Region 10
Projected Capital Costs

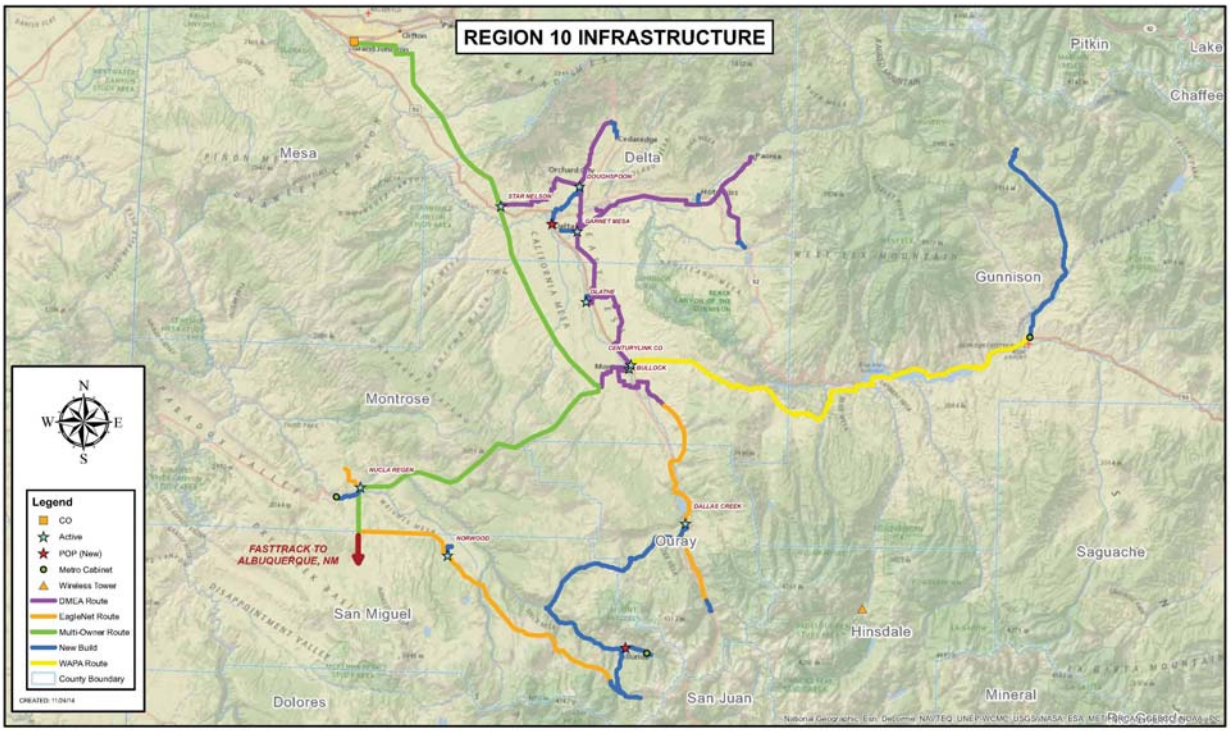
In order to improve the availability, abundance and redundancy of advanced broadband within Region 10, advanced broadband capacity needs to be brought to each of the communities within the region. The service providers cannot offer better services to each community until better bandwidth is available. The service providers often stated during NEO's meetings that transport and backhaul costs prohibit them from offering better service speeds. Transport and backhaul costs refer to the cost of Internet access, which are "backhauled" from Denver, Salt Lake, Albuquerque or Grand Junction. In order to provide more abundant bandwidth to the communities, this issue needs to be resolved.

There are many assets in place within the region that would allow advanced broadband services to be brought to each of the communities. These assets, meaning existing fiber optic cable and/or conduit or existing wireless towers, are in place and are owned by a number of companies. Fiber optic assets located between many of the communities within Region 10 are owned by the following entities:

- Tri-State Generation and Power
- Western Area Power Administration (WAPA)
- Delta Montrose Electric Association (DMEA)
- FastTrack (formed and owned by Empire Electric and La Plata Electric)
- San Miguel
- EAGLE-Net
- Century-Link
- Time Warner Cable
- Nucla Naturita Telephone Company

There is also existing fiber and/or conduit within the communities from the local ISPs that serve some of the communities. Additionally, there is fiber between Crested Butte and Mt. Crested Butte that is owned by Gunnison County.

