भारतीय विमानपतन प्राधिकरण
AIRPORTS AUTHORITY OF INDIA

DESIGN FOR PROPOSED NEW INTEGRATED TERMINAL AND ASSOCIATED WORKS AT AGARTALA AIRPORT

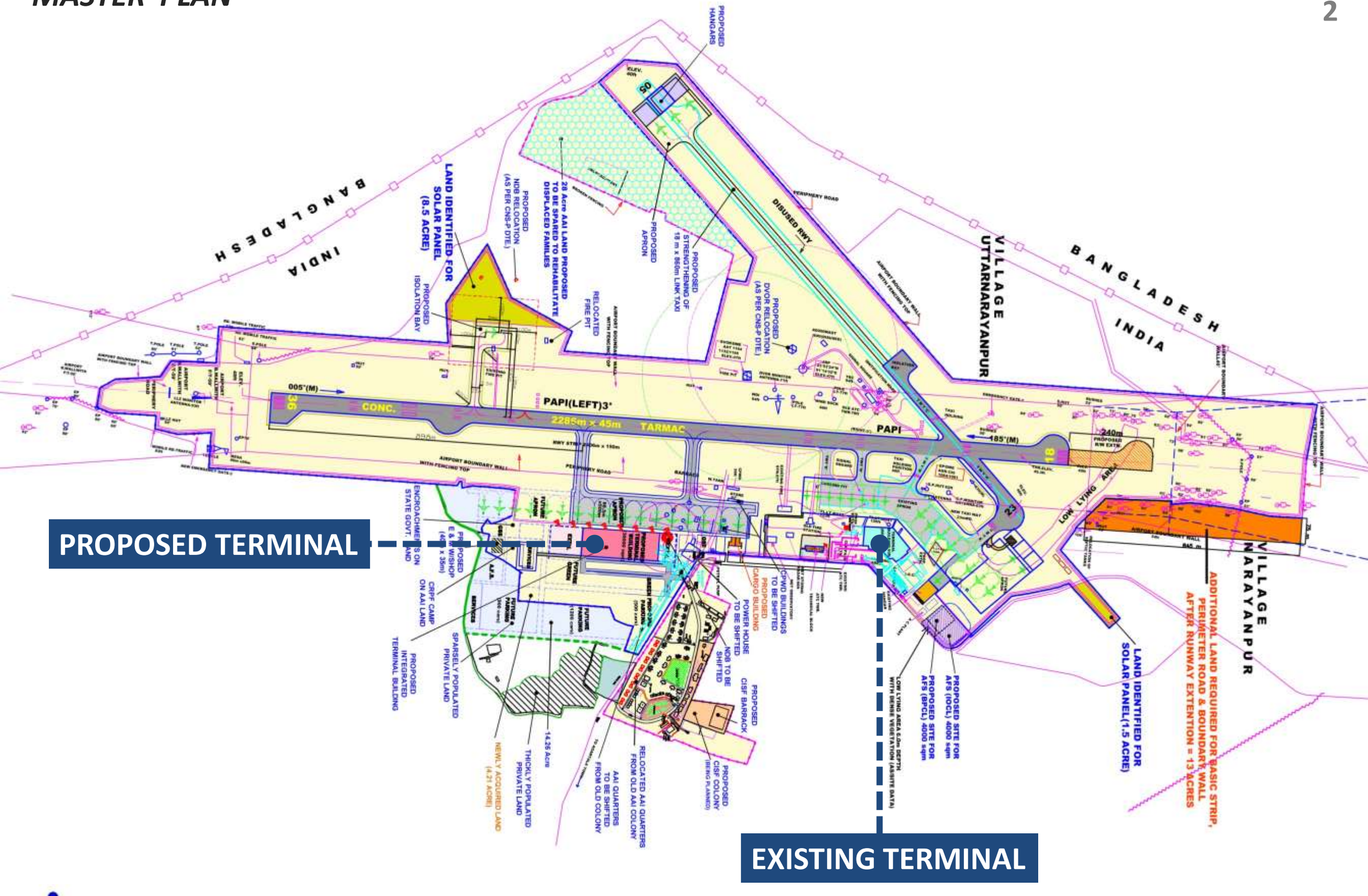
PMC :

SGS

ARCHITECTS :

CREATIVE GROUP
ARCHITECTS. URBAN PLANNERS & INTERIOR DESIGNERS

MASTER PLAN


PROPOSED HANGARS
ELEV. 49m
05
PROPOSED APRON
PROPOSED STRENGTHENING OF 18 m x 860m LINK TAXI
PERIMETER ROAD
DISUSED RWY
LAND IDENTIFIED FOR SOLAR PANEL (8.5 ACRE)
PROPOSED NDB RELOCATION (AS PER CNS-P DTE.)
28 Acre AAI LAND PROPOSED TO BE SPARED TO REHABILITATE DISPLACED FAMILIES
PROPOSED ISOLATION BAY
RELOCATED FIRE PIT
PROPOSED DVOR RELOCATION (AS PER CNS-P DTE.)
INDIA
BANGLADESH
VILLAGE UTTARNARAYANPUR
BANGLADESH
INDIA
VILLAGE NARAYANPUR
005°(M)
36
CONC.
2285m x 45m
TARMAC
PAPI(LEFT)3°
PAPI
185°(M)
18
240m PROPOSED R/W EXTN.
23
LOW LYING AREA
AIRPORT BOUNDARY WALL WITH FENCING TOP
ENCROACHMENTS ON STATE GOVT. LAND
PROPOSED E & W WISHOP (40 x 35m)
CRPF CAMP ON AAI LAND
PROPOSED INTEGRATED TERMINAL BUILDING
SPARSELY POPULATED PRIVATE LAND
NEWLY ACQUIRED LAND (14.21 ACRE)
THICKLY POPULATED PRIVATE LAND
14.26 Acre
AAI QUARTERS TO BE SHIFTED FROM OLD COLONY
RELOCATED AAI QUARTERS FROM OLD AAI COLONY
PROPOSED CISF COLONY (BEING PLANNED)
PROPOSED CISF BARRACK
CPWD BUILDINGS TO BE SHIFTED
PROPOSED CARGO BUILDING
POWER HOUSE TO BE SHIFTED
NDB TO BE SHIFTED
LOW LYING AREA 0.0m DEPTH WITH DENSE VEGETATION (AS SITE DATA)
PROPOSED SITE FOR AFS (IOCL) 4000 sqm
PROPOSED SITE FOR AFS (BPCL) 4000 sqm
LAND IDENTIFIED FOR SOLAR PANEL(1.5 ACRE)
ADDITIONAL LAND REQUIRED FOR BASIC STRIP, PERIMETER ROAD & BOUNDARY WALL AFTER RUNWAY EXTENTION = 13 ACRES
PROPOSED TERMINAL
EXISTING TERMINAL

