

AMERICAN FORK CITY COUNCIL
AUGUST 20, 2019
SPECIAL SESSION AND WORK SESSION AGENDA

Notice is hereby given that the American Fork City Council will meet in a Special Session and a Work Session on Tuesday, August 20, 2019, in the American Fork City Administration Office Conference Room, 51 East Main Street, commencing at 4:00 p.m. The agenda shall be as follows:

SPECIAL SESSION

1. Review and action on a resolution providing for the holding of a local special election in American Fork City for the purpose of submitting to the qualified electors of the city the question of the issuance and sale of up to \$8,500,000 of General Obligation Bonds for new Fire Station.
2. Adjourn to a work session.

WORK SESSION

The purpose of City Work Sessions is to prepare the City Council for upcoming agenda items on future City Council Meetings. The Work Session is not an action item meeting. No one attending the meeting should rely on any discussion or any perceived consensus as action or authorization. These come only from the City Council Meeting.

1. Discussion with Jibe Media on the concept for city re-branding.
2. Discussion on policy considerations, financial projections, and interlocal cooperative opportunities for the proposed broadband project.
3. Adjournment.

Dated this 15 day of August, 2019.



Terilyn Lurker
City Recorder

- In accordance with the Americans with Disabilities Act, American Fork City will make reasonable accommodations to participate in the meeting. Requests for assistance can be made by contacting the City Recorder at 801-763-3000 at least 48 hours in advance of the meeting.
- The order of agenda items may change to accommodate the needs of the City Council, the staff, and the public.



**REQUEST FOR COUNCIL ACTION
CITY OF AMERICAN FORK
AUGUST 20, 2019**

Department Recorder **Director Approval** Terilyn Lurker

AGENDA ITEM Review and action on a resolution providing for the holding of a local special in American Fork City for the purpose of submitting to the qualified electors of the city the question of the issuance and sale of up to \$8,500,000 of General Obligation Bonds for new Fire Station.

SUMMARY RECOMMENDATION:

Staff recommends the Mayor and Council consider a resolution providing for the holding of a local special bond election for the purpose of submitting to the qualified electors of the city a general obligation bond not to exceed \$8,500,000 for the purpose of purchasing real property, acquiring, constructing and equipping a new fire station and related improvements.

BACKGROUND:

The City has determined through operations, research, and by technical reports prepared by qualified consultants that an additional fire station is necessary to provide for the public health, safety and welfare of residences and businesses in the city. In order to facilitate the purchase of real property, acquire, construct, and equip a new fire station and related improvements, it is necessary to seek sufficient funds through the Local Government Bonding Act. The proposed resolution provides for the holding of a local special election in American Fork City for the purpose of submitting to the qualified electors of the city the question of the issuance and sale of up to \$8,500,000 of General Obligation Bonds for a new fire station.

SUGGESTED MOTION:

I move to approve the resolution providing for the holding of a local special bond election in American Fork City, Utah, for the purpose of submitting to the qualified electors of the city the question of the issuance and sale of up to \$8,500,000 of general obligation bonds; providing for the holding of a public hearing and the publication of a notice of public hearing; and providing for related matters.

SUPPORTING DOCUMENTS

Bond Resolution and Ballot Title Fire Station 52 (PDF)

RESOLUTION NO. _____ PROVIDING FOR THE HOLDING OF A LOCAL SPECIAL BOND ELECTION IN AMERICAN FORK CITY, UTAH, FOR THE PURPOSE OF SUBMITTING TO THE QUALIFIED ELECTORS OF THE CITY THE QUESTION OF THE ISSUANCE AND SALE OF UP TO \$8,500,000 OF GENERAL OBLIGATION BONDS; PROVIDING FOR THE HOLDING OF A PUBLIC HEARING AND THE PUBLICATION OF A NOTICE OF PUBLIC HEARING; AND PROVIDING FOR RELATED MATTERS.

WHEREAS, there is a need to raise money for the purpose of purchasing real property, acquiring, constructing, and equipping a new fire station ("Station"), and related improvements for the citizens of American Fork City, Utah (the "City"), and, to the extent necessary, for providing moneys for the funding or refunding, at or prior to the maturity thereof, of general obligation bonds of the City authorized hereunder or heretofore issued and now outstanding;

WHEREAS, there are insufficient funds in the treasury of the City available for these purposes;

WHEREAS, the City is authorized pursuant to the Local Government Bonding Act, Chapter 14 of Title 11 of the Utah Code Annotated 1953, as amended (the "Utah Code"), to call an election to submit to the qualified electors of the City the question as to whether the City should issue its general obligation bonds for the purposes set forth above;

WHEREAS, the City desires to submit a proposition concerning the issuance of the Bonds to the vote of the qualified electors of the City;

WHEREAS, Section 11-14-318 of the Local Government Bonding Act, Chapter 14, Title 11 of the Utah Code requires that a public hearing be held with respect to the issuance of the proposed bonds and that notice of the public hearing be given as provided by law;

NOW, THEREFORE, BE IT RESOLVED by the Municipal Council of American Fork City, Utah, as follows:

Section 1. In the judgment of the City Council, it is advisable that a local special bond election be called and held in the City at the same time as the statewide regular general election on Tuesday, November 5, 2019 (the "Election Day"), to submit to the qualified electors of the City the question of whether bonds of City in an amount not to exceed \$ 8,500,000 shall be issued and sold for the purpose of raising money for paying all or a portion of the costs of purchasing real property, acquiring, constructing, and equipping a new fire station ("Station"), and related improvements for the citizens of American Fork City, Utah and related infrastructure improvements (collectively, the "Project").

Section 2. The question shall be submitted to the qualified electors of the City at a local special bond election, and such local special bond election (the "Local Special Bond Election") is

hereby called to be held in the City on the Election Day. The question shall be submitted in substantially the form set out in the form of ballot appearing in Section 4 hereof.

Section 3. The City Recorder of the City, as election officer (the “*City Recorder*”) is hereby authorized and directed to perform and do, and to cause to be performed and done, all things necessary to conduct the Special Bond Election in accordance with the provisions of this Resolution, Chapter 14, Title 11 of the Utah Code, and Title 20A of the Utah Code and all applicable federal laws and court orders. The County Clerk of Utah County, Utah, as provider election officer (the “*County Clerk*”), is hereby requested for and on behalf of the City to assist and enable the City Recorder, to do all such things necessary to conduct the Local Special Bond Election.

Section 4. The ballots to be used at the Local Special Bond Election shall comply in all respects with the requirements of Sections 11-14-206, Title 20A, Chapter 6, Part 1 and Part 3 and Section 20A-6-303 of the Utah Code, and shall be in substantially the following form (following page):

**OFFICIAL BALLOT FOR
AMERICAN FORK CITY, UTAH
SPECIAL BOND ELECTION**

November 5, 2019

/s/ Terilyn Lurker

City Recorder, American Fork City, Utah

Shall American Fork City, Utah be authorized to issue General Obligation Bonds in a principal amount not to exceed \$8,500,000 and to mature in no more than 21 years from the date or dates of issuance of such bonds for the purpose of paying all or a portion of the costs of purchasing real property, acquiring, constructing, and equipping a new fire station ("Station") and related improvements?

If the Bonds are issued as planned, without regard to the taxes currently levied for outstanding bonds that will reduce over time, an annual property tax to pay debt service on the proposed bonds will be required over a period of 21 years in the estimated amount of \$38.94 per year on a \$ 300,000 primary residence and in the estimated amount of \$70.80 per year on a business having the same value.

The City has other outstanding bonds for which a tax decrease would occur upon the retirement of such bonds, which may not occur if the proposed bonds are issued.

The foregoing information is only an estimate and is not a limit on the amount of taxes that the City may be required to levy to pay debt service on the bonds. The City is obligated to levy taxes to the extent provided by law in order to pay the bonds.

To vote in favor of the above bond issue, select the box immediately adjacent to the words "FOR THE ISSUANCE OF BONDS." To vote against the bond issue, select the box immediately adjacent to the words "AGAINST THE ISSUANCE OF BONDS."

☐

FOR THE ISSUANCE OF BONDS

☐

AGAINST THE ISSUANCE OF BONDS

Section 5. In satisfaction of the requirements of Section 11-14-318 of the Code, a public hearing shall be held by the City Council on September 10, 2019, during the City Council meeting that begins at 7:00 p.m. at the regular meeting place of the City Council, with respect to the issuance by the City of general obligation bonds, if approved by eligible voters at the Local Special Bond Election, for the purposes set forth in Section 1 and the potential economic impact of the Project will have on the private sector.

Section 6. The City Recorder shall cause the “Notice of Public Hearing,” in substantially the form attached hereto as *Exhibit 1*, to be published (a) once each week for 2 consecutive weeks in the *Daily Herald*, a newspaper of general circulation in the City, with the first publication being at least 14 days prior to the date set for the public hearing and (b) on the Utah Public Notice Website (as of the date of this Resolution, <http://pmn.utah.gov>) at least 14 days prior to the date set for the public hearing.

Section 7. After the adoption of this Resolution and at least 75 days before the Local Special Bond Election, a certified copy hereof, which includes the ballot title and the ballot proposition, shall be furnished to the Lieutenant Governor of the State of Utah and to the City Recorder, as election officer and the County Clerk of Utah County, Utah, as provider election officer (collectively, the “*Election Officer*”).

Section 8.

(a) In satisfaction of and in compliance with the requirements of Section 59-1-1604 of the Utah Code, the Mayor or his designee, on behalf of the City Council, shall prepare and submit to the City Recorder, an argument in favor of the ballot proposition and the rebuttal to the argument against the ballot proposition, if necessary.

(b) To facilitate compliance with the requirements of Section 59-1-1604 of the Utah Code, the argument in favor of the ballot proposition prepared by the Mayor or the Mayor's designee, and any argument in favor of the ballot proposed by an eligible voter of the City, the designated argument against the ballot proposition prepared by an eligible voter of the City, and any rebuttals thereto submitted by the respective drafters of the arguments in favor of and against the ballot proposition, shall be submitted in accordance with the schedule outlined in Section 59-1-1604:

(i) the argument in favor of the ballot proposition prepared by the election officer shall be submitted to the City Recorder no later than 5:00 p.m. MDT on September 6, 2019;

(ii) eligible voters wishing to submit an argument in favor of or an argument against the ballot proposition shall file such argument with the City Recorder no later than 5:00 p.m. MDT on September 6, 2019; if two or more eligible voters file an argument in favor of or against the ballot proposition the City Recorder, as election officer, will designate one of the eligible voters to submit the argument.

(iii) All arguments and rebuttal arguments shall comply with the provisions of Section 59-1-1604 of the Utah Code.

(c) In accordance with the requirements of Section 59-1-1605 of the Utah Code, a public meeting shall be held by the City Council during the City Council meeting that begins at 7:00 p.m., on October 8, 2019, at the regular meeting place of the City Council, for the presentation of the arguments in favor of and against the ballot proposition.

(d) As provided in Section 59-1-1604 of the Utah Code, the City Recorder, on behalf of the City Council, shall cause the Notice of Public Meeting, including the date, time and place of the public meeting, together with the arguments in favor of and against the ballot proposition and the rebuttals thereto, to be (i) posted for 30 consecutive days before the Election Day on (A) the Statewide Electronic Voter Information Website (as of the date of this Resolution, vote.utah.gov) and (B) a prominent place on the City's website, and (ii) published in the City's October newsletter, which is the scheduled newsletter published immediately before the Election Day.

Section 9. The Election Officer and the officers and employees of the City are authorized to take such action as they may deem necessary in order to assure that the Local Special Bond Election does not violate any applicable state or federal law, including laws regarding the use of the electronic voting devices.

Section 10. All acts and resolutions in conflict with this Resolution or any part thereof are hereby repealed.

Section 11. It is hereby declared that all parts of this Resolution are severable, and if any section, clause or provision of this Resolution shall, for any reason, be held to be invalid and unenforceable, the invalidity or unenforceability of any such section, clause or provision shall not affect the remaining sections, clauses or provisions of this Resolution.

Section 12. Immediately after its adoption by at least two-thirds majority of the members of the City Council, this Resolution shall be signed by Mayor and the City Recorder, shall be sealed with the seal of the City and shall be recorded in a book kept for that purpose and shall take immediate effect.

PASSED AND ADOPTED BY THE AMERICAN FORK CITY COUNCIL, STATE OF UTAH, ON THIS 20th DAY OF AUGUST, 2019.

AMERICAN FORK CITY:

MAYOR BRADLEY J. FROST

ATTEST:

TERILYN LURKER, CITY RECORDER

EXHIBIT 1**NOTICE OF PUBLIC HEARING****AMERICAN FORK CITY, UTAH**

PUBLIC NOTICE IS HEREBY GIVEN that on August 20, 2019, the City Council (the “City Council”) of American Fork City, Utah (the “City”) adopted a resolution (the “Resolution”), providing for a local special bond election to be held in the City on Tuesday, November 5, 2019, for the purpose of submitting to the qualified electors of the City the question of the issuance of general obligation bonds in an amount not to exceed \$8,500,000 (the “Local Special Bond Election”) and calling a public hearing to receive input from the public with respect to the issuance of general obligation bonds and the potential economic impact that the improvement, facility, or property for which the bonds pay all or part of the cost will have on the private sector, pursuant to the Section 11-14-318 of the Utah Code Annotated 1953, as amended.

If approved by eligible voters at the Local Special Bond Election, the City intends to issue general obligation bonds for the purpose of raising money paying all or a portion of the costs of for the purpose of paying all or a portion of the costs of acquiring, constructing, and equipping a new fire station (“Station”).

If approved by eligible voters at the Local Special Bond Election, the City intends to issue general obligation bonds in an amount not to exceed \$8,500,000 in one or more series at one or more times.

The City proposes to pledge the full faith and credit of the City for the payment of its general obligation bonds and will be obligated to levy and collect ad valorem taxes sufficient to pay the general obligation bonds, as provided by law.

The City will hold a public hearing during its City Council meeting which begins at 7:00 p.m. on September 10, 2019. The public hearing will be held at the regular meeting place of the City Council in the Council Chambers, 31 North Church Street, in American Fork, Utah. All members of the public are invited to attend and participate in the public hearing. Prior to the public hearing, written comments may be submitted to the City, to the attention of the City Recorder.

DATED this 20th day of August, 2019.

AMERICAN FORK CITY, UTAH

CITY COUNCIL STUDY ITEM

City of American Fork COUNCIL WORK SESSION AUGUST 20, 2019

Department Recorder

Department Terilyn Lurker

STUDY ITEM Discussion with Jibe Media on the concept for city re-branding.

BACKGROUND

Jibe Media will be present to discuss with the council the concept for city re-branding.

Information will be provided at the meeting.

SUPPORTING DOCUMENTS

CITY COUNCIL STUDY ITEM

City of American Fork COUNCIL WORK SESSION AUGUST 20, 2019

Department Recorder

Department Terilyn Lurker

STUDY ITEM Discussion on policy considerations, financial projections, and interlocal cooperative opportunities for the proposed broadband project.

SUMMARY RECOMMENDATION:

Staff recommends the Mayor and Council discuss various public policy considerations regarding the proposed municipal broadband infrastructure project, review the technical committee recommendations, review additional proforma models, project timelines, and also discuss Interlocal Cooperatives in relation to the American Fork proposal.

BACKGROUND:

The City has been presented with a proposed municipal broadband infrastructure project. The project includes the installation of Fiber To The Home (FTTH) for every residential and commercial unit within the city. There may be several policy considerations, financial projections, recommendations, and potential interlocal cooperative opportunities discussed during the work session.

SUPPORTING DOCUMENTS

Fiber Policy Review Work Session 8-20-19 (PDF)

AMFork_proforma_190815_25percent-upgrade-rate-large (PDF)

AMFork_proforma_190815_50percent-upgrade-rate-large (PDF)

AMFork_proforma_190815_70percent-upgrade-rate-large (1) (PDF)

AF Fiber Initiative (PDF)

American Fork City

City Council Work Session

August 20, 2019

Fiber to the Premise Project Parameters for the City Council to consider:

Effective date & amount of American Fork Fiber Utility Fee

- Assess Fiber Utility Fee to each connection as soon as service is available to that connection within the construction footprint
- Residential fee will be set at \$9.95
- Business Fee (business account) will be set at \$19.95

Service Connection (excludes Utility Fees)

Residential Level Services not including the utility fee.

- 3mbs down/1mbs up - \$0.00
- 250mbs down/up - \$35.00 - \$50.00
- 1,000mbs down/up - \$45.00 - \$60.00

Commercial Grade Services

- 250mbs down/up - \$70.00 - \$80.00
- 1,000mbs* down/up - \$400.00 - \$900.00
*(redundant connection)

Opt Out of Premise Install

Residents, Churches or Businesses desiring to not have the fiber optic infrastructure installed to their premise would need to submit an application to American Fork City.

- The form would have the applicant acknowledge that they are electing to not have fiber optic connectivity provided to their premise. It would also inform the applicant that they would be required to disclose their Opt Out election upon sale of premise.
- Opt Out Applications would need to be renewed to the City every year.
- The Opt Out form must be submitted prior to Fiber installation within the applicant's section of the city (notice to be provided approximately 90 days prior to start of installation in a specific section of the city).
- The form would outline the manner and cost of future premise install to the Fiber Utility.
- The form would not require any fee upon submission.
- The Opt Out is only for the Premise Connection (Street to Structure). All premises will continue to be subject to the Fiber Utility Fee unless an exemption is granted.

Post Project Premise Install Fee

- No premise install fee if connected to fiber infrastructure during initial section installation (don't opt out as outlined above)
- \$999/\$1,499 + site specific install costs (Residential/Commercial) Premise Install fee if Opt Out form submitted prior to section construction being started.
- Applicant would contact American Fork City Utility to request connection to the Fiber Infrastructure.
- Applicant would be required to submit request forms and pay install fee prior to receiving service.

Low Income Exemption

- For residents that qualify for the Home Energy Assistance Program (HEAT), they may receive assistance to lower the Fiber Utility Fee to as low as \$1.50/month. They would be responsible for any ISP service fees.
- Residents who qualify for the LifeLine Program through Universal Service Administrative Co. (or similar programs as offered) may receive federal assistance based on Income, enrollment in SNAP, Medicaid, or Other Programs
- If certain criteria are met for the LifeLine Program (or similar program), and no federal assistance is available, residents may receive partial fiber utility fee discounts through city.

Business Rates

- Businesses, churches and schools may elect to negotiate with an ISP for a Residential level service and pay the same ISP rates as residential users.
- Residences, Businesses, Schools and Churches may request Commercial level service.

New Construction

- All new development not included in the original project shall be required to install fiber optic infrastructure in compliance with the standards and specifications of American Fork City.
- When a permit is requested, builder/contractor shall install service lateral from public infrastructure into premise for fiber connectivity
- The utility fee shall be assessed when service is given

Timeline

- August 20 @ 4 pm – City Council work session
- September 3 @ 4 pm – City Council work session
- Additional work sessions as necessary
- September 10 @ 7 pm Vote on Adoption of Interlocal Agreement
- September 24 @ 7 pm – Public Hearing on Utility Fee, Vote on Adoption of the Utility Fee, 7:10 pm Public Hearing on super parameters resolution and vote on final Parameters resolution
- October 7 – October 11 Bond Rating campaign
- October 15 – Price bonds (30 days)
- November 18 – 22 Bond Closing

Financial Projection for American Fork, Utah

FTTX - American Fork, Utah
Monthly Utility Fee of \$9.95
25% Upgrade Take Rate

8/15/19 American Fork, Utah

American Fork, Utah - Financial Overview

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Summary of Project Revenue										
Residential Recurring Revenue	\$255,785	\$1,439,637	\$2,386,232	\$2,592,817	\$2,651,862	\$2,710,907	\$2,769,953	\$2,828,998	\$2,888,043	\$2,947,088
Business/Inst. Recurring Revenue	\$35,854	\$182,437	\$382,411	\$517,872	\$598,979	\$700,626	\$837,954	\$1,019,892	\$1,058,324	\$1,082,420
Residential Annual Non-Recurring Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Business/Inst. Non-Recurring Revenue	\$4,950	\$13,530	\$14,520	\$6,600	\$6,600	\$6,600	\$6,600	\$6,600	\$0	\$0
Total Recurring Revenue	\$291,639	\$1,622,075	\$2,768,644	\$3,110,689	\$3,250,841	\$3,411,533	\$3,607,907	\$3,848,890	\$3,946,367	\$4,029,508
Total Non-Recurring Revenue	\$4,950	\$13,530	\$14,520	\$6,600	\$6,600	\$6,600	\$6,600	\$6,600	\$0	\$0
Other Services	\$75,676	\$84,550	\$93,644	\$102,868	\$112,999	\$124,128	\$136,356	\$149,791	\$164,514	\$180,699
Gross Network Revenue	\$372,265	\$1,720,155	\$2,876,807	\$3,220,157	\$3,370,440	\$3,542,262	\$3,750,862	\$4,005,281	\$4,110,881	\$4,210,207
Cost of Services (Operations Expenses)	\$471,727	\$888,990	\$1,185,700	\$1,217,797	\$1,257,183	\$1,326,744	\$1,337,655	\$1,377,904	\$1,447,876	\$1,459,765
Revenue after Expenses	-\$99,461	\$831,165	\$1,691,107	\$2,002,359	\$2,113,256	\$2,215,518	\$2,413,207	\$2,627,376	\$2,663,005	\$2,750,442
Sales, General, and Administrative Expense	\$463,318	\$699,808	\$642,160	\$540,702	\$549,369	\$558,248	\$567,344	\$577,231	\$581,826	\$591,604
Total Operating Expenses	\$935,044	\$1,530,973	\$2,333,268	\$2,543,061	\$2,662,626	\$2,773,766	\$2,980,551	\$3,204,608	\$3,244,831	\$3,342,046
Net Income after Interest, Depreciation	-\$1,426,486	-\$536,073	\$262,631	\$599,991	\$722,243	\$837,708	\$1,050,281	\$1,281,575	\$1,342,994	\$1,452,297
Capital Upgrade Fund	\$0	\$0	\$57,159	\$44,726	\$71,343	\$131,863	\$257,443	\$456,970	\$670,565	\$912,469
Bond Pre-Payments	\$0	\$0	\$65,325	\$51,116	\$81,535	\$150,701	\$294,221	\$522,251	\$766,361	\$1,042,821
Cash at Year End	\$15,702,191	\$6,191,384	\$40,828	\$31,947	\$50,959	\$94,188	\$183,888	\$326,407	\$478,975	\$651,763
New Debt	\$26,364,701	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Principal Payments Per Year	\$0	\$0	\$0	-\$1,493,440	-\$1,493,440	-\$1,493,440	-\$1,493,440	-\$1,493,440	-\$1,493,440	-\$1,493,440
Total Cumulative Debt (minus principal paid)	\$26,364,701	\$26,364,701	\$26,364,701	\$24,871,261	\$23,377,820	\$21,884,380	\$20,390,940	\$18,897,500	\$17,404,059	\$15,910,619
Interest Payments Per Year	-\$863,708	-\$863,708	-\$863,708	-\$863,708	-\$843,241	-\$822,110	-\$800,292	-\$777,764	-\$754,505	-\$730,489
Cumulative Interest Payments	-\$863,708	-\$1,727,415	-\$2,591,123	-\$3,454,830	-\$4,298,072	-\$5,120,182	-\$5,920,473	-\$6,698,237	-\$7,452,742	-\$8,183,232

Attachment: AMFork_proforma_190815_25percent-upgrade-rate-large (Policy Considerations and

American Fork, Utah - Market Summary

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Fiber Network										
Residential										
Customers Connected	3,440	7,740	8,600	8,600	8,600	8,600	8,600	8,600	8,600	8,600
Customers Upgraded (year end)	516	1,548	2,150	2,236	2,322	2,408	2,494	2,580	2,666	2,752
Upgrade Take Rate 250/250 Meg	15%	20%	25%	26%	27%	28%	29%	30%	31%	32%
Upgrade Take Rate 1000/1000 Meg	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Business										
Customers Passed	165	462	660	660	660	660	660	660	660	660
Customers Served (year end)	25	92	165	198	231	264	297	330	330	330
Take Rate	15%	20%	25%	30%	35%	40%	45%	50%	50%	50%
Network Activation Fee	\$0 one time fee to activate connection			Base Rate Service (no upgrade)			\$9.95			
Monthly Utility Fee	\$9.95									
Estimated Monthly Internet Service Cost (e.g. 250/250 Meg)	\$60			Utility Fee plus 250/250 service			\$60			
Subscriber Monthly Total Cost	\$69.95			Utility Fee plus 1000/1000 service			\$70			

