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## **PURPOSE**

GMR Hyderabad International Airport is under expansion. Subsequently the New Commercial Areas are developed for the establishment of the outlets. The main purpose of the Tenant Design Manual (TDM) is to enable the concessionaire to align their outlet design based on the standards set by the GMR team. This Manual briefs on the Do's & Don'ts during the project life cycle. The Specification and approved makes of the material are also mentioned to ease the work.

## **SCOPE**

The scope of this Tenant Design Manual is for Phase 1B outlets, spread in Fore Court area, Check in Hall at Level F & Baggage Reclaim area & Fore Court area at Level D.

## **DESIGN**

### **1 Concept Presentation:**

- 1.1 2D Drawing of the layout and furniture
- 1.2 3D rendering reflecting all necessary information for the proposed unit
- 1.3 Ensured all relevance of data for the proposed unit is designed as per the shared LOD.

### **2 Drawing List to be submitted for AFC:**

#### **2.1 GENERAL**

- 2.1.1 All list of drawings needs to be presented with accurate dimension details in "mm" only.
- 2.1.2 Plan details
- 2.1.3 Elevation of all sides
- 2.1.4 Sectional details
- 2.1.5 Internal partition layout
- 2.1.6 Flooring layout with floor trim details Ceiling layout
- 2.1.7 Ceiling layout
- 2.1.8 RCP layout
- 2.1.9 Furniture layout
- 2.1.10 Signage layout
- 2.1.11 CCTV and IT POS layout
- 2.1.12 All general arrangement layout needs to be provided for easy understanding
- 2.1.13 F&B equipment layout

#### **2.2 MEP**

- 2.2.1 Lighting layout
- 2.2.2 Electrical raceway layout
- 2.2.3 Electrical power outlet layout
- 2.2.4 Electrical SLD (Single Line Diagram)
- 2.2.5 Plumbing layout
- 2.2.6 Sprinkler layout the influence coverage area circles
- 2.2.7 Smoke detector layout if applicable
- 2.2.8 HVAC equipment and ducting layout

#### **2.3 Document List to be submitted for AFC:**

- 2.3.1 Project Schedule

- 2.3.2 Materials Specification Sheet
- 2.3.3 Mood Board
- 2.3.4 Forms attached as Annexures

#### **2.4 HVAC Details Request for F&B:**

- 2.4.1 Heat load analysis need to be provided
- 2.4.2 Back of House ducting sizing and insulation details need to be provided
- 2.4.3 Air conditioning fresh air supply and exhaust details need to be provided
- 2.4.4 VCD, Duct sizing, diffusers grills and fire damper details need to be addressed
- 2.4.5 Tenant need to provide booster exhaust fan to suit their ventilation required
- 2.4.6 Fresh air shall be filtered and washed-air washer need to be provided by tenant at kitchen area.

**Note: AFCs will be issued only after receipt of all drawings and Documents.**

### **3 FIRE PROTECTION SERVICES:**

#### **3.1 Fire Alarm System**

- 3.1.1 Smoke detectors to be installed as applicable and coverage details as per NFPA to be shown.
- 3.1.2 Smoke vents should be planned at closed places within the outlet/warehouse.

#### **3.2 Fire Fighting**

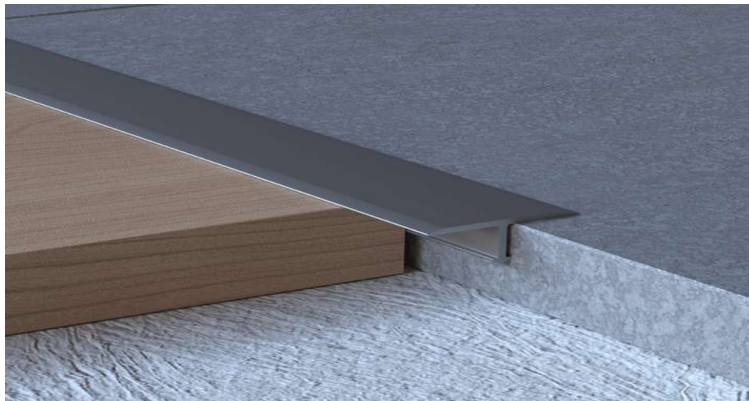
- 3.2.1 Sprinkler coverage details as per NFPA (National Fire Protection Authority).
- 3.2.2 Upright sprinkler need to be provided if applicable.
- 3.2.3 All sprinklers shall be pendant type and quick response only.
- 3.2.4 Fire line Pipe sizing details
- 3.2.5 Handheld extinguisher details need to be provided
- 3.2.6 Fire load details shall be provided (in Kgs)
- 3.2.7 Self-illuminated fire exist signage shall be provided
- 3.2.8 Handheld extinguisher details shall be provided as per the recommendations of ARFF only.

