# SUBMISSION CHECKLIST

Vendor \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

The following listing is meant to assist vendors in gathering documentation to accompany their proposal submission. This listing is not necessarily all-inclusive, and relevant documents mentioned within this RFP should all be included with the vendor’s proposal regardless of whether they show up on this checklist or not.

\_\_\_\_\_ Documentation of qualifications in Outside Plant (if appropriate)

\_\_\_\_\_ Documentation of qualifications in Fiber Installation/Splicing/Testing (if appropriate)

\_\_\_\_\_ Documentation of qualifications in Network Hardware Installation/Configuration (if appropriate)

\_\_\_\_\_ References

\_\_\_\_\_ Specification sheet(s) for equivalent model hardware

\_\_\_\_\_ Timeline(s) for construction and connection

\_\_\_\_\_ Service Level Agreement(s)

**This page should be filled out and submitted with your proposal submission.**

# GENERAL DESCRIPTION AND SPECIFICATIONS

Midland Independent School District (ISD) is requesting proposals for Leased Dark Fiber and services provided over third-party networks for delivery of wide area network (WAN) services to the district. **The applicant will accept bids for any type of leased connectivity, including wireless and other types of connectivity that can meet our connectivity goals**

Midland ISD has two district HUB locations, Central Office (C.O.) and Legacy High School (002). Midland is requesting one connection from each district HUB to each service location. Midland ISD does not require a specific topology. The proposed solution must ensure diverse and resilient paths between each campus and its corresponding hub sites. Specifically, the connectivity between these locations must follow different physical routes, diverging no less than 500 feet apart to mitigate risks of service disruption due to single points of failure. Midland ISD is requesting bids for a network design/topology that allows for a fiber cut without losing connectivity to any site connected to the WAN.

Physical topology for the network could include any topology that provides the resiliency that is being sought by Midland ISD. This could include traditional network designs (such as hub and spoke) or alternative proposals (such as ring, bus, tree or other) that, in accordance with E-rate guidance, maximize cost-effectiveness. Midland ISD is not advocating or mandating any preconceived network design or construction route and leaves this decision up to the vendor to present their best solution while recognizing the cited termination locations.  For each response, vendor must include a logical network diagram as well as a physical network diagram displaying the paths to be used to serve each endpoint.

Regardless of the network topology proposed by the vendor, the network should be capable of initially providing 10 Gbps to all sites on the network, and able to support upgrades to 100 Gbps.

## REQUEST FOR PROPOSAL TIMELINE

The Request for Proposal (RFP) will be posted to the Schools and Libraries Division website along with the ERate form 470. Additionally, the RFP will be posted to the CRW Consulting Invitation for Competitive Bids (IFCB) website (<https://www.crwconsulting.com/ifcb>). Vendor questions pertaining to the RFP should be presented using the IFCB website shown above. Vendors should not call, email, or otherwise attempt to contact the school district during the bidding process.

The deadline for questions about the RFP is listed on the CRW IFCB webpage that you used to download this document. All questions will be answered through the IFCB website as they are received. Vendors are required to submit their proposal through the IFCB website, and all proposals are due no later than the deadline listed on the CRW IFCB page you used to download this document

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## DEFINITIONS

**Leased Lit Service**, which is defined as any technology neutral point-to-point broadband service that provides the desired connectivity end-to-end. This could be fiber-optic cable, microwave, or other media where the service provider1 installs, operates and maintains all of the equipment necessary to provide end-to-end service for Midland ISD.

**Leased Dark Fiber**, which is defined as either existing fiber-optic cable, or fiber-optic cable that is installed for the use of Midland ISD for the duration of the contract. The fiber-optic cable is maintained by the service provider, but Midland ISD provides, operates and maintains the electronics to light the fiber.

**Leased Dark Fiber (IRU),** which is defined as either existing fiber-optic cable, or fiber-optic cable that is installed for the use of Midland ISD for the duration of the contract. The fiber-optic cable is maintained by the service provider, but Midland ISD provides, operates and maintains the electronics to light the fiber. The Leased Dark Fiber (IRU) differs from Leased Dark Fiber mainly in the duration of the contract, which for The Leased Dark Fiber (IRU) will typically be for a period of either 10, 15 or 20 years.

**Any other type of transport service** - A technology-neutral service delivered over a service provider or other third-party owned network that delivers the bandwidth speeds and meets the uptime, latency, and jitter specifications outlined in the leased lit service option. While the bandwidth and service requirements are the same as leased lit service, this request is technology-neutral and can include non-fiber solutions. Requirements for this type solution will mirror the requirements for Leased Lit Service.

Midland ISD is also seeking proposals for Modulating Electronics to support the Leased Dark Fiber and Leased Dark Fiber (IRU) options. Details on specific equipment requirements and quantities are described under NETWORK EQUIPMENT.

Vendors may submit proposals for any and all options as listed above that will provide point-to-point connectivity at the desired bandwidth. Specifics for each option are listed in the section titled WAN PROCUREMENT OPTIONS. Vendors may also submit proposals on the network equipment regardless of whether they submit proposals on connectivity options or not.

