SIA EDUCATION at ISC

Optimizing Wireless Networks for Smart Cities and Expansive Open Areas

Alman Ruiz, IT Director , Chicago Park District

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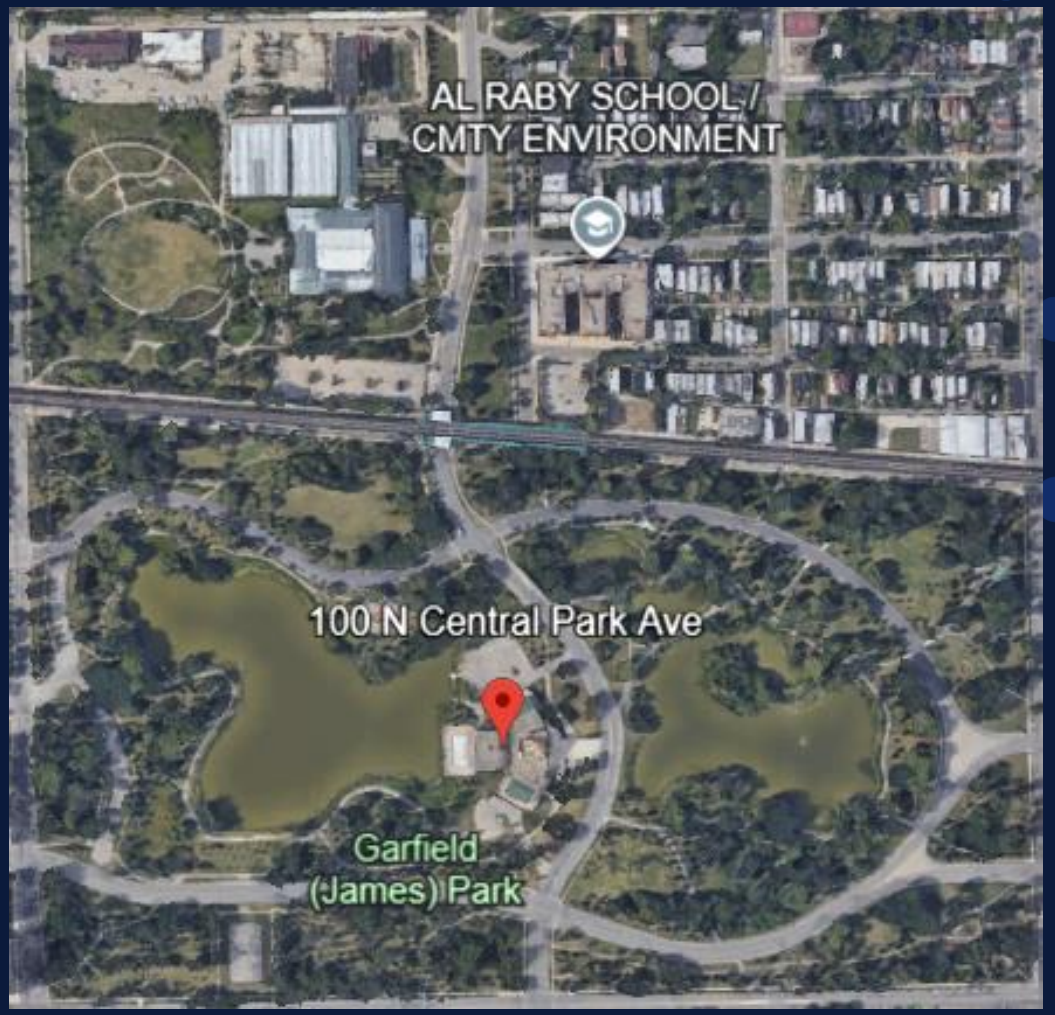
Chicago Park District
Broadband & Wi-Fi Expansion

The Chicago Park District is one of the largest park districts in the United State

- 8,900 acres of green space
  - 600 parks and playgrounds
  - 75 nature areas
  - 2 world-class greenhouse conservatories
  - 27 lakefront beaches, 50 outdoor pools and 27 indoor pools
  - 8 golf courses
  - 11 museums
- Demand for a network
  - Internal use and Free Public Access
  - Video surveillance & security cameras

Garfield Park Network Expansion



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Garfield Park
Network Expansion Design

