



# 1 1 1 1 年報

交通部公路總局

Directorate General of Highways, MOTC Annual Report 2020





# 179 |年報

# 交通部公路總局

Directorate General of Highways, MOTC Annual Report 2020





#### **CONTENTS**

06 局長的話

Words from the Director-General



#### #確 傳承起點 Starting Point of Inherited Glory

- 12 蘇花改榮獲國際道路協會「全球道路成就獎—工程設計類首獎」
  - 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 (GRAA) from the International Road Federation (IRF)
- 14 台9線南迴公路安朔至草埔段C1橋梁標新建工程榮獲109年度金路獎傑出工程類第一名
  The New Construction of C1 Bridge in the Anshuo-Caopu section of the South-Link
  Highway of Provincial Highway No.9 Won the First Prize of the 2020 Golden Way Award in
  Outstanding Engineering
- 16 雲川霧境返山路—十年來莫拉克颱風災害後的重建(台24線32k~40k)榮獲2020 IFLA 國際景觀大賞榮譽獎
  - The Misty Road Leading Back to the Mountain-Reconstruction After the Typhoon Morakot Disaster in Decade Won the Honorable Mention of the A20w2a0rd IFsLA-APR LA
- 20 道法自然—阿里山公路景觀營造(台18線85k~95k)榮獲2020 IFLA國際景觀大賞榮譽獎 Way of Nature-Landscape Development of Alishan Highway (Taiwan Provincial Highway No.18) Won the Honorable Mention of the 2020 IFLA-APR LA Awards
- 22 「護蟹任務」微電影榮獲9項國際競賽獎項 Documentary "Mission-Land Crab Redemption" was Awarded 9 International Awards
- 24 淡江大橋新建工程獲頒交通部「廉正透明獎」特優
  The New Construction of Danjiang Bridge Received Excellent Honor in the Integrity and Transparency Award by MOTC





### **擘劃** 放眼百年

#### Planning ahead for the Next Century

- 28 注重生態保育跨部會合作 簽署「國土生態 保護綠色網絡」合作協議 Ecological Conservation through Interministerial Cooperation: Signing the Cooperation Agreement on the "Green Network for Ecological Protection on National Land"
- 30 「西部濱海公路後續建設計畫」榮獲109年 國家永續發展獎 The "West Coast Expressway Followup Construction Project" Won the 2020 National Sustainable Development Award
- 32 特展與旅遊合輯一自在,漫遊一來公路輕旅 Special Exhibition and Travel Compilation: Roaming Freely on the Highway
- 34 偏鄉服務再提升—新創幸福巴士2.0
  Upgraded Services for Remote Areas:
  Happiness Bus 2.0, the New Innovation
- 36 109年公路防災成果彙報暨展望
  Summary and Outlook on Highway Disaster
  Prevention in 2020
- 40 法制作業優化與卓越一精進法制在地人才 Optimization and Excellence of Legal Works
- 42「從檢驗業務深耕企業誠信與社會責任」 交流座談會

Symposium on "Furthering Corporate Integrity and Social Responsibility from Inspections"

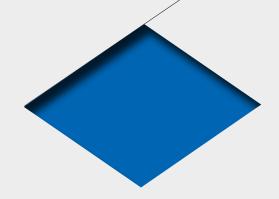


## 

#### Way of Foundation for Construction

- 46 自行車多元路線建置及暨有環島路網優化 Construction of New Bicycle Routes and Optimization of the Existing Network
- 50 行政院前瞻基礎建設— 城鄉建設改善停車問題計畫 Forward-looking Infrastructure Development Program of the Executive Yuan: Urban-rural Development Parking Solution Project
- 52 代辦南方澳跨港大橋重建工程 Overseeing the Reconstruction of Nanfang'ao Bridge
- 54 淡江大橋主橋塔鋼管椿圍堰合龍祈福典禮 Groundbreaking Blessing Ceremony of the Steel Pipe Cofferdam Closure of the Main Tower for Danjiang Bridge







## 的用 | 迎向你我

#### Put in Effect for Everyone's Benefit

- 58「應用手機網路信令探偵(CVP)技術提升 交通資訊服務」試辦計畫 Pilot Program of "Enhancing Traffic Information Services with CVP Application"
- 60 109 年車輛動態資訊成果彙報 The 2020 Vehicle Dynamic Information Report
- 62 台9線草埔森永隧道試辦通行大型重型機車及開放大貨車通行

The Trial Program for Heavy Motorcycles and Trucks Driving through Caopu Senyong Tunnel on Provincial Highway No.9

- 64 駕照新制一放寬輕度癲癇患者考領駕照
  The New Regulation for Driver's License:
  Patients with Mild Epilepsy Now Eligible to
  Take the Test
- 66 與時俱進一汽車運輸業大型車職業駕駛人延 長執業至68歳

Keeping up with the times-Professional Drivers of Large Transport Vehicles Allowed to Work till Age 68

68 交通安全巡迴車宣導活動— 偏鄉監理服務再升級

Traffic Safety Bus on Tour: Upgraded Motor Vehicles Services for Remote Rural Areas

- 70 安全上路一國內第一本「車輛裝載貨物指引手冊」
  - Road Safety: the First "Guidelines for Cargo Loading on Vehicles" in Taiwan
- 72 新一代支付導入 Introduction of the New-generation Payment
- 74 九大運輸業落實路口停讓行人行動 9 Categories of Transportation Enterprises Realize Yielding to Pedestrians at Intersection
- 76 防疫紓困—政府與您行作夥
  Pandemic Prevention and Relief: Government Policies
- 78 話務服務具體成果 Call Center Achievement
- 80 運安生力軍一話務中心完善通報系統
  New Addition to Transportation Safety:
  Completing the Reporting System for the Call
  Center

### Chapter 5

## **養護** 百年關鍵

#### Key of Maintenance for Everlasting Future

86 山城探路雲水悠然

- 84 探古訪幽采玉路廊 (台7線5k~11k+700)109年養護成果 Maintenance Results of the Jade Collecting Corridor (the Section of 5k-11k+700 of Provincial Highway No.7) in 2020
- (台14線40k~45k) 109年養護成果
  Maintenance Results of Mountain Road
  Landscape in Guoxing Township (the Section
  of 40k-45k of Provincial Highway No.14) in
  2020
- 90 109年公路養護具體成果 The Highway Maintenance Results in 2020
- 94 109年國家關鍵基礎設施防護訪評演習成果 The Critical Infrastructure Protection Exercise in 2020
- 96 超前部署—疫情時代的數位轉型
  Advanced Preparations: Digital Transformation during the Pandemic
- 98 資訊中心 (thb-IDC) 維運成果
  The Maintenance results of thb-IDC
- 100 109年專書閱讀推廣競賽活動獲 交通部特優獎 The 2020 Reading Competition Awarded the Excellence Award by MOTC

# Chapter 6

### **回首** 繼續前行

#### **Looking Back and Moving Forward**

- 104 組織系統 Organizational Structure
- 106 施政計畫 Administrative Project
- 107 參賽成果 Competition Results
- 111 研究發展 Research and Development
- 112 大事紀要 Major Events
- 121 預算執行與保留
  Budget Execution and Reservation



# 局長的話 路在心頭

**Words from the Director-General** 

#### The Roads in Mind

你知道《我在台61》這部電影嗎?有近20萬人次在線上跟著鏡頭走過這條美麗而又豐富 多元的公路,其中一幕令我印象深刻,女主角求得的鹿港天后宮籤詩上寫著:「我今指引 平安路,路在心頭汝自知」。

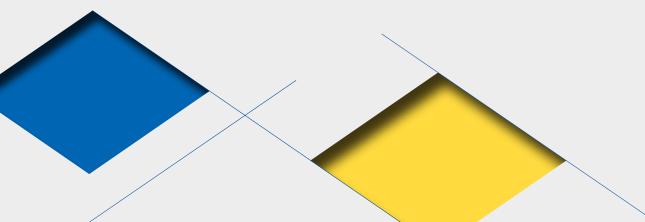
公路總局的同仁傾多年心力完成台61線,想必也是因為公路完成後的風景早已映在心頭,所有人一同為了那道風景投入各自的歲月。

正因為路在心頭,所以能堅定方向。公路總局秉持「人本交通、與民同行」的理念,持續在安全、效率、品質及綠色的面向上推動各項工程建設,並屢獲國際大獎的肯定,締造光輝榮耀。為保持原生自然風貌、存續人文景觀,公路總局在部分路段營造説在地故事的公路景觀,例如保育高山森林與冬螢的阿里山公路景觀營造(台18線85k~95k),及鑲嵌魯凱族原始風貌與人文的霧臺公路景觀營造(台24線32k~40k),雙雙榮獲「2020 IFLA國際景觀大賞榮譽獎」。

而作為安心、安全基石的工程品質,兼顧路線抗災維生性及環境保育的蘇花公路改善計畫(蘇花改),榮獲國際道路協會(IRF)「2020全球道路成就獎」工程設計類首獎;台9線南迴公路安朔至草埔段C1橋梁標新建工程,亦榮獲臺灣本年度金路獎傑出工程類第一名。

正因為路在心頭,所以能在磨難中堅持、在困頓中前行。新冠肺炎疫情來得迅猛,所有人都在各自的領域一同守住防線、相互支持。

公路總局迅速建置異地辦公網路,不讓服務間斷,並規劃多項防疫措施,除了提供汽車運輸駕駛人員足夠的口罩,也針對客運場站及車輛持續消毒,並對乘客進行防疫宣導,讓民眾保有安心的乘車環境;此外,推出汽車燃料費、牌照税補貼、計程車油料補貼,以及駕駛人薪資及國道客運營運費用補貼等紓困措施,協助運輸業渡過難關,也確保民眾能持續享有便捷運輸服務。



Do you know the movie "West Coast Expressway"? Nearly 200,000 people took the virtual tour of this beautiful and diverse highway through the lens online. The scene that impressed me most is the "kau chim (fortune poem)" the female protagonist gets at Lukang Mazu Temple, and the poem goes: "I show you the path of a safe road. You will know in your heart where you have to go."

The Directorate General of Highways (DGH) employees dedicated years of efforts to completing the West Coast Expressway. They might have had a vision of the view upon the completion, and that was why they all devoted their time working towards the goal.

Knowing where we must go is what anchors us. Based on the principle of "human-oriented transportation and walking hand in hand with people" that the DGH adheres to, the DGH continues to carry out construction projects while focusing on safety, efficiency, quality, and eco-friendliness. Some of the projects have won multiple international awards to showcase the achievement and glory. To safeguard pristine nature and to preserve cultural landscape, the DGH has enriched the views of the highways with the elements of local stories, such as the conservation of high mountain forests and winter fireflies along the Alishan Highway (the section of 85k-95k of Provincial Highway No.18) and the Wutai Highway (the section of 32k-40k of Provincial Highway No.24) which has mingled the primitive views and culture of Rukai aboriginals. The projects mentioned above both won the Honorable Mention of the 2020 IFLA-APR LA Awards.

With reassurance and safety being the cornerstones of construction quality, the Suhua Highway Mountainous Section Improvement Project (aka the Suhua Highway Improvement Project) takes both disaster resistance and environmental protection into consideration. This project won first prize for Engineering Design in the Global Road Achievement Award (GRAA) from the International Road Federation (IRF). The new construction of C1 Bridge in the Anshuo-Caopu Section, the South-Link Highway of Provincial Highway No.9, also won first prize for Outstanding Engineering in the 2020 Golden Way Award.

Knowing where we must go also allows us to persevere in difficulties and move forward despite the hardship. The swift and violent nature of the COVID-19 pandemic has taught us to hold the fort in our respective fields and support each other.

The DGH quickly set up a remote office network to prevent service interruptions and formulating a number of pandemic prevention measures. In addition to providing sufficient masks to motor transportation drivers, the DGH also continued to disinfect bus stations and vehicles and promoted pandemic prevention to create a safe traveling environment for passengers. Moreover, relief measures such as subsidies for vehicle fuel fees, vehicle license taxes, taxi fuel fees, driver salary, and freeway passenger service operations, were granted to help the transportation industry to go through this difficult time while ensuring convenient transportation services for the general public.



在許多措施緊縮的時刻,公路總局堅持將觸角深入偏鄉,提升偏鄉監理服務,更推出「幸福巴士2.0」,放寬NGO團體或個人在偏鄉地區可以經營公共運輸服務,並建置幸福巴士預約媒合平台,期盼為偏鄉的交通問題找到新解方,提供更多元、彈性及有效率的公共運輸,推廣到更多偏鄉地區。

當然,路不只在公路人的心頭,也在民眾的心頭。隨著疫情在臺灣獲得控制,國 旅風潮興起,公路總局推出「幸福公路台61-海路漫行輕旅行」,並出版《吹海風的 路》及《台61海路漫行》,鼓勵民眾走訪體驗台61沿線那些不曾發掘的驚喜。

特別是永安脊背橋、鳳鼻隧道、大安大甲脊背橋、王功脊背橋、七股溪橋等兼具 自然、人文與工程之美的特色工程建設介紹,使國旅業者和民眾的遊程更具深度。另 一方面,我們也持續建置自行車多元路線及優化既有環島路網,迎接「2021自行車旅 遊年」與更多探索臺灣的高昂遊興。

無論是觀光還是旅行,若無永續的環境就如同房子缺乏穩固的地基,公路總局也從工程、保育、文化等面向為永續盡心力。

「西部濱海公路後續建設計畫」是唯一榮獲本年度國家永續發展獎的工程建設計畫,我們也與注重生態保育跨部會合作,簽署「國土生態保護綠色網絡」合作協議, 將破碎生物棲地相互串連,使臺灣生態系更為健全。微電影《護蟹任務》更獲國際獎項肯定,從中能看出我們與民眾共創友善及永續道路環境的努力。

無論是公路人心中的路,或是民眾心中的路,其實永遠不只腳下那一道穩固、踏 實的結構體,更包括沿途的風景,以及身邊分享風景的人們。

因為路在腳下,過去的一年,我們與民眾一同面對疫情挑戰,推展各項民眾有感的交通服務,並持續打造維護安全便捷的公路系統,成果豐碩;因為路在心頭,未來仍將秉持交通服務的本質,致力於開創串聯人與人、人與環境的公路,為使人、路與環境「連結,共好」,透過提升交通運輸效率與安全,落實綠色永續經營的人本交通,戮力為民眾建構更寬廣綿長的幸福之路。



At the time when many measures were being tightened, the DGH insisted on offering better services to remote rural areas, such as improving motor vehicle service in remote rural areas and launching "Happiness Bus 2.0." By allowing NGOs or individuals to operate public transportation services and building an appointment platform, we look forward to finding new solutions to the traffic problems and to providing more diverse, flexible, and efficient public transportation services in remote rural areas.

It goes without saying that roads not only live in the hearts of all DGH employees but also in the hearts of all people. Following the pandemic being under control in Taiwan, domestic travel has become a trend. The DHG launched the travel itinerary, "The Highway of Happiness: Trip along the West Coast Expressway of Provincial Highway No.61", while publishing "the Highway with Sea Breeze" and "Roaming along the West Coast Expressway." All of the projects listed above were aimed to encourage the general public to visit and to experience all the surprises of Provincial Highway No.61 which have not been discovered yet.

The construction projects, such as the Yong-an Extradosed Bridge, Fengbi Tunnel, Daan Dajia Extradosed Bridge, Wanggong Extradosed Bridge, and Qiguxi Bridge, combined nature, culture, and the beauty of engineering to enrich the trips for both tour operators and tourists. In the meantime, we continued to build multiple bicycle routes and optimized the existing network around the island to welcome the "2021 Cycling Tourism" and the increased interest to explore Taiwan.

Whether for sightseeing or traveling, the lack of sustainable environment is like the lack of a solid foundation for a house. Therefore, the DGH also does its part to achieve sustainability from the aspects of engineering, conservation, and culture.

The West Coast Expressway Follow-up Construction Project is the only engineering construction plan that won the 2020 National Sustainable Development Award. We also have contributed to ecological conservation through inter-ministerial cooperation by signing the cooperation agreement of "Green Network for Ecological Protection on National Land." The initiative connects fragmented habitats together to enhance Taiwan's ecosystem. The documentary "Mission: Land Crab Redemption" also won international recognition and awards, and our efforts to create a friendly and sustainable highway environment with the general public are also fully demonstrated from the examples above.

Whether the highways are in the hearts of highway workers or of the general public, they are always more than just the stable and solid structure underneath our feet. The highways also include the roadside views and the people who share the views aournd with us.

As we walked along the road, we faced the pandemic together with everyone last year and launched various transportation services to benefit the general public while creating a safe and convenient highway system with fruitful results. Highways are our priority, and we will continue dedicating to providing the essence of transportation services by building highways that connect people with people and people with the environment. To facilitate connections and co-prosperity among people, roads, and the environment, we will enhance transportation efficiency and safety and carry out eco-friendly and sustainable human-oriented transportation while doing our best to construct wider and longer roads to happiness for people.

Director-General Hsu, Cheng-Chang



交通部公路總局 蘇花公路改善工程處

中興工程原問服份有限公司 EMIOTECH ENGINEERING CONSULTANTS, LTD

CECI (



# **榮耀** | 傳承起點

Starting Point of Inherited Glory

風搖動的森林,

先民穿越過的海湧,

路從大地出發,

鋪成你我的生命故事。

The forest sways in the wind. Our ancestors sailed through the tumbling ocean. The roads start from this land and contructe stories of our life.



# 蘇花改榮獲國際道路協會 「全球道路成就獎」 工程設計類首獎」

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 (GRAA) from the International Road Federation (IRF)



蘇澳東澳段-蘇花改路線線型之美。 The linear beauty of the route of the Improved Suhua Highway-Suao-Dongao section.

蘇花公路改善計畫路廊環境險峻並具世界 級景觀,計畫推動以提供東部居民一條安全回家 的路為目標,考量區域環境敏感,計畫推動以路 段災損及交通肇事率高路段進行改善,兼具工程 減量、環境友善及強化公路抗災性。改善計畫全 長約38.8公里,工程構築以隧道及橋梁為構築主 體,為臺灣近10年最具工程規模、技術指標及 施工艱鉅之公路建設。

計畫以永續公共工程核心理念為基礎,從 規劃、設計到施工,歷經嚴謹環境調查與綿密公 民溝通,掌握地質水文、選線最佳化及精進隧道 工法,並構思施工衝擊減緩、土方鐵路運輸、停 工機制、長期環境監測、友善生態文史及在地部 落溝通等配套策略,並導入先進防災機電及智慧 交控營運,以建構安全、環保與智慧之全生命週



和中大清水段-施工之艱困。 Difficulty of constructon Zhongda-Qingshui section.

期典範山區公路建設;施工階段進一步推動工程 碳盤查、依環評承諾設置環境保護監督小組,體 現公共工程深度社會對話、資訊透明與監督機 制,開創國內公共工程推動先例。

「台9線蘇花公路山區路段改善計畫」參加 國際道路協會(IRF)2020「全球道路成就獎」 工程設計類競賽,與世界各國一較高下,最終於 11月20日美國休斯頓舉行之IRF國際道路協會線 上國際會議中,宣布「台9線蘇花公路山區路段 改善計畫」榮獲工程設計類首獎。

本次獲獎獎項是臺灣公路工程卓越的成 果,除了讓臺灣公路工程建設得以躍登國際舞 台,也讓世界看見臺灣與認識台灣世界級工程技 術實踐力。



南澳和平段-橋梁及隧道之壯闊。
The grand view of the tunnels and bridges in the Nan'ao-Heping Section.



R2T會議獲獎照片。 R2T conference award ceremony.

The Suhua Highway Improvement Project has a steep environment and a world-class landscape along the corridors. With the goal of constructing a safe highway for the Eastern residents, the environmental factors were taken into consideration to devise an improvement project targeting the section with a high rate of disaster damage and traffic accidents. This allows for reduced construction, environmental friendliness and highway disaster resistance. The improvement project covers 38.8 kilometers of highway, with tunnels and bridges as the main structure. It is the largest highway construction project, requiring the most technical capabilities with the most derious difficulty in Taiwan over the past decade.

Based on the core concept of sustainable public construction, the project involved rigorous environmental assessment and communication with citizens from planning, designing and construction. Factors such as geology and hydrology, were taken into consideration with optimized route selection and advanced tunnel construction methods. In the meantime, the impact of construction was mitigated through measures such as railway transportation for earthwork, suspension mechanism, long-term environmental monitoring, ecology, historic

preservation, and communication with local tribes. Advanced disaster prevention electromechanical engineering was incorporated with smart traffic control operations to facilitate a model mountainous road construction with its full life cycle based on safety, environmental protection and wisdom. During the construction phase, carbon inventory and the establishment of an environmental protection supervision team under the EIA commitment were implemented to realize an in-depth dialogue between public construction and the society, information transparency and supervision mechanism to create a precedent for all public constructions in Taiwan.

"The Suhua Highway of Provincial Highway No.9 Mountainous Section Improvement Project" was submitted to the Global Road Achievement Award (GRAA) organized by the International Road Federation (IRF) in the Engineering Design category. The project was awarded the First Prize on November 20 during a video conference based in Houston, the USA.

This award proved of the outstanding achievement of Taiwan's highway engineering. In addition to placing the result on the international stage, it shows Taiwan and its world-class engineering technology to the world.

# 台9線南迴公路安朔至草埔段 C1橋梁標新建工程榮獲109年度 金路獎傑出工程類第一名

The New Construction of C1 Bridge in the Anshuo-Caopu section of the South-Link Highway of Provincial Highway No.9 Won the First Prize of the 2020 Golden Way Award in Outstanding Engineering

舊有台9線(今台9戊線)台東縣達仁鄉南 迴公路山區路段,路線蜿蜒並沿山壁及河谷間狹 縫佈設,常因災害受損而導致交通中斷;為了減 少人命財產損失外並提高區域經濟及產業運輸效 益,交通部公路總局回應民眾期待,於高致災路 段採截彎取直,新闢橋梁興建公路,以提供一條 安全的道路。

本工程全長6,300公尺,採雙向四車道設計,每車道寬3.5公尺,兩側路肩寬2.0公尺,於雙向合併段全寬18公尺;高架橋路線跨越安朔溪後,沿其支流五福谷溪蜿蜒而上至隧道北口,以「藏橋於林」為設計理念,將橋梁融入山與河谷間,並克服地形限制兼顧生態與交通,全線採大跨徑之高架橋設置,減少開挖及落墩影響環境,路面亦採多孔隙透水瀝青混凝土鋪面,可降低行車噪音及減少揚水提高行車安全,行駛過程有悠遊山林居高臨下之感。

另外本工程位處自然溪谷區及原始森林區,常有保育類動物如台灣山羊、穿山甲、黃喉貂、台灣獼猴,保育鳥類熊鷹、台灣藍鵲,保育昆蟲類黃蝶、黃裳鳳蝶以及兩棲爬蟲類、褐樹蛙族群等覓食及飲水。為了將環境生態之影響降低,設計階段即邀請生態保育人士採24小時紅外線攝影觀察調查生物路徑,並以生態調查結果作為設計工作考量重點,在不可避免之人為開發

的情況下,仍可兼顧自然環境之保護與保育,施 工期間也進行環境之水質、空氣、噪音、生態數 量監測以及工程碳足跡盤查,並於竣工後彙整碳 足跡盤查清冊、取得碳足跡查證聲明書,本工程 皆以融入當地景觀環境及生態,並且配合地方發 展之理念進行設計。

鑒於本工程於設計階段即有全面綜合考量環境生態影響並兼顧地方發展,另於施工期間進行卓越品質管理,獲得交通部工程施工查核及公路總局工程督導甲等成績,通車後為台東居民提供一條安全、穩定回家的道路,本工程參加交通部109年度金路獎評選榮獲傑出工程類第1名,不僅是給予設計、監造及施工人員之肯定,亦是對公路總局及所屬機關人員莫大的鼓舞。



藏橋於林。 Hidden bridge in the forest.



安朔高架橋橋台。 Abutment of Anshuo Viaduct.

The old Provincial Highway No.9 (now Provincial Highway No.9 E) starting in Daren Township, Taitung County, is a winding section laid along the slits between mountain walls and river valleys. The traffic was often interrupted due to damage brought about by disasters. To protect lives and properties as well as improving regional economic and transportation efficiency, the DGH and MOTC met the people's expectations by building bridges and highway on the disaster-prone section to construct a safe road.

The project covers a total length of 6,300 meters as a four lane dual carriageway. Each lane is 3.5 meters with the shoulder width of 2.0 meters on both sides. The full width of the dual carriageway merge section is 18 meters. After the viaduct crosses Anshuo River, it follows its tributary Wufugu River reaching upwards to the tunnel's north entrance. The design adopts the concept of a "hidden bridge in the forest" to integrate the bridge into the mountains and river valleys, while overcoming terrain restrictions to take both ecology and traffic into consideration. The entire section adopts long viaducts to prevent impact of excavation and the piers on the environment. The pavement of the bridge section adopts a multi-porous water-permeable asphalt concrete cover. This feature reduces noise and splash from driving and enhancing safety, giving the drivers a sense of traveling leisurely in the mountains and forests.

In addition, the project is located in natural valleys and old-growth forest, where animals of protected species feed and drink, including Taiwan serow, pangolins, yellow-throated martens, Formosan rock macaques, Mountain hawkeagles, Taiwan blue magpies, Eurema blanda, (aka three-spot grass yellow butterflies) Troides Aeacus (aka golden birdwing butterflies), as well as reptiles and Buergeria robusta (aka robust Buerger's frogs). To reduce the impact on the environment and ecology, ecological conservationists were invited to observe and investigate animal paths 24 hours a day with infrared photography at the design stage. The results were taken into serious consideration. While manmade development was essential in this case, environmental protection and nature conservation were still prioritized. During the construction period, water quality, air, noise, animal number monitoring, and carbon footprint inventory were equally carried out. Upon completion of the project, the carbon footprint inventory was collected and with the verification statement obtained. This project was designed with local landscape and ecology in mind, as well as local development.

In view of the comprehensive consideration of environmental and ecological impacts and local development during the design phase, coupled with excellent quality management during the construction period, this project was rated A by the MOTC Construction Inspection and the DGH Construction Supervision. Once inaugurated, this highway offers Taitung residents a safe way home. The project won the First Prize of the 2020 Golden Way Award in Outstanding Engineering. Not only is it positive reinforcement for design, supervision and construction personnel, it is also a great encouragement for the personnel at DGH and its affiliated agencies.

# 雲川霧境返山路—十年來莫拉克颱風災 害後的重建(台 24 線 32k~40k)榮獲 2020 IFLA 國際景觀大賞榮譽獎

The Misty Road Leading Back to the Mountain-Reconstruction After the Typhoon Morakot Disaster in Decade Won the Honorable Mention of the 2020 IFLA-APR LA Awards



台24線32k谷川大橋日間景觀。 Daytime view of Guchuan Bridge at 32k of Provincial Highway No.24.

#### 公路環境歷程

台24線32k~40k位於屏東縣霧臺鄉,隘寮 北溪是本區重要的水系,沿線部落保有濃厚魯凱 族原始人文與風貌。隨著山巒稜線或山腰蜿蜒而 上,知名景點有:岩板巷、櫻花王、神山瀑布、 哈尤溪溫泉及災後新建的霧臺谷川大橋,其高聳 的橋墩一柱擎天,蜿蜒的線形猶如蒼龍,凌駕雲 霧之中。

#### 風災劫後重生

民國98年莫拉克風災重創南臺灣,屏東縣 以台24線霧臺公路受創最為嚴重。自八八風災 後至105年期間,公路總局第三區養護工程處潮 州工務段為強化公路之永久路廊並提升抗災安全 性,沿線復育聖誕紅、九重葛、杜鵑、山櫻花及 王爺葵等,使霧臺公路不僅有得天獨厚的山川 美景外,也營造出民眾心目中最美的公路花海景 象。尤其在每年耶誕節時,隨著天氣變冷,霧臺

# History and Environment of the Highway

The section of 32k-40k of Provincial Highway No.24 is located in Wutai Township, Pingtung County. The Ailiao North River forms an important hydrographical network in this area. The native culture and features of the Rukai tribe are preserved along the way. If you follow the mountain ridge or mountainside upwards, you can see renowned scenic spots including Stone Slab Alley, Taiwan Cherry King, Shenshan Waterfall, Hayouxi Hotspring and the Guchuan Bridge that was newly rebuilt after the typhoon. The tall pier almost reaches the sky, with a winding dragon-like shape sitting above the clouds and mist.