Below is a map of the existing fiber routes.



The map needs to be updated with the following routes:
1. CenturyLink fiber between Gunnison and Lake City
2. Time Warner fiber between Gunnison and Crested Butte
3. Gunnison County fiber between Crested Butte and Mt. Crested Butte
4. San Miguel Power's fiber, where-abouts unknown

Grand Junction to Albuquerque route:

Internet Access Points of Presence are located at the CenturyLink Central Office in Grand Junction and in Albuquerque. There is an existing fiber route between Grand Junction and Albuquerque that is co-owned by multiple companies or entities. These include Tri-State, DMEA, and FastTrack. Additionally, a few wireless providers have capacity on this route.

Tri-State provided pricing for a 20-year IRU for this route. The initial fee for purchase of an IRU would be $1,500,200 for (2) strands of fiber. Annual operations and maintenance fees quoted by Tri-State are $228,300 per year.

Tri-State has an arrangement with other entities on this route, namely DMEA, San Miguel and FastTrack that allow for pass-through only charges for annual operations and maintenance fees.

This means that maintenance fees are only charged when actual maintenance is performed on the network. The actual fees incurred are then charged to the various entities.

Tri-State also mentioned that any work performed by Region 10 regarding perfecting of easements or installation of additional regeneration site equipment could be credited against the IRU fees. The easements along this route have been perfected and no additional costs would be included along this route. Also, regeneration sites have already been established on this route. However, there are other fiber route that are owned by Tri-State in which additional regeneration sites would need to be established and the easements would need to be perfected for commercial use.

For many grant programs that fund advanced broadband networks, annual maintenance fees could be capitalized and paid up-front. Tri-State provided a fee of $4,566,000 for a 20-year annual operations and maintenance fee; however, NEO has noted that this quoted fee does not include a time-value of money calculation or present value calculation that would be typical if annual operations and maintenance fees are paid up-front. If a present value calculation was applied, using a 6% discount factor assumption, the present value annual maintenance fee paid up-front would be approximately $2,618,000. If NEO were to negotiate the annual maintenance fee to be paid up-front, we would suggest starting with a higher discount factor assumption such as 12%. This reduced the present value calculation to $1,705,000.

DMEA has been willing to work with Region 10 by deeding (6) counts of fiber on routes that are within the Delta and Montrose counties and we are negotiating access or use of their 2.25 counts of fiber on the Grand Junction to Albuquerque route. NEO has been positioning with DMEA that Region 10 could install additional regeneration site equipment needed to use this Grand Junction to Albuquerque route. The estimated costs are $425,000.

If Region 10 were to build this route, the capital costs for this route would be $48.5 Million. Obviously NEO is not recommending that this route be built. As Tri-State has already stated that an IRU for this route can be purchased, NEO did not assume that this route would be built.

Addition options to explore for this route would be to obtain a leased circuit and Internet access from FastTrack, who also co-owns this route and/or to explore options with San Miguel Power who also owns (2.25) fibers.

Here's a summary of options that have been discussed with Tri-State and with DMEA:

Summary of Options, Grand Junction to Albuquerque: IRU with Annual Maintenance			
	Tri-State	**DMEA**	
IRU Value or Regeneration Equipment	$1,500,200	$400,000	
Operations and Maintenance Fees, Paid Annually	$228,300	Pass through	

Summary of Options, Grand Junction to Albuquerque: Capitalize Annual Maintenance			
	Tri-State Quoted	Tri-State at 6% Discount Factor	Tri-State with 12% Discount Factor
IRU Value or Regeneration Equipment	$1,500,200	$1,500,200	$1,500,200
Operations and Maintenance Fees, Paid Up Front	$4,566,000	$2,618,583	$1,705,274
Total	$6,066,200	$4,118,783	$3,205,474

An additional consideration is sharing in the IRU acquisition costs of this route with Region 9. Region 9 has expressed interest in this route as they too have a need for redundancy, with the ability to subscribe to Internet access from Grand Junction and from Albuquerque.

DMEA Fiber

DMEA has installed and is in the process of installing fiber within its Delta and Montrose county footprint. The network will connect their various power substations to their headquarters location in Montrose.