## DESIGN STANDARDS

### 4. MATERIAL SPECIFICATIONS

#### 4.1 FLOORING

- 4.1.1 Flooring need to be matched with the concourse floor level.
- 4.1.2 Flooring can be proposed of granite/marble/vinyl (min 4mm thick)/wooden/Vitrified flooring.
- 4.1.3 Anchoring on Airport flooring or wall partitions is not permitted.
- 4.1.4 SS 304 grade Skirting of 150 mm need to be provided to the counter to avoid any damage.
- 4.1.5 Standard T Transition profile shall be used at the junction of concourse floor along the demise. Transition profile from Bottomline make is preferred.



#### 4.1.6 Kitchen

- 4.1.6.a Concessionaire shall raise the height of floor to accommodate Hydraulic services, Floor
- 4.1.6.b Gullies and Drain Gullies to be covered with SS Grate.
- 4.1.6.c Light weight Screed to be used as substrate to final floor.
- 4.1.6.d Water proofing to be done by the Concessionaire.
- 4.1.6.e Non Slip and Non Porous material to be used for flooring

#### 4.2 PARTITION AND CEILING

- 4.2.1 Gypsum, plywood, and all fire combustible materials shall be fire retardant of 60 mins (minimum).
- 4.2.2 All wooden elements of non-FR specs can be painted FR paint and certifications shall be submitted.
- 4.2.3 As a part of fire strategy, and overall, 30% of the free area evenly distributed over the ceiling for smoke clearance.
- 4.2.4 False ceiling support stands can be drawn from airport structural members, any additional.
- 4.2.5 Support can be fabricated if required and details need to be submitted.
- 4.2.6 All glass elements shall be toughened.
- 4.2.7 Joinery and fixing details need to be provided in respective layouts.
- 4.2.8 MS fabrication details need to be provided.
- 4.2.9 The finishing schedule need to be provided.
- 4.2.10 Kiosk/customer counters top is preferred to be of Quartz/marble/solid acrylic finish only.
- 4.2.11 All Stainless-Steel materials shall be of SS304 grade only.
- 4.2.12 Any kind of block wall partitions proposed in the outlet area shall be of light weight

blocks only.

4.2.13 All Glass to be Toughened with safety film or protected using Guard Rail.

4.2.14 For indicating a Full height glass Dots or branding at 1.5Mtrs above FFL to be installed.

#### **4.3 BRANDING**

4.3.1 Font style shall be as per brand's standards

4.3.2 Maximum coverage of signage shall be 60% of the shopfrontage.

4.3.3 Signage shall be backlit with a maximum 50Lux level.

4.3.4 Any kind of treatment other than signage on bulkhead is not allowed

4.3.5 Signage shall be proposed as per the guidelines mentioned in this document and LOD

4.3.6 No branding is allowed on GHIAL pilasters

4.3.7 All metal elements of a signage shall be SS316

#### **4.4 ELECTRICAL**

4.4.1 Electrical load sheet details, all cables shall be FRLS/LSZH.

4.4.2 Fuse safety units proposed for the unit shall be RCBO up to 63Amps and MCCB for above 63Amps

4.4.3 UPS power for the system is mandatory to prevent the loss of data.

4.4.4 UPS power to be provided by the concessionaire for at least 20% of installed light fixtures.

4.4.5 UPS power shall be provided in all the enclosed areas of Lounges, Spa, F&B's, Back office, and warehouses.

4.3.8 ELCB shall be provided.

4.3.9 Recommend to provided LED light fixtures.

4.3.10 Digital energy meter shall be installed by concessionaire as mentioned in the ECR.

4.3.11 A dedicated electrical control point shall be provided at a visible and reachable location, preferably at the entrance. Enclosure for the same shall be provided without any lock & key provision. Space is not allowed to be used for any other requirements such as storage

4.3.12 Using loose wires instead of cables is not acceptable.

4.3.13 Additional power points shall be considered for operational requirement. Usage of extension boxes and spikes are not allowed.

