Georgia Interstate Broadband Deployment Project

Commercial Assessment Summary

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Overview

GDOT completed a robust market study to assess the overall value of its right-of-way for commercial broadband fiber and wireless use

GDOT Market Assessment	Georgia Department of Transportation ("GDOT") completed a market assessment to understand the potential value of existing GDOT conduit, potential conduit in existing right-of-way ("ROW"), and wireless broadband on the fixed network from a commercial perspective. The study included a review of interstates and secondary state routes for fiber, wireless and fiber and wireless businesses. The quantitative output provided directional figures on potential market size, revenue, profit, and capital investment requirements to support an indicative payback period assessment.
Data Sources	Data was collected from publically available sources including the Federal Communications Commission ("FCC"), United States Census Bureau ("Census"), the Bureau of Labor Statistics ("BLS"), GDOT, State of Georgia, and other public sector data sets. In addition, industry data from 10K annual reports, investor presentations, white papers, and prior public-private partnership ("P3" or "PPP") projects were used. Captured data was used to drive several analyses.
Analysis	The analysis included a total market sizing exercise, competitive intensity review, and ROW positioning for current and future fiber and wireless broadband businesses. Information was generated on a county, census tract, and square mile basis. Business models explored included transit fiber, access fiber, fiber backhaul, pole leasing, and wireless network / wireless internet service provider ("WISP"). The analysis was completed using a geographical information system ("GIS") tool combined with big data systems, business models, and a dynamic visualization.
Overview of Findings	The total annual run rate opportunity for fiber and wireless broadband on GDOT's ROW for this network scope is expected to be between $80M-100M+: • ***Existing Assets (fiber and wireless):*** Existing conduit is expected to contribute $30M-35M of annual run rate revenue for fiber and wireless broadband. • ***Interstate ROW (fiber and wireless):*** the interstate is expected to contribute $25M-30M in annual run rate revenue for fiber and $20M-25M in annual run rate revenue for wireless. • ***Pocket Opportunity (fiber and wireless):*** access fiber and wireless pockets alongside the interstate on other ROW is expected to contribute up to $20M in annual run rate revenue with additional upside for wireless small cell in populated areas.

Source: GDOT

Commercial Assessment Framework

The study of GDOT's ROW leverages a mutually exclusive and collectively exhaustive framework that identified $80M-100M+ of annual interstate revenue

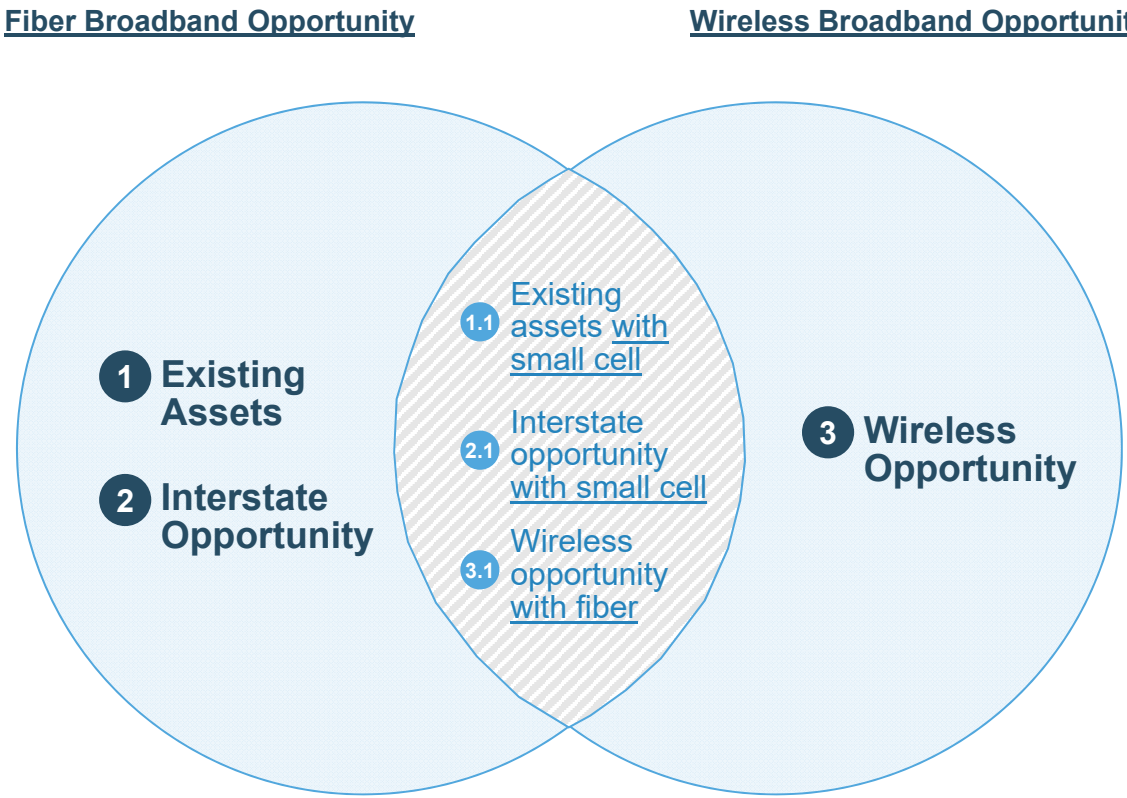
 # Opportunity *# Dependent Opportunity*