PRECEDENT

AGARTALA , TRIPURA - GREEN/FORESTS , LOCAL BAMBOO MATERIAL , TRIBAL ART

EXTENSIVE GREEN & FOREST COVER

FORESTS IN TRIPURA

FORESTS NEAR AGARTALA

LOCALLY USED BAMBOO MATERIAL

BAMBOO PLANTATIONS IN TRIPURA

BAMBOO HANDICRAFTS MADE IN AGARTALA

LOCAL TRIBAL STONE SCULPTURES

UNAKOTI HILL , AGARTALA

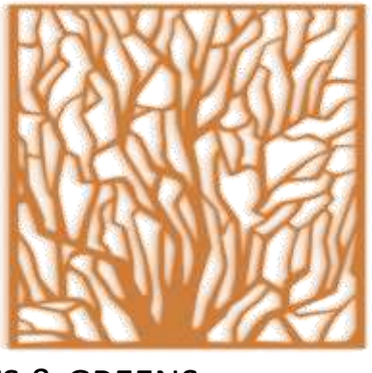
TRIPURA STATE REPRESENTATION ON REPUBLIC DAY

CITY SIDE DEVELOPMENT

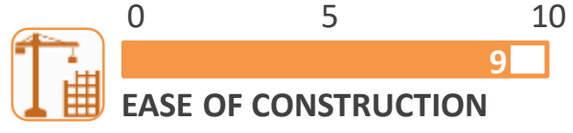
AERIAL VIEW

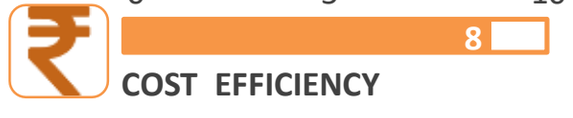
LOCAL FORESTS AND GREENARY DEPICTED IN FACADE JAALI

MATERIALS:- CANOPY - 16 CELL POLYCARBONATE SHEETS
FACADE - LAMINATED GLAZING + GFRC IN BAMBOO FINISH
ROOF - INSULATED STANDING SEAM ROOF CLADDING