#### Rebirth after the Typhoon

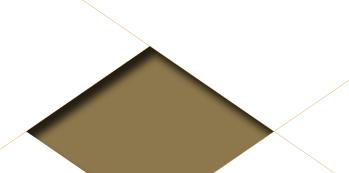
In 2009, Typhoon Morakot wreaked havoc in southern Taiwan, and the Provincial Highway No.24 was the part in Pingtung County that was the hardest hit. From the incident till 2016, the Chaozhou Branch of the Third Maintenance Office, DGH, planted Poinsettias, bougainvillea, azaleas, Taiwan cherry, and Mexican sunflowers along the way to reinforced the permanent corridors while enhancing disaster resistance. This has enhanced the unique landscape of the Wutai Highway by creating the beautiful view of a sea of flowers. As the temperature drops around the Christmas season, the numerous Poinsettia turns bright red from green. The view goes on for 10 kilometers that conveys the spirit of the season. Many drivers upload the photos they take on social media, calling it "the most Christmasy highway in Taiwan."

#### **Creating Landscape Highlights**

To make the Provincial Highway No.24 a corridor that features elements of safety, culture, landscape and ecology, the Chaozhou Branch of the Third Maintenance Office launched the "Highway Landscape Highlight Design Project" in 2016, with the goal of enhancing the view of the corridors based on the principle of "creating" highlights in 3 years, numerous stars in 5 years and connected view in 10 years." To this end, the office actively has done field research to understand the highway and the surrounding areas to come up with an action plan including both "hard work" and "soft power." The messy water pipes along the way are hung on the retaining wall to declutter. The space was enhanced with local eco-friendly materials to create resting areas (including the observation deck on the Wutai Guchuan Bridge, the Lily Pavilion, the Shenshan Liulong site, and the Wutai Observation Deck). To make the construction eco-friendly, local seniors were consulted with local materials sourced and the unique overlapped slate method adopted to reinforced the structure with better friction. The slates not only retain soil but also allows the water to drain with great drainage, decompression, and filtration properties. In addition, the cracks have made great habitats, and the rearrangement has created slate crafts (including slate stairs, slate retaining walls, terraced fields, etc.) to improve aesthetics. Simultaneously, it prepares for the extreme weather in the future while maintaining traditional Rukai skills.

#### Integration of Art and Culture

The Provincial Highway No.24 is a highway rooted in local culture. The Chaozhou Branch of the Third Maintenance Office worked with students and teachers from local junior high schools and elementary schools, as well as specialists in pottery, woodcarving and logs to create more memories of the connection between



公路上栽植的數千株聖誕紅,率先由綠轉為耀眼 鮮紅,沿線10公里的花海怒放景緻洋溢著幸福 溫馨,耶誕氛圍感染了車友,紛紛拍照上傳以分 享雀躍心情,實屬「全臺最有耶誕味的公路」。

#### 營造景觀亮點

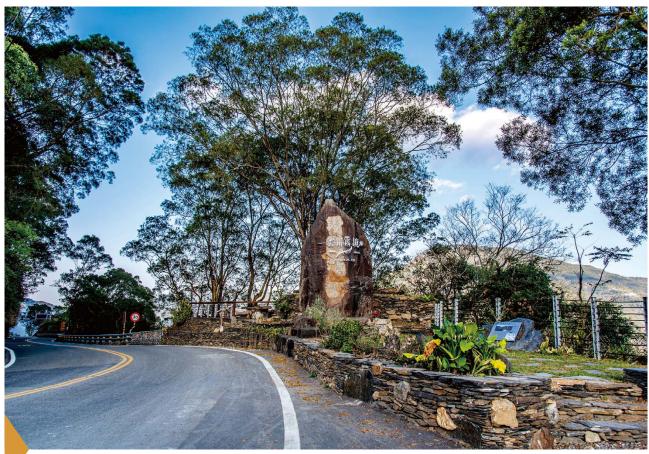
公路總局第三區養護工程處潮州工務段為 打造台24線成為安全、文化、景觀及生態的廊 道,自105年度開始執行「省道景觀營造亮點 計畫」,期盼以「3年亮點、5年繁星、10年串 聯」來整頓沿線路廊景觀,並積極深入地方,瞭 解道路及周邊環境,設定「硬功夫」及「軟實 力」的行動方案,依序將沿途雜亂無章的水管整 理附掛於擋土牆上,將景觀視覺雜亂現象加以改 善,另利用在地綠建材重新整理隙地空間,開拓 多功能的休憩環境(包含霧臺谷川大橋觀景臺營 造、百合涼亭活化、神山流籠遺址優化及霧光觀 景平臺改善)。對於生態工法的應用上,則商請 在地耆老參與指導,用就地取材及特有的板岩交 疊方法,讓石板間產生較佳的摩擦力而更形牢 固。此砌石不但具擋土之效,若遇大水來襲,亦 可從石縫中流走,其排水減壓及濾水清淨水質效 果良好。另外,孔隙間也創造出生態棲息空間,並因石板的重新排列亦創作出石板工藝(包含石板階梯、石板擋土牆、梯田……等)。本路段透過景觀改造,提升了環境美學,同時也為未來的極端氣候預作準備,讓這份魯凱族傳統技藝得以持續保留。

#### 結合藝術人文

台24線霧臺公路是一條具有在地文化底蘊的藝術公路,公路總局第三區養護工程處潮州工務段偕同當地國中、小師生與陶壺、木雕、原木藝術家,利用陶板、木雕、泥塑、風倒木及工程剩材,創作出部落與公路間更多的連結記憶。另外,霧臺鄉公所為改善部落商店街的路容,也首度推動自主營造計畫及植樹活動,以凝聚台24線霧臺部落的意識。整體計畫改善後,除提供交通運輸安全功能外,也強化景觀生態理念的落實。因此,本路段參加國際景觀大賞徵選(2020 IFLA AAPME AWARDS)評比,獲得「自然災害和極端天氣類—榮譽獎」殊榮,使臺灣的霧臺公路躍上國際,讓世界上更多的人領會臺灣公路之美。



台24線36.8k遠眺霧臺公路全景。 The panoramic view of Wutai Highway at the 36.8k section of Provincial Highway No.24.



台24線37k神山流籠遺址優化。 Optimization of the Shenshan Liulong Site at the 37k section Provincial Highway No.24.

the tribe and the highway with pottery plates, woodcarvings, clay sculptures, fallen trunks and leftover construction materials. In addition, to improve the roads of the tribal shopping street, the Wutai Township Office also launched its own construction and tree planting project to build greater consensus in the Wutai village along the Provincial Highway No.24. Upon completion, the project has not only enhanced transportation safety as well as reinforcing the concept of ecology. As a result, this section of the highway participated in the 2020 IFLA AAPME Awards and won Honorable Mention in the "Natural Disasters and Extreme Weather" category. This shows the beauty of the Wutai Highway to the world, allowing everyone to witness the beauty of Taiwan's highways.

參加國際景觀大賞徵選(2020 IFLA AAPME AWARDS)評比, 獲得「自然災害和極端天氣類─ 榮譽獎」殊榮

This section of the highway participated in the 2020 IFLA AAPME Awards and won Honorable Mention in the "Natural Disasters and Extreme Weather" category.

# 道法自然—阿里山公路景觀營造 (台 18 線 85k~95k) 榮獲 2020 IFLA 國際景觀大賞榮譽獎

Way of Nature-Landscape Development of Alishan Highway (Taiwan Provincial Highway No.18) Won the Honorable Mention of the 2020 IFLA-APR LA Awards



台18線89.3k季節變化的林相。
The forest changing colors in autumn at the section of 89.3k of Provincial Highway No.18.

#### 公路環境歷程

台18線85k~95k位於嘉義縣阿里山的二萬坪至自忠路段,海拔約2,000公尺以上。溫帶延伸至寒帶的氣候,造就了闊葉林、霧林帶的優美林相,道路蜿蜒而上,山巒層層,景觀渾然天成,更有幾世代守候這塊土地的原住民「鄒族」,具有生態、景觀、人文豐富的樣貌。

#### 落實無痕設計

本路段藉由循序漸進地經費投入,以自然維養方式減少人力,透過減量設計及生態工法、 綠建材之運用,重新檢視沿線隙地空間,秉持 80%生態維護、20%景觀營造原則,捨棄舊式土 木工程思維,以無痕景觀營造方式,將公路完美 融入山林景觀之中。

#### 友善棲地營造

公路總局第五區養護工程處阿里山工務段

透過盤點台18線沿線閒置隙地空間,營造生物微棲地,塑造多樣性生態環境,增加螢火蟲繁衍面積,經過長期環境營造及生態復育的成果,阿里山地區每年4月~6月(夏螢)及11月~隔年1月(冬螢)夜間賞螢導覽及相關生態遊程已成為在地特色。

#### 實現生態復育

辦理原生及在地植物調查後,於台18線沿線隙地空間及路側依海拔高度選擇適生植栽,以誘蝶、誘鳥植物及開花植栽為主,採複層植栽方式營造自然錯落的景觀層次,同時確保生態環境多樣性。豐富的食草和蜜源植物,吸引了鳥群、蝴蝶在此駐足繁衍,處處生機,成為永續經營的景觀公路。

#### 融入人文特色

阿里山工務段與鄒族部落合作,採用木柵 圍籬結合鄒族傳統工藝(黃藤編織綁紮)保護珍 貴神木,不僅保育阿里山珍貴樹種,更融入當地 之人文特色。鄒族人以茅草為頂的建築,塑造獨 特的部落景觀,而根源於生活所發展出的皮雕、 藤編、木雕工藝,更是展現鄒族文化的智慧與 美感。本公路闡述著如何在保護社區的同時, 亦著重於提高土地價值與社區經濟力,因而參加 2020 IFLA國際景觀大賞「經濟可行性類」競賽 時,榮獲「榮譽獎」之肯定。

# History and Environment of the Highway

The section of 85k-95k of Provincial Highway No.18 is located in the area between Erwanping and Zizhong in Alishan, Chiayi County. At the altitude of more than 2,000 meters, the climate covers the temperate zone and the frigid zone, creating a beautiful temperate broad-leaf forest mixed with cloud forest. The winding road is situated among peaks to create a stunning natural landscape. The aboriginal Tsou people have safeguarded this land for generations, enriching the landscape with ecology, view and culture.

# Implementation of Nature Biomimetic Principles

Funds were gradually invested in this section of the road to reduce the need for manpower through natural maintenance. Open space was put under review through reduced design, Ecological Engineering Methods, and green materials based on the principle of 80% of ecological maintenance and 20% of landscape design. The outdated logic for civil construction was replaced with the nature-biomimetic principles to integrate the highway into the mountains and forest perfectly.

#### Friendly Habitat

The Alishan Branch of the Fifth Maintenance Office created microhabitats by taking advantage of idle open space along of Provincial Highway No.18. The microhabitats contribute to a diverse ecosystem and increase the perfect habitat for fireflies population growth. With long-term effort, firefly-watching tours and the related ecology tours have become popular in Alishan from April to June and November to January.

#### **Ecological Restoration**

After surveying native and local plants, plants were selected in accordance with the altitude for open space and roadsides along the Provincial



台18線71.1k芙谷峩橋與銀河。 FKUO Bridge and the Milky Way at 71.7k of Provincial Highway No.18.

Highway No.18. Plants that attract butterflies, birds, and flowering ones were prioritized to be planted in layers to achieve a natural view while guaranteeing biological diversity. The abundance of host plants and honey plants attract birds and butterflies to stop by and multiply, become the sustainable highway into the surrounding landscaping.

#### **Cultural Features**

The Alishan Branch worked with the Tsou people to combine wooden fences with the traditional tribal craftsmanship (craft of tying, binding and weaving the yellow rotang palm) to protect the precious sacred trees. This not only preserves the precious tree species of Alishan but also incorporates local cultural features. The Tsou people's thatched cottages create a unique tribal landscape, and the leather carving, palm weaving, and wood carving craftsmanship developed from their lifestyle also show the wisdom and beauty of the Tsou culture. This highway display how to protect the community while also focusing on increasing the value of the land and empowering the community with better economic prospect. It won Honorable Mention in the "Economic Viability" category of the 2020 IFLA-APR LA Awards.

## 「護蟹任務」微電影榮獲 9 項國際競賽獎項

# Documentary "Mission-Land Crab Redemption" was Awarded 9 International Awards

位於臺灣國境之南的省道台26線附近,有著一群從熱帶地區隨著黑潮洋流漂流來的「陸蟹」,而墾丁國家公園區內的後灣、香蕉灣海岸林、港口溪河口及出風鼻等四處更是分布熱區,其中香蕉灣海岸林內住著將近30種的陸蟹,是全世界已知陸蟹種類多樣性最高的地方。

每年農曆6月至9月期間,是陸蟹的繁殖期,而由於海水的鹽度穩定,加上豐富的營養鹽可提供充足的食物來源,所以對於抱卵的陸蟹媽媽來說,是將懷中的陸蟹寶寶送入大海中成為首選的「育嬰房」。不過隨著臺灣經濟的繁榮與觀光業的發達,公路從中劃過一分為二,讓陸蟹媽媽降海釋幼的這趟路程可是危機重重。

為提高陸蟹行經道路的安全性,公路總局、墾丁國家公園管理處及各界專家學者一同合作,利用月圓期間的繁殖高峰期以「道路縮減交通管制措施」及「陸蟹引導設施」等方式改善,再搭配向來往民眾進行解説及環境教育,達到行車減速友善陸蟹先行。

由於成效良好,受到在地民眾及愛護陸蟹的保育人員肯定,公路總局更將其過程拍攝成微電影短片,並獲得美國國際短片競賽(Best Short Competition)、全球電影競賽(The Accolade Global Film Competition)及 休士頓國際影視展(WorldFest-Houston International Film Festival)共9項獎項。



台26線道路縮減交通管制措施,並向來往民眾進行解説。
Traffic reduction control Provincial Highway No.26 while offering people explanations.



美國國際短片競賽2項獎項獎盃。 Two trophies from the Best Short Competition.



「護蟹任務」微電影專書。 Dedicated publication for "Mission-Land Crab Redemption".

In the south of the island near Provincial Highway No.26, a cast of "land crabs" drift along with the Kuroshio current from tropical areas to arrive in Taiwan. Houwan, coastal forest of Banana Bay, the estuary of Gangkou River and Chufongbi in the Kenting National Park area are hot spots. Among them, nearly 30 species of land crab live in the coastal forest of Banana Bay, with the highest known diversity of land crab species in the world.

The period from the 6<sup>th</sup> to 9<sup>th</sup> months of lunar calendar is the breeding period for land crabs. The seawater's stable salinity and the rich nutrients as food sources are the perfect "baby room" for ovigerous female crabs. However, with the prosperity of Taiwan's economy and the development of tourism industry, the highway was divided into two, making the land crabs' journey to release her young to the sea dangerous.

To improve road safety for land crabs, the DGH and the Headquarters of Kenting National Park worked with experts and scholars from different fields. At the peak breeding period around full moon, traffic control and land crab guiding facilities are implemented, while giving people who pass by explanations and environmental education to slow down the cars and be more crab-friendly.

The great results have been recognized by local people as well as land crab conservationists. The DGH made a documentary of the process and submitted to several competitions around the world, winning 9 awards from the Best Short Competition, The Accolade Global Film Competition and WorldFest-Houston International Film Festival.

## 淡江大橋新建工程 獲頒交通部「廉正透明獎」特優

The New Construction of Danjiang Bridge Received Excellent Honor in the Integrity and Transparency Award by MOTC



公路總局淡江大橋新建工程,獲頒交通部廉正透明獎「特優」殊榮。
The DGH's new construction of Danjiang Bridge received Excellent Honor in the Integrity and Transparency Award by MOTC.

#### 推動廉政平臺,召開聯繫會議

淡江大橋預計113年9月完工,完工後將成 為全球最大跨距單塔不對稱斜張橋,也是臺灣第 一座由機關以國際競圖方式評選而出的橋,因工 法、專業技術複雜且金額龐大,為確保民眾獲得 足夠的工程資訊,公路總局訂定推動淡江大橋廉 政交流方案實施計畫,藉由廉政交流平臺定期聯 繫會議方式,持續向檢、廉、調等司法機關揭露 工程資訊。

#### 網站公開資訊,推動行政透明

109年2月建置淡江大橋願景館,提供民眾 專業導覽解説,並將相關工程進度、生態環保、 民眾疑義、各項會議資料等資訊,公開於淡江大 橋網站供民眾查詢,並建構工地即時影像資訊置 放網站中,供民眾共同監督,達全民督工效果, 以公私協力的方式,建立重大工程之行政透明工 程模式,減少民眾對重大工程的質疑,增加機關 行政透明效能,維護廠商合理權益,提升政府廉 能形象。

#### 榮獲廉正透明獎「特優」殊榮

淡江大橋新建工程建立廉政平臺,積極推動廉正透明作為,經參加交通部109年「廉正透明獎」,榮獲最高分「特優」殊榮。



交通部祁文中常務次長親自頒發廉正透明獎予公路總局西部濱海公路北區臨時工程處詹益祥處長。 The Administrative Deputy Minister of MOTC, Chi Wen-jong, gave trophy of the Integrity and Transparency Award to the Director of West Coast Expressway Northern Region Temporary Engineering Office, Chan Yi-hsiang.

#### **Anti-corruption Platform Meetings**

The Danjiang Bridge is expected to be completed in September 2024. Upon completion, it is going to be the world's longest-span single-pylon asymmetric cable-stayed bridge and the first design that was selected by the authorities from an international design competition. With the complexity in construction methods and expertise, the DGH has launched the Danjiang Bridge Anti-corruption Platform to ensure people can access adequate information about the construction. The Anti-corruption Platform continues to hold contact meetings in order to disclose information to the judicial authorities such as prosecutors, anti-corruption and investigation authorities.

# Facilitating Administrative Transparency through Publishing Information Online

In February 2020, the Danjiang Bridge Vision Hall opened its doors to offer public, professional tours. In the meantime, information

such as progress, ecological and environmental protection, public concerns, conference materials and so on is published on the project website for a public inquiry. Real-time images are placed on the website to facilitate public supervision to build a model for making major public construction projects transparent with the effort from the public and private sectors with the aims of assuring the public, increase administrative transparency and efficiency, safeguarding legitimate rights for the suppliers and enhancing the government's image of integrity.

# Receiving Excellent Honor in the Integrity and Transparency Award by MOTC

The DGH's new construction of Danjiang Bridge project incorporates an Anti-corruption Platform to promote transparency. It received Excellent Honor in the 2020 Integrity and Transparency Award by MOTC.





# **聲劃** 放眼百年

Planning ahead for the Next Century

出發,該有方向, 向著夢想、向著遠方, 向著山巔水湄、向著久違的歸鄉, 路在我們筆下,向著實現的方向。

We set off with a direction in mind and work toward our dreams and somewhere far away. We have long dreamed while working toward the top of the mountains and the river and on the homecoming road. The future of the highway is being planned and will be realized.

Planning ahead for the Next Century



# 注重生態保育跨部會合作 簽署「國土生態保護 綠色網絡」合作協議

Ecological Conservation through Inter-ministerial Cooperation: Signing the Cooperation Agreement on the "Green Network for Ecological Protection on National Land"

健康的生態環境是維持生物多樣性與支持 社會經濟發展之基礎,維護生物廊道之生命力與 生態系服務功能,是環境資源保育與各項基礎建 設主管機關的共同使命。

109年11月27日在交通部陳彥伯政務次長及 農委會黃金城副主任委員的見證下,公路總局與 農委會林務局、特有生物研究保育中心及高速公 路局透過共同簽署「國土生態保護綠色網絡」合作協議,為維護生態環境進行跨域合作,攜手共同推動永續發展健全路網,將傳統人定勝天、鑿山開路的傳統思維轉變為尊重自然與環境共存共好,積極運用路廊迴避、衝擊減輕、補償替代等方式,於道路先期規劃、設計與施工時,具體採納及實行各項環境友善作為,並針對路殺熱點及外來種入侵等環境劣化議題積極進行改善,期望

再提供便利交通的同時,兼顧保護 棲地與生態網絡的串連。



交通部陳彥伯政務次長及農委會黃金城副主任委員見證四位機關首長簽署「國土生態保護綠色網絡」合作協議。

Chen Yen-po, Political Deputy Minister of MOTC and Huang Chin-cheng, Deputy Minister of Council of Agriculture, serving as witnesses for the signing of the cooperation agreement on "Green Network for Ecological Protection on National Land"

A healthy ecosystem is a foundation for maintaining biodiversity and supporting social and economic development. To this end, maintaining the lives and ecosystem of biological corridors is the priority of authorities in charge of resource conservation and infrastructure.

On November 27, 2020, the DGH signed the agreement on "Green Network for Ecological Protection on National Land" with the Forestry Bureau, Endemic Species Research Institute and Freeway Bureau with the Political Deputy Minister of MOTC, Chen Yen-po and the Deputy Minister of Council of Agriculture, Huang Chincheng. The agreement aims to develop a network of roads that allows for sustainable development and engagement in cooperation that facilitates environmental protection, transforming the traditional logic of "man will conquer nature, cutting roads through the mountains" to respecting nature and achieving co-existence and co-prosperity. Corridors are adopted to avoid, mitigate impact and compensate. Ecofriendly measures are incorporated in the early planning, design and construction stages, and

work on issues, such as road kill hotspots and invasive alien species. The end goal is providing convenient transportation while protecting the habitat and the ecological network.

In recent years, the DGH has worked with various units to protect the environment by setting up animal crossing, protective nets, and incorporating advanced image recognition technology to develop an alert system and other measures to prevent leopard cats and other animals becoming road kill. The cooperation agreement allows for close cooperation among different units based on positive existing experience. The DGH will continue to examine and improve existing environmental issues such as road kill and habitat restoration, as well as building an inter-ministerial platform for sharing the results, resources and experience to achieve a win-win situation between infrastructure and conservation, building a sustainable environment where man and nature co-exist in peace.



見證人、簽署首長及與會人員大合照。(左2起,高速公路局趙興華局長、公路總局許鉦漳局長、交通部陳彥伯政務次長、農委會黃金城副主任委員、林務局林華慶局長、特有生物研究保育中心楊嘉棟主任)

Group photo of witnesses, representatives and participants (second from the left: Jaw Shing-hau, Director-General of the Freeway Bureau, Hsu Cheng-chang, Director-General of DGH, Chen Yen-po, Political Deputy Minister of MOTC, Huang Chin-cheng, Deputy Minister of Council of Agriculture, Lin Hwa-ching, Director-General of Forestry Bureau and Yang Jia-dong, Director-General of ESRI).

## 「西部濱海公路後續建設計畫」 榮獲 109 年國家永續發展獎

The "West Coast Expressway Follow-up Construction Project"
Won the 2020 National Sustainable Development Award



台61線七股溪橋以歌德式拱橋設計加大跨距減少落墩,降低對環境衝擊。 Qiguxi Bridge is a Gothic Arch Bridge with spans increased and supported by fewer pillars to reduce the environmental impact of Provincial Highway No.61.

西濱快速公路後續建設計畫最後一哩路新豐~鳳鼻路段於109年1月22日正式開放通車,完成後與國道及橫向快速公路建構成西部地區快速公路路網,有效帶動濱海地區的產業及觀光發展,建設過程中兼顧環境永續與文化保存,獲交通部推薦參加「109年國家永續發展獎」甄選並榮獲入選獎,行政院109年11月25日由蘇貞昌院長頒發獎狀表揚,西濱公路為唯一獲獎之工程建設計畫,實屬不易。

臺灣西部濱海地區有海岸、濕地、潮間帶 等珍貴的自然環境,也有許多富有文化的純樸小 鎮,西濱快速公路在規劃路線時優先迴避環境敏 感區域,設定停工機制及動物保護措施降低對生 態的干擾,運用綠色材料減少水泥用量,延長建設壽命,並利用自動化工法縮短工期,降低施工噪音,達到節能減碳效益。此外,亦將在地文化納入工程設計,串聯台61線沿海自然生態及濱海風光景點,建構出一條充滿文化及生態元素的道路。

台61線通車後成為貫穿西部沿海的交通動脈,沿途經過10個縣市、35個鄉鎮市,對於均衡濱海地區永續發展扮演極為重要的角色,國家永續發展委員會對於西濱快速公路能兼顧工程開發與環境永續發展,並帶動沿線觀光及提升地方經濟活力表達了高度的肯定及讚賞。

The Xinfeng-Fongbi section was the last mile of the West Coast Expressway Follow-up Construction Project. Opened to traffic on January 22, 2020, the section completed the expressway network in the Western region together with highways and horizontal connections, effectively boosting the development of industries and tourism for the coastal region. The project took environmental sustainability and cultural preservation into account during the construction process, winning the recommendation by MOTC for the 2020 National Sustainable Development Award. Premier Su Tseng-chang gave the award certificate on November 25, 2020. It was a grand achievement as West Coast Expressway was the only award-winning construction project.

The coastal region of western Taiwan has precious natural resources such as coast, wetlands, intertidal zones, and simple towns with a rich culture. While planning the West Coast Expressway, environmentally sensitive areas were avoided with suspension mechanisms and animal protection measures to reduce the impact on the environment. Green materials were prioritized to

reduce cement consumption, extend construction life, and automated construction methods were chosen to shorten the time needed, reduce noise, and achieve energy-saving and carbon-reduction benefits. In addition, local cultural elements were also incorporated into the design, connecting the natural coastal ecosystem and scenic spots of Provincial Highway No.61 and enrich the highway with cultural and ecological elements.

With Provincial Highway No.61 open to traffic, it has become a traffic artery for the western coast. It passes through 10 cities and counties and 35 towns, playing a vital role in bringing balance for the sustainable development of the coastal area. The National Sustainable Development Network has recognized and praised the West Coast Expressway to strike a balance between development and sustainable environment and boost tourism and the economy for the surrounding areas.



行政院蘇貞昌院長與入選獎得獎單位合照(右3為公路總局林聰利副局長)。 Group photo with Premier Su Tseng-chang and award winners (Lin Tsung-li, the Deputy Director-General of DGH third from the right).

### 特展與旅遊合輯—自在,漫遊—來公路輕旅

# Special Exhibition and Travel Compilation: Roaming Freely on the Highway

為將公路總局歷經二十餘年興建之台61公路建設內容及闢建的艱辛挑戰,以及公路沿線的鄉土風情、地方特色產業,以多樣的手法呈現,公路總局有別以往,結合動態旅遊及靜態特展的方式,規劃「幸福公路台61—海路漫行防疫輕旅行」踩線活動、「自在,漫遊-來公路輕旅」特展。

首先,積極響應交通部「防疫旅遊,從心 啟動」政策,公路總局在暑假前夕,籌辦「幸福 公路台61-海路漫行防疫輕旅行」踩線活動, 從「工程亮點」、「觀光景點」及「在地人文產 業」面向規劃自台61線之北端、南端出發之1日 遊行程。這次踩線活動由公路總局許鉦漳局長、 黃運貴副局長分別擔任踩線達人領隊,邀請中華 民國旅行商業同業公會全國聯合會、相關旅行業負責人及公路總局所屬同仁,搭乘遊覽車並搭配隨車導遊領隊人員及公路總局工程人員解說,將台61線特殊工程亮點與沿途特色文史觀光景點逐一介紹,兩梯次踩線活動獲旅行業者高度迴響。

緊接著,公路總局採繪本風手法,以故事 敘述並輔以影像、影片、文物,引領民眾在暑假 期間讓親子、家庭、朋友以輕旅行的視角,瀏覽 台61公路的沿途文史、風土及秘境景點,傳遞 工程的艱辛挑戰與完工的便捷美好,這次特展期 間,計有15個團體、1933人次參訪,前來參觀 的舊雨新知對於幸福公路館再次用不同手法呈現 施政亮點,給予高度評價。



由黃運貴副局長率隊之「幸福公路台61—海路漫行防疫輕旅行」踩線活動。
The "Happiness Highway: the Provincial Highway No.61" campaign headed by Huang Yung-kuei, the Deputy Director-General of DGH.