Vendors providing proposals should have an ERate Service Provider Information Number (SPIN) from the SLD, and should include their SPIN on their proposal. There is no cost to register for a SPIN/498 ID, and application can be made at <https://www.usac.org/e-rate/service-providers/step-1-obtain-a-spin/>

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## SERVICE LOCATIONS

Service is expected to be delivered from the district hubs:

* Central Office (C.O.) located at 615 W. Missouri Ave., Midland, Texas 79701
* Legacy High School (002) located at 3500 Neely Ave., Midland, Texas 79707

Demarcation point is the network operations center identified as NOC on the attached floor plans. Service is expected to be delivered to each service location from the district hubs at the following location, with demarcation point at the MDF as identified on the attached floor plans:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Designator** | **Building** | **Address** | | **School** |
| C.O.\* | CENTRAL OFFICE | 615 W. Missouri Ave. | MIDLAND, TX 79701 | Y |
| 002\* | Legacy HS | 3500 Neely Ave. | MIDLAND, TX 79707 | Y |
| 003 | MIDLAND H S | 906 W ILLINOIS AVE | MIDLAND, TX 79701 | Y |
| 004 | VIOLA M COLEMAN H S | 1600 E GOLF COURSE RD | MIDLAND, TX 79701 | Y |
| 006 | EARLY COLLEGE HS @ MIDLAND COLLEGE | 3600 N GARFIELD | MIDLAND, TX 79705 | Y |
| 030 | MIDLAND ALTERNATIVE PROGRAM | 2101 W MISSOURI | MIDLAND, TX 79701 | Y |
| 041 | ALAMO J H | 3800 W STOREY AVE | MIDLAND, TX 79703 | Y |
| 042 | LEGACY FRESHMAN H S | 1400 E OAK AVE | MIDLAND, TX 79705 | Y |
| 044 | MIDLAND FRESHMAN HS | 100 E GIST AVE | MIDLAND, TX 79701 | Y |
| 045 | SAN JACINTO J H | 1400 N. N ST | MIDLAND, TX 79701 | Y |
| 046 | GODDARD J H | 2500 HAYNES AVE | MIDLAND, TX 79705 | Y |
| 047 | ABELL J H | 3201 HERITAGE BLVD | MIDLAND, TX 79707 | Y |
| 101 | BONHAM EL | 909 BONHAM ST | MIDLAND, TX 79703 | Y |
| 104 | BURNET EL | 900 RAYMOND RD | MIDLAND, TX 79703 | Y |
| 106 | DE ZAVALA EL | 705 N LEE ST | MIDLAND, TX 79701 | Y |
| 107 | FANNIN EL | 2400 FANNIN AVE | MIDLAND, TX 79705 | Y |
| 108 | HENDERSON EL | 4800 GRACELAND DR | MIDLAND, TX 79703 | Y |
| 109 | SAM HOUSTON COLLEGIATE PREP | 2000 W LOUISIANA AVE | MIDLAND, TX 79701 | Y |
| 110 | JONES EL | 4919 SHADYLANE DR | MIDLAND, TX 79703 | Y |
| 111 | LAMAR EL | 3200 KESSLER AVE | MIDLAND, TX 79701 | Y |
| 112 | LONG EL | 4200 CEDAR SPRING DR | MIDLAND, TX 79703 | Y |
| 113 | MILAM EL | 301 E DORMARD AVE | MIDLAND, TX 79705 | Y |
| 114 | EMERSON EL | 2800 MOSS AVE | MIDLAND, TX 79705 | Y |
| 116 | RUSK EL | 2601 WEDGEWOOD ST | MIDLAND, TX 79707 | Y |
| 117 | SOUTH EL | 200 W DAKOTA AVE | MIDLAND, TX 79701 | Y |
| 118 | IDEA TRAVIS ACADEMY | 900 E GIST AVE | MIDLAND, TX 79701 | Y |
| 122 | PARKER EL | 3800 NORWOOD ST | MIDLAND, TX 79707 | Y |
| 123 | SANTA RITA EL | 5306 WHITMAN ST | MIDLAND, TX 79705 | Y |
| **Designator** | **Building** | **Address** | | **School** |
| 125 | SCHARBAUER EL | 2115 HEREFORD BLVD | MIDLAND, TX 79707 | Y |
| 126 | CARVER CENTER | 1300 E WALL ST | MIDLAND, TX 79701 | Y |
| 127 | BUSH EL | 5001 PRESTON DR | MIDLAND, TX 79707 | Y |
| 128 | GREATHOUSE EL | 5107 GREATHOUSE AVE | MIDLAND, TX 79707 | Y |
| 129 | YOUNG WOMEN'S LEADERSHIP ACADEMY | 1800 E WALL ST | MIDLAND, TX 79701 | Y |
| 130 | PEASE COMMS/TECH ACADEMY | 1700 E MAGNOLIA AVE | MIDLAND, TX 79705 | Y |
| 131 | JAMES BOWIE FINE ARTS ACADEMY | 805 ELK | MIDLAND, TX 79701 | Y |
| 132 | BARBARA YARBROUGH EL | 6000 RIVERFRONT DR | MIDLAND, TX 79706 | Y |
| 133 | BARBARA FASKEN EL | 5806 VAL VERDE | MIDLAND, TX 79707 | Y |
| 134 | RALPH BUNCHE EL | 700 S JACKSON | MIDLAND, TX 79701 | Y |
| 135 | GENERAL TOMMY FRANKS EL | 401 E PARKER AVE | MIDLAND, TX 79701 | Y |
| LST | LONE STAR TRAILS EL | 6801 PIONEER ROAD | MIDLAND, TX 79705 | Y |
| AC | AGRICULTURAL EDUCATION CENTER | 2207 E COUNTY RD 90 | MIDLAND, TX 79706 | NIF |
| AT | ADVANCED TECHNOLOGY CENTER | 3200 W CUTHBERT AVE. | MIDLAND, TX 79701 | NIF |
| B | AUDREY GILL SPORTS COMPLEX | 200 E Loop 250 N | MIDLAND, TX 79705 | NIF |
| M | MORAN (SCHOOL PLANT SERVICES/  MAIN/FOOD SVCS COMPLEX) | 801 MORAN ST | MIDLAND, TX 79701 | NIF |
| S | MEMORIAL STADIUM | 2001 W CUTHBERT AVE | MIDLAND, TX 79701 | NIF |
| T | TRANSPORTATION | 7201 BRIARWOOD AVE | MIDLAND, TX 79707 | NIF |
| X | Encore Simpatico | 2910 W. Michigan Ave | MIDLAND, TX 79701 | **Annex** |

## \* Indicates this location is a district HUB site

## EXISTING CONDITIONS

Midland ISD is opening a new elementary campus, Lone Star Trails Elementary at 6801 Pioneer Road, Midland, Texas 79705 for the 2025/26 school year. Additionally, Midland ISD has plans to open two new high schools for the 2028/29 school year. These will be Midland High School at 1600 E Wadley, Midland, Texas 79705 and Legacy High School, no address but the GPS coordinates are 31.98007° N, 102.15328° W.