FLORAL PATTERN JAALI DEPICTING LOCAL FORESTS & GREENS





EXTERIOR VIEW

EXTERNAL LANDSCAPE LAYOUT

1 ENTRY & EXIT

2 DRIVEWAY

3 PATHWAY

4 ENTRANCE MOUND WITH SIGNAGE

5 TRIBES OF TRIPURA

6 CONNECTING CROSS-WAY

7 OUTDOOR CAFE

8 PAVED PLAZA

9 CENTRAL WATER FEATURE

10 TREE COURT

11 LAWN WITH ROCKS

12 PAVED AREA

13 ROW OF PALM PLANTING

14 ARTISTIC HEDGES

15 MOUND WITH TRADITIONAL ROCK ART

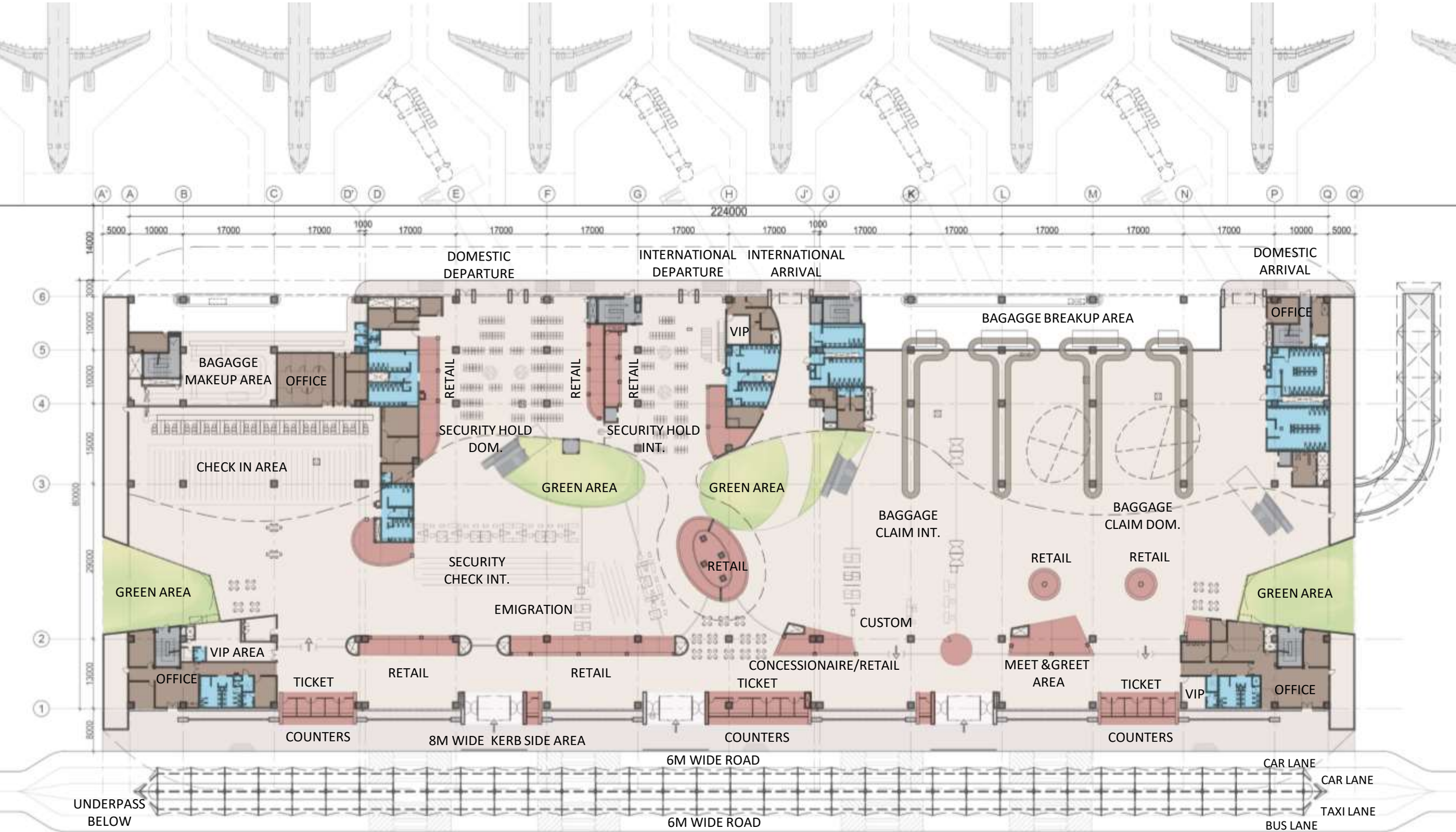
16 PAGODA STRUCTURE

17 PLANTING ALONG DRIVEWAY

18 GREEN ISLAND

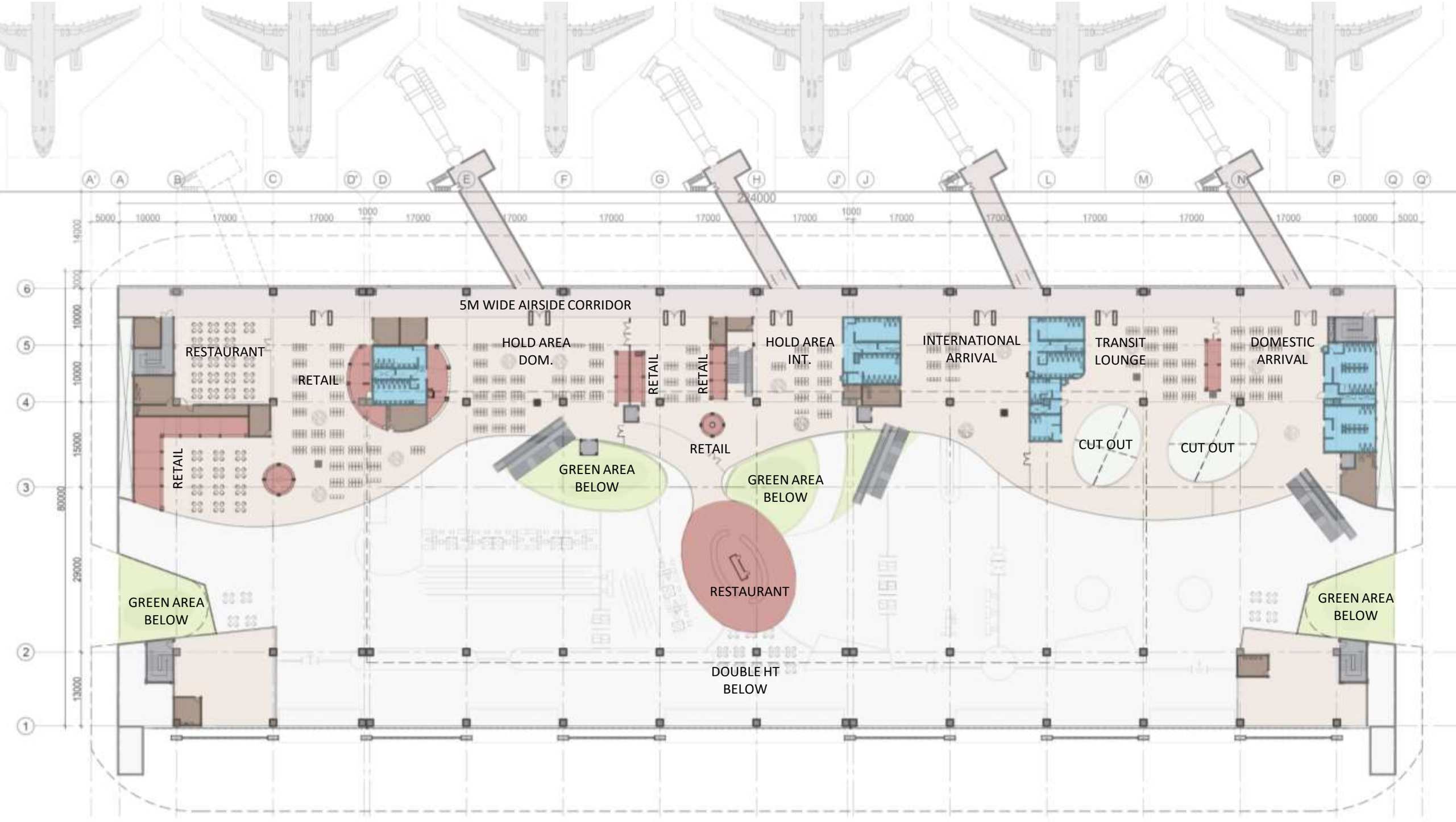
GROUND FLOOR PLAN

FLOOR AREA = 18300 SQ.M
RETAIL AREA = 2000 SQ.M (11%)



