



Project 10 | West Fresno Overview Packet  
January 31, 2022

This map identifies the initial 18 broadband project areas and the network solutions proposed by the Third Party Administrator (TPA), GoldenStateNet, which build upon the California Public Utilities Commission (CPUC) recommended routes. Highlighted in this packet are the solutions identified for the West Fresno Project and other geospatially registered data sets which influenced them.



## Project 10 | West Fresno Summary

The Fresno region's nearly total lack of existing open access infrastructure was flagged as especially urgent by community leaders, area residents, and businesses. This area would greatly benefit from remote schooling, telehealth, telework, and greater connections to community anchor institutions. Because of the rural makeup of the area, extensive middle-mile broadband would support precision agriculture applications that use real-time sensors to observe, measure, and respond to inter- and intra-field variability in crops and enable robotic cultivation to farms along the route.

To meet the needs of the region, GoldenStateNet proposes a 75-mile new construction build to create a fiber broadband ring from Chowchilla to Fresno taking in Dos Palos, Firebaugh, Mendota, and San Joaquin along Highways 233, 152, and 33, before running north to Kerman. This ring would then link to existing open access fiber available in the region with an Indefeasible Right of Use (IRU) dark fiber lease, reducing construction costs and interconnection to an Internet Exchange Point to the global Internet. This broad western network ring is intended to provide connections for chronically under-served, and economically distressed, Central Valley Hispanic communities. Caltrans will manage the construction of a portion of the recommended route.

To complete the full project, GoldenStateNet proposes to work with Caltrans and a local last-mile provider to create a ring design that should enable last-mile service providers to offer alternatives to expensive satellite and other poor connections.

Complicating the completion of the Fresno ring solution is that 19 of the plan's 75 miles are outside Caltrans right of ways, and, as of January 2022, will require further negotiation along the construction path to support the most direct route.

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Project 10 | West Fresno Highlights

<b>Type of Solution:</b>	New Construction Fiber Build Indefeasible Right of Use (IRU) dark fiber lease
<b>Highways/Routes:</b>	HWY 33, 180
<b>Start and End Points or Cities connected:</b>	Fresno, Tranquility, Firebaugh, Dos Palos, Chowchilla
<b>Approximate Fiber Miles:</b>	95
<b>Quantity of Fibers:</b>	288 (including 4 on some existing routes)
<b>Approximate Start Date:</b>	2022
<b>Regional Broadband Consortium:</b>	San Joaquin Regional Broadband Consortium
<b>Regional Transportation Planning Agency (RTPA) &amp; Metropolitan Planning Organizations (MPO):</b>	Fresno Council of Governments, Madera County Transportation Commission, Merced County Association of Governments

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## GoldenStateNet Maps

The appended maps share detailed visualizations of the GoldenStateNet (TPA) recommended middle-mile network solutions. The maps illustrate the complex geographical, topological, technological, and socioeconomic landscape of California.

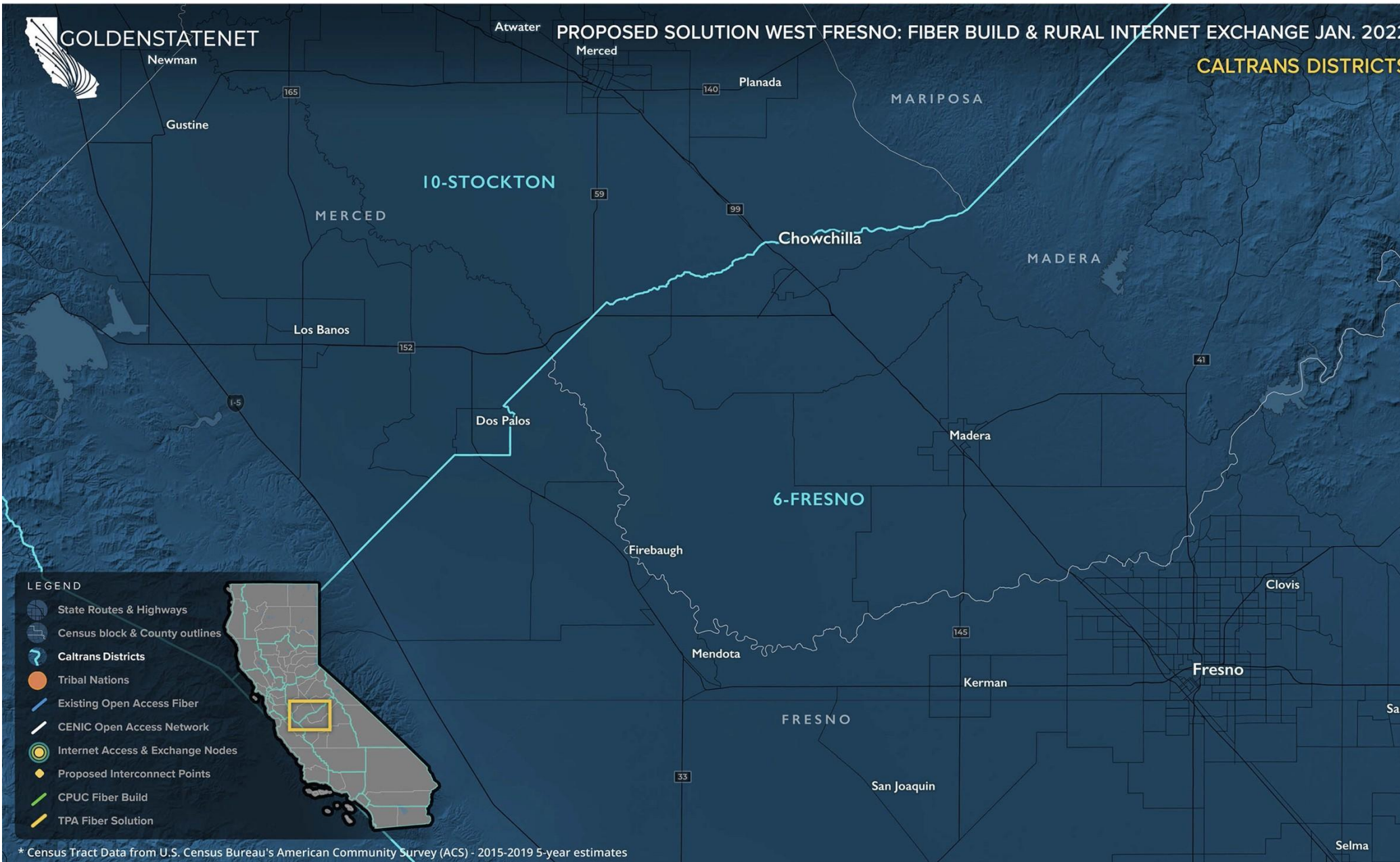
In combination with available network assets and regional partnerships, the map data has helped to directly inform GoldenStateNet's well-considered proposals.