To present the construction and the challenges of Provincial Highway No.61 as well as showcasing local customs and industries in a variety of ways, the DGH combined travel with exhibition to formulate the "Happiness Highway: the Provincial Highway No.61" campaign, and the "Roaming Freely on the Highway" exhibition.

In response to the MOTC's "pandemic-prevention travel" policy, the DGH organized the "Happiness Highway: the Provincial Highway No.61" campaign before the summer vacation to plan a day trip from the north to the south end of Provincial Highway No.61 featuring the construction highlights, scenic spots and local cultural industries. The campaign was headed by Hsu Cheng-chang, Director-General of DGH, and Huang Yung-kuei, the Deputy Director-General of DGH. Tour operators and DGH employees

were invited to join the tour, with guides and DGH construction personnel on the tour buses offering information on the engineering spotlights and specific scenic spots. Both campaigns received very positive feedback from tour operators.

The DGH then created a storytelling picture book with images, videos and cultural artifacts to attract people to Provincial Highway No.61 during the summer holiday. Not only did they enjoy the culture, history, customs and hidden scenic spots, but they also got to learn about the challenges of the project and the convenience it brings. A total of 1933 people and 15 groups visited the special exhibition, giving great feedback on how DGH showcased the highlights of the construction project from a different angle.



陳彥伯次長回娘家,由許鉦漳局長與吳季娟執行秘書接待並參觀「自在,漫遊一來公路輕旅」特展。 Chen Yen-po, the Political Deputy Minister of MOTC, was received by Hsu Cheng-chang, Director-General of DGH, and Wu Chi-chuan, the Executive Secretary, to visit the "Roaming Freely on the Highway" special exhibition.

### 偏鄉服務再提升—新創幸福巴士 2.0

Upgraded Services for Remote Areas: Happiness Bus 2.0, the New Innovation



#### 幸福巴士2.0上路。 Happiness Bus 2.0 kicks off.

#### 幸福巴士, 滿足最後一哩 基本民行

幸福巴士就是要讓偏鄉民眾微笑、擁抱幸福。為了改善偏鄉地區交通問題並考量偏鄉地區公共運輸

需求特性,公路總局選定公共運輸涵蓋率較低及 傳統客運業者無服務意願之偏鄉地區優先推動幸 福巴士,並善用多元運具及提供靈活、彈性之營 運模式,例如營運班次可提供預約及固定班次、 營運路線提供彈性路線及固定路線,以及使用乙 類大客車、計程車及小型車等多元運具,完善偏 鄉地區最後一哩基本民行。

截至109年12月31日,透過公路總局補助資源已輔導101個鄉鎮共242條路線(包含45個偏鄉)推動幸福巴士(含幸福小黃),全國偏鄉地區公路公共運輸涵蓋率達88.33%。

#### 新創幸福巴士2.0整合示範服務

為持續精進幸福巴士服務,規劃幸福巴士 2.0整合示範服務並以屏東縣滿州鄉進行試辦, 內容包括完善在地公共運輸網絡、建構整合平台、政府資源整合、結合在地資源、民間資源投入及設計統一識別等6大亮點,並於109年12月24日通車啟用。該服務以傳統客運加上幸福巴士,並搭配預約機制,服務鄉內所有村里銜接客運路線或至恆春地區;另整合相關資源至統一調度平台,包括教育部、衛生福利部、原住民族委員會及屏東縣政府等;同時配合汽車運輸業管理規則等法規鬆綁,輔導當地社會團體「一粒麥子基金會」成立市區客運業,並鼓勵民間企業CSR(企業社會責任),由長榮航空公司、中華航空公司3年各捐贈500萬元,協助偏鄉公共運輸,透過更多資源的投入與整合,建構在地微型公共運輸服務系統,讓偏鄉不再是行的偏鄉。



CSR投入偏鄉交通捐贈儀式。 CSR donation ceremony for the public transportation in remote rural areas.

## Happiness Bus Completes the Last Mile of Transportation

Happiness Bus is meant to make people in remote rural areas smile and embrace happiness. To solve traffic problems while considering the demand characteristics of public transportation in these areas, the DGH has promoted Happiness Bus 2.0 and put it into effect primarily in the remote rural areas where public transportation coverage is low and traditional passenger carriers have little interest to provide services for. To complete the last mile of transportation by Happiness Bus 2.0 in remote rural areas, multiple modes of vehicles and flexible operation models are adopted. For example, reservation and fixscheduled services can both be offered at the same time. Additionally, flexible-route and fixed-route services can also be operated by using multiple modes of vehicles, such as type-B buses, taxis, and sedans.

As of December 31, 2020, the DGH has supplemented resources for the promotion of Happiness Bus (incl. Happiness Taxi) to a total of 242 Happiness Bus routes in 101 villages and towns, including 45 remote rural areas. As the result, the public transportation coverage has reached 88.33% in these remote rural areas.

# Happiness Bus 2.0 Integration Pilot Program

To continuously enhance the Happiness Bus services, the Happiness Bus 2.0 Integration Pilot Program has been launched in Manzhou Township, Pingtung County on December 24,

2020. The program covers 6 highlights: improving the local public transportation network, building an integrated platform, integrating government resources, combining local resources, devoting resources from private sectors, and designing uniform identity. This program combines traditional passenger transportation and Happiness Bus along with an appointment system. In addition, this program provides connecting transportation or services heading to Hengchun for all villages in Manzhou Township. Besides, it integrates relevant resources into an unified dispatch platform, including resources from the Ministry of Education, the Ministry of Health and Welfare, the Council of Indigenous Peoples, and Pingtung County Government. Meanwhile, the local social organization, A Kernel of Wheat Foundation, was guided to set up a metropolitan automobile transportation enterprise in accordance with the relaxed regulations for the automobile transportation industry. CSR (Corporate Social Responsibility) of private sectors are also encouraged to assist the public transportation development in remote rural areas in this program. For example, EVA Air and China Airlines have donated 5 million NT dollars respectively in 3 years to help the improvement of public transportation in remote rural areas. With more integrations and devotions of resources, a local micro public transportation system is expected to be built to transform remote rural villages into accessible and convenient locations.



Services provided by the appointment platform of A Kernel of Wheat Foundation.

### 109 年公路防災成果彙報暨展望

Summary and Outlook on Highway Disaster Prevention in 2020



劇烈天候下防災零A1事件計數表。 Zero A1 incident count during extreme weather events.

#### 109年防災應變、演練、科研成果

不變的初衷-劇烈天候下防災零A1事件計數 表在104年歸零,公路總局記取教訓步步為營精 進防災應變作為,在暌違近5年後跨過了1838, 數字的累進不是挑戰不是突破,是公路防災中心 創立的初衷-守護每一位用路人。

防災應變、演練全年無時差-109年度劇烈 天候事件緊急應變成立計7次,滾動式檢討執行 成果回饋業務計畫及災害標準作業程序修正計 3次、一二級監控路段/橋梁彙整表(含淹水泥 流、浪襲路段、地下道、全流域觀測彙整)計 12次。

因應複合式災害時代來臨,防災整備作業 採全年度無時差精進整備演練,109年間共辦理 兵棋推演5場、軍勤隊演練5場、隧道事故實兵 演練22場、天然災害封橋/封路演練35場、地震 高司演練50場、隧道事故高司演練130場,總演 練場次高達247場。

智慧防災計畫-借重科技4道防線保障用路人安全:第1道-風險預警推播系統、第2道-路側資訊顯示系統、第3道-落石告警系統、第4道-受困車輛偵測系統;第1期計畫台9丁線108年已上線運轉並持續驗證調整;109年第2期計畫建置運轉台7線北橫公路、台9丁延伸路段及台18線阿里山公路等3路段,積極推動策進未達封路標準前之預警通告作為,降低用路人曝險之機率,即時傳送有感的風險訊息,提供用路人安全回家的路。

## 2020 Disaster Prevention and Response, Drills and Research

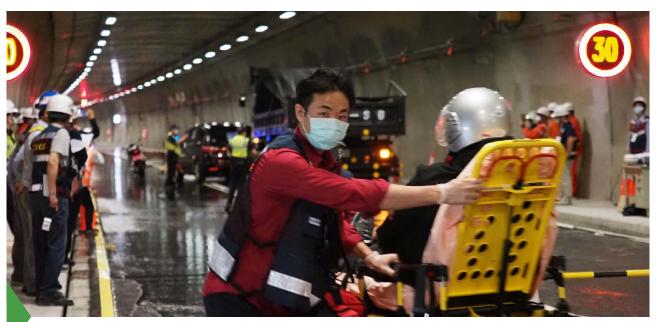
Unwavering Intention: The zero A1 incident count during extreme weather events was reset in 2015. The DGH has learned its lessons to reinforce disaster prevention measures step by step. After 5 years, the count is now at 1,838. The increasing number is not a challenge or a breakthrough, and it stands for the intention of the Highway Disaster Center, which is protecting every road user.

Timely Disaster Prevention Response and Drill: In 2020, the severe weather events emergency response was set up 7 times, with plans and disaster SOP modified 3 times based on the feedback from rolling review, and 12 summaries from monitored sections/bridges (including flood, mud flow, waves, underground passages and observation in the drainage basins).

In the era of complex disasters, advanced drills are adopted all year round as part of disaster

prevention and preparation. In 2020, a total of 5 simulations, 5 military logistics drills, 22 tunnel accident drills, 35 natural disaster bridge/road closure drills, 50 earthquake drills, and 130 tunnel accident drills were organized with the total number reaching 247.

Smart disaster prevention: Technology has been adopted to construct 4 lines of defense that ensure road user safety: 1 – Risk notification, 2 – Roadside information display, 3 – Rockfall alert, 4 – Trapped vehicle detection. Phase 1 of Provincial Highway No.9 D has been put into operation in 2019 and continues to be verified and adjusted. The second phase was launched in 2020 for Provincial Highway No.7, extension to Provincial Highway No.9 D and Provincial Highway No.18. The goal is to send out alerts before the roads have to be sealed, reducing risks for road users. The alert notifications will guide road users on a safe way home.



草埔森永隧道演練。 Caopu Senyong Tunnel drill.



草埔森永隧道演練。 Caopu Senyong Tunnel drill.

#### 110年展望-強化風險管理及機制

隧安專案:分層分級的管理機制,人力有效率,管理最佳化;一級自主管制由隧道維運團隊每月至少辦理1次隧道現地抽測作業自主管理;第二級稽核機制由各區養護工程處相關業管單位(交控中心)、工務段組成稽核小組每半年辦理1次稽核作業;第三級督導考核機制由公路總局業務單位組成督導小組每半年擇定2座甲級隧道及1座乙級隧道辦理督導考核。

兵棋推演精進作為:導入國家關鍵基礎設施演習之精神,讓演習與程序回歸正統,列出五大演習規劃重點:境況模擬→災損評估→行動方案→驗證目標→演練檢討;期望藉由五大重點週而復始的推演持續精進,實務與演練不脱鉤。

防災督導員補位夜間、假日指揮應變:引

進全年24小時防災督導員機制,於災害發生第一時間擔任訊息傳遞、資料蒐集、督導指揮體系建立之重責大任。

資訊系統軟硬體設施及無線電效能提升: 因應Windows 2008及Google地球未來將不再提 供更新服務,公路總局規劃110~111年間進行 系統軟硬體設備暨效能提升;另因現有無線電 通訊幹線設備多屬類比系統,建置時間已逾20 年,易受天候或雜訊干擾,已於110年度預算編 列逾3千萬元將局本部無線電骨幹鏈路數位化及 各工程處無線電設備一次性汰換為數位設備。

公路總局持續以「風險管理」及「科技運用」精進公路災害防救業務,將道路通阻與即時 風險資訊傳遞予用路人,落實防災重於救災、離 災優於防災的防災思維。

## 2021 Outlook: Enhanced Risk Management

Tunnel Safety Project: hierarchical management enhances manpower and management efficiency. The First-level autonomous control is managed by the tunnel maintenance team, conducting a test at least once a month. The Second-level audit is conducted by the branches of the local Maintenance Office (traffic control center) and the audit team once every 6 months. The Third-level supervision and assessment carried out by the DGH supervision team, selecting 2 Class A tunnels and 1 Class B tunnel for a checkup once every 6 months.

Simulation drills: The concept of Critical Infrastructure Drill was introduced to make exercises regular with 5 key points, including scenario simulation  $\rightarrow$  disaster assessment  $\rightarrow$  action plan  $\rightarrow$  target verification  $\rightarrow$  drill review. The goal is continuing to improve base on these 5 steps to make reality consistent with simulation.

Night and holiday shift for disaster prevention

supervisors: Disaster prevention supervisors now work 24 hours a day to relay messages, collect information and supervise command as soon as a disaster occurs.

Upgrade for information system hardware, software, and radio: As Windows 2008 and Google Earth will no longer be updated, the DGH plans to update the system software, hardware, and performance between 2021 and 2022. In addition, most of the existing radio communication channels use the analog system. Built more than 20 years ago, they are vulnerable to weather or noise interference. More than NT\$30 million has been budgeted in 2021 to digitize the radio system at the DGH headquarters, and replace the radio equipment of office in one go.

The DGH continues to improve its highway disaster prevention and rescue mechanisms based on risk management and technology, passing road obstruction and real-time risk alerts to road users. More emphasis is laid on prevention than relief to effectively eliminate disasters.



草埔森永隧道演練。 Caopu Senyong Tunnel drill.

### 法制作業優化與卓越一精進法制在地人才

#### Optimization and Excellence of Legal Works



法制室指派專人至臺北所授課,提升同仁基本法律智能。
The Legal Affairs Office sent personnel to the Taipei Office, enhancing basic law knowledge.

#### 法制人才在地化

為協助局屬機關同仁解決業務處理時所遭遇之法律問題,公路總局法制室會同人事室於109年6月11日、7月17日及8月6日邀集各局屬機關並分別由黃運貴副局長及鄧文廣總工程司主持研商會議,確定各區監理所、養護工程處因業務性質需求而將設置1名法制人員,俾利協助機關內業務單位突破法律障礙並順利推動各項業務。

#### 法規查核,更為卓越

法制室配合交通部辦理108年度的法規通報 績效查核作業,奉交通部109年1月22日函復: 「辛勞得力,績效卓著」、「較往年之表現更為 卓越,請依權責辦理相關人員敘獎事宜,以資鼓 勵」。



#### 深耕法律教育,成果良好

法制室109年度除例行開辦工程法律概念、 工程訴訟案例、工程爭議調解、公報與法制作 業、國賠實務及行政救濟等5項講習班之外,專 案辦理「申挖業務之行政處分暨裁處權時效研習 班」,平均滿意度達91.9分。另為加強基層人員 的基本法律概念,法制室指派專人至至臺北所、 臺中所、高雄市所、三工處、西濱北、南工處及 公訓所等機關授課,共計7場次,上述到訓同仁 累計達663人次,著有實績。

#### 提供法律諮詢,即時協助釋疑

法制室提供適法性之法律諮詢,於109年度提供諮詢共計達686件次、服務時間共計達19,335分鐘,未來法制室仍秉自我期許扮演「推進器」與「煞車器」之雙重角色,俾協助業務單位「依法行政」下推展業務及遂行各項任務。

#### **Local Legal Talents**

To assist colleagues from affiliated agencies in solving legal issues related to their assignments, the Legal Affairs Office and the Personnel Office of DGH invited representatives of affiliated agencies on June 11, July 17, and August 6, 2020, to host a meeting presided by Huang Yung-kuei, the Deputy Director-General and Teng Wen-kuang, the Deputy Chief Engineer. The consensus was reached to appoint one dedicated legal affairs staff member at all Motor Vehicles Offices and Maintenance Offices due to the nature of the work, helping all agencies break through legal barriers to do their job.

#### **Better Regulatory Review**

The Legal Affairs Office worked with MOTC to carry out the audit for regulatory review. The result was received in a letter dated on January 22, 2020, stating that the DGH had "worked hard to achieve great performance" and that the performance was "better than that of the previous years. All those responsible should be awarded."

#### **Excellent Result in Legal Education**

In addition to five workshops on the legal concept of engineering, engineering litigation, engineering dispute mediation, bulletin and legal operations, national remedy practices, and administrative relief, the Legal Office organized the "Administrative Sanctions and Adjudications for Excavation" in 2020 with an average satisfaction rating of 91.9 points. In addition, to strengthen the basic legal concepts of all personnel, the Legal Affairs Office sent personnel to give 7 lectures at the Taipei Motor Vehicles Office, Taichung Motor Vehicles Office, Kaohsiung City Motor Vehicles Office, the Third Maintenance Office, the West Coast Expressway Engineering Office and the Training Institute. The total number of participants reached 663, showing great achievements. Providing legal consultations for timely assistance: The Legal Affairs Office provides consultations on legal compliance. In 2020, it provided a total of 686 consultations with a total service time of 19,335 minutes. In the future, the Legal Affairs Office will act as both the "propeller" and "break" to help all units comply with the regulations while performing various tasks.



法制室會同人事室召開局屬機關設置法制人員研商會議。

The Legal Affairs Office and the Personnel Office convened a meeting for hiring legal personnel for affiliated agencies.

### 「從檢驗業務深耕企業誠信與社會責任」 交流座談會

Symposium on "Furthering Corporate Integrity and Social Responsibility from Inspections"

#### 共同宣示誠信理念



公路總局許鉦漳局長與5位代表帶領與會人員宣示誠信檢驗之核心理念。 With five representatives, DGH Director General Hsu Cheng-chang leads attendees in announcing the core idea of honest inspection.

謙署長、交通部陳彥伯政務次長、士林地檢朱家崎檢察長、臺灣透明組織協會蘇毓昌副執行長及代檢協會劉國連理事長等5位產官學界代表帶領全場與會人員宣示「誠信檢驗我ok 安全責任您放心」之核心理念,另由各區代檢聯誼會代表透過「臺灣拼圖」合力展現各區業者均能落實誠信檢驗之決心。

#### 加強宣導廉潔觀念

為加強代檢廠業者對企業誠信與社會責任 之認知,會中邀請臺灣透明組織協會蘇毓昌副執 行長針對企業誠信與社會責任進行專題演講;公 路總局監理組並就代檢廠現行管理重要法規與政 策進行宣導。許鉦漳局長亦表示,汽車檢驗結果 的正確性及服務品質的良窳,除了攸關車輛的行 駛安全,也是保護民眾的平安便利,因此,透過 交流座談會共同強化代檢廠從業人員守法廉潔的 觀念,讓代檢廠業者知道公路總局要求檢驗業務 必須廉潔誠信,以確保大眾行車安全。

#### 有效深植廉能意識

本次座談會除有效提升代檢業者之廉能意識外,會中倡議事項經後續追踪管考顯有具體成效,達成延伸運用推動執行之效益,並經法務部廉政署鄭銘謙署長於第110次署務會報公開讚揚公路總局用心植入誠信意識,完善社會責任。



各區代檢聯誼會代表透過「臺灣拼圖」合力展現誠信檢驗之決心。
District inspection agency associations have put together a "Puzzle of Taiwan" to show their determination of performing their tasks with integrity.

# Announcing the Principle of Integrity

In view of the accident of 4 people killed in which a concrete pump truck crashed on Yangde Boulevard in Yangming Mountain in 2017, the company responsible for the truck inspection was also prosecuted for making false inspections. The root cause was that some commissioned inspectors had ignored the importance of integrity. Hsu Cheng-chang, the Director-General of DGH, hosted the symposium on "Furthering Corporate Integrity and Social Responsibility from Inspections" on July 6, 2020, with 5 representatives from the industry, government and academia announcing the principle of integrity with all participants, including Cheng Ming-chian, the Director-General of Agency Against Corruption, Chen Yen-po, the Political Deputy Minister of MOTC, Chu Chiachi, the Head Prosecutor of Taiwan Shilin District Prosecutors Office, Su Yu-chang of TICT and Liu Kuo-lian of TCEA. The core concept lies in inspection integrity for safety. Moreover, district inspection agency associations have put together a "Puzzle of Taiwan" to show their determination to perform their tasks with integrity.

#### **Promoting the Concept of Integrity**

In order to enhance the understanding of corporate integrity and social responsibility for inspection agencies, Su Yu-chang of TICT gave a lecture on the topic. The Motor Vehicles Division has also raised awareness of important regulations and policies for inspection agencies. Director-General Hsu Cheng-chang also explained that the accuracy of vehicle inspection and the quality of services are related to vehicle safety, and protect the general public safety. The symposium was organized to enhance the legal compliance and integrity for the employees of the inspection agencies, showing them that DGH requires absolute integrity from them to ensure safety.

## Effectively Reinforcing the Concept of Anti-corruption

In addition to effectively enhancing the inspector agencies' awareness of integrity, this symposium showed concrete results with follow-up examinations and achieved promotion benefits. Chen Ming-chian, the Director-General of Agency Against Corruption, praised the DGH for promoting integrity and carrying out social responsibilities during the 110<sup>th</sup> agency meeting.





# 建造「奠基之道

Way of Foundation for Construction

實現理想,要用踏實的步伐去追,

每一道起伏,都平順無礙,

每一個銜接,都不容誤差,

有穩健的路,才有穩健的腳步。

It takes a steady pace to realize the ideal, makes every curve smooth, and makes every connection precise. A robust road is the key to a steady pace.



## 自行車多元路線建置及 暨有環島路網優化

Construction of New Bicycle Routes and Optimization of the Existing Network



台9戊線增設自行車專用道。 Bike lane added to Provincial Highway No.9 E.

#### 響應2021「自行車旅遊年」,規劃多 元路線

近年來,在「東部自行車路網示範計畫」及「全國自行車友善環境路網整體規劃及交通部自行車路網建置計畫」推波助瀾下,自行車觀光旅遊活動已蔚為風潮,聯合國亦於107年正式制定每年6月3日為「World Bicycle Day」,我國108年6月2日於福隆遊客中心辦理「世界自行車日」宣示活動,是日除宣示臺灣加入「世界自行車日」會派活動外,並宣布將110年訂為「自行車日」響應活動外,並宣布將110年訂為「自行車旅遊年」。為響應前揭目標已規劃109~112年辦理「環島自行車道升級暨多元路線整合推動計畫」,除持續優化已完成之環島自行車路線並會同相關單位規劃16條多元之自行車旅遊路線,以吸引更多民眾前來使用。

經運輸研究所、觀光局、臺灣鐵路管理局及 公路總局共同努力,109年已完成7條多元路線導 引標誌、補給站指標及導覽牌,説明如下:

- 一、北海岸路線:編號為Bike Tour 11,由基隆 車站經北海岸至淺水灣。
- 二、東北角路線:編號為Bike Tour 12,又名黃金山海線,由雙溪車站經舊草嶺隧道至石城。
- 三、宜蘭濱海-蘭陽平原路線:編號為Bike Tour 41,又名葛瑪蘭路線,由宜蘭車站至狀圍沙 丘服務區。
- 四、花東縱谷-森林溫泉路線:編號為Bike Tour 43-2,又名板塊騎遇線,由玉里車站至南安 遊客服務區。

# Multiple Routes Planned to Welcome the "2021 Year of Cycling Tourism"

Thanks to the "Eastern Bicycle Lane Network Demo Project" and the "Overall Planning for the National Bicycle-friendly Network and MOTC Bicycle Lane Construction Project" in recent years, cycling tourism has become a trend. The United Nations has also designated June 3 as "World Bicycle Day" in 2018. On June 2, 2019, Taiwan pledged to the World Bicycle Day at the Fulong Visitor Center on June 2, 2019. In addition to announcing Taiwan's participation in World Bicycle Day, 2021 was announced as the "Year of Cycling Tourism." To this end, the "Bicycle Lane Upgrade and Route Integration Project" was launched for 2020-2023. Besides optimizing the existing network, 16 routes for cycling tourism have also been planned.

Through the joint efforts of the Institute of Transportation, Tourism Bureau, Taiwan Railways Administration and the DGH, signs for routes, supply stations and guides have been put up for the 7 routes listed below:

- North Coast Route: Bike Tour 11 goes from Keelung Station to Qianshuiwan via the North Coast.
- Northeast Coast Route: Bike Tour 12 is also known as the Golden Mountain and Sea Route, from Shuangxi Station to Shicheng via the Old Caoling Tunnel.
- Yilan Coastal-Lanyang Plain Route: Bike Tour 41 is also known as Kamalan Route, and it goes from Yilan Station to Zhuangwei Dune Visitor Center.
- 4. East Rift Valley-Forest Hot Spring Route: Bike Tour 43-2 is nicknamed "the Encounter between Plate Tectonics." It goes from Yuli Station to the Nan'an Visitor Center.
- Silaya Route: Bike Tour 32 is also known as Lingbo Guantian Route. It goes from Longtian Station to Wushantou Reservoir.
- East Coast-Chenggong Sanxiantai Route: Bike Tour 45 is nicknamed as the "the Success Route." It goes from Taitung Station to Sanxiantai in Chenggong.
- 7. Penghu Route: Bike Tour 51 is also known as the Gaillardia Island Route. It goes from Baisha Township to Xiyu Lighthouse.



基平隧道北口告警系統。

Warning system at the northern end of the Chiping tunnels.



新澳隧道南口告警系統。 Xin'ao Tunnel south exit alert system.

五、西拉雅路線:編號為Bike Tour 32,又名菱波官田線,由隆田車站至烏山頭水庫。

六、東海岸-成功三仙台路線:編號為Bike Tour 45,又名馬到成功線,由台東車站至成功三 仙台。

七、澎湖路線:編號為Bike Tour 51,又名菊島線,路線由白沙鄉至西嶼燈塔。

#### 防護設施及標誌牌面設置更新, 騎乘安全又安心

多元路線指標牌面部分,省道路段109年度 公路總局共計新設及更新72面導引標誌及56面 補給站牌面,另為增進自行車騎士於隧道或彎 道路段之安全性,公路總局優先選定台2丙線平 雙、基平隧道、台9丁線新澳隧道南北兩端及台 9丁線121k彎道段等共10處增設自行車智慧安全 告警設施,該設備可於自行車騎士騎乘通過時以 警示文字提醒後方汽車駕駛,達到降低事故發生 之成效。 環島自行車路網另一優化重點為老舊護欄及 邊溝改善,因自行車騎士多騎乘於路側,若護欄 高度較矮及邊溝未加蓋易有跌落風險,且邊溝加 蓋後亦可增加自行車騎乘空間,公路總局針對所 轄省道進行檢視,擇定一工處台2線、台2丙線; 二工處台14線;三工處台9線、台9戊線、台17 線;四工處台9丁線;五工處台1線、台19甲線 等路段進行改善,已完成護欄改善12.63公里及 邊溝改善1.16公里。

環島路網規劃之初因受限公路環境,除少部分路段設有自行車專用道外,大部分路段自行車皆與汽機車共用車道行駛,為改善此議題交通部已於109年8月19日修正慢車道最小寬度為1.5米(原為2米),得於路幅寬度不足之路段增設慢車道,減少混合車流以增進自行車騎士安全,另配合南迴改通車,公路總局亦於台9戊至辦理車道調整,增設自行車專用道創更佳的環境,車道調整部分109年度已完成123.6公里。

## **Updated Protective Facilities and Signs to Make Cycling Safe**

In terms of route signs, the DGH set up and replaced a total of 72 route signs and 56 supply station signs on provincial highways in 2020. In addition, the DGH has selected a total of 10 locations for the smart alert system to enhance safety for cyclists riding through tunnels or curved roads, including the Pingshuang and Chiping tunnels on Provincial Highway No.2 C, the north and south ends of the Xinao Tunnel on Provincial Highway No.9 D, and the 121k curve section of the Provincial Highway No.9 D. This equipment warns cars behind the cyclists to reduce accidents.

