Airport Commission
Operational Efficiency Query Responses
Supporting Data

25/06/2014

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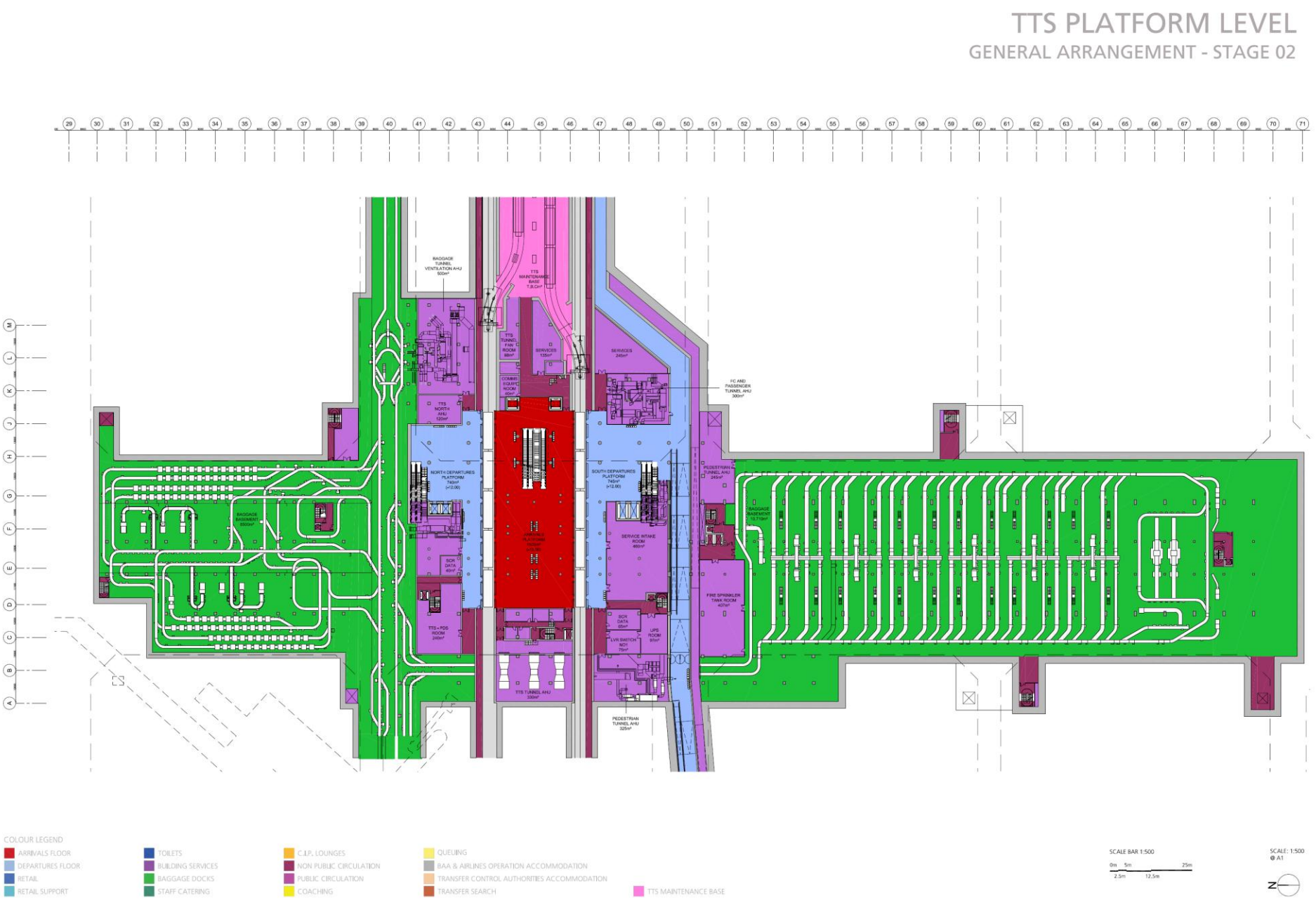
Q1: Concourse B – TTS Level