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# PROPOSED SOLUTION WEST FRESNO: FIBER BUILD & RURAL INTERNET EXCHANGE JAN. 2022

CALTRANS DISTRICTS



### LEGEND

- State Routes & Highways
- Census block & County outlines
- Caltrans Districts
- Tribal Nations
- Existing Open Access Fiber
- CENIC Open Access Network
- Internet Access & Exchange Nodes
- Proposed Interconnect Points
- CPUC Fiber Build
- TPA Fiber Solution

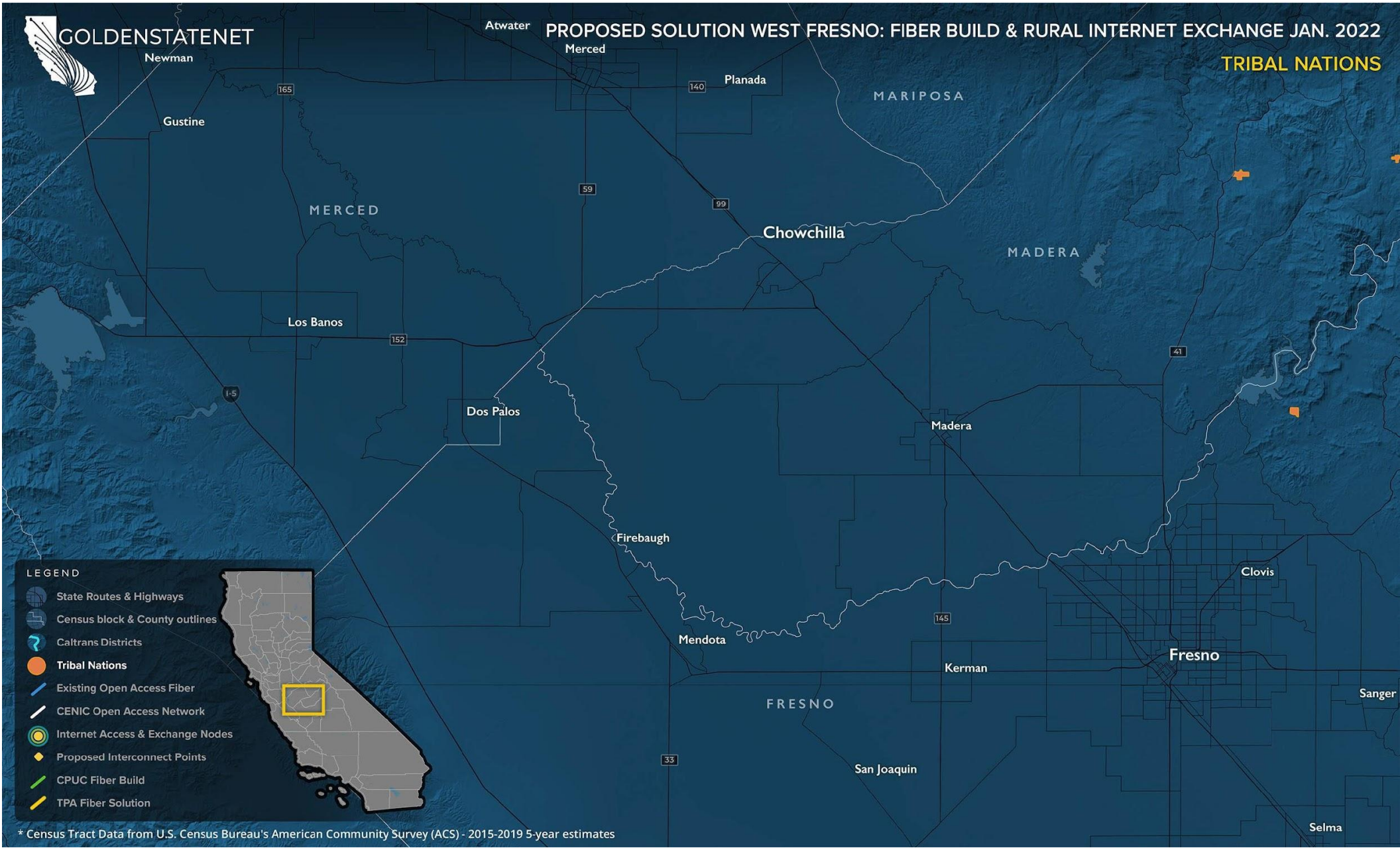


\* Census Tract Data from U.S. Census Bureau's American Community Survey (ACS) - 2015-2019 5-year estimates



