

ROAD DEVELOPMENT AND MODERNISATION IN INDONESIA

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BALI TOLL ROAD



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ASIAN HIGHWAYS

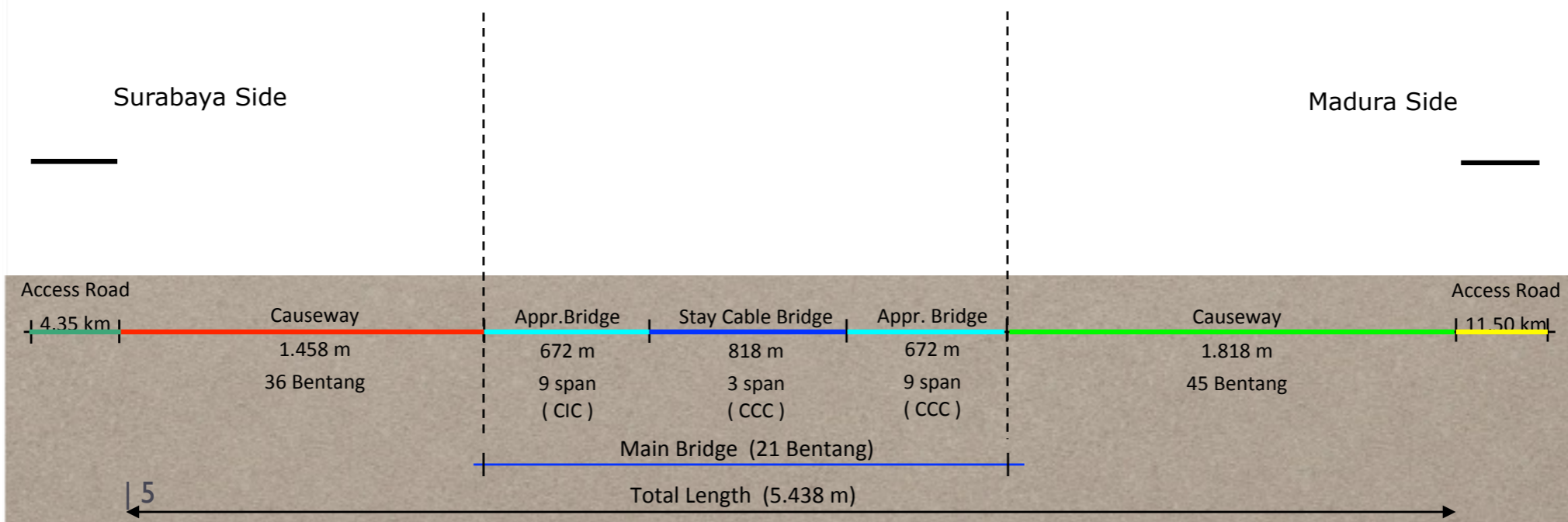
ASEAN/Asian Highway Network Map



SURAMADU BRIDGE



SURAMADU BRIDGE PROJECT Cross Long Section



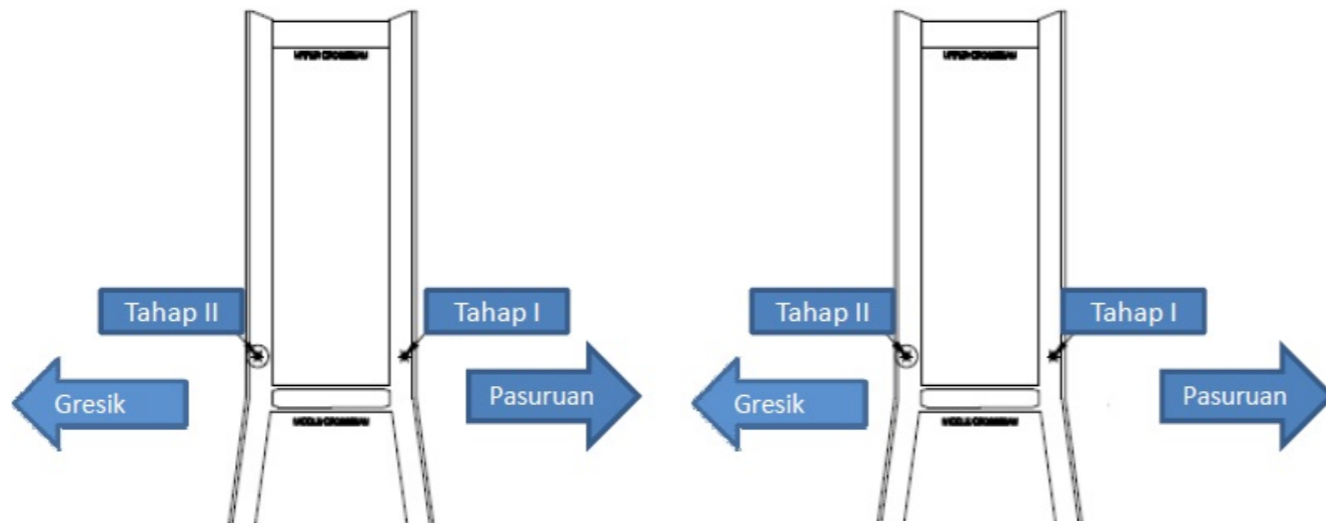
INSTRUMENTS

Anemometer

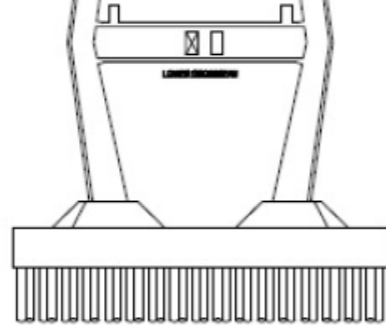


ATRH

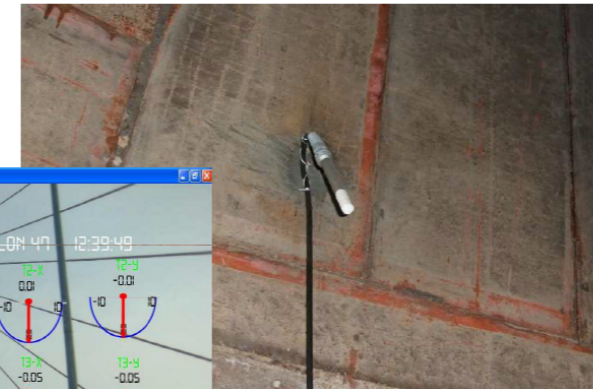
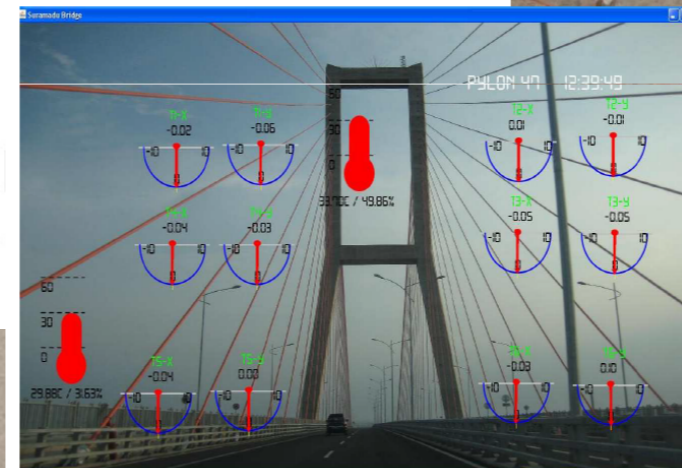
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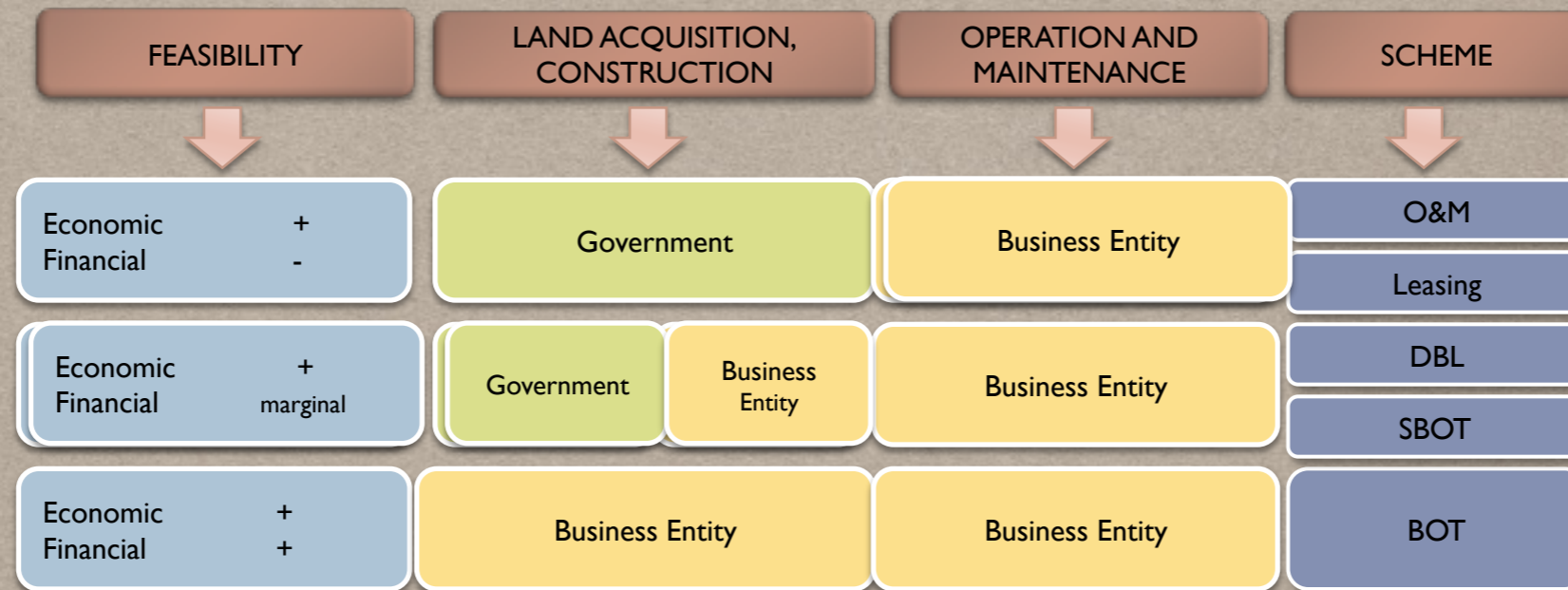
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PYLON P.46



