

MMRTC FARE POLICY AND STRUCTURE

Bus and Metro

February 2020

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I. Purpose

The purpose of this document “Fare Policy and Structure for MMRT’s Bus and Metro” is to establish guidelines for setting, and restructuring in future, MMRT fares. MMRT staff will refer to this policy when they make decisions about adjusting fares. This document will be updated to reflect, as and when there is additions\amendments to any guidelines which require to be considered within any policy.

This Policy document shall direct the MMRT to adopt a fare policy that addresses the following:

- A fare structure, including fare media and passes
- Fare levels, including discounts
- A system for free or substantially price-reduced transfer privileges
- Fare equity.

This policy complies with (TGA) Transport General Authority’s Fare Policy published in 2019. Future updates undertaken by TGA will be reflected in this policy accordingly.

II. Fare Policy Goal

The goal of this Fare Policy is to support MMRT’s mission of providing high quality public transport services for the benefit of the Makkah residents, visitors and pilgrims.

It is important to note that a relationship exists between the amount of government support provided for operating a public transit system and the amount of revenue collected from the actual users of the system. The relationship of subsidy verses passenger fare varies for each agency and is based on policy decisions made by the local governing authority. This relationship is measured by comparing the revenue collected relative to the operating expenditures of the system and is known as the fare recovery or fare return rate. Hence, this Fare Policy strives to identify a prudent balance between the various factors influencing public transit.

III. Fare Policy Objectives

Six objectives define MMRT's Fare Policy that are critical to achieving the Fare Policy Goal. The nature of these objectives reflects the complexity of developing a Fare Structure that will balance the desire to keep fares affordable for MMRT customers with the need to maximize fare revenue to help maintain and expand transit operations. These objectives were used to develop the Fare Structure described later in the policy.

In the future, when changes to the Fare Structure are considered, strategies for meeting the six objectives will be developed and evaluated. The new Fare Structure that emerges will encompass the mix of strategies that are determined to best meet the Fare Policy Objectives, as described below.

A. Customer-Related Objectives

The following three objectives directly support the MMRT's aspiration of operating high-quality public transportation services. When a fare increase or restructuring is proposed, all fare strategies considered for achieving these three objectives should be carefully weighed in relation to each other, as some possible strategies may achieve one objective at the expense of another. MMRT must strive to meet all of these objectives.

1. Increase Ridership Utilization and Occupancy

Because the MMRT exists to provide transit services for the benefit of the public and visitors, the degree to which the ridership increases is a direct indication of how successfully the MMRT is achieving its mission. Increasing ridership also supports the important social goals of reducing traffic congestion and decreasing air pollution.

2. Establish Equitable Fares

To be equitable, fares must take into account the needs of various populations of users and types of services. The Fare Structure should support the travel patterns and requirements of transit riders throughout the service area and should reflect the level and quality of the service provided. In addition, MMRT recognizes the need to ensure that for any fare increase, the burden placed shall not be borne primarily by a select user segment but rather by the system as a whole.

3. Enhance Mobility and Access

The Fare Structure should enhance the ability of riders to access the system and move through it with ease. To do so, the Fare Structure should be easy to understand and should promote a unified system by simplifying fares across modes.

B. Financial and Privacy Objectives

All fare strategies that are seriously considered in the context of the three Customer Objectives discussed above must also meet the following three Financial and Privacy Objectives to ensure the continued operation of MMRT services and the right to privacy of the customers.

1. Maintain or Increase Fare Revenue Stream

Because fare revenue will be a critical component of MMRT's operating budget, any increase to, or restructuring of, fares should ensure that the total fare revenue stream is maintained at an appropriate level.

2. Maximize Fare Revenue Collection

To maximize fare revenue collection and reduce fare evasion, MMRT should take advantage of substantial developments in fare collection technologies.

3. Maintain Customer Privacy

As MMRT strives to implement fare collection technologies that are easy and convenient to use, MMRT must remain cognizant of the need to respect customers' privacy and to ensure the security of personal information.

