



Comprehensive Community Infrastructure Budget Narrative Template

Applicant Name: Nevada Hospital Association

EasyGrants Number: 7648

Organization Type: Non-Profit

Proposed Period of Performance: August 2013 – September 2014

Total Project Costs: 14,767,204

Total Federal Grant Request: \$11,654,277

Total Matching Funds (Cash): \$3,112,927

Total Matching Funds (In-Kind):

Total Matching Funds (Cash + In-Kind):

Total Matching Funds (Cash + In-Kind) as Percentage of Total Project Costs:

1. Administrative and legal expenses - \$668,203

Line Item	Monthly August-Dec 2013	Monthly Jan-Sept 2014
NHA Direct Personnel	\$31,500	\$16,505
Travel	\$2,250	\$656
Consulting	\$45,000	\$1,000
Legal	\$15,000	\$4,000
Monthly Total	\$93,750	\$22,161
Budget Period Total	\$468,750	\$199,453

Administrative and legal fees are related to the costs incurred for the management of the grant by the Nevada Hospital Association (NHA) and legal fees associated with the management of the grant. Costs also include the preliminary engineering for the network associated with the grant.

NHA has three employees working on grant administration. Their time is allocated according to actual hours of work performed. The work load is anticipated to decrease once construction begins and a new sub-recipient assumes much of the daily administrative work. NHA staff anticipates 10 hours per week of work at a rate of \$125 per hour.



NHA employs two consultants to assist with grant management and assisting with issuance of a potential Invitation to Negotiate (ITN). The consultants are paid on an hourly basis with a total of 30 hours per month in 2013 and 20 hours per month in 2014 for Mike Pieper and 40 hours of work per month for Doug Thoutt on the ITN during 2013.

Legal costs are estimated based on the need to establish contracts with the new sub-recipient, close-out the relationship with the prior sub-recipient, and to perform routine legal work associated with the grant and operation of the network. Negotiating a new sub-recipient agreement that protects NHA and requires timely completion of the network, efficient use of the remaining grant funds, and a sustainable plan for network operations may require significant attorney time. It may also be necessary to negotiate a final release with the existing sub-recipient. Ongoing routine legal filings will include those with the Nevada Secretary of State – such as recording of the federal property interest in grant funded assets – and with the Nevada Public Utilities Commission. Attorney time will also be needed to review IRU's, and contracts with large commercial customers to assure they comply with grant rules and objectives.

2. Land, structure, rights-of-way, appraisals, etc. - \$134,400

Land, Structure, rights of way, appraisals and other admin costs for this grant has three components. The first is the material costs of the regen shelters to be installed in remote areas of the network to house the transport equipment for the network. The second component is for material costs associated with refurbishing POP sites that will be installed in locations where leased space is available and a regen shelter would not be needed. The third component is system/permit engineering and project management costs associated with the design and construction of these components of the network.

3. Relocation expenses and payment - \$0

No Funds in this grant relate to this item.

4. Architectural and engineering fees - \$632,186

Architectural and engineering fees are related to the costs incurred for the design of the network. These include but are not limited to costs for the field office in Nevada, support staff for the field office, travel related to the network design, and administrative support by the field staff to manage the grant. Costs include development of engineering design and bid packages for the equipment installation, material handling and disbursement procedures, engineering design and bid packages for fiber optic cable installation, pre-bid meetings and pre-construction meetings, permit acquisition and tracking. Each of the seven backbone route segments and all NHA and CAI lateral route segments require several layers of engineering. Initial engineering is the field engineering which requires an OSP Engineer to survey the pole line or underground path that best fits the backbone or lateral infrastructure. Additional engineering including the use of CADD, O-Calc Pro or PLS-CADD and PLS-POLE which evaluate the structural integrity of each structure is required. Finally a Professional Engineer must review and stamp the results before submittal to the the Power or Phone company for aerial route proposals.

5. Other architectural and engineering fees - \$169,500

Other architectural and engineering fees are composed of costs relating to the preparation and submission of the EA, legal fees relating to the grant and environmental monitoring costs.

6. Project inspection fees - \$816,607

Project Inspection fees are related to the costs incurred for the supervision of the installation of the network. These include but are not limited to costs for the field office in Nevada, support staff for the field office, travel related to the network installation and administrative support by the field staff to manage the grant. Costs also



include Rights of Way acquisition, construction supervision, electronic equipment installation, test and turnup, fiber optic cable test and acceptance, permit and pole license acquisition and overall Project Management of the network installation.

7. Site work - \$368,480

Site work costs are divided into three categories; Network Nodes, Network POP (Point of Presence) sites and CAI POP sites. Optica Network Technologies (ONT) will be deploying 2 network Nodes, 7 Network POPs and 10 CAI POPs under the Grant.