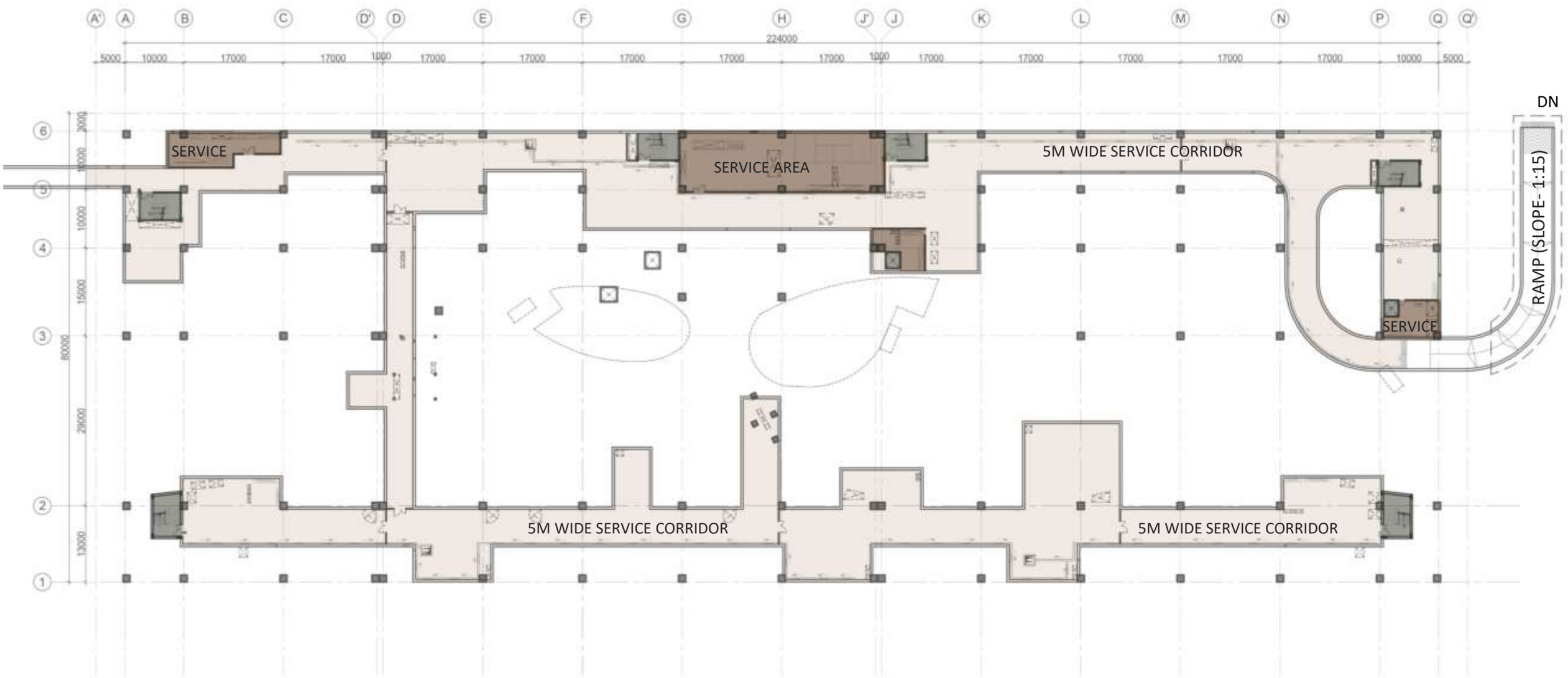
MEZZANINE FLOOR PLAN

FLOOR AREA = 8500 SQ.M
RETAIL AREA = 1050 SQ.M (12.5%)

