

VOLUME 1, SECTION 9: TECHNICAL NARRATIVE TO AMPLIFY TECHNICAL NARRATIVE TABLES



9.0 TECHNICAL NARRATIVE TO AMPLIFY TECHNICAL NARRATIVE TABLES

In Section 9.0 each of the technical volume narrative requirements for mandatory services and optional services proposed by Level 3 is addressed. The original table number, ID number, and narrative requirement are provided for reference.

9.1 TECHNICAL NARRATIVE REQUIREMENTS FOR MANDATORY IP-BASED SERVICES

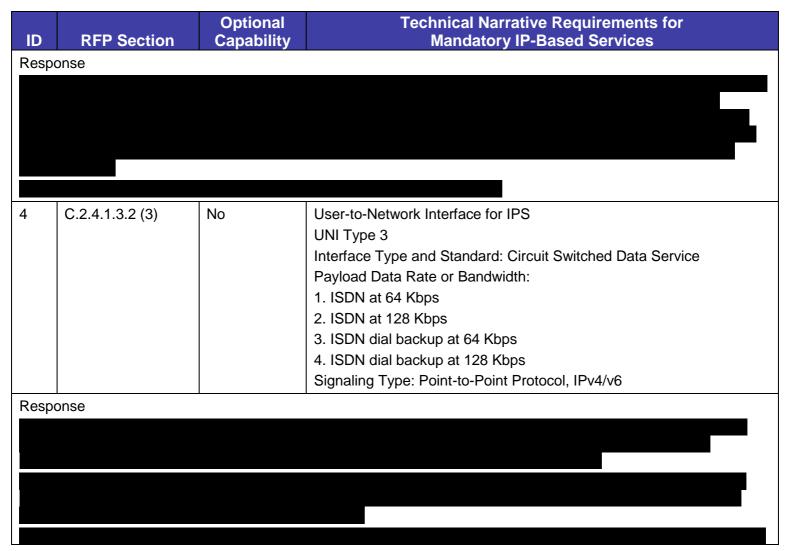
All items in this section are from Table J.9.1.1.3 (a).

ID	RFP Section	Optional Capability	Technical Narrative Requirements for Mandatory IP-Based Services		
1	C.2.4.1.1.4 (2)	No	The following IPS capabilities are mandatory unless marked optional: 2. The contractor shall support appropriate access services (such as dial-up VS analog data service, dial-up ISDN, DSL, cable high speed access, FRS, PLS, satellite, or ATMS) to connect customers' SDPs to the contractor's IPS.		
Level	Response Level 3 will support appropriate access services (such as dial-up VS analog data service, dial-up ISDN, DSL, cable high speed access, FRS, PLS, satellite, or ATMS) to connect customers' SDPs to the Level 3 IPS.				
2	C.2.4.1.3.2 (1)	No	User-to-Network Interface for IPS UNI Type 1 Interface/Access Type: Asynchronous Transfer Mode Service Network-Side Interface: 1. T1 2. T3		

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ID	RFP Section	Optional Capability	Technical Narrative Requirements for Mandatory IP-Based Services
			3. OC-3c
			4. OC-12c
			Protocol Type: IPv4/v6 over ATMS
Respo	onse		
3	C.2.4.1.3.2 (2)	No	User-to-Network Interface for IPS
	0.2. 1.1.0.2 (2)		UNI Type 2
			Interface Type and Standard: Cable High Speed Access
			Payload Data Rate or Bandwidth: 320 Kbps up to 10 Mbps
			Signaling Type: Point-to-Point Protocol, IPv4/v6
	L		0 0 71 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2

