



Kaohsiung LRT From a Freight Line To a Tramway

Nai-Yi Hsu

The Name of Kaohsiung

- Takow: before 1920, a fishing village
- Takao: 1920-1945, renamed by Japanese, became the biggest harbor in Taiwan
- Kaohsiung: since 1945, once the 3rd biggest container port in the world

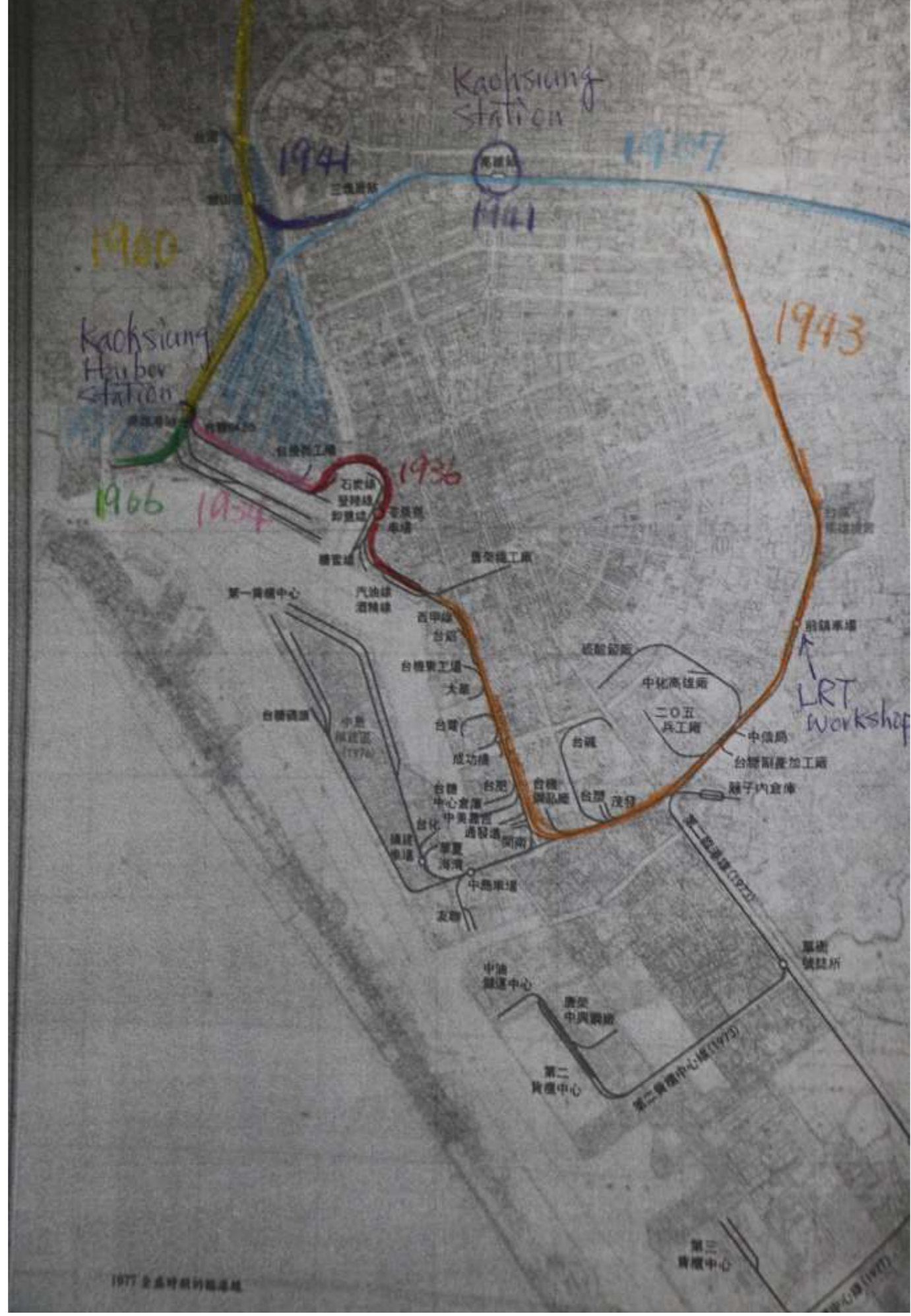


The development of Kaohsiung(Takao)

- Beginning with the construction of railway
- From a small fishing village to the most important port city in Taiwan
- Railway, port, industries and the whole city growing together and influencing each other

Exporting Goods from Kaohsiung Port

- Agricultural products before WWII:
Sugar, Rice, Timbers, Banana, Molasses
- Processing industrials:
Textile
- Heavy industries:
Petrochemical goods
- Container harbor(post 1970's)



1977 全島時刻表路線圖

Kaohsiung Port before Construction

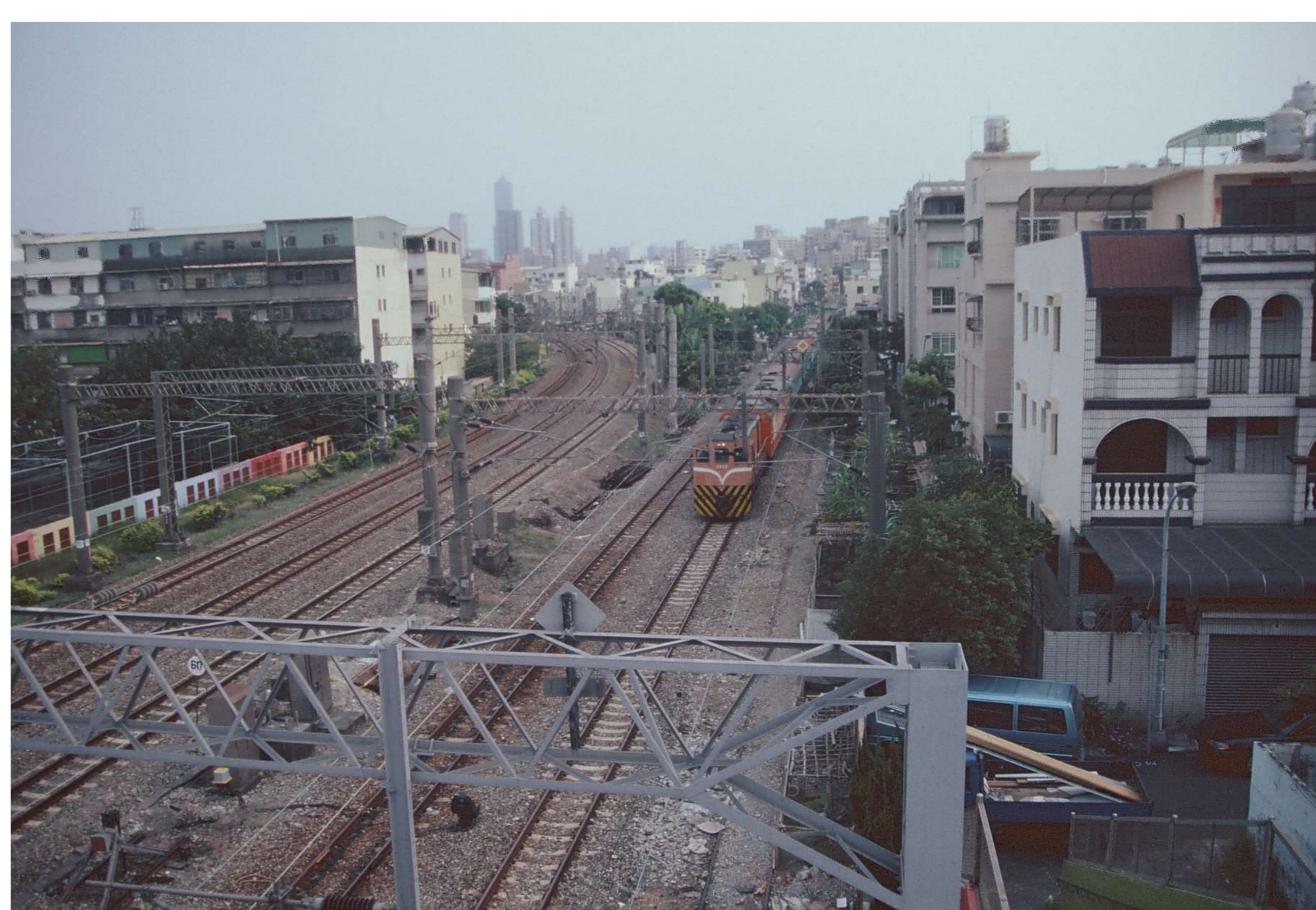
- 1900-1908
- 1900 Railway to Tainan opened
- 1906 the Hama Line(Hamassen)
- 1907 the Fengshan Branch(later Pingtong Line)
- Shipping by boats relay
- City along the railway and Hamassen new ground