Network Nodes on the network are collocated within established Telecommunications to allow ease of connection to other carriers within the state. These sites are managed by speciality providers who build the space to suit and no site work is required at these sites. Network POP site work ranges from; site buildouts within leased commercial space to the performing ground work and setting a telecommunications shelter on BLM land along the network backbone. CAI POP's are housed with a customer end point, the listed CAI's all have existing rack space and power for the network equipment and no site work is required at these sites.

Network Nodes

Site	Space type	Work Required	% Complete
Reno POP/Node	Collocation within Zayo space	No site work required	N/A
Las Vegas POP/Node	Collocation within SuperNAP 7	No site work required	N/A

Network POPs

Carson City	Leased building	Requires minor interior space improvements	100%
Silver Springs	Leased building	Requires interior space improvements	100%
Yerington	Leased building	Requires interior space improvements	100%
Hawthorne	Leased building	Requires interior space improvements	0%
Mina	Communications Shelter	Requires ground work, electrical work and placement	0%
Tonopah	Leased building	Requires interior space improvements	0%
Pahrump	Communications Shelter	Shelter and site work provided by VEA	100%

CAI POPs

South Lyon County Hospital - Yerington	CAI Space	No site work required	N/A
Mt. Grant General Hospital - Hawthorne	CAI Space	No site work required	N/A



Nye Regional Medical Center / Main Hospital	CAI Space	No site work required	N/A
William Bee Ririe Hospital - Ely	CAI Space	No site work required	N/A
Northeastern Nevada Hospital - Elko	CAI Space	No site work required	N/A
Battle Mountain General	CAI Space	No site work required	N/A
Pershing General Hospital - Lovelock	CAI Space	No site work required	N/A
Humboldt General - Winnemucca	CAI Space	No site work required	N/A
TBD	CAI Space	No site work required	N/A
TBD	CAI Space	No site work required	N/A

8. Demolition and removal - \$0

No Funds in this grant relate to this item.

9. Construction - \$9,913,384

Construction costs are divided into three categories; Backbone segment construction, Network Node/POP Lateral construction and CAI Lateral construction. ONT will be deploying 7 backbone segments, 7 Network POP laterals and 10 CAI laterals under the Grant.

The proposed service include aerial fiber construction, fiber trenching, fiber boring, the installation of manhole and handholes and various hardware required to install fiber optic cable throughout the network. ONT will sub-contract these construction services to qualified contractors, ONT will supervise all construction.

Backbone Segment	% Complete
Reno to Carson City	100%
Carson City to Silver Springs	100%
Silver Springs to Yerington	0%
Yerington to Hawthorne	0%
Hawthorne to Mina	0%
Mina to Tonopah	0%
Pahrump to Las Vegas	0%

Network POP/Node Laterals	% Complete
Reno POP/Node	90%
Las Vegas POP/Node	0%
Carson City POP	100%
Silver Springs POP	100%
Yerington POP	0%
Hawthorne POP	0%



Mina POP	0%
Tonopah POP	0%
Pahrump POP	0%

CAI Laterals

South Lion County Hospital - Yerington	0%
Mt. Grant General Hospital - Hawthorne	0%
Nye Regional Medical Center / Main Hospital	0%
William Bee Ririe Hospital - Ely	0%
Northeastern Nevada Hospital - Elko	0%
Battle Mountain General	0%
Pershing General Hospital - Lovelock	0%
Humboldt General - Winnemucca	0%
TBD	0%
TBD	0%

10. Equipment - \$2,064,444

Equipment costs are divided into three categories; Network Nodes, Network POP (Point of Presence) sites and customer POP sites. ONT will be deploying 2 network Nodes, 7 Network POPs and 10 Customer POPs under the Grant.

Network Nodes serve as data centers for the network, two data centers are required for backup and network redundancy, the primary Node is located in Reno and the secondary node is located in Las Vegas. Network POPs are used to regenerate and distribute CAI and network management circuits within the network. CAI POP's serve the hospitals covered under the grant.

All equipment covered under the grant funds will be purchased. Cost and quantity information can be found in the budget documents.

