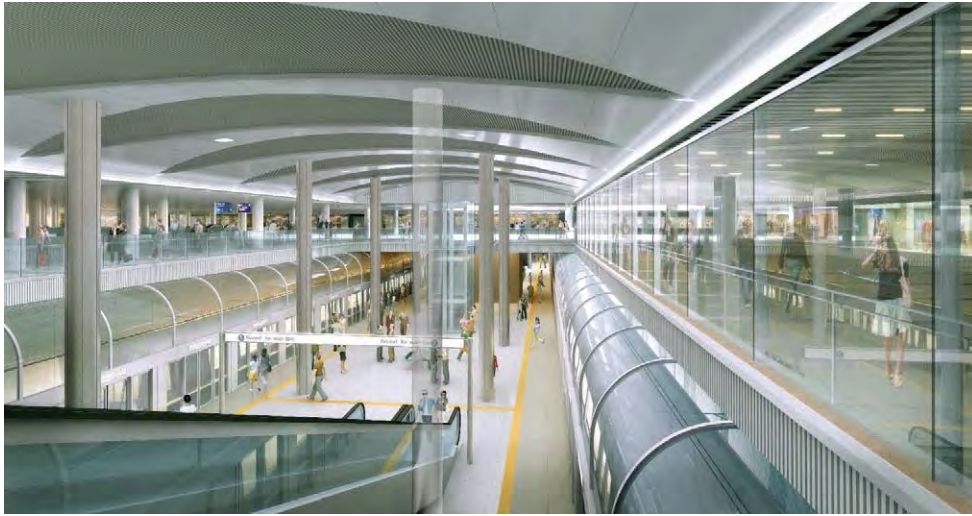


# OUTLINE OF FIRE FIGHTING AND PREVENTION PLAN FOR BEN THANH STATION



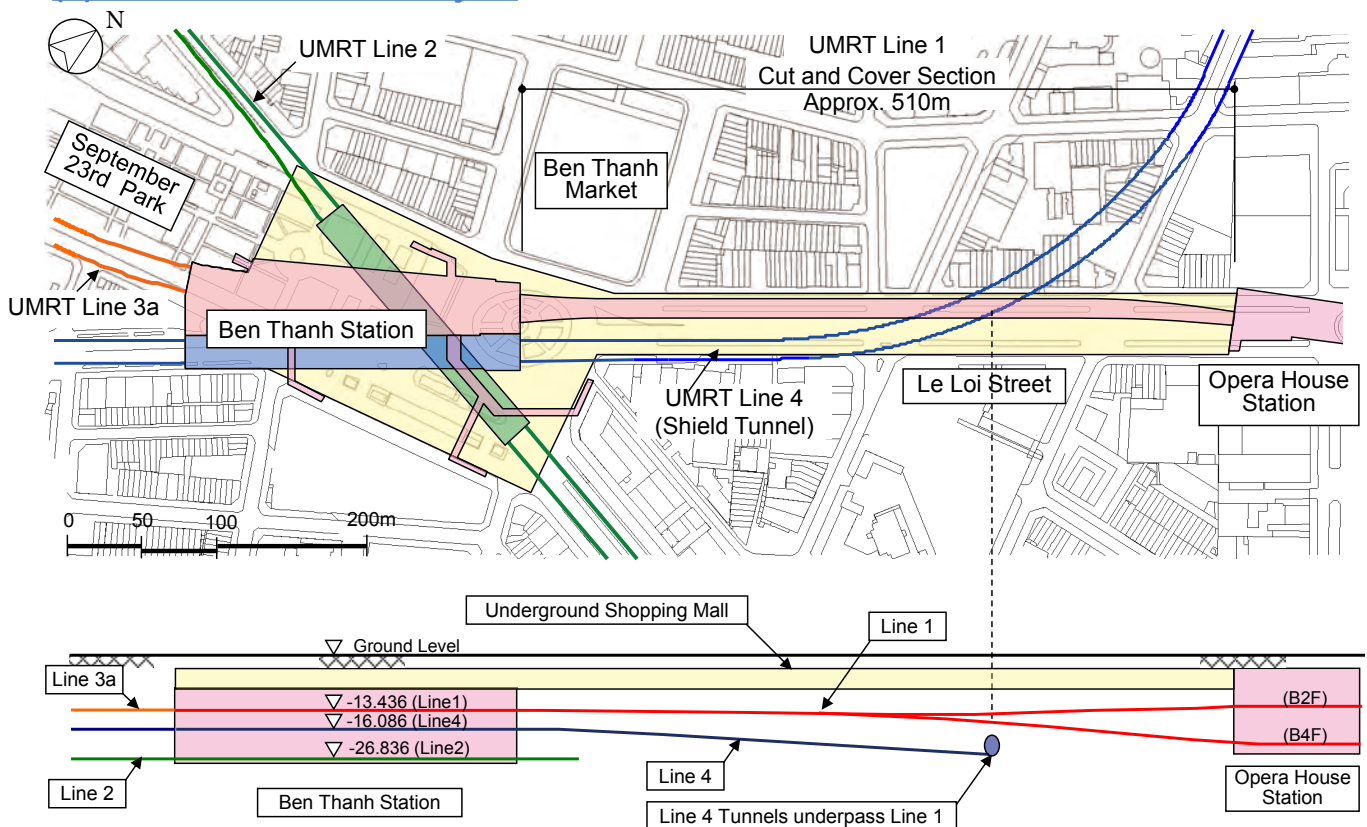
26 February 2016

NIKKEN SEKKEI CIVIL ENGINEERING LTD.

## FIRE FIGHTING AND PREVENTION PLAN FOR BEN THANH STATION

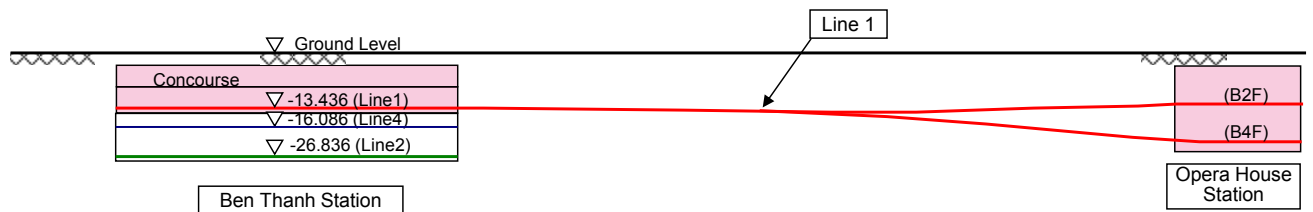
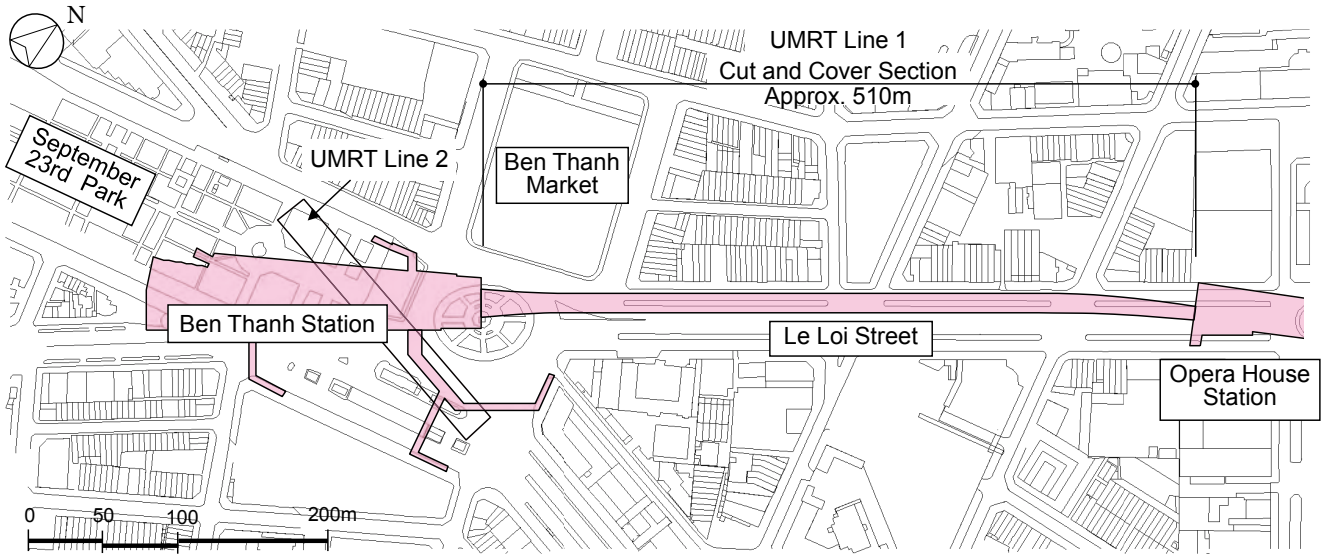
### 1. OUTLINE OF BEN THANH CENTRAL STATION PROJECT

#### (1) Outline of Whole Project



# 1. OUTLINE OF BEN THANH CENTRAL STATION PROJECT

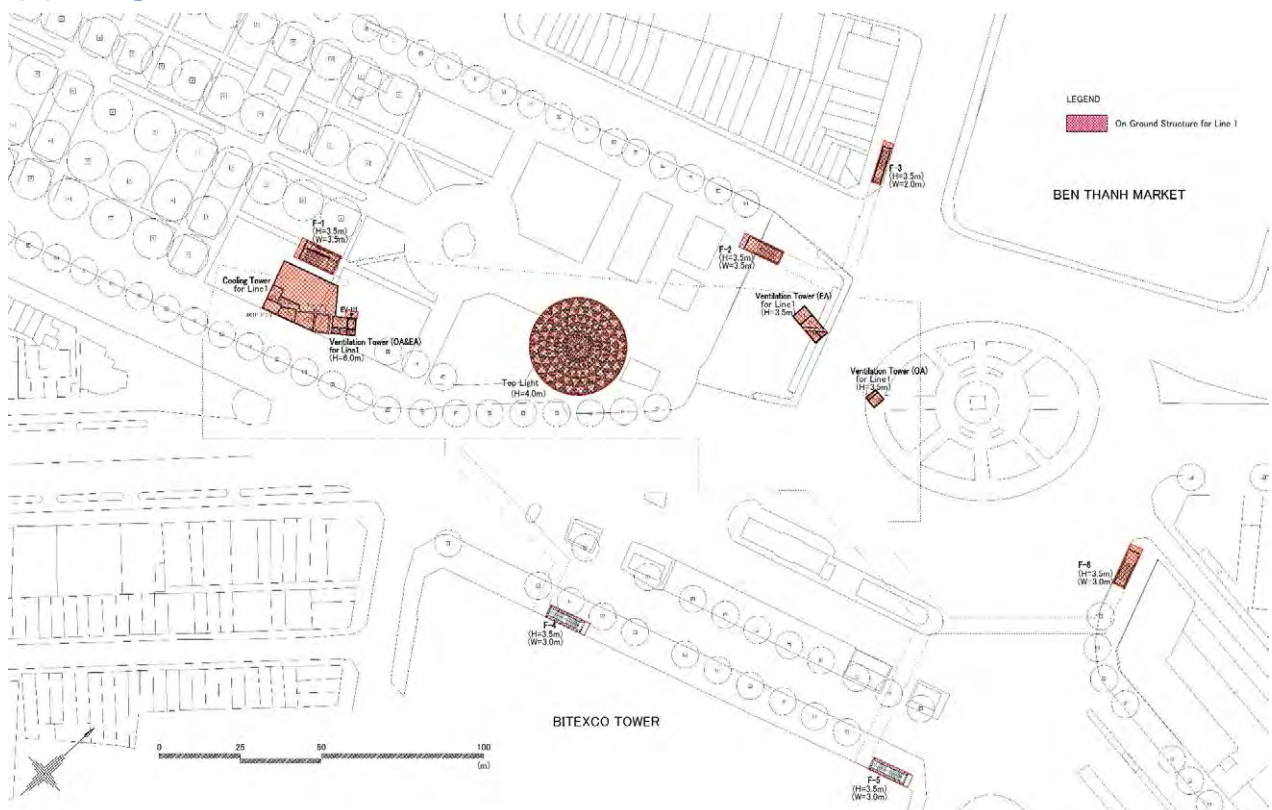
## (2) Phased Construction



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# 2. OUTLINE OF BEN THANH STATION FOR 1st PHASE

## (1) On-ground Plan

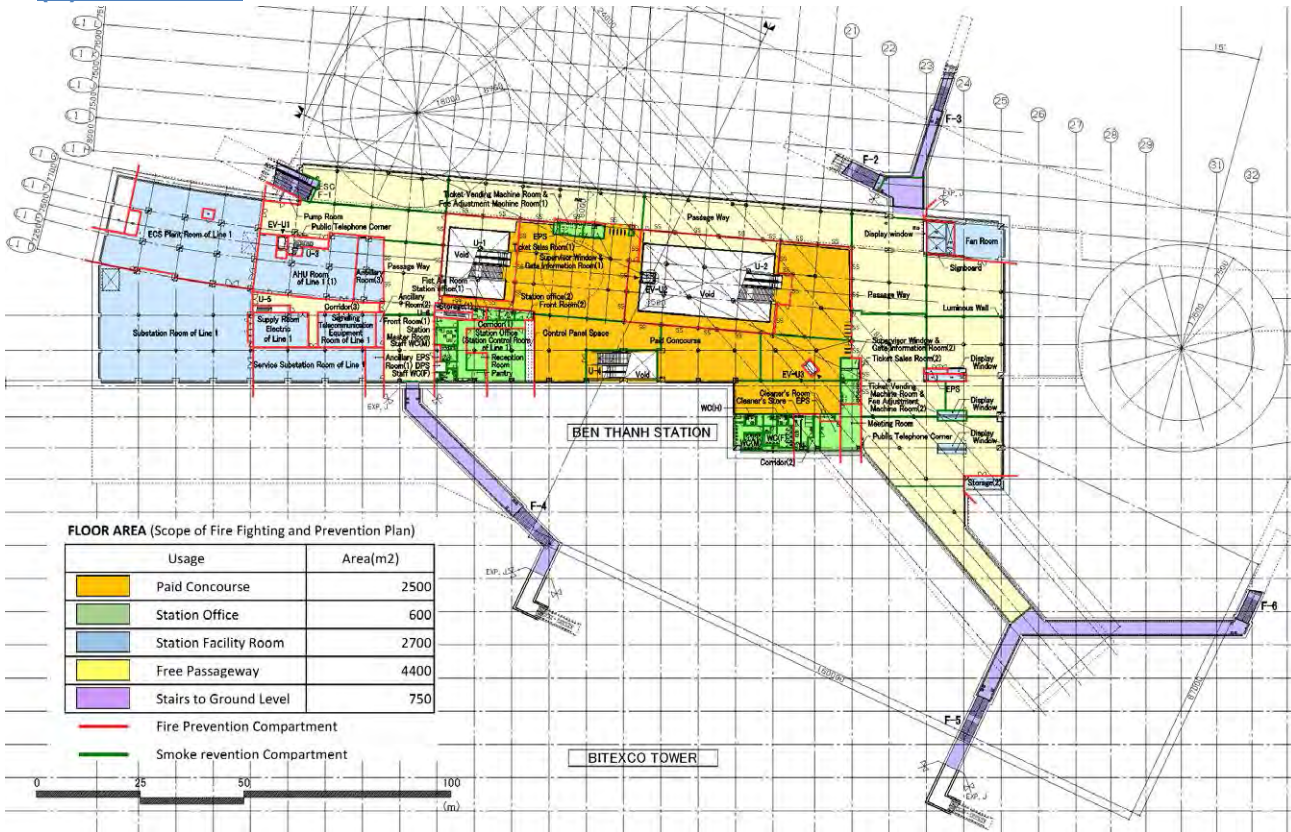


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## 2. OUTLINE OF BEN THANH STATION FOR 1st PHASE

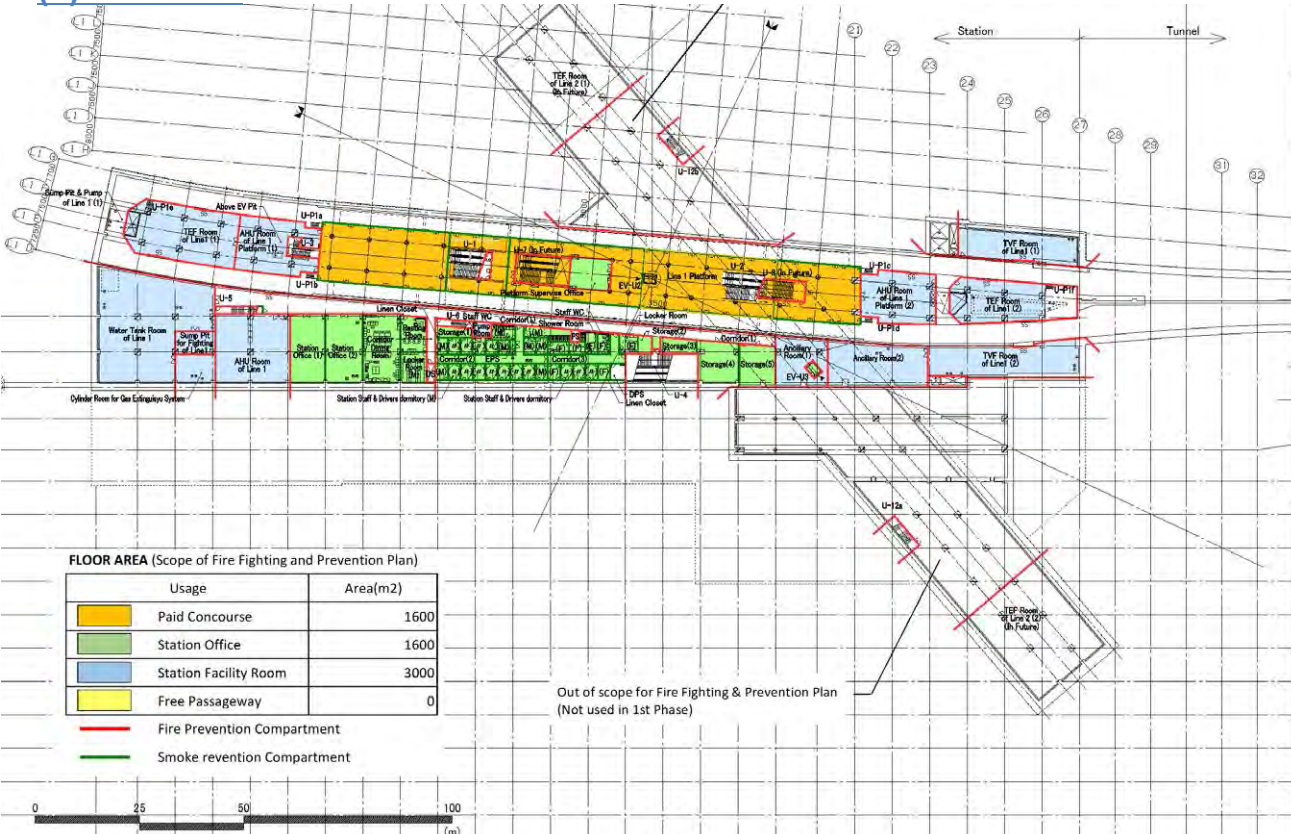
### (2) B1F Plan



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## 2. OUTLINE OF BEN THANH STATION FOR 1st PHASE