American Fork, Utah - Operations Costs Summary

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
SG&A										
<i>Total Staff Expenses (salary + benefits)</i>	\$282,625	\$289,691	\$296,933	\$304,356	\$311,965	\$319,764	\$327,758	\$335,952	\$344,351	\$352,960
<i>Total Office Expenses</i>	\$28,580	\$32,650	\$30,867	\$28,662	\$29,044	\$29,433	\$29,831	\$30,806	\$31,220	\$31,642
<i>Marketing Expenses</i>	\$126,113	\$209,948	\$146,190	\$17,850	\$17,850	\$17,850	\$17,850	\$17,850	\$12,900	\$12,900
<i>Other External Expenses</i>	\$26,000	\$167,520	\$168,170	\$189,834	\$190,510	\$191,201	\$191,905	\$192,623	\$193,355	\$194,102
Total SG&A expenses	\$463,318	\$699,808	\$642,160	\$540,702	\$549,369	\$558,248	\$567,344	\$577,231	\$581,826	\$591,604
Operating Expenses										
<i>Total Service Delivery Staff (salary + benefits)</i>	\$256,250	\$358,750	\$367,719	\$376,912	\$386,335	\$395,993	\$405,893	\$416,040	\$426,441	\$437,102
<i>Support and Equip. Replacement Fees</i>	\$18,000	\$33,360	\$64,097	\$43,177	\$44,466	\$75,474	\$47,350	\$48,963	\$80,325	\$52,589
<i>ISP Fees</i>	\$43,056	\$279,780	\$511,136	\$556,222	\$577,615	\$599,008	\$620,401	\$641,794	\$663,187	\$684,581
<i>Total Network Operational Costs</i>	\$118,421	\$177,860	\$201,741	\$198,612	\$203,915	\$209,321	\$214,839	\$220,481	\$225,743	\$231,648
<i>Total Outside Plant (OSP) Maintenance</i>	\$36,000	\$39,240	\$41,008	\$42,876	\$44,852	\$46,948	\$49,172	\$50,626	\$52,180	\$53,846
Total Operating Expenses	\$471,727	\$888,990	\$1,185,700	\$1,217,797	\$1,257,183	\$1,326,744	\$1,337,655	\$1,377,904	\$1,447,876	\$1,459,765

Attachment: AMFork_proforma_190815_25percent-upgrade-rate-large (Policy Considerations and

American Fork, Utah - Capital Costs Summary

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
FTTP Capital Costs Summary										
<i>Outside Plant</i>	\$6,652,670	\$7,238,511	\$4,857,338	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Equipment</i>	\$955,735	\$497,614	\$521,310	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Other (soft costs)</i>	\$1,916,457	\$1,293,089	\$931,979	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total CAPEX	\$9,524,861	\$9,029,213	\$6,310,626	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Accumulated Capex	\$9,524,861	\$18,554,075	\$24,864,701	\$24,864,701	\$24,864,701	\$24,864,701	\$24,864,701	\$24,864,701	\$24,864,701	\$24,864,701
D&A (per year)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Depreciation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Book Value	\$7,608,404	\$15,344,529	\$20,723,177	\$20,723,177	\$20,723,177	\$20,723,177	\$20,723,177	\$20,723,177	\$20,723,177	\$20,723,177

American Fork Pro Forma Income Statement and Financial Summary

Summary of Project Revenue	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Residential Recurring Revenue	\$255,785	\$1,439,637	\$2,386,232	\$2,592,817	\$2,651,862	\$2,710,907	\$2,769,953	\$2,828,998	\$2,888,043	\$2,947,088
Business/Inst. Recurring Revenue	\$35,854	\$182,437	\$382,411	\$517,872	\$598,979	\$700,626	\$837,954	\$1,019,892	\$1,058,324	\$1,082,420
Residential Annual Non-Recurring Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Business/Inst. Non-Recurring Revenue	\$4,950	\$13,530	\$14,520	\$6,600	\$6,600	\$6,600	\$6,600	\$6,600	\$0	\$0
Total Recurring Revenue	\$291,639	\$1,622,075	\$2,768,644	\$3,110,689	\$3,250,841	\$3,411,533	\$3,607,907	\$3,848,890	\$3,946,367	\$4,029,508
Total Non-Recurring Revenue	\$4,950	\$13,530	\$14,520	\$6,600	\$6,600	\$6,600	\$6,600	\$6,600	\$0	\$0
Other Services	\$75,676	\$84,550	\$93,644	\$102,868	\$112,999	\$124,128	\$136,356	\$149,791	\$164,514	\$180,699
Gross Network Revenue	\$372,265	\$1,720,155	\$2,876,807	\$3,220,157	\$3,370,440	\$3,542,262	\$3,750,862	\$4,005,281	\$4,110,881	\$4,210,207
Cost of Services	\$471,727	\$888,990	\$1,185,700	\$1,217,797	\$1,257,183	\$1,326,744	\$1,337,655	\$1,377,904	\$1,447,876	\$1,459,765
Revenue after Expenses	-\$99,461	\$831,165	\$1,691,107	\$2,002,359	\$2,113,256	\$2,215,518	\$2,413,207	\$2,627,376	\$2,663,005	\$2,750,442
Sales, General & Administrative Expenses (SG&A)	\$463,318	\$699,808	\$642,160	\$540,702	\$549,369	\$558,248	\$567,344	\$577,231	\$581,826	\$591,604
Earnings before Interest, Taxes, Deprec.	-\$562,779	\$131,357	\$1,048,947	\$1,461,657	\$1,563,887	\$1,657,269	\$1,845,863	\$2,050,145	\$2,081,179	\$2,158,838
Interest Income	\$0	\$196,277	\$77,392	\$2,041	\$1,597	\$2,548	\$4,709	\$9,194	\$16,320	\$23,949
Interest Expense	\$863,708	\$863,708	\$863,708	\$863,708	\$843,241	\$822,110	\$800,292	\$777,764	\$754,505	\$730,489
Taxes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Depreciation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Amortization	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net Income	-\$1,426,486	-\$536,073	\$262,631	\$599,991	\$722,243	\$837,708	\$1,050,281	\$1,281,575	\$1,342,994	\$1,452,297
Year End Funds	\$15,702,191	\$6,191,384	\$163,311	\$127,790	\$203,838	\$376,752	\$735,551	\$1,305,628	\$1,915,901	\$2,607,053
Capital Upgrade Fund	\$0	\$0	\$57,159	\$44,726	\$71,343	\$131,863	\$257,443	\$456,970	\$670,565	\$912,469
Bond Pre-Payments	\$0	\$0	\$65,325	\$51,116	\$81,535	\$150,701	\$294,221	\$522,251	\$766,361	\$1,042,821
Cash on Hand at Year End	\$15,702,191	\$6,191,384	\$40,828	\$31,947	\$50,959	\$94,188	\$183,888	\$326,407	\$478,975	\$651,763
Accumulated Am. Fork Debt Payments	\$0	\$135,000	\$270,000	\$405,000	\$540,000	\$675,000	\$810,000	\$945,000	\$1,080,000	\$1,215,000
Accumulated Capital Upgrade Fund	\$0	\$0	\$57,159	\$101,885	\$173,229	\$305,092	\$562,535	\$1,019,505	\$1,690,070	\$2,602,539
Accumulated Bond Pre-Payments	\$0	\$0	\$65,325	\$116,440	\$197,975	\$348,676	\$642,897	\$1,165,148	\$1,931,509	\$2,974,330
Capital Expenditures (CAPEX)	\$9,524,861	\$9,029,213	\$6,310,626	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Accumulated CAPEX	\$9,524,861	\$18,554,075	\$24,864,701	\$24,864,701	\$24,864,701	\$24,864,701	\$24,864,701	\$24,864,701	\$24,864,701	\$24,864,701
Summary of Funding and Borrowing	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Sources of Funds										
Equity	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Long-Term Debt	\$26,575,619	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Funding	\$26,575,619	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Attachment: AMFork_proforma_190815_25percent-upgrade-rate-large (Policy Considerations and

Balance Sheet

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Current Assets										
Cash	\$15,702,191	\$6,191,384	\$163,311	\$127,790	\$203,838	\$376,752	\$735,551	\$1,305,628	\$1,915,901	\$2,607,053
Operating Reserve Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Current Assets	\$15,702,191	\$6,191,384	\$163,311	\$127,790	\$203,838	\$376,752	\$735,551	\$1,305,628	\$1,915,901	\$2,607,053
Non-Current Assets										
Long Term Investments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Amortizable Asset (Net Amortization)	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Plant in Service	\$9,474,861	\$18,504,075	\$24,814,701	\$24,814,701	\$24,814,701	\$24,814,701	\$24,814,701	\$24,814,701	\$24,814,701	\$24,814,701
Less: Accumulated Depreciation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net Plant	\$9,474,861	\$18,504,075	\$24,814,701	\$24,814,701	\$24,814,701	\$24,814,701	\$24,814,701	\$24,814,701	\$24,814,701	\$24,814,701
Other										
Total Non Current Assets	\$9,524,861	\$18,554,075	\$24,864,701	\$24,864,701	\$24,864,701	\$24,864,701	\$24,864,701	\$24,864,701	\$24,864,701	\$24,864,701
Total Assets	\$25,227,053	\$24,745,459	\$25,028,012	\$24,992,491	\$25,068,539	\$25,241,453	\$25,600,252	\$26,170,329	\$26,780,602	\$27,471,754
Current Liabilities										
Accounts Payable	\$77,920	\$132,400	\$152,322	\$146,542	\$150,546	\$157,083	\$158,750	\$162,928	\$169,142	\$170,947
Current Portion of Long Term Debt	\$0	\$0	\$629,733	\$650,199	\$671,330	\$693,149	\$715,676	\$738,936	\$762,951	\$705,693
Other Current Liabilities	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Operating Reserve Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Current Liabilities	\$77,920	\$132,400	\$782,054	\$796,741	\$821,877	\$850,231	\$874,426	\$901,864	\$932,093	\$876,641
Non-Current Liabilities and Equity										
Long Term Liabilities	\$26,575,619	\$26,575,619	\$25,945,886	\$25,295,687	\$24,624,356	\$23,931,208	\$23,215,532	\$22,476,596	\$21,713,645	\$21,007,952
Equity	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Retained Earnings	-\$1,426,486	-\$1,962,559	-\$1,699,928	-\$1,099,937	-\$377,694	\$460,013	\$1,510,295	\$2,791,870	\$4,134,864	\$5,587,162
Total Non-Current Liabilities and Equity	\$25,149,132	\$24,613,059	\$24,245,958	\$24,195,750	\$24,246,662	\$24,391,221	\$24,725,826	\$25,268,466	\$25,848,510	\$26,595,113
Total Equity and Liabilities	\$25,227,053	\$24,745,459	\$25,028,012	\$24,992,491	\$25,068,539	\$25,241,453	\$25,600,252	\$26,170,329	\$26,780,602	\$27,471,754
Current Ratio (current assets/current liabilities)										
	201.52	46.76	0.21	0.16	0.25	0.44	0.84	1.45	2.06	2.97

Attachment: AMFork_proforma_190815_25percent-upgrade-rate-large (Policy Considerations and

Cash Flow Statement (Indirect Method)

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Cash Flow from Operating Activities										
Net Income	-\$1,426,486	-\$536,073	\$262,631	\$599,991	\$722,243	\$837,708	\$1,050,281	\$1,281,575	\$1,342,994	\$1,452,297
Depreciation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Amortization	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Current Liabilities	\$77,920	\$54,479	\$19,922	-\$5,780	\$4,004	\$6,537	\$1,667	\$4,178	\$6,214	\$1,806
Net Cash Flow from Operating Activities	-\$1,348,566	-\$481,594	\$282,553	\$594,211	\$726,247	\$844,244	\$1,051,949	\$1,285,753	\$1,349,208	\$1,454,103
Cash Flow from Investing Activities										
Capital Expenditures	-\$9,524,861	-\$9,029,213	-\$6,310,626	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net Cash Flow from Investing Activities	-\$9,524,861	-\$9,029,213	-\$6,310,626	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cash Flow from Financing Activities										
Increase in Operational Reserve	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Issuance of New Long-Term Debt	\$26,575,619	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Repayment of Long-Term Debt	\$0	\$0	\$0	-\$629,733	-\$650,199	-\$671,330	-\$693,149	-\$715,676	-\$738,936	-\$762,951
Other Equity	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Investor Dividend	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net Cash Flow from Financing Activities	\$26,575,619	\$0	\$0	-\$629,733	-\$650,199	-\$671,330	-\$693,149	-\$715,676	-\$738,936	-\$762,951
Total Cash Flow at Year-End	\$15,702,191	-\$9,510,807	-\$6,028,073	-\$35,522	\$76,048	\$172,914	\$358,800	\$570,077	\$610,273	\$691,152
Cash-On-Hand at Year End	\$15,702,191	\$6,191,384	\$163,311	\$127,790	\$203,838	\$376,752	\$735,551	\$1,305,628	\$1,915,901	\$2,607,053

Attachment: AMFork_proforma_190815_25percent-upgrade-rate-large (Policy Considerations and

Funding, Equity, and Loan Costs

Financing	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Long-Term Debt	\$26,364,701	\$0	\$0	\$0	\$0					
Other Equity (cash, in-kind)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Long Term Debt (overall)	100%									
- Income interest	1.250%									
	1	2	3	4	5	6	7	8	9	10
Cash Injections	\$26,364,701	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
-Extra Payments										
Accumulated Loan Unpaid Balance	\$26,575,619	\$26,575,619	\$26,575,619	\$25,945,886	\$25,295,687	\$24,624,356	\$23,931,208	\$23,215,532	\$22,476,596	\$21,713,64
Amortization	\$0	\$0	\$0	\$629,733	\$650,199	\$671,330	\$693,149	\$715,676	\$738,936	\$762,951
Operating Reserve										
Interest Expenses	\$863,708	\$863,708	\$863,708	\$863,708	\$843,241	\$822,110	\$800,292	\$777,764	\$754,505	\$730,489
Loan Maturity (years)	30									
Length of Interest Only	3									
Loan Cost of Capital (%)	3.25%									
Fees and Closing Costs	\$210,918									
External Funding Year 1										
- Initial Loan Balance	\$26,575,619	\$26,575,619	\$26,575,619	\$26,575,619	\$25,945,886	\$25,295,687	\$24,624,356	\$23,931,208	\$23,215,532	\$22,476,59
- Interest Charge	\$863,708	\$863,708	\$863,708	\$863,708	\$843,241	\$822,110	\$800,292	\$777,764	\$754,505	\$730,489
- Total Loan Payments	\$0	\$0	\$0	-\$1,493,440	-\$1,493,440	-\$1,493,440	-\$1,493,440	-\$1,493,440	-\$1,493,440	-\$1,493,440
- Principal Payment	\$0	\$0	\$0	-\$629,733	-\$650,199	-\$671,330	-\$693,149	-\$715,676	-\$738,936	-\$762,951
- Interest Payment	-\$863,708	-\$863,708	-\$863,708	-\$863,708	-\$843,241	-\$822,110	-\$800,292	-\$777,764	-\$754,505	-\$730,489
- Ending Loan Balance	\$26,575,619	\$26,575,619	\$26,575,619	\$25,945,886	\$25,295,687	\$24,624,356	\$23,931,208	\$23,215,532	\$22,476,596	\$21,713,64
Loan Maturity (years)	30									
Length of Interest Only	3									
Loan Cost of Capital (%)	3.8%									
Fees and Closing Costs	\$0									
External Funding Year 2										
- Initial Loan Balance		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Interest Charge		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Total Loan Payments		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Principal Payment		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Interest Payment		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Ending Loan Balance		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Loan Maturity (years)	30									
Length of Interest Only	1									
Loan Cost of Capital (%)	3.8%									
Fees and Closing Costs	\$0									

Funding, Equity, and Loan Costs

External Funding Year 3

- Initial Loan Balance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Interest Charge	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Total Loan Payments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Principal Payment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Interest Payment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Ending Loan Balance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Loan Maturity (years)	30
Length of Interest Only	0
Loan Cost of Capital (%)	3.8%
Fees and Closing Costs	\$0

External Funding Year 4

- Initial Loan Balance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Interest Charge	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Total Loan Payments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Principal Payment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Interest Payment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Ending Loan Balance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Loan Maturity (years)	0
Length of Interest Only	1
Loan Cost of Capital (%)	7.0%
Fees and Closing Costs	\$0

External Funding Year 5

- Initial Loan Balance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Interest Charge	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Total Loan Payments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Principal Payment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Interest Payment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Ending Loan Balance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
New Long Term Debt	\$26,575,619	\$0	\$0	\$0	\$0					
Accumulated Init. Loan Bal.	\$26,575,619	\$26,575,619	\$26,575,619	\$26,575,619	\$25,945,886	\$25,295,687	\$24,624,356	\$23,931,208	\$23,215,532	\$22,476,599
Accumulated Loan Pmts	\$0	\$0	\$0	-\$1,493,440	-\$1,493,440	-\$1,493,440	-\$1,493,440	-\$1,493,440	-\$1,493,440	-\$1,493,440
Accumulated Princ. Pmts.	\$0	\$0	\$0	-\$629,733	-\$650,199	-\$671,330	-\$693,149	-\$715,676	-\$738,936	-\$762,951
Accumulated Interest Exp.	-\$863,708	-\$863,708	-\$863,708	-\$863,708	-\$843,241	-\$822,110	-\$800,292	-\$777,764	-\$754,505	-\$730,489
Acc. Ending Loan Bal.	\$26,575,619	\$26,575,619	\$26,575,619	\$25,945,886	\$25,295,687	\$24,624,356	\$23,931,208	\$23,215,532	\$22,476,599	\$21,713,649
Acc. Interest Charges	\$863,708	\$863,708	\$863,708	\$863,708	\$843,241	\$822,110	\$800,292	\$777,764	\$754,505	\$730,489
Interest Income	\$0	\$196,277	\$77,392	\$2,041	\$1,597	\$2,548	\$4,709	\$9,194	\$16,320	\$23,949

Working Capital and Tax

Working Capital		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	Days										
Receivables	30	31,022	143,346	239,734	268,346	280,870	295,188	312,572	333,773	342,573	350,851
Payables Estimate	30	77,920	132,400	152,322	146,542	150,546	157,083	158,750	162,928	169,142	170,947
Working Capital		-46,898	10,946	87,412	121,805	130,324	138,106	153,822	170,845	173,432	179,903
Change in Working Capital		-46,898	57,845	76,466	34,393	8,519	7,782	15,716	17,023	2,586	6,471.6
Tax Calculations		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Tax %	0.00%										
Earnings before Interest, Taxes, Deprec.		-562,779	131,357	1,048,947	1,461,657	1,563,887	1,657,269	1,845,863	2,050,145	2,081,179	2,158,838
Accumulated Earnings Before Taxes		-562,779	-431,422	617,525	2,079,182	3,643,069	5,300,338	7,146,202	9,196,347	11,277,526	13,436,364
Actual Tax		0	0	0	0	0	0	0	0	0	0

IRR Calculation												
									EBITDA			\$2,158,838
									EBITDA Multiple			10
									TEV			\$21,588,379
									Less: Net Debt			-\$18,400,899
	Investor Equity								Equity Value			\$3,187,480
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		\$3,187,480
IRR												

Partner Share Distribution

		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Net Income		-\$1,426,48	-\$536,073	\$262,631	\$599,991	\$722,243	\$837,708	\$1,050,281	\$1,281,575	\$1,342,994	\$1,452,297
Partner 1	0.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Partner 2	0.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Partner 3	0.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Partner 4	0.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Partner 5	0.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Partner Share		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Accumulated Share		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Fiber/Wireless Market Summary

Total Market											
Residential	8,600										
Business/Institutional	660										
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Premises Connected											
Residential		3,440	7,740	8,600	8,600	8,600	8,600	8,600	8,600	8,600	8,600
Business/Institutional		165	462	660	660	660	660	660	660	660	660
New Upgrade Customers											
Residential		516	1,032	602	86	86	86	86	86	86	86
Business/Institutional		25	67	73	33	33	33	33	33	0	0
Total Year End Upgrades											
Residential		516	1,548	2,150	2,236	2,322	2,408	2,494	2,580	2,666	2,752
Business/Institutional	660	25	92	165	198	231	264	297	330	330	330
Revenue per market segment											
Residential		\$271,285	\$1,540,358	\$2,570,241	\$2,793,057	\$2,859,804	\$2,926,550	\$2,993,297	\$3,060,044	\$3,126,790	\$3,193,537
Business/Institutional		\$40,804	\$195,967	\$396,931	\$524,472	\$605,579	\$707,226	\$844,554	\$1,026,492	\$1,058,324	\$1,082,420
ARPU per market (monthly)											
Residential		\$2.48	\$13.95	\$23.12	\$25.12	\$25.70	\$26.27	\$26.84	\$27.41	\$27.98	\$28.56
Business/Institutional		\$241.44	\$259.55	\$247.61	\$237.77	\$232.70	\$235.90	\$248.95	\$271.10	\$267.25	\$273.34

Residential Fiber Market and Build Out Assumptions

Market Assumptions

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Total Available Market	8,600	40%	90%	100%	100%	100%	100%	100%	100%	100%
Homes Connected	3,440	7,740	8,600	8,600	8,600	8,600	8,600	8,600	8,600	8,600
Upgrade Take Rate	15%	20%	25%	26%	27%	28%	29%	30%	31%	32%
Homes that purchase upgrade	516	1,548	2,150	2,236	2,322	2,408	2,494	2,580	2,666	2,752
Addressable Market %	6%	18%	25%	26%	27%	28%	29%	30%	31%	32%

Fiber Optic Build Out

Average Homes Connected	1,147	5,590	8,170	8,600	8,600	8,600	8,600	8,600	8,600	8,600
New Upgrade Customers	516	1,032	602	86	86	86	86	86	86	86
Average Upgrade Customers	172	1,032	1,849	2,193	2,279	2,365	2,451	2,537	2,623	2,709

Detached & Single House (SDU)

Apartments (MDU)

95%
5%

Non-recurring Revenue

Network Activation Fee	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
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Monthly Utility Fee

	0%	0%	0%	3%	0%	0%	0%	0%	0%	0%
\$9.95	\$136,952	\$667,446	\$975,498	\$1,057,645	\$1,057,645	\$1,057,645	\$1,057,645	\$1,057,645	\$1,057,645	\$1,057,645

Monthly Service Fee 250/250

	15%	20%	25%	26%	27%	28%	29%	30%	31%	32%
\$60	\$103,333	\$671,471	\$1,226,726	\$1,334,932	\$1,386,276	\$1,437,619	\$1,488,963	\$1,540,306	\$1,591,650	\$1,642,994
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Monthly Service Fee 1000/1000

\$70	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
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Advanced Services Growth

15%	\$15,500	\$100,721	\$184,009	\$200,240	\$207,941	\$215,643	\$223,344	\$231,046	\$238,747	\$246,449
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Annual Non-recurring Revenue

\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
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Annual Recurring Revenue (monthly service)

\$255,785	\$1,439,637	\$2,386,232	\$2,592,817	\$2,651,862	\$2,710,907	\$2,769,953	\$2,828,998	\$2,888,043	\$2,947,088	
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Gross Access Revenue Before Expenses

\$271,285	\$1,540,358	\$2,570,241	\$2,793,057	\$2,859,804	\$2,926,550	\$2,993,297	\$3,060,044	\$3,126,790	\$3,193,537	
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Business/Institutional Market and Build Out Assumptions