Network Node Typical Equipment List

Description (BOM)	Mfr Part Number	MFR
BNDL 7750 SR-7 w/PEM3/EFT + SFM3	3HE05866AA	Alcatel
REC -SR/ESS-7 AC PWR BNDL - INTL	3HE03065BA	Alcatel
OS - 7750 SR-7/12 R9.0 OS LICENSE	3HE00107KA	Alcatel
SF/CPM - 7750 SR SFM3-7	3HE04164AA	Alcatel
IOM - 7750 SR IOM3-XP	3HE03619AA	Alcatel
MDA - 7750 20-PT GE MDA-XP - SFP	3HE03612AA	Alcatel
MDA - 7750 SR 2-PT 10G MDA-XP - XFP	3HE03685AA	Alcatel
SFP - GIGE SX - LC ROHS 6/6 DDM -40/85C	3HE00027CA	Alcatel
SFP - GIGE LX - LC ROHS 6/6 DDM -40/85C	3HE00028CA	Alcatel
SFP - GIGE ZX - LC ROHS 6/6 DDM -40/85C	3HE00029CA	Alcatel
SFP - GIGE BASE-T RJ45 R6/6 DDM -40/85C	3HE00062CB	Alcatel



XFP - 10GE EZX - LC ROHS6/6 0/70C	3HE05761CA	Alcatel
XFP - 10GE LR - LC ROHS 6/6 -40/85C	3HE05831CA	Alcatel
XFP - 10GE ZR - LC ROHS 6/6 -40/85C	3HE05833CA	Alcatel
5620 SAM-E/A/P R9.0 Lic. - 7750/7710 MDA	3HE00756KA	Alcatel
5620 SAM-E/A/P R9.0 7750/7710 SR PREMIUM MDA	3HE04331KA	Alcatel
HP Proliant DL380 G6 (24GB RAM, P410i)	1AF20249AAAA	HP
HP Proliant DL380 G6 (12GB RAM, P410i)	1AF10385AAAA	HP
300 GB-10Krpm 2.5" dual-port 6Gbps SAS-2 disk drive	1AF17602AAAA	HP
IP Core Firewall- Fortinet 1240B (HA)	300553393	Fortinet
IP Core - Firewall - FortiGuard - SW	300553393	Fortinet
IP Core - Firewall - SFP LX	300553393	Fortinet
IP Core - Firewall - SFP SX	300553394	Fortinet
300A -48 VDC Plant, 7 Rect. Pos., 19" 10RU, 2x20 Dist.	273751	Eltek
Smartpack WEB/SNMP for DC Plant 6+6	242100.118	Eltek
Flatpack2 HE 48V/2000W (50A Rectifier)	241115.105	Eltek
Blank Panels FP2 HE Black	236408	Eltek
Bullet-Style Breaker 30A, 1P, 5/16"	502657	Eltek
Bullet-Style Breaker 100A, 1P, 5/16"	502666	Eltek
Bullet-Style Breaker 5A, 1P, 5/16"	502652	Eltek
Bullet-Style Breaker 20A 1P AUX 5/16"	502655	Eltek
Eclipse 2RU FDP, 48F, SC-UPC	ECL-C2U-4859	Corning
Eclipse 4RU FDP, 96F, SC-UPC w/Sp. Tr. & 48 Pigtaills	ED448P12-59-3RH4R0	Corning
Eclipse 4RU FDP, 144F, SC-UPC w/Sp. Tr. & 48 Pigtaills	ED448P12-59-3RH6R0	Corning

Network POP Typical Equipment List

Description	Mfr Part Number	MFR
SYS - 7210 SAS-M 24F2XFP -48V DC	3HE05169AA	Alcatel
PS - 7210 SAS E/M -48V DC Power Supply (Non ETR)	3HE04415AA	Alcatel
SFP - GIGE LX - LC ROHS 6/6 DDM -40/85C	3HE00028CA	Alcatel
XFP - 10GE LR - LC ROHS 6/6 -40/85C	3HE05831CA	Alcatel
XFP - 10GE ZR - LC ROHS 6/6 -40/85C	3HE05833CA	Alcatel
XFP - 10GE EZX - LC ROHS6/6 0/70C	3HE05761CA	Alcatel
5620 SAM-E/A/P R9.0 - 7210 SAS-M-24F2XFP	3HE05789KA	Alcatel
300A -48 VDC Plant, 7 Rect. Pos., 23" 6RU, 1x24 Dist.	264368	Eltek
Smartpack WEB/SNMP for DC Plant 6+6	242100.118	Eltek
Flatpack2 HE 48V/2000W (50A Rectifier)	241115.105	Eltek
Blank Panels FP2 HE Black	236408	Eltek
	502653	Eltek
BREAKER 10A 1P AUX 5/16 BULLET		
BREAKER 20A 1P AUX 5/16 BULLET	502655	Eltek



