

安全・效率・品質・緑色

Safety; Efficiency; Quality; Eco-Friendly



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# 行路如常,守護如常

111年,臺灣的天空與大地並不平靜。

光是3至4月,中、南、東部數起有感地震,讓受到驚嚇的人們一夜難眠。5月,梅雨的考驗緊接而至,過往的連綿陰雨因氣候變遷成為伴隨雷擊、強風的致災性降雨,所幸對各地並無重大影響。孰料,9月18日,一場規模不小的淺層地震襲擊臺東,陸續傳出坍方和橋面龜裂等災情。

一連串的挑戰中,能夠及時傳遞道路受災狀況,甚至能提前封閉危險路段,守護用路人通行安全,不僅有賴同仁們確實並熟練地執行SOP,更是因為平時對道路和周遭環境狀況瞭若指掌,才得以做出最適切的判斷。

918地震發生後,公路總局隨即成立應變小組,於當天迅速排除坍方造成的災阻,並確認多處橋面橋梁受損隨即派員搶修。同時,因地牛翻身之力導致鐵軌變形、車站受損的臺鐵花東線,由我們協力啟動「類火車」疏運調度作業,協調遊覽車客運業者開行兩條接駁路線,銜接起花蓮至臺東間的運輸缺口。

雖不如過往便利,但看到在同仁們盡心盡力下,讓旅客和遊子能順利出行與返家,來往人們臉上都充滿期待的表情,給予我們最直達心底的感動與鼓勵。

#### 綠色永續 生命的幸福之路

天雨、地動,災後往往讓人更覺安全的可貴,但除了搶救與復原,若不是同仁們 平時日復一日細心扎穩馬步、打好基礎,讓道路挺過一次次考驗,行路如常,其實並 不平常。

然而,安全的路,不該僅僅為人服務,那些會經過道路的、在道路兩旁生息的繽紛生命力,也該由我們守護。位於高雄的台28線馬頭山地區,是臺灣水鹿、食蟹獴、穿山甲等保育類動物的家,公路總局與特有生物研究保育中心、林務局、屏科大、馬頭山協會等單位攜手合作,設置防護網並改善環境,一步一腳印打造友善綠色廊道。

# Words from the Director-General

#### Words from the Director-General

#### Travel as Usual Guard as Usual

The sky and earth were not quiet in Taiwan in 2022.

In March and April alone, several earthquakes were felt in the central, southern and eastern Taiwan, causing sleepless nights for those frightened citizens. This was followed by the plum rain test; this time, due to climate change, the rain was torrential, accompanied by lightning and strong winds, but fortunately there were no disasters. Then, on September 18, a shallow earthquake of considerable magnitude struck Taitung, and reports of landslides and damaged bridges soon followed.

In a series of challenges, being able to quickly convey the road damage situation and even close dangerous sections in advance to protect the safety of the travelling public depends not only on the correct execution of SOPs, which colleagues are very familiar with, but also on having a full understanding of the roads and their surroundings at ordinary times, which allows the most appropriate and quick decisions.

After the September 18 earthquakes, the Directorate General of Highways (DGH) immediately set up a response team, clearing blocked roads and dispatching restoration teams to restoration damaged bridges the same day. As the force of the guake distorted railway tracks, we launched a "rail replacement bus service" to disperse passengers on the Hualien-Taitung line of Taiwan Railways Aministraion where stations had been damaged, and coordinated with tour bus operators to set up two shuttle routes between Hualien and Taitung to fill the transport gap.

Although not as comfortable as before, the efforts of our colleagues enabled people to travel and return home safely, their faces full of expectation moving and encouraging us.

#### **Green Sustainability** The Road to Happiness in Life

Heavy rains and earthquakes often remind us of the importance of safety. Beyond restorations and reconstruction, it is the tireless daily efforts of our colleagues that keep our highways open for people to use, test after test.

Safe roads don't just serve people, we should also protect the rich wildlife that crosses them and lives along them. The Matou Mountain section of Provincial Highway No.28 in Kaohsiung is home to protected species such as sambar deer, crab-eating mongoose and pangolin. The DGH has been working with the Endemic Species Research Institute, the Council of Agriculture, Pingtung Forest District Office, Forestry Bureau, National Pingtung University of Science and Technology and Matou Mountain Association to create a protective network and improve the environment, a green corridor step by step. To share the results of highway ecological conservation, the MOTC, in cooperation with the DGH and Freeway Bureau, jointly held the "Highway Ecological Conservation Seminar" for the experience of highway ecological conservation with all circles. In the future, we will continue to work with agencies to implement the green transport concept and build a happy road for road users and animals.

為分享公路生態保育工作的成果,公路總局與高速公路局合辦「公路生態保育研討會」,向各界揭示並分享公路生態保育經驗,未來持續透過跨機關合作,共同落實綠色運輸理念,營造用路人與動物都能幸福的公路。

#### 堅實工程 安全的回家之路

在國家重大建設工程,公路總局也交出了亮麗成績,包括「台20線南橫公路梅山口至向陽路段」遭98年莫拉克風災重創致道路中斷,復建期間又歷經多次颱風豪雨侵襲,經過13年努力復建,於111年5月1日有條件開放通行,台20線自此全線恢復通行,獲得行政院蘇院長高度肯定,以及民眾熱烈迴響。108年南方澳跨港大橋發生無預警倒塌事故,公路總局臨危授命辦理重建工程,經3年多努力於111年12月18日完工開放通車,新橋除了耐久結構安全,同時兼具鯖魚意象造型設計,並搭配景觀藝術光雕,成為當地指標性地標,帶動區域經濟發展。

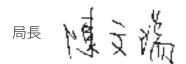
此外,公路總局為全面提升屏鵝公路沿線鄉鎮供電網韌性、塑造自然乾淨天際線、營造優美的綠色長廊,會同台電公司、中華電信辦理纜線下地,與林試所合作改善優化屏鵝公路植栽,並創造半年內完工的超高效率。然而,工程的安全、品質及進度是同仁們奉行的施工圭臬,「東西向快速公路台76線 (0k+000~3k+700) 永興至文津路段新建工程」榮獲第22屆公共工程金質獎,「台9線325k+900~328k+800瑞豐永安段道路拓寬工程」榮獲第16屆金安獎特優。蘇花改計畫路廊繼109年獲得國際道路協會 (IRF)「全球道路成就獎」工程設計類首獎後,111年再度榮獲亞洲土木工程聯盟 (ACECC, The Asian Civil Engineering Coordinating Council) 第9屆傑出工程計畫獎首獎的肯定。

#### 積極管理 自在慢行

幸福的根基,就是安全與安心,回想新年之初,人們方沉浸在跨年的喜悦中,中央各部會及地方政府已齊心動員,為改善危險路段路口而努力,一年過去,公路總局總共辦理了472處路口改善,成果斐然,安全更有感。

改善現況後,更要透過與時俱進的管理規劃,幸福才能夢想成真。公路總局推出「第3代公路監理資訊系統」,完善數位治理需求,朝向「人本交通」邁進,在來自全球各國的提案中,獲得全球資通訊科技卓越獎 (WITSA 2022 ICT Excellence Award) 傑出公眾合作獎首獎。11月起,更正式納管微型電動二輪車,增加須登記領用懸掛號牌、投保強制險及行駛道路管理等規定,讓擔心少一點、安心多一些。

因為安心,所以自在。無論你想跟著生態繪本《神祕的螢火蟲公路》拜訪阿里山公路,或是來一趟南橫慢活之旅,每一哩路都有我們最誠摯的守護。



#### **Strong Construction Safe Road Home**

The DGH has achieved impressive results in major national construction projects. In August 2009, the section between Meishankou and Xiangyang on the Southern Cross-Island Highway of Provincial Highway No.20 was severely damaged by Typhoon Morakot, and the road was cut off. During the restoration period, work was affected by successive typhoons and heavy rain. Provincial Highway No.20 was finally reopened after 13 years of effort on May 1, 2022. The reopening of the road was confirmed by Premier Su Chen-chang and received an enthusiastic response from the public. In 2019, the Nanfang'ao Bridge collapsed without warning and the DGH was given the task of rebuilding it. The new bridge was officially opened on December 18, 2022. The bridge is durable and structurally safe, with a mackerel-inspired design accompanied by an artistic light sculpture. It is a local landmark and will stimulate local economic development.

To improve the resilience of power supply along the Ping-E Highway, create a natural clean horizon and build a beautiful green corridor, we also accomplished with Taiwan Power Company and Chunghwa Telecom to move cables underground and trees along the highway with the Taiwan Forestry Research Institute, demonstrating super-high efficiency by completing the work in just six months. Safety, quality and progress are the guiding principles of our colleagues. East-West Expressway No.76 Yongxing-Wenjin Section (0k+000~3k+700) Construction won the 22nd Public Construction Golden Quality Award. Provincial Highway No.9 Ruifeng-Yongan (325k+900~328k+800) Section Widening Project won the high distinction award of the 16th Excellent Construction Golden Safety Awards. The Suhua Highway of Provincial Highway No.9 Mountainous Section Improvement Project was awarded the first prize for Engineering Design in the Global Road Achievement Award from the International Road Federation, followed by the first prize of the 9th Outstanding Engineering Project Award of the Asian Civil Engineering Coordinating Council.

#### Positive Management Slow Traveling

The foundation of happiness is safety and peace of mind. Looking back to the beginning of the year, when everyone was in a festive mood, central agencies and local government worked together to improve dangerous intersections. After one year, the DGH has improved 472 intersections, an outstanding achievement that has brought safety improvements in a way that road users can feel.

After improving the current situation, only management planning that moves with the times can make dreams come true. The DGH's "3rd Generation Motor Vehicle and Driver Information System (MVDIS)" meets the requirements of digital governance and moves towards "human-oriented transportation". It won first prize in the WITSA 2022 ICT Excellence Award, beating proposals from around the world. From November, it also officially covers micro-electric bicycles, adding the need to obtain a licence plate, take out compulsory insurance and road management, etc., reducing safety concerns and increasing peace of mind.

At ease because of peace of mind. Whether you follow the picture book *Mysterious Firefly Highway* to the Alishan Highway or take a leisurely drive along the Southern Crossisland Highway of Provincial Highway No.20, you will enjoy our best ever protection every kilometer of the way.

Director-General Chen, Wen Jue?





# 台 20 線南橫公路梅山口至向陽路段天災頻繁搶修艱鉅 逐步復建迎旅客

The Section between Meishankou and Xiangyang on the Southern Crossisland Highway of Provincial Highway No.20

The Difficulty of Frequent Natural Disastrous Restoration and Gradually Recovery Welcoming Visitors



111年5月1日復通首日吸引大量車潮 A large number of vehicles were attracted on May 1, 2022, the first day of opening

#### 公路簡要歷程

省道台20線俗稱南橫公路,為臺灣三條東 西橫貫公路之一,於民國57年7月11日動工興 建,至民國61年10月31日完工通車。西起臺南 市中西區湯德章紀念公園,東迄臺東縣關山鎮 德高里,全長203.982公里。部分路廊依日治時 期闢建之關山越嶺古道而興建,部分則為新闢 道路,並全程採人力修築。另因南橫公路跨越 中央山脈,地形陡峭及地質破碎,導致興建過 程更加艱難以及人員傷亡,開闢南橫公路殉職 工程人員靈位祀奉於天池的長青祠。 公路開通後,沿途美麗風景吸引人潮絡 繹不絕,並為南臺灣地區提供絕佳自然觀光資源。不料民國98年8月,南橫公路受到莫拉克 風災重創,造成橋梁損毀23座,路基流失12公 里,開啟漫長又艱辛的復建工作。且在復建過程中,每3~5年即發生較大規模災害,導致陷入搶修→施工→損毀之輪迴。然而公路總局及第三區養護工程處的同仁,始終沒有放棄修復這條公路的使命,致力為原民部落族人建設一條安全回家的路,陸續完成甲仙→寶來→桃源→復興→梅山口等路段復建工程。

# Building Dreams—Safeguarding the New Appearance of Highways

#### **Brief History of The Highway**

Provincial Highway No.20, commonly known as Nanheng Highway (Southern Crossisland Highway,) is one of the three east-west highways in Taiwan. Construction began on July 11, 1968, the highway was completed and opened to traffic on October 31, 1972. It starts from Tang Te-chang Memorial Park in the West Central District of Tainan City in the west and ends in Degao Village, Guanshan Town, Taitung County in the east, with a total length of 203.982 kilometers. Some of the road corridors were built along the Guanshan Traverse Trail built during the Japanese Occupation, while others were new and built entirely by hand. As the Nanheng Highway crosses the Central Mountain Range with steep terrain and fractured geological conditions, the construction process was difficult with worker deaths and injuries. The memorial plaques of the workers who died during the construction were placed in the Evergreen Temple in Tianchi.

After the opening of the highway, the beautiful scenery along the way attracted an endless stream of people, providing an excellent natural tourism resource for southern Taiwan. However, in August 2009, the Nanheng Highway was severely damaged by Typhoon Morakot, caused 23 bridges destroyed and 12 kilometers of roadbed, beginning of the long and arduous reconstruction process. In addition, during the process, major disasters occurred every 3 to 5 years, resulting in a cycle of emergency restoration, construction and damage. However, the colleagues of the DGH and the Third Maintenance Office never gave up on the mission to restoration highway. They remain committed to build a safe way for the indigenous villagers to return home and eventually complete the reconstruction project for the sections from Jiaxian, Baolai, Taoyuan, Fuxing and Meishankou.



邊坡修復作業 Restoration of the side slope



#### 戮力完成

「梅山口至向陽」路段在莫拉克風災後 便封閉管制通行,在施工團隊積極努力下,在 109年1月13日有條件開放「梅山口至天池」路 段通行。但110年8月7日台20線明霸克露橋遭 土石流沖毀,車輛進出受阻,造成「天池至向 陽」路段復建作業進度延遲。在各界的殷殷期 待下,工程團隊克服萬難,終於在今(111)年5 月1日,順利達成「梅山口至向陽」整個路段 有條件開放通行的任務。(「有條件開放通 行」主要係上午7時至下午3時,開放5噸以下 小貨車及9人座以下小客車通行。)

開放通行首日立即吸引大批民眾漏夜排隊 前來「搶頭香」,一覽睽違13年的高山美景以 及玉山群峰風光,媒體也爭相報導。當天共有 5,836輛汽機車進入南橫公路,可謂盛況空前, 同時也帶動鄰近地區觀光商機,大幅提升地方 經濟繁榮。

#### 堅持信念 重返山林

南横美麗重現,是所有工程團隊辛勞及努 力的成果,尤其是現場工程人員,腳踏實地、 一步一腳印,付出寶貴的時間和青春,甚至冒 著牛命危險完成這項艱鉅的仟務。開放通車之 後,將重新串連沿線風景,恢復風災前遊客如 纖的盛況,再次為地方觀光注入一劑強心針, 帶動地方產業及經濟發展。



# Building Dreams Safeguarding the New Appearance of Highways 構築夢想 守護公路新風貌

#### **Dedicated to Completion**

The section between Meishankou and Xiangyang was closed to traffic due to Typhoon Morakot. With the active efforts of the construction team, the "Meishankou to Tianchi" section was conditionally opened to traffic on January 13, 2020. However, on August 7, 2021, the Mingba Kelu Bridge on Provincial Highway No.20 was destroyed by landslides, blocking the passage of vehicles and delaying the reconstruction of the "Tianchi to Xiangyang" section. With the community's eager anticipation, the engineering team overcame all difficulties to successfully complete the mission of conditionally reopening the entire the section between "Meishankou to Xiangyang" on May 1, 2022. ("Conditional reopening" means that small trucks under 5 tonnes and small passenger cars with less than 9 seats are allowed to pass from 7:00 am to 3:00 pm).

On the first day of opening, a large number of people immediately queued up to be the first to enjoy the beautiful scenery of the Yushan Mountains, which had not been seen for 13 years. The reopening also attracted a lot of media attention, with a total of 5,836 automobiles and motorcycles entering the Nanheng Highway that day. It was an unprecedented event creating sightseeing business opportunities in neighboring areas, boosting local economies and prosperity.

# Holding on to the Faith Return to Nature

The revelation of Nanheng's beauty is the result of the hard work and perseverance of everyone on the engineering team, especially the on-site staff who devoted their precious time to complete the work step by step, sometimes even risking their lives. The reopening has reconnected the landscape to restore the level of tourism that existed before the typhoon, providing endless opportunities for local tourism and boosting local industry and economic development.



111年4月30日復通祈福典禮合影 Group photo of the recepning blessing ceremony on April 30, 2022

# 交通部公路總局 11

# 南方澳跨港大橋結合藝術光雕 串聯在地活絡商圈新指標

Nanfang'ao Bridge with an Artistic Light Sculpture Become a New Landmark by Connecting and **Revitalizing Local Businesses** 



南方澳跨港大橋重建工程 Nanfang'ao Bridge Reconstruction Project

#### 計畫緣由

南方澳是東臺灣最大的陸連島,與蘇澳隔 著約100公尺寬的水道與陸地相通,東臨太平 洋西接中央山脈,使南方澳漁港成為三面環山 的良港,又有黑潮在外海流經,是優良漁場。 南方澳大橋的建立使得蘇澳往來南方澳更為便 利,減少行車的時間。108年10月1日大橋發生無 預警倒塌事故,公路總局臨危授命辦理重建工 程,後續經多次會議研商,109年3月18日會議中 決議於原址辦理南方澳跨港大橋重建工程。

#### 工程概要

南方澳跨港大橋重建工程全長796.53公尺, 包含橋梁595公尺、兩側引道201.53公尺、標準 寬度13公尺,增設機車道以分流汽、機車,於 109年7月16日開工,111年12月18日開放通車。

南方澳是「鯖魚之鄉」,故南方澳大橋以 「鯖魚」和「海浪」兩種元素做為橋梁造型, 夜間搭配景觀藝術光雕,並設有人行道及4處 觀景平臺,造型優美,是一個觀光遊憩及打卡 拍照的好景點。此外,大橋連結西側漁港觀光 市集與東側豆腐岬風景區,形成環狀道路系統 串聯在地商圈,可提升南方澳地區生活便利性 及機能,更能成為當地指標性地標。

#### 計畫效益

南方澳跨港大橋重新通車後,讓在地生活 重新擁有一座堅固可靠,足以代表蘇澳鎮精神 的南方澳大橋。相信藉由新大橋的完工開通, 必能重現南方澳漁港往日風采,帶動地方產業 經濟重新轉動創生,更有助於振興漁業及觀光 發展。

#### **Project Origin**

Nanfang'ao is the largest tied island in Eastern Taiwan. It is connected to Suao by a 100-meter-wide waterway. Bordered by the Pacific Ocean to the east and the Central Mountain Range to the west, The Nanfang'ao Fishing Port is surrounded by mountains on three sides and the Kuroshio Current flows through the open sea, making it an excellent

fishing ground. The Nanfang'ao Bridge makes it more convenient to travel between Suao and Nanfang'ao, shortening the journey. On October 1, 2019, the bridge collapsed without warning, and the DGH was tasked with the reconstruction project. After meetings and discussions, it was decided at the meeting on March 18, 2020 that the Nanfang'ao Bridge would be rebuilt at the original site.



#### **Engineering Overview**

The total length of the Nanfang'ao Bridge Reconstruction Project is 796.53 meters, of which the bridge is 595 meters. The approach road is 201.53 meters long and the standard width is 13 meters. A motorcycle lane has been added to divert vehicles and motorcycles. Construction was begun on July 16, 2020 and bridge was opened to traffic on December 18, 2022.

Nanfang'ao is the "hometown of mackerel", so Nanfang'ao Bridge incorporates the elements of "mackerel" and "waves" in the design of the bridge. It is equipped with art light sculptures at night, walkways and 4 viewing platforms. The beautiful form makes it a great place visiting and take photos for social media. In addition, the bridge connects

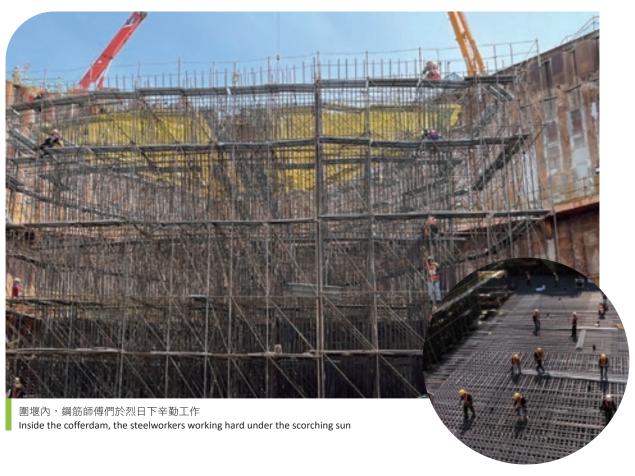
the Fishing Harbor Market in the west and the Tofu Cape Scenic Area in the east, forming a ring road system that connects the local business district, making life in the Nanfang'ao area more convenient as a local landmark.

#### **Project Benefits**

After the reopening of the Nanfang'ao Bridge, the local people will have a solid and reliable bridge that represents the spirit of Suao. It is believed that with the completion and opening of the new bridge, Nanfang'ao Fishing Port will be restored to its former glory, reviving the local industry and economy, which will also help to revitalize the development of fishing and tourism.

# 淡江大橋主橋塔 P130 樁帽國際級工程 基礎混凝土澆置任務大成功盼成國內典範

The World-class Construction of Danjiang Bridge Pylon P130 Pile Cap Pouring Was Successfully Completed and Expected to Become a Model Project in Taiwan



#### 計畫緣由

淡江大橋主橋塔P130基礎樁帽為橢圓形狀,全臺最大單一橋墩基礎,位於水平面下16.5公尺,長77公尺,寬44公尺,面積高達3,030平方公尺,相當一座200公尺操場大,樁帽基礎厚達5公尺,鋼筋總量達5千7百多公噸,施工團隊在高溫潮濕的工作環境,歷經近三個月組立綁紮,克服了巨積超量且複雜鋼筋作業,順利完成基礎樁帽預力鋼筋綁紮作業。

#### 執行情形

主橋塔P130樁帽基礎混凝土澆置作業於 111年8月28日早上開始混凝土澆置,歷經93 小時連續不間斷輪班進行澆置作業,於111年 9月1日凌晨3點完成,澆置數量達1萬4,394立 方公尺,期間共動用6輛混凝土壓送車,大約 1,626車次混凝土預伴車及400人次,過程中 除須確保混凝土供料、運輸各環節相互配合 不能中斷,亦要確保混凝土到場溫度及克服 烈日盛暑酷熱的作業環境。

# Building Dreams Safeguarding the New Appearance of Highways

#### **Project Origin**

The P130 pile cap of the main span of the Danjiang Bridge is elliptical. It is the largest single pile foundation in Taiwan. Located 16.5 meters below the water level, it is 77 meters long, 44 meters wide and has an area of 3,030 square meters, equivalent to a 200-meter sports field. The pile foundation is 5 meters thick, with a total weight of 5,700 tonnes of steel bars. The engineering team worked in a hot and humid environment. After almost three months of assembling and tying, the team overcame the challenge of huge and complicated steel bars and successfully completed the pre-tensioning of the pile cap foundation.

#### **Execution**

Concreting of the P130 pile cap foundation of the main bridge tower began on the morning of August 28, 2022. After 93 hours of continuous

shifts, the pouring was completed at 3:00 am on September 1, 2022. The volume reached 14,394 cubic meters. During this period, a total of 6 concrete pressure delivery vehicles were used, approximately 1,626 concrete delivery vehicles and 400 persons. Workers had to ensure the temperature of the concrete on site and overcome the scorching sun and hot working environment.

To ensure a smooth and safe pour, the team planned and designed a concrete supply plan in advance to be fully prepared. They also held several pre-pour meetings for all the details before finalising the plan and contacting a professional team for advice on controlling the temperature of the concrete. Everything, including procedures, manpower, vehicle movements and health and safety measures were confirmed in advance to ensure the safety of the construction. Despite the detailed planning, unexpected situations arose during



基礎混凝土澆置前 Before pouring the basic concrete

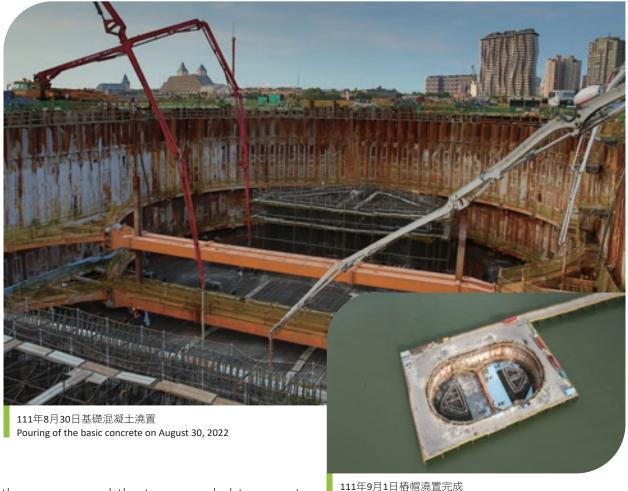
為確保混凝土澆置作業順利安全進行, 工作團隊預先規劃擬定基礎混凝土供料計 畫,充份作好準備,更預先召開多次澆置前 會議研議所有工作細節後定案及洽專業團隊 諮詢混凝土溫度控制等方法,預排相關工 序、人力、車輛動線及安衛管制作為等, 存保作業安全施工,即使經縝密的工 。 。 。 。 。 。 , 決置過程仍不免出現不可預期的狀況, 讓工作團隊不得不繃緊神經努力應對,在作 業期間突發狀況如台電停電、拌合車及混凝 土泵車故障、混凝土預拌廠機具設備因持愈 開機溫度過高等,在緊急聯絡台電報修及啟 用機用電源、備用車輛及泵車支援、拌合廠 機械設備增設風扇降溫及維修工班待命等, 澆置期間雖有二次台電外電跳電,所幸終能相互備援,且未有斷料的情況下,於111年9月1日清晨3點完成P130主橋塔基礎。

#### 任務目標

本工程於109年4月開始進入河中段施作 P130主塔鋼管樁圍堰工程起、110年12月完成 基樁至今(111)年9月完成樁帽基礎,正式跨入 下個階段塔柱工程,後續工作團隊亦將秉持戰 戰兢兢、穩健向前的精神,迎接施工中的每一 項挑戰、克服一切險阻與困難,期能如期如質 地完成此項重要任務,也期盼此項國際級的工 程能成為國內公共工程施工典範。



111年8月28日基礎混凝土澆置 Pouring of the basic concrete on August 28, 2022



the process and the team needed to execut carefully. Emergencies included Taiwan Power Company power cuts, breakdown of mixer trucks and concrete pump trucks, and overheating of machinery and equipment in the concrete batching plant when they were left on. These were resolved by contacting Taiwan Power Company to request restorations, and by relying on back-up power, back-up vehicles, back-up pump trucks, adding fans to the mixing plant machinery and equipment to cool them, and keeping the maintenance team on standby, etc. Although there were two external Taiwan Power Company power cuts during the casting period, fortunately the back-ups worked and there was no shortage of materials. At 3:00 a.m. on September 1, 2022, the foundation of the P130 main bridge was completed.

#### **Mission Target**

The project was begun in April 2020 with the construction of the P130 main bridge steel tube pile cofferdam from the middle section of the river. The foundation pile was completed in December 2021 and the pile cap foundation was completed in September 2022, marking the official start of the next phase of the pylon. The engineering team for the follow-up works will continue to strive for steady progress in order to meet every construction challenge, overcome all obstacles and difficulties, and complete this important task on schedule and with high quality. It is also hoped this project could become a model for domestic engineering in Taiwan.