# PROPOSED SOLUTION WEST FRESNO: FIBER BUILD & RURAL INTERNET EXCHANGE JAN. 2022

TRIBAL NATIONS

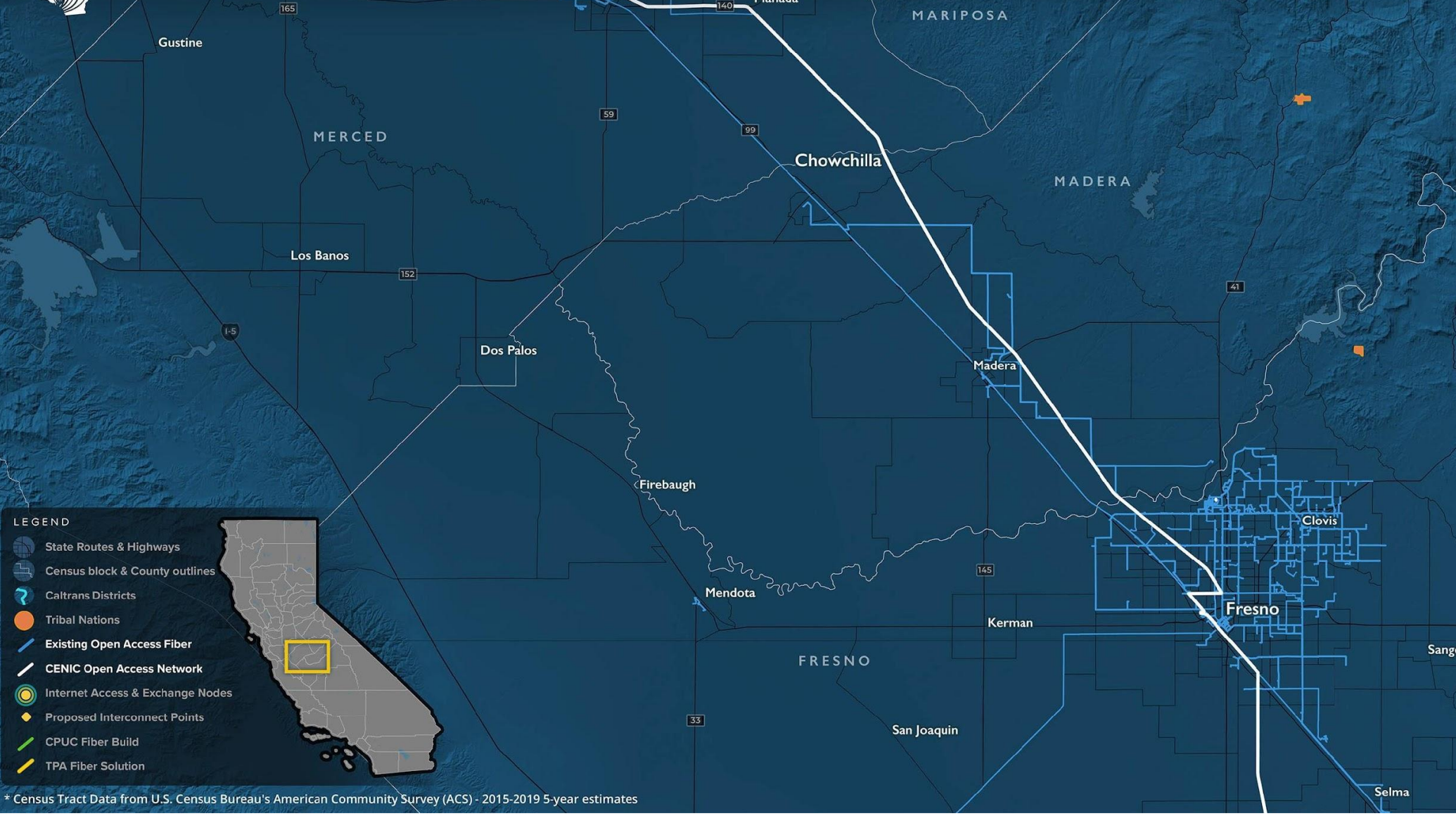


\* Census Tract Data from U.S. Census Bureau's American Community Survey (ACS) - 2015-2019 5-year estimates