Market Assumptions		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Total Available Market	660	25%	70%	100%	100%	100%	100%	100%	100%	100%	100%
Businesses Passed		165	462	660	660	660	660	660	660	660	660
Service Take Rate		15%	20%	25%	30%	35%	40%	45%	50%	50%	50%
Businesses Served		25	92	165	198	231	264	297	330	330	330
Addressable Market %		4%	14%	25%	30%	35%	40%	45%	50%	50%	50%
Fiber Optic Build Out											
Average Businesses Passed		55	314	561	660	660	660	660	660	660	660
New fiber service customers		25	68	73	33	33	33	33	33	0	0
Average service customers		12	59	129	182	215	248	281	314	330	330
Services (Monthly)											
Rate Increase			0%	2%	2%	2%	2%	2%	2%	2%	2%
Tier 1 - 50/10	\$45	\$45	\$46	\$47	\$48	\$49	\$50	\$51	\$52	\$53	\$53
Tier 1 - 100/20	\$60	\$60	\$61	\$62	\$64	\$65	\$66	\$68	\$69	\$70	\$70
Tier 2 - 250/100	\$85	\$85	\$87	\$88	\$90	\$92	\$94	\$96	\$98	\$100	\$100
Tier 2 - 500/100	\$150	\$150	\$153	\$156	\$159	\$162	\$166	\$169	\$172	\$176	\$176
Tier 2 - 1000/100	\$450	\$450	\$459	\$468	\$478	\$487	\$497	\$507	\$517	\$527	\$527
Tier 3 - 1000/1000	\$850	\$850	\$867	\$884	\$902	\$920	\$938	\$957	\$976	\$996	\$996
Take Rate Per Service											
Tier 1 - 50/10		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Tier 1 - 100/20		70%	70%	65%	60%	50%	35%	20%	15%	10%	5%
Tier 2 - 250/100		10%	10%	10%	15%	25%	35%	35%	35%	50%	55%
Tier 2 - 500/100		5%	5%	10%	10%	10%	15%	30%	30%	20%	20%
Tier 2 - 1000/100		10%	10%	10%	10%	10%	10%	10%	15%	15%	15%
Tier 3 - 1000/1000		5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Market Total		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Non-recurring Revenue											
Network Activation Fee	\$200	\$4,950	\$13,530	\$14,520	\$6,600	\$6,600	\$6,600	\$6,600	\$6,600	\$0	\$0
Business Construction Fee	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Annual Non-recurring Revenue		\$4,950	\$13,530	\$14,520	\$6,600	\$6,600	\$6,600	\$6,600	\$6,600	\$0	\$0
Services (Yearly)											
Monthly Utility Fee	\$20	\$13,167	\$75,052	\$134,303	\$158,004	\$158,004	\$158,004	\$158,004	\$158,004	\$158,004	\$158,004
Annual Recurring Revenue		\$35,854	\$182,437	\$382,411	\$517,872	\$598,979	\$700,626	\$837,954	\$1,019,892	\$1,058,324	\$1,082,420
Business Rev. Before Expenses		\$40,804	\$195,967	\$396,931	\$524,472	\$605,579	\$707,226	\$844,554	\$1,026,492	\$1,058,324	\$1,082,420

Revenue Other Services

Fiber Optic Cable Leases

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Lit Bandwidth Leases	\$75,000	\$82,500	\$90,750	\$99,825	\$109,808	\$120,788	\$132,867	\$146,154	\$160,769	\$176,846
TBD	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TBD	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Other Services

Customer Re-connection Fee	\$25										
Customer Re-connection Fees Revenue	5%	\$676	\$2,050	\$2,894	\$3,043	\$3,191	\$3,340	\$3,489	\$3,638	\$3,745	\$3,853
AF Connect Revenue		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TBD		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TBD		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Provider fees

Service Provider A		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Service Provider B		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Service Provider C		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Total Other Services

Other services total		\$75,676	\$84,550	\$93,644	\$102,868	\$112,999	\$124,128	\$136,356	\$149,791	\$164,514	\$180,699
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General & Administrative (G&A) Expenses

Fringe Benefits		25%	Annual Salary Increase				2.5%	Cost index				2%
Staff			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Senior Manager	\$105,000		\$131,250	\$134,531	\$137,895	\$141,342	\$144,875	\$148,497	\$152,210	\$156,015	\$159,915	\$163,913
			0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Finance, Billing, Admin	\$55,000		\$34,375	\$35,234	\$36,115	\$37,018	\$37,944	\$38,892	\$39,864	\$40,861	\$41,883	\$42,930
			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Network Engineer	\$90,000		\$117,000	\$119,925	\$122,923	\$125,996	\$129,146	\$132,375	\$135,684	\$139,076	\$142,553	\$146,117
Total Staff Expense			\$282,625	\$289,691	\$296,933	\$304,356	\$311,965	\$319,764	\$327,758	\$335,952	\$344,351	\$352,960
Administrative Staff			2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Operations Staff			3.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Total # of Employees			5.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Staff and Office Expenses												
Travel Expenses	\$1,000		\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500
Other costs	\$1,000		\$5,500	\$6,630	\$6,630	\$6,630	\$6,630	\$6,630	\$6,630	\$6,630	\$6,630	\$6,630
Office and Expenses			\$12,000	\$12,240	\$12,485	\$12,734	\$12,989	\$13,249	\$13,514	\$13,784	\$14,060	\$14,341
Office Supplies			\$2,500	\$2,550	\$2,601	\$2,653	\$2,706	\$2,760	\$2,815	\$2,872	\$2,929	\$2,988
Computers and Office Equipment			\$3,500	\$3,570	\$3,641	\$3,714	\$3,789	\$3,864	\$3,942	\$4,020	\$4,101	\$4,183
Mailing & Delivery	\$5		\$2,580	\$5,160	\$3,010	\$430	\$430	\$430	\$430	\$1,000	\$1,000	\$1,000
Total Staff and Office Expenses			\$28,580	\$32,650	\$30,867	\$28,662	\$29,044	\$29,433	\$29,831	\$30,806	\$31,220	\$31,642
Sales and Marketing												
Marketing/Sales Management			\$45,000	\$45,000	\$45,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Contract Acquisition	\$150.00		\$81,113	\$164,948	\$101,190	\$17,850	\$17,850	\$17,850	\$17,850	\$17,850	\$12,900	\$12,900
Total Sales and Marketing			\$126,113	\$209,948	\$146,190	\$17,850	\$17,850	\$17,850	\$17,850	\$17,850	\$12,900	\$12,900
Other External Expenses												
Audit			\$0	\$6,000	\$6,120	\$6,242	\$6,367	\$6,495	\$6,624	\$6,757	\$6,892	\$7,030
Project Legal			\$0	\$0	\$0	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000
American Fork Debt Payment			\$0	\$135,000	\$135,000	\$135,000	\$135,000	\$135,000	\$135,000	\$135,000	\$135,000	\$135,000
Financial & Technical Consulting			\$0	\$0	\$0	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
Asset, Business, Liability Insurance			\$16,000	\$16,320	\$16,646	\$16,979	\$17,319	\$17,665	\$18,019	\$18,379	\$18,747	\$19,121
Miscellaneous			\$10,000	\$10,200	\$10,404	\$10,612	\$10,824	\$11,041	\$11,262	\$11,487	\$11,717	\$11,951
Total Other External Expenses			\$26,000	\$167,520	\$168,170	\$189,834	\$190,510	\$191,201	\$191,905	\$192,623	\$193,355	\$194,102
Total SG&A Expenses			\$463,318	\$699,808	\$642,160	\$540,702	\$549,369	\$558,248	\$567,344	\$577,231	\$581,826	\$591,604

Attachment: AMFork_proforma_190815_25percent-upgrade-rate-large (Policy Considerations and

Service Delivery and Network Operations

		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Service Delivery Staff		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Customer Services Manager	\$85,000	\$106,250	\$108,906	\$111,629	\$114,420	\$117,280	\$120,212	\$123,217	\$126,298	\$129,455	\$132,692
		1.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
OSP Network Technician	\$75,000	\$93,750	\$192,188	\$196,992	\$201,917	\$206,965	\$212,139	\$217,443	\$222,879	\$228,451	\$234,162
		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Customer Service Delivery	\$45,000	\$56,250	\$57,656	\$59,098	\$60,575	\$62,089	\$63,642	\$65,233	\$66,864	\$68,535	\$70,249
Total Service Delivery Staff Salary and Benefits		\$256,250	\$358,750	\$367,719	\$376,912	\$386,335	\$395,993	\$405,893	\$416,040	\$426,441	\$437,102
Support and Equip. Replacement Fees											
Core Network Equipment		\$0	\$0	\$29,620	\$0	\$0	\$29,620	\$0	\$0	\$29,620	\$0
Distribution Network Equipment		\$0	\$7,500	\$7,500	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
CPE		\$0	\$7,500	\$8,250	\$9,075	\$9,983	\$10,981	\$12,079	\$13,287	\$14,615	\$16,077
Tools and vehicle maintenance, replacement		\$18,000	\$18,360	\$18,727	\$19,102	\$19,484	\$19,873	\$20,271	\$20,676	\$21,090	\$21,512
Total Equipment Support Fees		\$18,000	\$33,360	\$64,097	\$43,177	\$44,466	\$75,474	\$47,350	\$48,963	\$80,325	\$52,589
ISP Fees		\$43,056	\$279,780	\$511,136	\$556,222	\$577,615	\$599,008	\$620,401	\$641,794	\$663,187	\$684,581
Network Operations Costs											
New Customer Fee	\$15	\$8,115	\$16,485	\$10,125	\$1,785	\$1,785	\$1,785	\$1,785	\$1,785	\$1,290	\$1,290
Re-Connection Fee	50%	\$338	\$1,025	\$1,447	\$1,521	\$1,596	\$1,670	\$1,744	\$1,819	\$1,873	\$1,926
Network Operations base cost		\$64,000	\$64,000	\$64,000	\$64,000	\$64,000	\$64,000	\$64,000	\$64,000	\$64,000	\$64,000
Network Operations per sub fee	\$4	\$24,768	\$74,304	\$103,200	\$107,328	\$111,456	\$115,584	\$119,712	\$123,840	\$127,968	\$132,096
Network electric utility costs		\$3,000	\$3,060	\$3,121	\$3,184	\$3,247	\$3,312	\$3,378	\$3,446	\$3,515	\$3,585
Locates		\$1,200	\$1,236	\$1,273	\$1,311	\$1,351	\$1,391	\$1,433	\$1,476	\$1,520	\$1,566
Pole Use Fees	\$25	\$7,500	\$8,250	\$9,075	\$9,983	\$10,981	\$12,079	\$13,287	\$14,615	\$16,077	\$17,685
Conduit/Dark Fiber Lease		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Storage and site leases		\$9,500	\$9,500	\$9,500	\$9,500	\$9,500	\$9,500	\$9,500	\$9,500	\$9,500	\$9,500
Total Network Operational Costs		\$118,421	\$177,860	\$201,741	\$198,612	\$203,915	\$209,321	\$214,839	\$220,481	\$225,743	\$231,648
Outside Plant (OSP) Costs											
Outside Plant Maintenance		\$36,000	\$37,440	\$38,938	\$40,495	\$42,115	\$43,800	\$45,551	\$46,463	\$47,392	\$48,340
Buildings Maintenance		\$0	\$1,800	\$2,070	\$2,381	\$2,738	\$3,148	\$3,620	\$4,164	\$4,788	\$5,506
Total Outside Plant (OSP) Maintenance		\$36,000	\$39,240	\$41,008	\$42,876	\$44,852	\$46,948	\$49,172	\$50,626	\$52,180	\$53,846
Total Operational Expenses		\$471,727	\$888,990	\$1,185,700	\$1,217,797	\$1,257,183	\$1,326,744	\$1,337,655	\$1,377,904	\$1,447,876	\$1,459,765
Total SG&A and OPEX		\$935,044	\$1,588,798	\$1,827,861	\$1,758,499	\$1,806,553	\$1,884,992	\$1,904,999	\$1,955,136	\$2,029,702	\$2,051,369
Monthly Operational Cost per Sub		\$403	\$100	\$55	\$42	\$41	\$41	\$39	\$38	\$39	\$37

Attachment: AMFork_proforma_190815_25percent-upgrade-rate-large (Policy Considerations and

Capital Expenditure (CAPEX) Summary

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Outside Plant										
Buildings	\$138,790	\$46,263	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Distribution	\$4,415,245	\$5,093,613	\$3,058,508	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Access	\$2,098,635	\$2,098,635	\$1,798,830	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal	\$6,652,670	\$7,238,511	\$4,857,338	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Equipment										
Core / Routing	\$296,199	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Distribution / Switching	\$552,904	\$414,678	\$414,678	\$0	\$0	\$0	\$0	\$0	\$0	\$0
CPE	\$47,392	\$82,936	\$106,632	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other (servers, etc.)	\$59,240	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal	\$955,735	\$497,614	\$521,310	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other										
Professional Services	\$697,220	\$697,220	\$348,610	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Engineering	\$896,737	\$448,369	\$448,369	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Legal	\$60,000	\$60,000	\$60,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Tools and Vehicles	\$125,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
OSS/BSS/Software	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Upfront Costs	\$87,500	\$87,500	\$75,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal	\$1,916,457	\$1,293,089	\$931,979	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL CAPITAL EXPENDITURES	\$9,524,861	\$9,029,213	\$6,310,626	\$0	\$0	\$0	\$0	\$0	\$0	\$0
40 Year Depreciation Capex	\$8,394,127	\$8,531,600	\$5,789,317	\$0	\$0	\$0	\$0	\$0	\$0	\$0
10 Year Depreciation Capex	\$1,080,735	\$497,614	\$521,310	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7 Year Amortization Capex	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Depreciation Schedule

- Passive	0		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
				\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
					\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
						\$0	\$0	\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0	\$0
								\$0	\$0	\$0	\$0	\$0
									\$0	\$0	\$0	\$0
										\$0	\$0	\$0
											\$0	\$0
												\$0
Depreciation/ Yr		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Accumulated		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Depreciation (Yrs)												
- Active	0		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
				\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
					\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
						\$0	\$0	\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0	\$0
								\$0	\$0	\$0	\$0	\$0
									\$0	\$0	\$0	\$0
										\$0	\$0	\$0
											\$0	\$0
												\$0
Depreciation/ Yr		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Accumulated		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Amortization/ Yr		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Accumulated		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Amortization	0		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
				\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
					\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
						\$0	\$0	\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0	\$0
								\$0	\$0	\$0	\$0	\$0
									\$0	\$0	\$0	\$0
										\$0	\$0	\$0
											\$0	\$0
												\$0
Amortization/ Yr		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Accumulated		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Assets												
Yearly Costs		\$9,524,861	\$9,029,213	\$6,310,626	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Passive		\$6,652,670	\$7,238,511	\$4,857,338	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Equipment		\$955,735	\$497,614	\$521,310	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Software & PS		\$1,916,457	\$1,293,089	\$931,979	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Accumulated Costs		\$9,524,861	\$18,554,075	\$24,864,701	\$24,864,701	\$24,864,701	\$24,864,701	\$24,864,701	\$24,864,701	\$24,864,701	\$24,864,701	\$24,864,701
Amortization		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Depreciation		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Intangible Asset Value		\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Book Value		\$7,608,404	\$15,344,529	\$20,723,177	\$20,723,177	\$20,723,177	\$20,723,177	\$20,723,177	\$20,723,177	\$20,723,177	\$20,723,177	\$20,723,177
Book Value / CAPEX		80%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%
80% of Book Value		\$6,086,723	\$12,275,623	\$16,578,542	\$16,578,542	\$16,578,542	\$16,578,542	\$16,578,542	\$16,578,542	\$16,578,542	\$16,578,542	\$16,578,542

Financial Projection for American Fork, Utah

FTTX - American Fork, Utah
Monthly Utility Fee of \$9.95
50% Upgrade Take Rate

8/15/19 American Fork, Utah

American Fork, Utah - Financial Overview

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Summary of Project Revenue										
Residential Recurring Revenue	\$556,805	\$2,713,638	\$3,966,086	\$4,187,919	\$4,187,919	\$4,187,919	\$4,187,919	\$4,187,919	\$4,187,919	\$4,187,919
Business/Inst. Recurring Revenue	\$35,854	\$182,437	\$382,411	\$517,872	\$598,979	\$700,626	\$837,954	\$1,019,892	\$1,058,324	\$1,082,420
Residential Annual Non-Recurring Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Business/Inst. Non-Recurring Revenue	\$4,950	\$13,530	\$14,520	\$6,600	\$6,600	\$6,600	\$6,600	\$6,600	\$0	\$0
Total Recurring Revenue	\$592,660	\$2,896,075	\$4,348,497	\$4,705,791	\$4,786,898	\$4,888,545	\$5,025,873	\$5,207,811	\$5,246,244	\$5,270,340
Total Non-Recurring Revenue	\$4,950	\$13,530	\$14,520	\$6,600	\$6,600	\$6,600	\$6,600	\$6,600	\$0	\$0
Other Services	\$77,181	\$87,453	\$96,331	\$105,448	\$115,471	\$126,493	\$138,613	\$151,941	\$166,557	\$182,634
Gross Network Revenue	\$674,791	\$2,997,057	\$4,459,348	\$4,817,838	\$4,908,969	\$5,021,638	\$5,171,087	\$5,366,352	\$5,412,800	\$5,452,973
Cost of Services (Operations Expenses)	\$698,228	\$1,641,942	\$2,047,624	\$2,081,072	\$2,097,721	\$2,144,659	\$2,133,070	\$2,150,948	\$2,198,687	\$2,188,491
Revenue after Expenses	-\$23,437	\$1,355,116	\$2,411,725	\$2,736,766	\$2,811,248	\$2,876,979	\$3,038,017	\$3,215,404	\$3,214,113	\$3,264,482
Sales, General, and Administrative Expense	\$738,163	\$965,568	\$699,370	\$769,092	\$702,759	\$711,638	\$720,734	\$731,051	\$735,646	\$745,424
Total Operating Expenses	\$1,436,391	\$2,320,684	\$3,111,095	\$3,505,858	\$3,514,007	\$3,588,618	\$3,758,751	\$3,946,456	\$3,949,759	\$4,009,906
Net Income after Interest, Depreciation	-\$1,613,022	-\$234,183	\$949,261	\$1,124,335	\$1,293,006	\$1,380,409	\$1,564,708	\$1,767,203	\$1,800,206	\$1,880,613
Capital Upgrade Fund	\$0	\$0	\$188,611	\$367,866	\$594,636	\$847,784	\$1,156,208	\$1,528,627	\$1,905,277	\$2,300,245
Bond Pre-Payments	\$0	\$0	\$215,556	\$420,418	\$679,584	\$968,896	\$1,321,380	\$1,747,002	\$2,177,459	\$2,628,851
Cash at Year End	\$15,179,434	\$5,888,631	\$134,722	\$262,761	\$424,740	\$605,560	\$825,863	\$1,091,877	\$1,360,912	\$1,643,032
New Debt	\$25,989,701	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Principal Payments Per Year	\$0	\$0	\$0	-\$1,472,198	-\$1,472,198	-\$1,472,198	-\$1,472,198	-\$1,472,198	-\$1,472,198	-\$1,472,198
Total Cumulative Debt (minus principal paid)	\$25,989,701	\$25,989,701	\$25,989,701	\$24,517,503	\$23,045,305	\$21,573,106	\$20,100,908	\$18,628,710	\$17,156,512	\$15,684,313
Interest Payments Per Year	-\$851,423	-\$851,423	-\$851,423	-\$851,423	-\$831,247	-\$810,416	-\$788,909	-\$766,702	-\$743,773	-\$720,099
Cumulative Interest Payments	-\$851,423	-\$1,702,845	-\$2,554,268	-\$3,405,690	-\$4,236,938	-\$5,047,354	-\$5,836,263	-\$6,602,965	-\$7,346,738	-\$8,066,837

Attachment: AMFork_proforma_190815_50percent-upgrade-rate-large (Policy Considerations and

American Fork, Utah - Market Summary

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Fiber Network										
Residential										
Customers Connected	3,440	7,740	8,600	8,600	8,600	8,600	8,600	8,600	8,600	8,600
Customers Upgraded (year end)	1,720	3,870	4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300
Upgrade Take Rate 250/250 Meg	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%
Upgrade Take Rate 1000/1000 Meg	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
Business										
Customers Passed	165	462	660	660	660	660	660	660	660	660
Customers Served (year end)	25	92	165	198	231	264	297	330	330	330
Take Rate	15%	20%	25%	30%	35%	40%	45%	50%	50%	50%
Network Activation Fee	\$0 one time fee to activate connection				Base Rate Service (no upgrade)		\$9.95			
Monthly Utility Fee	\$9.95									
Estimated Monthly Internet Service Cost (e.g. 250/250 Meg)	\$60				Utility Fee plus 250/250 service		\$60			
Subscriber Monthly Total Cost	\$69.95				Utility Fee plus 1000/1000 service		\$70			

American Fork, Utah - Operations Costs Summary

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
SG&A										
<i>Total Staff Expenses (salary + benefits)</i>	\$282,625	\$289,691	\$296,933	\$304,356	\$311,965	\$319,764	\$327,758	\$335,952	\$344,351	\$352,960
<i>Total Office Expenses</i>	\$47,825	\$55,710	\$38,877	\$34,952	\$35,334	\$35,723	\$36,121	\$37,526	\$37,940	\$38,362
<i>Marketing Expenses</i>	\$381,713	\$452,648	\$195,390	\$124,950	\$49,950	\$49,950	\$49,950	\$49,950	\$45,000	\$45,000
<i>Other External Expenses</i>	\$26,000	\$167,520	\$168,170	\$304,834	\$305,510	\$306,201	\$306,905	\$307,623	\$308,355	\$309,102
Total SG&A expenses	\$738,163	\$965,568	\$699,370	\$769,092	\$702,759	\$711,638	\$720,734	\$731,051	\$735,646	\$745,424
Operating Expenses										
<i>Total Service Delivery Staff (salary + benefits)</i>	\$268,750	\$429,219	\$439,949	\$450,948	\$462,222	\$473,777	\$485,622	\$497,762	\$510,206	\$522,961
<i>Support and Equip. Replacement Fees</i>	\$36,000	\$74,220	\$105,824	\$78,328	\$80,605	\$112,668	\$85,673	\$88,497	\$121,159	\$94,818
<i>ISP Fees</i>	\$162,452	\$791,726	\$1,157,138	\$1,211,237	\$1,211,237	\$1,211,237	\$1,211,237	\$1,211,237	\$1,211,237	\$1,211,237
<i>Total Network Operational Costs</i>	\$195,026	\$307,537	\$303,705	\$297,684	\$298,806	\$300,030	\$301,366	\$302,826	\$303,906	\$305,629
<i>Total Outside Plant (OSP) Maintenance</i>	\$36,000	\$39,240	\$41,008	\$42,876	\$44,852	\$46,948	\$49,172	\$50,626	\$52,180	\$53,846
Total Operating Expenses	\$698,228	\$1,641,942	\$2,047,624	\$2,081,072	\$2,097,721	\$2,144,659	\$2,133,070	\$2,150,948	\$2,198,687	\$2,188,491

Attachment: AMFork_proforma_190815_50percent-upgrade-rate-large (Policy Considerations and

American Fork, Utah - Capital Costs Summary

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
FTTP Capital Costs Summary										
<i>Outside Plant</i>	\$6,652,670	\$7,238,511	\$4,857,338	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Equipment</i>	\$955,735	\$497,614	\$521,310	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Other (soft costs)</i>	\$1,916,457	\$1,418,089	\$931,979	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total CAPEX	\$9,524,861	\$9,154,213	\$6,310,626	\$0	\$0	\$0	\$0	\$0	\$0	\$0
 Accumulated Capex	 \$9,524,861	 \$18,679,075	 \$24,989,701	 \$24,989,701	 \$24,989,701	 \$24,989,701	 \$24,989,701	 \$24,989,701	 \$24,989,701	 \$24,989,701
 D&A (per year)	 \$0	 \$0	 \$0	 \$0	 \$0	 \$0	 \$0	 \$0	 \$0	 \$0
Total Depreciation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Book Value	\$7,608,404	\$15,344,529	\$20,723,177	\$20,723,177	\$20,723,177	\$20,723,177	\$20,723,177	\$20,723,177	\$20,723,177	\$20,723,177