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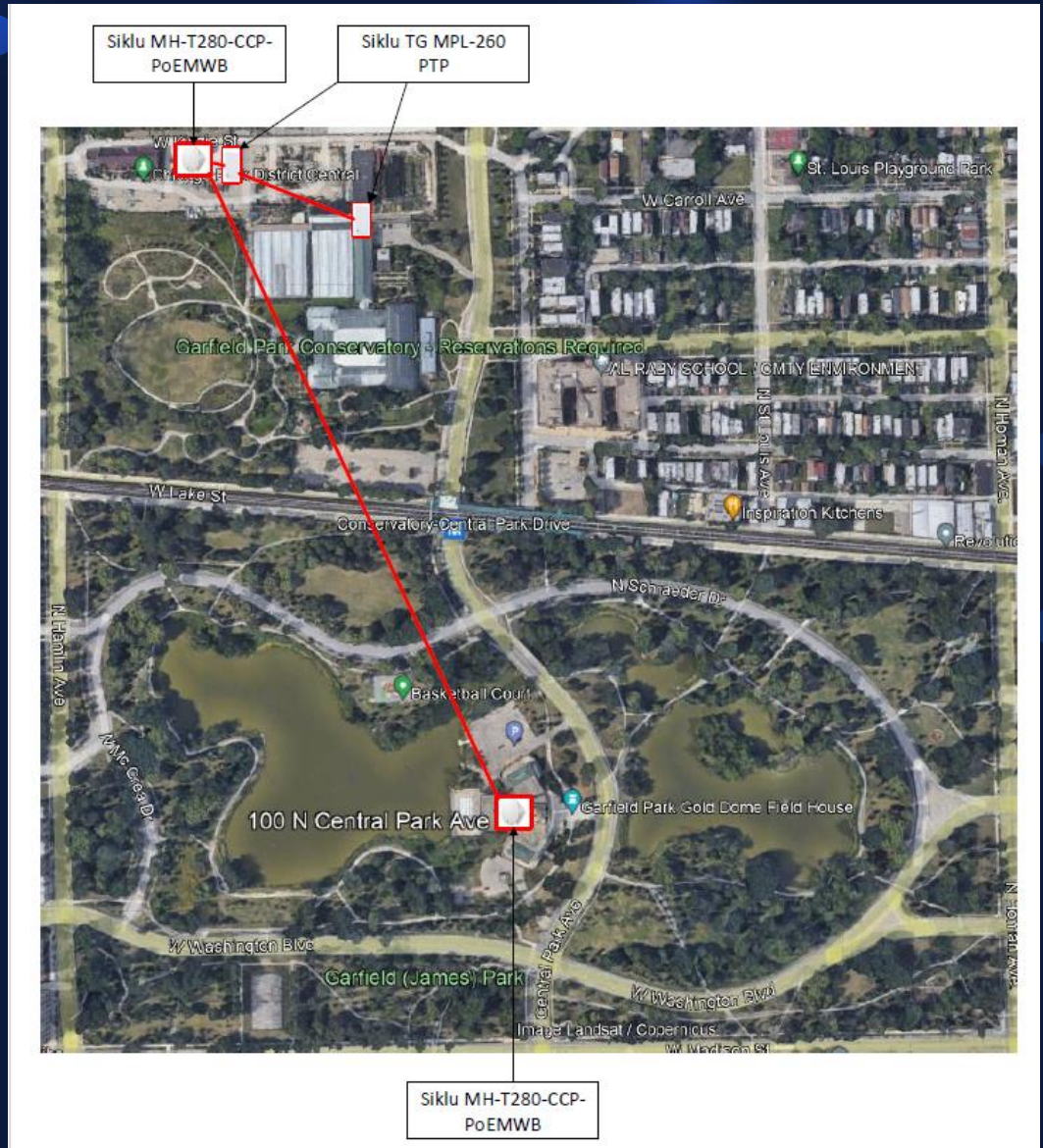