Q1/2: Security Considerations

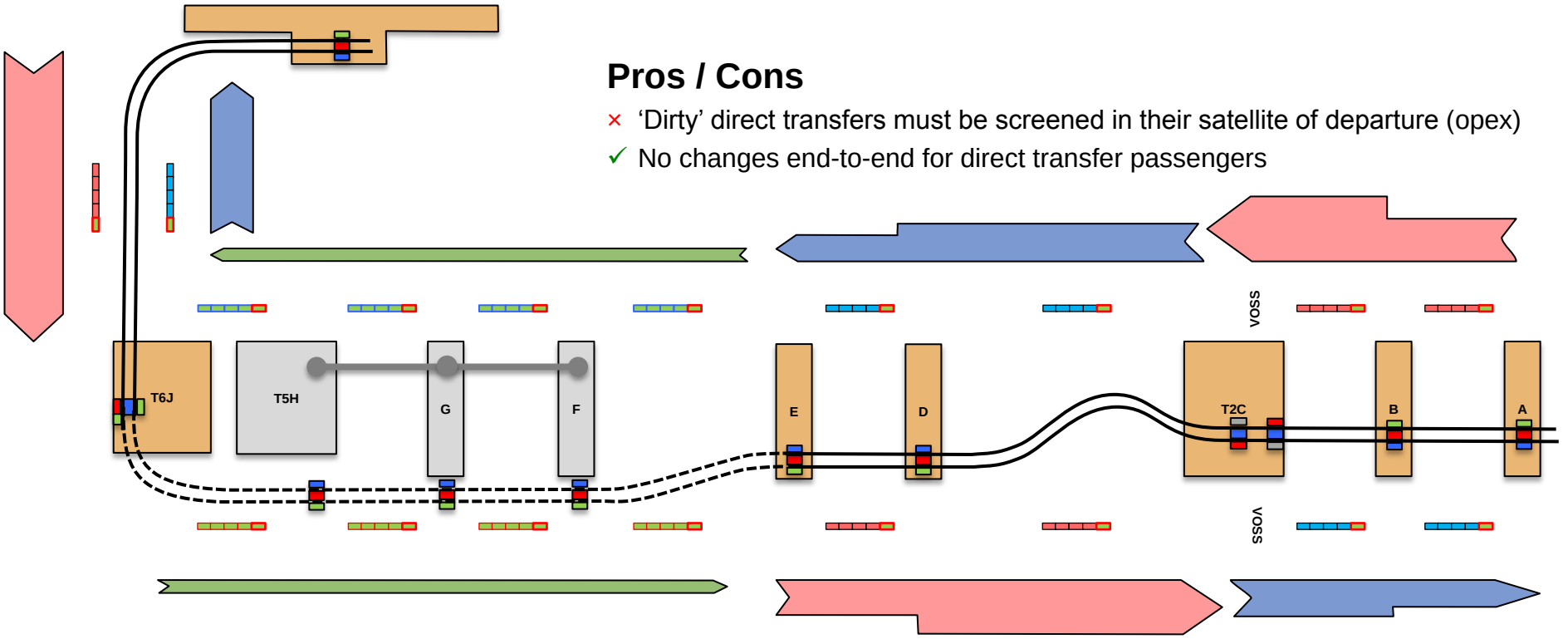
Implications for Transfer Passengers

a. VOSS screening ***only*** in T2C in both directions

b. Existing T5 TTS used for T5 O/D pax, T5 transfer pax use new TTS

c. Transfers directed to separate platform must be in a specific car(s) to remain on the train ('dirty'). Transfer pax screened at pier of departure (or T6/5/2 for long connects)

d. Peak flow is arrivals where all cars need to be 'dirty'. There is spare capacity on the departure legs to operate 'dirty' transfer cars, which could be operated dynamically (e.g. 4:1 clean:dirty trains or 3:2)