American Fork Pro Forma Income Statement and Financial Summary

Summary of Project Revenue	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Residential Recurring Revenue	\$556,805	\$2,713,638	\$3,966,086	\$4,187,919	\$4,187,919	\$4,187,919	\$4,187,919	\$4,187,919	\$4,187,919	\$4,187,919
Business/Inst. Recurring Revenue	\$35,854	\$182,437	\$382,411	\$517,872	\$598,979	\$700,626	\$837,954	\$1,019,892	\$1,058,324	\$1,082,420
Residential Annual Non-Recurring Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Business/Inst. Non-Recurring Revenue	\$4,950	\$13,530	\$14,520	\$6,600	\$6,600	\$6,600	\$6,600	\$6,600	\$0	\$0
Total Recurring Revenue	\$592,660	\$2,896,075	\$4,348,497	\$4,705,791	\$4,786,898	\$4,888,545	\$5,025,873	\$5,207,811	\$5,246,244	\$5,270,340
Total Non-Recurring Revenue	\$4,950	\$13,530	\$14,520	\$6,600	\$6,600	\$6,600	\$6,600	\$6,600	\$0	\$0
Other Services	\$77,181	\$87,453	\$96,331	\$105,448	\$115,471	\$126,493	\$138,613	\$151,941	\$166,557	\$182,634
Gross Network Revenue	\$674,791	\$2,997,057	\$4,459,348	\$4,817,838	\$4,908,969	\$5,021,638	\$5,171,087	\$5,366,352	\$5,412,800	\$5,452,973
Cost of Services	\$698,228	\$1,641,942	\$2,047,624	\$2,081,072	\$2,097,721	\$2,144,659	\$2,133,070	\$2,150,948	\$2,198,687	\$2,188,491
Revenue after Expenses	-\$23,437	\$1,355,116	\$2,411,725	\$2,736,766	\$2,811,248	\$2,876,979	\$3,038,017	\$3,215,404	\$3,214,113	\$3,264,482
Sales, General & Administrative Expenses (SG&A)	\$738,163	\$965,568	\$699,370	\$769,092	\$702,759	\$711,638	\$720,734	\$731,051	\$735,646	\$745,424
Earnings before Interest, Taxes, Deprec.	-\$761,600	\$389,548	\$1,712,354	\$1,967,674	\$2,108,488	\$2,165,341	\$2,317,283	\$2,484,353	\$2,478,467	\$2,519,058
Interest Income	\$0	\$227,692	\$88,329	\$8,083	\$15,766	\$25,484	\$36,334	\$49,552	\$65,513	\$81,655
Interest Expense	\$851,423	\$851,423	\$851,423	\$851,423	\$831,247	\$810,416	\$788,909	\$766,702	\$743,773	\$720,099
Taxes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Depreciation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Amortization	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net Income	-\$1,613,022	-\$234,183	\$949,261	\$1,124,335	\$1,293,006	\$1,380,409	\$1,564,708	\$1,767,203	\$1,800,206	\$1,880,613
Year End Funds	\$15,179,434	\$5,888,631	\$538,889	\$1,051,046	\$1,698,961	\$2,422,239	\$3,303,450	\$4,367,506	\$5,443,648	\$6,572,128
Capital Upgrade Fund	\$0	\$0	\$188,611	\$367,866	\$594,636	\$847,784	\$1,156,208	\$1,528,627	\$1,905,277	\$2,300,245
Bond Pre-Payments	\$0	\$0	\$215,556	\$420,418	\$679,584	\$968,896	\$1,321,380	\$1,747,002	\$2,177,459	\$2,628,851
Cash on Hand at Year End	\$15,179,434	\$5,888,631	\$134,722	\$262,761	\$424,740	\$605,560	\$825,863	\$1,091,877	\$1,360,912	\$1,643,032
Accumulated Am. Fork Debt Payments	\$0	\$135,000	\$270,000	\$405,000	\$540,000	\$675,000	\$810,000	\$945,000	\$1,080,000	\$1,215,000
Accumulated Capital Upgrade Fund	\$0	\$0	\$188,611	\$556,477	\$1,151,114	\$1,998,897	\$3,155,105	\$4,683,732	\$6,589,009	\$8,889,254
Accumulated Bond Pre-Payments	\$0	\$0	\$215,556	\$635,974	\$1,315,558	\$2,284,454	\$3,605,834	\$5,352,837	\$7,530,296	\$10,159,147
Capital Expenditures (CAPEX)	\$9,524,861	\$9,154,213	\$6,310,626	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Accumulated CAPEX	\$9,524,861	\$18,679,075	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701
Summary of Funding and Borrowing	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Sources of Funds										
Equity	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Long-Term Debt	\$26,197,619	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Funding	\$26,197,619	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Attachment: AMFork_proforma_190815_50percent-upgrade-rate-large (Policy Considerations and

Balance Sheet

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Current Assets										
Cash	\$15,179,434	\$5,888,631	\$538,889	\$1,051,046	\$1,698,961	\$2,422,239	\$3,303,450	\$4,367,506	\$5,443,648	\$6,572,128
Operating Reserve Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Current Assets	\$15,179,434	\$5,888,631	\$538,889	\$1,051,046	\$1,698,961	\$2,422,239	\$3,303,450	\$4,367,506	\$5,443,648	\$6,572,128
Non-Current Assets										
Long Term Investments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Amortizable Asset (Net Amortization)	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Plant in Service	\$9,474,861	\$18,629,075	\$24,939,701	\$24,939,701	\$24,939,701	\$24,939,701	\$24,939,701	\$24,939,701	\$24,939,701	\$24,939,701
Less: Accumulated Depreciation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net Plant	\$9,474,861	\$18,629,075	\$24,939,701	\$24,939,701	\$24,939,701	\$24,939,701	\$24,939,701	\$24,939,701	\$24,939,701	\$24,939,701
Other										
Total Non Current Assets	\$9,524,861	\$18,679,075	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701
Total Assets	\$24,704,295	\$24,567,705	\$25,528,590	\$26,040,747	\$26,688,662	\$27,411,940	\$28,293,151	\$29,357,207	\$30,433,349	\$31,561,829
Current Liabilities										
Accounts Payable	\$119,699	\$217,292	\$228,916	\$237,514	\$233,373	\$238,025	\$237,817	\$240,167	\$244,528	\$244,493
Current Portion of Long Term Debt	\$0	\$0	\$620,776	\$640,951	\$661,782	\$683,290	\$705,497	\$728,425	\$752,099	\$695,656
Other Current Liabilities	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Operating Reserve Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Current Liabilities	\$119,699	\$217,292	\$849,692	\$878,465	\$895,155	\$921,314	\$943,314	\$968,592	\$996,627	\$940,149
Non-Current Liabilities and Equity										
Long Term Liabilities	\$26,197,619	\$26,197,619	\$25,576,843	\$24,935,892	\$24,274,110	\$23,590,821	\$22,885,324	\$22,156,899	\$21,404,800	\$20,709,144
Equity	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Retained Earnings	-\$1,613,022	-\$1,847,206	-\$897,945	\$226,390	\$1,519,397	\$2,899,805	\$4,464,513	\$6,231,716	\$8,031,923	\$9,912,536
Total Non-Current Liabilities and Equity	\$24,584,596	\$24,350,413	\$24,678,898	\$25,162,282	\$25,793,507	\$26,490,626	\$27,349,837	\$28,388,615	\$29,436,723	\$30,621,680
Total Equity and Liabilities	\$24,704,295	\$24,567,705	\$25,528,590	\$26,040,747	\$26,688,662	\$27,411,940	\$28,293,151	\$29,357,207	\$30,433,349	\$31,561,829
Current Ratio (current assets/current liabilities)	126.81	27.10	0.63	1.20	1.90	2.63	3.50	4.51	5.46	6.99

Cash Flow Statement (Indirect Method)

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Cash Flow from Operating Activities										
Net Income	-\$1,613,022	-\$234,183	\$949,261	\$1,124,335	\$1,293,006	\$1,380,409	\$1,564,708	\$1,767,203	\$1,800,206	\$1,880,613
Depreciation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Amortization	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Current Liabilities	\$119,699	\$97,593	\$11,624	\$8,598	-\$4,140	\$4,651	-\$208	\$2,350	\$4,361	-\$35
Net Cash Flow from Operating Activities	-\$1,493,323	-\$136,590	\$960,885	\$1,132,933	\$1,288,866	\$1,385,060	\$1,564,500	\$1,769,553	\$1,804,568	\$1,880,578
Cash Flow from Investing Activities										
Capital Expenditures	-\$9,524,861	-\$9,154,213	-\$6,310,626	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net Cash Flow from Investing Activities	-\$9,524,861	-\$9,154,213	-\$6,310,626	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cash Flow from Financing Activities										
Increase in Operational Reserve	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Issuance of New Long-Term Debt	\$26,197,619	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Repayment of Long-Term Debt	\$0	\$0	\$0	-\$620,776	-\$640,951	-\$661,782	-\$683,290	-\$705,497	-\$728,425	-\$752,099
Other Equity	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Investor Dividend	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net Cash Flow from Financing Activities	\$26,197,619	\$0	\$0	-\$620,776	-\$640,951	-\$661,782	-\$683,290	-\$705,497	-\$728,425	-\$752,099
Total Cash Flow at Year-End	\$15,179,434	-\$9,290,804	-\$5,349,742	\$512,157	\$647,915	\$723,278	\$881,211	\$1,064,056	\$1,076,142	\$1,128,479
Cash-On-Hand at Year End	\$15,179,434	\$5,888,631	\$538,889	\$1,051,046	\$1,698,961	\$2,422,239	\$3,303,450	\$4,367,506	\$5,443,648	\$6,572,128

Attachment: AMFork_proforma_190815_50percent-upgrade-rate-large (Policy Considerations and

Funding, Equity, and Loan Costs

Financing		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Long-Term Debt		\$25,989,701	\$0	\$0	\$0	\$0					
Other Equity (cash, in-kind)		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Long Term Debt (overall)	100%										
- Income interest	1.500%										
		1	2	3	4	5	6	7	8	9	10
Cash Injections		\$25,989,701	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
-Extra Payments											
Accumulated Loan Unpaid Balance		\$26,197,619	\$26,197,619	\$26,197,619	\$25,576,843	\$24,935,892	\$24,274,110	\$23,590,821	\$22,885,324	\$22,156,899	\$21,404,80
Amortization		\$0	\$0	\$0	\$620,776	\$640,951	\$661,782	\$683,290	\$705,497	\$728,425	\$752,099
Operating Reserve											
Interest Expenses		\$851,423	\$851,423	\$851,423	\$851,423	\$831,247	\$810,416	\$788,909	\$766,702	\$743,773	\$720,099
Loan Maturity (years)	30										
Length of Interest Only	3										
Loan Cost of Capital (%)	3.25%										
Fees and Closing Costs	\$207,918										
External Funding Year 1											
- Initial Loan Balance		\$26,197,619	\$26,197,619	\$26,197,619	\$26,197,619	\$25,576,843	\$24,935,892	\$24,274,110	\$23,590,821	\$22,885,324	\$22,156,89
- Interest Charge		\$851,423	\$851,423	\$851,423	\$851,423	\$831,247	\$810,416	\$788,909	\$766,702	\$743,773	\$720,099
- Total Loan Payments		\$0	\$0	\$0	-\$1,472,198	-\$1,472,198	-\$1,472,198	-\$1,472,198	-\$1,472,198	-\$1,472,198	-\$1,472,198
- Principal Payment		\$0	\$0	\$0	-\$620,776	-\$640,951	-\$661,782	-\$683,290	-\$705,497	-\$728,425	-\$752,099
- Interest Payment		-\$851,423	-\$851,423	-\$851,423	-\$851,423	-\$831,247	-\$810,416	-\$788,909	-\$766,702	-\$743,773	-\$720,099
- Ending Loan Balance		\$26,197,619	\$26,197,619	\$26,197,619	\$25,576,843	\$24,935,892	\$24,274,110	\$23,590,821	\$22,885,324	\$22,156,899	\$21,404,80
Loan Maturity (years)	30										
Length of Interest Only	3										
Loan Cost of Capital (%)	3.8%										
Fees and Closing Costs	\$0										
External Funding Year 2											
- Initial Loan Balance			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Interest Charge			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Total Loan Payments			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Principal Payment			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Interest Payment			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Ending Loan Balance			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Loan Maturity (years)	30										
Length of Interest Only	1										
Loan Cost of Capital (%)	3.8%										
Fees and Closing Costs	\$0										

Funding, Equity, and Loan Costs

External Funding Year 3										
- Initial Loan Balance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Interest Charge	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Total Loan Payments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Principal Payment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Interest Payment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Ending Loan Balance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Loan Maturity (years)	30									
Length of Interest Only	0									
Loan Cost of Capital (%)	3.8%									
Fees and Closing Costs	\$0									
External Funding Year 4										
- Initial Loan Balance		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Interest Charge		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Total Loan Payments		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Principal Payment		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Interest Payment		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Ending Loan Balance		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Loan Maturity (years)	0									
Length of Interest Only	1									
Loan Cost of Capital (%)	7.0%									
Fees and Closing Costs	\$0									
External Funding Year 5										
- Initial Loan Balance			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Interest Charge			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Total Loan Payments			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Principal Payment			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Interest Payment			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Ending Loan Balance			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
New Long Term Debt	\$26,197,619	\$0	\$0	\$0	\$0					
Accumulated Init. Loan Bal.	\$26,197,619	\$26,197,619	\$26,197,619	\$26,197,619	\$25,576,843	\$24,935,892	\$24,274,110	\$23,590,821	\$22,885,324	\$22,156,899
Accumulated Loan Pmts	\$0	\$0	\$0	-\$1,472,198	-\$1,472,198	-\$1,472,198	-\$1,472,198	-\$1,472,198	-\$1,472,198	-\$1,472,198
Accumulated Princ. Pmts.	\$0	\$0	\$0	-\$620,776	-\$640,951	-\$661,782	-\$683,290	-\$705,497	-\$728,425	-\$752,099
Accumulated Interest Exp.	-\$851,423	-\$851,423	-\$851,423	-\$851,423	-\$831,247	-\$810,416	-\$788,909	-\$766,702	-\$743,773	-\$720,099
Acc. Ending Loan Bal.	\$26,197,619	\$26,197,619	\$26,197,619	\$25,576,843	\$24,935,892	\$24,274,110	\$23,590,821	\$22,885,324	\$22,156,899	\$21,404,800
Acc. Interest Charges	\$851,423	\$851,423	\$851,423	\$851,423	\$831,247	\$810,416	\$788,909	\$766,702	\$743,773	\$720,099
Interest Income	\$0	\$227,692	\$88,329	\$8,083	\$15,766	\$25,484	\$36,334	\$49,552	\$65,513	\$81,655

Working Capital and Tax

Working Capital		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	Days										
Receivables	30	56,233	249,755	371,612	401,487	409,081	418,470	430,924	447,196	451,067	454,414
Payables Estimate	30	119,699	217,292	228,916	237,514	233,373	238,025	237,817	240,167	244,528	244,493
Working Capital		-63,467	32,462	142,696	163,973	175,707	180,445	193,107	207,029	206,539	209,921
Change in Working Capital		-63,467	95,929	110,234	21,277	11,734	4,738	12,662	13,922	491	3,382.6
Tax Calculations		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Tax %	0.00%										
Earnings before Interest, Taxes, Deprec.		-761,600	389,548	1,712,354	1,967,674	2,108,488	2,165,341	2,317,283	2,484,353	2,478,467	2,519,058
Accumulated Earnings Before Taxes		-761,600	-372,052	1,340,302	3,307,976	5,416,464	7,581,805	9,899,088	12,383,441	14,861,908	17,380,966
Actual Tax		0	0	0	0	0	0	0	0	0	0

IRR Calculation												
									EBITDA			\$2,519,058
									EBITDA Multiple			10
									TEV			\$25,190,578
									Less: Net Debt			-\$14,137,016
	Investor Equity								Equity Value			\$11,053,562
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		\$11,053,562
IRR												

Partner Share Distribution

		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Net Income		-\$1,613,02	-\$234,183	\$949,261	\$1,124,335	\$1,293,006	\$1,380,409	\$1,564,708	\$1,767,203	\$1,800,206	\$1,880,613
Partner 1	0.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Partner 2	0.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Partner 3	0.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Partner 4	0.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Partner 5	0.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Partner Share		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Accumulated Share		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Fiber/Wireless Market Summary

Total Market											
Residential	8,600										
Business/Institutional	660										
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Premises Connected											
Residential		3,440	7,740	8,600	8,600	8,600	8,600	8,600	8,600	8,600	8,600
Business/Institutional		165	462	660	660	660	660	660	660	660	660
New Upgrade Customers											
Residential		1,720	2,150	430	0	0	0	0	0	0	0
Business/Institutional		25	67	73	33	33	33	33	33	0	0
Total Year End Upgrades											
Residential		1,720	3,870	4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300
Business/Institutional	660	25	92	165	198	231	264	297	330	330	330
Revenue per market segment											
Residential		\$611,569	\$2,980,532	\$4,356,162	\$4,596,216	\$4,596,216	\$4,596,216	\$4,596,216	\$4,596,216	\$4,596,216	\$4,596,216
Business/Institutional		\$40,804	\$195,967	\$396,931	\$524,472	\$605,579	\$707,226	\$844,554	\$1,026,492	\$1,058,324	\$1,082,420
ARPU per market (monthly)											
Residential		\$5.40	\$26.29	\$38.43	\$40.58	\$40.58	\$40.58	\$40.58	\$40.58	\$40.58	\$40.58
Business/Institutional		\$241.44	\$259.55	\$247.61	\$237.77	\$232.70	\$235.90	\$248.95	\$271.10	\$267.25	\$273.34

Residential Fiber Market and Build Out Assumptions

Market Assumptions

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Total Available Market	8,600	40%	90%	100%	100%	100%	100%	100%	100%	100%
Homes Connected	3,440	7,740	8,600	8,600	8,600	8,600	8,600	8,600	8,600	8,600
Upgrade Take Rate	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Homes that purchase upgrade	1,720	3,870	4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300
Addressable Market %	20%	45%	50%	50%	50%	50%	50%	50%	50%	50%

Fiber Optic Build Out

Average Homes Connected	1,147	5,590	8,170	8,600	8,600	8,600	8,600	8,600	8,600	8,600
New Upgrade Customers	1,720	2,150	430	0	0	0	0	0	0	0
Average Upgrade Customers	573	2,795	4,085	4,300	4,300	4,300	4,300	4,300	4,300	4,300

Detached & Single House (SDU)

Apartments (MDU)

95%
5%

Non-recurring Revenue

Network Activation Fee	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
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Monthly Utility Fee

	0%	0%	0%	3%	0%	0%	0%	0%	0%	0%
\$9.95	\$136,952	\$667,446	\$975,498	\$1,057,645	\$1,057,645	\$1,057,645	\$1,057,645	\$1,057,645	\$1,057,645	\$1,057,645

Monthly Service Fee 250/250

	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%
\$60	\$241,111	\$1,175,074	\$1,717,416	\$1,797,024	\$1,797,024	\$1,797,024	\$1,797,024	\$1,797,024	\$1,797,024	\$1,797,024
	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%

Monthly Service Fee 1000/1000

\$70	\$123,979	\$604,223	\$883,095	\$924,953	\$924,953	\$924,953	\$924,953	\$924,953	\$924,953	\$924,953
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Advanced Services Growth

15%	\$54,764	\$266,895	\$390,077	\$408,297	\$408,297	\$408,297	\$408,297	\$408,297	\$408,297	\$408,297
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Annual Non-recurring Revenue

\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
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Annual Recurring Revenue (monthly service)

\$556,805	\$2,713,638	\$3,966,086	\$4,187,919	\$4,187,919	\$4,187,919	\$4,187,919	\$4,187,919	\$4,187,919	\$4,187,919	\$4,187,919
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Gross Access Revenue Before Expenses

\$611,569	\$2,980,532	\$4,356,162	\$4,596,216	\$4,596,216	\$4,596,216	\$4,596,216	\$4,596,216	\$4,596,216	\$4,596,216	\$4,596,216
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Business/Institutional Market and Build Out Assumptions

Market Assumptions	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Total Available Market	660	25%	70%	100%	100%	100%	100%	100%	100%	100%
Businesses Passed	165	462	660	660	660	660	660	660	660	660
Service Take Rate	15%	20%	25%	30%	35%	40%	45%	50%	50%	50%
Businesses Served	25	92	165	198	231	264	297	330	330	330
Addressable Market %	4%	14%	25%	30%	35%	40%	45%	50%	50%	50%
Fiber Optic Build Out										
Average Businesses Passed	55	314	561	660	660	660	660	660	660	660
New fiber service customers	25	68	73	33	33	33	33	33	0	0
Average service customers	12	59	129	182	215	248	281	314	330	330
Services (Monthly)										
Rate Increase		0%	2%	2%	2%	2%	2%	2%	2%	2%
Tier 1 - 50/10	\$45	\$45	\$46	\$47	\$48	\$49	\$50	\$51	\$52	\$53
Tier 1 - 100/20	\$60	\$60	\$61	\$62	\$64	\$65	\$66	\$68	\$69	\$70
Tier 2 - 250/100	\$85	\$85	\$87	\$88	\$90	\$92	\$94	\$96	\$98	\$100
Tier 2 - 500/100	\$150	\$150	\$153	\$156	\$159	\$162	\$166	\$169	\$172	\$176
Tier 2 - 1000/100	\$450	\$450	\$459	\$468	\$478	\$487	\$497	\$507	\$517	\$527
Tier 3 - 1000/1000	\$850	\$850	\$867	\$884	\$902	\$920	\$938	\$957	\$976	\$996
Take Rate Per Service										
Tier 1 - 50/10	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Tier 1 - 100/20	70%	70%	65%	60%	50%	35%	20%	15%	10%	5%
Tier 2 - 250/100	10%	10%	10%	15%	25%	35%	35%	35%	50%	55%
Tier 2 - 500/100	5%	5%	10%	10%	10%	15%	30%	30%	20%	20%
Tier 2 - 1000/100	10%	10%	10%	10%	10%	10%	10%	15%	15%	15%
Tier 3 - 1000/1000	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Market Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Non-recurring Revenue										
Network Activation Fee	\$200	\$4,950	\$13,530	\$14,520	\$6,600	\$6,600	\$6,600	\$6,600	\$0	\$0
Business Construction Fee	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Annual Non-recurring Revenue		\$4,950	\$13,530	\$14,520	\$6,600	\$6,600	\$6,600	\$6,600	\$0	\$0
Services (Yearly)										
Monthly Utility Fee	\$20	\$13,167	\$75,052	\$134,303	\$158,004	\$158,004	\$158,004	\$158,004	\$158,004	\$158,004
Annual Recurring Revenue		\$35,854	\$182,437	\$382,411	\$517,872	\$598,979	\$700,626	\$837,954	\$1,019,892	\$1,082,420
Business Rev. Before Expenses		\$40,804	\$195,967	\$396,931	\$524,472	\$605,579	\$707,226	\$844,554	\$1,026,492	\$1,082,420

Revenue Other Services

Fiber Optic Cable Leases

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Lit Bandwidth Leases	\$75,000	\$82,500	\$90,750	\$99,825	\$109,808	\$120,788	\$132,867	\$146,154	\$160,769	\$176,846
TBD	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TBD	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Other Services

Customer Re-connection Fee	\$25									
Customer Re-connection Fees Revenue	5%	\$2,181	\$4,953	\$5,581	\$5,623	\$5,664	\$5,705	\$5,746	\$5,788	\$5,788
AF Connect Revenue		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TBD		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TBD		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Provider fees

Service Provider A	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Service Provider B	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Service Provider C	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Total Other Services

Other services total	\$77,181	\$87,453	\$96,331	\$105,448	\$115,471	\$126,493	\$138,613	\$151,941	\$166,557	\$182,634
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General & Administrative (G&A) Expenses

