



GOLDENSTATENET

Project 8 | Oakland 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 Oakland Project and other geospatially registered data sets which influenced them.



## Project 8 | Oakland Summary

Most households in Oakland’s “Flats” still do not benefit from the area’s existing open access infrastructure and its many service providers. The city’s existing free WiFi network, called OAK WiFi, though a leading example for other municipalities, remains slow and unreliable, especially when needed for remote learning or telehealth.

Unfortunately, the free WiFi system was flawed in construction. Built without reliable, diverse connections, and currently burdened with aging and poorly-performing equipment, the design throttles connection speed to a minimum. As a result, the network does not meet acceptable broadband standards.

GoldenStateNet, in partnership with OAK WiFi along with the policy group EducationSuperHighway, and with the support of the California chapter of the National Association for the Advancement of Colored People (NAACP), proposes to institute a thorough redesign of the Flat’s wireless broadband network and create a portion of the statewide open access middle-mile network within the urban center.

The benefits will be far-reaching. OAK WiFi can expand its service area to 19 prioritized neighborhood areas while freeing-up portions of the City of Oakland’s telecommunications infrastructure dedicated to OAK WiFi for other municipal uses.

This redesign will use long-term Indefeasible Right of Use (IRU) dark fiber leases from existing network owners to integrate multiple fiber routes into a cohesive network system. Crucially, as most of the needed infrastructure is in place, the redesign can be instituted expeditiously.

Like Orange County (Project #16) and Los Angeles (Project #15), much of the adoption issue relates to socioeconomic issues in the area. As a poor urban region, residents are unable to afford current last-mile provider services, among other factors.

The statewide middle-mile entity solutions are intended to reduce prices for Oakland’s last-mile service providers in part by ensuring local Internet traffic does not need to traverse a costly global Internet network provider as well as provide direct connections to content and cloud providers which offer popular Internet services.

Project 8 | Oakland Highlights

<b>Type of Solution:</b>	Indefeasible Right of Use (IRU) dark fiber lease
<b>Highways/Routes:</b>	HWY 185
<b>Start and End Points or Cities connected:</b>	Emeryville, Oakland, Sunnyvale
<b>Approximate Fiber Miles:</b>	48
<b>Quantity of Fibers:</b>	4
<b>Approximate Start Date:</b>	2022
<b>Regional Transportation Planning Agency (RTPA) &amp; Metropolitan Planning Organization (MPO):</b>	Metropolitan Transportation Commission

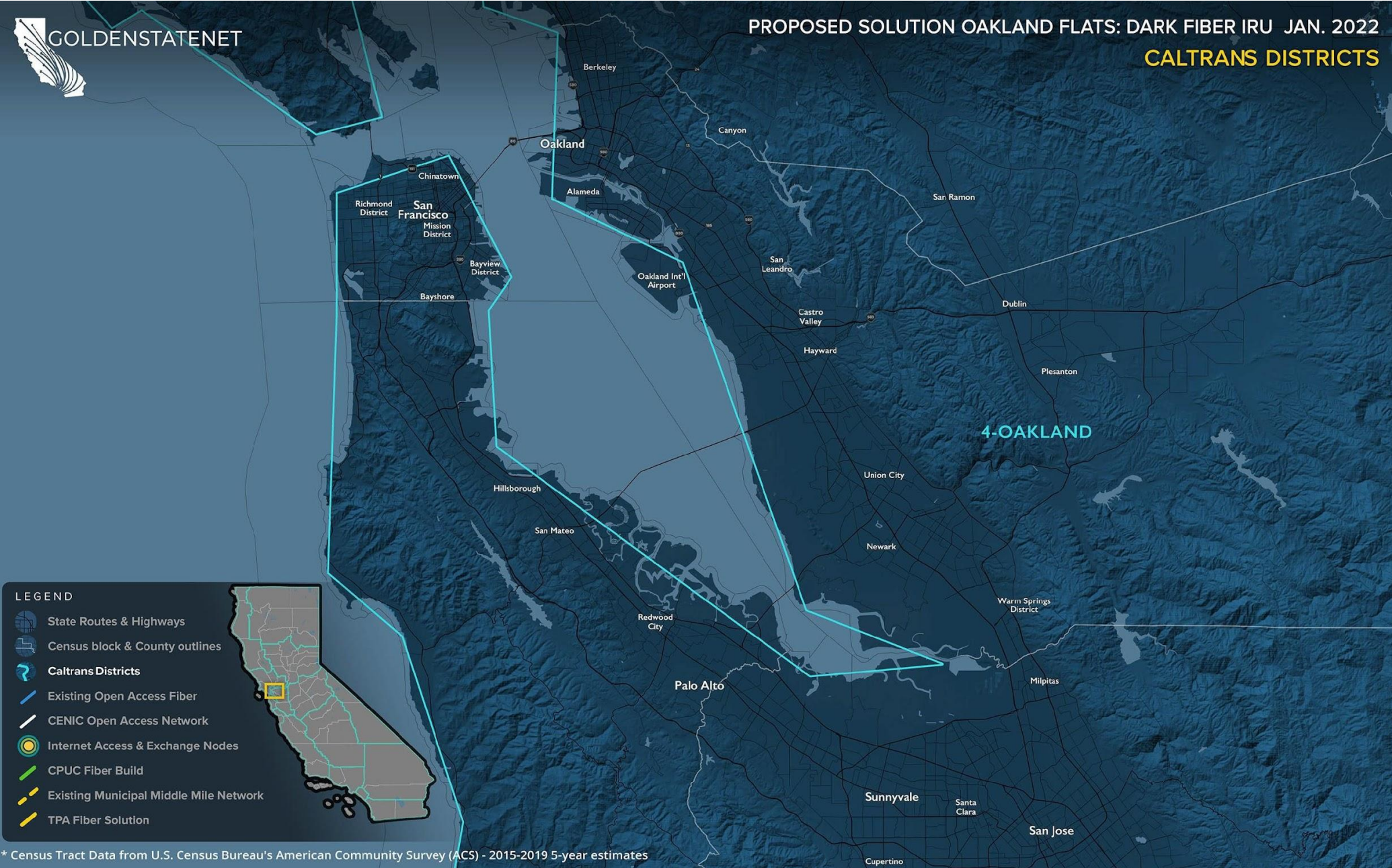
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## GoldenStateNet Maps