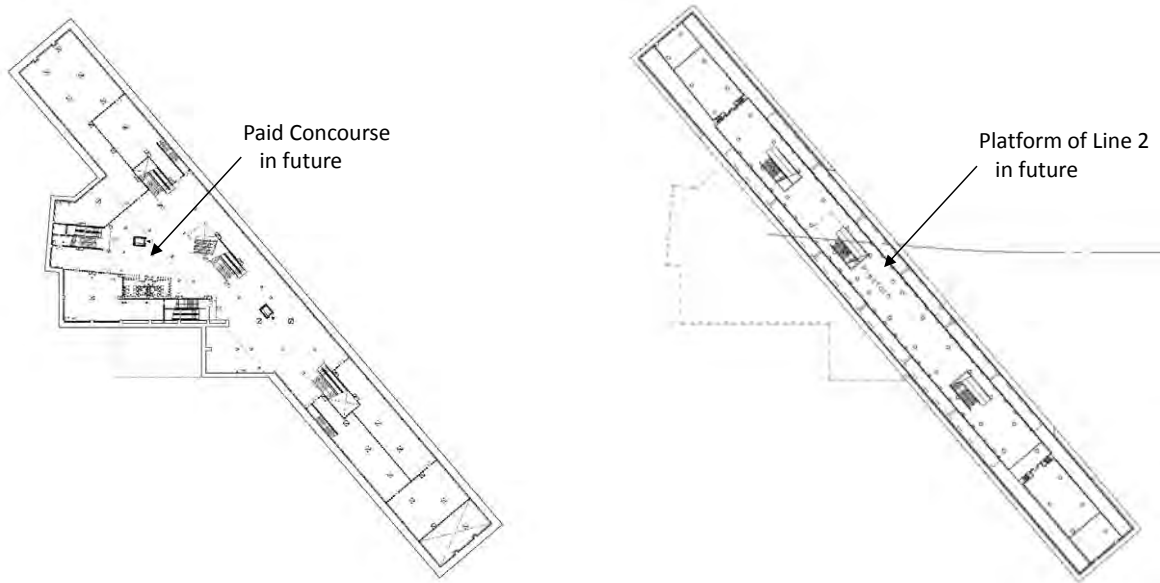
### (3) B2F Plan



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## 2. OUTLINE OF BEN THANH STATION FOR 1st PHASE

### (4) B3F and B4F Plan



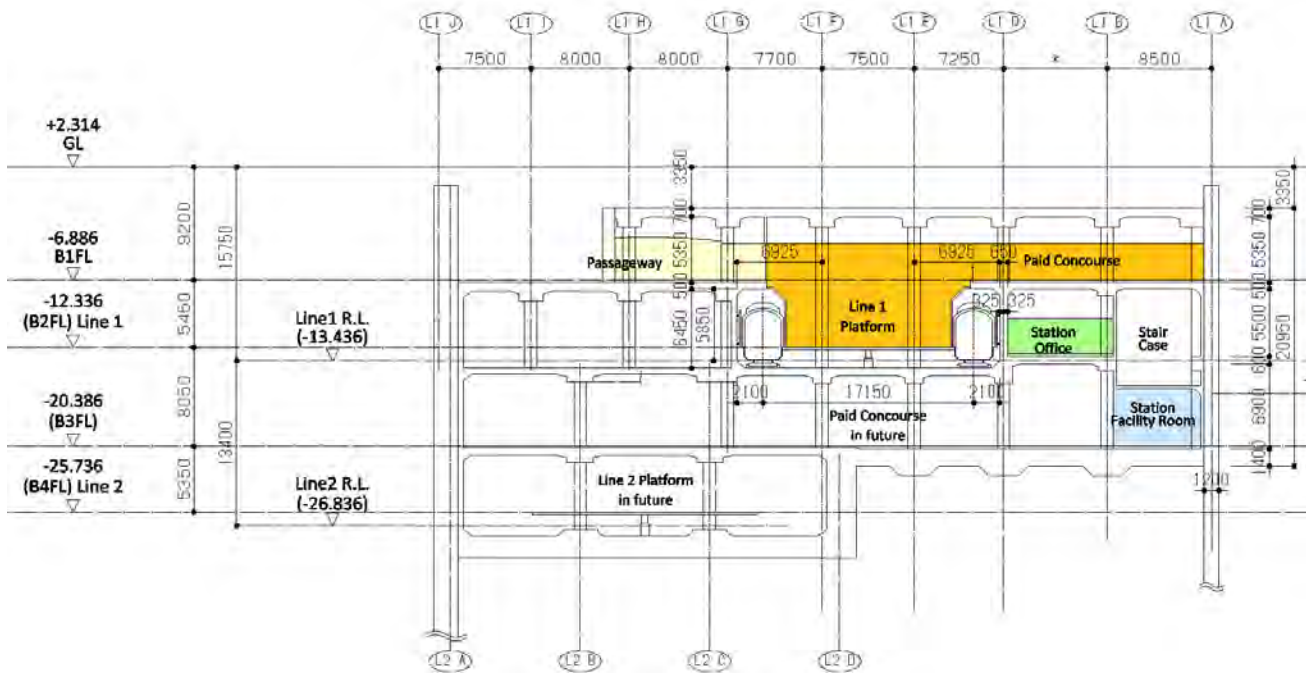
a) B3F Plan

b) B4F Plan

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## 2. OUTLINE OF BEN THANH STATION FOR 1st PHASE

### (5) Section



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## 2. OUTLINE OF BEN THANH STATION FOR 1st PHASE

### (6) Summary Table

Floor	Outline of Plan	Total Floor Area	Floor Level	Scope
B1F	Free Passageway Station Paid Concourse Station Offices Station Facility Rooms	11,260 m <sup>2</sup>	GL -9.20 m	Scope of Fire Fighting and Prevention Plan for 1st Phase
B2F	Platform of Line 1 Station Backyard Offices Station Facility Rooms	6,785 m <sup>2</sup>	GL -14.65 m	
B3F	No Use (Paid Concourse for Transfer in future)	-	GL -22.70 m	Out of Scope
B4F	No Use (Platform of Line 2 in future)	-	GL -28.05 m	

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## 3. APPLIED TECHNICAL STANDARDS

	STANDARDS
<b>MAJOR JAPANESE STANDARDS</b>	<ul style="list-style-type: none"> <li>➤ Article No. 29 in Ministerial Ordinance No.151, December 2001 established by Japan's Ministry of Land, Infrastructure, Transport, and Tourism (MLITT)</li> <li>➤ The Building Standard Law of Japan</li> <li>➤ The Building Standard Law Enforcement Order</li> <li>➤ The Fire Service Law of Japan</li> <li>➤ The Fire Service Law Enforcement Order</li> </ul>
<b>MAJOR VIETNAMESE STANDARDS</b>	<ul style="list-style-type: none"> <li>➤ QCVN 08 : 2009/BXD National Building Code / Vietnamese Building Code for Urban Underground Structures Part 1 The Underground</li> <li>➤ QCVN 06 : 2010/BXD Vietnamese Building Code on Fire Safety of Building</li> </ul>
	<ul style="list-style-type: none"> <li>➤ TCVN 2622-1995 Fire prevention and protection for buildings and structures –Design requirements</li> <li>➤ TCVN 7336-2003 Fire protection – Automatic sprinkler systems – Design and installation requirements</li> <li>➤ TCVN 5738-2001 Fire detection and alarm system – Technical requirements</li> <li>➤ TCVN 7435-2004 Fire protection – Portable and wheeled fire extinguishers</li> <li>➤ TCVN 4317-1986 Warehouses - Basic principles for design</li> <li>➤ TCVN 4513-1988 Standard of Indoor Water Supply and Water Drainage</li> <li>➤ TCXDVN 33-2006 Water Supply - Distribution System and Facilities: Design Standard</li> <li>➤ TCVN 3890-2009 Fire protection equipments for construction and building – Providing, installation, inspection, maintenance</li> </ul>

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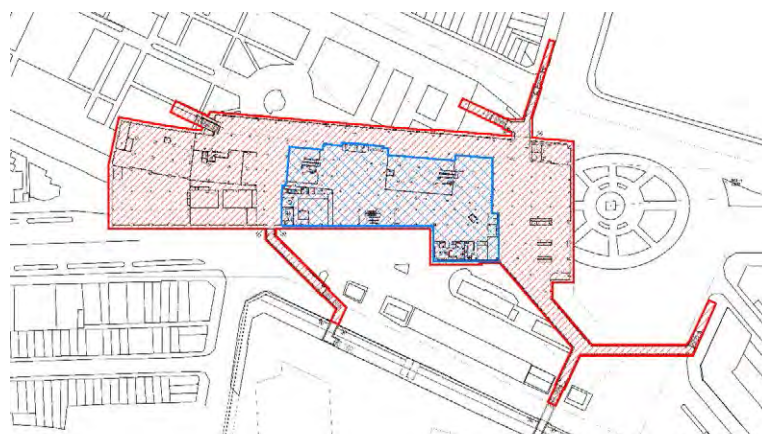
## 4. MAJOR CONSIDERATION FOR FIRE FIGHTING & PREVENTION PLAN

ITEMS	OUTLINE OF SPECIFICATION
Fire Proofing of structural materials and interior dressings	<ul style="list-style-type: none"> <li>Structural items shall be made by fireproof construction.</li> <li>Fire proof construction shall have no less than two hours fire resistance grade.</li> <li>Interior dressing of ceilings, floors and walls shall use non-flammable materials.</li> </ul>
Fire Prevention Compartments	<ul style="list-style-type: none"> <li>Paid concourse and platform shall be partitioned by fire prevention compartment.</li> <li>Following rooms are partitioned by floors and walls with fire-resist and fire doors.                             <ul style="list-style-type: none"> <li>Station office, Electrical rooms, and Machine rooms.</li> </ul> </li> <li>Station area (B1 Paid Concourse) is subdivided from free passageway with fire prevention compartment in order to separate free passageway as a safety area.</li> </ul>
Smoke Prevention Compartments	<ul style="list-style-type: none"> <li>Smoke prevention compartments are established in B1 paid concourse within 500m<sup>2</sup>.</li> <li>Track way and platform are partitioned by the smoke prevention compartment.</li> </ul>
Disaster Prevention Control Room	<ul style="list-style-type: none"> <li>Railway station shall have a permanently manned disaster prevention control room that collects information, conveys notifications and commands, makes announcements for passengers, and also monitors and controls fire shutters and other facilities.</li> </ul>
Fire Prevention & Fighting Facilities	<ul style="list-style-type: none"> <li>Following system shall be installed in order to enable passenger to evacuate safely.                             <ul style="list-style-type: none"> <li>Alarm facilities, notification facilities, Evacuation guidance facilities, Smoke exhaust facilities, Fire extinguishing facilities, and others</li> </ul> </li> </ul>
Evacuation Passageways	<ul style="list-style-type: none"> <li>In principle, two different evacuation passageways from the platform to ground level shall be provided in a station.</li> <li>Lighting facilities shall ensure an illumination intensity of at least 1 lux at the main parts of the floor surface.</li> </ul>

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## 5. MAJOR CONSIDERATION OF VIETNAMESE STANDARDS

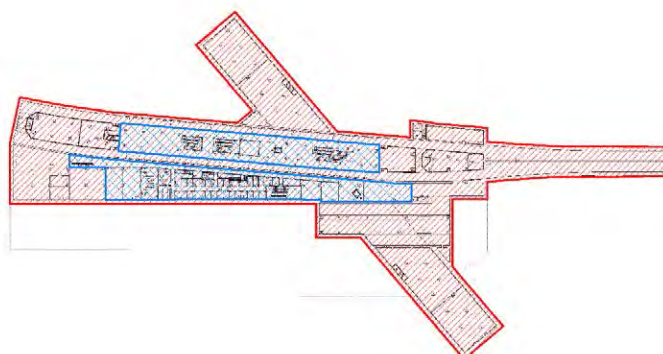
### (1) Objective Area of Vietnamese Standards



Objective Area

- QCVN08
- QCVN06

a) B1 Plan



b) B2 Plan

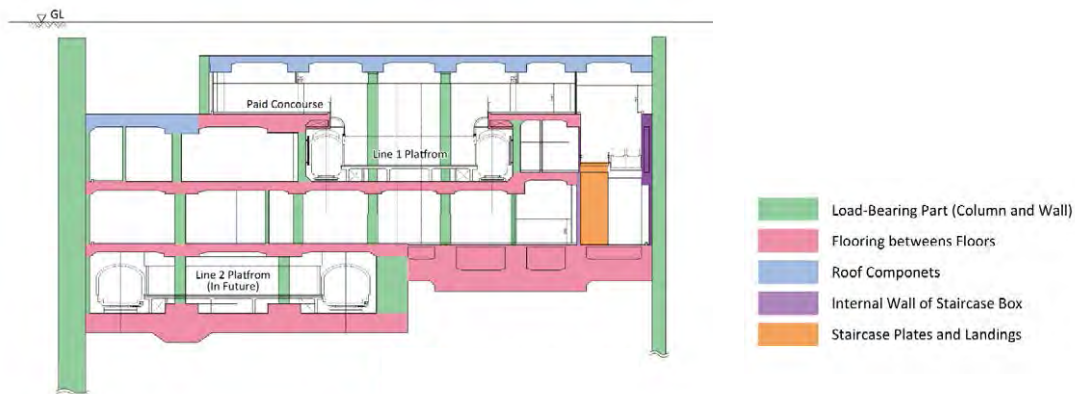
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## 5. MAJOR CONSIDERATION OF VIETNAMESE STANDARDS

### (2) Fire Resistance Grade

Fire Resistance Grade of Building	Fire resistance limit of construction element, not less than						
	Load-bearing part of building	External wall non load-bearing	Flooring between floors (include attic floor and floor above basement)	Roof component (without attic floor)		Staircase box	
				Roof plate (including insulating roof plate)	Truss, beams, purling	Internal wall of staircase box	Staircase plates and landings
I	R120	E30	REI60	RE30	R30	REI120	R60

Source : QCVN 08; 2009/BXD National Building Code



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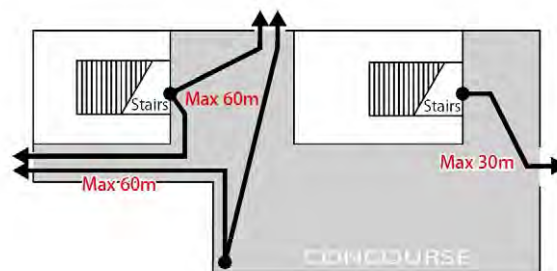
## 5. MAJOR CONSIDERATION OF VIETNAMESE STANDARDS

### (3) Allowable Distance to Emergency Exits

#### a) Paid Concourse on B1

Maximum Distance :

- 1) Two direction : 60m
- 2) One direction : 30m



#### b) Platform on B2

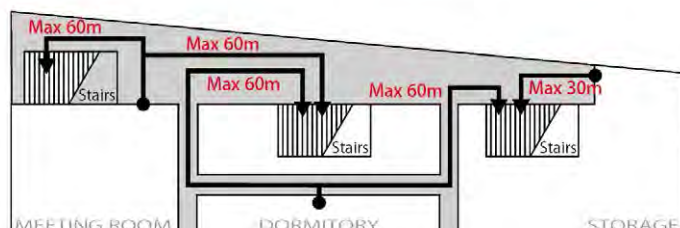
Maximum Distance : 45m



#### c) Station Backyard Office on B2

Maximum Distance :

- 1) Two direction : 60m
- 2) One direction : 30m



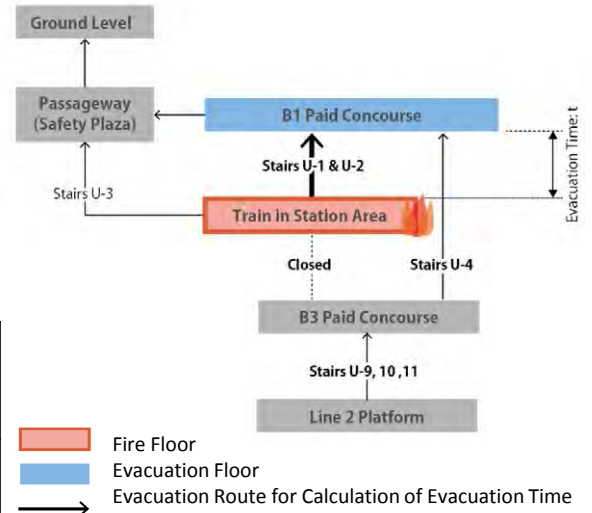
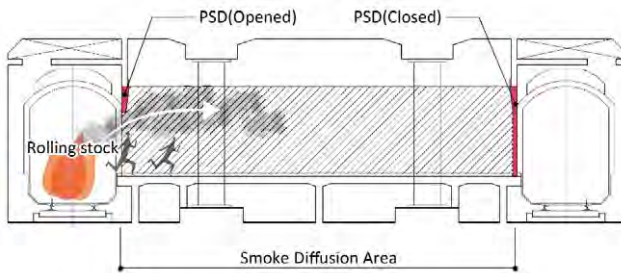
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## 6. SAFETY EVACUATION