# PROPOSED SOLUTION WEST FRESNO: FIBER BUILD & RURAL INTERNET EXCHANGE JAN. 2022

## EXISTING OPEN ACCESS FIBER ROUTES & CENIC OPEN ACCESS NETWORK



- LEGEND**
- State Routes & Highways
  - Census block & County outlines
  - Caltrans Districts
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  - Existing Open Access Fiber
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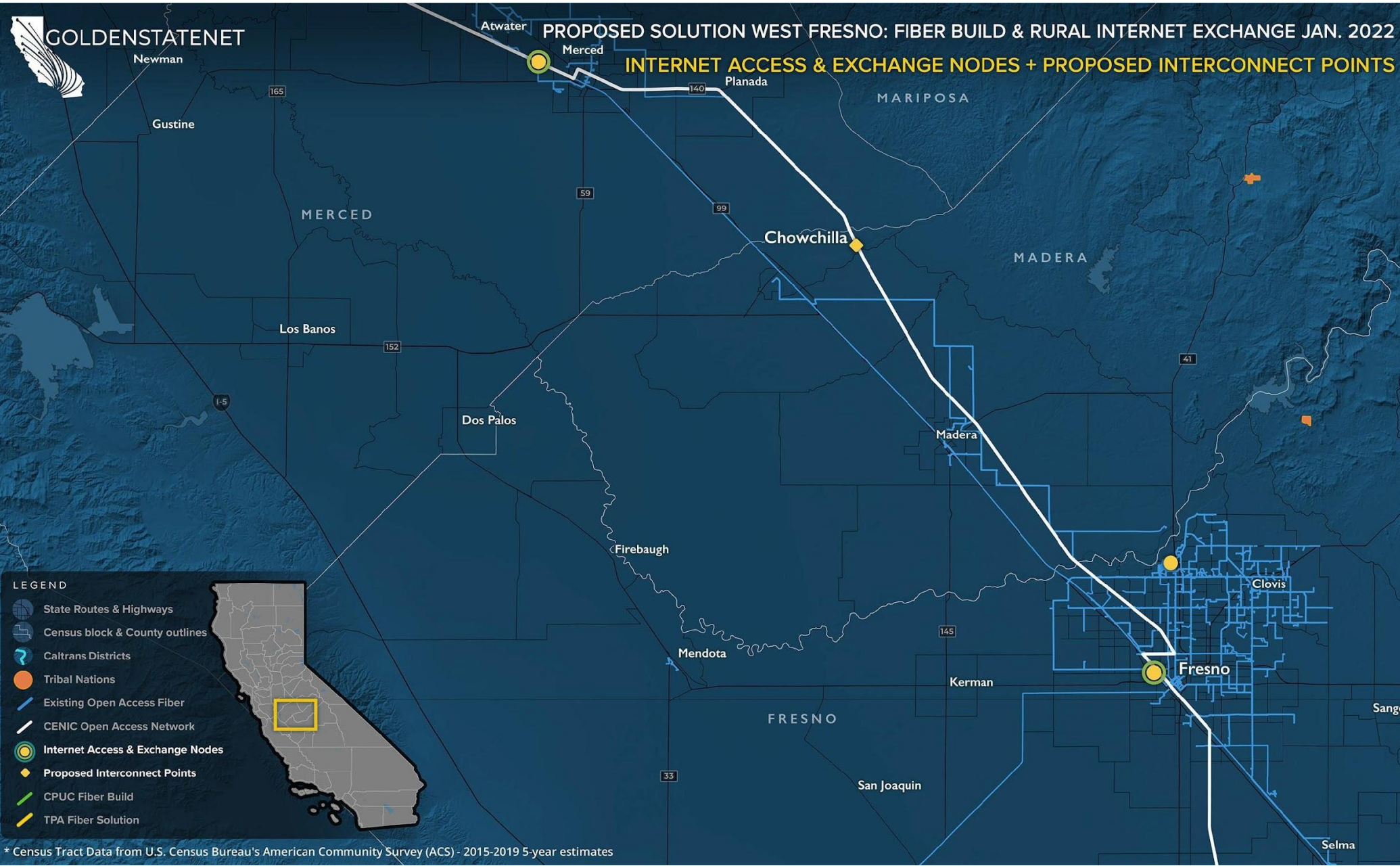
\* Census Tract Data from U.S. Census Bureau's American Community Survey (ACS) - 2015-2019 5-year estimates





