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| Country Name | Project for enhancing management capacity of transport system focused on public transport in Binh Duong Province |
| Socialist Republic of Viet Nam | |

I. Project Outline

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|--|---|--------------|---|--|--|
| Background | <p>Binh Duong Province, which bordered the north of Ho Chi Minh City (HCMC), had a total population of 1.7 million. Within the province, there were 28 industrial parks. Because the southern part of Binh Duong Province was located within the commuter shed of HCMC, the population was continuing to increase. By 2020, the population of Binh Duong Province was expected to grow to 2.5 million. In addition, Binh Duong Province aimed to have its administrative status elevated to that of a centrally controlled municipality. In anticipation of this, around 10 km away from the old provincial capital of Thu Dau Mot City, a new provincial capital called Binh Duong New City was constructed. In February 2014, the provincial administration was moved to Binh Duong New City and, in December of the same year, a new bus service was planned to be inaugurated connecting Thu Dau Mot City with Binh Duong New City although many employees commuted from Thu Dau Mot City to the new city by motorcycle. The New City had only begun to function in part, and it was expected that, by developing bus transportation in advance, the public transportation system centered on bus transportation would be established (Figures are at the time of ex-ante evaluation.).</p> | | | | |
| Objectives of the Project | <p>The project aimed to strengthen institutional capacity of policy development and implementation on the public transport system in southern part of Binh Duong Province in Viet Nam through preparing bus system improvement plan, examining measures to upgrade quality of the bus service and implementing pilot projects, and formulation and implementation of Mobility Management (MM) to enhance the bus use in cooperation with relevant organizations and communities, thereby promoting enhancement of public transport system.</p> | | | | |
| | <ol style="list-style-type: none"> Overall Goal: Enhancement of public transport system is promoted. Project Purpose: Institutional capacity of policy development and implementation on the public transport system development is strengthened. | | | | |
| Activities of the Project | <ol style="list-style-type: none"> Project site: Southern part of Binh Duong Province, including Thu Dau Mot City and Binh Duong New City¹ Main activities: Preparation of bus system improvement plan, examination of the orientation for improvement of the quality of bus services, planning and implementation of pilot projects (implementation of punctual bus operation and management system, introduction of IC-card system, implementation of traffic safety measures, and introduction of monitoring system of the attitude of bus drivers and conductors toward passengers) and MM activities to promote bus usage and Park and Ride (P&R)². Inputs (to carry out above activities): <table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> Japanese Side 1) Experts: 13 persons 2) Trainees received: 14 persons 3) Equipment: Equipment for introduction of IC-card system, equipment for P&R pilot project 4) Local cost </td> <td style="width: 50%; vertical-align: top;"> Vietnamese side 1) Staff allocated: 33 persons (Department of Transport (DOT) (8), Department of Finance (DOF) (1), Department of Construction (DOC), Department of Planning and Investment (DPI) (1)/Binh Duong Province, Management and Operation Center for Public Transport (MOCPT) (3), Investment and Industrial Development Corporation (Becamex IDC) (2), Becamex Tokyu Bus (3), etc.)³ 2) Office space for experts 3) Local cost: Construction cost for bus shelter and P&R facilities etc. </td> </tr> </table> | | | Japanese Side 1) Experts: 13 persons 2) Trainees received: 14 persons 3) Equipment: Equipment for introduction of IC-card system, equipment for P&R pilot project 4) Local cost | Vietnamese side 1) Staff allocated: 33 persons (Department of Transport (DOT) (8), Department of Finance (DOF) (1), Department of Construction (DOC), Department of Planning and Investment (DPI) (1)/Binh Duong Province, Management and Operation Center for Public Transport (MOCPT) (3), Investment and Industrial Development Corporation (Becamex IDC) (2), Becamex Tokyu Bus (3), etc.) ³ 2) Office space for experts 3) Local cost: Construction cost for bus shelter and P&R facilities etc. |
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| Project Period | (ex-ante) July 2014-June 2017 (actual) March 2015-June 2018 | Project Cost | (ex-ante) 300 million yen, (actual) 279 million yen | | |
| Implementing Agency | Department of Transport (DOT)/Binh Duong Province | | | | |
| Cooperation Agency in Japan | ALMEC Corporation; Tokyu Corporation | | | | |