IV. Fare Payment Type

Using the Fare Policy Objectives described above, MMRT identified fare strategies for developing the following Fare Structure that meets the four fare policy requirements found in the Purpose paragraph.

A. Fare Media and Passes

1. Fare Media will be available for use on Makkah Public Transportation Project MPTP:

- a. **Contactless Smart Card:** with a computer chip that can be programmed to hold stored value to pay for rides individually or/and to select a pass product whether discounted or non, that allows multiple rides within a specified duration of time. This card can utilize capping for the daily pass only when the stored value consumed for number of passes during a day. Automatically the daily pass will be stored once the money value consumed equal or over the daily pass money value.
- b. **Contactless Smart Ticket:** with a computer chip that can be programmed to hold a single trip or a pass product (that allows multiple rides within a specified duration of time)
- c. **Credit & Debit Cards:** will be accepted on board the bus using the Validator.
- d. **QR Codes:** paper QR Codes & digital QR Code will be accepted on board the bus using the Validator.
- e. **Account Based Ticketing (ABT):** will be adapted for all digital sales channels whether using NFC, QR Code, Wallet or any advance technology presentation of fare media.

Each fare media representation conveys a set of specific features, requirements & functions that are summarized in following table.

Functions	Smart card			QR		ABT (NFC, wallet, D-QR code &/or others)
	Permanent	Limited		Paper	Digital	
		Di-cut	Roll			
Features						
Registration (ID)	Yes	No	No	No	Yes/No	Yes (email)
Personalization	Yes	No	No	No	No	Yes
TOP UP	Yes	No	No	No	No	Yes
Refund	Yes	No	No	No	No	Yes
Lost-Damaged	Yes	No	No	No	-	-
Capping	Yes	No	No	No	No	Yes
Products selections	No	No	No	No	No	Yes
Credit Deposit	Mandatory	non	non	non	non	non
Sales Channels						
TVM	Issue/Top up	-	Issue	Issue	-	-
SSC (TVS)	Issue/Top up	Issue	-	Issue	-	-
Website & App	Top up	-	-	-	Issue ⁽¹⁾	Issue/Top up
POS	Issue/Top up	Issue	-	Issue	-	-
Validator	-	-	-	-	-	-
Call Centre	Top up	-		-	Issue ⁽¹⁾	Top up ⁽²⁾
Discount						
Students	Yes	No		No	Yes	Yes
Seniors						
Disable/Cancer/welfare						
Minors 6 -14 years						
Passes Type						
Single Trip	Min. monthly pass purchase is mandatory	No	No	Yes	Yes	Yes*
Daily		Yes	Yes	No	Yes*	
Weekly		Yes	Yes		Yes*	
Monthly		Yes	Yes		Yes*	
Annually		No	No		Yes*	

* Will be renewed frequently

(1) QR tickets which are issued via Web Site or Call Center will be for single use and static.

(2) "Top Up" via Call Center to ABT can only be done to e-wallet account.

For permanent cards: riders must procure min value equivalent to monthly periodic pass to be able to get (issue) anonymous/personalized permanent card. The initial card can only be issued with monthly periodic pass purchase (for both anonymous and personalized).

As permanent card manufacturing cost is high, another option is to issue a permanent card through paying the cards fees which is set to be SR10. This will represent the cost of cards in which no value stored in the card. Those 2 options cannot be applied concurrently.

2. Pass Products:

- a. Single Trip for BRT, local bus, feeder services, or combo pass for both bus & metro.
- b. Daily Pass for BRT, local bus, feeder services, or a combo pass for both bus & metro.
- c. Weekly Pass for BRT, local bus, feeder services, or a combo pass for both bus & metro.
- d. Monthly Pass for BRT, local bus, feeder services, or combo pass for both bus & metro.
- e. Annual Pass for BRT, local bus, feeder services, or a combo pass for both bus & metro.