# PROPOSED SOLUTION WEST FRESNO: FIBER BUILD & RURAL INTERNET EXCHANGE JAN. 2022

## INTERNET ACCESS & EXCHANGE NODES + PROPOSED INTERCONNECT POINTS

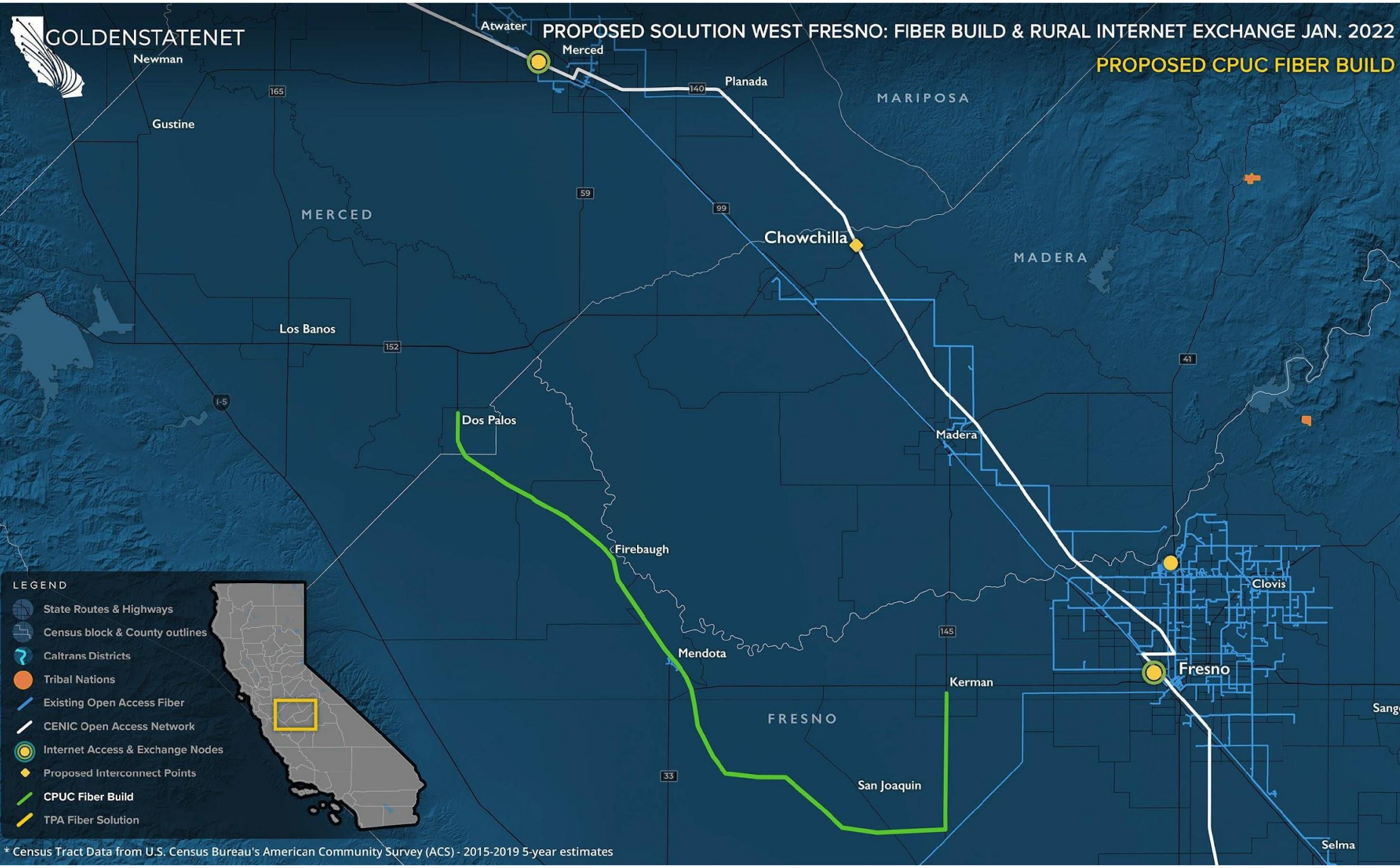


\* Census Tract Data from U.S. Census Bureau's American Community Survey (ACS) - 2015-2019 5-year estimates



# PROPOSED SOLUTION WEST FRESNO: FIBER BUILD & RURAL INTERNET EXCHANGE JAN. 2022

PROPOSED CPUC FIBER BUILD

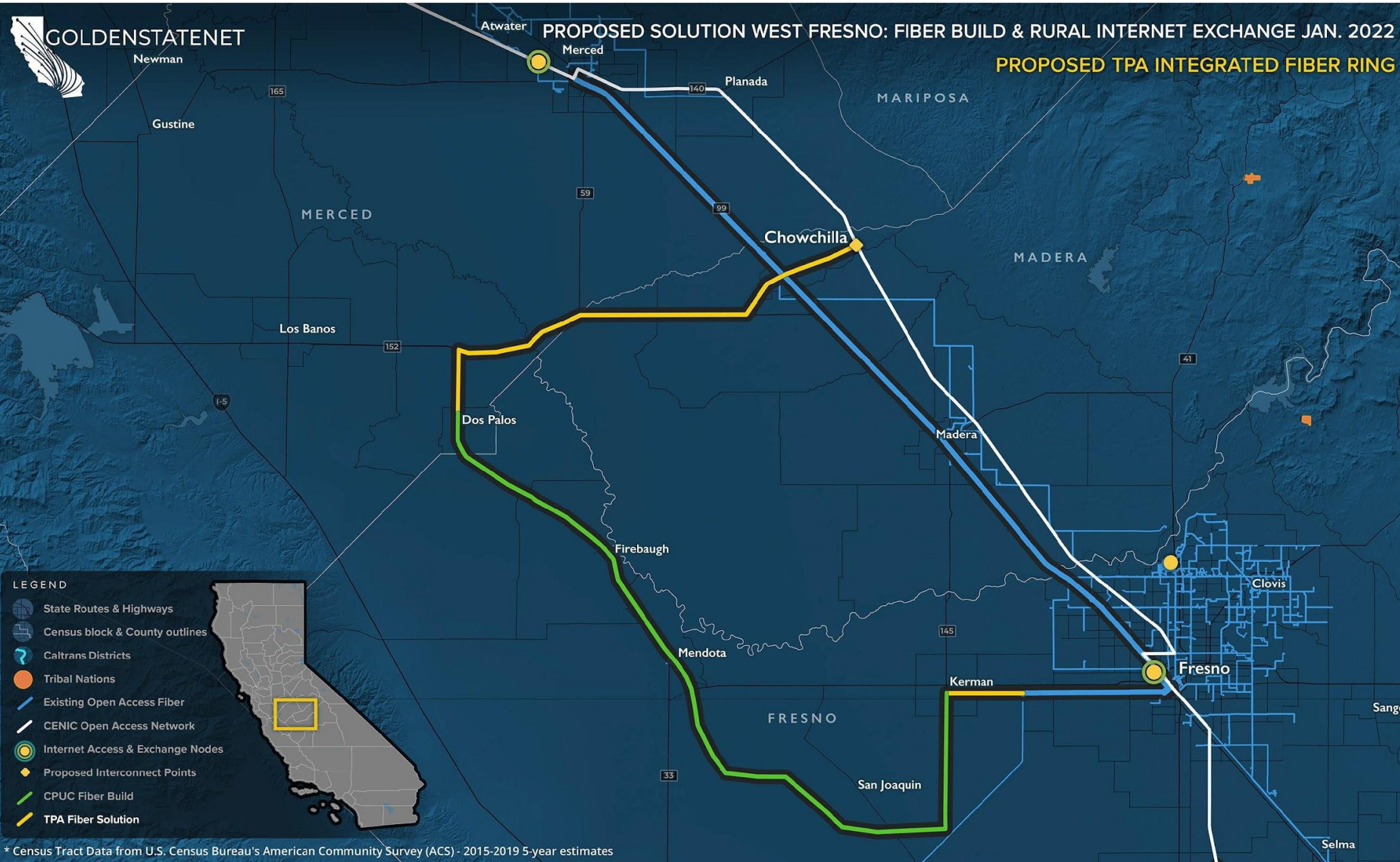


\* Census Tract Data from U.S. Census Bureau's American Community Survey (ACS) - 2015-2019 5-year estimates



# PROPOSED SOLUTION WEST FRESNO: FIBER BUILD & RURAL INTERNET EXCHANGE JAN. 2022

## PROPOSED TPA INTEGRATED FIBER RING



- LEGEND**
- State Routes & Highways
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# PROPOSED SOLUTION WEST FRESNO: FIBER BUILD & RURAL INTERNET EXCHANGE JAN. 2022