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## TIMELINE

Vendors must include 3 timelines with their proposal:

* One identifying the earliest date (but not before July 1, 2025) the vendor could provide a “ready” connection to all locations, and when construction (if any) would need to begin in order to meet that timeline. Note that “ready” in this section means:
  + For **Leased Lit Service** and/or **Any other type of transport service** this means that all Ethernet connections are in place at all locations, and ready to provide Layer3 transport and 10 Gbps service from the hub to each location.
  + For **Leased Dark Fiber** or **Leased Dark Fiber IRU** this means that the fiber in in place end-to-end between the hub and each location, is terminated in the MDF at each location, and is ready to attach a Layer3 switch at each location and commence 10 Gbps data connection.
* One describing the earliest date the vendor could provide a “ready’ connection to all locations based on a construction start date of May 1, 2025.
* One describing the latest start date after March 1, 2025 that would still allow the vendor to provide a ready connection to all locations by July 1, 2025.

For all services, the new service is being planned to begin on July 1, 2025 which represents the expiration of the current WAN contract. For each response, respondents must include a timeline for bringing all sites online and an explanation of how much they are able to adhere to Midland ISD’s specified timeline.

# WAN PROCUREMENT OPTIONS

Midland ISD is seeking multiple options for bids. Service providers may bid one, all, or any number of options. **Except for** **vendors bidding only on Modulating Electronics (NETWORK HARDWARE), The first option is for services delivered over third-party networks. This category includes the following solutions:**

**Leased Lit Service/Transport** - A fully managed, leased lit service solution. This option may include Special Construction costs (see section on Special Construction). If Special Construction is included, it should be bid separately from the monthly recurring cost. Additionally, any installation or connection charges should be bid separately as a non-recurring cost. Maintenance cost for the Leased Lit Service should be included in the monthly recurring cost, and should include all transport media (fiber or other) maintenance, as well as the maintenance and any equipment refresh that is required during the course of the contract. With the exception of any Special Construction charges and any non-recurring costs stipulated by the service provider in their proposal, Midland ISD shall only be liable for the service provider stated monthly recurring cost for the duration of the contract.

**Leased Dark Fiber** **or Leased Dark Fiber with Indefeasible Rights of Use (IRU)** - A leased dark fiber solution is a lease by Midland ISD of the specified number of fiber strands between two locations. The monthly recurring lease charge for the fiber strands should include maintenance of the fiber. If the fiber maintenance is a separate monthly recurring charge, this should be clearly spelled out on the appropriate pricing sheet. A dark fiber lease may include a Special Construction charge, which should be listed separately in the space provided on the pricing sheets.

**Any other type of transport service** - A service delivered over a service provider or other third-party owned network that delivers the bandwidth speeds and meets the uptime, latency, and jitter specifications outlined in the leased lit service option. While the bandwidth and service requirements are the same as leased lit service, this request is technology neutral and can include non-fiber solutions. Requirements for this type solution will mirror the requirements for Leased Lit Service.

Midland ISD is also seeking proposals for the purchase of network equipment necessary to light any leased dark fiber, leased dark fiber (IRU), and/or self-provisioned solutions. Details concerning the specific equipment that is required by Midland ISD is outlined in the NETWORK EQUIPMENT section of this document. Note that applicant may already own some equipment necessary to light the aforementioned fiber so there may not be a direct correlation between the apparent and actual needs of Midland ISD based on this document. The equipment outlined in NETWORK EQUIPMENT should be bid separately from any fiber services, and service providers are not required to bid on any of the aforementioned solutions in order to submit a proposal on network equipment.

For all options Midland ISD will consider traditional network designs (such as hub and spoke) or alternative proposals (such as ring, bus, tree or other) that, in accordance with E-rate guidance, maximize cost effectiveness. Respondents should clearly illustrate proposed network design and construction routes. Midland ISD is not advocating or mandating any preconceived network design or construction route and leaves this decision up to the vendor to present their best solution while recognizing the cited termination locations. For each response, vendor must include a network diagram displaying the paths to be used to serve each endpoint.

In E-rate terminology, **special construction** refers to the upfront, non-recurring costs associated with the installation of new fiber to or between eligible entities. If no new fiber is being installed, then any installation costs are considered standard **non-recurring costs (NRC).** Applicants may seek funding for special construction charges in connection with leased lit service, leased dark fiber, and self-provisioning. Special construction charges eligible for Category One support consist of three components:

* Design
* Construction of network facilities
* Project management

***Note:***The term Special Construction does not include network equipment necessary to light fiber, nor the services necessary to maintain the fiber.

All options can include Special Construction costs as well as E-rate eligible recurring circuit costs. For any proposed solution other than Self-Provisioned Fiber, an attempt by the service provider to add any fiber strands during construction that are NOT for Midland ISD will trigger a requirement for the service provider to cost allocate out all costs related to the additional fiber strands. For self-provisioned fiber, service providers are restricted from adding additional fiber strands for their own use. By USAC rules, Midland ISD must own the entire self-provisioned fiber network end-to-end, to include fiber cable, conduit(s), and hand holes/manholes.