Concrete pouring for the pile cap completed on September 1, 2022

# 屏東地區台 17 線易淹水路段改善提升防災效能行車安居有保障

Improvement of a Flood Prone Section of Provincial Highway No.17 in Pingtung Promoting the Effectiveness of Disaster Prevention for Driver Safety



台17線257k+580(東港鎮)新建橋梁工程-牛埔溪疏洪橋 Provincial Highway No.17 257k+580 (Donggang Town) New Bridge Project – Niupu River Dredging Bridge

#### 持續改建工程

公路總局第三區養護工程處轄管台17 線252k至266k行經屏東縣東港鎮、林邊鄉及 佳冬鄉地區,屬經濟部水利署劃分地層下陷 區,常年因汛期期間颱風豪雨等天候因素, 致排水不良且既有河道通水斷面不足屢屢溢 淹至橋面與道路,導致台17線需進行交管或 封路影響用路人行車安全;公路總局第三區 養護工程處潮州工務段爰自97年開始提報配 合屏東縣政府「易淹水地區水患治理計畫」 辦理橋梁改建及路面加高工程。

第三區養護工程處陸續辦理「台17線257k+580(東港鎮)新建橋梁工程(牛埔溪疏洪橋)」100年12月完工、「台17線260k~261k(林邊鄉)臺鐵路段至國3林邊交流道路面提高工程」102年10月完工、「台17線258k~259k(東港鎮)大鵬灣路段提高工程」111年1月完工、「台17線261k+300(林邊鄉)長源橋工程」、「台17線264k+942(佳冬鄉)羌園二號橋改建工程」102年12

月完工、「台17線264k+850佳冬鄉羌園路 段道路提高工程」107年7月完工、「台17線 265k+650~266k佳冬鄉羌園-六根路段道路提 升工程」111年5月完工及「台17線261k+440 嗂仔口橋改建工程」111年11月完工。

該路段橋梁改建與道路提高,已有效提 升公路橋梁防洪抗災耐震能力,避免汛期或 地震時交通中斷,提升救災效能,降低周遭 雨水患風險之同時,亦提升居住環境之安全 性及生活品質。



台17線264k+850佳冬鄉羌園路段道路提高工程 Road Elevation Project of Qiangyuan Road Section, Jiadong Township, Provincial Highway No.17 264k+850



台17線258k~259k(東港鎮)大鵬灣路段提高工程 Road Elevation Project of Dapeng Bay Section of Provincial Highway No.17 258k~259k (Donggang Town)



#### **Continuous Improvement**

The Third Maintenance Office of the DGH is responsible for the 252k~266k section of Provincial Highway No.17, passing through Donggang Town, Linbian Township and Jiadong Township in Pingtung County. It is a subsidence area classified by the Water Resources Agency of the Ministry of Economic Affairs. Due to weather factors such as typhoons and heavy rains during the flood season, poor drainage and inadequate cross-sections of existing rivers, bridge decks and roads have repeatedly been flooded, resulting in the need for traffic control or road closures on Provincial Highway No.17 and affecting the safety of road users. Since 2008, the Chaozhou Maintenance Office Branch of the Third Maintenance Office has submitted reports to cooperate with the Pingtung County Government's "Hazard Control Plan for Flood-Prone Areas" to manage bridge reconstruction and road elevation projects.

The Third Maintenance Office has completed the "Provincial Highway No.17 257k+580 (Donggang Town) New Bridge Project (Niupu River Dredging Bridge)", which was completed in December 2011, "Provincial Highway No.17 260k~261k (Linbian Township)

Taiwan Railway Section to Provincial Highway No.3 Linbian Interchange Road Elevation Project", which was completed in October 2013. "Provincial Highway No.17 258k~259k (Donggang Town) Dapeng Bay Section Elevation Project", which was completed in January 2022, "Provincial Highway No.17 261k+300 (Linbian Township) Changyuan Bridge Project" and "Provincial Highway No.17 264k+942 (Jiadong Township) Qiangyuan No.2 Bridge Improvement Project", which were completed in December 2013; "Provincial Highway No.17 264k+850 Jiadong Quanyuan Section Raising Project", which was completed in July 2018; the "Provincial Highway No.17 265k+650~266k Jiadong Township Qiangyuan-Liugen Road Section Improvement Project" was completed in May 2022, and "Provincial Highway No.17 261k+440 Yaozikou Bridge Reconstruction Project" was completed in November 2022.

The reconstruction of the bridges and road elevation in this section have effectively improved the flood control, disaster resistance and earthquake resistance of the highway bridges, preventing traffic disruption during flood season or earthquake, improving the efficiency of disaster relief and reducing the risk caused by rainwater, while improving the safety of the living environment and quality of life.



台17線261k+440嗂仔口橋改建工程 Reconstruction Project of 261k+440 Yaozikou Bridge on Provincial Highway No.17

# 屏鵝公路纜線 141 公里地下化 暨種樹百里 2.0 計畫 徜徉綠色長廊 愛上天際線無礙景緻

Ping-E Highway 141k Underground Cable and 100k Tree Planting 2.0 Project

Lingering in the Green Corridor and Falling in Love with the Unobstructed Horizon



屏鵝公路改善成果 Result of Ping-E Highway Improvement

#### 綠色公路

墾丁國家公園歷年均有600萬以上國內外 旅遊人數,屏鵝公路為西部唯一通達的公路, 實屬國際級迎賓大道。

公路總局為全面提升屏鵝公路沿線鄉鎮 供電網韌性、塑造自然乾淨之天際線、營造更 優美的綠色長廊,會同台電公司、中華電信辦 理纜線下地,並與林試所合作改善優化屏鵝公 路植栽觀賞性策略,並於下地工程交維期間, 一次性完成沿線不良木汰換、補換植、樹穴改 善、礙景設施遮蔽等景觀優化措施,減少交通 衝擊,並於111年度超前進度完工。

公路總局目標以最短時間之交通衝擊,達 成日後防災韌性的供電系統、百年老樹綠色長 廊、海天一線傍海而行的療癒公路。

#### 跨域合作

本計畫全線起自高屏大橋、訖至恆春,包含桿線下地與景觀優化工程,景觀優化部分為

减少施工界面,係併入桿線下地工程配合同時進場換(補)植。整體由公路總局統籌施工,林業試驗所協助植栽規劃,林務局及台糖合作苗木供給,台電公司負責桿線下地工程之管線設計及材料供應協調,地方維運部分則由屏東縣政府及屏東縣警察局協助交通維持,跨域合作,各司其職。

#### 後續維養

以臺灣原生樹種為主軸,請益林業試驗 所「全國種樹諮詢中心」,導入正確種樹知 識,包括樹種建議、種植技術指導、土壤生 育地及修剪維護等,並辦理培訓課程,後 續養護作業將參照公路總局規範、林試所 修剪指引及相關養護手冊,期能建構綠色 屏鵝公路。

#### 實質效益

- 一、全面提升屏鵝公路沿線鄉鎮供電網韌性, 促進經濟穩定發展,並減少分年桿線下地 工程對屏鵝公路造成之重複性交通與經濟 衝擊及施工干擾。
- 二、減去林立的電桿與電線,設施減量塑造更 自然優美、無礙景之景觀與乾淨之天際線 景緻。
- 三、同步汰換沿線不良木、補換植、土壤及 樹穴改善、礙景設施遮蔽、特色樹種營 造等景觀優化,型塑更安全、更優美的 綠色長廊。
- 四、帶動國內整體道路景觀發展。



#### **Green Highway**

Kenting National Park receives an average of more than 6 million domestic and international tourists each year. The Ping-E Highway is the only provincial highway to Kenting National Park in the west, and is truly a symbol of Taiwan for international visitors.

To create an unobstructed horizon, the DGH has improved the resilience of the power supply network to towns and villages along Ping-E Highway, creating a more beautiful green corridor. It worked with Taiwan Power Company and Chunghwa Telecom to bury all the cables underground, and with the Taiwan Forestry Research Institute to optimize the strategy for planting ornamental plants. During the maintenance period of the cable work, the DGH carried out landscape optimisation measures such as pool condition tree replacement, planting and replacement, improvement of tree pits and optimisation of scenic obstructions to reduce traffic impact. The project was completed ahead of schedule in 2022.

The DGH aims to achieve a disasterproof and resilient power supply system for the future in the shortest possible time, and to create a highway with green corridors of century-old trees along the sea.

#### **Cross-domain Collaboration**

The project was begun at Gaoping Bridge and ended at Hengchun, including the undergrounding of poles and cables and landscape optimisation. The construction interface of landscaping part was reduced by incorporated into the underground pole and cable project, which was planted at the same time. This project was coordinated by the DGH, with the Taiwan Forestry Research Institute and Taiwan Sugar Corporation providing seedlings, and Taipower Company responsible for cable design and material

supply. The Pingtung County Government and the Pingtung Police Department assisted with traffic management, each playing their part in the cross-domain project.

#### Follow-up Maintenance

The DGH selected Taiwan's endemic tree species as the main group and consulted the National Tree Planting Consultation Center of the Taiwan Forestry Research Institute to incorporate proper tree planting knowledge, including tree species recommendations, technical guidance, soil growth, pruning and maintenance, etc. Training courses have also been organized. Subsequent maintenance will be carried out in accordance with the DGH's regulations, the Taiwan Forestry Research Institute's pruning guidelines and other maintenance manuals, in the hope of creating a greener Ping-E Highway.

#### **Substantial Benefits**

- 1. To improve the resilience of the power supply network for towns along the Ping-E Highway, promote stable economic development and reduce the recurring traffic and economic impacts and construction disruptions caused by the annual pylon and cable undergrounding project on the Ping-E Highway.
- 2. Elimination of numerous electric poles and cables, reduction of the number of facilities to establish a more natural and beautiful, unobstructed landscape and horizon.
- 3. Meanwhile, replacing poor condition trees along the road, supplemental planting and transplanting, improving soil quality and plant pits, screening scenic obstructing facilities, planting specific tree species and other landscape enhancement measures to shape a safer and more beautiful green corridor.
- 4. To promote the landscape development of the overall road in Taiwan

# 東西向快速公路台 76 線 (0k+000~3k+700) 永興至文津路段新建工程榮獲 第 22 屆公共工程金質獎

East-West Expressway No.76 Yongxing-Wenjin Section (0k+000~3k+700) Construction Won the 22nd Public Construction Golden Quality Award



中央綠帶噴灑草籽綠化道路

Spraying of grass seeds in the central green belt to green the road

#### 工程概述

「東西向快速公路台76線 (0k+000~3k+700) 永興至文津路段新建工程」位於彰化縣芳苑 鄉,為主線全長3.7公里新闢道路工程,且亦為 東西向快速公路台76線台19線以西計畫第一標 工程;工程於109年6月30日開工,原訂111年5 月15日完工,提前於111年4月25日完工,並於 111年9月7日順利通車。

工程主要項目計有擋土牆工程、排水工程、路基工程及鋪面工程,車道採單向2快車道及1慢車道配置,快慢車道間採實體緣石分隔,於工程中央綠帶辦理植栽作業及噴灑草籽,藉此增加綠化空間保護生態;另道路中央設置滯洪池及溢流堰,以降低區域瞬間逕流量,減緩區域排水負擔。

#### 施工特色

工程擋土牆採鋼模板施作,施工團隊研發使用「倒角高程可調式結構及倒角高程線型控制模組」,以有效控制擋土牆各單元間銜接高程及外露倒角線型,該模組由磁吸式角材、螺桿、螺帽及調整座組成,此模組並已取得專利。

為提高路基承載力及確保路面平整度,施工過程依規定回填滾壓,逐層車載試驗,並採2臺瀝青混凝土鋪裝機同時施作,減低縱向接縫產生之可能,路面完成後,經公路總局材試所檢測,國際粗糙度IRI為1.78m/km。

#### 工程績效

本工程以安全、品質及進度為圭臬,施工期間進度穩定超前,連續兩季安全衛生聯合稽核暨三級勞安聯合作業稽核成績斐然,經公路總局西部濱海公路北區臨時工程處公開表揚;工程品質歷經工程處稽核、公路總局督導、交通部及工程會查核,成績卓越;工程經公共工程委員會評選,榮獲111年度第22屆公共工程金質獎殊榮。

#### **Engineering Overview**

East-West Expressway No.76 Yongxing-Wenjin Section (0k+000~3k+700) Construction is located in Fangyuan Township, Changhua County. It is a new section of the main road with a length of 3.7km, and it is also the first construction tender of the East-West Expressway No.76 west of Provincial Highway No.19. This project was begun on June 30, 2020 and was originally scheduled for completion on May 15, 2022. It was completed ahead of schedule on April 25, 2022 and opened to traffic on September 7, 2022.

The main items of the project included retaining walls, drainage, subbase and surfacing. The carriageway has a one-way configuration with 2 fast lanes and 1 slow lane. The fast and slow lanes are separated by solid kerbs. Plants and grass seeds are planted in the landscaped median to increase vegetation and protect the environment. In addition, a detention pond and overflow weir will be installed in the center of the road to reduce the instantaneous runoff in the area and the load on the drainage system.

#### **Engineering Features**

Steel formwork was constructed for the retaining wall. The engineering team developed and used the "Chamfer Elevation Adjustable Structure and Chamfer Elevation Linear Control Module" to effectively control the connection elevation between the units of the

retaining wall and the exposed chamfer line. The kit consists of magnetic angle materials, bolts, nuts and adjustment bases. This module has been patented.

To improve the bearing capacity of the subgrade and to ensure the evenness of the road surface, the surface was backfilled and rolled in accordance with the regulations during the construction process, and the vehicle test was carried out layer by layer. Two asphalt-concrete paving machines were installed simultaneously to reduce the possibility of longitudinal joints. The International Roughness Index (IRI) is 1.78m/km as tested by the Materials Testing Laboratory of the DGH.

#### **Engineering Performance**

The project adhered to the principles of safety, quality and progress. Progress remained steady and ahead of schedule. It achieved excellent results in the Health and Safety Audit and the Level 3 Labor and Safety Audit for two consecutive quarters and was publicly commended by the West Coast Expressway Northern Region Temporary Engineering Office of the DGH. Quality was audited by the Engineering Office, supervised by the DGH, and approved by the MOTC and the Public Construction Commission, with excellent results. The project was selected by the Public Construction Commission and won the 22nd Public Construction Golden Quality Award in 2022.



台76線夜間空拍 Night-time aerial photography of East-west Expressway No.76

## 台 9 線 325k+900~328k+800 瑞豐永安段 道路拓寬工程榮獲第 16 屆金安獎特優

Provincial Highway No.9 Ruifeng-Yongan (325k+900~328k+800) Section Widening Project Won the High Distinction Award of the 16th Excellent Construction Golden Safety Awards



榮獲第16屆金安獎 Won the 16th Excellent Construction Golden Safety Award

#### 建構世界級景觀公路

公路總局為改善花東地區交通,長期致力提升花東縱谷公路整體服務品質,以建構世界級景觀公路為目標。本標瑞豐永安段拓寬道路工程為台9線景觀大道臺東段之優先標工程,具有象徵性指標性意義,本道路改善採以原路拓寬方式,全長2.9公里,主要施工項目包括道路工程、橋梁工程、擋土牆工程、箱涵及其他附屬工程,施工期間雖歷經新冠疫情、東部人

員缺工、物料上漲及強震發生等影響,施工團 隊不屈不撓勇敢面對克服挑戰。

#### 有效風險傳遞及落實管理

公路總局第三區養護工程處為招攬優良廠 商,招標階段將廠商職安執行能力及過去工安 績效列為評選項目,為落實團隊職安觀念,施 工期間積極辦理各項安全衛生研習課程,對於 重複性常見缺失,定期召集各單位辦理矯正預

> 防會議,達到橫向單位整合職安管理 之目標。設計階段三工處盤點工區五 大風險交付設計單位,並要求完成辦 理風險辨識、評估、完成風險評估報 告、風險地圖、安全設計圖説及預算 編列。開工前召開風險傳遞會議,告 知施工廠商要求擬定風險防治對策, 監造單位訂定風險管制計畫執行監 督,有效管控工區高風險,提升工區 整體施工安全性。



台9線景觀大道瑞豐永安段完工示意圖 Schematic diagram of the completed Ruifeng Yongan section of the landscape boulevard on Provincial Highway No.9

# Constructing a World-class Landscape Boulevard

In order to improve traffic in the Hualien and Taitung areas, the DGH has long been committed to improving the overall service quality of the East Rift Valley Highway, with the goal of building a world-class landscape boulevard. The road widening project of the Ruifeng-Yongan section is the priority construction in this tender of the Landscape Boulevard Provincial Highway No.9 Taitung section with symbolic significance. The project will widen the existing road with a total length of 2.9 kilometers. The main works include road construction, bridge construction, retaining walls, box culverts and other ancillary works. Despite the effects of the COVID-19 pandemic, a shortage of labor in the East, rising costs of material and strong earthquakes, the engineering team has persevered to overcome the challenges.

# Effective Risk Contagion and Implementation Management

To attract quality suppliers, the Third Maintenance Office included the suppliers'

ability to implement occupational safety and their safety performance on previous projects as evaluation points during the tendering phase. Safety and health courses were organized during construction to familiarise the team with occupational safety concepts. For recurring deficiencies, all units regularly met for corrective and preventive meetings to achieve the goal of horizontal unit integration of occupational safety management. At the design stage, the Third Maintenance Office took an inventory of the five major risks in the work area and handed it over to the design unit, requiring risk identification, assessment, completion of the risk assessment report, risk maps, safety design diagrams and budget formulation. A risk communication meeting was held prior to the start of construction and contractor was informed by requirements to formulate risk prevention and control countermeasures. The supervision unit formulated a risk control plan to implement, manage effectively and control the high risks in the work area, thereby improving overall safety.





懸臂工作車電子圍籬警報廣播管制 Cantilevered electronic fence alarm transmitter

#### 風險即時回報預防災害發生

他山之石可以攻錯,工程團隊保持施工安全敏感度,以其他工地發生事故為借鏡,進行風險回饋,針對類似施工方法,重新進行風險分析,加強工地安全管理及提出精進作為,例如三鶯線事故,團隊加強柱頭翼版支撐,改用桁架支撐,另外東部地區地震頻繁,因應PCI梁橋因地震大樑翻落事故,為防範同樣事情再發生,增設防震措施材料,加強預力I型梁耐震效果,經歷多次花東地區大小地震,均能達到預期所需成果。

#### 科技化安全管理暨AloT智慧聯網整合

工區運用科技化安全管理暨AIOT智慧聯網即時監控系統,整合人臉辨識系統、工地簡易氣象站、水位監測、電子圍籬等科技設施,工作車採用BIM進行工序及衝突安全分析,實施工安全管理,邊坡自動監測科技設置、實施全面主動式監控系統等科技化管理,當人員侵入危險區即自動廣播警示驅離,能有效保全作業安全,公路總局第三區養護工程處及工程團隊持續落實全員工安,持續營造友善職場環境、守護職場勞工安全,以達到「零事故、零職災、全員工安」之安全衛生目標。



# Instant Report on Risks for Disaster Prevention

Advice from others can help you overcome the own shortcomings. To keep the engineering team alert to construction safety, accidents at other sites were referenced as risk feedback. For similar construction methods, risks were re-analysed for improved site safety management and advanced measures, such as the Sanying Line accident. The team strengthened the support of column cap wing plate and replaced it with a truss support. In addition, in response to the accident of the PCI girder bridge falling due to frequent earthquakes in the eastern region, additional anti-seismic materials were added, and the prestressed I-beam was strengthened to prevent the same accident. After experiencing many earthquakes in Hualien and Taitung areas, the expected results were achieved.

# Technological Safety Management and AloT Integration

The work area adopts technological safety management and AloT real-time monitoring system with integrated facial recognition system, simple weather station in the construction site, water level monitoring, electronic fence and other technological facilities. Construction vehicles adopt BIM for process and conflict safety analysis to implement work safety management. Technical management such as automatic slope monitoring has been installed, and a comprehensive active monitoring system established. When people into the danger zone, the system automatically broadcasts warnings to leave, protecting the safety of operations effectively. The Third Maintenance Office and the engineering team will continue to keep an eye on everyone's work safety by creating a friendly workplace and protecting the safety of workers in the workplace, so as to achieve the safety and health goals of "zero accidents, zero occupational injuries and safety for all employees".

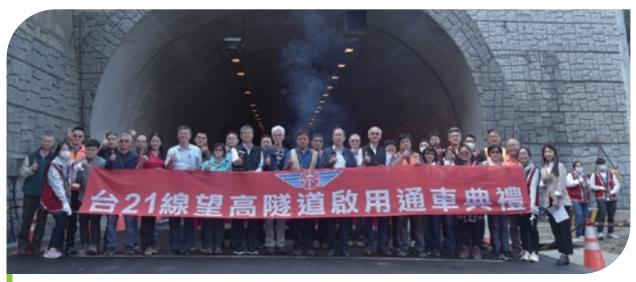


PCI梁橋增加耐震設施

Earthquake resistance facilities added to the PCI girder bridges

### 111 年公路養護具體成果

#### The Highway Maintenance Results in 2022



台21線115k+540望高隧道通車典禮

The opening ceremony of the 115k+540 Wanggao Tunnel of Provincial Highway No.21

#### 戮力不懈 確保安全

公路總局於111年度執行內含3,483座橋梁 及283座隧道、總長達5,146公里的省道養護工 作,以平安潔美為工作主軸,包含路面品質改 善、橋梁改建及耐震補強、邊坡保護與災害復 建、公路修建拓寬以及環境景觀形塑等項目, 以提供便利交通、確保用路人安全。

#### 縮時 減量 提高強度

對於「路平」目標,公路總局持續推動快速公路路面平整度提升,111年度合計改善里程數為110公里,本年度快速公路IRI已由110年的2.32降至111年的2.23,並積極研擬路面延壽策略,採用瀝青膠泥進行路面裂縫填補及底層碎石級配拌合水泥方式來改良路基承載力,同



台18線芙谷峩橋每年度辦理橋檢作業

The Fugue Bridge on Provincial Highway No.18 gets a safety inspection each year



台2線5.3k隙地營造改善,採用簡易綠化,提供休憩空間及視覺通透感 The improved open space at 5.3k of the Provincial Highway No.2 provides a rest area and visual transparency with simple greenery

#### **Working Tirelessly to Ensure Safety**

In 2022, the DGH carried out maintenance work on 5,146 kilometers of provincial highways, including 3,483 bridges and 283 tunnels, focusing on safety, cleanliness and aesthetics. This included improving the quality of the road surface, reconstructing bridges and strengthening them for earthquakes, protecting slopes and rebuilding after disasters, widening highways and landscaping the environment to ensure comfortable transport and the safety of travellers

# Time and Volume Reduction for Increased Intensity

For the goal "flat road", the DGH continues to improve the flatness of motorways as efficiently as possible. The total distance

improved in 2022 is 110 kilometers, reducing the IRI for motorways from 2.32 in 2021 to 2.23 in 2022. The extanding service life strategy of roads has also been adopted by using asphalt cement to fill cracks in the road surface, and by improving the bearing capacity of the subgrade by mixing cement with crushed stone in the bottom layer or by selecting a large grain size (nominal maximum grain size 25mm). When burying pipelines, the strategy of reducing the time and volume of pipeline excavation has been adopted to control the number of cases. The number of excavations on provincial highways in 2022 was 3,503 cases, a decrease of 13% compared to 2021, and the excavation length of 125 kilometers was reduced by 8% compared to 2021. The total number of manholes in 2022 was paired with the road flattening project with a total number of 1,897, and the overall rate of manholes on provincial highways has exceeded 85%.





台2丙線8k隙地植栽輕量化改善 Reducing the weight of plants in the open space at the 8k of Provincial Highway No.2C

時使用水泥填縫料增加路面抗剝脱能力,並以提 升瀝青膠泥等級(使用改質瀝青)或使用大粒徑 (標稱最大粒徑25mm)等方式來延長路面的使 用年限。對於管線挖掘管理則持續採取「管線 挖掘縮時減量」策略來管控申挖案件數量, 111 年度省道挖掘件數為3,503件較110年減少13%, 同時挖掘長度125公里較110年度減少達8公里, 111年度人手孔配合路平專案下地數量合計為 1,897個,省道整體人手孔下地率已超過85%。

#### 科技巡檢 守護用路人安全

「路安」部分是公路總局最重視的課題, 公路總局依據交通部頒「公路橋梁檢測及補強 規範」及公路總局「公路養護手冊」等規範辦 理橋梁定期檢測,111年度已完成1,903座省道 橋梁定期檢測作業,並於颱風、豪大雨及地震 後辦理特別檢測,以及早發現問題,維護橋梁 通行安全。另公路總局使用UAV無人機空拍觀 測橋梁上下游河道變化,亦用於拍攝在深山峻 嶺或人員不易到達之橋梁構件,以確保橋梁整 體安全性。公路總局為增進橋梁檢測效率及安 全性,刻正研發AI智慧無人機橋梁檢測系統, 並獲得交通部領航盃應用組卓越獎。

在邊坡安全管理方面,公路總局將省 道轄區邊坡予以分級管理、導入科技巡檢、 以無人機空拍建立3D模型比對變異性,並 針對省道轄區約3萬2,000支地錨辦理安全性 評估、邊坡補強及防蝕處理;另外省道邊坡 全生命週期維護管理系統的資料完整性一直 是公路總局持續努力的目標,已完成近5年 災害復建資料之建置,針對易致災熱點輔以 光達技術濾除植披、檢視岩體裂解狀況擬定 復建策略,提升用路人行的安全;公路總局 除持續辦理各項災害搶修復建作業,亦積 極協助地方政府辦理花64線(瑞港公路) 0k+000~22k+500及投89線(力行產業道路) **通行可靠度及安全性之提升。** 

#### 打造幸福有威輕美公路

公路總局對於公路環境「潔、美」形塑 方面:以道路空間設計美學,優化既有省道景 觀、推動「景觀輕設計」計畫,採「輕、透、 減量」方式整合環境元素,於111年完成430公 里以上之路段改善,礙景設施清整(含民眾占 用清除、邊坡管線清整)45處、視覺通透度提 升(臨路側植栽清整)118處、島頭植栽高度改 善74處,全面提升道路養護成果及環境景觀形 塑目標。另針對行道樹缺失改善部分,111年度



為塑型更優美的高山生態景觀,增加視域自然性,移除電桿 及多餘雜木,使視覺景觀更為乾淨舒適

To shape a more beautiful alpine ecological landscape and improve the natural view, the poles and excessive trees have been removed to make the view cleaner and more aesthetically pleasing



擋土牆端砌石柔化,改變原本生硬量體,且能建造多孔性昆 蟲棲地及避難空間,增加環境融合度

The stone masonry at the end of the retaining wall is softened to alter the original rigidity, creating a porous insect habitat and refuge, increasing the degree of environmental integration

# Technology Inspection to Protect the Safety of Passers-by

"Road Safety" is of paramount importance to the DGH. To this end, it conducts regular bridge inspections in accordance with the MOTC's Highway Bridge Inspection and Reinforcement Specifications and the DGH's Highway Maintenance Manual.

"Highway Maintenance Manual" of the DGH. In 2022, 1,903 bridges on provincial highways have been completed. Regular bridge inspections and special inspections after typhoons, heavy rains and earthquakes are carried out to identify problems early and maintain road safety. The DGH also adopts UAV drones to monitor changes in rivers upstream and downstream of bridges. Also used in taking pictures of bridge components in deep mountains that rare humans to reach, ensuring the overall safety of bridges. To improve the efficiency and safety of bridge inspections, the DGH is developing an AI intelligent UAV bridge inspection system, which won the Excellence

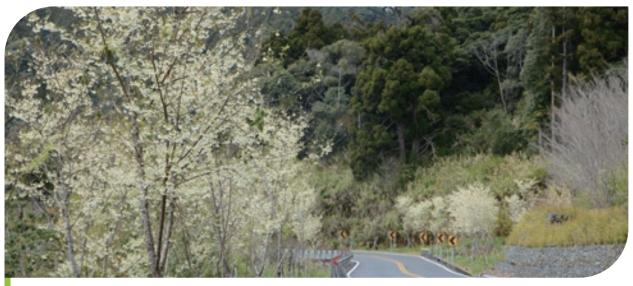
Award in the Application Group of the MOTC Pilot Cup.

