

Chapter 10. Summary

10.1 Overview of study results

This report summarizes the findings of a preliminary Study for a Jakarta Integrated Urban Transport Hub development project in Republic of Indonesia, taking the area of Dukuh Atas Station as a model (PPP infrastructure project). The study was conducted in close coordination with PT. Mass Rapid Transit Jakarta (PRT.MRJ) so there would be no major change in the bid details for the MRT North-South Line, for which a bid has already been submitted as part of Japanese Official Development Assistance (ODA). As there is not enough information on the Serpong-Bekasi Line planning, Airport Line planning, Monorail (BRT) planning and city center expressway planning to permit detailed planning coordination, this study was conducted using estimates of the space for each of these projects. Mutual coordination will be conducted when the details of each of these plans are determined in the future.

Consensus-forming with regard to the content of the study was conducted by a Steering Committee primarily comprised of the implementing organizations on the Indonesian side: the National Development Planning Agency of the Ministry of National Development Planning (BAPPENAS), the DKI Jakarta Capital City Government (DKI Jakarta), and the Directorate General of Railways of the Ministry of Transportation (DGR). Technical and practical discussions and coordination at the working group level were conducted, centering particularly on BAPPEDA of DKI, in the promotion of the survey.

The basic project planning policies shown below were finalized based on discussions at the Steering Committee.

Facilities that must be constructed before the MRT North-South Line is put into service (underground passageways and artificial ground Phase 1) should be constructed as public facilities.

Facilities that will be subsequently expanded based on the status of railway construction (artificial ground Phase 2) will be constructed using public contributions at the time of private sector development in the surrounding area (as PPP projects).

Based on these basic policies, formulate plans for individual facilities and the preliminary design, prepare planning drawings, study the construction plans, and the calculate estimated project costs.

The study regarding environmental and social considerations will be implemented at the IEE level, and based on discussions with relevant agencies, the content to be studied at the next stage will be determined.

In this study, the effectiveness of project implementation was confirmed from the standpoint of both financial analysis and economic analysis.

In the future, a study of measures to mitigate various risks and a detailed study with relevant agencies regarding Phase 2 implementation will be needed.

Table-10.1.1 Overview of Study Results

| Item | | Overview | Status of Study by Indonesian Side | Issues | Expected Action Plan | |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Planning Conditions | Urban planning for Dukuh Atas area | Discussions with the City Planning Bureau and planning in accordance with revised planning for land use, ratio of building volume to lot and building-to-land ratio in a 500 meter radius around MRT Dukuh Atas Station. | The UDGL review (draft) has already been completed and is awaiting approval. | The increase in volume provided by the public sector contribution is a matter for discussion. | Expected to be implemented by means of an additional study of the mechanism to be established for executing the redevelopment method. |
| | | Western Line | Existing routes and Sudirman Station will be used as is. Some parts of stations will need to be improved in accordance with new flow lines for transport users. | Confirmed separately by DGR. | Confirmation is needed with regard to who will be responsible for the improvement costs for station interiors. | Expected to be confirmed through the detailed design at the next stage in anticipation of project implementation. |
| | | MRT North-South Line planning | Planning will be implemented based on the bid drawings (basic design level). | Following outsourcing at the end of 2012, detailed design is expected to be conducted starting from 2013. | Design must be coordinated with the underground passageway connecting section. | On the MRT side, detailed design will be conducted as an open area. |
| | | Serpong-Bekasi Line planning | The plan to extend the Serpong-Bekasi Line will be divided into Stage 1 and Stage 2. However, the issue of land for the underground station and the issue of coordination with the Airport Line must be resolved. This plan is being promoted on the assumption that the underground station will be constructed on the west side of Thamrin/Sudirman Street. | The findings of the JICA "Study regarding the Project to Increase Railway Transport Capacity in the Jakarta Metropolitan Sphere" have already been explained to the Indonesian side. However, there has been no specific action by DGR. | Construction underground and coordination with the Airport Line | Handled by railway company |
| | | Airport Line planning | Two routes are being studied, a high-speed rail line and a commuter line, and in each case a route passing through Dukuh Atas is most promising. Planning is being pursued on the assumption that the section on the north side of the canal will be an elevated railway. | A feasibility study is underway for the high-speed rail line on the north side. PT.KAI has begun acquiring land on the west side of Tangerang Station for the construction of the Tangerang Line connecting route. | Planning coordination with Serpong Bekasi Line and Western Line is needed in the event that the Airport Line passes through Dukuh Atas. | Handled by railway company |
| | | Monorail planning | The plan was to have the monorail run east to west on top of the embankment on the south side of the canal, but at present work has been suspended. However, it is possible that the monorail plan will be revived or changed to a BRT plan, so the space is taken into consideration in this plan. | The project is currently suspended, but it may be restarted. | Feasibility of project and confirmation of schedule | Expected to be confirmed through the detailed design at the next stage in anticipation of project implementation. |
| | | High-speed rail line | In the plan to construct a "bullet train" line between Jakarta and Bandung, the name of Dukuh Atas was raised as a possible station of origin on the Jakarta end. However, this would be difficult due to space limitations, and it is not taken into consideration in this plan. | Ranked similarly by the Steering Committee | Feasibility of project and confirmation of schedule | Expected to be confirmed through the detailed design at the next stage in anticipation of project implementation. |
| | | City center expressway plan (PT. JTD) | Route planning for the construction of a six-lane expressway (with three lanes in each direction) passing through this area has been approved, and the expressway is expected to begin service in this area in 2016. The design will be conducted sometime after the spring of 2013, so for the purposes of this study planning was promoted based on existing references. | Discussions among PT. JTD, MPW and DGR will be held in the near future | Under the expressway plan, bridge piers will be placed within the canal, but this has not been approved by MPW. If the bridge piers are placed on top of the embankment, they will be very close to the railway. | Handled by expressway company |
| Transjakarta plan | The Transjakarta Line 1 is expected to be abolished when the MRT begins service. It has been proposed that Dukuh Atas Station for Line 4 and Line 6 be moved to the new artificial ground. | Approved by the Steering Committee | As the Transjakarta is part of the network, it is possible that Line 1 will not be abolished even when the MRT | The question of whether to abolish Line 1 involves major policy issues, so this should be confirmed through the detailed design at the next | | |

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|---|----------------------------------|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | | | has been completed. | stage in anticipation of project implementation. |
| | | Canal restrictions | Planning is being conducted while accommodating requests to not place the bridge piers in the channel, separate it from the HWL, propose dredging methods and so on. | Confirmed independently with MPW | Permission is needed to use the space over the canal and to build near the canal walls. | Expected to be confirmed through the detailed design at the next stage in anticipation of project implementation. |
| 2 | Planning policy | Public transport transfer facilities | Facilities have been proposed to make it easier for users to transfer between the independently planned means of transport. | In general, has been approved by the Steering Committee. | A detailed study of each facility is needed. | Expected to be confirmed through the detailed design at the next stage in anticipation of project implementation. |
| | | Station area development | Measures have been proposed to introduce private sector vitality into low-density blocks in the station area and pursue development using a rights conversion method, collecting public contributions and thereby reducing the public works construction burden. | In general, has been approved by the Steering Committee. | A study that includes a project evaluation in terms of facilities to be introduced, scale, etc., is needed. | Expected to be implemented by means of an additional study of the mechanism to be established for executing the redevelopment method. |
| 3 | Planning/Design | Underground passageway planning | An underground connecting passageway linking the existing Sudirman Station and Dukuh Atas Station on the MRT North-South Line has been proposed. | Has been approved by the Steering Commit | Establishment of interior furnishing, equipment grade. | Expected to be confirmed through the detailed design at the next stage in anticipation of project implementation. |
| | | Artificial ground planning | Use of the space over the canal to construct artificial grounds as spaces for transfer between railway stations and bus, taxi and other means of transport, and as connecting spaces to link separated regions, has been proposed. | Has been approved by the Steering Committee. | Establishment of the suitability of detailed sections, detailed structure, equipment, etc. | Expected to be confirmed through the detailed design at the next stage in anticipation of project implementation. |
| 4 | Construction planning | Underground passageway construction planning | With regard to the underground passageway, the cut-and-cover method and non-cut-and-cover methods have been proposed out of consideration for the impact on above-ground transit. | Already described the cut-and-cover method in the Steering Committee. Must be approved by the governor. | Whether to minimize the impact on above-ground transport or to choose a method that involves lower construction costs and will enable completion before the start of MRT service. | Expected to be confirmed through the detailed design at the next stage in anticipation of project implementation following the finalization of policy. |
| | | Artificial ground construction planning | A method in which a temporary pier will be provided has been proposed for construction of the artificial ground over the canal. | Construction method has been explained to MPW, which manages the canal, and in general approval has been obtained. | The locations of the artificial ground piles and girders will change depending on the location of the expressway and monorail substructures. The method of construction used for girders will also change depending on the timing of the construction of these items. | Discussions will be held in order to finalize the type of foundation structure, shape and location for each project. Consultations in the new study committee of MPW. |
| 5 | Estimation of project costs | Estimation of project costs for public works construction portion | The estimated project costs for the public facilities portion to be constructed in time for the start of MRT service will be calculated. | Already described in the Steering Committee. Must be approved by the governor. | | Expected to be confirmed through the detailed design at the next stage in anticipation of project implementation. |
| | | Estimation of project costs for expansion portion | The estimated project costs for the public facilities expansion portion to be constructed after 2020, when the means of public transport other than the MRT are expected to begin service, will be calculated. | Already described in the Steering Committee. Must be approved by the governor. | | Expected to be confirmed through the detailed design at the next stage in anticipation of project implementation |
| 6 | Private sector facility planning | Integrated station and community development | High density development of the railway station area is being planned in order to improve convenience and convert the area into a public transport oriented community. | Has been approved by the Steering Committee. | What to do about specific facility introduction and use configuration | Expected to be implemented by means of an additional study of the mechanism to be established for executing the redevelopment |

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|----|----------------------------------------|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| | | | | | | method. |
| 7 | Environmental and social consideration | Environmental and social consideration | An IEE level study will be conducted and scoping will be conducted to propose Terms of Reference (TOR) for the EIA. | Already described in the Steering Committee. Details will be coordinated with BPLHD. | An EIA is needed at an early date in anticipation of project implementation. | An EIA will be implemented at an early date by DKI. |
| 8 | Project scheme | Public/private division of roles | A public/private sector division of roles is being proposed in which the transport nodes will be divided into those that will be constructed independently by the public sector as infrastructure facility construction and those that are advantageous for even private sector development, thereby reducing the public sector financing burden. | In general, has been approved by the Steering Committee. | Detailed discussions and study that include relevant departments are needed. | Expected to be implemented by means of an additional study of the mechanism to be established for executing the redevelopment method. |
| | | Project program | A project program is being proposed in which the public sector contribution is appropriated from the private sector for Phase 2 public facility construction. | In general, has been approved by the Steering Committee. | Detailed discussions and study that include relevant departments are needed. | Expected to be implemented by means of an additional study of the mechanism to be established for executing the redevelopment method. |
| | | Project schedule | A project schedule that is coordinated with public facility construction in the surrounding area is being proposed. | Already described in the Steering Committee. Must be approved by the governor. | Detailed discussions and study that include relevant departments are needed. | Expected to be implemented by means of an additional study of the mechanism to be established for executing the redevelopment method. |
| 9 | Project assessment | Financial analysis | A project assessment will be conducted for investment by the private sector company in the redevelopment project, for a ratio of building volume to lot of 600%, 1000% and 1500%, from the standpoint of verifying the potential for the percentage of the public sector contribution burden and assessing validity in terms of project achievement. If the ratio of building volume to lot is 1000-1500%, securing of an equity IRR of approximately 15% can be confirmed. | Already described in the Steering Committee. Must be approved by the governor. | Detailed discussions and study that include relevant departments are needed. | The private sector company will take the lead in implementing a detailed study to finalize the project scheme. |
| | | Economic analysis | As an economic analysis, the social benefit accompanying urban redevelopment is measured, and the Economic Internal Rate of Return (EIRR) is calculated. If the EIRR exceeds 12%, there is judged to be sufficient social value. | Already described in the Steering Committee. Must be approved by the governor. | Detailed discussions and study that include relevant departments are needed. | The private sector company will take the lead in implementing a detailed study to finalize the project scheme. |
| 10 | Project effect | Project assessment | The outcome indicators thought to assess the project effect are studied and proposed and anticipated target values are established. | Already described in the Steering Committee. Must be approved by the governor. | Detailed discussions and study that include relevant departments are needed. | The private sector company will take the lead in implementing a detailed study to finalize the project scheme. |

10.2 Future response toward project implementation

Based on the results of this study, the relevant issues and the measures needed for implementation of the project in the future are shown below.