DMEA hired a consulting firm approximately a year ago to research how to best leverage and use its existing fiber network. One of the obstacles to leveraging its network to offer broadband services is allowing expanded use of the extra capacity on the network. The path of their fiber optic network crosses over private property at more than 600 locations throughout their service territory. DMEA has easements to cross these properties to provide management of its power system; however the easements need to be perfected in order to allow for an expanded use of their network; i.e. to allow the network to be used for broadband services. The estimated cost of perfecting these easements varies greatly and has been estimated as high as $1 Million. This unknown liability is seen as a risk within the Board of Directors of DMEA and therefore, rightfully so, the Board has been hesitant to go forward with any plans for offering broadband services. The Board has stated its fiduciary obligation to the cooperative and its members, to ensure that additional costs incurred in allowing public access to DMEA's fiber network does not increase the rates charges for electric service.

The study recommended that the best strategy for DMEA that offered the least financial risk to the cooperative was the lease of dark fiber. The largest hurdle of perfecting the easements is being evaluated by a committee formed by the Board along with appropriate legal counsel, subject matter experts from the fiber industry, and other regional cooperatives that have experience in commercial communication in regards to right of way perfection. DMEA has stated that it welcomes discussions on how to best mitigate this risk.

Virgil Turner and NEO's Diane Kruse met with the CEO and team members of DMEA on December 10th to discuss options in working together. Virgil Turner put together a white paper on perfecting the easements to advance broadband deployment in Montrose and Delta counties. Quoting a portion of the introduction of the white paper, it states, "Acquisition of easements by

utilities is supported by the power of eminent domain. This power assures the owner of the underlying property receives fair market value for the property right and the condemning party is assured the ability to acquire the necessary property right even while the compensation value is being determined, whether voluntarily or in a court action. As stated, in many cases, the additional property right for non-utility use, must obtained before the excess fiber-optic capacity can be put to use. While DMEA may rely on its power of eminent domain for acquisition of easements, this power does not extend to non-utility purposes.

The absence of the power of eminent domain when attempting to obtain a non-utility easement places an enormous risk on any attempt by DMEA to obtain the public use property rights to for the excess fiber-optic capacity. On any given corridor where this property right is determined to necessary for the public good, without the power of eminent domain, successful negotiation with <u>all</u> property owners cannot be assured.

Finding a successful solution to this issue is a high priority to the communities DMEA serves, as they attempt to increase availability, redundancy and affordability of broadband service for the public benefit and to drive economic development.[2]

One possible solution to address this issue is to transfer ownership of the excess fiber-optic capacity to a local government entity with jurisdiction for the particular segment of the DMEA network. By resolution of necessity the local government, may identify the additional property rights necessary to use the excess fiber-optic cable for government and commercial use. This would allow the use of eminent domain to complete the acquisition in a timely and cost effective manner."

At the end of the meeting, DMEA agreed to further research the deeding of a minimum of (6) strands of fiber to Region 10 for $1, with the caveat that Delta and Montrose counties would be responsible for the perfection of the easements necessary to allow communication services. The Board of Directors of DMEA would need to approve a proposal from Region 10 and the counties of Delta and Montrose would need to also agree to this strategy. Additionally, DMEA agreed to allow use of its (2.25) strands of fiber between Grand Junction and Albuquerque with Region 10 paying for the additional equipment needed at the regeneration sites along that route. DMEA asked that a separate proposal be submitted along with the easement proposal.

If this strategy is approved, $6.5 Million in capital costs would be eliminated, as DMEA has already built or is in the process of building fiber to each of the communities within Delta and Montrose:

DMEA						
Segment	Dist (FT)	Dist (Miles)	Fiber Cnt	Build Rate	Build Cost $$	Route Description
Segment 2	34,012 FT	6.44	12	$ 10.00	$ 340,120.00	MONTROSE SWITCH TO BULLOCK
Segment 3	21,357 FT	4.04	6	$ 10.00	$ 213,570.00	BULLOCK TO HEAD QUARTERS
Segment 4	12,979 FT	2.46	6	$ 10.00	$ 129,790.00	HEAD QUARTERS TO PEACH VALLEY TAP
Segment 5	50,697 FT	9.60	6	$ 10.00	$ 506,970.00	PEACH VALLEY TAP TO OLATHE
Segment 6	57,762 FT	10.94	6	$ 10.00	$ 577,620.00	OLATHE TO GARNET MESA
Segment 7	26,799 FT	5.08	6	$ 10.00	$ 267,990.00	GARNET MESA TO READ SERVICE CENTER
Segment 8	74,545 FT	14.12	6	$ 10.00	$ 745,450.00	READ SERVICE CENTER TO HOTCHKISS
Segment 9	22,524 FT	4.27	6	$ 10.00	$ 225,240.00	HOTCHKISS TO HOTCHKISS TAP
Segment 10	30,665 FT	5.81	6	$ 10.00	$ 306,650.00	HOTCHKISS TAP TO PAONIA
Segment 11	44,964 FT	8.52	6	$ 10.00	$ 449,640.00	PAONIA TO CRAWFORD
Segment 12	11,599 FT	2.20	6	$ 10.00	$ 115,990.00	GARNET MESA TO GUNNISON VALLEY
Segment 13	20,989 FT	3.98	6	$ 10.00	$ 209,890.00	GUNNISON VALLEY TO DOUGHSPOON
Segment 14	52,926 FT	10.02	6	$ 10.00	$ 529,260.00	DOUGHSPOON TO CEDARRIDGE
Segment 15	70,370 FT	13.33	6	$ 10.00	$ 703,700.00	DOUGHSPOON TO STAR NELSON
Segment 16	22,434 FT	4.25	6	$ 10.00	$ 224,340.00	BULLOCK TO HAPPY CANYON
Segment 17	9,798 FT	1.86	6	$ 10.00	$ 97,980.00	HAPPY CANYON TO CHIPETA
Segment 18	35,691 FT	6.76	6	$ 10.00	$ 356,910.00	CHIPETA TO SOUTH CANAL
Segment 19	2,112 FT	0.40	6	$ 10.00	$ 21,120.00	HEAD QUARTERS TO NORTH MESA
DMEA Subtotals					**$ 6,022,230.00**	

Regens/POP Facilities

	Locations	Sites	*Lease Rate	*Lease Cost $$	Build Rate	Build Cost $$
Transport	Bullock, Star Nelson, Doughspoon, Garnet Mesa, Olathe	5	**$250**	**$ 300,000.00**	**$85,000**	**$ 425,000.00**
Fiber Characterization, Testing & Documentation		20 Segments, 6 Fiber Bi-directional		**$ 10,800.00**		**Included**
DMEA Lease/Build Total						**$ 6,447,230.00**

The above costs are therefore, not included in our capital cost summary provided at the end of this section.

The following communities would be connected with fiber with this strategy:

- Olathe
- Montrose
- Delta
- Hotchkiss
- Cedaredge
- Paonia
- Crawford

Region 10 would potentially pay for construction of fiber network to extend from the power substation to a carrier neutral facility within each community. Region 10 would also pay for equipment at regeneration sites along these routes. Further verification must be done to determine whether or not DMEA is planning to pay for the regeneration sites or if Region 10 would need to include this in their capital costs budget.

Additionally, DMEA expressed interest in a possible joint build to the Nucla/Naturita and Cimarron substations within the region. The implications of this are further discussed under the WAPA section and the Eagle-Net section below.

The cost to perfect the easements for these routes needs to be estimated and included in the projected capital costs. NEO assumed an average of 200 feet between poles which results in approximately 27 poles per mile. An assumption of $100 per pole for payment to landowners to perfect the easement was used.

Perfection of Easements, Payments to Landowners			
Total Miles	# of Poles per Mile	Cost per Pole	Total Cost
114.06	26	$100	$301,111.50

There will also be legal and professional fees associated with perfection of easements. NEO assumed a placeholder budget of the following:

Perfection of Easements Budget	Estimate
Payment to Landowners	$325,000
Legal and Professional Fees	$85,000
Total Budget	$410,000

TDS

TDS did not share with NEO where they have fiber optic facilities. We do know that they serve the following markets and therefore, most likely have fiber to these communities.

- Eckert
- Grand Mesa
- Cedaredge
- Hotchkiss
- Paonia
- Somerset
- Crawford

The DMEA fiber is the best option available to Region 10 as DMEA will also have fiber to most of these communities. Additionally, TDS stated that they would not be interested in providing an IRU to Region 10; however, they would be interested in speaking with Region 10 regarding lowering their transport and backhaul fees (i.e. Internet access in Grand Junction or Albuquerque) and would be interested in additional fiber facilities to Delta.