In terms of the safety management of side slope, the DGH has introduced tiered management and technological inspections with aerial drone 3D model photography to compare variability, and conducted safety assessments on 32,000 ground anchors in the provincial highway area, side slope reinforcement and anti-corrosion treatment. In addition, the DGH's continuous goal has maintained the data integrity of the full life-cycle maintenance and management system for provincial highway embankments. Disaster hotspots are complemented by LiDAR technology to filter out vegetation, inspect rock mass cracks and formulate reconstruction strategies to improve road user safety. In addition to disaster reconstruction and restoration work, the DGH continues to improve traffic reliability and safety on Provincial Highway No.64 (Ruigang Highway) 0k+000~22k+500 and Provincial Highway No.89 (Lixing Industrial Road).



移除礙景設施、增加昆蟲多孔隙棲地,營造台18線84k~85k隙 地景觀

Obstacle facilities were removed and insect porous habitat increased to create open space scenery  $84k\sim85k$  on Provincial Highway No.18



台18線78k~85k森態阿里山 Provincial Highway No.18 78k~85k Alishan Forest

完成喬木樹幹增設保護套8,354株、老舊支架拆除859株、樹穴改善(移除表面覆蓋物)20處共916株、協調移除占用物10處等養護成果。

其中又於阿里山工務段執行成果(台18線 75k~85k)最為傑出,並榮獲111年度交通部金 路獎優良景觀類第一名。路段主題為「森態阿 里山」,以生態、生命、生物為主軸,並結合 景觀輕設計理念,移除不必要之礙景設施,提 升視覺通透度,將道路景觀融入自然環境,打 造極具自然特色之景觀道路。

公路養護作業不像新建工程,完工後充滿了鎂光燈與掌聲,而是更傾向於身體保養,養護的好也許沒那麼有感,但是只要養護不好就會造成用路人困擾,未來公路總局將持續以「平安潔美」為養護指標,在公路養護上持續精進,以維護民眾用路權益。



台7線85.5k~94k及台7甲線0k~3k櫻花路廊 Provincial Highway No.7 85.5k~94k and Provincial Highway No.7A 0k~3k Cherry Blossom Corridor



# Create Happy, Light and Beautiful Roads

In terms of shaping "clean and beautiful" highway environments, the DGH optimizes the landscape of existing provincial highways based on the aesthetics of road space design, promotes the "light landscape design" plan, and integrates environmental elements in a "light, transparent and reduced" way. More than 430 kilometers of road sections will be improved in 2022, with 45 sight obstructing facilities removed (including objects occupied by people and side slope pipelines), 118 visual transparency places improved (roadside plants removed), and 74 plant height improvements, to comprehensively promote road maintenance results and environmental landscape design goals. In addition, to improve the lack of street trees, 8,354 tree trunks with protective covers, 859 old supports removed, 20 tree pits improved (surface cover removed) with a total of 916 trees, and 10 occupied objects removed in 2022.

Among them, the results of the Alishan Maintenance Office Branch (Provincial Highway No.18 75k~85k) are the most outstanding, winning first place in the excellent landscape category of the Golden Road Award of the MOTC in 2022. The theme of the section is "Alishan Forest", focusing on ecology, life and biology, combined with the concept of light landscape design, unnecessary view obstructing facilities removed, visual transparency improved, and integrating the road landscape with the natural environment to create a landscape road with natural features.

Maintaining a highway is not like building a new road with lots of spotlights and applause when finished. It is more like taking care of body. If doing well, it may not be that impressive; but if don't do it well, it might cause problems for road users. In the future, the DGH will continue to adopt "safety, cleanliness and aesthetics" as maintenance objectives, keep road maintenance to protect the rights and interests of the public.

### 111 年公路防災成果彙報暨展望

#### The Highway Disaster Prevention and Prospects in 2022



搶通災區施工便道協助民眾脱困 Rapid restoration of the access road in the disaster area to help people get out

#### 防災應變演練成果

111年歷經0323花蓮地震、軒嵐諾颱風、梅花颱風、0917/0918臺東地震、尼莎颱風、奈格颱風共6次劇烈天候事件;0917/0918臺東地震造成花蓮六十石山及赤科山聯外道路阻斷致遊客受困,公路總局緊急動員大型機具及人員協助搶通道路及疏散受困遊客百餘人;尼莎颱風期間為留滯遊客運補油電水糧、日夜搶通施工便道,協助分批撤離總計近500人,中央與地方、政府與民間齊力協助用路人平安回家!

#### 兵推導入地震兵棋臺及全災害風險 評估

本年度共辦理兵棋推演5場、天然災害 封橋/封路演練36場、隧道事故演練31場、 地震演練20場;其中兵棋推演導入地震兵棋 臺,讓兵推境況模擬更符合實際災況,並以 國家關鍵基礎設施演習方式,評估選定之維 生基礎設施,以全災害角度 (天然、人為、資安)下達 情境,與縱橫向單位共同演 練,以驗證機關風險均能有 效控制。

#### 隧安專案 無預警抽檢 作業成果

精進公路隧道緊急應 變督導考核三級作業機制, 由公路總局督導小組就轄管 甲、乙級隧道辦理督導考核 作業,並邀請外部專家學者 擔任委員指導精進,以驗證 隧道全方位聯防作業能力。

#### 公路防救災資訊系統(Bobe 168.tw) 改版升級

為提供各災防單位介接省道通阻資訊及因應資通訊安全管理,公路總局綜整歷年防災經驗並藉優化人機介面將Bobe系統全面改版升級,提升使用順暢度及防救災工作效率,俾利災防單位迅速整合相關災情,採取各種必要之應變措施,並提供省道即時資訊予用路人。



111年度隧安專案實況-蕭柏桓委員(左二)、林錦堂委員 (左三)

2022 Tunnel Safety Program, committee Xiao Bo-huan (second from left), committee Lin Jin-tang (third from left)



111年度兵棋推演實況 2022 Military Stimulations

#### **Results of Disaster Response Drills**

In 2022, there were 6 severe weather events including the March 23 Hualien Earthquake, Typhoon Hinnamnor, Typhoon Muifa, September 17/18 Taitung Earthquakes, Typhoon Nesat and Typhoon Nalgae. In the September 17/18 Taitung Earthquakes, tourists were trapped when the roads connecting Liushishi Mountain and Chike Mountain were destroyed. The DGH urgently mobilized large machinery and personnel to clear the road and evacuate more than a hundred trapped tourists. Nearly 500 people were evacuated in batches during Typhoon Nesat, with the DGH providing electricity, water and food to trapped tourists. Central and local governments teamed together with civil society helping road users got home safelv!

#### Earthquake Simulation Platform and All Hazards Risk Assessment **Integrated into Simulations**

This year, a total of 5 simulations were organized, with 36 natural disaster bridge/road closure drills, 31 tunnel accident drills and 20 earthquake drills. Among them, the simulations quote the earthquake simulation platform to more closely match the actual disaster situation. Methods for the assessment of selected life support infrastructures were adopted in the form of National Key Infrastructure Exercises, with scenarios issued from the perspective of all

disasters (natural, man-made and information security). Joint exercises were organized with vertical and horizontal units to verify the risks of the organization controlled effectively.

#### **Tunnel Safety Program: Inspection Results without Early Warning**

The DGH improved the third level mechanism of emergency response monitoring and evaluation of tunnels. The team of the DGH is responsible for the supervision and evaluation of Class A and Class B tunnels under its jurisdiction, and invites external experts and scientists as committee members for further quidance in order to verify overall defence operation capabilities of the tunnels.

#### **Highway Disaster Prevention** and Relief Information System (Bobe 168.tw) revision and upgrade

To provide various disaster prevention departments with access to provincial highway blockage information, and communication security management, the DGH revised and upgraded the Bobe System by years of disaster prevention experience and optimising the human-machine interface and the efficiency of disaster prevention and relief work. As a result, disaster prevention departments can quickly integrate relevant situations, various necessary emergency measures, and provide road users with real-time information of provincial highways.





# 交通部公路總局 111

## 開闢生態永續公路 跨域交流搭建保育防護網

**Creating Ecologically Sustainable Highways** The Conservation Protection Network Building for Cross-boundary Exchange



公路總局陳文瑞局長(左五)、林聰利副局長(右五)、陳 松堂副總工程司(右四)、特生中心楊嘉棟主任(左四)、 張仕緯組長(左三)與省道保育議題講者合照

Group photo with Director General of the DGH Chen Wen-juei (fifth from left), Deputy Director Lin Cong-li (fifth from right), Deputy Chief Engineer Chen Song-tang (fourth from right), Director of the Endemic Species Research Institute Yang Jia-Dong (fourth from left), Section Chief Chang Shih-wei (third from left) and the Spokesperson for Conservation on Provincial Highways

#### 凝聚力量友善生熊環境

公路總局與林務局、特有生物研究保育 中心及高速公路局自109年11月27日簽署「國 土生態保育綠色網絡」協議後,跨機關合作 迄今已近2年,為向各界揭示並分享公路生 態保育經驗,今 (111) 年8月26日與高公局於 公路總局2樓大會議廳合辦「公路生態保育 研討會」。公路總局陳文瑞局長、林聰利副 局長、高速公路局趙興華局長、陳國隆副局 長、林務局林澔貞副局長及特生中心楊嘉棟 主任皆受邀出席本次盛會,政府機關及民間 保育團體計93人參與,並同步於FB「公路總 局:公路人」粉絲團進行直播,邀請關心生 態保育的朋友一同觀看。

#### 交流分享保育成果 創造 生態永續公路

公路總局與特生中心合 作建立省道路殺調查標準作 業流程及資料庫,共享路殺 調查及生態資源數據,並針 對石虎、水鹿、金絲蛇等物 種,與林務局、特生中心、 石虎保育協會及高雄市馬頭 山社區協會等機關團體研 商,設置動物通道、防護網 等友善作為。台26線墾丁香 蕉灣 - 砂島路段與墾丁國家

公園管理處合作,每年進行夜間車道縮減、封 路10分鐘放行10分鐘交通管制及志工人力共 同護蟹,打造陸蟹廊道,減緩路殺發生。台21 線新中橫公路道路管養秉持自然工法,以綠資 材建構生態友善設施,在草坪頭-塔塔加路段 (110k~145k) 實施道路夜間封閉管制,使野生 動物獲得生息。台18線阿里山公路透過微棲地 營造等方式,讓螢火蟲回到阿里山公路繼續繁 衍。

#### 重視生態保育環境 各界給予高度讚賞

研討會上各界人士對公路機關重視生態保 育及作法給予高度讚賞,其中特生中心肯定 中央機關已落實生態環境預防與保護,並取 得良好成效,建議將環境永續理念及經驗推 廣至縣市政府,中央地方共同推動各項生態 保育工作。

未來公路總局將持續透過跨機關合作,共 享調查成果及盤點關注課題,落實綠色運輸理 念,一起營造用路人與動植物都能幸福友善的 公路,建構人與自然和諧共好的永續環境。

# Working together to Create a Friendly Ecological Environment

The DGH, the Forestry Bureau, the Endemic Species Research Institute and the Freeway Bureau signed the "National Green Network Agreement" on November 27, 2020. The institutes have been working together for almost 2 years. In order to reveal and share their experience in highway ecological conservation, the "Highway Ecological Conservation Seminar" was held with the Freeway Bureau on August 26 in the conference hall of the DGH building. The DGH Director-General, Chen Wen-juei, Deputy Director, Lin Cong-li, the Freeway Bureau Director General, Zhao Xing-hua, Deputy Director, Chen Guolong, the Forestry Bureau Deputy Director General, Lin Hao-chen and the Endemic Species Research Institute, Director Yang Jiadong were invited to the grand occasion with 93 participants from government agencies and civil conservation groups. This event was streamed live on the Facebook fan page "DGH: Highway Users" for people interested in conservation.

# Sharing Conservation Successes to Create Environmentally Sustainable Highways

The DGH worked with the Endemic Species Research Institute to formulate standard operating procedures for roadkill investigations and a database, species such as leopard cats, sambar deer, maki's keelback, etc. with government agencies and organizations, including the Forestry Bureau, the Endemic Species Research Institute, the Leopard Cat Association of Taiwan, and the Community Association of Matou Mountain, Kaohsiung City. Friendly measures wildlife crossings and protective nets were implemented. The

DGH also teamed up with Kenting National Park Headquarters on the Banana Bay-Shadao section of Provincial Highway No.26 to reduce the number of lanes at night every year, by closing for 10 minutes and reopening it for another 10 minutes for safe passage of terrestrial crabs and less roadkill together with volunteers. Provincial Highway No.21, it is known as the Central Cross-Island Highway with nature-friendly engineering. The Chaopingtou-Tataka section (110k~145k) is closed for wildlife resting at night. The Alishan Highway (Provincial Highway No.18) measures were taken such as micro-habitats creating fireflies returning to the Alishan Highway to boom continuously.

#### Efforts for Ecological Conservation Environmental Protection with Highly Appreciation

At the seminar, people from all walks of life praised the DGH for paying attention to ecological conservation and relevant practices. Among them, the Endemic Species Research Institute affirmed that the central authorities have implemented ecological environmental prevention and protection and achieved good results. Suggestion of the concept and experience of environmental sustainability should be extended to county and city governments, so the central and local governments can carry out ecological conservation together.

In the future, the DGH will share survey results and take stock of issues of concern through inter-agency cooperation, implement the concept of green transport, creating highways friendly to passers-by, animals and plants, and building a sustainable environment where people and nature coexist in harmony.



## 野生動物安心棲息 守護台 28 線馬頭山路段的淨土

A Peaceful Living for Wildlife Protecting the Pristine Land of the Matou Mountain Section of Provincial Highway No.28



梅花鹿利用動物通道通行 Sika deer crossing the road through the animal channel

#### 馬頭山生熊特殊地理環境

台28線馬頭山地區以其特殊地形地貌而聞名,位於高雄市旗山、內門與田寮區交界處,是低海拔的淺山丘陵環境,山路段兩旁廣大腹地屬於泥岩惡地,因地質不利開發,成為許多野生動物重要棲息地。在108年國家自然公園管理處於此區的調查報告中,共記錄到24種哺乳類動物,資源豐富,像是臺灣水鹿(三級保育類動物)、穿山甲(二級保育類動物)、白鼻心等野生動物,有賴馬頭山地區特殊的地理條件,進而發展出獨特的生態體系。

#### 推動生態友善作為

台28線切過馬頭山山腳,對棲息於道路兩側的野生動物與低空飛行的森林性鳥類形成棲地切割效應,加上該路段為寬廣、多彎的雙線道,用路人易在車速過快、彎道視野受限及光線不佳等因素下,對遭遇誤入道路的動物,易造成動物路

殺事件。為維護道路安全,減輕道路對周邊生態環境影響,公路總局自109年開始與農委會特有生物研究保育中心、林務局屏東林管處、屏東科技大學、馬頭山協會等單位多次前往現場勘查,於110年在野生動物路殺熱點路段及有較大腹地的橋下空間辦理第一期改善,規劃相關的生態友善設施改善工程,包含:

- 一、為防止民眾隨意頃倒丟棄垃圾,於馬頭山一、二號橋兩側設置防護網,並清理橋下環境;
- 二、將橋下擋土牆高差以土石堆疊成緩坡, 改善成為動物通道;
- 三、為防止動物誤闖路面,在台28線25k+500 與27k+500處設置防護網;
- 四、在動物路殺熱點路段前的醒目處設置警告標示,提醒用路人減速慢行等。

完成第一期改善後,經委託生態顧問公司進行短期監測評估成效後,為提升野生動物使用橋下空間的頻度與改善鹿科動物路殺熱點,公路總局再度於111年5月邀集相關單位與專家學者,規劃第二期的生態友善設施改善工程,包含:

- 一、台28線馬頭山二號橋橋下沖蝕溝改善、設置生態池及水撲滿;
- 二、台28線23k+500設置防護網等。

相關第二期成效監測亦同步進行,公路總 局將本於自然環境與人為開發之間獲得共榮共 存目標,持續打造友善綠色廊道。

#### Special ecology and geography of Matou Mountain

The Matou Mountain area on Provincial Highway No.28 is famous for its special terrain and landforms. It is located at the intersection of Qishan, Neimen and Tianliao districts in Kaohsiung City. It is a low-lying hilly area where development has been impossible cause the vast hinterland along the mountain road mudstone badland. As a result, it is now an important habitat for many wildlife. A survey conducted by the National Nature Park Headquarters in 2019 recorded 24 species of mammals, including sambar deer (protected animal level III), sika deer, crab-eating mongoose (protected animal level III), mangabeys (protected animal level II) and masked palm civet. The unique ecosystem has developed thanks to the specific geographical conditions of Matou Mountain.

#### **Environmentally Friendly Actions**

Provincial Highway No.28 cuts through the foothills of Matou Mountain, fragmenting the habitat of wildlife living on both sides of road and lowflying forest birds. In addition, this section is a wide and winding two-lane road, easy to cause roadkill when road users driving at high speeds with limited visibility around bends and poor lighting. In order to maintain road safety and reduce the impact on the environment, since 2020 the DGH cooperated with the Endemic Species Research Institute, the Council of Agriculture, the Pingtung Forest District Office, the Forestry Bureau, the National Pingtung University of Science and Technology and the Matou Mountain Association to conduct onsite inspections. The first phase of improvements was carried out in 2021 in the hot spots of wildlife roadkill and under bridges with a large hinterland.

Relevant environmental improvement projects have been planned, including:

- To prevent people from littering, protective nets have been put up on both sides of bridges No.1 and 2 at Matou Mountain, and the area under the bridge has been cleaned;
- 2. The height difference of the retaining wall under the bridge was turned into a slope by piling up earth and rocks to serve as a wild animal channel.
- 3. To prevent animals from accidentally entering the road, protective nets were installed at the 25k+500 and 27k+500 sections of Provincial Highway No.28;
- 4. Warning signs were placed in conspicuous locations ahead of the roadkill hotspot section reminding road users to slow down.

Following the completion of the first phase of improvements, an ecological consultancy was commissioned to carry out short-term monitoring and evaluation. To boost the frequency of wildlife living space under the bridge and improve the roadkill hotspots, the DGH again invited relevant agencies and experts in May 2022 to formulate the second phase of the eco-friendly facility improvement project, including:

- 1. Improvement of the gully under the bridge of No.2 on the Provincial Highway No.28, created an ecological pool and rainwater harvesting;
- 2. Set up protective nets at 23k+500 on Provincial Highway No.28.

The results of the second phase will also be monitored. The DGH will continuously create a friendly green corridor for the goal of co-prosperity and coexistence between natural environment and human-made development.



設置防護網,防止民眾傾倒垃圾 Protective nets are set up to prevent people from dumping garbage



綠帶設置防護網,以防止動物穿越道路 Protective nets are set up on the green corridor preventing animals from crossing the road

# 交通生態繪本《神祕的螢火蟲公路》 延續絢麗的螢光旅程

Traffic Ecology Picture Book *Mysterious Firefly Highway* A Gorgeous Journey of Light



故事主人翁冬冬觀察蜜源植物與螢火蟲食草植物 The protagonist of the story, Dongdong, observes honey plants and plants that feed fireflies

#### 發現阿里山公路之美

位於嘉義的省道台18線「阿里山公路」,全長約108公里,起自嘉義縣太保市,迄於玉山國家公園塔塔加遊客中心。其中嘉義市到塔塔加的路段,是通往阿里山的主要道路,俗稱「阿里山公路」。在阿里山公路上,處處可見煙嵐繚繞雲霧翻騰的自然景觀。正因由低至高海拔的多樣氣候,造就了豐富多元的林相及生態資源。其中,又以臺灣少見的冬季螢火蟲區域,吸引眾多遊客紛至沓來,最為人津津樂道。

#### 以圖文故事描繪阿里山絢麗景緻

繼去(110)年微電影「四季螢光」榮 獲第55屆美國全球電影競賽及第55屆美 國最佳短片競賽影展多項殊榮肯定之後, 今(111)年再接續出版了《神祕的螢火蟲公路》繪本,描繪一場即將開始的絢麗舞會,如何透過故事主人翁「冬冬」小男孩的幫助,得以順利展開。書中敘述了生態工法的施作,以及阿里山特有的冬螢及其獨特的習性。在書後的知識頁,也補充了相關工法説明及蜜源植物的介紹。而書籍的印刷則採用了特殊的作法,讓讀者們可以加深體驗螢光流動的意象。

這是一本適合爸爸媽媽帶著小朋友全家共同閱讀的繪本,一起進行探索神祕的生態之旅,讓愛惜生命、珍視自然的種子,能夠在小朋友們的心中發芽茁壯。也希望透過這本繪本,讓大家對於阿里山公路上的螢火蟲及其他物種,能有更多的認識及了解。公路建設,是為了讓你我便捷快速抵達目的地;而交通生態繪本,則是抵達你我心中,沿途最溫暖人心的風景。



大紅紋鳳蝶與冬螢 Byasa polyeuctes termessus and winter fireflies

# A Green Future Opening a New Chapter in Sustainability

# Discover the Beauty of Alishan Highway

The Provincial Highway No.18, is commonly known as Alishan Highway, a total length of about 108 kilometers from Taibao City, Chiayi County to Tataka Visitor Center, Yushan National Park. The section from Chiayi City to Tataka is the main road leading to Alishan, commonly known as "Alishan Highway". All along the Alishan Highway, the natural landscape of misty clouds could be discovered. The diverse climate from low to high altitude has created rich and diverse forest and ecological resources. Among them, the winter firefly area, which is rare in Taiwan, attracting visitors with the most topic talked about.

# Depicting the magnificent scenery of Alishan with illustrations and stories

Following 2021's microfilm "All-Season Glow", which won multiple awards at the 55th Accolade Global Film Competition and the 55th Best Shorts Competition, this year 2022's

picture book "Mysterious Firefly Highway" has been published, depicting an upcoming glamorous ball about to start with the help of a little boy, Dongdong, the protagonist of the story. The book describes ecological construction methods and the unique winter fireflies and their habits in Alishan. The knowledge page at the back of the book also provides additional descriptions of relevant construction methods and introductions to honey plants. The book is printed using a special process so that readers fully enjoy the experience of the firefly glow.

This is a picture book ideal for parents and children to read together, exploring the mysterious ecological journey and planting the seed of valuing life and nature in children's hearts. It is also hoped that this picture book can teach everyone about fireflies and other species on the Alishan Highway. The construction of the highway enable people to reach their destination with speed and ease; the picture book of eco-friendly transport will lead us to the most heartwarming scenery along the way in our hearts.

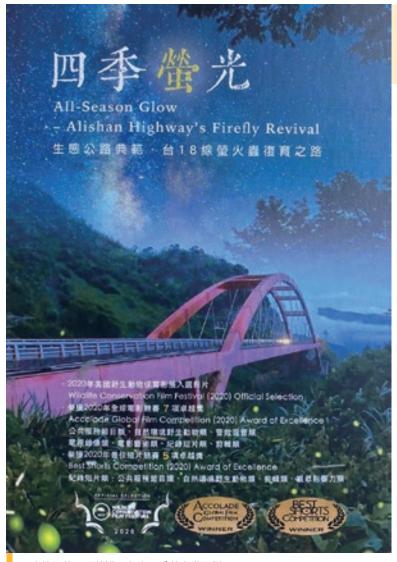


螢光舞會 Firefly Ball

## 投身復育工程及低碳綠能參訪大放異彩 多視角交流凝聚共識激盪新火花

Participated Ecological Restoration Engineering and Brilliant Low-carbon Green Energy Visits

Multi-perspective Exchange Forms Consensus and Creates New Sparks



公路總局第五區養護工程處四季螢光微電影 Microfilm All-Season Glow of the Fifth Maintenance Office, the DGH

#### 激發潛能積極減碳保育

公路總局掌理公路工程、公路運輸管理 及公路監理等業務,鑒於生態保育及淨零碳排 議題已成為全球共識,公路總局公路工程之發 展與建設及監理運輸業務,亦配合相關議題與 時俱進,公路總局於111年8月19至20日高階主管共識營規劃「台18線(阿里山公路)沿路工程參訪」,111年10月28日至29日中階主管(站長級)共識營安排參訪新竹科學園區「淨零碳排科技」,以激發主管人員配合政府重大政策,將生態保育、淨零碳排觀念融入日常業務,精進公路工程及監理運輸業務等作為。

#### 生態公路典範台18線螢火蟲 復育之路

公路總局第五區養護工程處 阿里山工務段主要轄管養護台18線 阿里山公路,該工務段為歷年度交 通部金路獎路況養護類常勝軍,也 在111年度以「三生構築阿里山公 路」為題榮獲金路獎優良景觀類第 一名殊榮,在執行災後復建及例

行維養,採「型框植生」等工法,以安全兼顧 景觀綠化維理念,進行自然棲地營造,備受肯 定,為增進公路總局高階主管共識營標竿學習 效能,並促進高階主管身心健康,增進彼此情 感交流,爰安排「台18線(阿里山公路)沿路 工程參訪」。

# 総合男女 | 界島-万線来篇章A Green Future | Opening a New Chapter in Sustainability

# Actively motivating the potential for carbon reduction and conservation

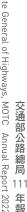
The DGH is in charge of highway engineering, highway traffic management and motor vehicles offices. As ecological protection and net-zero carbon emission have become a global consensus, the development and construction of highway engineering and motor vehicle affairs have also moved with the times. The DGH organized the "Provincial Highway No.18 (Alishan Highway) Visit" on August 19-29, 2022, with high-level executives from the Fifth Maintenance Office and the creators of All-Season Glow. On October 28-29, mid-level executives (station managers) were sent to visit the "Net Zero Emission Technology" at Hsinchu Science Park to inspire them to stay in line with major government policies and integrate the concepts of environmental protection and netzero carbon emission into daily tasks, ultimately improving highway engineering and motor vehicle affairs.

# Ecological Highway Model: the Road to Firefly Restoration on Provincial Highway No.18

The Alishan Maintenance Office Branch of the DGH Fifth Maintenance Office is responsible for the maintenance of Provincial Highway No.18 (Alishan Highway). The office branch is a regular winner in the road maintenance category of the Golden Way Awards. And won the first place in the Excellent Scenery category in the Golden Way Awards for Building the Alishan Highway with Ecology, Bio-organism and Life in 2022. In post-disaster restoration and routine maintenance "Frame-structure Vegetation" and other methods are adopted to create natural habitat while paying attention to safety and greening and have been well-received. The Alishan Highway Construction Project Visit was arranged to promote the benchmark learning effectiveness of the DGH senior management consensus camp and the mental and physical health of senior executives for exchanges and interactions.



公路總局111年度高階主管人員共識營(阿里山梅園樓)參加人員合影 Group photo of the participants of the 2022 Annual Consensus Camp for Senior Executives of the DGH (My Landscape Hotel, Alishan)





公路總局111年度中階主管人員共識營(新竹福華大飯店)參加人員合影 Group photo of the participants of the 2022 Annual Consensus Camp for mid-level executives of the DGH (Howard Plaza Hotel Hsinchu)

#### 淨零碳排 永續未來

公路總局監理運輸業務配合政府「2050 年淨零碳排」政策,以環境保護為主要考 量,致力推動2030年公車全面電動化及綠 運輸友善環境營造等計畫。為使監理機關中 階主管瞭解臺灣產業界對於淨零碳排政策的 目標、趨勢及發展成果,以激發其對於環境 保護觀念融入日常業務之創新思考及精進作 為,爰於中階主管共識營安排新竹科學園區 探索館「低碳綠能」專區參訪。該館設置綠 色產業專區,陳列數十件由竹科知名廠商所 研發與低碳綠能相關的科技產品,可作為公 路總局綠運輸政策推展之參據。

#### 翻轉思維 建構共識 提高績效

公路總局每年規劃辦理中(高)階主 管共識營,提升中高階主管團隊之組織領導 能力及團隊向心力,進而凝聚共識,建立系 統化思考及宏觀思維,並擴展領導及管理視 野。突破舊有框架,以多元視角研擬及推動 新政策方針,有助提升公路總局整體施政績 效,建立卓越績效之共同願景。



新竹科學園區探索館1樓前瞻館參訪 Visiting the Innovation Award section on the 1st floor of the Science Park Exploration Museum in Hsinchu

# Creating a Sustainable Future with Net Zero Emissions

The DGH's transport and vehicle affairs are in line with the government's "2050 Net Zero Emissions" policy, with environmental protection as its main goal. To this end, it is committed promoting the full electrification of buses by 2030 and the creation of a green transport friendly environment. To help the DGH's mid-level managers understand the goals, trends and development of the net-zero emission policy of local industries, and to inspire thinking innovatively and act with fine-tuning. A visit was arranged to the "low-carbon green energy" section of the Science Park Exploration Museum in Hsinchu. The museum has a section dedicated to green industries, with dozens of high-tech low-carbon and green energy products developed by renowned companies in the Science Park, serving as a reference for the green transportation promoted by the DGH.

