EDSA Busway

By Engr. Johan Martinez

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THROUGH THE lens of the Strategic, Tactical, and Operational (STO) Framework, the main objective of the EDSA Busway project is to provide a public transport system that can support around 600,000 public transport trips per day. The 600,000 figure came from the target of the Inter-Agency Task Force (IATF) to open up the economy to essential sectors around June of 2020. The historical context is we had a hard lockdown around March, and around mid-April, there was a discussion on how to provide public transport when the economy finally opens. The idea is that it should open gradually, starting with the essential sectors, and there are 600,000 public transport trips associated with these essential sectors. One other criterion that was required of us in coming up with a solution was to have a Light-Quick-Cheap solution. We had barely around 6 weeks to conceptualize a plan and make it available. Another criterion pertains to the fear that the public transport could become a vector of transmission of the virus. Of the original Covid variant, what we know is that it requires a certain volume of air and a certain exposure time for the virus to transmit from one person to another. So it is a very big concern that the travel time along the corridor should be kept at the minimum. All of this is at the strategic level.

At the tactical level, I would like to highlight two points: First is the establishment of an approach that uses the segregated median lane. The traditional practice is to use the curb side. We made a very quick site assessment and what we got is that if we will use curb side, we will have to deal with around 100-150 points of varying degrees. In total, this will make the travel time longer, so the approach

was easily concluded to be in the median lane. Second, another problem is how do we organize the 500 buses that have the rights and franchise to operate along the EDSA corridor? The approach is to integrate them in one system. We have calculated that during peak hours, the ideal situation optimal number of buses along EDSA corridor is just around 120.

At the operational level, I would like to highlight a couple of points: First is the proposal to operate 2 buses in convoy at a headway of around 3 minutes during peak hours. This would require somebody to ensure orderliness and compliance to the system plan. It would require an entity that will serve as an oversight for this service plan. Second is to attain the travel time objective, a speed of around 23-35 kph have to be maintained. And finally, probably the most contentious debate along the planning process, is the placement of the bus stop. There are proposals that have been identified. One is to put the bus stops within the center median, and another is to put them on the side.

The organizational structure is shown in Figure 1. IATF gives the final sign off for the plans. The agencies involved in the planning and implementations are DOTr, MMDA, LTFRB, and DPWH, with working groups under them to find solutions to various issues. For example, DOTr was tasked to identify funding for the solution and also develop the concept. In terms of developing the concept, the solutions came from two major sources: first is assisting MRT capacity augmentation which would utilize these buses and median corridor; and the second point of reference of the plan is the EDSA BRT system, a study proposed by the Asian Development Bank (ADB). What is common in these two studies is the use of median lane. Both of these reference materials have their limitations in the context of pandemic, so we are forced to outsource the other analysis and simulation in other components of the study that we are blind of.

Luckily, we have reached out to some firms and individuals such as SMDI, Egis International, and Systra Philippines. They have agreed in conducting detailed engineering, planning, construction management and construction of some of the stations and traffic management.

LTRFB, on the other hand, is tasked with organizing the bus services, making sure that by the time the system is reopened the buses will be there, up and running. During this time, the route rationalization plan led by the LTFRB was also considered. Within that route rationalization plan, it was identified that EDSA will only serve as a carousel model to catch the other bus routes, the EDSA Busway. And then DPWH will construct the other parts of the infrastructure requirement that are not covered by IATF.

The solution looks something like this (Figure 2). There is a segregated busway in themiddle, and in some sections that the space permits, two lanes were proposed to allow for some constraint spaces. On either side, the barriers between the mixed lane and the bike lane are to be provided with the plastic bollards. At this time, the MRT3 is not a viable option because of compliance to health protocols. The MRT3 can only accommodate around 50,000 passengers per day, so the other half 550,000 will have to be carried by the bus services.

In terms of locations and linkages, these are the configurations of the station (Figure 13). There are 4 types. The stations with a rail icon represents bus stops with access to rail stations, so the operations of the bus have to be synchronized with the operation of the LRT system. On the other hand, the other bus stops with oval represents the stations that are very near the pedestrian overpass. Therefore, that overpass can be used as a means of access to that particular station.