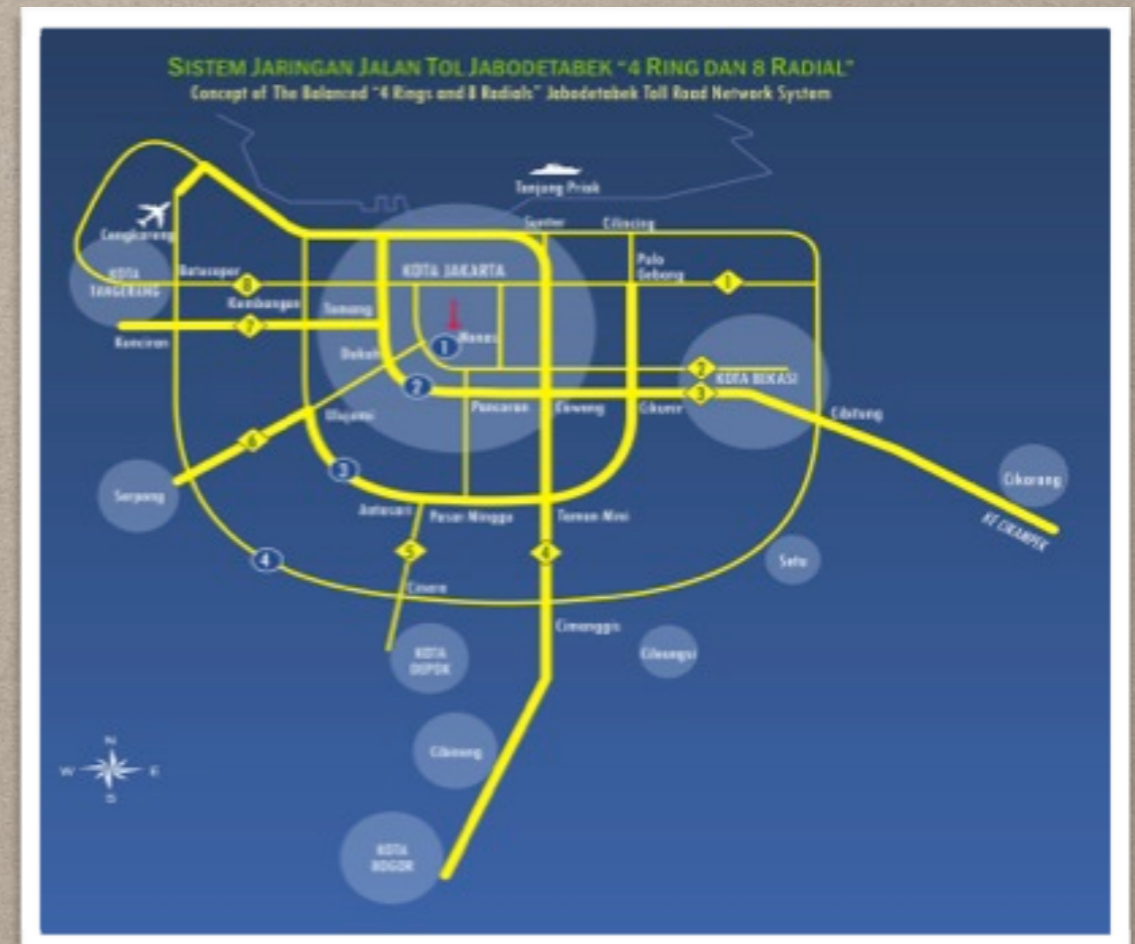
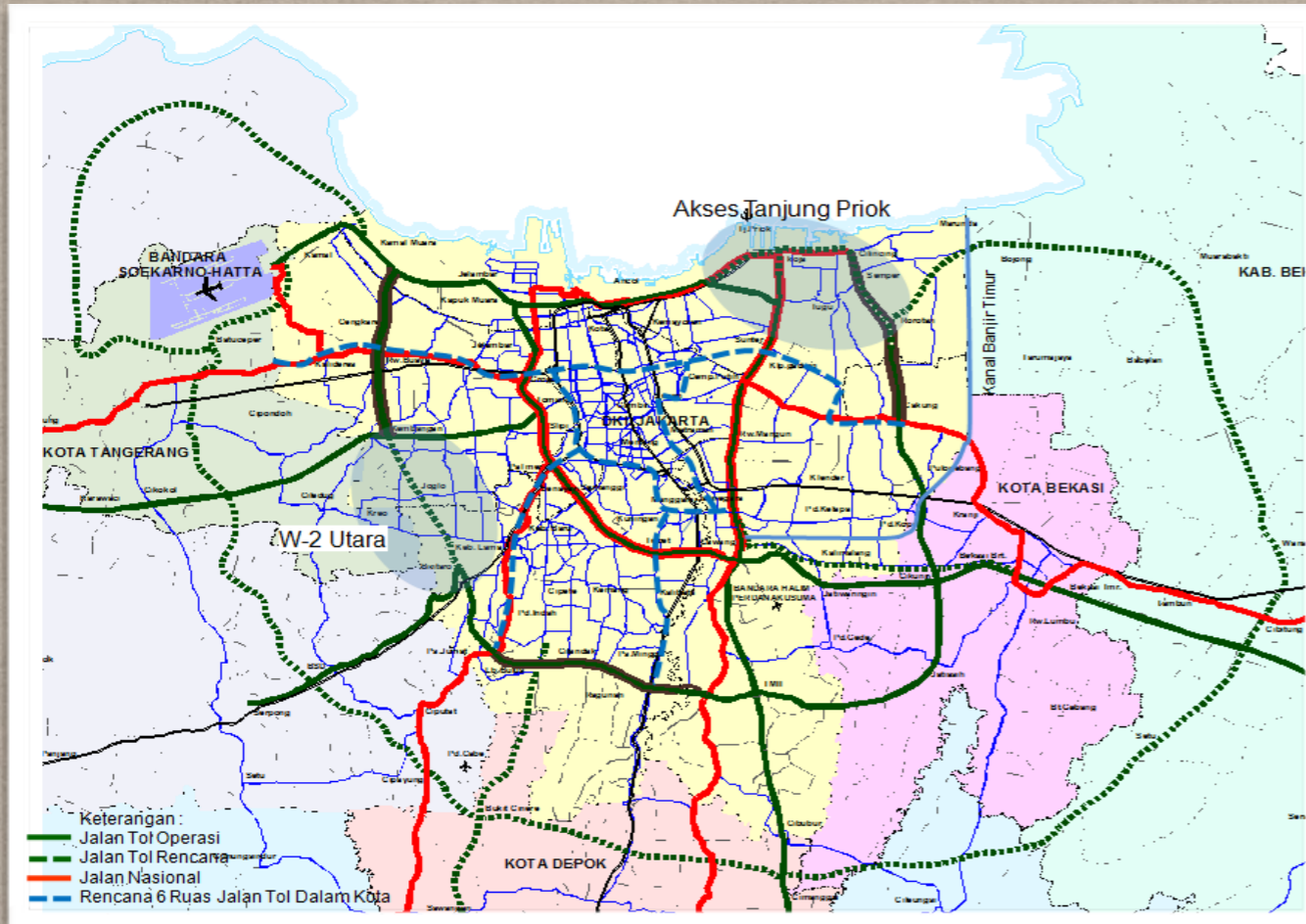
PPP MODALITY FOR TOLL ROAD DEVELOPMENT AND STRATEGY