The winning service provider assumes full responsibility to ensure appropriate incremental costs are allocated out of the Special Construction charges to the district in accordance with FCC rules and orders. If, after the issuance of the Funding Commitment Decision Letter, USAC or the FCC determines that the winning service provider did NOT appropriately cost-allocate those charges associated with the additional strands, Midland ISD will not be responsible for reimbursing the winning vendor and the winning vendor will assume fiscal responsibility for all costs deemed ineligible by USAC. For examples of cost allocation, please see documentation prepared by the State E-rate Coordinators’ Alliance (SECA) attached.

Based on the bids and both a short term and long-term cost effectiveness analysis, Midland ISD will determine which, if any, of the proposed solutions or some combination of solutions is acceptable. The specifications related to each solution option are as follows.

Vendors are also asked to provide pricing for adding new sites during the contract period.  Midland ISD currently has plans to open two new high schools for the 2028/29 school year. Additionally, Midland ISD may have need to open additional sites during this contract, but does not have specific site(s) in mind. Midland ISD wants to have the ability to add additional sites during this contract, and be able to use this proposal and the associated ERate form 470 in order to be able to receive ERate funding for any new site without issuing another Request for Proposal.  These new sites would have service until the end of the contract for the other Midland ISD schools, so for example, if Midland ISD signed an agreement initially for a 5-year contract, and were adding a new site to begin service July 1st of the third year of that contract, service for the new school would be for three years (the 3rd, 4th and 5th years of the contract). It is understood that any voluntary renewals by Midland ISD will include any additional sites added during the contract.

Vendors are free to choose how they price the cost for new sites, but would anticipate that the construction costs would be delineated in terms of how much new construction would be required, which could include additional backbone fiber to reach the area of the new site, as well as the cost of bringing the fiber into the new site.  Additionally, the monthly recurring cost (MRC) for the new site should also be included.   As the methodology for each vendor will vary and Midland ISD cannot anticipate in what manner would be most appropriate to provide Leased Dark Fiber or Lit Leased Service to a new site, all pricing for new sites should be entered on the pricing sheet labeled “New Sites” or on a separate vendor document labeled as “New Sites”.

Assuming that any new sites will begin service on July 1st, vendors may also include special construction costs for new sites as part of their pricing sheet for adding additional sites.  The same rules for special construction apply to new sites in the year they are added to the Midland ISD contract.

## LEASED LIT SERVICE/TRANSPORT

**Leased Lit Service/Transport** - A fully managed, leased lit service solution.

LEASED LIT FIBER DISQUALIFICATION FACTOR: Vendors must bid all connections. If vendors submit a bid missing any connection, we will consider your bid incomplete and disqualify your bid.

This option may include Special Construction costs (see SPECIAL CONSTRUCTION). If Special Construction is included, it should be bid separately from the monthly recurring cost. Additionally, any installation or connection charges should be bid separately as a non-recurring cost. Maintenance cost for the Leased Lit Service, as well as all other costs (fiber/circuit/transport lease, fiber/circuit/transport maintenance, modulating electronics, routing equipment, equipment refreshes, pole attachment fees, maintenance, etc.) should be included in the monthly recurring cost. With the exception of any Special Construction charges and any non-recurring costs stipulated by the service provider in their proposal, Midland ISD shall only be liable for the service provider stated monthly recurring cost for the duration of the contract.

Midland ISD desires a single technology neutral connection from the network operations center to each location. Initial connection speeds for all location will be 10 Gbps. Pricing for incremental bandwidth upgrades up to 100 Gbps per site should also be included in the proposal. Midland ISD must have dedicated, symmetrical transport bandwidth as described by location/year on the pricing sheet, with Service Level Agreement (SLA) guarantees between the designated endpoints.  The solution must be scalable to 100 Gbps with 5 Gbps cost increments. Midland ISD reserves the right to request bandwidth increases by site during the duration of the contract as needed to meet actual needs.

This option should include vendor-maintained equipment necessary at each end point to provide a 40 Gbps Layer-3 connection to the hub, as well as a 40 Gbps connection to the district-owned core router at the end point. At the hub(s), the vendor-maintained Layer-3 switch needs to have enough 10 Gbps ports to connect all end points, as well as enough 10 Gbps or 100 Gbps ports to connect to the district hub core switch without creating a network bottleneck. Note that if the district increases bandwidth during this contract, the equipment must be able to support the new bandwidth, or replacement equipment with this capability must be provided.

Midland ISD is requesting pricing for 5 and 10 year contracts. All contracts shall be written so as to allow for up to 5 one-year extensions.

With respect to portions on Midland ISD property, service providers will abide by all applicable NEC, state and local codes. All cable entering a building must be indoor-rated, transitioned to an indoor-rated cable, or contained in an acceptable conduit that allows it to meet all codes; and all applicable grounding and bonding codes must be met.

Termination point for all options shall be the designated demarcation point within the buildings. Vendor provided services shall terminate in an appropriate vendor-provided patch panel or LIU, and LC patch cables of an appropriate length to reach Midland ISD equipment shall be provided as part of the proposal. Unless otherwise stated in this document, hand-off protocol shall be TCP/IP Ethernet.

If Midland ISD selects this option for providing WAN connectivity to schools, connections will need to be operational July 1, 2025, or as soon thereafter as possible. Vendor must provide a timeline with their proposal defining the construction window necessary to have this service available beginning July 1, 2025. If service is not expected to be available July 1 2025, vendor shall supply 3 timelines as identified in section labeled TIMELINE above. The vendor that is selected for this project must also include these three timelines as part of their contract with Midland ISD.

