Work Orders:
The Process and Guidelines

The Work Order contract is a procurement vehicle established to assist the state in managing and determining its telecommunication needs and objectives. The contract is available to all state agencies through a seamless, streamlined process to aid in their mission objectives.

What is a Work Order?

A Work Order is an independent contract used to procure services and equipment in a broad area of telecommunication specialties such as data center, network, and radio communications.

What is the Work Order Process?

The Work Order process is an analytic overview of telecommunication needs and services to meet State of Alaska IT objectives.

A requesting agency may have numerous phases or projects that fall under one Work Order or a request that might encompass numerous years, but the majority of the Work Order Requests are focal approaches to a single project.

The agency will discuss their project objectives with the contractor (WWT) to determine the best approach and execution of the services and commodities needed. Details such as location, timeline, type of service (Time and Material or Fixed Fee), telecommunication requirements, special expertise and experience will be reviewed that will assist both parties in making a final decision for the project.

WWT will finalize the request and assess what type of special services and/or equipment will be required. Once the project's details and approach have been determined and the information is concluded, the Work Order Project Manager assigned will send the final write up to the requesting agency as a Work Order Draft.

The agency will review the draft to make certain all of the information contained is correct and in their best interest. After the state accepts the project approach and approves the draft, the Work Order Project Manager will assign it a title and Work Order number.

This information then gets circulated for signature approval via email to the project managers, resources, state IT Manager, fiscal officer and state Work Order Manager. Once all signatures have been obtained, the Work Order becomes a standalone contract and the project may now begin.

The Project at a quick glance

The agency describes the need of their project and the **contractor determines**

- ✓ If the request is compliant with the Work Order contract
- ✓ If resources are available to perform the services requested
- ✓ If there is a need for subcontractor personnel
- ✓ If there are any construction components required to complete the project, and
- ✓ What is the cost to the state

The following list details each telecommunication category and what services and commodities are available under the contract.

Category 1: Telecommunications Consultant Services

Provide telecommunication consulting and management services for the planning, cost benefit analysis, design, assessment of configuration and performance, development and implementation of large-scale telecommunications systems and processes including statewide telephone, teleconference, video conference, two-way radio, personal paging systems, broadcasting, multi-protocol data systems, network security, tele-management, and voice/call processing applications. These services may also include; the development, review, recommendation of policies and procedures as well as creating, maintaining, and monitoring project schedules for multiple staff members and agency personnel. Telecommunications Consultant Services shall be performed by personnel with substantial recent technical experience in communications and electronics theory, providing similar services for network/systems comparable to the State of Alaska.

Technologies and Services of Interest:
- Telecommunications Development/Architecture/Systematization
- Telecommunications Business Consulting such as Supply Chain, Staging/Kitting, Asset Management, Logistics/Warehousing, Asset/Life Cycle Management, Equipment Pre-Configuration, Equipment Imaging, Asset Tagging, Burn-In, Remote Access, Reporting, Billing, etc.
- IP Telephony Services (CISCO)

Category 2: Telecommunications Planning, Analysis & Design

Provide telecommunication services involving the planning, analysis, design, documentation, project leadership and installation and/or modification of a wide range of communications systems including; voice, video and data communications via radio, microwave, cable or satellite transmission. These are commonly described as local (LAN), municipal (MAN), and Wide Area Networks (WAN). These services require expertise regarding electromagnetic communications requirements and ability to recommend new methods or revise existing methods of communication to achieve greater economy, efficiency and to eliminate obsolescence. Services

shall be performed by personnel with recent experience in advanced telecommunications technologies and in applying innovative approaches for adapting complex communications principles and/or techniques to the unique circumstances of the Alaskan environment.

Technologies and Services of Interest:
- Cisco, Motorola, Harris and Alcatel Technologies
- Interoperability of TDM and WAN packet switching transport technologies

Category 3: Telephone Communications

Provide Cisco Certified Services for Cisco's Architecture for Voice, Video and Integrated Data (AVVID) Infrastructure **as referenced in Section 2.08**. Certifications to support Cisco's AVVID infrastructure is required. Extensive experience in deploying large scale AVVID installations is required to develop, deploy and support Cisco's Call managers, Unity Voice Mail Servers, IP Contact Centers, ICD Servers, IP IVR Servers, Gateways, Cisco ATA devices and Soft, Wireless & 7900 series IP Phones. Successful design and deployment of Cisco's Survivable Remote Site Telephony (SRST) is required in the AVVID environment to provide VoIP fail-over services. Since this environment is exclusively Cisco's AVVID infrastructure, it is required that Cisco CCNP, CCIE, and other certifications be held by the organization supporting this infrastructure to meet manufacturer support requirements. These vendor certifications include but are not limited to Cisco Gold Certification, IP Telephony Services Certification & Cisco Advanced Technology Provider – IPCC Express Certification.

