





安全、便捷、舒適、美觀

**捷** 運松山線為臺北都會區整體路網中重要的一環,除連接 新店線共同營運外,亦可與南港線、淡水線、中和新蘆線、 文湖線轉乘,並與臺鐵松山車站及臺灣桃園國際機場聯外捷 運系統台北車站連通銜接,連結捷運與鐵路兩大軌道運輸系 統。未來完工通車後,可以減輕台北車站、忠孝新生站、忠 孝復興站等交會站人潮過於集中擁擠的現象及分擔、紓解南 港線東西向運輸需求之負荷,並可提供臺鐵松山車站、臺北 體育園區及南京東路金融商圈等快速便捷準點的運輸服務, 大幅縮短臺北都會區各運輸走廊與松山、南京東路沿線商圈 之旅運時間。



### Preface

The Songshan MRT line, one of the critical routes of the entire Taipei MRT network, connects with the Xindian line and allows passengers to transfer to the Nangang, Tamsui, Zhonghe-Xinlu, and Wenhu lines at several stations. It also connects with Taiwan Railways and Taiwan Taoyuan

International Airport Access MRT System at Songshan Station and Taipei Main Station respectively. When completed, the line will help disperse large numbers of passengers that converge on transfer stations such as Taipei Main Station, Zhongxiao Xinsheng Station and Zhongxiao Fuxing Station and will alleviate the traffic burden on the east-west Nangang line. At that time, it will provide convenient and punctual public transportation, to Songshan Railway Station, Taipei City Sports Park, and Nanjing East Road commercial zone, saving a lot of travel time for people using Taipei metropolitan transportation corridors to travel to the commercial zones in the Songshan area and along Nanjing East Road.

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# ●● 路線說明

**捷** 運松山線自南港線西門站經中華路、塔城街,向北過市民大道後轉天水路接南京西路, 續沿南京西路、東路行經1至5段,偏向東南轉入八德路4段繼續東行至臺鐵松山車站北側廣 場止,全線長約8.5公里,以地下型式興建,共設8座車站(含西門站)。

# Route Description

The Songshan line runs north from the Nangang line's Ximen Station along Zhonghua Road to Tacheng Street, northeast to Tianshui Road and then turns east along Nanjing West and East Road Section 1-5, turns southeast to Bade Road Section 4 before continuing east to end at the square north of Songshan Railway Station. Its 8.5-km route encompasses eight underground stations including Ximen Station.



# 車站站名及位置 Stations and Locations

站 名 Stations	位 置 Locations
北門站 Beimen	市民大道與忠孝西路間之塔城街道路下方 Located beneath Tacheng St. between Civic Blvd. and Zhongxiao W. Rd.
中山站 Zhongshan	南京西路下方,與淡水線中山站交會轉乘 Located beneath Nanjing W. Rd.; connecting with the Tamsui Line
松江南京站 Songjiang Nanjing	南京東路與松江路交叉口之南京東路下方,與新莊線松江南京站交會轉乘 Located beneath Nanjing E. Rd. and adjacent to the intersection of Nanjing E. Rd. and Songjiang Rd.; connecting with the Xinzhuang Line
南京復興站 Nanjing Fuxing	南京東路與復興北路交叉口之南京東路下方,與文湖線南京復興站交會轉乘 Located beneath Nanjing E. Rd. and adjacent to the intersection of Nanjing E. Rd. and Fuxing N. Rd.; connecting with the Wenhu Line
台北小巨蛋站 Taipei Arena	北寧路以西之南京東路下方 Located beneath Nanjing E. Rd. to the west of Beining Rd.
南京三民站 Nanjing Sanmin	南京東路與三民路交叉口之南京東路下方 Located beneath Nanjing E. Rd. and adjacent to the intersection of Nanjing E. Rd. and Sanmin Rd.
松山站 Songshan	臺鐵松山車站北側廣場前之八德路下方,為松山線之終點站 Located beneath the square north of Songshan Railway Station on Bade Rd.; the terminal station of the Songshan Line

# ※北門站:

車站型式為地下4層車站,長約171M,寬約32M, 開挖深度約32M,設有3處出入口、2座通風口及 2座無障礙電梯,其中出入口B與鐵道博物館園區 南館整體興建。



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#### **Beimen Station**

The 171-m-long, 32-m-wide, and 32-m-deep four-level underground Beimen Station has three exits, two vent shafts, and two barrier-free elevators. Exit B is integrated with the South Wing of the Railroad Museum Park.