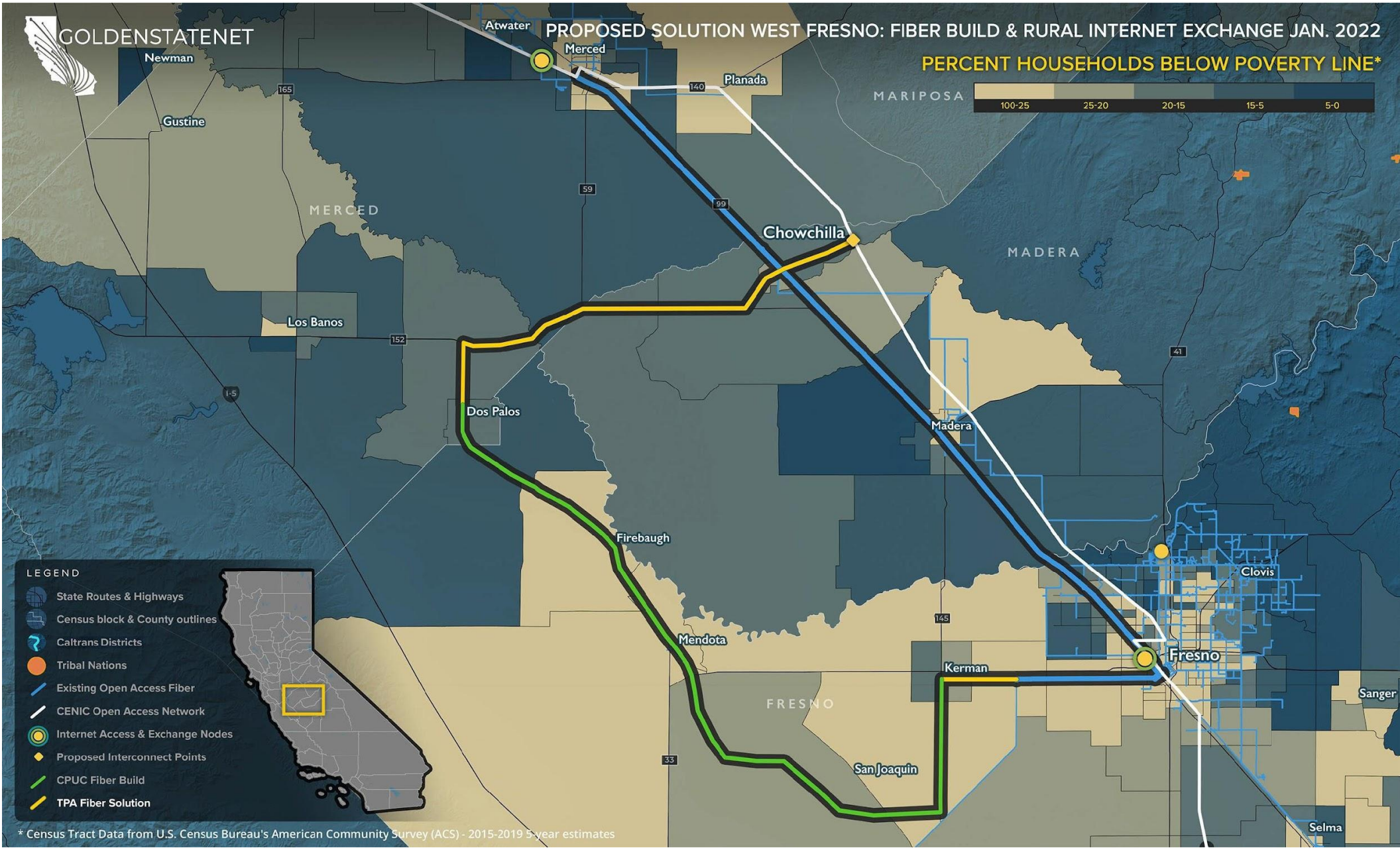
PERCENT HOUSEHOLDS BELOW POVERTY LINE\*



- LEGEND
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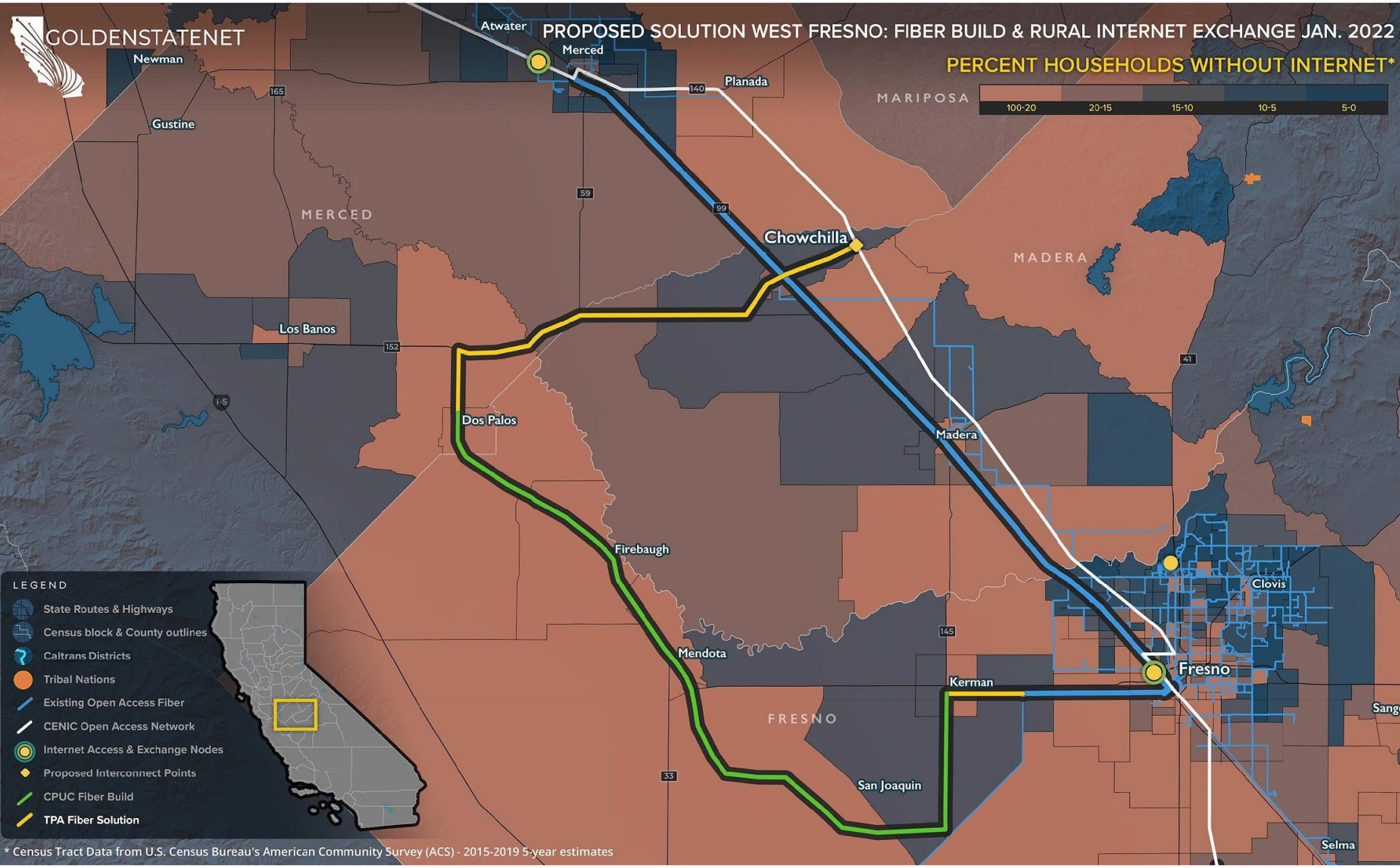
\* Census Tract Data from U.S. Census Bureau's American Community Survey (ACS) - 2015-2019 5-year estimates