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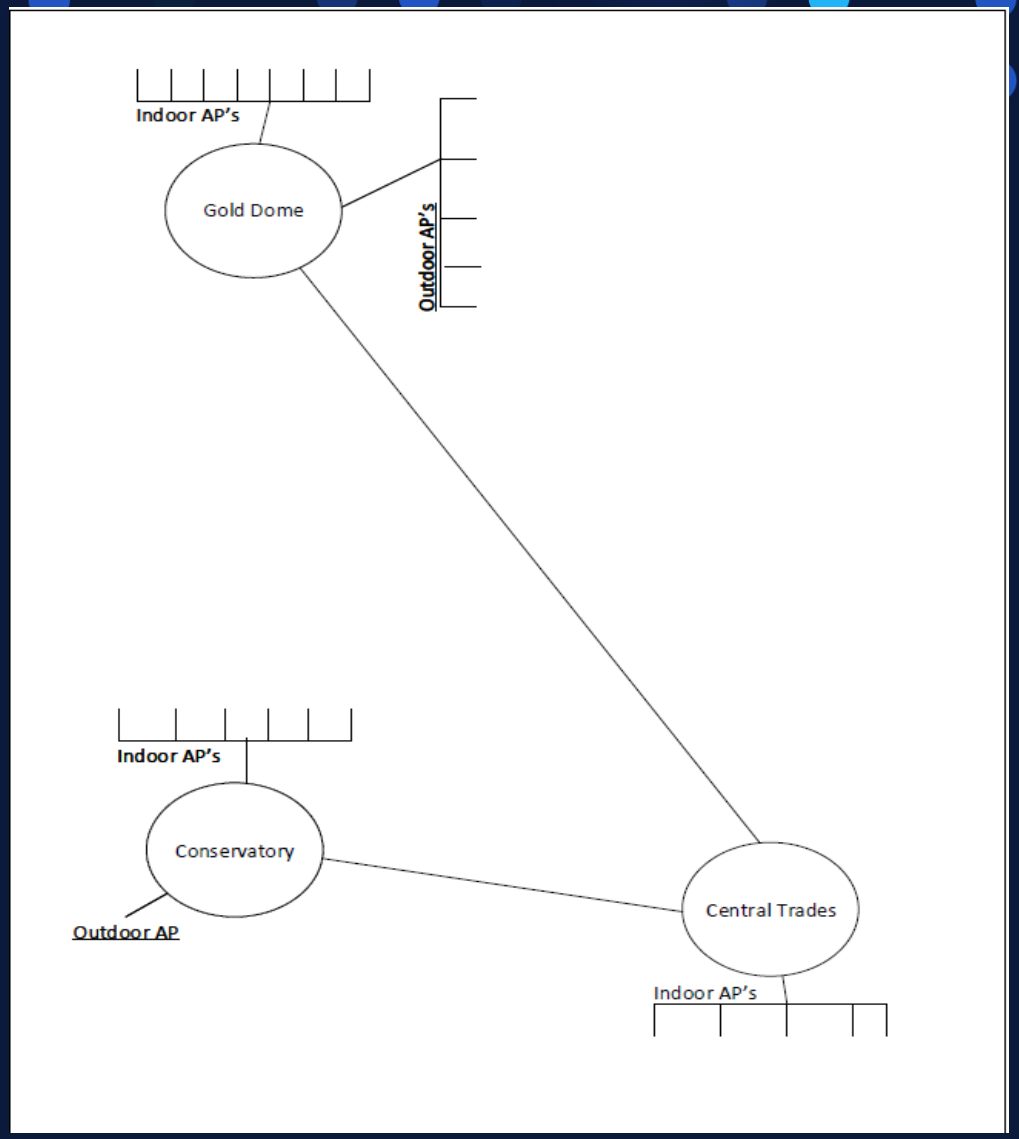
Garfield Park
Network Expansion Design