4.3.14 Labelling needs to be done for electrical panels for ease of operation.

4.3.15 The electrical DB panel room & janitor room shall be provided with vents.

4.3.16 All electrical appliances shall be energy efficiency rated only.

4.3.17 Electrical DB shall be placed in the cabinet free from adjacent/surrounding store elements for easy access.

4.3.18 LUX level calculation sheet shall be provided with exact lighting proposals.

#### **4.5 PLUMBING**

4.5.1 Fresh water connection, drainage & routing layouts

4.5.2 Clean out plug location shall be provided

4.5.3 Concessionaire shall provide grease trap before letting out drain connection to the main network.

4.5.4 Grease traps shall be provided with service lids and to be covered well.

4.5.5 Pulverized equipment shall be provided for all the F & B outlets

4.5.6 Grease traps and drain shall have sieves/ lids to ensure it is well covered to segregate food & liquid wastages.

4.5.7 Waterproofing details for the kitchen area to be submitted.

4.5.8 Flushing water pipe connection needs to be GI Class-B only.

4.5.9 Soil & wastewater pipe connection shall be CI only.

4.5.10 All hot water pipes insulated as per IS norms

#### **4.6 HVAC**

- 4.6.1 Heat load analysis shall be provided.
- 4.6.2 Back-of-house (BOH) ducting, sizing and installation details shall be provided.
- 4.6.3 Air conditioning, Fresh Air & Exhaust details shall be provided.
- 4.6.4 VCD, duct sizing, diffuser grills and fire dampers details shall be provided.
- 4.6.5 Tenants need to provide booster exhaust fan to suit their ventilation, if required.
- 4.6.6 Fresh air shall be filtered and washed-air washer need to be provided by concessionaire at kitchen area.
- 4.6.7 Appropriate scrubber units shall be provided by concessionaire as applicable to the retail format.
- 4.6.8 All HVAC ducts shall be insulated with nitrile rubber 'O' Class, thickness shall be as per requirement.
- 4.6.9 All HVAC ducts shall be insulated as per IS norms

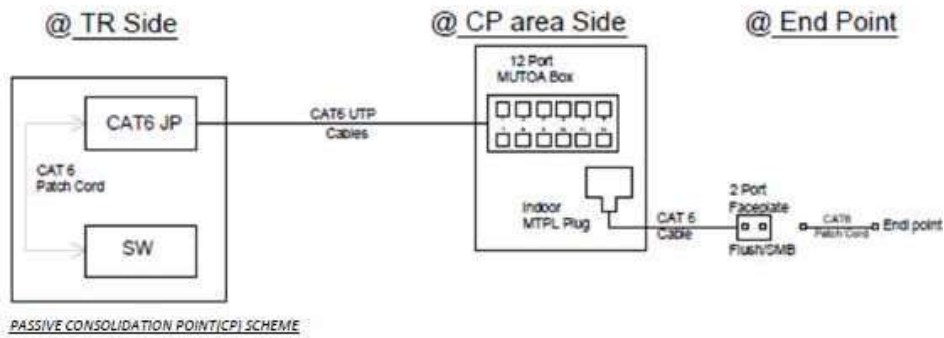
#### **4.7 FF & FAS**

- 4.7.1 Smoke detectors to be installed as applicable and coverage details as per NFPA to be mentioned.
- 4.7.2 Smoke vents shall be planned at closed places within the outlet/warehouse.
- 4.7.3 Sprinkler coverage area details shall be provided as per NFPA.
- 4.7.4 Upright sprinklers shall be provided, if required or as directed by GMR.
- 4.7.5 All sprinklers shall be pendent type and quick response only.
- 4.7.6 Fire line pipe sizing details shall be provided.
- 4.7.7 Hand held extinguisher details shall be provided, capacity & make as recommended by GHIAL- ARFF.
- 4.7.8 Fire load details (in Kgs) shall be provided.
- 4.7.9 Self-illuminated fire exit signage shall be provided, as directed or if applicable.
- 4.7.10 Fire Manual Call Point and Hooter shall be provided in F&B Kitchen areas.

#### **4.8 IT WORKS**

- 4.8.1 The Concessionaire based on his final interiors and finishes shall carry out internal cabling from passive CPs to its end-devices. Post completion of internal cabling, IT shall test these cables end-end to ensure the cable installation is carried out as per the project standards and stands healthy for all data transmission.
- 4.8.2 The concessionaire shall fit out the details of IT requirements as prescribed in the Annexure.
- 4.8.3 To avail IP-technology services at retail outlets, concessionaire shall closely coordinate with IT operations team and procure the telephone handset based on the approved and compatible model.
- 4.8.4 Concessionaires are required to closely coordinate with IT operational team and choose the approved make and model of data cable (Ref. approved make list).
- 4.8.5 Concessionaire shall not use or install any active network device such as routers, hubs or switches, etc.,
- 4.8.6 For all the IT requirements shall be routed through IT operation team only.
- 4.8.7 Concessionaire shall ensure one data port shall be used from passive CP's/ports provided in the retail/F&B, etc., to install GHIAL camera on top of EPOS counter for monitoring purpose. Internal cable from CP's/Port to camera shall be in concessionaire scope.
- 4.8.8 If concessionaire use native POS software, sales data will be pulled by GHIAL directly from DB.
- 4.8.9 GHIAL shall not provide any other services, other than LAN connectivity.
- 4.8.10 In case concessionaire use native POS software, concessionaire to provide data fields and DB access to pull sales data, however a cumulative decision of native or non-native POS will be decided by GHIAL non-aero commercial & IT team based on operational demand.

