



ISO 9001:2008
Certified Airport

भारतीय विमानपत्तन प्राधिकरण AIRPORTS AUTHORITY OF INDIA

Ref. No: AAI/ER/PAT/SM (E-E)/Fire Stop /WO- 11/2024-25/ 8167

Dated: 07.03.2025

By Speed Post & Email

To,
M/s. NRG SAFE,
2ND FLOOR, FL-D-2, PRNOBIN APARTMENT,
62, SANTOSH PUR AVENUE, KOLKATA,
SOUTH 24 PARGANAS,
WEST BENGAL, 700075

Sub: -: Construction of New Terminal Building & Other Allied structures (Phase I & II) at Patna Airport.

SH-SITC of Passive Fire Stop Works

Ref: - (i) AAI Tender Id N: 2025_AAI_223827_1

(ii) Your e-Bid opened on 19.02.2025.

Dear Sir(s),

1. Your tender for the work mentioned above is hereby accepted on behalf of Chairman, Airports Authority of India, at the item rates quoted by you totaling to Rs. 1,10,30,361.00 (**Rupees One Crore Ten Lacs Thirty Thousand Three Hundred and Sixty One Only**) (exclusive of GST) which is 0.00% below/Above the Justified Cost put to tender of Rs. 1,10,30,361.00
2. SM (E-E), AAI, J.P.N.I. Airport, Patna shall be the Engineer-In-charge of the work. You are requested to attend the office of SM (E-E), AAI, J.P.N.I. Airport, Patna by 17.03.2025 to sign and complete the contract agreement. The contract agreement shall be executed on a non-Judicial Stamp Paper of Value of Rs. 100.00 (**Rupees One Hundred Only**) and the cost of the stamp paper shall be borne by you.
3. The Earnest Money Amount of Rs. 2,20,607.00 (**Rupees Two Lacs Twenty Thousand Six Hundred and Seven Only**) received along with your tender will be treated and converted as part of Security Deposit as per Clause No.13 of General Guidelines of Tender document. Please deposit Rs 8,82,429.00/- (**Rupees Eight Lacs Eighty Two Thousand Four Hundred and Twenty Nine Only**) towards Security Deposit within 10 days from the date of issue of this letter, failing which, the same will be Deducted as per Clause No.1(A) of General Condition of Contract document.
4. You are requested to comply with the provision of Contract Labour (Regulation & Abolition) Act of 1970 and Contract Labour (Regulation & Abolition) Central Rules 1971 and Minimum Wages Act & Rules thereof Central & State Governments.
5. You are also directed to contact Senior Manager (Engg Elect.), AAI, Patna immediately who will arrange to hand over the site to you.



6. Please note that the time allowed for carrying out the work shall be **02 (Two) Months** and same shall be reckoned from **17.03.2025**.
7. Any further correspondence in connection with the contract should normally be addressed to the SM (E-E), AAI, J.P.N.I. Airport, Patna.
8. Please note that the defect liability period is **(12) Twelve Months** after the date of Completion of work.
9. Please acknowledge the receipt and return the duplicate copy of this letter enclosed herewith after signing it to the undersigned as a token of acceptance.

Yours faithfully,

[Signature]
07/03/2025

(Shridhar Gupta)

SM (Elect- Engg)

AAI, J.P.N.I. Airport, Patna.

For and on behalf of the Chairman

Airports Authority of India.

Encl: Schedule A (Schedule of Work)



Schedule of Work

"Schedule A"

Name of work: Construction of New Terminal Building & Other Allied structures (Phase I & II) at Patna Airport.