II. Result of the Evaluation

<Special Perspectives Considered in the Ex-Post Evaluation>

- As for the Project Purpose Indicator 1 (development and implementation of bus system improvement plan and pilot project/MM activities), the continuation status of the bus system improvement plan was confirmed under the continuation status of the Project Purpose Indicator 2 (authorization of bus system improvement plan).
- The target year for the Overall Goal (“Enhancement of public transport system is promoted”) was set to be 2021, which was 3 years after the project

¹ According to Decision 1066/QD-UBND dated April 26, 2017 of the Binh Duong Provincial People's Committee, Binh Duong New City belongs to the Industrial - Service - Urban Complex, located in Hoa Phu ward and Phu Tan ward of Thu Dau Mot City, Binh Duong Province. It borders on Hoa Loi ward (Ben Cat town) to the North; Phu My ward (Thu Dau Mot city) to the South; Tan Hiep ward, Tan Vinh Hiep commune and Phu Chanh commune (Tan Uyen town) to the East; and Hoa Loi ward (Ben Cat town) and Dinh Hoa ward (Thu Dau Mot city) to the West.

² The pilot projects were planned and implemented in collaboration with Becamex Tokyu Bus.

³ Twelve of them (6 from DOT, 2 from MOCPT, 1 each from DOF, DOC, DPI, and Becamex IDC) were assigned to 3 Working Groups on Bus System Improvement Plan, Measures to Upgrade Quality of the Bus Service and Pilot Project, and MM Activity, consisting of JICA experts and Vietnamese staff.

completion, because the ex-post evaluation was planned 3 years after the project completion as per the ex-ante evaluation sheet.

- The target area of the Overall Goal was not specified in the logical framework of the project (only available in English). In this ex-post evaluation, Binh Duong Province was regarded as the target area because, in the Completion Report, implementation of the bus system improvement plan developed under the project was mentioned as a necessary activity to achieve the Overall Goal, the said plan was a 3-year plan covering Binh Duong Province, and the number of bus passengers in Binh Duong Province was presented as the results of the Overall Goal Indicator, which was also included as a monitoring item in the post-monitoring plan.
- The term “public transportation” mentioned in the Overall Goal Indicator (“Number of public transport passengers/modal share of public transportation are increased”) was interpreted to mean buses since the Completion Report shows the number of bus passengers as the results of the indicator as described above. Since “/” means “and/or”, the change in the number of bus passengers and/or modal share was checked. As DOT provided the data on the number of bus passengers, the number of bus passengers was used to judge the achievement status of the indicator.

1 Relevance/Coherence

[Relevance]

<Consistency with the Development Policy of Viet Nam at the Time of Ex-Ante Evaluation >
 The project was consistent with the development policies of Viet Nam at the time of ex-ante evaluation: the Socio-Economic Development Strategy (SEDS) (2011-2020), which set forth “Quickly develop infrastructure, especially transportation infrastructure” and the Transport Development Strategy up to 2020 with a vision toward 2030, which set forth “Strongly development of bus systems in big cities”.

<Consistency with the Development Needs of Viet Nam at the Time of Ex-Ante Evaluation >
 The project was consistent with the development needs of Viet Nam for the development of public transport system focused on bus system at the time of ex-ante evaluation as mentioned in “Background” above.

<Appropriateness of Project Design/Approach>
 The project design/approach was appropriate. No problem attributed to the project design/approach was confirmed.

<Evaluation Result>
 In light of the above, the relevance of the project is ③⁴.

[Coherence]

<Consistency with Japan’s ODA Policy at the Time of Ex-Ante Evaluation>
 The project was consistent with the Japan’s ODA policy to Viet Nam at the time of ex-ante evaluation because the Country Assistance Policy for the Socialist Republic of Viet Nam (2012) included assistance to develop arterial traffic and urban transport network under one of the priority areas of “Promotion of Economic Growth and Strengthening International Competitiveness”.

<Collaboration/Coordination with other JICA’s interventions>
 Any collaboration/coordination between the project and other JICA’s intervention was not clearly planned at the time of ex-ante evaluation.

<Cooperation with other institutions/ Coordination with international framework>
 Any cooperation/coordination with other institutions (donors, NGOs, universities, private companies/international framework) was not clearly planned at the time of ex-ante evaluation.