Content Modality	EPC	Finance	O&M	Main Source of Revenue of TRC
BOT	TRC	TRC	TRC	Toll Tariff
SBOT	TRC (Private Portion)	TRC (Private Portion)	TRC	Toll Tariff
Lease	Contractors other than TRC*	Government	TRC	Toll Tariff
Outsourcing	Contractors other than TRC	Government	TRC	Payment by Government
Annuity	TRC	TRC	TRC	Payment by Government

BOT : Build, Operate and Transfer
 SBOT : Subsidized, Build, Operate and Transfer
 TRC : Toll Road Company
 EPC : Engineering, Procurement and Construction

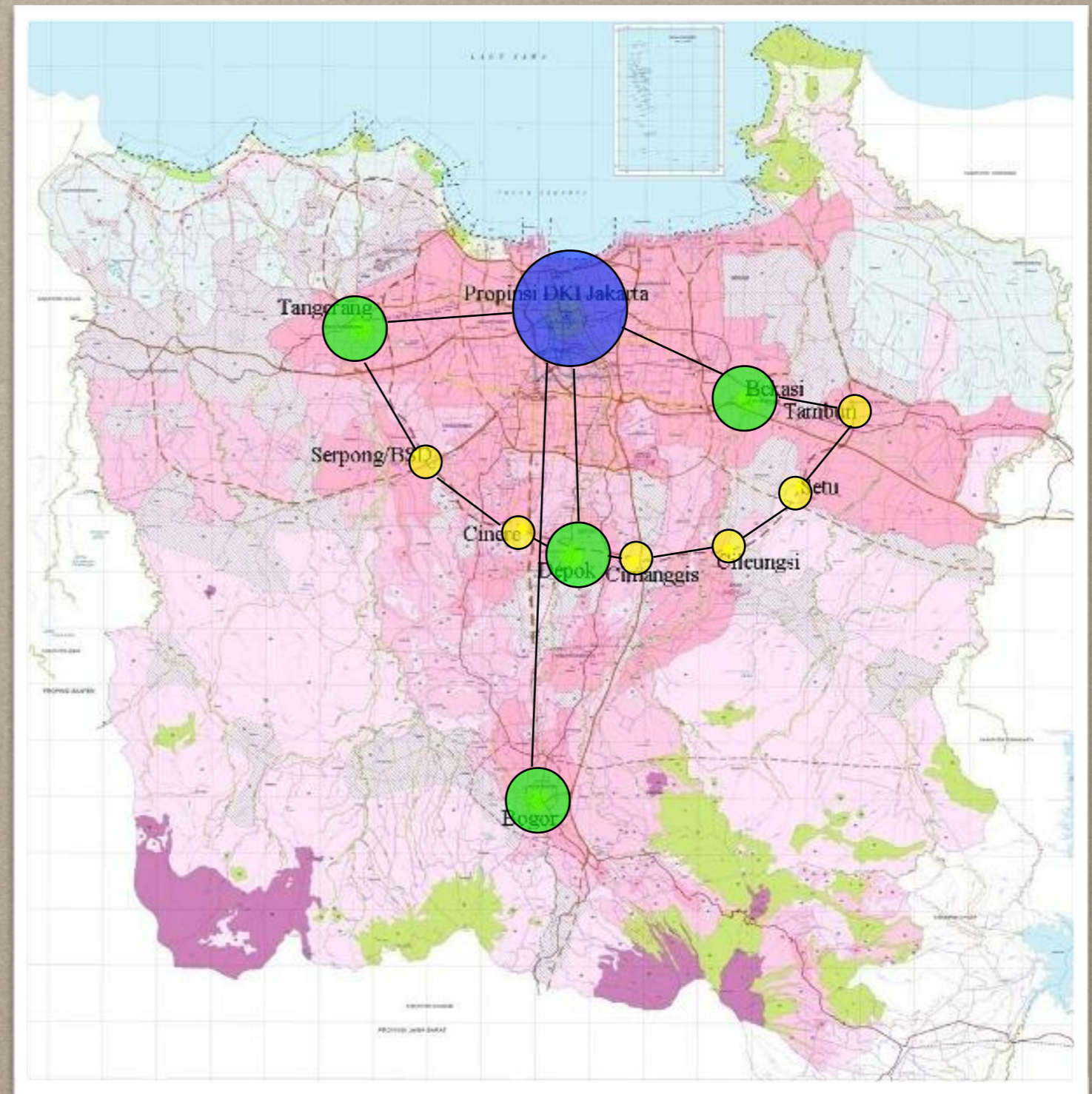
JABODETABEK RING AND RADIAL ROAD



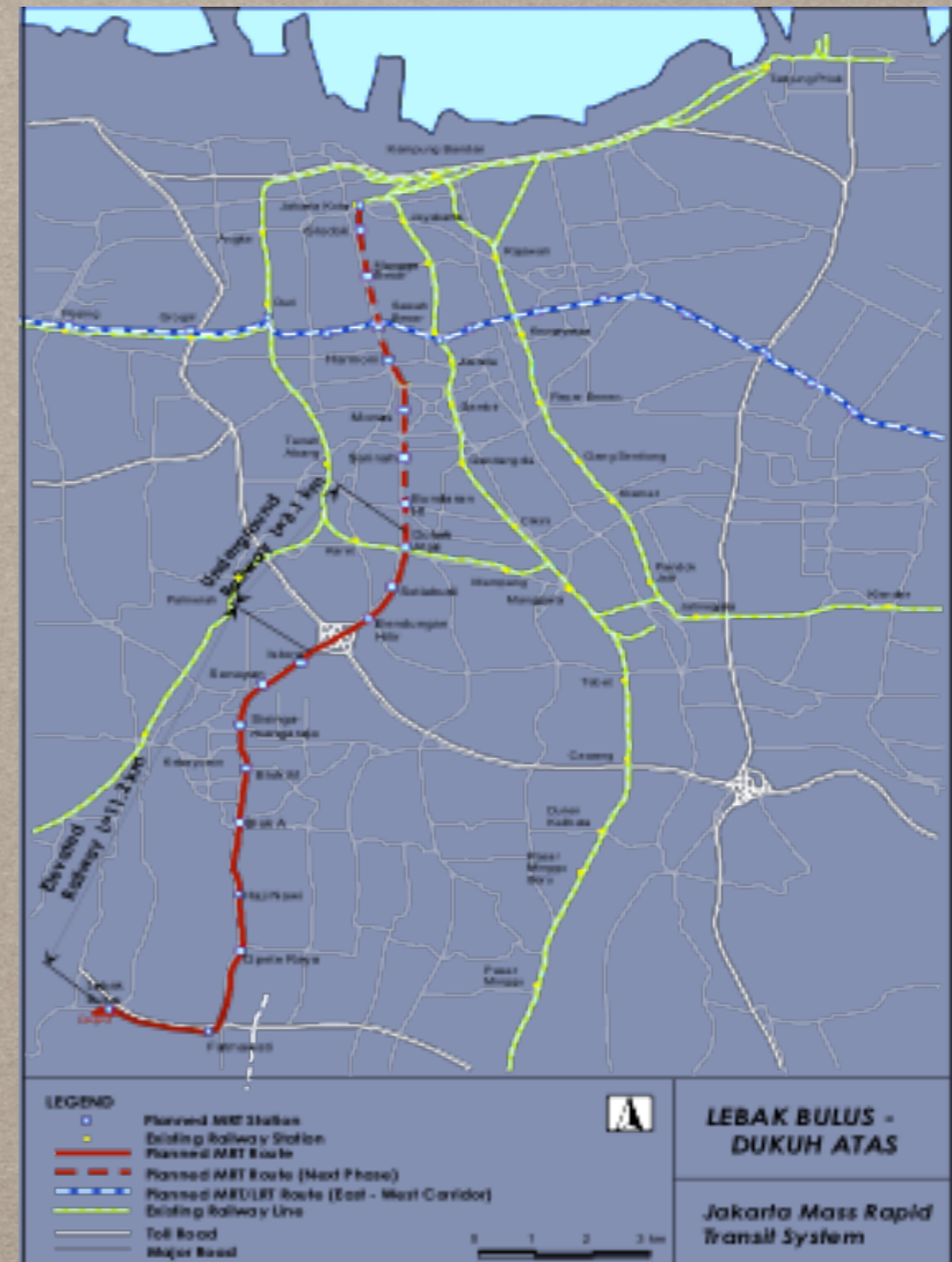