### (1) Fire Cases

Case	Fire Location	Train Operation
1	Station	Small Shop on B1 Concourse
2	Station	Stopped at track way in station
3	Rolling Stock	Run to next station
4	Tunnel	Stopped at tunnel Section

### (2) Sample of Evacuation Verification

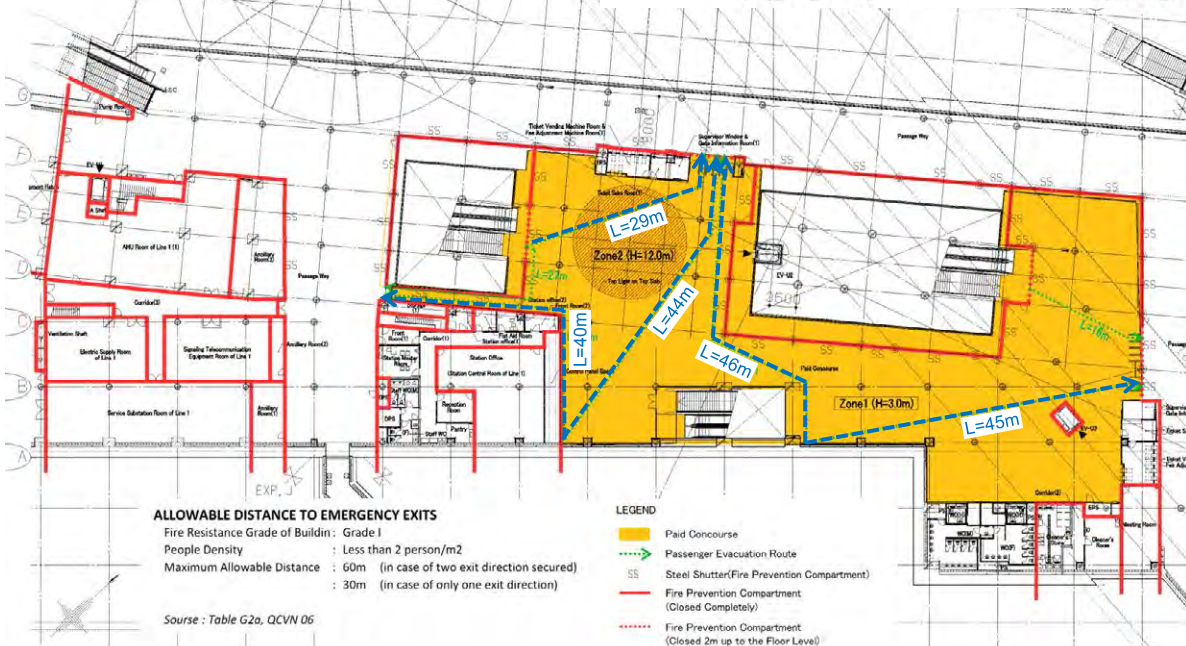
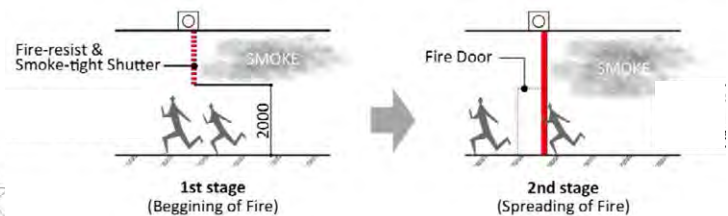


Fire Location	Stairs No.	Evacuation Time t (min)	Smoke Descending Time to (min)	Verification
Train at Trackway in Station Area	U-1, 2	6.8	11.0	OK!! (to >t)

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## 6. SAFETY EVACUATION

### (3) B1 Floor Plan for Concourse



**ALLOWABLE DISTANCE TO EMERGENCY EXITS**  
 Fire Resistance Grade of Building: Grade I  
 People Density: Less than 2 person/m<sup>2</sup>  
 Maximum Allowable Distance: 60m (in case of two exit direction secured)  
 30m (in case of only one exit direction)

**LEGEND**  
 Paid Concourse  
 Passenger Evacuation Route  
 Steel Shutter (Fire Prevention Compartment)  
 Fire Prevention Compartment (Closed Completely)  
 Fire Prevention Compartment (Closed 2m up to the Floor Level)

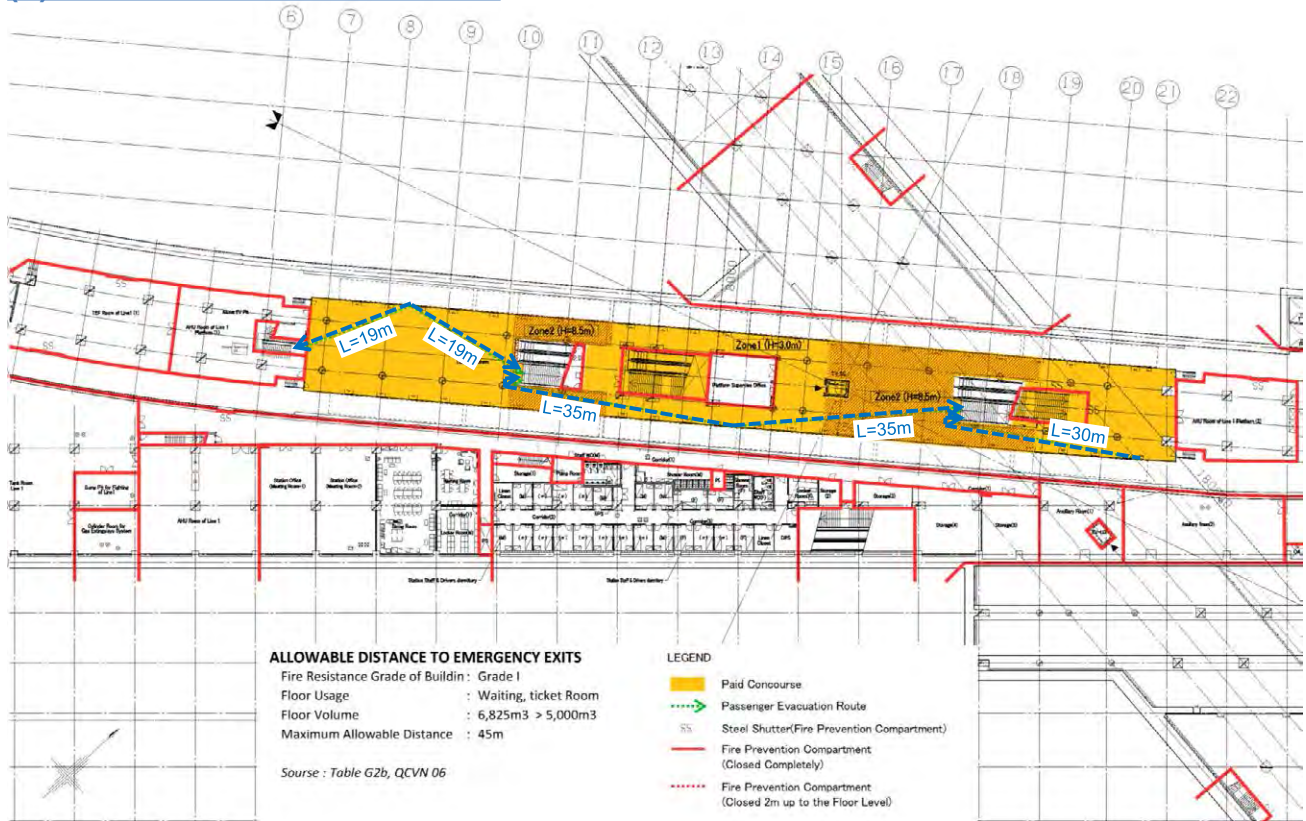
Source: Table G2a, QCVN 06

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## 6. SAFETY EVACUATION

### (3) B2 Floor Plan for Platform



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## 6. FIRE FIGHTING AND PREVENTION FACILITIES

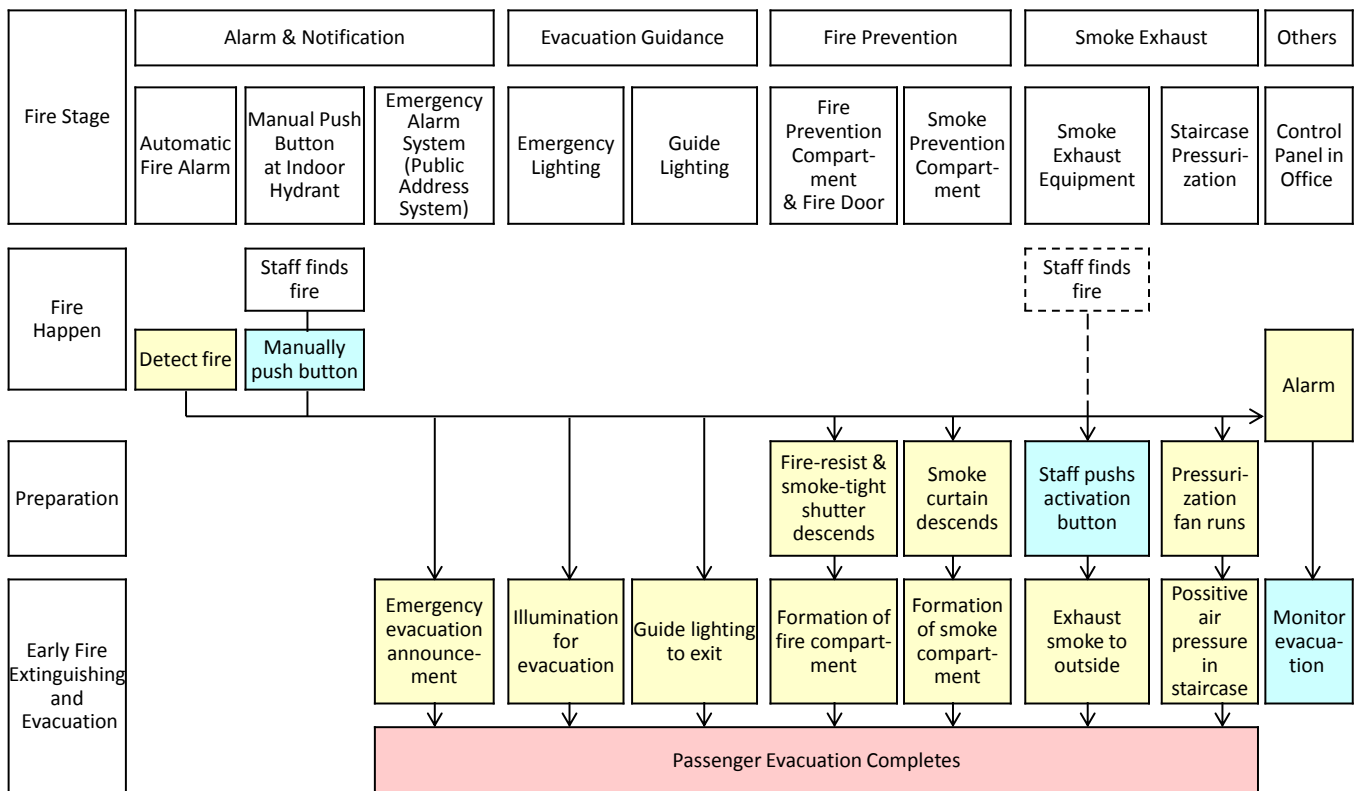
### (1) Outline of Facilities

FACILITIES	EQUIPMENTS / SYSTEMS
Alarm Facilities	<ul style="list-style-type: none"> <li>Automatic fire alarm systems</li> </ul>
Notification Facilities	<ul style="list-style-type: none"> <li>Emergency telecommunication system</li> <li>Emergency alarm systems</li> <li>Emergency broadcast equipment</li> <li>Auxiliary facilities for radio communication system</li> </ul>
Evacuation Guidance Facilities	<ul style="list-style-type: none"> <li>Emergency lighting</li> <li>Guide lighting</li> </ul>
Smoke Exhaust Facilities	<ul style="list-style-type: none"> <li>Smoke exhaust equipment</li> </ul>
Fire Extinguishing Facilities	<ul style="list-style-type: none"> <li>Fire extinguisher</li> <li>Indoor fire hydrant systems</li> <li>Sprinkler systems</li> <li>Inert gas fire extinguishing systems</li> <li>Sprinkler systems with Fire Department (FD) connections</li> <li>Fire department (FD) indoor fire hydrant systems</li> <li>Water tank for fire service</li> </ul>
Others	<ul style="list-style-type: none"> <li>Emergency power outlets</li> <li>Disaster prevention panel</li> </ul>

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## 6. FIRE FIGHTING AND PREVENTION FACILITIES

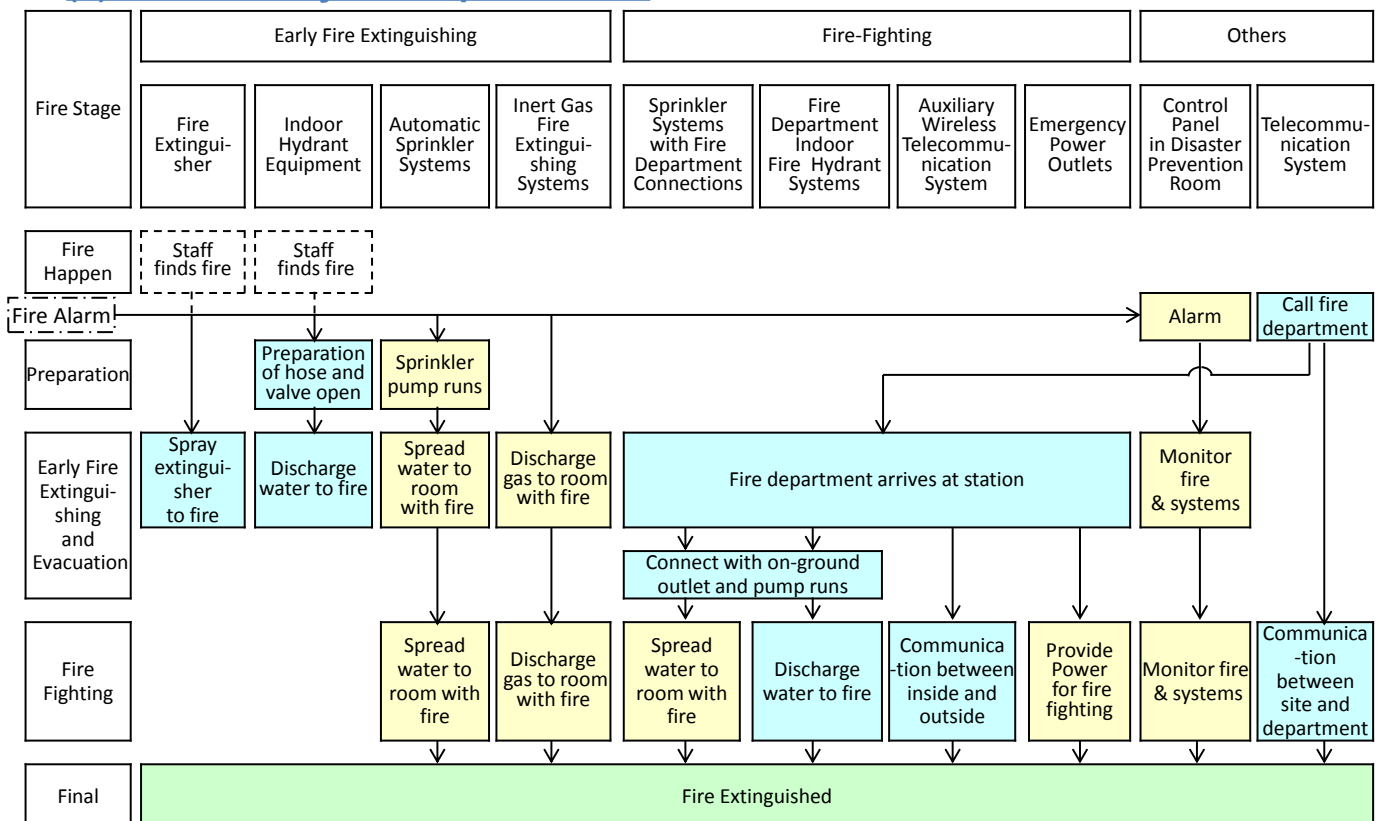
### (1) Outline of System Operation - 1



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## 6. FIRE FIGHTING AND PREVENTION FACILITIES

### (2) Outline of System Operation - 2



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## **7. FIRE RESPONSE MANUAL AND FIRE DRILL**

### **(1) Action to Be Taken by Staffs in the Event of Fire**

- a) Notifying the fire fighting authorities
- b) Informing passengers about the fire
- c) Checking and operating fire prevention equipment such as smoke exhaust equipment
- d) Early fire-fighting
- e) Giving evacuation guidance to passengers

### **(2) Education and Training for Staffs**

- a) Improving self fire-fighting capability for railway staffs to perform early fire fighting, evacuation guidance, etc. quickly and properly
- b) Conducting training periodically, at least once a year

### **(3) Collaboration with Fire Fighting Organization**

- a) Sharing information of fire fighting and prevention facilities with authorities
- b) Cooperating with authorities in the event of fire