HERE



XIDIBRAND

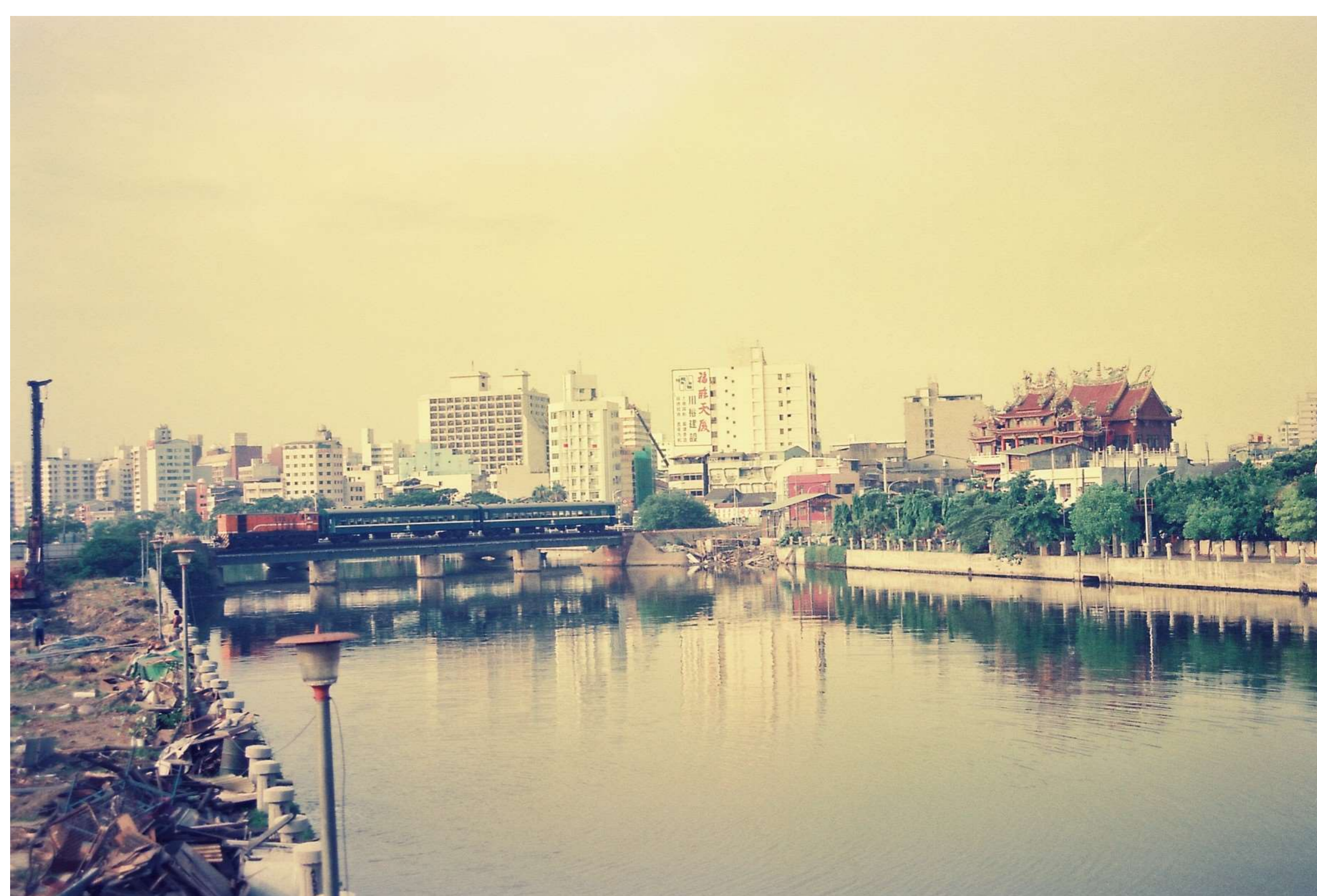








1993 7 11



Kaohsiung Port Construction Stage I

- 1908-1912
- Deepening the channel and filling the seaport new ground by the earth dug out
- The whole Main Trunk Railway opened
- 7 docks constructed
- the city west to the Takao River



HERE



XIDIBRAND

THE TAKAO STATION, THE SOUTH TERMINAL OF
THE RAIL-WAY TRAVERSING TAIWAN, TAKAO.
驛雄高、雄南最の線貫縦（勝名雄高）





1908 打狗市區改正計畫圖

Kaohsiung Port Construction Stage II

- 1912-1936
- Further expansion of the port by digging channel and filling new ground
- 10 new docks
- Railway and city across the Takao River

高雄市區改正圖
一、六、一、一

大正十一年訂於十月十日
市長長七三三三號
臺南廳警務局



1922 打狗市區改正計畫圖



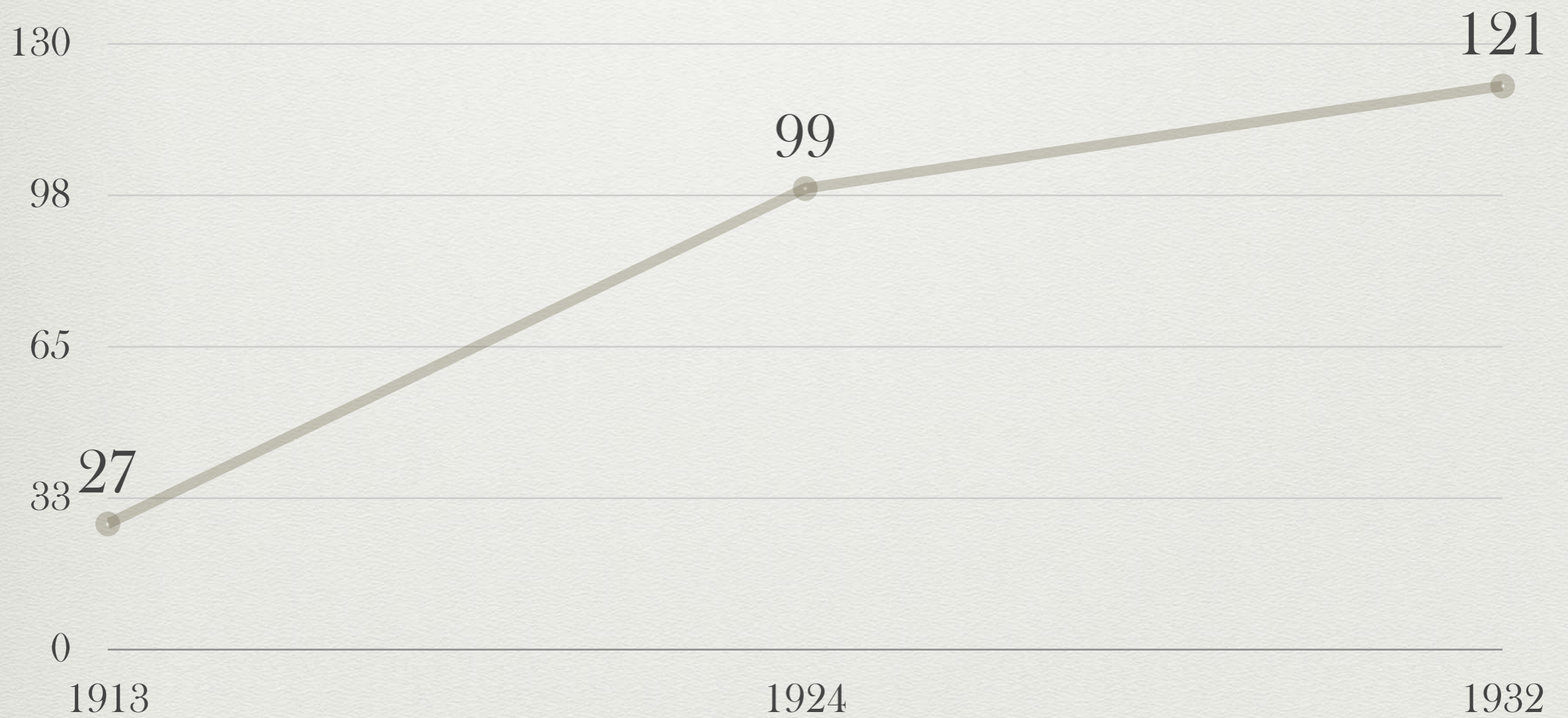




高雄市人口 (萬人)