SH-SITC of Passive Fire Stop Works

Sl. No.	Item Description	Unit	Qty.	RATE	AMOUNT
	Electrical Shaft				
1	Providing Fire stop mortar system, with minimum 2 hours fire rating when tested in accordance with IS 12458:2019/ UL 1479/ ASTM-E 814 standards, for horizontal openings in floors or slabs after passing service lines like Metal Pipes & Electrical penetrants. The mortar shall be a light weight cementitious product and shall carry test certificate in accordance with IEC 60068-2-57:1999-11 (Environmental Testing) as per Part 2-57: Test for Vibration-Time-history method and VERTEQII for seismic zone 4. The product shall be age tested as per Dafstb and DIBT standards. The product shall carry test certificate for mold resistance rating of 0 as determined by ASTM G21-96. The system shall be UL listed & classified and product shall bear the UL and FM approval logo on the packing. If none of UL test certificate comply with actual application, an EJ document prepared by a qualified personnel and based on nearest third party tested & approved systems like UL test certificates & in accordance with IFC guidelines shall be produced by manufacturer. A firestop submittal shall be produced by manufacturer, in accordance with approved passive fire protection method statement, for technical approval. Firestop installation shall be done in accordance with Hilti guidelines and UL system test certificates or approved EJ document. Firestop Speciality Contractor needs to submit work completion certificate along with installation report through Hilti documentation Software for periodic inspection & maintenance purpose. The gaps around combustible penetrants like plastic pipes or ducts with insulation shall be sealed with an appropriate intumescent technology like FS One Max Sealants, CP 648-E Wraps and Retaining Collars. Intumescent items shall be paid under separate heads under Item No. 2 & 4 respectively as per actuals at site.	Sq. Mtr.	78	28,143	21,95,154
	Electrical Shaft/ Plumbing/Electrical Cables				
2	Provide high performance intumescent firestop sealant FS One Max around the annulus of Electrical CableTrays//plastic pipes or ducts/ pipes/Cables passing through floors or walls to provide minimum 2 hours fire rating when subject to test standards of IS 12458:2019/ UL 1479/ ASTM-E 814. The sealant shall have surface burning characteristics in accordance with UL 723 (ASTM E84-96): Flame spread index 0 and smoke development index 5. The sound transmission classification according to ASTM E 90-99 shall be 56 (STC Rating). Sealant shall have mold and mildew resistance and the performance shall be Class 0 according to ASTM G-21. Movement capability approx. 5% (ISO 11600) and the average volume shrinkage is 24% according ASTM C1241. Sealant shall meet LEED requirements for indoor environmental quality credit (4.1 and 4.2) with a VOC content of 9 g/l. Seismic tested on mechanical performance, smoke and fire-ratings. The product shall be age tested as per Dafstb and DIBT standards. The system shall be UL listed & classified. The product shall bear the UL and FM approval logo on the packing. If none of UL test certificate comply with actual application, an EJ document prepared by a qualified personnel and based on nearest third party tested & approved systems like UL test certificates & in accordance with IFC guidelines shall be produced by manufacturer. A firestop submittal shall be produced by manufacturer, in accordance with approved passive fire protection method statement, for technical approval. Firestop installation shall be done in accordance with Hilti guidelines and UL system test certificates or approved EJ document. Firestop Speciality Contractor needs to submit work completion certificate along with installation report through Hilti documentation Software for periodic inspection & maintenance purpose.	Sq. Mtr.	3	91,505	2,74,515

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ElectricalShaft & Plumbing					
3	Providing Fire stop mortar system, with minimum 2 hours fire rating when tested in accordance with IS 12458:2019/ UL 1479/ ASTM-E 814 standards, for horizontal openings in floors or slabs after passing service lines like Plastic Pipes with combustibel/ Non Combustible insulations. The mortar shall be a light weight cementitious product and shall carry test certificate in accordance with IEC 60068-2-57:1999-11 (Environmental Testing) as per Part 2-57: Test for Vibration-Time-history method and VERTEQII for seismic zone 4. The product shall be age tested as per Dafstb and DIBT standards. The product shall carry test certificate for mold resistance rating of 0 as determined by ASTM G21-96. The system shall be UL listed & classified and product shall bear the UL and FM approval logo on the packing. If none of UL test certificate comply with actual application, an EJ document prepared by a qualified personnel and based on nearest third party tested & approved systems like UL test certificates & in accordance with IFC guidelines shall be produced by manufacturer. A firestop submittal shall be produced by manufacturer, in accordance with approved passive fire protection method statement, for technical approval. Firestop installation shall be done in accordance with Hilti guidelines and UL system test certificates or approved EJ document. Firestop Speciality Contractor needs to submitt work completion certificate along with installation report through Hilti documentation Software CFS DM for periodic inspection & maintenance purpose. The gaps around combustible penetrants like plastic pipes or ducts with insulation shall be sealed with an appropriate intumescent technology like FS One Max Sealants, CP 648-E Wraps and Retaining Collars . Intumescent items shall be paid under separate heads under Item No. 2 & 4 respectively	Sq. Mtr.	52	39,630	20,60,760
Plumbing					
4	Provide intumescent flexible firestop wrap strip CP 648 E for plastic pipe, insulated pipe and various non-metalic penetrations from 2" to 6" diameter passing through floor slab or through penetrations in walls to provide minimum 2 hours fire rating when subject to test standards of IS 12458:2019/ UL 1479/ ASTM-E 814. The product Can be used with orthogonal pipes and pipes at 45°. The product shall be mold and mildew resistant and the performance of Class 0 according ASTM G21-96 and EN ISO 846. Highly intumescent with an expansion temperature (intumescent activation) of 320 °F (160°C) and the expansion ratio up to 1:40. FBC System Compatible. The product shall meet LEED requirements for indoor nvronmental quality credit (4.1 and 4.2) with a VOC content of 3.1 g/l. The system shall be UL listed & classified. The product shall bear the UL and FM approval logo on the packing. If none of UL test certificate comply with actual application, an EJ document prepared by a qualified personnel and based on nearest third party tested & approved systems like UL test certificates & in accordance with IFC guidelines shall be produced by manufacturer. A firestop submittal shall be produced by manufacturer, in accordance with approved passive fire protection method statement, for technical approval. Firestop installation shall be done in accordance with Hilti guidelines and UL system test certificates or approved EJ document. Firestop Speciality Contractor needs to submitt work completion certificate along with installation report through Hilti documentation Software for periodic inspection & maintenance purpose.				
4.1	Plastic Pipe diameter of 2.5" (CP 648-E Firestop Wrap), Min. recommended hole dia. in floor: 92 mm	Nos.	1	2,802	2,802
4.2	Plastic Pipe diameter of 3" (CP 648-E Firestop Wrap), Min. recommended hole dia. in floor: 112 mm	Nos.	1	3,202	3,202
4.3	Plastic Pipe diameter of 4" (CP 648-E Firestop Wrap), Min. recommended hole dia. in floor: 132 mm	Nos.	1	4,002	4,002
4.4	Plastic Pipe diameter of 5" (CP 648-E Firestop Wrap), Min. recommended hole dia. in floor: 152 mm	Nos.	1	4,803	4,803
4.5	Plastic Pipe diameter of 6" (CP 648-E Firestop Wrap), Min. recommended hole dia. in floor: 202 mm	Nos.	1	7,203	7,203

