

The GUIDE - Proposed Steps & Tools

The GUIDE Detail Section - Create a Public Development Authority

This section contains a proposed InterLocal Agreement between the City and County, a joint Ordinance establishing the Jefferson County Public Fiber Network Authority, a Charter and Bylaws for the new organization. These documents if approved, establish the JCPFN legal entity that can form the actual partnerships, execute contracts, apply and receive grant funding.

The GUIDE Detail Section - JCPFN Catalog of Network Elements

The JCPFN Catalog of Network Elements is the most important single tool for managing the creation and operation of the JCPFN. At the start, it is simply a blueprint or template for moving ahead--truly the GUIDE's centerpiece. As work commences on the project, the JCPFN Catalog of Network Elements points the way. As each element is completed the element's record in the Catalog will be updated and expanded to reflect the implementation of the element. Because the Catalog is maintained in a database, reports regarding the JCPFN network status can be generated to aid in the project creation and management.

Currently, the Catalog is the preliminary engineering for JCPFN and breaks the project into sub-projects or elements. The Catalog identifies the tangible elements provided by JCPFN partners and the value of each element. There are 129 Network Elements described in the Catalog to form the complete JCPFN and also includes the NoaNet fiber and POP elements.

The following Table 1 contains a list of JCPFN POP locations extracted from the Catalog of Network Elements. Several interesting observations can be made from this table.

There are a total of 44 JCPFN POPs in the fully constructed network. There are 34 of this POPs included in the main Phase One Build Out. Phase Two contains 6 JCPFN POPs. While Phase Three contains just 4 POPs.

Even with the high density of JCPFN POP facilities in Phase One the cost is just under \$2 million because of the availability of Millennium Digital Media partnered fiber within the Phase One area.

The great distances between JCPFN POPs in Phase Two and Phase Three must be spanned with new fiber at roughly \$31,725 per mile in installation costs.

As a public investment, being fiber linked to all the fire stations in East Jefferson County plus all Sheriff, school, Jefferson HealthCare and community center facilities will greatly enhance public safety throughout the entire County to everyone's benefit. In addition, the Phase Two and Three built outs strengthen the Phase One Build out by offering alternate routing in case of outages.

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TABLE 1

| Element# | Element Type | Element Location | Economy Impacted |
|---|--------------|--|------------------|
| PHASE ONE BUILD OUT (~\$2 million of total) | | | |
| 006 | JCPFN POP | Jefferson County Sheriff Complex | County |
| 009 | JCPFN POP | JC Fire District #1 Station #1 | County |
| 011 | JCPFN POP | Shold Business Park | County |
| 013 | JCPFN POP | JCFD Station #61 | County |
| 015 | JCPFN POP | MDM Head End | City |
| 019 | JCPFN POP | Blue Heron School | City |
| 021 | JCPFN POP | Jefferson County Fair Grounds | City |
| 023 | JCPFN POP | Port Townsend Wastewater Treatment Plant | City |
| 028 | JCPFN POP | Fort Worden State Park | City |
| 031 | JCPFN POP | OPSCAN Communications Tower | City |
| 033 | JCPFN POP | Port of Port Townsend HQ. bldg. | City |
| 035 | JCPFN POP | Port Townsend City Hall | City |
| 037 | JCPFN POP | Port Townsend Community Center | City |
| 039 | JCPFN POP | Port Townsend Fire Station | City |
| 041 | JCPFN POP | PTTV at Port Townsend High School | City |
| 043 | JCPFN POP | Mountain View School | City |
| 045 | JCPFN POP | Jefferson County Courthouse | City |
| 047 | JCPFN POP | U.S. Post Office | City |
| 049 | JCPFN POP | WSDOT Ferry Dock | City |
| 051 | JCPFN POP | Boat Haven Boatyard | City |
| 053 | JCPFN POP | Jefferson HealthCare Hospital | City |
| 055 | JCPFN POP | Grant Street Elementary School | City |
| 057 | JCPFN POP | Port Townsend Business Park | City |
| 063 | JCPFN POP | Port Townsend Paper Co. | City |
| 067 | JCPFN POP | Mobilisa or Alaska P&T office | County |
| 071 | JCPFN POP | Jefferson County International Airport | County |
| 075 | JCPFN POP | US Post Office | County |
| 079 | JCPFN POP | US Navy - Indian Island | County |
| 081 | JCPFN POP | Nordland Fire Station 12 | County |
| 083 | JCPFN POP | Fort Flagler | County |
| 087 | JCPFN POP | Port Ludlow Fire Station 31 | County |
| 089 | JCPFN POP | US Post Office Port Ludlow | County |
| 093 | JCPFN POP | Hood Canal Bridge | County |
| 095 | JCPFN POP | Shine Fire Station 32 | County |
| PHASE TWO BUILD OUT (~\$2.5 million of total) | | | |
| 099 | JCPFN POP | Coyle Fire Station 23 | County |
| 101 | JCPFN POP | US Navy - Zelatched Point | County |
| 107 | JCPFN POP | Quilcene High School | County |
| 109 | JCPFN POP | Quilcene Fire Station 21 | County |
| 111 | JCPFN POP | Brinnon School | County |
| 113 | JCPFN POP | Duckabush Maintenance Shop | County |
| PHASE THREE BUILD OUT (~\$1 million of total) | | | |
| 119 | JCPFN POP | Discovery Bay Fire Station 51 | County |
| 121 | JCPFN POP | Gardiner Fire Station 52 | County |
| 127 | JCPFN POP | Chimacum Creek Primary School | County |
| 129 | JCPFN POP | Jefferson County Public Library | County |

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Each of the JCPFN POP locations listed in Table 1 will have connection points available for Public data traffic to be carried over the optically isolated “red light” path and connection points for Private/Commercial/Residential data traffic to be carried over the optically isolated “green light” path around the loop.

Each JCPFN POP has the same configuration and the same powerful capability no matter where in the County or City it is located, the potential is there, waiting and ready...

The work to get the JCPFN design to this point has and is involving many interested parties that stand ready to partner in the completion of the project. The management and engineering staff at both Millennium Digital Media (MDM) and Northwest Open Access Network (NoaNet) lend their considerable knowledge and creative partnering that will make JCPFN a new model of telecommunications success.

The GUIDE Detail Section - Create an Indefeasible Right of Use (IRU) Contract

This legal partnering agreement is essential to clearly and securely define the working relationships between the JCPFN Authority and the private partners. Each element of the network as defined by the JCPFN Catalog of Network Elements shall have an addendum with specifics as part of the IRU contract.

The GUIDE Detail Section - JCPFN Scalability of Services

The network is initially configured to handle a constant flow of a gigabit of data (1,000,000,000 bits) per Lambda (each color of light forming an optically isolated data path). That is a gigabit for the Public “Red Light” path and another gigabit for the Private/Commercial “Green Light” path. To increase capacity simply required a small electronic addition to each JCPFN POP at very nominal cost. In other words, once the JCPFN is built, upgrades are simple, cheap and fast!

The GUIDE Detail Section - JCPFN Pro forma Financial Statements

The assumptions:

Although, many different levels of service will be available on the Public “Red Light” path the Pro Forma Revenues are based on one size, one price and that is a 10 megabit access port at \$300/month. Also, assume the City and County are charged for their access ports. There is also potential for revenue from JCPFN management of MDM’s private “Green Light” path at a negotiated fee--speculate 10% of fees charged on Public side. There is strong potential to develop JCPFN value added services on the Public side that may provide revenue.

Overhead or Operating Expenses will tend to be steady over any year’s time. Finally, the cost of goods sold over the network (like internet access, special ISP products, etc.) are not included.

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