Pre-Feasibility Study
Cebu SRP Transport Strategy Development Phase III

January 2012
Executive Summary

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A. Introduction

1. Integrated Transport Planning Ltd. (ITP) has been employed by Cities Development initiative in Asia (CDIA) to support Cebu City Government in the development of the public transport strategy for SRP. Phase II was presented to an executive meeting of the council in June 2011. The strategy takes full account of the Cebu BRT Pre-Feasibility Study approved by Cebu City Council in June 2010. The phase II report included:

- 1.1. Incorporation and phased introduction leading to the eventual service by the World Bank funded Pilot BRT route (assumed operational in 2015)
- 1.2. An additional BRT style route operating along the coastal road between North Bus Terminal and Talisay
- 1.3. An interim High Quality Public Transport Route to operate between North Bus Terminal and Talisay in order to support early development within SRP in advance of the World Bank BRT route.
- 1.4. Both the Interim Route and the eventual BRT service require the internal road within SRP to be built incorporating BRT ready infrastructure.

2. Phase III developed these strategic principles and has developed costed infrastructure proposals (up to outline engineering design) and an operating service plan/business case for services using that infrastructure.

B. The Programme

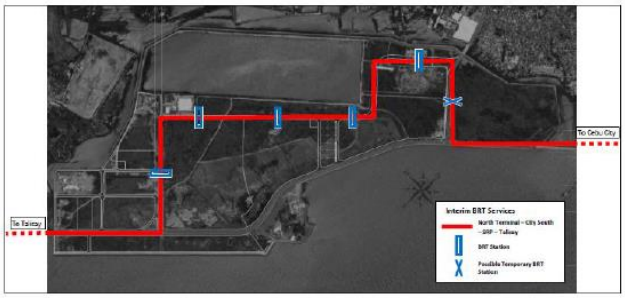
3. Key programming dates are:

- 3.1. **May 2013** SM mall will open, Il Corso will be complete and approximately 20% of the Filinvest JV land will be developed. At this time the SRP will generate an average of 80,000 public transport trips per day.
- 3.2. **During 2013 and 2104** construction of the pilot BRT route will be on-going making quality of access to the SRP from the north (Mambaling Road) difficult.
- 3.3. 2015 the BRT Pilot route will open.

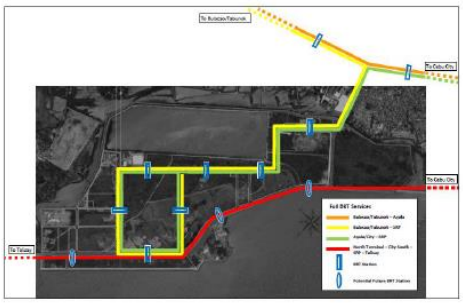
4. It is clear that the BRT pilot route will not be available during the early days of operation, it is equally clear that whatever serves SRP in the interim must not prejudice the eventual BRT network and should be seen as working towards the BRT network.

C. A Two Phase Service

5. A two phased approach has been developed. This starts in 2013 with a High Quality Public Transport Service operating using BRT style infrastructure within the SRP and mixing with other traffic outside of SRP. In 2015 the initial service migrates to a coastal service with an additional service connecting with the BRT pilot route in Mambaling. By 2015 it is assumed that SRP will be fully occupied. Together these two services ensure that all parts of SRP are within 400m of a BRT station.