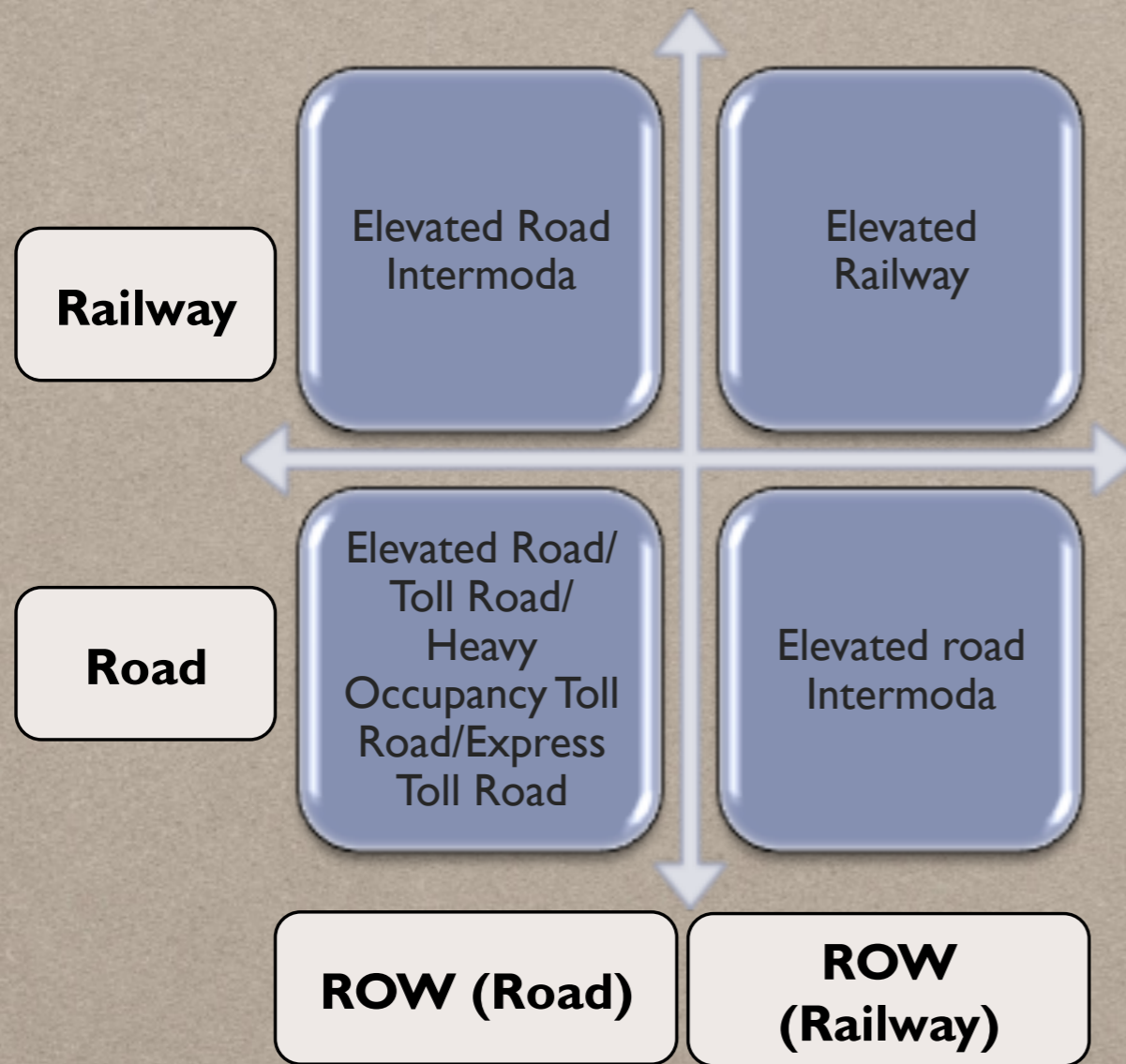
SPACE STRUCTURE OF JABODETABEK

Space structure is the development plan arrangement of **residential centers and infrastructure systems** that support social and economic activities that have hierarchically functional relationship.

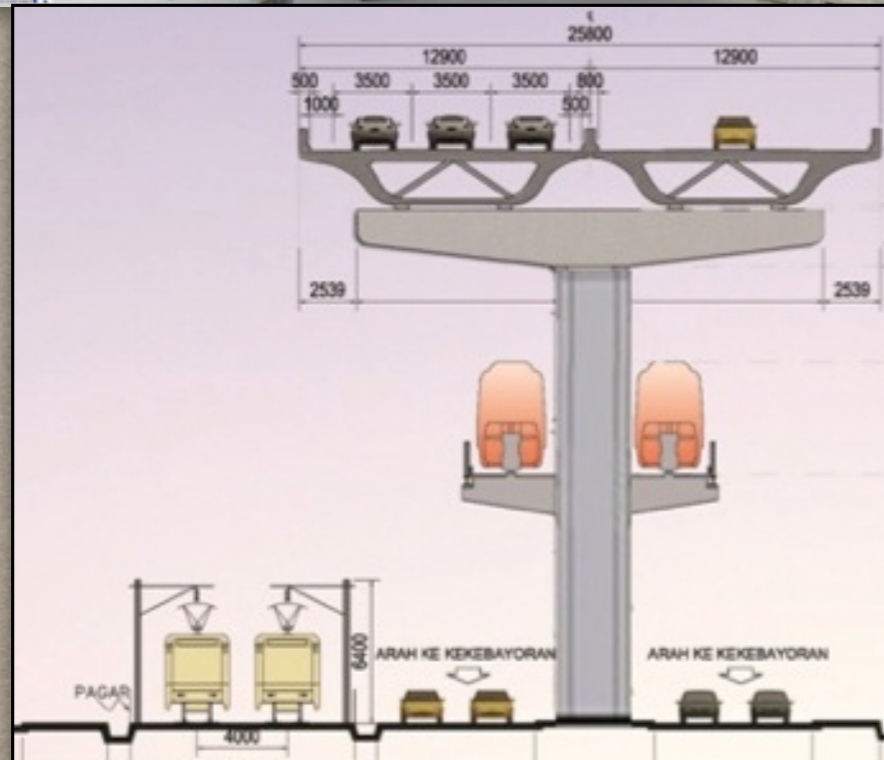
Infrastructure Network system includes transportation systems on land, sea and air, the raw water supply systems, wastewater management, management of hazardous and toxic waste, drainage and flood control, solid waste, electricity and telecommunications networks.