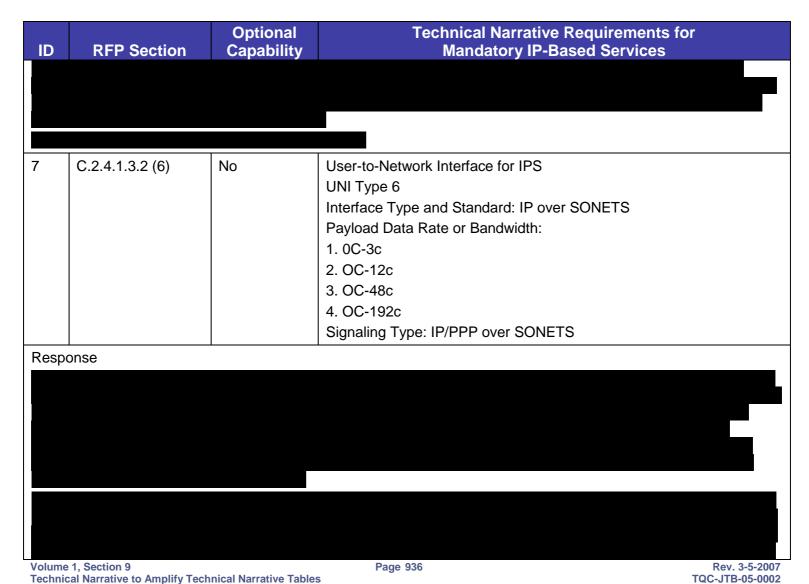


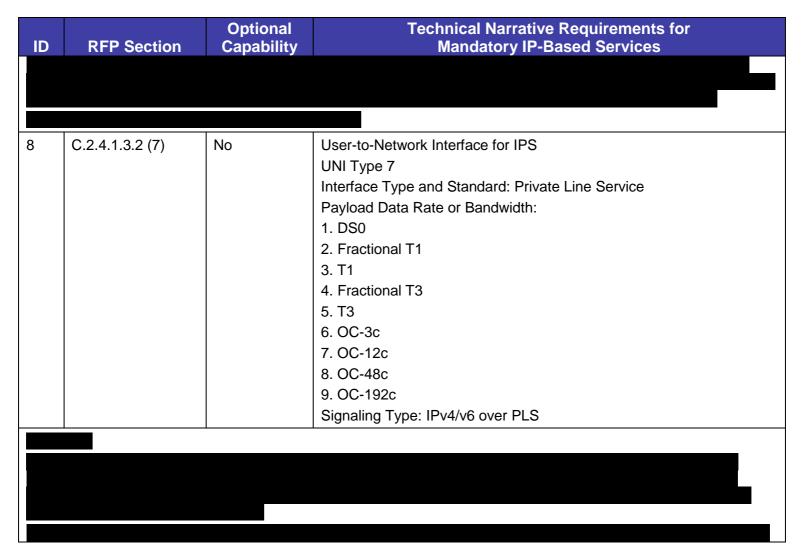
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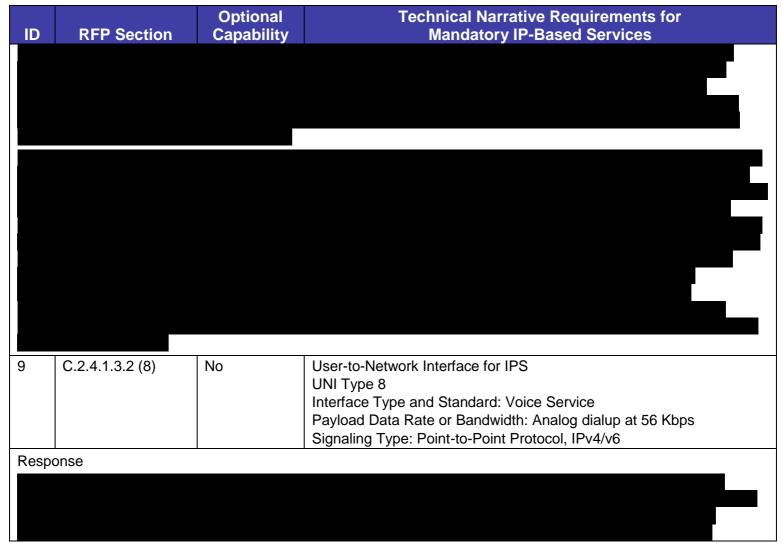
ID	RFP Section	Optional Capability	Technical Narrative Requirements for Mandatory IP-Based Services
5	C.2.4.1.3.2 (4)	No	User-to-Network Interface for IPS UNI Type 4 Interface Type and Standard: Ethernet Access Payload Data Rate or Bandwidth: 1. 1 Mbps up to 1 GbE (Gigabit Ethernet) 2. 10 GbE (Optional) Signaling Type: IPv4/v6 over Ethernet
Resp	onse		
6	C.2.4.1.3.2 (5)	No	User-to-Network Interface for IPS UNI Type 5 Interface Type and Standard: Frame Relay Service

ID	RFP Section	Optional Capability	Technical Narrative Requirements for Mandatory IP-Based Services
			Payload Data Rate or Bandwidth:
			1. 56 Kbps with 32 Kbps CIR
			2. Fractional T1
			(a) 128 Kbps with 64 Kbps CIR
			(b) 256 Kbps with 128 Kbps CIR
			(c) 384 Kbps with 128 Kbps CIR
			(d) 512 Kbps with 256 Kbps CIR
			(e) 768 Kbps with 384 Kbps CIR
			3. T1
			(a) 1.536 Mbps with 768 Kbps CIR
			(b) 1.536 Mbps with 1024 Kbps CIR
			4. Fractional T3
			(a) 3 Mbps
			(b) 6 Mbps
			(c) 12 Mbps
			(d) 24 Mbps
			(e) 45 Mbps
			5. T3
			Signaling Type: IPv4/v6 over FRS
Respo	nse		7 5 71
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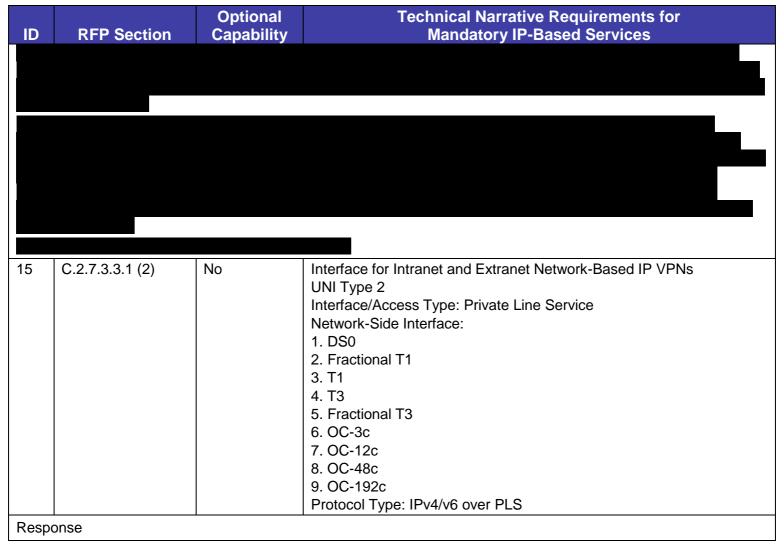