10.2.1 Public facility construction

1) Coordination of underground passageways and MRT Dukuh Atas Station

(a) Issues

For MRT Dukuh Atas Station, to which the underground passageways connect, a contract for design and construction is expected to be signed at the end of 2012 and detailed design work is expected to begin from the start of 2013. Discussions regarding the detailed design (such as adjustment of the connection locations and detailed coordination of the water shutoff system, expansion joints and other connection locations) and coordination of the timing for the construction of connecting locations are needed prior to the start of construction of Dukuh Atas Station.

(b) Action Plan

The design for the underground passageways must be contracted at an early date, and detailed design discussions with the company on the MRT Dukuh Atas Station side are needed.

2) Coordination between artificial grounds and other transport facilities

(a) Issues

An urban expressway is planned for construction above the artificial grounds, and at present the locations of the bridge piers for the urban expressway have not been finalized. Planning for this plan was conducted based on the urban expressway references that had been received. On the urban expressway side, however, discussions with relevant agencies will be held in the future, so it is very likely that changes will occur. As the detailed design for the urban expressway will be conducted starting around the spring of 2013, it will be necessary to coordinate the locations of the bridge piers, secure access routes to and from the bus stops on the urban expressway, coordinate the timing of the construction, etc.

There are also plans to construct a monorail (or BRT) above the artificial grounds, but no details have been decided yet. For this reason, discussions with the departments responsible must be held to determine how the design of the artificial grounds should be conducted.

(b) Action Plan

The design of the artificial grounds should be contracted at an early date, and detailed design discussions are needed with the company handling the urban expressway.

3) Implementation of EIA

(a) Issues

With regard to consideration for the environment and society, an IEE level study will be conducted as part of this study and scoping will be conducted to propose Terms of Reference (TOR) for the Environmental Impact Assessment (EIA).

(b) Action Plan

In accordance with the project, consultants should check it with BPLHD again.

10.2.2 Peripheral development

(a) Issues

Indonesia has not introduced the Right Conversion System for Urban Redevelopment yet. Land acquisition has been the practical methodology but the progress has been slow in spite of the efforts by the government as well as the local administrations.

The Study Team recommends this Right Conversion Methodology for Urban Redevelopment. With a purpose to promote and induce private sector investment, this Right Conversion requires a proper legal framework, institutional and organization development under Right Conversion System for Urban Redevelopment activities. It has been identified by the Study Team that this kind of Urban Redevelopment system once had been processed in late 1990s but due to the Asian financial crisis, this initiative halted in half way. If taking into account of the subsequent economic development but facing with the remaining urban poor as well as the future perspective of the city, Jakarta acutely needs its central city area redevelopment.

(c) Action Plan

Taking the foregoing into consideration, the Study Team recommends a Technical Cooperation from Japan to support Right Conversion Methodology for Urban Redevelopment containing its introduction, development, capacity development, and implementation of pilot projects to be offered parallel with the implementation of the Project. Without improved environment of the urban area, unity as a community or clear concepts, it will be difficult to see active private sector investment. Wasting simply time will not find a break-through in front of the fact that the left-over areas from development continue to exist.

This technical cooperation implementation will enhance the understanding and capacity for Public sector readiness for the urban redevelopment and thus the paving-the-ground type environment for future Private sector investment.

(1) Legal Framework Review, Analysis and Improvement

Review and confirmation on the existing legal system, review and confirmation on the legal framework development as well as study and confirmation on Japanese urban redevelopment

- Review and study on the legal system to support right conversion methodology for urban redevelopment (Civil Act, Commercial Act and other Land Acquisition Act and related laws and regulations)
- Study and Introduction of Japanese cases (Land Rezoning Law, Urban Redevelopment Law and other related laws on urban redevelopment, Study on achievements and issues of urban redevelopments)
- Study on the conformity and consistency with Indonesian urban development plan and other upper level plans, maser plans and other relevant activities.

(2) Institutional and Organizational Development

DKI to Establish a Planning and Evaluation unit and also a Supervising and Administration unit for the urban redevelopment with Technical cooperation support and recommendations

- Urban Redevelopment Planning, Appraisal and Training Unit
(Urban redevelopment policy planning, Project preparation, Project feasibility review, Implemented project evaluation, Capacity building for project implementation)
- Urban Redevelopment Execution and Administration
(Implementation of individual projects)

(3) Capacity Building for Urban Redevelopment Activity Implementation

Capacity building training for implementation of urban redevelopment projects. (Including training in Japan)

- Legal framework to support activities in Indonesia with its current situation and issues (Civil Law, Commercial Law and Land Acquisition Law)
- Japanese case (Land Rezoning Law, Urban Redevelopment Law and other related laws on urban redevelopment, Study on achievements and issues of urban redevelopments) training, and methodology and lessons learned
- Urban Redevelopment basic concepts, process for implementations
- Basic structure drafting (development and construction sites, development framework, building usage etc.
- Market Analysis and Market transaction flow and processes
- Feasibility study
- On-site review, land survey, legal documents review
- Registration of property for implementation, Rationalization of illegal occupiers
- Project implementation methodology, Project planning document preparation
- Project cost estimate
- Project implementation structure

(4) Pilot Project Implementation and Review on Effectiveness

One or a few Pilot projects can be selected and their implementation, for example. This Project as the first pilot project for implementation.

- a) Formulation of draft policy proposal (including Presidential order, etc.)
- b) Consistency with city planning laws and other upper level planning and Master Plan (including consistency with other projects)
There must be good prospects for project realization at the stage at which changes are made to the actual Master Plan.
- c) Preparation of basic conceptual diagram
Finalization of development site and construction site, finalization of development frame, and finalization of use configuration are needed, and market surveys for each type of use and real estate liquidation market surveys, etc., for this purpose are needed.
- d) Confirmation of legal basis and re-examination of single feasibility study
- e) Reassessment of project feasibility
- f) Survey of existing conditions, surveying and rights survey
Registry of proof of title, legitimization of squatters' rights.
- g) Project methods and preparation of draft project plan
- h) Calculation of project costs
- i) Establishment of project organization

10.3 Study Application to the Other Areas

10.3.1 BLOK M

1) Current Situation

Blok M is an area situated in the south end of Jakarta's central district, and is a center to commerce and public bus network to the southern areas of the city. It is also the departure and arrival terminal station for Transjakarta's corridor 1 busway, connecting Blok M to the Northern old city center Kota station in distance of 6km, 8 busway stations in about 20minutes.

The Blok M area belongs to the Kebayoran Baru of the Jakarta Selatan District, which was developed during the 1950s under

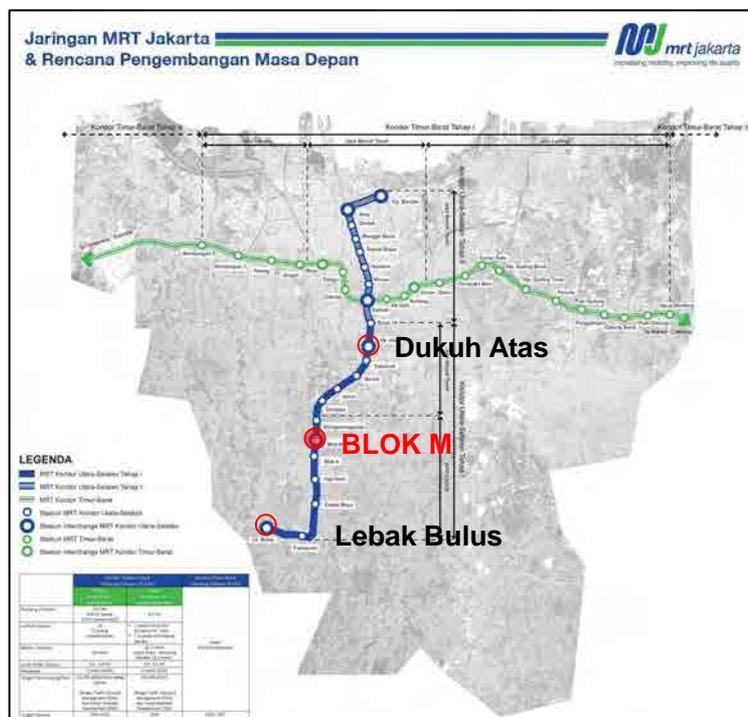


Figure 10.3.1 BLOK M Area (Source:<http://www.jakartamrt.com/>)

the government in a block development plan from Blok A to Blok S, and Blok M situated in the center evolved into a commercial and transport center. Large high class housings are also seen around the area.

The area consists of bus terminal in the center, and large commercial department stores like BLOCK M MALL, PLAZA BLOCK M, PASARAYA surrounding it.

The bus terminal itself is 1 story high, 2 stories underground, situated in the land owned by the DKI government, and is developed by a PPP 30 years BOT scheme by private company PT Langgeng Ayom Lestari in 1993. For the underground floors other than for parking usage, underground malls a built in 2 levels. The bus terminal itself is under the Transportation Department of DKI

In the future plan, the elevated MRT North-south line station of Blok M is planned along Jalan Panglima Polim. According to DKI, Bappeda, Transjakarta koridor1 would be discontinued, once MRT North-South line would be established, but the new planned koridor 15 (Blok M—Cilewung) would be using the existing bus terminal in the future. Along with other Metro-mini and Kopaja busses, Blok M would play an even more important role as a transport hub station of Jakarta's sub center, as it is located just in the middle of Dukuh Atas and Lebak Bulus, the starting point of MRT north-south line.

Under the UDGL now in progress, land use and volume etc, is to be reviewed once again concentrating in the 300m radius area around the new MRT station and existing bus terminal. Area between the MRT station and the bus terminal is to stay as commercial and for the area west of MRT station is to be set as mixture usage of residential and commercial

BLOK M Existing Situation



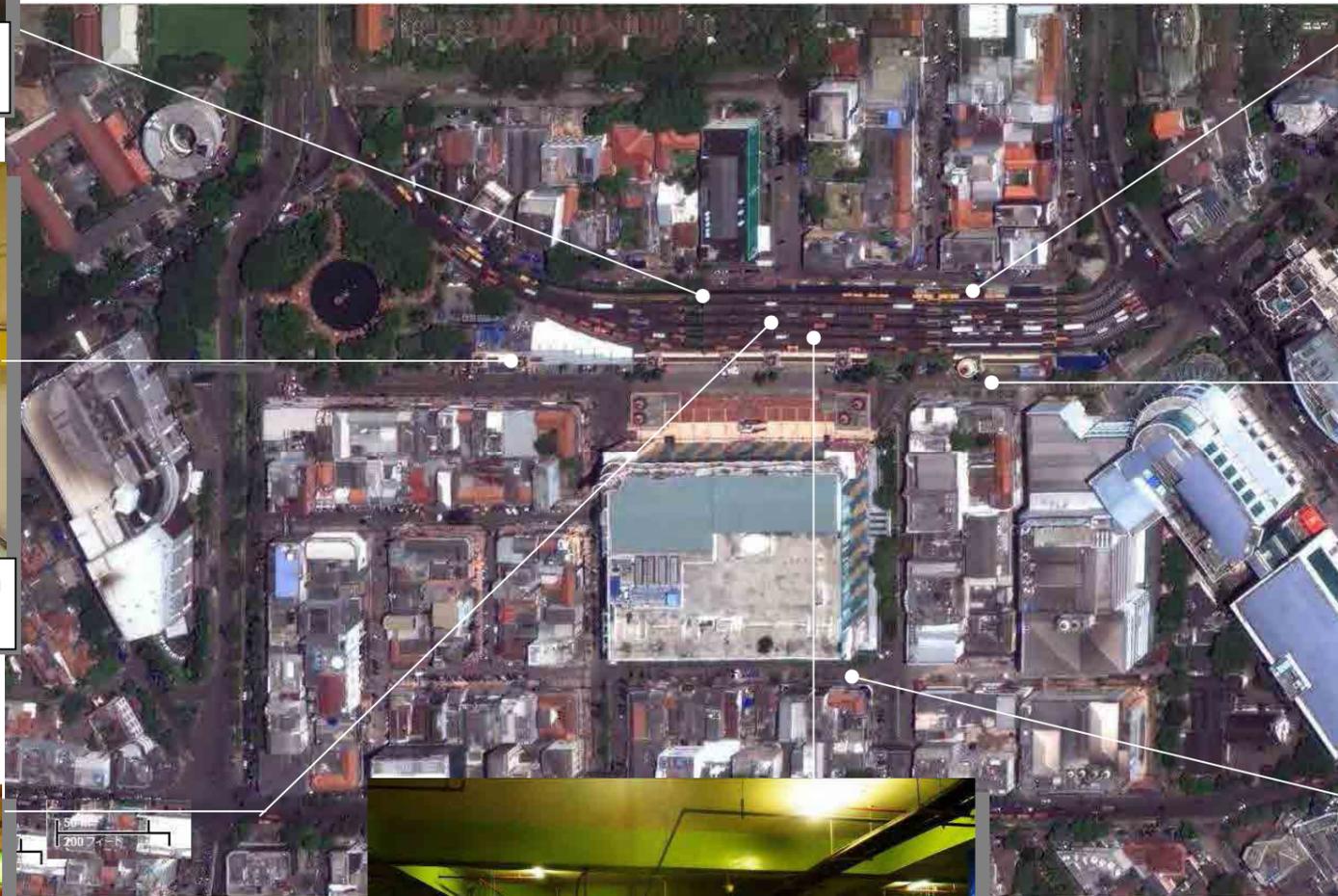
Blok M Mall also expands in 2 floor levels underground the bus terminal



Transjakarta koridor1 has an individual platform in the bus terminal.



