

LBNF/DUNE-US

VD Cryostat Roof Decking – Bar Grate

Procurement Specification

Dated: 09.16.2026

Version Control & Approval

Table 1 Version History

Revision	Responsible Person	Date	Description of Changes
0	Justin Freitag	09.16.2026	Original

Table 2 Approval

Responsible Person	Signature
Justin Freitag	jfreitag Digitally signed by jfreitag DN: CN=jfreitag Date: 2026.09.16 12:43:20-05'00'

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1 Introduction

Under contract to the U.S. Department of Energy (DOE), the Fermi Forward Discovery Group, LLC (FFDG), is leading the Long-Baseline Neutrino Facility (LBNF) Project to enable a world-class program in neutrino physics. Specifically, the LBNF Project (<https://lbnf-dune.fnal.gov>) provides the infrastructure for the Deep Underground Neutrino Experiment (DUNE), which will consist of two large liquid argon-based neutrino detectors located nearly a mile underground at the Sanford Underground Research Facility (SURF) in Lead, SD. See Figure 1, LBNF/DUNE-US Schematic

The Far Detector & Cryogenics (FDC) subproject of LBNF/DUNE-US installs the cryostats, detectors, cryogenics and supporting infrastructure at the SURF laboratory.

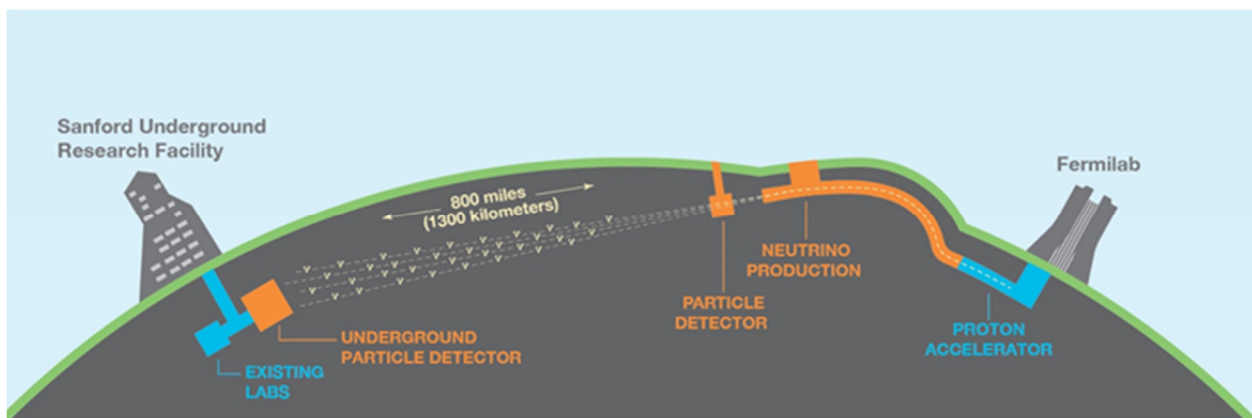


Figure 1-1 LBNF/DUNE-US Schematic

2 Equipment Description

The roof framing of the cryostat requires access for personnel and equipment, and such an adequate walking surface is required. Bar grating has been selected as the best option for the requirements of the project.

3 Technical Requirements

The vendor shall provide all bar grating and associated clips/hardware that meets the following requirements:

Table 3 Requirements

Requirement	Description
Bearing Bar Height	1-1/2"
Bearing Bar Thickness	3/16"
Nominal unsupported span	48"
Bearing bar span	Bearing bars shall be parallel to span direction
Maximum opening	Bearing bars shall have a maximum clear spacing of 1"
Dead load [self-weight]	11 PSF
Live load [personnel]	100 PSF minimum
Concentrated load [line load at mid-span]	1000 LB minimum
Maximum deflection	Nominal maximum deflection is .25"
Panel width	Maximum panel width shall be 2'-0". Panel sizes shown on FFDG provided reference drawing
Material	Galvanized [hot dipped]
Hardware	Clips which clamp to top flange of cryostat roof beams [W44x290] and/or top flange of spacer beams [W10x49]

4 Post-Award Deliverables

The Subcontractor shall comply with the following requirements once the subcontract award has been issued.

- Bar grating sized per FFDG provided drawing and hardware which meets the requirements listed in this document's Section 3, Technical Requirements.
- Customer support to answer any questions that arise relating to installation and/or operation.
- All available Operator's Manuals for the purchased bar grating and hardware.
- Logistics and shipping plan.

Delivery address:

Dakota Warehouse
1313 E Saint Patrick St
Rapid City, SD 57701

5 Quality Control

The Subcontractor is responsible for all activities necessary to manage, control, and document work to ensure compliance with the subcontract documents. The Subcontractor's responsibility includes ensuring adequate Quality Control services are provided for work accomplished on- and off-site by their organization, suppliers, sub-tier subcontractors, technical laboratories, and consultants.

6 References

- FDC-0001043.pdf
- Ross_Load_Envelopes_v5.pdf
- Shipping Expectation Fact Sheet.pdf

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