right of way with wick applicator.
545	**Chemical Vegatation Control, Basal Application (UM = HR)** Control of undesirable brush species in the right of way with a low volume basal bark application.
548+	**Seeding, Sodding, Hydromulching and Blanketing (UM = SY)** Seeding, sodding, hydromulching and/or placing soil retention blankets.
551	**Landscaping (UM=AC)** The installation or maintenance of landscape plantings and their facilities including planter walls, border, sprinkler systems, etc. (excluding picnic and rest areas).
552	**Tree and Brush Control (UM=CL)** The trimming, pruning and disposal of shrubs, vines, and trees (excluding picnic and rest areas).
558	**Storm Water Pollution Protection (UM=LF)** Maintenance or Installation of storm water pollution protection plan (SW3P) in accordance with EPA regulation on projects designated by Area Engineers
560+	**Riprap Installation and Maintenance (UM=SY)**

Code Chart 12 - Segment 78
Function Codes and Descriptions by FIMS Segments

Function Code	Description
	Installation and maintenance of ditch liners, retards, down drains, riprap, flumes, concrete mowing strips, gabions, retaining walls and other erosion protection.
561+	**Ditch Maintenance (UM = CY)**
	Removal and hauling of silt, drift and/or filling eroded areas. Not to be used for work at culverts or bridges. (See Functions 570 and 620.)
562+	**Reshaping Ditches (UM = LF)**
	Reshaping ditches using maintainer and/or gradall, etc. Not to be used for work at culverts and bridges. (See Functions 570 and 620.)
563+	**Slope Repair/Stabilization (UM = SY)**
	Slope repair and/or stabilization. Not to be used for work at culverts and bridges. (See Functions 570 or 620)
570	**Culvert and Storm Drain Maintenance (UM=EA)**
	The 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).
571	**Storm Water Pump Station Maintenance (UM=EA)**
	Repair and maintenance of motors, pumps, generators, wet wells, dry wells, debris screening baskets, buildings, etc., including costs of utility services.
580+	**Removal of Illegal Signs on ROW (Temporary, no special handling required.) (UM =EA)**
	Removal of illegal signs on right-of-way, including disposal and written notices to owners.
581+	**Removal of Illegal Signs on ROW (Permanent, special handling required.) (UM = EA)**
	Removal of illegal signs on right-of-way, including disposal and written notices to owners.
582	**Removal of Encroachments, Other than Signs (UM = HR)**
	Removal of illegal encroachments (other than signs) on the ROW, including disposal and written notice to owners.
585+	**Driveway Installation / Removal and Maintenance (UM = SY)**
	See access management policy
591	**Utilities and Driveway Inspection (UM = HR)**
593+	**Cable Median Barrier (UM=LF)**
	Installation and maintenance of high tension cable median barrier systems, including the cable, posts and other end treatments.
594+	**Concrete Barrier (UM = LF)**
	Installation, removal and maintenance of concrete barrier, including attached headlight barrier fence.
595+	**Guard Fence (UM = LF)**
	Installation and maintenance of guard fence, M.B.G.F. turn down ends, median barrier and attached headlight barrier fence, including posts, metal beams, etc. (End treatment other than turn down ends see Function 596)
596+	**Guardrail End Treatment Systems (UM=EA)**
	Installation and maintenance of guardrail end treatments systems. (For attenuators other than GETS, see function 725)
597+	**Mailboxes, Installation and Maintenance (UM = EA)**
598	**Boat Ramp Maintenance (UM = HR)**
	Work performed in maintaining boat ramps including mowing, litter pick, emptying litter barrels, maintenance of paved and unpaved areas, etc..
	BRIDGES AND BRIDGE CHANNELS
610+	**Bridges, Movable Span (UM = HR)**
	Operation, routine maintenance and inspection of movable span bridges, (Swing barge, lift or turn). Restricted use: Beaumont, Houston, Pharr, and Yoakum District only.
611+	**Bridges, Portable (UM=HR)**