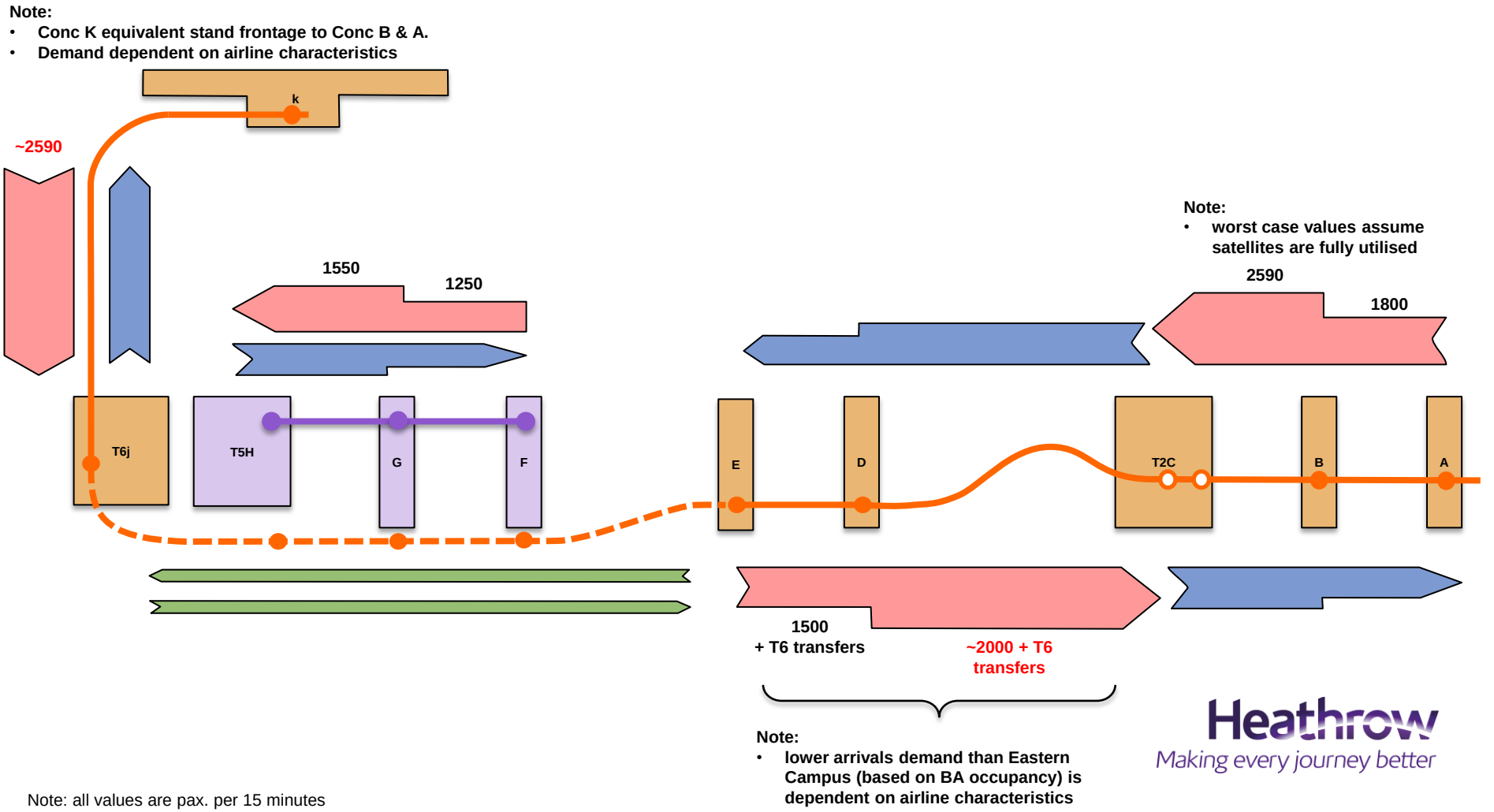
Pros / Cons

× 'Dirty' direct transfers must be screened in their satellite of departure (opex)

✓ No changes end-to-end for direct transfer passengers

Q2: Extrapolated TTS Demand

1. 2R campuses based on previous masterplans (15 min peaks).
2. New campuses would depend on 3R occupancy and airline characteristics.



Note: all values are pax. per 15 minutes

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Q2: TTS Capacity - T2A Summary (end-to-end system)

1. Current peak demand is in the Conc B & A peak flow (arrivals & transfers combined) = 2590 pax. per 15min.
2. If the end-to-end TTS were to be configured to deliver this it could be achieved in various ways

No. of Stations in T2A	Automated VOSS process	No. of Cars	Headway	Capacity (pax. / 15 min.)
2 no.	No	6 car trains	129s	2930
1 no.	Yes	6 car trains	136s	2779
2 no.	Yes	5 car trains	89s	3539
2 no.	Yes	6 car trains	89s	4247

Note:
- High level assessment only (using principle of critical headway), not based on simulation analysis allowing for dynamic effects
- Capacities are pax. per 15 minutes assuming normal loading of 70 pax. per car.
- Assumes automated VOSS process will be specified to screen and approve a train in 10 seconds

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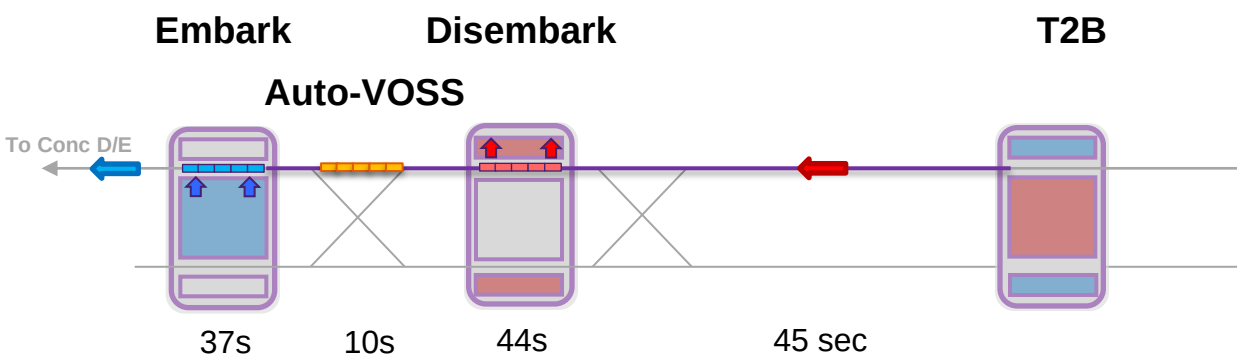
Q2: TTS Headways

Long-loop with ***Automated***-VOSS (security sweep) in middle of line



Double Station (VOSS in ***motion***)
Headway = 89 s
Capacity = 3539 pax./15min

If Automated VOSS not achievable, fallback position is to retain manual VOSS process and 6 car trains/platforms required

Note:
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- Capacities are pax. per 15 minutes assuming normal loading of 70 pax. per car.