Vendor shall make all reasonable efforts to ensure 99.99% network availability on each circuit. Vendor shall provide the full bandwidth to each location, and at no time shall the vendor limit or throttle the capacity of the circuit. Additionally, the vendor shall provide a sample Service level Agreement that outlines the vendor’s guarantees with regard to network functionality and availability, to include but not limited to:

* Network availability commitment
* Maximum acceptable frame/packet loss commitment
* Maximum network latency commitment
* Maximum network jitter commitment
* Maximum time to respond to outage (commencing from the time Midland ISD notifies vendor of the outage)
* Maximum time to restore service
* How quality of service will be measured for credit to Midland ISD
* How outage will be measured for credit to Midland ISD
* How credit for reduced quality of service and outages will be credited to Midland ISD

**Excess Fiber Strands for Applicant’s Future Use**

If the service provider installs additional strands for the applicant’s exclusive future use in a leased dark fiber or leased lit service special construction project, and if the applicant can show documentation that buying a cable containing the number of strands placed in the fiber system for the applicant’s future use is more cost effective then buying a fiber cable with the number of strands the applicant plans to place into service the first year, no cost allocation of the excess strands is required and no other special construction charges would need to be cost allocated.

If the service provider installs excess strands for the applicant’s exclusive future use in a leased dark fiber or leased lit service special construction project where the excess strands will remain dormant until they are lit for the applicant in the future, and if the applicant cannot show that it is not more cost effective than buying the exact number of fiber strands being lit in the first year, the applicant must cost allocate the costs associated with the excess strands only. No other special construction charges would need to be cost allocated.

# Excess Fiber Strands for Service Provider’s Future Use

For lit services special construction and leased dark fiber special construction, if the service provider wishes to place extra strands in the build for its own use, the E-rate applicant must cost allocate the cost of the service provider-owned extra strands, as well as all incremental costs of those extra strands from the special construction E-rate funding request. It is not a pro-rata share, but an incremental cost calculation that must be backed by detailed documentation.

## LEASED DARK FIBER & LEASED DARK FIBER IRU

If the vendor is going to bid on a fiber solution, the following specifications will apply. A leased dark fiber solution is defined as a lease by Midland ISD of the specified number of fiber strands between two locations. The monthly recurring lease charge for the fiber strands should include maintenance of the fiber. If the fiber maintenance is a separate monthly recurring charge, this should be clearly spelled out on the appropriate pricing sheet. A dark fiber lease may include Special Construction charges, which should be listed separately in the space provided on the pricing sheets. Regardless of any discussions on, or references to, topology or routes contained in this document, the applicant will accept bids for any topology or routes that meet our connectivity goals.

LEASED DARK FIBER DISQUALIFICATION FACTOR: Vendors must bid the specified strands (at a minimum) for all requested locations. If vendors submit a bid missing, or falling short of the requested strands, for any location, we will consider your bid incomplete and disqualify your bid.

Midland ISD is requesting 4-strands (two pair) of fiber to each entity described under SERVICE LOCATIONS, and will be lighting 4-strands the first year. In accordance with USAC rules, the cost of any strands not lit during the funding year must be allocated out as ineligible charges and as such, vendor will be responsible for cost allocating out the extra strands of fiber to each location. Vendor should use the guidance in documentation prepared by the State E-rate Coordinators’ Alliance [SECA] in attached PDF). Fiber should be single mode ITU‐T G.652.C/D compliant, and dB loss across each link must allow for acceptable data transmission using existing district modulating equipment, and/or new equipment specified in NETWORK EQUIPMENT. Acceptable dB loss must be maintained for the duration of the lease.

Midland ISD is requesting pricing for contracts for 5 years and 10 years. All contracts shall be written so as to allow for up to 5 one-year extensions.

For all options, with respect to portions on Midland ISD property, service providers will abide by all applicable NEC, state and local codes. All cable entering a building must be indoor-rated, transitioned to an indoor-rated cable, or contained in an acceptable conduit that allows it to meet all codes; and all applicable grounding and bonding codes must be met.

Termination point for all options shall be the designated demarcation point within the buildings. Vendor provided services shall terminate in an appropriate vendor-provided patch panel or LIU, and LC patch cables of an appropriate length to reach Midland ISD equipment shall be provided as part of the proposal. Unless otherwise stated in this document.

Leased Dark Fiber responses require maintenance as part of the response, even if maintenance is subcontracted out to a third party. In the case of the 3rd party maintenance, the respondent must hold and manage the subcontract and is ultimately responsible for the Service level Agreement. It is assumed that the dark fiber network is part of a more comprehensive fiber infrastructure of the service provider. The respondent will include only the portion of maintenance that is required to support Midland ISD fiber segments versus overall network maintenance. If the fiber serves multiple customers, the cost of maintenance should be shared among all the recipients.

Vendor shall make all reasonable efforts to ensure 99.99% network availability on each circuit. Additionally, the vendor shall provide a sample Service level Agreement that outlines the vendor’s guarantees with regard to network functionality and availability, to include but not limited to:

* Leased fiber availability commitment
* Maximum acceptable dB loss per circuit (in the event that this level is exceeded, vendor is responsible for whatever repairs are necessary to reduce the dB loss to acceptable levels)
* Maximum time to respond to outage (commencing from the time Midland ISD notifies vendor of the outage or issue)
* Maximum time to restore service
* How quality of service (dB loss) will be measured for credit to Midland ISD
* How outage will be measured for credit to Midland ISD
* How credit for reduced quality of service and outages will be credited to Midland ISD

**Excess Strands for Applicant’s Future Use**

If the service provider installs additional strands for the applicant’s exclusive future use in a leased dark fiber or leased lit service special construction project, and if the applicant can show documentation that buying a cable containing the number of strands placed in the fiber system for the applicant’s future use is more cost effective then buying a fiber cable with the number of strands the applicant plans to place into service the first year, no cost allocation of the excess strands is required and no other special construction charges would need to be cost allocated.

If the service provider installs excess strands for the applicant’s exclusive future use in a leased dark fiber or leased lit service special construction project where the excess strands will remain dormant until they are lit for the applicant in the future, and if the applicant cannot show that it is not more cost effective than buying the exact number of fiber strands being lit in the first year, the applicant must cost allocate the costs associated with the excess strands only. No other special construction charges would need to be cost allocated.