Broadband Opportunity

1. Includes **existing GDOT conduit**; 1.1 assumes **incremental revenue from attractive small cell** areas fixed to existing structures on GDOT ROW

2. Includes **fiber broadband rollout** to **interstate highways**; 2.1 assumes **incremental revenue from attractive small cell** areas fixed to structures on GDOT ROW

3. Includes **small cell rollout to GDOT ROW structures outside of GDOT interstate highways without P3 fiber connectivity**; 3.1 assumes incremental wireline revenue on GDOT's ROW



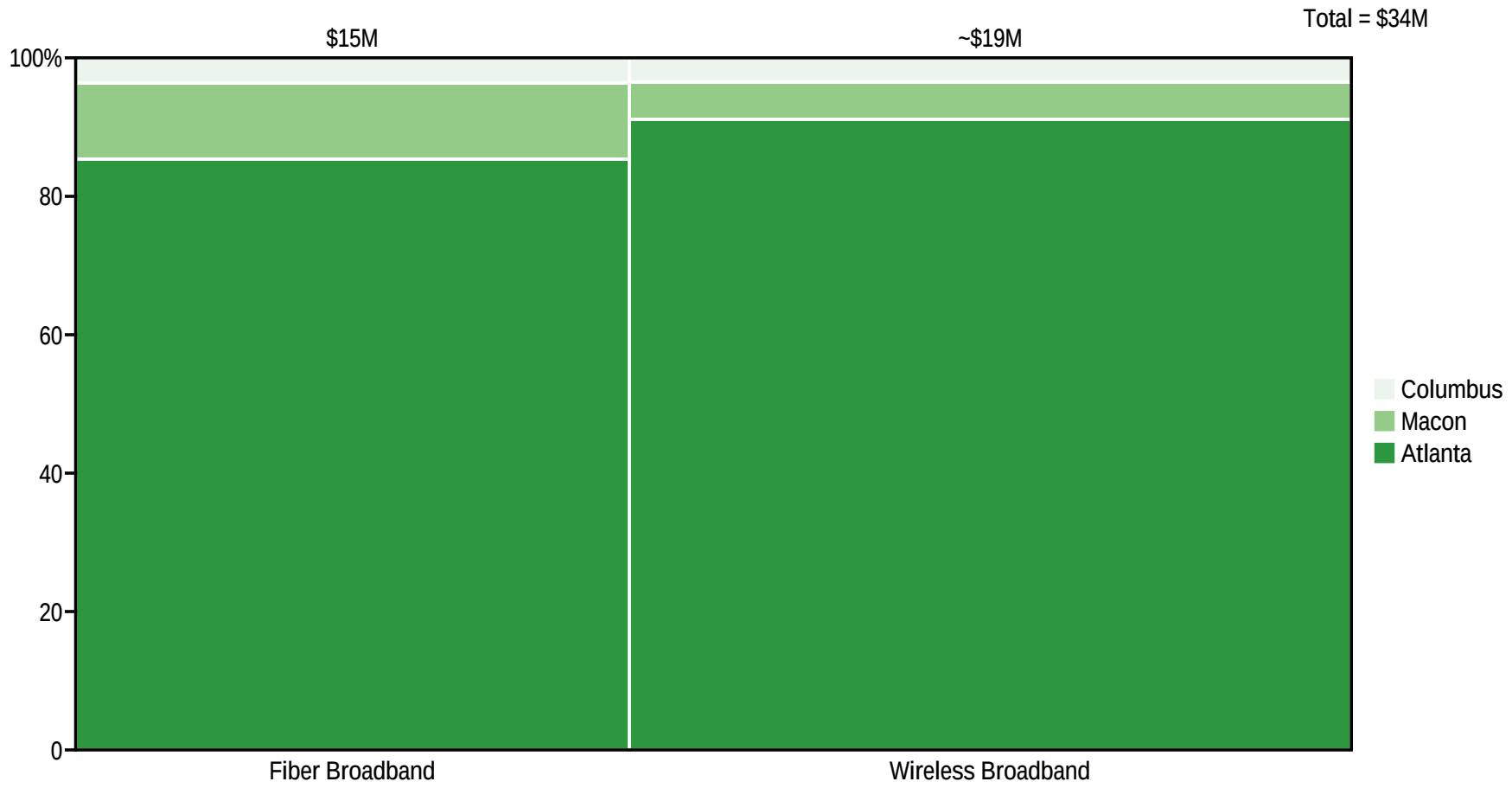
Source: GDOT

Fiber and Wireless Broadband Opportunity on Existing Conduit

A combined broadband scope on existing GDOT conduit could provide ~$30M-$35M annual run rate revenue opportunity

Fiber Broadband | Wireless Broadband

Revenue Opportunity on Existing GDOT Conduit[1]



Note: 1) Represents GDOT conduit as provided by GDOT in December 2017; Figures do not include IRUs, customer/revenue ramp up. Conduit is largely on interstate roadways, but some conduit exists on ROW off of the interstates