Interim Service: May 2013 - 2015



Full Service: 2015 onwards

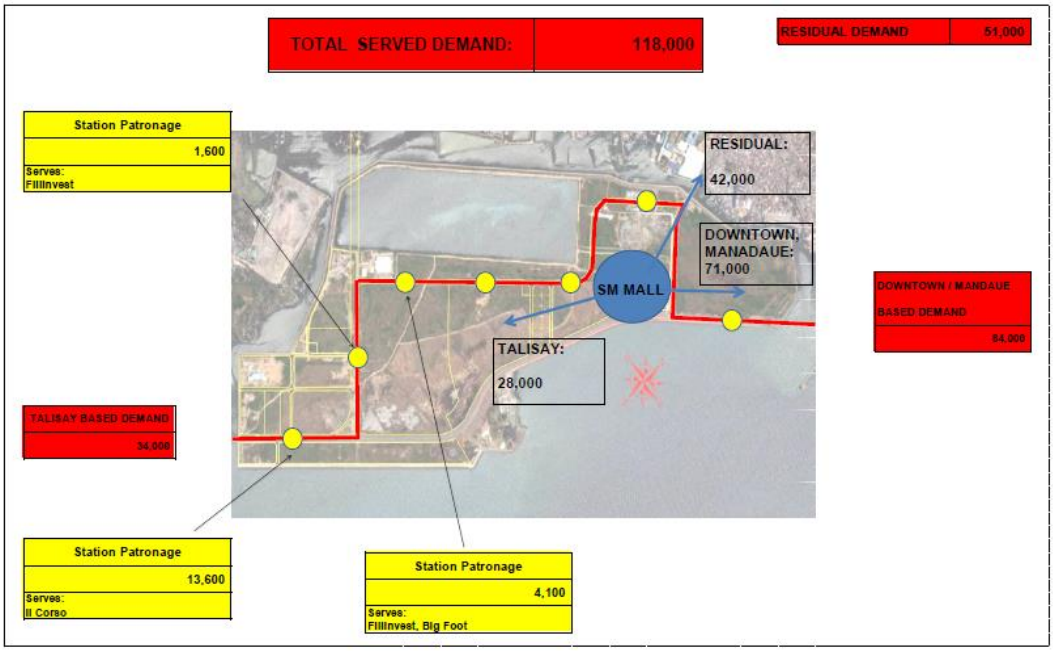
6. Achieving the two phased service requires 'BRT ready' infrastructure to be built within SRP. This will consist of BRT lanes and stations within the median of the yet to be built SRP internal road, Pardo Road and the Coastal Road. ITP as part of its commission has provided Cebu City with outline engineering design drawings of the infrastructure required. This infrastructure has been defined to meet calculated demand and provide full and comprehensive access throughout SRP. They incorporate wide sidewalks, cycle lanes and road widths sufficient to accommodate future anticipated traffic levels. During technical development has been guided by a Steering Committee established by the Mayor Rama and has consulted with SRP investors as well as, DPWH and DOTC. The final set of plans emanate from two former draft sets of plans and take on board all comments received. The cost of identified improvements has been estimated below. These costs include all road works, utilities, drainage street lighting and some landscaping. A cost estimate for detailed design and construction supervision is provided separately.

Total Construction Cost Including Drainage	**953 million Peso**	**$21.92 million**
Detailed Engineering Design Cost	**53 million Peso**	**$1.22 million**

7. Construction of the internal BRT road needs to be complete and ready accept operations by May 2013 at the very latest. The modifications of the Coastal Road need to be complete by 2015.

D. The High Quality Bus Service

8. Trip generation has been calculated with reference to other similar development in Cebu and the Philippines in general. A traffic/trip model has been developed for SRP that calculates passenger volumes at stations and the number of vehicles on roads and public transport links. This guides infrastructure and service development. Trip generation to/from SRP is dominated by SM mall particularly in the early years. The peak arrivals/departures for a shopping mall occur at a weekend. The peak daily (Saturday) forecast demand emanating from SRP in 2013 is summarized below. In developing the service plan for the SRP public transport full account has been taken of varying demand throughout the day and week but infrastructure design takes account of peak demand only.