<Evaluation Result>
 In light of the above, the coherence of the project is ②.

[Evaluation Result of Relevance/Coherence]
 In light of the above, the relevance/coherence of the project is ③.

2 Effectiveness/Impact

<Status of Achievement of the Project Purpose at the Time of Project Completion>
 At the time of project completion, the Project Purpose has been mostly achieved as planned. The staffs of DOT and the related organizations allocated for the project, in cooperation with JICA experts, (1) prepared Bus Service Improvement Plan for Binh Duong Province (including subsidy policies)⁵ and (2) planned and implemented several pilot projects to improve bus service and MM activities to promote bus use and MM activities to promote P&R (P&R pilot projects) (Indicator 1). The Bus Service Improvement Plan was basically agreed upon by Provincial People's Committee (PPC) in May 2018. DOT revised parts of the plan based on the request of the PPC and submitted the revised version to PPC for approval, but it took time for comments by the relevant departments so that the approval was not obtained before the project completion in June 2018. (It was approved on July 10, 2018, just after the project completion) (Indicator 2).

< Continuation Status of Project Effects at the Time of Ex-Post Evaluation >
 At the time of the ex-post evaluation, the project effects have been continued. DOT in collaboration with the related organizations has continued the bus service improvement measures that were introduced at the 6 pilot routes, the MM activities to promote bus use, and the P&R at the 3 P&R pilot project sites, despite that social quarantine, behavioral restrictions, etc. were implemented in Binh Duong Province from 2020 to 2021 due to the COVID-19 pandemic. Of these continued activities, 3 of the 4 bus service improvement measures (i.e., punctual operation and management system, IC-card system, and monitoring system of the attitude of bus drivers and conductors toward passengers) and the MM activities have been further developed⁶. In addition, the Bus Service Improvement Plan developed under the

⁴ ④:very high, ③:high, ②:moderately low, ①:low * To be the same afterwards.

⁵ For reference, the Bus Service Improvement Plan also included the MM for promotion of bus use (the plan did not include dissemination of the pilot project activities and P&R).

⁶ The punctual operation and management system is being reflected in a plan for new bus route development. Regarding the IC-card system, another card function has been added to the bus IC card (to which the function for P&R bicycle parking lot card had been added during project implementation in coordination with the P&R pilot project), and 2 other bus operators have introduced the IC card system. Monitoring system of the attitude toward passengers of bus drivers and assistants has been strengthened, for example, by combining data from vehicle cameras. As for the MM, target and frequency of promotion on bus usage have been expanded and increased. The use of Social Networking Service (SNS) has been adopted as a method, too.

project has been continuously used and implemented as an official plan of the province. The Bus Service Improvement Plan was approved by the PPC in July 2018 as the Plan 1881 (2018-2020)⁷. Its implementation plan was prepared by DOT in September of the same year and the Plan 1881 was notified to the relevant agencies by the PPC in October. However, as the main components of the Plan 1881 were targeted for support to private companies and residents, it required time to confirm/establish the legal basis, implementation guidelines, implementation methods, and specific procedures related to budget support in the public transportation sector. In addition, there were changes in the relevant laws and regulations relevant to the opening of 3 new bus routes included in the Plan 1881, which required time to review the new laws and regulations and to adapt to the procedures established by them. Moreover, the relevant activities were temporarily suspended by the social quarantine and movement restrictions caused by the COVID-19 pandemic in 2020. As a result, the Plan 1881 did not proceed as planned except for some activities, so that, by the decision of the PPC in August 2020, the implementation period was extended until December 2023. Since then, the activities have made steady progress despite movement restrictions and social quarantine posed by the COVID-19 pandemic which continued intermittently until 2021. DOT expects the Plan 1881 to be completed by 2023 as scheduled, but will evaluate the overall progress in 2023 and, if necessary, will prepare and submit a new plan.