#### ※中山站:

車站型式為地下3層交會車站,本站屬於松山 線站體之長度約173M,寬約23M,開挖深度約 26M,設有4處出入口,其中包含更新現已使用 之南京西路靠中山北路的2處出入口及與聯合開 發大樓共構之2處出入口,另與淡水線中山站2 處出入口連通轉乘,共計有6處出入口、2座通 風口及4座無障礙電梯。



#### **Zhongshan Station**

The 173-m-long, 23-m-wide, and 26-m-deep three-level underground Zhongshan Station has six exits, four vent shafts, and two barrier-free elevators. Of the six exits, two existing exits situated on Nanjing W. Rd. near Zhongshan N. Rd. are to be renovated; two are integrated with a joint development building; and the other two are existing exits shared with the in-service Tamsui line's Zhongshan Station.



#### ※松江南京站:

車站型式為地下2層交會車站,本站屬於松山線站體 長度約148M,寬約26M,開挖深度約20M,設有3處出 入口,其餘4處出入口已配合新莊線先行施作,共計 有7處出入口、3座通風口及3座無障礙電梯。





#### Songjiang Nanjing Station

The 148-m-long, 26-m-wide, and 20-m-deep two-level underground Songjiang Nanjing Station is a transfer station connecting with the Xinzhuang line. It has a total of seven exits including four constructed in cooperation with the construction of the Xinzhuang line, plus four vent shafts, and three barrier-free elevators. 車站站名及位置 Stations and Locations

### ※南京復興站:

車站型式為地下3層交會車站,本站屬於松山線 站體長度約240M,寬約22M,開挖深度約25M,設 有7處出入口,另與文湖線南京復興站1處出入口 連通轉乘,共計有8處出入口、3座通風口及3座 無障礙電梯。



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#### **Nanjing Fuxing Station**

The 240-m-long, 22-m-wide, and 25-m-deep three-level underground Nanjing E. Rd. Station, a transfer station, has eight exits including one shared with the in-service Wenhu line's Nanjing Fuxing Station, three vent shafts, and three barrier-free elevators.



### ※台北小巨蛋站:

車站型式為地下3層車站,長約219M,寬約21M, 開挖深度約26M,共設有5處出入口、2座通風口 及2座無障礙電梯。

#### Taipei Arena Station

The 219-m-long, 21-m-wide, and 26-m-deep three-level underground Taipei Arena Station has five exits, two vent shafts, and two barrier-free elevators.









05

N

出入口D/通風口Y

出入口C

南京東路五段

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### ※南京三民站:

車站型式為地下2層車站,長約235M,寬約27M, 開挖深度約20M,設有4處出入口、2座通風口及 2座無障礙電梯。

#### Nanjing Sanmin Station

The 235-m-long, 27-m-wide, and 20-m-deep two-level underground Nanjing Sanmin Station has four exits, two vent shafts, and two barrier-free elevators.





慈祐宮■

出入口A2

松山站

出入口B1/通風口Z

松山國小

通風口CT

涌同口

松山路

三民路三巷

出入口B

Ň

通風口X1

通風□X2■

出入口A/通風口X

二民路

南京三民站

### ※松山站:

車站型式為地下2層車站,車站及橫渡線長約 390M,寬約24M,開挖深度約21M,與臺鐵松 山車站以地下連通,提供轉乘服務,共設有 5處出入口、6座通風口及2座無障礙電梯。

#### Songshan Station

The 390-m-long, 24-m-wide, and 21-m-deep two-level Songshan Station, with five exits, six vent shafts, and two barrier-free elevators, connects with Songshan Railway Station via an underground passageway.



