

Terms of Reference

Design Consultancy Services for Non-Aero Commercial Development

Adani Airports Holding Limited

Revision 0

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1. Introduction

Adani Enterprises Ltd (the client) has won bid for the operations, management and development of following airports for concession period of 50 years. The following map shows the geographical locations of airports managed by Adani Airport Holding Ltd.



1. Sardar Vallabhbhai Patel International Airport, Ahmedabad.
2. Chaudhary Charan Singh International Airport, Lucknow.
3. Mangaluru (Mangalore) International Airport, Mangluru.
4. Jaipur International Airport, Jaipur.
5. Lokpriya Gopinath Bordoloi International Airport, Guwahati.
6. Thiruvananthapuram International Airport, Thiruvananthapuram.
7. Chhatrapati Shivaji Maharaj International Airport, Mumbai.

8. Navi Mumbai International Airport

Purpose of this document is to invite bids for Design Consultancy Services Non-Aero Commercial Development for Airports located at Ahmedabad, Lucknow, Mangalore, Jaipur, Guwahati, Trivandrum, Mumbai & Navi Mumbai.

2. Objective

The client has already taken over the operations of the assets and modifying existing commercial spaces (retail and F&B) to be best in class standards for better passenger experience. Therefore, objective of this document is to seek proposals from suitably qualified consultants for all works described in this document.

To ascertain the possibility of the proposed up-gradations and new development, there is a need to have a consultant on-board having strong experience of planning and design of retail and commercial spaces.

3. Scope of Work

The broad scope of services would be development of detailed design and engineering related to various retail and F&B projects inside and outside Terminal facility across the airport assets under AAHL. The roles and responsibilities include the following and is not limited to:

1. Preparation of concept designs & submission for approval.
2. The Consultant shall provide renders and walkthrough for approval of the designs prepared.
3. The Consultant to conduct site survey post receipt of layout to ascertain correctness on received drawings.
4. The Consultant shall be responsible for all design including following activities from concept to execution including tender:
 - Design Quality
 - Architecture Design
 - Interior Design
 - Structure Design
 - Electrical Design
 - Plumbing Design
 - HVAC Design
 - IT/ICT Design
 - Kitchen ventilation Design
 - Fire Fighting Design
 - Kitchen Layout Planning
 - Kitchen services and interior Design
 - All white goods & Kitchen equipment
 - BoQ
 - Specifications
 - Testing and commissioning
 - As-built drawings'
5. Mood board & final approved sample/mock ups for material/products shall be arranged by the consultant.
6. Design support to project team from initial design engagement till commissioning.
7. Submission of GFCs and support during execution phase.
8. Preparation of documents and drawings, required for various approvals not limited to fire NOC, BCAS and local approvals.



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9. The consultant & his team shall visit the site before & during construction, as and when required to give clarification/explanation related to project implementation activity.
10. The Consultant shall prepare design documentation in project standards and prepare necessary design information in AutoCAD and BIM/Revit formats.
11. The scope of work shall include planning, designing, keeping all provisions for phasing if any, considering all requirements of the building services etc.
12. The scope shall also include required revisions/updates at any stage of work/amendments as required by client/statutory body.
13. The consultant shall share /provide details, study, various engineering models, simulations for Lighting, MEP etc. measurement & data sheets/models developed for this project & give clarification explanation as required by Client's proof checking consultant/team.
14. Consultant shall coordinate with Client and respective Stakeholders and provide all relevant details, data, supporting document as per requirement.
15. Consultant shall support the Client with Tender along with BOQ and Specifications etc to appoint the Contractor. Consultant shall also provide support in responding to Tender queries. RFIs etc
16. Any Brand/make change for materials post completion of Design by consultant shall not be considered additional scope and is not liable for any remuneration.
17. Consultant to deploy separate design teams for different Assets.
18. Consultant to provide weekly status report for all assets.
19. Consultant to attend review meeting as and when required.
20. Consultant shall report to Airport Asset Design lead for scope work mentioned above.

4. Tenure of Engagement

The duration of the consultancy services is 09 months from the issuance of LOI and additional duration of 03 months for design support.

5. Deliverables

The consultant shall model the projects in AutoCAD and BIM/Revit model. Including BoQ and detailed specifications consultant shall submit following deliverables as per their scope.