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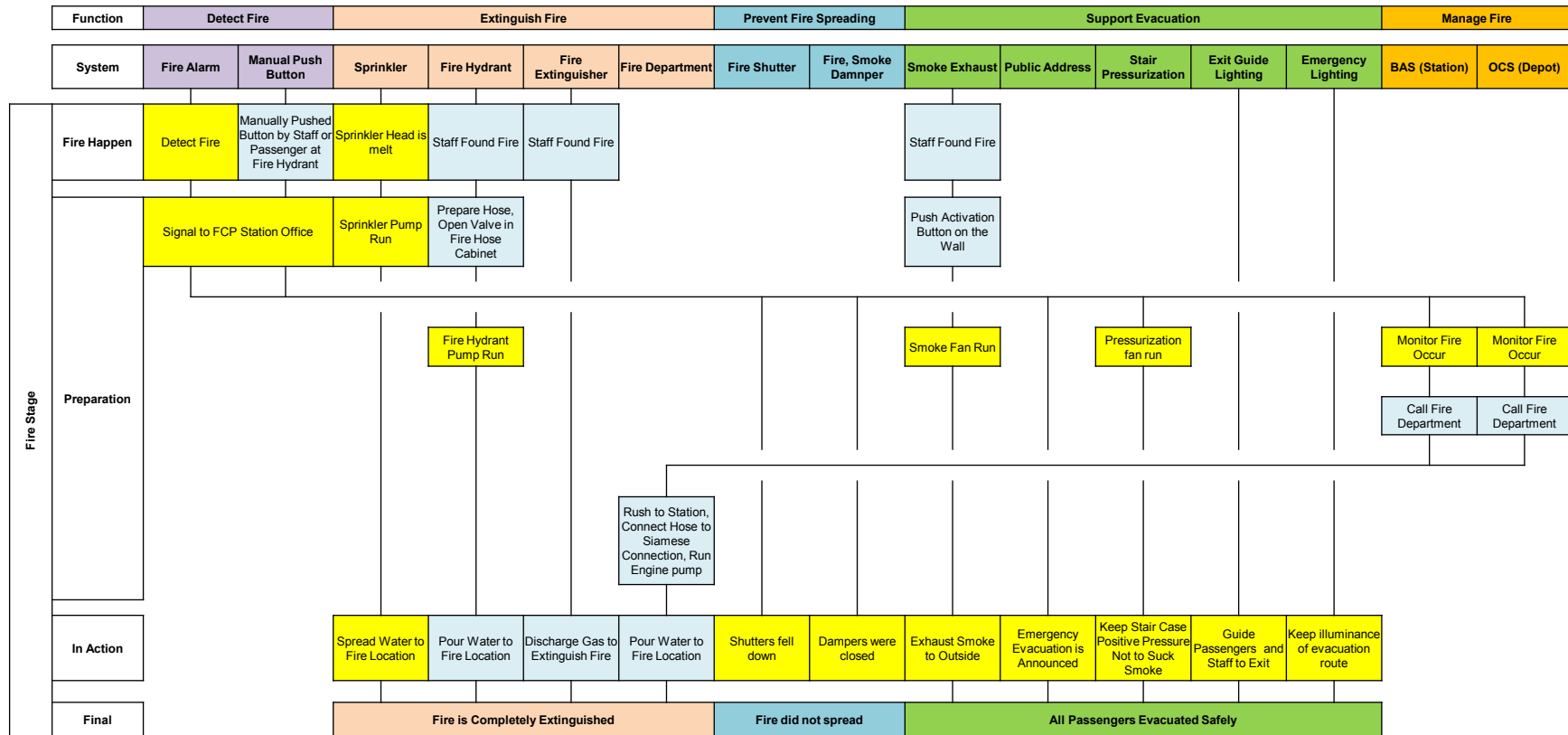
**Thank you for your attention**



# Fire Sequence

Sequence of Fire Extinguish and Evacuation in Case of Underground Station Fire

Update 2015/12/15

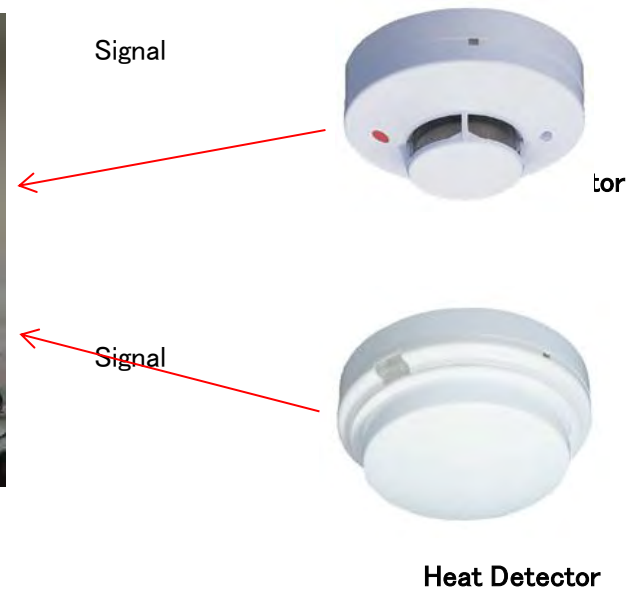


# Fire Alarm System

## A Fire Alarm System



Fire Control Panel  
Located in Station Control Room



# Fire Hydrant System

## B Fire Hydrant System



**Fire Hydrant Pump**  
Located B4 Fire Pump Room

Water



**Fire Hydrant Box**  
Located in Station Area



# Sprinkler System

## C Sprinkler System



**Sprinkler Pump  
Located B4 Fire Pump Room**

Water



**Sprinkler Head for Exposed**

Water



**Sprinkler Head for false  
ceiling**

# Tunnel Hose Reel System

## D Tunnel Fire Hose Reel System



Fire Engine Supply water to Siamese Connection

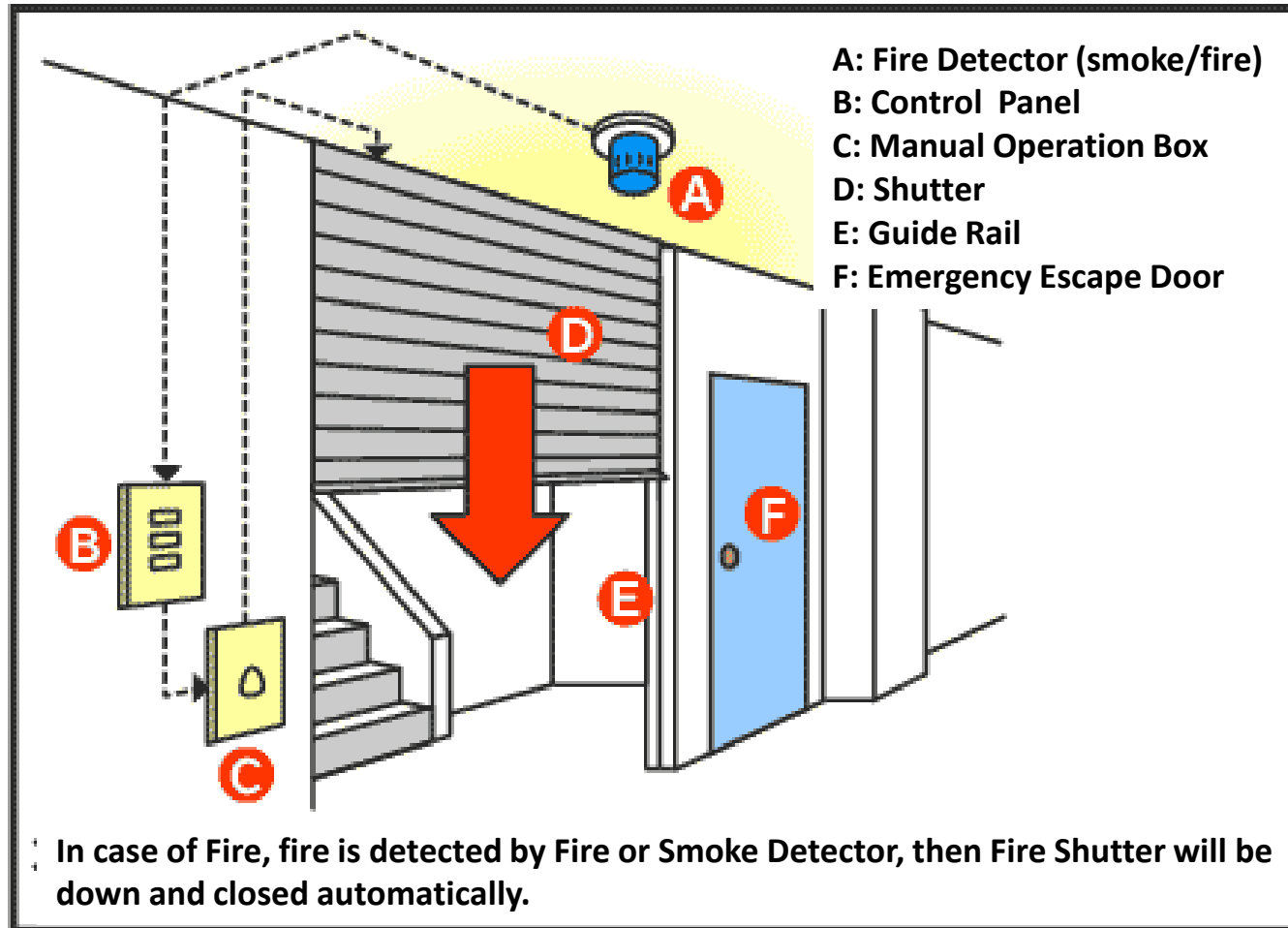
Water →



Landing Valve  
located in Tunnel

# Fire Shutter

## E Fire Shutter





# Station Control Room

## E Station Control Room



**A. Normal**  
**Monitor CCTV**  
**Monitor equipment operation**

**B. Emergency (Fire etc.)**  
**Confirm Emergency**  
**Announce Evacuation**

**(No.10) Materials which is used in the On Job Training conducted by the acceptance of railways company in Japan.**

**(Inside the attached CD-ROM)**

## 日本国における鉄道行政の仕組み

26 February 2016  
Masayuki Shiomi

### I、狙い

(1)日本国における鉄道行政は、国土交通省が所管している。国土交通省は、中央組織(本省)と地方組織(地方運輸局、全国で9か所)とが、それぞれの権限に基づいて鉄道整備の許認可等、鉄道事業の発達、改善、安全の確保、車両・信号保安装置等の製造・流通等に関する行政事務を司っている。  
本日は、この仕組みについて説明する。

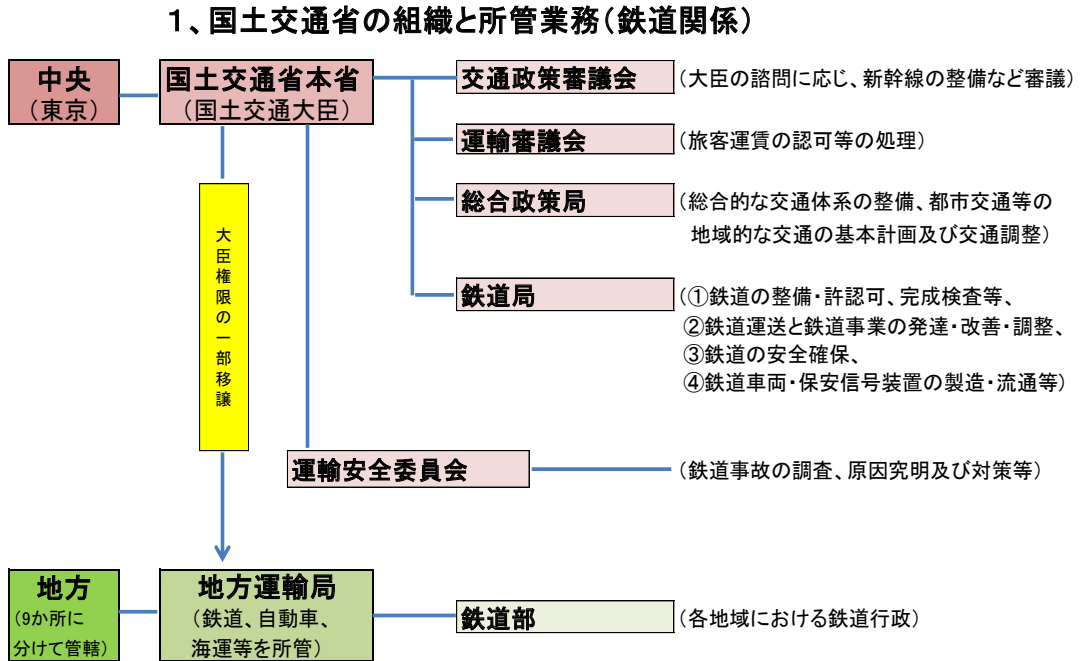
(2)さらに参考までに、地下鉄事業と日本の地方自治体との関連についても紹介する。

- ①前述の鉄道事業者の許認可等の実務を地方自治体は行っていない。
- ②東京都と8つの政令指定都市(横浜市や大阪市等)は地下鉄事業を行っている。
- ③比較的多くの自治体は、大都市圏周辺の開発に伴って新たに建設及び運営するために設立された鉄道事業者に出資している。



## II、国土交通省の組織と所管業務(鉄道関係)

### 1、国土交通省の組織と所管業務(鉄道関係)



## 2、組織関係法令

- (1) 国土交通省設置法(法律第100号)
- (2) 国土交通省組織令(政令第255号)
- (3) 国土交通省組織規則(国土交通省令第1号)
- (4) 地方運輸局組織規則(国土交通省令第73号)
- (5) 運輸安全委員会設置法(法律第113号)



## Ⅲ.日本の鉄道関係法令の体系

日本の鉄道関係法令は、(1)鉄道事業法及び(2)鉄道営業法の2つの法令を基に構成されている

### 1, 鉄道事業法

この法令の主な内容は、下記の通り

- (1)事業の許可に関する事
- (2)工事の完成検査及び鉄道施設の変更等
- (3)旅客の運賃、料金及び運行計画等
- (4)輸送の安全に関する事及び事故等報告
- (5)会計及び事業改善の命令
- (6)立入検査及び罰則等

### 2, 鉄道営業法

この法令の主な内容は下記の通り

- (1)鉄道営業に係る「鉄道の建設・車両器具の構造及び運転」は国土交通省令によって定めることが規定されている
- (2)鉄道利用者と鉄道事業者との関係を定めている(鉄道運輸規定等)
- (3)鉄道係員の職制及び運転免許取得の資格等に係る事項についても定めている

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## 1、鉄道事業法(1)

鉄道事業法の主な内容、関係省令及び鉄道事業者が定める規定等の関係は、下記の通りである

### 「第1条」(目的)

この法律は、鉄道事業等の運営を適正かつ合理的なものとする事により、輸送の安全を確保し、鉄道等の利用者の利益を保護するとともに、鉄道事業等の健全な発達を図り、もつて公共の福祉を増進することを目的とする。

### 「第2条」(鉄道事業の種類)

この法律において「鉄道事業」とは、第一種鉄道事業、第二種鉄道事業及び第三種鉄道事業をいう。

### 「第4条」(事業の許可申請)

鉄道事業の許可を受けようとする者は、定められた事項を記載した申請書を国土交通大臣に提出しなければならない。

⇒鉄道事業法施行規則(省令)

「第4条」(鉄道の種類)

「第5条」(事業基本計画)

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## 1,鉄道事業法(2)

### 「第5条」(事業許可基準)

国土交通大臣は、鉄道事業の許可をしようとするときは、所定の基準に適合するかどうかを審査して、これをしなければならない

### 「第10条」(工事の完成検査)

鉄道事業者は工事の施行の認可の際、国土交通大臣の指定する工事の完成の期限までに、鉄道施設の工事を完成し、かつ、国土交通省令で定めるところにより国土交通大臣の検査を申請しなければならない。

⇒鉄道施設等検査規則

第3条(鉄道施設検査の対象及び時期)

### 「第12条」(鉄道施設の変更)

- 1、鉄道事業者は、第十条第一項又は前条第一項の検査に合格した後において鉄道施設を変更しようとするときは、国土交通省令で定めるところにより当該変更に係る工事計画を定め、国土交通大臣の認可を受けなければならない。ただし、国土交通省令で定める軽微な変更については、この限りでない。
- 2、鉄道事業者は、前項ただし書の国土交通省令で定める軽微な変更をしようとするときは、その旨を国土交通大臣に届け出なければならない。

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## 1,鉄道事業法(3)

### 「第13条」(車両の確認)

- 1、鉄道運送事業者は、車両を当該鉄道事業の用に供しようとするときは、その車両が鉄道営業法第一条の国土交通省令で定める規程に適合することについて、国土交通省令で定めるところにより、国土交通大臣の確認を受けなければならない。
- 2、鉄道運送事業者は、前項の確認を受けた車両について、その構造又は装置を変更してこれを当該鉄道事業の用に供しようとするときは、同項の規定の例により、国土交通大臣の確認を受けなければならない。ただし、国土交通省令で定める軽微な変更をしてこれを当該鉄道事業の用に供しようとするときは、この限りでない。

### 「第16条」(旅客の運賃及び料金)

鉄道運送事業者は、旅客の運賃及び国土交通省令で定める旅客の料金(以下「旅客運賃等」という。)の上限を定め、国土交通大臣の認可を受けなければならない。これを変更しようとするときも、同様とする。

なお鉄道運送事業者は、この上限の範囲内で、旅客の運賃を定め国土交通大臣に届出なければならない。

### 「第17条」(運行計画)

鉄道運送事業者は、国土交通省令で定めるところにより、列車の運行計画を定め、あらかじめ、その旨を国土交通大臣に届け出なければならない。これを変更しようとするときも、同様とする。

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## 1,鉄道事業法(4)

### 「第18条2」(輸送の安全性の向上)

鉄道事業者は、輸送の安全の確保が最も重要であることを自覚し、絶えず輸送の安全性の向上に努めなければならない

### 「第18条3」(安全管理規程等)

鉄道事業者は、安全管理規程を定め、国土交通省令で定めるところにより、国土交通大臣に届け出なければならない。これを変更しようとするときも、同様とする。

⇒鉄道事業法施行規則(省令)

第36条の2(安全管理規程の届出)

⇒鉄道事業者の安全管理規程制定

第36条の3(安全管理規程の内容)

第36条の4((安全統括管理者の要件)

第36条の5(運転管理者の要件)

第36条の7(乗務員指導管理者の要件)

第36条の9(鉄道事業者による安全報告書の公表)

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## 1,鉄道事業法(5)

### 第19条」(事故等報告)

鉄道事業者は、列車の衝突若しくは火災その他の列車若しくは車両の運転中における事故、鉄道による輸送に障害を生じた事態、鉄道に係る電気事故又は鉄道に係る災害であつて国土交通省令で定めるものが発生したときは、遅滞なく、事故の種類、原因その他の国土交通省令で定める事項を国土交通大臣に報告しなければならない。

⇒鉄道事故等の報告規則(省令)