饒河往

型山市場 ■ 出入口A1

八德路四段



# 車站建築設計與公共藝術 Stations' Architectural Design and Public Art

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**捷** 運松山線於規劃設計階段時,即將各車站之設計主題融入於建築裝修中,並藉由燈光、 色彩及光影等之變化,呈現各站不同之風貌,期以提供舒適的搭乘環境,同時於各站選擇適 當地點進行公共藝術之徵件,各站主題及特色說明如下:

During the design stage of the Songshan MRT line, different themes were chosen for each station design and incorporated into the architectural design concept. Through variations of lighting, colors and light & shadow, each station presents various features to offer passengers a comfortable riding environment. Public artworks will be solicited and exhibited at suitable locations of each station. The theme and features of each station are described as follows:

#### 北門站

- ●主題:清代機器局遺構出土舊建材活化再利用計畫
- 說明:在B1樓層降板中置放12組遺構,展示及概述考古挖掘歷程,透過原樣原現的呈現方式,將新的站體與歷史遺跡相互融合搭配,在新舊並陳的空間當中,讓旅客在享受新穎快速的現代交通建設時,亦能緬懷為臺灣交通發展奠基的精神及北門區的考古緣起與發展。

#### **Beimen Station**

- Design Theme: Plan for the activation and re-use of unearthed old building materials from the Machine Bureau of the Qing Dynasty
- Description: 12 sets of heritage artifacts are installed in glass-topped display pits under the floor at B1 level to demonstrate and sketch the process of archaeological excavation. Through presenting the artifacts in their original forms, the modern station and historic site match well with each other. In the space mingled with new and old objects, while enjoying modern and rapid public transportation, passengers will be able to recall and cherish the memory of the founding spirit of transportation development in Taiwan and the origin and development of the Beimen area.



#### Introduction to the Songshan Line

#### Safety, Convenience, Comfort and Beauty Experience a Healthy and Beautiful City



# 中山站

#### ◎ 主題:快樂轉運

 說明:搭乘大衆捷運在都市間移動的同時,能獲得喘一口氣的休息時間,闡釋 「轉運」的過程。鼓勵民衆多使用大衆運輸系統,融合洋溢著 青春特質與文化的地緣特徵,讓每個人都能感受到快樂能量。

#### **Zhongshan Station**

- Design Theme: Happy Transit
- Description: The theme "Happy Transit" suggests that passengers can enjoy taking a rest while riding the MRT through the metropolitan area. The general public is encouraged to make good use of public transportation. The combination of the vitality of Zhongshan Station and local cultural characteristics will allow everyone to experience the strength that happiness brings.

### 松江南京站

- ◎ 主題:都會衆生相
- 說明:採地、火、水、風四大元素,呈現都會與自然間協調融合的超現實情境。
  - 「地」-都會叢林的商務活動。
  - 「火」-電光火石的星際交會。
  - 「水」-悠游自在的海底辦公室。
  - 「風」-漂浮在雲端的咖啡廳。

#### Songjiang Nanjing Station

- Design Theme: Metropolitan Images of Daily Life
- Description: The theme "Metropolitan Images of Daily Life " uses four elements
  - earth, fire, water, and wind to present surreal situations of city and nature combined.
    - Earth --- Business in the City Jungle
    - Fire --- Universe in a Flash
    - Water --- Office Under the Sea
    - Wind --- Coffee Shop Floating in the Clouds



車站建築設計與公共藝術 Stations' Architectural Design and Public Art

### 南京復興站

◎ 主題: 浮光掠影

○ 說明:以光影變化手法,結合藝術、科技,在 光影的新空間中遊走,突破傳統藝術的 經驗,創造新視覺美感,利用跳接及淡 出、淡入等光影的轉換,看似虚無的光 谏及軌跡產生新的能量,使車站藉由公 共藝術而「活」了起來。

#### **Nanjing Fuxing Station**

- Design Theme: Reflective Mosaic of Light
- O Description: The focus of the public artwork at Nanjing E. Rd. Station is on the variations of light and shadow. Combining concepts from art and technology, as well as armed with a breakthrough in art creation, new ideas are then proposed beyond traditional imagination. Innovative visual effects are henceforth achieved, turning this station into a savvy miniature art museum with artworks "living" in every corner.