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	HVAC Duct/ Metallic Pipe				
5	Provide Acrylic Firestop Sealant CP 606 in gaps around non combustible penetrants like ducts or metal pipes passing through wall or floors to provide minimum 2 hours fire rating when subject to the test conditions of IS 12458:2019/ UL 1479/ASTME 814 standards. The sealant shall be applied on both sides of wall. The product shall be age tested as per DafStb guidelines. Sealant should provide sufficient MAF, water and gas tight seal. Sealant shall also provide airborne sound transmission reduction (STC of 50) and shall be tested as per DIN 52210 for sound insulation. Sealant shall carry test certificate for mold resistance rating of 0 as determined by ASTM G21-96 and should have a VOC content of approx. 75 g/l as per LEED 2009. The sealant shall carry test certificate in accordance with IEC 60068-2-57:1999- 11 (Environmental Testing) as per Part 2-57: Test for Vibration-Time-history method and VERTEQII for seismic zone 4. The system shall be UL listed & classified and product shall bear the UL and FM approval logo on the packing. If none of UL test certificate comply with actual application, an EJ document prepared by a qualified personnel and based on nearest third party tested & approved systems like UL test certificates & in accordance with IFC guidelines shall be produced by manufacturer. A firestop submittal shall be produced by manufacturer, in accordance with approved passive fire protection method statement, for technical approval. Firestop installation shall be done in accordance with Hilti guidelines and UL system test certificates or approved EJ document. Firestop Speciality Contractor needs to submit work completion certificate along with installation report through Hilti documentation Software for periodic inspection & maintenance purpose.	Sq. Mtr.	30	97,493	29,24,790
	Electrical Cables				
6	Provide rodent and termite proof Fire Barriers CFS Cos Sheet on both sides of wall or One side of the floor (Composite Sheet) system for 2 hours fire rating when tested in accordance with IS 12458:2019/ ASTM E 814/UL 1479 standards. The Composite Sheet 3.81 mm thick, bonded with organic/ inorganic fire-resistive elastomeric #SS 304 (Stainless steel) sheet. One side is bonded with 26 gauge #SS 304 (Stainless steel) sheet and the other side is reinforced with hexagonal shaped #SS 304 (Stainless steel) wire mesh and covered with aluminum foil for the penetrants for the big openings. The small gaps left around the penetrants should be closed with Intumescent sealant FS One max. which should be soft & moldable to any shape, to give complete L Rating. This system is to seal all fire rated horizontal in Floor and walls made of concrete, masonry, metal, gypsum partition, after passing service lines like cables/ cable bundles, cable trays etc. The system shall be UL listed & classified. The product shall bear the UL & FM approval logo on the packing. If none of UL test certificate comply with actual application, an EJ document prepared by a qualified personnel and based on nearest third party tested & approved systems like UL test certificates & in accordance with IFC guidelines shall be produced by manufacturer. A firestop submittal shall be produced by manufacturer, in accordance with approved passive fire protection method statement, for technical approval. Firestop installation shall be done in accordance with Hilti guidelines and UL system test certificates or approved EJ document. Firestop Speciality Contractor needs to submit work completion certificate along with installation report through Hilti documentation Software for periodic inspection & maintenance purpose. The gaps along/ around cables penetrants shall be sealed with intumescent sealant FS One Max. it shall be used and shall be paid under separate heads under Item No. 2.	Sq. Mtr.	14	2,53,795	35,53,130
					1,10,30,361

(Rupees One Crore Ten lacs Thirty Thousand Three Hundred and Sixty One Only)

Note:- GST Extra as applicable

Shridhar Gupta
07/03/2025
(Shridhar Gupta)
SM(E-E)
JPNI Airport, Patna