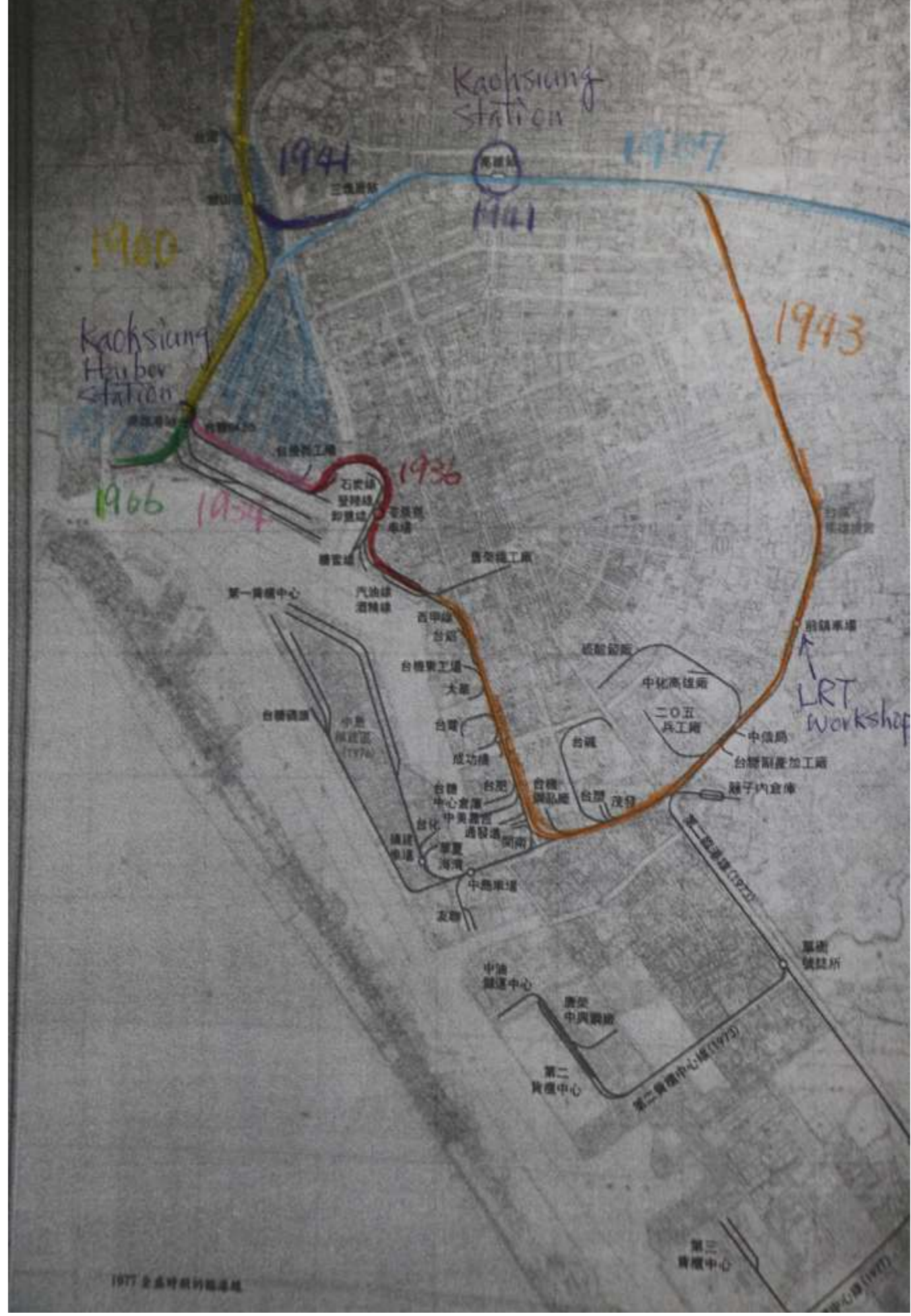


起降貨物（單位萬噸）

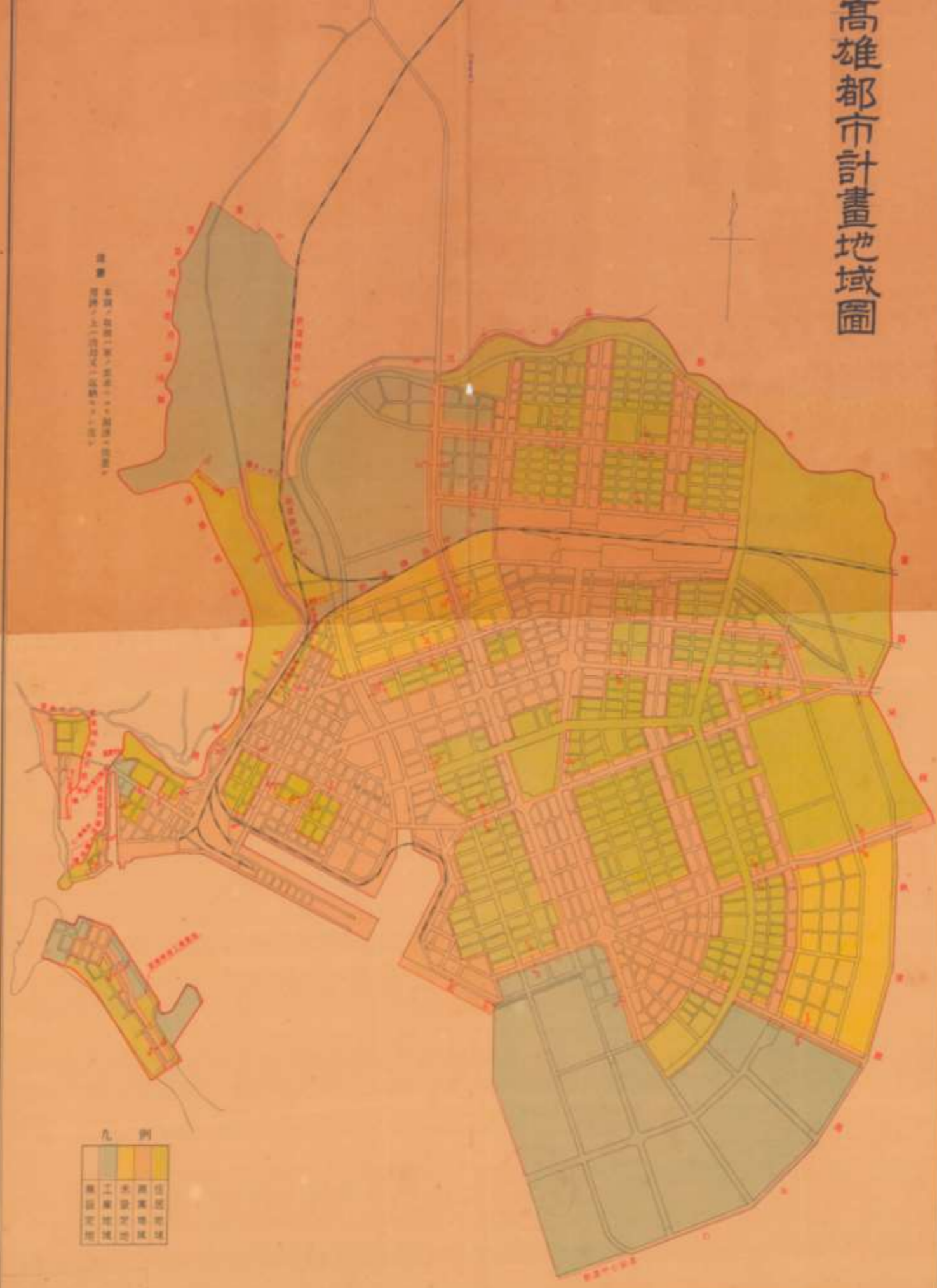


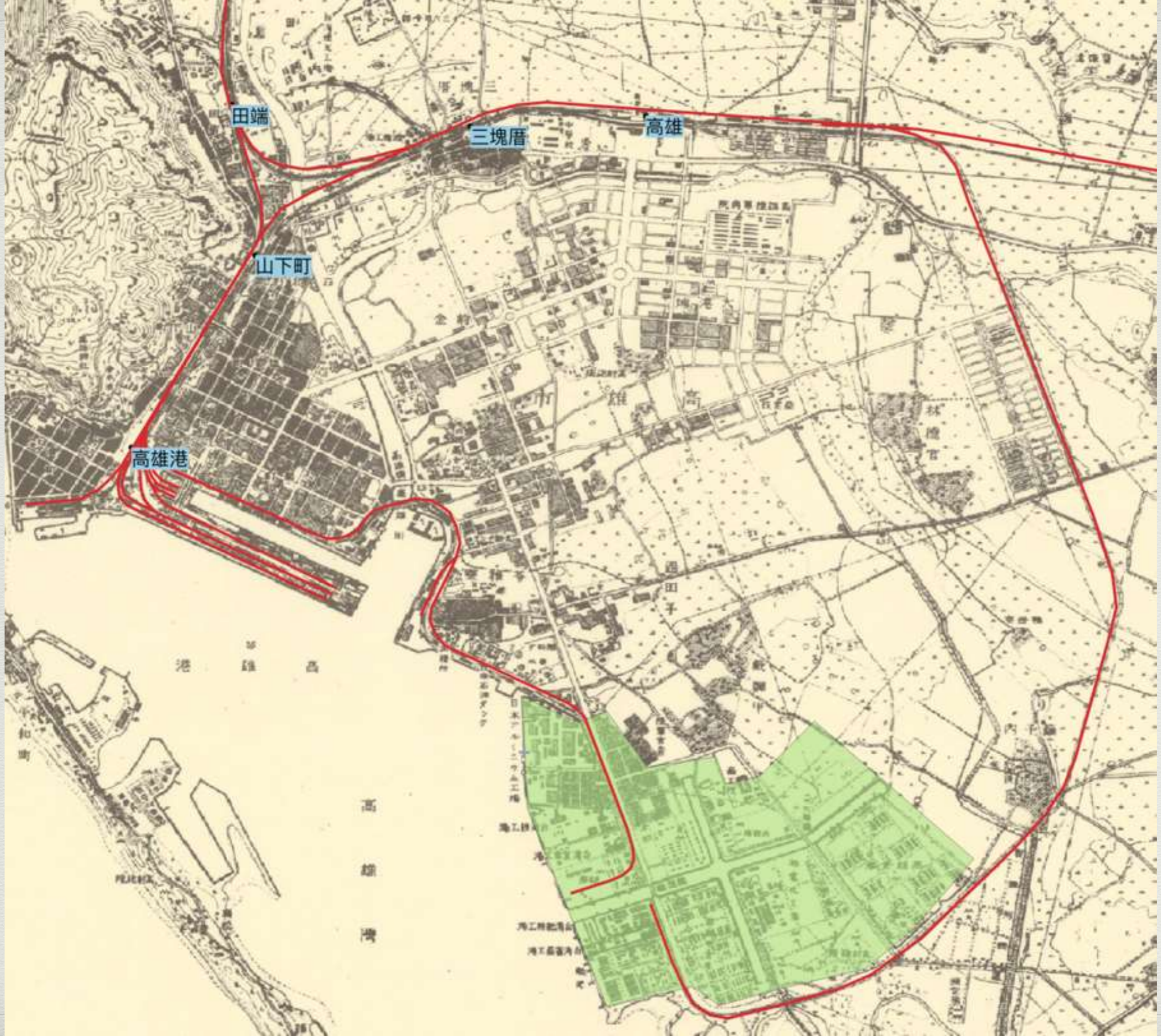
Kaohsiung Port Construction Stage III

- 1936-1945
- No more new ground or docks
- 1941 New Takao Station and city downtown shifted to around it
- 1943 East portion of the Port Line railway
- 1944/1945 railway connected to a loop
- Factories along the railway for military purpose
- Railway, port and factories nearly total destroyed by bombing in WWII



高雄都市計畫地域圖





田端

三塊厝

高雄

山下町

高雄港

高雄港

海防

田子

海防

海防

海防





慶祝中華民國建國八十周年

















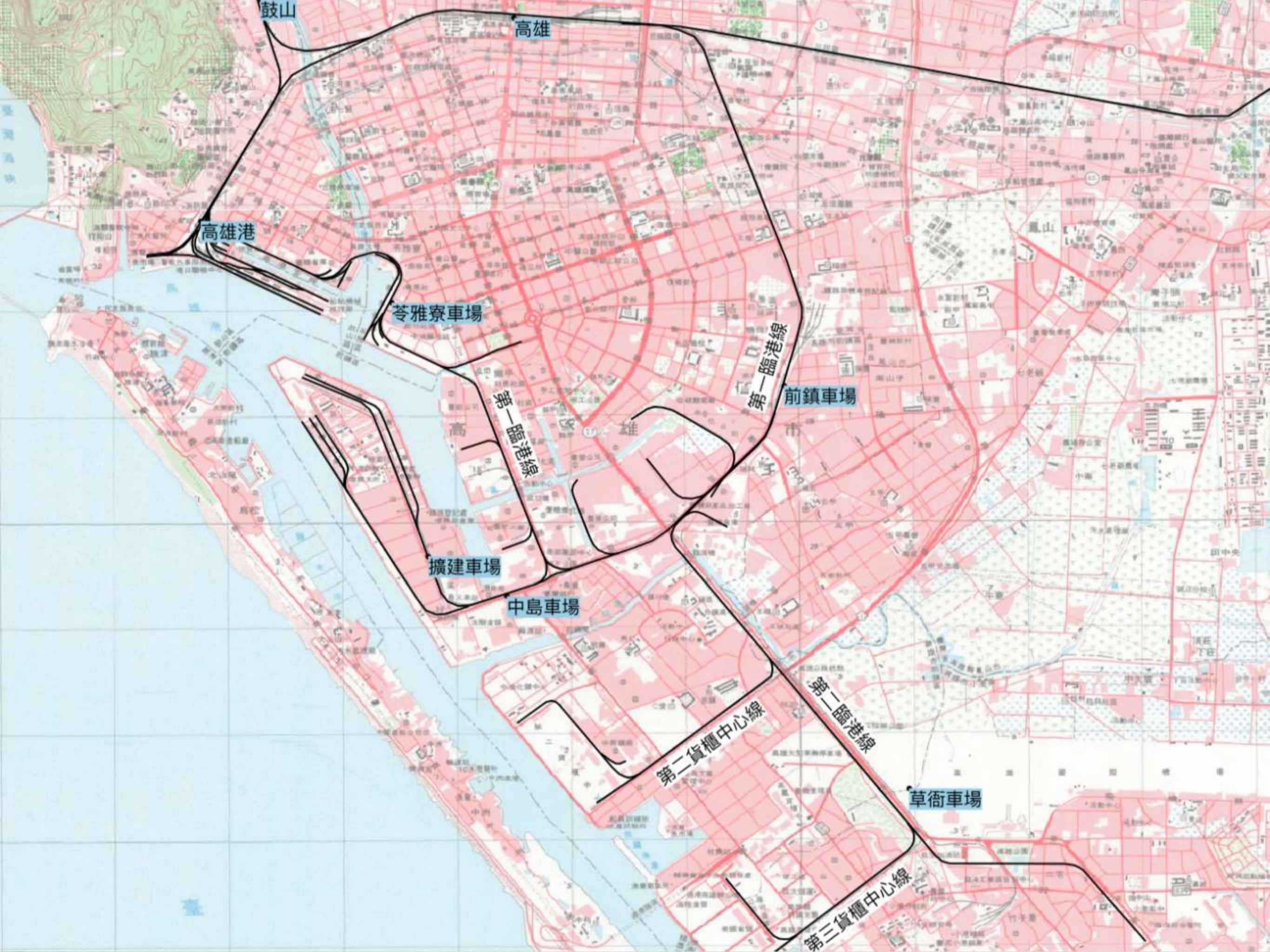
Kaohsiung Port Post War Reconstruction

- 1945-1965
- Digging out the sunken ships
- Restoring the railway and factories
- Sugar timber export to earn money

Kaohsiung Port

New construction and Golden stage