# Building Consensus with Innovative Thinking to Improve Performance

The DGH organizes consensus camps for mid (senior) level executives every year to improve organizational leadership and teamwork, build consensus, establish systematic and macro thinking, and broaden leadership and management horizons. This allows to break through old thinking and develop new policies, guidelines from different perspectives, which will help promoting the overall leadership performance of DGH and establishing a common vision of excellence.





# 交通部公路總局 111

# 協助高、臺鐵緊急疏運 接駁旅客安心返鄉

Assisting Taiwan High Speed Railway and Taiwan Railways Administration with Passenger Emergency Dispersal **Providing Safe Shuttle Services Home** 



0501臺鐵工會不加班疏運,交通部王國材部長視察臺東車站類火車路線運行情形 Helping with passenger transport as the Taiwan Railway Labor Union decided to strike on May 1. The MOTC Minister, Wang Kwo-tsai inspected the operation of the Rail Replacement Bus Service at Taitung train station

#### 緊急應變措施

鐵路系統因天災或突發事件中斷時,營運 單位常因既有開口契約接駁能量不足需公路總 局協助,綜整111年度公路總局協助辦理緊急 疏運仟務計3次,説明如後。

#### 0401高鐵斷電緊急疏運

111年4月1日高雄東南水泥廠儲倉倒塌, 造成高鐵主線供電中斷,左營 - 臺南間雙向 暫停運轉,臺灣高速鐵路股份有限公司成立應 變小組並啟動緊急疏運,公路總局嘉義區監理 所及高雄市區監理所主動聯繫高鐵公司協助辦 理緊急疏運接駁作業,同時聯繫轄區內業者調

派遊覽車投入疏運,並派員至高鐵臺南站及左 營站掌握疏運情形。

當日總計調派170輛遊覽車,開行362車 次,疏運約1萬4,868人。另因應當日係清明節 連假前1日,考量民眾返鄉需求,公路總局亦 持續掌握各大客運轉運站疏運情形,並協調業 者視人潮狀況機動加開班次。

#### 0501臺鐵工會不加班疏運

111年5月1日臺鐵工會發動不加班活動, 當日全線班次停駛,經交通部指示由臺灣鐵路 管理局擬定整體應變計畫,並由公路總局、 高鐵公司協助疏運。考量本次影響範圍屬全



0501臺鐵工會不加班疏運,【0951】、【0952】及【0953】花蓮 — 臺東類火車路線於臺東車站乘車引導 Helping with passenger transport as the Taiwan Railway Labor Union decided to strike on May 1. Hualien-Taitung Rail Replacement Bus route "0951", "0952" and "0953" at Taitung train station

#### **Emergency Response Measures**

When the railway system is interrupted due to disasters or emergencies, the operator often needs the support of the DGH assisting the lack of shuttle capacity of the existing open contract. In 2022, the DGH supported 3 emergency transport operations with the following details

# April 1 THSR Power Failure Emergency Evacuation

On April 1, 2022, the Kaohsiung Southeast Cement Corporation's warehouse collapsed, causing the power supply to the main line of the THSR interrupted and the two-way service between Zuoying and Tainan suspended. The THSR set up an emergency response team

providing emergency transport. The Chiayi and Kaohsiung City Motor Vehicles Offices, DGH contacted THSR and offered assistance with emergency shuttle services. Meanwhile, tourist bus carriers were contacted dispatching tour buses for this mission. Staff were assigned to THSR's Tainan and Zuoying stations to keep updated with the situation.

A total of 170 tour buses were dispatched on that day, 362 vehicle runs and around 14,868 people transported. In addition, considering the needs of returning to hometowns on the day before Qing-ming Festival holidays, the DGH continued monitoring the situation at major bus transfer stations and coordinated with carriers by providing additional vehicle runs depending on the crowd.



0501臺鐵工會不加班疏運,【 0975 】後壁 — 善化類火車客運路線於後壁站搭乘情形 Helping with passenger transport when the Taiwan Railway Labor Union decided to strike on May 1. Houbi-Shanhua Rail Replacement Bus route "0975" at Houbi train station



0401高鐵斷電緊急疏運,公路總局高雄市區監理所同仁於現場協助疏導 Emergency passenger transport due to THSR power outage on April 1. Staff from the Kaohsiung City Motor Vehicles Office, DGH assisted with local transport

國性層面,公路總局全面盤點國道、公路及市區客運路線行經之臺鐵站點,綜合評估公共運輸替代量能,不足則請業者增班;另針對旅運服務斷鏈、運能不足或既有路線過於彎繞區間,則參考國外鐵路中斷替代旅運服務 (Rail Replacement Bus Service),規劃行駛12條「類火車」客運路線,當日總計開行1萬3,416班次,疏運17萬5,160人次,各路線均正常運行,搭乘秩序良好。

本次疏運公路總局及各區監理所於短期內完 成路線規劃、車輛實際勘查、疏運應變演練、場 站乘車動線引導布置等整備作業,而當日亦成 立應變小組,並派員進駐臺鐵應變中心、各重 要客運轉運站、臺鐵車站等地,總計出動548 人次,協助引導旅客乘車並提供諮詢服務。

#### 0918花東地震疏運

111年9月18日臺東地區地震造成臺鐵花東線中斷,公路總局依臺鐵局所提需求,比照0501疏運模式協調客運業者自9月19日至30日於花蓮 — 臺東區間開行3條類火車客運路線,沿途停靠12個站點,疏運原有搭乘火車旅客;疏運期間共11日,開行1,296班次,載運2萬6,176人次,疏運情形良好,公路總局臺北區監理所及高雄區監理所亦派員進駐各站點,協助監督車輛運行情形等,總計出動159人次。

自9月30日起,臺鐵花東線僅剩玉里 - 富里 區間(約18公里)中斷,其餘路線皆已復駛, 由臺鐵局自行辦理公路接駁,為確保初期疏運 順暢,臺北區監理所仍持續派員進駐主要站點 直至國慶連假結束後(10月11日)始撤除。

# Transportation and Travel Connecting Warm Stories 運輸行旅 串連溫暖心故事

#### May 1 Passenger Transport due to Taiwan Railway Labor Union's Decision not to Work Overtime

On May 1, 2022, the Taiwan Railway Labor Union launched a strike stopping all trains on that day. In accordance with the MOTC's instructions, the Taiwan Railway Administration, with the help of the DGH and THSR, drew up an overall contingency plan. Given the national scale of the impact, the DGH conducted an inventory of Taiwan Railway stations located on provincial highways, expressways and intercity bus routes. The assessment looked at the capacity of public transport alternatives. Bus carriers were asked to increase service for insufficient capacity. Where there were insufficient options, 12 rail replacement bus services organized using examples from other countries. A total of 13,416 services were organized on the day, carrying 175,160 passengers. All routes operated normally and well.

The DGH and vehicle offices quickly completed route planning, actual vehicle surveys, emergency response drills and passenger instructions. A response team was set up on the day, with staff stationed at Taiwan Railway's response center, transfer stations

and train stations. A total of 548 people were deployed to provide passenger guidance and information.

# September 18 Passenger Transport after Taitung Earthquake

The earthquakes in Taitung on September 18, 2022 caused the disruption of the Hualien-Taitung line of Taiwan Railways. Following the requirements of the Taiwan Railway Administration, the DGH coordinated passenger transport in the Hualien-Taitung area from September 19 to 30 in a similar model to the May 1 scenario. Three routes of rail replacement bus services were arranged with 12 stops for train passengers. The period lasted 11 days with 1,296 vehicle runs, carrying 26,176 passengers in good order. The Taipei and Kaohsiung Motor Vehicles Offices also dispatched a total of 159 people to each station, to assist in monitoring vehicle operations.

Since September 30, only the Yuli-Fuli section (about 18 kilometers) of Taiwan Railways' Hualien-Taitung line has been disrupted, while other sections have resumed operations. The TRA has stepped in providing shuttle services. To ensure a smooth transition, the DGH continued to deploy staff to main stations until after the Double Tenth weekend (October 11).



0918臺東震災疏運,花蓮-臺東類火車路線提供直達車服務 Passenger transport after Taitung Earthquake on September 18. The Hualien-Taitung line provides a direct rail replacement bus service

## 公車進校園 守護莘莘學子行的安全

#### **Buses into Schools Ensure Safe Transport for Students**



四方電巴公司【 249 】臺中市市區客運路線延駛朝陽科技大學 Bus 249, operated by SF E-bus in Taichung City, extends its route to Chaoyang University of Technology

#### 推動公共運輸 朝向減排校園

學生族群是國家社會寶貴的資產,上下學 騎乘機車不僅風吹雨淋,若發生碰撞時也常因 缺乏保護,導致身體損傷相對嚴重。因此公路 總局推動公車進校園,除了可以培養學生搭乘 公共運輸的習慣外,也能促進節能減碳。

公車進校園計畫執行自104年起至110年止 共計46所學校參與,為擴大辦理計畫,111年 更進一步推動地方財力分級補助減輕地方財政 負擔、擴大至高中(職)學校實施及建立跨部 會合作平臺等3項精進作為,透過公路總局與教 育部、交通部道路交通安全督導委員會、地方 政府、學校及客運業者,積極以政府機關跨部 門及客運業者,公私夥伴共同合作方式,根據學校需求提出可行路線改善方案(如:路線增班、調整班次、延繞駛或新闢等),截至111年底新增34所學校加入,共計80所學校參與。

111年公車進校園計畫參與學校學生騎乘機車每千人事故數為6.54件、每千人死傷數為6.75人,相較104年推動前學生騎乘機車每千人事故數為14.46件、每千人死傷數為14.46人,分別下降54.77%及53.32%,成效相當顯著。

未來公路總局將繼續與相關單位共同檢視 學校需求及實施成效,滾動檢討公共運輸改善 方案,以守護學生行的安全。

# Transportation and Travel Connecting Warm Stories

# Promoting Public Transport to Reduce Emissions on Campus

Students are the valuable asset to country and society. Riding scooters to and from campus not only exposes them to wind and rain, but also often results in relatively serious physical injuries due to lack of protection in the event of a collision. The DGH therefore launched the initiative to bring buses to the campus. As well as helping students develop the habit of using public transport, it also helps to save energy and reduce carbon emissions.

A total of 46 schools participated in the program from 2015 to 2021. In order to expand the program, three refinement measures were taken in 2022, namely, local financial subsidies were further promoted the financial burden reduced on local governments, the program were extended to (vocational) high schools and an inter-agency cooperation platform established. Through the active cooperation of various government agencies and bus carriers, including the DGH, Ministry of

Education, the MOTC Road Safety Committee, local governments, schools and bus carriers, bringing together partners from the public/private sectors, feasible route improvement proposals are out forward in line with school area requirements (such as increasing the number of bus services, adjusting services, rerouting or opening new routes). By the end of 2022, 34 new schools joined the program, bringing the total to 80.

In 2022, the number of accidents per 1,000 students riding scooters in participating schools is estimated to be 6.54, with 6.75 casualties per 1,000 students, compared to 14.46 accidents per 1,000 students and 14.46 casualties per 1,000 students in 2015, a decrease of 54.77% and 53.32% respectively. The result is quite remarkable.

Going forward, the DGH will continue to work with relevant agencies to review school needs and implementation outcomes, as well as continually review public transport improvement plans to ensure pupil safety.



國光客運【學51】宜蘭縣市區客運路線調整班次服務宜蘭高中 Kuo-Kuang Motor Transport's "Student 51" route in Yilan County has been adapted to transport students to and from Yilan High School

### 渡過疫情困境 獎助公路客運業者提升運量

Tackling through the Pandemic Financial Subsidy for Highway Bus Carrier Operation Boosting Capacity



公路汽車客運運量獎助施行後,刺激業者積極辦理行銷作為,進而吸引更多乘客,有效促使公路客運運量回流 Incentive program encouraged Highway Bus Carriers to run marketing campaigns, and thus attracting people to use public transportation again

#### 走過疫情 交出亮眼績效

新冠肺炎疫情自109年初開始蔓延,嚴重 衝擊國人使用公共運輸的信心,期間更經歷 110年5月中疫情提升為三級警戒,111年5月底 單日確診人數突破9.5萬人等事件,民眾利用公 共運輸通勤與觀光之旅運需求已達谷底,並轉 以私人運具替代。依交通部統計資料,111年6 月公路客運整體運量為399萬人次,已較疫前 (108年)同期之1,114萬降低64%以上。為避 免長期培養之公路汽車客運客群流失,對政府 推廣公共運輸及節能減碳目標產生嚴重影響, 推動「公路汽車客運運量提升獎助計畫」,有 如及時雨,協助客運業者渡過疫情困境,也達到吸引乘客回流,提振公路客運運量的效果。

#### 積極措施 創造雙贏局面

本獎助除公路總局例行辦理之一般公路 客運虧損補貼路線外,依路線性質及運量給 予每位乘客15至70元不等之獎助金,自111 年7月1日開始獎助後,各月份運量均大幅 提升至少25%以上,本次運量獎助對於公路 客運市場振興助益甚大,不只給予業者立即 性的經濟扶持,並帶領業者共同走出運量低 靡的公運困境。

Transportation and	
Travel	運輸
Connect	<b></b> 旅
onnecting Warn	串連溫淫
Warm Stories	吸心故事

項目	6月(獎助前) June (before incentive program)	7月 July	8月 August	9月 September	10月 October
實際運量 Actual volume	3,829,296	4,804,741	5,176,585	5,083,364	5,384,315
較6月成長量 Growth compared to June		975,445	1,347,289	1,254,068	1,555,019
較6月成長倍數 Time of growth compared to June		1.25	1.35	1.33	1.41

# Overcoming the Pandemic Delivering Excellence

The COVID-19 pandemic began to wreak havoc in early 2020, significantly reducing people's motivation using the public transport. During this period, the pandemic alert level was raised to level 3 in May 2021, and the number of confirmed cases exceeded 95,000 in a single day at the end of May 2022, causing the demand for public transport for commuting and sightseeing to bottom out and be replaced by private transport. According to the MOTC statistics, the total number of road passengers in June 2022 was 3.99 million, down by more than 64% from 11.14 million in the same period before the epidemic (2019). To avoid losing the loyalty of public road transport passengers, which could have a serious impact on the government's goals of promoting public transport, saving energy and reducing carbon emissions, the incentives for Highway Bus Carrier operators were introduced to help them through the difficult period. The incentives also attracted more passengers and thus increased the volume of highway bus transport.

#### Active Measures to Create a Win-Win Situation

In addition to general subsidies for Highway Bus Carrier, the program provides a subsidy of NT\$15-70 per passenger, depending on the type and volume of the route. After the launch of the program on July 1, 2022, the monthly passenger volume has increased significantly by at least 25%. This passenger volume subsidy is of great help in revitalizing the highway bus transport market. It not only provides immediate economic support to the industry, but also helps the industry get out of the predicament caused by the pandemic.



公路汽車客運運量獎助施行後,刺激業者積極辦理行銷作為,進而吸引更多乘客,有效促使公路客運運量回流 Incentive program encouraged Highway Bus Carriers to run marketing campaigns, and thus attracting people to use public transportation again

### 改善停車空間不足 促進公共運輸轉乘

#### Improving Parking Spaces Shortages with Public Transport Transfers



屏菸1936文化基地(屏東菸葉廠)立體停車場 Pingtung 1936 Tobacco Culture Base (Pingtung Tobacco Factory) vertical parking lot

#### 納入亮點計畫 協助改善地區發展需求

行政院於106年2月18日聽取國家發展委員會報告「城鄉建設 - 地方前瞻基礎建設事宜」會議提示,委請交通部研議提出公共運輸服務計畫,納入停車問題改善評估,若停車場管理具示範效果,可容許地方政府依其發展特色及需求提出專案亮點計畫納入,以協助地方政府改善地區發展需求;另於106年3月21日「研商城鄉建設 - 改善停車問題」會議結論,基於停車場建設為具自償性之公共建設,為擴大政府投資乘數效果,帶動民間投資量能,應鼓勵民間投資參與,惟也不排除由地方政府自行興建。交通部依據行政院上述政策方向,提出「改善停車問題計畫」。

#### 智慧化停車管理 綠能及性別友善 提升停車服務品質

為鼓勵及增加大眾運輸使用,透過創造較佳的停車轉乘設施,並搭配接駁運具與市中心連接,避免過多車輛進入市中心、人車商業密集區域造成交通壅塞,另由於許多遊憩據點並未設置大眾停車場或停車場地不足,以致沿路邊停車。因此,交通部研訂「前瞻基礎建設 一 城鄉建設 一 改善停車問題計畫」,期藉由優先補助公共運輸場站停車轉乘、觀光遊憩旅次量大之地區等停車位不足,具示範效果之路外公共收費停車場,並透過智慧化停車管理服務、綠能及性別友善設計原則,提升停車場使用效益與服務品質,以改善停車空間不足問題,滿足停車轉乘及觀光等停車需求。



屏東縣幸福公園地下停車場 Underground parking lot of Xingfu Park in Pingtung County

#### Highlight Program Included Supporting The Improvement of Regional Development Needs

On February 18, 2017, the Executive Yuan accepted the National Development Council's report on "Urban and Rural Construction -Local Forward-Looking Infrastructure". The meeting resulted in a reminder, and the MOTC was instructed to propose a public transport service plan including an assessment of how to improve parking problems. If the parking management becomes a good model, the local government will be allowed to propose a highlight program according to its development characteristics and needs. On March 21, 2017, the "Discussion on Urban and Rural Construction - Parking Problem Improvement" meeting concluded that as parking is a selfcompensating public infrastructure, civil society should be encouraged to invest in order to create a multiplier effect of government investment and increase the capacity of private investment. However, it does not rule out construction by local governments. In line with the Executive Yuan's above-mentioned policy direction, the MOTC has proposed the "Parking Improvement Plan".

#### Smart Parking Management: Green Energy and Gender-Friendly - Parking Service Quality Improvement

In order to encourage and increase the use of public transport, it is necessary to prevent too many vehicles entering the city center and causing traffic congestion in densely populated business areas by providing better park, ride facilities and connecting them to the city center with shuttle services. In addition, as many leisure facilities with insufficient public parking lot, people may park on the street. To this end, the MOTC has formulated the "Forward-Looking" Infrastructure – Urban and Rural Construction - Plan to Improve Parking Problems", hoping to give priority subsidizing the lack of parking lot at public transport stations for park and ride, areas with a large number of sightseeing and recreational trips, and public roadside toll parking that build a model effect, as well as promoting the efficiency and service quality of parking facilities through intelligent management services, green energy, and the principle of gender-friendly design, in order to improve the problem of insufficient parking lot and meet the needs of park and ride and sightseeing.





臺南市西門健康立體停車場 Ximen Jiankang parking lot in Tainan City

#### 執行成果

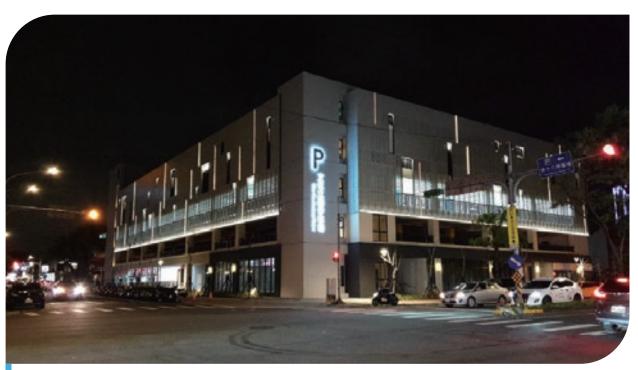
- 一、奉行政院109年9月7日院臺交字第 1090029856號核准,改善停車問題計畫將 補足各年期經費,並延長整體計畫期程從 106年9月至113年12月;又本案修正計畫 於111年8月16日奉行政院核定,修正後總 經費為260億元,並延長整體計畫期程至 114年8月。
- 二、截至111年12月31日,已完成核定補助19 縣市124座停車場,合計總工程經費為 422.58億元,中央補助199.24億元(預計 可提供大型車66席、汽車34,877席及機車 15,390席)。截至111年已完工停車場57 處,可提供大型車66席、汽車14,158席 及機車4,188席,改善各地交通及停車問 題。另各縣市補助情形如下:

- (一)整體規劃案件:目前核定20件合計 1億3,520萬元(臺北市與新竹市已 自行完成未申請)。
- (二)可行性評估案件:已核定59件合計 7,192.4萬元(基隆市1件、新竹市 10件、桃園市4件、金門縣5件、宜 蘭縣5件、澎湖縣2件、高雄市10 件、屏東縣6件、臺南市7件、雲林 縣3件、花蓮縣3件、臺東縣2件、 嘉義市4件)。
- (三)工程案件:申請162件、審議162 件、已核定124件,中央補助經費 合計為198.4億元。另基隆市1件、 臺南市2件、臺中市1件、彰化縣2 件、苗栗縣1件、花蓮縣1件、桃園 市1件及雲林縣1件,計10件撤案。

#### **Implementation Results**

- 1. As approved by the Executive Yuan on September 7, 2020, Official Announcement No. 1090029856, the funds for the implementation of the plan of parking problem will be provided annually, with the overall period extended from September 2017 to December 2024. In addition, the revised plan was approved by the Executive Yuan on August 16, 2022. After the revision, the total funding reached NT\$26 billion and the period was extended to August 2025.
- 2. As of December 31, 2022, 124 parking lot in 19 counties and cities have been approved for subsidy. The total project cost is NT\$42.258 billion, with a government subsidy of NT\$19.924 billion (expected to provide 66 spaces for large vehicles, 34,877 spaces for cars and 15,390 spaces for scooters). By the year of 2022, 57 parking lot were completed, providing 66 spaces for large vehicles, 14,158 spaces for cars, and 4,188 spaces for scooters to alleviate traffic and parking problems across the country. The subsidies for each county and city are as follows:

- (1) Overall plan: To date, 20 cases have been approved, totalling NT\$135.2 million (Taipei City and Hsinchu City have completed the relevant work without application).
- (2) Feasibility assessment: 59 cases totalling NT\$71.924 million were approved (1 in Keelung City, 10 in Hsinchu City, 4 in Taoyuan City, 5 in Kinmen County, 5 in Yilan County, 2 in Penghu County, 10 in Kaohsiung City, 6 in Pingtung County, 7 in Tainan City, 3 in Yunlin County, 3 in Hualien County, 2 in Cin Taitung County and 4 in Chiayi City).
- (3) Construction cases: 162 cases were applied for, of which 162 were reviewed and 124 were approved. Central government subsidies reached NT\$19.84 billion. In addition, 10 cases were withdrawn, including 1 in Keelung City, 2 in Tainan City, 1 in Taichung City, 2 in Changhua County, 1 in Miaoli County, 1 in Hualien County, 1 in Taoyuan City and 1 in Yunlin County.



桃園市龜山區停18停車場 Guishan District No.18 parking lot in Taoyuan City

# 大型重機騎士新福音 蘇花改正式開放通行

Good News for Large Heavy Motorcyclists
Improved Suhua Highway Officially Opened to Large Heavy Motorcycles



蘇花改開放大型重機通行 Suhua Highway opens to large heavy motorcycles

#### 傾聽民意 試辦開放通行

台9線蘇花改(蘇澳至東澳、南澳至和平、和中至大清水路段)於109年1月6日全線通車,除和仁至大清水間的仁水隧道可通行一般機慢車輛外,其餘路段僅開放通行小型車、大客車及大貨車通行。因應蘇花改計有東澳、觀音、谷風、中仁等4座長隧道,為審慎評估開放大型重型機車通行的可行性,因此參考台9線南迴改路段「試辦草埔隧道通行大型重型機車計畫」之試辦成果,辦理台9線蘇花改通行大型重型機車試辦計畫,評估不同道路條件(僅一車道、長隧道長12.6公里等)、車種組成之蘇花改路段,是否適宜開放大型重型機通行。

試辦計畫藉由蒐集國內外已開放機車通行之隧道現況及交通管理方式,研提蘇花改試辦開放大型重機通行之方案及相關配套措施,進行各車種之交通資料蒐集與觀測、試辦前後交通特性與肇事資料之比對,再依秩序、行為、環境、及安全等指標評估正式開放通行之適宜性。

蘇花改於110年9月30日試辦開放大型重型機車通行,經檢視試辦期間秩序、行為、環境及安全等指標之檢核成果,蘇花改通行大型重型機車無明顯之通行疑慮,大型重型機車亦已納入例行性之防災應變演練情境,經綜合評估後於111年9月1日正式開放大型重型機車通行。

# Transportation and Travel Connecting Warm Stories

# Pilot Program Based on Public Feedback

Known as Suhua Highway, Provincial Highway No.9 (Suao to Dongao, Nanao to Heping, Hezhong to Daqingshui sections) was opened to traffic on January 6, 2020. Apart from the Renshui Tunnel between Heren and Dagingshui, which allows motorcycles, other sections are only open to small cars, buses and trucks. With 4 long tunnels including Dong'ao, Guanyin, Gufeng and Zhongren, the feasibility of opening to large heavy motorcycles was carefully evaluated based on the results of the "Caobu Tunnel for Large Heavy Motorcycles Pilot Program" on the South Link Highway Improvement Project of Provincial Highway No.9. Different road conditions (single lane, long tunnel of 12.6km, etc.) were evaluated, including the section of Suhua Highway with different vehicle composition, to decide whether it was suitable for large heavy motorcycles.

The pilot program collected information on the current situation of tunnels opened to large heavy motorcycles and traffic management in Taiwan and abroad in order to propose relevant measures for the Suhua Highway. Traffic data from various types of vehicles was collected and observed, and traffic characteristics were compared with traffic incident data before assessing the feasibility of officially opening the Suhua Highway to large heavy motorcycles based on indicators such as order, behavior, environment and safety.

On September 30, 2021, Suhua Highway was opened to large heavy motorcycles based on the pilot program. After reviewing the order, behavior, environment and safety indicators during the pilot period, there were no obvious passage problems of large heavy motorcycles on Suhua Highway. Large heavy motorcycles were also included in the routine disaster prevention and response drills. After a comprehensive evaluation, large heavy motorcycles were officially allowed on September 1, 2022.