Fringe Benefits		25%	Annual Salary Increase				2.5%	Cost index				2%
Staff			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Senior Manager	\$105,000		\$131,250	\$134,531	\$137,895	\$141,342	\$144,875	\$148,497	\$152,210	\$156,015	\$159,915	\$163,913
			0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Finance, Billing, Admin	\$55,000		\$34,375	\$35,234	\$36,115	\$37,018	\$37,944	\$38,892	\$39,864	\$40,861	\$41,883	\$42,930
			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Network Engineer	\$90,000		\$117,000	\$119,925	\$122,923	\$125,996	\$129,146	\$132,375	\$135,684	\$139,076	\$142,553	\$146,117
Total Staff Expense			\$282,625	\$289,691	\$296,933	\$304,356	\$311,965	\$319,764	\$327,758	\$335,952	\$344,351	\$352,960
Administrative Staff			2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Operations Staff			3.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Total # of Employees			5.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Staff and Office Expenses												
Travel Expenses	\$1,750		\$4,375	\$4,375	\$4,375	\$4,375	\$4,375	\$4,375	\$4,375	\$4,375	\$4,375	\$4,375
Other costs	\$1,500		\$8,250	\$11,475	\$11,475	\$11,475	\$11,475	\$11,475	\$11,475	\$11,475	\$11,475	\$11,475
Office and Expenses			\$12,000	\$12,240	\$12,485	\$12,734	\$12,989	\$13,249	\$13,514	\$13,784	\$14,060	\$14,341
Office Supplies			\$2,500	\$2,550	\$2,601	\$2,653	\$2,706	\$2,760	\$2,815	\$2,872	\$2,929	\$2,988
Computers and Office Equipment			\$3,500	\$3,570	\$3,641	\$3,714	\$3,789	\$3,864	\$3,942	\$4,020	\$4,101	\$4,183
Mailing & Delivery	\$10		\$17,200	\$21,500	\$4,300	\$0	\$0	\$0	\$0	\$1,000	\$1,000	\$1,000
Total Staff and Office Expenses			\$47,825	\$55,710	\$38,877	\$34,952	\$35,334	\$35,723	\$36,121	\$37,526	\$37,940	\$38,362
Sales and Marketing												
Marketing/Sales Management			\$120,000	\$120,000	\$120,000	\$120,000	\$45,000	\$45,000	\$45,000	\$45,000	\$45,000	\$45,000
Contract Acquisition	\$150.00		\$261,713	\$332,648	\$75,390	\$4,950	\$4,950	\$4,950	\$4,950	\$4,950	\$0	\$0
Total Sales and Marketing			\$381,713	\$452,648	\$195,390	\$124,950	\$49,950	\$49,950	\$49,950	\$49,950	\$45,000	\$45,000
Other External Expenses												
Audit			\$0	\$6,000	\$6,120	\$6,242	\$6,367	\$6,495	\$6,624	\$6,757	\$6,892	\$7,030
Project Legal			\$0	\$0	\$0	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000
American Fork Debt Payment			\$0	\$135,000	\$135,000	\$135,000	\$135,000	\$135,000	\$135,000	\$135,000	\$135,000	\$135,000
Financial & Technical Consulting			\$0	\$0	\$0	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
Asset, Business, Liability Insurance			\$16,000	\$16,320	\$16,646	\$16,979	\$17,319	\$17,665	\$18,019	\$18,379	\$18,747	\$19,121
Miscellaneous			\$10,000	\$10,200	\$10,404	\$10,612	\$10,824	\$11,041	\$11,262	\$11,487	\$11,717	\$11,951
Total Other External Expenses			\$26,000	\$167,520	\$168,170	\$304,834	\$305,510	\$306,201	\$306,905	\$307,623	\$308,355	\$309,102
Total SG&A Expenses			\$738,163	\$965,568	\$699,370	\$769,092	\$702,759	\$711,638	\$720,734	\$731,051	\$735,646	\$745,424

Service Delivery and Network Operations

		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Service Delivery Staff		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Customer Services Manager	\$95,000	\$118,750	\$121,719	\$124,762	\$127,881	\$131,078	\$134,355	\$137,714	\$141,156	\$144,685	\$148,302
		1.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
OSP Network Technician	\$75,000	\$93,750	\$192,188	\$196,992	\$201,917	\$206,965	\$212,139	\$217,443	\$222,879	\$228,451	\$234,162
		1.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Customer Service Delivery	\$45,000	\$56,250	\$115,313	\$118,195	\$121,150	\$124,179	\$127,283	\$130,466	\$133,727	\$137,070	\$140,497
Total Service Delivery Staff Salary and Benefits		\$268,750	\$429,219	\$439,949	\$450,948	\$462,222	\$473,777	\$485,622	\$497,762	\$510,206	\$522,961
Support and Equip. Replacement Fees											
Core Network Equipment		\$0	\$0	\$29,620	\$0	\$0	\$29,620	\$0	\$0	\$29,620	\$0
Distribution Network Equipment		\$0	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
CPE		\$0	\$12,500	\$13,750	\$15,125	\$16,638	\$18,301	\$20,131	\$22,145	\$24,359	\$26,795
Tools and vehicle maintenance, replacement		\$36,000	\$36,720	\$37,454	\$38,203	\$38,968	\$39,747	\$40,542	\$41,353	\$42,180	\$43,023
Total Equipment Support Fees		\$36,000	\$74,220	\$105,824	\$78,328	\$80,605	\$112,668	\$85,673	\$88,497	\$121,159	\$94,818
ISP Fees		\$162,452	\$791,726	\$1,157,138	\$1,211,237	\$1,211,237	\$1,211,237	\$1,211,237	\$1,211,237	\$1,211,237	\$1,211,237
Network Operations Costs											
New Customer Fee	\$15	\$26,175	\$33,255	\$7,545	\$495	\$495	\$495	\$495	\$495	\$0	\$0
Re-Connection Fee	50%	\$1,091	\$2,476	\$2,791	\$2,811	\$2,832	\$2,853	\$2,873	\$2,894	\$2,894	\$2,894
Network Operations base cost		\$64,000	\$64,000	\$64,000	\$64,000	\$64,000	\$64,000	\$64,000	\$64,000	\$64,000	\$64,000
Network Operations per sub fee	\$4	\$82,560	\$185,760	\$206,400	\$206,400	\$206,400	\$206,400	\$206,400	\$206,400	\$206,400	\$206,400
Network electric utility costs		\$3,000	\$3,060	\$3,121	\$3,184	\$3,247	\$3,312	\$3,378	\$3,446	\$3,515	\$3,585
Locates		\$1,200	\$1,236	\$1,273	\$1,311	\$1,351	\$1,391	\$1,433	\$1,476	\$1,520	\$1,566
Pole Use Fees	\$25	\$7,500	\$8,250	\$9,075	\$9,983	\$10,981	\$12,079	\$13,287	\$14,615	\$16,077	\$17,685
Conduit/Dark Fiber Lease		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Storage and site leases		\$9,500	\$9,500	\$9,500	\$9,500	\$9,500	\$9,500	\$9,500	\$9,500	\$9,500	\$9,500
Total Network Operational Costs		\$195,026	\$307,537	\$303,705	\$297,684	\$298,806	\$300,030	\$301,366	\$302,826	\$303,906	\$305,629
Outside Plant (OSP) Costs											
Outside Plant Maintenance		\$36,000	\$37,440	\$38,938	\$40,495	\$42,115	\$43,800	\$45,551	\$46,463	\$47,392	\$48,340
Buildings Maintenance		\$0	\$1,800	\$2,070	\$2,381	\$2,738	\$3,148	\$3,620	\$4,164	\$4,788	\$5,506
Total Outside Plant (OSP) Maintenance		\$36,000	\$39,240	\$41,008	\$42,876	\$44,852	\$46,948	\$49,172	\$50,626	\$52,180	\$53,846
Total Operational Expenses		\$698,228	\$1,641,942	\$2,047,624	\$2,081,072	\$2,097,721	\$2,144,659	\$2,133,070	\$2,150,948	\$2,198,687	\$2,188,491
Total SG&A and OPEX		\$1,436,391	\$2,607,510	\$2,746,994	\$2,850,164	\$2,800,481	\$2,856,298	\$2,853,804	\$2,882,000	\$2,934,333	\$2,933,915
Monthly Operational Cost per Sub		\$181	\$53	\$31	\$30	\$29	\$30	\$30	\$30	\$31	\$31

Attachment: AMFork_proforma_190815_50percent-upgrade-rate-large (Policy Considerations and

Capital Expenditure (CAPEX) Summary

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Outside Plant										
Buildings	\$138,790	\$46,263	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Distribution	\$4,415,245	\$5,093,613	\$3,058,508	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Access	\$2,098,635	\$2,098,635	\$1,798,830	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal	\$6,652,670	\$7,238,511	\$4,857,338	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Equipment										
Core / Routing	\$296,199	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Distribution / Switching	\$552,904	\$414,678	\$414,678	\$0	\$0	\$0	\$0	\$0	\$0	\$0
CPE	\$47,392	\$82,936	\$106,632	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other (servers, etc.)	\$59,240	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal	\$955,735	\$497,614	\$521,310	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other										
Professional Services	\$697,220	\$697,220	\$348,610	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Engineering	\$896,737	\$448,369	\$448,369	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Legal	\$60,000	\$60,000	\$60,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Tools and Vehicles	\$125,000	\$125,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
OSS/BSS/Software	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Upfront Costs	\$87,500	\$87,500	\$75,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal	\$1,916,457	\$1,418,089	\$931,979	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL CAPITAL EXPENDITURES	\$9,524,861	\$9,154,213	\$6,310,626	\$0	\$0	\$0	\$0	\$0	\$0	\$0
40 Year Depreciation Capex	\$8,394,127	\$8,531,600	\$5,789,317	\$0	\$0	\$0	\$0	\$0	\$0	\$0
10 Year Depreciation Capex	\$1,080,735	\$622,614	\$521,310	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7 Year Amortization Capex	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Depreciation Schedule

- Passive	0		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
				\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
					\$0	\$0	\$0	\$0	\$0	\$0	\$0
						\$0	\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
								\$0	\$0	\$0	\$0
									\$0	\$0	\$0
										\$0	\$0
											\$0
											\$0
Depreciation/ Yr		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Accumulated		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Depreciation (Yrs)											
- Active	0		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
				\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
					\$0	\$0	\$0	\$0	\$0	\$0	\$0
						\$0	\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
								\$0	\$0	\$0	\$0
									\$0	\$0	\$0
										\$0	\$0
											\$0
											\$0
Depreciation/ Yr		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Accumulated		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Amortization (Yrs)											
- Amortization	0		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
				\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
					\$0	\$0	\$0	\$0	\$0	\$0	\$0
						\$0	\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
								\$0	\$0	\$0	\$0
									\$0	\$0	\$0
										\$0	\$0
											\$0
											\$0
Amortization/ Yr		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Accumulated		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Assets											
Yearly Costs		\$9,524,861	\$9,154,213	\$6,310,626	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Passive		\$6,652,670	\$7,238,511	\$4,857,338	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Equipment		\$955,735	\$497,614	\$521,310	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Software & PS		\$1,916,457	\$1,418,089	\$931,979	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Accumulated Costs		\$9,524,861	\$18,679,075	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701
Amortization		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Depreciation		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Intangible Asset Value		\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Book Value		\$7,608,404	\$15,344,529	\$20,723,177	\$20,723,177	\$20,723,177	\$20,723,177	\$20,723,177	\$20,723,177	\$20,723,177	\$20,723,177
Book Value / CAPEX		80%	82%	83%	83%	83%	83%	83%	83%	83%	83%
80% of Book Value		\$6,086,723	\$12,275,623	\$16,578,542	\$16,578,542	\$16,578,542	\$16,578,542	\$16,578,542	\$16,578,542	\$16,578,542	\$16,578,542

Financial Projection for American Fork, Utah

FTTX - American Fork, Utah
Monthly Utility Fee of \$9.95
70% Upgrade Take Rate

8/15/19 American Fork, Utah

American Fork, Utah - Financial Overview

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Summary of Project Revenue										
Residential Recurring Revenue	\$738,993	\$3,601,542	\$5,263,792	\$5,546,841	\$5,546,841	\$5,546,841	\$5,546,841	\$5,546,841	\$5,546,841	\$5,546,841
Business/Inst. Recurring Revenue	\$35,854	\$182,437	\$382,411	\$517,872	\$598,979	\$700,626	\$837,954	\$1,019,892	\$1,058,324	\$1,082,420
Residential Annual Non-Recurring Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Business/Inst. Non-Recurring Revenue	\$4,950	\$13,530	\$14,520	\$6,600	\$6,600	\$6,600	\$6,600	\$6,600	\$0	\$0
Total Recurring Revenue	\$774,847	\$3,783,979	\$5,646,203	\$6,064,713	\$6,145,819	\$6,247,467	\$6,384,795	\$6,566,733	\$6,605,165	\$6,629,261
Total Non-Recurring Revenue	\$4,950	\$13,530	\$14,520	\$6,600	\$6,600	\$6,600	\$6,600	\$6,600	\$0	\$0
Other Services	\$78,041	\$89,388	\$98,481	\$107,598	\$117,621	\$128,643	\$140,763	\$154,091	\$168,707	\$184,784
Gross Network Revenue	\$857,838	\$3,886,897	\$5,759,205	\$6,178,910	\$6,270,041	\$6,382,710	\$6,532,158	\$6,727,424	\$6,773,872	\$6,814,045
Cost of Services (Operations Expenses)	\$818,344	\$2,102,170	\$2,677,613	\$2,734,150	\$2,750,799	\$2,797,737	\$2,786,147	\$2,804,025	\$2,851,764	\$2,841,569
Revenue after Expenses	\$39,494	\$1,784,727	\$3,081,591	\$3,444,760	\$3,519,242	\$3,584,973	\$3,746,011	\$3,923,399	\$3,922,107	\$3,972,476
Sales, General, and Administrative Expense	\$848,243	\$1,103,168	\$726,890	\$769,092	\$702,759	\$711,638	\$720,734	\$731,051	\$735,646	\$745,424
Total Operating Expenses	\$1,666,586	\$2,887,895	\$3,808,482	\$4,213,852	\$4,222,001	\$4,296,612	\$4,466,745	\$4,654,450	\$4,657,754	\$4,717,900
Net Income after Interest, Depreciation	-\$1,627,411	\$75,540	\$1,614,425	\$1,865,199	\$2,044,560	\$2,142,803	\$2,338,093	\$2,551,729	\$2,596,025	\$2,687,879
Capital Upgrade Fund	\$0	\$1,829,025	\$191,163	\$637,951	\$1,136,397	\$1,665,294	\$2,253,605	\$2,910,109	\$3,575,105	\$4,262,744
Bond Pre-Payments	\$0	\$2,090,314	\$218,472	\$729,087	\$1,298,739	\$1,903,193	\$2,575,548	\$3,325,839	\$4,085,834	\$4,871,708
Cash at Year End	\$14,176,229	\$1,306,446	\$136,545	\$455,679	\$811,712	\$1,189,496	\$1,609,718	\$2,078,649	\$2,553,646	\$3,044,817
New Debt	\$24,989,701	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Principal Payments Per Year	\$0	\$0	\$0	-\$1,415,553	-\$1,415,553	-\$1,415,553	-\$1,415,553	-\$1,415,553	-\$1,415,553	-\$1,415,553
Total Cumulative Debt (minus principal paid)	\$24,989,701	\$24,989,701	\$24,989,701	\$23,574,148	\$22,158,595	\$20,743,043	\$19,327,490	\$17,911,937	\$16,496,384	\$15,080,831
Interest Payments Per Year	-\$818,663	-\$818,663	-\$818,663	-\$818,663	-\$799,264	-\$779,234	-\$758,554	-\$737,201	-\$715,155	-\$692,392
Cumulative Interest Payments	-\$818,663	-\$1,637,325	-\$2,455,988	-\$3,274,650	-\$4,073,914	-\$4,853,148	-\$5,611,702	-\$6,348,904	-\$7,064,059	-\$7,756,451

Attachment: AMFork_proforma_190815_70percent-upgrade-rate-large (1) (Policy Considerations and

American Fork, Utah - Market Summary

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Fiber Network										
Residential										
Customers Connected	3,440	7,740	8,600	8,600	8,600	8,600	8,600	8,600	8,600	8,600
Customers Upgraded (year end)	2,408	5,418	6,020	6,020	6,020	6,020	6,020	6,020	6,020	6,020
Upgrade Take Rate 250/250 Meg	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%
Upgrade Take Rate 1000/1000 Meg	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%
Business										
Customers Passed	165	462	660	660	660	660	660	660	660	660
Customers Served (year end)	25	92	165	198	231	264	297	330	330	330
Take Rate	15%	20%	25%	30%	35%	40%	45%	50%	50%	50%
Network Activation Fee	\$0 one time fee to activate connection			Base Rate Service (no upgrade)			\$9.95			
Monthly Utility Fee	\$9.95									
Estimated Monthly Internet Service Cost (e.g. 250/250 Meg)	\$60			Utility Fee plus 250/250 service			\$60			
Subscriber Monthly Total Cost	\$69.95			Utility Fee plus 1000/1000 service			\$70			

American Fork, Utah - Operations Costs Summary

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
SG&A										
<i>Total Staff Expenses (salary + benefits)</i>	\$282,625	\$289,691	\$296,933	\$304,356	\$311,965	\$319,764	\$327,758	\$335,952	\$344,351	\$352,960
<i>Total Office Expenses</i>	\$54,705	\$64,310	\$40,597	\$34,952	\$35,334	\$35,723	\$36,121	\$37,526	\$37,940	\$38,362
<i>Marketing Expenses</i>	\$484,913	\$581,648	\$221,190	\$124,950	\$49,950	\$49,950	\$49,950	\$49,950	\$45,000	\$45,000
<i>Other External Expenses</i>	\$26,000	\$167,520	\$168,170	\$304,834	\$305,510	\$306,201	\$306,905	\$307,623	\$308,355	\$309,102
Total SG&A expenses	\$848,243	\$1,103,168	\$726,890	\$769,092	\$702,759	\$711,638	\$720,734	\$731,051	\$735,646	\$745,424
Operating Expenses										
<i>Total Service Delivery Staff (salary + benefits)</i>	\$268,750	\$429,219	\$439,949	\$450,948	\$462,222	\$473,777	\$485,622	\$497,762	\$510,206	\$522,961
<i>Support and Equip. Replacement Fees</i>	\$36,000	\$74,220	\$105,824	\$78,328	\$80,605	\$112,668	\$85,673	\$88,497	\$121,159	\$94,818
<i>ISP Fees</i>	\$238,794	\$1,163,782	\$1,700,912	\$1,780,679	\$1,780,679	\$1,780,679	\$1,780,679	\$1,780,679	\$1,780,679	\$1,780,679
<i>Total Network Operational Costs</i>	\$238,800	\$395,709	\$389,920	\$381,319	\$382,441	\$383,665	\$385,001	\$386,461	\$387,541	\$389,264
<i>Total Outside Plant (OSP) Maintenance</i>	\$36,000	\$39,240	\$41,008	\$42,876	\$44,852	\$46,948	\$49,172	\$50,626	\$52,180	\$53,846
Total Operating Expenses	\$818,344	\$2,102,170	\$2,677,613	\$2,734,150	\$2,750,799	\$2,797,737	\$2,786,147	\$2,804,025	\$2,851,764	\$2,841,569

Attachment: AMFork_proforma_190815_70percent-upgrade-rate-large (1) (Policy Considerations and

American Fork, Utah - Capital Costs Summary

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
FTTP Capital Costs Summary										
<i>Outside Plant</i>	\$6,652,670	\$7,238,511	\$4,857,338	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Equipment</i>	\$955,735	\$497,614	\$521,310	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Other (soft costs)</i>	\$1,916,457	\$1,418,089	\$931,979	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total CAPEX	\$9,524,861	\$9,154,213	\$6,310,626	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Accumulated Capex	\$9,524,861	\$18,679,075	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701
D&A (per year)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Depreciation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Book Value	\$7,608,404	\$15,344,529	\$20,723,177	\$20,723,177	\$20,723,177	\$20,723,177	\$20,723,177	\$20,723,177	\$20,723,177	\$20,723,177

American Fork Pro Forma Income Statement and Financial Summary

Summary of Project Revenue	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Residential Recurring Revenue	\$738,993	\$3,601,542	\$5,263,792	\$5,546,841	\$5,546,841	\$5,546,841	\$5,546,841	\$5,546,841	\$5,546,841	\$5,546,841
Business/Inst. Recurring Revenue	\$35,854	\$182,437	\$382,411	\$517,872	\$598,979	\$700,626	\$837,954	\$1,019,892	\$1,058,324	\$1,082,420
Residential Annual Non-Recurring Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Business/Inst. Non-Recurring Revenue	\$4,950	\$13,530	\$14,520	\$6,600	\$6,600	\$6,600	\$6,600	\$6,600	\$0	\$0
Total Recurring Revenue	\$774,847	\$3,783,979	\$5,646,203	\$6,064,713	\$6,145,819	\$6,247,467	\$6,384,795	\$6,566,733	\$6,605,165	\$6,629,261
Total Non-Recurring Revenue	\$4,950	\$13,530	\$14,520	\$6,600	\$6,600	\$6,600	\$6,600	\$6,600	\$0	\$0
Other Services	\$78,041	\$89,388	\$98,481	\$107,598	\$117,621	\$128,643	\$140,763	\$154,091	\$168,707	\$184,784
Gross Network Revenue	\$857,838	\$3,886,897	\$5,759,205	\$6,178,910	\$6,270,041	\$6,382,710	\$6,532,158	\$6,727,424	\$6,773,872	\$6,814,045
Cost of Services	\$818,344	\$2,102,170	\$2,677,613	\$2,734,150	\$2,750,799	\$2,797,737	\$2,786,147	\$2,804,025	\$2,851,764	\$2,841,569
Revenue after Expenses	\$39,494	\$1,784,727	\$3,081,591	\$3,444,760	\$3,519,242	\$3,584,973	\$3,746,011	\$3,923,399	\$3,922,107	\$3,972,476
Sales, General & Administrative Expenses (SG&A)	\$848,243	\$1,103,168	\$726,890	\$769,092	\$702,759	\$711,638	\$720,734	\$731,051	\$735,646	\$745,424
Earnings before Interest, Taxes, Deprec.	-\$808,748	\$681,559	\$2,354,701	\$2,675,669	\$2,816,482	\$2,873,335	\$3,025,277	\$3,192,347	\$3,186,461	\$3,227,052
Interest Income	\$0	\$212,643	\$78,387	\$8,193	\$27,341	\$48,703	\$71,370	\$96,583	\$124,719	\$153,219
Interest Expense	\$818,663	\$818,663	\$818,663	\$818,663	\$799,264	\$779,234	\$758,554	\$737,201	\$715,155	\$692,392
Taxes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Depreciation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Amortization	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net Income	-\$1,627,411	\$75,540	\$1,614,425	\$1,865,199	\$2,044,560	\$2,142,803	\$2,338,093	\$2,551,729	\$2,596,025	\$2,687,879
Year End Funds	\$14,176,229	\$5,225,785	\$546,181	\$1,822,717	\$3,246,847	\$4,757,984	\$6,438,870	\$8,314,597	\$10,214,586	\$12,179,269
Capital Upgrade Fund	\$0	\$1,829,025	\$191,163	\$637,951	\$1,136,397	\$1,665,294	\$2,253,605	\$2,910,109	\$3,575,105	\$4,262,744
Bond Pre-Payments	\$0	\$2,090,314	\$218,472	\$729,087	\$1,298,739	\$1,903,193	\$2,575,548	\$3,325,839	\$4,085,834	\$4,871,708
Cash on Hand at Year End	\$14,176,229	\$1,306,446	\$136,545	\$455,679	\$811,712	\$1,189,496	\$1,609,718	\$2,078,649	\$2,553,646	\$3,044,817
Accumulated Am. Fork Debt Payments	\$0	\$135,000	\$270,000	\$405,000	\$540,000	\$675,000	\$810,000	\$945,000	\$1,080,000	\$1,215,000
Accumulated Capital Upgrade Fund	\$0	\$1,829,025	\$2,020,188	\$2,658,139	\$3,794,535	\$5,459,830	\$7,713,434	\$10,623,543	\$14,198,648	\$18,461,392
Accumulated Bond Pre-Payments	\$0	\$2,090,314	\$2,308,786	\$3,037,873	\$4,336,612	\$6,239,805	\$8,815,353	\$12,141,192	\$16,227,026	\$21,098,734
Capital Expenditures (CAPEX)	\$9,524,861	\$9,154,213	\$6,310,626	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Accumulated CAPEX	\$9,524,861	\$18,679,075	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701
Summary of Funding and Borrowing	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Sources of Funds										
Equity	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Long-Term Debt	\$25,189,619	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Funding	\$25,189,619	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Attachment: AMFork_proforma_190815_70percent-upgrade-rate-large (1) (Policy Considerations and