9. As an interim (2013-2015) service two service patterns have been considered:
   9.1. North bus terminal – downtown – SRP
   9.2. North bus terminal – downtown – SRP– Talisay

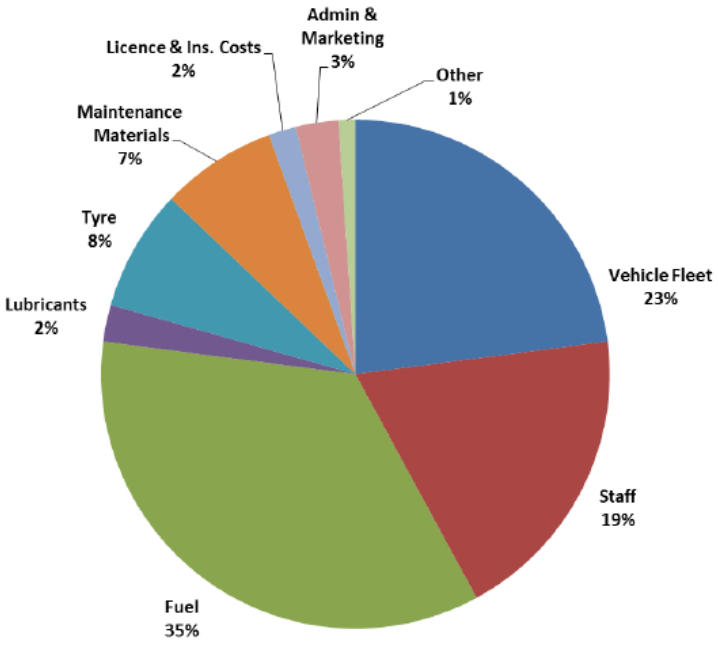
10. Service type 1 terminates at the western edge of SRP. In order to serve the high demand emanating from the west a terminal facility would have to be provided within SRP for passengers to transfer from Jeepney to BRT style service. This would have an effect on capital receipts (occupying developable land) and would have a construction and maintenance cost. Assuming that a circa 12m bus carrying 100 passengers (a mix of standing and seated) is used 121 buses would be required to cater for full demand under scenario 1. This rises to 162 vehicles in 2015 in order to cater for full demand.

11. Service type 2 is a through service and caters for demand from both the east (Cebu City) and west (Talisay). This would require agreement with Talisay City and a terminal point to be identified in Talisay. This would require 146 buses to cater for full demand at 2013 rising to 194 vehicles in 2015.

12. A smaller number of buses are required if the service terminates in SRP and that the ratio of revenue to costs is greater. This is because the journey time and subsequent operating costs is less. There is however a hidden operating cost of the Jeepney services that would travel between Talisay and the SRP interchange with BRT.

