DRAFT AGENDA May 5, 2021 @ 5:30 PM DRAFT AGENDA

5:30 PM   Welcomes and introductions - Greene/McKee

5:33 PM   Discuss: The Orange County Board of Commissioners adopted a charge for the task
force:

> 1.   Discuss broadband solutions that will improve the quality of high speed
> internet services to Orange County residents
>
> 2.   Recommend a plan to the Board of Orange County Commissioners that
> will expand reliable high-speed internet services to all County residents and
> businesses.
>
> The task force may consider other issues not related to items 1 or 2, at its
> discretion.

5:40 PM   Open Broadband County and Statewide Update (What works? What doesn't?) Alan
Fitzpatrick

6:00 PM   Discuss the "Proposal" RFP, RFQ or RFI. Northrup/Sural/Myren

6:25 PM   Discuss meeting length - Co-chairs

6:28 PM   Old Business/New Business/Housekeeping

> •   Action Register Grants Update\
> •   Minutes/Notes approval

6:30 PM   Adjourn

Meeting Notes:

Attendees: Commissioner Greene

          Commissioner McKee

          Charles Burnham

          Tony Blake

          Victoria Deaton

          Jeff Sural

          Travis Myren

          Patricia Hull

Paul Cardillo

Todd Broucksou

Alan Fitzpatrick – Co-founder and CTO of Open Broadband (10 min presentation)

Agenda: Discuss the charge – recommend a plan to BOCC; will be time for public input later; talk about BB solutions available to all OC residents – focus on 5000 households and target them first

Action:

- Alan Fitzpatrick: provide estimate of number of towers needed to service 5000 households
- Jim: get RFI/RFQ and "county run fiber project" ready for BbTF to review

Alan Fitzpatrick – presenting PowerPoint (attached)

- Presentation
- Q&A
    o Todd – what is cellular solution? AF: NetGear(?) Wave (cradlepoint) cellular router/plan – unlimited usage, no data caps, 25-26 homes in service, only 3 that didn't work; fixed wireless are using CBRS 3.5Ghz spectrum to get through dense trees; had to go to 9 Mhz; using shared spectrum but managed by provider that manages bandwidth; every endpoint has to be programmed into spectrum sharing
    o Pat – of the residents who signed up to receive service what portion are you able to serve, AF: 10%; even some that sign up can't be served; TOH water tower is 102' but with rolling terrain 60-80' height still challenges getting signal through
    o Earl – what tower height would OpenBB need should county build a tower; AF: 250-300' would be ideal; Q: what is limitation in height for county vertical assets; JN: no limit but higher the tower, the more the regulations to adhere to; Earl: limitation now is FAA regulations; SUT process gets you to 200' tower then FAA regs kick in.
    o Sally - how tall are Viper towers?; Todd: ~80' monopole; Sally – if commission were to request a tower - if reason was to provide high-speed wireless internet service – hopes exception would be made; Alan – provide # of how many towers OpenBB would need to build to service 5000 households; AF: will review; considerations are terrain around tower, capacity of equipment – 500 users per tower; if perfectly placed, 10 towers; TB: 14-15 towers ideally; latticework towers (roan?) $20-25k/tower; guy wires would be required so need large tract of land for "fall zone", power is also a requirement; JN: ES tower was first tower and was used to successfully service trailer park
    o Earl – out of the total # of units in mobile home park how many signed up, AF: 65-70%, others didn't sign up because they wanted a bundled TV/internet solution, also part of it was lack of confidence – had a working solution so were reluctant to change to "unknown"; results on Phase 1 didn't live up to the promise
    o Earl – on Phase 1 outcome wasn't what was expected – what has acceptance rate been around towers? Need to understand what works for OpenBB as well as residents; AF: #1 reason don't have more is because coverage rate of existing equipment – 35-50% "take rate"; regular LTE worked in Gaston Co and Wayne Co and getting 5 miles with 50 Mb; in OC towers not that tall and too much rolling terrain and density of trees.
    o Earl – what distance can expect from tall towers? AF: 2-2.5 miles; Sally - cost per household $1000; RDOF cost is $1700; GREAT grants average rate was $1100/household; Jeff Sural - $2900/household (includes all modes – fiber, fixed, etc); fixed wireless is $1500/household; drop