Entrance to the underground Blok M Mall exist on east and west, both sides of the bus terminal.



The partial area between Blok M Mall and the bus terminal is kept car-free.



Direct access is provided from the underground mall to the bus island.



The underground mall of Blok M mall under the bus terminal is connected to the building itself via underground parking



The backside area of Block M is used as a parking space and is not pedestrian friendly.

Figure 10.3.2 BLOK M Existing Situation (Source: Study Team)



Figure 10.3.3 BLOK M UDGL LAND USE PLAN

(Source: PRK Pengembangan Koridor MRT Jakarta versi februari 2012 draft)

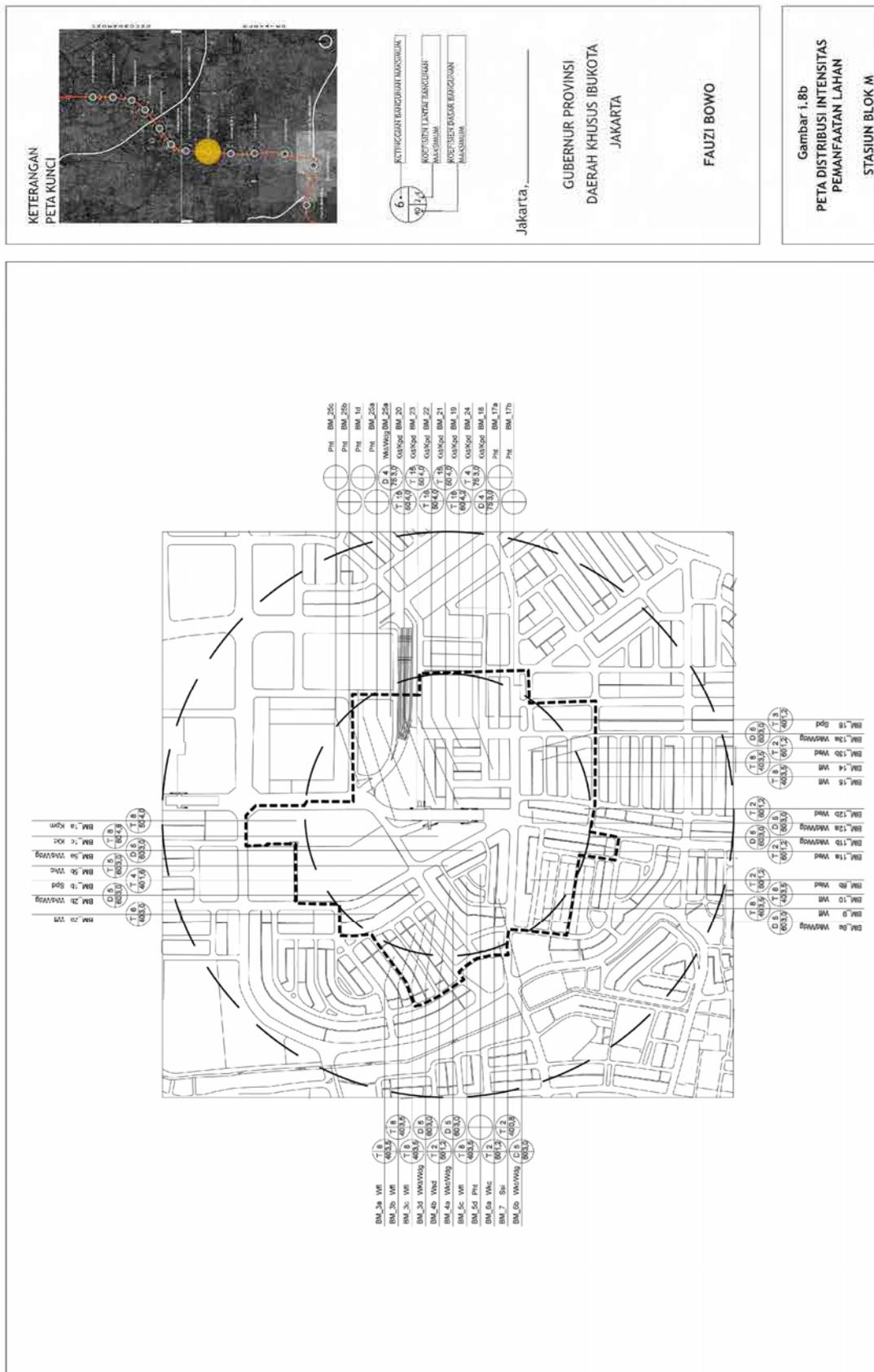


Figure 10.3.4 BLOK M UDGL VOLUME PLAN
(Source: PRK Pengembangan Koridor MRT Jakarta versi februari 2012 draft)

Table 10.3.1 BLOK M UDGL PLANNING SHEET

(Source: PRK Pengembangan Koridor MRT Jakarta versi februari 2012 draft)

| NAMA KAVLING | | | LUAS LAHAN / KAPLING | RENCANA PENGEMBANGAN | | | | | | |
|--------------|------------------|------------|-------------------------|----------------------|-----|---------------|------------|-------------|-------------------|------------------|
| BLOK | NOMOR KAPLING | PERUNTUKAN | | INTENSITAS | | | | LUAS LANTAI | | |
| | | | | T/D | KDB | KLB | TB | Dasar | Total | |
| BLOK M | BM_1 | a | 26.411 | Kpm | T | 50 | 4,0 | 8 | 13.205,50 | 105.644,0 |
| | | b | 33.807 | Spd | T | 40 | 1,6 | 4 | 13.522,80 | 54.091,2 |
| | | c | 11.430 | Kkt | T | 60 | 4,8 | 8 | 6.858,00 | 54.864,0 |
| | | d | 964 | Pht | | | 0,0 | | - | - |
| | BM_2 | a | 12.100 | Wfl | T | 40 | 3,0 | 6,0 | 4.840,00 | 36.300,0 |
| | | b | 1.644 | Wkt/Wdg | D | 60 | 3,0 | 5 | 986,40 | 4.932,0 |
| | BM_3 | a | 9.383 | Wfl | T | 40 | 3,5 | 8,0 | 3.753,20 | 32.840,5 |
| | | b | 9.519 | Wfl | T | 40 | 3,5 | 8,0 | 3.807,60 | 33.316,5 |
| | | c | 5.673 | Wfl | T | 40 | 3,5 | 8,0 | 2.269,20 | 19.855,5 |
| | | d | 2.730 | Wkt/Wdg | D | 60 | 3,0 | 5 | 1.638,00 | 8.190,0 |
| | BM_4 | a | 9.201 | Wkt/Wdg | D | 60 | 3,0 | 5 | 5.520,60 | 27.603,0 |
| | | b | 3.492 | Wsd | T | 60 | 1,2 | 2 | 2.095,20 | 4.190,4 |
| | BM_5 | a | 3.269 | Wkt/Wdg | D | 60 | 3,0 | 5 | 1.961,40 | 9.807,0 |
| | | b | 1.805 | Wkc | T | 60 | 1,2 | 2 | 1.083,00 | 2.166,0 |
| | | c | 2.870 | Wfl | T | 40 | 3,5 | 8,0 | 1.148,00 | 10.045,0 |
| | | d | 1.631 | Pht | | | 0,0 | | - | - |
| | BM_6 | a | 2.396 | Wkc | T | 60 | 1,2 | 2 | 1.437,60 | 2.875,2 |
| | | b | 5.939 | Wkt/Wdg | D | 60 | 3,0 | 5 | 3.563,40 | 17.817,0 |
| | BM_7 | | 2.768 | Ssi | T | 40 | 0,8 | 2 | 1.107,20 | 2.214,4 |
| | BM_8 | a | 7.941 | Wkt/Wdg | D | 60 | 3,0 | 5 | 4.764,60 | 23.823,0 |
| | | b | 3.047 | Wsd | T | 60 | 1,2 | 2 | 1.828,20 | 3.656,4 |
| | BM_9 | | 7.409 | Wfl | T | 40 | 3,5 | 8,0 | 2.963,60 | 25.931,5 |
| | BM_10 | a | 7.531 | Wfl | T | 40 | 3,5 | 8,0 | 3.012,40 | 26.358,5 |
| | | b | 7.731 | Wfl | T | 40 | 3,5 | 8,0 | 3.092,40 | 27.058,5 |
| | | c | 4.818 | Wfl | T | 40 | 3,5 | 8,0 | 1.927,20 | 16.863,0 |
| | | d | 8.251 | Wfl | T | 40 | 3,5 | 8,0 | 3.300,40 | 28.878,5 |
| e | | 8.365 | Wfl | T | 40 | 0,8 | 2 | 3.346,00 | 6.692,0 | |
| BM_11 | a | 3.631 | Wsd | T | 60 | 1,2 | 2 | 2.178,60 | 4.357,2 | |
| | b | 4.250 | Wkt/Wdg | D | 60 | 3,0 | 5 | 2.550,00 | 12.750,0 | |
| BM_12 | a | 4.760 | Wkt/Wdg | D | 60 | 3,0 | 5 | 2.856,00 | 14.280,0 | |
| | b | 3.184 | Wsd | T | 60 | 1,2 | 2 | 1.910,40 | 3.820,8 | |
| BM_13 | a | 5.183 | Wkt/Wdg | D | 60 | 3,0 | 5 | 3.109,80 | 15.549,0 | |
| | b | 2.975 | Wsd | T | 60 | 1,2 | 2 | 1.785,00 | 3.570,0 | |
| BM_14 | | 7.442 | Wfl | T | 40 | 3,5 | 8,0 | 2.976,80 | 26.047,0 | |
| BM_15 | | 7.800 | Wfl | T | 40 | 3,5 | 8,0 | 3.120,00 | 27.300,0 | |
| BM_16 | | 8.815 | Spd | T | 40 | 1,2 | 3 | 3.526,00 | 10.578,0 | |
| BM_17 | a | 1.079 | Pht | | | 0,0 | | - | - | |
| | b | 902 | Pht | | | 0,0 | | - | - | |
| BM_18 | | 6.744 | Kkt/Kpd | D | 75 | 3,0 | 4 | 5.058,00 | 20.232,0 | |
| BM_19 | | 18.617 | Kkt/Kpd | T | 60 | 4,2 | 16 | 11.170,20 | 78.191,4 | |
| BM_20 | | 8.958 | Kkt/Kpd | T | 50 | 4,0 | 15 | 4.479,00 | 35.832,0 | |
| BM_21 | | 2.757 | Kkt/Kpd | T | 50 | 4,0 | 15 | 1.378,50 | 11.028,0 | |
| BM_22 | | 2.820 | Kkt/Kpd | T | 50 | 4,0 | 15 | 1.410,00 | 11.280,0 | |
| BM_23 | | 7.303 | Kkt/Kpd | T | 50 | 4,0 | 15 | 3.651,50 | 29.212,0 | |
| BM_24 | | 5.168 | Kkt/Kpd | T | 75 | 3,0 | 4 | 3.876,00 | 15.504,0 | |
| BM_25 | a | 11.827 | Pht | | | 0,0 | | - | - | |
| | b | 165 | Pht | | | 0,0 | | - | - | |
| | c | 372 | Pht | | | 0,0 | | - | - | |
| BM_26 | | 14.579 | Wkt/Wdg | D | 75 | 3,0 | 4 | 10.934,25 | 43.737,0 | |
| TOTAL | | | 331.456 | | | 47.97% | 2,9 | | 159.001,95 | 949.281,5 |

2) Proposal Plan for the Future Development

Understanding the current situation and existing future plans of the Blok M area, priority plan for 2017 and future plan for 2020 as under can be proposed;

(1) 2017~Construction of the passenger flow line connection from MRT to the bus terminal (Pedestrian flyover deck)

The priority improvement plan for the MRT to be in service would be establishing the connection from the elevated MRT station to the current bus terminal. At first, the north side area, including the public park area which belongs to DKI could be used to establish a pedestrian flyover. The connection point to the bus terminal should be well coordinated with the new transjakarta koridor 15 station.