Another focus for the optimization project is improving old guardrails and side ditches. As cyclists often ride on the side of the road, if the guardrail is low and the side ditches are not covered, there is a risk of falling. Covering side ditches can also increase space for cyclists. The DGH inspected provincial highways and selected some sections, including Provincial Highway No.2

and No.2 C of the First Maintenance Office, No.14 of the Second Maintenance Office, No.9, No.9 E, and No.17 of the Third Maintenance Office, No.9 D of the Fourth Maintenance Office, No.1 and No.19 A of the Fifth Maintenance Office for improvement. A total of 12.63 kilometers of guardrail and 1.16 kilometers of side ditches have been completed.

Many restrictions existed at the beginning planning phase of the bike lane network. Except for a few sections with dedicated bicycle lanes, most other sections require cyclists to share lanes with motorcycles. To fix this issue, the MOTC had revised the minimum width of the low-speed vehicle lane to 1.5 meters (from 2 meters) on August 1, 2020. Slow lanes can be added on-road sections with insufficient width to reduce mixed traffic and improve safety for cyclists. In addition, with the South-link Highway open to traffic, the DGH also adjusted lanes for Provincial Highway No.9 E. The added bike lane creates a better experience for cyclists. As of 2020, 123.6 kilometers of lanes have been modified.



台2線(宜蘭濱海路線)補 給站標誌。

Provincial Highway No.2 (Yilan Coastal Route) supply station sign.



台2線-東向107k+900。 Provincial Highway No.2-Eastbound 107k+900.

## 行政院前瞻基礎建設—城鄉建設 改善停車問題計畫

Forward-looking Infrastructure Development Program of the Executive Yuan:

Urban-rural Development Parking Solution Project

#### 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「城鄉建設一地方前瞻基礎建設事宜」會議提示,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「研商城鄉建設一改善停車問題」會議結論,基於停車場建設為具自價性之公共建設,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」。

#### 智慧化停車管理及綠能性別友善, 提升停車服務品質

為了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—城鄉建 設—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。



中壢文化公園地下停車場成果照片(109.08.07完 工)。

Chungli Cultural Park underground parking (completed on August 7, 2020).

#### 執行成果

- 一、本計畫奉行政院106年6月30日院臺交字第 1060091615號函暨109年9月7日院臺交字 第1090029856號核定,整體計畫期程為106 年9月至113年12月,計畫經費200億元。
- 二、截至109年止,已完成核定補助19縣市122 座停車場,合計總工程經費為410.03億元, 中央補助194.52億元(預計可提供大型車66 席、汽車34,223席及機車14,302席)。109 年完工停車場10處,可提供大型車15席、汽 車2,758席及機車1,096席,改善各地交通及 停車問題。

## Integrated in the Highlight Program to Meet Local Development Needs

The Executive Yuan followed the National Development Council's report on "Urban-rural Development: Local Forward-looking Infrastructure" on February 18, 2017, and asked the MOTC to come up with a project for public transportation improvement that solves parking issues. When the parking lot management proves to be a good model, the local governments were allowed to propose targeted highlight projects to enhance local development. Moreover, the "Urban-rural Development Parking Solution" meeting on March 21, 2017, stated that the private sector should be encouraged to invest as an attempt of creating a synergy with government investment, as the parking lot was self-liquidating infrastructure. In the meantime, local governments were not excluded from engaging in construction projects. In line with the policy, the MOTC proposed the "Parking Solution Project."

#### Smart Parking Management and Gender-friendly Green Energy to Improve Parking Services

To encourage and increase the use of public transportation, better park-and-ride facilities and connections to the city center are built to avoid too many vehicles entering the city center and crowded commercial areas to cause traffic congestion. In addition, many recreational areas have no parking or not enough parking spaces, leading to many cars being parked on the street. Therefore, the MOTC has formulated the "Forwardlooking Infrastructure-Urban-rural Development -Parking Solution Project," which prioritizes subsidizing public transportation stations and areas with tourism activities for creating parking spaces. These parking lots set an example for charged off-the-road parking, as well as enhancing efficiency and service quality with smart parking management, green energy and a gender-friendly design principle. This offers a solution to the

parking problem by satisfying needs for park-andride and parking during trips.

#### Results

- The Executive Yuan's document approved plan No.1060091615, dated June 30, 2017 and document No.1090029856, dated September 7, 2017. The projects started in September and will end in December 2024 with a budget of NT\$20 billion.
- 2. As of 2020, subsidies for 122 parking lots in 19 cities/counties have been approved with the total funding of NT\$41.003 billion and subsidies from the central government at NT\$19.452 billion (expected to for 66 large vehicles, 34,223 cars and 14,302 motorcycles). Ten parking lots were completed in 2020, providing parking space for 15 large vehicles, 2,758 cars and 1,096 motorcycles to improve traffic and parking issues everywhere.



新北市永康公園地下停車場成果照片(109.07.01完T)。

Yongkang Park Underground Parking in New Taipei City (completed on July 1, 2020).



新北市音樂公園地下停車場成果照片(109.09.05完 工)。

Music Park Underground Parking in New Taipei City (completed on September 5, 2020).

### 代辦南方澳跨港大橋重建工程

#### Overseeing the Reconstruction of Nanfang'ao Bridge



舊橋拆除。 Demolition of the old bridge.

蔡英文總統主持祈福動土典禮。
President Tsai Ing-wen officiated at the groundbreaking

President Tsai Ing-wen officiated at the groundbreaking and blessing ceremony.

108年10月1日宜蘭縣蘇澳鎮境內「南方澳跨港大橋」無預警倒塌造成漁港航道受阻及民眾傷亡事件,不僅影響當地交通及漁業發展,更重創當地經濟及觀光產業。交通部於108年10月7日指示公路總局、航港局、港務公司進行後續重建工程,相關計畫由公路總局主政,並指示3年內完成重建工程。

108年10月16日公路總局、航港局與港務公司完成代辦協議書簽訂,108年10月31日設計、測量及地質探查工作決標予台灣世曦工程顧問股份有限公司,隨即展開重建工程規劃與設計。新橋重建涉及當地漁業發展與地方觀光發展規劃,期間數次召開民眾説明會聽取當地民眾意見,後新橋遇選址問題暫停設計,經多次與當地居民、地方漁會及航港局溝通協調,在109年3月18日行政院吳澤成政務委員召開「中央地方建設協調會報一南方澳大橋重建橋址(第2次)」會議中裁示於原橋址拆除重建,至此重建方案獲得確

立。本工程採設計、招標同步方式進行,於109年5月底完成細部設計、109年5月工程標上網公告、109年7月13日決標予新亞建設開發股份有限公司,並於109年7月16日開工。

在公路總局與蘇花公路改善工程處施工團隊 努力之下,「原南方澳大橋」舊橋如期拆除完成。

109年10月5日辦理祈福動土典禮,蔡英文總統偕同蘇貞昌院長、林佳龍部長、公路總局許鉦漳局長、各級貴賓長官及地方人士與社會賢達共同出席,祈求南方澳跨港大橋重建工程順利圓滿完成,並期許如期於111年10月完工,象徵「南方澳跨港大橋重建工程」將自此展翅重生,也重振南方澳漁港往日風采,未來將提升南方澳地區民眾之交通便利性、促進漁港活化、振興商圈並加速觀光發展,橋梁特殊鯖魚造型,夜間搭配藝術光雕系統,更可成為南方澳地區指標性地標。

On October 1, 2019, the collapse of the Nanfang'ao Bridge (located in Su'ao Township, Yilan County) blocked the navigation channel and wounded many. Not only has the incident interfered with the development of local transportation and fishery, it also had a severe impact on the local economy and tourism industry. On October 7, 2019, the MOTC instructed the DGH, Maritime & Port Bureau and Taiwan International Ports Corporation to reconstruct the bridge with the DGH overseeing the construction, scheduled to be completed within 3 years.

On October 16, 2019, the DGH, Maritime & Port Bureau and Taiwan International Ports Corporation signed the agency agreement. CECI Engineering Consultants, Inc., Taiwan was awarded the tender for the design, survey and geological exploration on October 31, 2019, and the reconstruction project followed suit. The reconstruction of the new bridge is a factor in the local fishery and tourism development. Therefore, public briefing sessions were held to collect feedback from local residents. The design process was briefly halted due to the choice of location. After many attempts to coordinate with local residents, fishermen's association and the Maritime & Port Bureau, the second "Nanfang'ao Bridge Relocation and Reconstruction Coordination Meeting between the Central and Local Governments" convened by Minister of State without Portfolio Wu Tze-cheng on March

18, 2020, instructed the bridge to be demolished and reconstructed in the approved reconstruction project. The design and tendering of this project were carried out simultaneously. The detailed design was completed at the end of May 2020, with the tender announced online in May 2020. NEW ASIA CONSTRUCTION & DEVELOPMENT CORP. was awarded the tender on July 13, 2020, and the work was started on July 16, 2020.

With the efforts of the construction team of DGH's Suhua Improvement Engineering Office, the former Nanfang'ao Bridge was demolished as scheduled.

The groundbreaking and blessing ceremony was held on October 5, 2020, with President Tsai Ing-wen, Premier Su Tseng-chang, Minister Lin Chia-lung, Director-General Hsu Cheng-chang, high-level supervisors, local residents and social elites in attendance, praying for the reconstruction to be completed with success as scheduled in October 2022. The "Nanfang'ao Bridge Reconstruction Project" symbolizes rebirth and the rediscovery of the beauty of the Nanfang'ao Fishing Habor. It will enhance transportation convenience, revitalize the fishing harbor, bring business as well as accelerating the development of tourism. The mackerel shape of the bridge paired with light sculptures at night will become a landmark in the area.



新橋完工模擬圖。 Simulation of the completed new bridge.

### 淡江大橋主橋塔鋼管椿圍堰合龍祈福典禮

Groundbreaking Blessing Ceremony of the Steel Pipe Cofferdam
Closure of the Main Tower for Danjiang Bridge



在眾人期盼中打下最後一根鋼管樁完成圍堰合龍。
The last steel pile was laid to complete the highly-expected cofferdam closure.

淡江大橋主橋塔鋼管樁圍堰合龍祈福典禮於 109年9月9日上午11時舉行,林佳龍部長特別親 臨現場並慰勉施工人員辛勞,希望工作團隊皆能 以同舟共渡、全力以赴,期許淡江大橋能如質如 期完成,改善淡水對外交通問題並帶來更多觀光 商機。參加祈福人員有洪孟楷立法委員、路政司 陳文瑞司長、公路總局許鉦漳局長及施工團隊成 員等。 淡江大橋主橋於109年4月16日P130主塔第 1支鋼管樁在林部長親臨祈福下開始施作,依往 年天候評估,原本預計109年11月11日才能完 成,所幸在部長親臨祈福下,7、8月間無颱風影 響施工,使得本項作業能提前於東北季風前完成 合龍。

淡江大橋主橋塔P130基礎鋼管樁圍堰長79.4公尺、寬47.4公尺約同200公尺運動場,由144組管徑1.2公尺鋼管所組成,是淡江大橋主橋施工初期第一優先進入河中之重要分項工程,鋼管樁圍堰必須藉用大型平台船機立於河中作業並配合駁船運送管材供料始可施作,合龍後聯合同步作業之施工便橋推進銜接至主橋塔位置,可提供後續主橋塔水下深達16.5公尺開挖之基礎工程,在一個安全完備之施工環境與運輸動線,為淡江大橋重要的里程碑,同時在合龍的鋼管樁圍堰中進行土石開挖作業,亦能嚴格控制基礎土石開挖不污染淡水河,落實公路總局對環境保護之重視與承諾。

林佳龍部長勉勵工作團隊秉持戰戰兢兢、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,也期盼此項國際級重大工程能成為國內公共工程施工典範,並於113年底如期完工。祈福典禮在眾人的祝福聲中,圓滿結束。



你住態砂技學來入典愷依於爬工便備工為爬工團隊加油打氣业宣影笛念。
Group photo of Minister Lin Chia-lung cheering for the team on the construction bridge after the ceremony.

The blessing ceremony for the Steel Pipe Cofferdam Closure of the Main Tower for Danjiang Bridge was held at 11am on September 9, 2020. Minister Lin Chia-lung attended to show support for the construction staff for their hard work, hoping the team would be able to move forward together for the bridge to be completed on time, improving traffic as well as bringing business for the tourism industry. Legislator Hung Meng-kai, Director-General of the Department of Railways and Highways Chen Wen-ruey, Director-General of DGH Hsu Cheng-chang and the construction team also participated in the ceremony.

The first steel pipe of the P130 main tower of Danjiang Bridge was laid on April 16 with Minister Lin Chia-lung's blessing. The project was due for completion on November 11, 2020, based on the weather data from previous years. With the Minister's blessing, no typhoon interfered with the work in July and August. Therefore, the project was completed ahead of time before the northeast monsoon.

The P130 steel pile cofferdam foundation of the main tower of the Danjiang Bridge is 79.4 meters long and 47.4 meters wide, which is about the same as the 200-meter sports ground. It is composed of 144 sets of 1.2-meter steel pipes. The project is an important sub-project for phase 1 of

the main tower of Danjiang Bridge. The steel pipe pile cofferdam must be built in the river by using a large deck barge, with the barge transporting the materials for the work to be executed. After the closure was completed, the construction bridge will be advanced and connected to the main tower, laying the foundation for the subsequent excavation 16.5 meters below the water level. It constructs a safe working environment and transportation flow as the important milestone of Danjiang Bridge. Moreover, the earth and rock exvacation can be done in the steel pipe cofferdam closure to prevent polluting the riverm realizing the DGH's commitment to environmental protection.

Minister of Transport and Communications Lin Chia-lung exhorted the work team to follow the spirit of diligence and steady progress to meet every challenge in the construction process and overcome every obstacle and difficulty, with the aim of completing this important mission on time and to the required quality; he also expressed the hope that this major international construction project can become a model for public construction project work and will be completed on schedule before the end of 2024. The blessing ceremony was successfully completed amidst the best wishes of attendees.





# 的用一迎向你我

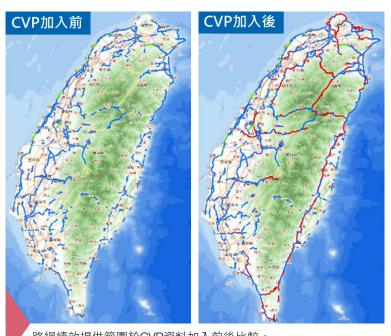
Put in Effect for Everyone's Benefit

那遠方有你的期許、我的盼望<sup>,</sup> 終於,踏出第一步<sup>,</sup> 你的前方<sup>,</sup>也是我回家的路。

Your expectations and my hopes in the distance. We are finally taking the first step. Your future is also my way home. Put in Effect for Everyone's Benefit

## 「應用手機網路信令探偵 (CVP)技術提升交通資訊 服務」試辦計畫

Pilot Program of "Enhancing Traffic Information Services with CVP Application"



路網績效提供範圍於CVP資料加入前後比較。
Comparison between road network performance before and after CVP incorporation.

#### 計畫緣起

傳統的路況資訊蒐集方式,主要係利用路側的交控設備,偵測各種速率、密度等路況資料,並經過後端的邏輯運算後,再透過路側資訊可變標誌(CMS)、網頁或手機傳遞給用路人,作為行旅資訊之參考,惟此種方式,須建置大量的路側交控設備,其建置成本與後續維護成本龐大,經初步評估CVP資料較使用Google資料節省68%經費,較傳統(VD)方式節省82%經費需求,爰108~109年度導入以手機通訊信令為基礎之探偵車(Cellular-Based Vehicle

Probe, CVP)技術,應用於公路總局 17條重點監控路段(表1),期能以更 經濟方式達到交通資訊服務之智慧化 與無縫化,提供民眾更即時、準確之 交通資訊服務。

#### 辦理成果-整體路網績效覆蓋 提升

CVP加入後,17條重點監控路段 實際績效由原先56%提升至100%,整體路網績 效由29%提升至53%,同時,公路總局交控系統 路網未來可進行更細部的切分,使道路績效將更 能反映實際路況。

#### 未來精進方式

受限於基地臺定位技術,CVP無法有效區分市區汽車和機車,以及高架與平面路段,故在市區及高架路段準確率相較較低,爰後續將探討汽車和機車間不同運具特性及高架與平面路段在不同交通量情況下之差異,提升CVP資料準確率。

17條重點監控路段 17 Key Monitored Sections	
台61線	台14線及其支線
Provincial Highway No.61 台1線(402k-終點、六都除外) Provincial Highway No.1 (with the exception between 402k-exit and the 6 special municipalities)	
台2線及其支線 Provincial Highway No.2 and branch highway	台18線阿里山公路 Provincial Highway No.18 Alishan Highway
台3線 Provincial Highway No.3	台19線及其支線 Provincial Highway No.19 and branch highway
台7線及其支線 Provincial Highway No.7 and branch highway	台21、台21甲線日月潭路段 Provincial Highway No.21, 21 A Sun Moon Lake Section
台8線 Provincial Highway No.8	台26線 Provincial Highway No.26
台9線及其支線(隧道段除外) Provincial Highway No.9 and branch highway (with the exception of the tunnel)	台62甲線 Provincial Highway No.62 A
台11線及其支線 Provincial Highway No.11 and branch highway	11條國道替代道路 11 alternate routes

#### Origin

The traditional way of collecting traffic information adopted roadside equipment to detect information such as speed, density and so on, before the algorithm made the calculation and sent it to road users through CMS, webpage or mobile phone as reference. A large number of roadside traffic control equipment is required for this method, with huge installation and maintenance costs. The initial evaluation deemed that CVP saves 68% of the cost compared to Google data, and 82% compared to the VD method. As a result, cellular-based vehicle probe (CVP) technology was introduced between 2019-2020. This technology is now used to monitor 17 key sections (Table 1), with the hopes of providing people timely and accurate information while staying budget-conscious through smart and seamless technology.

# Results: Improvement for Overall Road Network Performance Coverage

After the incorporation of CVP, the actual performance of the 17 key monitored sections increased from 56% to 100%, and the overall road network performance from 29% to 53%. Simultaneously, the network can be divided further in the future, allowing for real-time monitoring.

#### **Future Improvement**

Limited by the base station positioning technology, CVP cannot effectively distinguish urban vehicles and motorcycles, and elevated and flat road sections. As a result, the accuracy is lower in urban areas and on elevated road sections. The characteristics of vehicles/motorcycles and elevated/flat roads will be investigated under different traffic conditions to improve the accuracy of CVP data.

### 109 年車輛動態資訊成果彙報

#### The 2020 Vehicle Dynamic Information Report





公路客運 APP 及網頁改版。 iBus app and website upgrade.

#### 公路汽車客運動態資訊系統(iBus)

- 一、「公路汽車客運即時動態資訊網」及「公路 客運 APP」從多元使用者角度進行全新改 版,提供一般民眾、身障者、視障者、國外 人士友善及直覺之體驗服務。
- 二、實施駕駛員駕車時間事前、事中及事後三階 段稽核機制:事前要求業者預排班表並上傳 至動態系統進行檢核,事中透過動態系統自 動檢核駕駛員駕車時間、休息時數,並即時 發出告警,事後則產出駕車時間異常報表。

#### 遊覽車動態資訊系統(tBus)

- 一、警戒區域監控:即時掌握災害區域或事故地 點周邊遊覽車行車狀況,提升事故通報及處 理作業。
- 二、遊覽車停留景點分析:透過遊覽車GPS點位 資訊,分析平日、假日遊覽車較常停留之風 景區,提供監理單位滾動調整稽查地點,提 升路檢聯稽精作業效率。

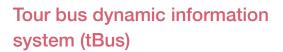
三、新冠疫情遊覽車出車情形:透過公司車輛數 及出車數變化,即時掌握遊覽車公司營運狀 況,輔導業者調整公司經營型態、協助政策 補助申請、推估整體遊覽車產值。

#### 運送危險物品車輛動態資訊系統 (dCar)

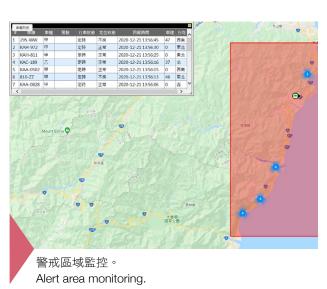
- 一、危險物品車輛介接:介接環保署廢管處運送 毒性化學物質車輛、環保署化學局運送事業 用廢棄物車輛、經濟部礦物局運送事業用 爆炸物車輛及台灣中油股份有限公司油罐車 等共計4,371輛車,進行即時監控與異常通 報。
- 二、行駛時段及路段分析:透過車輛行駛軌跡與 高快速道路里程樁號資料,分析常行駛時段 及路段,提供監理單位調整稽查時段與地 點,提升路檢聯稽精作業效率。

# Bus dynamic information system (iBus)

- The iBus website and iBus APP were updated to provide all users with user-friendly and intuitive services, including the general public, the physically-challenged, visually-impaired and foreigners.
- 2. Implement a three-stage audit for drivers before, during and after their shift: Operators are required to arrange the schedule and upload it to the dynamic system for review, which automatically checks the driver's driving and resting time and issuing timely alerts. The abnormal incidents are exported in a report after the shift is over.



- Surveillance of alert areas: Real-time surveillance of driving conditions of tour buses around areas with disasters or accidents to accelerate reporting and handling.
- Analysis of tourist attractions: Scenic spots where tour buses often stay on weekdays and holidays are analyzed through the GPS location, allowing the authorities to adjust locations for inspection to improve efficiency.





執行危險物品車輛攔查作業。 Inspection for vehicles carrying dangerous goods.

3. Tour bus usage during the COVID-19 pandemic: Operations of tour bus operators are monitored based on the number of vehicles and vehicles in use to help the operators adjust their business model, apply for subsidies and estimate the overall industry value.

#### Vehicle Dynamic Information System for carrying dangerous goods (dCar)

- Dangerous goods vehicle interface: A total of 4,371 vehicles carrying toxic chemical substances, business waste and explosives from the EPA's Department of Waste Management, Poisons and Chemicals Bureau, and the MOEA's Bureau of Mine, and oil tanks from CPC are connected to the interface for real-time monitoring and notification.
- Driving time and road section analysis: Regular driving time and road sections are analyzed through vehicle trajectory and highway mileage data to provide authorities with information on when and where to conduct inspections to improve efficiency.

# 台9線草埔森永隧道試辦通行大型重型機車及開放大貨車通行

The Trial Program for Heavy Motorcycles and Trucks Driving through Caopu Senyong Tunnel on Provincial Highway No.9



#### 傾聽民衆聲音,國内首座長隧道通行 大型重型機車

南迴改安朔草埔段於108年12月23日通車, 該路段設置有長約4.6公里的草埔森永隧道,考 量國內尚未有長隧道通行大型重型機車的前例及 管理經驗,公路總局為審慎評估該隧道通行大型 重型機車的適宜性,特別委託立場公正的中華民 國運輸學會辦理「試辦草埔隧道通行大型重型機 車計畫」,並於109年4月7日召開試辦計畫説明 會,邀請民間機車團體共同討論試辦內容,在相 關單位的共同努力下,已於109年6月30日試辦 開放大型重型機車通行。

試辦開放大型重型機車通行時間自試辦日 起算6個月,由於草埔森永隧道為國內首座試辦 開放大型重型機車通行的長隧道,因此試辦期 間中華民國運輸學會每月將以抽樣方式觀測與 檢核隧道內的秩序、行為、安全及環境指標, 並於每季邀集相關單位及民間機車團體召開檢 核會議,第1季及第2季檢核會議已分別於109年 10月29日、110年1月21日召開,以公正且客觀 的立場分析執行成效,於試辦期滿後提出試辦 成果報告,據以評估正式開放大型重型機車通 行的適宜性。

#### 縮短貨物運送時間,拉近城鄉距離, 開放大貨車通行

南迴改安朔草埔段採分階段通車,於108年 12月23日開放小型車及大客車通行後,即展開 開放大貨車通行整備事宜,針對管理措施與防災 應變能力、設施整備、交通運轉特性與交通評估 及相關配套計畫等項目辦理檢討作業,在與屏東 縣政府、臺東縣政府的警察、消防、衛生等聯防 單位共同努力下,完成所有應變與管理準備,並 於109年10月19日開放大貨車通行。



南迴改安朔草埔段實景。 Caopu Senyong Tunnel on Provincial Highway No.9.

# The First Long Tunnel in Taiwan to Allow Heavy Motorcycles

The Anshuo-Caopu Section of the South-Link Highway of Provincial Highway No.9 was opened to traffic on December 23, 2019. The 4.6-kilometer Caopu Senyong Tunnel is a part of the section. There is no precedent and management experience for heavy motorcycles passing through long tunnels in Taiwan, the DGH carefully reviewed the feasibility by commissioning the impartial Chinese Institute of Transportation to run the trial program. A presentation was hosted on April 7, 2020, with motorcycle groups from the private sector attending for further discussions. With the joint effort of all those involved, the trial program was launched on June 30, 2020.

The trial period was 6 months starting from the launch date. As the tunnel was the first long tunnel that allows heavy motorcycles, the Chinese Institute of Transportation conducted sampling and inspections each month to evaluate the order, behavior, safety, and environmental indexes inside the tunnel. A review meeting was also held each quarter with both relevant authorities

and motorcycle groups from the private sector. Reviewmeetings for the first and second quarters were convened on October 29, 2020 and January 21, 2021. The results were analyzed fairly and impartially. The report was submitted after the trial period to evaluate the feasibility.

#### Shortening Delivery Time to Reduce the Urban-rural Gap by Allowing Trucks through

The staged opening was adopted for the Anshuo-Caopu Section of the South-Link Highway of Provincial Highway No.9. Cars and buses have been allowed to pass since December 23, 2019. Preparation for trucks started immediately afterward, focusing on the reviews of management measures, disaster prevention and response capabilities, facilities, traffic evaluation and supporting measures. With the joint effort of the police, fire, and health agencies from the Pingtung County Government and the Taitung County Government, all contingency and management preparations were completed to allow trucks to pass through the tunnel on October 19, 2020.

## 駕照新制—放寬輕度癲癇 患者考領駕照新制

The New Regulation for Driver's License: Patients with Mild Epilepsy Now Eligible to Take the Test

長期以來鑑於癲癇疾病發作時機難以預測,為保護用路人及駕駛人安全,道路交通安全規則第64條規定患癲癇疾病者不符合考領汽、機車駕駛執照之資格。

由於現代醫學研究累積之專業知識及醫療技術發展,醫學界對癲癇疾病的種類、發作原因及對治方法已較早期進步,患者經外科手術、藥物治療後多獲得改善或得到控制,且有長期不發作者。為讓癲癇患者有考領駕照之權利,避免影響日常生活、就業權利,同時符合聯合國身心障礙者權利公約(CRPD)精神,放寬能有效控制症狀、行車安全風險較低之患者在適度的駕駛執照管理規定下取得駕駛執照駕車,是駕照管理制度更趨於人性化的進步。

交通部令自109年9月4日施行,倘患者符合一般報考駕駛執照體檢合格基準及資格規定,並檢具合格醫療院所之神經內科、神經外科或兒科且曾參加神經相關專業訓練醫師,出具最近2年以上癲癇未發作診斷證明書,得申請考領機車、普通小型車駕照,駕駛人並每2年檢具最近2年以上癲癇未發作診斷證明書,申請換發新照。實施至109年12月31日,考領並核發機車駕照計47人、汽車駕照計22人,合計69人,此項駕照管理新制受到患癲癇民眾的關切與歡迎,並認為是駕照管理之大跨步。



As epilepsy attacks are unpredictable, Article 64 of Traffic Regulations states that patients with epilepsy are not eligible to take driver's license tests in order to protect other road users and drivers.