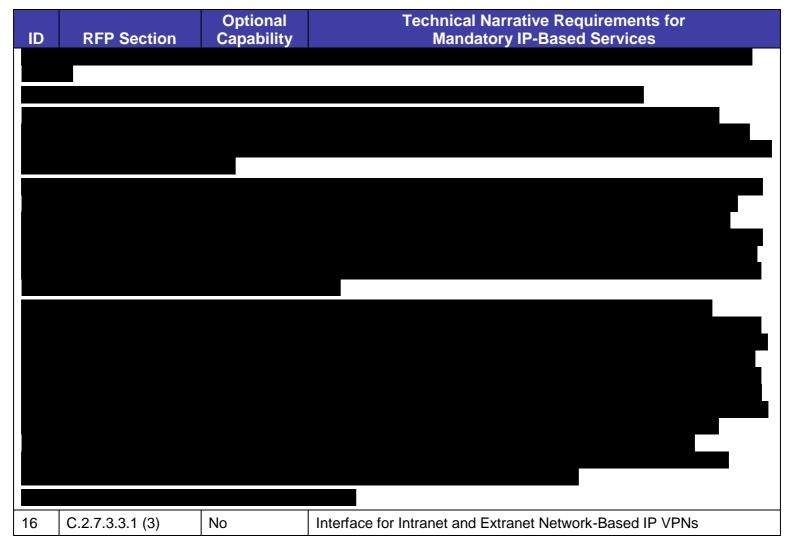
ID	RFP Section	Optional Capability	Technical Narrative Requirements for Mandatory IP-Based Services
10	C.2.4.1.3.2 (9)	No	User-to-Network Interface for IPS
			UNI Type 9
			Interface Type and Standard: DSL Service
			Payload Data Rate or Bandwidth: xDSL access at 1.5 to 6 Mbps
			Signaling Type: Point-to-Point Protocol, IPv4/v6
Resp	oonse		
11	C.2.4.1.3.2 (10)	No	User-to-Network Interface for IPS UNI Type 10
11	C.2.4.1.3.2 (10)	No	UNI Type 10
11	C.2.4.1.3.2 (10)	No	
	C.2.4.1.3.2 (10)	No	UNI Type 10 Interface Type and Standard: Multimode/Wireless LAN Service Payload Data Rate or Bandwidth: See Section C.2.14.3.3.1 MWLANS
Resp	ponse		UNI Type 10 Interface Type and Standard: Multimode/Wireless LAN Service Payload Data Rate or Bandwidth: See Section C.2.14.3.3.1 MWLANS

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ID	RFP Section	Optional Capability	Technical Narrative Requirements for Mandatory IP-Based Services
			UNI Type 11
			Interface Type and Standard: Wireless Access
			Payload Data Rate or Bandwidth: See Section C.2.16.2.3.3.1 Wireless Access Arrangement Interfaces
Resp	onse	·	
Not p	roposed. Level 3 will	not be able to offe	er this optional service as part of our Networx proposal.
13	C.2.4.1.3.2 (12)	No	User-to-Network Interface for IPS
	, ,		UNI Type 12
			Interface Type and Standard: Satellite Access
			Payload Data Rate or Bandwidth: See Section C.2.16.2.4.3.1 Satellite Access Arrangement Interfaces
Resp	onse		
Not p	roposed. Level 3 will	not be able to offe	er this optional service as part of our Networx proposal.
14	C.2.7.3.3.1 (1)	No	Interface for Intranet and Extranet Network-Based IP VPNs
			UNI Type 1
			Interface/Access Type: Ethernet Access
			Network-Side Interface:
			1. 1 Mbps up to 1 GbE (Gigabit Ethernet)
			2. 10 GbE (Optional)
			Protocol Type: IPv4/v6 over Ethernet
Resp	onse	•	



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ID	RFP Section	Optional Capability	Technical Narrative Requirements fo Mandatory IP-Based Services	r
		i i	UNI Type 3	
			Interface/Access Type: IP over SONETS	
			Network-Side Interface:	
			1. OC-3c	
			2. OC-12c	
			3. OC-48c	
			4. OC-192c	
			Protocol Type: IP/PPP over SONETS	
Respo	onse	1		
17	C.2.7.3.3.2 (1)	No	Interface for Remote Access Network-Based IP VPNs	