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.

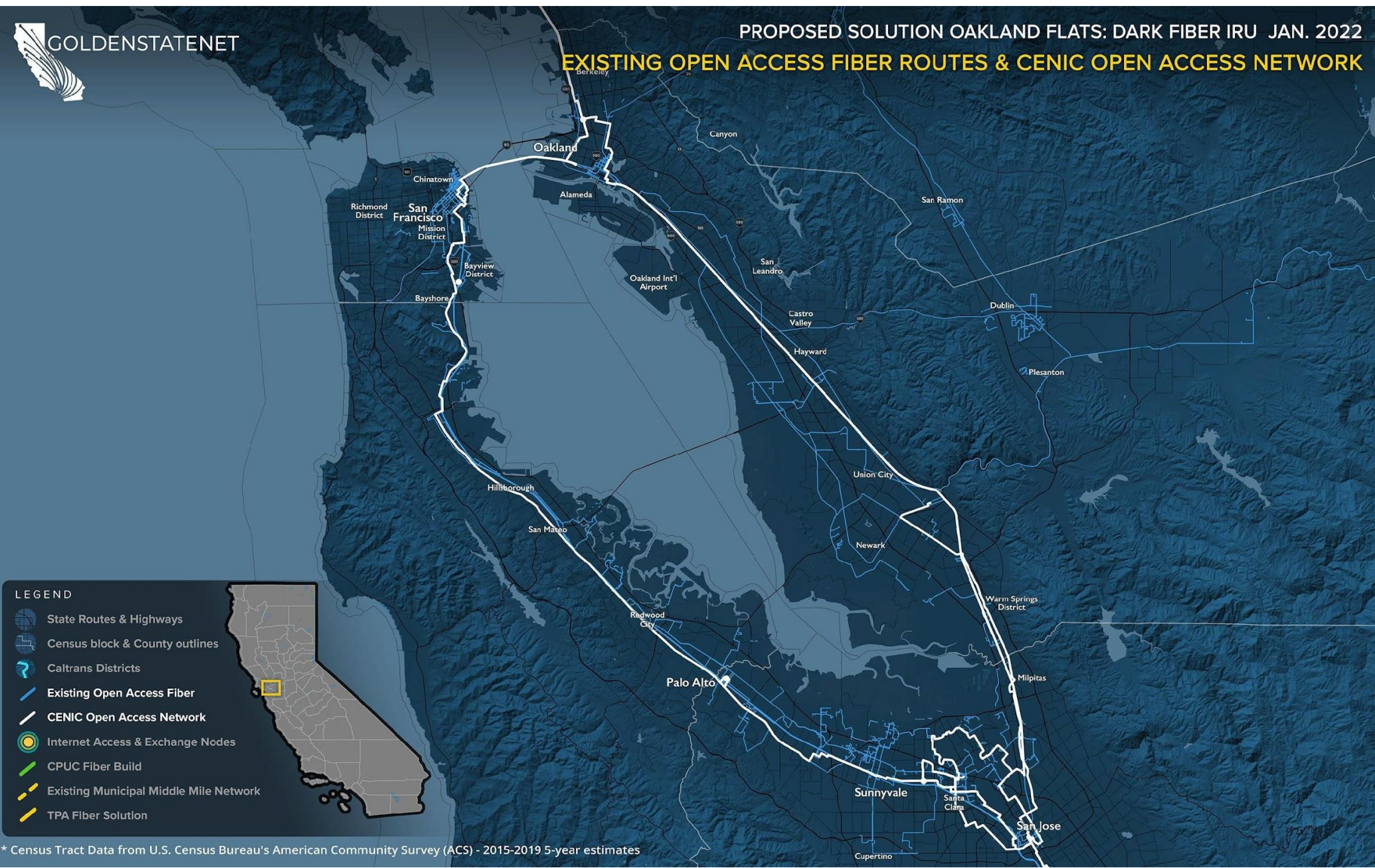













\* Census Tract Data from U.S. Census Bureau's American Community Survey (ACS) - 2015-2019 5-year estimates