### 台北小巨蛋站

- ○名稱:能·動·光·軌
- ◎ 說明:強調運動園區的特色,反映出活潑、朝氣、動 力之意象,以光影變化作為基調,以速度及光 影不停在轉移改變,如同人們生命般,親自體 驗不同的經驗及感覺,也襯托出以「人」為運 動及旅行主角之鮮明活動軌跡,使車站藉由公 共藝術「動」了起來。

#### **Taipei Arena Station**



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- Design Theme: Energy, Movement, Light, Tracks

O Description: Emphasizing the unique characteristics of sporting complexes, the design aims to reflect the station's liveliness, spirit, and power. In terms of public artwork, Taipei Arena Station conjugates the variations between light and shadow. Distinctive lights flash through space, marking a tempo with their speed inside the main structure. Similar to what happens in one's life, the speed of the flashes and the lights themselves are constantly changing, injecting different perceptions for every viewer. The station is brought to life through public art.



# 松山站

- ●名稱:光的慶典
- 說明:反映松山地區傳統與現代夾雜並陳的人文 特色,兼具交通運輸中心、地區性宗教及 行政重心,加上饒河夜市及五分埔成衣批 發市場活絡的夜間商圈,以燈光配合空間 的構思,塑造出交通網重要光環,反映出 編織藝術的新面貌,呈現此區夜間活動的多采多姿。

### Songshan Station

- Design Theme: Festivities of the Light
- Description: "Festivities of the Light" is taken as the





theme of the station in reflection of the special features of the equal and simultaneous mix of traditional and modern culture, local religion and administration. In addition, the coordination of space and lighting enhances the magnificent and colorful night activities in the area of Roahe Night Market and Wufenpu Wholesale Center of Ready-made Clothes, presenting a station area full of many and various activities both day and night.



# 工程特色及施工方法 Construction Features and Work Methods

### - 、隧道潛盾工法:

松山線隧道除了松江南京站東側喇叭段及中央避車道以明挖覆蓋工法施作,其它大都採用潛 盾施工法施作。該潛盾施工工法係以明挖設置工作井,再運入潛盾鑽掘機構件進行組合,在 地下一邊鑽掘,一邊組立混凝土或鑄鐵預鑄環片,並且將土渣運出,同時進行背填灌漿及二 次灌漿,逐步往前推進、貫通。因此,鑽掘的過程中,全部在地下進行,對於地面上的交通 影響極小。

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#### 1. Shield Tunneling Method

The shield tunneling method is applied to the construction of most of the tunnels on the Songshan MRT line, except for the transitional section on the east side of Songjiang Nanjing Station and a pocket track where the cut-and-cover method is adopted. For shield tunneling construction, work shafts are built using the cut-and-cover method at each end of a tunnel route. Then, the shield tunneling machine is lowered underground through the work shaft and starts digging while constructing the shield tunnel at the rear side of the machine. It repeats the same work cycle of boring a tunnel and putting pre-cast concrete or graphite cast iron tunnel segments in place until it arrives at the other end of the work shaft. All the construction is conducted underground and creates very little impact on road traffic.