Due to the advance in medical research, progress has been made in terms of knowing the type, cause and treatment for epilepsy. Patients have seen progress or control after operations or medication, and many never relapse. To safeguard the rights of patients with epilepsy and reduce impact on their daily lives and the right to work, as well as staying in line with the spirit of the United Nations' Convention on the Rights of Persons with Disabilities (CRPD), regulations have been loosed for them in terms of eligibility for driver's license. Those who can effectively control their symptoms and therefore pose a lesser risk on traffic safety are allowed to take the driver's license test as a more human-oriented approach.

An order of the Ministry of Transportation and Communications came into effect on September 4, 2020, stipulating that people living with epilepsy can apply to take the test for a motorcycle and ordinary small automobile driver's license. If they pass the ordinary physical examination and meet other qualifying requirements submitting a diagnostic certificate from neurology, neurosurgery or pediatric doctor at a qualified hospital who have received nerve-related professional training stating not suffered an epilepsy attack in the past two years. As of December 31, 2020, 47 people had received motorcycle licenses and 22 people automobile licenses, for a total of 69 people. This new driver's license system attracted the attention of and was welcomed by people living with epilepsy and is regarded as a major step forward in river's license administration.



醫院體檢診斷。 Physical Examination diagnosis. 駕駛人並每2年檢具最近2年以 上癲癇未發作診斷證明書,申請 換發新照。

Drivers can have their license reissued every two years provided they can submit proof that they have not had a seizure over the past 2 years.

# 與時俱進一汽車運輸業大型車職業駕駛人延長執業至68歲

Keeping up with the times-Professional Drivers of Large Transport Vehicles Allowed to Work till Age 68



人口高齡化社會及延後退休年齡已為國際 趨勢,加以汽車運輸業駕駛人力普遍不足,已影 響產業發展,同時配合我國中高齡就業政策,因 此規劃延長大型車職業人駕駛執照持照年齡上 限。

配合總統已公布制定「中高齡者及高齡者就業促進法」保障高齡勞動權益精神,經檢討後先以行駛區域固定、駕駛行車路程較短、限制每日最高工時等條件下,自109年7月1日起放寬汽車運輸業所屬大型車職業駕駛人持照年齡至68歲,適用對象包括貨運三業(汽車貨運業、汽車路線貨運業、汽車貨櫃貨運業)、遊覽車客運業

(限駕交通車)、市區及一般公路客運業、國道客運業(限駕駛相鄰縣市路線)等汽車運輸業所屬之駕駛人,並搭配更嚴謹之體格檢查標準作為配套措施,原則限制上午6時至下午6時之時段駕車,每日總駕駛時間以8小時為限,連續駕車3小時,至少應有30分鐘休息,休息時間如採分次實施者,每次應不得少於15分鐘等更嚴格之駕車及休息時間要求等之動態管理機制。

實施至12月31日延長職業大型車駕照年齡計有878人,顯示本項措施對中高齡就業人口具有實質幫助。



汽車運輸業所屬大型車職業駕駛人延齡執業。
Professional drivers of large transport vehicles can now extend their career.

Aging society and delayed retirement age have become international trends. Insufficient manpower in the automobile transport industry has a negative impact on its development. In line with the national policy of elderly employment, the age limit for driver's license for professional drivers of large transport vehicles has been extended.

The President's Middle-aged and Elderly Employment Promotion Act guarantees the right to work for the elderly. After a comprehensive review, the age limit for a driver's license for professional drivers of large vehicles has been extended to 68 under the condition that the area is fixed, the route is shorter and the working hours are limited. This

applies to the transportation industry, tour buses, regular highway passenger transport, highway transport, etc. More rigorous physical examination is also imposed with the principle that they are only allowed to drive from 6AM to 6PM, with the limit of 8 hours a day. They should also rest for 30 minutes after a 3-hour drive. If they divide the break time, they should rest for over 15 minutes at a time.

As of December 31, a total of 878 people extended their license, showing that this measure is of substantial help to middle-aged and elderly employment.

## 交通安全巡迴車宣導活動— 偏鄉監理服務再升級

Traffic Safety Bus on Tour: Upgraded Motor Vehicles Services for Remote Rural Areas

為提供民眾更多元化的管道申辦監理業務,體驗交通安全宣導服務,及減少偏鄉居民往返監理所站的路途時間,公路總局打造「數位行動監理站」,突破傳統行動監理車之先進服務與外觀限制,提升機關形象達到宣傳效果。

數位行動監理站外觀主視覺以公路總局局徽作為基礎,圖案除有駕駛人、道路及各類車輛外,還有石虎、黑熊等台灣原生物種,強調「人本交通」的友善用路環境,打造出「公路總動員」偏鄉服務的意象;在內裝方面也克服限制,客製化打造可受理監理服務的空間,還可將車身展開延伸變成舞台,並搭配投影、電視牆及行動網路等先進設備,將整體功能放大,提供更多樣的便民服務。

109年度規劃由7區監理所搭配數位行動監理站各辦理1場宣導活動,自7月至11月期間,分別於南投縣、嘉義縣、新竹縣、臺北市、新北市、高雄科工館及衛武營文化中心等地辦理,以在地化或配合節慶等方式,策劃豐富精采的活動,每場次皆以跨機關合作方式,邀請當地交通單位、警察單位、學校或里長辦公室等共襄盛舉。

未來,公路總局持續打造新款行動監理 車,深入大街小巷,車子開到哪裡,監理服務就 到哪裡,是第38個監理站,造福偏(原)鄉及 離島民眾,讓城市有溫度,偏鄉有服務。



表演劇團與民眾合影。

Group photo of the performing troupe with the public.



陳彦伯政務次長參與壓軸場次。 Chen Yen-po, the Political Deputy Minister of MOTC, attended the last session.

To provide the public with different access to motor vehicles services, enhance traffic safety, and reduce the time needed to make it to motor vehicles offices, the DHG launched the "Mobile Motor Vehicles Office" to offer a brand new outlook and advanced services.

The Mobile Motor Vehicles Office is decorated with the DGH's emblem, featuring artwork such as drivers, roads, and different vehicles, as well as native species such as leopard cats and Formosan black bear to create a friendly image of "human-oriented traffic" and the desire to serve remote rural areas. The inside of the vehicle has been customized to create space. The vehicle also opens up to be a stage with advanced equipment such as projection, LED display and mobile network to create synergy with all services.

In 2020, 7 motor vehicle offices held a campaign with the mobile motor vehicles office. From July to November, events with a local or festival elements were launched in Nantou County, Chiayi County, Hsinchu County, Taipei City, New Taipei City, and National Science and Technology Museum and Weiwuying National Kaohsiung Center for the Arts. Inter-agency cooperation was



民眾排隊辦理監理業務。 People queuing for motor vehicles services.

also sought to incorporate local local transportation and policy agencies, schools or the village chief's office.

In the future, DGH will continue to offer services with mobile motor vehicles office. Wherever it goes, motor vehicles services can be provided. The 38<sup>th</sup> motor vehicles office serves remote (aboriginal) areas and people on outlying islands.

# 安全上路—國內第一本「車輛裝載貨物指引手冊」

Road Safety: the First "Guidelines for Cargo Loading on Vehicles" in Taiwan



全國各界踴躍出席車輛裝載貨物指引手冊成果發表會。
People from all walks of life across the country attended the presentation of the Guidelines for Cargo Loading on Vehicles.

鑑於國內因貨物未捆綁穩妥造成之交通事故頻傳,為能降低散落物造成的交通事故,公路總局策劃編印國內第一本「車輛裝載貨物指引手冊」,蒐羅業界及各機關寶貴的實務意見,將常見散落物類型固定方法及正確的放置裝載方式相關態樣均納入,內容豐富實用。

手冊詳列貨物裝載法規及處罰依據,內容輔以圖説呈現,清晰完整淺顯易懂,並特別提醒車輛駕駛人,道路交通管理處罰條例已修正加重貨物脱落及掉落處汽車駕駛人新台幣3千以上

至1萬8千元以下之罰緩,若不慎造成交通事故外,還須負民刑事責任,再次呼籲車輛裝載貨物應捆綁牢固,才能安全上路。

為讓手冊使用更便利,封面掃描QRcode或 連結交通部公路總局交通安全宣導網頁,即可下 載手冊、教學簡報及宣導影片等資料,更可作為 業者自主教育訓練教材,這本手冊提升業者及駕 駛人的裝載安全認知,降低道路上貨物散落物之 發生,是運輸業從業人員於車輛裝載各式貨物之 最佳指南。



「車輛裝載貨物指引手冊」成果發表會。 Presentation of the "Guidelines for Cargo Loading on Vehicles".

In view of the frequent traffic accidents caused by loose cargo, the DGH printed the first Guidelines for Cargo Loading on Vehicles to prevent traffic incidents with valuable information from the industry and agencies. The guidelines feature ways to fix common scattered objects for proper loading, which is very practical.

The manual features cargo loading regulations and punishment in detail, paired with illustrations for greater clarity and readability. Drivers are reminded that the Road Traffic Management and Penalty Act fines drivers with loose or fallen cargo NT\$3,000 to NT\$18,000. If loose cargo results in a traffic incident, the driver is also held responsible in terms of civil and criminal law. The drivers are reminded to fix their cargo properly to be safe on the road.

To make the manual more accessible, drivers can download the manual, presentation and video by scanning the QR code or visiting the DGH's

traffic safety webpage. The manual enhances the concept of loading safety to reduce the risk of loose cargo on the road. It is the best guide for cargo loading for the transportation industry.



全國第一本車輛裝載貨物指引手冊。
The first Guidelines for Cargo Loading on Vehicles.

### 新一代支付導入

#### Introduction of the New-generation Payment



公車先導行動支付記者會啟動儀式。

The Launching Ceremony for the Press Conference of Pilot Bus Mobile Payment.

#### 公車先導行動支付之契機

隨著資通訊設施快速發展及智慧型行動裝置 普及,已逐漸改變民眾的支付行為與習慣,為因 應多元支付及公共運輸整合服務時代的來臨,公 路總局規劃在公車端導入新一代的支付方式,由 過去一卡通到多卡通,再升級到行動支付,來提 升民眾搭乘公共運輸之便利性。

#### 制訂統一產業標準及進行PILOT RUN 驗證作業

為利推動公車導入行動支付並有一致性之 產業規範,公路總局商請台灣車聯網產業協會 (TTIA)訂定行動支付設備產業標準,並於109 年10月21日訂定完成及對外公佈,供設備廠商生 產相關設備。 另為瞭解驗票設備運作穩定性及通用性, 公路總局擇定北、中、南計5條路線先進行 PILOT RUN驗證作業,包括國道客運(2088、 1800)、公路客運(9189)及市區公車(865、 866)等,並於初期先導入悠遊付、LINE PAY MONEY及ICASH PAY等3家行動支付業者,於 110年1月5日上線進行驗證測試,讓民眾可以使 用QR Code行動支付來搭乘客運公車路線。

#### 未來規劃

PILOT RUN驗證作業預計試辦至110年6月 底止,公路總局後續將依驗證成果規劃補助措施,逐步推動所有公車汰換新一代驗票機導入行動支付,以建構公共運輸票證整合使用環境,讓交通上的支付都可以透過手機來完成,促進整體公共運輸發展。

## Opportunity of Pilot Bus Mobile Payment

With the rapid development of information and communication facilities and the popularity of smart mobile devices, people's payment methods and habits have gradually changed. To welcome the advent of the era of multiple payments and integrated public transportation services, the DGH plans to introduce a new-generation payment method on buses. From Single-Card to Multi-Card Electronic Ticketing, the ticketing system is now upgraded to allow mobile payment, hence the convenience of public transportation is improved.



部長示範使用行動支付搭乘公車。 Minister Lin demonstrates to use mobile payment for a bus ride.

## Unified Industry Standards and PILOT RUN

In order to promote bus mobile payment and to unify the industry standards, the DGH commissioned TTIA (Taiwan Telematics Industry Association) to formulate the industry standards for mobile payment equipment. The standards were formulated and published on October 21, 2020, for equipment manufacturers to start the manufacturing process.

To understand the stability and compatibility



試辦行動支付實車展示。 Pilot mobile payment demonstration.

of the ticketing equipment operation, the DGH has selected a total of 5 routes from north, central, and south Taiwan for the implementation of PILOT RUN, including freeway passenger routes (2088 and 1800), highway passenger route (9189), and city bus routes (865 and 866). Easy Wallet, LINE PAY MONEY, and iCash Pay were selected as the first three mobile payment service providers to be tested. The test was launched on January 5, 2021, allowing people to pay bus fares by QR code mobile payment.

#### **Future Planning**

PILOT RUN is expected to finish by the end of June 2021. The DGH will plan the measures of subsidies based on the results of PILOT RUN, and the original ticketing machines will be gradually replaced by new ones which mobile payment is allowed to pay bus fares. By building an integrated environment of public transportation ticketing that all traffic payments can be made by mobile phones, the development of public transportation industry is expected to be facilitated.

## 九大運輸業落實路口停讓行人行動

9 Categories of Transportation Enterprises Realize Yielding to Pedestrians at Intersection

#### 活動緣起

考量國內交通事故死傷人數近兩年惡化攀升,且進一步分析交通事故發生地點計有6成發生於路口,顯見路口交通事故防制的重要性,公路總局配合交通部政策措施,參考日本交通安全週活動規劃交通安全宣導主題,針對汽車運輸業提倡響應路口停讓行人,以呼籲各界重視路口行人安全。

#### 「路口停讓行人」運輸業優先響應

九大運輸業者約有38萬車輛為最頻繁的用路 人,汽車運輸業者對於維護交通安全責無旁貸, 透過本次的活動由汽車運輸業者及所屬職業駕駛 人以身作則率先響應,期帶動其他駕駛人對於路 口安全的重視。

本次活動於9月14日於交通部大廳舉行,除 由運輸業者拍攝「路口停讓行人」宣導影片, 以不同運輸業職業駕駛角度現身説法路口行車安 全外,並藉由落實指差擺頭確認動作使駕駛員多 一分注意,行人的安全也就多一點保障;最後由 九大運輸業者代表簽署「路口停讓行人宣言」, 未來將共同響應及強化駕駛教育訓練,要求落實 「慢、看、停」路口轉彎標準動作,加強駕駛人 的安全意識,提升交通安全。



運輸業者代表聯合簽署「路口停讓行人宣言」。

The representatives of the transportation industry signed a pledge of yielding to pedestrians at intersections.



運輸業職業駕駛人共同響應路口慢看停。 Drivers of Transportation Enterprises Respond to the "Slow Down, Look, and Stop" Movements at Intersections.

#### **Origin of Activity**

Considering that the number of casualty in domestic traffic accidents has worsened in the past two years, the DGH discovered in further analysis that 60% of the accidents occur at intersections. This shows the importance of accident prevention at intersections. Following the policies and measures of MOTC while taking the campaign planning and the promotional topics of the Traffic Safety Week in Japan as a reference, the DGH advocates yielding to pedestrians at intersections and asks all transportation enterprises to follow. By doing this, the DGH appeals to the public to recognize the importance of pedestrian safety at intersections.

# The Transportation Industry Primarily Responding to the Campaign of "Yielding to Pedestrians at Intersections"

With around 380,000 vehicles, the 9 categories of transportation enterprises are

the most frequent road users. Therefore, the transportation industry has the responsibility of maintaining traffic safety. This campaign expects the industry and its drivers to become the role models by responding to the advocacy of yielding to pedestrians, hoping to appeal to all drivers to recognize the importance of intersection safety.

This campaign was launched at the MOTC lobby on September 14, 2020. In addition to the "Yielding to Pedestrians at Intersections" video made by the transportation industry featuring professional drivers talking about traffic safety, the checking movements of pointing and head-turning also increase the awareness of drivers to improve pedestrian safety. At the end of the activity, the representatives of the transportation industry signed a pledge of yielding to pedestrians at intersections. The industry will respond to the relevant safety campaigns and reinforce the educational training for drivers in the future. Meanwhile, the standard movements for intersection turning, "slow down, look, and stop", will be required for drivers, and safety awareness of drivers will also be strengthened to enhance traffic safety.

## 防疫紓困一政府與您行作夥

#### Pandemic Prevention and Relief: Government Policies



防疫車隊之車輛進行消毒作業。 Disinfection of vehicle.



Vehicle disinfection demonstration.

#### **積極防疫,防堵病毒擴散**

新冠肺炎疫情自年初起影響台灣,對民眾健 康造成威脅,公路總局隨即規劃多項防疫措施, 包含提供汽車運輸業駕駛人足量口罩、要求客運 業者落實車輛及場站防疫措施、並向乘客宣導 搭乘客運時全程佩戴口罩;監理機關亦於連假期 間前往客運轉運站查核業者執行防疫措施情形, 以提供民眾安心乘車環境。另外,在疫情爆發初期,公路總局也配合衛生福利部疾病管制署集中檢疫措施,協助徵用遊覽車接駁返臺民眾至集中檢疫中心,順利完成多次載送任務,共同守護國人健康安全。

#### **舒困與後疫情時代,政府與您伴行**

疫情不僅影響個人健康,也衝擊全球產業經濟,國內的汽車運輸業更是首當其衝。

疫情發生初期,為減輕業者營運負擔,政府 規劃一連串紓困措施,包含補貼汽車燃料使用費 及牌照税50%、對於車輛貸款展延所衍生的利息 及計程車油資亦給予補貼,再加上補貼業者因配 合防疫措施而衍生防疫物資相關成本,減少業者 既有税費及營運支出;另考量疫情造成汽車運輸 業從業人員的營運空檔,也規劃相關從業人員參 與短期培訓課程充實自我知能,以因應後疫情時 代的商機。

而隨著疫情影響擴大,導致各運輸產業營運 狀況持續下探,為穩定駕駛人任職及汽車運輸業 者經營,以維持相關產業發展,公路總局提供駕 駛人薪資補貼及國道客運營運費用補貼,以最直 接、最有感的紓困措施協助業者度過難關。

因應疫情期間汽車運輸業營運所受之衝擊, 公路總局共計投入80.68億元預算辦理各項紓困 及防疫補貼措施。而在國內疫情逐步趨緩下,隨 著民眾逐步恢復旅遊及各項活動,汽車運輸業各 業營運情形亦逐漸復甦,公路總局後續將持續關 注最新疫情發展,與汽車運輸業一起走過疫情及 復甦的路。

#### 公路總局辦理紓困措施成效 Results of DGH Relief Measures

紓困措施 Relief measures	受益數(業者數/人數/車輛數) Number of beneficiaries (number of operators/ number of people/number of vehicles)	補助金額 Amount of subsidy
補貼汽燃費 Subsidy for fuel fee	_	19億1,377萬元 NT\$1,913.77 million
補貼牌照税 Subsidy for vehicle license tax		5億1,968萬元 NT\$519.68 million
融資展延利息補貼 Subsidy for deferred financing interest	414家、1,133輛 414 operators, 1,133 vehicles	155萬元 NT\$1.55 million
轉型培訓補助 Subsidy for training	3萬2,548人次 3,2548 people	4億7,754萬元 NT\$477.54 million
計程車油料補貼 Subsidy for taxi fuel	9萬4,728輛 94,728 vehicles	10億887萬元 NT\$10.0887 billion
防疫物資補貼 Subsidy for pandemic prevention materials		2億3,256萬元 NT\$232.56 million
國道客運營運費用補貼 Subsidy for national highway bus operations	3,076輛 3,076 vehicles	2億2,524萬元 NT\$225.24 million
駕駛人薪資補貼 Subsidy for driver salary	10萬7,509人 107,509 people	32億2,402萬元 NT\$3,224.02 million

#### **Active Pandemic Prevention Measures**

The COVID-19 pandemic struck Taiwan at in the beginning of the year, threatening the citizens' health. The DGH immediately came up with a number of epidemic prevention measures, including providing sufficient masks for commercial automobile drivers, asking bus operators to implement epidemic prevention measures for the vehicles and stations, also requiring passengers to wear a mask while taking the bus. Motor vehicle offices also inspected the implementation at transfer stations during holidays in order to provide with a safe environment. Moreover, the DGH assisted CECC with centralized guarantine measures by commissioning tour buses to transport returning citizens to the specified quarantine facility. Many trips were completed to safeguard citizens' health.

#### Government Policies for Relief Measures and Post-pandemic Era

The pandemic not only had impacts on personal health, but also global economy.

Commercial automobile transport operators

had the hardest hit. Relief measures were formulated at the onset of the pandemic to relieve the operators' burdens, such as subsidies for 50% of vehicle fuel fee, 50% of the vehicle license tax, interest for car loans, taxi fuel, costs for epidemic prevention materials were offered to reduce tax and operating cost. Moreover, short-term training was offered to drivers and employees in the industry to enhance their capabilities, making them able to and find business opportunities in the post-pandemic era.

However, with the pandemic worsening, the industry experienced a very difficult period. To stabilize industry development, subsidies for driver salary and national highway bus operations were offered to help the industry through this difficult time.

In response to the impacts on the commercial automobile transportation industry during the pandemic, the DGH invested a total amount of NT\$8 billion in various epidemic prevention and relief measures. As the epidemic waned, people started traveling and getting back to normal lives, the operation of transportation industry also rebounded from the bottom. The DGH will continue to stay updated with the situation to give hands to the industry on the way of recovery.

### 話務服務具體成果

#### Call Center Achievement

為提供民眾即時諮詢服務,公路總局用路人服務中心,自104年起提供免付費專線0800231035,由24名話務人員提供民眾全年無休之諮詢服務,迄今已服務超過140萬人次;隨著民眾溝通習慣與溝通管道的改變,公路總局透過AI人工智慧的協作,於109年9月22日正式推出「智能小鹿」,提供民眾更多元且快速的服務。

109年總話務量為24萬2,500通,平均每 月2萬210通,統計民眾進線來電原因數為19萬 9,486件,由客服人員線上説明結案共16萬7,589 件,一線客服結案率達84%,顯見話務中心持續 更新業務問答,強化民眾對話務人員之信任。

用路人服務中心非常重視話務人員之服 務品質,藉由系統滿意度抽樣外撥,就話務人 員態度、答覆內容及專線設置之滿意度回饋, 統計109年話務人員服務態度之平均滿意度達94.5%,而回答內容平均滿意度達90%,另外109年服務指標(KPI)20秒接聽率平均每月達89.8%,應答率更每月高達98%。

此外,智能小鹿除了提供文字即問即答功能外,並將民眾常見問答,在官網介面上設計快速推薦選單,讓民眾在最短時間得到解答,智能小鹿於109年10月及11月總問答次數共4萬4,861次,平均每月2萬2,431次,推薦選單點擊次數共1萬8,200次,平均每月9,100次,顯示民眾對新服務管道的接受與支持。

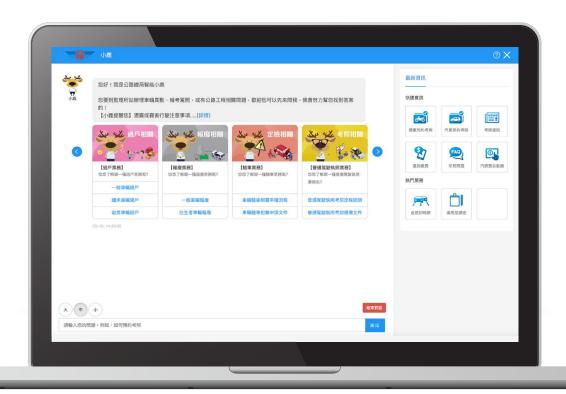
話務中心是公路總局與民眾間之重要溝通 橋樑,能快速有效解決民眾問題,也是輿情掌握 之重要管道,未來將持續提昇服務品質,並精進 智能小鹿各項功能。



話務中心24小時全年無休,服務不中斷。
The call center is opened for 24 hours a day with uninterrupted services.

109 年 9 月 22 日正式推出 「智能小鹿」,提供民眾更 多元且快速的服務。

On September 22, 2020, the "Smart Deer" was officially launched to provide better services to the public.



智能小鹿快速選單。 Smart Deer quick menu.

The DGH launched the toll-free hotline 0800231035 in 2015, with 24 representatives offering services all year round to provide timely assistance. 1.4 million people have used the services so far. With the means of communication changing, the DGH launched "Smart Deer" on September 22, 2020 with artificial intelligence to offer faster services.

In 2020, the center received 242,500 phone calls, which was 20,210 phone calls per month. People called for a total of 199,486 with different reasons, and customer service representatives were able to solve 167,589 of them, meaning 84% of cases are solved this way. The Center continues to update the Q&A to further build trust.

The Road User Service Center attaches great importance to the service quality of the representatives. The system conducted a survey to collect feedback on the customer representatives' attitudes, answers and hotlines. On average, their

attitude reached 94.5% of satisfaction, and the answers reached 90% of satisfaction. Moreover, the 20-second answering rate (KPI for 2020) averaged 89.8% per month, and the answer rate was as high as 98% per month.

Smart Deer provides a chatbot and adds a quick menu on the website to give people timely answers. Smart Deer answered 44,861 questions in October and November 2020, averaging 22,431 a month. The menu received 18,200 clicks, with the monthly average reaching 9,100 clicks, showing the support for the new services.

The Call Center is an important communication bridge between the DGH and public. It can quickly and effectively solve their problems and is also an important channel for gauging public opinion. In the future, efforts to raise service quality and improve the functions of Smart Deer will continue.

### 運安生力軍—話務中心完善通報系統

New Addition to Transportation Safety: Completing the Reporting System for the Call Center



公路總局許鉦漳局長與運安會楊宏智主任委員共同完成簽署。 Director-General Hus Cheng-chang and Dr. Yang Hong-chi, Chairperson of TTSB with the finalized MOU.

公路總局與國家運輸安全調查委員會 (以下簡稱運安會)於平等互惠及優勢互補原 則,在109年7月14日與該會簽訂合作協議書 (MOU),協議雙方對重大公路事故調查作業、 資訊分享及教育訓練等相關事宜之合作依據, 其中有關重大公路事故通報部分,公路總局於接 獲重大公路事故通報後,即依既定程序通報運安 會,如運安會由其他管道接獲重大公路事故通報 後,亦速通報公路總局,建立雙向通報機制。 公路總局話務中心24小時全年無休受理用路人反映工程、監理、運輸及路況,並能在第1時間回覆意見或傳遞訊息,考量事故發生時間不確定,為確保與運安會之事故通報順利,藉由話務中心的服務特性,擔負起運安工作的守門員,於接獲運安會事故通報後,立即由話務中心值機人員,以電話或LINE訊息通報,並通知事故地轄管所及公路總局相關業管組,成為運安生力軍,完善事故通報系統。

Based on the principle of equality and mutual benefits, the DGH and Taiwan Transportation Safety Board (TTSB) signed the MOU on July 14, 2020, creating the legal base for major highway accident investigation, information sharing and training. In terms of major highway accident investigation, once the DGH is notified, it will report to the TTSB following the existing procedures. If the TTSB is notified, the DGH will be notified with a two-way notification mechanism.

The DGH call center accepts road user reports on engineering, motor vehicles services, transportation and road conditions 24 hours a day, equipped with the ability to relay the feedback or message instantaneously. Considering the unpredictable nature of accidents, the call center is seen as the gatekeeper of transportation safety. After receiving accident reports from TTSB, the customer service representatives will report via phone or LINE messages, as well as notifying the competent authorities and DGH departments to complete the reporting system.

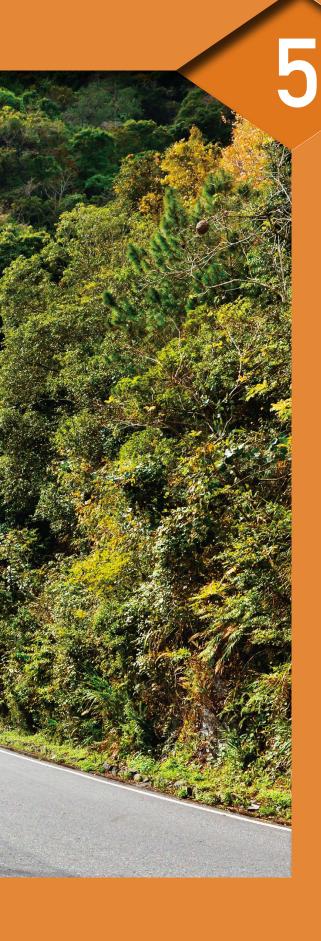


公路總局與國家運輸安全調查委員會簽署合作協議書。 The DGH and TTSB signing the MOU.