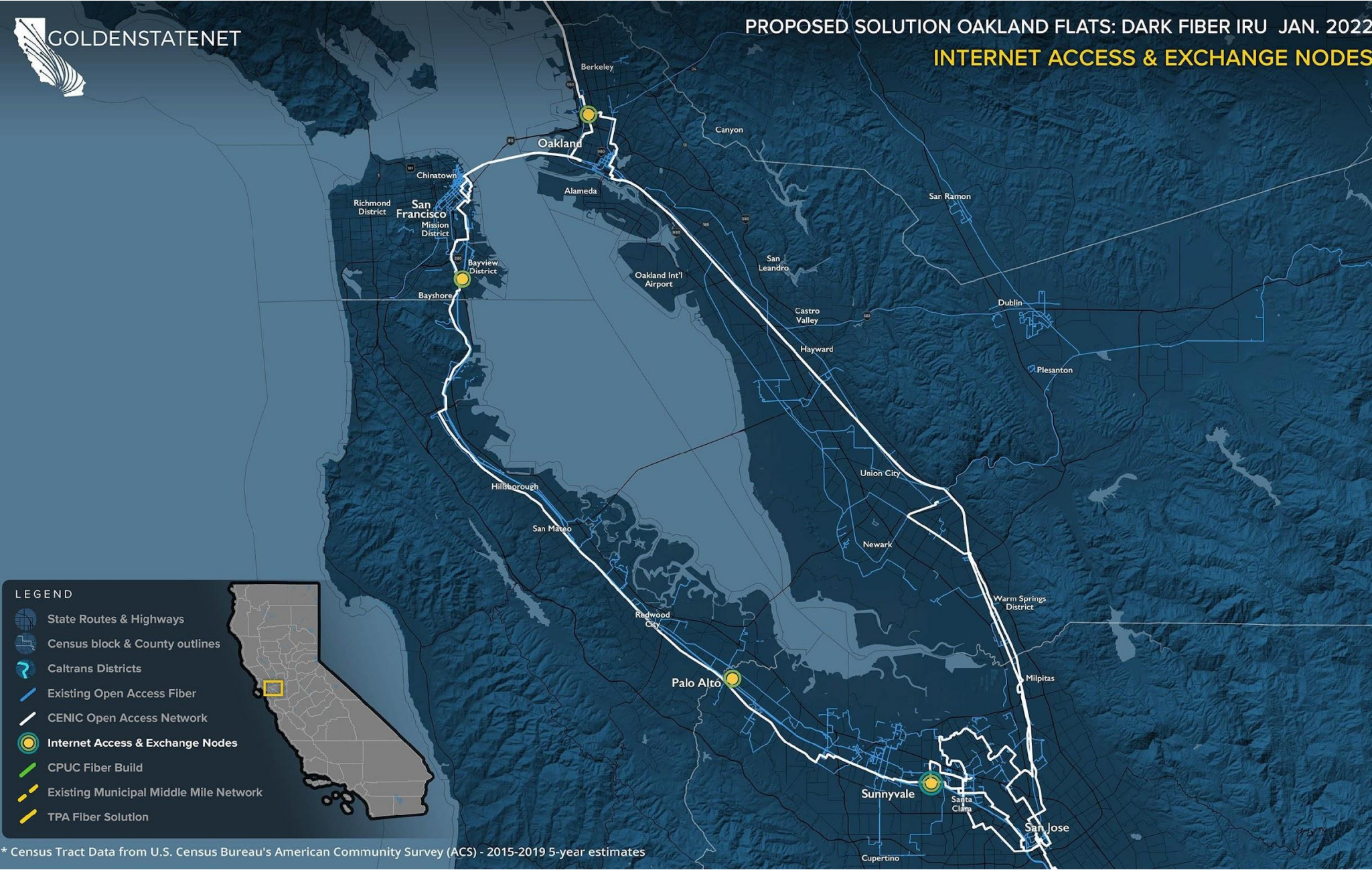
**EXISTING OPEN ACCESS FIBER ROUTES & CENIC OPEN ACCESS NETWORK**



- LEGEND**
-  State Routes & Highways
  -  Census block & County outlines
  -  Caltrans Districts
  -  Existing Open Access Fiber
  -  CENIC Open Access Network
  -  Internet Access & Exchange Nodes
  -  CPUC Fiber Build
  -  Existing Municipal Middle Mile Network
  -  TPA Fiber Solution