ID	RFP Section	Optional Capability	Technical Narrative Requirements for Mandatory IP-Based Services	
			UNI Type 1	
			Interface/Access Type: Voice Service	
			Network-Side Interface: Analog dialup at 56 kbps	
			Protocol Type: Point-to-Point Protocol, IPv4/v6	
Resp	onse			
18	C.2.7.3.3.2 (2)	No	Interface for Remote Access Network-Based IP VPNs	
			UNI Type 2	
			Interface/Access Type: DSL Service	
			Network-Side Interface: xDSL access at 1.5 to 6 Mbps	
			Protocol Type: Point-to-Point Protocol, IPv4/v6	
Resp	onse			
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ID	RFP Section	Optional Capability	Technical Narrative Requirements for Mandatory IP-Based Services
19	C.2.7.3.3.2 (3)	No	Interface for Remote Access Network-Based IP VPNs
			UNI Type 3
			Interface/Access Type: Cable high speed access
			Network-Side Interface: 320 Kbps up to 10 Mbps
			Protocol Type: Point-to-Point Protocol, IPv4/v6
Resp			
20	C.2.7.3.3.2 (4)	No	Interface for Remote Access Network-Based IP VPNs UNI Type 4 Interface/Access Type: Multimode/Wireless LAN Service
			Network-Side Interface: See Section C.2.14.3.3.1 MWLANS User-to- Network Interfaces
Resp	onse	•	•
•		not be able to offe	er this optional service as part of our Networx proposal.
•		not be able to offe	er this optional service as part of our Networx proposal.

ID	RFP Section	Optional Capability	Technical Narrative Requirements for Mandatory IP-Based Services
21	C.2.7.3.3.2 (5)	No	Interface for Remote Access Network-Based IP VPNs UNI Type 5 Interface/Access Type: Wireless Access
			Network-Side Interface: See Section C.2.16.2.3.3.1 Wireless Access Arrangement Interfaces
Resp Not P		not be able to offe	er this optional service as part of our Networx proposal.
22	C.2.7.3.3.2 (6)	No	Interface for Remote Access Network-Based IP VPNs UNI Type 6 Interface/Access Type: Satellite Access Network-Side Interface: See Section C.2.16.2.4.3.1 Satellite Access Arrangement Interfaces
Resp		not be able to offe	er this optional service as part of our Networx proposal.
23	C.2.7.3.3.2 (7)	No	Interface for Remote Access Network-Based IP VPNs UNI Type 7 Interface/Access Type: Circuit Switched Data Service Network-Side Interface: 1. ISDN at 64 Kbps 2. ISDN at 128 Kbps 3. ISDN dial backup at 64 Kbps 4. ISDN dial backup at 128 Kbps Protocol Type: Point-to-Point Protocol, IPv4/v6

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ID	RFP Section	Optional Capability	Technical Narrative Requirements for Mandatory IP-Based Services					
Resp	Response							
24	C.2.7.4.3.1 (1)	No	Interface for Intranet and Extranet Connectivity					
			UNI Type 1					
			Interface/Access Type: Asynchronous Transfer Mode Service					
			Network-Side Interface:					
			1. T1					
			2. T3					
			3. OC-3c					
			4. OC-12c					
			Protocol Type: IPv4/v6 over ATMS					
Resp	onse							
MTS	S will use our PB-VPN	N or IPS service a	s applicable. Please see the relevant section for UNI options.					
25	C.2.7.4.3.1 (2)	No	Interface for Intranet and Extranet Connectivity					

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ID	RFP Section	Optional Capability	Technical Narrative Requirements for Mandatory IP-Based Services
			UNI Type 2
			Interface/Access Type: Ethernet Access
			Network-Side Interface:
			1. 1 Mbps up to 1 GbE (Gigabit Ethernet)
			2. 10 GbE (Optional)
			Protocol Type: IPv4/v6 over Ethernet
Respo	onse		
MTSS	will use our PB-VPN	or IPS service as	s applicable. Please see the relevant section for UNI options.
26	C.2.7.4.3.1 (3)	No	Interface for Intranet and Extranet Connectivity
			UNI Type 3
			Interface/Access Type: Frame Relay Service
			Network-Side Interface:
			1. 56 Kbps with 32 Kbps CIR
			2. Fractional T1
			(a) 128 Kbps with 64 Kbps CIR
			(b) 256 Kbps with 128 Kbps CIR
			(c) 512 Kbps with 256 Kbps CIR
			(d) 768 Kbps with 384 Kbps CIR
			3. T1
			(a) 1.536 Mbps with 768 Kbps CIR
			(b) 1.536 Mbps with 1024 Kbps CIR
			4. Fractional T3
			5. T3