ELEVATED ROAD CONCEPT FOR INTERMODAL



INTERMODAL ELEVATED ROAD IMPLEMENTATION (ANTASARI - BLOK M, JAKARTA)



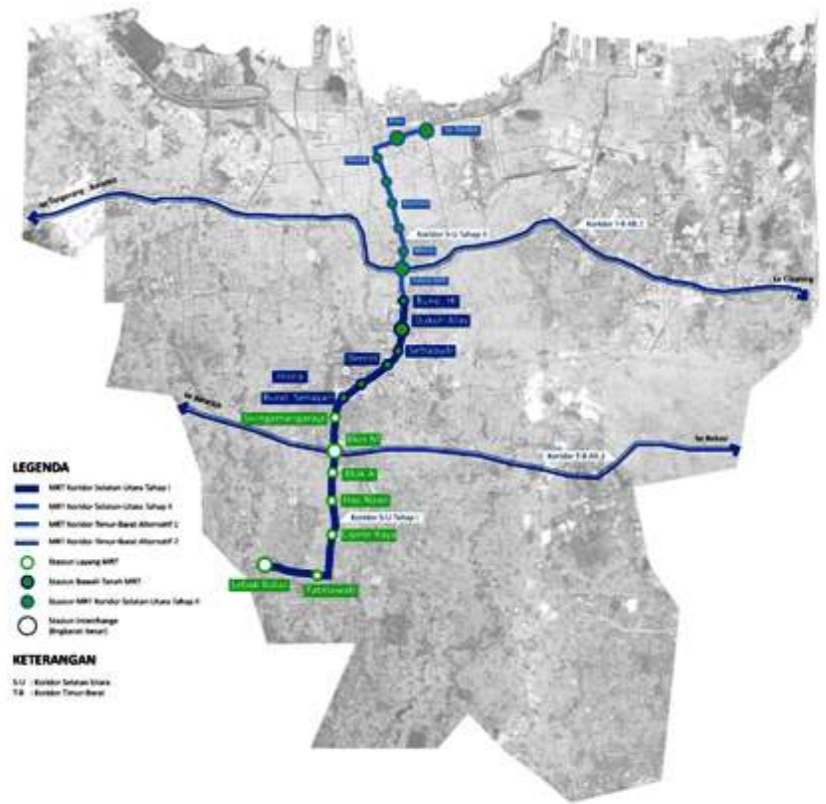
JAKARTA MASS RAPID TRANSPORT

MRT JAKARTA TAHAP I Lebak Bulus-Bundaran Hotel Indonesia



Sumber: MRT Jakarta, JMEC Basic Design Final Report

GUNAWAN



JAKARTA MASS RAPID TRANSPORT