Balance Sheet

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Current Assets										
Cash	\$14,176,229	\$5,225,785	\$546,181	\$1,822,717	\$3,246,847	\$4,757,984	\$6,438,870	\$8,314,597	\$10,214,586	\$12,179,269
Operating Reserve Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Current Assets	\$14,176,229	\$5,225,785	\$546,181	\$1,822,717	\$3,246,847	\$4,757,984	\$6,438,870	\$8,314,597	\$10,214,586	\$12,179,269
Non-Current Assets										
Long Term Investments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Amortizable Asset (Net Amortization)	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Plant in Service	\$9,474,861	\$18,629,075	\$24,939,701	\$24,939,701	\$24,939,701	\$24,939,701	\$24,939,701	\$24,939,701	\$24,939,701	\$24,939,701
Less: Accumulated Depreciation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net Plant	\$9,474,861	\$18,629,075	\$24,939,701	\$24,939,701	\$24,939,701	\$24,939,701	\$24,939,701	\$24,939,701	\$24,939,701	\$24,939,701
Other										
Total Non Current Assets	\$9,524,861	\$18,679,075	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701
Total Assets	\$23,701,090	\$23,904,859	\$25,535,882	\$26,812,418	\$28,236,548	\$29,747,685	\$31,428,571	\$33,304,298	\$35,204,287	\$37,168,970
Current Liabilities										
Accounts Payable	\$138,882	\$267,111	\$283,709	\$291,937	\$287,797	\$292,448	\$292,240	\$294,590	\$298,951	\$298,916
Current Portion of Long Term Debt	\$0	\$0	\$596,890	\$616,289	\$636,319	\$656,999	\$678,351	\$700,398	\$723,161	\$668,889
Other Current Liabilities	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Operating Reserve Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Current Liabilities	\$138,882	\$267,111	\$880,599	\$908,226	\$924,115	\$949,447	\$970,591	\$994,987	\$1,022,112	\$967,805
Non-Current Liabilities and Equity										
Long Term Liabilities	\$25,189,619	\$25,189,619	\$24,592,728	\$23,976,439	\$23,340,121	\$22,683,122	\$22,004,771	\$21,304,373	\$20,581,212	\$19,912,323
Equity	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Retained Earnings	-\$1,627,411	-\$1,551,871	\$62,554	\$1,927,753	\$3,972,312	\$6,115,116	\$8,453,209	\$11,004,938	\$13,600,963	\$16,288,842
Total Non-Current Liabilities and Equity	\$23,562,208	\$23,637,748	\$24,655,283	\$25,904,192	\$27,312,433	\$28,798,238	\$30,457,980	\$32,309,311	\$34,182,175	\$36,201,164
Total Equity and Liabilities	\$23,701,090	\$23,904,859	\$25,535,882	\$26,812,418	\$28,236,548	\$29,747,685	\$31,428,571	\$33,304,298	\$35,204,287	\$37,168,970
Current Ratio (current assets/current liabilities)	102.07	19.56	0.62	2.01	3.51	5.01	6.63	8.36	9.99	12.58

Cash Flow Statement (Indirect Method)

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Cash Flow from Operating Activities										
Net Income	-\$1,627,411	\$75,540	\$1,614,425	\$1,865,199	\$2,044,560	\$2,142,803	\$2,338,093	\$2,551,729	\$2,596,025	\$2,687,879
Depreciation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Amortization	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Current Liabilities	\$138,882	\$128,229	\$16,597	\$8,228	-\$4,140	\$4,651	-\$208	\$2,350	\$4,361	-\$35
Net Cash Flow from Operating Activities	-\$1,488,529	\$203,769	\$1,631,022	\$1,873,427	\$2,040,419	\$2,147,455	\$2,337,885	\$2,554,078	\$2,600,386	\$2,687,844
Cash Flow from Investing Activities										
Capital Expenditures	-\$9,524,861	-\$9,154,213	-\$6,310,626	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net Cash Flow from Investing Activities	-\$9,524,861	-\$9,154,213	-\$6,310,626	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cash Flow from Financing Activities										
Increase in Operational Reserve	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Issuance of New Long-Term Debt	\$25,189,619	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Repayment of Long-Term Debt	\$0	\$0	\$0	-\$596,890	-\$616,289	-\$636,319	-\$656,999	-\$678,351	-\$700,398	-\$723,161
Other Equity	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Investor Dividend	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net Cash Flow from Financing Activities	\$25,189,619	\$0	\$0	-\$596,890	-\$616,289	-\$636,319	-\$656,999	-\$678,351	-\$700,398	-\$723,161
Total Cash Flow at Year-End	\$14,176,229	-\$8,950,444	-\$4,679,604	\$1,276,537	\$1,424,130	\$1,511,136	\$1,680,886	\$1,875,727	\$1,899,988	\$1,964,683
Cash-On-Hand at Year End	\$14,176,229	\$5,225,785	\$546,181	\$1,822,717	\$3,246,847	\$4,757,984	\$6,438,870	\$8,314,597	\$10,214,586	\$12,179,269

Attachment: AMFork_proforma_190815_70percent-upgrade-rate-large (1) (Policy Considerations and

Funding, Equity, and Loan Costs

Financing	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Long-Term Debt	\$24,989,701	\$0	\$0	\$0	\$0					
Other Equity (cash, in-kind)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Long Term Debt (overall)	100%									
- Income interest	1.500%									
Cash Injections	1 \$24,989,701	2 \$0	3 \$0	4 \$0	5 \$0	6 \$0	7 \$0	8 \$0	9 \$0	10 \$0
-Extra Payments										
Accumulated Loan Unpaid Balance	\$25,189,619	\$25,189,619	\$25,189,619	\$24,592,728	\$23,976,439	\$23,340,121	\$22,683,122	\$22,004,771	\$21,304,373	\$20,581,21
Amortization	\$0	\$0	\$0	\$596,890	\$616,289	\$636,319	\$656,999	\$678,351	\$700,398	\$723,161
Operating Reserve										
Interest Expenses	\$818,663	\$818,663	\$818,663	\$818,663	\$799,264	\$779,234	\$758,554	\$737,201	\$715,155	\$692,392
Loan Maturity (years)	30									
Length of Interest Only	3									
Loan Cost of Capital (%)	3.25%									
Fees and Closing Costs	\$199,918									
External Funding Year 1										
- Initial Loan Balance	\$25,189,619	\$25,189,619	\$25,189,619	\$25,189,619	\$24,592,728	\$23,976,439	\$23,340,121	\$22,683,122	\$22,004,771	\$21,304,37
- Interest Charge	\$818,663	\$818,663	\$818,663	\$818,663	\$799,264	\$779,234	\$758,554	\$737,201	\$715,155	\$692,392
- Total Loan Payments	\$0	\$0	\$0	-\$1,415,553	-\$1,415,553	-\$1,415,553	-\$1,415,553	-\$1,415,553	-\$1,415,553	-\$1,415,553
- Principal Payment	\$0	\$0	\$0	-\$596,890	-\$616,289	-\$636,319	-\$656,999	-\$678,351	-\$700,398	-\$723,161
- Interest Payment	-\$818,663	-\$818,663	-\$818,663	-\$818,663	-\$799,264	-\$779,234	-\$758,554	-\$737,201	-\$715,155	-\$692,392
- Ending Loan Balance	\$25,189,619	\$25,189,619	\$25,189,619	\$24,592,728	\$23,976,439	\$23,340,121	\$22,683,122	\$22,004,771	\$21,304,373	\$20,581,21
Loan Maturity (years)	30									
Length of Interest Only	3									
Loan Cost of Capital (%)	3.8%									
Fees and Closing Costs	\$0									
External Funding Year 2										
- Initial Loan Balance		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Interest Charge		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Total Loan Payments		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Principal Payment		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Interest Payment		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Ending Loan Balance		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Loan Maturity (years)	30									
Length of Interest Only	1									
Loan Cost of Capital (%)	3.8%									
Fees and Closing Costs	\$0									

Funding, Equity, and Loan Costs

External Funding Year 3										
- Initial Loan Balance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Interest Charge	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Total Loan Payments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Principal Payment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Interest Payment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Ending Loan Balance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Loan Maturity (years)	30									
Length of Interest Only	0									
Loan Cost of Capital (%)	3.8%									
Fees and Closing Costs	\$0									
External Funding Year 4										
- Initial Loan Balance		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Interest Charge		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Total Loan Payments		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Principal Payment		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Interest Payment		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Ending Loan Balance		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Loan Maturity (years)	0									
Length of Interest Only	1									
Loan Cost of Capital (%)	7.0%									
Fees and Closing Costs	\$0									
External Funding Year 5										
- Initial Loan Balance			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Interest Charge			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Total Loan Payments			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Principal Payment			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Interest Payment			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Ending Loan Balance			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
New Long Term Debt	\$25,189,619	\$0	\$0	\$0	\$0					
Accumulated Init. Loan Bal.	\$25,189,619	\$25,189,619	\$25,189,619	\$25,189,619	\$24,592,728	\$23,976,439	\$23,340,121	\$22,683,122	\$22,004,771	\$21,304,371
Accumulated Loan Pmts	\$0	\$0	\$0	-\$1,415,553	-\$1,415,553	-\$1,415,553	-\$1,415,553	-\$1,415,553	-\$1,415,553	-\$1,415,553
Accumulated Princ. Pmts.	\$0	\$0	\$0	-\$596,890	-\$616,289	-\$636,319	-\$656,999	-\$678,351	-\$700,398	-\$723,161
Accumulated Interest Exp.	-\$818,663	-\$818,663	-\$818,663	-\$818,663	-\$799,264	-\$779,234	-\$758,554	-\$737,201	-\$715,155	-\$692,392
Acc. Ending Loan Bal.	\$25,189,619	\$25,189,619	\$25,189,619	\$24,592,728	\$23,976,439	\$23,340,121	\$22,683,122	\$22,004,771	\$21,304,373	\$20,581,211
Acc. Interest Charges	\$818,663	\$818,663	\$818,663	\$818,663	\$799,264	\$779,234	\$758,554	\$737,201	\$715,155	\$692,392
Interest Income	\$0	\$212,643	\$78,387	\$8,193	\$27,341	\$48,703	\$71,370	\$96,583	\$124,719	\$153,219

Working Capital and Tax

Working Capital		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	Days										
Receivables	30	71,486	323,908	479,934	514,909	522,503	531,893	544,347	560,619	564,489	567,837
Payables Estimate	30	138,882	267,111	283,709	291,937	287,797	292,448	292,240	294,590	298,951	298,916
Working Capital		-67,396	56,797	196,225	222,972	234,707	239,445	252,106	266,029	265,538	268,921
Change in Working Capital		-67,396	124,192	139,428	26,747	11,734	4,738	12,662	13,922	491	3,382.6
Tax Calculations		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Tax %	0.00%										
Earnings before Interest, Taxes, Deprec.		-808,748	681,559	2,354,701	2,675,669	2,816,482	2,873,335	3,025,277	3,192,347	3,186,461	3,227,052
Accumulated Earnings Before Taxes		-808,748	-127,189	2,227,512	4,903,180	7,719,663	10,592,998	13,618,275	16,810,622	19,997,084	23,224,136
Actual Tax		0	0	0	0	0	0	0	0	0	0

IRR Calculation												
									EBITDA			\$3,227,052
									EBITDA Multiple			10
									TEV			\$32,270,521
									Less: Net Debt			-\$7,733,054
	Investor Equity								Equity Value			\$24,537,467
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		\$24,537,467
IRR												

Partner Share Distribution

		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Net Income		-\$1,627,41	\$75,540	\$1,614,425	\$1,865,199	\$2,044,560	\$2,142,803	\$2,338,093	\$2,551,729	\$2,596,025	\$2,687,879
Partner 1	0.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Partner 2	0.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Partner 3	0.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Partner 4	0.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Partner 5	0.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Partner Share		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Accumulated Share		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Fiber/Wireless Market Summary

Total Market											
Residential	8,600										
Business/Institutional	660										
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Premises Connected											
Residential		3,440	7,740	8,600	8,600	8,600	8,600	8,600	8,600	8,600	8,600
Business/Institutional		165	462	660	660	660	660	660	660	660	660
New Upgrade Customers											
Residential		2,408	3,010	602	0	0	0	0	0	0	0
Business/Institutional		25	67	73	33	33	33	33	33	0	0
Total Year End Upgrades											
Residential		2,408	5,418	6,020	6,020	6,020	6,020	6,020	6,020	6,020	6,020
Business/Institutional	660	25	92	165	198	231	264	297	330	330	330
Revenue per market segment											
Residential		\$817,520	\$3,984,250	\$5,823,135	\$6,132,388	\$6,132,388	\$6,132,388	\$6,132,388	\$6,132,388	\$6,132,388	\$6,132,388
Business/Institutional		\$40,804	\$195,967	\$396,931	\$524,472	\$605,579	\$707,226	\$844,554	\$1,026,492	\$1,058,324	\$1,082,420
ARPU per market (monthly)											
Residential		\$7.16	\$34.90	\$51.01	\$53.75	\$53.75	\$53.75	\$53.75	\$53.75	\$53.75	\$53.75
Business/Institutional		\$241.44	\$259.55	\$247.61	\$237.77	\$232.70	\$235.90	\$248.95	\$271.10	\$267.25	\$273.34

Residential Fiber Market and Build Out Assumptions

Market Assumptions

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Total Available Market	8,600	40%	90%	100%	100%	100%	100%	100%	100%	100%
Homes Connected	3,440	7,740	8,600	8,600	8,600	8,600	8,600	8,600	8,600	8,600
Upgrade Take Rate	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%
Homes that purchase upgrade	2,408	5,418	6,020	6,020	6,020	6,020	6,020	6,020	6,020	6,020
Addressable Market %	28%	63%	70%	70%	70%	70%	70%	70%	70%	70%

Fiber Optic Build Out

Average Homes Connected	1,147	5,590	8,170	8,600	8,600	8,600	8,600	8,600	8,600	8,600
New Upgrade Customers	2,408	3,010	602	0	0	0	0	0	0	0
Average Upgrade Customers	803	3,913	5,719	6,020	6,020	6,020	6,020	6,020	6,020	6,020

Detached & Single House (SDU)

Apartments (MDU)

95%
5%

Non-recurring Revenue

Network Activation Fee	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
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Monthly Utility Fee

	0%	0%	0%	3%	0%	0%	0%	0%	0%	0%
\$9.95	\$136,952	\$667,446	\$975,498	\$1,057,645	\$1,057,645	\$1,057,645	\$1,057,645	\$1,057,645	\$1,057,645	\$1,057,645

Monthly Service Fee 250/250

	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%
\$60	\$275,555	\$1,342,942	\$1,962,761	\$2,053,742	\$2,053,742	\$2,053,742	\$2,053,742	\$2,053,742	\$2,053,742	\$2,053,742
	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%

Monthly Service Fee 1000/1000

\$70	\$247,958	\$1,208,446	\$1,766,191	\$1,849,906	\$1,849,906	\$1,849,906	\$1,849,906	\$1,849,906	\$1,849,906	\$1,849,906
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Advanced Services Growth

15%	\$78,527	\$382,708	\$559,343	\$585,547	\$585,547	\$585,547	\$585,547	\$585,547	\$585,547	\$585,547
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Annual Non-recurring Revenue

\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
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Annual Recurring Revenue (monthly service)

\$738,993	\$3,601,542	\$5,263,792	\$5,546,841	\$5,546,841	\$5,546,841	\$5,546,841	\$5,546,841	\$5,546,841	\$5,546,841	\$5,546,841
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Gross Access Revenue Before Expenses

\$817,520	\$3,984,250	\$5,823,135	\$6,132,388	\$6,132,388	\$6,132,388	\$6,132,388	\$6,132,388	\$6,132,388	\$6,132,388	\$6,132,388
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Business/Institutional Market and Build Out Assumptions

Market Assumptions		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Total Available Market	660	25%	70%	100%	100%	100%	100%	100%	100%	100%	100%
Businesses Passed		165	462	660	660	660	660	660	660	660	660
Service Take Rate		15%	20%	25%	30%	35%	40%	45%	50%	50%	50%
Businesses Served		25	92	165	198	231	264	297	330	330	330
Addressable Market %		4%	14%	25%	30%	35%	40%	45%	50%	50%	50%
Fiber Optic Build Out											
Average Businesses Passed		55	314	561	660	660	660	660	660	660	660
New fiber service customers		25	68	73	33	33	33	33	33	0	0
Average service customers		12	59	129	182	215	248	281	314	330	330
Services (Monthly)											
Rate Increase			0%	2%	2%	2%	2%	2%	2%	2%	2%
Tier 1 - 50/10	\$45	\$45	\$46	\$47	\$48	\$49	\$50	\$51	\$52	\$53	\$53
Tier 1 - 100/20	\$60	\$60	\$61	\$62	\$64	\$65	\$66	\$68	\$69	\$70	\$70
Tier 2 - 250/100	\$85	\$85	\$87	\$88	\$90	\$92	\$94	\$96	\$98	\$100	\$100
Tier 2 - 500/100	\$150	\$150	\$153	\$156	\$159	\$162	\$166	\$169	\$172	\$176	\$176
Tier 2 - 1000/100	\$450	\$450	\$459	\$468	\$478	\$487	\$497	\$507	\$517	\$527	\$527
Tier 3 - 1000/1000	\$850	\$850	\$867	\$884	\$902	\$920	\$938	\$957	\$976	\$996	\$996
Take Rate Per Service											
Tier 1 - 50/10		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Tier 1 - 100/20		70%	70%	65%	60%	50%	35%	20%	15%	10%	5%
Tier 2 - 250/100		10%	10%	10%	15%	25%	35%	35%	35%	50%	55%
Tier 2 - 500/100		5%	5%	10%	10%	10%	15%	30%	30%	20%	20%
Tier 2 - 1000/100		10%	10%	10%	10%	10%	10%	10%	15%	15%	15%
Tier 3 - 1000/1000		5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Market Total		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Non-recurring Revenue											
Network Activation Fee	\$200	\$4,950	\$13,530	\$14,520	\$6,600	\$6,600	\$6,600	\$6,600	\$6,600	\$0	\$0
Business Construction Fee	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Annual Non-recurring Revenue		\$4,950	\$13,530	\$14,520	\$6,600	\$6,600	\$6,600	\$6,600	\$6,600	\$0	\$0
Services (Yearly)											
Monthly Utility Fee	\$20	\$13,167	\$75,052	\$134,303	\$158,004	\$158,004	\$158,004	\$158,004	\$158,004	\$158,004	\$158,004
Annual Recurring Revenue		\$35,854	\$182,437	\$382,411	\$517,872	\$598,979	\$700,626	\$837,954	\$1,019,892	\$1,058,324	\$1,082,420
Business Rev. Before Expenses		\$40,804	\$195,967	\$396,931	\$524,472	\$605,579	\$707,226	\$844,554	\$1,026,492	\$1,058,324	\$1,082,420

Revenue Other Services

Fiber Optic Cable Leases

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Lit Bandwidth Leases	\$75,000	\$82,500	\$90,750	\$99,825	\$109,808	\$120,788	\$132,867	\$146,154	\$160,769	\$176,846
TBD	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TBD	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Other Services

Customer Re-connection Fee	\$25									
Customer Re-connection Fees Revenue	5%	\$3,041	\$6,888	\$7,731	\$7,773	\$7,814	\$7,855	\$7,896	\$7,938	\$7,938
AF Connect Revenue		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TBD		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TBD		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Provider fees

Service Provider A	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Service Provider B	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Service Provider C	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Total Other Services

Other services total	\$78,041	\$89,388	\$98,481	\$107,598	\$117,621	\$128,643	\$140,763	\$154,091	\$168,707	\$184,784
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General & Administrative (G&A) Expenses

Fringe Benefits		25%	Annual Salary Increase				2.5%	Cost index				2%
Staff			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Senior Manager	\$105,000		\$131,250	\$134,531	\$137,895	\$141,342	\$144,875	\$148,497	\$152,210	\$156,015	\$159,915	\$163,913
			0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Finance, Billing, Admin	\$55,000		\$34,375	\$35,234	\$36,115	\$37,018	\$37,944	\$38,892	\$39,864	\$40,861	\$41,883	\$42,930
			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Network Engineer	\$90,000		\$117,000	\$119,925	\$122,923	\$125,996	\$129,146	\$132,375	\$135,684	\$139,076	\$142,553	\$146,117
Total Staff Expense			\$282,625	\$289,691	\$296,933	\$304,356	\$311,965	\$319,764	\$327,758	\$335,952	\$344,351	\$352,960
Administrative Staff			2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Operations Staff			3.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Total # of Employees			5.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Staff and Office Expenses												
Travel Expenses	\$1,750		\$4,375	\$4,375	\$4,375	\$4,375	\$4,375	\$4,375	\$4,375	\$4,375	\$4,375	\$4,375
Other costs	\$1,500		\$8,250	\$11,475	\$11,475	\$11,475	\$11,475	\$11,475	\$11,475	\$11,475	\$11,475	\$11,475
Office and Expenses			\$12,000	\$12,240	\$12,485	\$12,734	\$12,989	\$13,249	\$13,514	\$13,784	\$14,060	\$14,341
Office Supplies			\$2,500	\$2,550	\$2,601	\$2,653	\$2,706	\$2,760	\$2,815	\$2,872	\$2,929	\$2,988
Computers and Office Equipment			\$3,500	\$3,570	\$3,641	\$3,714	\$3,789	\$3,864	\$3,942	\$4,020	\$4,101	\$4,183
Mailing & Delivery	\$10		\$24,080	\$30,100	\$6,020	\$0	\$0	\$0	\$0	\$1,000	\$1,000	\$1,000
Total Staff and Office Expenses			\$54,705	\$64,310	\$40,597	\$34,952	\$35,334	\$35,723	\$36,121	\$37,526	\$37,940	\$38,362
Sales and Marketing												
Marketing/Sales Management			\$120,000	\$120,000	\$120,000	\$120,000	\$45,000	\$45,000	\$45,000	\$45,000	\$45,000	\$45,000
Contract Acquisition	\$150.00		\$364,913	\$461,648	\$101,190	\$4,950	\$4,950	\$4,950	\$4,950	\$4,950	\$0	\$0
Total Sales and Marketing			\$484,913	\$581,648	\$221,190	\$124,950	\$49,950	\$49,950	\$49,950	\$49,950	\$45,000	\$45,000
Other External Expenses												
Audit			\$0	\$6,000	\$6,120	\$6,242	\$6,367	\$6,495	\$6,624	\$6,757	\$6,892	\$7,030
Project Legal			\$0	\$0	\$0	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000
American Fork Debt Payment			\$0	\$135,000	\$135,000	\$135,000	\$135,000	\$135,000	\$135,000	\$135,000	\$135,000	\$135,000
Financial & Technical Consulting			\$0	\$0	\$0	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
Asset, Business, Liability Insurance			\$16,000	\$16,320	\$16,646	\$16,979	\$17,319	\$17,665	\$18,019	\$18,379	\$18,747	\$19,121
Miscellaneous			\$10,000	\$10,200	\$10,404	\$10,612	\$10,824	\$11,041	\$11,262	\$11,487	\$11,717	\$11,951
Total Other External Expenses			\$26,000	\$167,520	\$168,170	\$304,834	\$305,510	\$306,201	\$306,905	\$307,623	\$308,355	\$309,102
Total SG&A Expenses			\$848,243	\$1,103,168	\$726,890	\$769,092	\$702,759	\$711,638	\$720,734	\$731,051	\$735,646	\$745,424

