

ASISTANCE IN PREPARING PUBLIC PRIVATE PARTNERSHIP (PPP) PROJECT YEAR 2016

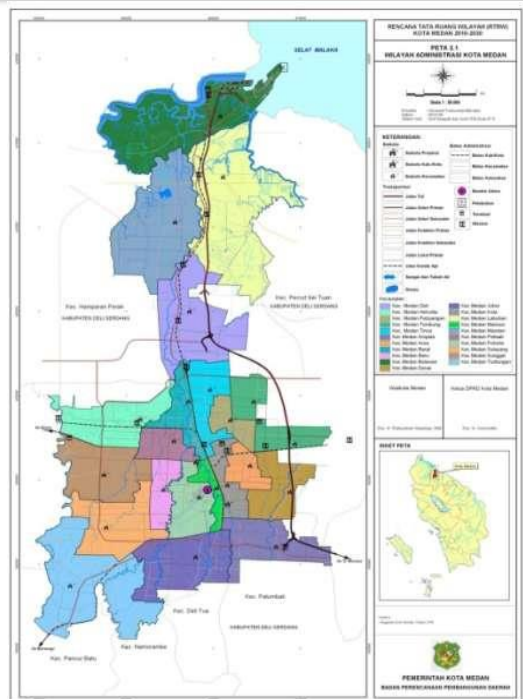


Information Memorandum Integrated Urban Transportation City of Medan (Rail and Bus)

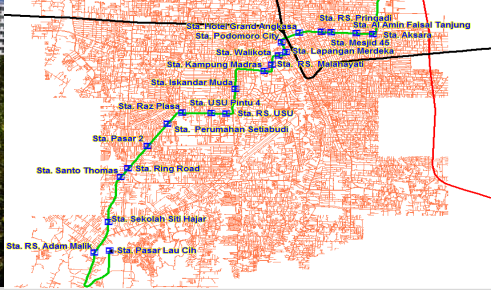
Project Name	: Light Rail Transit (LRT) and BRT Medan
Government Contracting Agency	: Mayor of Medan City
Preparation Agency	: National Development Planning / Bappenas
Project Cost	: IDR 6,4 Trillion
Concession Period	: 35 years
FIRR Project	: 12.7%
Location	: Medan City, North Sumatera

1. Backgrounds

Medan city has a population of 2.5 million people with population density of 8.008 inhabitants/km². 98% of community mobility uses private vehicles, thus it predicted that Grid Lock will be occurred in 2024. Mass transit based transportation system has been planned in city's RPJPD (Long Term Regional Development Plan) 2006-2025 and 2011-2015 RPJMD (Mid-term Regional Development Plan). The development includes infrastructure development for Bus Rapid Transit (BRT), developed by the of the city government of Medan. The development of rail-based transportation is expected to complement the existing public transportation systems without consuming large space in road.



Picture 1 Medan City Map



2. Project Objective

The project is expected to be a solution of overcome traffic congestion and to reduce the threat of gridlock in 2024 in city of Medan

3. Project Description

The main development of this project is the construction of Medan Light Rail Transit (LRT) for 22.74 km, which consist of:

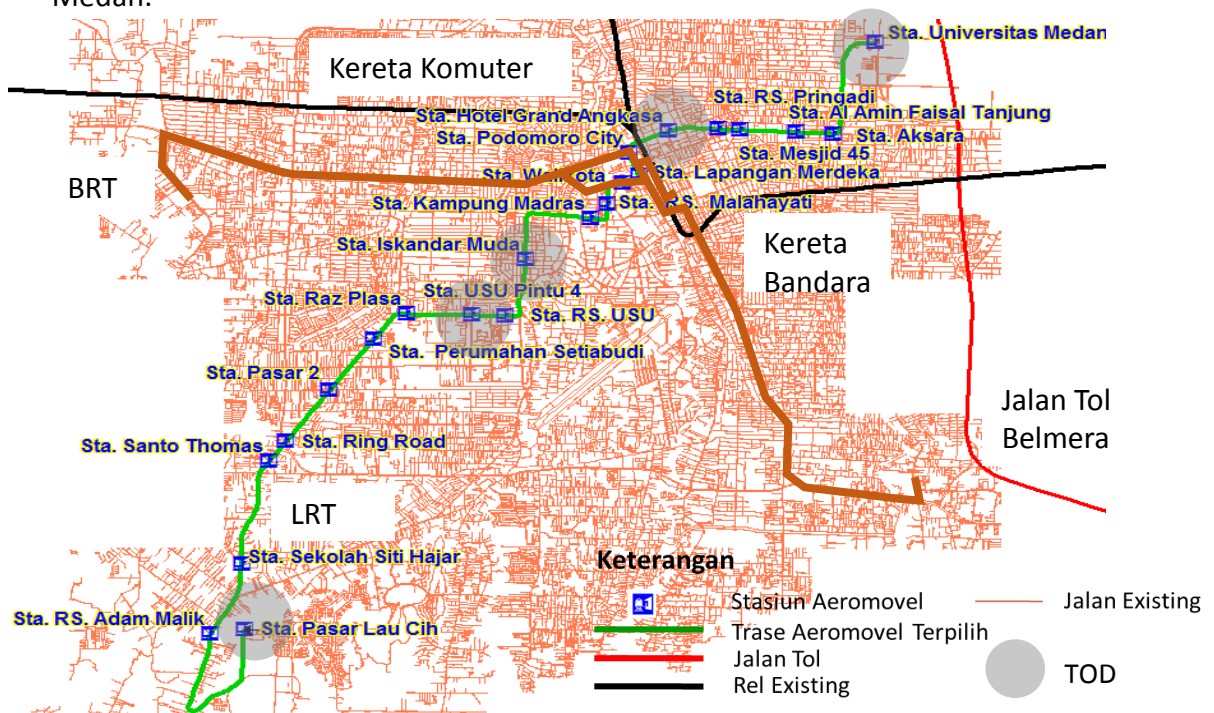
1. Third Contact Rail System Facility, hardware, tools and supporting structure tools, third rail contact trace and related facilities;
2. Positive and negative electrical feeder connection of in substation transactions;
3. Circuit breaker and electrical grounding tools.

Private sectors will also construct BRT's infrastructure, provide buses and operate the BRT system.

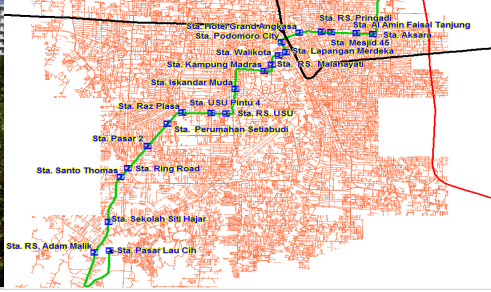
Business Entities can build, and manage TOD in land provided by the City Government of Medan.

4. Corridor Route

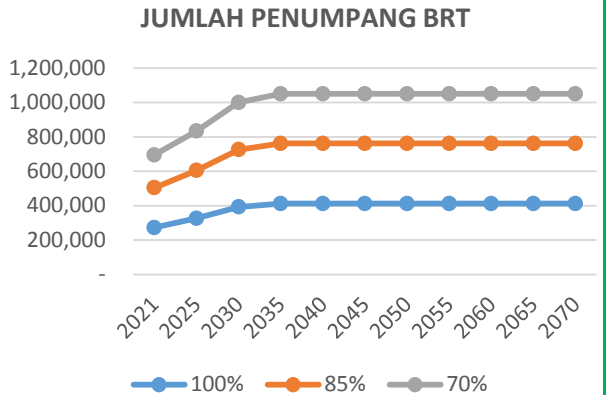
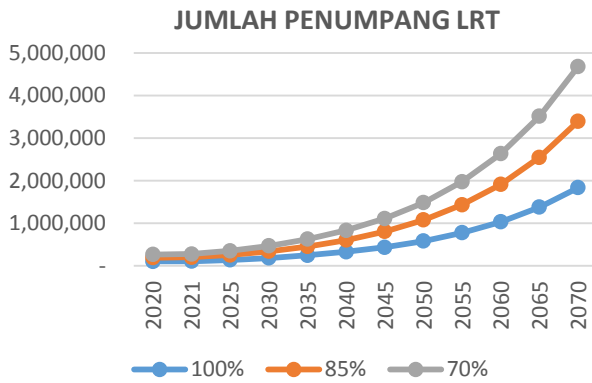
No	Nama Jalan	Kecamatan
1	Jalan William Iskandar	Medan Sunggal
2	Jalan Prof. H.M. Yamin	Medan Perjuangan
3	Jalan Perintis Kemerdekaan	Medan Timur
4	Jalan Putri Hijau	Medan Barat
5	Jalan Balai Kota	Medan Barat
6	Jalan Raden Saleh Dalam	Medan Barat
7	Jalan Kapten Maulana Lubis	Medan Petisah
8	Jalan Perdana	Medan Barat
9	Jalan Pangeran Diponegoro	Medan Polonia
10	Jalan KH. Zainul Arifin	Medan Polonia
11	Jalan Gajah Mada	Medan Baru
12	Jalan Iskandar Muda	Medan Baru
13	Jalan Jamin Ginting	Medan Baru
14	Jalan Dr. Mansyur	Medan Selayang
15	Jalan Setiabudi	Medan Selayang
16	Jalan Jamin Ginting	Medan Baru
17	Jalan Pasar Induk Lau Cih	Medan Tuntungan