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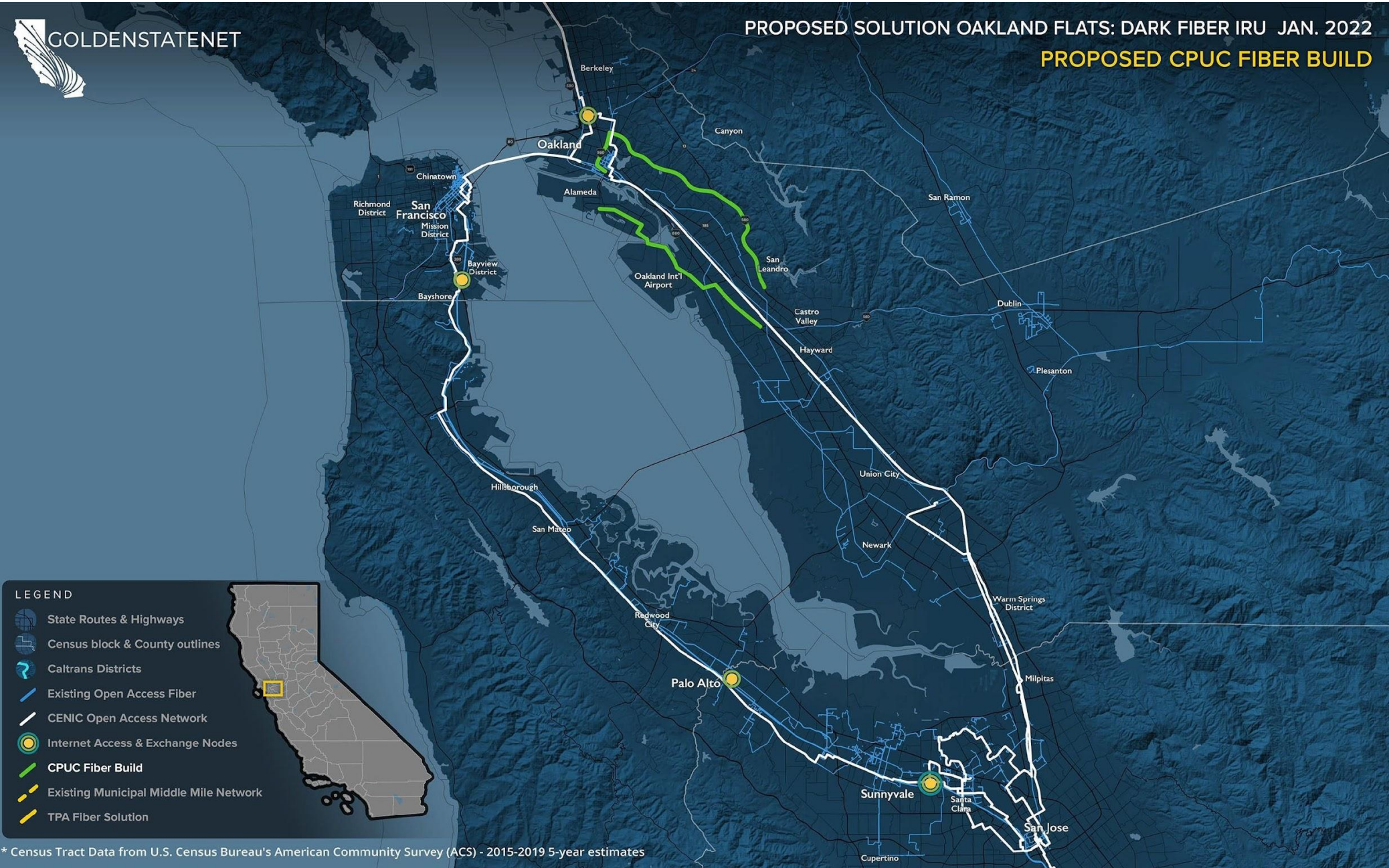