to home cable company wants to charge $4k; PEMC quotes $5k/household for fiber to the home; Bertie County is $15k/household for fiber; grants are funding $1000/path; Earl – if OC was to move forward with towers (phase 1) is OpenBB ready to get service out to people it would be able to reach – manpower, equipment, etc.; AF: will need to evaluate equipment and manpower need to determine schedule; part of discussion would be that OpenBB could/would move forward quickly, without hesitation or exception; AF: extensive competition for talent and significant impact on manufacturers, chip shortages, cargo delays, etc – will be hard to hit high number given these constraints

- o Earl – how many installers now and how many would be required to do 1000 homes (19/day for a year to get 5000 household installs); 1000 would require 10 technicians so would need to staff up; JN: know fixed wireless won't be able to get to every one of 5000 houses; <ASK WHAT THE GOAL DATE WAS – 2 years?????> (Call dropped during discussion); how to determine "take rate" to be able to get a more accurate estimate?; 5000 comes from "where Spectrum isn't" so only single landline provider (DSL – CenturyLink); JN: all calculations were pre-pandemic;
- o Paul: does the 5000 number account for hotspots? JN: no, don't have map data for hotspot coverage; data caps and throttling are concern; AF: did anything OpenBB presented surprise us? Sally – surprised by cost versus cost of other solutions; also by how much of own money invested

Jim/Travis/Jeff – discuss RFQ/RFP;

- working on last summer; something Finance/Legal/Construction team were working on; RFQ said have $30 million to spend, help us spend it; don't know what technology is required but know we want to partner with someone; not just handing over $30million and say "get 'er done"
- discussion around differences between RFP/RFQ/RFI
- RFQ – request for qualifications, and a design/build construction project; AMS felt would be adequate for getting design services
- Sally – we know generally what our problem is, and that one solution isn't going to solve it; want bidder to help clearly define the problem and propose a solution
- Todd – what would like to see group do is empowering the County – take money coming from Feds, use it to put fiber on streets to 5000 homes then choose vendor that could take advantage of fiber to get internet to the home; one time in a generation to get money for this; Paul agrees – doesn't know how long schools will be able to afford hotspot costs of $40k/year; Terri agrees w/Todd as well; put out RFI to see which providers might be interested; lease fiber to vendor then use $$ to cover cost of maintaining fiber
- JN – CTC (vendor for Ting); did strategic plan and would be interested in doing plan for fiber, parts list and price it out from soup to nuts; then left with infrastructure that we'd be responsible for lighting up (one approach); plan/price for fiber network for County; design process would take 6-9 months
- Todd – short term idea => StarLink - county pays $500 then homeowner pays the monthly fees; use telephone poles for fiber-to-home so need to get friendly with PEMC; thinks could build infrastructure within 2 years; MCNC did 2400 miles in 2 years
- Paul – fiber to the street – AT&T and Spectrum both have fiber past every house on 54; Spectrum charged $3000 to get it from street to house
- Earl – money has to be spent by 2024
- Jeff Sural – RFP/RFI for County to install own fiber, need to have more discussion about legalities (see bill that Jeff just sent); bill has changed how state operates; next step is to finish RFP
- Earl – proposes to discuss short term (fixed wireless) and fiber for long term; get more info; Sally – Jim to prepare RFP for group to review; Jim: can do RFP and get information about "county run fiber project" and bring it back to the group

Defer approval of minutes (for last two meetings) until next meeting

ACTION – Jim to bring RFP and "county run fiber project"

Move to adjourn