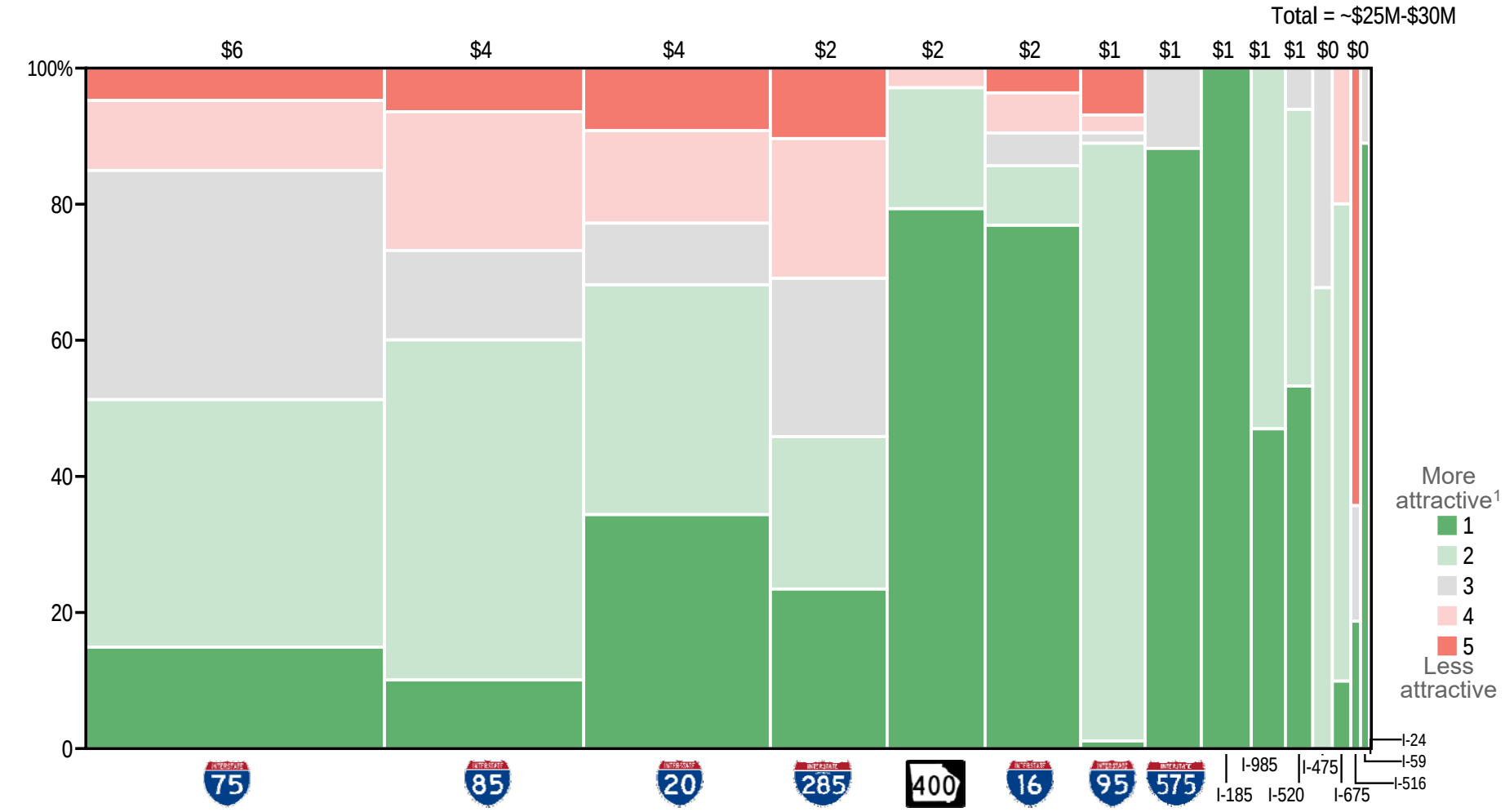
Source: GDOT

Fiber Broadband Opportunity on Interstates

GDOT interstate ROW outside of existing conduit offers ~$25M-30M in annual run rate fiber broadband revenue

Fiber Broadband | Wireless Broadband

Wireline Revenue Opportunity by Interstate and Competitive Intensity (USD M),
Includes Long Haul Potential Revenue from Existing GDOT Fiber; Measured Along Full Length of Interstate



Notes: 1) "Attractiveness" indicates how much broadband demand is met by broadband supply. More attractive areas have unaddressed demand for a commercial player to capture

