

**Texas Department of Transportation  
Book 2 – Technical Provisions**

**Grand Parkway Project**

**Attachment 21-1  
Toll Systems Responsibility Matrix**

## ATTACHMENT 21-1

Texas Department of Transportation

Toll Systems Responsibility Matrix

LEGEND		Work Description		
Primary Responsibility	A	1	2	3
Support Responsibility	B	Design	Procure	Install and/or Construct
Coordination Responsibility Only	C			
No Responsibility	D			

Element/Task/Component/ Sub-system	TxDOT (T)			Developer (D)			System Integrator (SI)			Comments Other Responsibility/Information
	1	2	3	1	2	3	1	2	3	
<b>FACILITIES</b>										
Toll Plaza Layout	A	D	C	D	C	B	B	A	A	SI to provide system design spec. T to incorporate into Project Design. Plaza locations provided in plans.
Metered power service to roadside equipment cabinet	A	D	C	D	A	A	B	D	C	SI to provide power requirements and special requirement for construction of utilities near toll collection point.
Complete backup power systems: generators, automatic transfer switches, and fuel tanks	C	D	C	D	D	D	A	A	A	
Foundation and conduits for backup power systems	C	D	C	D	D	C	A	A	A	SI to provide foundations and conduits
Uninterruptible Power Supplies	C	D	C	D	D	C	A	A	A	
Lightning Protection & Grounding	C	D	C	D	D	C	A	A	A	
Duct Bank	C	D	C	A	A	A	B	D	C	D to install conduit Duct Bank complete with pull strings
Fiber Optic cables in Duct Bank for Toll Systems	C	D	C	A	A	A	B	D	C	
Data/Communication service from duct bank to roadside equipment cabinet	C	D	C	C	A	A	A	D	C	SI to install from duct bank to roadside equipment cabinet
Data/Communication wire/fiber from roadside equipment cabinet to toll systems equipment	A	D	C	D	C	D	A	A	A	SI to install from roadside equipment cabinet to toll systems equipment.
Pavement, using the special HOU Standard, and conduit stub outs for pavement sensors	A	D	C	D	A	A	B	D	C	SI to provide any special requirements for pavement design
Pavement sensors	C	D	C	D	C	C	A	A	A	SI to saw cut and install pavement sensors

# ATTACHMENT 21-1

Texas Department of Transportation

Toll Systems Responsibility Matrix

LEGEND		Work Description		
Primary Responsibility	A	1	2	3
Support Responsibility	B	Design	Procure	Install and/or Construct
Coordination Responsibility Only	C			
No Responsibility	D			

Element/Task/Component/ Sub-system	TxDOT (T)			Developer (D)			System Integrator (SI)			Comments Other Responsibility/Information
	1	2	3	1	2	3	1	2	3	
<b>FACILITIES</b>										
Gantries including special framing for equipment mounts	A	D	C	D	D	D	B	A	A	SI to provide requirements for specific equipment mounts, conduits, J boxes, power and data wiring. T to incorporate into structural design
Toll Equipment mounts on Gantries	A	D	C	D	D	D	B	A	A	SI to install any required equipment mounts on gantries. SI to coordinate with T during the design phase to incorporate any required framing to support equipment mounts.
Roadside equipment cabinet slabs	C	D	C	D	D	D	A	A	A	SI to provide and install slab.
Roadside equipment cabinets (including HVAC systems)	C	D	C	D	D	D	A	A	A	SI to install complete
Lane Controller Hardware	C	D	C	D	D	D	A	A	A	D will provide and coordinate access to roadway for installations.
Communication Equipment	C	D	C	D	D	D	A	A	A	D will coordinate access to roadway for installations.
<b>ELECTRONIC TOLL COLLECTION SUB-SYSTEMS (ETC)</b>										
Installation/Electrical Design and Plans	A	D	C	D	D	D	B	A	A	
Automatic Vehicle Classification System and Image Capturing System (ICS) Hardware	C	D	C	D	D	D	A	A	A	
Roadside Equipment Cabinets	C	D	C	D	D	D	A	A	A	D will provide and coordinate access to roadway for installations.
Computer rack system, routers, hubs, switches, firewalls, VPN, modems, patch/distribution panels,	C	D	C	D	D	D	A	A	A	D will provide and coordinate access to roadway for installations.
Toll Plaza Host Computer	C	D	C	D	D	D	A	A	A	
Back-up Host Computer	C	D	C	D	D	D	A	A	A	
Support equipment at designated Customer Service Center	C	D	C	D	D	D	A	A	A	
Workstations/Printers	C	D	C	D	D	D	A	A	A	

# ATTACHMENT 21-1

Texas Department of Transportation

Toll Systems Responsibility Matrix

LEGEND		Work Description		
Primary Responsibility	A	1	2	3
Support Responsibility	B	Design	Procure	Install and/or Construct
Coordination Responsibility Only	C			
No Responsibility	D			

Element/Task/Component/ Sub-system	TxDOT (T)			Developer (D)			System Integrator (SI)			Comments Other Responsibility/Information
	1	2	3	1	2	3	1	2	3	
<b>FACILITIES</b>										
<b>ELECTRONIC TOLL COLLECTION SUB-SYSTEMS (ETC)</b>										
Commissioning and Operational Testing	C	D	C	D	D	C	A	A	A	
Lane controller software	C	D	C	D	D	D	A	A	A	
Plaza Computer Software	C	D	C	D	D	D	A	A	A	
Host Computer Software	C	D	C	D	D	D	A	A	A	
Toll Collection System Application Software	C	D	C	D	D	D	A	A	A	
Security Access System Software	C	D	C	D	D	D	A	A	A	
Maintenance Online Management System Software	C	D	C	D	D	D	A	A	A	
Factory Acceptance Test	C	D	C	D	D	C	A	A	A	D will prov and coord access to roadway for testing.
Project Acceptance Test	C	D	C	D	D	C	A	A	A	D will prov and coord access to roadway for testing.
Training	C	D	C	D	D	D	A	A	A	
Documentation	C	D	C	D	D	D	A	A	A	
FCC Licenses/Regulations as applies to toll systems	C	D	C	D	D	D	A	A	A	
Tolling location phone service	C	D	C	D	D	D	A	A	A	