A single trip may involve few transfers and bus passes to complete the trip.

B. Fare Levels

Fares may be differentiated by mode to reflect differences in operational characteristics and average trip length. However, as this public transportation introduced for the first time in the region, fare will be applied equally for all modes. The need for advance studies and fare adjustments will take place after the full transportation modes integrated and fully operational.

“Full fare” for all modes will be defined as the adult single-ride cash fare. Customers eligible for discounts, and carry personalized MMRT issued smart card, will pay a discounted fare. This is intended to eliminate fare evasion or abuse of discounted fares.

C. Transfer Privileges & Period validity

Discounted transfers will be structured so that customers who use stored value on the smart card and who transfer between two modes will be charged only for the cost of the higher-priced of the two modes. The transfer price will equal the difference in price between the two modes. Bus-to-bus and metro-to-metro transfers are free.

In the case where a customer is transferring and not using the stored value on the smart card for fare payment, that customer will not receive a free transfer but will be assessed the full fare upon boarding.

All transfers must occur within a 90 minutes window (that is, for any given trip on which a transfer is made, the second vehicle must be boarded within the 90 minutes of the time the first vehicle was boarded). Exception for the same operation service mode for both directions.

The validity period of each pass is:

Single Trip: Transfers valid for 90 minutes except same service line with both directions.

Daily pass: Valid for 1 operational day

Weekly pass: Valid for 7 operations days

Monthly pass: Valid for 30 operational days

Annual pass: Valid for 365 or 366 operational days (during leap years)

Each of these different passes has a different validity window and for each there is a start of the validity window. For example, the Single Trip is valid from first check-in (boarding the bus. On the other hand, all other passes products start their window period from the moments of issuance and ends at the end of related operational day.

D. Fare Equity

To enhance fare equity, the MMRT uses a simplified “flat-fare” system, which reflects a “value-pricing” instead of “distance-pricing” approach. “Value-pricing” recognizes that customers value the core bus and metro system in terms of whether it gets them to their destination safely and efficiently—not in terms of the distance they travel or connections they make. This is especially critical as most of low- or limited-income residents reside in communities away from the Haram area which means they tend to have the longest trips. Adopting a flat-fare policy will alleviate any additional cost burden to them.

Allowing customers to transfer between modes while only paying for the higher-priced of the two modes also reflects “value-pricing.” This approach benefits customers in the outskirts communities who do not have direct metro service, and who would otherwise pay two separate fares for their trip—one for the bus and one for the metro.

V. MMRT's Recommended Fare Strategy and Structure

The following summarizes MMRT's recommended fare strategy and structure.

Base Fare

Differentiated fares have their advantages as they try to manage demand (the case of "Time of Day") by charging more during certain times of the day, or encourage ridership (the cases of "Distance Traveled" and "Zone") as they only charge for the length of trip travelled. Flat fare, on the other hand, may actually overcharge a passenger who is only making a very short trip while those who are making the longest trips will be receiving a bargain.

However, compared to Differentiated Fares, the Flat Fare is a much simpler, straightforward fare that is easy to understand.

Given the fact that public transport will be a new introduction to the Makkah area, it is recommended to start with a Flat Fare for bus and metro service that everybody can easily understand. Shuttle service during Ramadan and other times will also have its assigned flat fare.

In few years, once the system is mature and the passengers have become well adapted to public transportation, MMRT may elect to implement a differentiated fare. However, social equity needs to be considered when considering differentiated fares. For example, most low-income residents live away from the centre of Makkah; therefore, introducing a distance-based fare may result in higher fares for those who can't afford it the most.

Recommendation:

Bus (BRT, Local, Feeder) & Metro: Flat Fare

Shuttle: Flat Fare

Fare-Free Passengers

As a convenience for parents, as well as to encourage them to ride public transportation, it is always a good practice to allow children of a certain age to ride for free. The premise is that a parent who is willing to ride public transportation may find it prohibitively expensive to ride if they have to pay for their accompanying children. An added benefit is that when young children get accustomed to riding public transportation with their parents, they will grow up to be pro-public transportation and will continue to ride it.