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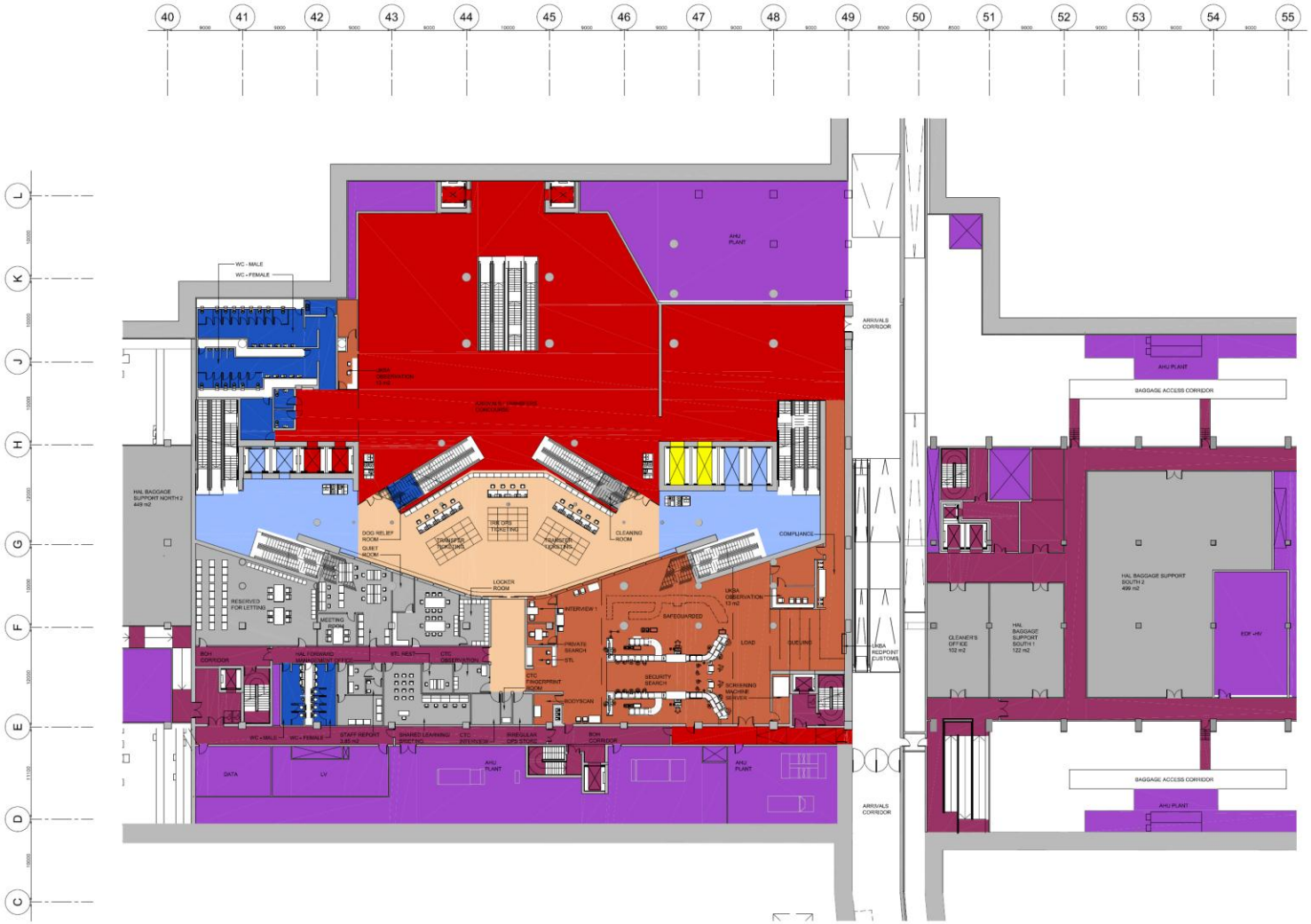
Q4: Concourse B – Screening Level

FLIGHT CONNECTIONS LEVEL

FCC PASSENGER CONCOURSE & SECURITY - STAGE 02



COLOUR LEGEND

- ARRIVALS FLOOR
- DEPARTURES FLOOR
- RETAIL
- RETAIL SUPPORT
- TOILETS
- BUILDING SERVICES
- BAGGAGE DOCKS
- STAFF CATERING
- C.I.P. LOUNGES
- NON PUBLIC CIRCULATION
- PUBLIC CIRCULATION
- COACHING
- QUEUING
- BAA & AIRLINES OPERATION ACCOMMODATION
- TRANSFER CONTROL AUTHORITIES ACCOMMODATION
- TRANSFER SEARCH
- TTS MAINTENANCE BASE