EAGLE-Net

EAGLE-Net Alliance ("EAGLE-Net") is a Colorado intergovernmental entity and the recipient of a BTOP grant award administered through NTIA and ARRA (i.e. "The Stimulus Program").

EAGLE-Net started with a vision to bring high-speed Internet to every public school in Colorado through public-private partnerships to build a comprehensive, statewide network.
In 2007, the Centennial Board of Cooperative Educational Services (CBOCES) developed EAGLE-Net as a cost-sharing consortium for Colorado. After conducting a broadband survey of all of Colorado's K-12 school districts in 2008, CBOCES/EAGLE-Net determined that market forces weren't sufficient to drive technological investment in Colorado's most remote, rural and underserved areas. It found that Colorado ranked 42nd out of all 50 states in broadband connectivity. In response to these findings, CBOCES, as the operator of the EAGLE-Net network became an American Registry for Internet Numbering (ARIN) acknowledged Internet service provider with its own IP addressing capability.

In 2009, EAGLE-Net responded to 78 school district requests for Internet services and began to connect districts to the EAGLE-Net network. In coordination with the American Recovery and Reinvestment Act (ARRA) and Colorado's Recovery Act Broadband Framework, CBOCES determined that in order to expand its technology-rich broadband Internet services, it would respond to the Round-1 notice of funding availability offered via the U.S. Department of Commerce Broadband Technology Opportunities Program (BTOP), with the intent to create the EAGLE-Net Alliance as an independent intergovernmental entity to deploy and operate the statewide network.

The EAGLE-Net Alliance applied for and was awarded a $100.6 million grant from BTOP in September 2010.

EAGLE-Net has fiber network facilities to Ouray, Ridgeway, Norwood, and Nucla. Upon initial discussions with EAGLE-Net, they stated that they would most likely not be able to sell IRU's of their fiber, but would rather sell dark fiber leases for use of their fiber.

EagleNet								
Segment	Dist (FT)	Dist (Miles)	Fiber Cnt	IRU Cost per Fiber Mile	IRU Cost	Build Rate	Estimated Build Costs	Route Description
Segment 1	71,874 FT	13.61	6	$1,500	$ 122,512.50	$ 10.00	$ 718,740.00	SOUTH CANAL TO COW CREEK
Segment 2	26,392 FT	5.00	6	$1,500	$ 44,986.36	$ 10.00	$ 263,920.00	COW CREEK TO DALLAS CREEK
Segment 3	57,054 FT	10.81	6	$1,500	$ 97,251.14	$ 10.00	$ 570,540.00	DALLAS CREEK TO OURAY CITY
Segment 4	19,065 FT	3.61	6	$1,500	$ 32,497.16	$ 8.50	$ 162,052.50	NUCLA REGEN TO NULCA TOWN
Segment 5	69,750 FT	13.21	6	$1,500	$ 118,892.05	$ 10.00	$ 697,500.00	COUNTY LINE TO NORWOOD
Segment 6	151,812 FT	28.75	6	$1,500	$ 258,770.45	$ 10.00	$ 1,518,120.00	NORWOOD TO SUNSHINE
EagleNet Subtotals					**$ 674,909.66**		**$ 3,930,872.50**	
Regens/POP Facilities								
	Locations		**Sites**	***Lease Rate**	***Lease Cost $$**	**Build Rate**	**Build Cost $$**	
Transport			**0**	**$250**	**$ -**	**$85,000**	**$ -**	
Fiber Characterization, Testing & Documentat			6 Segments, 6 Fiber		**$ 3,600.00**		**Included**	
EagleNet Lease/Build Total					**$ 678,509.66**		**$ 3,930,872.50**	

Further research is needed to determine what options are available for use of these routes and whether or not Region 10 may acquire an IRU or if these routes will need to be built.

As noted above, DMEA has expressed an interest in obtaining fiber to Nucla and Naturita power substations. Some of the above costs may be shared with DMEA. For purposes of putting together a capital cost budget, NEO included 100% of the costs above.