Also, the other primary connection from the elevated MRT station should be to Blok M Plaza and educational facility area across the road on the north west side.

(2) 2017~ Construction of a complete car free area, the GREEN CORRIDOR

After the construction of the Pedestrian Flyover, the south side of the bus terminal connecting to the MRT station can be established also as an car free area, safe for pedestrians to have amenity environment and free to stay and spend time, different in purpose from the pedestrian flyover which to have a quick and short connection as possible between the facilities.

(3) 2020~Developing the existing park into a vertical GREEN HILL CORE

For the next phase, when the MRT north south line would be completely connected in all phases and Jakarta's transport network being fully developed as also in Dukuh Atas, increasing passenger demand also in Blok M, surrounding private development should be guided.

The park in the north east area would act as a vertical connection, GREEN HILL CORE connecting elevated MRT station and ground level smoothly, and the mixture usage area next to the park could be developed under the Japanese redevelopment type 1 (rights conversion) scheme, united with the GREEN HILL CORE development.

(4) 2020~Floor bonus for linkage terminal front redevelopment, direct connection residence, PPP renewal of bus terminal

Also at this phase, south side area of the bus terminal, including Blok M Mall can be redeveloped from the MRT station side in a linkage development scheme of the Japanese redevelopment type 1 (right conversion), allowing to save land space for temporally shops during relocation and construction in the same area. The current planned KLB under UDGL in the area is 300%, 400%, but giving KLB of 1000%~600%, renewal of the Bus terminal that has ended it's BOT contract can be possible by the developers. For the residential area on the south west side, having the potential of the good connection to the MRT station, These housing can be converted into high volume residential under the Japanese redevelopment type1 (rights conversion). This development can be also bundled with the Blok M Mall area redevelopment with the PPP renewal of the bus terminal.



THE GREEN CORRIDOR BLOK M PROPOSAL PLAN

- 1) Construction of the passenger flow line connection from MRT to the bus terminal (Pedestrian flyover deck)
- 2) Construction of a complete car free area, the GREEN CORRIDOR
- 3) Developing the existing park into a vertical GREEN HILL CORE
- 4) Floor bonus for linkage terminal front redevelopment, direct connection residence, PPP renewal of bus terminal

Figure 10.3.5 BLOK M PROPOSAL PLAN ((Source: Study Team))

Lebak Bulus Existing Situation



JL Pasar Jumat in front of the bus terminal is an important link to the Pamulang area in the south. Due to its under 4 lane road, heavy traffic congestion during peak time.



Fire station is situated in front of the bus terminal, on the DKI land area.



Transjakarta koridor 8 station connects Lebak Bulus to Harmoni.



The Outer ring Toll Road separating the Lebak Bulus area in the north east.



Lebak Bulus bus terminal provides bus connection from short distance to long distance destination like Sutabaya, Yogyakarta



The Carrefour shopping market on the north side consisting of large land area.



DKI stadium, swimming pool, next to the bus terminal.



High volume apartments and Point Square shopping mall.

Figure 10.3.7 Lebak Bulus Existing Situation ((Source: Study Team))

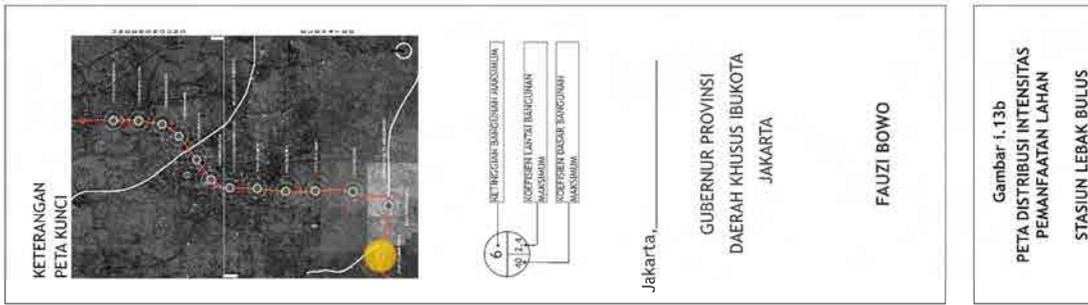


Figure 10.3.9 Lebak Bulus UDGL VOLUME PLAN

(Source: PRK Pengembangan Koridor MRT Jakarta versi february 2012 draft)

Table-10.3.2 Lebak Bulus UDGL PLANNING SHEET

(出典 : PRK Pengembangan Koridor MRT Jakarta versi februari 2012 draft)

| NAMA KAWLING | | LUAS LAHAN / KAPLING | RENCANA PENGEMBANGAN | | | | | | | |
|--------------|---------------|----------------------|----------------------|------------|---------------|-------------|--------|----------------|----------------|--|
| BLOK | NOMOR KAPLING | | PERUNTUKAN | INTENSITAS | | | | LUAS LANTAI | | |
| | | | | T/D | KDB | KL B | TB | Dasar (m2) | Total (m2) | |
| LEBAK BULUS | LB_1 | a | Kkt/Kp d | T | 50 | 2,0 | 4 | 19.539 | 78.156 | |
| | | b | Flu | | 0 | 0,0 | 0 | - | - | |
| | LB 2 | | Ssi | T | 40 | 1,6 | 4 | 1.983 | 7.931 | |
| | LB 3 | | Spd | T | 40 | 2,0 | 3 | 2.421 | 12.106 | |
| | LB 4 | | Kkt/Kp d | T | 50 | 4,0 | 25 | 16.584 | 132.672 | |
| | LB 5 | | Kpm | T | 40 | 1,6 | 4 | 6.289 | 25.157 | |
| | LB 6 | | Kpm | T | 40 | 1,6 | 4 | 1.580 | 6.318 | |
| | LB 7 | | Wsn | T | 40 | 4,0 | 25 | 12.232 | 122.316 | |
| | LB 8 | | Wsn | T | 40 | 4,0 | 25 | 5.023 | 50.232 | |
| | LB 9 | | Kpm | T | 40 | 1,6 | 4 | 7.690 | 30.758 | |
| | LB 10 | | Ssi | T | 40 | 1,6 | 4 | 855 | 3.421 | |
| | LB 11 | | Wsn | T | 40 | 4,0 | 25 | 3.486 | 34.860 | |
| | LB 12 | | Kkt/Kp d | T | 50 | 4,0 | 25 | 21.582 | 172.652 | |
| | LB_13 | a | Kul | T | 20 | 2,5 | 24 | 3.197 | 39.965 | |
| | | b | Flu | | 0 | 0,0 | 0 | - | - | |
| | LB_14 | a | Wsn | T | 40 | 4,0 | 25 | 2.036 | 20.356 | |
| | | b | Wsn | T | 40 | 4,0 | 25 | 7.492 | 74.924 | |
| | | c | Flu | | 0 | 0,0 | 0 | - | - | |
| d | | Spd | T | 40 | 1,6 | 4 | 3.390 | 13.558 | | |
| LB 15 | | Wsn | T | 40 | 4,0 | 25 | 4.869 | 48.688 | | |
| LB 16 | | Spk | T | 60 | 1,6 | 4 | 15.597 | 41.592 | | |
| LB 17 | | Stn | T | 60 | 1,6 | 4 | 18.655 | 49.747 | | |
| LB 18 | | Mka | | 0 | 0,0 | 0 | - | - | | |
| TOTAL | | 391.906 | | | 39,42% | 2,46 | | 154.499 | 965.410 | |

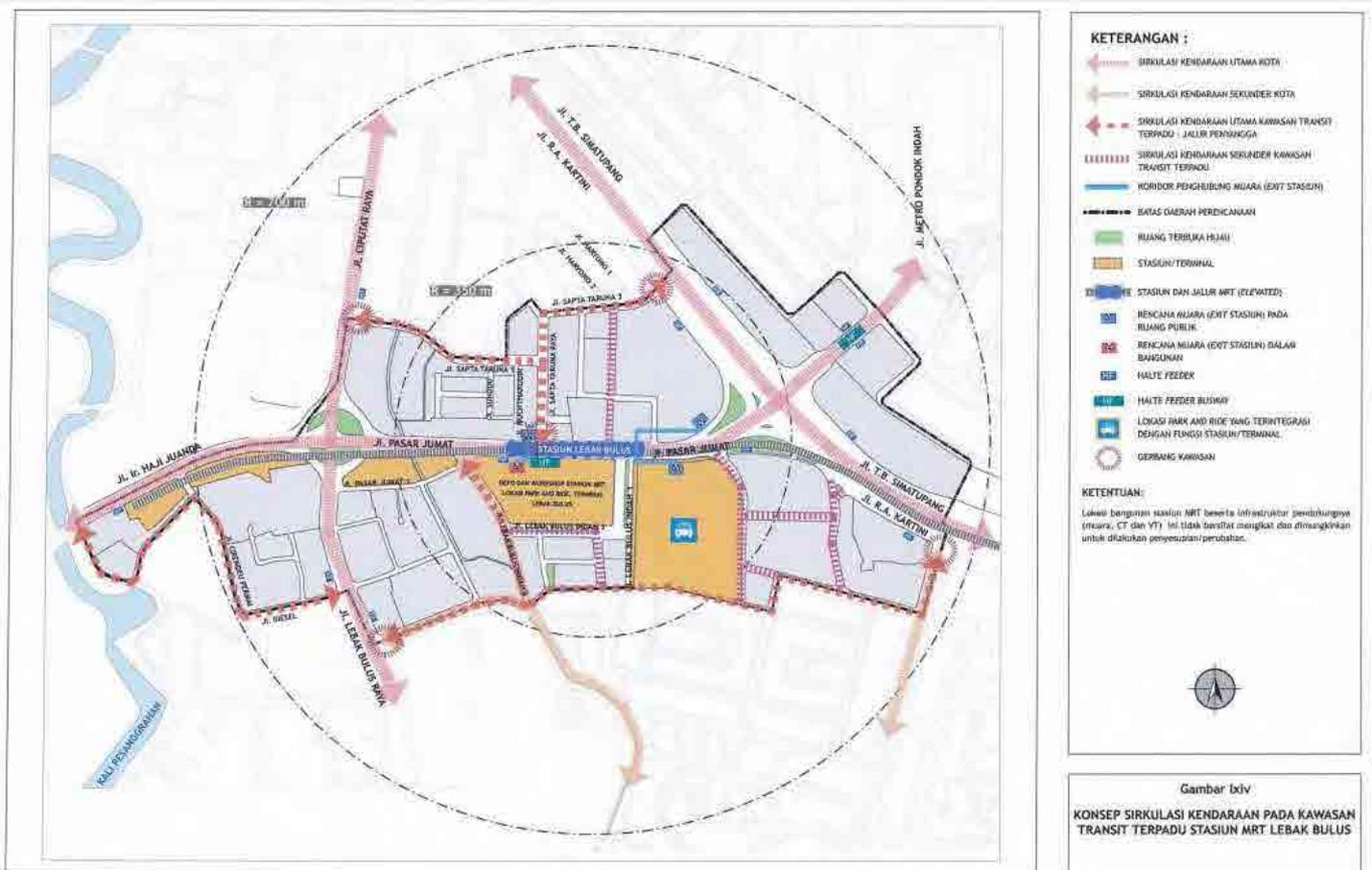


Figure 10.3.10 Lebak Bulus Urban Development Guideline PLAN

(Source:KONSEP SIRKULASI KENDARAAN PADA KAWASAN draft)