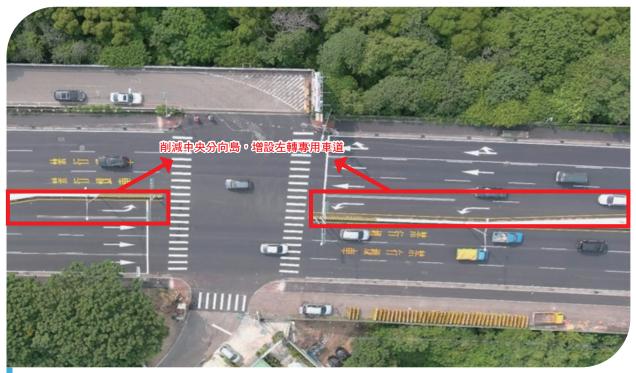


蘇花改開放大型重機通行路段蘇澳端起點

The Suao end of the section of the improved Suhua Highway open to large heavy motorcycles

### 盤點危險路段路口 戮力安全改善成果

# Stocktaking Dangerous Roads and Intersections Safety Improvement Results



台74甲線4k與田坑路一段路口(紅框內為改善成果:削減中央分向島,增設左轉專用車道) Improvement results at the intersection of 4k on Provincial Highway No.74A and Section 1, Tiankeng Road (the results of the improvements are shown in the red frame: removal of the median, addition of a left turn lane)

#### 111年完成472處路口改善

行政院蘇貞昌院長於111年1月6日院會聽取交通部「道路交通安全精進作為」報告表示,政府嚴肅正視道安問題,有決心要保障國人行的安全,就交通部提出的21項改善措施,請中央各部會及地方齊力推動並落實執行,共同努力改善道路安全,要求交通部、內政部盤點確認待改善的易肇事路口有多少處,與地方政府妥適溝通,導引地方政府和快、加大完成,並確認與公布完工期程及各地方政府執行成效;請交通部、教育部和地方政府落實盤點校園附近危險路段,在最短時間完成。故經交通部及內政部盤點後,111

年以辦理1,322處路口為目標,其中公路總局辦理472處路口改善(含轄管省道公路241處及補助地方政府231處)。

經桃園市政府、苗栗縣政府、臺中市政府、南投縣政府、嘉義縣政府、臺南市政府、高雄市政府及宜蘭縣政府等縣市政府申請公路總局「提升道路品質計畫(公路系統)(106~114年)」辦理行人路口安全改善計畫,及公路總局各區養護工程處就轄管省道多事故或高風險路口辦理改善,改善內容包含調整車道配置、增設左轉車道、調整行人穿越道線位置、增設行人庇護空間、增設號誌等項目,積極辦理改善,如期於111年底前全數完成改善。

#### **472 Intersections Improved in 2022**

Premier Su Tseng-chang listened to the MOTC's report on "Measures to Improve Traffic Safety" on January 6 and instructed the government must take traffic safety issues seriously and is determined to ensure traffic safety for all citizens. Ministries and local governments were asked to work together on the 21 measures proposed by the MOTC to jointly improve road safety. The MOTC and the Ministry of Home Affairs were asked for inventory of the accident prone intersections and communication with local governments for implementing the solutions in a timely manner. The completion schedule and results of all local governments were also reviewed. The MOTC, the Ministry of Education and the local governments were asked for the inventory of dangerous intersections near the campus as soon as possible. After the inventory completed by the MOTC and the Ministry of Home Affairs, 1,322 intersections were targeted, of which the DGH was responsible for 472 (including 241 on provincial roads under its jurisdiction and 231 with grants to local governments).

Taoyuan City Government, Miaoli County Government, Taichung City Government, Nantou County Government, Chiayi County Government, Tainan City Government, Kaohsiung City Government and Yilan County Government applied to the DGH's "Road Quality Improvement Project (Highway System, between 2017 and 2025)" to implement the Pedestrian Crossing Safety Improvement Plan. All maintenance Offices of the DGH were also required to make improvements to provincial highways under their jurisdiction that are prone to accidents or have dangerous intersections. Improvements include adjusting lane layouts, adding left-turn lanes, adjusting pedestrian crossing locations, adding pedestrian refuge islands, and adding signals. The measures have been actively implemented and are scheduled completed by the end of 2022.



### 運用車輛動態系統協助業者重要成果

# Excellent Results of Ultizing the Vehicle Dynamic Information System for Helping Operators



預排班表上傳功能 Pre-arranged Schedule Upload Feature

#### 業者可於事前排班預防超時駕車

建置「預排班表」功能,提供客運業者 於發車前2天上傳預排班表至動態系統,系 統利用歷史車輛行駛時間,自動檢核是否疑 似有駕車時間過長或休息時間不足之排班情 形,提供客運業者調整班表之參考,事前預 防超時駕車的情況發生。

#### 協助業者提供明確營運資料以利政 策推行

111年5月COVID-19疫情升溫,各縣市政府於5月23日宣佈高中以下學校暫停實體課

程,改採線上教學,導致遊覽車旅遊團與學校交通車的營運受到明顯衝擊。運用動態系統GPS車輛行駛資訊,掌握受衝擊業者家數與出車減少程度,即時且精準辦理汽燃費減免徵措施,協助業者度過難關。

# 即時掌握災點車輛位置,迅速有效完成救災

111年10月16日豪大雨造成觀光軸線台7線及台7甲線多處坍方,台7線與台7甲交會處對外道路全部中斷,形成孤島,運用動態系統之災點空間資訊,掌握受困2輛宜蘭縣市區客運及3輛遊覽車,提供救災作業有效資訊。



111年4~8月遊覽車出車與確診人數分布 Tour Bus Departures and Number Of Confirmed Cases from April to August 2022



受困市區客運與遊覽車即時位置 Real-time location of the trapped city bus and tourist bus

## Operators Can Arrange Schedule in Advance to Avoid Driving Overtime

The Pre-arranged Schedule feature allows bus carrier to upload pre-arranged schedules to the Vehicle Dynamic Information System 2 days before dispatch. This system automatically checks whether driving overtime or insufficient rest is a possibility based on the vehicle's historical driving time, providing bus carrier with a reference to adjust shift plans in advance to avoid driving overtime.

## Helping industry to provide clear operational information to facilitate policy implementation

Following the worsening of the COVID-19 pandemic in May 2022, county and municipal governments announced on May 23 that schools below high school suspend physical classes and switch to online classes, which was a significant impact on the operation of tour groups and school commuter bus. The real-time GPS vehicle travel information allows the DGH to keep abreast of the number of businesses affected and the number of reduced services in order to promptly and accurately manage gas and fuel tax rebates and exemptions helping carriers overcome difficulties.

# Real-time vehicle location in the disaster area for fast and effective disaster response

On October 16, 2022, heavy rains caused several landslides on Provincial Highway No.7 and No.7A, which have a concentration of tourist activities. The intersection of No.7 and No.7A has been cut off, making it an isolated island. The Dynamic Information System of the disaster area in the real-time system was used to keep up to date with the locations of trapped 2 city buses and 3 tourist buses in Yilan County, providing information for effective disaster relief operations.



道路坍方與人車受困相對位置 Relative Position of Road Collapse and Trapped People and Vehicles





# 交通部公路總局 11

## 騎車經駕訓 安全無疑慮

#### No Safety Worries after Rider Training



機車駕訓入校園 Rider Training on Campus

## 持續推動駕訓計畫

自108年起,為提升機車駕駛人駕駛安 全,公路總局配合交通部政策,開始推動機 車駕訓補助,經過蒐集推動3年多來的資料分 析,經駕訓者違規風險下降56%,肇事風險降 低35%,顯示機車駕訓對於提升駕駛人行車安 全確有成效。

111年度擴大辦理每名新臺幣1,300元, 名額共20,000名之補助計畫,111年度共有 26,103人參加訓練,同時與教育部合作,辦 理機車駕訓入校園計畫,由各區監理所深入 校園了解學校與學員的需求,並協助媒合駕 訓班,依據學校的需求入校辦理學、術科教 學,或是由交通車或其他方式接送到駕訓班 接受駕訓課程,讓學生可以免於奔波兩地, 提高參加駕訓班的意願,111年度共計有540 名學員透過校園駕訓計畫參加駕訓。

## 有效整合教學有感

另為增加駕訓受訓量能,111年度亦積極 邀集地方政府、業者、公會共襄盛舉,共同 挹注補助名額; 亦積極輔導駕訓班成立, 機 車駕訓班家數自108年24家成長至111年共74 家,並持續辦理師資召訓、實地教案教學提 升教學品質,有效增加駕訓之誘因及成效。

# Motor Vehicles Innovation A New Era of Safety and Convenience

## Continuing to promote the rider training program

Since 2019, the DGH followed the MOTC's policy of subsidising scooter training to improve the safety of scooter riders. Datas from the last three years shows who have received training are 56% less likely to commit traffic violations and 35% less likely to cause accident, demonstrating the effectiveness of training in improving the safety of scooter riders.

In 2022, the subsidy provided NT\$1,300 per person to a total of 20,000 trainees. This year, a total of 26,103 people participated in the training. Meanwhile, the DGH is working hand in hand with the Ministry of Education to organize on-campus driver training. Motor Vehicles Offices in different regions assess the needs of schools and students by visiting the campus and find driving schools to organize theoretical

and practical training on campus. Shuttle buses or other means of transport are also provided easier for students to attend training sessions, thus increasing their willingness to participate. In 2022,, a total of 540 students participated in driver training through the campus training program.

#### **Effective Integrated Teaching**

In addition, local governments, carriers and associations have been actively invited in 2022 to increase the number of training people received subsidies. New driving schools will also be established with active guidance, increasing the number of driver training schools from 24 in 2019 to a total of 74 in 2022. Instructor training and on-site training will also be organized to improve the quality of teaching, effectively increasing the incentive and effectiveness of driver training.



駕訓師資召訓 Instructor Training for Rider Training

# 交通部公路總局 111

## 掛牌審驗再上路 微型電動二輪車即早辦理免規費

**Licensing Check before Driving** No Charge for Early Handling by Mini Electric Two-wheel Vehicles



微型電動二輪車辦理掛牌作業檢驗登記處 Counter for The Registration of mini electric two-wheel vehicles

#### 電動服務掛牌嶄新紀元

現行以電力為主且最大行駛速率25km/h 以下、車重不含電池40公斤以下(或含電池 60公斤以下)屬慢車的電動自行車,因不 需申請牌照及投保強制汽車責任險,衍生改 裝、超速、交通事故增加及事故無法理賠等 原因,交通部認為有必要加強管理,修法更 名為微型電動二輪車(下稱微電車),並增 加須登記領用懸掛號牌、投保強制險及行駛 道路管理等規定,行政院訂並核定自111年11 月30日起正式實施。

11月30日起民眾辦理微電車領牌時, 需準備國民身分證(或僑民居留證)正 本、印章、出廠證明、統一發票(如有遺 失得由原車主以切結方式辦理)、有效期 間30日以上之強制汽車責任保險證等文件 及規費450元(號牌300元、行照150元), 至各公路點理機關辦理微電車實車查核 (車架號碼與來歷憑證相符、車輛型式與 安全審驗與安全審驗合格之型式相符、各 部機件齊全作用正常及速限符合最大速限 25公里/小時以下規定)合格後,由各公路 監理機關核發牌照。

#### 便民措施積極推廣辦理

為鼓勵微型電動二輪車掛牌納 管和投保強制險是很重要的交通安全 政策,為讓已上路使用中的微型電動 二輪車能儘早申請掛牌,凡是自111 年11月30日起至112年12月31日止, 使用中微型電動二輪車完成申請掛牌 的車主,免收450元的號牌和行照規 費,等同掛牌免費,鼓勵車主提早在 1年期間投保強制險及納管掛牌,免

規費期間共為期13個月,從實施日起至111年 12月31日,已有1萬9,848輛使用中車輛掛牌 的車主享免規費掛牌的優惠措施。

公路總局為服務使用中微電車在2年內領 牌方便,各監理所站與微電車經銷商、移工 仲介公司、工業區、鄉鎮區公所、里民活動 中心等單位合作,辦理「到點服務」實車查 核掛牌作業,從實施日起至111年12月31日已 辦理378場次的到點服務,共協助辦理9,976 件掛牌登記。

公路總局也在「監理服務網」網站設 置「微型電動二輪車」專區 (https://www. mvdis.gov.tw/m3-emv-car/car/electricBicycles/ eBicyclesDoc),提供掛牌納管登記問答集、懶 人包等相關資訊。



微型電動二輪車編配領牌作業 Approval for mini electric two-wheel vehicles

#### A New Era in Electric Licensing

Electric bicycles with a maximum speed of less than 25km/h and a vehicle weight of less than 40kg without batteries (or less than 60kg with batteries) are currently considered as slow vehicles. The absence of a requirement to obtain a licence and compulsory motor insurance has led to problems with retrofitting, speeding, increased road accidents and nonpayment of accident claims, etc. In order to improve management, the MOTC deemed it necessary to amend the law and change the name to Mini Electric Two-Wheel Vehicles (hereinafter referred to as Mini Electric Vehicle). with new regulations regarding licensing, compulsory motor vehicle liability insurance and road management. The regulations were formulated and approved by the Executive Yuan and promulgated on November 30, 2022.

From November 30, people can obtain a licence for their mini-electric vehicle with the following documents, including the original ID card (or residence certificate), the seal, the certificate of manufacture, the invoice (in case of loss, the original owner can sign an affidavit) and a compulsory motor vehicle liability insurance certificate with a validity period of more than 30 days, as well as a fee of NT\$450 (NT\$300 for the licence and NT\$150 for the vehicle registration). They can then go to the Motor Vehicles Office to have their electric minivehicle inspected (the fork number must match the one on the Certificate of Manufacture, the vehicle type must match the one that passed the safety inspection, all components must function normally and the speed limit must be less than 25km/h). Once qualified, the licence is issued by the Motor Vehicles Office.



微型電動二輪車實車查核作業 Inspection for Mini Electric Two-Wheelers

## Active Promotion of Comfort Measures

In order to encourage the registration and management of mini electric two-wheel vehicles, compulsory insurance is a very important traffic safety policy. In order to encourage mini electric two-wheel vehicles already on the road to apply for licensing as soon as possible, from November 30, 2022, to December 31, 2023, owners of mini electric twowheel vehicles in use will be exempted from the NT\$450 fee for license plates and registration, making licensing free. Owners are encouraged to purchase compulsory insurance for one year in advance for the purpose of licensing. The fee was waived for 13 months since the date of implementation to December 31, 2022, 19,848 owners in use were advantage of the opportunity.

For mini electric-vehicles to complete the licensing process more easily over the next two years, the DGH is working with Motor Vehicles Offices, mini electric-vehicle dealers, migrant labor agencies, township and district offices, and local activity centers to organize "mobile services" for licensing. From the date of implementation to December 31, 2022, 378 mobile licensing services were provided, licensing 9,976 vehicles.

The DGH has also set up a dedicated "Mini electric two-wheel vehicles" section on the Motor Vehicle Driver Information Service website (https://www.mvdis.gov.tw/m3-emv-car/car/electricBicycles/eBicyclesDoc), with FAQs and brief explanations on licensing.

## 試車牌照新分類 買賣試車領用更便利

## New Classification of Test Vehicle License Easier Buying and Selling of Test Vehicles

為符合汽車買賣業者申領試車牌於買賣 試車之實際使用需求,公路監理機關自111年 11月30日起新增核發限汽車買賣業申請之第 二類試車牌。

#### 試車牌照分類 新亮點

依據道路交通安全規則第20條規定,汽車買賣業、汽車製造業或汽車研究機構,因業務需要試行汽車時,可向公路監理機關申領試車牌,但測試車輛種類包括已經過車輛型式安全審驗的車輛,及研發中尚未經車輛型式安全審驗程序的車輛,考量研發中車輛未經審驗有安全風險,因而限制懸掛試車牌之車輛不得行駛高速公路。

汽車買賣業表示其領用試車牌為懸掛於 已通過車輛型式安全審驗且領過牌照之中古 車,或已經審驗合格的新車展售之汽車,所 以交通部高速公路局考量該類車輛與研發測 試車輛不同,同意開放其行駛高速公路。

#### 因應實際需求 再進化

為與原本核發之「白底藍字」試車牌(第一類試車牌)區分及考量汽車汽缸總排氣量之車輛數分布比例,新增「第二類試車牌」供汽車買賣業者申領,僅可懸掛於已取得車輛型式安全審驗合格證明或已領過牌照之車輛使用,並分類為限懸掛於4,200立方公分(或馬達馬力414HP)以下汽車領用「白底紅字」試車牌,及可懸掛於不限排氣量(或馬達馬力)汽車領用「紅底白字」試車牌照2種。另依使用牌照稅法規定,領用第一類試車牌及「紅底白字」第二類試車牌之使用牌照稅,以汽車之最高稅額徵收;領用「白底紅字」第二類試車牌,按排氣量分級對應級距徵收。本項政策可提升汽車買賣業者依實際需求申請領用之意願,亦增加買賣試車之便利性。



「白底紅字」第二類試車牌示意圖

Schematic representation of the Type II test vehicle number plate with red letters on a white background



「紅底白字」第二類試車牌示意圖 Schematic representation of a Type II test vehicle registration plate with white letters on a red background

To meet the real needs of automobile dealers applying for test vehicle licence for commercial vehicles, the DGH has issued a new type of test vehicle licence that will be restricted to car dealerships from November 30, 2022.

## Classification of test vehicle licences New highlight

According to Article 20 of the Road Traffic Safety Regulations, a car dealer, manufacturer or manufacturing research institute can apply to the DGH for a test licence if a car needs to be tested for business purposes. However, the types of test vehicles include those that have passed the type of safety test as well as vehicles under development that have not yet passed the type safety test. Given the safety risks associated with uninspected vehicles under development, vehicles with test licence plates are not allowed to be driven on freeway.

The automobile trade industry stated the test plates they receive are those have passed the vehicle type safety inspection and received a used car plate, or new cars that have passed the vehicle type safety inspection. Therefore, the Freeway Bureau of MOTC considers this type of vehicle and vehicles under development to be different and agrees to allow them on freeways.

## Evolution in Response to Real Needs

In order to distinguish from the original "white background and blue letters" (Type I test plate) and to take into account the distribution of the number of vehicles with the total distribution of car cylinders, a new "Type II test plate" is added for automobile dealers on vehicles that have obtained the vehicle type safety inspection certificate or have obtained a license plate, and limited to vehicles with a cubic capacity of 4,200 cubic centimetres (or 414 horsepower) to receive a "red letters on white background" test plate, and a "white letters on red background" test plate for vehicles with unlimited engine capacity (or horsepower). In addition, according to the licence tax law, the licence tax for the Type I test vehicle plate and the Type II "white letters on red background" test vehicle plate is levied at the maximum tax amount of the vehicle according to the corresponding interval of the engine capacity classification. For Type II test vehicle plate "Red letters on white background" tax is levied by grade according to engine capacity classification. This policy may increase the willingness of car dealers to apply according to actual needs and make the purchase and sale of test cars more accessible.

## 檢驗線的華麗翻身 貼心創新老舊倉庫再活化

Gorgeous Transformation of the Inspection Line
Attentive Innovation Reactivates an Old Warehouse



檢驗線外觀美化 Optimizing the appearance of the inspection line

## 智慧檢驗進化再升級

為提供洽公民眾有優質環境、較佳服務 品質、縮短驗車等待時間及兼顧檢驗品質, 並維護周遭道路交通秩序,桃園監理站檢驗 線改造區域,有建築物本體內外環境、檢驗 線旁倉庫活化、車道動線優化三大區塊。

## 檢驗線建物環境美化

外牆以綠層次鋁隔柵設計,與駕駛人 考驗場相容呼應,營造出森林的感覺,並有 自然通風之效,牆面字體Logo於夜間輔以燈 光營造不凡氣場,檢驗車道及人行步道以防 滑、明亮、耐污的環氧樹酯Epoxy重繪、增設 軸流式隧道風機,改善檢驗員工作環境之空 氣品質,以符使用者友善需求。

#### 檢驗線旁倉庫活化

將四間老舊倉庫,採工業風格設計改造 為桃園監理站文史導覽區、登檢及檢驗員辦公 室,並提供民眾洽公駐足休憩之區域,文史展 示空間呈現桃園站檢驗線歷史之軌跡,陳列展 示檢驗工具、儀器、研究報告等內容。

#### 車道動線升級優化

將登記檢驗室移近檢驗場,增加55米 排隊空間、檢驗入口移除固定式的紐澤西護欄,並規劃活動式可拆卸式之不鏽鋼柱,彈 性提供大小型車可互相調撥車道驗車,提高 檢驗效率及量能。

綜上,融入傳承過去、友善貼心、勇 於創新三大特色元素,改造桃園監理站檢驗 線,成為全國檢驗示範場域,並持續增取經 費,推出嶄新的檢驗線。



檢驗線內部驗車實況 Vehicle inspection inside the inspection line

#### **Smart Inspection Upgraded**

To provide the public with a quality environment and better service, to reduce the waiting time for vehicle inspections while maintaining inspection quality, and to maintain traffic order in the surrounding area, the inspection line at the Taoyuan Station of Hsinchu Motor Vehicles Office has been improved by revitalising the internal and external environment of the building itself, the warehouse next to the inspection line, and by optimising the driving directions.

## **Enhancing the Building for the Inspection Line**

The exterior wall is designed with a green layered aluminium grille, compatible with the test field with the ambience of a forest while allowing natural ventilation. The logo on the wall is complemented by lighting at night creating a special atmosphere. The inspection driveway and pedestrian walkways have been repainted with a non-slip, bright and stain resistant epoxy. Axial-flow tunnel fans were added to improve the air quality of the inspectors' working environment to meet user requirements.



車道動線優化 Directional Optimisation



倉庫活化運用 Warehouse Revitalization

## Revitalizing the Warehouses Next to the Inspection Line

The four old warehouses were converted into the Taoyuan Station of Hsinchu Motor Vehicles Office's Cultural and Historical Exhibition Area, Boarding Inspection and Inspector's Office, as well as an area for the public to stop and rest. The Culture and History Exhibition Room presents the history of Taoyuan Station of Hsinchu Motor Vehicles Offices inspection line, displaying inspection tools, instruments, research reports, etc.

## **Optimization of Driving Directions**

The registration inspection room was moved closer to the inspection area, increasing the queuing space by 55 metres, the fixed jersey barrier at the inspection entrance was removed, and movable and removable stainless steel columns were added to provide the flexibility to swap lanes of large and small vehicles for inspection, improving inspection efficiency and capacity.

In summary, by integrating the three characteristic elements of inheriting from the past, friendliness and kindness, and innovation, the inspection line at the Taoyuan Station of Hsinchu Motor Vehicles Office was transformed into a national inspection demonstration site. Funds will continue to be allocated for the establishment of a brand new inspection line.

## 榮獲資通訊界奧斯卡獎 第3代公路監理資訊系統 產官民共榮奪首獎

#### Wins the ITC Oscar

Industry-Government-Public Joint to Win the First Prize for The Third-Generation Motor Vehicle and Driver Information System



公路總局受獎代表與WITSA主席及秘書長合影 Group photo of the DGH representatives with the Chairman and Secretary General of WITSA

## 公路監理資訊系統之產官民共榮 生態系

「第3代公路監理資訊系統」係政府與國 內先進資通訊業者合作之典範,由公路總局 訂定交通監理發展軸線,並與中華電信資訊 技術分公司及相關協力團隊長年合作,完善 數位治理之需求,而近兩年來因應新冠疫情 (COVID-19) 造成衝擊,提供更良好的資訊基 礎建設以因應更多的無接觸式服務樣態,並 強化資訊安全防護架構。而後疫情的產業紓 困方案,第3代公路監理資訊系統也從中提供 了包含遊覽車業營運費用補貼、防疫專車補 助、防疫物資補貼、車駕訓練機構補貼等各 式紓困方案,透過線上化的申請流程及結合 系統審核機制,加速各紓困補貼的進程並確 保過程之正確及有效性。在110年6月至7月2 個月內,總計發放了超過新臺幣32億元紓困 費用,超過10萬名駕駛人受惠。再者,透過

資料及服務API串接,監理資料更多元的應用在警政、環保等面向,精進臺灣數位治理及服務的深度及廣度。

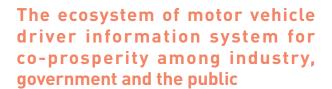
第3代公路監理資訊系統發展迄今,以穩健及完善的資通訊基礎建設協助監理業務之發展,透過政府政策定錨、資通訊業者提供技術解決方案、民間代檢驗業者共同協作、資料回饋至相關

部會以支持其業務應用發展,至最終受益於 民,為一全方位的產官民共榮生態系。

## 榮獲2022全球資通訊科技卓越獎

世界資訊科技與服務聯盟(簡稱WITSA)舉辦之全球資通訊科技卓越獎 (WITSA 2022 ICT Excellence Award),旨在表揚在資通訊產業具有傑出表現之組織及企業,享有「資通訊界的奧斯卡獎」之美譽。其獎項包含8大類別,其中「傑出公眾合作服務獎」係為獎勵政府部門與民間企業運用資通訊科技促進應用場域發展所設。

公路總局考量「第3代公路監理資訊系統」建立之產官民共榮生態系與該獎項宗旨相符,決定積極參獎,歷經國內初審,並於國際複審來自全球破百件的提案中脱穎而出,取得「傑出公眾合作服務獎」首獎。於馬來西亞舉辦之2022世界資訊科技大會(WCIT)中頒獎,彰顯國際肯定臺灣在智慧交通監理領域中的前瞻及貢獻。



The "3rd Generation Motor Vehicle and Driver Information System (MVDIS)" is a model of cooperation between the government and advanced local ICT companies. The DGH decided on the development topics for motor vehicle services and worked with the Information Technology Group, Chunghwa Telecom and other teams for several years to improve the digital government system. To cope with the impact of the COVID-19 pandemic in the past two years, the site aims to provide better information infrastructure offering more contactless services and strengthen the information security protection framework. The post-pandemic industry relief measures, such as the 3rd generation MVDIS provides the subsidies of expenses of the tourist bus carrier, subsidies for pandemic prevention vehicles, subsidies of pandemic prevention materials for carrier, and subsidies for driver training institutions, etc. By integrating an online application process with a system verification mechanism, the progress for relief measures and subsidies will be expedited, while ensuring the process is correct and effective. From June to July 2021, a total of more than NT\$3.2 billion in relief funds was distributed, benefiting more than 100,000 drivers. In addition, data and service APIs will be connected to apply motor vehicle information to police administration about traffic violations, environmental

protection, etc., improving digital government and services in Taiwan.

Since the launch of the 3rd generation MVDIS, it has supported the development of motor vehicle affairs with a comprehensive ICT infrastructure. Anchored by government policies, technical solutions provided by ICT companies and cooperation with civil inspection companies,

information is provided to relevant government departments to support the business application development and ultimately benefit the people, forming a comprehensive ecosystem for the coprosperity among industry, government and the public.

## Winner of the ICT Excellence Award 2022

The WITSA 2022 ICT Excellence Award is organized by the World Innovation, Technology and Services Alliance (WITSA) to recognise organizations and companies with outstanding achievements in the ICT industry. It is known as the "Oscar of the ICT industry". The awards include 8 categories, including the Public/Private Partnership Award, which rewards government agencies and private companies for promoting the development of application fields with the ICT.

The DGH actively participated in the selection as the "3rd Generation MVDIS" is in line with the purpose of the award in terms of building an ecosystem of co-prosperity among industry, government and the public. After the national pre-selection process, the project stood out from more than 100 proposals from around the world in the international selection process, winning first place in the "Public-Private Partnership Award". The award was presented at the 2022 World Conference on Information Technology (WCIT) in Malaysia, highlighting the international recognition of Taiwan's vision and contribution in the field of intelligent traffic services for motor vehicles.



各國獲獎代表於國際記者會合影

Group photo of representatives from different countries at the international press conference

# 脫穎而出 高雄市區監理所導入 EIS E 化管理獲廉正透明獎殊榮

Outstanding Kaohsiung City Motor Vehicles Office's Implementation of EIS-S Management Won the Integrity Transparency Award



公路總局獲頒交通部廉正透明獎第三名殊榮,陳文瑞局長代表至交通部受獎 The DGH won third place in the MOTC Integrity Transparency Award, with Director General Chen Wen-juei accepting the award on behalf of the DGH

## E化透明降風險 守護用路者安全

公路總局高雄市區監理所規劃公路監理 營運決策管理系統 (EIS),改善公路監理系統 貨運預警機制管理面向不足部分,重新制定 「公司管理」、「車輛管理」、「駕駛人管 理」等3層面計11項風險指標,藉由全面風險 評估總項指標及個別面向單項指標等不同層 面告警,找出高風險業者,並透過相關措施 督促改善,強化貨運業者源頭輔導與管理, 守護用路人生命安全。

## EIS系統再進化 創新擴充有成效

EIS預警機制111年4月再完成系統優化功能案,分別為「當期單項指標嚴重違規業者 名單」及「高頻次違規駕駛人及車輛名單」 兩項功能,屆時可進一步提供全國監理機關 運用,深化對業者的管理,持續藉由本系統 之特色包括「告警資料不容竄改」、「降低 業者與監理人員互利可能」等,消弭監理人 員與業者間互利人為操作空間。

## 團隊合作齊努力 廉正透明受肯定

自公路總局提報「全國高風險汽車貨運三業 EIS預警機制」參加交通部111年「廉正透明獎」 以來,高市所劉育麟所長率領該所團隊投入參獎 事宜,公路總局政風室及運輸組亦全程參與,團 隊合作協助審核高市所參獎申請表,參獎過程中 不斷演練策進,圓滿完成實地評核複審作業,自 全部11個參賽機關脱穎而出榮獲第3名佳績,監 理廉正透明成效,獲得外界肯定。



The Kaohsiung City Motor Vehicles Office planned a highway motor vehicle services executive management system (EIS) to improve the management of the freight warning mechanism of the highway motor vehicle service system, as well as redesigning 11 risk indicators at three levels of "Enterprise Management", "Vehicle Management" and "Driver Management". High-risk operators will be identified through a comprehensive risk assessment of general indicators and individual indicators, and will be required to improve through relevant measures, strengthen the source guidance and management of freight operators, and protect the safety of road users.