UNDERGROUND SECTION

Image of Underground Station

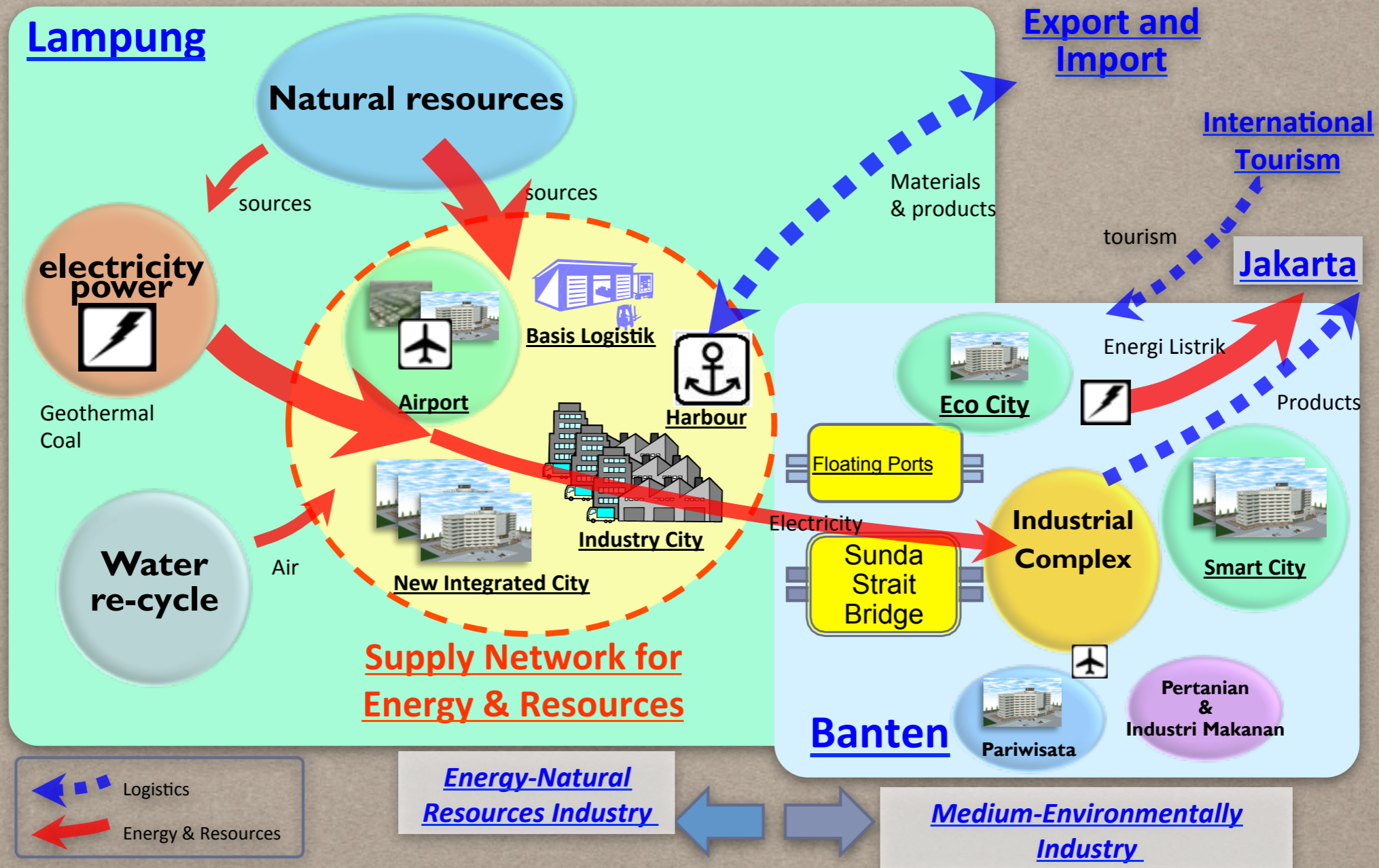


Bunderan HI Station

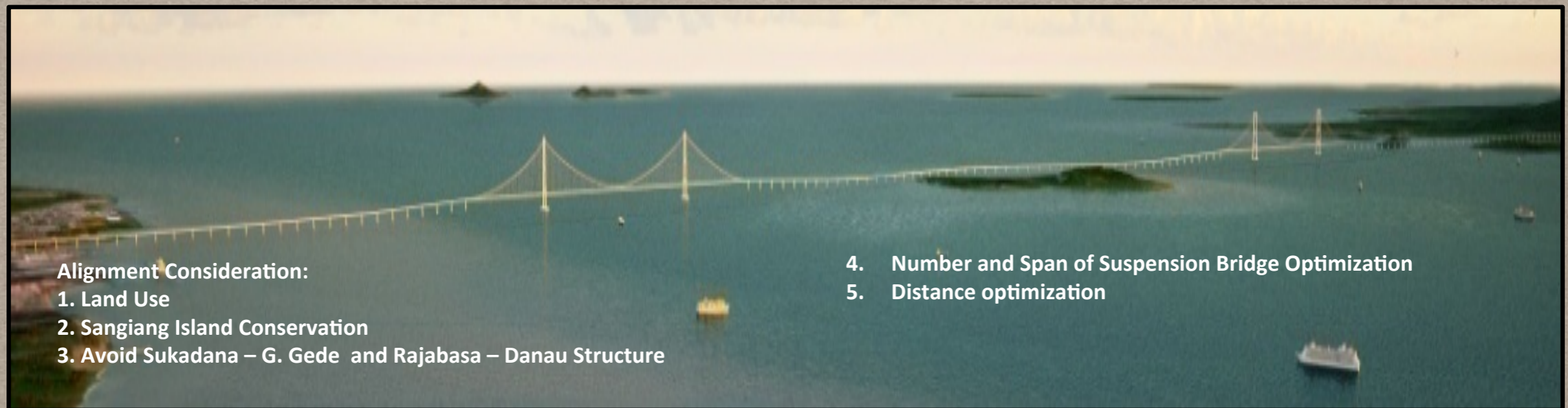
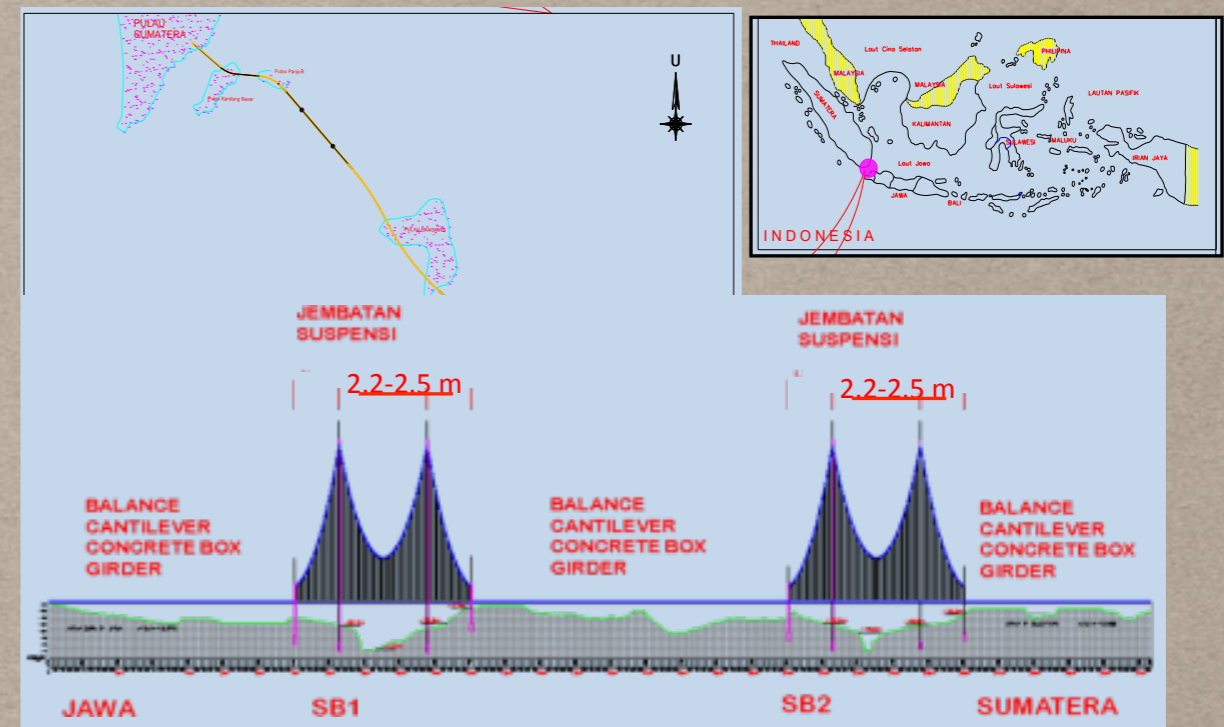
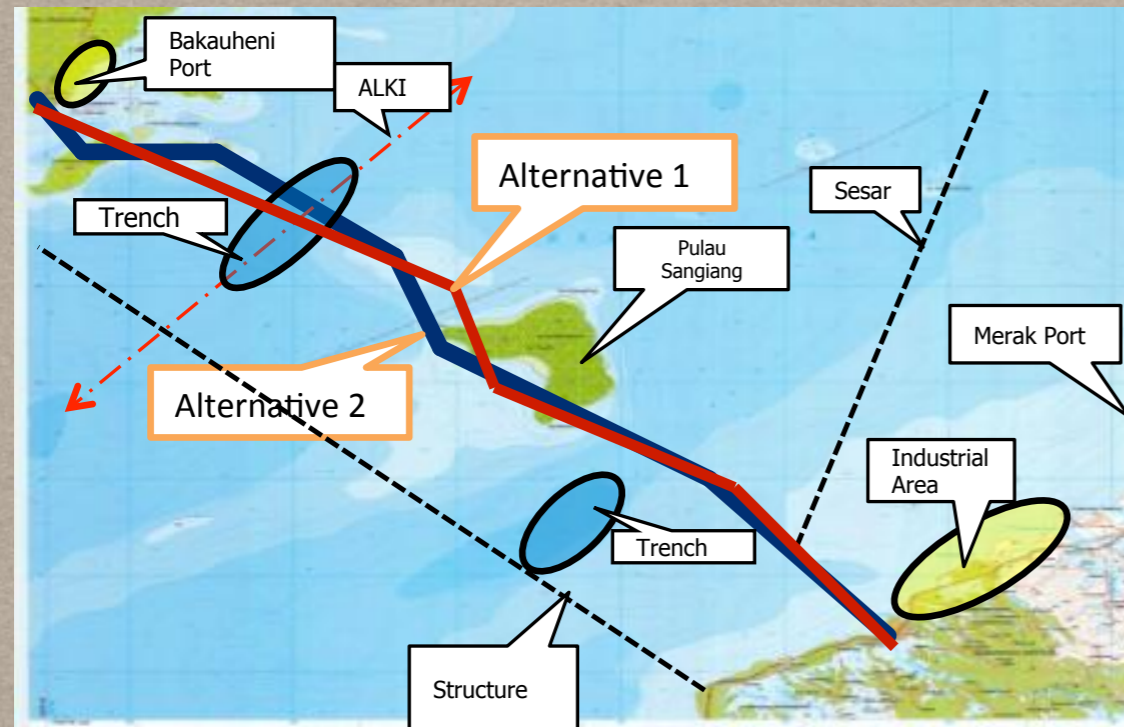
TRANS JAWA TOLL ROAD, TRANS SUMATERA TOLL ROAD AND SUNDA STRAIT BRIDGE