# - 穿越既有臺鐵/高鐵隧道下方:

上述潛盾隧道於中華路北側至塔城街段,其上、下行線二座潛盾隧道必須 從既有臺鐵/高鐵明挖覆蓋隧道下方穿越,而捷運隧道與臺鐵/高鐵隧道 兩者相交角度約為60度,將與其現有的一道連續壁、兩道SMW擋土牆及H型 鋼樑相衝突。因本段工程預定施工時高鐵已經開始營運,潛盾機鑽掘通過前



必須先完成地盤土質改良及連續壁、SMW擋土牆、H型鋼等障礙物移除,其施工困難度非常高,是相當具有挑戰性的一段工程。因此,本局除要求施工廠商於施工計畫中詳述擬採用之施工機具、灌注材料及人力動員計畫外,同時施工過程必須特別謹慎,以確保不影響臺鐵/ 高鐵營運及結構安全。

#### 2. Shield Tunnels Constructed Beneath the Existing TRA and THSR Tunnels

The up-track and down-track shield tunnel section of the Songshan MRT line located between Tacheng Street and the northern side of Zhonghua Road passed beneath the existing Taiwan Railways Administration (TRA) and Taiwan High Speed Rail (THSR) tunnels at an angle of 60 degrees and conflicted with one diaphragm wall, two soil mix walls (SMWs), and a number of H-shaped steel beams. As construction was performed when the THSR was already in service, ground improvement had to be completed and obstacles such



as the diaphragm wall, SMWs, and H-shaped steel beams had to be removed prior to excavation by the shield tunneling machine, making it a great challenge for engineers. Thus, DORTS first requested the contractors submit working schemes showing details of construction apparatus to be used, grouting materials, and overall mobilization plans to ensure the safety of the TRA and THSR tunnels

which remained in use throughout MRT tunnel construction.



### 三、共同管道工程:

臺北市共同管道系統於民國89年完成規劃,將本市寬20公尺 以上道路納入規劃範圍,研擬短、中、長程興建計畫,作為 建設共同管道系統網路之藍本。共同管道工程為減少興建時 衍生交通不便、空氣及噪音污染的環境衝擊,均配合重大公 共工程一併規劃及施築。其中配合捷運路網興建之共同管道 工程計有信義線(配合捷運信義線同時施作)及南京線(配 合捷運松山線同時施作)二條,其中南京線共同管道自新生 北路口西側,沿南京東路往東至塔悠路口止,全長約4.5公 里,並以敦化北路為界,以西收納電力(輸電及配電)、電 信、交通號誌及路燈管線,以東則收納電力(輸電及配電)、電 信、交通號誌及路燈管線,以東則收納電力(輸電及配電) 、自來水、電信、交通號誌及路燈管線,而該主管機關為臺 北市政府新建工程處,主辦機關為臺北市政府捷運工程局。 共同管道完成後,將可降低沿線路面挖掘次數,延長道路使 用壽命,減少施工造成之環境污染,並保持道路交通順暢與 維護管線傳輸品質,創造整齊市容景觀,大幅提昇生活品質。

#### 3.Common Duct Construction Project

The plan for the Taipei City Common Duct System was completed in June 2000 and has incorporated roads wider than 20 meters into the system. Short, medium, and long term plans have also been drawn up as a blueprint for system construction. The construction of common ducts, which may impact upon traffic, air pollution, and noise, should be comprehensively planned and implemented in cooperation with major public construction projects. Common duct construction performed simultaneously with the MRT construction includes the Xinyi line common duct (in line with the construction of the MRT Xinyi line) and the Nanjing line common duct (in line with the construction of the MRT Songshan line). The Nanjing line common duct starts from the west side of Xinsheng North Road, runs eastward along Nanjing East Road and ends at the intersection of Nanjing East Road and Tayou Road, spanning around 4.5



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共同管道電信管道(電信纜線支架) Telecommunication conduit in a common duct (telecommunication cable brackets)



共同管道潛盾隧道(内徑5.6m)安裝 ø2400mm 自來水鋼管施作 Installation of a 2400 mm-diameter steel water supply pipe in 5.6 m-inner diameter common duct shield tunnel