The previous slides represent the infrastructure requirement, but infrastructure

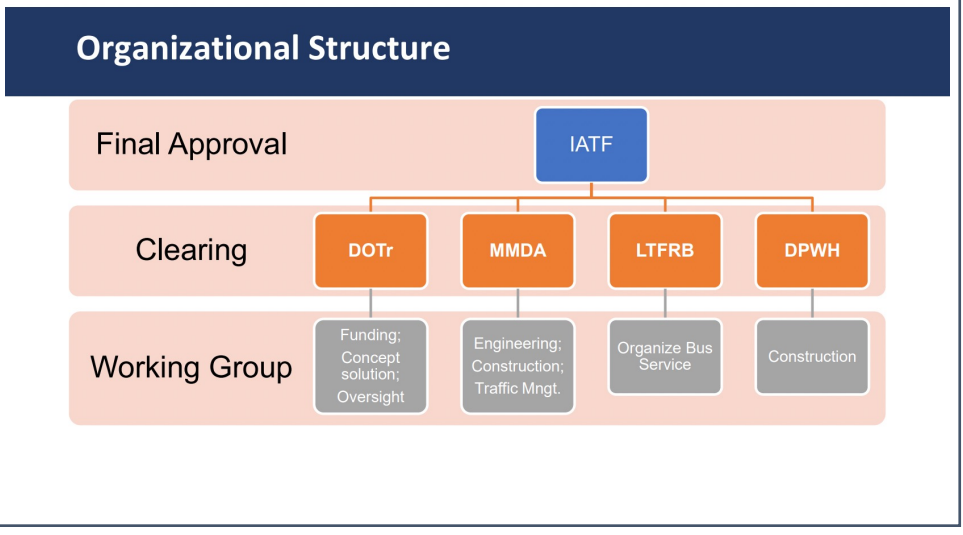

Figure 1. Organizational Structure for the EDSA Busway

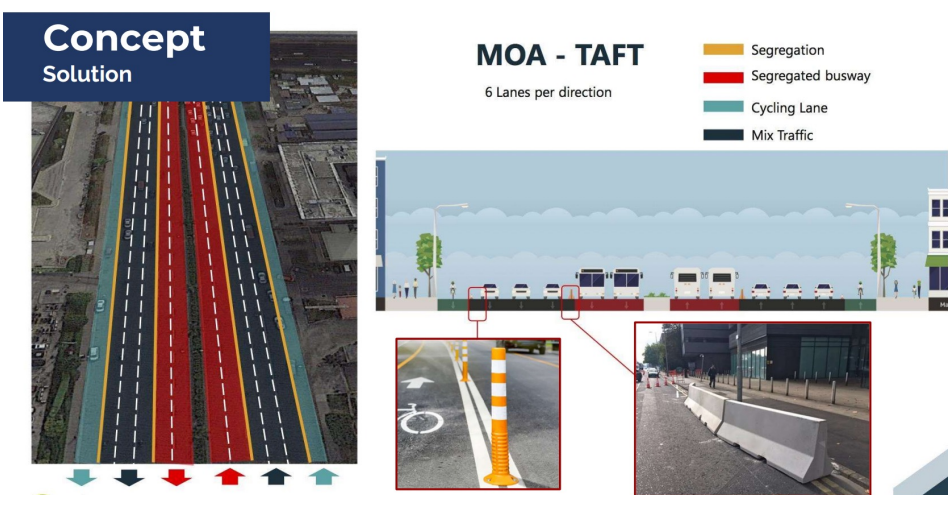

Figure 2. EDSA Busway Concept

Bus Stops
Locations & Linkages

Type	Bus Bays
1	2 (e.g. WTC)
2	4 (e.g. Kamuning)
3	6 (e.g. Greenfield)
4	8 (e.g. Ayala)

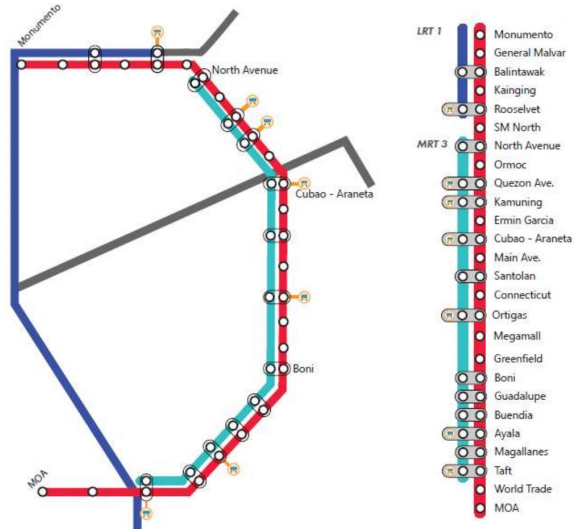

Figure 13. EDSA Busway Bus Stops

Service
Plan

5 services; 26 stations

Sample Travel Times	
Taft to North Avenue (Service A)	30 minutes
North Avenue to Ayala (Service C)	24 minutes
Cubao to Taft (Service E)	20 minutes