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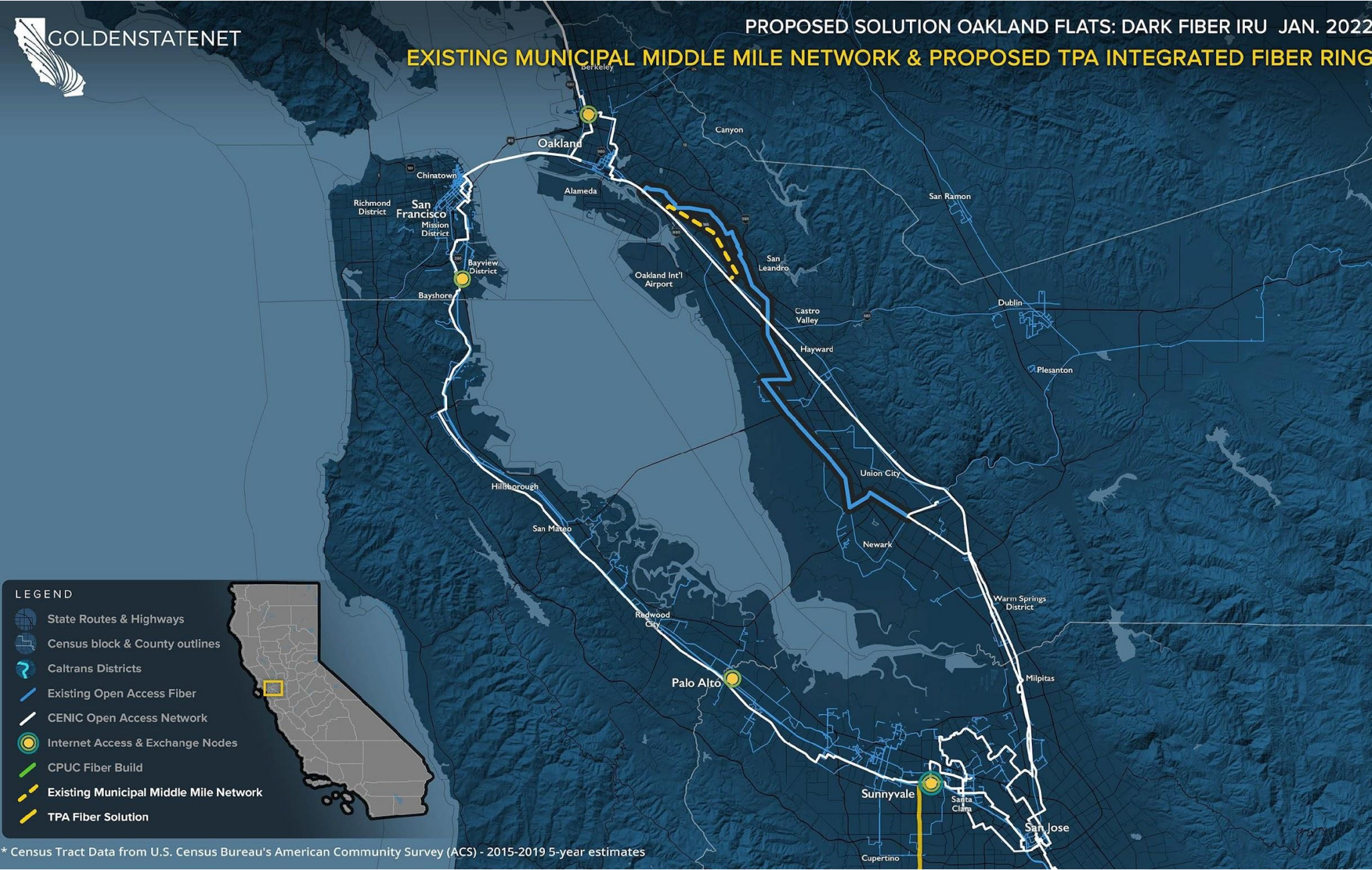




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**EXISTING MUNICIPAL MIDDLE MILE NETWORK & PROPOSED TPA INTEGRATED FIBER RING**