<Status of Achievement of the Overall Goal at the Time of Ex-Post Evaluation>

By the time of the ex-post evaluation, the Overall Goal has not been achieved because the indicator (increasing the number of bus passengers in Binh Duong Province) has not been achieved. It is noted that there was a downward trend in the number of bus passengers in Viet Nam since the 2000s due to private modes of transportation such as motorcycles and cars, and the number of bus passengers in Binh Duong Province continued to decline from 2010 (14 million) to 2017 (7.65 million). At the time of project completion, it was expected that the number of bus passengers could be increased through implementation of the Bus Service Improvement Plan, including subsidy policy; however, as mentioned earlier, the Plan 1881 approved by the PPC has not proceeded as initially planned due to necessity of confirmation of the legal basis and establishment of specific procedures for subsidizing private companies and residents, changes in the related laws and regulations for opening new bus routes, social quarantine due to the COVID-19 pandemic, etc., and the implementation period has been extended until the end of 2023. With this as one factor, the bus travel needs have declined since 2018 as well⁸, and the number of bus passengers has decreased every year. Moreover, self-restraint on public transportation use, social quarantine, and reduction or suspension of bus services due to the COVID-19 pandemic from 2020 to 2021 resulted in a sharp decline in the number of passengers. As a result, the number of bus passengers in 2021, the target year, decreased to 14% of the same in 2017, the year before the project completion⁹. As countermeasures for the decline in the bus ridership, DOT plans to improve and expand the bus route networks, expand commuter pass subsidies for residents, and provide support to bus operators etc. based on the Plan 1881 and the “Public Transport Development Plan by new means of transport in Binh Duong New City” (hereinafter referred to as “Binh Duong New City Bus System Development Plan”) (2014-2024), which had been developed and approved by the PPC outside the framework of this project.

<Other Impacts at the Time of Ex-Post Evaluation>

Binh Duong Province has been selected as one of the cities with Smart 21 (smart city development strategy) by the Intelligent Community Forum (ICF) for 4 consecutive years from 2019, and according to DOT, the Japanese-style bus system that utilizes the IC card system, established under the project, has contributed to meet one of the criteria for Smart 21, the Smart Bus System. Meanwhile, no negative impacts have been observed.

<Evaluation Result>

In light of the above, the effectiveness/impact of the project is ②.

Achievement of Project Purpose and Overall Goal

| Aim | Indicators | Results | Source |
|--|--|--|--|
| (Project Purpose) Institutional capacity of policy development and implementation on the public transport system development is strengthened. | Indicator 1: Counterpart personnel prepare/implement followings in cooperation with JICA experts in good manner. -Bus system improvement plan. -Several pilot projects/MM activities. | Status of the Achievement (Status of the Continuation): mostly achieved as planned (continued and further developed) (Project Completion) -DOT and the related organizations, in cooperation with JICA experts, prepared the 3-year Bus Service Improvement Plan for Binh Duong Province, implemented several pilot projects to improve bus service and the MM activities to promote bus use and P&R. (Ex-Post Evaluation) -The pilot projects and the MM activities have been continued in cooperation with the related organizations. Some of them have been further developed, such as reflection of punctual operation measures in a new bus route development plan and addition of a function to the bus IC card. | Completion Report, questionnaire and interview survey to DOT |
| | Indicator 2: Bus system improvement | Status of the Achievement (Status of the Continuation): mostly achieved as planned (continued)) (Project Completion) | ditto |

⁷ It is noted that, out of the proposed items of the Bus Service Improvement Plan, subsidies for bus fares for one-time ticket for residents were not included in the Plan 1881.

⁸ DOT attributed the decrease in bus ridership needs to such factors as decrease in demand for medium- and long-distance commuting due to construction of housing complexes near the industrial parks, higher bus fare compared to private transportation, easier access to motorcycles due to rise in the average income of residents and increase of the number of motorcycle shops, and preference for door-to-door private transportation. Of these, the higher bus fare is considered to have been affected by the fact that subsidizing commuter passes included in the Plan 1881 are being delayed and that the bus fare subsidy for one-time tickets proposed by the Bus Service Improvement Plan were not included in the Plan 1881.