1. Floor Plans: Detailed floor plans that depict the layout of various spaces within the interior project. This includes rooms, partitions, furniture layout, fixtures, signages, landscape, art, IT/ICT and other elements.
2. Elevations: Drawings that show the vertical views of walls, cabinetry, counters, and other vertical surfaces. Elevations provide information on the height, finishes, and dimensions of these elements.
3. Sections: Vertical or horizontal cut-through views of the interior space that illustrate the relationship and dimensions of different components, such as walls, ceilings, floors, and other building elements.
4. Details: Specific drawings that provide detailed information about construction details, joinery, finishes, and other elements that require specialized attention or customization.
5. Mechanical, Electrical, Plumbing and Fire (MEPF) and ICT, Security Drawings: Coordinated drawings that show the locations, routes, and specifications of mechanical, electrical, and plumbing systems within the interior project. These drawings may include HVAC ductwork, electrical wiring, lighting, ICT, Security fixtures, plumbing fixtures, and other related elements.



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6. Material and Finishes Schedules: A schedule that lists the materials, finishes, and specifications for various components in the interior project. This includes details about flooring, wall finishes, ceiling treatments, fixtures, hardware, and other materials to be used.
7. Make lists with at least three alternates for each supply item.
8. White goods make list, specification and quantities to be developed along with Client and operating Brand of the outlets.
9. Consultant shall submit tender documents in format provided by client. Tender shall be item rate contract. Tender BOQ, drawing & Specification shall be 95% accurate.
10. Deliverables from consultant shall follow the project schedule provided by client.

6. Specifications and Standards

Relevant codes for Architecture Design

In India, the National Building Code (NBC) is an important code that provides guidelines and standards for architectural design and construction practices. The NBC is published by the Bureau of Indian Standards (BIS) and is used as a reference for building design and construction across the country. The specific code related to architecture design is:

1. National Building Code of India 2016 (NBC 2016): This code covers various aspects of architectural design, including building layout, space planning, structural design, fire safety, ventilation, lighting, accessibility, and more. It provides guidelines for building design to ensure safety, efficiency, and sustainability.

Apart from the NBC, there are several other codes and standards related to specific aspects of architecture design, such as:

2. Indian Standards for Structural Design: These standards, published by the Bureau of Indian Standards (BIS), provide guidelines for the structural design of buildings, including materials, load calculations, design methodologies, and construction practices. Some relevant codes are IS 875 (Part 1-5) for loads on buildings, IS 456 for design of reinforced concrete structures, and IS 800 for design of steel structures.
3. National Electrical Code of India (NEC): The NEC provides standards and guidelines for electrical installations in buildings, including electrical safety, wiring practices, equipment selection, and earthing systems. It is published by the Bureau of Indian Standards (BIS) and is an essential reference for electrical design in architecture.
4. Energy Conservation Building Code (ECBC): The ECBC provides guidelines for energy-efficient design and construction of buildings in India. It aims to promote energy conservation and sustainability in the built environment by specifying energy performance standards, design strategies, and renewable energy integration.

It's important to note that these codes and standards are subject to updates and revisions. Therefore, it's recommended to refer to the latest versions and consult with local authorities, professional associations, and experts to ensure compliance with the applicable codes and regulations for architecture design in India.

Relevant codes for Electrical Design



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In India, the Bureau of Indian Standards (BIS) has developed several codes and standards related to electrical design. These codes provide guidelines and specifications for electrical installations, equipment, and safety practices. Here are some of the key IS codes for electrical design in India:

1. IS 732: Code of Practice for Electrical Wiring Installations
2. IS 1646: Code of Practice for Fire Safety of Electrical Installations and Systems
3. IS 3043: Code of Practice for Earthing
4. IS 694: Specification for PVC Insulated Cables
5. IS 1554: Specification for PVC Insulated (Heavy Duty) Electric Cables
6. IS 7098: Specification for Cross-Linked Polyethylene Insulated PVC Sheathed Cables
7. IS 1642: Specification for Low Voltage Switchgear and Control gear Assemblies
8. IS 375: Code of Practice for Design, Installation, and Maintenance of Electric Water Heaters
9. IS 6161: Code of Practice for Selection, Installation, and Maintenance of Electrical Apparatus for Hazardous Areas (Flameproof and Intrinsically Safe)
10. IS 5571: Code of Practice for Safety in Electroplating and Anodizing Processes

These are just a few examples of IS codes related to electrical design. It's important to note that these codes are subject to updates and revisions by the BIS. Therefore, it is recommended to refer to the latest versions of the codes and consult with relevant authorities and experts to ensure compliance with the applicable standards and regulations for electrical design in India.