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# PROPOSED SOLUTION WEST FRESNO: FIBER BUILD & RURAL INTERNET EXCHANGE JAN. 2022

## PERCENT HOUSEHOLDS WITHOUT INTERNET\*



- LEGEND**
- State Routes & Highways
  - Census block & County outlines
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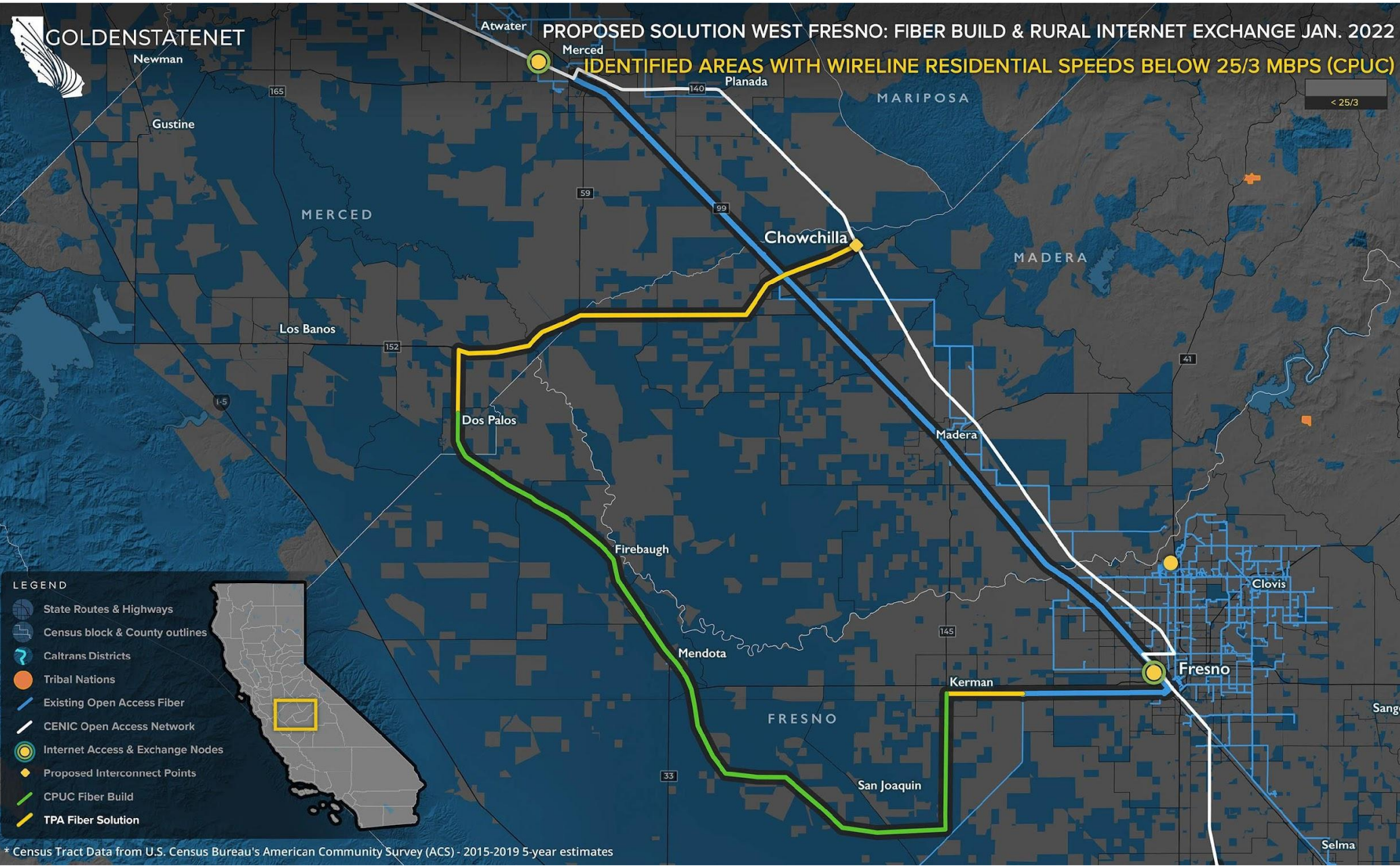
\* Census Tract Data from U.S. Census Bureau's American Community Survey (ACS) - 2015-2019 5-year estimates