SCALE BAR 1:250

0m 5m 2m 10m

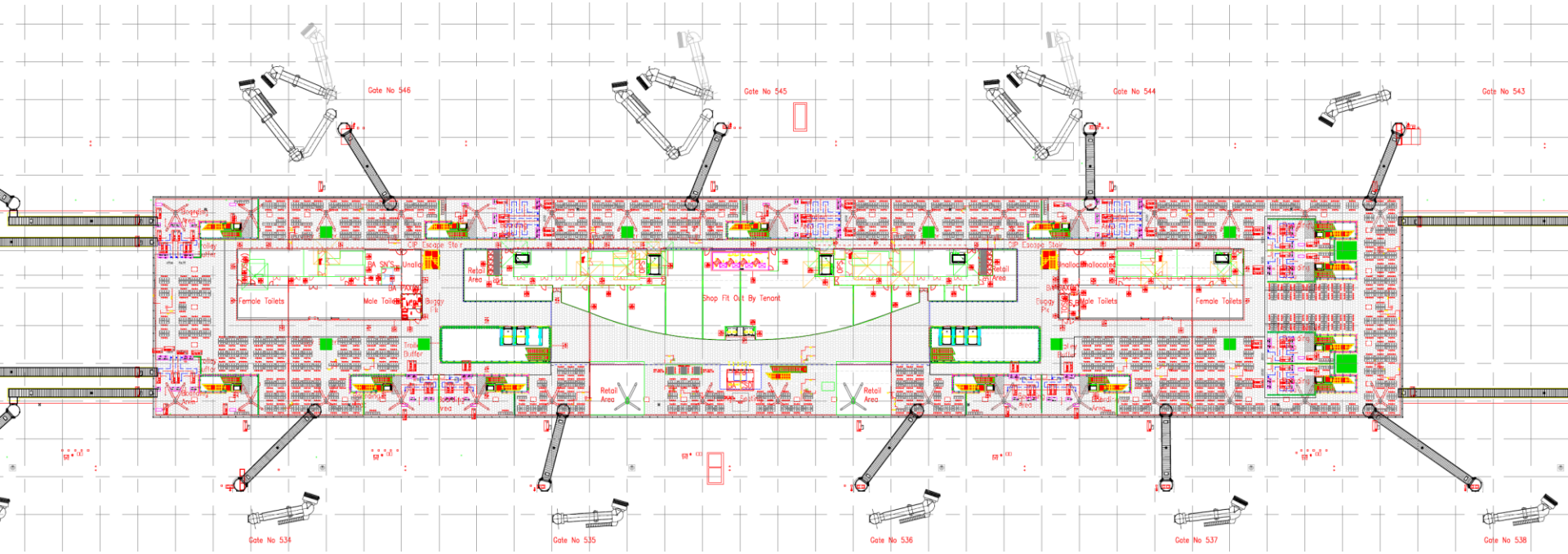
SCALE: 1:250 @ A1

177013-SK-0.0-457

Note: Drawing Indicative Only, All Dimensions and Levels to Be Confirmed By Final Survey

Balfour Beatty GRIMSHAW

Q5: Concourse H (Current T5B) – Departures Level



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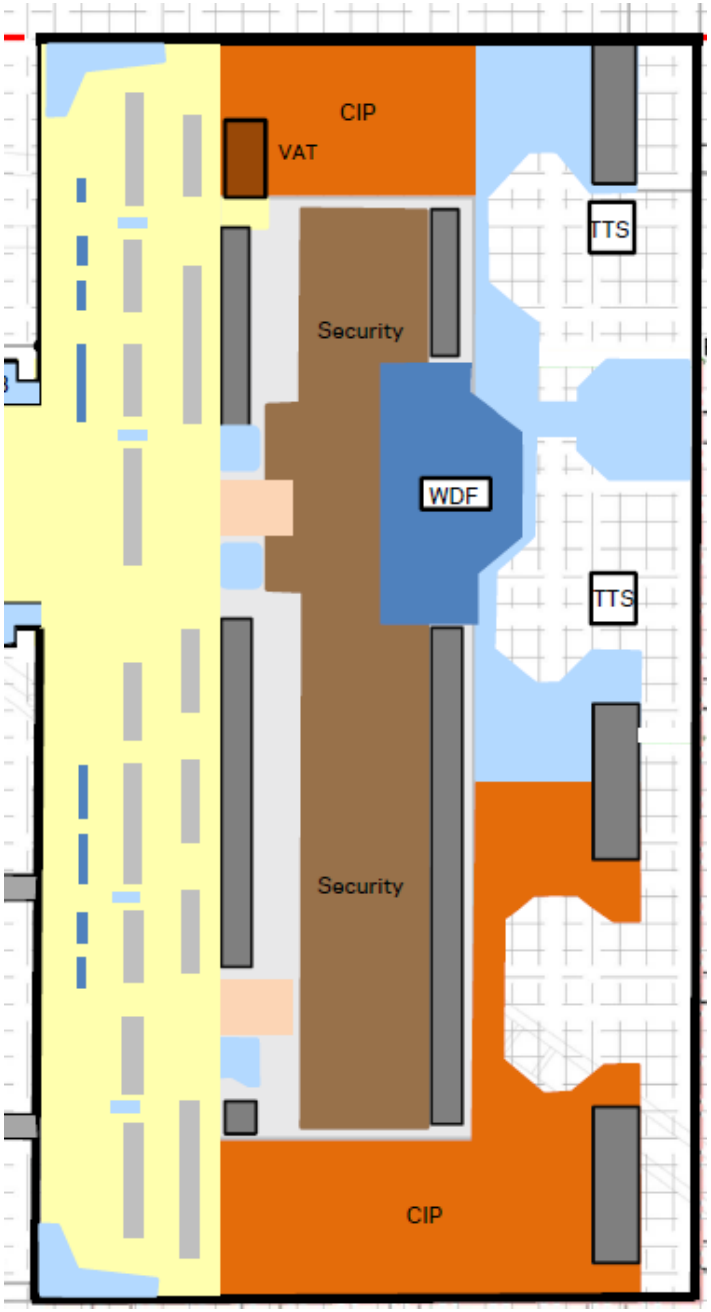
Q11: T2Ph3 – Departures Level (+18m)