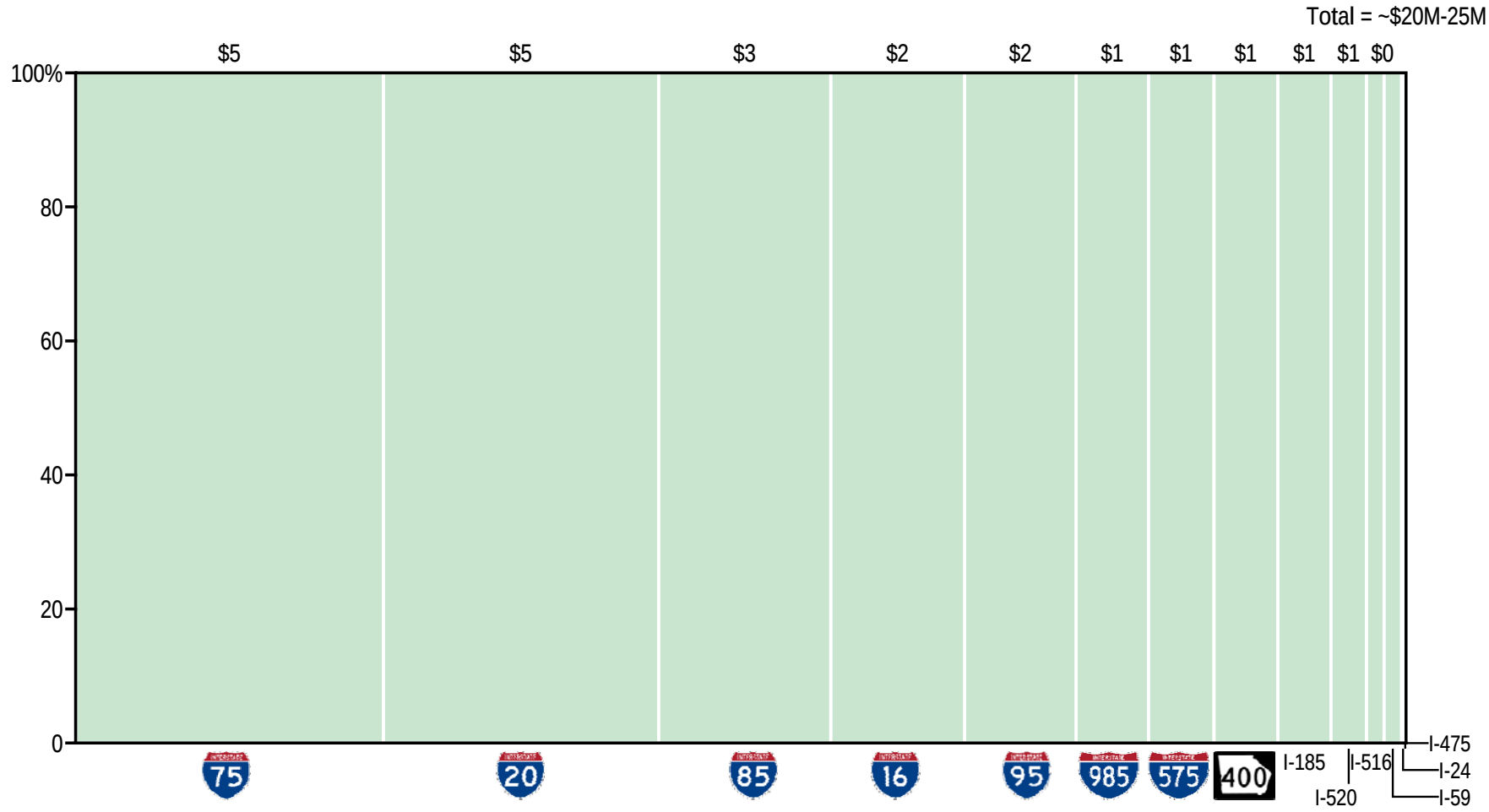
Source: GDOT, Company Public Filings; IDC; Ovum; Public Disclosure from Uniti; Senzi; US Census

Wireless Broadband Opportunity on Interstates

GDOT interstate ROW offers ~$20M-25M in annual run rate wireless broadband revenue

Fiber Broadband | **Wireless Broadband**

Wireless Revenue Opportunity Including Backhaul by Interstate (USD M);
Measured Along Full Length of Interstate



Notes: Competition is not highlighted based on technical data limitations associated with wireless wave propagation maps; I-675 and I-285 provide negligible opportunity and are not displayed; Individual highway extent estimated using conservative assumptions due to adjustments for factors including intersections; Chart includes backhaul revenue opportunity road concurrencies, and others

Source: Company Public Filings; IDC; Ovum; Public Disclosure from Uniti; Senzi; US Census, GDOT