# PROPOSED SOLUTION WEST FRESNO: FIBER BUILD & RURAL INTERNET EXCHANGE JAN. 2022

## IDENTIFIED AREAS WITH WIRELINE RESIDENTIAL SPEEDS BELOW 25/3 MBPS (CPUC)

< 25/3



- LEGEND**
- State Routes & Highways
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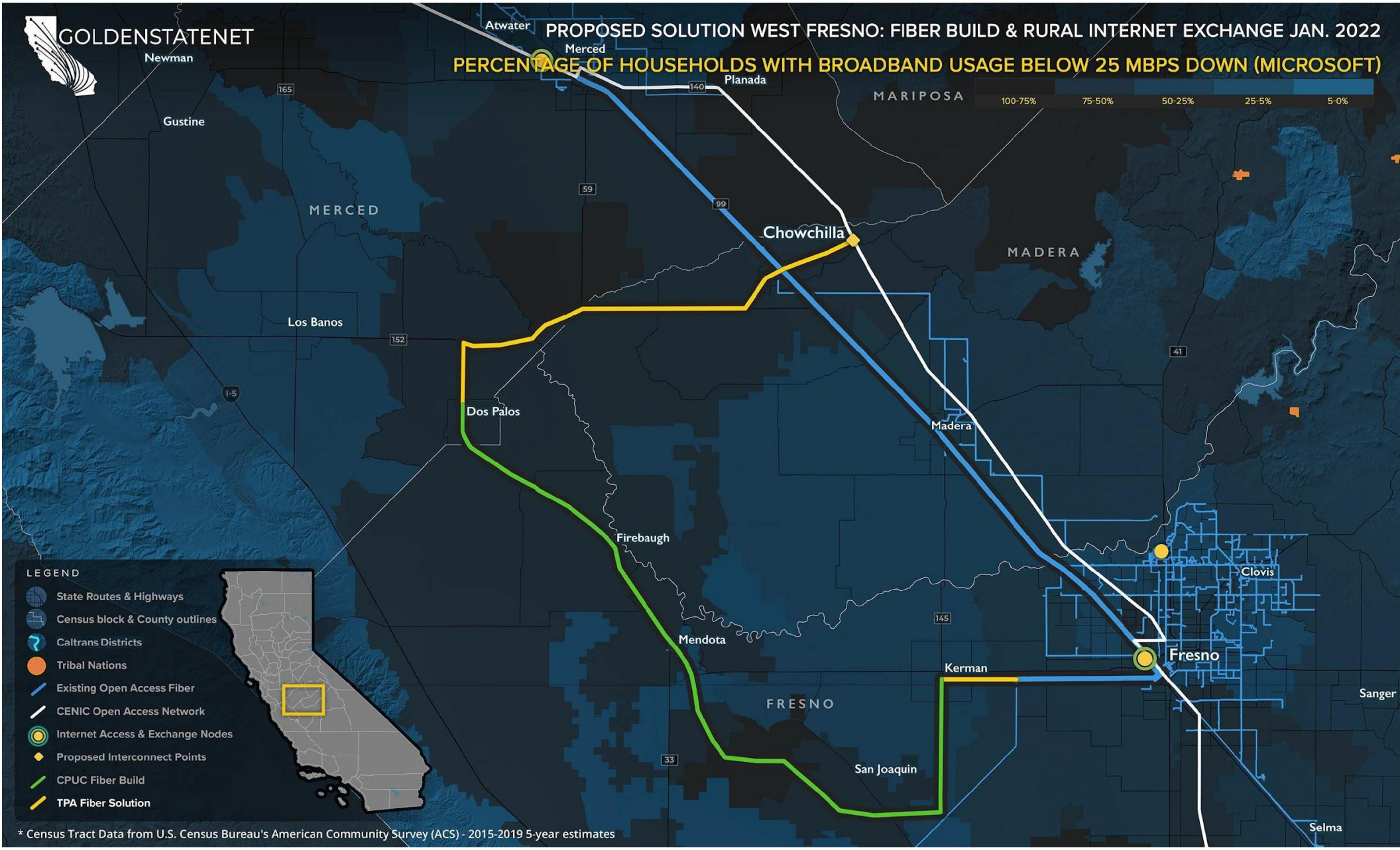
## PERCENTAGE OF HOUSEHOLDS WITH BROADBAND USAGE BELOW 25 MBPS DOWN (MICROSOFT)



- LEGEND**
- State Routes & Highways
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\* Census Tract Data from U.S. Census Bureau's American Community Survey (ACS) - 2015-2019 5-year estimates



## Data Sources\*

- American Community Survey - Internet Connectivity
- American Community Survey - Poverty Status
- California 2020 Legislative District Boundaries
- California Broadband Availability Maps and GIS Data
  - 20 Layers used from combined database
- California Census Blocks
- California Census Tracts
- California Counties
- California Fire Hazard Severity Zones
- California National Highway System
- California Major Lakes and Reservoirs
- California Parks Land
- California State Highway Network (SHN)
- California Tribal Lands
- CalTrans Juridictions
- CENIC Digital Fiber Segments
- CPUC Fixed Served Status
- Existing Open Access Networks - Under NDA
- FCC Fixed Consumer Deployment
- Microsoft Broadband Usage Percentages Dataset
- Ookla Test Data Results by Census Tract
- Technology Use Demographics (e.g. Internet use in home) by Census Tract

*\*All data was published between 2019 - 2021 and represents the most current data available. Not all layers are represented on the maps above. However, the data was utilized as a part of the development process.*





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