Service Delivery and Network Operations

		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Service Delivery Staff		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Customer Services Manager	\$95,000	\$118,750	\$121,719	\$124,762	\$127,881	\$131,078	\$134,355	\$137,714	\$141,156	\$144,685	\$148,302
		1.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
OSP Network Technician	\$75,000	\$93,750	\$192,188	\$196,992	\$201,917	\$206,965	\$212,139	\$217,443	\$222,879	\$228,451	\$234,162
		1.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Customer Service Delivery	\$45,000	\$56,250	\$115,313	\$118,195	\$121,150	\$124,179	\$127,283	\$130,466	\$133,727	\$137,070	\$140,497
Total Service Delivery Staff Salary and Benefits		\$268,750	\$429,219	\$439,949	\$450,948	\$462,222	\$473,777	\$485,622	\$497,762	\$510,206	\$522,961
Support and Equip. Replacement Fees											
Core Network Equipment		\$0	\$0	\$29,620	\$0	\$0	\$29,620	\$0	\$0	\$29,620	\$0
Distribution Network Equipment		\$0	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
CPE		\$0	\$12,500	\$13,750	\$15,125	\$16,638	\$18,301	\$20,131	\$22,145	\$24,359	\$26,795
Tools and vehicle maintenance, replacement		\$36,000	\$36,720	\$37,454	\$38,203	\$38,968	\$39,747	\$40,542	\$41,353	\$42,180	\$43,023
Total Equipment Support Fees		\$36,000	\$74,220	\$105,824	\$78,328	\$80,605	\$112,668	\$85,673	\$88,497	\$121,159	\$94,818
ISP Fees		\$238,794	\$1,163,782	\$1,700,912	\$1,780,679	\$1,780,679	\$1,780,679	\$1,780,679	\$1,780,679	\$1,780,679	\$1,780,679
Network Operations Costs											
New Customer Fee	\$15	\$36,495	\$46,155	\$10,125	\$495	\$495	\$495	\$495	\$495	\$0	\$0
Re-Connection Fee	50%	\$1,521	\$3,444	\$3,866	\$3,886	\$3,907	\$3,928	\$3,948	\$3,969	\$3,969	\$3,969
Network Operations base cost		\$64,000	\$64,000	\$64,000	\$64,000	\$64,000	\$64,000	\$64,000	\$64,000	\$64,000	\$64,000
Network Operations per sub fee	\$4	\$115,584	\$260,064	\$288,960	\$288,960	\$288,960	\$288,960	\$288,960	\$288,960	\$288,960	\$288,960
Network electric utility costs		\$3,000	\$3,060	\$3,121	\$3,184	\$3,247	\$3,312	\$3,378	\$3,446	\$3,515	\$3,585
Locates		\$1,200	\$1,236	\$1,273	\$1,311	\$1,351	\$1,391	\$1,433	\$1,476	\$1,520	\$1,566
Pole Use Fees	\$25	\$7,500	\$8,250	\$9,075	\$9,983	\$10,981	\$12,079	\$13,287	\$14,615	\$16,077	\$17,685
Conduit/Dark Fiber Lease		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Storage and site leases		\$9,500	\$9,500	\$9,500	\$9,500	\$9,500	\$9,500	\$9,500	\$9,500	\$9,500	\$9,500
Total Network Operational Costs		\$238,800	\$395,709	\$389,920	\$381,319	\$382,441	\$383,665	\$385,001	\$386,461	\$387,541	\$389,264
Outside Plant (OSP) Costs											
Outside Plant Maintenance		\$36,000	\$37,440	\$38,938	\$40,495	\$42,115	\$43,800	\$45,551	\$46,463	\$47,392	\$48,340
Buildings Maintenance		\$0	\$1,800	\$2,070	\$2,381	\$2,738	\$3,148	\$3,620	\$4,164	\$4,788	\$5,506
Total Outside Plant (OSP) Maintenance		\$36,000	\$39,240	\$41,008	\$42,876	\$44,852	\$46,948	\$49,172	\$50,626	\$52,180	\$53,846
Total Operational Expenses		\$818,344	\$2,102,170	\$2,677,613	\$2,734,150	\$2,750,799	\$2,797,737	\$2,786,147	\$2,804,025	\$2,851,764	\$2,841,569
Total SG&A and OPEX		\$1,666,586	\$3,205,338	\$3,404,504	\$3,503,241	\$3,453,558	\$3,509,375	\$3,506,881	\$3,535,077	\$3,587,411	\$3,586,993
Monthly Operational Cost per Sub		\$146	\$43	\$24	\$23	\$22	\$23	\$23	\$23	\$24	\$24

Attachment: AMFork_proforma_190815_70percent-upgrade-rate-large (1) (Policy Considerations and

Capital Expenditure (CAPEX) Summary

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Outside Plant										
Buildings	\$138,790	\$46,263	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Distribution	\$4,415,245	\$5,093,613	\$3,058,508	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Access	\$2,098,635	\$2,098,635	\$1,798,830	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal	\$6,652,670	\$7,238,511	\$4,857,338	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Equipment										
Core / Routing	\$296,199	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Distribution / Switching	\$552,904	\$414,678	\$414,678	\$0	\$0	\$0	\$0	\$0	\$0	\$0
CPE	\$47,392	\$82,936	\$106,632	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other (servers, etc.)	\$59,240	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal	\$955,735	\$497,614	\$521,310	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other										
Professional Services	\$697,220	\$697,220	\$348,610	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Engineering	\$896,737	\$448,369	\$448,369	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Legal	\$60,000	\$60,000	\$60,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Tools and Vehicles	\$125,000	\$125,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
OSS/BSS/Software	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Upfront Costs	\$87,500	\$87,500	\$75,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal	\$1,916,457	\$1,418,089	\$931,979	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL CAPITAL EXPENDITURES	\$9,524,861	\$9,154,213	\$6,310,626	\$0	\$0	\$0	\$0	\$0	\$0	\$0
40 Year Depreciation Capex	\$8,394,127	\$8,531,600	\$5,789,317	\$0	\$0	\$0	\$0	\$0	\$0	\$0
10 Year Depreciation Capex	\$1,080,735	\$622,614	\$521,310	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7 Year Amortization Capex	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Depreciation Schedule

- Passive	0		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
				\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
					\$0	\$0	\$0	\$0	\$0	\$0	\$0
					\$0	\$0	\$0	\$0	\$0	\$0	\$0
						\$0	\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
								\$0	\$0	\$0	\$0
									\$0	\$0	\$0
										\$0	\$0
											\$0
Depreciation/ Yr		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Accumulated		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Depreciation (Yrs)											
- Active	0		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
				\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
					\$0	\$0	\$0	\$0	\$0	\$0	\$0
						\$0	\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
								\$0	\$0	\$0	\$0
									\$0	\$0	\$0
										\$0	\$0
											\$0
											\$0
Depreciation/ Yr		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Accumulated		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Amortization (Yrs)											
- Amortization	0		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
				\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
					\$0	\$0	\$0	\$0	\$0	\$0	\$0
						\$0	\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
								\$0	\$0	\$0	\$0
									\$0	\$0	\$0
										\$0	\$0
											\$0
											\$0
Amortization/ Yr		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Accumulated		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Assets											
Yearly Costs		\$9,524,861	\$9,154,213	\$6,310,626	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Passive		\$6,652,670	\$7,238,511	\$4,857,338	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Equipment		\$955,735	\$497,614	\$521,310	\$0	\$0	\$0	\$0	\$0	\$0	\$0
- Software & PS		\$1,916,457	\$1,418,089	\$931,979	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Accumulated Costs		\$9,524,861	\$18,679,075	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701	\$24,989,701
Amortization		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Depreciation		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Intangible Asset Value		\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Book Value		\$7,608,404	\$15,344,529	\$20,723,177	\$20,723,177	\$20,723,177	\$20,723,177	\$20,723,177	\$20,723,177	\$20,723,177	\$20,723,177
Book Value / CAPEX		80%	82%	83%	83%	83%	83%	83%	83%	83%	83%
80% of Book Value		\$6,086,723	\$12,275,623	\$16,578,542	\$16,578,542	\$16,578,542	\$16,578,542	\$16,578,542	\$16,578,542	\$16,578,542	\$16,578,542



{DRAFT WORKING MODEL}

American Fork Fiber Initiative Brief

08/12/2019

Attachment: AF Fiber Initiative (Policy Considerations and interlocal proposal for the proposed broadband project)

The following brief addresses several ongoing efforts regarding American Fork's network operations, design process, construction, and the potential benefits of an interlocal.

Sustainable Operations

The network's financial requirements for sustainable operations

The network will require an overarching operations command structure facilitating Network Operations (NOC) functionality, logical and outside plant engineering, outside plant operations (OSP), marketing, public relations and customer service. Operations should see to strictly adhere to the established operating standards addressed in this brief.

Network economies of scale

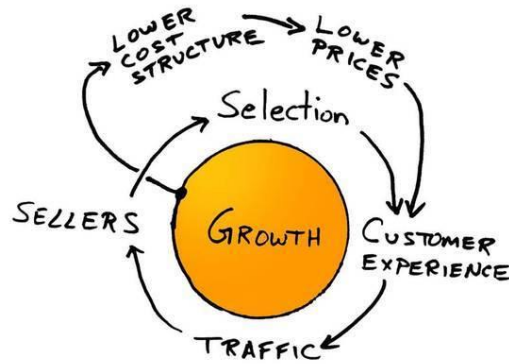
The textbook definition of economy of scale is a business where costs decrease per unit through increased output. The ISP/FTTH business is clearly an economy of scale project since the cost per customer decreases as the network adds more customers.

For example, look at the cost of paying for a general management for a FTTH project. The cost of the operations management is what economists would call a fixed cost – it doesn't vary as you add or lose customers. However, the amount of the general management operations costs that must be covered by each customer gets smaller as the customer base grows larger.

A large part of the costs of operating a FTTH project are fixed like the management operations costs. Costs like operating a business office, doing the needed accounting, buying a billing system, etc. are largely fixed. The largest fixed cost is often the debt service required to pay off the cost of building the network.

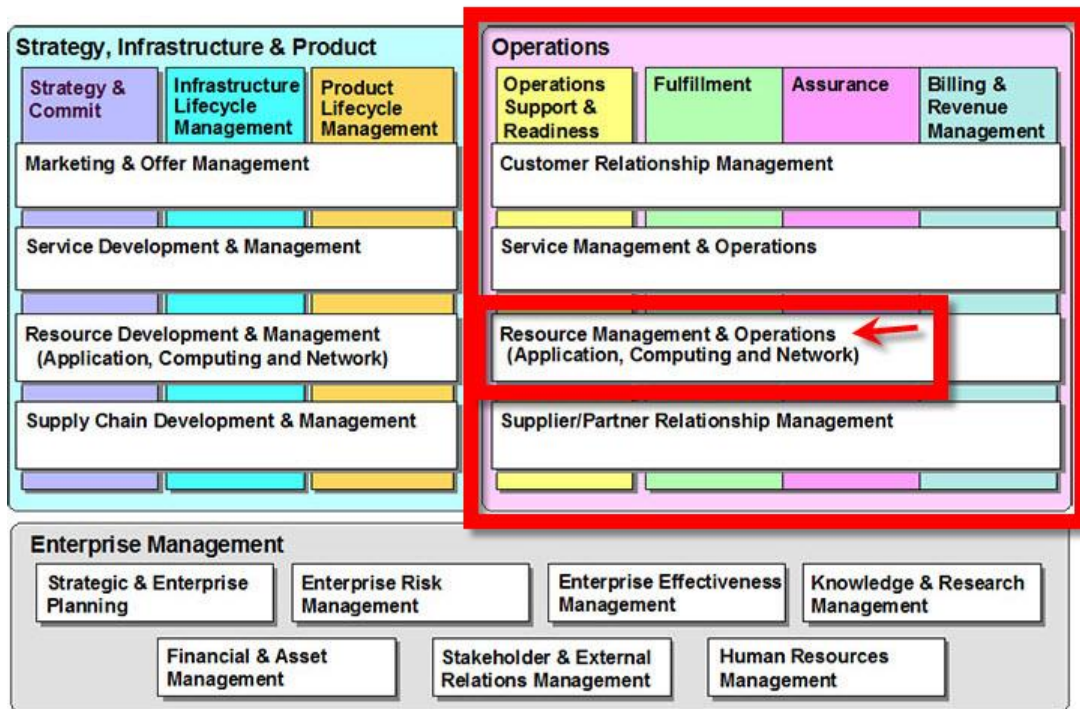
After having accomplished many business plans for communities of all sizes, we have developed a few rules of thumb for operating a traditional FTTH – one that has the expected number of employees, charges normal industry rates and has to finance the cost of their network.

- It's hard to justify a new stand-alone FTTH with fewer than 2,000 customers. i.e. the "worst case Scenario " memo provided previously.
- Economy of scale kicks in at that point and the business gets much more efficient, when measured on a per customer cost up until the FTTH project reaches between 3,000 to 25,000 customers.
- After 5,000 customers the cost curve reaches relative stasis – adding customers increases efficiency but also drives additional fixed costs. For example, companies find they need to hire extra accountants; they might need back office positions for functions like personnel or benefits management. While American Fork addresses total only 9200 for both residential and business, additional cities coming onboard within a possible interlocal would significantly increase economies of scale under the proposed modeling as well as expedite possible net revenues.



The Interlocal would optimize economies of scale and profitability.

The overall operations (O&M) is contained conceptually in the illustration below:



The FTTH O&M model illustrated above depicts inherent operational resources required to any fiber deployment operational model. When multiple cities operate within an Interlocal structure many of the operational requirements can be satisfied within one core management structure so that many expensive operational management requirements don't have to be duplicated. The multi-city combined Interlocal operations reach economies of scale sooner thus promoting the ability to realize net revenues sooner.

Principled Network Decisions

Open access

An Open Access network is analogous to cities building roads and bridges. Many residents and business use the roads to provide services to the city's residents. In the case of Open Access networks, the roads and bridges of connectivity provide access for private companies to utilize the roads to for their personal interest and commerce. The various qualified SP companies can collectively use the interlocal to provide direct Internet access within the respective interlocal member cities.

It must be understood that companies (Service Providers- SPs) leasing access to potential American Fork residents and businesses generally speaking, have other markets of interest. Therefore, it is important that we do not count on the respective marketing efforts of the SPs to drive our desired and targeted take rates. What most often happens is that SPs will perform initial marketing efforts seeking low hanging fruit. Once the low hanging fruit is obtained and marketing efforts become more demanding SPs will put forward less effort. Such efforts will be inadequate to meet our projected take rates.

We have developed a solution and strategy to aggressively drive take rate expectations by putting in place a contractual arrangement with one or more SPs to utilize their back-end (access to the internet) and our front-end professional services (customer service, billing, marketing, truck rolls) to drive our own marketing efforts. Because the network services are accessible and available to any SP wishing to utilize the services, the Network maintains true open access integrity and neutrality but keeps the ability to control its own take rate destiny. As part of our ongoing operations we will compete for the City's residents and businesses services in addition to the independent efforts of our SPs.

Residentially speaking, the marketing and sales efforts will consist of a door-to-door educational approach and an online market place/self-provisioning capability. Because of the network deployment, American Fork residents will be able to save significant monthly expenses by signing up with whatever SP and receive remarkably better connectivity.

The independence of being able to drive our own marketing efforts in addition to the individual efforts of our SPs result in the realization of the projected take rates.

Correct Architecture

General Network Design Rules

The following design rules of our strategic planning process discussed the major impact on operational costs of the network, once built. These two aspects are relevant to all three network rollout strategies:

- spare capacity
- flexibility and accessibility

Please note that when we talk about efficiency of operations, operational costs are not the only consideration, but also time (outage time, time to repair), and the availability of people and skills.

Spare capacity

The value of investing in sufficient spare capacity should be obvious. While operating the network in a competitive market, the customer base will change and different homes will need to be activated and deactivated over time. The effort required for this recurring task has a significant impact on the operational costs. Also new buildings will obviously be constructed during the lifetime of the network; for example, new houses are added between existing houses or larger houses are developed into apartment blocks with multiple residents. The network must be adapted to reach these new potential customers. This results in various additions and changes in the field, and in the worst case, if no spare capacity is available, network extensions with new fibers would be required.

Flexibility

Flexibility and accessibility has a significant impact on the costs and network operational efficiency. In reality, however, the most reasonable way of deploying the network lies somewhere in between, depending on the individual circumstances and constraints.

A network with low flexibility has a fixed connectivity at the fiber concentration points and only offers configuration options at the central office.

A network with high flexibility has several levels of fiber concentration points in the network where the fiber connectivity can be easily configured and changed over the lifetime of the network.

The network with low flexibility is a network in which the fibers of all customers are spliced from the start to the end. The splices are grouped within the fiber concentration point inside a splicing closure that could be placed inside a manhole. In such a network, even with a potential less than desirable take-rate, the communications provider must design full capacity (for 100% of the homes passed) into the network from the start, thus increasing the initial investment.

The network with high flexibility has street cabinets for each group of customers. The cabinet includes a mini optical distribution frame or patch panel, and fibers are connected by patch cords with connectors. Further flexibility can be introduced by deploying fiber cables that pass several houses. The connection between the cable and the houses is made when the customer is activated. The benefit of this approach is that the usage of splitters and fiber cables can be maximized, because for each active customer, the connection is established on demand, using the available free fibers or slots within the cables or enclosure.

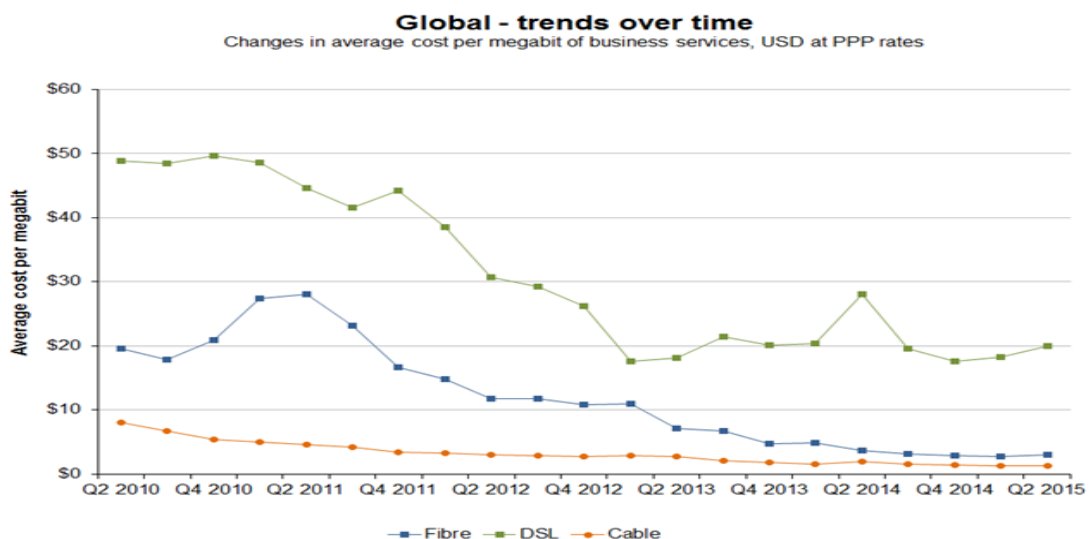
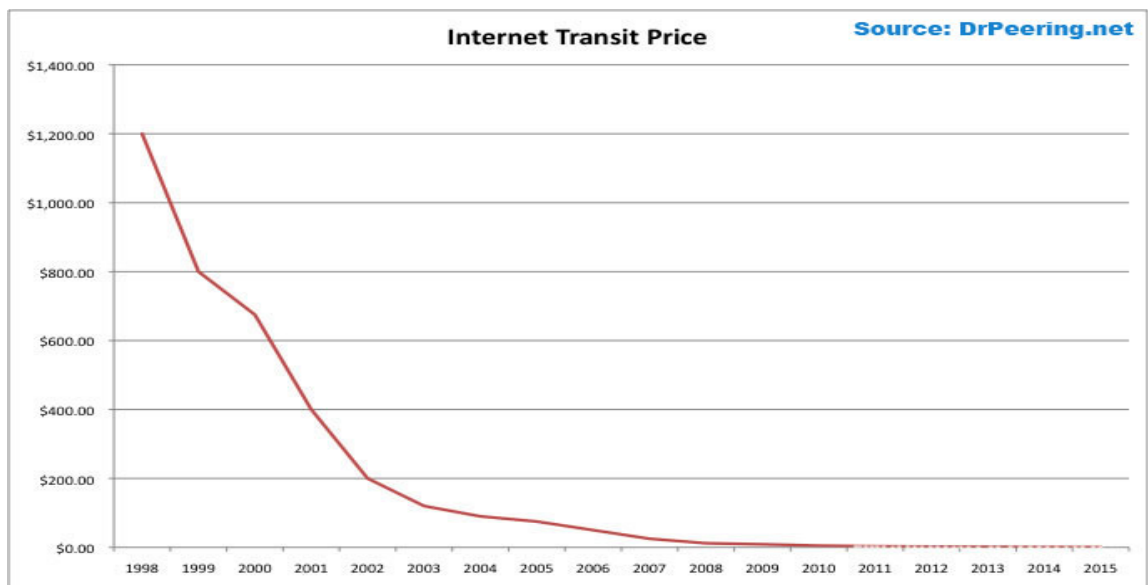
When these two extreme options are compared from an operational point of view, there is a clear difference. In a network with low flexibility, the customer connections are already pre-installed, and as a result, the effort to activate or deactivate a customer is very low. In a network with high flexibility the operator must send technicians into the field to establish new connections in several locations. There is scope for errors if the technician makes a mistake patching the cables. Information about patches must be stored and updated in a network documentation system. Any mistake in the documentation is difficult to correct later.

There are trade-offs, however. A network with high flexibility has lower power consumption; customer connections can be aggregated, so that fewer active devices and cards are required at the central office. When new homes are built, a network with high flexibility can easily be changed so that in many cases the new customers can be covered by the existing infrastructure. For example, some additional homes can be connected to a passing cable as long as the total amount of active users on the cable is smaller than the capacity of the cable. In a network with low flexibility new splices or additional cables would be required to connect homes that were not foreseen at the design stage.

Selection and Negotiation with Service Providers

Residential business case – The economics for SPs

Service provider hard costs today are lower than ever before. While all internet backbone is not created equal- meaning the quality of connectivity- generally speaking residential backhaul can be spread out over a variety of internet qualities allowing ISPs to incur as little as \$2 or less for transit.



The following cost elements associated with residential FTTH broadband are :

- \$2 for backhaul

- Front office costs, such as billing and customer service add incremental cost of around \$3
- Expense of a modem which will be around \$3.

Most SPs are able to operate at a cost of around \$8 or less. This of course does not include the cost of “Last Mile Access” infrastructure which is what the city is proposing to fund. So given the operational fixed costs, - under the city’s model- SPs become profitable once they cover marketing acquisition expenses and charge a rate in excess of \$8.

The Business-business case for the SP’s

Business internet is different because of Service Level Agreements (SLAs) between the SPs and the customer. Connectivity reliability requires a higher level of backhaul quality and operational scrutiny. SLAs come as standard with dedicated internet access agreements. These documents tend to provide a guarantee of uptime, reliability and speed. In addition, they address what happens if an outage does occur or if the reliability guarantee is not met.

The cost structure for business connectivity varies depending on the promises and service the respective SPs contract with their customers.

An inverse relationship

Most SPs want to maintain a healthy mix of business and residential customers because of the inverse relationship of internet usage between the two. For example peak time usage for business is between 9 a.m. to 5 p.m. and residential peak usage is from 5 p.m. to 9 p.m. SPs therefore view residential usage as kind of a freebie.

The price of poker

We will deploying a full FTTX Utility Model. As part of the model and as has been discussed, the city will provide -with the fiber drop -a modest connection to the internet TBD. Service Providers (SPs) wishing to take advantage of the city’s open access infrastructure, will agree to providing the basic service to those who choose not to upgrade.