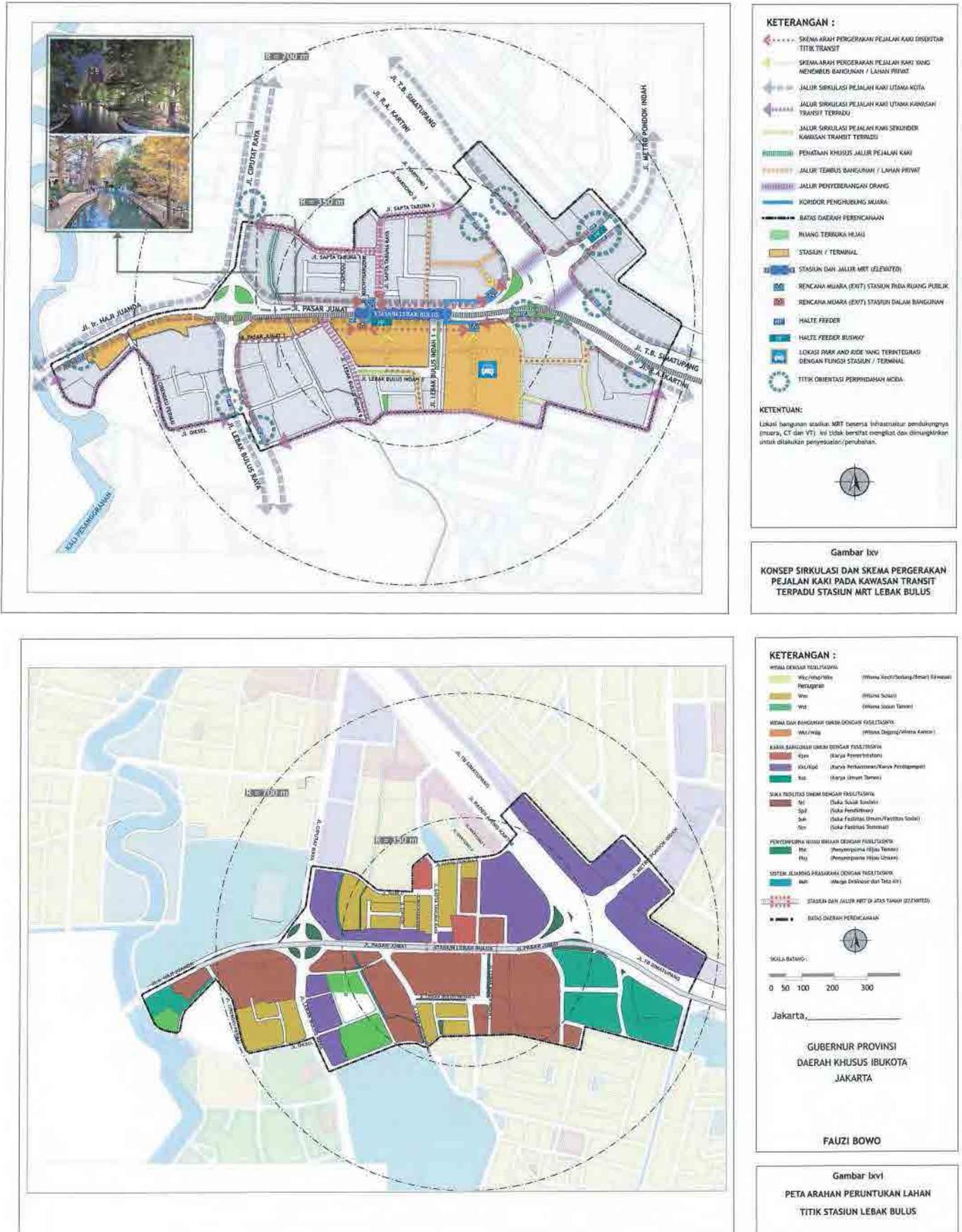


Figure 10.3.11 Lebak Bulus Urban Development Guideline PLAN
 (Source: KONSEP SIRKULASI KENDARAAN PADA KAWASAH draft)

2) Proposal Plan for the Future Development

Understanding the current situation and existing future plans of the Lebak Bulus area, priority plan for 2017 and future plan for 2020 as under can be proposed,

(1) 2017~MRT station, Depot, Bus Terminal, connected with a multilayer station building PPP BOT scheme connecting North-South, Rich open atrium space

Priority construction along with the MRT station is the construction plan of the MRT depot on the ground level and the new bus terminal on the 2nd level. Plans above the bus terminal is not yet decided, therefore to solve the north and south separation of the area, a connecting building above the MRT station could be constructed using the PPP BOT scheme to help solve the issue. The current KLB under the UDGL plan is 400%, 160%, therefore giving 600%~100% volume bonus, private parties can maximize the land usage above the station to fund the project.

Also to create a west –east axis of the area for future development, an rich open atrium space consisting of pedestrian flyover along the MRT track should be constructed.

(2) 2020~ Single large block redevelopment under KLB bonus, PPP urban core

For the next phase, when the MRT north south line would be completely connected in all phases and Jakarta's transport network being fully developed as also in Dukuh Atas, increasing passenger demand also in Lebak Bulus, surrounding private development should be guided. The North East area which consists of one block with only two parties, to guide their development, the current KLB under UDGL which is 200% can be maximized to 600%~1000% KLB bonus to fund the development of an URBAN CORE under the PPP scheme to create a smooth connection from the elevated MRT to the ground level.

(3) 2020~PPP underground walkway to solve the separation by the outer ring toll road to Pondok Indah. Usage of GREEN AREA

Also as the traffic hub character of the area develops, to provide easier access to the area from larger station radius, an underground walkway by a PPP scheme could be established to solve the existing separation by the existing outer ring toll road to the Pondok Indah side. The existing Point Square building consisting of high story apartments and commercial in the lower level, is in the area of KLB 250% under the UDGL plan. Giving KLB bonus up to 600%~1000%, the area could be redeveloped hold a elevated artificial ground with open green space, and an vertical access GREENCORE to the underground walkway.

(4) 2020~PPP urban redevelopment, KLB bonus to construct underground Park & Ride facilities

Having the potential as the starting point of the MRT north-south line, and also having the bus terminal, constructing Park & Ride facilities would bring more benefit to the area. But also to maximize the land use and at the same time offer high security, it is beneficial to construct underground Park & Ride facilities together with overground private developments.

The area suitable to hold these facilities, considering the access from the outer ring toll road and the traffic crossing at the west side, the area north and south on the west side of the MRT station is suitable.

The current KLB of the area under the UDGL plan is 400%, so giving them KLB bonus of 600% to 1000%, would be suitable to establish a PPP scheme, The area is consisting from a multiple land owners, so therefore Japanese redevelopment type 1 (rights conversion) should be suitable.

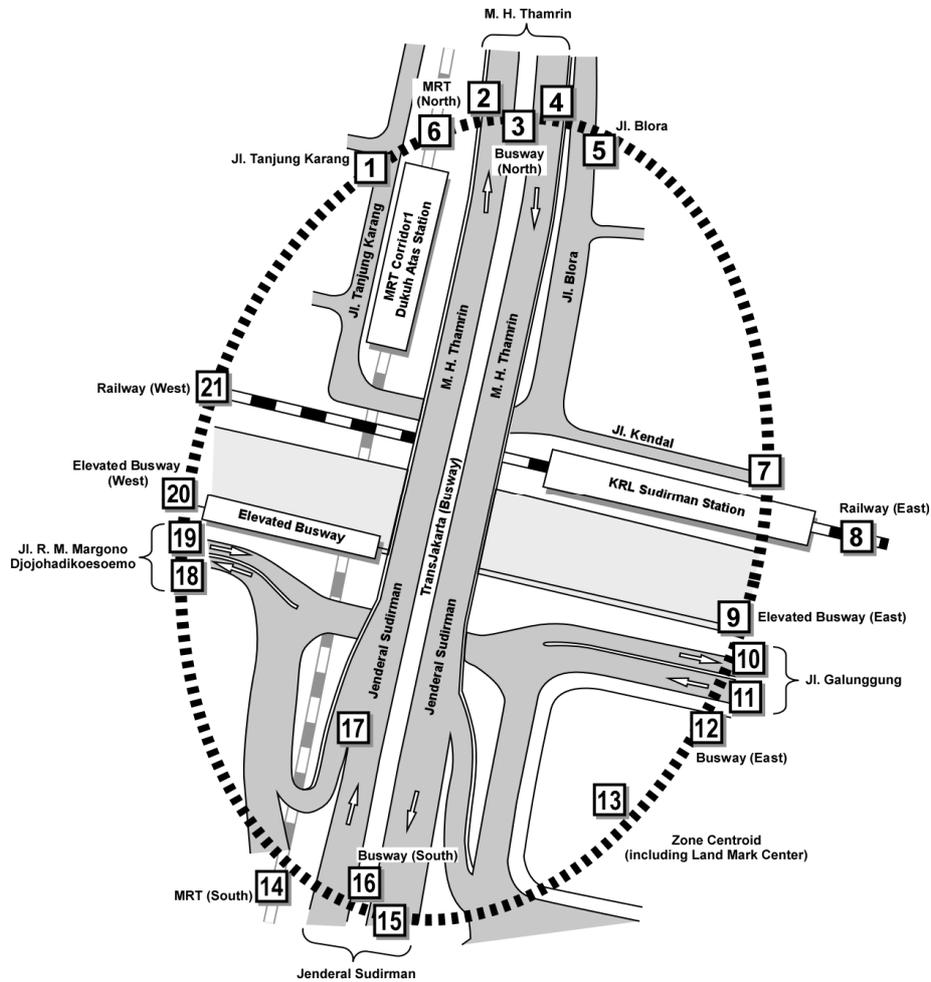
Also the access route to the parking facilities should be provided in areas with no interference with the current traffic flow of the are



Figure:10.3.12 Lebak Bulus PROPOSAL PLAN (Source: Study Team)

Appendix 1. Predicted rider flows at Dukuh Atas based on ramp analysis

For the sake of calculating demand by direction and mode of transportation for riders getting on and off or transferring between different modes of transportation at the station and bus stops, the ramps surrounding Dukuh Atas were identified as part of a demand allocation network as shown in the figure below.



Source: Study Team

Figure-A1-1. Ramp numbers on the demand allocation network

The results of analyses as to which ramps and which modes will be used to enter and leave the area for trips through the area surrounded by this ramp are shown starting on the next page. The table below is an example of the results of ramp analysis.

Table-A1-1. Example of ramp analysis results

| From RAMP | To RAMP | Inbound for Dukuh Atas | | | | | | Outbound for Dukuh Atas | | | | | | |
|-----------|---------|------------------------|-------------------|--------|--------|------------|-------|-------------------------|-------------------|--------|--------|------------|-------|-------|
| | | by Walk | by Ordinary Buses | by MRT | by BRT | by Railway | Total | by Walk | by Ordinary Buses | by MRT | by BRT | by Railway | Total | |
| 4 | 8 | 3,588 | 2,461 | 0 | 0 | 0 | 6,049 | 0 | 0 | 0 | 0 | 0 | 6,049 | 6,049 |

Source: Study Team

In this example, 3,588 people arrive on foot and 2,461 people arrive by regular bus routes from the north side of Sudirman Street, and they all get on a train at KRL Sudirman Station and head eastward. Incidentally, this model includes walking and riding regular bus routes as categories, but users of para-transit such as taxis and bajaj, which are not given as categories in the model, are also included under these modes of transportation.

