

Jon Fernandez

Engineering & Fiber Optic Consultant · Telecom Design · OSP · FTTx · PE (AZ)

Jon@fernandez.tech · +1 323 320 2020 · Phoenix, AZ 85032 · <https://fernandez.tech>

Summary

Telecommunications engineer and Arizona-licensed Professional Engineer with a strong background in OSP fiber engineering, construction, and network operations. Delivers fiber from long-haul and metro builds through laterals and building entry, then carries the design inside the building: telecom rooms, rack elevations, and cable pathways modeled in Revit MEP and SmartPlant for data centers, MDU/MTU properties, offices, and telco shelters. Designs to TIA, BICSI, and NEC requirements and works closely with electrical engineers wherever telecom and power systems meet. Recent work includes Cogent data-center engineering, LightPath fiber, and Zayo ERS (Emergency Response Service) project management restoring fiber outages. Known for AutoCAD/Bluebeam design, GIS and ROW validation, QA/QC, and driving complex projects to completion. Authorized to work in the U.S. for any employer; no sponsorship required.

Experience

ERS (Emergency Response Service) Project Manager · Fiber Outage Restoration — Zayo

Phoenix, AZ · May 2, 2026 – September 11, 2026

- Managed Zayo's Emergency Response Service (ERS), the team that restores fiber cuts and network outages — dispatched technicians and construction crews to site to repair fiber and get customers back online.
- Coordinated field techs, splicers, and construction with NOC/ops so cuts, damaged plant, and service-affecting events were worked in priority order.
- Owned on-site response: access, safety, vendor coordination, and status until traffic was restored.
- Kept customers and internal teams updated through restoration, then closed tickets once service was verified.

Engineering & Fiber Optic Consultant — LightPath

Phoenix, AZ · May 2, 2026 – September 11, 2026

- Supported LightPath fiber engineering and OSP work for metro and enterprise laterals, building entry, and customer cross-connects.
- Designed and reviewed fiber routes, handholes, and splice plans; walked sites for QA/QC and constructability.

- Modeled building entry, telecom rooms, and riser pathways in Revit MEP for commercial and residential MDU/MTU customers.
- Laid out MDF/IDF rooms, rack elevations, and structured cable schedules for MDU/MTU buildings to TIA and BICSI practices.
- Worked with permitting, utilities, and field teams to keep LightPath builds aligned with existing plant and customer handoff dates.
- Documented as-builts and test results so new fiber could be maintained and expanded cleanly.

Engineering & Fiber Optic Consultant · Fiber Technician — Cogent Communications

Phoenix, AZ · October 2025 – May 1, 2026

- Oversaw engineering and design for OSP fiber entry and direct fiber cross-connects serving Cogent, Microsoft, Stream, and Meta data centers.
- Designed in AutoCAD and Bluebeam, including CAD import/export for design packages and revisions.
- Built Revit MEP and SmartPlant models of data-center floors and telecom rooms so racks, cable tray, and pathways lined up with the electrical design before construction.
- Produced telecom room and MDF/IDF layouts, rack elevations, device floor plans, and copper and fiber cable schedules for data-center buildouts, following TIA-568/569/606/607, BICSI, and NEC (NFPA 70).
- Coordinated telecom packages with electrical engineers, and with architectural and mechanical teams wherever their work touched telecom spaces.
- Helped plan and schedule phased engineering across multiple buildings on new data-center sites in Arizona.
- Used GIS mapping to identify and validate ROW, utilities, and proposed handholes.
- Performed QA/QC on existing designs — verification, revisions, and field-driven alterations.
- Led moderate to complex OSP underground and aerial fiber construction projects.

- Led design of fiber spurs, laterals, and mid-span access; re-routed fiber from an existing underground long-haul path to the main campus and added 800 strands to the long-haul network.
- Planned FTTx networks for performance, efficiency, and cost, and mentored junior engineers on fiber deployment practices.
- Coordinated vendor management and field operations to keep client delivery timelines on track.
- Conducted site surveys for FTTx installs and expansions and validated customer infrastructure deliverables.
- Supported fusion splicing, termination, OTDR testing, and troubleshooting to keep loss low and uptime high.
- Identified and repaired fiber faults end-to-end and network-wide; tested new and repaired plant before turn-up.
- Helped complete large-scale installs on time and on budget, including placing and securing miles of fiber.

CTO — GeekiTek & GeekFi Internet

Phoenix, AZ · January 2013 – May 2025

- Directed R&D and engineering for the ISP — fixed wireless RF, fiber networks, and OSP underground construction, including a 240-mile long-haul fiber project for the Kaibab Indian Reservation.
- Company founder; owned end-to-end engineering and delivery for fiber optic network solutions.
- Built and operated GeekFi Internet (AS399797), serving businesses, homes, ranches, and remote sites.
- Installed RF tower gear, customer CPE, and above-ground plus underground OSP fiber and customer drops.
- Co-founded a family-owned shop focused on closing the tech gap for Hispanic and rural Arizona communities.
- Taught businesses, entrepreneurs, and community leaders cyber security and practical IT; worked with local organizations to help groups hit by cyber incidents and those trying to prevent them.
- Led cross-functional teams, technology strategy, budgeting, and vendor management for construction and engineering.
- Handled local permitting, easements, utilities, and ROW with public and private agencies in and around the Phoenix metro.
- Directed underground directional boring, terrain assessment, and conduit selection for fiber plant.