To improve convenience of parents and make public transportation more user-friendly, it is recommended to allow children under the age of 6 years to ride free of charge. Instead of checking for age of children, it will be left to the driver to make a judgment whether the accompanying child looks younger than the age of 6 years. This speeds up the boarding process without the need to ask for IDs.

Recommendation:

Children 6 years or younger: Fare Free

Transfers

Providing a free transfer is certainly a benefit to the passengers as they are not required to pay additional fare to complete their trip. One issue with free transfers, besides from lower revenue, is that of abuse or misuse. Riders may use free transfer for return ride or unboard the service vehicles for shopping and re-boarding the same service line with different vehicles within the 90 minutes period of time. And to minimize the abuse of this function, transfer will not be available for same operation service in both directions.

Full fare transfers actually mean that a passenger will pay each time he/she boards a vehicle. So, if it takes two buses to complete a journey from home to work, the passenger will pay the full fare twice. The disadvantage of this is it obviously penalizes the passenger by having them pay for every boarding and in turn may reduce ridership. On the other hand, there are two main benefits of this approach. The first is it guarantees that there will be no abuse of transfers and the second benefit is it encourages passengers to opt for period passes rather than paying with cash as period passes allow for unlimited boarding's.

The deployment of a smart card system will make it easy to implement a free and/or reduced transfer as it will be much easier for a smart card system to track transfers and whether a passenger is entitled for a transfer or not, or if their transfer has expired. However, this payment system, smart card, has to be interfaced with the onboard AVL/GPS system to be able to do that. It is recommended that the transfer shall be valid for 90 minutes only except using the same service line of travel in either directions.

Recommendation:

Passengers paying with stored value on smart card: Free Transfer when transferring from:

- ***Any bus mode to any bus mode***
- ***Metro to bus***
- ***Metro to metro***

Passengers paying with stored value on smart card: Fare Difference when transferring from:

- ***Any bus mode to metro***

Type of Passes

Period Passes provide a good bargain, or reward, for frequent passengers. Additionally, the use of passes, according to studies, increase ridership as individuals tend to make 15% more trips once they switch to a period pass. Not only does a pass save passengers money, compared to paying full fare for each trip, they are also a convenience as the passengers do not have to search for the correct change to rider or, worse yet, not have any cash to pay for the trip.

As for MMRT, encouraging passengers to use them provides numerous benefits. First, it reduces the amount of cash being collected onboard the vehicles (or at metro stations) which in turn reduces the need for collecting and handling the cash fares (i.e. collecting, counting, delivering to the bank). Second, when passengers buy a period pass, they pay up front for the entire period (e.g. 30 days) which means that MMRT is collecting a whole month worth of fares up front—whether the passenger ends up using the pass for its entire period or not. Third, passes have unique serial numbers which means that tracking the usage of passes is relatively easy. If the payment system is interfaced with an AVL/GPS system, then MMRT would be able to collect valuable data about travel patterns and behaviors of its passengers. This data would be valuable in the planning process and in helping to improve the service.

Recommendation:

- *Single Trip: Bus (BRT, Local, Feeder), Metro*
- *Daily Pass: Bus (BRT, Local, Feeder), Metro*
- *Weekly Pass: Bus (BRT, Local, Feeder), Metro*
- *Monthly Pass: Bus (BRT, Local, Feeder), Metro*
- *Annual Pass: Bus (BRT, Local, Feeder), Metro*

Special Fare

A) Seasonal Fare

As well known, Makkah is visited by about 3 million pilgrims and 5 million Umrah visitors annually. Hence, it makes good sense to provide special fares/passes during these events (Ramadan & Hajj). However, it is critical to have a well thought out plan on how to ensure that each pilgrim has the special pass. Providing these kinds of passes will also reduce the pilgrim's anxiety over not knowing how and from where to buy the passes and whether they can ride the public transport system or not.