Picture 2 Trace and Station Plan

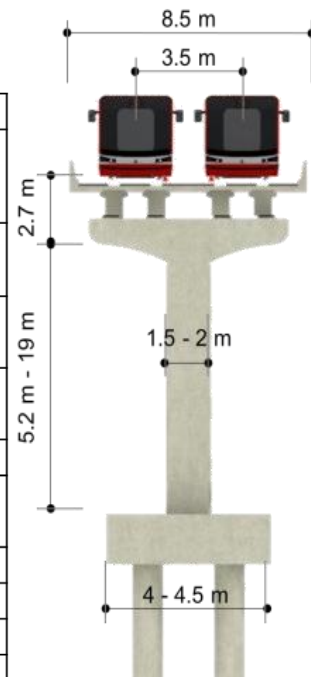


5. Demand Potential



6. Technical Specification

Lebar rel		1067 mm
Kecepatan maksimum desain		80 km/h
Radius lengkung horizontal		60 m
Panjang minimum lengkung peralihan		15 m
Peninggian maksimum	Jalur KA raya	110 mm
	Platform	70 mm
Radius minimum legkung vertical		1000 m
Gradien maksimum	di lintas	40‰
	di stasiun	1.5‰
	di depo	60‰
Sudut Wesel		#10
Tipe Jalan rel		Direct Fixation Track



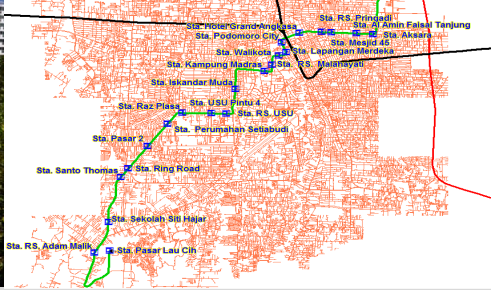
Picture 4 Design Criteria Summary

7. Land Status

Most of the land has been acquired by government, including the depot location

8. Environment Study

AMDAL study will be completed in 2017



9. Project Scheme

Cooperation of scheme alternative is BOT to support the availability of land for development TOD from the government for 35 years.

10. Financial Review

BUNDLING (LRT+BRT)		25 th	30 th	35 th
1	EQUITY IRR	8,2%	11,2%	12,7%
2	EQUITY NPV (juta rupiah)	(592.359)	569.200	1.768.416
3	PROJECT IRR	13,1%	14,1%	14,7%
4	PROJECT NPV (juta rupiah)	1.784.940	2.946.499	4.145.715
		<i>Not Accept</i>	<i>Not Accept</i>	<i>Accept</i>
5	Average DSCR	2,77		
6	Minimum DSCR	1,27		
7	Payback Period (years)	16,47		

11. Government Support

Government support is provided in the form of land for TOD in the center of the city and a few other areas that can be built and managed by Business Entities.

12. Government Guarantee

The risks that would be guaranteed are:

- Political and regulation risks. Unstable political conditions may change regulations which might cause downside risks for the project.
- Tariffs risk and adjustments. The risk in delaying or not applying tariff's adjustment in accordance with the inflation rate adjustment in every 2 years.
- TOD Risk: TOD land ownership risk and delaying right of use of TOD land risk.

13. Schedule of Activities

	2016	2017	2018	2019	2020
LRT	Design	Tender	Construction		Operation
BRT	Design	Tender	Construction	Operation	