System Manager to implement/enforce Service Plan

Figure 14. EDSA Busway Service Plan

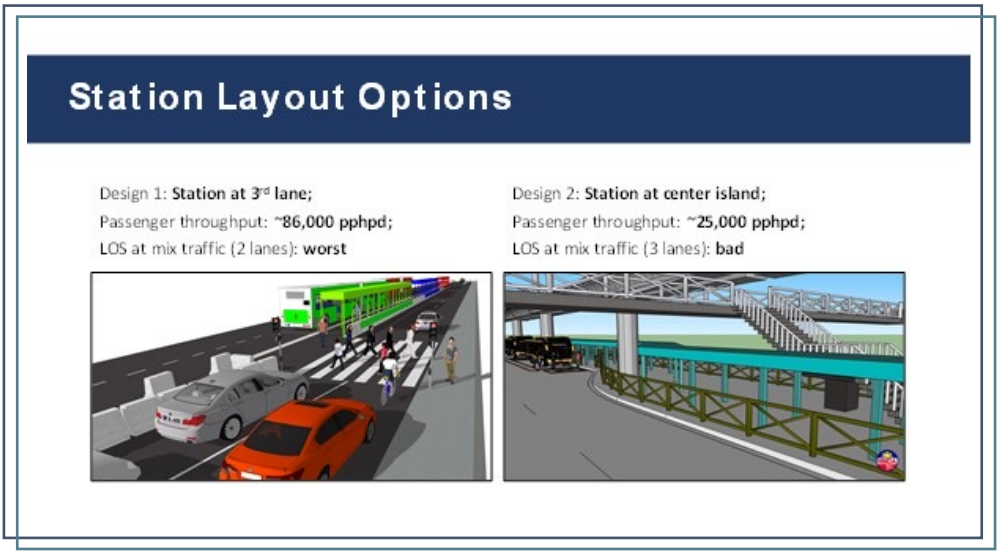

Figure 15. EDSA Busway Station Layout Options

alone will not make the EDSA Busway work. The big part of the solution, but sad to say, the least prioritized, is the formulation of the service plan. Part of the proposal for the EDSA Busway, for example Service B will cover the entire stretch, but will stop at certain stations indicated by the black dots, and so on and so forth with services C, D, and E (Figure 14).

Another component is the establishment of a system manager, an entity with competence and technology to oversee the day-to-day operation. They will serve as the implementing arm of the service plan. The operator partner will report to the system manager and the system manager will be accountable to the public in terms of the performance of the service operator. For some reason, some elements of this plan have not made it to the final form of the EDSA Busway being implemented now. This could be an interesting case for research later on.

Among the most contentious decision items during the planning for the EDSA Busway are the two station layout options (Figure 15). To simplify, the first option (station at 3rd lane) would prioritize the interest of the safety and convenience of the commuters at the expense of those people in the mixed lane. While on the other hand, the second option (station at center island) requires for the stations to be placed on the center median, it improves the level of service on the mixed lane but it significantly reduces the passenger throughput of the system.

My first takeaway would be that reform is possible, as seen in the EDSA Busway experience, and such reforms may not necessarily have to be costly. The second takeaway is the technical solutions and the directions of future plans would be influenced by the mandates of the institutions presently at hand. Most of the speakers also have hinted on identifying an entity that will promote public transport – we also see that in our experience in the EDSA Busway. And then finally, I would like to point out that venues such as this conference really help. For example, if not for the network of TSSP, we would not have access to those additional expertise during time of crisis. That would be all from me. Thank you.

About the Speaker

Engr. Johan G. Martinez

Engr. Martinez is a civil engineer and one of the first batch of MA Transportation Planning graduates from UP School of Urban and Regional Planning (SURP)/National Center for Transportation Studies (NCTS).

He is a former Director at Project Development Service of PPP Center of the Philippines. He is also a former Program Manager of BRT-National Program Management Office (BRT-NPMO) of DOTr, which is among the groups that spearhead the development of EDSA Busway concept.

Engr. Martinez now works as Infrastructure Specialist Consultant with Asian Development Bank (ADB)-World Bank.