- 1965-1990
- The Zhungdaou New Ground new piers and railway
- The Export Processing Area 1966
- The Container Dock I
- The Container Dock II & III
- The Grain Docks
- The China Steel Factory



鼓山

高雄

高雄港

苓雅寮車場

第一臨港線

前鎮車場

擴建車場

中島車場

第二貨櫃中心線

第二臨港線

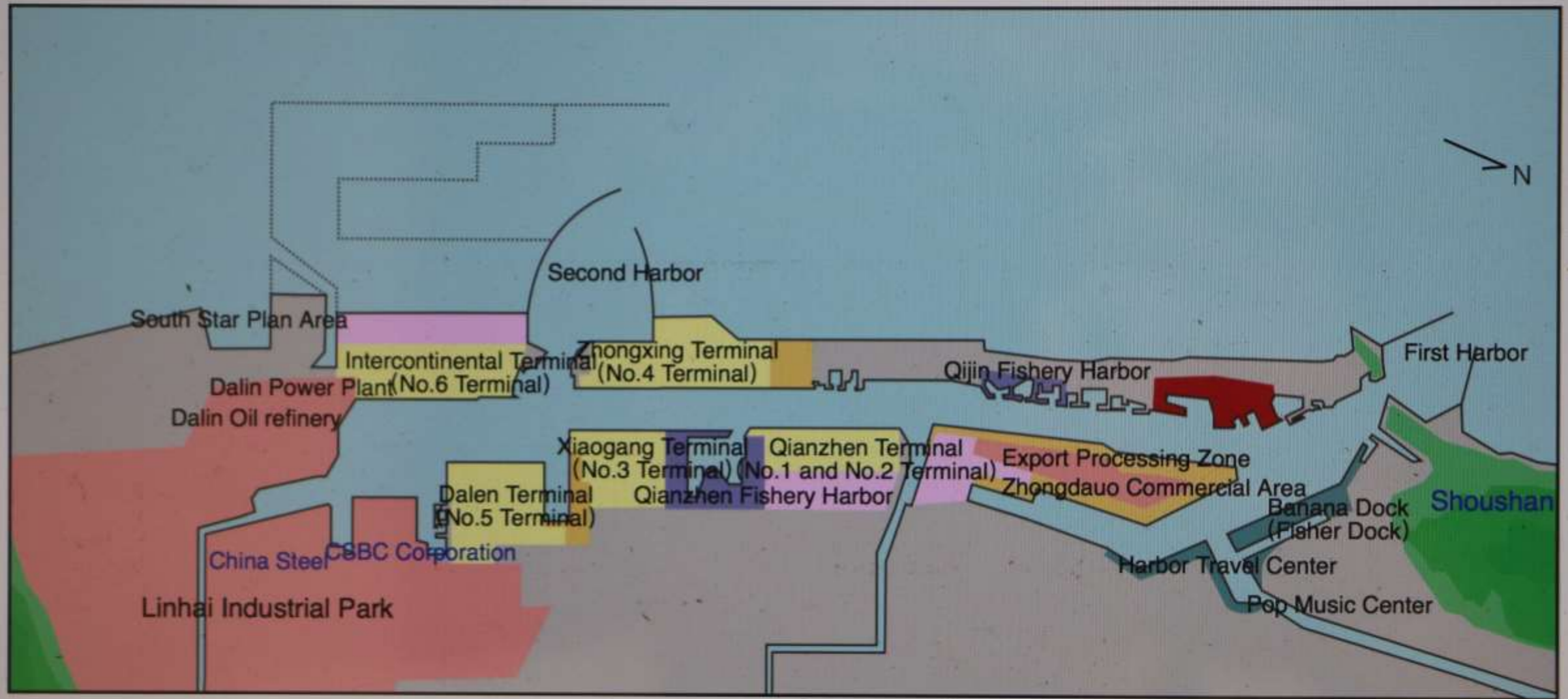
草衙車場

第三貨櫃中心線

This museum describes the history and clearance of a significantly sized residential community which was situated nearby to the expanded

Map of the port [\[edit \]](#)

■ = Industry Area ; ■ = Container Docks ; ■ = Bulk and Sundry Goods Docks ; ■ = Warehouse Exchange Area ; ■ = Fishery Harbor Area ; ■ = Naval Base



Recent Development [\[edit \]](#)

In 2017, Taiwan International Ports Corporation has completed the expensive expansion of Port of Kaohsiung and added new facilities to and passenger throughput.