ID	RFP Section	Optional Capability	Technical Narrative Requirements for Mandatory IP-Based Services
			Protocol Type: IPv4/v6 over FRS
Resp	onse	•	
			Please see the relevant section for UNI options.
27	C.2.7.4.3.1 (4)	No	Interface for Intranet and Extranet Connectivity UNI Type 4 Interface/Access Type: IP over SONETS Network-Side Interface: 1. OC-3c 2. OC-12c 3. OC-48c 4. OC-192c Protocol Type: IP/PPP over SONETS
Resp	onse		. Please see the relevant section for UNI options.
28	C.2.7.4.3.1 (5)	No	Interface for Intranet and Extranet Connectivity UNI Type 5 Interface/Access Type: Private Line Service Network-Side Interface: 1. T1 2. Fractional T3 3. T3 4. OC-3c 5. OC-12c 6. OC-48c 7. OC-192c Protocol Type: IPv4/v6 over PLS

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ID	RFP Section	Optional Capability	Technical Narrative Requirements for Mandatory IP-Based Services
Resp	oonse		
			Please see the relevant section for UNI options.
29	C.2.7.4.3.2 (1)	No	Interface for Remote Access Connectivity UNI Type 1 Interface/Access Type: Cable high speed access Network-Side Interface: 320 kbps up to 10 Mbps Protocol Type: Point-to-Point Protocol, IPv4/v6
Resp	oonse	•	
			Please see the relevant section for UNI options.
30	C.2.7.4.3.2 (2)	No	Interface for Remote Access Connectivity UNI Type 2 Interface/Access Type: Circuit Switched Data Service Network-Side Interface: 1. ISDN at 64 Kbps 2. ISDN at 128 Kbps 3. ISDN dial backup at 64 Kbps 4. ISDN dial backup at 128 Kbps Protocol Type: Point-to-Point Protocol, IPv4/v6
Resp	oonse		
			Please see the relevant section for UNI options.
31	C.2.7.4.3.2 (3)	No	Interface for Remote Access Connectivity UNI Type 3 Interface/Access Type: Voice Service

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ID	RFP Section	Optional Capability	Technical Narrative Requirements for Mandatory IP-Based Services
		i i	Network-Side Interface: Analog dialup at 56 Kbps
			Protocol Type: Point-to-Point Protocol, IPv4/v6
Resp	onse	•	
			Please see the relevant section for UNI options.
32	C.2.7.4.3.2 (4)	No	Interface for Remote Access Connectivity UNI Type 4 Interface/Access Type: DSL Service Network-Side Interface: xDSL access at 1.5 to 6 Mbps Protocol Type: Point-to-Point Protocol, IPv4/v6
Resp	onse		1 Totocol Type. I dilit to I dilit I Totocol, II V-1/VO
Nesp	Olise		Please see the relevant section for UNI options.
33	C.2.7.4.3.2 (5)	No	Interface for Remote Access Connectivity UNI Type 5 Interface/Access Type: Multimode/Wireless LAN Service Network-Side Interface: See Section C.2.14.3.3.1 MWLANS User-to-Network Interfaces
Resp	onse		
			Please see the relevant section for UNI options.
34	C.2.7.4.3.2 (6)	No	Interface for Remote Access Connectivity UNI Type 6 Interface/Access Type: Wireless Access Network-Side Interface: See Section C.2.16.2.3.3.1 Wireless Access Arrangement Interfaces

ID	RFP Section	Optional Capability	Technical Narrative Requirements for Mandatory IP-Based Services
Resp	oonse		
			Please see the relevant section for UNI options.
35	C.2.7.4.3.2 (7)	No	Interface for Remote Access Connectivity
			UNI Type 7
			Interface/Access Type: Satellite Access
			Network-Side Interface: See Section C.2.16.2.4.3.1 Satellite Access Arrangement Interfaces
Resp	onse	•	
			Please see the relevant section for UNI options.
36	C.2.7.8.1.4 (2)	No	The following Voice over Internet Protocol Transport Service capabilities are mandatory:
			2. The contractor shall enable a routing prioritization scheme or class of service to distinguish between IP services.
Resp	onse	1	

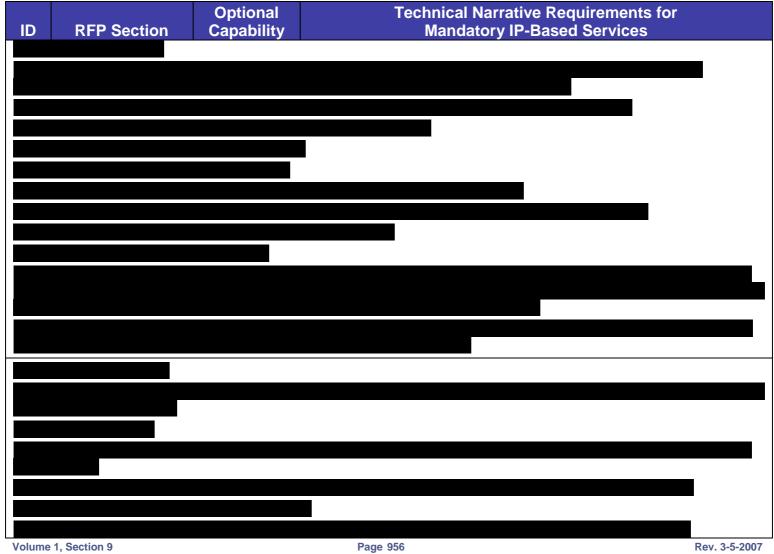
ID	RFP Section	Optional Capability	Technical Narrative Requirements for Mandatory IP-Based Services
37	C.2.7.8.1.4 (3)(d)	No	The following Voice over Internet Protocol Transport Service capabilities are mandatory: 3. The contractor shall provide the following minimum capabilities: d. The contractor's VOIPTS shall interoperate with private agency network dial plans.
Resp Level		vill interoperate v	vith private agency network dial plans.
38	C.2.7.8.1.4 (4)	No	The following Voice over Internet Protocol Transport Service capabilities are mandatory: The contractor shall provide gateways for interoperability with the contractors VOIPTS and the PSTN, or agency UNIs. Access Gateway
Resp	onse		
39	C.2.7.8.1.4 (4)	No	The following Voice over Internet Protocol Transport Service capabilities are mandatory: The contractor shall provide gateways for interoperability with the contractors VOIPTS and the PSTN, or agency UNIs.

