SERVICE SPECIFICATION / PHYSICAL INFRASTRUCTURE

Inside-plant fiber backbones

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Selected fiber types, connectors, polarity, panels, pathways, and terminations carry high-capacity links through the building.

Intended outcome

A protected, polarity-correct backbone with labeled strands, clean terminations, insertion-loss results, and an as-built route.

Service scope

Inside-plant fiber must match the installed environment and optical application. Fiber type, connector interface, polarity, panel density and transitions are designed as a link rather than chosen independently.

Preterminated assemblies can reduce field termination work in suitable pathways; field-spliced constructions can fit long, irregular or high-count routes. The right method depends on pathway access, pulling risk, density, schedule and repair strategy.

How the system fits together

01 Optical interface	Transceiver type, wavelength and supported reach
02 Patch field	Connector interface, polarity and panel density
03 Backbone cable	Rated construction and fiber type through the building pathway
04 Remote room	Labeled termination and corresponding active equipment

Typical project triggers

- Copper backbone distance or bandwidth is limiting service
- Telecommunications rooms need higher-capacity uplinks
- A building refresh changes optical interfaces or density
- Existing strands, polarity or loss are undocumented

Delivery and acceptance

The final project scope identifies quantities, locations, dependencies, and the evidence required at each delivery stage.

01 Link requirements

Confirm optics, data rate, distance, topology, fiber type and available ports.

Acceptance evidence: Link schedule and optical-interface matrix

02 Cable-plant design

Define pathway, construction, connectors, polarity, panels, strand count and loss budget.

Acceptance evidence: Fiber allocation, panel elevation and calculated loss budget

03 Place and terminate

Protect the cable through pulls and transitions, then splice or connect into labeled panels.

Acceptance evidence: Installation photos, termination map and splice record

04 Test and activate

Inspect/clean connectors, verify polarity and loss, then correlate strands to active links.

Acceptance evidence: Inspection/cleaning log, OLTS results and final strand schedule

Handover deliverables

- Optical link and strand schedule
- Panel and connector map
- Calculated link-loss budget
- Inspection, polarity and insertion-loss results
- As-built route and termination photos

Closeout: GHT and the customer review the agreed evidence, record unresolved exceptions and owners, and confirm acceptance against the signed project scope.

Planning and scope boundaries

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Customer and site inputs

- Transceiver type, speed, wavelength and distance
- Existing fiber, panels and connector interfaces
- Pathway length, access and fire-rating transitions
- Strand count, polarity and topology
- Loss-budget and test-format requirements

Constraints and coordination

- Optics and fiber compatibility
- Connector cleanliness and inspection access
- Bend radius, pulling method and pathway transitions
- Fire rating and protected building entry

Commercial scope and responsibilities

This specification describes the service framework. The signed statement of work defines included equipment, quantities, software licenses, integrations, access windows, schedule, pricing, warranty, and support coverage. Additional construction, electrical work, recurring subscriptions, and ongoing support require an explicit line item.

The customer appoints an acceptance owner and provides authorized access, required site information, and decisions. GHT records assumptions, coordinates assigned work, and submits changes for agreement before expanding the scope.

Technical references

Telecommunications Industry Association — TIA-568: Commercial Building Telecommunications Cabling Standards | Source review: 2026-08-20

Fiber Optic Association — Fiber Optic Network Design | Source review: 2026-08-20

Fiber Optic Association — FOA-6a: Fiber Optic Cable Plants | Source review: 2026-08-20

IEEE 802.3 Working Group — IEEE 802.3 Ethernet | Source review: 2026-08-20

Service guide and project discussion | Source review: 2026-09-06