## The Evolution of the EIS System with Effective Innovation and Expansion

A system function optimisation plan of the EIS early warning mechanism was completed in April 2022, including the "list of serious violations of individual indicators in the current period" and the "List Of High-Frequency

Violating Drivers And Vehicles", which will be provided to Motor Vehicles Offices to improve the management of operators. Mutually beneficial underhand dealings between motor vehicle staff and operators will be reduced through system functions such as "alarm data cannot be tampered with", "reducing the possibility of underhand dealings between operators and staff", etc.

## Integrity and Transparency Achieved through Teamwork

After the DGH submitted the "National EIS Early Warning Mechanism for the High-Risk Automobile Freight Industry" to participate in the 2022 MOTC "Integrity Transparency Award", the Kaohsiung City Motor Vehicles Office, Director Liu Yu-lin led the team to participate in the selection. The Civil Service Ethics Office and the Transportation Division of the DGH also participated the complete review of the application. They continued to practice the process to complete the on-site evaluation and review tasks. In the end, they stood out from all 11 participating agencies and won third place, with the integrity and transparency recognized by society.



廉正透明獎頒獎典禮,交通部王國材部長與前三名獲獎機關合影

Integrity Transparency Award Ceremony with the MOTC Minister Wang Kwo-tsai taking a group photo with the top three award-winning agencies





## 111 年話務服務成果及展望 開上廣連結、低延遲、高頻寬

# 開上廣連結、低延遲、高頻買用路人服務的第 1 哩路

Customer Service Call Center Achievements and Prospect for 2022 Developing First Mile Services for Road Users with Wide Connectivity, Low Delay and High Bandwidth



「線上、線下24小時不打烊」 Online 24 Hours A Day

新冠肺炎 (COVID-19) 疫情拉開社交距離,但拉近網路距離。疫情改變人們社交溝通的方式,使用網路代替馬路,如遠距的工作、學習、娛樂等;用路人服務中心(以下簡稱中心)業管的臺灣公路博物館及用路人話務中心,今年開始以「廣連結、低延遲、高頻寬」的新策略,啟動數位客服的優化、數據資訊視覺化,還有數位公路博物館的計畫。

## 廣連結在地、國際及新世代 公路故事啟發創新價值

公路博物館策展推動「廣連結」策略, 主動結合國際資源,以知識共享創造綜效。 首創跨國合作策展先例,與日本西武集團的 鐵道公司於111年9月24日合作「日本鐵道列 車,開進臺灣公路博物館!」講座,讓參加 民眾同時體驗臺灣公路及監理設計歷史,也 透過日本鐵道列車長豊田良先生揭密新世代 列車Laview創新理念及細節。

而公路博物館除跨國連結,更透過分享歷史及實務,串連啟發下一代工程人。中華工程司偕同中國科大土木與防災師生於111年11月17日下午參訪公路總局公路博物館了解臺灣公路建設及監理演變之歷史及實務,現場11名學生主動表示未來學以致用投身國家建設的行列,用工程做臺灣的護國神山。

公路策展,明年走出館外連結在地。112 年下半年預定配合行政院客家委員會,規劃 辦理「台9線公路與客庄巡展」,以「台9 線」公路為軸線,透過數位互動、公路實境 體驗等手法,分別在臺北及花蓮、臺東等3處 巡迴策展,展演公路英雄的開路故事及花東 縱谷的客庄文化。

## 整合典藏物件及打造用聽的博物館

公路總局與時俱進努力創造榮耀歷史, 更一起典藏及傳播故事,中心亦開始建立文 物、人力及策展資源的整合機制的第一步。 中心親訪局屬機關第一區養護工程處、第二區 養護工程處、第四區養護工程處等3個工程處 的文物展館及西部濱海公路北區臨時工程處淡 江大橋願景館,研擬討論整合典藏作業方法、 導覽素養及聯合行銷,以發揚公路總局工程及 人文資源,承擔領頭羊角色。 While the COVID-19 pandemic brought people socially-distant, however has brought people closer through the internet.

The pandemic changes the way people communicate and socialize, with more time online than on the road, working, studying and entertaining themselves from home. The Road User Service Center (hereinafter referred to as the Center) has adopted a new strategy of "Wide Connection, Low Latency And High Bandwidth" for the Taiwan Highway Museum and Call Center to optimize digital customer service, visualize data information and plan a digital highway museum.

#### Connecting Local, International and New Generations Value of Innovation Inspired by The Highway Museum

The Highway Museum promotes the strategy of "Broad Connection" to actively combine international resources and create synergy through knowledge sharing. The first example of a cross-border exhibition was the cooperation with Seibu Group Railway of Japan to hold the lecture "Welcoming Japanese Trains to Taiwan Highway Museum" on September 24, 2022, which allowed participants to experience Taiwan's history of highway and automobile services at the same time, and let the conductor of Japan Railway, Mr. Ryo Toyoda, reveal the innovative concept and details of the new generation of trains, Laview.

In addition to cross-border connections, the Highway Museum also inspires the next generation of engineers by sharing history and practices. On the afternoon of November 17, 2022, China Engineering Consultants, Inc. accompanied the students from the Department of Civil Engineering and Hazard Mitigation to the Taiwan Highway Museum to understand the history and practice of Taiwan's highway construction and the development of motor vehicle affairs. The 11 students expressed that they would apply what they have learned and dedicate themselves to national construction in the future to safeguard Taiwan.

Highway exhibitions will move out of the museum to connect with different places. In the second half of 2023, the "Provincial Highway No.9 and Hakka Village Tour Exhibition" is planned together with the Hakka Affairs Council. The Provincial Highway No.9 will be the main theme of the exhibition, which will be held in Taipei, Hualien and Taitung through digital interactions and virtual reality experiences, showcasing the history of the highway heroes and the Hakka culture of the East Rift Valley.

## Quickly Integrate Objects into The Collection to Create An Audio Museum

Moving with the times, the DGH strives to create a glorious history by collecting and **sharing stories.** The Center has also begun to take the first step in integrating cultural relics, human resources and curatorial resources. The Center visited the Cultural Relics Museum of the First Maintenance Office, the Second Maintenance Office and the Fourth Maintenance Office, as well as the Danjiang Bridge Vision Pavilion of the West Coast Expressway Northern Region Temporary Engineering Office, to discuss how to integrate and implement the collection operation methods, quality management and joint marketing, so as to maximize the technical and human resources of the DGH and play the leading role.



「臺灣公路與日本鐵道創新設計交流講座」用路人服務中心 章世政執行秘書(左一),西武鐵道集團豊田良副總經理 (中間),堺建築方俊凱建築師(右一)

The Road User Service Center, Executive Secretary, Chang Shihcheng (first from the left), the Seibu Railway, Deputy General Manager, Toyota Ryo (center) and the Kai Architects, architect, Fang Jun-kai (first from the right) at the "Taiwan Highway and Japan Railway Innovation Design Exchange Lecture"

交通部公路總局 111 年報

會導入國際博物館新趨勢-快速回應收 藏作為。將於112年首創先例,開設公路博 物館Podcast(網路廣播),透過重要政策 事件及成果的相關物件的掌握,對於當前重 大議題或事件做出記錄處理及口語傳播,透 過「聽的博物館」,不讓同仁努力及故事佚 失。

打造無牆的數位公路博物館,傳承、 影響及分享的理念,與社會大眾對話。112 年會突破博物館實體空間限制,參採元宇宙 體驗新模式,更將規劃環島體驗認證及線上 展示,讓公路旅人記憶也成為典藏及策展內 容,讓博物館亦如公路進入臺灣生活美好記 憶。

## 低延遲高效率結案 資訊視覺化發掘 服務痛點

處在大數據的時代,中心透過資訊視覺 化,提供時效「低延遲」又好理解的資訊, 呈現監理運輸及公路交通業務的需求及痛 點。話務中心已逐步建置資料格式,隨時收 集數位服務足跡,提供相關單位即時的管理 觀點。例如:111年6月話務中心進線量數據 異常提升,致公路總局通訊費用暴增,經後 臺分析,為他直轄市裁決所之自助語音內容 易遭民眾誤解,洽商立即調整後,不到1天解 決話務量驟升之現象。

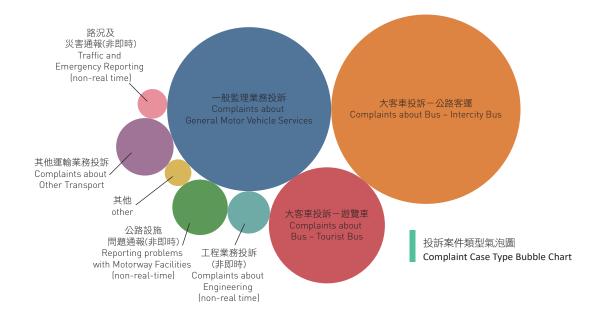
「低延遲」的投訴案件處理,在111年下 半年大幅減少至每月平均不到1件。用路人服 務中心積極檢視陳情案件時效性,由專人進行 案件稽催機制,提醒各單位未結案件以及到期 日,111年同比去年話務派派工管考系統陳情 案件逾期件數明顯大幅下降70%,提升陳情案 結案效率,創造服務品質良善文化及形象。

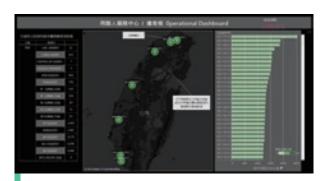
## 高頻寬效能話務服務 持續邁向數據 循證治理

數位工具雖然取代客服專員數位,但客 服專員逐步提升為AI教練,共同協作提供更 具規模的「高頻寬」話務服務。未來將持續 對文字智能平臺的優化,透過專人客服和聊 天機器人的搭配使用,同時善用兩者優勢, 不受資訊容量多寡及人為因素去影響服務品 質;新年度將評估QR Code網路電話及分析儀 表板之可行性,提供更適切、適時、人性的 服務。

推廣數位公路博物館、建立用數據服 務中心兩大目標,將奠下公路總局正面影響 力、服務規模及循證治理的新里程碑。112年 元月已開始奠基同仁「以資料為中心,以分 析為根據」的數位思維,提供真人及擬真人 線上、線下24小時不打烊又入心的服務。

現在,做好「用路人服務中心」;明 年,更要升級做好「用數據服務中心」。





「用數據服務中心」來電動態儀錶板 "A Service Centre Served by Data" Dynamic Dashboard for Incoming Calls

Meanwhile, a new trend of international museums – rapid response to collections – has always been introduced. A new example will be sent in 2023 with the launch of the Taiwan Highway Museum Podcast to record, process and share current major issues or events in spoken language by keeping up to date with relevant events and achievements of important contemporary policies. This "Audio Museum" will prevent the efforts and stories of all DGH staff from being lost.

The DGH aims to create a digital highway museum without walls to engage with the general public by upholding the concepts of inheritance, influence and sharing. In 2023, the DGH will break through the limitations of the museum's physical space to adopt a new model of experience with the metaverse. It will also plan to certify the round-the-island experience and online exhibition, so that the memories of highway travellers will also become the contents of the collection and exhibitions, allowing the museum to become part of the beautiful memories of living in Taiwan, just like the highway.

# Co-creation of Low Latency and High Efficiency Information Visualisation to Discover Service Pain Points

In the era of big data, the center provides time-sensitive "Low-Latency" and easy-to-understand information through information visualization, presenting the needs and pain points of automobile affairs and highway transportation business. The call center has gradually built a data format to collect digital service footprints at any time, providing relevant units with real-time management perspectives. For example: In June 2022, the number of

incoming calls to the call center increased drastically, resulting in a sharp increase in communication costs for the DGH. The analysis revealed that the answers automatically provided by the city's traffic offices were easily misunderstood by the public. The problem was resolved within a day of the DGH's intervention.

The processing of "Low-Latency" complaints was significantly reduced to an average of less than one per month in the second half of 2022. The Service Center actively reviewed the timeliness of petition cases, and dedicated staff implemented a case reminder mechanism to remind all units of unclosed cases and due dates. In 2022, the number of overdue petition cases was significantly reduced by 70% compared to last year in the telephone dispatching labor management examination system, improving the efficiency of closing petition cases and creating a culture and image of good service quality.

#### High-Bandwidth, High-Efficiency Telephony Services Continue to Move Towards Data and Evidence-Based Management

Although digital tools have gradually replaced customer service specialists, customer service specialists are gradually becoming Al coaches, working together to provide larger "High Bandwidth" call services. In the future, we will continue to optimize the intelligent text platform. By combining dedicated customer service specialists and chat robots, service quality will not be affected by information capacity and human factors. In the new year, the DGH will explore the feasibility of QR code VoIP and analysis dashboard to provide more appropriate, timely and human-centerd services.

The twin goals of promoting a digital highway museum and establishing a data service center will set a new milestone in the DGH's positive impact, service scale and evidence-based governance. In January 2023, it has begun to lay the foundation for the digital thinking of "Data-Centerd And Analysis-Based" colleagues, providing 24-hour services with both real and virtual people.

Now we can build a good Road User Service Center. In the future, we can build a good "Digital Service Centre".

# 泛通

## 提升法制價值 精進法制教育

#### Promoting Legal Affairs Value Refining Legal System Education



法制室創新辦理法制作業及公報刊登作業實際操作一對一教學 One-on-one training on the practical operation of the innovative handling of legal affairs and bulletin publication in the Legal Affairs Office

## 創新辦理法制作業及公報刊登作業 實務操作一對一教學

為提升機關內各單位承辦人法制作業及公報刊登作業之熟悉度,並考量過去教育訓練之學員僅被動聽課,當實際辦理公文時,卻常不知從何著手或不熟悉規定,故法制室透過一對一操作教學,由該室會辦承辦人帶領主辦單位承辦人於電腦前實際操作,除了可加速公文會辦時效之外,而且得加深各單位承辦人印象及提高實務操作能力,俾利法制作業及公報刊登作業更臻周延完善。

## 法律教育擴大辦理 提升同仁法律知 能

法制室**111**年度除了開辦工程法律、公報 與法制作業、國賠實務及行政救濟等講習班 (平均滿意度達92分)之外,另為加強同仁 法律概念,該室指派專人至局屬機關及主計 室所舉辦之教育訓練中,就其同仁所需要之 法律知識或可能面臨之法律問題進行授課, 計10場次,其中較往年較著重國賠及監理領 域,法制室更將法制教育範圍延伸至工程、 主計人員,到訓同仁累計達723人次,著有 實績。

## 提供法律諮詢 有效協助推動業務

法制室提供適法性之法律諮詢,於111年 度累計達417件次、服務時間計達1萬4,489分 鐘,未來該室仍將積極協助業務單位突破法 律障礙,並避免同仁誤觸法令,俾利業務單 位「依法行政」推展業務及遂行長官交辦之 各項任務,並在合法下達到周延妥適之行政 目的。



法制室指派專人至主計人員專業研習班講授法律課程
The Legal Affairs Office provides staff to teach legal courses at professional seminars for accountants

#### Innovative One-to-one Training in the Practical Operation of Legal Affairs and Bulletin Publication

In order to improve familiarity with legal affairs and the publication of bulletins in the various units of the DGH, and considering that in the past trainees only passively listened to the lectures and failed in the actual handling of official documents because they often did not know where to start or were not familiar with the regulations, the Legal Affairs Office is organizing actual practice sessions in front of computers with one-on-one teaching for dedicated staff. This will not only improve the efficiency of document processing, but will also make the procedures easier to remember, which will benefit Legal Affairs and the publication of the Bulletin.

# Expansion of the Legal Training Program to Improve Staff Legal Knowledge

In addition to holding workshops in 2022 on engineering law, bulletins and legal affairs, national compensation practices and

administrative relief, the Legal Affairs Office also engaged in innovative one-on-one teaching (with an average satisfaction score of 92 points). In order to strengthen the legal awareness of all staff, the Office assigned dedicated staff to the training sessions of the DGH agencies and the Accounting Office to give lectures on the legal knowledge needed to deal with the legal issues they may face. A total of 10 workshops were organized, focusing more than before on national compensation and motor vehicle matters. The Legal Affairs Office also extended the scope of legal training to technical and accounting staff, bringing the total number of people trained to 723.

## Providing Legal Advice to Effectively Support the Fulfilment of All Tasks

The Legal Affairs Office provides legal advice, with a total of 417 cases and 14,489 minutes in 2022. In the future, the Office will actively support all units in complying with the law in order to assist all units in fulfilling the tasks and missions assigned to them by senior management and to achieve administrative objectives while upholding the principle of compliance.

## 金檔卓越榮耀 樹立標竿典範

## Winning the Records Management Quality Award Setting a Benchmark Example



公路總局第一區養護工程處金檔團隊榮獲第19屆機關檔案管理金檔獎中央組第1名的佳績

The DGH's First Maintenance Office won first place among central government agencies for the 19th Records Management Quality Award

## 努力不懈 獲獎肯定

公路總局第一區養護工程處金檔團隊3年 來日以繼夜的規劃準備與辛勤付出,終於獲 得檔案管理局評審們肯定,榮獲第19屆機關 檔案管理金檔獎中央組第1名的佳績。

## 智能、科技的優質庫房

一工處完善檔案庫房成為智能化、科技化的優質設施,整合溫、溼度、漏水偵測、CO<sub>2</sub>、監視、消防及門禁系統,環境監測如超出標準值,透過Line系統立即發送,檔管人員同時可透過手機APP,遠端隨時監控,主動掌握異常狀況,及時應變處置。

## 橋路穿山海 典藉照古今

一工處規劃創設文物館,辦理文物徵集 活動,蒐集工程歷史的文書、照片、工程圖

的核心業務,創造更多的優良事蹟,讓檔案存 百載,青史留百世。

## 公路總局輔導成果

機關檔案管理金檔獎,是象徵檔案管理 最高榮譽之獎項,公路總局對所屬機關檔案 管理考評輔導以及推動所屬機關參加金檔獎 不遺餘力,近年公路總局所屬機關參獎皆有 優異成績,包含第16屆臺中所、第17屆三工 處以及本(19)屆一工處。公路總局成立金檔獎 輔導團隊,藉由書面審核、實地考評以及外 聘學者專家複評,擇優推派參獎,再配合交 通部輔導期程,從旁督導及協助所屬機關參 獎準備。本(19)屆一工處參獎受疫情影響、評 獎延期尤為辛勞,公路總局金檔獎輔導小組 適時給予協助及加油打氣,一工處與總局共 同努力之下,最終獲得中央組第1名的佳績。 公路總局將持續推動檔管考評輔導作業,落 實各項檔案管理工作,全面提升檔管效率與 效能以及服務品質。

## Winning Recognition with Tireless Effort

After three years of planning and preparation, the Golden Archives team at the DGH's First Maintenance Office has finally been recognized by the judges of the 19th Records Management Quality Award, winning first place among central government agencies.

## Intelligent and High-Tech Quality Storage

The First Maintenance Office has perfected the archive store as an intelligent and hightech quality facility, integrating temperature, humidity, water leak detection, CO<sub>2</sub>, monitoring, fire protection and access control systems. If the environmental monitoring exceeds the standard value, it is immediately sent through the Line system, so that the management staff can monitor remotely with their mobile phone and app to stay informed of the anomaly and address it in a timely manner.

#### Bridges and Highways Cross Mountains and Seas

The First Maintenance Office plans to create a cultural relics museum by issuing an open call for documents, photographs, engineering drawings and videos of the historic engineering projects, as well as organising activities for retired employees to return to the DGH so their memories can be retrieved. In this way, valuable records of their spirit and development of the motorway will be preserved through special publications such as memoirs of former directors, oral histories, etc. Among them, the book dedicated to the *From the mountains*, to the ocean: Yangmingshan – Jinshan Highway (2A Line), Taiwan won the 45th Golden

Tripod Award for Government Publications. The Cultural Relics Museum has also become a popular reference for various authorities. In the future, the DGH will continue to work hard and combine the core business to make more excellent achievements, so that the archives will be preserved for a hundred years.

#### **Results of DGH Guidance**

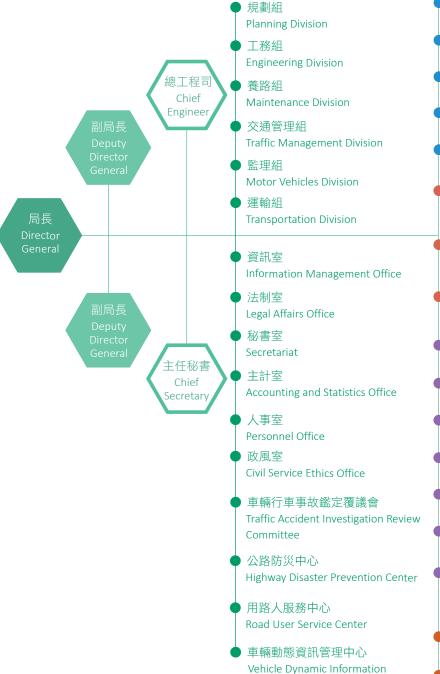
The Records Management Quality Award is the symbolizes of highest honor for archives management. The DGH has spared no effort in evaluating and guiding the archives management of its member agencies and in encouraging its member agencies to participate in the Records Management Quality Award. Many DGH agencies have won the award in recent years, such as the Taichung Office (16th), Third Maintenance Office (17th) and the First Engineeering Office this year (19th). The DGH has set up an advisory team for the Records Management Quality Award. Written evaluation, on-site evaluation and re-evaluation by external scholars and experts have helped to select the best candidates for the award. The team also works with the MOTC's guidance plan to supervise and assist affiliated institutions in preparing for the award. This year (19th), the First Engineering Office suffered from the effects of the epidemic, with many obstacles caused by delayed reviews. The Records Management Quality Award Guidance Team of DGH provided timely assistance and encouragement. With the joint efforts of the First Engineering Office and the DGH, it finally won the first place among all central government agencies. The DGH will continue to promote the evaluation and guidance of records management, implement various records management tasks, and improve the efficiency and effectiveness of records management and service quality.



公路總局第一區養護工程處金檔團隊榮獲第19屆機關檔案管理金檔獎中央組第1名的佳績



- 總 局內部單位計有6組、6室、4個任務編組單位。
- 17個所屬機關(構):
- 5個養護工程處(所轄36個工務段及50個監工站)
- 3個新建工程處(所轄18個工務段)
- 7個監理所(所轄26個監理站、4個監理分站及7個鑑定會)
- 公路人員訓練所(2個訓練中心)
- 材料試驗所
- The internal units of the Directorate General of Highways include 6 divisions, 6 offices, and 4 temporary task force units.
- 17 subordinated units:
- 5 maintenance offices (36 branches and 50 stations)
- 3 engineering offices (18 branches)
- 7 motor vehicles offices (26 stations, 4 substations, and 7 investigation committees)
- Training Institute (2 institutes)
- Materials Testing Laboratory



Management Center

- 第一區養護工程處 First Maintenance Office
- 第二區養護工程處 Second Maintenance Office
- 第三區養護工程處 Third Maintenance Office
- 第四區養護工程處 Fourth Maintenance Office
- 第五區養護工程處 Fifth Maintenance Office
- 西部濱海公路北區臨時工程處
  West Coast Expressway Northern Region
  Temporary Engineering Office
- 西部濱海公路南區臨時工程處West Coast Expressway Southern Region Temporary Engineering Office
- ●蘇花公路改善工程處 Suhua Improvement Engineering Office
- 臺北區監理所 Taipei Motor Vehicles Office
- 新竹區監理所 Hsinchu Motor Vehicles Office
- 臺中區監理所 Taichung Motor Vehicles Office
- 嘉義區監理所 Chiayi Motor Vehicles Office
- 高雄區監理所 Kaohsiung Motor Vehicles Office
- 臺北市區監理所 Taipei City Motor Vehicles Office
- 高雄市區監理所 Kaohsiung City Motor Vehicles Office
- 公路人員訓練所 Training Institute

## 施政計畫 Administrative Project

計畫名稱 Project name	年度預算 (千元) Annual budget (NTD 1,000)	計畫期程 (年) Timeframe (year)	列管級別 Supervisory Level
淡江大橋及其連絡道路建設計畫 Danjiang Bridge and Connecting Roads Construction Project	3,843,321	2014-2024	政院管制 Executive Yuan
生活圈道路交通系統建設計畫(公路系統) Region-Based Road System Construction Project (Highway System)	4,438,227	2022-2027	部會管制 Ministry
環島自行車道升級暨多元路線整合推動計畫 Bicycle Route Upgrade and Integration Project	823,885	2020-2024	部會管制 Ministry
提升道路品質建設計畫 Road Quality Improvement Construction Project	2,646,342	2017-2025	部會管制 Ministry
改善停車問題計畫 Parking Improvement Project	6,252,387	2017-2024	部會管制 Ministry
東西向快速公路台76線(原漢寶草屯線)台19線以西路段 改線工程 East-West Expressway No.76 (former Hanbao-Caotun Expressway) Section on the West of Provincial Highway No.19 Construction Project	3,071,037	2018-2026	部會管制 Ministry
科學城低碳智慧環境基礎建置 — 公共建設部分 Science City Low-carbon Intellectual Environment Foundation-Partial Plan for Constructing Infrastructure	225,905	2017-2022	部會管制 Ministry
西濱快速公路曾文溪橋段新建工程 New construction of the Zengwun River Bridge section of the West Coast Expressway	54,483	2021-2028	自行管制 Autonomous Management
台9線花東縱谷公路安全景觀大道計畫(臺東段) A Safe Landscape Boulevard on East Rift Valley Highway of Provincial Highway No.9 (Taitung Section)	243,918	2021-2027	自行管制 Autonomous Management

計畫名稱 Project name	年度預算 (千元) Annual budget (NTD 1,000)	計畫期程 (年) Timeframe (year)	列管級別 Supervisory Level
公共服務據點整備-公有危險建築補強重建(中央自辦)(公務)— 交通部及所屬 Refurbishment of Public Service Facilities — Reinforcement and Reconstruction of Publicly-owned Dangerous Buildings (managed by the central government) (public affairs) — MOTC and its affiliated institutions	104,733	2022-2022	自行管制 Autonomous Management
台9線花東縱谷公路安全景觀大道計畫 A Safe Landscape Boulevard on East Rift Valley Highway of Provincial Highway No.9	1,181,734	2017-2027	自行管制 Autonomous Management
公路公共運輸服務升級計畫 Highway Public Transport Service Enhancement Project	5,482,036	2021-2024	自行管制 Autonomous Management
省道改善計畫(108~113年) Highway Improvement Project (2019-2024)	7,944,657	2019-2024	自行管制 Autonomous Management
公路養護計畫 Highway Maintenance Project	8,547,914	2022-2022	自行管制 Autonomous Management
高雄市區監理所苓雅監理站遷建計畫 Linya Motor Vehicles Station, Kaohsiung City Motor Vehicles Office Relocation Project	218,186	2019-2023	自行管制 Autonomous Management
臺中區監理所臺中市監理站新建辦公大樓工程計畫 The New Office Building Construction Project for Taichung City Motor Vehicles Station, Taichung Motor Vehicles Office	128,041	2019-2023	自行管制 Autonomous Management
公路公共運輸多元推升計畫 Highway Public Transport Multiple Enhancement Project	249,459	2017-2022	自行管制 Autonomous Management