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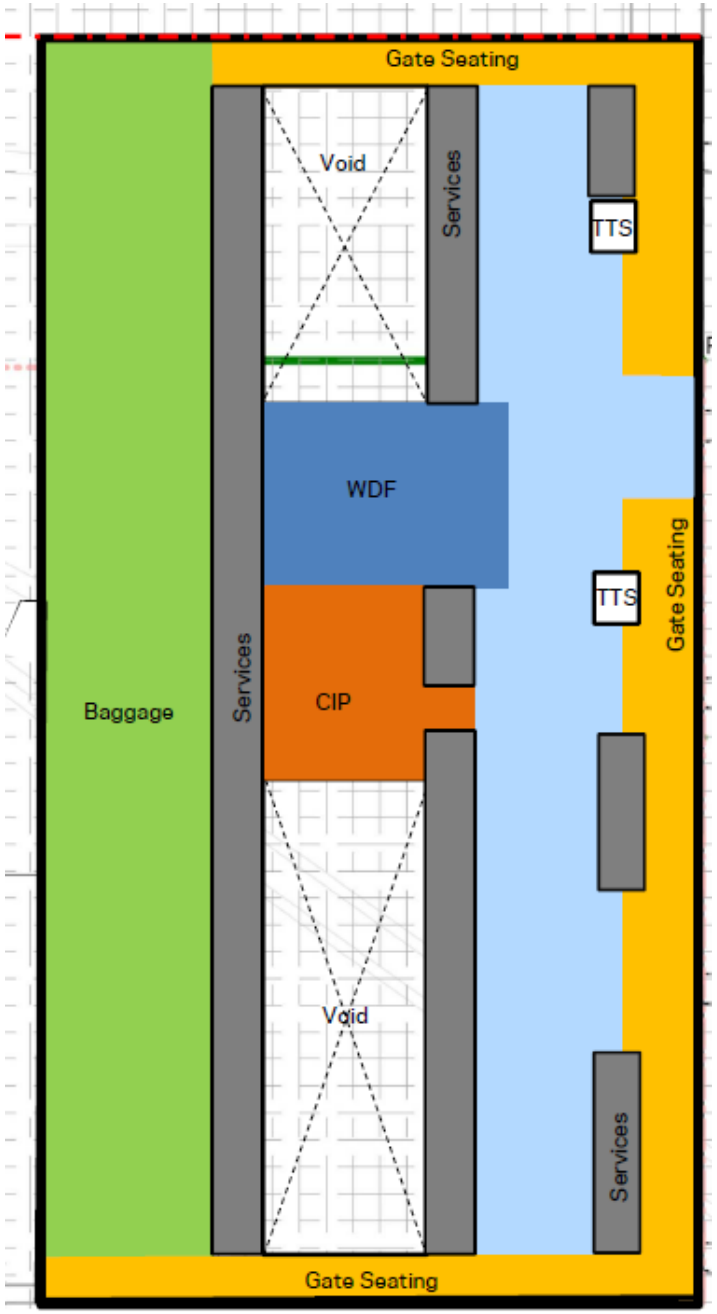
Q11: T2Ph3 – Departure Gates Level (+12m)



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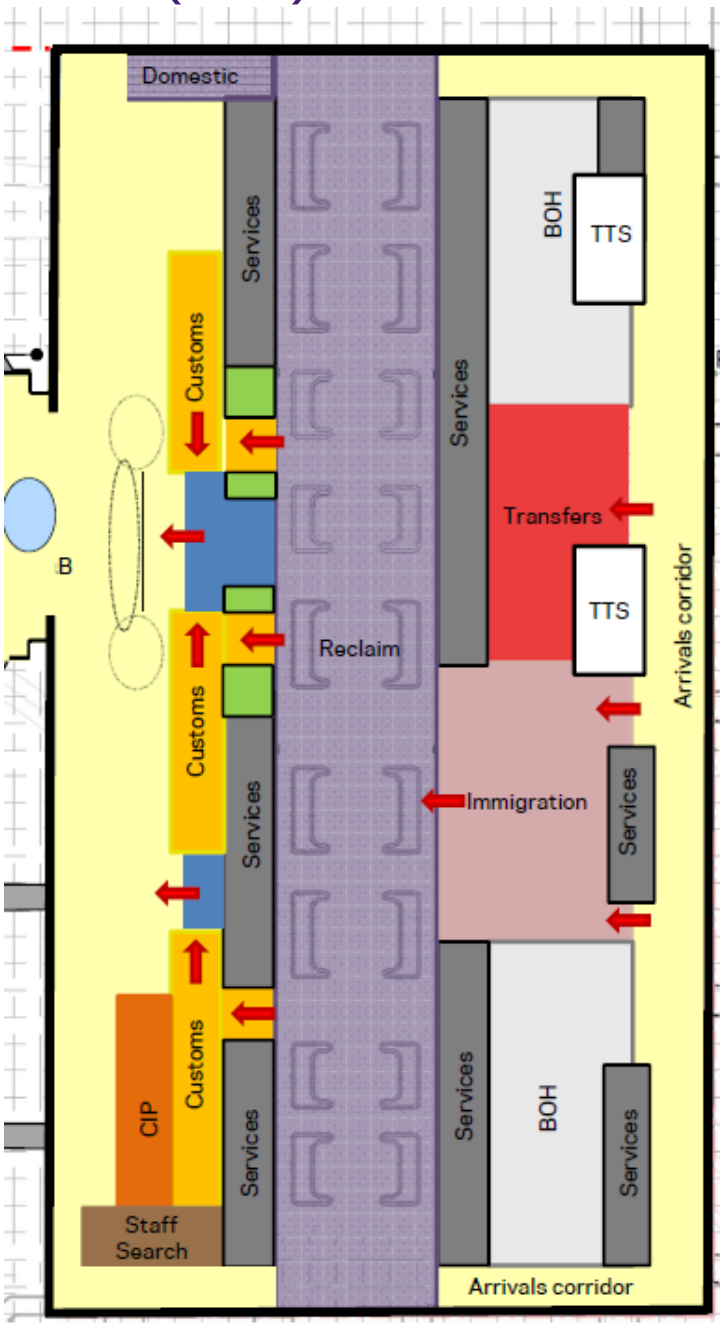
Q11: T2Ph3 – Arrivals Level (+6m)