### 「第20条」(会計)

鉄道事業者は、国土交通省令で定めるところにより、その事業年度並びに勘定科目の分類及び貸借対照表、損益計算書その他の財務計算に関する諸表の様式を定め、その会計を整理しなければならない。

### 「第23条」(事業改善の命令)

国土交通大臣は、鉄道事業者の事業について輸送の安全、利用者の利便その他公共の利益を阻害している事実があると認めるときは、鉄道事業者に対し、予め定められた事項について、その改善を命ずることができる。

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## 1,鉄道事業法(6)

### 「第56条」(立入検査)

国土交通大臣は、この法律の施行に必要な限度において、その職員に、鉄道事業者又は索道事業者の事務所その他の事業場に立ち入り、業務若しくは経理の状況若しくは事業の用に供する施設、帳簿、書類その他の物件を検査させ、又は関係者に質問させることができる。

⇒鉄道事業等監査規則

第3条(監査の種類)― ①保安監査, ②業務監査, ③会計監査

### 「第64条」(権限の委任)

この法律に規定する国土交通大臣の権限は、国土交通省令で定めるところにより、地方運輸局長に委任することができる。

### 「第67~74条」(罰則)

この法令の関係条項に違反した場合の罰則が定められている。

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## 2、鉄道営業法 (1)

鉄道営業法の主な内容、関係省令及び鉄道事業者が定める規程等の関係は、下記の通りである

### 第1章 鉄道の設備及び運送

#### 「第1条」(鉄道の建設・車両器具の構造及び運転)

鉄道の建設・車両器具の構造及び運転は国土交通省令を以て定むる規程によるべし

⇒運転の安全確保に関する省令

⇒運転安全規範(鉄道事業者)

⇒鉄道に関する技術上の基準を定める省令

⇒【鉄道に関する技術上の基準を定める省令の解釈基準】

⇒運転取扱実施基準(鉄道事業者)

⇒電車整備実施基準(鉄道事業者)

⇒車両構造実施基準(鉄道事業者)

⇒鉄道土木施設構造及び整備実施基準  
(鉄道事業者)

⇒電気設備実施基準(鉄道事業者)

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## 2, 鉄道営業法 (2)

### 「第2条」(鉄道運輸規程)

- 1、本法その他特別の法令に規定するものの外、鉄道運送に関する特別の事項は、鉄道運輸規程の定むる所による
- 2、鉄道運輸規程は国土交通省令を以て之を定む

⇒ 鉄道運輸規程(省令)

⇒ 旅客営業規程(鉄道事業者)

### 「第3条」(運賃その他の運送条件)

運賃その他の運送条件は関係停車場に広告したる後に非ざれば、これを実施することを得ず

### 「第15条」(乗車と運賃)

旅客は営業上、別段の定ある場合の外、運賃を支払い乗車券を受くるに非ざれば乗車することを得ず。

## 第2章 鉄道係員

### 「第19条」(職制)

鉄道係員の職制は国土交通省令を以て之を定む

⇒ 鉄道係員職制(省令)

⇒ 鉄道係員職制(鉄道事業者)

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## 2, 鉄道営業法 (3)

### 第20条(鉄道係員服務規程)

鉄道事業者は鉄道係員の服務規程を定むべし

⇒ 鉄道係員服務規程(鉄道事業者)

### 「第21条」(資格)

国土交通大臣は鉄道係員たるに要する資格を定むることを得る

⇒ 動力車操縦者運転免許に関する省令

⇒ 動力車操縦者養成基準(鉄道事業者)

### 「第22条」(制服)

旅客及公衆に対する職務を行う鉄道係員は一定の制服を著すべし

⇒ 被服類管理貸与規程(鉄道事業者)

## 第3章 旅客及び公衆

### 「第29条」(旅客の不正乗車を禁ずるための罰則規定)

鉄道係員の許諾を受けずして下記の所為を為したる者は、2万円以下の罰金又は科料に処す

- ①有効な乗車券なくして乗車したるとき
- ②乗車券に指示したる停車場に於て下車せざる時等

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## IV、本省と地方運輸局との事務分担 (1)

### 1、鉄道事業法上の主な許認可と事務分担 (1)

#### (1) 鉄道事業の許可(鉄道事業法第4条・第7条関係)

(大臣) 許可申請時に提出した事業計画の変更は、軽微事項を除いて、原則として、認可の対象。

(地方局長) 軽微事項の変更の届出の受理。大臣から委任された認可事案の処理。

#### (2) 鉄道施設の工事施行の認可(鉄道事業法第8条関係)

(大臣) 新規の工事施行が認可の対象となっている。

(地方局長) 変更認可が対象となっている。

#### (3) 鉄道施設の完成検査(鉄道事業法第10条関係)

(大臣) 特殊な構造を有する鉄道施設として大臣が告示で定めたもの(新幹線、本州と北海道間を結ぶ路線、本州と四国間を結ぶ路線)が対象となっている。

(地方局長) 特殊な構造を有する鉄道施設として大臣が告示で定めるもの以外、全てが対象となっている。



## IV、本省と地方運輸局との事務分担 (2)

### 1、鉄道事業法上の主な許認可と事務分担 (2)

#### (4) 鉄道車両の確認(鉄道事業法第13条関係)

(大臣) 新規の車両確認が対象となっている。

(地方局長) 変更確認が対象となっている。

#### (5) 旅客の運賃の認可及び届出(鉄道事業法第16条第1項関係)

(大臣) 路線の長さの長い鉄道事業者、直通運輸の行われている鉄道事業者  
[JR各社大手鉄道会社]

(地方局長) 収入予想額が一定以下の鉄道事業者[中小鉄道会社]

#### (6) 旅客の運賃の変更命令(鉄道事業法第16条第5項)

(大臣) 当該規定が対象としているもの全てが対象。

(地方局長) 地方局長が認可及び届け出を受理したものが対象。

#### (7) 安全監理規程の届出の受理(鉄道事業法第18条の3第1項関係)

(大臣) 新規に制定したもの全てが対象になっている。

(地方局長) 変更の届出が対象となっている。

## IV、本省と地方運輸局との事務分担（3）

### 1、鉄道事業法上の主な許認可と事務分担（3）

#### (8) 安全統括管理者及び運転管理者の届出の受理(鉄道事業法第18条の3第5項関係)

(大臣)安全管理者の選任又は解任が対象になっている。

(地方局長)運転管理者の選任又は解任が対象になっている。

#### (9) 事故の報告の受理(鉄道事業法第19条)

(大臣)地方局が受理した届出を本省で集約している

(地方局長)全てが対象となっている。

#### (10) 輸送の安全に関わる情報の公表(鉄道事業法第19条の3関係)

(大臣)全国の情報を整理し、公表する。

(地方局長)地方局エリア内の情報を整理し、公表できる。

#### (11) 乗継円滑化協議の開始命令(鉄道事業法第22条の2関係)

(大臣)新幹線鉄道に係る命令は、本省が行う。

(地方局長)新幹線鉄道に係るもの以外は、地方局が行う。

## IV、本省と地方運輸局との事務分担（4）

### 1、鉄道事業法上の主な許認可と事務分担（4）

#### (12) 事業改善命令(鉄道事業法第23条関係)

(大臣)当該規程が求めるもの全て。

(地方局長)当該規程が求めているもの全て。

#### (13) 立入検査(鉄道事業法第56条)

(大臣)全てが対象となっている。

(地方局長)全てが対象となっている。

(注)なお、地方運輸局長に提出すべき申請書は、それぞれ当該事案の土地を管轄する地方運輸局長に提出しなければならない。また、国土交通大臣に提出すべき申請書は、それぞれ所轄(しよかつ)の地方運輸局長を経由して提出しなければならない。



## IV、本省と地方運輸局との事務分担 (5)

### 2、鉄道営業法上の主な許認可と事務分担

#### (1) 運転免許の申請、養成所の指定、改善命令(免許省令第5条、第16条及び第18条の3関係)

(大臣) 養成所の指定、養成所の講習過程の新設、改善命令

(地方局長) 運転免許の交付、指定養成所の講習時間変更、改善命令

## IV、本省と地方運輸局との事務分担 (5)

### 3、事故調査に関する業務の事務分担

- 1、事故の調査と原因究明は、「**運輸安全委員会**」の所掌事務。
- 2、同委員会は、国土交通省の外局であり、独立した組織。
- 3、調査対象は、脱線、衝突、火災等の列車事故。
- 4、事故調査を行うために必要な場合には、同委員会は国土交通大臣に必要な援助を求めることが出来ると規定されている。
- 5、援助が求められた国土交通大臣は、地方運輸局長に対して運輸安全委員会の援助を要請する。
- 6、要請を受けた地方運輸局職員が直ちに事故現場に向かう。運輸安全委員会の調査官が現場到着後、調査を引き継ぐなどして、早急な調査開始と円滑な調査を図る。



## V、まとめ

- (1)本省においては、鉄道事業への参入許可と退出の届出の受理、鉄道施設の施行認可、車両の確認、運賃認可や届出の受理(大手事業者)、技術規準の策定と改善、安全性向上のための施策に関する総括、安全に関する統括的業務などの事務を所掌している。
- (2)地方運輸局においては、鉄道施設の工事完成検査、鉄道施設の変更認可、車両の変更確認、運賃認可や届出の受理(中小事業者)、保安監査の実施等の事務を所掌している。
- (3)地方運輸局と本省とが連携を図りつつ、自治体の境界を跨ぐ路線や相互直通運転、ターミナル駅での乗り換えなどにより、広域的なネットワークを形成する鉄道について自治体の境界を越えた広域的な視点からチェックをしている。
- (4)また、本省と地方運輸局とが連携を持つことによって、全国的に統一された基準及び一元的な運行を確保している。

### (参考)地下鉄事業と日本の地方自治体との関連 (1)

#### 1、東京都と8つの政令指定都市では地下鉄事業を行っている

- (1)地下鉄事業会計は、地方自治体の一般会計とは独立。原則として、独立採算方式となっている。
- (2)地方自治体の監査事務局による決算審査が行われる。
- (3)地方議会に決算状況が報告されるなど、議会の審査を受ける必要がある

#### 2、比較的多くの自治体は、大都市圏周辺の開発に伴って建設及び運営するために設立された鉄道事業者に出資している。

- (1)将来の需要増大を見込み、都市開発と一緒に鉄道敷設を自治体主導で進めるような時に、行われれることが多い。例えば、住宅地の造成と一体的な鉄道整備。

## (参考)地下鉄事業と日本の地方自治体との関連(2)

- (2) 将来の需要が見込みとおり増えないかもしれないというリスクがあること。また、鉄道事業に投資してから利益が得られるまでに何年も要すること。これらの理由から民間会社では資本が集まらないので、自治体が出資をする。ただし、民間会社の経営ノウハウを活用する観点から、民間の出資も集める。こうやって、自治体と民間が共同して出資して鉄道事業者が作られる。
- (3) 当該鉄道事業者が経営に困った場合には、出資した自治体が支援することが多い。

### 3、日本において地方自治体が鉄道事業者への許認可の業務を所省していないことについての考え方

- (1) 例えば、路線が一つの地方自治体に留まる鉄道事業であっても、その許認可、監督に当たっては、全国的に統一された基準及び一元的な運用を確保することで、輸送の安全を確保していく必要性があり、国が全国的な規模又は全国的な視点に立って実施している。

## (参考)地下鉄事業と日本の地方自治体との関連(3)

- 2) 鉄道行政における安全の確保は、安全基準の策定、許認可の審査における事前の安全確保、保安監査による事後の安全確保、そして法令違反があった場合には必要な行政処分や指導を通じて得た知見を踏まえて、制度を改正していくという一連のサイクルによって万全を期している。
- (3) さらに、鉄道行政における安全の確保は、各種安全確保に関する企画立案業務と、許認可、監査及び事故対応等の業務の両方を経験させる国独自のキャリアパスにより、専門分野における効果的効率的な経験を蓄積させた職員を配置している。

# Proposed Functions and Responsibilities of Regulator for Metropolitan Railway Lines in Hanoi City

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## OUTLINE

- **Current status of Hanoi Urban railway network**
- **Overview of JICA TA Project**
- **Necessity of clarifying functions and responsibilities for Urban railway regulator**
- **Hanoi Department of Transport (DOT) as regulator for urban railway**
- **Proposed functions and responsibilities of regulator**
- **Proposed organization of regulator**
- **Conclusions**



# 1. Current status of UR lines in Hanoi City

Line	Length	Status	Authority for Construction
Line 1	38.7 km	On-going by Japanese ODA for the first section (15.36km)	PMU-Rail, MOT
Line 2	35.2 km	On-going by Japanese ODA for the first section (11.5km)	Hanoi People's Committee (HPC)
Line 2A	14km	By Chinese ODA, under construction, plan to start operation in December 2016	Ministry of Transport (MOT), HPC will operate and maintain
Line 3	21 km	By loans from French Government, ADB, EIB for the first section (12.5km), under construction	HPC
Line 4	53.1 km	No specific study.	N.A.
Line 5	34.5 km	FS was conducted by Ministry of Transport, Japanese Government also supported a FS to build this line under PPP scheme.	HPC
Line 6	47 km	No specific study.	N.A.
Line7	35 km	No specific study.	N.A.
Line 8	28 km	No specific study.	N.A.

## 2. JICA TA Project

### Project Overview

- **Project name:** Technical Assistance Project “To Strengthen the Capacity of Regulator and to Establish O&M Company for Metropolitan Railway Lines in Hanoi City”.
- **Name of donor:** Japan International Cooperation Agency - JICA
- **Line agency:** Hanoi PC
- **Project owner:** Hanoi Metro Company
- **Project duration:** 36 months (from Feb., 2013to Feb., 2016)
- **Project's objective:**
  - + To strengthen the capacity for Hanoi urban railway regulator to be in charge of state management over the operation and maintenance of urban railways; start to function as regulator;
  - + To establish O&M Company for metropolitan railway lines in Hanoi City: trial operation of Company's activities are started in line with the progress of Line 2A Project for operation in 2015.

## 2. JICA TA Project

JICA TA project has ended in Feb. 2016

### OUTPUTS:

- (1) Hanoi Metro One Member Limited Liability Company was established and registered on June 19, 2015
- (2) Regulator of Hanoi urban railway is set to Department of Transport
- (3) Training: 12 officers trained by the TA project had gained knowledge relating to management, operation and maintenance of urban railway
- (4) All tasks relating to Regulator (Activity 1-3, PO) and O&M Company (Activity 4-6, PO) have been completed as scheduled

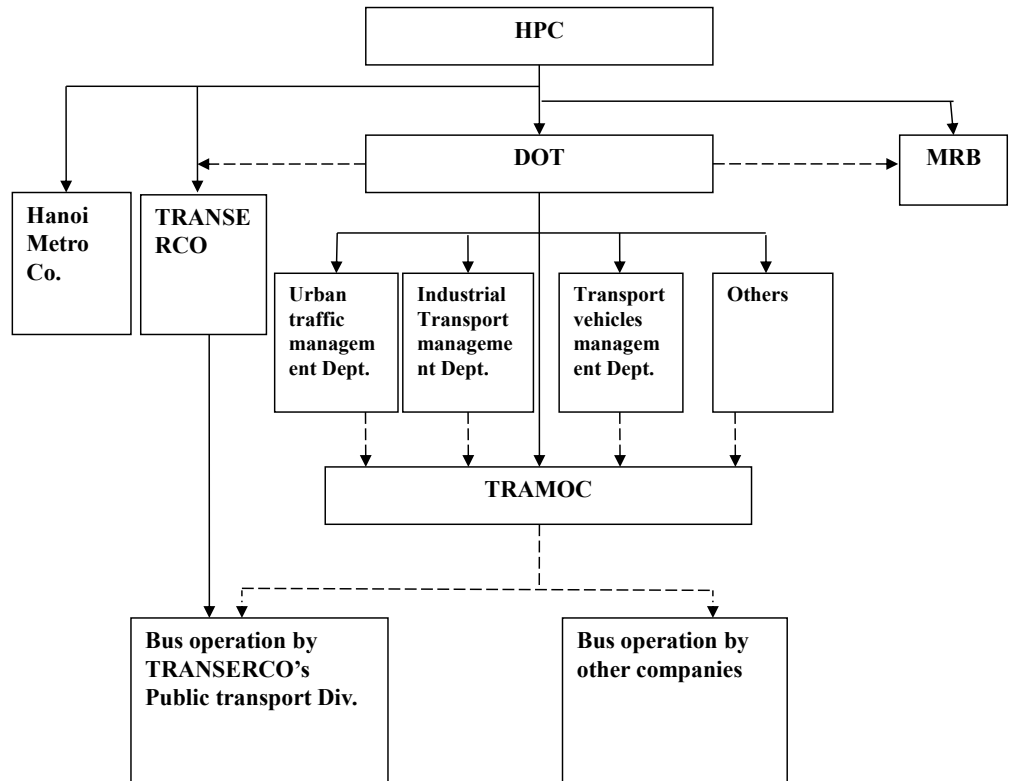
## 3. Necessity of clarifying functions of UR regulator

- According to latest plan, Line 2A (Cat Linh – Ha Dong) shall start its operation by end of 2016, while Line 3 is scheduled to commence the operation in January, 2018.
- Hanoi Metro Company was established and in the process of strengthening its capacity and preparing conditions for trial operation towards Line 2A.
- Metropolitan railways shall be managed by municipal government of Hanoi City (Railway Law 2005)
- DOT is functional organization of HPC for proposing and assisting HPC in executing state management on the transport sector, including roads, waterway, **urban railway**, transportation, traffic safety ... (Decision no. 17/2008/QĐ-UBND dated 29/9/2008). The functions regarding urban railway has not been executed and unclear so far.