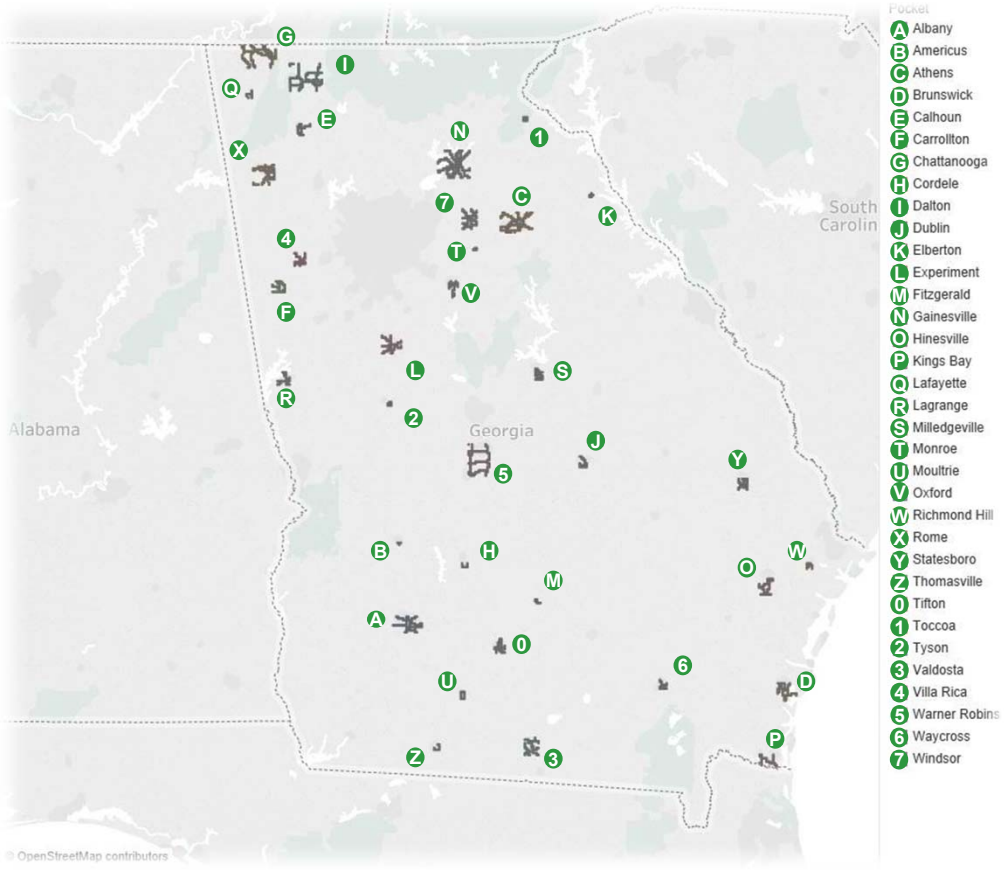
Fiber Access Broadband Opportunity on ROW Along Interstates

Georgia has several pockets of fiber access opportunity that appear underserved relative to demand, potentially contributing ~$20M of annual run rate revenue

Fiber Broadband | Wireless Broadband

Fiber Opportunities on State Route Pockets

Pocket Opportunities



Note: Pictures may not represent exact geographies included in each opportunity
Source: Company Public Filings; IDC; Ovum; Public Disclosure from Uniti; Senzi; US Census, GDOT

Commentary

- Pockets represent areas adjacent to GDOT interstate ROW. The demand opportunity for access fiber is material relative to the build investment when viewed against full state route combined build scenario
- 34 total opportunity pockets were identified
- 12 out of 34 pockets were intersected by the interstate, and 32 of 34 pockets were intersected by an existing metro fiber providers line
- The fiber broadband revenue opportunity could reach ~$20M in annual revenue with an additional $35M-40M of additional upside from wireless