公路總局話務中心 24 小時全年 無休受理用路人反映工程、監理、 運輸及路況,並能在第 1 時間回 覆意見或傳遞訊息

The DGH call center accepts road user reports on engineering, motor vehicles services, transportation and road conditions 24 hours a day, equipped with the ability to relay the feedback or message instantaneously.





## 養護「百年關鍵

Key of Maintenance for Everlasting Future

你我的百年路,

風會搜括、兩會敲打、日頭會曬乾時光<sup>,</sup> 不讓百年被偷走的秘密<sup>,</sup> 藏在汗水的結晶裡。

Our way is sometimes hit by wind, rain and the sun. All the secrets that do not fade with time are hidden in our hardworking sweat.

#### Key of Maintenance for Everlasting Future

## 探古訪幽采玉路廊(台7線 5k~11k+700) 109 年養護成果

Maintenance Results of the Jade Collecting Corridor (the Section of 5k-11k+700 of Provincial Highway No.7) in 2020



台7線7.7k活化舊百吉隧道。 Restored Old Baiji Tunnel at 7.7k of Provincial Highway No.7.

提升交通安全同時亦建構出楓香大 道。更秉持以人為本核心價值,重 視在地民眾感受積極協調,並整合 鄉里意見回饋到設計,讓民眾由反 對轉化為認同。

#### 活化塵封隧道

移除百吉隧道洞口纜線及整併 凌亂牌面,種植十餘年的落雨松亦 營造出特色地景,讓曾經塵封的隧 道有了新生命,成為民眾休閒健行 攬勝的絕佳去處。

#### 公路環境歷程

台7線北橫公路5k~11.7k位於桃園大溪, 路廊自泰雅獵徑、輕便車道、碎石路到今日的風 貌,演進歷程已逾百年,是一條兼具人文歷史與 自然生態資源豐沛的采玉路廊。

#### 形塑小鎭風貌

公路總局第一區養護工程處復興工務段為 了形塑大溪地區的鄉鎮風貌,在98年辦理台7線 5k~6k路段拓寬時即考量到,除了可增進道路 通行便利,亦可同步提升區域景觀風貌,因此進 行了全路段電纜下地以重現天際線,調整人行道 高度開拓視野以呈現流動性道路視覺景觀之美, 並於人行道種植楓香行道樹形成綠籬護欄,在

#### 實踐減法美學

路段經營以十年磨一劍的精神,秉持減法 美學來實踐環境永續,採用近自然、低維管、綠 建材手法重塑水岸美景,並儘量將道路附屬設施 如紐澤西護欄減量或轉化為較具景觀優勢的鋼板 護欄,積極排除民眾占用之礙景設施,使道路雜 亂樣貌重現過往之自然美景,呈現出良工琢磨, 美玉出焉的維養成果,也因此榮獲交通部109年 金路獎優良景觀類第1名的殊榮。

此次獲獎路段除秉持對環境友善的態度, 朝向回歸自然的目標進行養護,更利用現地素 材、仿自然概念設計於無形,使公路逐日返回最 自然的樸實樣貌,期待國人同來鑑賞這條生態景 觀公路,用心體會臺灣之美。

#### **History and Environment**

The 5k-11.7k section of Provincial Highway No.7 is located in Daxi District, Taoyuan. The corridor went from an Atayal hunting trail, light railway, and gravel road to what it is today. With evolution lasting over a century, the Caiyu Corridor is rich in culture, history and natural resources.

#### Shaping the Look of a Small Town

The Fuxing Branch of the First Maintenance Office took urban landscaping into consideration when engaging in the road widening project at the section of 5k-6k of Provincial Highway 2019. Besides improving the highway, the cables were put underground to reveal a clear skyline. The height of the sidewalks was adjusted for a better view and aesthetics. Formosan Sweet Gum was also built along the sidewalks as a green fence, improving traffic safety and the view. With a human-oriented nature at heart, the DGH collected feedback from local residents to be incorporated in the design, changing their objection into approval.

## Giving the Unused Tunnel a New Life

The cables and messy signs at the entrance of the Baiji Tunnel were removed, allowing the decade-old Bald Cypress forest to be the local feature and giving the unused tunnel a new life. It is now a great spot for a walk and sightseeing.

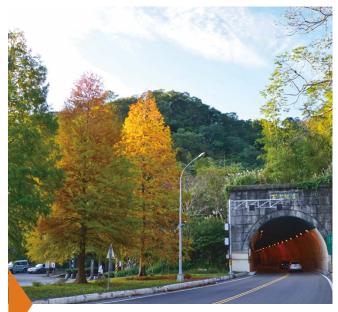
#### Less Is More

The road management sticks to the principle of patience and less is more to reshape the view with a natural, low-maintenance approach and green materials. Facilities such as Jersey barriers were also reduced or replaced with steel barrier with better appearance, excluding obstructive facilities and restoring the beautiful view of nature. The maintenance results won the First Prize in the Landscape Category of the 2020 Golden Way Award given by MOTC.

Besides adhering to an eco-friendly approach to restore nature, local materials and designs that simulate nature are also adopted to restore simplicity. As a highway that showcases the beauty of nature in Taiwan, it deserves to be admired.



台7線8.8k水岸美景。 View of the 8.8k of Provincial Highway No.7.



台7線8.15k落雨松地景。 Bald Cypress forest at 81.5k of Provincial Highway No.7.

## 山城探路雲水悠然 (台 14 線 40k~45k) 109 年養護成果

Maintenance Results of Mountain Road Landscape in Guoxing Township (the Section of 40k-45k of Provincial Highway No.14) in 2020



台14線43.2k大石公園。 The Dashi Park at 43.2k of Provincial Highway No.14.

#### 公路環境歷程

台14線40k~45k位於南投縣國姓鄉,自國 道6號通車後,車流繁忙不再,如今洗盡鉛華, 展現全新樣貌,猶如國姓鄉在921地震後再起, 發展咖啡產業,為地方帶來了龐大的經濟效益。 台14線不應只有蕭條的宿命,在公路總局與地 方攜手努力下,已找到全新的可能與轉機。

#### 營造景點故事

公路總局第二區養護工程處南投工務段藉 由參賽的機會,秉持研究的精神,透過文獻與實 地踏勘走訪地方,並在閱覽台14線的歷史過往 後,體現在地獨特的人文風情,營造專屬的公路 景觀。本路段亮點有:



台14線43.2k大石公園。 The Dashi Park at 43.2k of Provincial Highway No.14.

#### **History and Environment**

Located in Guoxing Township, Nantou County, the 40k-45k of Provincial Highway No.14 is now free to reveal its true beauty that heavy traffic has been redirected to Provincial Highway No.6. Guoxing Township has started developing a coffee industry since the 1999 Great Jiji Earthquake, bringing enormous economic benefits to the location. In a similar vein, Provincial Highway No.14 should not be deserted. With the joint effort from DGH and the local community, new possibilities and opportunities have presented themselves.

#### Scenic Highlights

The Nantou Branch of the Second Maintenance Office conducted research through literature and field surveys. After learning about the history of Provincial Highway, the branch decided to give this highway an exclusive view, with highlights including:

- 1. Caoyutan at 40k: an unforgettable story.
- 2. Deer Hill at 41.5k: traditional craftsmanship making a comeback to reproduce the original view.
- 3. Dashi Bridge at 43.2k: revitalization of highway facilities to reveal the meander.
- 4. Doushan Suspension Bridge at 44.5k: less is more and an experience of the 5 senses.
- 5. Beishan Tunnel at 45k: vision of the highway and promotion of local industries.

#### **Integrating Local Resources**

The resources of people, culture, geography, landscape, ecology and industry of Guoxing Township were inventoried to present the local characteristics:

 Showcasing Hakka cultural assets: Guoxing Township is the largest Hakka settlement in Nantou County. The landscape along the highway are linked to local industries, such as



台14線43.2k候車亭邊手繪解説牌。 Hand-painted signs by the transit shelter at 43.2k of Provincial Highway No.14.

- 一、40k草魚潭-不曾忘記的故事。
- 二、41.5k 鹿蹤小丘-傳統工藝重見與復刻原始風 貌。
- 三、43.2k大石橋-公路設施再生、曲流地形揭露。
- 四、44.5k斗山吊橋-減法美學、五感體驗。
- 五、45k北山隧道-公路願景、推廣地方產業。

#### 結合在地資源

盤點國姓鄉的人物、文化、地理、景觀、 生態、產業等資源,建立地方特色:

- 一、連結客庄文產:國姓鄉是南投縣最大的客家 聚落,沿線景觀連結在地傳產,如水鹿、咖啡、枇杷,還有慶典「3月鹿神祭、11月搶 成功」。
- 二、重現舊地記憶:從探尋舊地名出發,傳承地方記憶,重新詮釋草魚潭意象、大石股舊橋 秘境、鹿蹤小丘梅花砌石牆、斗山吊橋景觀 等。

- 三、聚集在地能量:推動社區認養綠地、與當地 國小師生、工藝達人共同創生。
- 四、融入地方藝術:沿線蘊含許多工藝坊、美術館,藝術氣息濃厚,公路總局與當地工藝家合作,運用在地石材與廢棄材料,營造具地方文化與藝術美感的特色景觀。

#### 製作行旅解說

沿線設有手繪解説牌12面,並製作「來寮國姓」行旅文宣、建置「DriveTaiwan-行旅台灣」網頁資料、「幸福公路APP」景點推播等,期結合文創旅行宣導,使旅客獲得更多用路資訊,開心漫遊台14線。

#### 打造通透視域

去除公路礙景設施,如:電桿人孔下地、管線整併、廣告物拆除,以還原天際線,使台14線的山川美景通透呈現,因而獲得109年金路獎優良景觀類第2名之榮耀。

- sambar deer, coffee, loquat, as well as the local festivals of the Deer Ceremony in March and Qiang Chenggong in November.
- 2. Conjuring the memories of the old places: Local memories are passed on from exploring old place names, including reinterpreting the image of Caoyutan, the hidden spot of the old Dashigu Bridge, the stone wall of Deer Hill and the view of Doushan Suspension Bridge.
- 3. Gathering Local Resources: Encouraging the community to adopt green spaces, engaging in placemaking with local elementary school teachers/students and craftsmen.
- 4. Incorporating local art: There are many craft workshops and art galleries along the highway with a strong artistic vibe. The DGH and local craftsmen work together to build a landscape with local and artistic elements.

#### **Signs Featuring Information**

There are 12 hand-painted signs along the highway, with a brochure about Lailiao Village, Guoxing Township, the DriveTaiwan Webpage and notifications from the Happiness Highway app. All the information gives people the opportunity to enjoy Provincial Highway No.14.

#### **Creating a Better View**

Obstructive facilities such as electric poles, manholes, pipeline and advertising campaigns were removed to restore the skyline and reveal the stunning mountains and rivers of the highway. The result won second place in the Landscape Category of the 2020 Golden Way Award.



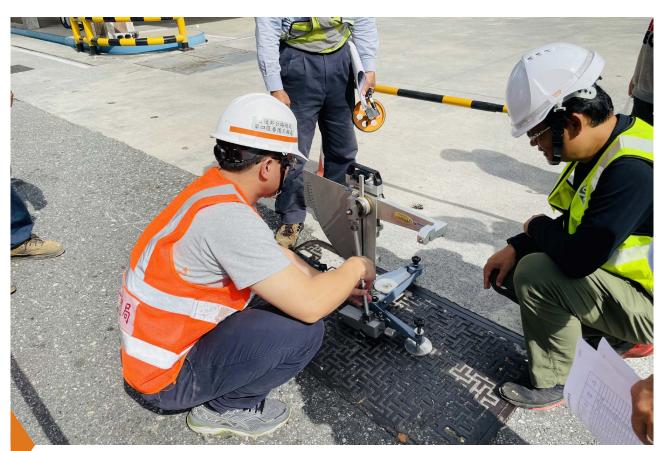
台14線40k草魚潭。 Caoyutan at 40k of Provincial Highway No.14.

## 109 年公路養護具體成果

#### The Highway Maintenance Results in 2020

公路總局於109年度投入約90億元,執行內含3,469座橋梁及263座隧道、總長達5,262公里的省道養護工作。包含路面品質改善、邊坡保護、災害復建、橋梁改建及耐震補強、公路修建拓寬等項目,以提供便利交通、確保用路人安全。

在攸關民眾安全舒適行駛的路面品質方面, 完成長185公里一般省道路面刨鋪改善;也透過 「快速公路路面平整度提升計畫」,經由檢測車 測量路面國際糙度指標(IRI)後,對平整度較差 25公里路段進行改善,使快速公路路面整體IRI已 經降至2.32,達整體舒適路面水準;並為提升省 道路面平坦度,除了採取「管線挖掘縮時減量」 策略來管控申請挖掘數量,年度省道挖掘件數較 108年下降10%,且挖掘面積減少5%,管路孔蓋 下地數量也達到3,262個。



台8線185k+200進行抗滑試驗,手孔摩擦抗滑足夠確保通行安全。
The anti-skid test is carried out on the section of 185k+200 of Provincial Highway No.8, making sure the friction is sufficient to ensure safe passage.

The DGH invested NT\$9 billion in 2020 for maintenance, including 3,469 bridges and 263 tunnels with the total length of 5,262 kilometers. The works included road quality improvement, slope protection, disaster restoration, bridge reconstruction, seismic reinforcement, road construction and widening to improve transportation and ensure the safety of road users.

In terms of road surface quality that is critical to safety and comfort, 185 kilometers of Provincial Highway have been improved. The "Expressway Surface Improvement Project" was also put in place. After the International Roughness Index (IRI) was measured by the inspection vehicle, the 25 rougher kilometers were worked on to bring the IRI to 2.32, which is considered comfortable. To further enhance surface flatness, the allowed pipeline work time has been reduced. In 2020, pipeline work on Provincial Highways has been reduced by 10% compared to 2019, the surface was reduced by 5%, and the number of pipe hole covers that were put underground reached 3,262.



台14線42k+050地錨揚起試驗,檢查地錨拉力足夠。 Earth anchor lift-off testing for the section of 42k+050 of Provincial Highway No.14 to ensure sufficient tension.

The stability of the highway slope is critical for ensuring traffic flow. About 30,000 pre-stressed ground anchors on the slope of provincial highways have also been fully tested. The slope safety assessment model has also been upgraded from a "qualitative and hierarchical management system" to a "quantitative classification." The highway slope



台18線41k+100左側邊坡坍滑修復施工中。 Repair in the progress of the left side slope on the section of 41k+100 of Provincial Highway No.18.



台18線41k+100左側坍滑修復施工後。 Repair completed for the left side slope on the section of 41k+100 of Provincial Highway No.18.



台21線115k+500B級邊坡第4季UAV巡檢。
The 4<sup>th</sup> quarter UAV inspection of the section of 115k+500B slope of Provincial Highway No.21.

公路邊坡的穩定關係著能否確保道路通暢, 省道公路邊坡約3萬支預力地錨也已全數檢測完 成;邊坡安全評估模式也由「定性分級管理制 度」提升至「定量分級管理及科技巡檢制度」, 公路邊坡經進行危害度評估(RHRS),已先篩 選出風險較高的「優先關注邊坡」,逐年編列 預算改善,並藉由科技巡檢建立3D數值模型比 對,可詳細探討邊坡穩定及變異情形。

地球極端氣候變異,公路易受颱風豪雨及地震等天然災害侵襲,重大天然災害路段尤須待大地生息、持續進行復建。莫拉克風災嚴重受創之台20線南橫公路梅山口至天池路段,已經開放3.5噸以下貨車、9人座以下客車、大型重機及機車通行,帶動觀光產業及經濟發展。

依據規範定期辦理橋梁檢測,儘早發現缺陷及時進行補強,確保橋梁安全。年度完成2,832座橋梁檢測,U=4急需改善橋梁皆已全數維修完成,並投入22億元辦理「橋隧安全可靠度提升與延壽計畫」,執行「台15線關渡橋耐震改善及維修補強」等23件工程;南方澳大橋事件後奉行政院指示擬具經費14.3億元「協助縣市政府加速整建受損橋梁計畫」,協助地方政府辦理41座橋梁檢測及60座橋梁整建。

以往公路設計都偏向「以車為主」,而「台 27線中興至大津段拓寬改善工程」採「以路就 樹」的規劃設計,符合工程與環境融合之理念, 並已於10月8日開工,竣工後將建構台27線為 「綠色廊帶紫斑蝶景觀大道」。 has undergone a RHRS assessment to prioritize the slope with higher risks. The slope will be improved with annual budgets and compared with a 3D numerical model to examine the stability and difference.

With extreme climate, highways have become vulnerable to natural disasters such as typhoons, heavy rains and earthquakes. Road sections with major damage from natural disasters must wait for the right timing to be restored. Typhoon Morakot severely damaged the section from Meishankou to Tianchi on the Provincial Highway No.20. It is now opened to trucks up to 3.5 tons, passenger cars with fewer than 9 seats, heavy motorcycles, and scooters to boost development for tourism and the economy.

Regular bridge inspections are conducted in accordance with the regulations in order to find defects as early as possible, and reinforce them in a timely manner to ensure safety. In 2020, 2,832 bridge inspections were completed. U=4 bridges in

urgent need of improvement have all been repaired, and NT\$2.2 billion has been invested in the "Bridge and Tunnel Safety and Reliability Improvement and Life Extension Project." 23 projects including the Guandu Bridge Seismic Improvement and Repair on Provincial Highway No.15 have been completed. After the Nanfang'ao Bridge incident, the Executive Yuan instructed the DGH to allocate NT\$1.43 billion to assist the county and city governments in accelerating the reconstruction of damaged bridges. So far, 41 bridges have been inspected and 60 have been reconstructed.

In the past, highway tended to be "caroriented," but "Zhongxing-Dajin Section on Provincial Highway No.27 Widening and Improvement Project" adopted a "tree-oriented" design, conforming to the concept of engineering and environment integration. The work commenced on October 8, 2020, and the Provincial Highway No.27 will be builted as the "Green Corridor for Euploea."



台61線後龍觀海大橋以橋檢車辦理橋檢作業。

The Houlongguanhai Bridge on Provincial Highway No.61 conducts bridge inspections.

## 109年國家關鍵基礎設施防護訪評演習成果

#### The Critical Infrastructure Protection Exercise in 2020



國家關鍵基礎設施防護演習,圓滿完成全體合照。 Group photo after Critical Infrastructure Protection Exercise successful completion.

「關鍵基礎設施(Critical Infrastructure, CI)」為國家電信、電力、醫療、交通……等,支持政府及社會功能持續營運之重要基礎設施,而「關鍵基礎設施保護(Critical Infrastructure Protection, CIP)」,則代表保護關鍵基礎設施(CI)之政策與作為。

行政院國土安全辦公室自104年開始,每年 選擇重要國家關鍵基礎設施,實施「CIP訪評演 習」,109年擇定公路總局之轄管設施辦理訪評 演習。

本次演習為全局首次辦理,由局長率領局、處、段同仁積極展開演習各項籌備工作,自年初開始歷經11個多月、30餘場會議,準備過程極具挑戰及複雜性。首先邀請局內具長隧道管理經驗的工程處,進行2次核心業務及風險評估會議,從中找出發生可能性低、衝擊性高之威脅,以模擬資通訊安全攻擊、人為攻擊及天然災害兵棋推演劇本。為演習情境符合國土辦演習目的,9次

邀請專家學者指導,從嚴、從難模擬11項複合 狀況,設計動態展演橋段輔助。另為演習流暢由 説明官走動式解説境況模擬、行動方案及驗證目 標,並與21個外部支援單位展開多達10次跨機關 預演。演習講求説到做到,所有的推演要有sop 依據,書面審核也是演習重點,公路總局以預 防、應變及復原三大系統準備173份文件受檢, 並製作成電子書併陳,訓練40名專人陪審。

本次演習應變組織,參考事故現場應變體 系ICS (Incident Command System)修訂八卦 山隧道ICS應變組織,包括四大分組有「應變 執行組、計畫參謀組、資源調度組及財務行政 組」,並於兵推過程中加以驗證,以期未來與國際接軌。

正式演習於12月8日舉行,在公路總局許局 長率二位副局長及局、處、段同仁及縱橫向聯防 團隊共同合作下圓滿完成,並獲國土辦及訪評委 員高度肯定,榮獲佳績!



國家關鍵基礎設施防護演習-兵推演習。 National critical infrastructure protection exercise: simulation.

"Critical Infrastructure (CI)" supports the operations of government and the society, such as telecommunications, power, medical, care transportation, etc., and "Critical Infrastructure Protection (CIP)" entails policies and actions to protect critical infrastructure.

Since 2015, the Office of Homeland Security, Executive Yuan has selected important national critical infrastructure for CIP exercise, in 2020, the facilities affiliated with the DGH were selected.

This exercise was the first for DGH, with the Director-General leading all employees in the preparations. Since the beginning of the year, over 30 meetings were held over the course of 11 months, showing the complexity and challenge of the process. Two core task-risk-assessment meetings were convened to find threats with a low probability and high impact, formulating exercises for information and communication security attacks, man-made attacks, and natural disasters. To ensure the exercise is in line with the purpose of the Office of Homeland Security, scholars and experts were invited 9 times to help assimilate 11 complex situations, designing demonstrations that would help. For the exercise to go smoothly,

dedicated personnel was asked to explain the scenario, action plan and target for verification. 10 inter-ministerial rehearsals were arranged with 21 external support units. All exercises were about taking action in accordance with the standard operating procedures. Document review also played an important part. The DGH prepared 173 documents to prevent, respond and recover. A digital version was also offered with 40 dedicated panel members.

The response organization of this exercise referred to the ICS (Incident Command System) of the accident site to revise the ICS response organization of the Baguashan Tunnel, including four major sub-groups focusing on contingency, planning, resource allocation and financial administration. The groups were verified during the drill with the aim of staying updated with international standards.

The formal exercise was held on December 8, 2020, and completed successfully under the cooperation of two deputy directors led by Director Hsu, all employees and the joint defense team. The Office of Homeland Security highly praised the excellent result.

## 超前部署一疫情時代的數位轉型

#### Advanced Preparations: Digital Transformation during the Pandemic



黃副局長視導異地辦公線上公文簽核演練。
Deputy Director Huang inspected the off-site online official document signing procedure.

自108年底以來,新冠病毒(COVID-19) 肆虐全球,影響人員移動交流,造成各公私組織 偌大的營運壓力。為確保公路總局業務不至因同 仁感染隔離或封閉局本部樓層而停止運作,特規 劃公路人員訓練所為局本部異地備援辦公室。萬 一疫情擴大,啟動應變機制,公路總局同仁即可 依行政層級與業務別分散至異地辦公室辦公或進 行居家辦公。為此,資訊室與相關組室辦理以下 措施:

- 一、導入視訊會議系統:資訊室與秘書室、公防中心多方評估,於109年4月與秘書室共同導入WebEx視訊會議系統,並於109年4月28日完成教育訓練。使公路總局得藉由視訊會議系統召開各項業務會議與同仁溝通討論,避免群聚感染之風險。
- 二、建立異地辦公環境:公訓所負責異地辦公環境的網路與電話線路之增設,資訊室協助進行擴充網路線路與頻寬、設置電腦設備、增設無線網路及整合同仁差勤系統資料同步等工作。109年4月15日,黃副局長率局本部

各組室同仁至公訓所之異地辦公室進行線上公文簽核與網路負載量擬真演練,4月22日於公訓所完成無線上網服務,又異地辦公同仁之刷卡資料,經資訊室測試均可於公路總局差勤系統正常顯示。在資訊室、公訓所與秘書室同仁協助下,圓滿完成各項演練工作,並可視疫情隨時啟動公路總局異地辦公機制。

三、試行遠距辦公方案:資訊室於員工入口網設置防疫專區,提供業務持訊營運之應變措施、操作手冊等,並與秘書室於109年3月下旬及4月初共同完成公路總局各組室之公文系統居家辦公演練。

天有不測風雲,組織如何在多變的災難中 持續經營,未雨綢繆之風險管理是有必要的;公 路總局已建立持續營運之管理文化,並藉由「超 前部署、料敵從嚴」的工作態度來面對危機,處 理危機,以確保公路總局業務永續經營與持續運 作。 Since the end of 2019, the COVID-19 pandemic has wreaked havoc around world, restricting the movement of people and causing tremendous pressure on public and private organizations. In order to ensure that the DGH can continue to operate even in case of infection, quarantine or shutdown, the DGH Training Institute was set up as the off-site backup office. In case the pandemic worsened and contingency was needed, DGH employees could work in the off-site office or at home depending on their level and responsibilities. To this end, the Information Management Office has formulated the following measures:

- 1. Introducing the video conference system: the Information Management Office, Secretariat and Highway Disaster Prevention Center introduced the WebEx video conference system together with the Secretariat in April 2020. The training was completed on April 28, 2020. The DGH could prevent cluster infections by holding meetings online.
- 2. Setting up a remote office: The DGH Training Institute was responsible for adding the Internet and phone connections to the off-site office. The Information Management Office assisted in expanding the network, bandwidth, computer equipment, wireless network and personnel

system synchronization. On April 15, 2020, Deputy Director Huang visited the off-site office with employees form all divisions to practice signing documents online and checking network capacity. On April 22, wireless network became available at the Training Institute. The Information Management Office conducted a test which showed the personnel system was synchronized and displayed with no issue. The exercise was successfully completed with the help of the Information Management Office, Training Institute and Secretariat. If needed, the off-site office could function.

3. Home office pilot: The Information Management Office set up an epidemic prevention section on the employee portal to provide response measures and manuals. Document systems in a home office setting were tested at the end of march and beginning of April with the help of the Secretariat.

Life has many unpredictable circumstances. Risk management is critical for an organization to continue its operations in a changing context. The DGH has formulated the management culture that allows continuous operations, and advanced preparations have been made in the face of crisis to ensure uninterrupted services.



#### Key of Maintenance for Everlasting Future

### 資訊中心(thb-IDC)維運成果

The Maintenance results of thb-IDC

公路總局前依據國家發展委員會與交通部建議,於100年即開始以GSN-VPN線路串連公路總局暨所屬網路為單一內部行政網路(簡稱大內網),目前所有對外連線均統一經由局本部對外存取政府服務網(GSN)與網際網路,以加強網路管理與資訊安全控管機制。另為配合政府資訊系統向上集中政策與分散風險,公路總局將總局暨所屬共18個機關之資訊服務集中至局本部資訊中心(簡稱thb-IDC)與南部異地備援中心(高雄市區監理所,簡稱thb-kh-IDC)。雖已完成資料中心整併,系統運作日趨穩定,惟歷經多年且隨著資通訊技術與網路攻擊行為演進,存在以下風險:

- 一、保護公路總局對外服務網站阻擋駭客入侵的網頁應用程式防火牆(WAF)及監控網路對包檢測防範潛在駭客入侵行為的入侵預防系統(IPS),均為單臺服務模式,存在單點故障之風險,萬一設備故障易形成防護漏洞造成資安風險。
- 二、連結網際網路之DMZ區邊界網路防火牆, 原廠已宣告停止銷售且逾使用年限,其中1 臺備援機並無資安模組,影響防火牆軟體修 補與正常資安防護運作。
- 三、微軟於109年1月14日停止Windows Server 2008 R2作業系統及郵件系統軟體Exchange Server 2010之技術支援,並將於110年4月



保護總局數位資產。 Protection of digital assets.