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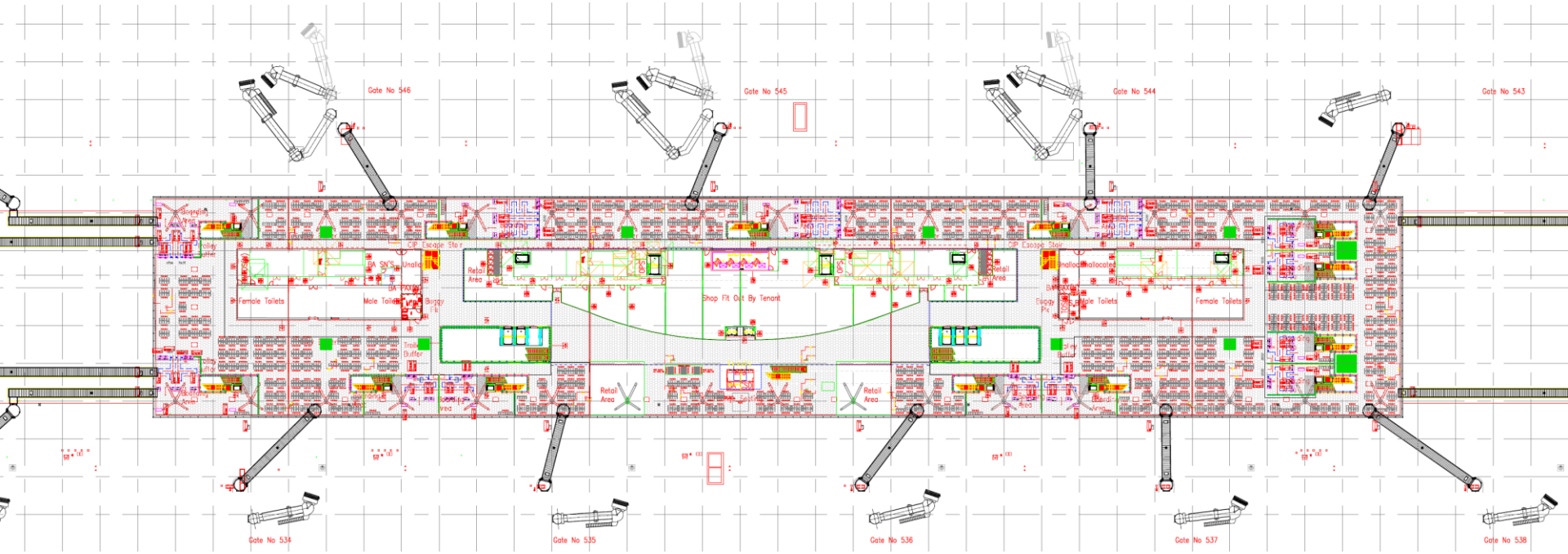
Q11: Concourse H (Current T5B) – Departures Level



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Q11: Concourse H (Current T5B) – Arrivals Level

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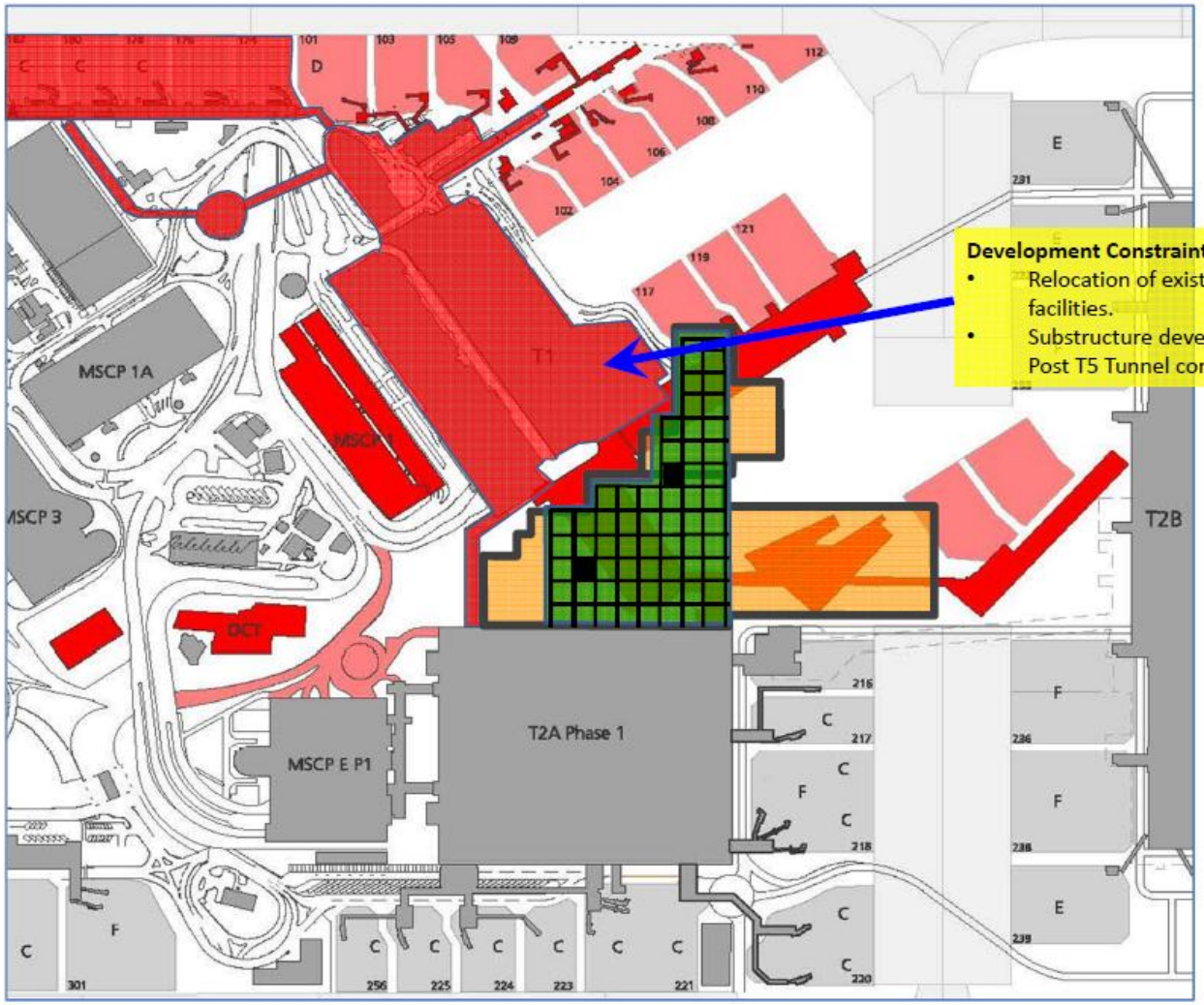
Q14: T2Ph1 to Ph2/3 Phasing