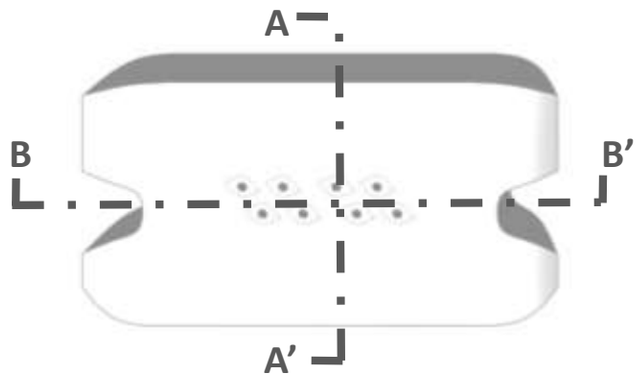


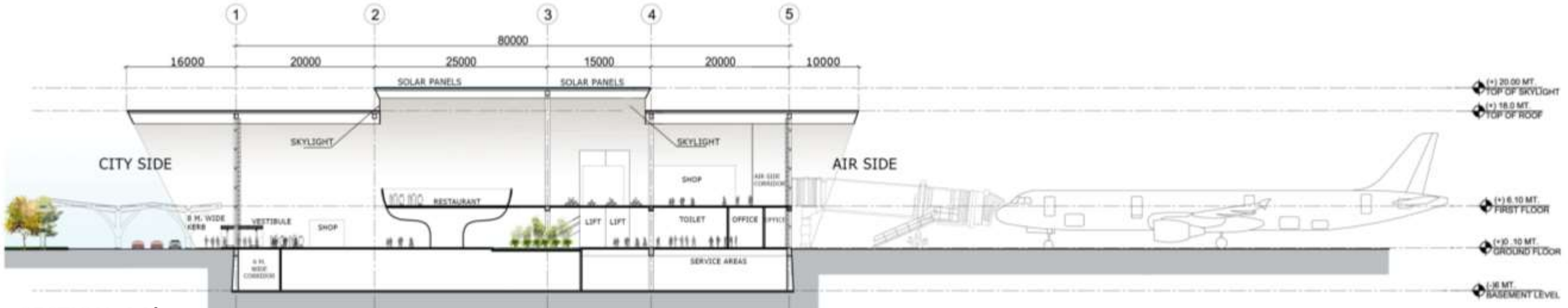
BASEMENT FLOOR PLAN

FLOOR AREA = 5,500 SQ.M

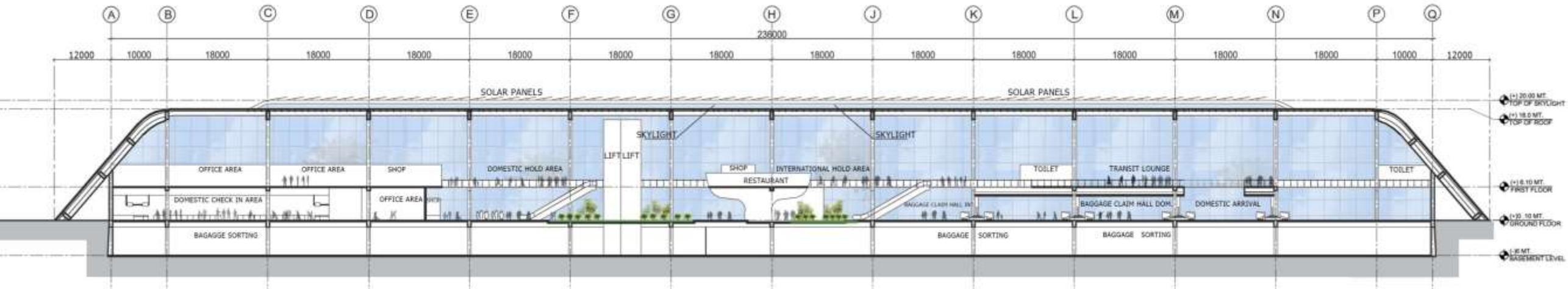


SECTIONS





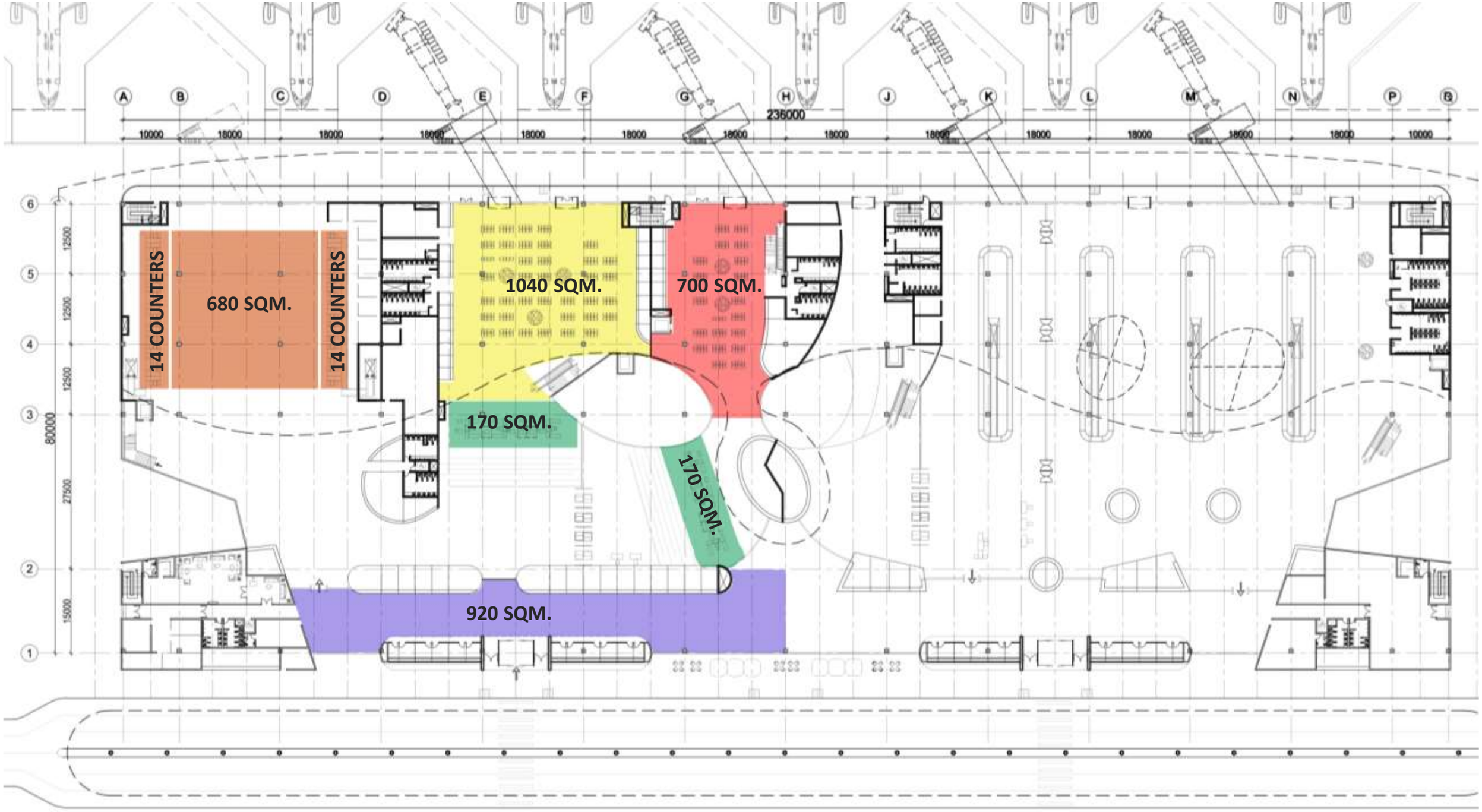
SECTION AA'