## 4. Hanoi DOT as Regulator of Urban railways

Current organization for public transport system in Hanoi City (After establishment of Hanoi Metro Company)

=> Department of Transport has been mainly focusing on bus system so far, while MRB is responsible for urban railway projects



## 4. Hanoi DOT as Regulator of Urban railways

Decision no. 17/2008/QĐ-UBND dated 29/9/2008 by HPC

- DOT is state management organization for urban railway

Joint-Circular No. 42/2015/TTLT-BGTVT-BNV dated 14/8/2015 of MOT and MOHA

- DOT assists HPC in state management of urban railway

Conclusions of Vice Chairman of HPC in JCC\* meetings

- In 5<sup>th</sup> JCC meeting (Jul, 2015), Department of Home Affairs was asked by Vice Chairman of HPC about a report on supplement of DOT's functions and responsibilities as UR regulator
- In 6<sup>th</sup> JCC meeting (Oct, 2015), supplement of DOT's functions and responsibilities as UR regulator was instructed by Vice Chairman of HPC

## **5. Proposed functions and responsibilities of UR Regulator (Hanoi DOT)**

**5.1. Quality management**

**5.2. Safety management**

**5.3. Incentive policies**

**5.4. Fare policy**

**5.5. Infrastructure management**

**5.6. Promulgation of regulations**

**5.7. Planning**

**5.8. Inspection and handling with violations**

**5.9. Propaganda activities**

**5.10. International cooperation**

### **5.1. Quality management**





## 5.1. Quality management

### Proposed functions and responsibilities of DOT:

- (1) promulgate, instruct, implement normative legal documents, regulations, and technical standards
- (2) participate in formulation of regulations on quality management of transport services by urban railways
- (3) evaluate train operation schedule, urban railway service quality plan of the Company
- (4) check and evaluate implementation process of train operation schedule, urban railway service quality plan of the Company
- (5) periodically perform statistic works, report results of public transport by urban railways
- (6) develop a database, conduct public consultation on results, needs and ability to improve the quality of transport services by urban railways
- (7) propose programs and plans to improve urban railway transport services

## 5.2. Safety management

### Demarcation of proposed functions of safety management between central government agency (Ministry of Transport) and local agency (Hanoi DOT)

Ministry of Transport	Department of Transport, HPC
Develop and publicize regulations, standards	Instruct and undertake the execution of regulations, standards
Perform verification and certification of urban railway system safety	Upon responsibilities of HPC, to check the preparation of requirements for safety assurance before launching new line or extended line
Inspect and monitor the observation of regulations, standards regarding to urban railway safety	Appraise urban railway train operation safety plan
Join in investigation and handling with urban railway accidents, incidents	Chair and coordinate with relevant organizations in investigation and handling with urban railway accidents, incidents

## 5.3. Incentive policies

Some solution groups for incentive policies of urban railway system:

1. **Mobilize funding** for construction and operation of UR system: taxation of transport, charges on private vehicles, etc.
2. **Transit Oriented Development (TOD)**: urban railway stations located nearby commercial areas, office buildings, convenient transition facilities like park and ride facilities, etc.
3. **Improve service quality**: by providing priorities for public transport, resulting in improvement in its punctuality, etc.
4. **Control private vehicles**: taxation of imported vehicles, road fees, fuel fees, etc.
5. **Encouraging policies for public transport users**: concession fares for prioritized subjects such as the elders, disabled, students; employee's allowance for public transport, etc.
6. **Propaganda activities**



## 5.3. Incentive policies

Proposed functions and responsibilities for DOT

<b>Funding</b>	Coordinate with relevant organizations and propose funding attracting policies to HPC
<b>TOD</b>	Coordinate with concerned agencies to provide TOD design solutions
<b>Quality</b>	Propose solutions for integrating and improving service quality
<b>Private vehicles</b>	Join in projects/programs aiming at reducing the number of private vehicles
<b>Encouraging users</b>	Propose financial solutions to encourage users of public transport
<b>Propaganda activities</b>	Propose propaganda programs to enhance people's awareness of using urban railway

## 5.4. Fare policy

Within the fringe of JICA TA Project, a separate Report on Fare policy for urban railway in Hanoi City was made.

Report includes:

- Fare structure
- Fare types
- Proposed base fare
- Transferring fee
- Other regulations on fare such as fare revision, etc.
- Subsidy for urban railway



## 5.4. Fare policy

**Proposed functions and responsibilities of DOT:**

- (1) Propose and coordinate with relevant organizations to develop regulations on Fare policy for urban railway system
- (2) Participate in development of policies, economic and technical benchmarks and unit price for urban rail transport
- (3) Coordinate with relevant organizations to calculate subsidies

## 5.5. Infrastructure management

### Proposed functions and responsibilities:

- Join in development of regulations on management of maintenance and upgrade of urban railway infrastructure and equipment
- Perform the function of managing and monitoring the quality and technical aspects of urban transport works
- Appraise maintenance plan prepared by Hanoi Metro Company and inspect the implementation of this plan
- Periodically report HPC on the implementation of maintenance plan of urban railway infrastructure and equipment

## Other functions and responsibilities

**5.6.** Propose HPC in issuance of regulations on authorization of responsibilities in state management of urban railways

**5.7.** Propose UR development plans to HPC

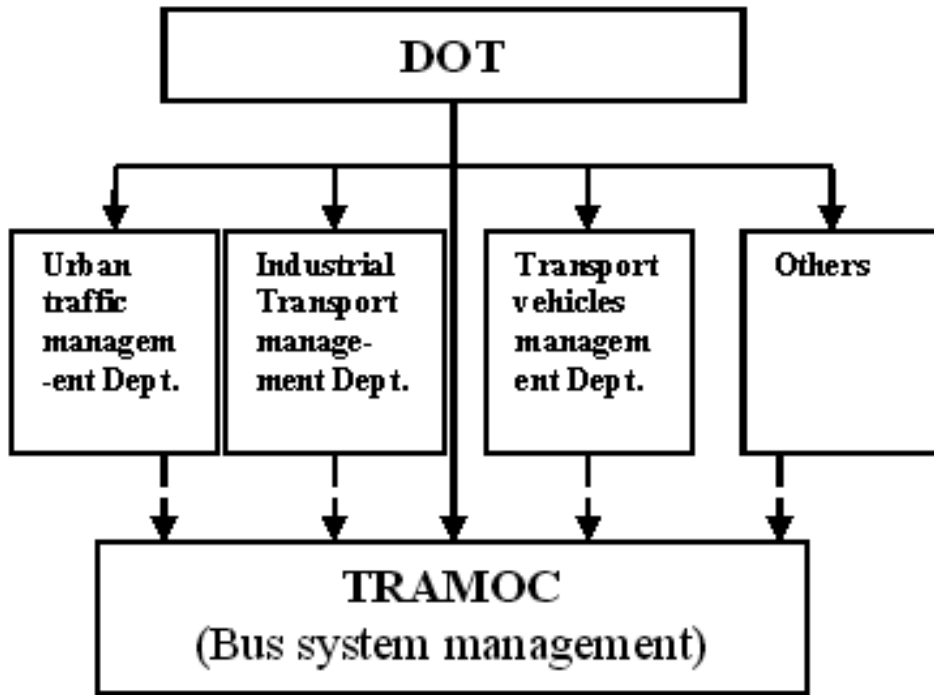
**5.8.** Inspect and handle with violations

**5.9.** Execute propaganda activities to the public about regulations on UR

**5.10.** Execute international cooperation activities in UR sector upon request and authorization by HPC

# 6. Proposed organization

## 6.1. Current organization structure of Hanoi DOT



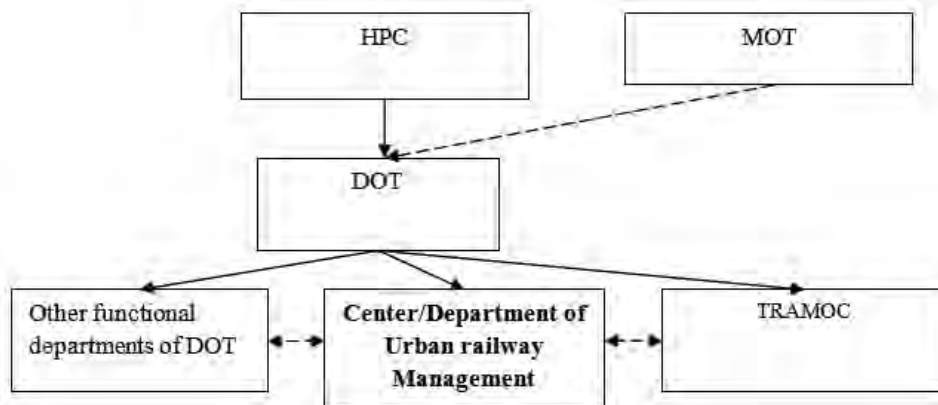
# 6. Proposed organization

## 6.2. Proposed organization

### Phase 1: present – 2022

There are three (03) options

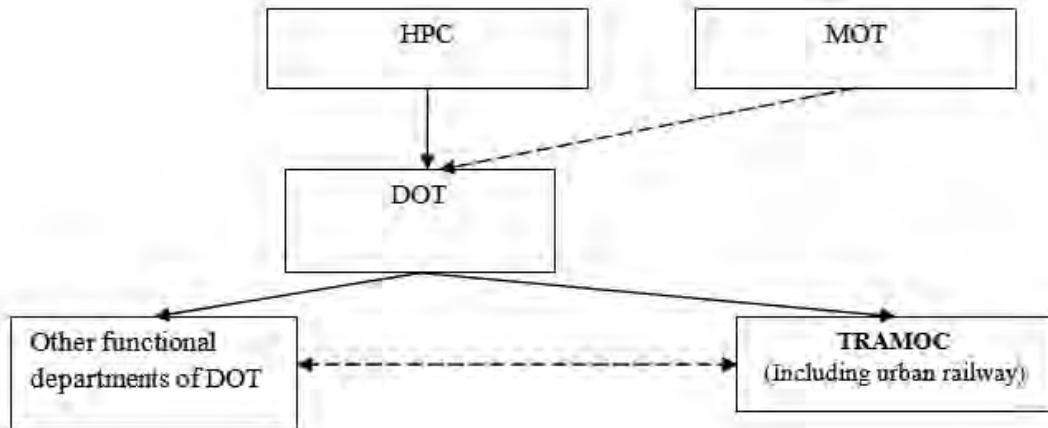
Option 1: Urban railway regulating agency under DOT





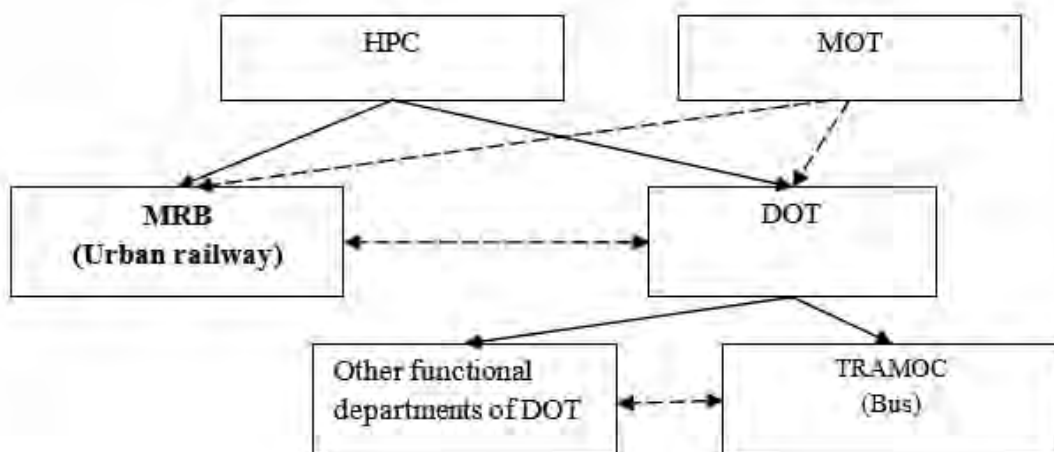
## 6. Proposed organization

Option 2: TRAMOC (under DOT) is also in charge of Urban railway



## 6. Proposed organization

Option 3: MRB as Urban railway regulator



## Pros and Cons

### Option 1

- Quick and timely decision-making
- Receive instructions and assistance from other functional divisions under Hanoi DOT

- The need of establishing a new organization under Hanoi DOT, requiring personnel allocation, budget, etc.

### Option 2

- Utilize existing resources of TRAMOC

- TRAMOC has no experience in railway management but only bus

### Option 3

- MRB has experience in railway
- A subordinate organization directly under the instruction of HPC

- MRB needs to concentrate on complicated management over construction projects
- In Joint-Circular 42/2015 (MOT&MOHA), DOT was mentioned as state management agency for urban railway

➔ **OPTION 1 is recommended**

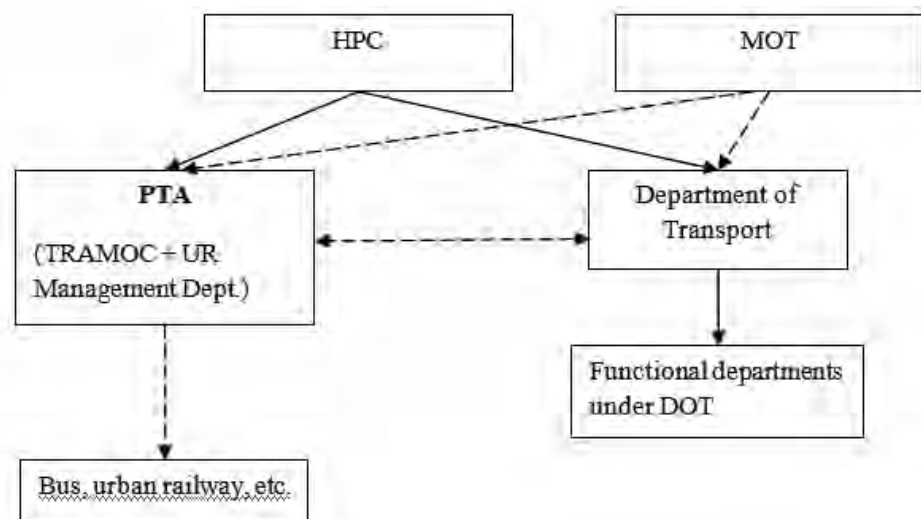
## 6. Proposed organization

### 6.2. Proposed organization:

#### Phase 2: 2022 onwards

A sole agency for all public transport modes:

#### Public Transport Authority (PTA)



## **Public Transport Authority (PTA)**

- The establishment of PTA is institutional development component, which is entitled “Institutional strengthening of TRAMOC and Creation of PTA” in the fringe of WB-funded Hanoi Urban Transport Development Project (HUTDP), which was launched since July, 2012.
- The advantages of establish PTA include
  - + existence of a sole agency in charge of public transport
  - + clear demarcation for functions relating to urban transport with DOT
  - + quick decision making thanks to direct instruction from HPC

## **7. Conclusions**

Propose to newly establish an organization under Hanoi DOT which is mainly in charge of regulating activities for urban railway system till PTA is formulated.

THANK YOU

# TRANSPORT SAFETY MANAGEMENT SYSTEM IN JAPAN

26<sup>th</sup> February 2016

**Tadashi Nakano**

- ◆ Deputy General Manager - Engineering Headquarters – JIC Co., Ltd.
- ◆ Associate Chief - Railway Control Department - Railway Business Headquarters - Osaka Municipal Transportation Bureau

## Training contents

- ① Management system
- ② Transport safety management system
- ③ Example of organizational structure of Osaka Municipal Transportation Bureau
- ④ Human errors
- ⑤ Safety culture and custom

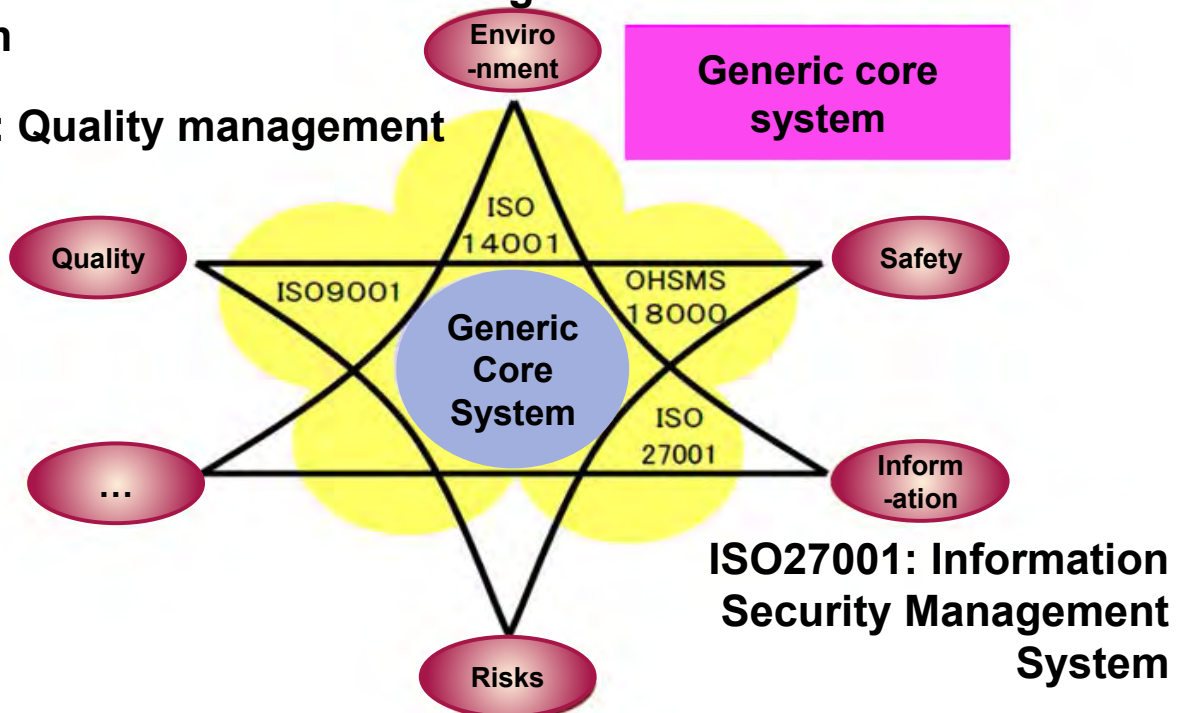


# ① Management system

There are many kinds of management in the world...