共同管道潛盾隧道仰拱中隔牆鋼模組立 Assembly of the steel framework of a partition wall in common duct shield tunnel

kilometers. The construction accommodates and integrates the setting of piping and wiring for public utilities including electricity supply (power transmission and distribution), telecommunications, traffic lights, and street lights for the areas to the east and west of Dunhua North Road, as well as water ducts for the area to the east of Dunhua North Road. The common ducts construction project is managed by Taipei City's New Construction Office and performed by Taipei City Department of Rapid Transit Systems. With the completion of the common ducts construction project, effective road management, increase of ducts' lifespan, smooth traffic flow, and improved maintenance of communication quality can be envisaged, helping create a neat cityscape and enhance residents' quality of life.

# •• 交通運輸及經濟效益



- ※ 營運30年乘客時間節省效益達新台幣2,085.7億元。
- ※ 松山線30年經濟内生報酬率為19.98%。
- ※ 減輕交會轉乘站集中人潮,紓解南港線東西向運輸負荷。
- ※ 捷運帶來大量人潮,預期對繁榮地方有極大貢獻。
- ※ 沿線附近金融商業活動絡繹不絶,帶動房地產增值商機。

# Transportation and Economic Benefits



- \* Traveling from Songshan Station to Ximen Station will only take 15 minutes when the line comes into operation.
- Passengers' time-savings will equate to a gain of NT\$208.57 billion over 30 years of commercial service.
- \* The economic internal rate of return of the Songshan MRT line over 30 years of commercial service is predicted to be 19.98%.
- \* The crowded flow of passengers at transfer stations will be relieved, and heavy east-west traffic on the Nangang line will be alleviated.
- \* Large numbers of MRT passengers can bring about local prosperity.
- ※ Increased business activities along MRT lines provide business opportunities especially as real estate values rise.



為促進大臺北地區都市的繁榮,捷運建設除提供交通運輸服務外,對於捷運設施周邊用地,充分利用發揮聯合開發的功效,以減少土地取得之抗爭,透過地主、投資人及政府三方的密切合作及妥善規劃,完成土地開發三贏之共榮。目前配



合捷運松山線中山站(捷一及捷二)、松江南京站(捷十及捷十三)、南京復興站(捷四)及南 京三民站(捷九及捷十)等站考量捷運設施設置需求,結合老舊社區再開發,共規劃七處聯合 開發區(捷)用地進行聯合開發,以提昇捷運建設的附加價値及都市發展遠景。

#### Joint Development

Taipei MRT construction not only provides transportation services but also promotes good use of land in the vicinity of MRT construction through Joint Development projects, with a view to boosting prosperity in the Taipei metropolitan area. To reduce the difficulties and protests that can occur during the process of land acquisition, careful and appropriate coordination and negotiations are conducted to meet the common interests among land owners, investors and government so as to come up with a triple-win situation. In line with the redevelopment of old communities, seven Joint Development construction sites have been planned on Zhonghshan Station (T1&T2), Songjiang Nanjing Station (T10&T13), Nanjing Fuxing Station (T4) and Nanjing Sanmin Station (T9&T10), anticipating that the added value associated with MRT construction and urban development can be increased.

#### 北門站『臺北工場』古蹟挪移與挪回



捷運系統施工期間,您如有任何疑問或權益受到損害時,請向臺北市 政府捷運工程局直接反映,本局將竭誠為您服務,並歡迎透過本局網站 www.dorts.gov.tw連結相關工程處網站,以查詢最新施工及交通資訊。

During construction, if you have any questions or problems, please contact the Department of Rapid Transit Systems (DORTS) or visit DORTS' Website at www.dorts.gov.tw for the latest construction information.

臺北市政府捷運工程局中區工程處 臺北市中正區忠孝東路一段108號9樓 (主辦松山線、臺中捷運工程)

Central District Project Office 9F, No. 108, Sec. 1, Zhongxiao E. Rd., Taipei City 10050, Taiwan (R.O.C.) TEL: 02-23946839 http://www.cdpo.dorts.gov.tw



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