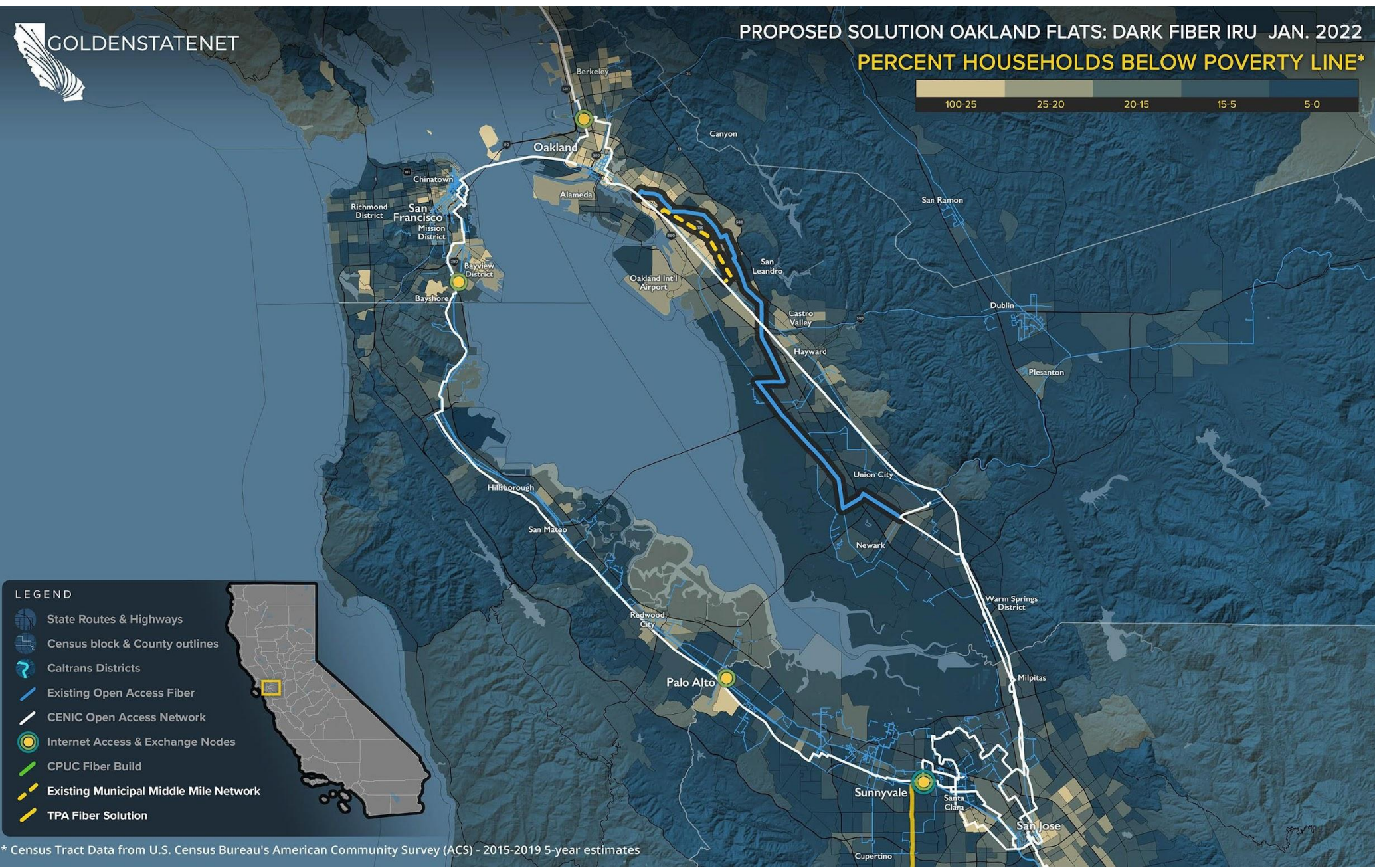
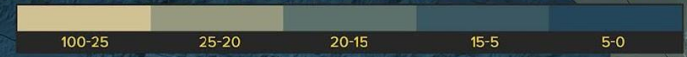
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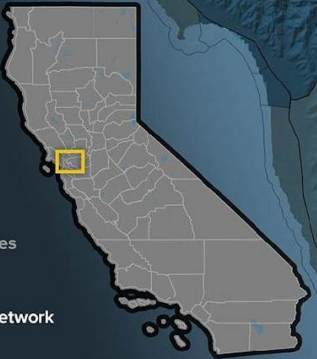
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**PERCENT HOUSEHOLDS BELOW POVERTY LINE\***

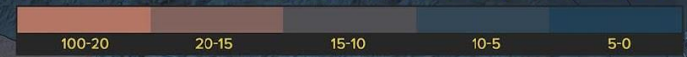


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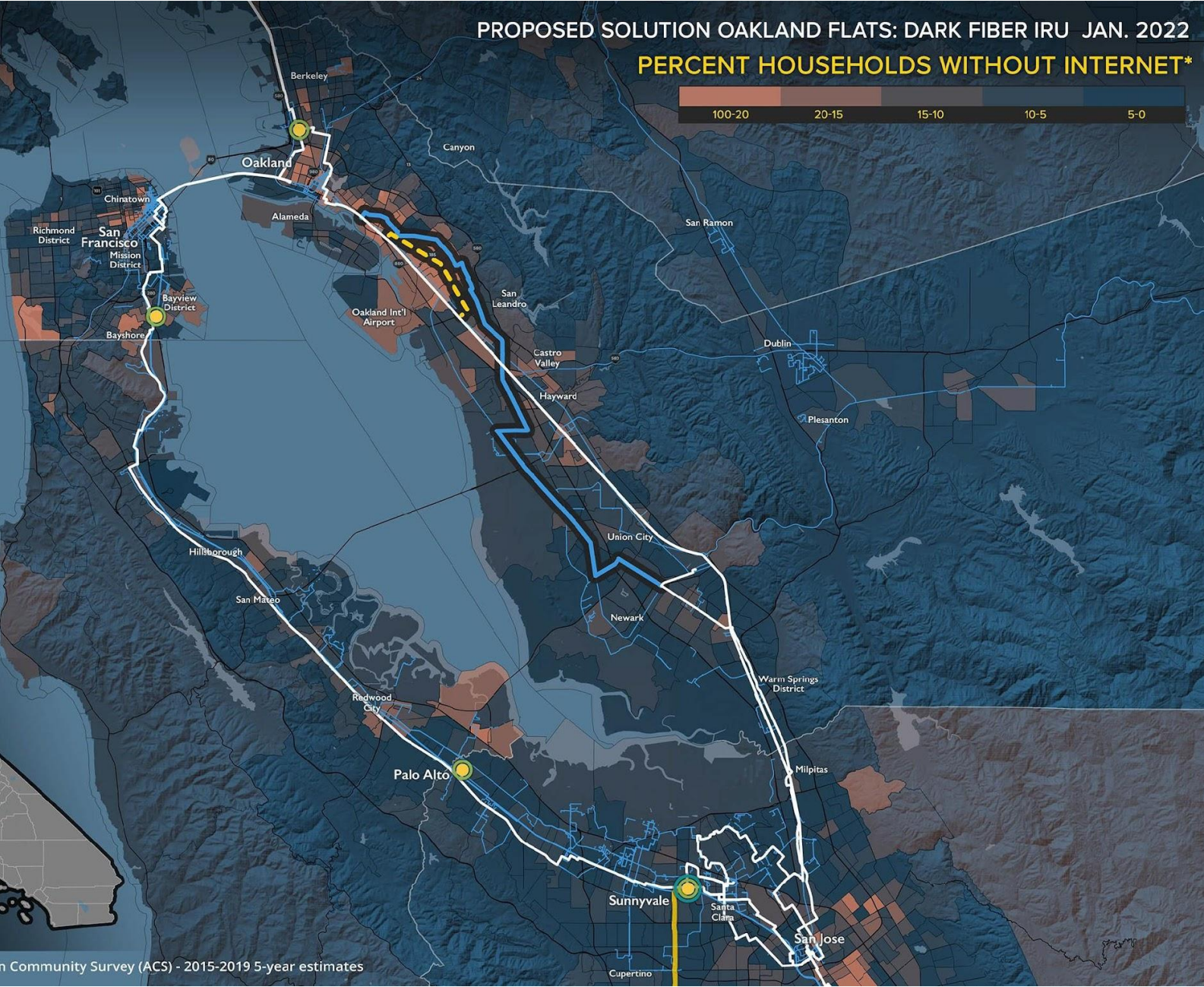