Van Oord recently created 250 hectares of new land for the Kaohsiung Intercontinental Container Center Phase II. The





Kaohsiung Port Shrinkage

- 1990 till now
- IT industries replacing the traditional ones with much smaller products
- Traditional industries moving out, mainly to China
- Pollution problems
- Road transport replacing railway



Promotions before the Transformation from Railway to LRT

- 1983 a special train for NCTU
- 1999-2005 Lantern Festival trains every year
- 2003-2006 Dudu trains everyday
- 2004 an LRT riding event
- 2006 the Lingyaliao Bridge changing to be a cycling road bridge
- 2010 Takao Railway Museum



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新光人壽

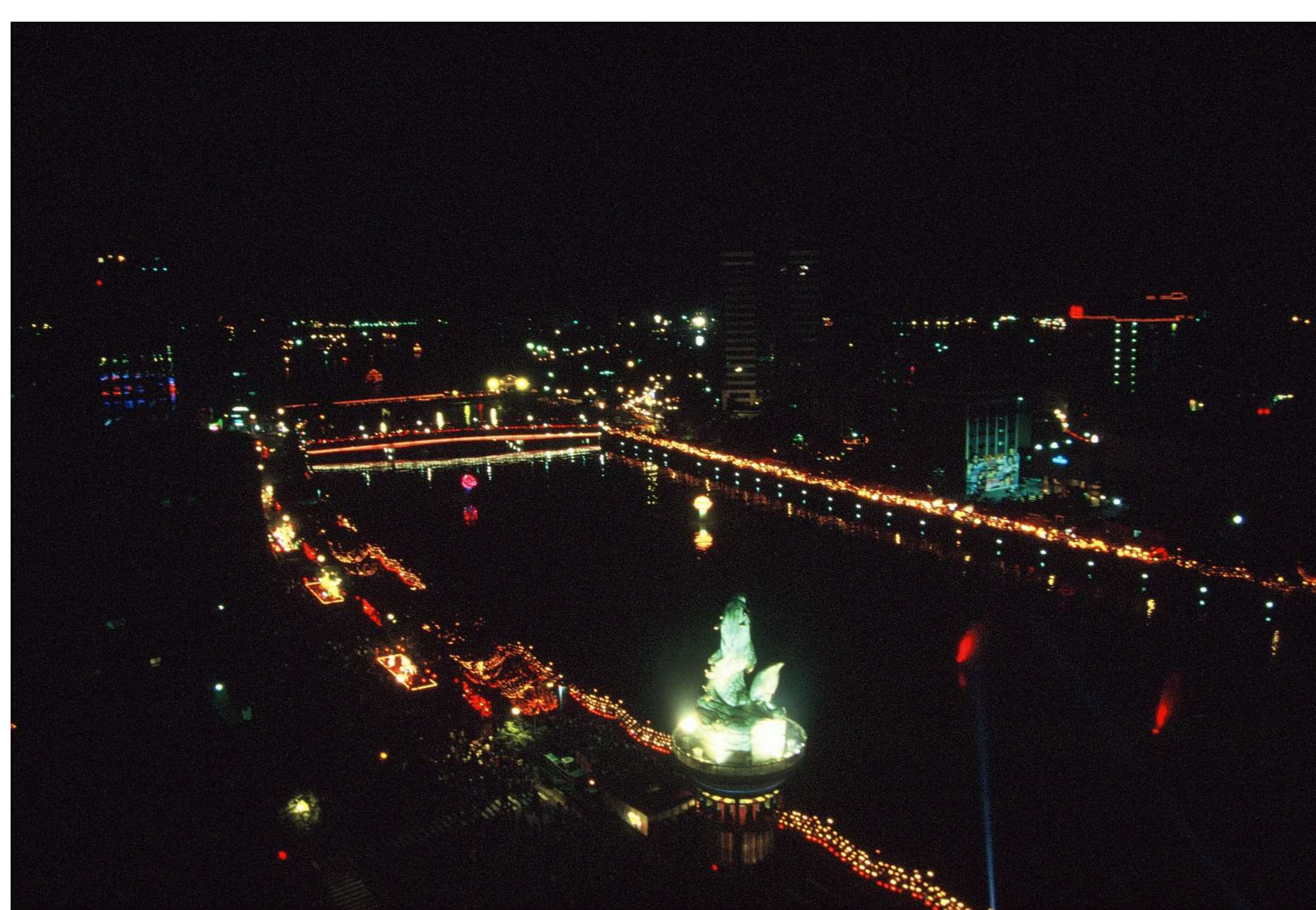


地的新光·道地的服務

國賓冰名

長江法律·孫禮光律師













OKWAP
手機人氣王



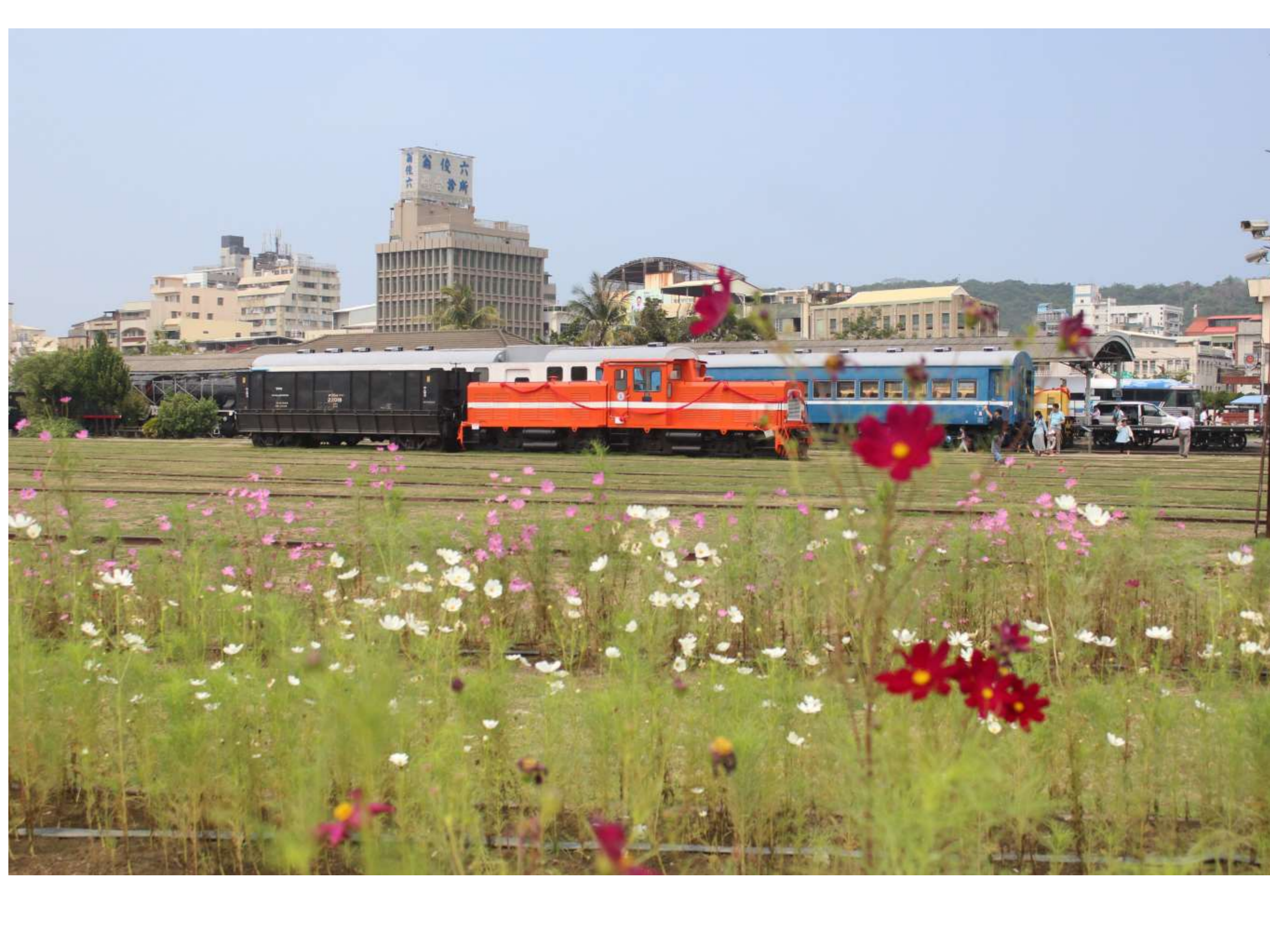
P

SIEMENS

高雄輕軌
多走





















the Port line changing to
an LRT line

新高雄路網

整理：記者王榮祥



The Characteristics of Kaohsiung LRT

- B type road right
- CAF made
- Catenary free system : super capacitors(ACR) on trains and overhead SCSE at stations recharging in 25 seconds providing 1.4 Km run/charge
- Grass on floor of tracks
- CDM-Q Track