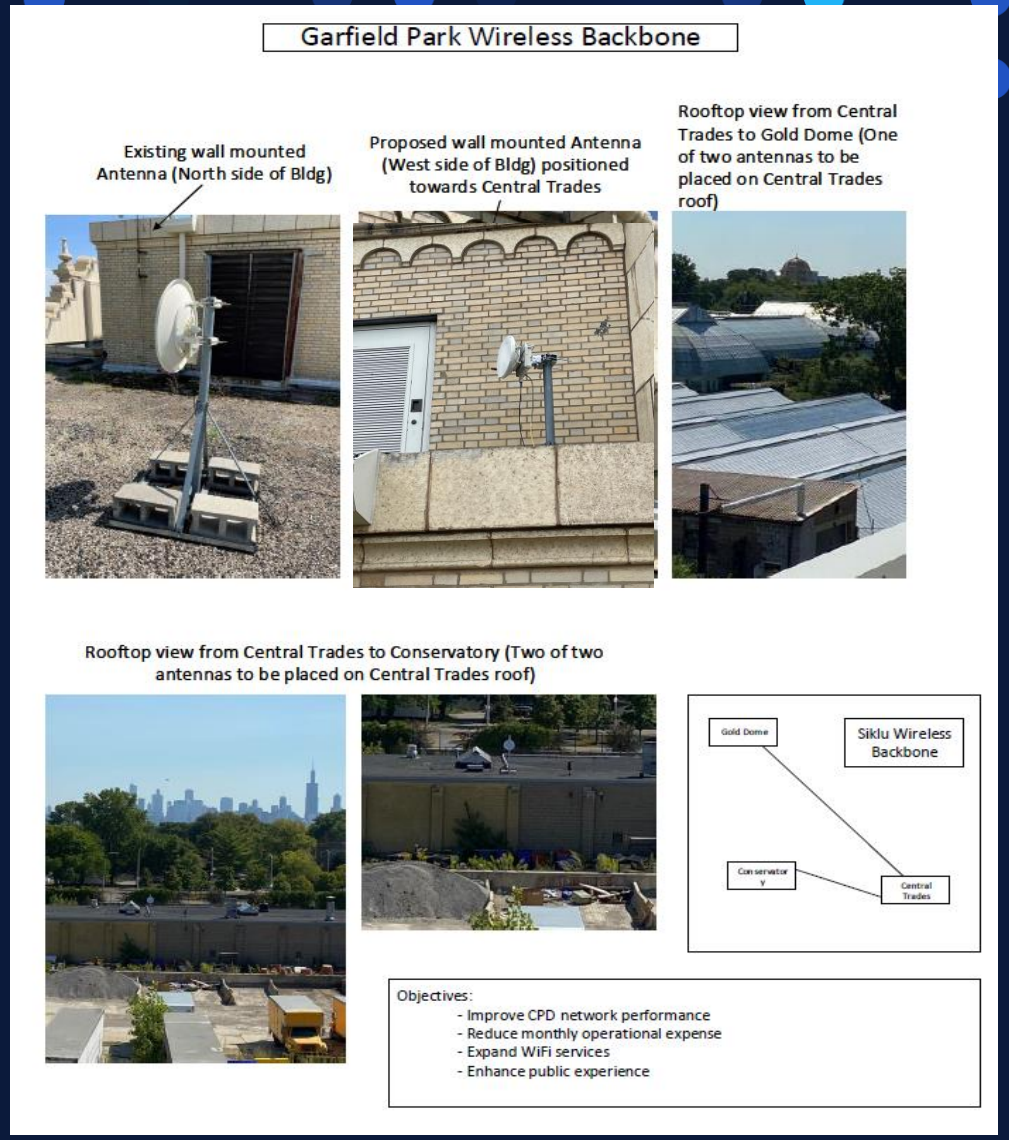
After

- ✓ Reduced internet service bill from 3 to 1
- ✓ Circuit in a day with out any Service work
- ✓ Deployed a **Small Campus Network** between buildings that were more that a quarter mile apart
  1. Gold Dome and Central Trades: 2000 ft apart
  2. Conservatory and Central Trades : 500 ft apart



Garfield Park Network Expansion

- ✓ Point to multipoint Wi-Fi expansion using millimeter wave radio
- ✓ Power that you have on the radio we were able to shoot
- ✓ Clear line of sight was a dependency
- ✓ Perimeter Wi-Fi
- ✓ No environmental damage to create a Small Campus network



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Humboldt Park Network & Wi-Fi Expansion