⁹ For reference, as for the pilot routes, the number of bus passengers in 2018, the year of project completion, increased compared to 2017 due to the effects of the pilot project. Although the pilot project activities continued and further developed after the project completion, the number of passengers slightly decreased in 2019 from the previous year to 370,000, and sharply decreased in 2020 and 2021 due to the spread of the COVID-19 (110,000 in 2021). The fact that the number of bus passengers in 2019 was only slightly decreased from the previous year suggests that a significant decrease in annual users could have been avoided if it had not been for the adverse impact of the COVID-19 pandemic.

| | plan is authorized. | <p>-The Bus Service Improvement Plan was submitted to PPC and basically agreed upon by PPC. (Ex-Post Evaluation)</p> <p>-The Bus Service Improvement Plan has been approved as an official plan of the province (the Plan 1881) and continuously utilized and implemented. The original implementation period (2018-2020), however, has been extended to 2023 due to delays in the overall progress of the plan's activities because of the need to confirm the legal basis and establish specific procedures for subsidizing private companies and residents, which account for many of the plan's activities, changes in laws and regulations related to opening new bus routes, and social isolation posed by the COVID-19 pandemic, etc..</p> | | | | | | | | | | | | | | | | | | | | | | |
|--|--|---|--------------------------------------|-------------|-------------|--------------------------------------|------|------|------|---------------------|-------|-----|-----|-----|-----|-----|---------------------|-----|----|----|----|----|----|-------|
| (Overall Goal) Enhancement of public transport system is promoted. | Indicator: Number of public transport passengers/modal share of public transportation are increased. | <p>(Ex-Post Evaluation): not achieved</p> <p>>Annual number of bus passengers in Binh Duong Province (Unit: 10 thousand people)</p> <table border="1"> <thead> <tr> <th></th> <th>(Ref.) 2010</th> <th>(Ref.) 2017</th> <th>2018 (Year of project completion)</th> <th>2019</th> <th>2020</th> <th>2021</th> </tr> </thead> <tbody> <tr> <td>Binh Duong Province</td> <td>1,400</td> <td>765</td> <td>659</td> <td>526</td> <td>286</td> <td>107</td> </tr> <tr> <td>(Ref.) Pilot routes</td> <td>N/A</td> <td>35</td> <td>39</td> <td>37</td> <td>26</td> <td>11</td> </tr> </tbody> </table> <p>-The bus ridership needs continuously decrease even after the project completion, and the bus ridership needs the number of passengers is decreasing every year (except for the pilot routes in 2018, when the number of passengers increased from the previous year due to the effects of the pilot projects). Factors inhibiting the improvement of the decline in bus travel needs include the slow progress of the Plan 1881, as noted in the continuation status of the Project Purpose Indicator 2 (see footnote 7 for other factors).</p> <p>-In 2020 and 2021, the number of passengers declined sharply due to self-restraints on public transportation use, social quarantine, and reduction or suspension of bus services due to the COVID-19 pandemic.</p> <p>-DOT has identified the continued implementation of the Plan 1881 and the Binh Duong New City Bus System Development Plan (2014-2024) as measures to address the decline in bus ridership.</p> | | (Ref.) 2010 | (Ref.) 2017 | 2018 (Year of project completion) | 2019 | 2020 | 2021 | Binh Duong Province | 1,400 | 765 | 659 | 526 | 286 | 107 | (Ref.) Pilot routes | N/A | 35 | 39 | 37 | 26 | 11 | ditto |
| | (Ref.) 2010 | (Ref.) 2017 | 2018 (Year of project completion) | 2019 | 2020 | 2021 | | | | | | | | | | | | | | | | | | |
| Binh Duong Province | 1,400 | 765 | 659 | 526 | 286 | 107 | | | | | | | | | | | | | | | | | | |
| (Ref.) Pilot routes | N/A | 35 | 39 | 37 | 26 | 11 | | | | | | | | | | | | | | | | | | |

3 Efficiency

The project cost was within the plan (the ratio against the plan: 93%) and the project period slightly exceeded the plan (the ratio against the plan: 111%). The project period slightly exceeded the plan because the start of the P&R pilot project was postponed at one of the 3 sites due to change in the use of the land where P&R was to be implemented and delay in civil engineering work. Outputs were produced as planned. In light of the above, the efficiency of the project is ③.

4 Sustainability

<Policy Aspect>

At the time of the ex-post evaluation, the SEDS (2021-2030) sets forth continuation of completion of the homogeneous and modern system of economic and social infrastructure as one of its three strategic breakthrough pillars and transportation infrastructure is identified as one of the major infrastructure to be developed. In addition, the Transport Development Strategy of Viet Nam presented in the "Relevance/Consistency" remains effective. Furthermore, the Bus Service Improvement Plan, developed under the project and approved by the PPC as the Plan 1881, has been extended and is effective until December 2023. The Binh Duong New City Bus System Development Plan approved by the PPC in 2014 has also been extended twice and is effective until December 2024.