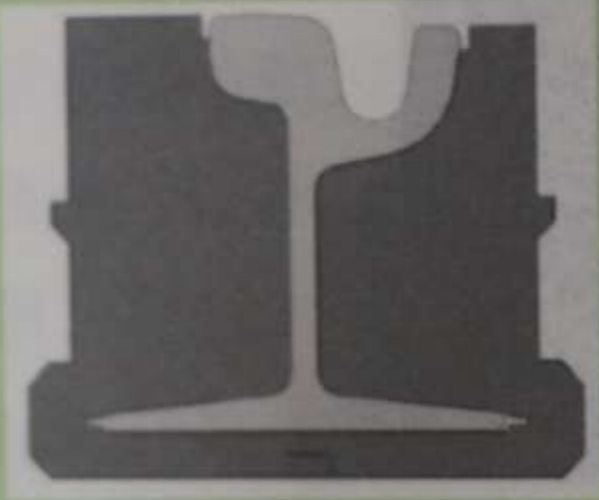
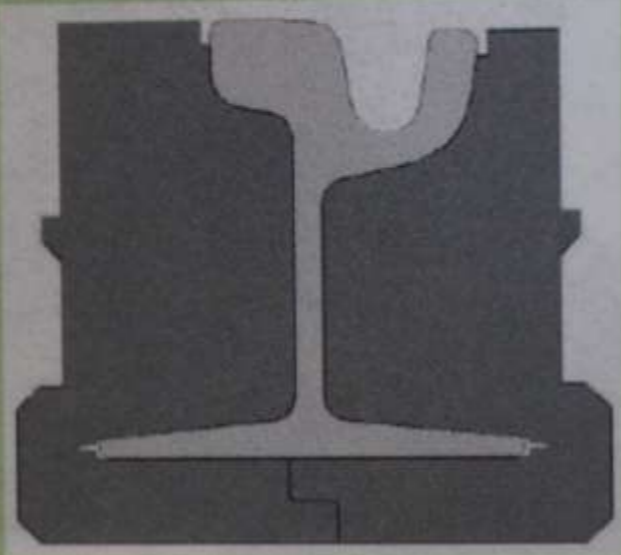







Cross section of Rail

表 4-2 CDM-QT-Profile 比較

<p>斷面型式</p>			
<p>名稱</p>	<p>CDM-QT-SP Standard Performance</p>	<p>CDM-QT-HP High Performance</p>	<p>CDM-QT-XP EXtra high Performance</p>
<p>材質</p>	<p>CDM-49</p>	<p>CDM-49</p>	<p>CDM-49 (灰) CDM-42 (藍)</p>
<p>勁度</p>	<p>高</p>	<p>中</p>	<p>低</p>
<p>減振等級</p>	<p>1-2dBv</p>	<p>3-5dBv</p>	<p>8-12dBv</p>

本工程使用之鋼軌彈性包覆材斷面為 SP 及 XP 型式，其中 SP 型

高雄輕軌運量統計表

營運日	星期	月台刷卡筆數	車上刷卡筆數	售票機筆數	人工售票筆數		總筆數
					補票	團體票	
107/02/01	四	1,505	4,636	1,544	15	322	8,022
107/02/02	五	1,633	5,536	1,712	5	233	9,119
107/02/03	六	2,254	7,059	2,697	30	223	12,263
107/02/04	日	2,475	7,415	2,666	29	91	12,676
107/02/05	一	1,211	4,046	1,706	6	10	6,979
107/02/06	二	1,620	5,033	1,690	8	321	8,672
107/02/07	三	1,734	4,896	1,607	16	82	8,335
107/02/08	四	1,746	5,358	1,777	19	180	9,080
107/02/09	五	1,936	6,049	2,137	14	231	10,367
107/02/10	六	2,515	7,162	2,958	30	22	12,687
107/02/11	日	2,349	7,039	2,713	18	61	12,180
107/02/12	一	1,766	6,095	2,352	14	42	10,269
107/02/13	二	2,919	8,618	922	4	75	12,538
107/02/14	三	2,972	8,798	939	7	38	12,754
107/02/15	四	2,133	6,003	718	16	11	8,881
107/02/16	五	9,867	16,606	2,695	13	49	29,230
107/02/17	六	10,135	17,655	2,677	14	171	30,652
107/02/18	日	12,500	18,141	3,643	9	153	34,446
107/02/19	一	11,356	18,702	2,849	6	184	33,097
107/02/20	二	6,495	14,905	2,094	2	21	23,517
107/02/21	三	2,358	7,373	852	8	26	10,617
107/02/22	四	2,106	6,521	683	4	0	9,314
107/02/23	五	2,461	7,472	589	3	15	10,540
107/02/24	六	5,408	12,761	1,487	8	44	19,708
107/02/25	日	5,102	12,572	1,554	18	106	19,352
107/02/26	一	1,853	5,742	471	1	434	8,501
107/02/27	二	2,069	6,474	447	2	116	9,108
107/02/28	三	5,459	14,446	957	14	35	20,911
累計		107,937	253,113	49,136	333	3,296	413,815

營運日	星期	月台刷卡筆數	車上刷卡筆數	售票機筆數	人工售票筆數		總筆數
					補票	團體票	
107.04.01	日	2,800	8,127	1,188	16	299	12,430
107.04.02	一	1,321	3,826	530	3	0	5,680
107.04.03	二	1,329	4,345	475	1	24	6,174
107.04.04	三	4,629	11,043	1,709	12	0	17,393
107.04.05	四	6,888	14,298	2,552	3	102	23,843
107.04.06	五	8,126	17,932	3,013	9	171	29,251
107.04.07	六	7,180	15,172	2,747	14	124	25,237
107.04.08	日	3,013	9,165	1,654	20	440	14,292
107.04.09	一	680	2,470	401	2	316	3,869
107.04.10	二	599	2,248	598	9	403	3,857
107.04.11	三	790	2,627	373	1	198	3,989
107.04.12	四	834	2,861	374	3	300	4,372
107.04.13	五	901	3,497	488	1	424	5,311
107.04.14	六	2,766	8,060	1,202	11	352	12,391
107.04.15	日	2,789	7,252	1,192	22	386	11,641
107.04.16	一	623	2,454	341	1	210	3,629
107.04.17	二	537	2,295	350	2	184	3,368
107.04.18	三	664	2,529	277	1	811	4,282
107.04.19	四	778	3,006	307	5	411	4,507
107.04.20	五	1,012	3,657	496	1	277	5,443
107.04.21	六	2,897	8,723	1,265	3	557	13,445
107.04.22	日	2,590	7,879	1,377	14	295	12,155
107.04.23	一	667	2,796	346	0	239	4,048
107.04.24	二	658	2,377	373	2	305	3,715
107.04.25	三	895	2,992	496	3	752	5,138
107.04.26	四	825	3,018	384	2	376	4,605
107.04.27	五	1,057	3,644	417	8	281	5,407
107.04.28	六	3,060	8,471	1,211	7	389	13,138
107.04.29	日	3,209	9,449	1,544	11	439	14,652
107.04.30	一	1,393	4,201	655	1	139	6,389
本月累計		65,510	180,414	28,335	188	9,204	283,651

Average Passengers by Month

- | Month | Holidays | Weekdays | Average |
|-------|----------|----------|---------|
| Jan | 15132 | 6326 | 8882 |
| Feb | 20736 | 9614 | 14778 |
| Mar | 13198 | 4530 | 6767 |
| Apr | 16656 | 4016 | 9072 |
| May | 11573 | 4644 | 6656 |
| Jun | 11818 | 5096 | 7112 |
| Jul | 17413 | 7576 | 10432 |
| Aug | 16336 | 6948 | 9551 |

- Long vacations in Feb and Apr
- Summer vacation July to August(Heavy rain in Aug)

The Fare of LRT

- NT\$30/ride by cash
- NT\$10/ride by prepaid cards
iPASS, EASYCARD, icash,
- No one day or multi days free ticket
- Group fare: 10 or more persons NT\$10/person
- No discount for elderly or children



公告 / Notice

高雄輕軌
可攜帶非動力式
折疊腳踏車搭乘

1. 車上不得飲酒
2. 不得在車上吸菸
3. 不得在車上飲食



公告 / Notice

各位旅客您好：
玻璃球、發光氣球、告白
風球等危險疑慮物品，
為了安全，禁止攜入輕
軌範圍。感謝您的配合。



服務時間
Service Hours

C3前鎮之星站
Cianjhen Star Station

往麟仔內站方向
To Lihnei Station (C1)

首班車 07:02
First train

末班車 22:27
Last train

首末班車期間列車班距約15分鐘，本詳
列表僅供參考，旅客宜提前到站等候。



• 操作說明 Please refer to the following instructions
1. 投幣 Coin → 請將紙幣或硬幣投入投幣口
2. 選擇票種 Select Ticket Type → 請按螢幕顯示之票種
3. 取票及找零 Collect Ticket and Change → 請按螢幕顯示之票種
4. 票款金額 Ticket Amount → 請按螢幕顯示之票款金額
5. 票款金額 Ticket Amount → 請按螢幕顯示之票款金額

即日起，一卡通、悠遊卡、有錢卡及愛金卡，均可利用高雄輕軌月台和車上驗票機，請多加使用並減少購買紙票，環保愛地球。

iPass, EasyCard, Happy cash, and icash can be used in ticket machines at platform or in tram instead of one way ticket.