OPTION 1 – TEMPORARY ENCLOSURE OF NEW BAGGAGE LIFTS,

NO CHECK-IN ZONE MINIMAL LANDSIDE CONCOURSE.



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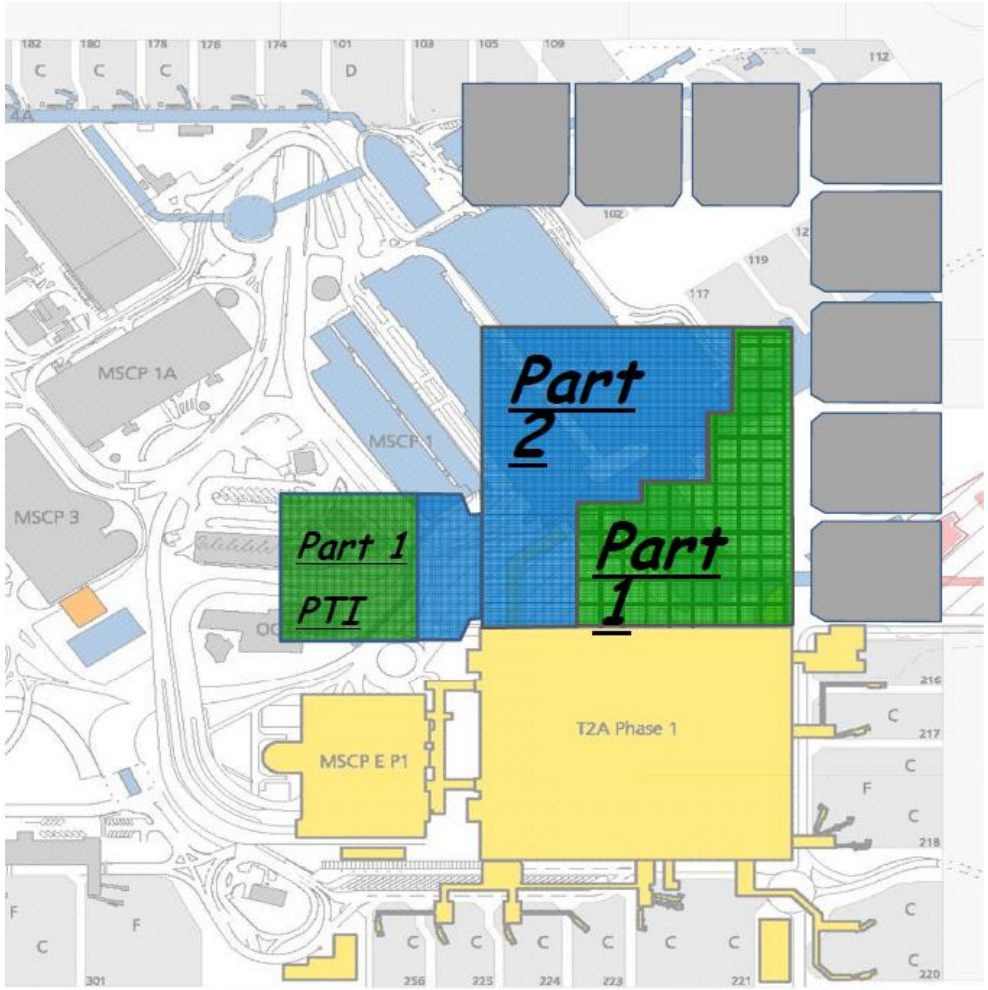
Q14: T2Ph1 to Ph2/3 Phasing



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