Code Chart 12 - Segment 78
Function Codes and Descriptions by FIMS Segments

Function Code	Description
	Installation, removal, maintenance and inspection of portable bridges.
620+	**Bridge Channel Maintenance (UM=CY)**
	Removing of silt and drift, filling eroded areas, maintenance and repair of fenders, jetties, dikes, riprap and channel maintenance (including easements) except under bridges.
628+	**Bridges, Rail (UM = LF)**
	Maintenance of bridge rail, posts and post connections to deck, including painting.
645+	**Bridges, Joint Maintenance (UM =LF)**
	Repair of bridge joints including cleaning and sealing.
646+	**Bridges, Joint Replacement (UM =LF)**
	Replacement of bridge joints.
650+	**Bridges, Deck (UM = SF)**
	Repair to bridge decks.
660+	**Bridges, Superstructure, Concrete (UM=SF)**
	Routine maintenance of concrete components of the bridge superstructure.
665+	**Bridges, Superstructure, Steel (UM=SF)**
	Routine maintenance of the steel components of the bridge superstructure, including bearings, concrete diaphragms, and beams.
670+	**Bridges, Substructure, Concrete (UM=SF)**
	Routine maintenance of the concrete components of the bridge substructure including caps, columns, abutments, wingwalls, piling, etc.
675+	**Bridges, Substructure, Steel and Timber (UM=SF)**
	Routine maintenance of the steel or timber components of the bridge substructure including caps, abutments, pile extensions, etc.
680+	**Bridges, Painting (UM=SF)**
	Cleaning and painting of steel superstructure or steel substructure.
690+	**Bridges, Mechanical and Electrical (UM = HR)**
	Maintenance and repair of the electrical and mechanical components of a bridge
695+	**Fender Systems (UM=HR)**
	Installation and maintenance of fender systems.
	TRAFFIC OPERATIONS
711+	**Paint and Bead Striping (UM=LF)**
	Striping or re-striping lane lines, center lines and edge lines using paint and beads.
	Function 711 should be used for all activities associated with new and retrace striping. Work items could include removal of old stripe, preparing and operating striping equipment and support vehicles such as the supply truck and shadow vehicle.
712+	**High Performance Striping (UM=LF)**
	Striping or re-striping lanes lines, centerlines and edge lines using thermoplastic or other high performance materials.
	Function 712 should be used for all activities associated with new and retrace thermoplastic striping. Work items might include removal of old stripe and installation of sealer. Work items will also include personnel and equipment time charges associated with inspection of contract striping work.
713	**Specialty Markings (UM=EA)**
	Medians, islands and other pavement markings not covered under functions 711 or 712. (Including make-ready operations for all stripe alignment, such as spotting, tabs, temporary tape, etc.)
715	**Removing Pavement Striping (UM=LF)**

Code Chart 12 - Segment 78
Function Codes and Descriptions by FIMS Segments

Function Code	Description
	Function 715 should be used for all activities associated with the removal or obliteration of pavement stripes when the stripe is not going to be replaced. Work items could include grinding, burning, scraping or covering existing pavement stripes by applying an asphaltic material.
716	**Performance-Based Contract Distribution (UM=LM)** These contracts are set up to pay the contractor a fixed price on a periodic basis regardless of the type of work performed and/or the amount of work performed.
721+	**Delineators (UM = EA)** Installation, maintenance and/or replacement of damaged or missing delineators and/or posts. This function shall include straightening of posts. Measured by each post and each reflector replaced.
724	**Roadway Access Control (UM=LF)** Installation and maintenance of barriers other than those covered by Functions 594 and 595, designed to control access on highways, including post and cable fences, ROW fences and cattle guards.
725	**Vehicle Attenuators (UM=EA)** Installation and maintenance of vehicle attentuator, crash cushions, etc. (Includes end treatment devices on guard fence).
731+	**Install or Reinstall Small Signs (UM=EA)** The installation of signs (less than 4' x 4'). Includes the installation of an old sign on a new post or the installation of a new sign on an existing post. Not to be used in lieu of Function 733, Maintain Vandalized Signs, Installation of Large Signs Function 732, or Adopt-A-Highway Function 525.
732+	**Install or Reinstall Large Signs (UM=EA)** The installation of signs (equal to or greater than 4' x 4'). Includes the installation of an old sign on a new post or the installation of a new sign on an existing post. Not to be used in lieu of Function 733, Maintain Vandalized Signs, Installation of Small Signs Function 731, or Adopt-A-Highway Function 525.
733+	**Vandalized Signs (UM = EA)** Replacement or repair of signs damaged by vandalism.
738	**Installation and Maintenance of Flashing Beacons (UM=EA)** Installation and maintenance of overhead flashing beacons, pedestal or sign mounted flashing beacons, etc.
742	**Illumination (UM=EA)** Installation, maintenance and operation of illumination systems including continuous lighting, safety lighting, and sign illumination.
743	**Installation and Maintenance of Isolated Traffic Signals (UM=EA)** Maintenance and operation of isolated traffic signals, diamond interchange signals, etc.
745	**Traffic Management System (UM=CM)** 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).
750+	**Installation & Removal of Pavement Markers (UM=EA)** Installation and/or removal of traffic buttons or reflective pavement markers.
790	**Miscellaneous Traffic Services (UM = HR)** All traffic surveys (including all motor vehicle and pedestrian counts at intersections) and directly related locations and other traffic services not covered elsewhere. **NOTE: Traffic control performed during the pavement evaluation process should be charge to Segment 71, Detail 3214, and the appropriation function code (600 thru 690).**
799	**Traffic Control Plan (UM = HR)** The placement, maintenance and removal of barricades, signs, cones, lights and other such devices needed to handle traffic during the maintenance operation.
	EXTRAORDINARY MAINTENANCE
811	**Assistance to Traffic (Snow and Ice) (UM = HR)**

Code Chart 12 - Segment 78
Function Codes and Descriptions by FIMS Segments

Function Code	Description
	Provide assistance to traffic caused by snow and ice conditions on all highways. (includes sanding, deicing, clearing, removal, etc.)
830	**Hazardous Material Cleanup, Spill or Leaking Storage Tanks (UM = HR)**
	Investigation, testing, cleanup, removal, disposal, and restoration work associated with a spill or leaking storage tank.
831	**Hazardous Material Cleanup (Abandoned Materials) (UM = HR)**
	Investigation, testing, cleanup, removal, disposal, and restoration work associated with abandoned hazardous materials of unknown ownership