13日停止Lync Server 2010即時通訊軟體之技術支援,之後不再提供安全性更新,影響公路總局電子郵件系統及Lync即時通訊系統安全性,有遭駭客攻擊資安威脅之虞。

資訊室於109年更新WAF設備為IMPERVA X2020並將原網頁應用程式防火牆改造為IPS設備,建構高可靠性入侵預防系統備援架構、提升DMZ區邊界網路防火牆為Palo Alto Network 5220雙備援架構、建置移轉第二代郵件系統包括全局7,000多個信箱以及升級新版Skype for Business Server軟體。透過資通訊設備系統升級建設,降低公路總局因微軟作業系統等設備停止產品技術支援所遭遇之資安風險,保護公路總局的數位資產,以強化公路工程、監理、運輸管理等業務之作業效能。



In line with the recommendations of the National Development Council and the MOTC, the DGH began connecting all affiliated agencies via GSN-VPN into a single internal administrative network (intranet) in 2001. At present, all external connections go through the Government Service Network (GSN) and the Internet via the headquarters to strengthen network management and information security control. In addition, in order to centralize control and diversify risks, the DGH has moved all information services for all 18 affiliated agencies to the Information Management Center at the headquarters (thb-IDC) and the offsite backup center in the south (the Kaohsiung Motor Vehicles Office, thb-kh-IDC). Although the integration of data centers has been completed with stable system operations, over the years the following risks still exist with the evolution of information communication technology and cyber attacks:

1. To protect the external website, a web application firewall (WAF) that prevents hackers and an intrusion prevention system (IPS) that monitors network packets to detect and prevent potential hacker intrusions exist. Both are single service models with a single point with the risk of failure. In case of equipment failure, a loophole can easily appear to cause information security risks.

- 2. The DMZ border network firewall connected to the Internet has been made obsolete by the manufacturer and no longer circulates on the market. One backup has no information security module, which affects the firewall software patching and normal security protection operations.
- 3. Microsoft stopped technical support for Windows Server 2008 R2 and Exchange Server 2010 on January 14, 2020. On April 13, 2021, support for Lync Server 2010 will also be halted. There will be no further security updates, which causes concerns for the emails and Lync instant messaging in terms of threats from hackers.

The Information Management Office updated the WAF equipment to IMPERVA X2020 in 2020 and transformed the original web application firewall into IPS, building a highly reliable intrusion prevention system backup architecture. The DMZ border network firewall was upgraded to the Palo Alto Network 5220 dual backup architecture, with the second-generation mail system migrated, including more than 7,000 mailboxes and the version of Skype for Business Server. The upgrades lower the risk the system is exposed to due to Microsoft's decision to stop technical support, protect the DGH's digital assets in order to strengthen the operational efficiency of highway engineering, supervision, transportation management and other tasks.

## 109 年專書閱讀推廣競賽活動獲交通部特優獎

The 2020 Reading Competition Awarded the Excellence Award by MOTC

公路總局今年再度榮獲交通部專書閱讀推 廣活動競賽團體獎特優獎(第1名)。公路總局 相當重視同仁終身學習品質的落實與提升,並引 導同仁培養良好的讀書習慣,建立優良的讀書風 潮,已連續4年獲得交通部所屬機關專書閱讀推 廣活動競賽第1名殊榮,這是對於公路總局多年 來推動閱讀風氣及同仁積極自主學習,給予最高 的肯定與讚賞。

#### 訂定年度推廣活動計畫

為養成同仁良好的閱讀習慣,激勵同仁品 德修養與工作潛能,公路總局訂定「交通部公路 總局及所屬機關專書閱讀推廣活動競賽實施計 畫」,積極提升公路總局各單位自主學習動力, 並鼓勵所屬各機關辦理專書閱讀推廣活動及踴躍 參與專書閱讀心得寫作競賽。

#### 辦理專書閱讀心得寫作競賽活動(個 人獎)

公路總局對專書閱讀活動相當注重,多年來積極舉辦專書閱讀心得寫作競賽,期許同仁在業務繁忙之際,也能抽空看書,養成良好的閱讀習慣。今年專書閱讀活動參加評選作品篇數高達332篇,代表公路總局閱讀風氣良好。

參賽作品由公路總局科長以上人員組成評審小組辦理審閱作業,並遴薦優秀作品參獎,因此獲獎同仁均經嚴格評選所脫穎而出。今年公路總局擇優評選前2名作品薦送交通部參賽,薦送作品均能掌握專書之精髓,亦具創造性與啟發性,公路總局所推薦之3篇作品分別獲交通部評選甲等獎2篇及乙等獎1篇。

#### 辦理專書閱讀推廣活動 (團體獎)

公路總局所屬各機關積極營造並推動機關閱讀風氣,透過導讀會、讀書會之運作,同仁互為分享心得,並與工作業務結合,以提升行政效率及服務品質。公路總局每年均就所屬各機關辦理各項專書閱讀推廣活動成果進行評選,本年度評審結果:第1名臺中所、第2名新竹所及第3名三工處,於公路總局109年9月22日擴大局務會議由局長頒獎。藉由辦理專書閱讀推廣競賽活動,公路總局型塑終身學習之優良組織文化。

#### 成立閱讀網站專區

公路總局及所屬各機關於員工入口網設置 閱讀網站專區,提供同仁進行專書閱讀心得交 流,及將相關資料上傳分享,藉此提昇同仁自主 學習動力,促進創造思考能力,透過持續學習與 創新,提昇為民服務品質。



交通部109年度專書閱讀推廣活動競賽頒獎典禮(團 體獎)。

Award Ceremony for the 2020 Reading Competition (Group Award).



交通部109年度專書閱讀推廣活動競賽頒獎典禮(個人獎)。 Award Ceremony for the 2020 Reading Competition (individual award).

This year, the DGH won the Excellence Award (No.1) for the Group Award of the MOTC Reading Competition. The DGH attaches great importance to lifelong learning for all employees. To this end, the employees are encouraged to read. For 4 years in a row, the DGH has been awarded number 1 for the reading competition. It is the highest honor that confirms the DGH's effort in promoting reading.

#### **Annual Promotion Plan**

To help employees forming good reading habits in order to boost moral values and work potential, the DGH formulated the MOTC Reading Competition Promotion Plan to actively encourage learning, while encouraging all agencies to host their own reading competitions and book review contest.

## Book Review Contest (Individual Award)

The DGH pays great attention to reading activities. Over the years, it has organized book review competitions. It is hoped that the employees will find time to read and develop good reading habits even with their busy lifestyles. This year's book review contest received 332 submissions.

Submitted works were reviewed by a team of employees above the rank section chief, selecting

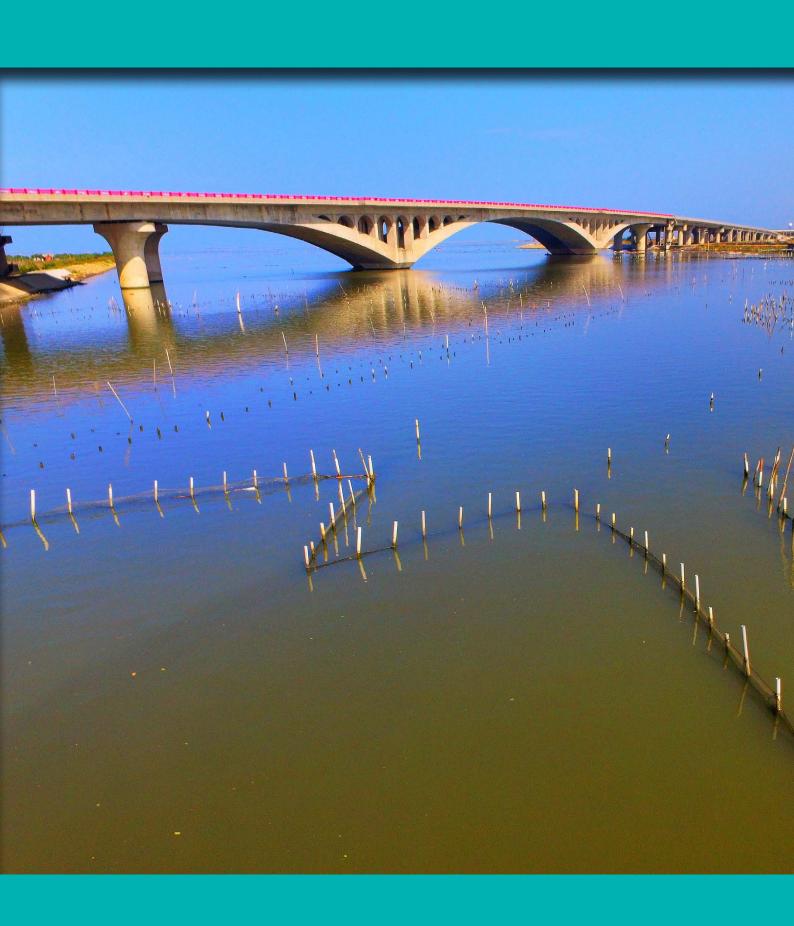
outstanding works to participate in the competition. Therefore, 2 works with the highest score were submitted to MOTC. Both reviews have grasped the essence of the books without compromising on creativity and inspiration. The 3 recommended reviews won 2 first prizes and 1 second prize.

#### Reading Promotion (Group Award)

The affiliated agencies have actively promoted reading through book presentations and book clubs. Employees share their experience and integrate it with their jobs to enhance efficiency and service quality. The DGH ranks all agencies on their reading promotion activities the first place, Hsinchu second place, and the Third Maintenance Office the third place. The awards were given on September 22, 2020 during a meeting. The DGH aims at shaping the organizational culture of lifelong learning through reading promotion.

#### Reading Section on Website

The DGH and its affiliated agencies have set up a special reading section for the employee portal to provide the employees the opportunity to share their experience as well as relevant information. This enhances their motivation and creativity in order to improve service quality through continuous learning.





# □ **首** │繼續前行

**Looking Back and Moving Forward** 

回望來時路,

一地燦爛,些許遺憾,

好好收進心的行囊,

抹去汗水,我們繼續前進。

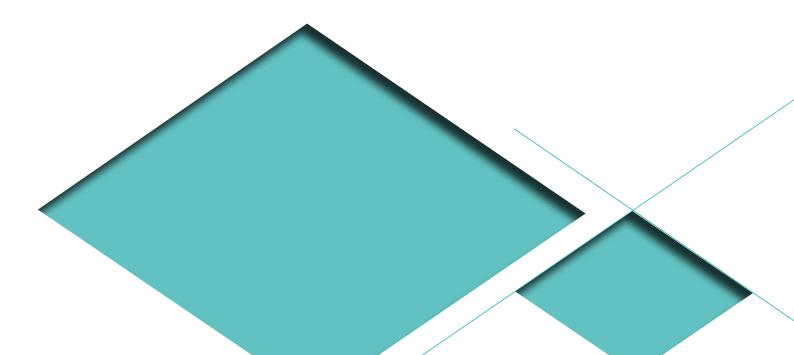
Looking back on the way we came, the mostly great memories are tinged with a little regret.

Let's store them in our hearts, wipe off the sweat and move forward.



### 組織系統 ◆ Organizational Structure

- ◆ 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49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 offces (36 branches and 49 stations)
  - 3 engineering offces (18 branches)
  - 7 motor vehicles offces (26 stations, 4 substations, and 7 investigation committees)
  - Training Institute (2 institutes)
  - Materials Testing Laboratory



	副局長 Deputy Director General	總工程司 Chief Engineer	Engineering Division  ◆ 養路組     Maintenance Division  ◆ 交通管理組     Traffic Management Division  ◆ 監理組     Motor Vehicles Division  ◆ 運輸組     Transportation Division
局長 Director General	副局長 Deputy Director General	主任秘書 Chief Secretary	◆ 資訊室 Information Management Office  ◆ 法制室 Legal Affairs Office  ◆ 秘書室 Secretariat  ◆ 主計室 Accounting and Statistics Office  ◆ 人事室 Personnel Office  ◆ 政風室 Civil Service Ethics Office  ◆ 車輛行車事故鑑定覆議會
			<ul> <li>▼ 車輛行車事 的</li></ul>

◆ 用路人服務中心

**Road User Service Center** 

**Vehicle Dynamic Information** 

◆ 車輛動態資訊管理中心

**Management Center** 

◆ 規劃組

◆ 工務組

**Planning Division** 

- ▶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
- ► 材料試驗所 Materials Testing Laboratory
- ▶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	3,053,359	2014-2024	政院管制 Executive Yuan
台9線南迴公路拓寬改善後續計畫 Follow Up to the South Link Highway of Provincial Highway No.9 Widening Project	2,549,666	2011-109	部會管制 Ministry
台9線蘇花公路山區路段改善計畫 The Suhua Highway of Provincial Highway No.9 Mountainous Section Improvement Project	4,010,058	2010-2020	部會管制 Ministry
提升道路品質建設計畫 Road Quality Improvement Construction Project	4,334,150	2017-2025	部會管制 Ministry
改善停車問題計畫 Parking Improvement Project	2,898,006	2017-2024	部會管制 Ministry
公路公共運輸多元推升計畫 Highway Public Transport Multiple Enhancement Project	4,763,996	2017-2020	部會管制 Ministry
生活圈道路交通系統建設計畫(公路系統)8年(104~111)計畫 Region-Based Road System Construction Project (Highway System) 8-year (2015-2022) plan	3,958,810	2015-2022	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	641,038	2017-2022	部會管制 Ministry
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 Affiliates	58,032	2020-2020	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	298,277	2020-2023	部會管制 Ministry
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	607,807	2017-2024	自行管制 Autonomous Management
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 The East-West Expressway No.76 (former Hanbao-Caotun Expressway) Section by Provincial Highway No.19 Construction Project	294,000	2018-2025	自行管制 Autonomous Management
省道配合區域排水整治及環境營造計畫需辦理橋梁工程 The Construction of Provincial Highway Bridges Needed for Regional Drainage & Regulation and Environment Construction Plan for Major Rivers	200,743	2015-2020	自行管制 Autonomous Management
西濱快速公路後續建設計畫 Follow Up to the West Coast Expressway Continuous Construction Project	475,919	2009-2020	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
省道改善計畫(108~113年) The Highway Improvement Project (2019-2024)	5,912,067	2019-2024	自行管制 Autonomous Management
公路養護計畫 The Highway Maintenance Project	9,852,482	2020-2020	自行管制 Autonomous Management
高雄市區監理所苓雅監理站遷建計畫 Linya Branch, Kaohsiung City Motor Vehicles Office Relocation Project	6,491	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	35,372	2019-2023	自行管制 Autonomous Management

# 參賽成果 ◆ Competition Results

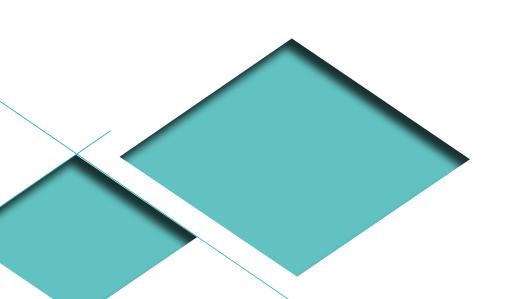
	考評(核)或競賽名稱 Evaluation or the name of the Competition	得獎單位 Awarded Unit	成績 Result
1	交通部所屬各一級行政機關109年績效考評 The 2020 performance evaluation of the chief administration departments of the Ministry of Transportation and Communications	公路總局 Directorate General of Highways	第1名 First Place
2	109年度交通部金路獎-優良景觀類-工程處 The 2020 MOTC Golden Way Award - outstanding landscape category – Maintenance Office	第一區養護工程處 First Maintenance Office	第1名 First Place
3	109年度交通部金路獎-優良景觀類-工務段 The 2020 MOTC Golden Way Award - outstanding landscape category – Maintenance Office Branch	第一區養護工程處-復 興工務段 Fuxing Branch, First Maintenance Office	第1名 First Place
4	109年勞動部推動職業安全衛生優良工程金安獎-主辦機關(台 15線關渡橋耐震改良及維修補強工程) The 2020 Ministry of Labor promoted labor safety and health outstanding public construction - competent agency (the Guandu Bridge Seismic Improvement and Repair on Provincial Highway No.15)	:	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
5	109年勞動部推動職業安全衛生優良工程金安獎-監造單位(台 15線關渡橋耐震改良及維修補強工程) The 2020 Ministry of Labor promoted labor safety and health outstanding public construction - supervision agency (the Guandu Bridge Seismic Improvement and Repair on Provincial Highway No.15)	:	優等 Excellent
6	108年度交通部所屬鐵公路管理機關橋梁維護管理外部稽核 The External audit of bridge maintenance and management by MOTC - affiliated railway and highway management agencies in 2019	第二區養護工程處 Second Maintenance Office	第1名 First Place
7	108年度橋梁維護管理作業督導考核 The 2019 bridge maintenance and management assessment	第二區養護工程處 Second Maintenance Office	優等 Excellent
8	第53屆休士頓國際影展~護蟹任務微電影WorldFest-Houston International Film Festival(休士頓影視展) "Mission-Land Crab Redemption" winning awards at the 53 <sup>rd</sup> WorldFest - Houston International Film Festival	第三區養護工程處 Third Maintenance Office	評審團 特別獎 Special Jury Prize
9	2019年度全球電影競賽~台26線香蕉灣-砂島護蟹路廊微電影 The Accolade Global Film Competition in 2019: Banana Bay on Provincial Highway No.26 - the documentary about animal crossing for land crabs	第三區養護工程處 Third Maintenance Office	年度人道 主義榮譽獎 Annual Humanitarian Honorary Prize
10	109年度交通部金路獎-路況養護類-工程處 The 2020 MOTC Golden Way Award - road maintenance category - Maintenance Office	第四區養護工程處 Fourth Maintenance Office	第1名 First Place
11	109年度交通部金路獎-路況養護類-工務段 The 2020 MOTC Golden Way Award - road maintenance category - Maintenance Office Branch	第四區養護工程處-獨 立山工務段 Dulishan Branch, Fourth Maintenance Office	第1名 First Place
12	109年勞動部推動職業安全衛生優良工程金安獎台7丁線 14k+415新城橋改建工程 The 2020 Ministry of Labor promoted labor safety and health outstanding public construction: reconstruction of Xincheng Bridge at 14k+415 of Provincial Highway No.7 D	•	優等 Excellent
13	108年度橋梁維護管理作業督導考核 The 2019 bridge maintenance and management assessment	第四區養護工程處 Fourth Maintenance Office	第1名 First Place
14	109年交通部金路獎-用路人資訊類-工程處 The 2020 MOTC Golden Way Award - road users information category - Maintenance Office	第五區養護工程處 Fifth Maintenance Office	第1名 First Place

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
15	109年交通部金路獎-用路人資訊類-工務段 The 2020 MOTC Golden Way Award - road users information category - Maintenance Office Branch	第五區養護工程處-新 營工務段 Sinying Branch, Fifth Maintenance Office	第1名 First Place
16	108年經濟部水利署表揚節約用水績優單位暨節水達人選拔活動(全國性考評競賽) The 2019 Water Resources Agency of the Ministry of Economic Affairs commended units with excellent water-saving results (national evaluation)	第五區養護工程處 Fifth Maintenance Office	特優 Superior
17	交通部109年3月23日金質獎初評「台17線本淵橋改建工程」 The First assessment of the MOTC Golden Quality Award on March 23, 2020 of Benyuan Bridge Reconstruction on Provincial Highway No.17	西濱南區工程處 West Coast Expressway Southern Region Temporary Engineering Office	優等 Excellent
18	交通部109年度金路獎傑出工程類(台9線南迴公路安朔至草埔段C1橋梁標(0k+000~6k+300)新建工程) The 2020 MOTC Golden Way Award -outstanding engineering category (new construction of C1 Tunnel tender(0k+000-6k+300) of the Anshuo-Caopu Section of the South - Link Highway of Provincial Highway No.9)	西濱南區工程處 West Coast Expressway Southern Region Temporary Engineering Office	第1名 First Place
19	台9線蘇花公路山區路段改善計畫(院管制) The Suhua Highway Mountain Section Improvement Project of Provincial Highway No.9 (ministry)	蘇花改工程處 Suhua Improvement Engineering Office	優等 Excellent
20	第12屆道安創新貢獻獎—公路監理組 The 12 <sup>th</sup> Road Safety Innovative Contribution Award - motor vehicle office team	臺北區監理所 Taipei Motor Vehicles Office	第1名 First Place
21	108年度院頒「道路交通秩序與交通安全改進方案」年終視導 一公路監理第1組 2019 Executive Yuan Annual Inspection "Improvement Program for Traffic Order and Safety" - motor vehicle office team 1	臺北區監理所 Taipei Motor Vehicles Office	第1名 First Place
22	108年度院頒「道路交通秩序與交通安全改進方案」年終視導一交通安全宣導第1組 2019 Executive Yuan Annual Inspection "Improvement Program for Traffic Order and Safety" - traffic safety advocacy team 1	臺北區監理所 Taipei Motor Vehicles Office	第1名 First Place
23	108年度院頒「道路交通秩序與交通安全改進方案」年終視導一砂石車安全管理優秀獎 2019 Executive Yuan Annual Inspection "Improvement Program for Traffic Order and Safety" - dump truck management	臺北區監理所 Taipei Motor Vehicles Office	第1名 First Place
24	108年度院頒「道路交通秩序與交通安全改進方案」年終視導 一公路監理第3組 2019 Executive Yuan Annual Inspection "Improvement Program for Traffic Order and Safety" - motor vehicle office team 3	臺北區監理所 Taipei Motor Vehicles Office	第1名 First Place

	考評(核)或競賽名稱 Evaluation or the name of the Competition	得獎單位 Awarded Unit	成績 Result
25	108年度院頒「道路交通秩序與交通安全改進方案」 年終視導一交通安全宣導第2組 2019 Executive Yuan Annual Inspection "Improvement Program for Traffic Order and Safety" - traffic safety advocacy team 2	臺中區監理所 Taichung Motor Vehicles Office	第1名 First Place
26	108年度院頒「道路交通秩序與交通安全改進方案」 年終視導一交通安全宣導第3組 2019 Executive Yuan Annual Inspection "Improvement Program for Traffic Order and Safety" - traffic safety advocacy team 3	臺中區監理所 Taichung Motor Vehicles Office	第1名 First Place
27	108年度院頒「道路交通秩序與交通安全改進方案」年終視導一交通安全宣導第1組 2019 Executive Yuan Annual Inspection "Improvement Program for Traffic Order and Safety" - traffic safety advocacy team 1	臺北市區監理 Taipei City Motor Vehicles Office	第1名 First Place
28	108年度院頒「道路交通秩序與交通安全改進方案」年終視導 一公路監理第1組 2019 Executive Yuan Annual Inspection "Improvement Program for Traffic Order and Safety" - motor vehicle office team 1	臺北市區監理 Taipei City Motor Vehicles Office	第1名 First Place
29	108年度院頒「道路交通秩序與交通安全改進方案」年終視導一砂石車安全管理組 2019 Executive Yuan Annual Inspection "Improvement Program for Traffic Order and Safety" - dump truck management	臺北市區監理 Taipei City Motor Vehicles Office	第1名 First Place
30	第12屆道安創新貢獻獎—交安宣導組:駐點醫院高齡換照—並監我們醫起走 The 12 <sup>th</sup> Road Safety Innovative Contribution Award—Traffic Safety Campaign: Driver's License Extension Services at Hospitals		第1名 First Place
31	108年交通部汽車貨運調查 The 2019 MOTC Annual Evaluation of Auto Cargo	高雄市區監理所 Kaohsiung City Motor Vehicles Office	第1名 First Place



# 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	瀝青磚坑洞修補整合式機械化工法研究 Research on integrated mechanical chemical method for repairing asphalt brick potholes	材料試驗所 Materials Testing Laboratory
2	水泥混凝土抗壓強度與抗滲能力關係之研究 Research on the relationship between the compressive strength and impermeability of cement concrete	材料試驗所 Materials Testing Laboratory
3	瀝青混凝土運用均衡式配合設計法(Balance Mix Design) 成效之研究 Research on the effectiveness of asphalt concrete using Balance Mix Design	材料試驗所 Materials Testing Laboratory
4	公路監理資訊系統異常查詢統計分析 Statistical analysis of abnormal query in the highway supervision information system	臺北市區監理所 Taipei City Motor Vehicles Office
5	偏鄉公共運輸路線附加價值服務研究-以(斗六-草嶺) DRTS路線為例 Research on Value-Added Services of Rural Public Transport Routes-Taking the Douliu-Caoling DRTS Route as Example	嘉義區監理所雲林監理站 Yunlin Branch, Chiayi Motor Vehicles Office
6	M3代檢廠大數據運用-智慧比對稽核檢驗數據 M3 Big data analysis for inspection agencies: smart comparison of audit data	高雄區監理所 Kaohsiung Motor Vehicles Office
7	違反強制汽車責任保險事件裁決書整批列印改善方案 Improvement of violation against compulsory auto liability insurance verdict batch	高雄市區監理所 Kaohsiung City Motor Vehicles Office
8	「汽車檢、考驗員研習班」及「汽車修護技術進修訓練班」結訓學員考取證照之就業情形調查報告 Report on the employment of the trainees in the "Automobile Inspection and Tester Seminar" and "Automobile Maintenance Technical Training Course"	公路人員訓練所 Training Institute
9	國道客運路線(臺北-高雄)易壅塞時空分析 Peak time and space analysis for national highway bus (Taipei-Kaohsiung)	公路總局車輛動態資訊管理中心 Vehicle Dynamic Information Management Center (DGH)

## 大事紀要 ◆ Major Events



交通部修正道路交通安全規則,明定自109年1月1日起將行車視野輔助系統列為大型車輛定期檢驗項目。

The MOTC amended the Traffic Regulations, from January 1, 2020 making driving vision aid systems a regular inspection item for heavy vehicles.

行政院蘇貞昌院長主持「台9線蘇花公路山區路段改善計畫」全線通車典禮,並於下午4時正式開放通車。

Premier Su Tseng-chang attended the full-route opening ceremony for the Suhua Highway Mountain Section Improvement Plan of Provincial Highway No.9 which was officially opened at 4pm.

「台9線花東縱谷公路安全景觀大道計畫(臺東段)」建設計畫奉行政院函核復: 「准予依核定本辦理。」

1/8 A reply was received for the Safe Landscape Boulevard on East Rift Valley Highway of Provincial Highway No.9 (Taitung section) construction plan submitted to the Executive Yuan for approval: proceed as approved.

台20線南橫公路梅山口至天池路段於1月13日(星期一)正式復通,開放3.5公噸以下貨車、9人座以下客車、大型重機及機車通行。

1/13 The Provincial Highway No.20 Meishankou to Tianchi section officially reopened on January 13 (Monday), opening to goods vehicles under 3.5 tons, passenger vehicles for up to nine passengers, heavy motorcycles and motorcycles.

「日本高速道路株式會社-高速道路總合技術研究所」至公路總局參訪交流未來公 路興建與防災維護規劃。

1/13 A delegation from the Nippon Expressway Research Institue of the Nippon Expressway Company Limited visited the DGH and engaged in an exchange on future road construction and disaster prevention planning.

隊安專案春節前無預警考核「南迴草埔隧道」、「蘇花改仁水隧道」及「八卦山隧道」緊急應變作為。

1/14 The emergency response preparedness for Caopu Tunnel on the South Link
 17 20 Highway, Renshui Tunnel on the improved Suhua Highway and Baguashan Tunnel was subject to unannounced evaluation under the Tunnel Safety project ahead of Chinese New Year.

交通部林佳龍部長1月15日視察台61線房裡交流道改善案,聽取苗栗縣政府建議房裡交流道改善。

1/15 Minister Lin Chia-lung visited the Provincial Highway No.61 Fangli Intersection Improvement Project on January 15 and heard suggestions for improving of the intersection from Miaoli County Government.

行政院蘇貞昌院長蒞臨公路總局應變中心視察109年春節連續假期疏運辦理情形,同時與各工程處及蘇澳、安朔等7個交控中心視訊連線,另外亦與台61線新豐~鳳鼻新通車路段現場連線,了解通車整備狀況。

Premier Su Tseng-chang visited the DGH's Response Center to inspect the traveler dispersal situation for Chinese New Year 2020 and also held a video conference with various engineering offices and seven traffic control centers including Suao and Anshuo; he also viewed the traffic situation on the newly opened section of road on Provincial Highway No.61 between Xinfeng and Fengbi by live video connection.