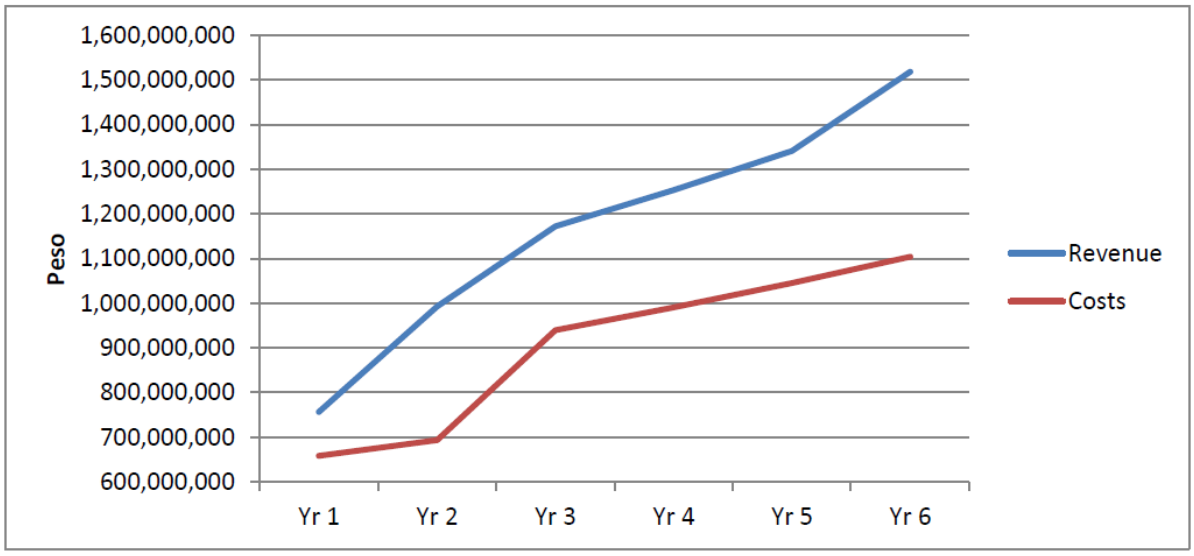
E. Business Case

13. In order to determine how attractive the service would be to a private sector operator a business case has been developed assuming a six year franchise period starting in 2013. Six years has been selected to enable full useful life to be extracted from new vehicles (additional vehicles purchase in 2015 have four year life), a period of escalating demand but not overtly long in order to enable re-franchising in the early years of full BRT operation. A purchase price of $100,000 per vehicle is assumed and, to give a robust analysis, it is assumed that a loan is taken out to purchase vehicles with interest rate 7.5% above Bank of Philippines standard rate. Operating costs consist of all personnel and resource costs associated with running a substantial sized bus company, this is summarised proportionally below.



14. Fares are assumed to be the same as existing Jeepney services and make up 99% of total revenue with the remaining revenue coming from advertising.

15. The figure below shows the relationship between revenue and cost throughout the intended franchise period – showing a clear operating profit stream.



16. The analysis shows a financial BCR (Benefit Cost Ratio) of 1.19 and 1.16 (service 1 and service 2) with a total financial NPV of operating surplus/profit of 1,160m Peso and 1,170m Peso (service 1 and 2). Analysis assumes full application of corporation tax, if excluded BCR's rise to 1.29 and 1.24 respectively.

17. The business case assumes that the operator purchases buses and as such the franchise negotiation must respect the lead in time for vehicle purchase. Purchasing a fleet of the size identified could take up to one year. The fleet should be available for testing at least one month prior to operation. As such the appointed operator should be in place by April 2012 at the latest.

F. Conclusion

18. The development of an interim high quality public transport SRP service that has BRT style service levels that then migrates to full BRT when the Mambaling corridor is converted to BRT service has the following advantages:

18.1. It meets an initial high level of demand

18.2. The migration of the initial service to a coastal service that complements the link between SRP and the BRT Pilot route is readily achievable and maintains escalating revenue levels for an operator.

18.3. An interim high quality public transport route has the ability to test BRT principles and expose both the travelling public and stakeholders to BRT principles in advance of full BRT over a route without any displacement of Jeepney operators and no land purchase.

18.4. The level of service required together with the investment in vehicles required produces a significant profit over a six year franchise period and as such should be sufficiently attractive to a private sector operator, however the need to control service level through the franchise agreement and on-going monitoring is emphasised.

19. To achieve this strategy requires early procurement of design and operations. In the event that this is not forthcoming an alternative approach has been investigated. This approach involves incorporation of SRP design and services into the wider World Bank funded BRT project. If Cebu City Government, DOTC and the World Bank were minded to pursue the alternative approach the following is recommended:

19.1. That negotiation between CIPC and SM (or any other such party) continue but centre upon a coastal road service only. The aim, if at all possible, should be to protect migration of this service to a form of BRT service as and when infrastructure is made available.

19.2. That the World Bank loan, and the on-going BRT Feasibility study, considers incorporation of internal roads to SRP (excluding the coastal road) within the wider BRT scheme development and delivery. This would exclude works to the Coastal Road and to Mambaling Road. However bus priority works that may or may not include localized widening, might be considered within the context of increased service levels and mitigating delivery risk.

19.3. That a dialogue with DPWH be continued to ensure that any widening of the coastal road be placed within the context of an overall delivery programme and that designs incorporate BRT proposals as defined within this study.

19.4. That CIPC continue to protect the land required for delivery of the road widening and BRT works, particularly where these lie outside of the land protected for road works.

19.5. That CIPC liaise and negotiate, calling upon the BRT Feasibility study consultants to assist where required, with investors to provide BRT stations associated with their development.