- 4.8.11 On a need basis, specific business requirements shall be deliberated to accommodate new business requirements
- 4.8.12 Any damage caused to IT infrastructure located within the retail space and its replacement shall be borne by the existing concessionaire. The same shall also be recovered as per commercial SOP.
- 4.8.13 Any additional IT requirements apart from the common IT infrastructure provided within the retail space shall be specified in the GHIAL IT service request form.



#### 4.9 GENERAL NOTES

- 4.9.1 Florescent strip of retro reflective tape shall be provided in demarcating the equipment position as per AFC.
- 4.9.2 Counters and display units shall not be mounted on to the Airport shell and core elements.
- 4.9.3 Core cutting, chasing, anchoring to airport floor (Mother slab) or any modification to the Airport shell and core elements are not permitted.
- 4.9.4 Structural stability certificate issued by authorized Agency/ signatory for all structure erected by concessionaires shall be submitted for evaluation and approval.
- 4.9.5 All proposed materials shall be LEED (Leadership in Energy & Environmental Design) certified.
- 4.9.6 Structural stability certificate issued by authorized Agency/ signatory for all structure erected by concessionaires shall be submitted for evaluation and approval.
- 4.9.7 Submission of 6 sets of all detail drawings shall be made at Document control for approval.
- 4.9.8 The works shall commence within one month of issuance of AFC. The AFC shall be revalidated in case of delays beyond one month.
- 4.9.9 All Product makes shared for easy reference, GHIAL does not reserve any commercial promotion for the listed item. Alternate to any module/devise/element is acceptable subjective to approval of technical specification. GHIAL reserves right to reject any brand if technical specifications does not meet airport norms.

## 5 APPROVED MAKES

### 1. INTERIORS

- a. Vitrified tiles: Kajaria, RAK, Nitco or equivalent
- b. Gypsum: Gyproc, Saint Gobian, Lafarge or equivalent
- c. Plywood: Green ply, Century ply, Merino or equivalent
- d. Glass: Saint Gobian, Modi glass, TATA glass or equivalent
- e. Laminates: Greenlam, Archid lam, Merino or equivalent
- f. Door hardware: Dorma, Doorset, Hafele, Ozone or equivalent
- g. Solid Acrylic: Corian, Du Point, Samsung, LG or equivalent
- h. Paint: Asian, Berger, Nerolac, Dulux or equivalent
- i. False ceiling: Vans, Saint Gobain, Armstrong, Hunter Douglas or equivalent
- j. Waterproofing: Fosroc, Sika, Pidilite or equivalent

### 2. ELECTRICAL WORKS

- a. DB, MCB, RCBO, ELCB & MCCB: Legrand, Siemens, ABB, Schneider or equivalent
- b. Light fixtures: Philips, Wipro, Crompton, Syska or equivalent
- c. Switch Sockets: Anchor Roma/Penta, Legrand, Havells Crabtree, Finolex, L&T, Switch gear or equivalent
- d. Electrical Wires & Cables: Finolex, Polycab, RR Kables, KEI or equivalent
- e. PVC Conduits: Sudhakar, Shakti or equivalent

### 3. PLUMBING WORKS

- a. Sanitary fittings: Toto, Cera, Vitra, Hindware or equivalent
- b. GI Pipe: TATA, Jindal, SAIL or equivalent
- c. CI Pipe: NECO
- d. Insulation for Hot water pipes: Thermax, Maxima, Fuelpac or equivalent

### 4. FIRE & SAFETY WORKS

- a. Sprinkler: Ansul, Buckeye, Smog Hog, Gem-Tyco, Spray safe or equivalent
- b. Smoke detector: Johnson or as directed
- c. MS Pipe: HSL, Mukut, Lalit steel or equivalent
- d. Fire rated paint: Temperkote, Flamex, Hy-Tech, Hilti, Birla, 3M
- e. Fire extinguisher: Kanex or as recommended by GHIAL-ARFF
- f. All IT cables and accessories shall be of Belden make only

### 5. IT WORKS

- a. All internal cabling shall be of BELDEN, part code 7834ANC



COMMERCIAL OUTLETS RENDERS



## **ANNEXURE**

1. Annexure 1 - Contractor's Document Submissions
2. Annexure 2 - IT Questionnaire
3. Annexure 3 - Electrical Connectivity Request form & Water Connectivity Request form (Duly signed by Concessionaire & GHIAL finance team)
4. Annexure 4 - Fire Safety Guidelines for operational F&B Outlets
5. Annexure 5 - Fire Safety Guidelines for operational retail outlets
6. Annexure 6 - Fire Safety Guidelines for Retail and F&B Project

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