It is highly recommended to provide special pass for Hajj with full coordination with Ministry of Hajj & Umrah and other main stakeholder to ensure reaching the objectives of servicing Makkah Visitors.

Additionally, Makkah also experiences an influx of Umrah visitors during Ramadan as Hajj season. During such seasons, operation hours and service buses frequency will be increased. Which will add additional operational costs to meet public demand during these periods of times.

Recommendation:

- *Hajj Pass: For all Bus Modes and Metro*
- *Seasonal Fare: For Ramadan Month – For the Hajj 2 months: the 11th & 12th months of the Islamic Calendar (Dhu al-Qa'dah & Dhu Al-Hijjah)*

B) Special Events

During National Day & Eid Days MMRTC will introduce a special discounted fare customized for these days and representing the importance of such events. The discounted percentage will be adopted once operation full undergo in which data will reflect some insights to build up the right discounting percentage. The period of the discounted fare will be determined in future and till the data reveal actual operation scenario a 50% discount recommended to be applied.

- *National Day: 50% off*
- *Eid Days: 50% off*

C) Discounted Fares

Some passengers may need a specially discounted fare as their income, or physical condition may require that. Almost all transit agencies offer some kind of a specially discounted fare for senior citizens (or retirees), low income people, people with disabilities and cancer, students and bulk sales to corporations and organizations. Providing such a discounted rate, alleviates some of the financial burden off of these individuals and allows them to be mobile and to carry on with their lives as normal as possible. It is always required that those who are requesting this type of discounted fare provide the proper documentation to proof their case (e.g. students to present students ID).

Additionally, MMRT, like many other transit agencies, may “reward” its passengers with some discounts based on how often they ride—for those who do not utilize a period pass. For example, some agencies give a 10% discount when a customer buys a book of 10 tickets, or one free ride with every 9 rides. Also, for “Employee Program” with group / bulk riders such as construction companies, hotels, or civil service agencies, discount will be adopted. However, this will be fully adapted later on during operation.

Guaranteed lowest (Capping) ride is another benefit to passengers who, instead of using a period pass, pay cash for every trip. Once these cash-paying passengers reach the break-even point with a period pass price, the system will automatically stop deducting a fare from their cash value stored on their smart card. For example, if the break-even point for a 1-Day pass is 3 trips, and a passenger is using his/her smart card to pay cash, then when the passengers attempts to board and pay for the 4th time (in the same day), the system will not deduct the fare from his/her smart card.

Finally, Negative Balance, allows passengers paying with cash stored on their smart card to have a negative balance, up to the price of one trip. This allows passengers to complete their trip if they were short on cash or if there were no TVMs in the vicinity to replenish their cards. MMRT will be able to recoup the negative balance the next time the passenger adds cash value on their cards. However, this will fully be adapted later on during fully integrated transportation modes operations.

Recommendation:

- *Seniors: Minimum age 60*
- *Minors: 6 to 14 years old*
- *Welfare People: people under social security program*
- *People with Cancer & People with Disabilities*
- *Students: School, College, and any other full-time education institution students*

No combination of 2 or more discounted fares, one rider will have one discounted fare

VI. Fare Structure & Products

A flat fare structure across Metro and Bus has been adopted for Makkah Public Transportation Project MPTP. This means that passengers will be asked to pay single trips or period passes regardless of the distance they travel within the network or which transportation mode they use for the trip (e.g. Bus, Metro or Bus and Metro combined).

The fare policy structure differentiates between different customer segments (e.g. Adult, Child, Disabled, Minor etc.) and types of fare products (e.g. Single and Period Passes) and defines fare products in a matrix. Customer segments have specific characteristics such as age or are employees of specific large organizations. Type of fare products differentiate between single passes and period passes.