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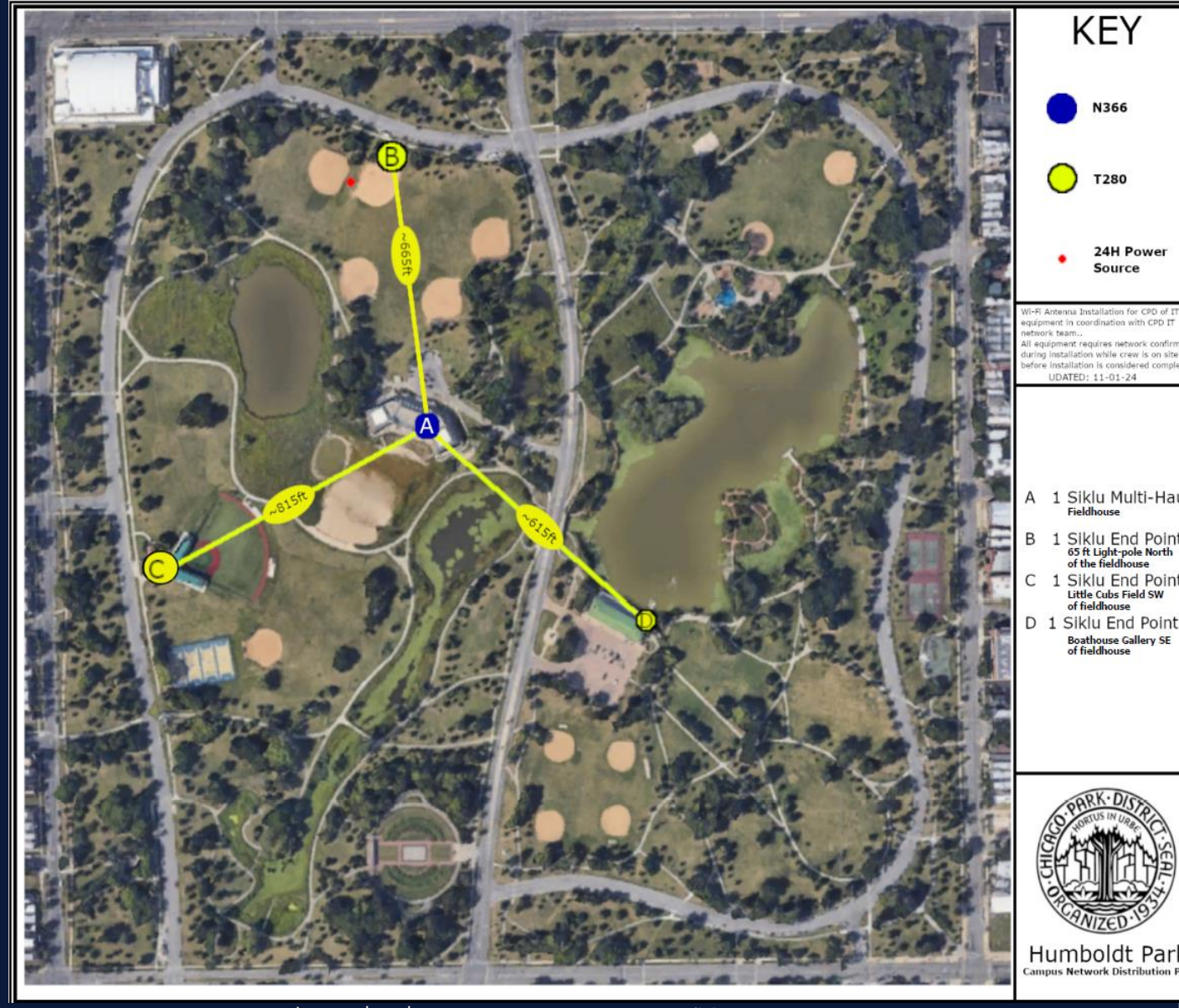
Humboldt Park Network & Wi-Fi Expansion

Before Challenges: (picture needed)

- ✓ Fieldhouse (A) and Boathouse Gallery (D) were on 2 separate networks
- ✓ Little Cubs Field (C) and 65 Ft Lightpole (B) did not have network connections
- ✓ No outdoor Wi-Fi in the Park
- ✓ No broadcasting of games from the fields available