- Designed in AutoCAD, ran GIS mapping, and performed QA/QC plus construction site walks.
- Modeled office low-voltage buildouts, data-center floors, and telco shelters in Revit MEP and SmartPlant.
- Drew TR/MDF/IDF layouts, rack elevations, device floor plans, and cable schedules for commercial and residential MDU/MTU properties, designing copper and fiber to TIA-568/569/606/607, BICSI TDMM, and NEC (NFPA 70).
- Edited Division 27 specifications and commissioned telecom systems, working with electrical engineers wherever communications and power systems overlapped.
- Scheduled phased engineering and construction across tower sites and fiber regeneration buildings.
- Designed and installed DAS (Distributed Antenna Systems) and ERRCS (Emergency Responder Radio Coverage Systems) for in-building coverage.
- Spent about two years on contract jobs at TSMC and Intel semiconductor sites, delivering telecom and low-voltage work to fab-site requirements.
- Engineered moderate to complex OSP underground and aerial fiber construction projects.

IT Technician — Trinity Hospital Twin City

Denison, OH · January 2008 – January 2010

- Installed and supported workstations, servers, and clinical applications for medical staff.
- Managed network connectivity and routine maintenance to reduce downtime.
- Installed and tested low-voltage cabling including Cat5/Cat6 Ethernet and coax.
- Set up video conferencing rooms and provided on-site and remote technical support.

Education

Associate Degree in Computer Science (ITT Technical Institute); Network Administration (Buckeye Vocational)

ITT Technical Institute and Buckeye Vocational · New Philadelphia, OH · January 2004 – January 2008

Cisco Certified Network Associate (CCNA)

Cisco Systems · Certification

RCDD · OSP · RTPM (previously held, not current)

BICSI · Certification

Professional Engineer (PE), Arizona · DOT Driver · Driver's License

Licenses ·

Skills

Fiber & OSP

Long-haul and metro fiber, FTTx/FTTH, laterals and mid-span access, building entry, data-center cross-connects, underground and aerial OSP, directional boring, conduit design, utility locating, cable utility locating, fiber optic systems installation, fiber optic cable installation, broadband

Field & Restoration

Fusion splicing, OTDR and fiber testing, ERS fiber outage restoration, crew and technician dispatch, site surveys, QA/QC, quality inspection, quality control, bucket truck, tower climbing, ladder climbing, outdoor work, field technician, field service, equipment troubleshooting, OSHA

Engineering & Design

AutoCAD, Bluebeam, Navisworks, GIS mapping, ROW and easements, permitting, as-builts, blueprint reading, schematics, system design, IT infrastructure

Telecom Design & Standards

Revit MEP, SmartPlant, TR/MDF/IDF layouts, rack elevations, device floor plans, structured cable schedules, TIA-568/569/606/607, BICSI TDMM, NEC (NFPA 70), Division 27 specifications, telecom commissioning, DAS, ERRCS, multidisciplinary coordination, phased project scheduling

Networks & Infrastructure

IP networking, computer networking, Cisco routers/switches (CCNA), firewalls, DHCP, routing protocols, WAN, network installation, network management, network support, structured cabling, Cat5/Cat6, Ethernet, coax, cable systems installation, Meraki, MikroTik, UniFi/UISP, VMware, VoIP, SAN, fixed wireless, 5G, ZeroTier, WireGuard, Windows, operating systems, remote access / RDP, remote desktop

Low Voltage, Hardware & Facilities

Low-voltage systems, electrical wiring, electrical building codes, hardware support, computer hardware, mobile devices, mobile device management, facilities maintenance, data center operations, data center experience, underground utilities, construction, construction utility work, RF scanner, solar installation, boiler, semiconductor sites (TSMC, Intel; ~2 years), robot troubleshooting

Leadership & Software

ERS project management, project leadership, vendor and construction coordination, ISP operations (GeekFi AS399797), management, cyber security training for small business, Node.js, Express, SQLite, React, Python, PowerShell, SQL

Client & Workplace

Customer service, client services, communication skills, interpersonal skills, teamwork, multitasking, attention to detail, sales, phone etiquette, HIPAA, Google Workspace, Microsoft Office

Licenses & Authorization

Professional Engineer (PE) – Arizona, CCNA, BICSI RCDD/OSP/RTPM (previously held), DOT Driver, driver's license, driving, IT climbing, U.S. work authorization (no sponsorship required)

Links

<https://www.linkedin.com/in/jon-fernandez-a98563365>

<https://github.com/JoNatGeekFiWiFi>

<https://codeberg.org/geekitek>