Relevant codes for Plumbing Design

In India, the Bureau of Indian Standards (BIS) has developed several codes and standards related to plumbing design and practices. These codes provide guidelines, specifications, and safety measures for plumbing systems in buildings. Here are some of the key IS codes for plumbing design in India:

1. IS 1172: Code of Basic Requirements for Water Supply, Drainage, and Sanitation
2. IS 768: Specification for Polyethylene Pipes for Potable Water Supplies
3. IS 4985: Specification for PVC Pipes for Potable Water Supplies
4. IS 7834: Code of Practice for Installation and Maintenance of Solid Fuel Burning Appliances (Part 1 - Plumbing)
5. IS 778: Specification for Cast Iron Soil, Waste, and Ventilating Pipes, Fittings, and Accessories
6. IS 1239: Specification for Mild Steel Tubes, Tubulars, and Other Wrought Steel Fittings
7. IS 5528: Code of Practice for Installation of Sanitary and Stormwater Drainage Systems



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8. IS 7310: Specification for Glass Reinforced Plastic (GRP) Pipes and Fittings for Potable Water Supplies
9. IS 13592: Code of Practice for Plastics Piping System for Soil and Waste Discharge (Low and High Temperature) Inside Buildings
10. IS 771: Specification for Lead Sheet and Strip for Building Construction

These are just a few examples of IS codes related to plumbing design. It's important to note that these codes are subject to updates and revisions by the BIS. Therefore, it is recommended to refer to the latest versions of the codes and consult with relevant authorities and experts to ensure compliance with the applicable standards and regulations for plumbing design in India.

Relevant codes for HVAC Design

In India, the Bureau of Indian Standards (BIS) has developed several codes and standards related to HVAC (Heating, Ventilation, and Air Conditioning) design and practices. These codes provide guidelines, specifications, and safety measures for HVAC systems in buildings. Here are some of the key IS codes for HVAC design in India:

1. IS 14687: Code of Practice for Design and Installation of Earth Air Tunnel Heat Exchangers for Air Conditioning of Buildings
2. IS 15211: Code of Practice for Design and Installation of Underground Pre-insulated District Cooling Pipelines
3. IS 15265: Code of Practice for Design and Installation of Operation and Maintenance of Energy Efficient HVAC Systems in Buildings
4. IS 16098 (Part 1 and 2): Method of Testing for Rating Rooftop Packaged Air Conditioners
5. IS 8148: Code of Practice for Design and Installation of Low Temperature Hot Water Heating Systems in Horticulture
6. IS 10101 (Part 2): Safety Code for Air Conditioning (Part 2 - Construction)
7. IS 1391: Specification for Industrial Air Conditioning Units
8. IS 15242 (Part 1 and 2): Method of Testing for Performance of Air-to-Air Heat/Energy Exchangers (Part 1 - General Requirements, Part 2 - Specific Requirements for Air-to-Air Heat/Energy Exchangers)
9. IS 13987: Code of Practice for Design, Installation, Testing, and Maintenance of Firefighting Systems in Buildings
10. IS 15883: Code of Practice for Design, Installation, Operation, and Maintenance of Fire Water Pumping Systems in Non-sprinklered Buildings

These are just a few examples of IS codes related to HVAC design. It's important to note that these codes are subject to updates and revisions by the BIS. Therefore, it is recommended to refer to the latest versions of the codes and consult with relevant authorities and experts to ensure compliance with the applicable standards and regulations for HVAC design in India.