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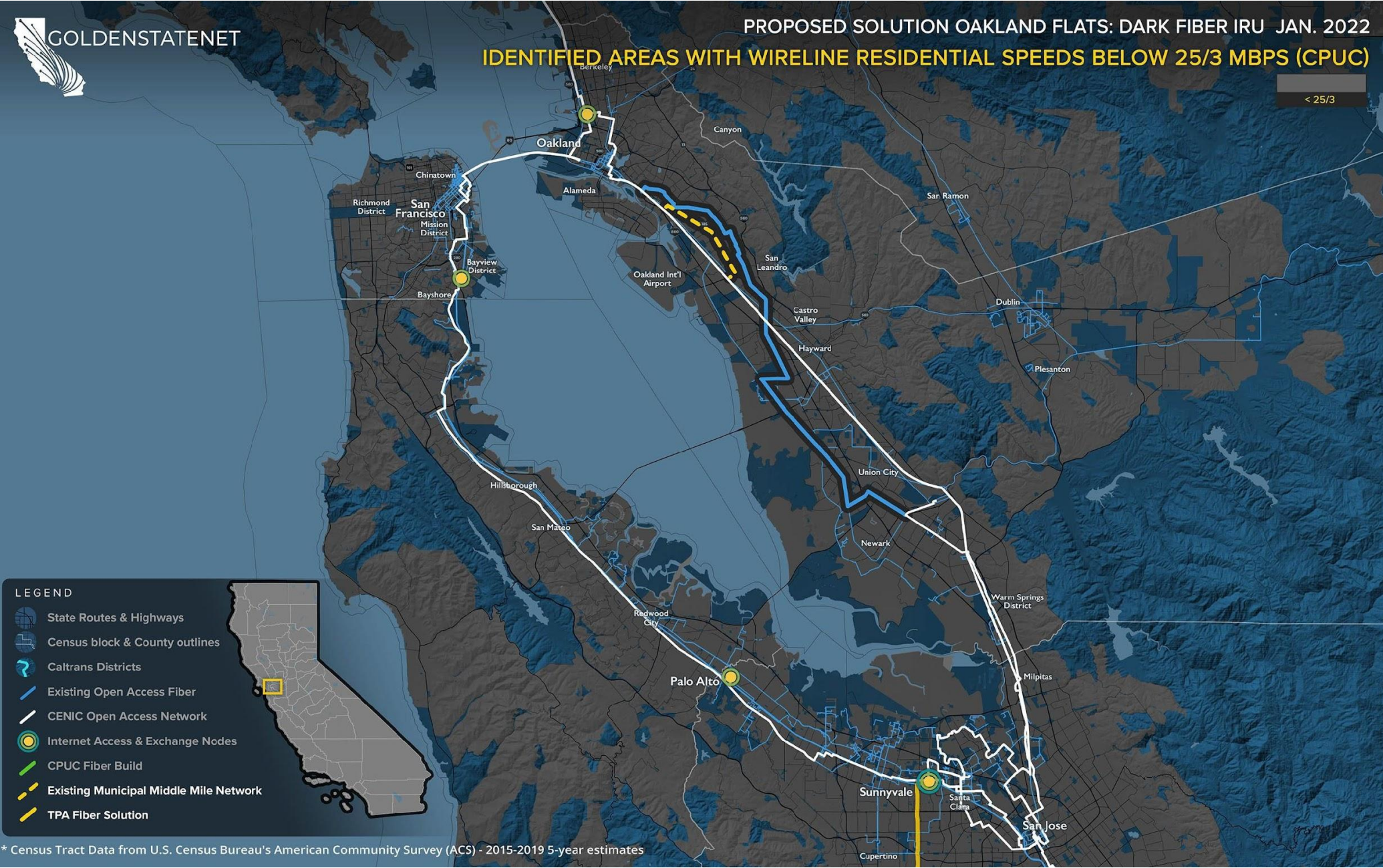
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**IDENTIFIED AREAS WITH WIRELINE RESIDENTIAL SPEEDS BELOW 25/3 MBPS (CPUC)**