Table-A1-2. Weekday flows in 2017 (Source: Study Team)

| From RAMP | To RAMP | Inbound | | | | | Outbound | | | | | Total | | | | | | | | | | | |
|-----------|---------|---------|-------------------|--------|--------|------------|----------|-------------------|--------|--------|------------|--------|--------|-------|-------|--------|--------|--------|---|---|---|---|--------|
| | | by Walk | by Ordinary Buses | by MRT | by BRT | by Railway | by Walk | by Ordinary Buses | by MRT | by BRT | by Railway | | | | | | | | | | | | |
| 4 | 8 | 2,444 | 1,676 | 0 | 0 | 0 | 4,120 | 0 | 0 | 0 | 4,120 | 4,120 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4 | 10 | 0 | 14 | 0 | 0 | 0 | 14 | 6 | 8 | 0 | 0 | 14 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| 4 | 12 | 878 | 765 | 0 | 0 | 0 | 1,643 | 0 | 0 | 0 | 1,643 | 386 | 366 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 386 |
| 4 | 13 | 644 | 398 | 0 | 0 | 0 | 1,042 | 1,042 | 0 | 0 | 0 | 464 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 464 |
| 4 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 96 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 96 |
| 4 | 15 | 227 | 33,033 | 0 | 0 | 0 | 33,260 | 227 | 33,033 | 0 | 0 | 8,176 | 0 | 0 | 8,176 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8,176 |
| 4 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 |
| 4 | 17 | 712 | 862 | 0 | 0 | 0 | 1,574 | 1,574 | 0 | 0 | 0 | 5,419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5,419 |
| 4 | 18 | 1,134 | 135 | 0 | 0 | 0 | 1,269 | 1,269 | 0 | 0 | 0 | 39 | 5 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 39 |
| 4 | 21 | 255 | 134 | 0 | 0 | 0 | 389 | 0 | 0 | 0 | 389 | 6,413 | 0 | 0 | 6,413 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6,413 |
| 5 | 8 | 903 | 0 | 0 | 0 | 0 | 903 | 0 | 0 | 0 | 0 | 407 | 407 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 407 |
| 6 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 670 | 670 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 670 |
| 6 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| 6 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| 6 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 666 | 40,876 | 0 | 0 | 41,542 | 619 | 40,923 | 0 | 0 | 0 | 0 | 41,542 |
| 8 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 261 | 49 | 0 | 0 | 310 | 310 | 0 | 0 | 0 | 0 | 0 | 310 |
| 8 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,916 | 4,148 | 0 | 0 | 7,064 | 0 | 0 | 0 | 0 | 0 | 0 | 7,064 |
| 8 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 122 | 78 | 0 | 0 | 200 | 195 | 5 | 0 | 0 | 0 | 0 | 200 |
| 8 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4,233 | 351 | 0 | 0 | 4,584 | 0 | 0 | 0 | 0 | 0 | 0 | 4,584 |
| 8 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,058 | 754 | 0 | 0 | 1,812 | 1,812 | 0 | 0 | 0 | 0 | 0 | 1,812 |
| 8 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 779 | 0 | 0 | 0 | 779 | 0 | 0 | 0 | 0 | 0 | 0 | 779 |
| 8 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,971 | 0 | 0 | 0 | 1,971 | 432 | 1,539 | 0 | 0 | 0 | 0 | 1,971 |
| 8 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 13 | 28 | 0 | 0 | 0 | 0 | 28 | 28 | 0 | 0 | 0 | 3,952 | 231 | 0 | 0 | 3,953 | 3,976 | 7 | 0 | 0 | 0 | 0 | 3,983 |
| 11 | 14 | 8 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 1,635 | 0 | 0 | 0 | 1,635 | 0 | 0 | 0 | 0 | 0 | 0 | 1,635 |
| 11 | 15 | 207 | 0 | 0 | 0 | 0 | 207 | 145 | 62 | 0 | 0 | 1,343 | 0 | 0 | 1,343 | 807 | 536 | 0 | 0 | 0 | 0 | 0 | 1,343 |
| 11 | 17 | 35 | 0 | 0 | 0 | 0 | 35 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 18 | 61 | 3,007 | 0 | 0 | 0 | 3,068 | 61 | 3,007 | 0 | 0 | 243 | 243 | 0 | 0 | 243 | 243 | 0 | 0 | 0 | 0 | 0 | 243 |
| 11 | 21 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 72 | 2,514 | 0 | 0 | 2,586 | 72 | 2,514 | 0 | 0 | 0 | 0 | 2,586 |
| 12 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 611 | 0 | 0 | 611 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 611 |
| 12 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 343 | 18 | 0 | 0 | 361 | 361 | 0 | 0 | 0 | 0 | 0 | 361 |
| 12 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 52 | 0 | 0 | 0 | 52 | 0 | 0 | 0 | 0 | 0 | 0 | 52 |
| 12 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 658 | 527 | 131 | 0 | 658 | 527 | 131 | 0 | 0 | 0 | 0 | 658 |
| 12 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,207 | 0 | 0 | 0 | 3,207 | 0 | 0 | 0 | 0 | 0 | 0 | 3,207 |
| 12 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4,113 | 2,633 | 1,480 | 0 | 4,113 | 2,633 | 1,480 | 0 | 0 | 0 | 0 | 4,113 |
| 12 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 2 | 830 | 0 | 0 | 0 | 0 | 830 | 132 | 698 | 0 | 0 | 848 | 848 | 0 | 0 | 848 | 848 | 0 | 0 | 0 | 0 | 0 | 848 |
| 13 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50,561 | 50,561 | 0 | 0 | 50,561 | 50,561 | 0 | 0 | 0 | 0 | 0 | 50,561 |
| 13 | 7 | 222 | 0 | 0 | 0 | 0 | 222 | 222 | 0 | 0 | 0 | 15 | 15 | 0 | 0 | 15 | 15 | 0 | 0 | 0 | 0 | 0 | 15 |
| 13 | 8 | 867 | 0 | 0 | 0 | 0 | 867 | 0 | 0 | 0 | 0 | 2,700 | 2,700 | 0 | 0 | 2,700 | 2,700 | 0 | 0 | 0 | 0 | 0 | 2,700 |
| 13 | 10 | 36 | 0 | 0 | 0 | 0 | 36 | 16 | 20 | 0 | 0 | 617 | 617 | 0 | 0 | 617 | 617 | 0 | 0 | 0 | 0 | 0 | 617 |
| 13 | 12 | 992 | 0 | 0 | 0 | 0 | 992 | 0 | 0 | 0 | 0 | 426 | 426 | 0 | 0 | 426 | 426 | 0 | 0 | 0 | 0 | 0 | 426 |
| 13 | 14 | 324 | 0 | 0 | 0 | 0 | 324 | 0 | 0 | 0 | 0 | 1,699 | 1,699 | 1,476 | 223 | 1,699 | 1,476 | 223 | 0 | 0 | 0 | 0 | 1,699 |
| 13 | 15 | 1,932 | 0 | 0 | 0 | 0 | 1,932 | 1,049 | 883 | 0 | 0 | 1,243 | 1,243 | 0 | 0 | 1,243 | 1,243 | 0 | 0 | 0 | 0 | 0 | 1,243 |

Table-A1-3. Peak morning flows in 2017 (Source: Study Team)

| From RAMP | To RAMP | Inbound | | | | | | Outbound | | | | | | | | | | | | | | | | | |
|--------------|---------|---------|-------------------|--------|--------|------------|-------|----------|-------------------|--------|--------|------------|-------|---|---|---|---|---|---|---|---|---|---|---|---|
| | | by Walk | by Ordinary Buses | by MRT | by BRT | by Railway | Total | by Walk | by Ordinary Buses | by MRT | by BRT | by Railway | Total | | | | | | | | | | | | |
| 4 | 8 | 32 | 9 | 0 | 0 | 0 | 41 | 0 | 0 | 0 | 0 | 0 | 41 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 12 | 35 | 23 | 0 | 0 | 0 | 58 | 0 | 0 | 0 | 0 | 58 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 13 | 69 | 53 | 0 | 0 | 0 | 119 | 0 | 0 | 0 | 0 | 119 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 15 | 22 | 2,524 | 0 | 0 | 0 | 2,546 | 22 | 2,524 | 0 | 0 | 2,546 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 17 | 83 | 129 | 0 | 0 | 0 | 212 | 212 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 18 | 130 | 25 | 0 | 0 | 0 | 155 | 155 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 21 | 7 | 3 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 8 | 20 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 14 | 0 | 0 | 0 | 0 | 0 | 550 | 0 | 0 | 0 | 0 | 550 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 2 | 0 | 0 | 0 | 0 | 0 | 1,134 | 1,134 | 701 | 433 | 0 | 0 | 1,134 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 7 | 0 | 0 | 0 | 0 | 0 | 88 | 88 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 12 | 0 | 0 | 0 | 0 | 0 | 9 | 9 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 13 | 0 | 0 | 0 | 0 | 0 | 180 | 180 | 180 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 14 | 0 | 0 | 0 | 0 | 0 | 466 | 466 | 0 | 466 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 15 | 0 | 0 | 0 | 0 | 0 | 1,731 | 1,731 | 652 | 1,079 | 0 | 0 | 1,731 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 17 | 0 | 0 | 0 | 0 | 0 | 286 | 286 | 286 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 21 | 0 | 0 | 0 | 0 | 0 | 6,636 | 6,636 | 0 | 0 | 0 | 0 | 6,636 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 15 | 13 | 0 | 0 | 0 | 0 | 13 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 18 | 0 | 0 | 0 | 0 | 0 | 307 | 307 | 0 | 307 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 2 | 0 | 0 | 0 | 0 | 0 | 598 | 0 | 598 | 345 | 253 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 13 | 0 | 0 | 0 | 0 | 0 | 177 | 177 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 14 | 0 | 0 | 0 | 0 | 0 | 772 | 0 | 772 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 15 | 0 | 0 | 0 | 0 | 0 | 1,331 | 0 | 1,331 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 17 | 0 | 0 | 0 | 0 | 0 | 283 | 0 | 283 | 283 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 18 | 0 | 0 | 0 | 0 | 0 | 189 | 189 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 21 | 0 | 0 | 0 | 0 | 0 | 164 | 0 | 164 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 2 | 55 | 0 | 0 | 0 | 0 | 55 | 7 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 7 | 18 | 0 | 0 | 0 | 0 | 18 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 8 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 10 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 12 | 13 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 14 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 15 | 155 | 0 | 0 | 0 | 0 | 155 | 125 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table-A1-5. Weekday flows in 2020 (Source: Study Team)

| From Ramp | Outbound | | | | | | Inbound | | | | | | To Ramp | | | | |
|-----------|----------|-----------------|--------|--------------------|-------------------|--------------|--------------------|---------|---------|-----------------|--------|--------------------|---------|-------------------|--------------|--------------------|-------|
| | By Walk | By Ordinary Bus | By MRT | By elevated busway | By Bypassing line | By Loop line | By Airport Express | Total | By Walk | By Ordinary Bus | By MRT | By elevated busway | | By Bypassing line | By Loop line | By Airport Express | Total |
| 4 | 5,643 | 2,807 | 0 | 0 | 0 | 0 | 0 | 7,850 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7,850 | 0 |
| 4 | 1,004 | 884 | 0 | 0 | 0 | 0 | 0 | 1,888 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,888 | 0 |
| 4 | 9 | 12 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 0 |
| 4 | 2,654 | 938 | 0 | 0 | 0 | 0 | 0 | 2,992 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,992 | 0 |
| 4 | 13 | 531 | 430 | 0 | 0 | 0 | 0 | 961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 961 | 0 |
| 4 | 3,717 | 73 | 0 | 0 | 0 | 0 | 0 | 3,790 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,790 | 0 |
| 4 | 15 | 338,533 | 0 | 0 | 0 | 0 | 0 | 338,533 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 338,533 | 0 |
| 4 | 17 | 732 | 1,081 | 0 | 0 | 0 | 0 | 1,801 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,801 | 0 |
| 4 | 18 | 1,005 | 185 | 0 | 0 | 0 | 0 | 1,160 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,160 | 0 |
| 4 | 20 | 766 | 601 | 0 | 0 | 0 | 0 | 826 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 826 | 0 |
| 4 | 21 | 7,156 | 4,980 | 0 | 0 | 0 | 0 | 12,146 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12,146 | 0 |
| 5 | 1,861 | 0 | 0 | 0 | 0 | 0 | 0 | 1,861 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,861 | 0 |
| 5 | 2,891 | 0 | 0 | 0 | 0 | 0 | 0 | 2,891 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,891 | 0 |
| 6 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 |
| 6 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 2 | 839 | 0 | 0 | 0 | 0 | 0 | 839 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 6 | 518 | 0 | 0 | 0 | 0 | 0 | 518 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table-A1-6. Peak morning flows in 2020 (Source: Study Team)