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Relevant codes for Fire Fighting Design

In India, the Bureau of Indian Standards (BIS) has developed several codes and standards related to firefighting design and practices. These codes provide guidelines, specifications, and safety measures for fire protection systems in buildings. Here are some of the key IS codes for firefighting design in India:

1. IS 2190: Code of Practice for Selection, Installation, and Maintenance of First Aid Fire Fighting Appliances
2. IS 10221: Code of Practice for Installation of Sprinkler Systems
3. IS 13039: Code of Practice for Fire Extinguisher, Carbon Dioxide Type
4. IS 15105: Code of Practice for Design, Installation, and Maintenance of Automatic Fire Detection and Alarm System
5. IS 3034: Specification for Portable Fire Extinguishers (Soda Acid Type)
6. IS 7272: Code of Practice for Fire Safety of Industrial Buildings - General Principles and Particular Requirements
7. IS 10292: Code of Practice for Selection, Installation, and Maintenance of Fixed Fire Fighting Systems - Water Based Systems
8. IS 12352: Code of Practice for Design, Installation, and Maintenance of Fire Hydrant Systems
9. IS 13045: Code of Practice for Selection, Installation, and Maintenance of Fire Hose Reels
10. IS 14230: Code of Practice for Selection, Installation, and Maintenance of Clean Agent Fire Extinguishing Systems

These are just a few examples of IS codes related to firefighting design. It's important to note that these codes are subject to updates and revisions by the BIS. Therefore, it is recommended to refer to the latest versions of the codes and consult with relevant authorities and experts to ensure compliance with the applicable standards and regulations for firefighting design in India.

Relevant code for Kitchen ventilation

In India, there is no specific IS code exclusively dedicated to kitchen ventilation design. However, there are relevant standards and guidelines that can be referenced for designing kitchen ventilation systems. Here are some important standards and guidelines related to kitchen ventilation in India:

1. National Building Code of India (NBC): The NBC provides general guidelines for ventilation in buildings, including commercial kitchens. It covers aspects such as ventilation rates, exhaust systems, and design considerations for air quality and safety.
2. ASHRAE Handbook: The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) publishes handbooks and guidelines related to HVAC systems. The ASHRAE Handbook - HVAC Applications chapter on commercial kitchens :



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provides guidance on ventilation system design, hood selection, exhaust rates, and other considerations.

3. Local Municipal and Fire Safety Regulations: Municipal and fire safety regulations in India may specify certain requirements for kitchen ventilation design in commercial establishments. These regulations may include provisions for exhaust hood sizing, ducting, filtration, and overall system design.

While there may not be a specific IS code for kitchen ventilation design, it is important to consider industry best practices, manufacturer guidelines, and recommendations from relevant authorities when designing a kitchen ventilation system. Consulting with experienced HVAC professionals, fire safety experts, and regulatory authorities can help ensure compliance with the applicable standards and regulations for kitchen ventilation in India.

7. Payment terms

- 35% on completion of concept and schematic design
- 35% on completion of tender documents and GFC
- 30% on submission of as built after completion of construction.

8. Technical Proposal

The consultant is required to provide its proposal as per the following schedule

1. Schedule A - Consultant's Information
2. Schedule B - Retail and F&B Projects History
3. Schedule C - Personnel CVs
4. Schedule D - Assumptions & Exclusions
5. Schedule E - Scope Matrix for JV / Consortium with sub-consultants (MEPF)
6. Schedule F - Request for Information (RFI)

9. Financial Proposal -

The empanelment of consultant shall be for a period of one year and assignment shall be given to them by client's representative.

The financial proposal shall be on per square feet basis but should include men-hours, rates and costs associated to the activities that they propose to complete the works as per the Clients project schedule requirements.

10. Proposal Submission

| Activity | Timeline (Days from start) |
|--|----------------------------|
| Release of ToR to consultants | Start (Day 0) |
| EOI and queries from consultant | 07 |
| Reply to queries from client | 10 |
| Submission of Technical and Financial Proposal | 17 |



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| Evaluation and assessment by client | 24 |
| Selection of consultant and LOI | 28 |

11. Administrative

All queries and clarifications must be directed to:

| | |
|-------------------|---|
| Technical | <p>Ravi Sharma, +91 6359922115 +91 79 25559035, ravi.sharma@adani.com Kaidjohar +91 909900719 Kaidjohar.ranapurwala@adani.com</p> <p>With copy to Jatin Jain, jatin.jain@adani.com</p> <p>Nalin Jaswal Nalin.jaswal@adani.com</p> |
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