< 25/3



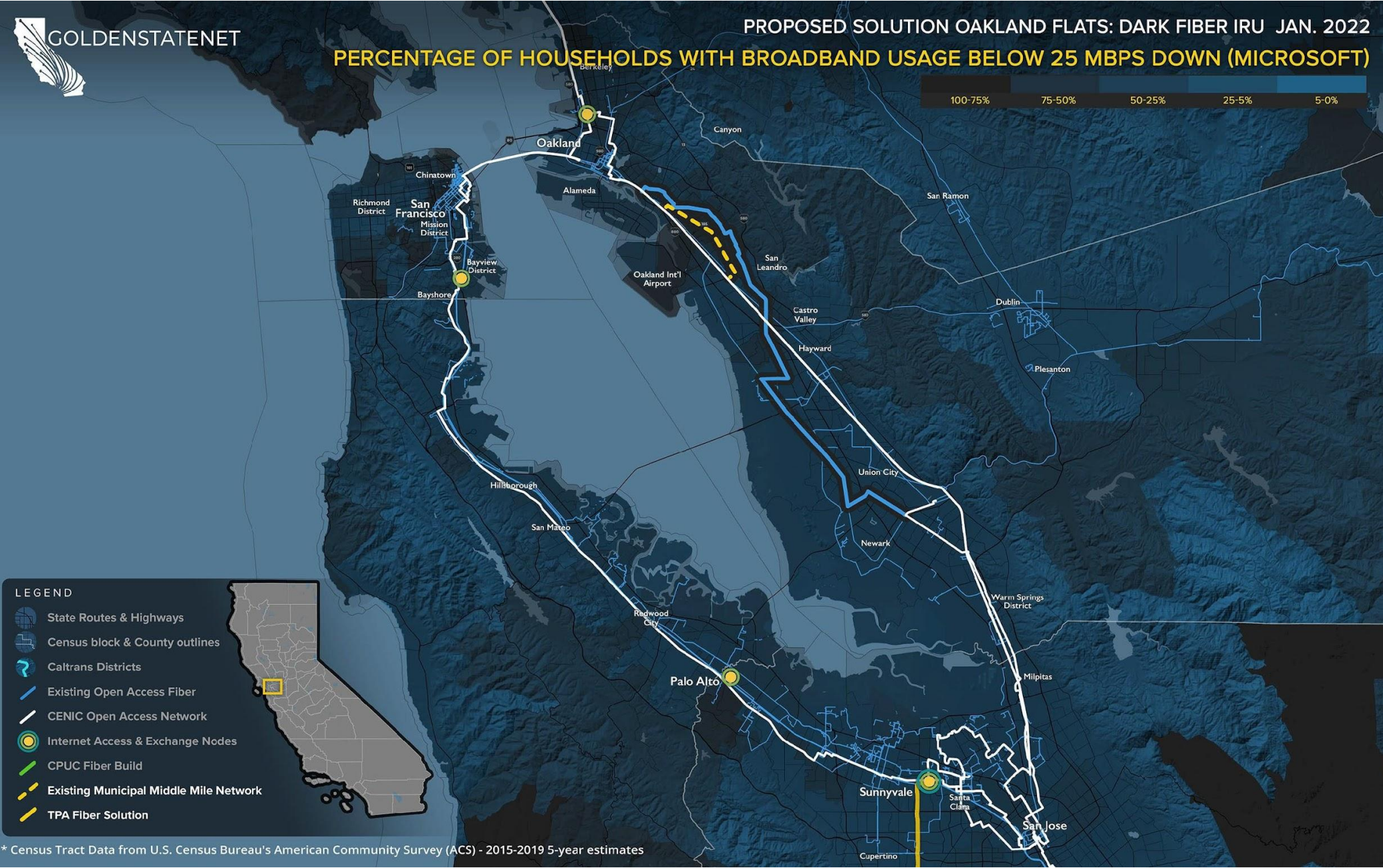
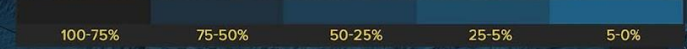
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**PERCENTAGE OF HOUSEHOLDS WITH BROADBAND USAGE BELOW 25 MBPS DOWN (MICROSOFT)**



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## 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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