SECTION BB'

Proposed Areas for Primary Processing and Waiting		
DEPARTURE		
Visitors Concourse Area	660 sq m	
Check-in-counters (Domestic) No. of Counters	22 nos.	16 required + 5 future expansion
Check-in-counters (International) No. of Counters	6 nos.	5 required + 3 future expansion
Check-in Queue Area	400 sq m	
Security Checkpoint No. of Lanes (Domestic)	3 nos.	2 required + 1 future expansion
Security Checkpoint Screening Area (Domestic)	200 sq m	
Security Checkpoint Queue Area (Domestic)	250 sq m	
Security Checkpoint No. of Lanes (International)	3 nos.	2 required + 1 future expansion
Security Checkpoint Screening Area (International)	110 sq m	
Security Checkpoint Queue Area (International)	150 sq m	
Outbound Baggage Screening Devices	6 nos.	5 required + 1 future expansion
Holdrooms (Domestic) Area	1040 sq m	
Holdrooms (International) Area	700 sq m	

ARRIVAL		
Baggage Claim Devices (Domestic) No. of Belts	3 nos.	2 required + 1 future expansion
Baggage Claim Devices (International) No. of Belts	1 no.	1 required
Positive baggage Claim area (Domestic)	3000 sq m	
Positive baggage Claim area (International)	900 sq m	
Visitors Concourse Area	920 sq m	



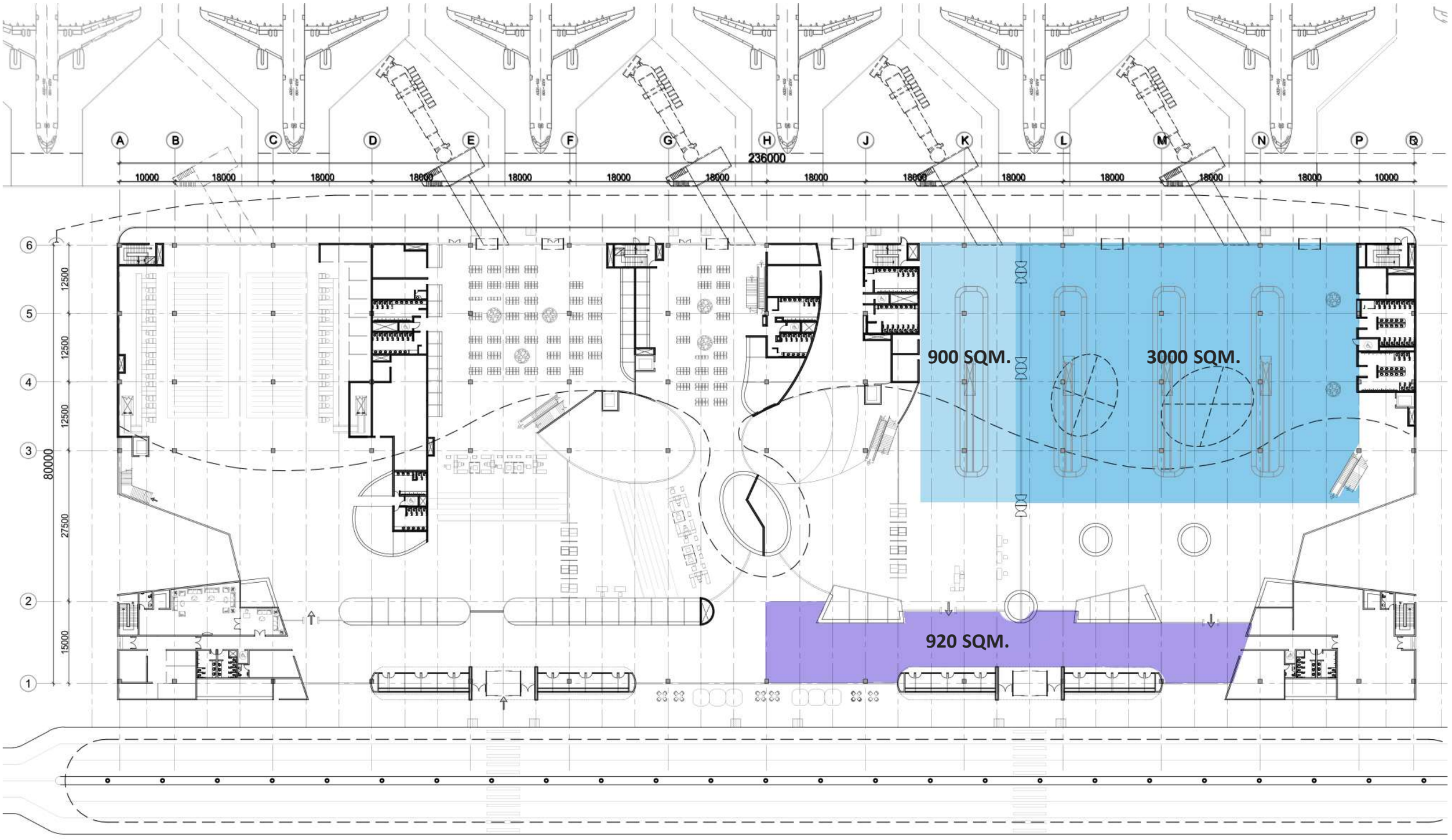
VISITOR CONCOURSE

CHECK IN AREA

HOLD ROOM DOMESTIC

HOLD ROOM INT.

SECURITY CHECK



VISITOR CONCOURSE

BAGGAGE CLAIM DOM.

BAGGAGE CLAIM INT.