SUNDA STRAIT STRATEGIC AREA DEVELOPMENT CONNECTIVITY



ALIGNMENT AND CONCEPT

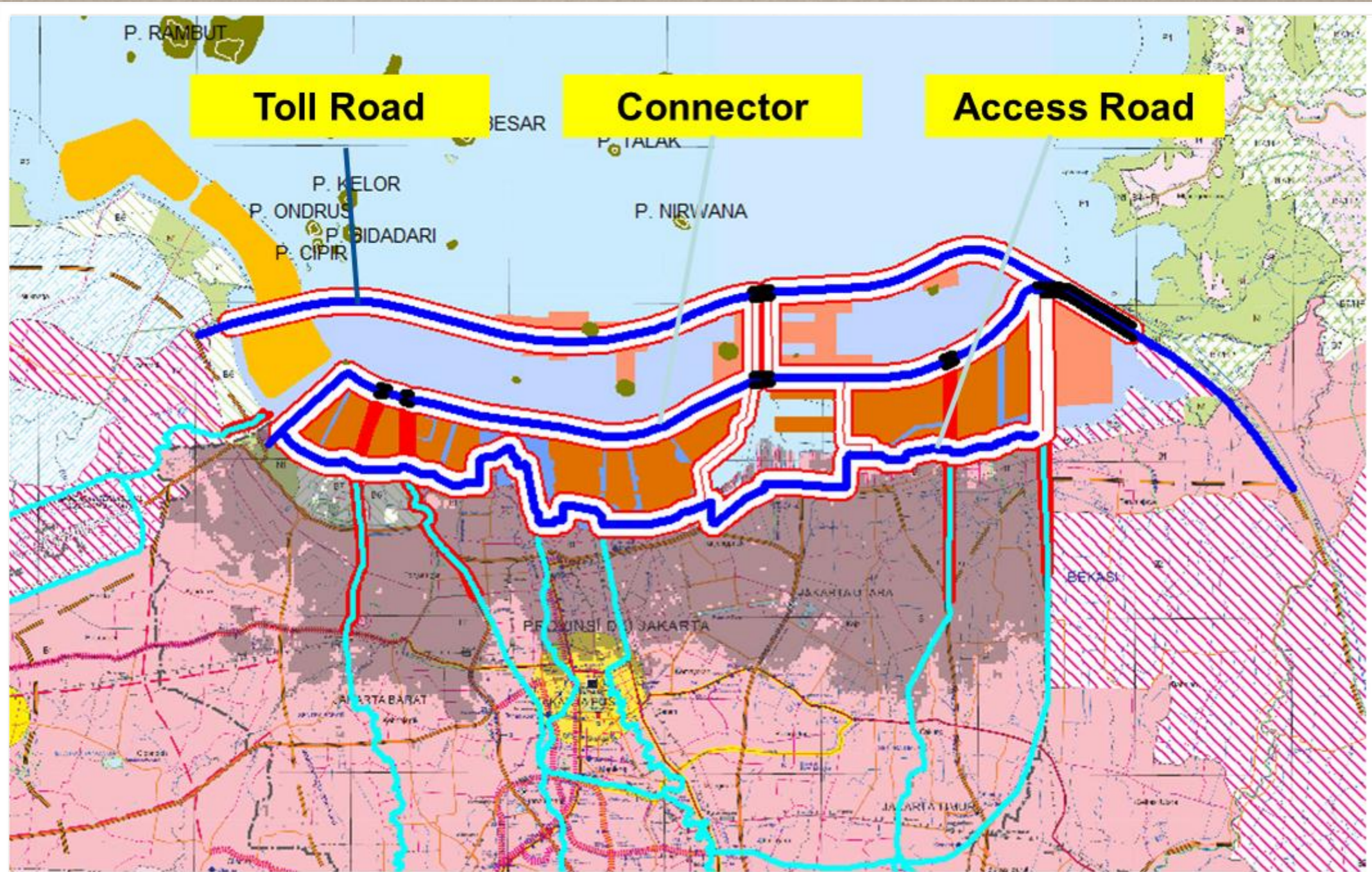


Alignment Consideration:

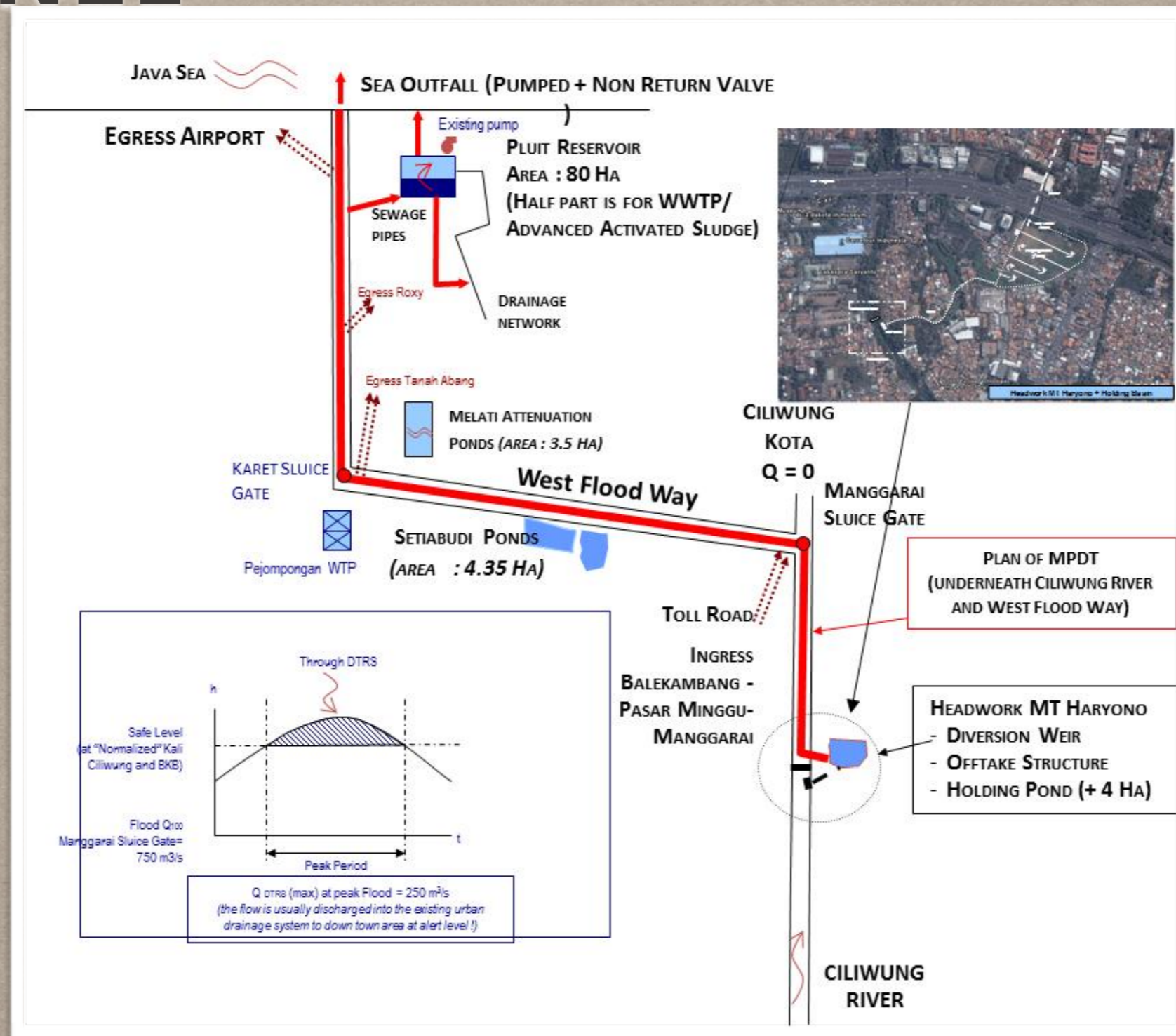
1. Land Use
2. Sangiang Island Conservation
3. Avoid Sukadana – G. Gede and Rajabasa – Danau Structure