| From Ramp | Inbound | | | | | | Outbound | | | | | | From Ramp | | | |
|-----------|---------|-----------------|--------|--------------------|----------------|--------------|------------|-------|---------|-----------------|--------|--------------------|-----------|----------------|--------------|------------|
| | By Walk | By Ordinary Bus | By MRT | By elevated busway | By Bypass line | By Loop line | By Express | Total | By Walk | By Ordinary Bus | By MRT | By elevated busway | | By Bypass line | By Loop line | By Express |
| 4 | 111 | 59 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 24 | 0 | 0 | 0 | 0 | 0 | 24 |
| 4 | 72 | 153 | 0 | 0 | 0 | 0 | 0 | 0 | 36 | 36 | 0 | 0 | 0 | 0 | 0 | 36 |
| 4 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 51 | 51 | 0 | 0 | 0 | 0 | 0 | 51 |
| 4 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 6 |
| 4 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 63 | 63 | 0 | 0 | 0 | 0 | 0 | 63 |
| 4 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 83 | 83 | 0 | 0 | 0 | 0 | 0 | 83 |
| 4 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 22 | 0 | 0 | 0 | 0 | 0 | 22 |
| 4 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 174 | 174 | 0 | 0 | 0 | 0 | 0 | 174 |
| 4 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 4 |
| 4 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 24 | 0 | 0 | 0 | 0 | 0 | 24 |
| 4 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 24 | 0 | 0 | 0 | 0 | 0 | 24 |
| 5 | 71 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 344 | 344 | 0 | 0 | 0 | 0 | 0 | 344 |
| 5 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11,013 | 11,013 | 0 | 0 | 0 | 0 | 0 | 11,013 |
| 6 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 362 | 362 | 0 | 0 | 0 | 0 | 0 | 362 |
| 6 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 746 | 746 | 0 | 0 | 0 | 0 | 0 | 746 |
| 6 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 48 | 48 | 0 | 0 | 0 | 0 | 0 | 48 |
| 6 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,074 | 3,074 | 0 | 0 | 0 | 0 | 0 | 3,074 |
| 6 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 230 | 230 | 0 | 0 | 0 | 0 | 0 | 230 |
| 6 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 42 | 0 | 0 | 0 | 0 | 0 | 42 |
| 6 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 14 | 0 | 0 | 0 | 0 | 0 | 14 |
| 6 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 27 | 0 | 0 | 0 | 0 | 0 | 27 |
| 6 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7,363 | 7,363 | 0 | 0 | 0 | 0 | 0 | 7,363 |
| 6 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 111 | 111 | 0 | 0 | 0 | 0 | 0 | 111 |
| 8 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 11 | 0 | 0 | 0 | 0 | 0 | 11 |
| 8 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 21 | 0 | 0 | 0 | 0 | 0 | 21 |
| 8 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 55 | 55 | 0 | 0 | 0 | 0 | 0 | 55 |
| 8 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 203 | 203 | 0 | 0 | 0 | 0 | 0 | 203 |
| 8 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 212 | 212 | 0 | 0 | 0 | 0 | 0 | 212 |
| 8 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 42 | 0 | 0 | 0 | 0 | 0 | 42 |
| 8 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 561 | 561 | 0 | 0 | 0 | 0 | 0 | 561 |
| 9 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 31 | 0 | 0 | 0 | 0 | 0 | 31 |
| 9 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 113 | 113 | 0 | 0 | 0 | 0 | 0 | 113 |
| 9 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 62 | 62 | 0 | 0 | 0 | 0 | 0 | 62 |
| 9 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 17 | 0 | 0 | 0 | 0 | 0 | 17 |
| 9 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 13 | 0 | 0 | 0 | 0 | 0 | 13 |
| 9 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 41 | 41 | 0 | 0 | 0 | 0 | 0 | 41 |
| 11 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 697 | 697 | 0 | 0 | 0 | 0 | 0 | 697 |
| 11 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 15 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 103 | 103 | 0 | 0 | 0 | 0 | 0 | 103 |
| 11 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 57 | 57 | 0 | 0 | 0 | 0 | 0 | 57 |
| 11 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 865 | 865 | 0 | 0 | 0 | 0 | 0 | 865 |
| 12 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 42 | 0 | 0 | 0 | 0 | 0 | 42 |
| 12 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 4 |
| 12 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43 | 43 | 0 | 0 | 0 | 0 | 0 | 43 |
| 12 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 6 |
| 12 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 94 | 94 | 0 | 0 | 0 | 0 | 0 | 94 |
| 12 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,324 | 1,324 | 0 | 0 | 0 | 0 | 0 | 1,324 |
| 12 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5,720 | 5,720 | 0 | 0 | 0 | 0 | 0 | 5,720 |
| 12 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,076 | 1,076 | 0 | 0 | 0 | 0 | 0 | 1,076 |
| 12 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 342 | 342 | 0 | 0 | 0 | 0 | 0 | 342 |
| 12 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 148 | 148 | 0 | 0 | 0 | 0 | 0 | 148 |
| 12 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 285 | 285 | 0 | 0 | 0 | 0 | 0 | 285 |
| 12 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 203 | 203 | 0 | 0 | 0 | 0 | 0 | 203 |
| 13 | 2 | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 139 | 139 | 0 | 0 | 0 | 0 | 0 | 139 |
| 13 | 6 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 242 | 242 | 0 | 0 | 0 | 0 | 0 | 242 |

Table-A1-8. Weekday flows in 2030 (Source: Study Team)

| From RAMP | bound | | | | | | | To RAMP | bound | | | | | | | Total | | | |
|-----------|---------|-------------------|--------|--------|--------------------|----------------|--------------------------------|---------|-----------------------------|--------|---------|-------------------|--------|--------|--------------------|-------|----------------|--------------------------------|-----------------------------|
| | By Walk | By Ordinary Buses | By MRT | By BRT | By elevated busway | By Bypass line | By Airport Express (Tangerang) | | By Airport Express (Harbor) | Total | By Walk | By Ordinary Buses | By MRT | By BRT | By elevated busway | | By Bypass line | By Airport Express (Tangerang) | By Airport Express (Harbor) |
| 4 | 3,397 | 10,333 | 0 | 0 | 0 | 0 | 0 | 13,730 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13,730 |
| 4 | 9 | 473 | 2,318 | 0 | 0 | 0 | 0 | 2,791 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,791 |
| 4 | 10 | 0 | 41 | 0 | 0 | 0 | 0 | 41 | 7 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 41 | |
| 4 | 12 | 1,055 | 3,406 | 0 | 0 | 0 | 0 | 4,411 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4,411 | |
| 4 | 13 | 410 | 510 | 0 | 0 | 0 | 0 | 920 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 920 | |
| 4 | 14 | 1,264 | 174 | 0 | 0 | 0 | 0 | 1,438 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,438 | |
| 4 | 15 | 269 | 37,517 | 0 | 0 | 0 | 0 | 37,786 | 206 | 37,517 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 37,723 | |
| 4 | 17 | 366 | 1,868 | 0 | 0 | 0 | 0 | 2,234 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,234 | |
| 4 | 18 | 363 | 211 | 0 | 0 | 0 | 0 | 574 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 574 | |
| 4 | 20 | 434 | 10,700 | 0 | 0 | 0 | 0 | 11,134 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11,134 | |
| 5 | 1,144 | 0 | 0 | 0 | 0 | 0 | 0 | 1,144 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,144 | |
| 5 | 1,434 | 0 | 0 | 0 | 0 | 0 | 0 | 1,434 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,434 | |
| 5 | 20 | 1,500 | 0 | 0 | 0 | 0 | 0 | 1,500 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,500 | |
| 5 | 21 | 1,500 | 0 | 0 | 0 | 0 | 0 | 1,500 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,500 | |
| 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | |
| 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | |
| 6 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | |
| 6 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | |
| 6 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | |
| 6 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | |
| 6 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | |
| 6 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | |
| 6 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | |
| 6 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | |
| 8 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| 8 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | |
| 8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | |
| 8 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | |
| 8 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | |
| 8 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | |
| 8 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | |
| 8 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | |
| 8 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | |
| 9 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| 9 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | |
| 9 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | |
| 9 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | |
| 9 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | |
| 9 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | |
| 9 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | |
| 9 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | |
| 9 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | |
| 11 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| 11 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | |
| 11 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | |
| 11 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | |
| 11 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | |
| 11 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | |
| 12 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| 12 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | |
| 12 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | |
| 12 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | |
| 12 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | |
| 12 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | |
| 12 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | |
| 12 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | |
| 12 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | |
| 12 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | |

Table-A1-10. Peak afternoon flows in 2030 (Source: Study Team)

| From RAMP | Inbound | | | | | | | Outbound | | | | | | | To RAMP |
|-----------|---------|--------|--------|--------------------|-------------------|--------------|--------|----------|--------|--------|--------------------|-------------------|--------------|--------|---------|
| | By Walk | By MRT | By BRT | By Deviated Busway | By Bypassing line | By Loop line | Total | By Walk | By MRT | By BRT | By Deviated Busway | By Bypassing line | By Loop line | Total | |
| 4 | 6 | 677 | 2,132 | 0 | 0 | 0 | 2,809 | 0 | 0 | 0 | 0 | 0 | 0 | 2,809 | |
| 4 | 9 | 55 | 286 | 0 | 0 | 0 | 341 | 0 | 0 | 0 | 0 | 0 | 0 | 341 | |
| 4 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4 | 12 | 193 | 859 | 0 | 0 | 0 | 1,052 | 0 | 0 | 0 | 0 | 0 | 0 | 1,052 | |
| 4 | 13 | 224 | 26 | 0 | 0 | 0 | 250 | 0 | 0 | 0 | 0 | 0 | 0 | 250 | |
| 4 | 15 | 10 | 4,326 | 0 | 0 | 0 | 4,336 | 0 | 0 | 0 | 0 | 0 | 0 | 4,336 | |
| 4 | 17 | 26 | 77 | 0 | 0 | 0 | 103 | 0 | 0 | 0 | 0 | 0 | 0 | 103 | |
| 4 | 18 | 34 | 5 | 0 | 0 | 0 | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 39 | |
| 4 | 20 | 54 | 32 | 0 | 0 | 0 | 86 | 0 | 0 | 0 | 0 | 0 | 0 | 86 | |
| 4 | 21 | 861 | 1,934 | 0 | 0 | 0 | 2,795 | 0 | 0 | 0 | 0 | 0 | 0 | 2,795 | |
| 5 | 8 | 339 | 0 | 0 | 0 | 0 | 339 | 0 | 0 | 0 | 0 | 0 | 0 | 339 | |
| 5 | 9 | 10 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | |
| 5 | 20 | 8 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | |
| 5 | 21 | 405 | 0 | 0 | 0 | 0 | 405 | 0 | 0 | 0 | 0 | 0 | 0 | 405 | |
| 6 | 8 | 0 | 1,122 | 0 | 0 | 0 | 1,122 | 0 | 0 | 0 | 0 | 0 | 0 | 1,122 | |
| 6 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 14 | 0 | 13,714 | 0 | 0 | 0 | 13,714 | 0 | 0 | 0 | 0 | 0 | 0 | 13,714 | |
| 6 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6 | 20 | 0 | 151 | 0 | 0 | 0 | 151 | 0 | 0 | 0 | 0 | 0 | 0 | 151 | |
| 6 | 21 | 0 | 2,456 | 0 | 0 | 0 | 2,456 | 0 | 0 | 0 | 0 | 0 | 0 | 2,456 | |
| 8 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11 | 14 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | |
| 11 | 15 | 8 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | |
| 11 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11 | 18 | 0 | 69 | 0 | 0 | 0 | 69 | 0 | 0 | 0 | 0 | 0 | 0 | 69 | |
| 12 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 12 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 12 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 12 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 12 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 12 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 12 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 12 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 12 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 12 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 12 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

Appendix 2. Study of the Space Utilization under the Thamrin/Sudirman Street

Constructing connecting passageway to the existing Sudirman Station - MRT and Shopping Mall under the Thamrin Street were investigated as PPP Project to utilize public land.