Normative Planning Data for Primary Processing and Waiting Areas				
	Input values	**Units**	**Remarks**	**Formula**
DEPARTURE AREAS				
Visitors Concourse	Peak hour Departing passengers	600	Given	600 x 2 = No. of visitors = 1200
	No. of visitors per passenger	2	Assumption	1200 x .33 dwell time in minutes = number of visitors in area = 396
	Dwell time of the visitors in minutes	15	Based on 60 minutes total dept dwell time	396 x 1.7 sm per passenger= area required for visitors concourse
	Area per visitor (sq.m)	1.70	IATA Standards	**Visitor concourse = 673.2 sq.m**
Check-in-counters (domestic)	Peak hour Departing passengers	500	Given	**IATA Formula**
	Check-in processing rate in minutes	2	Industry Std for Domestic	500 pax X (2 mins per pax/60 mins)
				No. of Check-in Counters = 16
Check-in-counters (international)	Peak hour Departing passengers	100	Given	**IATA Formula**
	Check-in processing rate in minutes	3	Industry Standard for International	100 pax X (3 mins per pax/60 mins)
				No. of Check-in Counters = 5
				TOTAL No. OF CHECK-IN COUNTERS = 21
Check-in Counters	Linear meter per counter width (lm)	1.52	Industry Standard	**Area required for the Check-in Counter and Queue**
	Lm per counter and work area depth	3.65	Industry Standard	Length of counter/work area X width of counter X no. of counters
				(3.65 x 1.52) x 21 = area(excluding circulation area)
				CHECK-IN COUNTERS Area requirement = 116.5 sq.m
Check-in Queue	Sq.m per passenger	1.7	IATA	1.7 sq.m per person x 140 persons
	25 minutes max waiting time	140	Design for 10 minutes queue	**CHECK-IN Queue area = 238 sq.m**

	Input values	Units	Remarks	Formula
Security Checkpoint Lanes (Domestic)	Peak hour Departing Pax	500	Given	500 divided by 250pax per hour per lane = 2
	Screening Processing Rate	250	IATA	**TOTAL No. OF SECURITY SCREENING CHECKPOINTS = 2**
Security Checkpoint area (Domestic)	Linear meter width of lane	5		5m x 14m x 2 lanes=140 sm
	Depth of lane	14		**SECURUTY Screening area = 140 sq.m**
Security Checkpoint queue (Domestic)	Sq.m per passenger	1.7	IATA	1.7 sq.m / person x 125
	Max 25% of peak hour passengers assumed	125	Design for 10 minutes queue in queue as per IATA	**SECURITY Queue area = 212.5 say 210 sq.m**
Security Checkpoint Lanes (International)	Peak hour Departing Pax	100	Given	100 divided by 250pax per hour per lane = 1
	Screening Processing Rate	250	IATA	**TOTAL No. OF SECURITY SCREENING CHECKPOINTS = 1**
Security Checkpoint area (International)	Linear meter width of lane	5		5m x 14m x 1 lanes=70 sq.m
	Depth of lane	14		**SECURITY Screening area = 70 sq.m**
Security Checkpoint queue (International)	Sm per passenger	1.7	IATA	1.7 sq.m / person x 25
	Max 25% of peak hour passengers assumed	25	Design for 10 minutes queue in queue as per IATA	**SECURITY Queue area = 42.5 say 45 sq.m**
Outbound Baggage Screening Devices	Peak hour Departing Pax	600	Given	600 pax X 2 bags per pax/250 bags per hr
	Baggage Screening rate per device	250	Design for 10 minutes queue in queue as per IATA	**No. of EDS in-line screening devices = 4.8 say 5 machines**
	Bags per pax	2		
Holdrooms (Domestic)	Maximum no. of departing passengers at a given time.	500	Given	Number of passengers x area per pax = 500 x 1.7 = 850
	Area per pax (sq.m)	1.7	IATA	**HOLDROOM - Area of I holdroom = 850 sq.m**
Holdrooms (International)	Maximum no. of departing passengers at a given time.	100	Given	Number of passengers x area per pax= 100 x 1.7 =170
	Area per pax (sq.m)	1.7	IATA	**HOLDROOM - Area of I holdroom = 170 sq.m**

	Input values	Units	Remarks	
ARRIVAL AREAS				
Baggage Claim Devices (Domestic)	Peak hour Arriving passengers	500	Given	70% of 500 = 350
	Percentage pax in the claim hall	70	At one time	350 pax / 4 pax per meter = 87.5 m of claim frontage
	Number of pax per metre of claim	4	In queue around the belt	Yields .8 belt at 55 meters
				Number of baggage claim devices = 2
Baggage Claim Devices (International)	Peak hour Arriving passengers	100	Given	70% of 100 = 70
	Percentage pax in the claim hall	70	At one time	70 pax/ 4 pax per meter= 17.5 m of claim frontage
	Number of pax per metre of claim	4	In queue around the belt	Yields .3 belt at 55 meters
				Number of baggage claim devices = 1
Positive baggage claim area (Domestic)	Area per unit of 55m belt (sq.m)	585	Actual	585 sq.m per belt x 2 belt=1170 sq.m
	Area per Pax (sq.m)	1.7	IATA Standards	350 x 1.7 = 5955 sq.m
				1170 + 595 = 1765 sq.m
				Area Required = 1765 sq.m
Positive baggage claim area (International)	Area per unit of 55m belt (sq.m)	585	Actual	585 sq.m per belt x 1 belt = 585 sq.m
	Area per Pax (sq.m)	1.7	IATA Standards	70 x 1.7 = 119 sq.m
				585 + 120 = 705 sq.m
				Area Required = 705 sq.m
Visitors Concourse	Peak hour arriving pax	600	Given	600 x 1 = 600
	Visitor per pax	1	Assumption	600 x 20min/60min = 200 visitors
	Dwell time in minutes	20	Per Industry Standards	200 x 1.7 per pax = area required for the visior concourse
	Area per Visitor (sq.m)	1.7	IATA	**Visitor Concourse= 340 sq.m**