4. Number and Span of Suspension Bridge Optimization
5. Distance optimization

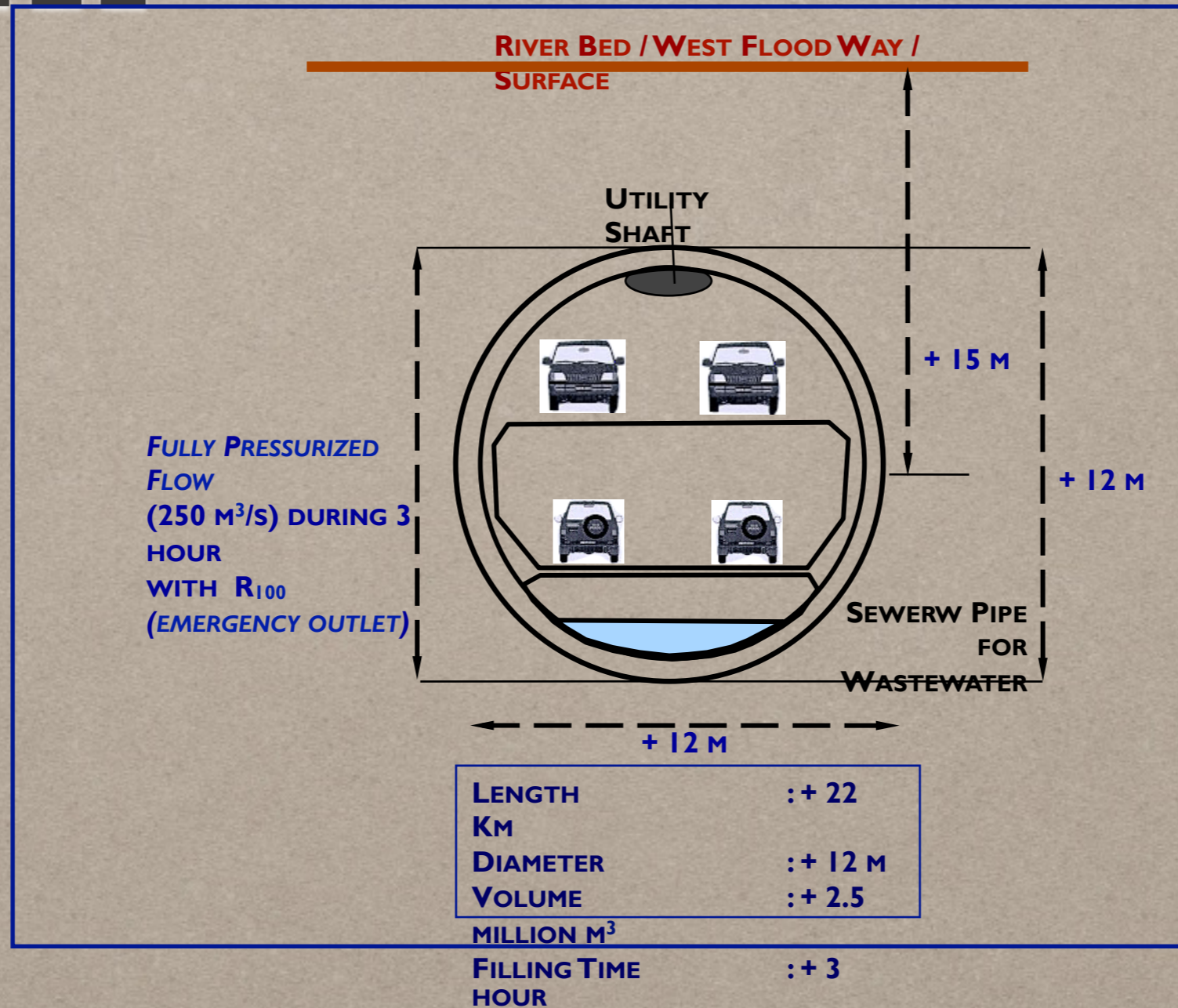
JAKARTA COASTAL DEVELOPMENT



JAKARTA MULTI PURPOSE DEEP TUNNEL

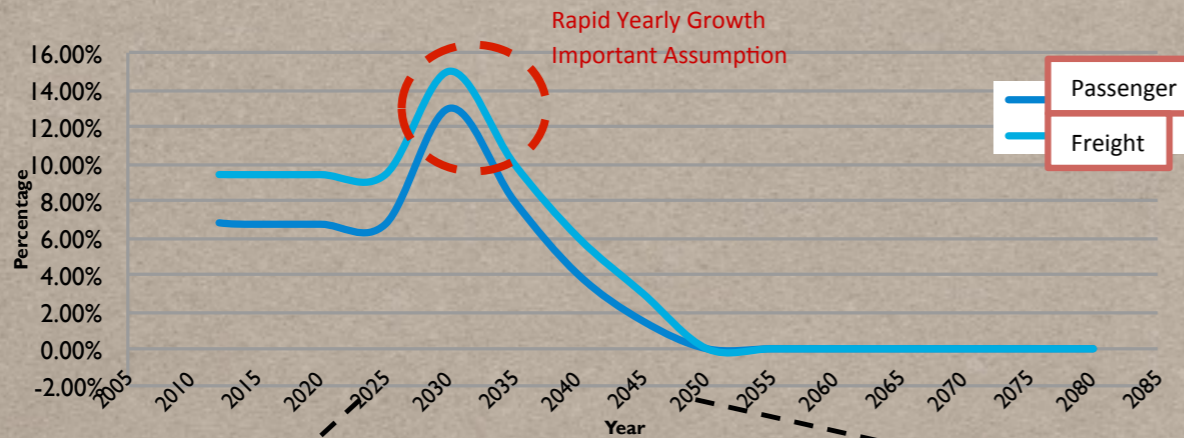


JAKARTA MULTI PURPOSE DEEP TUNNEL

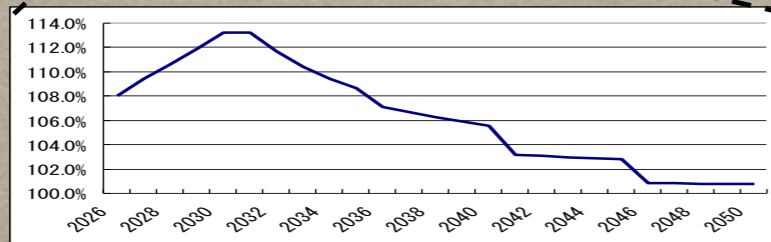


SUNDA STRAIT BRIDGE INVESTMENT(2) ICHIRO GOTANDA - INFRASTRUCTURE DEVELOPMENT INSTITUTE, JAPAN

Traffic growth assumption



SOURCE: Presentation, ANALISA INVESTASI PEMBANGUNAN JEMBATAN SELAT SUNDA 17 September 2012



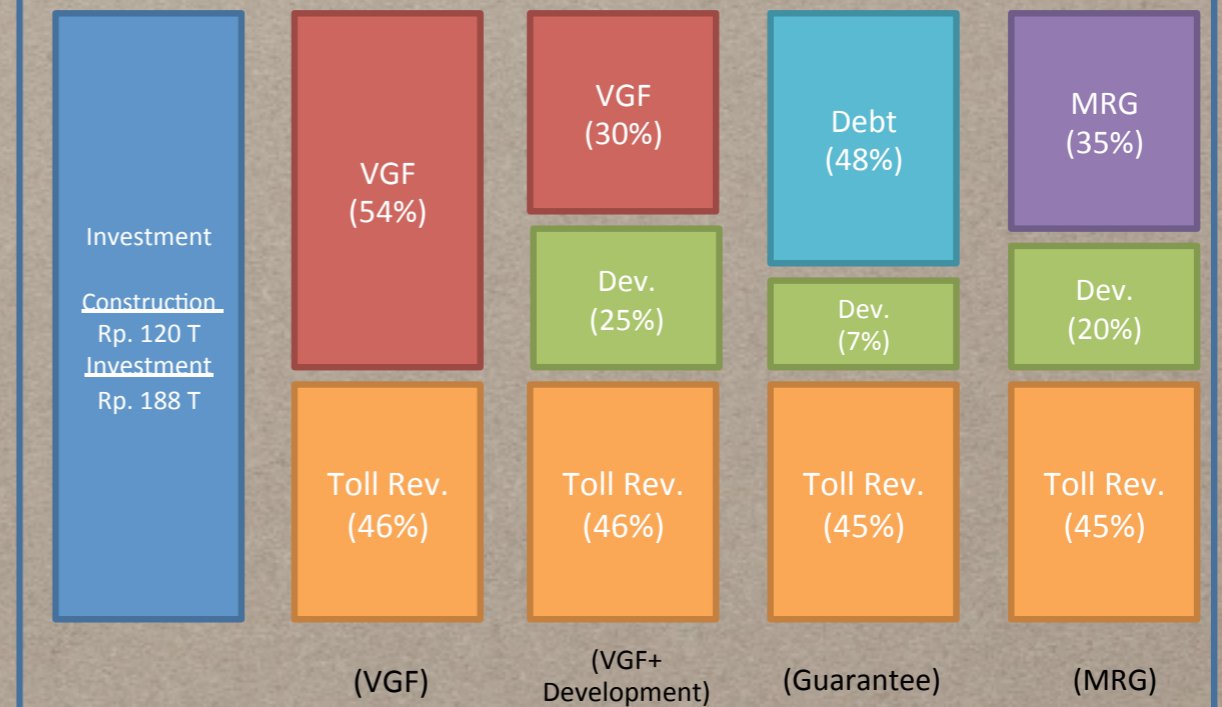
Recommendation

- Traffic growth assumption was too optimistic
- Construction Cost [Rp. 126 T < METI (Rp. 222 T)]
- OM Cost 20% revenue → Proposed 0.3 % Construction Cost
- Debt-Equity ratio 70:30 → Proposed 80:20

ANALISA KELAYAKAN INVESTASI

	Biaya Konstruksi *2012	FIRR
Analisa Investasi (2012)	Rp. 120 T	11.94 %
Financial Modeling based on AI (2012)	Rp. 126 T	6.4 %
METI optimistic (2011)	Rp. 167 T	4.9 %
METI Base (2011)	Rp. 222 T	3.3 %

FINANCIAL MODEL





THANK YOU

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