The following communities would be served with using EAGLE-Net fiber:

- Nucla
- Norwood
- Ridgeway
- Ouray

WAPA

Western Area Power Administration has fiber between Montrose and Gunnison, following their transmission power lines along this route. Additionally, CenturyLink has fiber within the CDOT right of way along state Highway 50.

WAPA expressed concern over providing an IRU on this route, stating restrictions imposed by the Department of Energy. This needs to be further investigated as the Town of Estes Park is using WAPA transmission lines for fiber that it owns into Estes Park. Apparently during the flood last year that hit Estes Park, it was brought to attention that Estes Park owned fiber placed on WAPA lines and that this was a potential problem with the Department of Energy. WAPA and Estes Park are still in negotiations upon whether or not it will be permissible for Estes Park

to continue to use the fiber along these transmission lines. It will be of great interest to Region 10 to see how this is resolved. Political pressure may be put upon WAPA for Estes Park to continue to use this fiber and depending upon how this is resolved, Region 10 may be able to convince WAPA to share in its use of fiber from Montrose to Gunnison.

Another consideration is to partner with DMEA on this route as DMEA expressed interest in having fiber built to serve the Cimarron power substation. Cimarron is located approximately halfway between Montrose and Gunnison.

Below are estimated IRU and build costs for this route:

WAPA Segment								
Segment	Dist (FT)	Dist (Miles)	Fiber Cnt	IRU Cost per Fiber Mile	IRU Cost	Build Rate	Estimated Build Costs	Route Description
Segment 1	339,951 FT	64.38	6	$1,500	$ 579,461.93	$ 12.00	$ 4,079,412.00	Montrose to Gunnison
Fiber Characterization, Testing & Documentation, 1 Segments, 6 Fiber Bi-directional					**$ 800.00**		**Included**	
WAPA Lease/Build Total					**$ 580,261.93**		**$ 4,079,412.00**	

Putting it Together

The following scenarios summarize the projected capital costs for the regional transport network. There are still a number of details that need to be nailed down. For example, depending upon whether or not WAPA or EAGLE-Net will allow IRU agreements on their fiber, the capital costs of the project will vary greatly. Also, San Miguel Power may have fiber facilities that can be used; as may Nucla Naturita Telephone. The following numbers are preliminary:

If Facilities Can be Acquired from EAGLE-Net and WAPA, NOT Including Marble, Paradox					
Summary of Capital Costs	**Other**	**Equipment**	**IRU Cost**	**Build Cost**	**Total Cost**
Grand Juntion to Albuquerque - DMEA	$0	$425,000	$0	$0	$425,000
DMEA Network, Perfection of Easements	$410,000	$0	$0	$0	$410,000
EAGLE-Net	$0	$0	$678,510	$0	$678,510
WAPA, Montrose to Gunnison	$0	$0	$580,262	$0	$580,262
New Fiber Build	$0	$962,700	$0	$7,043,984	$8,006,684
New Facilities	$0	$0	$0	$273,800	$273,800
Totals	**$410,000**	**$1,387,700**	**$1,258,772**	**$7,317,784**	**$10,374,256**

If Facilities Can NOT be Acquired from EAGLE-Net and WAPA, Including Marble, Paradox					
Summary of Capital Costs	**Other**	**Equipment**	**IRU Cost**	**Build Cost**	**Total Cost**
Grand Juntion to Albuquerque - DMEA	$0	$425,000	$0	$0	$425,000
DMEA Network, Perfection of Easements	$410,000	$0	$0	$0	$410,000
EAGLE-Net	$0	$0	$0	$3,930,873	$3,930,873
WAPA, Montrose to Gunnison	$0	$0	$0	$4,079,412	$4,079,412
New Fiber Build	$0	$962,700	$0	$10,537,797	$11,500,497
New Facilities	$0	$0	$0	$273,800	$273,800
Totals	**$410,000**	**$1,387,700**	**$0**	**$18,821,882**	**$20,619,582**

If Facilities Can be Acquired from EAGLE-Net and WAPA, NOT Including Marble, Paradox					
Summary of Capital Costs	**Other**	**Equipment**	**IRU Cost**	**Build Cost**	**Total Cost**
Grand Juntion to Albuquerque - DMEA	$0	$425,000	$0	$0	$425,000
DMEA Network, Perfection of Easements	$410,000	$0	$0	$0	$410,000
EAGLE-Net	$0	$0	$678,510	$0	$678,510
WAPA, Montrose to Gunnison	$0	$0	$580,262	$0	$580,262
New Fiber Build	$0	$962,700	$0	$7,043,984	$8,006,684
New Facilities	$0	$0	$0	$273,800	$273,800
Totals	**$410,000**	**$1,387,700**	**$1,258,772**	**$7,317,784**	**$10,374,256**