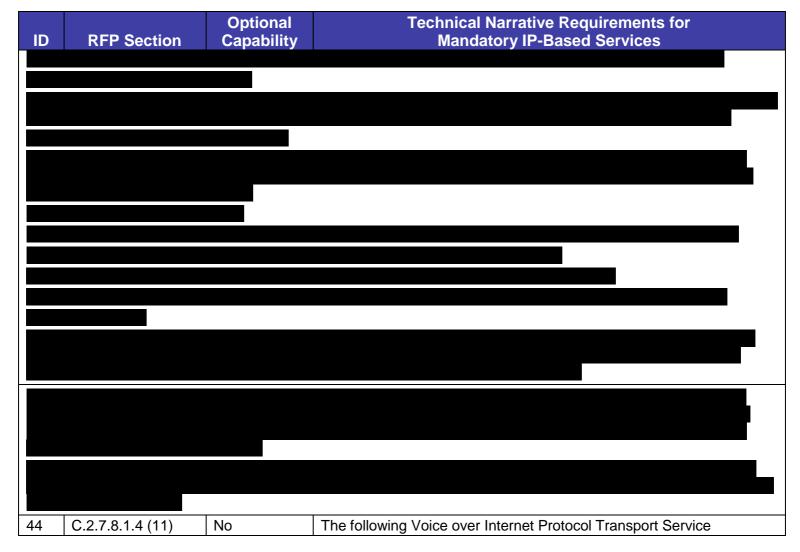
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ID	RFP Section	Optional Capability	Technical Narrative Requirements for Mandatory IP-Based Services
			Trunking Gateway
Resp	onse		
40	C.2.7.8.1.4 (4)	No	The following Voice over Internet Protocol Transport Service capabilities are mandatory:
			The contractor shall provide gateways for interoperability with the contractors VOIPTS and the PSTN, or agency UNIs.
			PSTN Gateway
Resp	onse		
41	C.2.7.8.1.4 (6)	No	The following Voice over Internet Protocol Transport Service capabilities are mandatory:
			6. The contractor shall verify with the agency that the agency firewall is compatible with this service.
Resp	onse	•	
42	C.2.7.8.1.4 (8)	No	The following Voice over Internet Protocol Transport Service capabilities are mandatory:
			8. The contractor shall state the minimum and optimal requirements for agency-owned voice equipment (such as PBX's or other voice

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ID	RFP Section	Optional Capability	Technical Narrative Requirements for Mandatory IP-Based Services
			systems) to be compatible and interoperate with the contractor's VOIPTS.
Resp	onse		
43	C.2.7.8.1.4 (11)	No	The following Voice over Internet Protocol Transport Service capabilities are mandatory:
			11. The contractor shall ensure security practices and safeguards are provided to minimize susceptibility to security issues and prevent unauthorized access.
Resp	onse		
			-





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ID	RFP Section	Optional Capability	Technical Narrative Requirements for Mandatory IP-Based Services
			capabilities are mandatory: 11. The contractor shall ensure security practices and policies are updated and audited regularly.
Respo			
Requ	irement addressed in	response to ID 4	3.
45	C.2.7.8.1.4 (11)(a)	No	The following Voice over Internet Protocol Transport Service capabilities are mandatory:
			a. Denial of service – The contractor shall provide safeguards to prevent hackers, worms, or viruses from denying legitimate VOIPTS users and subscribers from accessing VOIPTS.
Resp	onse		

ID	RFP Section	Optional Capability	Technical Narrative Requirements for Mandatory IP-Based Services
46	C.2.7.8.1.4 (11)(b)	No	The following Voice over Internet Protocol Transport Service capabilities are mandatory:
			b. Intrusion – The contractor shall provide safeguards to mitigate attempts to illegitimately use VOIPTS service.
•	oonse		
Requ	uirement addressed in	response to ID 4	5.
47	C.2.7.8.1.4 (11)(c)	No	The following Voice over Internet Protocol Transport Service capabilities are mandatory:
			c. Invasion of Privacy – The contractor shall ensure VOIPTS is private and that unauthorized third parties cannot eavesdrop or intercept VOIPTS communications.
Resp	oonse	•	
			that unauthorized third parties cannot eavesdrop or intercept VOIPTS
comi	munications by implem	enting	
			David 0.50