## 參賽成果 Competition Results

編號 Number	考評(核)或競賽名稱 Evaluation or the name of the Competition	得獎單位 Awarded Unit	成績 Result
1	交通部所屬各一級行政機關111年績效考評 The 2022 performance evaluation of the chief administration departments of the Ministry of Transportation and Communications	公路總局 Directorate General of Highways	第1名 First Place
2	第19屆機關檔案管理金檔獎 — 中央組 The 19th Records Management Quality Award for Agency Archives Management — Central Government Agencies	第一區養護工程處 First Maintenance Office	第1名 First Place
3	第45屆金鼎獎政府出版品類圖書獎 The 45th Golden Tripod Award in the Government Publications category	第一區養護工程處 First Maintenance Office	獲獎 Winning Award
4	110年度交通部公路養護作業督導考核 The 2021 MOTC Assessment for Highway Maintenance	第一區養護工程處 (基隆工務段) First Maintenance Office (Keelung Maintenance Office Branch)	第1名 First Place
5	111年行政院勞動部推動職業安全衛生優良工程金安獎 — 台64線中山高到板橋中山路口橋梁耐震補強工程 The 2022 Excellent Construction Safety Awards of Occupational Safety and Health in Engineering from the Ministry of Labor, Executive Yuan — Seismic Reinforcement Project of the Bridge from Zhongshan Highway to Banqiao Zhongshan Intersection on Provincial Highway No.64	第一區養護工程處 First Maintenance Office	佳作 Honorable Mention
6	110年行政院勞動部推動職業安全衛生優良工程金安獎-107年度第4次災害台8線109k+500路段復建工程The 2021 Excellent Construction Safety Awards of Occupational Safety and Health in Engineering from the Ministry of Labor, Executive Yuan – The 4th Disaster Restoration in 2018 for Provincial Highway No.8 109k+500 Section	第二區養護工程處 Second Maintenance Office	優等 Excellent
7	110年行政院勞動部推動職業安全衛生優良工程金安獎 — 台17線14k+915臨港二號橋改建工程The 2021 Excellent Construction Safety Awards of Occupational Safety and Health in Engineering from the Ministry of Labor, Executive Yuan – Reconstruction of 14k+915 Lingang No.2 Bridge on Provincial Highway No.17	第二區養護工程處 Second Maintenance Office	優等 Excellent

編號 Number	考評(核)或競賽名稱 Evaluation or the name of the Competition	得獎單位 Awarded Unit	成績 Result
8	111年度交通部金路獎 — 用路人資訊類 The 2022 MOTC Golden Way Awards – Road User Information Category	第二區養護工程處 (南投工務段) Second Maintenance Office (Nantou Maintenance Office Branch)	第1名 First Place
9	社團法人中華民國不動產協進會 2022國家卓越建設獎 — 最佳環境文化類 The 2022 National Excellence in Construction Award – Best Environmental Culture Category by FIABCI Taiwan	第二區養護工程處 Second Maintenance Office	特別獎 Special Award
10	社團法人中國土木水利工程學會110年 工程環境與美化獎 — 工程美化與景觀類 (台14線40k~45k景觀改善工程) The 2022 Engineering Environment and Beautification Award by the Chinese Institute of Civil and Hydraulic Engineering – Engineering Beautification and Landscape Category (Provincial Highway No.14 40k~45k Landscape Improvement Project)	第二區養護工程處 Second Maintenance Office	特優 Superior
11	社團法人中國土木水利工程學會110年 工程環境與美化獎 — 工程美化與景觀類 (南勢至天輪公路景觀改善工程) The 2022 The Engineering Environment and Beautification Award of the Chinese Institute of Civil and Hydraulic Engineering – Engineering Beautification and Landscape Category (Nanshi-Tianlun Highway Landscape Improvement Project)	第二區養護工程處 Second Maintenance Office	優等 Excellen
12	中華民國景觀學會2021第9屆臺灣景觀大獎 The 2021 9th Taiwan Landscape Award from the Taiwan Institute of Landscape Architects	第三區養護工程處 (臺東工務段) Third Maintenance Office (Taitung Maintenance Office Branch)	佳作 Honorable Mention
13	111年行政院勞動部推動職業安全衛生優良工程 金安獎 — 公共工程類 The 2022 Excellent Construction Safety Awards of Occupational Safety and Health in Engineering from the Ministry of Labor, Executive Yuan – Public Construction	第三區養護工程處 (關山工務段) Third Maintenance Office (Guanshan Maintenance Office Branch)	特優 Superio

編號 Number	考評(核)或競賽名稱 Evaluation or the name of the Competition	得獎單位 Awarded Unit	成績 Result
14	111年度交通部金路獎 — 路況養護類 The 2022 MOTC Golden Way Awards – Highway Maintenance Category	第四區養護工程處 Fourth Maintenance Office	第1名 First Place
15	111年度交通部金路獎 — 路況養護類 The 2022 MOTC Golden Way Awards – Highway Maintenance Category	第四區養護工程處 (獨立山工務段) Fourth Maintenance Office (Duli Mountain Maintenance Office Branch)	第1名 First Place
16	中華民國景觀學會2021第九屆臺灣景觀大獎 The 2021 9th Taiwan Landscape Award from the Taiwan Institute of Landscape Architects	第四區養護工程處 Fourth Maintenance Office	傑出獎 Outstanding Awrad
17	國際景觀建築師協會IFLA AAPME Awards 2022 國際景觀競賽 The IFLA AAPME Awards 2022 International Landscape Competition	第四區養護工程處 Fourth Maintenance Office	傑出獎 Outstanding Awrad
18	111年交通部金路獎 — 優良景觀類 The 2022 MOTC Golden Way Awards – Excellent Landscape Category	第五區養護工程處 (阿里山工務段) Fifth Maintenance Office (Alishan Maintenance Office Branch)	第1名 First Place
19	110年行政院勞動部推動職業安全衛生優良工程金安獎 — 公共工程組工程類 — 台18線78k+350及79k+035等2處附近邊坡災害明隧道修復工程(重編) The 2022 Excellent Construction Safety Awards of Occupational Safety and Health in Engineering from the Ministry of Labor, Executive Yuan — Public Construction, Engineering Category — Disaster Prevention Rock Shelter by the slope near Provincial Highway No.1878k+350 and 79k+035	第五區養護工程處 Fifth Maintenance Office	佳作 Honorable Mention

編號 Number	考評(核)或競賽名稱 Evaluation or the name of the Competition	得獎單位 Awarded Unit	成績 Result
20	110年行政院勞動部推動職業安全衛生優良工程金安獎 — 公共工程組工程類 — 台1線急水溪橋改建工程 The 2022 Excellent Construction Safety Awards of Occupational Safety and Health in Engineering from the Ministry of Labor, Executive Yuan — Public Construction, Engineering Category — Jishuixi Bridge Reconstruction Project of Provincial Highway No.1	第五區養護工程處 Fifth Maintenance Office	優等 Excellent
21	111年行政院勞動部推動職業安全衛生優良工程金安獎 — 公共工程組工程類 — 台18線76k+670~76k+820災害明隧道新建工程(第2次重編) The 2022 Excellent Construction Safety Awards of Occupational Safety and Health in Engineering from the Ministry of Labor, Executive Yuan — Public Construction, Engineering Category — Disaster Prevention Rock Shelter on the slope near Provincial Highway No.1878k+350 and 79k+035.	第五區養護工程處 Fifth Maintenance Office	佳作 Honorable Mention
22	110年公務人員傑出貢獻獎 — 團體獎 The 2021 Civil Service Outstanding Contribution Award – Group Award	蘇花公路改善工程處 Suhua Highway Improvement Engineering Office	傑出貢獻獎團體獎 The Outstanding Contribution Award – Group Award
23	亞洲土木工程聯盟 (ACECC) 第九屆亞洲土木工程大會 (CECAR9) The 9th Civil Engineering Conference in the Asian Region of the The Asian Civil Engineering Coordinating Council	蘇花公路改善工程處 Suhua Highway Improvement Engineering Office	傑出工程計畫獎首獎 The Outstanding Engineering Award: First Prize
24	第14屆道安創新貢獻獎 — 公路監理組 The 14th Road Safety Innovative Contribution Award- traffic safety advocacy team	臺北區監理所 Taipei Motor Vehicles Office	第1名 First Place
25	交通部110年「運輸資料流通服務平臺 TDX」加盟協作單位績效評獎作業(票證組 — 公車類)The 2021 MOTC "Transport Data Exchange (TDX) Collaborative Unit Performance Award" Bus Ticket category	新竹區監理所 Hsinchu Motor Vehicles Office	優等獎 Excellence Award

編號 Number	考評(核)或競賽名稱 Evaluation or the name of the Competition	得獎單位 Awarded Unit	成績 Result
26	110年汽車貨運調查 The 2021 MOTC Annual Evaluation of Auto Cargo	新竹區監理所 Hsinchu Motor Vehicles Office	第1名 First Place
27	111年交通部服務獎(社會關懷服務類) The 2022 MOTC Services Award (Social Care and Services category)	臺中區監理所 (彰化監理站) Taichung Motor Vehicles Office (Changhua Motor Vehicles Station)	獲獎 Winning Award
28	交通部110年「運輸資料流通服務平臺TDX」加盟協作單位績效評獎作業(票證組 — 公車類)The 2021 MOTC "Transport Data eXchange (TDX)Collaborative Unit Performance Award" Bus Ticket category	臺中區監理所 Taichung Motor Vehicles Office	優等 Excellent
29	111年交通部第二屆領航盃無人機創意應用大賽 The 2022 2nd Leading Cup-Drone Creative Application Competition from Ministry of Transportation and Communications	公路總局 Directorate General of Highways	應用組 - 卓越獎 Application Category – Outstanding Award
30	111年行政院勞動部推動職業安全衛生優良工程金安獎 — 台9線325k+900~328k+800瑞豐永安段道路拓寬工程 The 2022 Excellent Construction Safety Award of Occupational Safety and Health in Engineering from the Ministry of Labor, Executive Yuan - Provincial Highway No.9 Ruifeng-Yongan (325k+900~328k+800) Section Widening Project	第三區養護工程處 Third Maintenance Office	特優 Superior
31	111年行政院勞動部推動職業安全衛生優良工程 金安獎 — 東西向快速公路台76線(3K+700~11K+585) 文津至西庄路段新建工程 The 2022 Excellent Construction Safety Award of Occupational Safety and Health in Engineering from the Ministry of Labor, Executive Yuan - East-West Expressway No.76 (3K+700~11K+585) Wenjin to Xizhuang Section Construction Project	西部濱海公路北區 臨時工程處 West Coast Expressway Northern Region Temporary Engineering Office	佳作 Honorable Mention

編號 Number	考評(核)或競賽名稱 Evaluation or the name of the Competition	得獎單位 Awarded Unit	成績 Result
32	111年公共工程委員會第22屆公共工程金質獎 -台74線大里及霧峰地區增設匝道工程(台74線草湖交流道) The 2022 22nd Public Construction Golden Quality Awards – Provincial Highway No.74, Dali and Wufeng Ramp Addition Project (The Caohu Interchange of Provincial Highway No.74)	第二區養護工程處 Second Maintenance Office	特優 Superior
33	111年公共工程委員會第22屆公共工程金質獎 — 台18線78k+350及79k+035等2處附近邊坡災害明隧道 修復工程(重編) The 2022 22nd Public Construction Golden Quality Awards – Provincial Highway No.18 – (78k+350 and 79k+035) The Restoration of Disaster Side Slope and Tunnel in Two Places	第五區養護工程處 Fifth Maintenance Office	特優 Superior
34	111年公共工程委員會第22屆公共工程金質獎 — 台1線虎尾溪橋改建工程 The 2022 22nd Public Construction Golden Quality Awards — Provincial Highway No.1 Huwei Bridge Renovation Project	西部濱海公路南區 臨時工程處 West Coast Expressway Northern Region Temporary Engineering Office	優等 Excellent
35	111年公共工程委員會第22屆公共工程金質獎 - 東西向快速公路台76線(0k+000~3k+700) 永興至文津路段新建工程 The 2022 22nd Public Construction Golden Quality Awards – East-West Expressway No.76 (0k+000~3k+700) Yinghsing-Wenjin Section New Construction Project	西部濱海公路北區 臨時工程處 West Coast Expressway Northern Region Temporary Engineering Office	佳作 Honorable Mention
36	111年公共工程委員會第22屆公共工程金質獎 — 台76線八卦山隧道 The 2022 22nd Public Construction Golden Quality Awards – Provincial Highway No.76. Baguashan Tunnel	第二區養護工程處 Second Maintenance Office	佳作 Honorable Mention

## 研究發展 Research and Development

編號 Number	研究計畫名稱 Name of Research Development	研究單位 Research Unit
1	熱處理聚酯標線添加不同止滑材之抗滑性能研究 Research into the skid resistance of heat-treated polyester markings with different skid resistance materials	材料試驗所 Materials Testing Laboratory
2	馬歇爾配合設計與鋪面 (SuperPave) 配合設計相關性之研究 Research into the correlation between Marshall fit design and pavement (SuperPave) fit design	材料試驗所 Materials Testing Laboratory
3	RAP粒料混凝土對鋼筋握裹力的影響 Effect of RAP aggregate on the grip of steel bars	材料試驗所 Materials Testing Laboratory
4	車輛變更檢驗異動數值上傳M3資訊系統之效益 The benefits of uploading the vehicle modification inspection value to the M3 information system	臺北區監理所 Taipei Motor Vehicles Office
5	新竹區監理所窗口人力分析之研究 Research on Manpower Analysis of Counters at Hsinchu Motor Vehicles Office	新竹區監理所 Hsinchu Motor Vehicles Office
6	檢驗智能查詢平臺 Smart quary platform for inspection	臺中區監理所 Taichung Motor Vehicles Office
7	智慧無人公庫自助繳費機 Intelligent unmanned self-service payment machine	嘉義區監理所 Chiayi Motor Vehicles Office
8	自大貨(客)車牌照申領審核線上送件申請之研究 Research on online application for large cargo (passenger) vehicle licence inspection	嘉義區監理所臺南監理站 Chiayi Motor Vehicles Office (Tainan Motor Vehicles Station)
9	電子執行命令「超聰明」匯入M3程序器 "Super smart" electronic commands imported into M3 programmer	高雄區監理所屏東監理站 Kaohsiung Motor Vehicles Office (Pingtung Motor Vehicles Station)
10	「省時機器人」汽燃費逾5年限未送達原因自動生成器 "Time-saving robot" automatically generates reasons why gas and fuel fees have not been delivered for more than 5 years	高雄區監理所澎湖監理站 Kaohsiung Motor Vehicles Office (Penghu Motor Vehicles Station)
11	運用電腦稽核精進內部控制作業 Improving internal control with computer audits	高雄市區監理所 Kaohsiung City Motor Vehicles Office
12	視覺化精進公路監理營運決策管理系統以監理業務模組為例 Advanced decision management system for motor vehicle matters with visualisation using the motor vehicle module as an example	公路總局資訊室 DGH Information Management Office

公路總局舉辦《公路工程口述歷史》座談會,邀請交通部陳彥伯政務次長、歷任局長、退休前輩一同與會。

The DGH held a symposium on *Oral History of Highway Construction* with MOTC Political Deputy Minister, Chen Yen-po, former directors and retired staffs.

公路總局舉辦「台61線海路漫行॥影片發表會」,由公路總局許鉦漳局長、嘉義市交通 處駱際方副處長、雲嘉南濱海國家風景區管理處洪肇昌副處長、旅遊達人朱永達理事長 及網紅菜苔苔與菜生生共同參與。

1/7 The DGH launched the "Provincial Highway No.61 A Coastal Journey II" with Director-General, Hsu Cheng-chang, Deputy Director, Luo Ji-fang of the Chiayi City Department of Transport, Deputy Director, Hong Chao-chang of the Southwest Coast National Scenic Area Administration, travel expert, Chu Yong-da and KOLs Cai Taitai and Cai Shengsheng.

公路總局辦理台15線及台4線配合桃園國際機場擴建辦理改線工程辦理開工典禮,由交通 部陳彥伯政務次長主持,黃世杰立法委員、桃園市政府高安邦副市長、公路總局許鉦漳 局長、民航局方副局長、市議員及施工團隊等共同參與。

The Commencement Ceremony of the Provincial Highway No.15 and No.4 was held by the 1/10 DGH in conjunction with the expansion and rerouting of the Taoyuan International Airport. The ceremony was presided over by the MOTC Political Deputy Minister, Chen Yen-po, Legislator, Huang Shi-jie, the Taoyuan City Government Deputy Mayor, Kao An-pang, the DGH Director-General, Hsu Cheng-chang, the CAA Deputy Director, Fang Chih-wen, city councilors and the engineering team.

交通部王國材部長出席公路總局幸福巴士成果發表會,聽取110年幸福巴士成果及欣賞「幸福巴士2.0」推動理念宣導影片 — 千歲號出發!

1/10 The MOTC Minister, Wang Kwo-tsai attended the Happiness Bus press conference organized by DGH to learn about the 2021 performance and watch the Happiness Bus 2.0 promotional video.

公路總局陳文瑞局長(原任交通部路政司司長)經行政院111年1月14日院授人培字第 1113024138號令核定。

1/16 The DGH Director-General, Chen Wen-juei (formerly Director-General of the Department of Railways and Highways), was approved by the Executive Yuan on January 14, 2022 by Decree No. 1113024138.

1 Jan 交通部陳彥伯政務次長由公路總局陳文瑞局長陪同,前往市府轉運站及板橋轉運站,視 察春節連假疏運整備及防疫執行情形。

1/28 Accompanied by the DGH Director-General, Chen Wen-juei, the MOTC Political Deputy Minister, Chen Yen-po inspected preparations for passenger transport and epidemic prevention during the Lunar New Year holiday at Taipei City Hall and Banqiao Bus Station.

2 Feb

公路總局陳文瑞局長視察台76線第3標工程及台74線草湖交流道工程。

2/11 The DGH Director-General, Chen Wen-juei inspected the third tender for the construction of Provincial Highway No.76 and No.74 the Caohu Interchange Project.

3 Mar

3/4~5

3/15

交通部陳彥伯政務次長視察台9線景觀大道優先標、台20線南橫公路復建工程、寶來一橋 新建工程、台27線拓寬工程及苓雅監理站等新建工程等。

The MOTC Political Deputy Minister, Chen Yen-po inspected the priority bid of the Landscape Boulevard on Provincial Highway No.9, the reconstruction project of Southern Cross-island Highway of Provincial Highway No.20, the new construction of Baolai Bridge No.1, the widening project of Provincial Highway No.27 and the new Lingya Motor Vehicles Office.

公路總局張舜清主任秘書(原任交通部路政司副司長)經交通部111年3月4日交人字第 1115003245號令核定。

The DGH Chief Secretary, Chang Shun-qing (formerly the Department of Railways and Highways) was approved by the MOTC on March 4, 2022 under Document No. 1115003245.

交通部陳彥伯政務次長訪視梨山地區幸福巴士2.0試營運情形,聽取民眾試乘幸福巴士意 見及了解民眾搭乘使用狀況。

3/18~19 The MOTC Political Deputy Minister, Chen Yen-po inspected the trial operation of the Happiness Bus 2.0 in the Lishan area, listened to the public's feedback on the trial program and learned about its use.

交通部祁文中常務次長視察南方澳跨港大橋重建工程,關切施工進度及遭遇問題。

3/23 The MOTC Administrative Deputy Minister Chi Wen-jong inspected the Nanfang'ao Bridge Reconstruction Project to find out about the progress and problems encountered.

交通部祁文中常務次長視察「台9線(大禹至玉里段)道路拓寬之玉興橋工程」,因受3月23日地震影響32支預力梁將拆除重新施作。

The MOTC Administrative Deputy Minister Chi Wen-jong inspected the "Yuxing Bridge Project for Road Widening of Provincial Highway No.9 (Dayu-Yuli Section)". Due to the impact of the earthquake on March 23, 32 prestressed girders will be demolished and rebuilt.

因應臺灣高鐵臺南 - 左營間電力中斷事件,公路總局嘉義區監理所及高雄市區監理所主動聯繫臺灣高速鐵路股份有限公司,同時派員至車站掌握疏運接駁情形,總計調派170輛遊覽車,開行362車次,疏運約1萬4,868人。

Due to the power outage between Tainan and Zuoying on the THSR, the Chiayi Motor Vehicles Office and the Kaohsiung City Motor Vehicles of the DGH contacted the THSR. Meanwhile, staffs were dispatched to the stations to monitor the situation regarding transport and shuttle services. A total of 170 tour buses were dispatched that day, making 362 trips to transport around 14,868 people.

行政院蘇貞昌院長、交通部王國材部長、高雄市陳其邁市長、公路總局陳文瑞局長及各級民意代表出席「台20線78k+500寶來一橋改建工程」舉辦通車典禮。

4/3 Premier Su Tseng-chang, the MOTC Minister, Wang Kwo-tsai, the Kaohsiung City Mayor, Chen Chi-mai, the DGH Director-General Chen Wen-juei and legislators attended the opening ceremony of the "Provincial Highway No.20 78k+500 Baolai Bridge Reconstruction Project".

交通部王國材部長至臺鐵新左營站及高雄站,視察公路總局因應臺鐵五一勞動節不加班,增開類火車路線辦理情形。

The MOTC Minister, Wang Kwo-tsai visited the TRA's Xin Zuoying and Kaohsiung stations to inspect the Rail Replacement Bus Service in response to the TRA labors' strike over the Labor Day weekend.

行政院蘇貞昌院長、交通部王國材部長、高雄市陳其邁市長、臺東縣王志輝副縣長、公路總局陳文瑞局長及各級民意代表出席「台20線南橫公路梅山口至向陽路段有條件復通」祈福典禮,並宣布於5月1日正式復通。

4/30 Premier Su Tseng-chang, the MOTC Minister, Wang Kwo-tsai, the Kaohsiung Mayor, Chen Chi-mai, the Taitung County Deputy Major, Wang Chi-huey, the DGH Director General-Chen, Wen-juei and legislators attended the blessing ceremony for the conditional opening of the section between Meishankou and Xiangyang of Provincial Highway No.20. It was officially reopened on May 1.



交通部王國材部長至臺鐵池上站及關山站,視察公路總局因應臺鐵五一勞動節不加班, 增開類火車路線辦理情形。

4/30 The MOTC Minister, Wang Kwo-tsai visited the TRA's Chishang and Guanshan stations to inspect the Rail Replacement Bus Service in response to the TRA staff strike over the Labor Day weekend.

交通部陳彥伯政務次長至臺鐵枋寮站及鳳山站,視察公路總局因應臺鐵五一勞動節不加 班,增開類火車路線辦理情形。

4/30 The MOTC Political Deputy Minister, Chen Yen-po visited the TRA's Fangliao and Fangshan stations to inspect the Rail Replacement Bus Service in response to the TRA staff strike over the Labor Day weekend.



因應臺鐵工會發起五一不加班運動,交通部王國材部長及三位次長前往各轉運站視察國道/公路/市區客運疏運情形及12條類火車臨時客運路線運行情形;總計開行1萬3,416班次,疏運17萬5,160人次。

In response to the decision by TRA staff strike over the Labor Day weekend, MOTC Minister, Wang Kwo-tsai and 3 deputy ministers went to various stations to inspect passenger transport on Highway Bus Carriers and City Bus Carriers. There were 12 routes of Rail Replacement Bus Service organized, with 13,416 trips carrying 175,160 passengers.

交通部王國材部長邀集公路客運業召開座談,就客運運輸業營運困難及政府協助事項等 議題全盤討論。

5/17 The MOTC Minister, Wang Kwo-tsai invited Highway Bus Carriers to a symposium to discuss issues such as operational difficulties in the passenger transport industry and government support.

交通部祁文中常務次長出席「台86線武東大潭交流道東向下匝道(往高鐵)拓寬及高發 二路新闢工程」,該工程為行政院前瞻基礎建設中,針對綠能建設項下「科學城低碳智 慧環境基礎建置 - 公共建設部分」。

The MOTC Administrative Deputy Minister Chi Wen-jong visited the "Wudong Datan Interchange Eastward Ramp Widening Project (towards THSR) on Provincial Highway No.86 and the New Construction Project of Gaofa 2nd Road". This project is part of the Executive Yuan's Forward-Looking Infrastructure Program, which aims to build low-carbon smart environment infrastructure – public construction.

交通部陳彥伯政務次長由公路總局陳文瑞局長陪同前往市府轉運站,視察端午節連續假 期疏運整備、候車狀況及防疫執行情形,並慰勞現場業者辛勞。

6/2 Accompanied by the DGH Director-General Chen Wen-juei, MOTC Political Deputy Minister, Chen Yen-po inspected the preparations for passenger transport and epidemic prevention during the Dragon Boat Festival at Taipei City Hall Station and greeted local staff.

交通部王國材部長視察台61線及台66線路面會勘。

6/10 The MOTC Minister, Wang Kwo-tsai inspected the surface of Provincial Highway No.61 and No.66.

7 Jul 交通部陳彥伯政務次長於111年7月5日主持「屏鵝公路種樹百里2.0計畫」施工界面釐清整合及材料供應問題會議。

On July 5, 2022, the MOTC Political Deputy Minister, Chen Yen-po chaired the meeting on the "Ping-E Highway 141 Kilometer Underground Cable and 100 Kilometer Tree Planting 2.0 Project" technical interface integration and material supply problem.

交通部祁文中常務次長視察南方澳跨港大橋重建工程。

7/6 The MOTC Administrative Deputy Minister Chi Wen-jong inspected the Nanfang'ao Bridge Reconstruction Project.

交通部王國材部長及陳彥伯政務次長視察南方澳跨港大橋重建工程,期許施工單位以安 全為優先,用3個月的時間換取百年安全無虞的橋梁,儘早恢復地方交通,達成地方民眾 期望。

7/11 The MOTC Minister Wang Kwo-tsai and MOTC Political Deputy Minister, Chen Yen-po inspected the Nanfang'ao Bridge Reconstruction Project. They hoped that the 3-month project would prioritise safety, create a safe bridge for a century, restore local traffic as soon as possible and meet the expectations of local people.

交通部王國材部長、劉建國立法委員、雲林縣張麗善縣長、交通部路政司林福山司長及 公路總局陳文瑞局長等人出席「台1線石牛溪橋改建工程」完工祈福典禮。

- 7/15 The MOTC Minister Wang Kwo-tsai, Legislator Liu Jian-guo, the Yunlin County Magistrate, Chang Li-shan, the Director General of Railways and Highways, Lin Fu-shan and the DGH Director-General Chen Wen-juei attended the completion ceremony of the "Shiniuxi Bridge Reconstruction Project on Provincial Highway No.1".
  - 公路總局張舜清副局長(原任主任秘書)經交通部111年7月20日交人字第1117100518號 令核定。
- 7/21 The DGH Deputy Director, Chang Shun-qing (formerly Chief Secretary) was approved by the MOTC on July 20, 2022 under Document No. 1117100518.
  - 公路總局邀請行政院唐鳳政務委員蒞局專題演講,指導公路總局運用資通訊科技開創行政創新作為,推動核心業務數位轉型需求。
- 7/25 The DGH invited the Minister without Portfolio of the Executive Yuan, Audrey Tang, to deliver a speech of ICT technology to create administrative innovation and promote the digital transformation of its core functions.

8 Aug

8/2

- 公路總局林義勝主任秘書(原任公路總局副總工程司)上任,經交通部111年7月20日交 人字第1117100518號令核定。
- The DGH Secretary, Lin Yi-sheng (formerly Deputy Chief Engineer of the DGH) took office with the approval of the MOTC on July 20, 2022 with Document No. 1117100518.
  - 交通部陳彥伯政務次長參加行政院工程會召開「屏鵝公路種樹百里2.0計畫」辦理進度列 管第2次會議。
- On July 5, 2022, the MOTC Political Deputy Minister, Chen Yen-po chaired the second progress review meeting of the "Ping-E Highway 141 Kilometer Underground Cable and 100 Kilometer Tree Planting 2.0 Project".
  - 交通部陳彥伯政務次長視察淡江計畫施工現況及進度。
- The MOTC Political Deputy Minister, Chen Yen-po inspected the status and progress of the Danjiang Bridge project.