ISO14001: environmental management system

ISO9001: Quality management

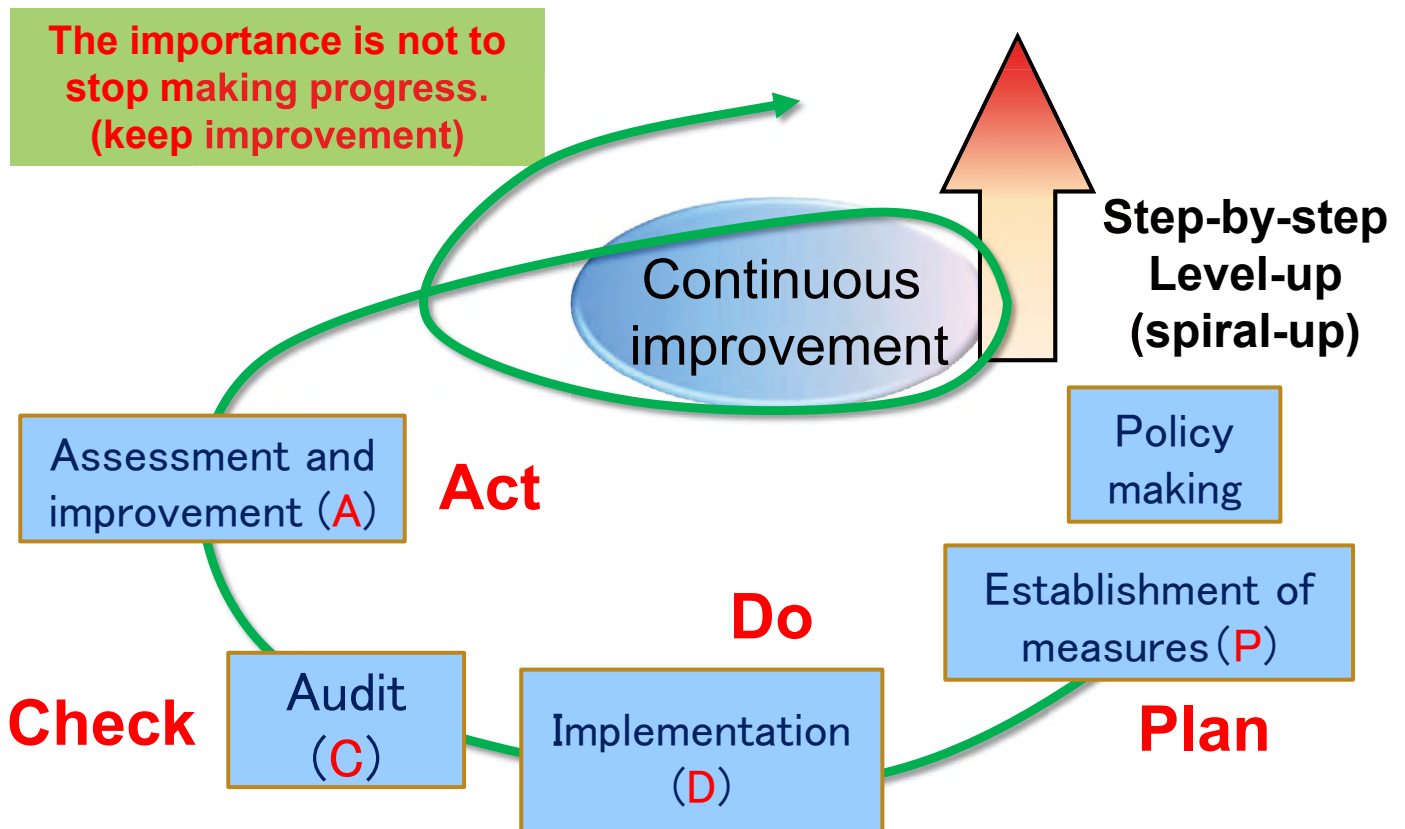


## Generic Core system : 4 important factors of management system

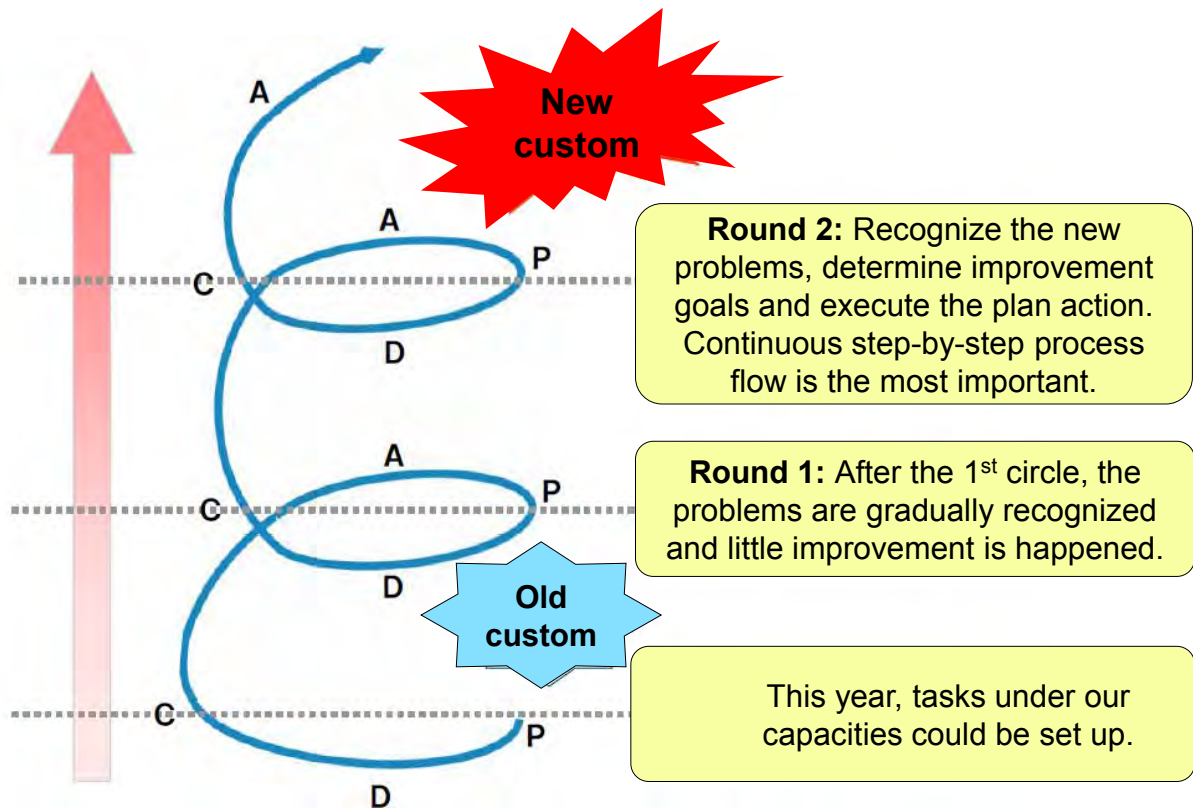
- Top - down
- Continuous improvement (PDCA)
- Self control (Internal audit)
- Participation of all members in the organization

**These are core factors for all management systems (core system)**

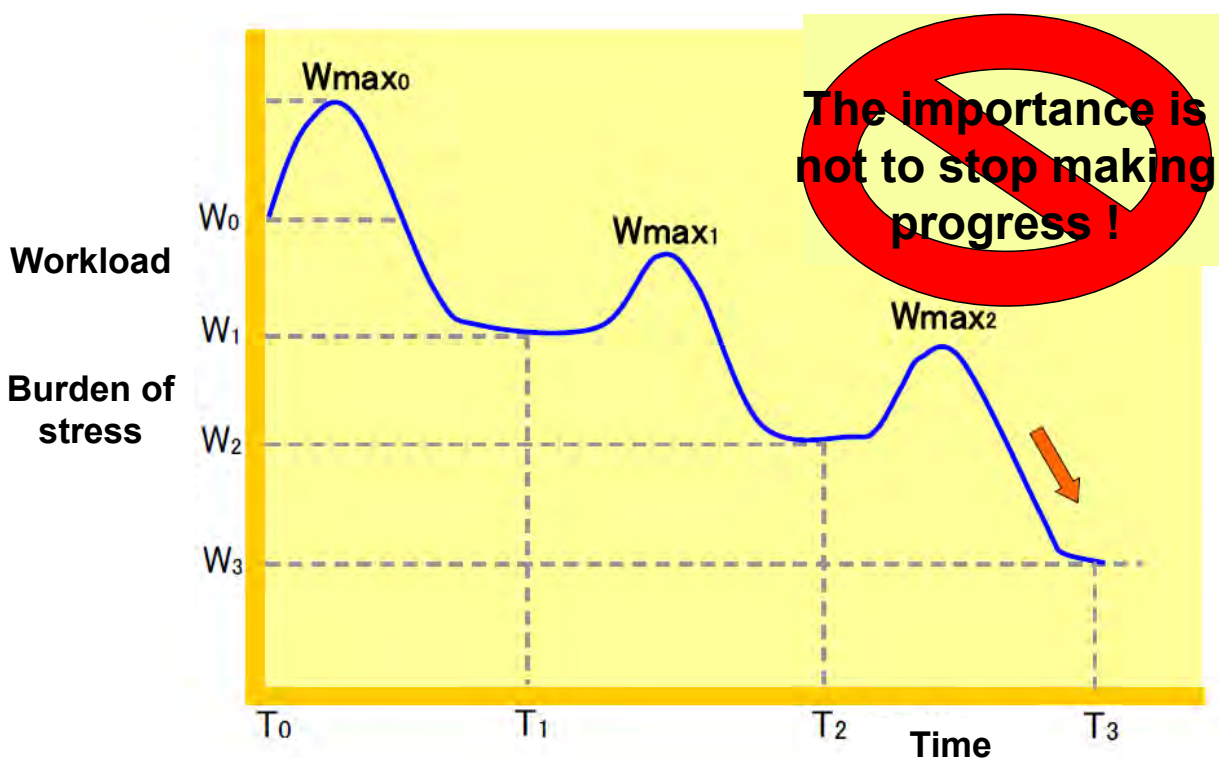
## Continuous improvement (PDCA)



# Continuous improvement (PDCA)



# Continuous improvement of management system



## ② Transport Safety Management System

### 4 Background of the JR Fukuchiyama line derailment accident

- ◆ **Offenders have received penalty “day-shift training”**
- ◆ **There were no countermeasures to deal with accidents happened suddenly**
- ◆ **Giving the instruction of normal working time for staffs on duty (In other railway divisions, there were also the bowling and karaoke events)**
- ◆ **In 2005, the purpose of the regional Director was “To make profit”**

## History of transport safety management system

◆ Once the accidents happened in the past, these were considered unintentional errors contributed by human failures.



◆ For the effective preventive measures, it is important to identify **circumstances that produce the environment at occurrence of accidents** and to study the approach of preventing in the entire system.



Set up “the Committee to Evaluate Measures for the Prevention of Accidents Caused by Human Error in Public Transport”

## History of safety management system for transportation

There are two types of human errors

Errors are “unintentional actions” due to omissions or misdiagnoses

Human failures in narrow definition

Errors are intentional actions while actors are aware of the “risks” of these actions

Unsafe acts



In order to prevent the violation contributed by human errors...

Set up the system in accordance with ergonomic principles, etc., to minimize human errors in narrow definition



Establish policies of avoiding unsafe acts

Establishment of safety culture



## History of transport safety management system

◆ March 2006 Promulgate “Law to amend the Railway Business Law to enhance transport safety” (Laws for Transport Safety)  
(Promulgated on March 31st 2006)

◆ April 2006 The Ministry of Land, Infrastructure and Transport (MLIT) Establishment of new organization  
(Office of Minister Evaluation Committee responsible for examining transport safety policies)

**October 2006 Enforcement of Laws for Transport Safety  
Implementation of Management Safety Evaluation System**

## Transport safety management system (Summary)

### 【 Features of transport safety management system 】

1. In the integrated manner from top management to all personnel (staff, worker, etc.), **building organizational structure of safety management, carrying out continuous improvement (PDCA)**
2. Implementation of **the system for checking and evaluating by the competent State agencies** regarding the actual state of the Company (**Evaluation of Management for Transport Safety**)

### 【Regulations of law】

1. Have the obligation to draw up and report of **safety management rules**
2. Have the obligation to appoint and report **a manager responsible for administering and controlling safety**
3. Have the obligation to **publicize information** related to transport safety

運輸安全一括法に規定する安全管理規程  
に係るガイドラインの手引

平成19年12月  
国土交通省大臣官房  
運輸安全監理官

## The role of Guideline Manual

- Shows the rules described in safety management regulations and provides the rationale behind in order to support each Company to establish the safety management system by its own capabilities.

## Guidelines on safety management regulations

### 【14 instruction items】

1 Commitment of top management

2 Responsibilities of top management

3 Safety policies etc. **P**

4 Manager responsible for administering and controlling safety **D**

5 Responsibilities and rights of personnel

6 Securement of information transfer and communications

7 Report of information about accidents, incidents, etc.

8 Response to major incidents **D**

9 Ensure to comply with relevant laws and regulations

10 Necessary training and education aimed to maintain Safety Management System

11 Internal audit **C**

12 Assessment and continuous improvement **A**

13 Document creation and tracking

14 Report creation and tracking

## 運輸事業者における安全管理の進め方に関するガイドライン

～輸送の安全性の更なる向上に向けて～

平成22年3月

国土交通省大臣官房

運輸安全監理官

## The amendment to Guideline Manual

After safety management system commissioned to place into practice, each Company drew up regulations of safety management, and the implementation plan was built upon these.

In the amendment, the section of **orientation to building-improvement for safety management system of the corporation and examples served as reference** plays the main role.

## Guidelines on safety management regulations

### 【14 instruction items】

**1** Responsibilities of top management

**2** Safety policies

P

**3** Strategic safety policies

**4** Manager responsible for administering and controlling safety

D

**5** Responsibilities and rights of personnel

**6** Securement of information transfer and communications

**7** Report of information about Accidents, incidents, etc.

**8** Response to major incidents

D

**9** Ensure to comply with relevant laws and regulations

**10** Necessary training and education aimed to maintain Safety Management System

**11** Internal audit

C

**12** Assesment and continuous improvement

A

**13** Document creation and tracking

**14** Report creation and tracking

# Assessment of Management for Transport Safety

The auditing method of the State to the Company's organizational structure – activities for safety management system

- ◆ Conducted basically every year
- ◆ Interview
  - Director
  - Each (Railway / Bus) manager responsible for administering and controlling safety
  - Manager of Transport Dept.
  - Manager of Railway Control Dept., etc.



***We are friends forever.***

No.13-1 [output of Action 3-1 ]No. 1344 /BQLSDT-TCDT -To: Vietnam  
Railway Administration (“VNRA”), April 27th, 2015

**PEOPLE’S COMMITTEE  
OF HOCHIMINH CITY  
MANAGEMENT AUTHORITY  
FOR URBAN RAILWAYS**

**SOCIALIST REPUBLIC OF VIETNAM  
INDEPENDENCE – FREEDOM – HAPPINESS**

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Ref.: No. 1344 /BQLSDT-TCDT

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*Ho Chi Minh City, April 27<sup>th</sup>, 2015*

Re: Train driver training period and  
driver certificate issued for Ho Chi  
Minh City Urban railway Line 1

**To: Vietnam Railway Administration (“VNRA”)**

Preparation for JICA 3<sup>rd</sup> Loan agreement for the construction project of Ho Chi Minh City urban railway Line 1 (Ben Thanh – Suoi Tien), Management Authority for Urban Railway (“MAUR”) worked with JICA Fact Finding Team in April 2015 on contents related to the project, including train driver training. Therefore, MAUR requests VNRA reviewing, having any suggestion for following contents to correspond to JICA fact finding mission:

1. According to the former train driver training plan, Line 1’s General Consultant (“GC”) proposed railway operation staff shall be trained for 400 hours (about 2 months) of theory training and 400 hours of practical training on the base of referring to driver training period in Japan. However, after comparing Line 1 train driving technology which is automatic (ATO) to Japan’s manual driving and for guaranteeing sufficient number of drivers in the trial period (tentatively 6 months), GC is considering to decrease practical training period to below 400 hours (theory training period remains the same). Therefore, MAUR suggests VNRA reviewing and leaving a comment on the decrease of training period mentioned above.

2. After theory and practical training accomplished, the trainees will shall be issued “Training course completion certificate” by the training center to participate in the driver license examination. At Point a, Clause 2, Article 4, Chapter 2, Circular No. 05/2015/TT-BGTVT of Ministry of Transport dated March 30th, 2015 guiding on standards, titles of direct operational staff on urban railway, it is regulated that the train driver is obliged to have the “Urban railway train driver license, training certificate”. As for Line 1, the training is mainly conducted by Japan railway companies so they are expected to be the certificate issuing unit. However, according to regulations of Japan railway companies, they do not issue Training certificate but can only authorize Training course completion certificate for foreign trainees. Therefore, MAUR suggests VNRA guiding on the matter above.

We are looking forward to your cooperation. (Signed)



***Recipients:***

- As above;
- MAUR:
- + Training and Organization Division;
- + PMU 1;
- For record: Record Office

**CHAIRMAN**

(Signed and sealed)

**Bui Xuan Cuong**

No.13-2 [output of Action 3-1 ] No. 1001 / CDSVN- VTATGT- To: Ho Chi Minh City Management Authority for Urban Railways (“MAUR”), 12th May, 2015

**MINISTRY OF TRANSPORT  
VIETNAM RAILWAY AUTHORITY**

**SOCIALIST REPUBLIC OF VIETNAM  
INDEPENDENCE – FREEDOM – HAPPINESS**

-----  
Ref.: No. 1001 / CDSVN- VTATGT

-----  
*Ha Noi, 12<sup>th</sup> May, 2015*

Re: Train driver training period and driver certificate issue for Ho Chi Minh City Urban railway Line 1

**To: Ho Chi Minh City Management Authority for Urban Railways (“MAUR”)**

In response to the Official Letter No. 1344/BALDSDT-TCDDT dated 27<sup>th</sup> April, 2015 on train driver training period and driver certificate issue for Ho Chi Minh City Urban Railway Line 1, Vietnam Railway Authority (“VNRA”) comments as follows:

1. According to the train driver training period: Currently, in Viet Nam there is not yet the training center for urban railway drivers, therefore the specified regulations of driver training content and period are not issued yet. The training of the driver and other train staff in the first batch of urban railway is implemented by technical transfer committed between investor and technology contractor; accordingly, this training wholly depends on the technology of contractor. To ensure that the technology training and transfer for the operation of urban railway system meet the standard requirement, VNRA requests MAUR ask the investor to commit the training period and quality complying with operation of urban railway system in a high level of safety.