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ID	RFP Section	Optional Capability	Technical Narrative Requirements for Mandatory IP-Based Services
48	C.2.7.8.3.2 (1)	No	Voice Over Internet Protocol Transport Service Interfaces UNI Type 1 Interface Type: Ethernet port: RJ-45 (Std: IEEE 802.3) Payload Data Rate or Bandwidth: Up to 100 Mbps Signaling Type: SIP, H.323, MGCP
		3 (where comme	rcially available), and MGCP (where commercially available) for this
49	C.2.11.9.1.4 (1) (f)	No	The contractor shall provide network architecture design services. This shall include but is not limited to technical support to assist agencies with network architecture planning and design, solutions development, and the identification and evaluation of network solutions and technologies to meet agency business concepts and requirements
			f. Identification of cost and performance tradeoffs
Resp	onse		

ID	RFP Section	Optional Capability	Technical Narrative Requirements for Mandatory IP-Based Services
50	C.2.11.9.1.4 (1) (a)	No	The contractor shall provide network architecture design services. This shall include but is not limited to technical support to assist agencies with network architecture planning and design, solutions development, and the identification and evaluation of network solutions and technologies to meet agency business concepts and requirements. a. Requirements gathering, definition, and analysis
Resp	l onse		ar requiremente gamening, accumiant, and arranyone
T T T			
	1 -	Ī	
51	C.2.11.9.1.4 (1) (b)	No	The contractor shall provide network architecture design services. This shall include but is not limited to technical support to assist agencies with network architecture planning and design, solutions development, and the identification and evaluation of network solutions and technologies to meet agency business concepts and requirements
			b. Development of specifications
Resp	onse		

ID	RFP Section	Optional Capability	Technical Narrative Requirements for Mandatory IP-Based Services
52	C.2.11.9.1.4 (1) (c)	No	The contractor shall provide network architecture design services. This shall include but is not limited to technical support to assist agencies with network architecture planning and design, solutions development, and the identification and evaluation of network solutions and technologies to meet agency business concepts and requirements c. Development and evaluation of alternative technical approaches
variou and a	e requirements for eacus technical approaches appropriateness for the	es. Each approac customer needs	alyzed, the architecture and design solution will be scrutinized using ch will be considered for cost-effectiveness, applicability to the solution s. In addition, reliability, maintenance requirements and vendor support be best possible solution is created for the customer.
53	C.2.11.9.1.4 (1) (d)	No	The contractor shall provide network architecture design services. This shall include but is not limited to technical support to assist agencies with network architecture planning and design, solutions development, and the identification and evaluation of network solutions and technologies to meet agency business concepts and requirements
			'
			d. Computer aided design, modeling and/or simulation

ID	RFP Section	Optional Capability	Technical Narrative Requirements for Mandatory IP-Based Services	
54	C.2.11.9.1.4 (1) (e)	No	The contractor shall provide network architecture design services. This shall include but is not limited to technical support to assist agencies with network architecture planning and design, solutions development, and the identification and evaluation of network solutions and technologies to meet agency business concepts and requirements e. Network design recommendations	
Resp	onse			
55	C.2.11.9.1.4 (1) (g)	No	The contractor shall provide network architecture design services. This shall include but is not limited to technical support to assist agencies with network architecture planning and design, solutions development, and the identification and evaluation of network solutions and technologies to meet agency business concepts and requirements	
			g. Feasibility and capacity analysis.	
Response				

ID	RFP Section	Optional Capability	Technical Narrative Requirements for Mandatory IP-Based Services		
56	C.2.11.9.1.4 (1) (h.)	No	The contractor shall provide network architecture design services. This shall include but is not limited to technical support to assist agencies with network architecture planning and design, solutions development, and the identification and evaluation of network solutions and technologies to meet agency business concepts and requirements h. Preliminary planning		
Resp	onse	1			
57	C.2.11.9.1.4 (2)	No	2. The contractor shall provide network and related systems design validation. The contractor shall review and validate the design of existing or proposed networks, related services, and systems identified by the subscribing agency.		
Resp	Response				
58	C.2.11.9.1.4 (2)	No	2. The review shall include but is not limited to network performance,		

ID	RFP Section	Optional Capability	Technical Narrative Requirements for Mandatory IP-Based Services
			routing, IP addressing, numbering plans, physical/logical redundancy and diversity, network equipment, security, interoperability, and scalability.
Respo	onse		
59	C.2.11.9.1.4 (2) (a)	No	2. The review shall include but is not limited to network performance, routing, IP addressing, numbering plans, physical/logical redundancy and diversity, network equipment, security, interoperability, and scalability
			a. Assessment of network strengths, weaknesses, and vulnerabilities
Respo	onse		
60	C.2.11.9.1.4 (2) (b)	No	2. The review shall include but is not limited to network performance, routing, IP addressing, numbering plans, physical/logical redundancy and diversity, network equipment, security, interoperability, and scalability
			b. Capacity and traffic pattern analysis on current and projected traffic loads