# Excess Strands for Service Provider’s Future Use

For lit services special construction and leased dark fiber special construction, if the service provider wishes to place extra strands in the build for its own use, the E-rate applicant must cost allocate the cost of the service provider-owned extra strands, as well as all incremental costs of those extra strands from the special construction E-rate funding request. It is not a pro-rata share, but an incremental cost calculation that must be backed by detailed documentation.

# NETWORK EQUIPMENT (FOR OTHER THAN LIT LEASED SERVICE/TRANSPORT)

Midland ISD is also seeking bids for necessary network equipment to place leased dark fiber, leased dark fiber (IRU) into service at 10 Gbps once fiber is available. All references to make/model are strictly to demonstrate desired functionality, and all equivalent equipment proposed will be considered by Midland ISD. If vendor is specifying an equivalent item, vendor shall include a specification sheet for each such item with the proposal when it is submitted. Midland ISD may, at their discretion, request vendor to demonstrate that the proposed equipment is equivalent to any equipment listed in the RFP.

Currently, Midland ISD is using 1x Cisco C9500-24Y4C switch at each remote location except MHS, which has two C9500-24Y4C switches. Our Hub sites, Legacy High and Central Office (District Administration), each have 2x C9500-32C switches, and each hub site provides internet access to campuses.

Midland ISD will be refreshing our network switches, and will require every switch at every site to meet the following requirements:

* Dual Power Supplies
* Layer 3 routed interfaces and sub-interfaces
* Support common routing protocols (prefer EIGRP, OSPF, BGP, and IS-IS)
* Support Netflow or an equivalent technology
* Support common security and encryption Protocols (GRE, IPSEC)
* Support for Rapid Per-VLAN Spanning Tree (Rapid PVST)
* IPv4 and IPv6 capable with the ability to run each individually or both at the same time
* 802.1x support for administrative authentication
* SNMPv3 support
* Interoperability with Cisco’s Emergency Responder (CER) system
* Support for SD-WAN
* Compatibility with Cisco Discovery Protocol (CDP)

Switch type A for HUB Sites (C.O. & 002):

* Each hub site requires 2 switches (4 total) with the following specifications:
* 32 (LAN) ports that are capable of at least 10 Gbps connectivity (SFP+), prefer
* 4 additional (WAN) ports that are capable of at least 100 Gbps connectivity
* If the 32x 10 Gbps ports are some variant of QSFP, then we will need adapters or breakout cables to SFP+, SFP28, or SFP56
* For non-Cisco submissions, we will either need 10 Gbps SFP+ optics or equipment that is fully compatible with Cisco optical transceivers to fully populate all ports. The LAN optics should be multimode capable, and the WAN optics should be single mode capable.
* Stacking capabilities (if hardware is required for stacking, that hardware should be included in the response).
* Example switches: C9500X-28C8D, C9500X-60L4D, or equivalent

Switch type B for Midland HS (003):

* 2 switches total
* Stacking capabilities (if hardware is required for stacking, that hardware should be included in the response).
* At least 48 (LAN) ports that support 10 Gbps or higher connectivity
* At least four additional (WAN) ports that support at least 100 Gbps connectivity
* For non-Cisco submissions, we will either need 10 Gbps SFP+ optics or equipment that is fully compatible with Cisco optical transceivers to fully populate all ports. The LAN optics should be multimode capable, and the WAN optics should be single mode capable.
* Example Switches: C9500X-60L4D, C9500-48Y4C, or equivalent

Switch type C for the following sites: AT - Agricultural Education Center, AT - Advanced Technology Center, B - Audrey Gill Sports Complex, S - Memorial Stadium, X - Encore Simpatico, T - Transportation, M - Moran

* 1 switch for each site (seven total)
* Minimum of 48 RJ-45 ports supporting at least 1 Gbps connectivity
* Minimum of two SFP+ or higher ports supporting at least 10 Gbps connectivity.

Switch type D for all other remote sites:

* 1 switch at each site
* At least 24 ports with a minimum of 10 Gbps connectivity up to at least 40 Gbps (100 Gbps preferred, but not necessary).
* Example Switch: C9500-24Y4C (or equivalent)

Pricing information, as well as manufacturer/model of equipment proposed, should be included in equipment pricing matrix included in the pricing sheets. Network equipment for leased dark fiber, leased dark fiber (IRU) may be bid as a stand-alone service by anyone, even if they are not bidding on any fiber service. Please note that respondents submitting a fiber proposal may also bid on equipment provided they bid them separately and do not bundle equipment costs with their fiber proposal.

Vendor may be responsible for installation and configuration of the equipment listed above, and shall include pricing for installation/configuration on the pricing sheet in the appropriate location. Midland ISD reserves the right to determine at the time of purchase which, if any, equipment will be installed and/or configured by the vendor.

Midland ISD reserves the right to change (increase or decrease) the quantities at time of purchase and prices must remain firm.

# SPECIAL CONSTRUCTION

## DESCRIPTION

For the purposes of the E-rate Program, special construction charges are the upfront, non-recurring costs of deploying new fiber or upgraded facilities to E-rate eligible entities. Special construction consists of three components:

1. Construction of network facilities
2. Design and engineering
3. Project management

Special construction does not include charges for Network Equipment, i.e., modulating electronics and other equipment necessary to make a Category One service functional.

An applicant may not receive E-rate support for recurring charges for leased lit service or leased dark fiber until the fiber is lit. Additionally an applicant may not receive E-rate support for special construction related to leased lit service or leased dark fiber if the fiber is not lit by the end of the funding year (i.e., June 30). Similarly, applicants may only receive E-rate support for a self-provisioned network if the network is constructed and is in use within the funding year.