Fare products

Customers Segments	Single Trip	Period passes			
		Daily	Weekly	Monthly	Annual
Adult	<i>Full Fare</i>	<i>Full Fare</i>	<i>Full Fare</i>	<i>Full Fare</i>	<i>Full Fare</i>
Child (below 6 years)	<i>Free travel</i>				
Minor (6 – 14 years)	<i>%50 off</i>	<i>%50 off</i>	<i>%50 off</i>	<i>%50 off</i>	<i>%50 off</i>
Student					
Senior (above 60 years)					
People with Disability / Cancer					
Welfare People					

The fare products that are planned for MPTP are summarized in the above table. Each fare products are tailored for the specific customer segment in which the Adult Fare (full fare) to be applied as a default fare when discount is not applicable.

The full fare of products includes the %15 VAT. Table below illustrates fares for all customers segments against all products types. To facilitate the operation decimal numbers (hallalah) have been rounded to closest number possible. For example, full fare for adult is SR 3.15 (SR 3 plus VAT SR 0.15) has been rounded to be SR 3.

During top-up of store-value, rider will give VAT inclusive amount. VAT deducted amount will be written to permanent card or ABT e-wallet. According to VAT Guidelines: "If the total VAT amount or the total taxable amount calculated for a supply equates to a figure that includes a fraction of a halala, the VAT amount on the Tax Invoice should be rounded to the nearest halala." Examples:

Example 1:

Riders will insert SR 10 into TVM, TVM will calculate $VAT=10*15/115= 1.3043 = 1.30 \text{ SR}$

The amount that will be written to card = $10 - 1.30 = 8.70 \text{ SR}$

Example 2:

Riders give/select = 20 SAR, $VAT = 20*15/115=2.6086 = 2.61 \text{ SR}$

The amount that will be written to card/ABT = $20 - 2.61 = 17.39 \text{ SAR}$

Finally, rides for period passes has been equated as following:

Daily: 3 rides (single trips)

Weekly: 3 rides daily for 5 working days with %10 off

Monthly: weekly pass for 3.1 working weeks

Annually: monthly pass for 8.3 working months (excluding holidays)

Fare products (in SR)

Including VAT

Customers Segments	Single	Period passes			
	Trip	Daily	Weekly	Monthly	Annual
Adult	3	9	41	127	1,055
Child (below 6 years)	<i>Free</i>				
Minor (6 – 14 years)	2	5	21	64	528
Student	2	5	21	64	528
Senior (above 60 years)	2	5	21	64	528
People with Disability / Cancer	2	5	21	64	528
Welfare People	2	5	21	64	528

All discounted fare issuance applications should be authorized through SCC (TVS) or website & smart devices app, that will go through identified procedures within the credit clearing house for review, check, and approvals by MMRT.

Seasonal Fare:

As stated, operation during Ramadan & Hajj seasons will be increased. Specifically, number of servicing buses will be increased as estimated. Also, operations hours will be pushed to be 24hrs instead of 20hrs a day. Therefore, as increased operation cost is invariable, pricing for these seasons may add up to meet the additional operational cost. The table below shows the fare for each category during Ramadan & Hajj season which will be applicable only after Transportation Minister approval:

Fare products

Including VAT

Customers Segments	Single Trip	Period passes		
		Daily	Weekly	Monthly
Adult	Full Fare + %25	Full Fare + %25	Full Fare + %25	Full Fare + %25
Child (below 6 years)	<i>Free travel</i>			
Minor (6 – 14 years)				
Student	Full Fare + %25	Full Fare + %25	Full Fare + %25	Full Fare + %25
Senior (above 60 years)	+	+	+	+
People with Disability / Cancer	%50 off	%50 off	%50 off	%50 off
Welfare People				

Finally, a Strategic Fares Review will take place after two to five years of commencement of operations to consider options for all components of the Fare Structure.