Technologies and Services of Interest:
- Communications Interoperability – Cisco IPICS, P25, LTE, Satellite, etc.
- Bridging Technologies – Session Initiation Protocol (SIP), Cisco Unified Border Element (CUBE)

Category 4: Radio Communications

Provide technical services that include analysis, design, documentation, project leadership and implementation for two-way radio and broadcast systems. The State of Alaska uses the P25 standard for Trunked Land Mobile Radio Systems. This is a suite of North American digital radio communication standards for digital public safety radio communications. It is likely that LTE, another suite of standards, will slowly supplement P25 over time. Services shall be performed by personnel with recent experience in radio performing activities of increasing complexity.

Technologies and Services of Interest:
- Cisco, Motorola, Harris and Alcatel Technologies
- TIA 102-P25 and Trunked Mobile Systems
- Interoperability tools for these systems: Cisco IPICS, p25, LTE
- Broadcast Systems

Category 5: Data Communications

Provide technical services that include the analysis, design, documentation, troubleshooting, implementation and operation of data networks in a large Wide Area Network enterprise environment (WAN) as well as at a Local Area Network environment (LAN). Services shall be

performed by personnel with extensive technical background, data communications experience in TCP/IP, and routing analysis of; BGP, MPLS, EIGRP, RIP OSPF, HSRP and ATM protocols. Extensive experience in designing, implementing, and operating high-end enterprise networks is required. Experience must include implementing Cisco's Suite of routers and Layer 2 & 3 switches including but not limited to; 7500, 7200, 3600, 2600, 6500 & 4500 series equipment.

Extensive experience is required in order to design, develop, and deploy Quality of Service mechanisms such as; Classification of Traffic, Prioritization, Queuing, Traffic Shaping, and Compression Efficiencies such as G.711 & G.729. Experience is also required in deploying large scale enterprise Multi-Protocol networks that support Voice, Data & Video applications. Experience must include the successful design and implementation of these networks utilizing Cisco AVVID framework for networks.

Technologies and Services of Interest:
- Cisco Technologies
- Alaska Land Mobile Radio (ALMR) migration of circuit switched network to packet switched network
- Public Broadband
- Security Technologies: Physical, Network, Endpoint, Application, Management, Etc.
- Router/Switch configuration/BGP

Category 6: Data Center Solutions
Provide data network services that include planning, analysis, design, programming, documentation, installation, implementation, "trouble-shooting" and training related to LAN and/or WAN. Services shall be performed by personnel with recent experience performing network activities of increasing complexity. These include but are not limited to; Datacenter Networking, Cisco Unified Computing System (UCS), Private Cloud (w/Flex pod) Inc., NetApp, IBM, Dell, Virtualization (Server, VDI, Application), Citrix, VMware, Unified Compute, Storage Area Networks – NetApp, Storage Architectures – NetApp, Disaster Recovery, Datacenter plant facilities (environmentals).

Category 7: Local Area Network
Provide data network services that include planning, analysis, design, programming, documentation, installation, implementation, "trouble-shooting" and training related to local area networks and/or wide area networks. Services shall be performed by personnel with experience performing network activities of increasing complexity within the past twelve (12) months. Experience with multiple protocols, topologies, and architectures is preferred. Experience with applications, protocols, and appropriate certifications are desirable.

Technologies and Services of Interest:
- Facility Infrastructure ((EIA/TIA 942, Uptime Institute, BISCI etc.)
- Electrical design – power distribution inc. shore, generators, ups and other power components
- HVAC systems
- Seismic/ISO Base
- Physical Security – access control, camera & management systems

- Communication closet construction – main & intermediate distribution frame rooms
- Building systems & wiring: ANSI/NECA/BICSI 568-2006
- Fire Alarm and Suppression systems
- Systems Monitoring