INTERIOR VIEW - FLUIDITY IN PLAN FOR EASE OF PASSENGER MOVEMENT & DEFINATION OF BULK HEADS TO ENHANCE RETAIL

VIEW 01

MATERIALS :- 1. CEILING - PERFORATED METAL CEILING BAMBOO FINISH , TENSILE MEMBRANE
2. FLOORING - WHITE GRANITE, RUBY RED (POLISHED/FLAMED), BLACK GRANITE

INTERIOR VIEW - INTERNAL LANDSCAPE

VIEW 02

- **MODERN DEPICTION OF LOCAL ART**

- **UNAKOTI HILLS IN AGARTALA**

BAMBOO HANDICRAFTS OF AGARTALA

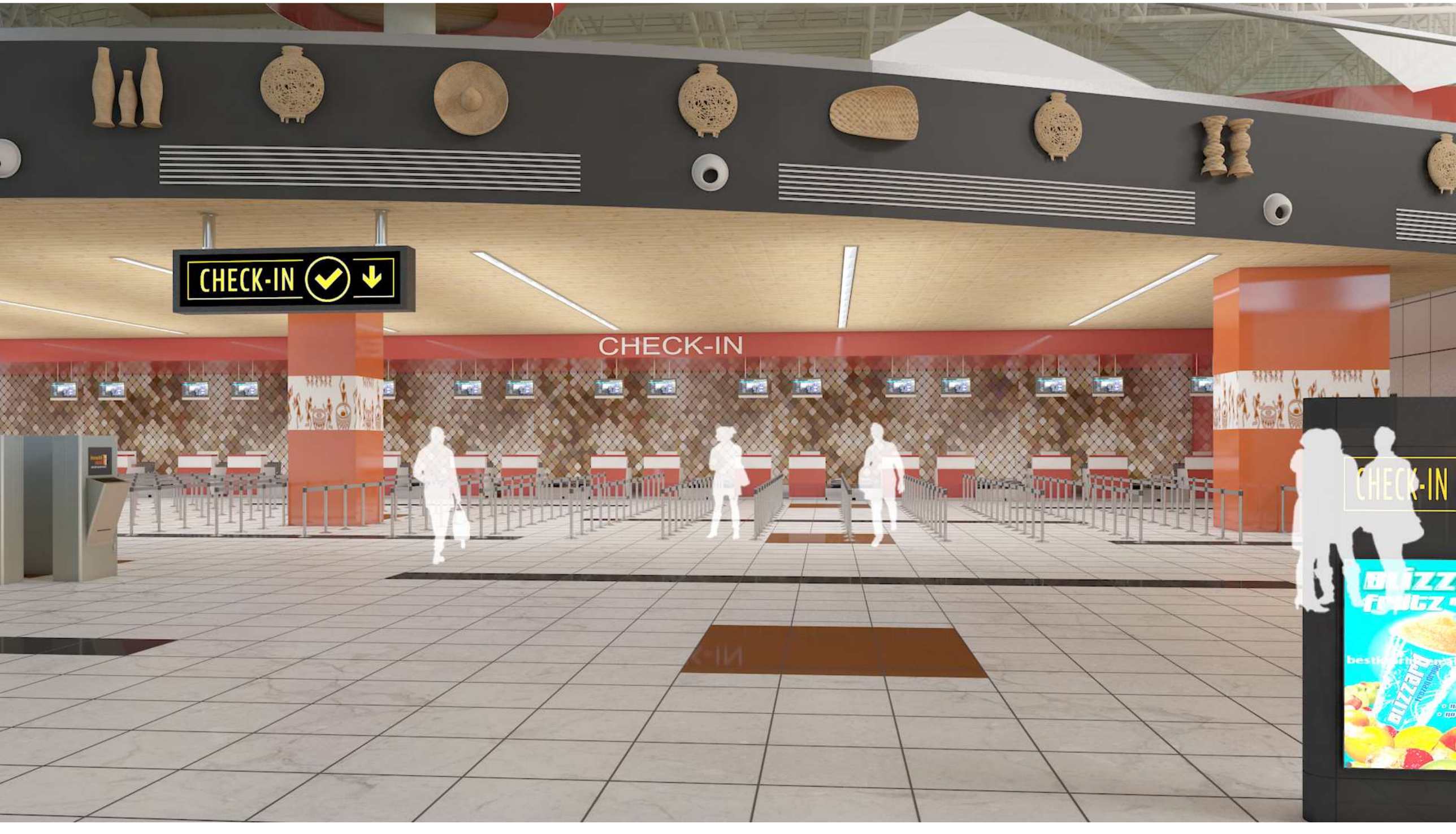
INTERIOR VIEW - BAGGAGE RECLAIM AREA

VIEW 03

MATERIALS :- 1. CEILING - PERFORATED METAL CEILING
BAMBOO FINISH, TENSILE MEMBRANE
2. FLOORING- WHITE GRANITE, BLACK GRANITE
RUBY RED (POLISHED/FLAMED),
3. BULKHEAD- ACP PANELS WITH MOTIF INLAY

INTERIOR VIEW - LOCAL MOTIF DEPICTED IN METAL CLADDING TO CREATE VIBERANCY
- USE OF METAL CLADDING AND PERFORATED SCREENS IN INTERIOR AREAS

VIEW 04



INTERIOR VIEW – VIP LOUNGE

VIEW 05

INTERIOR VIEW - USE OF BAMBOO LANDSCAPE WITHIN INTERIOR WAITING AREAS

VIEW 05

MATERIALS :- 1. CEILING - PERFORATED METAL CEILING BAMBOO TEXTURE , MINERAL FIBRE BOARD CEILING
2. BAMBOO LANDSCAPE FEATURE IN GLASS CASING