Telco Rack - 7' x 23", Seismic	R237S	Eltek
GMT Fuse Panel, 10 Pos. A&B, +/- 24/48 VDC	506716	Trimm
23" Battery Tray Kit w/100A Circuit Breaker	259245	Eltek
Battery Cable Kit 100A w/Alarming	289732	Eltek
Battery Cable Kit 100A	289733	Eltek
Termination Panel Batt/Return	8800000123	Eltek
Rear Shield Kit, 5RU, 4"	234148	Eltek
16 Gal. Eye Wash Station	506554	Eltek
Battery Set, -48V (4x12V), 190Ah - #SBS190F	227968	Energysys
KLM/GMT Fuse Panel, 2x10 A&B, -48VDC	7573212121	Trimm
2"x2" Vertical, Slotted, Fiber Guide and Cover	FGS-KTW1-CA	ADC
#6 Red - THHN, Stranded (order multiples of 100)	THHN6STDRED	Altdo
#6 Green - THHN, Stranded (order multiples of 100)	THHN6GRNSTD	Altdo
#6 Black - THHN, Stranded (order multiples of 100)	THHN6STDBLK	Altdo
#6 Lug - 2 Hole, 1/4" Bolt, 5/8" Centers, Blue	YA6CL2TC14	Burndy
Att. LC/UPC Male-LC/UPC Female 5dB	LC-5DB-ATTN	Lynn Electr.
Att. LC/UPC Male-LC/UPC Female 10dB	LC-10DB-ATTN	Lynn Electr.
Att. LC/UPC Male-LC/UPC Female 15dB	LC-15DB-ATTN	Lynn Electr.
4"x4" Horizontal Yellow Fiber Channel (6' section)	FGS-MSHS-A	ADC
4" Quick Connect Couplers	FGS-MFAW-A	ADC
Right Angle Fittings	FGS-MH9E-A	ADC
Down Spout Fittings	FGS-MDSP-A	ADC
5/8" Threaded Rod Mount Kit (Fiber Channel to Ladder Rack)	0025510810	Newton
5 Mtr, 1.6mm Simplex SM LC/UPC-SC/UPC	LCSCSIMSM-5M	Lynn Electr.
3 Mtr, 1.6mm Simplex SM LC/UPC-SC/UPC	LCSCSIMSM-3M	Lynn Electr.
1 Mtr, 1.6mm Simplex SM LC/UPC-SC/UPC	LCSCSIMSM-1M	Lynn Electr.
20M I/C Tie Cable, 24 Fiber - SC/SC - SM	IFC-7/7B020	Corning
Heat Shrink - Clear, 1/2" x 4'	HSTT50-48-5C	Panduit
Heat Shrink - Clear, 3/16" x 4'	HSTT19-48-QC	Panduit
RJ-45 Connectors	406374-1	TE
Fiber Cleaning Kit - 5000 use	FPC-CLNKIT	ADC
Eclipse 2RU FDP, 48F, SC-UPC	ECL-C2U-4859	Corning
Eclipse 4RU FDP, 96F, SC-UPC w/Sp. Tr. & 48 Pigtaills	ED448P12-59-3RH4R0	Corning
Eclipse 4RU FDP, 144F, SC-UPC w/Sp. Tr. & 48 Pigtaills	ED448P12-59-3RH6R0	Corning

CAI - Typical Equipment List

Description (BOM)	Mfr Part Number	MFR
SYS - 7210 SAS-M 24F2XFP AC w NAR Power Cord	3HE05678AA	Alcatel
PS - 7210 SAS E/M AC Power Supply (Non ETR)	3HE04414AA	Alcatel
SFP - GIGE LX - LC ROHS 6/6 DDM -40/85C	3HE00028CA	Alcatel



SFP - GIGE EX - LC ROHS 6/6 DDM -40/85C	3HE00867CA	Alcatel
SFP - GIGE BASE-T RJ45 R6/6 DDM -40/85C	3HE00062CB	Alcatel
SFP - GIGE ZX - LC ROHS 6/6 DDM -40/85C	3HE00029CA	Alcatel
5620 SAM-E/A/P R9.0 - 7210 SAS-M-24F2XFP	3HE05789KA	Alcatel
Att. LC/UPC Male-LC/UPC Female 5dB	LC-5DB-ATTN	Lynn Electr.
Att. LC/UPC Male-LC/UPC Female 10dB	LC-10DB-ATTN	Lynn Electr.
Att. LC/UPC Male-LC/UPC Female 15dB	LC-15DB-ATTN	Lynn Electr.
1 Mtr, 1.6mm Simplex SM LC/UPC-SC/UPC	LCSCSIMSM-1M	Lynn Electr.
Eclipse 1RU FDP, 12F, SC-UPC w/Sp. Tr. & Pigtails	EC112P12-59-3RH1R0	Corning

11. Miscellaneous - \$0

No funds in this grant related to this category.

13. Contingencies - \$0

No funds in this grant related to this category.

15. Project (program) income - \$0

No funds in this grant related to this category.