Conceptual Drawings are as follows;

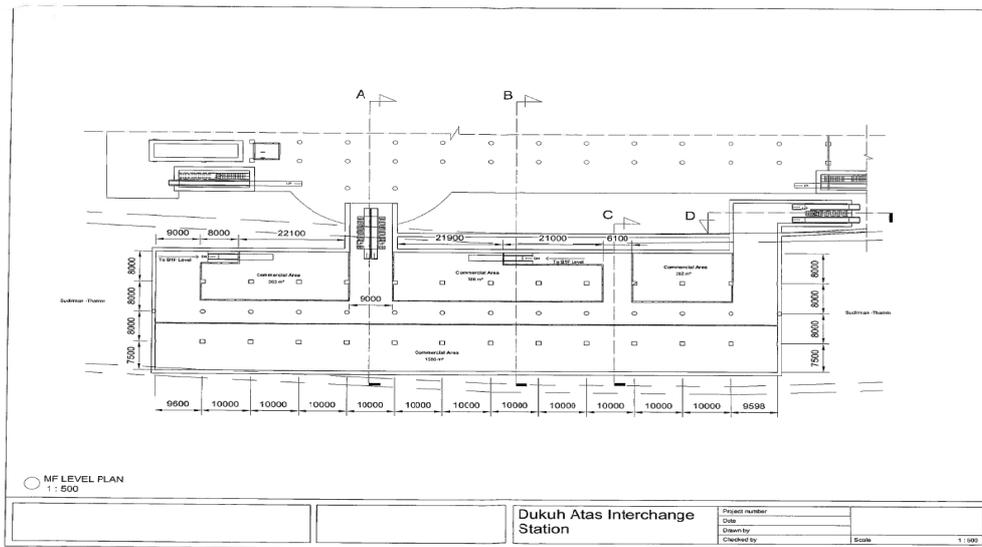


Figure-A2-1 MF LEVEL PLAN

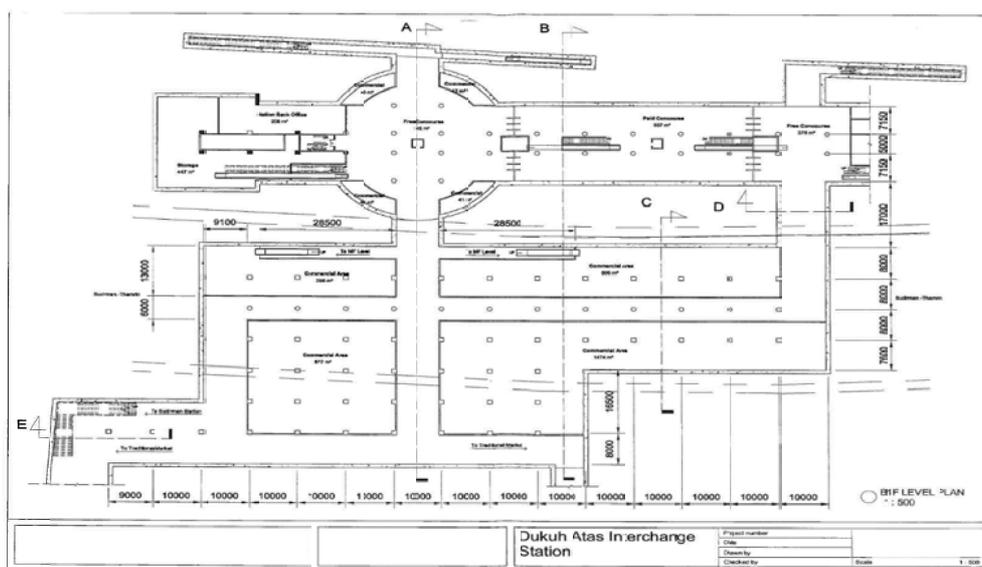


Figure-A2-2 B1 LEVEL PLAN

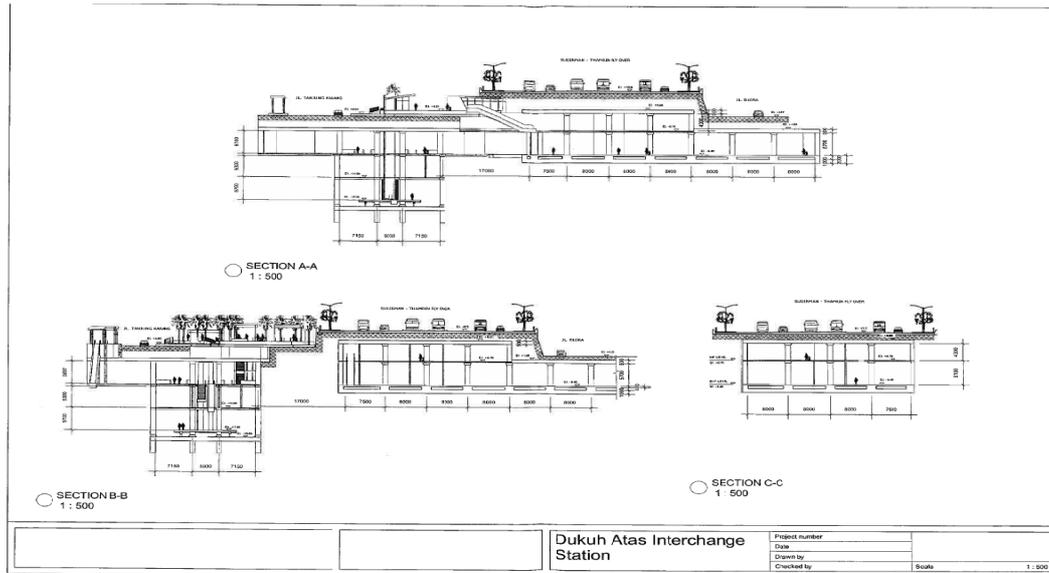


Figure-A2-3 CROSS SECTION (1)

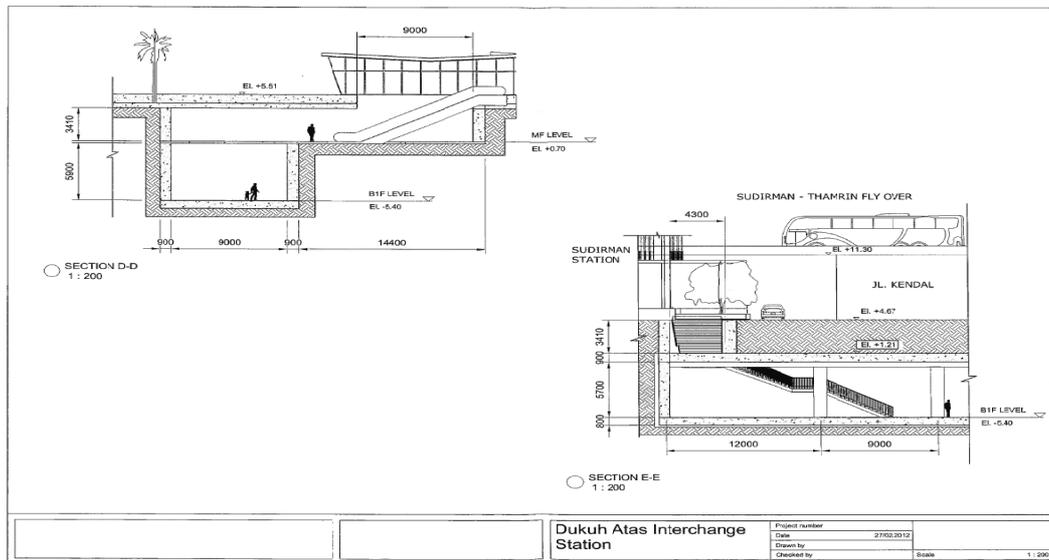


Figure-A2-4 CROSS SECTION (2)

In this case, the construction cost is estimated to become approximately 7,000 million Yen (USD80 mill). In addition, adverse impacts for the traffics on Thamrin street would be extremely heavy during construction of underground of its street. It would be very difficult to cover construction and maintenance costs of the underground structures by the interests to be gained from the commercial facilities. In general, management of underground mall is very difficult even if the cost of underground Shopping Mall structure was borne by the public. Thus, as a result of discussions with the Indonesian Counterpart, it was decided to construct only underground passageway but not Shopping Mall under Phase-1 Project.

Appendix 3. List of environmental standards related to arsenic

In Japan, there are very stringent laws and regulations concerning arsenic (Table A3-1). Arsenic is strictly regulated under Japan's Water Pollution Prevention Law, which limits arsenic to 0.1 mg/L. In Europe, the European Standard EN 71-3 on Safety of Toys limits arsenic to 25 mg/kg, also a very low level. The Food Sanitation Law includes arsenic regulations, and standards are set for toys depending on their types.

Table-A3-1. Major laws and standards related to arsenic

| Law or standard | Regulated substance | Limit |
|----------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------------------------|
| Basic Environment Law and environmental standards: River and lake water, etc. | Arsenic | 0.01 mg/L |
| Water Pollution Prevention Law and effluent standards: Factory effluent, etc. | Arsenic and arsenic compounds | 0.1 mg/L |
| Soil Contamination Countermeasures Law and soil environmental standards: Soil | Arsenic | 0.01 mg per liter of liquid sample |
| Farmland | | Less than 15 mg per kg of soil |
| Food Sanitation Law | Arsenic | 25 µg/g |
| European Standard EN 71-3 on Safety of Toys: Toys | Arsenic | 25 mg/kg |
| Industrial Safety and Health Law and working environment assessment standards | Arsenic and arsenic compounds | 0.003 mg/m ³ as arsenic |
| Waste Disposal and Public Cleaning Law | Arsenic or arsenic compounds | 0.3 mg per liter of liquid sample; 0.15 mg per kg of specimen, etc. |

Source: Compiled by the Study Team, based on http://www.boken.or.jp/lib_anken_seni_jyuukinzoku7.html

Appendix 4. Bibliography

Table- A 4-1 Bibliography, Document

| Chapter | Bibliography, Document |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------|
| 1.1.2 | Country Assistance Program for Republic of Indonesia: April 2012 |
| 2.1.1 | Basic Information on Indonesia: ASEAN-JAPAN CENTRE |
| 2.2.1 | Jakarta Selatan Dalam Angka 2012: Kota Administrasi Jakarta Pusat |
| 2.2.1 | Jakarta Selatan Dalam Angka 2012: Kota Administrasi Jakarta Selatan |
| 2.2.1 | Engineering Consulting Service for Jakarta Mass Rapid Transit System Project Basic Engineering Design Report (Final) |
| 2.2.2 | RTRW DKI Jakarta 2030 versi Februari |
| 2.2.2 | RENCANA TATA RUANG WILAYAH DKI JAKARTA 2030 |
| 2.2.2 | Panduan Rancang Kota Kawasan Dukuh Atas DKI 2008 |
| 2.2.3 | Engineering Consulting Services for Jakarta Mass Transit System Project |
| 2.2.3 | Preparatory Survey for Jakarta Mass Transit East-West Line Project: 2011,11,JICA |
| 2.2.4 | Preparatory Survey for JABODETABEK Railway Capacity Enhancement Project: JICA |
| 2.2.6 | PPP Infrastructure Plans in Indonesia: 2011 BAPPENAS |
| 2.2.7 | PPK Pengembangan Koridor MRT Jakarta versi februari 2012 draft |
| 2.4.1 | Study on Railway Station Revitalization : JBIC, 2008,7 |
| 4.1.2 | JABODETABEK Urban Transportation Policy Integration : JUTPI, 2011, JICA |
| 4.12 | Engineering Consulting Services for Jakarta Mass Rapid Transit System Project: 2011, JMEC,DGR |
| 4.1.3 | Preparatory Survey for JABODETABEK Railway Capacity Enhancement Project: 2011,JICA |
| 4.1.3 | Basic Engineering Design Report of Engineering Consulting Service for Jakarta Mass Rapid Transit System Project |
| 4.1.3 | Preparatory Survey for Jakarta Mass Transit East-West Line Project: 2011,11,JICA |
| 4.1.3 | Project for the Study on JABODETABEK Public Transportation Policy Implementation Strategy (JAPTraPIS) : JAPTraPIS, 2012, JICA |
| 4.1.6 | Project for the Master Plan Study on Multiple-Airport Development for Greater Jakarta Metropolitan Area in the Republic of Indonesia: JICA |
| 4.3.1 | “PEDESTRIAN Planning and design”, JOHN J.FRUIIN |
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