2. Regarding of “Training course completion certificate”: According to the regulations under Clause 2 Article 8 in Circular No. 05/2015/TT-BGTVT of Ministry of Transport dated March 30<sup>th</sup>, 2015 on the standards, titles of urban railway operation staff, the qualifications of first-batch staffs shall be applied following the standard of technology of the line, through the training and technology transfer process. Issuing License, Certificate or Training course completion certificate is a confirmation of the fact that the railway staffs are trained, examined and qualified through training course of technology transfer. Therefore, VNRA requests MAUR ask the investor to define clearly that Certificate is granted only for the trainees who are trained, examined and satisfy the requirements of railway field through training course of technology transfer, simultaneously the investor also need to pledge that the trainees who gained the Training course completion certificate, had obtained the required knowledge, skills in operation of Ho Chi Minh City Urban Railway Line 1 with a high level of safety.

Above are the comment of VNRA, recommend MAUR for investigation, consideration.(signed)

**Recipients:**

- As above;
- PCT PT Nguyen Van Doanh (for report);
- For record: Record Office, VT&ATGT (*Transport & Safe Traffic*)

**ON BEHALF OF DIRECTOR GENERAL  
DEPUTY DIRECTOR GENERAL**

(Signed and sealed)  
**Vu Quang Khoi**

No.13-3 [output of Action 3-1] No. 272 / CDSVN - VTATGT, “Re: Granting training certificates to train drivers for HCMC Urban Railways Metro Line 1”, March 4th, 2016

MINISTRY OF TRANSPORT  
VIETNAM RAILWAYS AUTHORITY

SOCIALIST REPUBLIC OF VIETNAM  
Independence – Freedom – Happiness

No. 272/CDSVN-VTATGT

*Ho Chi Minh City, March 4, 2016*

Re: Granting training certificates to train drivers for  
HCMC Urban Railways Metro Line 1

To: Ho Chi Minh City Management Authority for urban  
Railways

In reply to your Official Letter No. 156/BQLĐSĐT-TCĐT dated 15 January 2016 regarding granting training certificates to train drivers for HCMC Urban Railways No.1, after reviewing the content of your request to Vietnam Railways Authority (VNR) for guiding how to change the Training Course Completion Certificate into Train Driving License granted by Japanese Training Contractors without the necessity to attend the national examination as stipulated in Circular No. 31/2015/TT-BGTVT dated 17 July 2015 by the Ministry of Transport (MOT), VNR has the following comments:

1. Official Letter No. 1001/CDSVN-VTATGT dated 12 May 2015 issued by VNR confirmed that the Training Course Completion Certificate granted after completing the Technology Transfer Training Course *is not* the Train Driving License granted by a competent agency.

2. As for your proposal at Official Letter No. 156/BQLĐSĐT-TCĐT dated 15 January 2016, if the Contractor confirms that the Training Course Completion Certificate is as valid as a Specialized Railways Transport Means Driving Certificate, but not a Train Driving License granted by a Japanese competent agency, the train driving trainees are also required to comply with the regulations on examination to grant Train Driving License as stipulated in Circular No. 31/2015/TT-BGTVT dated 17 July 2015 by MOT to be granted Urban Railways Train Driving License.

Above are VNR’s opinions on your proposal. You are kindly requested to study and synthesize.

**Recipients:**

- As above;
- Filed in VP, VT&ATGT

ON BEHALF OF VNR HEAD

*(signed and sealed)*

**Khuong The Duy**  
VICE HEAD

## APPLICATION FORM FOR JAPAN'S TECHNICAL COOPERATION

1. **Date of Entry:** Day \_\_\_\_\_ Month \_\_\_\_\_ Year 2015
2. **Applicant:** The Government of Socialist Republic of Vietnam
3. **Technical Cooperation (T/C) Title:** Project on Strengthening Management Ability of Operation and Maintenance Company for the opening of Urban Railway Line 1 in Ho Chi Minh City
4. **Type of the T/C**※Select only one scheme.

- Technical Cooperation Project / Technical Cooperation for Development Planning
- Science and Technology Research Partnership for Sustainable Development (SATREPS)
- Individual Expert     Individual Training     Equipment

5. **Contact Point (Implementing Agency):** The Management Authority for Urban Railway – Ho Chi Minh city People's Committee

Address: 29 Le Quy Don street, district 3, Ho Chi Minh City, Vietnam.

Contact Person: Mr. Hoang Nhu Cuong - Vice Chairman

Tel. No.: +84 8 39309495

Fax No. +84 8 39309497

E-Mail:

6. **Background of the T/C**

*(Current conditions of the sector, Government's development policy for the sector, Issues and problems to be solved, Existing development activities in the sector, the Project's priority in the National Development Plan / Public Investment Program, etc.)*

The population of Ho Chi Minh City (hereinafter referred to as "HCMC") metropolitan area has increased to 10.54 million in 2010 compared with 6.59 million in 1995. The number of registered motorcycles and cars has been increasing substantially, the traffic volume of roads has been increasing accordingly. As the results of that, it causes serious traffic congestion, increase in traffic accidents, and deterioration of air pollution and difficulty of the access to urban facilities. It has become the hindrance of the efficient economic and social activities. It is already difficult to enhance the capacity of the existing public transportation such as buses and widen the existing roads network, therefore JICA started to support HCMC Urban Railway Construction Project (Ben Thanh - Suoi Tien Section (Line 1)) from FY 2006.

On the other hand, since this is the first urban railway project in HCMC, the Management Authority for Urban Railway (hereinafter referred to as “MAUR”) of the People’s Committee of HCMC (hereinafter referred to as “HCMC-PC”) does not have any experience and knowledge of urban railway operation and maintenance including the establishment of O&M organization. In such circumstances, responding to the request of HCMC-PC, JICA dispatched the Technical Cooperation Team (hereinafter referred to as “TC Team”) for “the Project for Support on Set up of Operation and Maintenance Company of Urban Railways in Ho Chi Minh City” (the previous TC Project) between March 2011 and March 2013. The TC Team with Counterpart Team composed of MAUR members conducted preparation works for the establishment of O&M company and formulated the Establishment Plan for the O&M company (hereinafter referred to as “EP”). The HCMC-PC approved the EP in July 2013.

When the previous TC Project was formulated, O&M company was supposed to be established in 2013 anticipating that the UMRT Line 1 will be provided in service in 2016. However, due to delay of the construction work, MAUR and JICA have already agreed with the schedule that O&M company be established by HCMCPC by the end of 2015.

During the time from establishment of the O&M company to starting of commercial urban railway transportation service, many works need to be done by the O&M company, such as:

- To finalize training system for direct operation staffs of Line 1, get official agreement of Viet Nam Railways Administration (VNRA) and implement training activities;
- To check and take over the civil infrastructure and E&M upper structure from contractors;
- To carry out “on the job training” at Japanese railway operators for the frame of headquarters (first and key staffs);
- To obtain skill of building and adjustment of train diagram, driver schedule;
- To cooperate with General Consultant (GC), and Contract Package (CP) 4 contractor in building office IT system;
- To establish, test and operate accounting system, asset management system, etc;
- To get “safety certificate” for urban railway transportation service prior to commercial transportation service;



- To get decision of HCMC PC for fare level and subsidy policy;
- To study and make proposals of investment and various kinds of non-fare business;
- To review, update internal regulations composed in Previous TC and supplement others internal regulations (if any; ex: safety operation);
- To develop work flow/manuals of clarifying the actual operating procedures for the workers based on the internal regulations;
- To cooperate with PMU2, PMU5 (under MAUR) in order to update project progress and participate in studies of operation and maintenance for lines 2 and 5 (on the view point of One O&M company for whole lines invested by state budget);
- Others,

Taking these circumstances into account, HCMC PC kindly requests Government of Japan and JICA to conduct the subsequent cooperation.

## 7. Outline of the T/C

### (1) Overall Goal

*(Long-term objective)*

Urban railway Line 1 in Ho Chi Minh City is operated safely and reliably by the O&M Company. .

### (2) T/C Purpose

*(Objective expected to be achieved by the end of the project period. Elaborate with quantitative indicators if possible)*

Management ability to operate and maintain urban railway developed in Operation and Maintenance Company.

### (3) Outputs

*(Objectives to be realized by the “T/C Activities” in order to achieve the “T/C Purpose”)*

1. Systems (Training system for direct operation staffs / Safety operation system / Fare level and subsidy system) necessary for opening of operating urban railway are established.

2. Staff ability necessary for management of operating and maintaining urban railway is strengthened.

3. Software (Internal regulations / Work flow or manuals / Accounting system, asset management system, etc.) necessary for management of operating and maintaining urban railway is established.

4. Hardware (Civil infrastructure / E&M upper structure / office IT system) necessary for management of operating and maintaining urban railway is established.

5. Coordination (with each urban railway line in HCMC) necessary for management of operating and maintaining urban railway is completed.

#### **(4) T/C Site**

*(In case the proposed T/C assumes a particular area, please enter the name of the target area for the T/C and attach a rough map to the documents submitted. The attached map should be at a scale that clearly shows the project site.)*

Ho Chi Minh city, Vietnam

#### **(5) T/C Activities**

*(Specific actions intended to produce each “Output” of T/C by effective use of the “Input”. )*

1-1 To finalize training system for direct operation staffs of Line 1, get official agreement of VNRA and implement training activities;

1-2 To get “safety certificate” for urban railway transportation service prior to commercial transportation service;

1-3 To get decision of HCMC PC for fare level and subsidy policy;

2-1 To carry out “on the job training” at Japanese railway operators for the frame of headquarter (first and key staffs);

2-2 To obtain skill of building and adjustment of train diagram, driver schedule;

2-3 To study and make proposals of investment and various kinds of non-fare business;

3-1 To establish, test and operate accounting system, asset management system, etc;

3-2 To review, update internal regulations composed in Previous TC and supplement others internal regulations (if any);

3-3 To develop work flow / manuals of clarifying the actual operating procedures for the workers based on the internal regulations.

4-1 To check as the position of end user (O&M company) and take over the civil infrastructure and E&M upper structure from contractors, GC; (except for the actions included in the contract with GC and each contractor)

4-2 To cooperate as the position of end user (O&M company) with GC, CP4 contractor in building office IT system; (except for the actions included in the contract with GC and CP4 contractor)

5-1 To cooperate with PMU2, PMU5 (under MAUR) in order to update project progress and participate in studies of operation and maintenance for these lines (on the view point of One O&M company for whole lines invested by state budget); etc.

#### **(6) Input from the Recipient Government**

*(Counterpart personnel (identify the name and position of the Project manager), support staff, office space, running expenses, vehicles, equipment, etc.)*

- Personnel for Preparation Unit for set up the O&M Company (PUC): at least 19 persons;
- Provision of facilities for the project implementation: project office, working equipment;
- Cost for PUC, office rent, equipment and supplies, other activities.

#### **(7) Input from the Japanese Government**

*(Number and qualification of Japanese experts/consultants, contents of training (in Japan and in-country) courses, seminars and workshops, equipment, etc.)*

- Dispatch of Japanese Experts: many experts specialized in specific issues/activities and output of this T/C (ex: accounting system, office IT system, train diagram, driver schedule, etc);
- Counterpart training in Japan: on the job training at Japanese railway operators and others kinds of training;
- Necessary Equipment;
- Other expenses.

### **8. Implementation Schedule**

Month 10 Year 2016 ~ Month 09 Year 2020

### **9. Description of Implementing Agency**

*(Budget allocated to the Agency, Number of Staff of the Agency,*

*Department/division in charge of the T/C, etc.)*

The Management Authority for Urban Railways (MAUR) was established in accordance with the Decision No.119/2007/QĐ-UBND dated 13 September 2007 of the Ho Chi Minh City People's Committee with the functions as an implementing agency of construction and operation of urban railway in HCMC. MAUR consists of 04 divisions and 04 PMU (Project Management Unit) with the total staffs of 230 persons.

O&M company and "Division of Training and Organization under MAUR" will be in charge of this T/C. Nineteen people from this Division, nominated as PUC, will work full time for this T/C.

## **10. Related Information**

### **(1) Prospects of further plans and actions/ Expected funding resources for the Project:**

*(If implementing agency plans to take some (future) actions in connection with this proposed project, please describe the concrete plans/action and enter the funding sources for the plans and actions.)*

Not available

### **(2) Activities in the sector by other donor agencies, the recipient government and NGOs and others:**

*(Please pay particular attention to the following items:*

*–Whether you have requested the same project to other donors or not.*

*–Whether any other donor has already started a similar project in the target area or not.*

*–Presence/absence of cooperation results or plans by third-countries or international agencies for similar projects.*

*–In the case that a project was conducted in the same field in the past, describe the grounds for requesting this project/study, the present status of the previous project, and the situation regarding the technology transfer.*

*–Whether there are existing projects/studies regarding this requested project/ study or not. (Enter the time/period, content and concerned agencies of the existing studies.))*

Not available

## **11. Global Issues (Gender, Poverty, Climate change, etc.)**

*(Any relevant information of the project from global issues (gender, poverty, climate change, etc.) perspective.)*

Not available

**12. Environmental and Social Considerations**

**(In case of Technical Cooperation Project (including SATREPS) / Technical Cooperation for Development Planning, please fill in the attached screening format.)**

(Note) If JICA considers that the environmental and social considerations are required to the T/C, the applicants agree on JICA’s information disclosure of the T/C for public hearing in accordance with JICA guidelines for environmental and social considerations as stated Question 11 in attached Screening Format.

**13. Others**

Not available
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Signed:  
Title:  
On behalf of the Government of  
Date:

## Screening Format (Environmental and Social Considerations)

Please write “to be advised (TBA)” when the details of a project are yet to be determined.

Question 1: Address of project site

Ho Chi Minh city, Vietnam

Question 2: Scale and contents of the project (approximate area, facilities area, production, electricity generated, etc.)

2-1. Project profile (scale and contents)

Mentioned above (please refer to Application form)

2-2. How was the necessity of the project confirmed?

Is the project consistent with the higher program/policy?

YES: Please describe the higher program/policy.

(Decision No. 568/QD-TTg dated April 08, 2013 of the Prime Minister approving the adjustment for the transportation development planning of Ho Chi Minh in 2020 and the vision to 2020)

NO

2-3. Did the proponent consider alternatives before this request?

YES: Please describe outline of the alternatives

( )

NO

2-4. Did the proponent implement meetings with the related stakeholders before this request?

Implemented     Not implemented

If implemented, please mark the following stakeholders.

Administrative body

Local residents

NGO

Others (JICA fact finding mission for 3<sup>rd</sup> Loan of line 1, JICA office in Vietnam)

Question 3:

Is the project a new one or an ongoing one? In the case of an ongoing project, have you received strong complaints or other comments from local residents?

New     Ongoing(with complaints)     Ongoing (without complaints)

Other

Question 4:



Is an Environmental Impact Assessment (EIA), including an Initial Environmental Examination (IEE) is, required for the project according to a law or guidelines of a host country? If yes, is EIA implemented or planned? If necessary, please fill in the reason why EIA is required.

Necessity ( Implemented  Ongoing/planning)

(Reason why EIA is required: \_\_\_\_\_ )

Not necessary

Other (please explain)

Question 5:

In the case that steps were taken for an EIA, was the EIA approved by the relevant laws of the host country? If yes, please note the date of approval and the competent authority.

<input type="checkbox"/> Approved without a supplementary condition	<input type="checkbox"/> Approved with a supplementary condition	<input type="checkbox"/> Under appraisal
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(Date of approval: \_\_\_\_\_ Competent authority: \_\_\_\_\_ )

Under implementation

Appraisal process not yet started

Other( \_\_\_\_\_ )

Question 6:

If the project requires a certificate regarding the environment and society other than an EIA, please indicate the title of said certificate. Was it approved?

Already certified

Title of the certificate: ( \_\_\_\_\_ )

Requires a certificate but not yet approved

Not required

Other ( \_\_\_\_\_ )

Question 7:

Are any of the following areas present either inside or surrounding the project site?

Yes  No

If yes, please mark the corresponding items.

National parks, protection areas designated by the government (coastline, wetlands, reserved area for ethnic or indigenous people, cultural heritage)

Primeval forests, tropical natural forests

Ecologically important habitats (coral reefs, mangrove wetlands, tidal flats, etc.)

- Habitats of endangered species for which protection is required under local laws and/or international treaties
- Areas that run the risk of a large scale increase in soil salinity or soil erosion
- Remarkable desertification areas
- Areas with special values from archaeological, historical, and/or cultural points of view
- Habitats of minorities, indigenous people, or nomadic people with a traditional lifestyle, or areas with special social value

Question 8:

Does the project include any of the following items?

- Yes     No

If yes, please mark the appropriate items.

- Involuntary resettlement (scale: household's persons)
- Groundwater pumping (scale: m<sup>3</sup>/year)
- Land reclamation, land development, and/or land-clearing (scale: hectors)
- Logging (scale: hectors)

Question 9:

Please mark related environmental and social impacts, and describe their outlines.

- Air pollution
- Water pollution
- Soil pollution
- Waste
- Noise and vibrations
- Ground subsidence
- Offensive odors
- Geographical features
- Bottom sediment
- Biota and ecosystems
- Water usage
- Accidents
- Global warming

- Involuntary resettlement
- Local economies, such as employment, livelihood, etc.
- Land use and utilization of local resources
- Social institutions such as social infrastructure and local decision-making institutions
- Existing social infrastructures and services
- Poor, indigenous, or ethnic people
- Misdistribution of benefits and damages
- Local conflicts of interest
- Gender
- Children's rights
- Cultural heritage
- Infectious diseases such as HIV/AIDS
- Other ( )

Outline of related impact:

( )

Question 10:

In the case of a loan project such as a two-step loan or a sector loan, can sub-projects be specified at the present time?

- Yes       No

Question 11:

Regarding information disclosure and meetings with stakeholders, if JICA's environmental and social considerations are required, does the proponent agree to information disclosure and meetings with stakeholders through these guidelines?

- Yes       No