SPs will see the upside of competing on the city’s network as compelling and the requirement to provide the basic modest utility connection as the “price of poker”. The additional ability for credible SPs to access multiple city markets from one collective Interlocal provides an even more compelling business case.

Vendor Research, Recommendations and Selection

Supplier Strategy

There are two main aspects of the supplier or vendor strategy to consider:

- diversity of devices and assembly units
- interoperability

We will decide how many different types of splices, connectors, patch panels, assembly units, cables, conduits, ducts and micro-ducts should be used (and so on). The following example using micro-duct systems illustrates the problem.

There are around 60 different micro-duct systems on the market. Even within the same system, there are a variety of sizes and micro-duct configurations. On the one hand the huge variety of systems makes it possible to find the perfect system for each street. On the other hand the huge variety of systems increases the overhead costs, because each type has to be in stock. As the network operator, we would have to stock for shortage and then new parts have to be ordered in case of a network failure. The result is a long time to repair.

We will define at an early planning stage which devices, assembly units, cables, pipes, and micro-ducts will be deployed in the network. And closely related to this decision is the question about which suppliers will be used. The suppliers and or vendors will be processes thru the city's competitive bid process.

In general a specific product or product line can be purchased from one vendor (a single vendor strategy) or from several vendors (a multi-vendor strategy). The advantage of a single vendor strategy is that all systems are compatible (homogeneous system). The disadvantage of such a strategy is that it leads to dependency on this vendor and the network will be held hostage somewhat in terms of their cost structure. We strongly prefer a multi-vendor strategy.

The best outcome from an operations and maintenance perspective is to choose vendors with products that are standardized rather than proprietary.

Network Deployment Strategy

It is important to select the optimum network architecture, technology, and equipment to suit the circumstances and the proposed network deployment strategy. Our chosen network topology is – point-to-point (P2P), although it is conceivable given certain parameters that a point -to -multi point or passive system could be deployed in some circumstances. This is termed a dual deployment strategy. Full network rollout, we will deploy the network inside the complete service area within a defined timeframe. The advantage of the full network rollout approach is that it is possible to optimize the roll-out process right at the start. The optimization includes:

- location of fiber concentration points
- Capacities of cables and conduits
- P2P topology and or passive or Dual topologies
- Topology efficiencies
- Spare fiber capacities
- Placement of equipment in racks
- Fiber assignment at the splice cassettes and within cables

With a primarily active topology approach, there is no need to add fiber connections at some future time because the network path between customer and central office is completely installed from the outset. Robust underground closures can be used at the fiber concentration points to reduce the risk of failure, because for the full network rollout the work at these concentration points is mainly done once during the initial deployment.

To reduce upfront costs, the full rollout can be changed to a less strict variant, where drop cables are not yet spliced at the fiber concentration points. This can save on the initial cost of installing feeder cables, but new feeder cables have to be added later when they are required.

The way cables are laid in the ducts only becomes relevant from an operational point of view when there is network failure. In the event of a cable cut, fittings and closures are required to repair the network, or in the worst case the complete cable has to be replaced. If the cable has to be replaced, it will cost more and take longer to repair the cable if no duct or conduit has been used. If protective ducts are used it may be possible to add a new cable to replace the damaged cable without having to dig up the street.

In the scenario “homes passed” it we will reduce the effort required for installation, for example, by using pre-assembled cables. The cable end points remain underground in front of the buildings, but they are already spliced at the fiber concentration points. That means the later effort to connect a customer is reduced to the final installation at the central office and at the customer location.

From an installation and maintenance point of view, the number of fiber concentration points should be reduced in order to reduce the number of potential points of failure and to reduce the effort of installation. Instead of underground closures, in this case cabinets are the best choice for the fiber concentration points, because access will be required for continuous changes. Connectors are recommended in all fiber concentration points because they allow easier additions and changes.

Future Migration Strategy

We must plan ahead for how the network and its capacity can be extended by new technologies in the future. It is important to consider the future migration strategy, so that the network could be upgraded to higher speeds and/or capacities with the least possible effort and cost.

The chosen network topology will influence the effort required for a future network migration. When a point- to-point topology is used then every customer has his own dedicated fiber. This fiber can support any arbitrary transmission technology and so upgrades will require minimal changes to the outside plant cables.

Integration and Betterment of Wireless options including 5G/CELL TOWER LEASES

-Cell tower

What Is A Cell Tower Lease?

A cell tower lease is an agreement between a tower company and or the City, a landowner or property manager allowing the cell tower company to install and maintain a tower for a specified number of years. The value of these contracts is negotiated before tower installation, when the lease renews, and during lease buyout discussions.

- Number of cell towers in the US in 2018 – 307,626
- Average cost of building a cell phone tower – \$175,000+
- Average yearly cell phone tower lease rate – \$45,000+
- Lowest annual cost to lease a cell tower – \$100
- Cell sites added in 2018 – 9,571

The City’s fiber infrastructure and city’s assets will uniquely positioned to capitalize on cellular and other spectrum deployments.

5G will bring a suite of new technologies, and among the most popular contenders are small cells, millimeter waves, massive multiple-input multiple-output (MIMO), beamforming and full duplex. Essentially small cells are miniature cellphone towers that can be placed in inconspicuous places such as light poles and the roofs of buildings. (Which the City has control over) They don’t require as much power as full-sized towers, and perform better when clustered together.

Delivery of 5G service will require wireless carriers to invest in more cell towers, as well as in small cell and fiber networks to broadcast 5G signals into specific areas. Implementation is expected to buoy revenue growth for the better part of the next decade. Cities with a specific focus on small cells development stand to cash in. The global market for single-mode fiber will more than double from \$3.02 billion in 2017 to \$6.81 billion in 2025, predicts Allied Market Research in a new report. The 10.8% compound annual growth rate (CAGR) will benefit from the demand for single-mode fiber in support of 5G rollouts.

Outside Plant and Network Documentation

All communications providers, whether incumbent or new network operators, have to go through the same process steps of planning, execution, and operation. The requirements for this life cycle are so complex and comprehensive that software support is required for each of the three process steps.

The network operator's objective is to ensure that the data created during the planning, design and build phases is retained so that the resulting network can be operated and maintained in an efficient manner. Without this data operational costs will increase because of inefficiencies in the operational processes.

Various methods of storing the data are possible, from a central database repository or data warehouse to a locally held GIS-based documentation of the network layers. Despite the wide range of possibilities, there are several common points which are required for efficient network design, operation and maintenance.

Field verification of the network design. As-built documentation for network rollout and for all changes made during operation. Central data management to combine resource management with provisioning and fulfilment. Added value of central data management for service assurance.

Field Verification of Network Design

While it is commonplace for network designers to undertake field visits before creating the initial network design, it is less common for a field visit to take place once the initial design has been completed. This has a number of implications because, once the build is in progress, any problems with the proposed design may force changes to the design. Changes to cable routes can have an impact on the design within the current construction area, but the changes can also influence the cable routes in other construction areas, for instance, if a cable in one construction area leads over the ducts or conduit in a second construction area. In extreme cases changes in the field may completely invalidate the optimization of a particular area.

With the wide availability of high-quality satellite, aerial and street level imagery, it is now possible for the designer to undertake the initial design from the office. High-quality imagery such as that available from Google Street View allows designers to undertake desktop surveys and create an initial design that is much closer to the final design, by taking into account the location of obstacles or placing equipment to reduce its visual impact.

Field verification of the design is still essential but, by taking the initial design out into the field, the designer can now ensure that the resulting design will minimize the changes required during construction. Tablets allow designers to take the design into the field, mark up required changes to the design with sketching tools, notes and photos. They can capture information about obstructions and possible health and safety issues quickly and easily.

Once back in the office our designs can now update the initial design to take account of the situation in the field, confident that the final design is now fully optimized for the area and should require minimal changes during construction.

Such an approach has a number of benefits:

- Faster design time as less change is required from initial to final design.
- Reduction in the number of field visits required, saving costs and time.
- Reducing unforeseen changes and their related costs during construction because the final design is more accurate.
- Faster inventory updates once the design is complete because there is less change from the final design to the as-built design.

It is also essential that every network object like a location, cable or device gets a unique ID within the entire city. As reasonable and easy as it sounds, it is a major challenge from the IT perspective and it is almost impossible to solve for large networks. Therefore it is important that we decide to introduce a central data management, which creates and assigns the IDs that will be used in all applications.

As-built Documentation

Based on experience, the installed network can have a difference of up to 30% compared to the planned network. Therefore it is vital for network operation later that all changes are documented properly. The required process strongly depends on the type of the network rollout project:

The documentation and all intermediate steps need to be documented. For example; we need to know which cables and which one of the micro-ducts leads to the right building. Any inconsistency between planning and installation results in mistakes, such as blowing the cable into the wrong duct, which in turn leads to delays during deployment.

As the network operator, and what is used to enter the as-built data into separate applications and the as-built database may completely independent of the planning process and the planning tool. An integrated solution (planning and documentation in one tool) simplifies and speeds up processes leading to further operational savings.

The changes between the as-built documentation and the original design can include changed cable routes, different types of material, or even new locations, which can ultimately influence the attenuation budget or the ordering of splicing. As explained previously changes occurring during construction can invalidate the optimization performed during the design phase, resulting in unplanned costs and missed budgets. Therefore it is important to minimize changes to the design as much as possible during construction.

Reducing the amount of change also means that the as-built documentation can be updated more quickly because the change to the initial design is less. Again using tablets in the field allows the construction crews to electronically mark-up the changes they have made from the final design to the as-built network. This allows these changes to get back to the back office much faster and the master inventory to be quickly updated. This is vital to ensure that revenue generating services can be offered over the new network as quickly as possible.

Increasingly a “bring your own device” (BYOD) approach is common when construction is outsourced. Software that allows contractors to download an app and access the relevant designs and update them, either directly in the field or afterwards from their office, can significantly streamline process. The operator’s back office team can then confirm the proposed changes before accepting them into the master inventory.

Once again the benefits include faster completion of work and the creation of high-quality network documentation, which is vital for the successful operation of the network.

Central Data Management – THE NOC

The map/illustration above distinguishes between “resource management” and “service management” which reflects the division of systems in the current IT world. Network operators typically have separate inventory management systems and systems to manage the customer services. From a resource perspective, it is not only important to know whether a certain resource is available or otherwise, but also which resources are busy and for how long.

In FTTH networks, the fundamental resource that is necessary to deliver service is the physical fiber-optic cable that connects the central office to the end customer. When a customer requests a connection, the order management and service inventory systems need to quickly find out if a physical connection is available or possible. In our case, it should always populate as “available”. These details can only be found in the physical network documentation, which must make this data available to other systems so that they can respond to such requests.

The approach of a central data management is to integrate the physical network documentation with order or service management systems to quickly answer the question of service availability.

Integrating the resource management and service management systems in such a combined approach is often referred to as federated inventory management.

It is also important to continue to keep the network documentation up to date while the network is in operation. Whenever customer connections are enabled or disabled, the network documentation should be updated as soon as possible to avoid degrading the quality of the data. This is critical to ensure that provisioning requests do not fail. Failed orders result in additional operational costs, loss of income, and a reduction in customer satisfaction.

Standardize and Streamline OAM Processes

Process Management

Network operations and maintenance is a “big ticket” item with operators typically devoting around one third of their total operating expenditure to such activities. Add to this the huge capex budgets being spent on network build projects and it soon becomes clear how significant these “build and maintain” processes are in determining an FTTH operator’s current and future ability to produce positive net revenues. As further cost savings and productivity gains becoming increasingly harder to find, greater scrutiny is now being placed on these activities.

Process management is increasingly gaining favor over historical cost-cutting exercises - no doubt because it is more objective. Furthermore, process management offers a methodical approach to identifying specific problems such as bottlenecks and non-value-add activity (waste), etc.

Many different terms are used to describe process-based management approaches; for example: business process re-engineering (BPR) and business process management (BPM) to name just two. Whilst such terms are not identical, they do largely overlap and are used interchangeably within the industry (meaning one person’s BPR project might well be another’s BPM project).

Naturally, the overall concept of process management continues to evolve, driven by changes in technology, resources and the business environment. However, its basic value proposition has remained unchanged for decades; namely, to process more with less effort and of a higher quality. Process management will therefore no doubt remain a cornerstone discipline for the network.

Process Management Adoption

Process management is a well-established managerial discipline across most major industries, many network operators have been slow to embrace it - and have therefore largely forgone the benefits that such an approach offers.

This is particularly evident in developing economies where many operators have tended to favor a labor-intensive approach to building and operating their networks. Often described as short-sighted, it is easy to understand why operators largely rely on cheap labor to compensate for shortfalls in their planning and execution capabilities. Of course, operators in developed economies don't have the luxury of working in such an "inefficient" manner and it is therefore no coincidence that process management adoption has been much higher in these more mature markets.

When implemented correctly, process management helps to compensate for a lack of organizational capability and experience. Being prescriptive, it clearly explains what needs to be done and removes individual guesswork.

A Model for Change

A popular paradigm for driving process improvement is the 'As-Is' to 'To-Be' approach. 'As-Is' is the process as it currently stands; whereas 'To-Be' is the target process after it has been re-engineered. The operator then builds a bridge from the current 'As-Is' position to the desired 'To-Be' outcome via a series of changes. These changes may be small and relate directly to the process, or they could be holistic changes that assist in achieving the bigger picture. Examples include changes in responsibility, backfilling positions, automating tasks, changing structures, etc. It is also worth remembering that network culture is as relevant as the tasks and resources that the process utilizes.

The beauty of this approach is that the required changes can be broken down into small manageable pieces and completed over a period of time. Each change is a step in the right direction and this type of iterative approach also sets the foundations for continuous improvement. The Networks essential personnel become used to the culture of ongoing change and the pursuit of improvement becomes ingrained in the network's culture.

Process Standardization

The importance of process standardization for network operators cannot be underestimated. Process standardization is of most value with high-volume, repetitive processes that move amongst a number of different individuals during their lifecycle. This will be particularly true in the case of a common interlocal operation.

Given the fact that the majority of a network's activities fit this scenario – especially in deployment and operations - process standardization is key to delivering a consistent customer experience and improving productivity. It is also a precondition for fast and efficient workflows.

As with any process, if more than one individual completes a task without any parameters in place, then it is likely that more than one method is being used. Collaborative process standardization results in more consistent output, better training and where industry regulations must be enforced, provides assurance around company compliance.

As an example, consider an FTTH rollout where a network operator is monitoring the cost-per-premise passed. Invariably the build cost for the most expensive 10-20% of premises far exceeds the average.

However, whilst some incremental costs are no doubt unavoidable (due to physical factors such as lower population density, etc.), others are often caused by a breakdown in the process itself.

Without standardized processes, the operator is unnecessarily accentuating the cost per premises passed by allowing inefficient variations to become part of daily activity. By standardizing the processes inherent in the FTTH rollout, variations reduce and productivity increases. Standardization ensures that there are robust processes in place and that they are embraced.

Standard Operating Procedures

A Standard Operating Procedure (SOP) is a document that outlines the steps required to complete a particular process. A SOP takes the uncertainty out of a process and means that employees and contractors have a clear directive to follow.

A SOP should cover both operational and support processes, with the procedures for each core process mapped from start to finish. Ideally, the processes are mapped by those who already undertake the process, but the process should be simple and clear enough to be followed by most. Generally, diagrams and visual depictions are preferred over overly technical, verbose explanations.

A SOP defines what needs to be done, when and by whom. It also defines how the process will be measured and who is responsible for achieving that measure. Without a SOP, employees have no clear guidance around how a task should be completed, and ad hoc processes and personal preferences/habits filter into the operational equation. This scenario can be more likely where staff are spread over many different locations or where contractors form a large part of the labor force.

The Impact of Outsourcing

With more networks outsourcing more of their activities to managed service providers and third- party contractors, outsourcing is having a big impact on the industry. This is especially true with build, operations and maintenance processes which are the most frequently outsourced.

However, the belief that outsourcing somehow negates the importance of process management is ill-founded. In fact, as the number of contractors and/or outsourcing parties employed by the operator increases, so too does the complexity of the operating environment.

Even with managed service providers in place, accountability (and therefore overall process ownership) ultimately remains with the operator- or in our case the city. So, while outsourcing clearly changes the operating model, it doesn't remove the need for disciplined process management. In fact, as many network operators have slowly realized, process management actually becomes more important in such situations.

Such misconceptions no doubt help to explain why many network operators have failed to achieve the anticipated financial returns from outsourcing. However, a common practice

Common causes of outsourcing failure include:

- incongruent and subjective goals
- misunderstanding of the process
- lack of standards
- inadequate reporting and transparency
- unclear division of responsibilities

Outsourcing therefore presents its own set of unique challenges and process management has a critical role to play. It is both a planning and execution tool and helps the parties clearly define robust operating and business models that are grounded in reality.

Logistics and Inventory Management

Logistics and inventory management are also vital components that must be integrated into an operator's core processes. Once the network equipment supplier agreement is in place, attention must move to the logistics for ordering and delivering the required materials to site. This must be tightly coordinated with the workforce management process in order to ensure the technicians have access to the correct materials to complete the work and so inventory doesn't get misused or stolen.

For the network operator, it is fundamentally about ensuring that both the key personnel and network inventory are available and present on site at the right time. Failure to ensure that the equipment is at the right location at the right time will inevitably mean wasted time and effort for technicians who are ready to complete a scheduled task but lack the equipment to do so. This in turn can have ongoing repercussions for scheduled work timetables and deadlines. Process management is therefore essential in coordinating workforce management and logistics management.

These issues can be avoided by establishing an integrated, end-to-end supply chain, which, with the right expertise and tools, can in turn drive efficiency into the delivery of services and remove significant cost from the value chain. Workflows therefore need to be tightly integrated from an inventory and workforce point-of-view.

Enabling Process Management with Software

The power of software to support operators' process management initiatives is well established. In fact, very few processes can be considered even close to optimal without the use of software to manage and report on the process.

Once a process has been standardized (to the agreement and satisfaction of all key personnel) and documented, it can be replicated in the software. This means configuring the software to match the operator's desired workflow. The implementation should also extend beyond the network operator to include contractors in order to create the collaborative environment critical for success. The software then helps to manage, measure and report on the process.

Many process steps will be able to be automated based on software-defined business rules and automatic data-capture forms the foundation for powerful reporting. Here the data can be used to provide automated real-time reporting of key measures. This in turn supports rapid decision-making by all stakeholders – those undertaking the process, those monitoring the process and those responsible for its outcome.

The software also helps to support process standardization by establishing controls that ensure adherence to the prescribed workflow.

The use of software minimizes the amount of effort needed to perform, manage and report on operational processes. It is therefore a critical enabler for operators looking to leverage the full value from their process management initiatives.

Process Measurement

Effectively measuring a process ensures that it is delivering to the agreed standard and improving over time. But with so many different possible options, careful consideration needs to be given to implementing the right measures.

Generally speaking, this means establishing a small, balanced set of key performance indicators (KPIs) that helps to answer the following key questions:

- How effective is the process?
- How efficient is the process?
- How agile is the process?

Most operations and maintenance processes will therefore require a handful of different measures that can be assessed together in order to strike the right balance between speed, cost and quality of service.

Central Data Management and Service Assurance

Central data management has significant benefits for service assurance processes as well. Solutions like a federated inventory provide a cross-domain view which integrates the physical network inventory with the service inventory. A customer takes certain services, the services are routed over fibers from the customer to the central office, the fibers are part of cables, cables lead over conduits and pipes, conduits and pipes are deployed in ducts.

An integrated solution can answer questions such as: What customers and services are affected, if conduit system xyz is cut? Are there unused fibers in other cables leading over different conduit systems which are not affected, so they can be used instead? What are the required steps to use identified spare fibers for important traffic?

If data about customers and their services are combined with data about resources then it is possible to inform the affected customers about network failure or installation work that may affect the services they receive. In many cases this can be achieved before the customer is even aware they have been affected by the outage, which is essential for business customers) for example by combining data from resource inventory with health indicators from the customer premises equipment.

This concept can be taken one stage further by integrating fault management systems with the federated inventory management. For example if an active device detects a fault, a cross-domain view is required to identify the faults in the infrastructure. There are two key aspects to this: first the customer has to be identified, and then the location of the fault has to be identified, so that a repair can be made.

Let us consider the situation where the fault is the result of a cable cut. In this case the fault management system will detect an alarm and needs to understand which services are impacted. This information can be retrieved from the service inventory. With this information the appropriate restoration plan can be implemented.

However, in order to fully restore service, the cut cable will need to be fixed. One of the key challenges is to locate the cut. The normal practice is to use OTDR (optical time-domain reflectometer) equipment to determine the distance along the fiber of the cut. When the distance is known, then it is possible to use geospatial data held in the physical inventory to precisely locate the cut in the field. This interrogation can be performed by the engineer in the field on a tablet or could be handled by an engineer in the network operations center (NOC) accessing the physical inventory directly. In a fully integrated fault management system, the system with the physical inventory returns the coordinate of the fiber cut to the fault management system, which in-turn automatically dispatches the field engineer to that location.

The main point is that accurate and up-to-date physical and service inventory data is critical when determining the impact and the location of a fault. Getting customers back on the network quickly is essential to meet service level agreements and maintain customer satisfaction.

Summary

High-quality network documentation is an important part of efficient network operations and maintenance. The cost of maintaining network documentation should be considered in the context of more efficient network design, construction and operations. In those contexts the relatively modest amount of expenditure required can result in significant savings through faster and more accurate designs leading to reduced overruns during construction and more efficient network operations.

In conclusion, efficient operation and maintenance is only possible when the network that has been thoroughly documented and the documentation kept up to date.

Summary

Process management can be a powerful tool lower operations and maintenance costs and improve service performance. It allows us to deliver more with less: to improve output (both in terms of quantity and quality) with less input (and therefore lower costs).

Conclusions

Four important issues that have an impact on the efficiency of FTTH network operations and maintenance:

1. **Strategic planning** at the start of a project can minimize the effort required to operate and maintain the network later. The deployment strategy can be optimized to enable more efficient network operations and maintenance. Clear network design rules are required. Considerations include the provision of spare capacity for network additions and extensions, the required flexibility and accessibility of cables and conduit, and the future migration strategy. Finally, the number of suppliers and the variety of equipment deployed in the network has a strong impact on the complexity of maintaining the network.
2. Well-maintained **network documentation** is important to keep the network manageable, avoids unnecessary errors and outage times in case of repairs, and overall saves time and cost during the network operation and maintenance phase. To create and maintain high-quality documentation is an important but challenging task. Software tools are indispensable; some can collect data in the field and enter those details directly into the as-built documentation for an up-to-date record. With a centralized data management system, inconsistencies between different teams and data sources can be avoided, which improves the service performance of the network.
3. **Standardized process management** provides a set of proven and effective practices to support network operations and maintenance in a systematic way, while increasing the efficiency of all related procedures and tasks. Further aspects, such as inventory management and process measurement are taken as relevant component to support the whole process management approach. It is also possible to apply a tool-supported process management to make the implementation sufficient.
4. **Interlocal Operations** promotes the aforementioned FFTX practices across a broader service market allowing quicker economies of scale to be realized and stronger ISP market attention. It would be difficult to experience the same economies and efficiencies by the city going it alone and our individually outsourcing the operations. It should be also noted that American Fork maintains some existing core competencies specific to past fiber efforts. It would be anticipated under an interlocal operating model, that other municipalities could take advantage of American Fork's network core competencies in conjunction with the interlocal model. If and when that were

to occur American Fork would experience additional financial gains to its respective fiber efforts and model.

Summary

Once the aforementioned operation's processes are in place and the network has been constructed, the established operating model and its established processes must be the law of the land. The efficiency of the networks operations depend on such consistency.

The potential of an interlocal operations would accelerate "economies of scale" abilities and produce net revenues sooner. The standardization of processes allow such an interlocal practice. It would be anticipated that the interlocal would utilize the existing core competencies already embedded within American Forks Network Operation's center to benefit not only the other members of the interlocal but further enhance the efficiencies of American Fork's fiber model.