取票及找零
Tickets/Change

C03-2-1

板橋之景站
 車資 10 Fare
 餘額 177 Balance
 卡號 尾 車號



付費搭乘說明：
 1. 繳費車程：指個月台登車與下車間之車程，於上車前完成繳費，一人一票，單一車價，票出後請留意車中請勿下車。
 2. 若本月台數票機故障/請至對面月台或別的站繳費。
 3. 使用電子票證：目前高雄輕軌可使用一卡通 (FASCO)、智慧卡 (SmartCash)、悠遊卡 (EASYPASS)、愛卡 (icash) 做為付費工具，月台及列車均有刷卡機，應選擇於上車後立即完成刷卡。
 4. 備註：高雄輕軌目前仍處於試營運階段，票價及各項規定將視營運狀況調整，請留意車站公告。
 5. 如有任何問題，請洽：高雄輕軌服務專線 07-222-8888。







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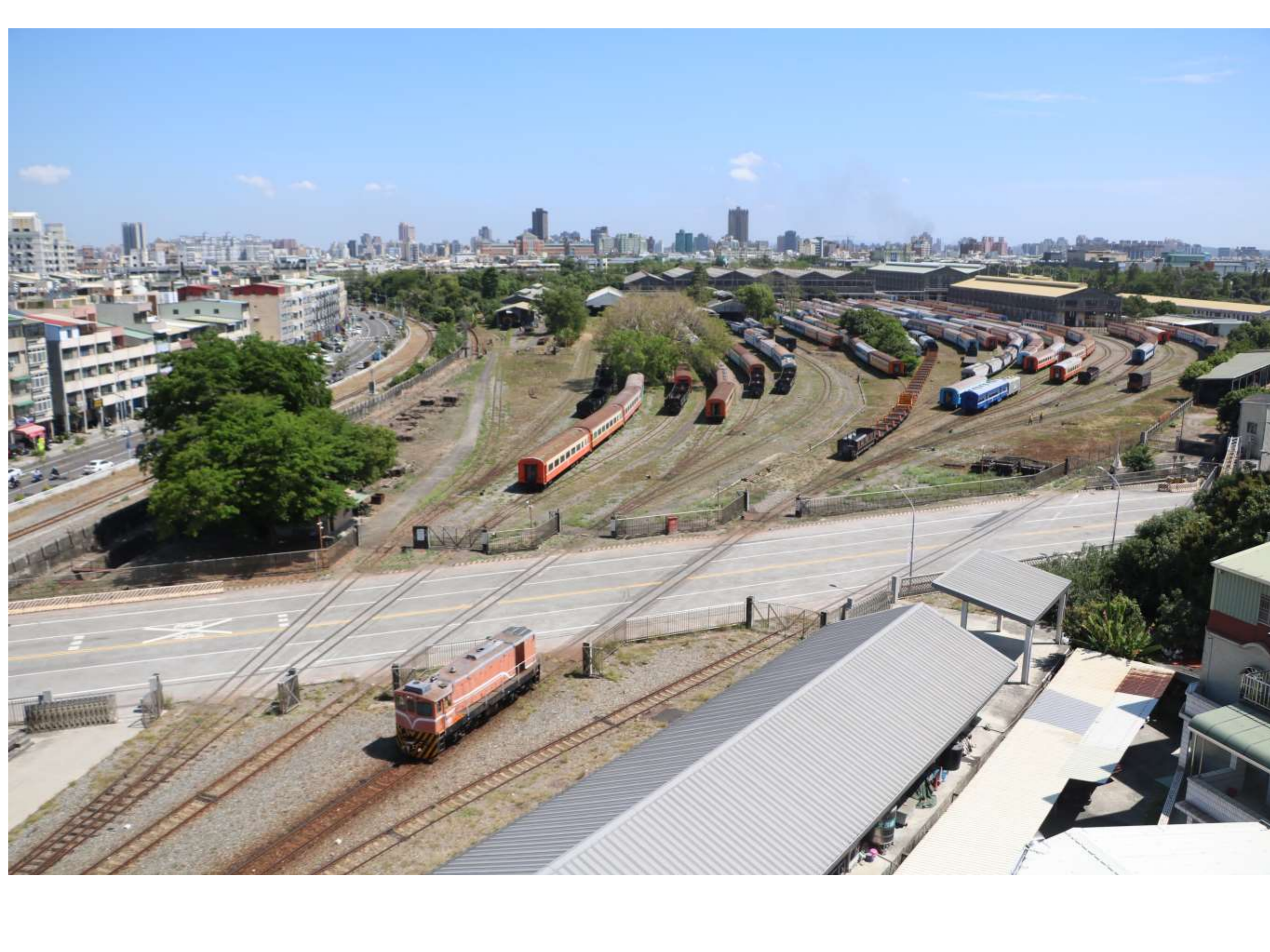
KW2