If Facilities Can NOT be Acquired from EAGLE-Net and WAPA, NOT Including Marble, Paradox					
Summary of Capital Costs	**Other**	**Equipment**	**IRU Cost**	**Build Cost**	**Total Cost**
Grand Juntion to Albuquerque - DMEA	$0	$425,000	$0	$0	$425,000
DMEA Network, Perfection of Easements	$410,000	$0	$0	$0	$410,000
EAGLE-Net	$0	$0	$0	$3,930,873	$3,930,873
WAPA, Montrose to Gunnison	$0	$0	$0	$4,079,412	$4,079,412
New Fiber Build	$0	$962,700	$0	$7,043,984	$8,006,684
New Facilities	$0	$0	$0	$273,800	$273,800
Totals	**$410,000**	**$1,387,700**	**$0**	**$15,328,069**	**$17,125,769**

Other Considerations

There are other things to consider in terms of how these networks can be built. If there is fiber along a route and an IRU cannot be purchased, there are other alternatives for these routes other than building fiber along these routes. For example, another consideration may be to enter into a dark fiber lease on a month-to-month basis to secure fiber to various communities. Considerations need to be weighed regarding whether or not costs should be incurred up front as capital costs, or can be incurred monthly as operational expenses.

Another possibility to explore is having the service providers share in the capital costs of building to the communities. The service providers have much to gain when their backhaul and transport costs are greatly reduced. FastTrack offered to contribute to this project by paying for some of the matching funds. There is a possibility that the other service providers may also participate and collaborate with Region 10.

Building to the Anchor Institutions

NEO's engineering team also put together network routes and preliminary capital costs of building to most of the anchor institutions within each community. The following summarizes the capital costs for building within each community.

Community Anchor Institution Builds					
Segment	**Dist (FT)**	**Dist (Miles)**	**Fiber Cnt**	**Build Rate**	**Build Cost $$**
CEDAREDGE	12,176 FT	2.31	96	$12.00	$146,112
CRAWFORD	4,550 FT	0.86	48	$12.00	$54,600
CRESTED BUTTE	4,386 FT	0.83	48	$12.00	$52,632
DELTA	56,154 FT	10.64	96	$14.00	$786,156
GUNNISON	22,720 FT	4.30	48	$12.00	$272,640
HOTCHKISS	15,229 FT	2.88	48	$12.00	$182,748
LAKE CITY					$0
MARBLE	1,379 FT	0.26	48	$12.00	$16,548
MONTROSE	61,828 FT	11.71	96	$16.00	$989,248
MOUNT CRESTED BUTTE	6,578 FT	1.25	48	$12.00	$78,936
MOUNTAIN VILLAGE					$0
NATURITA	5,023 FT	0.95	48	$12.00	$60,276
NORWOOD	5,971 FT	1.13	48	$12.00	$71,652
NUCLA	3,959 FT	0.75	48	$12.00	$47,508
OLATHE	7,539 FT	1.43	48	$12.00	$90,468
OPHIR					$0
OURAY	2,983 FT	0.56	48	$12.00	$35,796
PAONIA	14,008 FT	2.65	48	$12.00	$168,096
PARADOX	672 FT	0.13	48	$12.00	$8,064
RIDGWAY	8,202 FT	1.55	48	$12.00	$98,424
SAWPIT					$0
TELLURIDE	5,775 FT	1.09	96	$16.00	$92,400
Anchor Locations					
	Locations		**Sites**	**Build Rate**	**Build Cost $$**
	See List		224	**$5,500**	**$ 1,232,000.00**
Community Anchor Institutions Total					**$4,484,304**

A list of community anchor institutions served on the network is provided, as is a list of locations that are not currently served with fiber.

These cost projections are again, preliminary as there may be fiber assets within each community that can be leveraged or perhaps some of the anchor institutions within the community are already being adequately served. Input and feedback from Region 10 and from the communities are needed to further validate the location to be served.