ID	RFP Section	Optional Capability	Technical Narrative Requirements for Mandatory IP-Based Services		
61	C.2.11.9.1.4 (2) (c)	No	2. The review shall include but is not limited to network performance, routing, IP addressing, numbering plans, physical/logical redundancy and diversity, network equipment, security, interoperability, and scalability		
			c. Measurement and assessment of network performance and availability		
Resp	onse				
62	C.2.11.9.1.4 (2) (d)	No	2. The review shall include but is not limited to network performance, routing, IP addressing, numbering plans, physical/logical redundancy and diversity, network equipment, security, interoperability, and scalability		
			d. Recommendations for network optimization, simplification, or cost reduction.		
Resp	Response				
63	C.2.11.9.1.4 (2) (e)	No	2. The review shall include but is not limited to network performance, routing, IP addressing, numbering plans, physical/logical redundancy and diversity, network equipment, security, interoperability, and scalability		

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ID	RFP Section	Optional Capability	Technical Narrative Requirements for Mandatory IP-Based Services
			e. Identification of critical applications, protocols and vital data impacting the network
Respo	onse		
64	C.2.11.9.1.4 (2) (f)	No	2. The review shall include but is not limited to network performance, routing, IP addressing, numbering plans, physical/logical redundancy and diversity, network equipment, security, interoperability, and scalability
			f Network discovery including development of a topology map
Respo	onse		
65	C.2.11.9.1.4 (2) (g)	No	2. The review shall include but is not limited to network performance, routing, IP addressing, numbering plans, physical/logical redundancy and diversity, network equipment, security, interoperability, and scalability
			g. Development of strategies to improve reliability, availability, and security

Response

Included in the review will be the development of strategies to improve reliability, availability and security of the network. Information assurance and data availability are key factors to the successful operation of any network system. The Level 3 Team understands this requirement as it is critical to the successful deployment of services to

ID	RFP Section	Optional Capability	Technical Narrative Requirements for Mandatory IP-Based Services		
the c	the customer.				
66	C.2.11.9.1.4 (2) (h)	No	2. The review shall include but is not limited to network performance, routing, IP addressing, numbering plans, physical/logical redundancy and diversity, network equipment, security, interoperability, and scalability		
			h. Develop and validate current infrastructure drawings/schematics.		
Resp	onse				
Includ	ded in the review will b	e the developme	nt and validation of the current infrastructure drawings and schematics.		
67	C.2.11.9.1.4 (2) (i)	No	2. The review shall include but is not limited to network performance, routing, IP addressing, numbering plans, physical/logical redundancy and diversity, network equipment, security, interoperability, and scalability		
			i. Validate service interoperability with other networks and systems		
Resp	onse				
		1			
68	C.2.11.9.1.4 (3)	No	3. The contractor shall evaluate network technologies alternatives and approaches to meet agency requirements.		
Resp	onse				
The L	_evel 3 Team will evalu	uate network tech	nnologies, alternatives and approaches to meet agency requirements.		
69	C.2.11.9.1.4 (4)	No	4. The contractor shall perform modeling and simulation of applications and network services prior to implementation in a production environment.		

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ID	RFP Section	Optional Capability	Technical Narrative Requirements for Mandatory IP-Based Services		
Resp	onse				
simul	ate the real world.	Typically this is	s done in a laboratory environment on a test network designed to		
70	C.2.11.9.1.4 (5)	No	5. The contractor shall ensure rigorous and thorough testing is performed under a controlled test bed environment or the contractor's production network, according to subscribing agency's needs, to verify and evaluate the suitability and compatibility of new services.		
Response The Level 3 Team will ensure rigorous and thorough testing is performed under a controlled test bed environment the Level 3 Team's production network, according to subscribing agency's needs, to verify and evaluate the suitability and compatibility of new services.					
71	C.2.11.9.1.4 (5)	No	5. The contractor shall validate and verify that the services and/or applications under test operate according to the agency's requirements and objectives.		
The l	Response The Level 3 Team will validate and verify that the services and/or applications under test operate according to the agency's requirements and objectives.				
72	C.2.11.9.1.4 (6) (a)	No	6. The contractor shall provide technical support to facilitate the transition of services into a sustainable pilot or production service that operates on the agencies networks.		
			a. Evaluation of the impact of new services upon agency networks		
Resp	onse				

ID	RFP Section	Optional Capability	Technical Narrative Requirements for Mandatory IP-Based Services		
73	C.2.11.9.1.4 (6) (b)	No	6. The contractor shall provide technical support to facilitate the transition of services into a sustainable pilot or production service that operates on the agencies networks.		
			b. Development of transition plans		
The L	Response The Level 3 Team will provide technical support to facilitate the transition of services into a sustainable pilot or production service that operates on the agencies networks including the development of transition plans.				
74	C.2.11.9.1.4 (6) (c)	No	6. The contractor shall provide technical support to facilitate the transition of services into a sustainable pilot or production service that operates on the agencies networks.c. Implementation support.		
Resp	Response				
	The Level 3 Team will provide technical support to facilitate the transition of services into a sustainable pilot or production service that operates on the agencies networks that includes implementation support.				