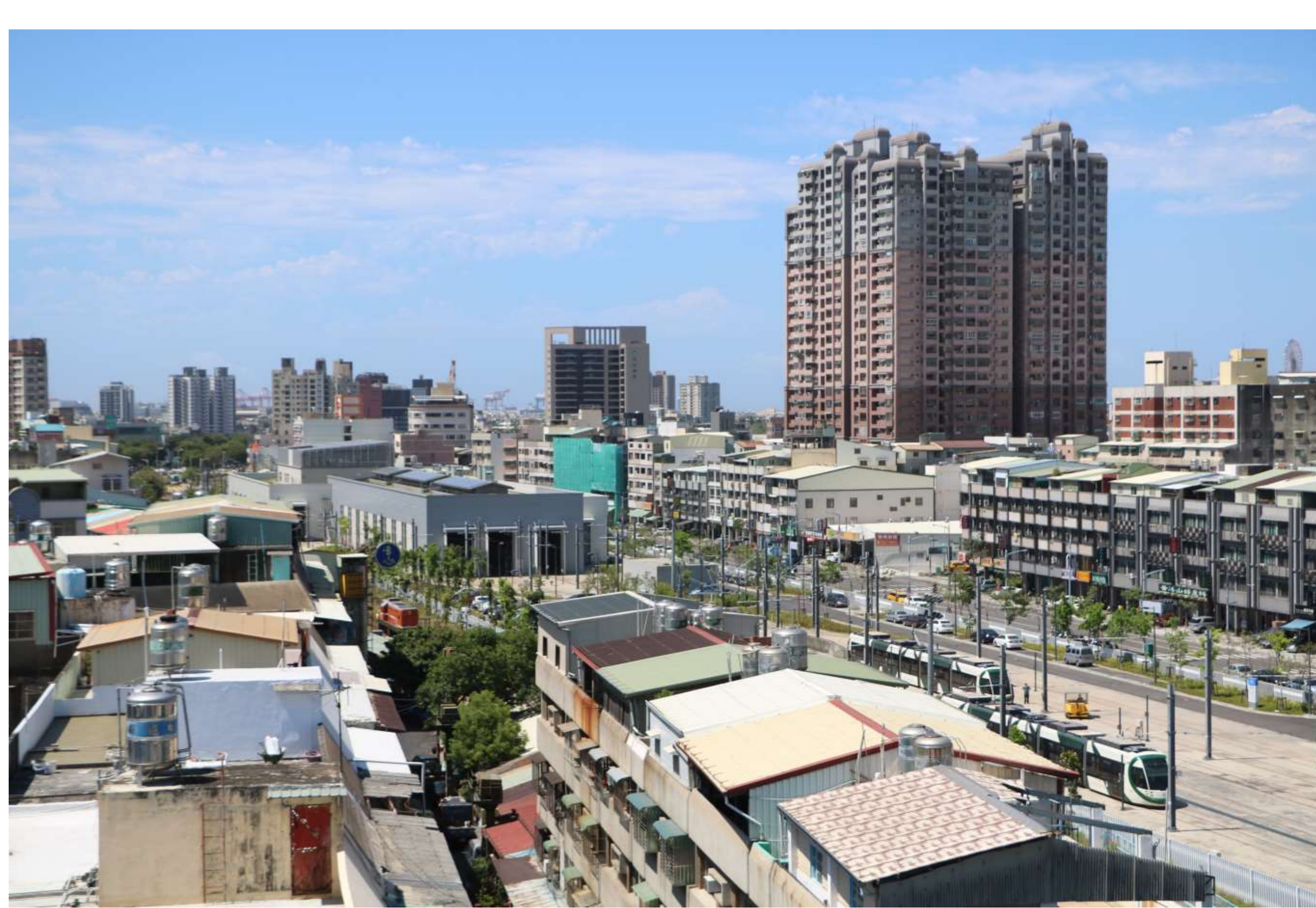
KAOHSIUNG
PORT
WAREHOUSE
No. 2

二棧貳庫



The Scenarios of LRT

















前有違規照相
請減速慢行



D



























高雄輕軌愛河橋第一跨吊裝全記錄 2016.01



▲高雄輕軌愛河橋第一跨吊裝全記錄 2016.01

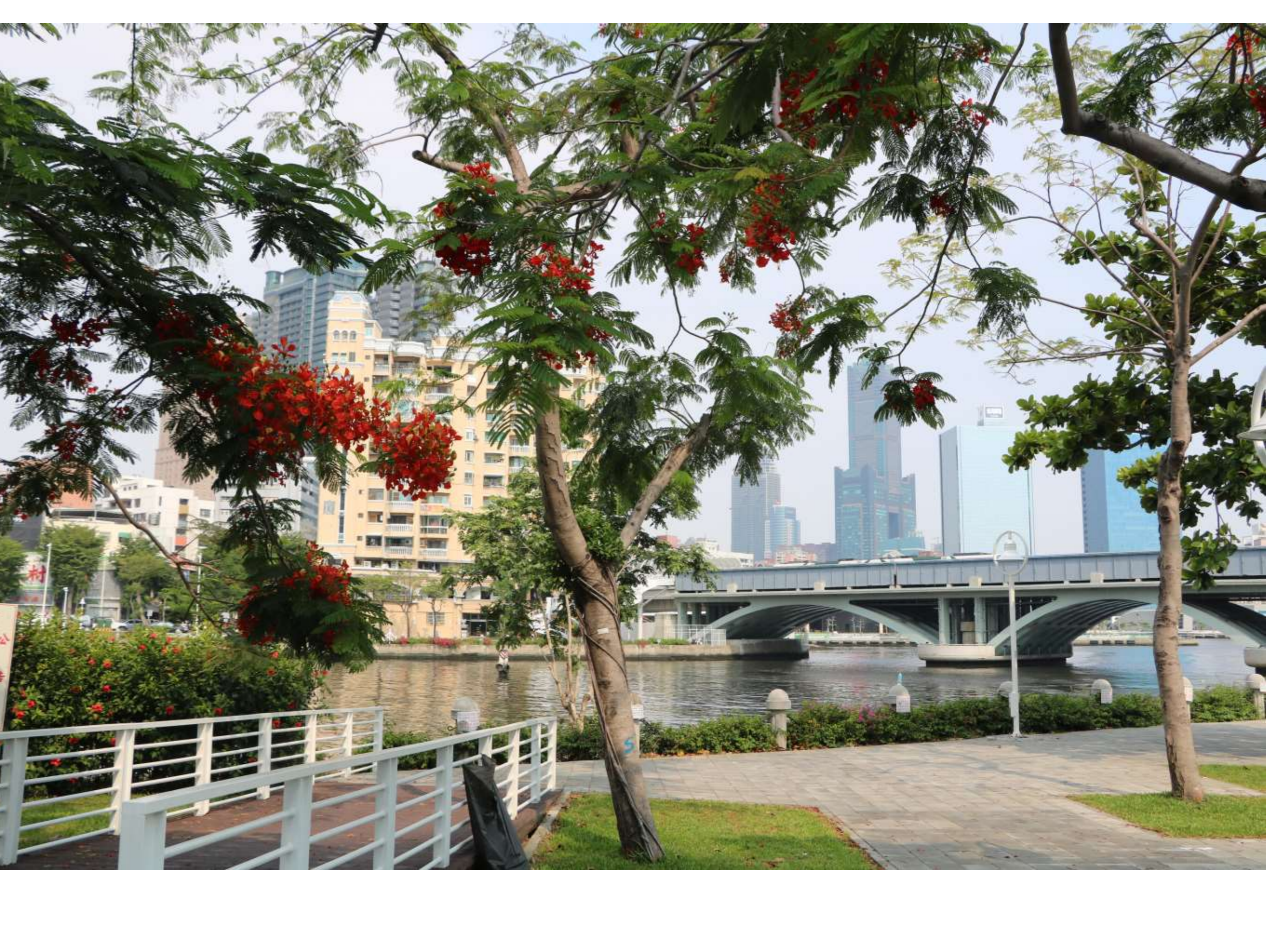


▲高雄輕軌愛河橋第二、三跨吊裝記錄 2016.07~08

高雄輕軌與自行車道的關係













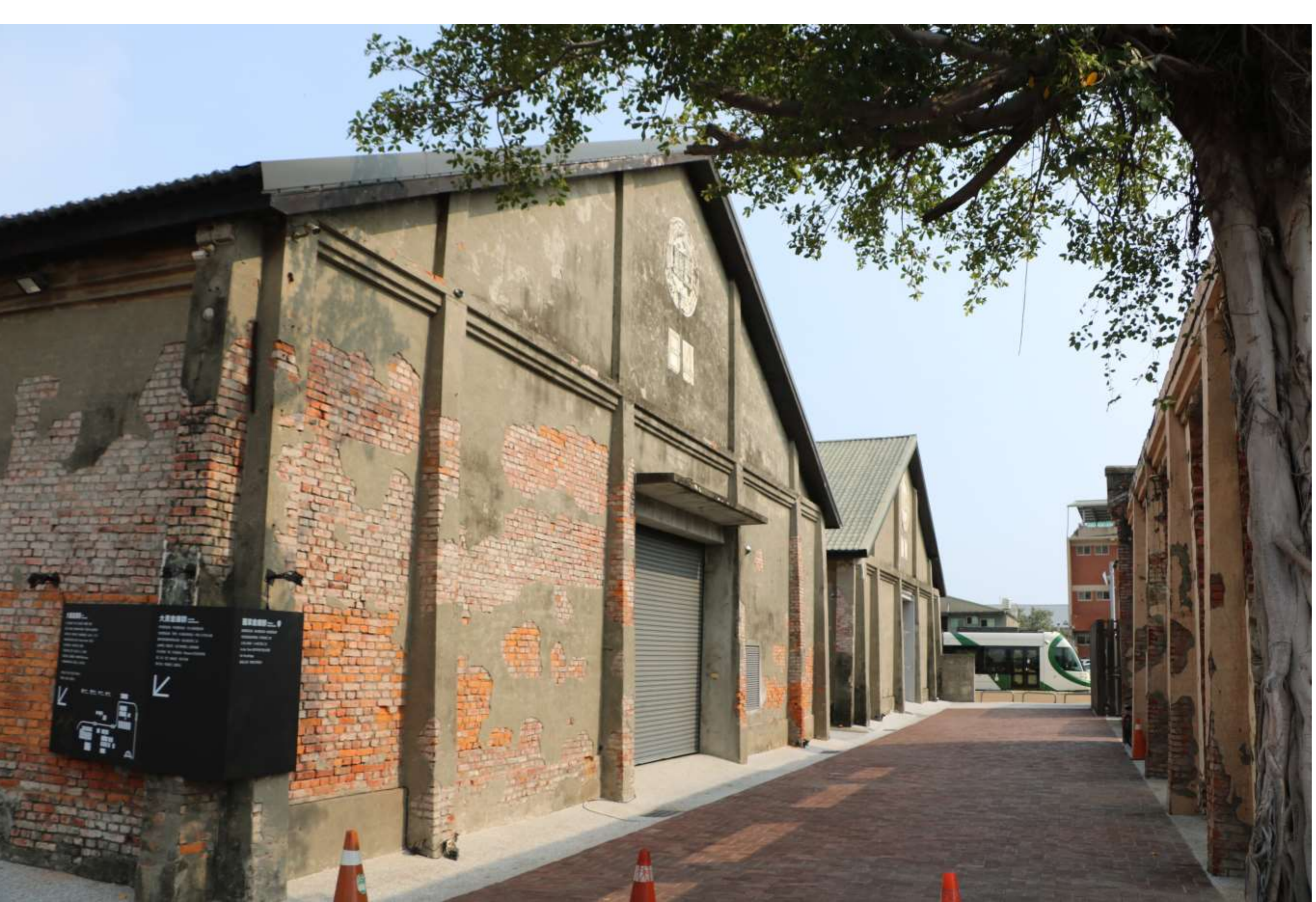


















交通部台灣鐵路管理局
TAIWAN RAILWAY ADMINISTRATION
高港站/KAOSHIUNG PORT STATION

拉狗堡

賣票辦公室











勇 勇 七名 輛進入
雄市 通大隊





智慧無人駕駛小巴
試乘區
Driverless Shuttle Trial Run

TPC
50-#
2184























Look Back and Forward

- Kaohsiung city, Railway, Port and Industries growing together
- Railway for freight transforming to LRT for tourists
- Factories, warehouses reforming for commerce or amuse use
- The Main Trunk Line going to underground
- New Kaohsiung Station











Thank you for Listening

Welcome to Taiwan