All E-rate applications including Special Construction are subject to detailed questioning during PIA review where the cost of proposed special construction will be reviewed based on the cost of historical fiber builds in the region.  Additionally, certain information on necessary special construction is needed to accurately fill out the Form 471. Respondents are **required** to fill out the special construction table included with the pricing sheet for each project type. Additionally, respondents are encouraged (but not required) to submit the following additional information that will likely be requested during PIA review.

Information that can be included now, but will be requested at a later date for chosen solution:

* Special construction cost breakdown worksheet
* Any cost allocation worksheets, if applicable (see documentation prepared by the State E-rate Coordinators’ Alliance [SECA] in attached PDF)
* Route map of all build segments in kmz format
* Explanation of alternative routes that were explored and why the chosen route is most cost-effective
* Explanation of special materials and procedures required that may have increased construction costs. Such as:
  + Historical preservation or environmental issues
  + Bridge, waterway, railway, or highway crossings
  + Directional boring through hard rock or under paved surfaces
  + An excessive number of hand holes, marker posts, or other OSP materials
  + Expensive pole attachment fees or make-ready costs

If respondents do not submit this information above with their bid, and their solution is chosen, they must be prepared to promptly provide that information and any additional information not described in this RFP when requested. Please note that vendors may assist applicants with preparing funding requests or responding to PIA questions and may speak directly with PIA reviewers.

Vendors proposing Special Construction need to either include with their proposal, or be prepared to provide if awarded, detailed information on the special construction. Specifically:

* For all combined aerial segments
  + An average cost per foot for the eligible fiber cable
  + An average cost per foot for labor to install eligible fiber cable
  + An average cost per foot for the eligible fiber plant materials (attachment hardware, slack storage, and other materials
  + An average cost per foot for labor to install fiber plant materials
* For all combined buried segments
  + An average cost per foot for the eligible fiber cable
  + An average cost per foot for labor to install eligible fiber cable
  + An average cost per foot for the eligible fiber plant materials (conduit, hand holes, manholes, trace wire and grounding rods, etc.)
  + An average cost per foot for labor to install fiber plant materials (trenching, backfill, restoration, ground rods, etc.)
* For all combined directionally bored segments
  + An average cost per foot for the eligible fiber cable
  + An average cost per foot for labor to install eligible fiber cable
  + An average cost per foot for the eligible fiber plant materials (conduit, hand holes, manholes, trace wire and grounding rods, etc.)
  + An average cost per foot for labor to install fiber plant materials (directional boring, backfill, restoration, ground rods, etc.)

Special construction and service eligibility for reimbursement have changed starting funding year 2016.  See the Federal Communications Commission E-rate modernization order 2 (WC Docket No. 13-184) (<https://www.fcc.gov/document/fcc-releases-order-modernizing-e-rate-21st-century-connectivity>) for more information.

## PAYMENT PLAN

In addition to allowing vendor to separate Special Construction charges from the monthly recurring cost so that the Special Construction charges can be paid up-front[[1]](#footnote-1), USAC allows vendors to extend a payment plan to applicants to allow them to pay their share over a period of up to four years.

Midland ISD requests that the vendor allows Midland ISD to make monthly payments for their share of the Special Construction charges over a period of either 3 or 4 years. Midland ISD is eligible for an 80% discount, making Midland ISD’s cost share 20% of eligible expenses. If vendor agrees to allow Midland ISD to pay their share of Special Construction charges over time, vendor should include the monthly charge (to include all interest and carrying charges, if any) and to specify whether the payments will be for three or four years.

# NOTICE TO PROCEED & BUDGET CONTINGENCIES

This project is being proposed as an ERate project, and is subject to funding approval by the Schools and Libraries Division (SLD) of the Universal Services Administrative Company (USAC). Additionally, this project is subject to available funding in the Midland ISD budget to cover the district share of this ERate project.

Funding notification by SLD is NOT approval for the vendor to proceed with the purchase of materials for this project, nor approval for the vendor to begin construction. Vendor will wait to receive a purchase order and notice to proceed from Midland ISD before beginning this project.

Midland ISD reserves the right to not award some or all of the components based on negotiated pricing and availability of funds.

Midland ISD will follow the purchasing policies of the Midland ISD Board of Trustees, as well as requirements and procedures of the FCC’s E-rate program as administered by the Universal Service Administrative Company to be eligible for all available funding. The implementation of any associated contracts resulting from this competitive bid process will be dependent on the district's issuance of a written Notice to Proceed, a USAC Funding Commitment Decision Letter alone is not sufficient. The district will have the right to allow the contract to expire without implementation if appropriate funding does not become available.

# REFERENCES & QUALIFICATIONS

Vendors providing proposals should have an ERate Service Provider Information Number (SPIN) from the SLD, and should include their SPIN on their proposal. There is no cost to register for a SPIN, and application can be made at <https://www.usac.org/e-rate/service-providers/step-1-obtain-a-spin/>

Vendors submitting proposals including Special Construction must provide documentation relating to any qualifications in outside plant design and/or installation.

Vendors submitting proposals including any fiber installation must provide documentation of any qualifications in fiber installation, to include splicing, termination and testing.

Vendors submitting proposals for network equipment must provide documentation of qualifications for installing and configuring said network equipment.

For each response, vendor must provide 3 references from current or recent customers (preferably K-12) with projects equivalent to the size of Midland ISD.  For each reference, please provide:

* the name of the entity
* name, phone number, and email of the entity point of contact
* a description of the scope and size of the project

If vendor responds to more than one option (e.g. leased lit service as well as leased dark fiber), provide 3 references for each.

For each response, vendor must provide 3 references from current or recent customers (preferably K-12) with projects equivalent to the size of Midland ISD .