<Institutional/Organizational Aspect>

The organizational structure for the public transportation system in Binh Duong Province has not been changed and it is functioning. DOT is a government agency that oversees the related organizations, and has the minimum necessary number of staff, including 2 in charge of the Plan 1881. Outside DOT, there has been basically no change in the staff in charge at MOCPT and other departments. The systems and activities introduced by the project have been implemented not only through administrative management by DOT but also through collaboration with the related organizations which actually implement activities (MOCPT and bus companies) and the related departments (DOF, DPI, etc.).

<Technical Aspect>

DOT and the related organizations maintain the necessary skills and knowledge to promote the bus system improvement. DOT in collaboration with bus companies provides the necessary training in accordance with the decision of Ministry of Transportation (July 2020), which is the framework for traffic safety as well as training for drivers and assistants in Viet Nam. In addition, the plans, documents, and manuals prepared under the project are continuously utilized. The equipment provided under the project is also maintained in good condition and utilized.

<Financial Aspect>

The implementation periods of the Plan 1881 and the Binh Duong New City Bus System Development Plan has been respectively extended until 2023 and 2024; therefore, the necessary budget for promotion of the bus system improvement is secured by the provincial government. Becamex Tokyu Bus has also secured the necessary budget for continuation of the pilot project and MM activities, including maintenance costs of the provided equipment, from its own resources.

<Environmental and Social Aspect>

No issue on environmental and social aspect has been observed and it has not been necessary to take any countermeasures about the bus system improvement measures introduced under the project.

<Evaluation Result>

In light of the above, no problem has been observed in terms of the policy/ institutional/organizational/ technical/ financial/ environmental and social aspects. Therefore, the sustainability of the project effects is ④.

5 Summary of the Evaluation

The Project Purpose of strengthening of institutional capacity of policy development and implementation on the public transport system development was mostly achieved as planned and the effects of the project have continued. The Overall Goal of promotion of enhancement of public transport system has not been achieved, however, as the number of bus passengers has not increased compared to the one before the project completion. (This is because the declining trend in the bus travel needs has not been improved due to factors such as overall delays in the progress of the Bus Service Improvement Plan developed under the project, and the bus usage has sharply dropped due to the COVID-19 pandemic). As for the Sustainability, no problem has been observed in terms of the policy, institutional/organizational, technical, financial, and environmental and social aspects. Considering all of the above points, this project is evaluated to be satisfactory.

III. Recommendations & Lessons Learned

Recommendations for Implementing Agency:

- The positive effects of the project on the number of bus passengers have been confirmed at the pilot routes. If the activities at the pilot routes that are not included in the Plan 1881 are disseminated throughout the province, they are considered to contribute to the achievement of the Overall Goal. It is recommended that DOT work with local bus companies to disseminate the activities implemented at the pilot routes (i.e., introduction of IC cards, punctual bus operation, P&R, optimization of bus route networks, and monitoring system of the attitude of bus drivers and assistants toward passengers) throughout the province by December 2023, which is the deadline for achieving the Plan 1881.

Lessons learned for JICA:

- At the planning stage of a technical cooperation project in the transportation sector that includes development of a public service improvement plan, it is important to include in the project activities not only an activity for development of the contents of the plan but also an activity in which the implementing agency, in collaboration with other departments, confirms the legal basis and procedures for the implementation stage of the plan, and, then set an appropriate time frame for implementation of the plan.
- In a similar project which sets forth the enhancement of public transportation systems as the Overall Goal, careful consideration should be given as to whether it is appropriate to use only "increase of public transportation users/modal share" as the indicator because the achievement is largely affected by external factors (such as the effects of the COVID-19 pandemic and the increase of private modes of transportation, etc.). (For example, it could be used together with indicators such as improvement in customer satisfaction, reduction in traffic congestion, etc.).



Becamex Tower P&R parking developed under P&R pilot project (continuously utilized)



Bus stop in front of Thien Hau Temple developed under a pilot project for bus service improvement (continuously utilized)