

City of Wildwood, MO
Options for Improving Broadband Service
June 2019

The City of Wildwood faces supply constraints on the provision of high-speed internet access. In particular, residents on the west side of the City, have limited—if any—broadband choices. The reasons for the short supply are that the cost of fiber construction is extremely high and wireless coverage is challenging. This means ISPs cannot provide ubiquitous coverage and obtain a reasonable rate of return. As a result, ISPs will tend to serve only those areas of the west side where costs of construction are lower or able to serve a location with wireless.

Solving this problem will require some kind of subsidy; that is, funding sources that do not need a rate of return or recovery.

The high cost to build is driven by several factors:

- Low housing density (low number of households per street-mile)
- Long “drop” distances (long driveways)
- The predominance of underground construction, which is more costly than aerial construction.
- Rocky soil conditions, which make the cost of underground construction especially high.

There are some ways to reduce the construction costs, such as by using internal crews rather than contractors, and other such steps. These will help somewhat but not come close to solving the cost issue.

In terms of technology choices, wireless expansion has helped in the short-term but is not the long-term solution for coverage that is both ubiquitous and robust. The wireless ISPs (WISPs) operating in Wildwood—Bayes ET and Wisper—concur that wireless is not the long-term or comprehensive solution in Wildwood. They have tried expansion of wireless, but these attempts will not meet long-term needs.

Rather, what’s required for most of Wildwood is a fiber-to-the-premises (FTTP) or a hybrid fiber coaxial (HFC) buildout. If Spectrum were to expand into the west side of the city, they would use HFC because this is their existing network platform. If another ISP were to build, they would most likely use FTTP. Either way, a wired network would be required to serve most of the City’s residents, with wireless solutions perhaps deployed on a case-by-case basis for particularly hard-to-reach premises.

Carrying out such a buildout will require substantial subsidies, or funding that will not be recovered. Potential sources include:

- Investment funding from an ISP. However, the ISP will need a rate of return on the investment. The City of Wildwood cannot expect any ISP fund a project that does not provide a reasonable rate of return.

- Contribution from City. City should not expect a recovery of these funds in the short or long term.
- Contribution from residents (HOA, individual groups, other). Residents should not expect a recovery of these funds in the short or long term. An indirect benefit to homeowners is increased home value and faster resale potential once a robust broadband connection is in place.
- Grants would be nice to receive; however, it does not appear that Wildwood is eligible for any current federal or other grant programs.

CTC examined eight approaches to solving these problems (see “Wildwood Approach Advantages Disadvantages” and “Wildwood Approach Summary”). Of the eight, three appear to be the most reasonable:

1: City Builds and Leases Dark Middle Mile. Under this scenario, the City would build middle-mile fiber and provide ISPs access to this fiber. The ISPs would then deploy, own and operate last mile infrastructure—outside plant (OSP) and electronics—and provide retail services. This allows the ISP to connect neighborhoods on a case-by-case basis, avoiding the cost to connect neighborhood-to-neighborhood.

For a ubiquitous buildout, the middle-mile portion represents a low percentage of the total cost. One disadvantage of this approach is that it may still leave many neighborhoods unserved; the highest-cost neighborhoods may still not be addressed¹. One advantage is that this may provide a relatively fast solution and reduced costs to solve the problem in the lower-cost neighborhoods. One question to resolve: if residents help subsidize the cost to build the last mile—do they prefer to own, or perhaps prefer to avoid owning) the fiber.

Bays ET suggested a variation on the above approach in which the City just installs conduit, then Bays ET (or another provider selected following an RFP process) pulls fiber when required. This would reduce the City’s implementation and operation costs but might limit attractiveness to other ISPs. From a control and protection perspective, City might be better served with owning and controlling both the middle-mile fiber and conduit.

2: Offer Cash Incentives. Under this scenario, the City would issue an RFP offering funds for any ISP willing to provide broadband coverage guarantees as specified in the RFP. Spectrum would be expected to respond, others might. This approach has the potential of meeting core objectives—availability on a near-ubiquitous basis and contractually-guaranteed coverage and performance—at a lower cost than building middle-mile fiber or. This approach would require a legal review.

¹ The high cost to build is driven by last-mile costs. Many neighborhoods will require other funding sources (homeowners associations, residents, other) for last mile construction. The availability of middle-mile fiber does not address the high cost of last mile fiber.

3: Expand Wireless Assets. Under this scenario, the City would expand placement of poles and other assets for WISPs, and streamline permitting and other processes for underground fiber placement. However, by itself, this approach is unlikely to achieve much more than what the City is doing today. This approach might be more effective if done in conjunction with one of the previous two approaches.

A hybrid of the above three basic approaches may be needed. CTC recommends that Wildwood engage in an RFP/RFI approach to solicit interest from ISPs for each approach and allow a range of ISPs to respond. It is expected that the various ISPs will have preferences. For example, Bays ET will likely favor the middle mile approach, Wisper will likely to favor wireless expansion, and Spectrum is likely to favor cash incentives.