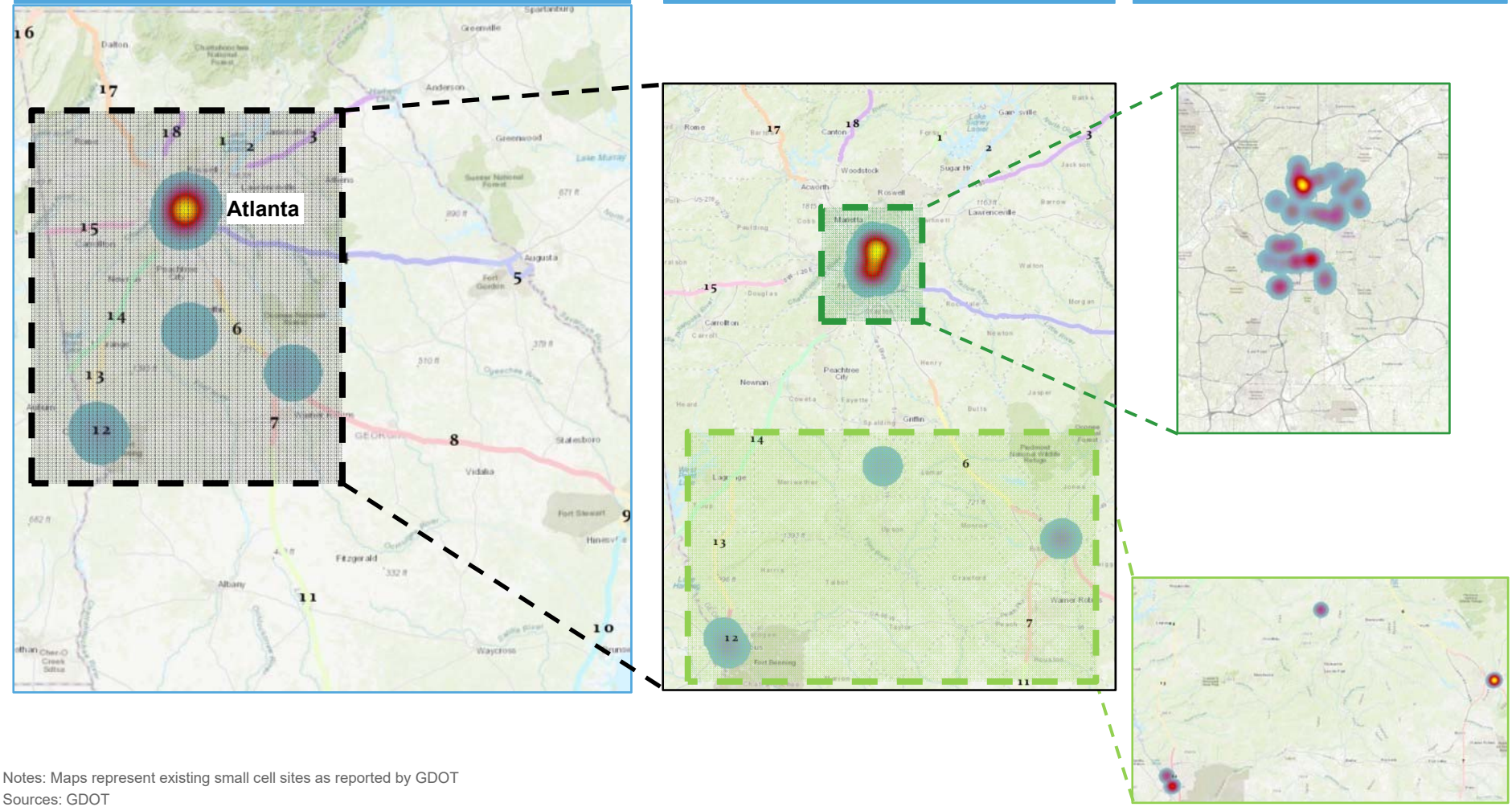
Wireless Broadband Demand

Current small cell demand is highly concentrated in population centers, especially Atlanta, Macon, and Columbus; fiber backhaul augments revenue

Fiber Broadband | **Wireless Broadband**

Attractive Small Cell Wireless Areas

State of Georgia | *Midwest to Northwest Quadrant View* | *Local View*



Notes: Maps represent existing small cell sites as reported by GDOT
Sources: GDOT