## BUILDING ENTRANCES

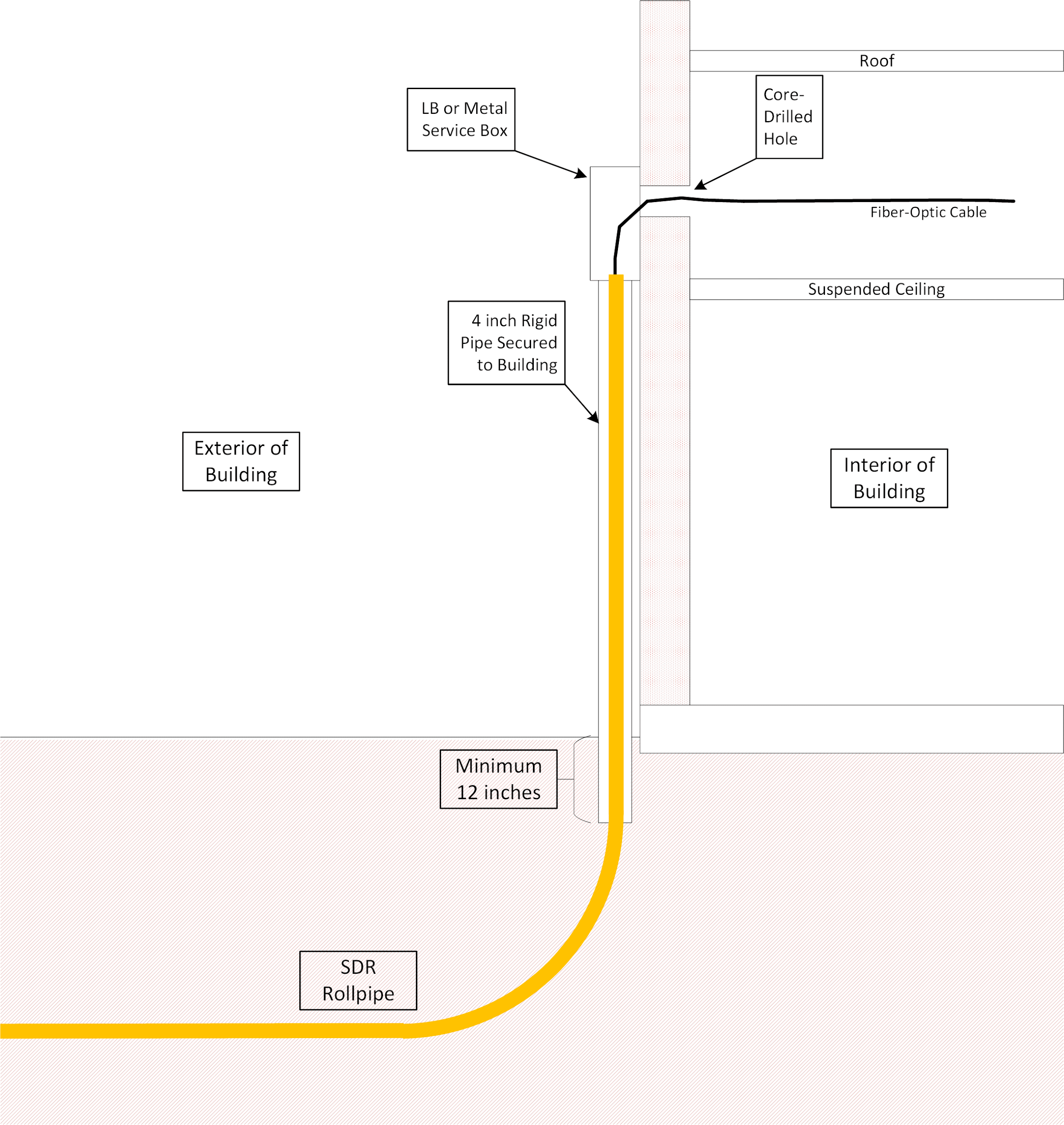
Underground cables - Unless otherwise specified, anywhere a Building Penetration is requested it will consist of an appropriately sized galvanized rigid steel (GRS) pipe. GRS pipe will be attached to the outside of the exterior wall of the building. The GRS pipe will extend down at least 12 inches below grade, and up to the height necessary such that an LB or Metallic service box (minimum 12”x12”x6”, but large enough so as not to exceed cable manufacturer recommendation for bend radius) connected to the top will allow fiber-optic cable passing through the LB (or the back of the service box) to enter the building above the suspended ceiling (see diagram on next page). SDR11 roll pipe will enter this rigid metal pipe at the bottom, providing a pathway from the underground conduit into the building. The GRS pipe, and any service box, will be mechanically secured to the exterior wall. The opening through the exterior wall shall be core drilled, sleeved if appropriate, and sealed after fiber-optic cable is installed.

In locations where an existing underground conduit leading to the demarcation point is accessible from the outside, an existing or new hand hole will be used to transition from the HDPE roll pipe to the existing conduit.

Aerial cables – Aerial cables may be transitioned to underground at the property line, or may be run to the building aerially. Aerial cables running directly to the building shall be secured to the building using the messenger cable. A drip loop of cable will remain outside, and the fiber cable will penetrate the building at an appropriate height to enter above any suspended ceiling. Any penetrations to the exterior wall will be properly sealed by vendor.

When fiber-optic cable enters buildings, vendors must comply with all fire codes and other applicable codes. If outdoor cable will run 50 feet or more inside the building, it must meet indoor cable rating. This can be accomplished by fusion splicing an indoor rated cable. Another option is to use an indoor/outdoor rated cable and to remove the outdoor jacket at or near the building entrance point to expose the indoor rated sheath for the remainder of the run inside the building. Vendors may propose any other solution that meets NEC and local codes. Vendor will specify in their proposal how they intend to meet the indoor cable rating at any locations where this will be an issue.

Penetration Illustration



1. Once funded by USAC, Special Construction charges can be invoiced as work is completed (even before fiber is lit), and USAC will pay the discounted share (80%) of eligible costs. [↑](#footnote-ref-1)