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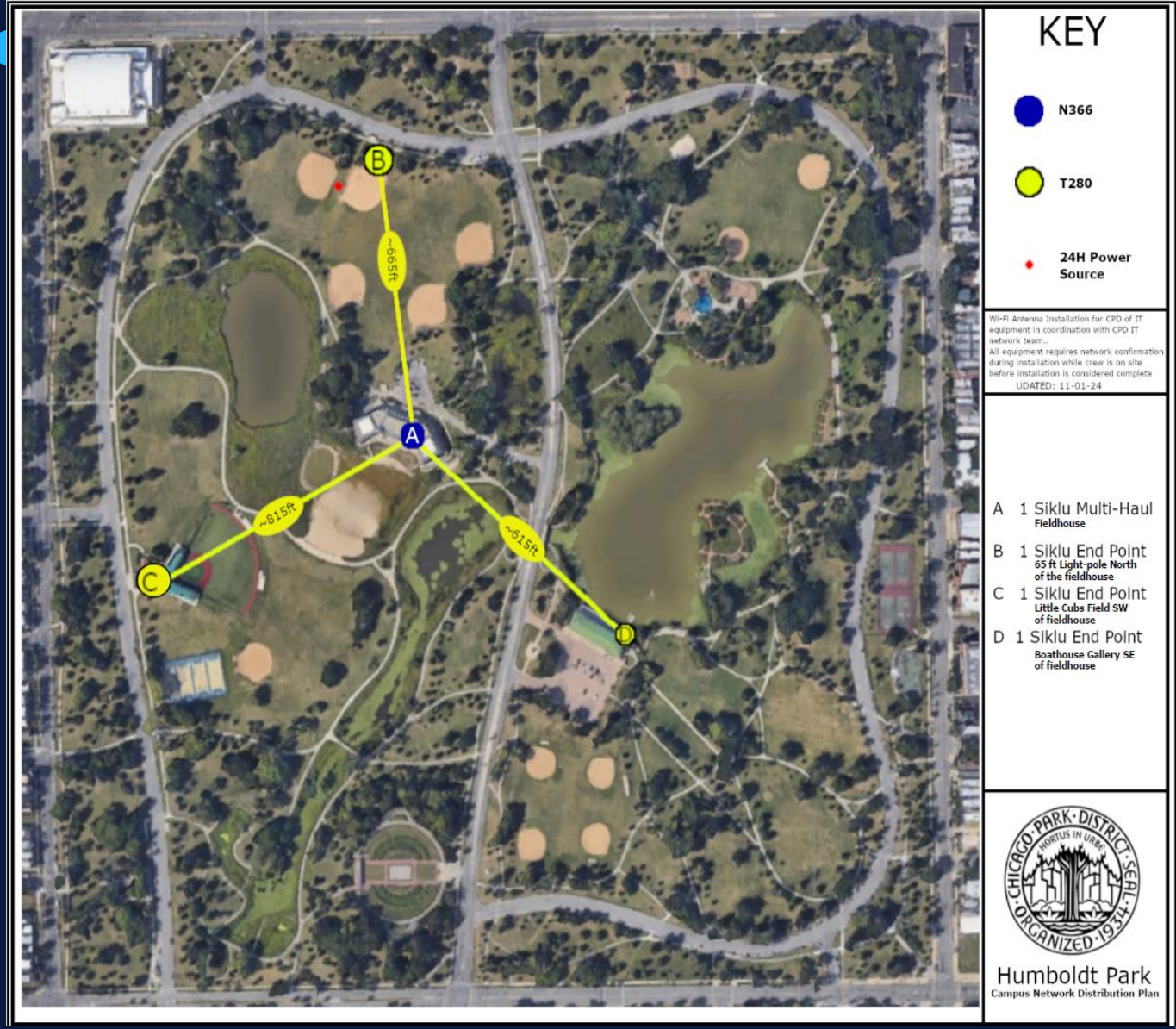
Humboldt Park Network & Wi-Fi Expansion Design

One high-capacity Siklu PtMP wireless radio installed on top of the Humboldt Park Fieldhouse's main building at a central, elevated location to maximize coverage range.

Setup of a central location (rooftop of the Humboldt Park Fieldhouse) and multiple subscriber units strategically placed throughout Humboldt Park ensuring comprehensive coverage and optimal performance.

3 Siklu subscriber units added around the park to extend the network coverage from the fieldhouse's PtMP network

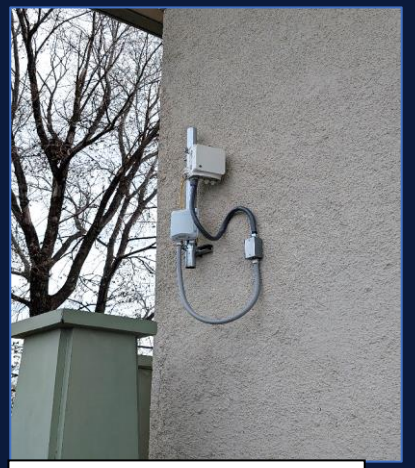


Humboldt Park Network & Wi-Fi Expansion

Value Added:

- ✓ Safety and Security: add network cameras with the extended networks
- ✓ Promote Digital Inclusion: Ensure all community members have access to the internet, reducing the digital divide.
- ✓ Provide free public Wi-Fi: Offer free internet access to park visitors, enhancing their experience.
- ✓ Support Community Events: Enable seamless connectivity for community gatherings, events, and activities.
- ✓ High speed internet to broadcast the games ☺

Little Cubs Field Siklu Radio



Boathouse Siklu Radio

Fieldhouse Siklu Radio

65 ft Light Pole Siklu Radio

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Thank you!

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