交通部王國材部長聽取「110年度縣市政府橋梁維護管理評鑑作業」簡報,並指示公路總局應函請相關縣市政府積極籌編經費辦理橋梁維修作業,及副知首長室。

- The MOTC Minister, Wang Kwo-tsai listened to the briefing on the "2022 County and City Government Bridge Maintenance and Management Evaluation" and instructed the DGH to ask county and city governments to actively prepare funds for bridge maintenance and to inform the leadership offices.
  - 交通部陳彥伯政務次長視察「屏鵝公路種樹百里2.0計畫」施工現況。
- 8/20 The MOTC Political Deputy Minister, Chen Yen-po inspected the progress of the "Ping-E Highway 141 Kilometer Underground Cable and 100 Kilometer Tree Planting 2.0 Project".
  - 交通部陳彥伯政務次長視察「南方澳跨港大橋重建工程」,並參加中元普渡祈福法會, 祈求工程順利完工。
- 8/22 The MOTC Political Deputy Minister, Chen Yen-po inspected the Nanfang'ao Bridge Reconstruction Project and attended the Zhongyuan Pudu Blessing Ceremony to pray for the smooth completion of the project.
  - 交通部黃荷婷主任秘書出席公路總局「省道公路道路品質提升及人本安全路口設計改善成果發表與經驗交流研討會」,邀請所屬各區養護工程處之工務段段長分享人本安全路口設計改善成果,結合專家、學者分享的知識,歸納臺灣路口改善之關鍵課題。
- The MOTC Chief Secretary, Huang He-ting attended the "Provincial Highway Road Quality Improvement and Human-oriented Safety Intersection Design Achievement Experience Exchange Seminar" hosted by the DGH, where all section chiefs of maintenance offices shared the results of human-oriented safety intersection design, combined the knowledge of experts and scholars, and summarised the key issues of intersection improvement in Taiwan.
  - 公路總局與高速公路局合辦「公路生態保育研討會」,由公路總局陳文瑞局長、林聰利副局長、高速公路局趙興華局長、陳國隆副局長、林務局林澔貞副局長及特有生物研究保育中心楊嘉棟主任共同出席本次盛會,並邀請民間保育團體共同參與,透過主題分享及交流座談,向各界揭示並分享公路生態保育工作之成果。
- The DGH and the Freeway Bureau held the "Highway Ecological Conservation Seminar", which was attended by DGH Director-General Chen Wen-juei, Deputy Director, Lin Chong-li, the Freeway Bureau Director-General, Jaw Shing-hau and Deputy Director, Cheng Kuo-long, as well as the Endemic Species Research Institute Director Yang Jia-Dong and civil conservation groups. The results of ecological conservation on highways were shared through keynote speeches and seminars.

8 Aug 交通部陳彥伯政務次長視察「屏鵝公路種樹百里2.0計畫」第1電桿下地作業及施工現況,並主持「屏鵝公路種樹百里2.0計畫」工作進度檢討會議。

The MOTC Political Deputy Minister, Chen Yen-po inspected the first underground power pole operation and the progress of the "Ping-E Highway 141 Kilometer Underground Cable and 100 Kilometer Tree Planting 2.0 Project", and hosted the 2.0 Project Progress Review Meeting.

交通部陳彥伯政務次長率員參訪金門縣幸福巴士及金門縣公車處建華公車場站,視察幸福巴士營運情況及金門縣公車營運概況及場站低碳太陽能發電設施。

The MOTC Political Deputy Minister, Chen Yen-po led a delegation to visit the Happiness Bus in Kinmen County and the Jianhua Bus Station to inspect the operation of the Happiness Bus, the operation of other local buses and the low-carbon solar power generation facilities at the station.

9 Sep 交通部王國材部長出席全國交通安全月啟動記者會,攜手教育部、內政部警政署及22 地方縣市政府再次打造「全國性運動」,使國人更重視「交通安全的守法觀念與停讓文化」。

9/1 The MOTC Minister, Wang Kwo-tsai attended the press conference to launch the National Road Safety Month with the Ministry of Education, the National Policy Agency and 22 local county and city governments to launch a "national campaign" to make people aware of "the concept of compliance and the culture of giving way".

法務部廉政署與美國國際民主協會 (NDI)臺北辦事處,共同邀請印尼、菲律賓、斯里蘭卡及巴布亞新幾內亞等4國之非政府組織青年,觀察我國落實反貪腐公約現況,於111年9月1日辦理「2022年印太青年國際廉政交流團」參訪淡江大橋活動,觀摩重大工程如何透過廉政交流平臺達到公開透明,建立公私部門與民眾之互信,由公路總局陳文瑞局長主持,參加人數計93人次,圓滿順利。

The Agency Against Corruption of the Ministry of Justice and the Taipei Office of the National Democratic Institute (NDI) invited young people from NGOs in Indonesia, the Philippines, Sri Lanka and Papua New Guinea to observe the current implementation of anti-corruption conventions in Taiwan. On September 1, 2022, the 2022 Indo-Pacific Youth Exchange on Anti-Corruption Programme visited the Danjiang Bridge to observe how major projects can achieve openness and transparency through an anti-corruption exchange platform and build mutual trust between the public and private sectors and the public. The meeting was chaired by DGH Director-General Chen Wen-juei with 93 participants.

交通部陳彥伯政務次長赴屏東警察局慰勞,屏東警察局為配合「屏鵝公路纜線141公里地下化暨種樹百里2.0計畫」施工路段道路安全,動員各執勤單位全力協助維持交通,實感辛勞。

9/2 The MOTC Political Deputy Minister, Chen Yen-po welcomed the staff of the Pingtung County Police Bureau. The officers were helping to maintain traffic for the "Ping-E Highway 141 Kilometer Underground Cable and 100 Kilometer Tree Planting 2.0 Project" and their hard work was much appreciated.

9/16

- 9/3 The MOTC Political Deputy Minister, Chen Yen-po hosted the progress review meeting of the "Ping-E Highway 141 Kilometer Underground Cable and 100 Kilometer Tree Planting 2.0 Project".
  - 東西向快速公路台76線 (0k+000~3k+700) 永興至文津路段新建工程通車,有助於提升彰化西南角發展,帶動地方觀光發展。
- 9/7 The East-West Expressway No.76 (0k+000~3k+700) Yunghsing-Wenjin new construction project has been opened to traffic. It is beneficial to the development of the southwest corner of Changhua.
  - 公路總局「第3代公路監理資訊系統」獲世界資訊科技服務聯盟 (WITSA) 2022年資通訊科技卓越獎之傑出公眾合作服務獎 (Public/Private Partnership Award) 首獎,並於9月14日世界資訊科技大會 (WCIT) 頒獎典禮上受獎。
- The Third-Generation Motor Vehicle and Driver Information System of the DGH won the first prize in the Public/Private Partnership category of the WITSA 2022 ICT Excellence Award, and the DGH received the award at the World Congress on IT (WCIT) on September 14.
  - 交通部陳彥伯政務次長視察「屏鵝公路纜線141公里地下化暨種樹百里2.0計畫」夜間施工狀況。
- 9/16 The MOTC Political Deputy Minister, Chen Yen-po inspected the construction progress of the "Ping-E Highway 141 Kilometer Underground Cable and 100 Kilometer Tree Planting 2.0 Project" at night.
  - 公路總局舉辦交通安全月「安全返『笑』日 Safety Talk」脱口秀活動,邀請劇場網紅 嚎哮排演現場演出,以脱口秀的形式與民眾溝通,透過喜劇獨特的魅力,讓更多人關注交通安全。
  - MOTC's Road Safety Month "Safety Talk Show" invited the online theatre celebrities HaoxHsiao Troupe to perform. They communicate with people through the talk show format. Through the unique charisma of comedy, people will pay more attention to road safety.
  - 交通部陳彥伯政務次長視察「屏鵝公路纜線141公里地下化暨種樹百里2.0計畫」施工現 況。
- 9/17 The MOTC Political Deputy Minister, Chen Yen-po inspected the construction progress of the "Ping-E Highway 141 Kilometer Underground Cable and 100 Kilometer Tree Planting 2.0 Project".

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因應臺灣鐵路管理局花東幹線0918臺東震災路線中斷,公路總局於鐵路修復期間協調遊覽車客運業者開行類火車臨時路線疏運旅客,交通部王國材部長及陳彥伯政務次長分別於9月19日及9月23日視察疏運情形,指示加強緊急疏運工作。類火車疏運至9月29日為止,總計開行1,296班次,載運2萬6,176人次,完成鐵路中斷期間階段性疏運任務。

9/19 \ 9/23 In response to the earthquakes in Taitung on September18, 2022, which caused the disruption of the Hualien-Taitung line of Taiwan Railways. DGH negotiated with tour bus owners to provide rail replacement bus services to temporarily transport passengers. The MOTC Minister, Wang Kwo-tsai and the Political Deputy Minister, Chen Yen-po inspected the transport situation on September 19 and 23. They gave instructions to step up emergency passenger transport. The replacement bus service ended on September 29. There was a total of 1,296 train services with 26,176 passengers, completing the task of transporting passengers during the railway disruption.

交通部王國材部長主持111年「廉正透明獎」頒獎典禮,公路總局提報「全國高風險汽車 貨運三業EIS預警機制」,榮獲第三名殊榮。

9/22 The MOTC Minister, Wang Kwo-tsai hosted the "2022 Integrity Transparency Award" ceremony. DGH submitted the "National EIS Early Warning Mechanism for the High-Risk Automobile Freight Industry". We won the third-place honor.

行政院吳澤成政務委員兼工程會主任委員訪查南方澳跨港大橋重建工程。

9/26 The Minister without Portfolio and Minister of the Public Construction Commission, Executive Yuan, Wu Tze-cheng, inspected the Nanfang'ao Bridge Reconstruction Project.

公路總局與弘道老人福利基金會及路老師舉辦「長輩安全行」記者會,首推「交通安全 長輩圖」將宣導深入日常,提醒長者們注意交通安全。

The DGH, the Hondao Senior Citizen's Welfare Foundation and Doctor Road's hosted the "Safetravel of Seniors" press conference. We first promoted "Traffic Safety for Seniors", advocated its implementation in daily life, and reminded seniors to pay attention to traffic safety.

公路總局與財團法人靖娟兒童安全文教基金會合作辦理「安全教育動起來 交安隊長帶您 GO」交通安全月活動記者會,邀請賴清德副總統、交通部陳彥伯政務次長、教育部林騰 蛟常務次長、公路總局陳文瑞局長等多位長官,共同呼籲全民一起加強交通安全教育。

9/30 The DGH and the Jing Chuan Child Safety Foundation co-hosted the "Safety Education Moves – Let's go with the Safety Captain! Vice President Lai Ching-te, the MOTC Political Deputy Minister, Chen Yen-po, Administrative Deputy Minister of the Ministry of Education, Lin Teng-chiao, the DGH Director-General Chen Wen-juei and others were invited to the press conference to remind citizens to improve road safety education.



交通部陳彥伯政務次長主持「屏鵝公路纜線141公里地下化暨種樹百里2.0計畫」工作進度檢討會議及視察現場施工狀況。

The MOTC Political Deputy Minister, Chen Yen-po hosted the progress review meeting of the "Ping-E Highway 141 Kilometer Underground Cable and 100 Kilometer Tree Planting 2.0 Project" and inspected the construction status on site.

交通部陳彥伯政務次長主持「屛鵝公路纜線141公里地下化暨種樹百里2.0計畫」工作進度檢討會議及視察現場施工狀況。

10/15 The MOTC Political Deputy Minister, Chen Yen-po hosted the progress review meeting of the "Ping-E Highway 141 Kilometer Underground Cable and 100 Kilometer Tree Planting 2.0 Project" and inspected the construction status on site.

東西向快速公路台76線 (16k+607~20k+890) 西湖至瓦磘路段新建工程開工,完工後有助於提升彰化西南角發展,帶動地方觀光發展。

10/15 Work has started on the new construction of the Xihu-Wayao road section of the East-West Expressway No.76 (0k+000~3k+700). After construction, it will benefit the development of the southwest corner of Changhua and promote local tourism.

交通部陳彥伯政務次長視察「屏鵝公路纜線141公里地下化暨種樹百里2.0計畫」現場施工現況。

The MOTC Political Deputy Minister, Chen Yen-po inspected the construction progress of the "Ping-E Highway 141 Kilometer Underground Cable and 100 Kilometer Tree Planting 2.0 Project" on site.

台9線242k+592~243k+600萬里溪橋改建工程通車,計畫路線屬花東縱谷之重要交通幹道,可提升道路安全及服務水準,並帶動地方觀光發展。

10/28 Provincial Highway No.9 (242k+592~243k+600) Wanlixi Bridge has been opened to traffic. The proposed route is an important arterial road in the Huadong Valley. It will improve road safety and service standards and promote local tourism development.



10/24

11/14

交通部陳彥伯政務次長前往慰勞「屏鵝公路纜線141公里地下化暨種樹百里2.0計畫」台電及中華電信現場工班。

The MOTC Political Deputy Minister, Chen Yen-po consoled workers on the site of the "Ping-E Highway 141 Kilometer Underground Cable and 100 Kilometer Tree Planting 2.0 Project" of Taiwan Power Company and Chunghwa Telecom.

交通部公路總局 111 年報



蔡英文總統出席「桃園市龍潭區停二立體停車場」啟用典禮,交通部補助經費0.92億 元,導入多項智慧型服務,完工後將提供民眾更優質的公共交通服務。

11/17 President Tsai Ing-wen attended the inauguration ceremony of the "Tinger Vertical Parking Lot in Taoyuan Longtan District". The MOTC subsidized NT\$92 million and introduced intelligent services. When completed, it will provide better quality public transport services.

交通部陳彥伯政務次長陪同工程會吳主委視察「屏鵝公路纜線141公里地下化暨種樹百里 2.0計畫」桿線下地及植栽完成情形。

11/18 The MOTC Political Deputy Minister, Chen Yen-po accompanied PCC Minister Wu to inspect the progress of the undergrounding, cable laying and planting of the "Ping-E Highway 141 Kilometer Underground Cable and 100 Kilometer Tree Planting 2.0 Project".

交通部陳彥伯政務次長視察「屏鵝公路纜線141公里地下化暨種樹百里2.0計畫」桿線下 地及植栽完成情形。

11/23 The MOTC Political Deputy Minister, Chen Yen-po inspected the progress of undergrounding poles and cables and planting trees in the "Ping-E Highway 141 Kilometer Underground Cable and 100 Kilometer Tree Planting 2.0 Project".

交通部為加強管理,將現行以電力為主且最大行駛速率25km/h以下、車重不含電池40公 斤以下(或含電池60公斤以下)屬慢車的電動自行車,修法更名為微型電動二輪車(下 稱微電車),並增加須登記領用懸掛號牌、投保強制險及行駛道路管理等規定,以杜絕 改裝、超速、交通事故增加及事故無法理賠等原因,行政院核定自111年11月30日起正式 實施。

Electric bicycles with a maximum speed of less than 25km/h and a vehicle weight of less than 11/30 40kg without batteries (or less than 60 kg with batteries) are currently considered as slow vehicles. The MOTC deemed it necessary to amend the law and change the name to "Mini Electric Two-Wheels Vehicles" (hereinafter referred to as "Mini Electric Vehicle"), with new rules regarding licensing, compulsory motor vehicle liability insurance and road management, in order to prevent retrofitting, speeding, increased traffic accidents and inability to pay compensation for accidents, etc. The regulations were formulated and approved by the Executive Yuan and promulgated on November 30, 2022.

因應汽車買賣業之需求,交通部111年11月30日起新增第二類試車牌供車商申請於買賣試 車時使用,分2種樣式,分別為限懸掛於汽缸總排氣量4,200C.C.(或馬達馬力414HP)以 下之車輛為領用「白底紅字」試車牌,及不限懸掛汽缸總排氣量(或馬達馬力)之車輛 為領用「紅底白字」試車牌,限汽車買賣業申請;現階段核發之「白底藍字」試車牌則 調整名稱為「第一類試車牌」。

11/30 In order to meet the real needs of car dealers, the DGH has introduced a new type 2 test vehicle plate with two types, which will be restricted to car dealerships from November 30, 2022. Vehicles with a total cylinder capacity of less than 4,200 cubic centimetres (or 414hp) will receive a "red letters on white background" test plate and a "white letters on red background" test plate with unlimited cylinder capacity, restricted to car dealerships: the name of the existing "white background and blue letters" test plate has been changed to "Type I" test plate.

The DGH Wanggao Tunnel of Provincial Highway No.21 was officially opened to traffic. Provincial Highway No.21 is an important local road. The 115km Wanggao Tunnel of Provincial Highway No.21 shortens the travel distance by 455 meters.

蔡英文總統、行政院蘇貞昌院長及交通部王國材部長蒞臨南方澳跨港大橋重建工程通車 典禮。

12/18 President Tsai Ing-wen, Premier Su Tseng-chang and the MOTC Minister, Wang Kwo-tsai attended the opening ceremony of the Nafangao Bridge Reconstruction Project.

交通部王國材部長出席台61線西濱快速公路曾文溪橋新建工程動土典禮。台61線跨越曾文溪往南延伸約3.38公里,完工通車後有利於台61線的交通效益南延。

The MOTC Minister, Wang Kwo-tsai attended the groundbreaking ceremony for the new construction of Provincial Highway No.61 for the Zengwun River section of the West Coast Expressway. Provincial Highway No.61 has been extended south for about 3.38 kilometers across the Zengwen River. It will be beneficial to the southern extension of the traffic benefits of Provincial Highway No.61.

交通部陳彥伯政務次長至桃園市楊梅區公所地下停車場竣工視察,本案交通部補助1.13 億元,提供汽車275格及機車142格,供洽公停車或參加活動之民眾便利之停車服務。

The MOTC Political Deputy Minister, Chen Yen-po inspected the completion of the underground car park at the Yangmei District Office. The MOTC subsidized NT\$113 million. It provides 275 parking lot for cars and 142 for motorcycles. It provides convenient parking services for businesses or people attending events.

行政院蘇貞昌院長、交通部王國材部長及陳彥伯政務次長出席「屏鵝公路再塑百年風華 - 全線桿線地下化暨種樹百里2.0完工感恩茶會」。公路總局代辦之屏鵝公路141公里纜 線地下化管道工程,並提升屏鵝公路路面服務品質,以及優化道路沿線景觀,採原生種 喬木與灌木補植、換植等作業,已於111年12月23日順利全部提前完成。

Premier Su Tseng-chang, the MOTC Minister, Wang Kwo-tsai and the MOTC Political Deputy
12/30 Minister, Chen Yen-po attended the Thanksgiving Tea Party for the Ping-E Highway 141
Kilometer Underground Cable and 100 Kilometer Tree Planting 2.0 Projects. The DGH carried
out the Ping-E Highway 141 Kilometer Underground Cable Project, improved the road surface
service quality of the Ping-E Highway and optimized the roadside landscape. The DGH planted
primeval trees and additional shrubs. All this was completed ahead of schedule on December
23, 2022.

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### 預算執行成果及展望 Budget Execution and Vision

#### 一、公務預算 Official Budget

111年度歲入預算85億5,122萬元,執行102億6,296萬餘元(圖1),執行率120.02%,超收17 億1,174萬餘元;歲出預算385億5,294萬餘元,執行377億7,323萬餘元(圖2),執行率97.98%,撙 節384萬餘元,未完成數獲行政院核定轉入112年度繼續處理。

In 2022, the annual revenue budget was more than NT\$8.55122 billion, of which more than NT\$10.26296 billion (Figure 1) was implemented with an execution rate of 120.02%, and the excess revenue was more than NT\$1.71174 billion. The annual expenditure budget was more than NT\$38.55294 billion, and more than NT\$37.77323 billion was implemented (Figure 2) with an execution rate of 97.98%, saving more than NT\$3.84 million. The uncompleted amount was carried over to 2023 for further processing approval by the Executive Yuan.

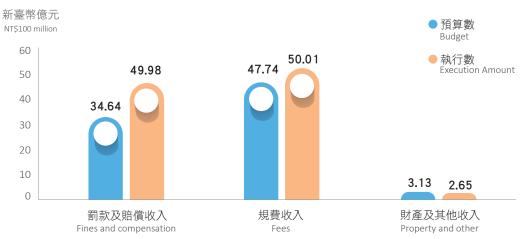


圖1 111年度公務預算歲入執行情形 Figure 1 Execution of the 2022 Annual Official Budget Revenue

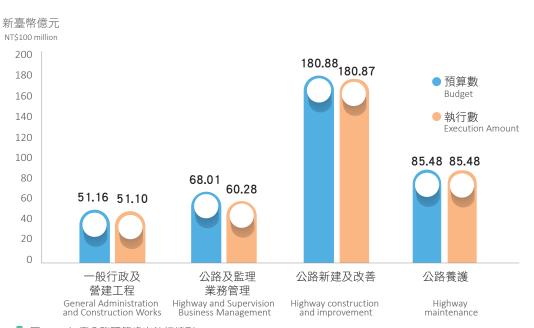
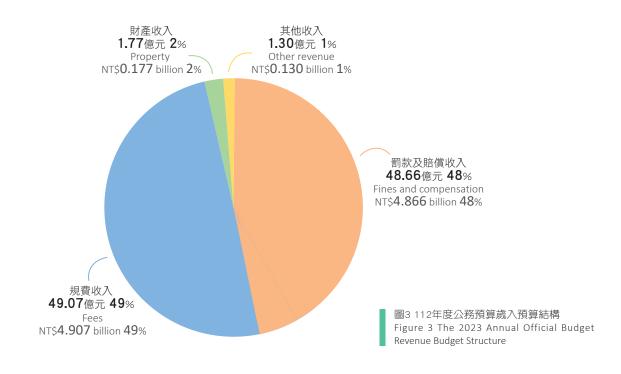
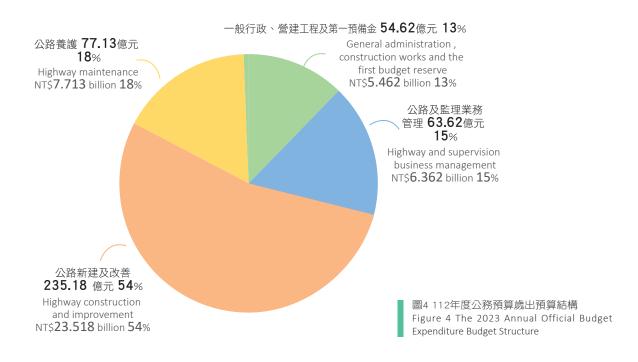


圖2 111年度公務預算歲出執行情形 Figure 2 Execution of the 2022 Annual Official Budget Expenditure

112年度歲入預算100億8,064萬元(圖3),較上年度增加15億2,942萬元;歲出預算430億5,559萬餘元(圖4),較上年度增加45億264萬餘元,公路總局將依政策方向與努力目標,達成打造幸福公路及追求永續共榮的施政願景。

The annual revenue budget for 2023 was over NT\$10.08064 billion (Figure 3), an increase of more than NT\$1.52942 billion over the previous year. The annual expenditure budget for 2023 was over NT\$43.05559 billion (Figure 4), an increase of more than NT\$4.50264 billion over the previous year. The DGH will achieve the vision of building a road to happiness and pursuing sustainable and common prosperity in accordance with the policy plan and goals.





#### 二、特別預算 Special Budget

(一)前瞻基礎建設計畫第3期(110年度至111年度)Third Phase of Forward-Looking Infrastructure Plan (2021~2022)

111年度歲入執行5,241萬餘元(圖5);歲出分配預算97億8萬餘元,執行96億914萬餘元(圖6),執行率99.06%,撙節4,556萬餘元,未完成數獲行政院核定轉入112年度繼續處理。

In 2022, the annual revenue was more than NT\$52.41 million (Figure 5), the annual expenditure budget was more than NT\$9.70008 billion, and more than NT\$9.60914 billion was implemented (Figure 6) with an execution rate of 99.06%, saving more than NT\$45.56 million. The uncompleted amount was carried over to 2023 for further processing approval by the Executive Yuan.

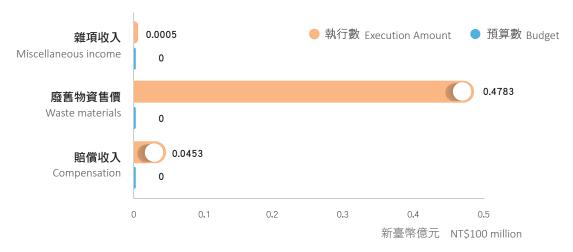


圖5 111年度前瞻三期歲入執行情形 Figure 5 Execution of Forward-Looking Phase III Revenue in 2022

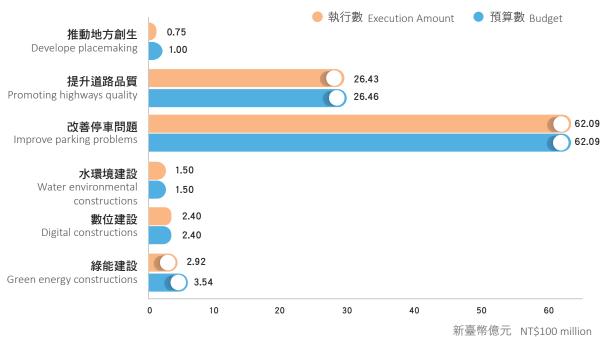
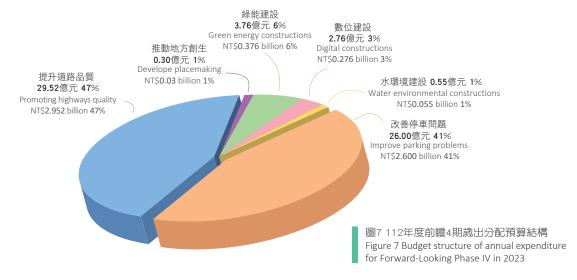


圖6 111年度前瞻三期歲出執行情形 Figure 6 Execution of Forward-Looking Phase III Expenditure in 2022

(二)前瞻基礎建設計畫第4期(112年度至113年度)Fourth Phase of Forward-Looking Infrastructure Plan (2023~2024)

112年度歲出分配預算62億8,800萬元(圖7),公路總局將持續提升道路品質、改善停車問題、推動綠能產業等建設,達成加強地方整體發展及區域均衡,奠定公路未來發展基礎的願景。

The annual budget for 2023 is NT\$6.28800 billion (Figure 7). The DGH will continue to improve road quality, improve parking problems, and promote the construction of green energy industries so as to achieve the vision of strengthening the overall local development and regional balance, and laying the foundation for the future development of highways.



(三)嚴重特殊傳染性肺炎防治及紓困振興(109年度至112年度)Prevention, Relief and Revitalization Measures for Severe Pneumonia with Novel Pathogens (2020~2023)

111年度歲出分配預算37億8,521萬餘元,執行數36億5,297萬餘元(圖8),執行率96.51%,未完成數轉入112年度繼續處理。

The annual expenditure budget in 2022 was more than NT\$3.78521 billion, with an execution amount of more than NT\$3.65297 billion (Figure 8), with an execution rate of 96.51%. The uncompleted amount was carried over to 2023 for further processing.



#### 交通部公路總局111年年報

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編輯指導 張舜清、林聰利 總編輯 林義勝、劉雅玲

編輯委員 王東琪、李佳輯、李順成、姜宇峰、胡家萍、唐述如、張莉婷、章世政、梁郭國、陳大慶、

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撰稿人員 王姿玫、王富生、王璟諺、吳品賢、呂宗修、呂東隆、李君睿、李玟萱、李美臻、李清澤、

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Supervising Editors Chang Shun-qing, Lin Cong-li Chief Editor Lin Yi-sheng, Liu Ya-ling

Editors Wang Dong-qi, Li Jia-ji, Li Shun-cheng, Jiang Yu-feng, Hu Jia-ping, Tang Shu-ru,

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Writing Committee Wang Zi-mei, Wang Fu-sheng, Wang Jing-yan, Wu Pin-xian, Lu Zong-xiu, Lu Dong-long,

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Huang Guo-ting, Huang Hong-wen, Lu Wei-zhen, Xiao Shu-yun, Hsieh Jin-yi,

Hsieh Shu-cheng, Luo Yi-zhong (based the surname stroke order)

Editing unit DGH Secretariat Tel: +886-2-2307-0123

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## 交通部公路總局 Directorate General of Highways, MOTC

108234 臺北市萬華區東園街 65 號

電話:02-23070123(代表號)

www.thb.gov.tw

No.65, Dongyuan St., Wanhua Dist., Taipei City, 108234, Taiwan (R.O.C.)

886-2-23070123 (Representative number)