交通部林佳龍部長於大年初二,由公路總局陳彥伯局長陪同至朝馬轉運站視察,特別針對武漢肺炎防疫工作請各單位加強落實,並慰勉第一線同仁及客運業者辛勞。

On the second day of Chinese New Year, accompanied by DGH Director-General Chen Yen-po, Minister Lin Chia-lung went to Chaoma Bus station for inspection and instructed every unit to implement COVID-19 prevention work; he also thanked front-line staff and bus operators for their hard work.



2/14

行政院核定「協助縣市政府加速整建受損橋梁計畫3年(109~111)計畫」

The Executive Yuan approved the Program to Assist County and City Governments Accelerate Rebuilding of Damaged Bridges 3-Year Plan (2020-2022).

交通部林佳龍部長出席《吹海風的路:台61線西部濱海快速公路》新書發表分享會。

Minister Lin Chia-lung attended the new book presentation meeting for Road in the Sea Breeze: Provincial Highway No.61 West Coastal Expressway.

隧安專案228連假前無預警考核「觀音山隧道」緊急應變作為。

2/27 Unannounced evaluation of emergency response preparedness for Guanyinshan Tunnel was held before the February 28 Incident continuous holiday.

交通部業於3月10日假公路總局公路人員訓練所南部訓練中心辦理人才轉型培訓南區説明會,由王政務次長主持,並於説明會中向相關公、工、協會説明轉型培訓方案內容、申請方式及規定。

3/10 At the Southern Region Training Center of the Training Institute DGH, a convention for transport drivers and employees training was on March 10, chaired by Deputy Minister Wang Kwo-tsai. The content of the training program and its application were explained during the meeting.

109年阿里山櫻花季時程訂於108年3月9日至4月10日,並包含清明連續假期,於 109年3月3日花季開始前至現場確認各單位疏運整備狀況、3月14日亦於花季管制 第1日至現場確認疏運運行情形。

The Alishan Cherry Blossom Season was set for March 9-April 10, it also included the Tomb-sweeping consecutive holiday. On March 3, 2020 before the event started, a visit was made to inspect the traveler dispersal preparations. A visit was also made on the first day of the event to check the traveler dispersal situation onsite on March 14.

公路總局第五區養護工程處為配合雲林縣政府新庄仔排水堤防改善,爰辦理台19線38k+458港後橋改建工程,預計自109年3月19日至110年1月31日止,施工期間採工階段半半施工,封閉部分道路及車輛改道行駛之方式,維持施工範圍內單線雙向通行。

In coordination with the improvement of Xinzhuangzi drainage by Yunlin County Government, the Fifth Maintenance Office, MOTC carried out improvement work on Xianghou Bridge at 38k+458 on Provincial Highway No.19 from March 19, 2020-January 31, 2021. The project was carried out in two halves. By closing some roads and diverting traffic, single lane two-way traffic was maintained in the scope of construction.

交通部召開「清明連假疏運及防疫會議」,由林佳龍部長主持,請公路總局等各單位簡報説明清明假期防疫及疏運應變措施規劃。

The MOTC convened the "Tomb-sweeping continuous holiday traveler dispersal and epidemic prevention meeting," chaired by Minister Lin Chia-lung. The DGH and other institutes were asked to explain planning for epidemic prevention and traveler dispersal measures during the holiday.

交通部林佳龍部長、路政司陳文瑞司長、公路總局陳彥伯局長於4月6日陪同立法院 交通委員會洪孟楷委員及新北市政府副市長陳純敬、鄭戴麗香議員、蔡錦賢議員、 陳偉杰議員等地方民意代表,考察淡江大橋工程施工情形,並聽取相關簡報。

On April 6, accompanied by member of the Legislative Yuan Transportation Committee Legisklator Hong Meng-kai, New Taipei City Deputy Mayor Chen Chunching and Councilors Cheng-Tai Li-hsiang and Tsai Jin-hsian, Minister Lin Chia-lung, Department of Railways and Highways Director Chen Wen-rui and DGH Director-General Chen Yen-po inspected the construction situation at Danjiang Bridge and heard a related report.

3

Mar

3/23

4/6

4 Apr



交通部林佳龍部長於109年4月16日出席淡江大橋主橋塔奠基祈福儀式,嘉勉工程團隊辛勞並予肯定。

4/16 Minister Lin Chia-lung attended the blessing ceremony for the laying of the foundations of the main bridge tower of Danjiang Bridge on April 16, 2020 and comforted and encouraged the construction team.

行政院資安處重點資料庫技術檢測

公路總局第三代公路監理資訊系統接受行政院資安處實施資訊安全技術檢測與實地 稽核,檢視資安防護落實情形,並掌握可能之資安風險。

Technical testing of key data banks by Department of Cyber Security, Executive Yuan The DGH's 3<sup>rd</sup> generation highway supervision information system was subject to technical testing and onsite inspection by the Department of Cyber Security to review the cyber security protection implementation situation and grasp possible cyber security risk.



西濱快速公路曾文溪橋段新建工程建設計畫行政院109年5月1日院臺交字第 1090082840號函核定。

The new construction plan for the Tsengwen River bridge section on the West Coastal Highway was approved by the Executive Yuan in document Yuan Tai Jiao No.1090082840 on May 1, 2020.

交通部林佳龍部長分別於5月8日及5月14日出席中華民國計程車駕駛員工會全國聯合會於臺北市及桃園市辦理之人才轉型培訓課程。

5/8

Minster Lin Chia-lung attended transport drivers and employees training program held by the Taxi Driver Labor Union ROC on May 8 and May 14 in Taipei city and Taoyuan city.

交通部陳彥伯政務次長(原任公路總局局長)經總統109年5月20日任命及行政院 同年月日院授人培字第1090033588號令核定。

5/20 Deputy Minister Chen Yen-po (originally Director-General of the DGH) was appointed by the president on May 20, 2020 and approved by the Executive Yuan in document Yuan Shou Ren Pei Zi No.1090033588.

交通部林佳龍部長透過影片帶大小朋友一起探索《幸運的一群》兒童繪本。 5/22 In a video, Minister Lin Chia-lung led children to explore the children's picture bo

5/22 In a video, Minister Lin Chia-lung led children to explore the children's picture book Lucky Group.

交通部贈送苗栗、臺中、南投489所國小《幸運的一群》兒童繪本,鼓勵小朋友從 小培養閱讀習慣並建立生態保育觀念。

6/15 The MOTC presented children's picture book Lucky Group to 489 elementary schools in Miaoli, Taichung and Nantou to encourage children to develop the habit of reading at a young age and to form ecological conservation concepts.

公路總局局長許鉦漳(原任副局長)經行政院109年6月12日院授人培字第 1090035121號令核定,並於6月16日舉行布達典禮,由林佳龍部長監誓。

The appointment of the Director-General of the DGH Hsu Cheng-chang (originally Deputy Director-General) was approved by the Executive Yuan in document Yuan Shou Ren Pei No.1090035121 on Jun 12; the handover ceremony was held on June 26, supervised by Minister Lin Chia-lung.

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第一標工程開工。 Work began on the first tender of the project to re-route East-west Expressway Provincial Highway No.76 (originally Handou-Caodun route) West of Provincial Highway No.19.

「代辦南方澳跨港大橋重建工程」辦理資格標開標作業。

6/30 Qualification tender held for the Nanfangao Cross-sea Bridge Agent Rebuilding Project.





交通部於109年7月1日廢止「全國公路監理電腦越區異動連線作業要點」,公路監理之多項業務開放得至各地公路監理機關辦理。

7/1 The MOTC cancelled the Guidelines for National Highway Supervision Computer Cross-area Abnormal Connection on July 1, 2020, allowing various supervisory operations to be handled by highway inspection agencies in each area.

公路總局辦理「從檢驗業務深耕企業誠信與社會責任」交流座談會,由許鉦漳局長主持,邀請交通部陳政務次長彥伯、法務部廉政署鄭銘謙署長、士林地檢署朱家崎檢察長等貴賓共同參與。

The DGH held the "Cultivating Enterprise Integrity and Social Responsibility Through Inspection Operations" exchange and discussion meeting. It was chaired by Director-General Hsu and was attended by MOTC deputy minister Chen Yen-po, director of the Agency Against Corruption Cheng Ming-chian, chief prosecutor of Shilin District Prosecutors Office Chu Chia-chi, and others.

「西濱快速公路鳳鼻至香山段路線可行性評估」業經行政院核定。
West Coastal Expressway Fengbi to Xiangshan section feasibility assessment.

7/16 「代辦南方澳跨港大橋重建工程」工程開工。

Work begins on the Nanfangao Cross-sea Bridge Agent Rebuilding Project.

公路總局於7月20舉辦《越山臨海記-台2甲陽金公路》及《青澀的中橫》聯合新書發表會,交通部林佳龍部長親臨現場表達肯定與支持。

7/20 The DGH held a joint book presentation meeting for *Past the Mountains to the Sea-Provincial Highway No.2 A Yang-jin Highway and Central Cross-island Highway* on July 20. Minister Lin Chia-lung attended and expressed his affirmation and support.

花東縱谷景觀大道計畫項下「台9線287k+000~292k+625(大禹至玉里段)道路 拓寬工程」於109年7月22日開工,工程範圍北起高寮大橋路口銜接日前完工之太 平溪橋路段,南迄民權街路口銜接已拓寬玉里外環道,路線長約5,625公尺,總經費7億6,075萬餘元,預定112年7月完工。

The Provincial Highway No.9 287k+000~292k+625 Dayu-Yuli section) Road Widening Project under the Huadong East Rift Valley Scenic Boulevard Plan began construction on July 22, 2020. The scope of work is from Gaoliao Bridge in the north to Taipingxi Bridge and from Minquan intersection to the already-widened Yuli circular road in the south. The route is around 5,625 meters long and has a budget of NT\$760.75 million and is expected to be completed in July 2023.

公路總局林聰利副局長(原任嘉義縣政府建設處處長)經交通部109年7月14日交 人字第1097100589號令核定。

7/30 Appointment of DGH Deputy Director-General Lin Cong-li (originally Director, Department of Construction. Chiayi County Government) approved by the MOTC on July 14, 2020 by document Jiao Ren Zi No.1097100589

交通部林佳龍部長出席公路總局74周年局慶暨「自在,漫遊—來公路輕旅」特展開幕典禮,此特展將台61線、台9線南迴公路及蘇花改之特色工程、附近景點——呈現,邀請民眾搭配政府安心旅遊政策來趟公路輕旅行。

Minister Lin Chia-lung attended the celebration of the 74<sup>th</sup> anniversary of the DGH and the opening of the special exhibition Easy Wandering Highway Trip. This exhibition displayed the distinctive construction projects of Provincial Highway No.61, Provincial Highway No.9 South Link and the improved Suhua Highway and nearby attractions, inviting the public to take a highway trip in response to the government's travel without worry policy.

8/5

回



交通部林佳龍部長出席臺中區監理所南投監理站落成啟用典禮,為新站剪綵、啟 用,並視導翻轉監理推動成果,包括監理服務不分區、數位行動監理站、車輛號牌 智慧收繳機及2.0數位自助服務機等便民措施。

Minister Lin Chia-lung attended the opening ceremony for Nantou Motor Vehicle Station of Taichung Motor Vehicle Office and cut the ribbon and inspected the results of the efforts to upgrade motor vehicle inspection, the measures for public convenience including motor vehicle inspection without areas, digital mobile motor vehicle inspection stations, number plate smart payment machines and 2.0 digital self-service machines.

交通部林佳龍部長出席東西向快速公路台76線、台19線以西延伸工程動土典禮。 Minister Lin Chia-lung attended the groundbreaking ceremony for the East-west 8/17 Expressway Provincial Highway No.76 and extension westward of Provincial Highway No.19.

交通部林佳龍部長出席「台74線大里及霧峰地區增設匝道工程(台74線草湖交流 道 )」 動土典禮,以「中山路延伸工程」為連絡道路,以便捷民眾交通及有效紓解 台3線之車流量。

8/24 Minister Lin Chia-lung attended the groundbreaking ceremony for Provincial Highway No.74 Dali and Wufeng Ramp addition project (Provincial Highway No.74 Caohu Intersection); with the Zhongshan Road Extension Project as the access road, it will make travel easier for the public and ease traffic volume on Provincial Highway No.3.

交通部公共工程優良工程獎「優等」一公路總局「淡江大橋及其連絡道路 2k+606~5k+000段、7k+000~8k+165段新建工程」。

8/26 The DGH Danjiang Bridge and Access Road 2k+606~5k+000,7k+000~8k+165 New Construction Project was awarded the MOTC Public Construction Outstanding Engineering Project Award-Excellent.

交通部陳彥伯政務次長視察淡江大橋計畫工程。 8/31

Deputy Minister Chen Yen-po inspected the Danjiang Bridge construction project.

交通部修正道路交通安全規則第52-3、64、65及76條,自109年9月4日施行,放 寬輕度可控制2年以上不發作之癲癇患者考領駕照新制,駕駛人須每2年檢具醫師診 斷證明書申請換照。

9/4 Amended articles 52-3, 64, 65 and 76 of the Traffic Regulations were implemented on September 4, allowing mild epilepsy sufferers who have not had an attack for at least two years to take automobile and motorcycle driving tests. Licenses can be renewed every two years with the submission of a doctor's diagnostic certificate.

交通部修正道路交通安全規則貨車管理規定,將總重量逾3.5噸至5噸且全長6公尺 以下貨車歸屬小貨車管理,並於109年9月4日發布施行。

The MOTC amended goods vehicle administration regulations in the Traffic 9/4 Regulations, classifying goods vehicles from 3.5 tons to 5 tons and under six meters in length as light goods vehicles. This amendment was announced and took effect on September 4, 2020.

交通部林佳龍部長蒞臨淡江大橋主橋塔鋼管樁圍堰合龍祈福典禮並慰勉施工人員辛

9/9 Minister Lin Chia-lung attended the blessing ceremony for the joining of the steel pipe pile cofferdam of the bridge tower of Danjiang Bridge and comforted and encouraged the hardworking workers.

行政院蘇貞昌院長聽取公路總局報告「高雄-屏東間東西向第2條快速公路」目前進

9/10 Premier Su Tseng-chang listened to the DGH report on current progress of the Kaohsiung-Pingtung 2<sup>nd</sup> East-west Expressway.



交通部林佳龍部長、陳彥伯政務次長、公路總局許鉦漳局長以及立法委員陳歐珀前 往南港及羅東轉運站視察中秋及國慶連假公路客運疏運整備情形,並與宜蘭縣縣長 林姿妙、客運及汽機車租賃業者……等舉辦座談會,感謝各業者配合本次疏運推動 之優惠措施。

9/11 Minister Lin Chia-lung, Deputy Minter Chen Yen-po, DGH Director-General Hsu Cheng-chang and Legislator Chen Ou-po inspected preparations for Mid-Autumnl and Double Tenth consecutive holiday traveler dispersal measures at Nangang and Luodong transfer stations and held a discussion meeting with Yilan Magistrate Lin Zi-miao, bus and car rental business operators, in which he thanked them for offering incentives to promote traveler dispersal.

西濱快速公路竹一交流道至鳳鼻尾隧道段(WH10C標)工程完工。

9/13 West Coastal Expressway Zhuyi-Fengbiwei Tunnel section (tender WH10C) completed.

公路總局於交通部一樓大廳舉辦九大運輸業響應路口停讓行人行動記者會,本次活動由林佳龍部長及公路總局許鉦漳局長見證,號召所有運輸業者及駕駛員共同響應,以提升路口行車及行人安全。

The press conference for "the commercial automobile transport operators respond to the call to give way to pedestrians at intersections." This event was witnessed by Minister Lin Chia-lung and DGH Director-General Hsu Cheng-chang. It called for all operators and drivers to give priority to pedestrians to enhance driver and pedestrian safety at intersections.

交通部林佳龍部長主持「1968與幸福公路APP整合發表記者會」, 説明整合國5資訊、路況播報、旅行時間預測等功能。

9/15 Minister Lin Chia-lung held the "1968 and Happy Highway APP integration launch press conference," explaining the integration of functions such as National Highway No.5 information, road situation announcement and projected travel time.

交通部胡迪琦簡任技正與公路總局黃運貴副局長前往花蓮視察中秋及國慶連假公路 客運疏運整備情形,並與花蓮縣徐榛蔚縣長、鄭天財立法委員服務處主任、傅崐萁 立法委員服務處處長、行政院東部聯合服務中心洪宗楷執行長、客運及汽機車租賃 業者等辦理座談會,加強推廣本次疏運相關優惠事宜。

9/18 MOTC Senior Specialist and DGH Deputy Director-General Huang Yung-kuei went to Hualien to inspect traveler dispersal measures preparations for Mid-Autumn and the Double Tenth consecutive holiday. They held a discussion meeting with Hualien County magistrate Hsu Chen-wei, director of the service office of Legislator Cheng Tian-tsai, director of the service office of Legislator Fu Kun-chi, Hong Tsung-kai the Chief Executive of the Eastern Taiwan Joint Service Center, Executive Yuan, bus and car rental business operators, to promote traveler dispersal measures.

公路總局召開「台9線蘇花公路安全提升計畫」第1場環境議題座談會。

9/21 DGH convened the first environmental issue discussion meeting for the Provincial Highway No.9 Suhua Highway Safety Improvement Plan.

中秋節連續假期第1日,交通部林佳龍部長率陳彥伯政務次長及交通部相關同仁至 公路總局防災中心視導疏運輪值情形及關心省道路況。

10/1 On the first day of the Mid-Autumn consecutive holiday, Minister Lin Chia-lung led Deputy Minister Chen Yen-po and MOTC staff to the DGH Disaster Prevention Center to inspect the dispersal and county road situation.

交通部陳彥伯政務次長於中秋節連續假期第三日至公路總局安朔交控中心,關心台 9線南迴公路中秋連假疏運情形。

10/3 Deputy Minister Chen Yen-po visited the DGH's Anshuo Traffic Control Center on the third day of the Mid-Autumn Festival continuous holiday to see the traffic dispersal situation on South Link Highway of Provincial Highway No.9.





交通部陳彥伯政務次長於中秋節連續假期第四日至公路總局南澳交控中心,關心台 9線蘇花公路連假最後一日花蓮北返的交通狀況。

10/4 Deputy Minister Chen Yen-po visited the DGH's Nanao Traffic Control Center on the fourth day of the Mid-Autumn Festival continuous holiday to see the Hualien-to northern Taiwan traffic situation on Suhua Highway on the last day of the holiday.

蔡英文總統偕同行政院蘇貞昌院長、交通部林佳龍部長、各級貴賓長官及地方人士 與社會賢達共同出席南方澳跨港大橋重建工程祈福動土典禮,新橋重建後將為地方 帶來嶄新氣象。

公路總局台9線316k+575~319k+804(富里至富南段)道路拓寬工程正式動土,

10/5 President Tsai Ing-wen, Premier Su Tseng-chang, Minister Lin Chia-lung, guests and officials at all levels, local residents, and social elites participated in the Groundbreaking Blessing Ceremony of the Reconstruction of Nanfang'ao Bridge. After the reconstruction, the new bridge will bring new life to the town.

該工程屬「台9線花東縱谷公路安全景觀大道計畫」,預計112年3月29日前完工。 DGH Provincial Highway No.9 316k+575~319k+804 (Fuli to Funan Section) The 10/8 groundbreaking of the road widening project was conducted. The construction project belongs to the Provincial Highway No.9 East Rift Valley Safe Boulevard Road Plan. It is expected to be completed by March 29, 2023.

交通部至公路總局召開「雙十連假疏運聯合預報記者會」,部屬機關(氣象局、高 公局、公路總局、台鐵局、觀光局、高鐵公司)於是日説明連續假期疏運措施預 報,提醒各用路人連續假期避開壅塞時段出遊及相關注意事項。

10/8 MOTC held the Double Tenth consecutive Holiday Dispersal Press Conference. The subordinate agencies (Central Weather Bureau, DGH, Taiwan Railway Administration, Tourism Bureau, Taiwan High Speed Rail) explained the holiday dispersal measures, drivers to avoid congestion hours.

雙十連假第2天,交通部陳彥伯政務次長到台61線鳳鼻隧道關心連續假期疏運情 形,聽取鳳鼻隧道應變整備。

10/10 On the second day of the Double Ten Continuous Holiday, Deputy Minister Chen Yen-po went to Provincial Highway No.61 Fengbi Tunnel to pay close attention to the holiday dispersal situation and hear about Fengbi Tunnel response preparations.

> 公路總局台24線霧台公路、台18線阿里山公路榮獲國際景觀建築師協會亞太區分 會榮譽獎。

10/16 DGH Provincial Highway No.24 Wutai Highway and Provincial Highway No.18 Alishan Highway was awarded the Honorary Award by the International Federation of Landscape Architects' Asia-Pacific Branch.

> 公路總局辦理「中部地區友善道路改善計畫」108年度成果發表會,邀請學者及各 地方政府與會,由特生中心團隊及中興大學蔣雅郁教授報告計畫成果,針對石虎路 殺保育議題進行充分交流及溝通。

DGH held the 2019 Central Region Friendly Road Improvement Plan Year End 10/26 Presentation. We invited scholars and local government officials. The Endemic Research Institute team and National Chung Hsin University Professor Chiang Ya-yu reported the achievements of the plan. Exchange and communications on the topic of the road kills of leopard cats was carried out.

交通部陳彥伯政務次長拜會高雄市陳其邁市長研議「高屏二快西延議題」。

10/27 Deputy Minister Chen Yen-po met with Kaohsiung City Mayor Chen Chi-mai to discuss the topics of western extension of the Kaohsiung-Pingtung 2<sup>nd</sup> Expressway.

交通界奧斯卡獎-金路獎頒獎典禮,訂於109年10月27日(星期二)假臺灣鐵路管 理局五樓演藝廳舉行,109年由交通部公路總局籌辦,本屆共頒發7大類獎項計有 51個機關單位獲獎。

The Transportation Oscars - Golden Road Award Ceremony was held on October 27 2020 (Tuesday) in 5<sup>th</sup> floor performance hall of the TRA. In 2020, DGH held the ceremony. This year, a total of 7 types of awards were given out, and 51 agencies were awarded.

10/27



交通部陳彥伯政務次長出席公路總局於衛武營國家藝術文化中心舉辦之109年度交通安全巡迴車宣導活動,現場除了展示公路總局第2輛數位行動監理車外,亦即時提供民眾辦理監理業務及多項精采表演節目。

11/15 Deputy Minister Chen Yen-po participated in the 2020 annual DGH Traffic Safety Bus Tour at the Weiwuying National Kaohsiung Center for the Arts. Other than exhibiting the second digital mobile monitoring van of the DGH, we also provided motor vehicle related services for people and many splendid performances.

行政院蘇貞昌院長視察高雄-屏東間東西向第2條快速公路指示,目前規劃成果原則 支持,惟就路線部分再與地方溝通。

11/21 Premier Su Tseng-chang inspected the plan of Kaohsiung-Pingtung East-West 2<sup>nd</sup> Expressway. Currently, he supported the plan in principle; as for the route, he would communicate further with local government officials.

交通部陳彥伯政務次長由公路總局許鉦漳局長、邱議瑩立法委員、高雄市曾麗燕議 長及相關地方代表陪同出席台27線中興至大津段拓寬改善計畫第1、2標動土典禮。 Deputy Minister Chen Yen-po, Director-General of DGH Hsu Cheng-chang, Legislator Chu Yi-ving, Speaker of Kaohsiung City Council Tseng Li-ven, and

11/24 Legislator Chu Yi-ying, Speaker of Kaohsiung City Council Tseng Li-yen, and related local representatives participated in the first and second groundbreaking ceremonies of the Provincial Highway No.27 Chunghsin to Dajing Section Widening Improvement Plan.

台9線蘇花公路山區路段改善計畫榮獲國際道路協會(IRF)2020全球道路成就獎工程設計類首獎。

11/25 The Provincial Highway No.9 Suhua Highway Mountainous Section Improvement Plan was awarded the 2020 First Prize for Engineering Design in the Global Road Achievement Award (GRAA) by the International Road Federation (IRF).

「西濱快速公路後續建設計畫」榮獲109年國家永續發展獎(政府機關類)入選獎, 行政院舉行頒獎典禮並由院長頒發獎狀以資鼓勵。

The West Coastal Expressway Follow-up Construction Project was awarded the 2020 National Sustainable Development Award (government agency type) Honorable Mention award. The Executive Yuan held the ceremony, and the premier gave out the awards as encouragement.

交通部重大工程督導會報專案報告「馬祖大橋綜合規劃辦理情形」。

11/26 MOTC Important Construction Project Supervision Supervisory Council project report "Mazu Bridge Comprehensive Planning Handling Situation."

公路總局與高速公路局、農委會林務局及特生中心共同簽署「國土生態保護綠色網絡」合作協議,並由交通部陳彥伯政務次長及農委會黃金城副主委擔任見證人,透過跨域合作,為維護生態環境攜手構築生態網絡合作平台,永續發展健全路網。 DGH, Freeway Bureau, Forestry Bureau of THE COA, and Endemic Species

Research Institute signed the Cooperation Agreement on the "Green Network for Ecological Protection on National Land." Deputy Minister Chen Yen-po, Council of Agriculture Deputy Chairman Huang Jing-chen were witnesses. Through interdisciplinary cooperation, we have built an ecological network cooperation platform to protect the ecological environment and allow the sustainable developmental of the road network.

公路總局高雄市區監理所榮獲第3屆「政府服務獎-社會關懷服務類」獎項,國發會 訂於109年12月17日於台大醫院國際會議中心舉行頒獎典禮公開表揚。

The DGH Kaohsiung City Motor Vehicle Office was awarded the 3<sup>rd</sup> annual Government Service Award in Social Care Service. The National Development Council held the award ceremony at National Taiwan University Hospital International Convention Center on December 17, 2020.

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開工。

11/30 The Provincial Highway No.76 East-West Expressway 3k+700~11k+585 Wenjin to Xizhuang section renovation construction got under way.



公路總局為提升道路動能及橋梁安全,於「台9線花東縱谷公路安全景觀大道計畫」內編列14億元辦理木瓜溪橋改建工程,改建工程於12月2日開工,並於12月10日由許鉦漳局長主持木瓜溪橋改建祈福動土典禮。

In order to upgrade road capability and bridge safety, in Safe Landscape Boulevard on East Rift Valley Highway of Provincial Highway No.9 Plan, NT\$1.4 billion was budgeted for Mugua River Bridge reconstruction. Reconstruction began on December 2, and on December 10, DGH Director-General, Hsu Cheng-chang, held the Mugua River Reconstruction Groundbreaking Blessing Ceremony.

交通部公路總局淡江大橋新建工程建立廉政平臺,積極推動廉正透明作為,經參加交通部109年「廉正透明獎」,榮獲最高分「特優」殊榮。

12/8 DGH established a clean government platform for the Danjiang Bridge new construction project and actively promoted integrity and transparency. It received the highest honor in the MOTC's 2020 Integrity and Transparency Awards, High Distinction.

公路總局許鉦漳局長拜會屏東縣潘孟安縣長商討「高雄-屏東間東西向第2條快速公路」路線議題。

12/16 DGH Director-General Hsu visited Pingtung County Magistrate Pan Mengan to discuss issues relating to the route of Kaohsiung-Pingtung East-West 2<sup>nd</sup> Expressway.

交通部公路總局109年度參加「台灣景觀大獎」競賽,分別以「實踐減法美學-北 橫公路景觀營造(台7線5k~11.7k)」參加「環境設施類」;「(台21線136k同富-142k塔塔加)往玉山最後一哩路・樸原森活新中橫」參加「特殊主題類:生態 保育」,雙雙榮獲「佳作獎」之肯定。

In 2020, the DGH participated in the Taiwan Landscape Award Competition. We used "Less is More Northern Cross-island Highway (Provincial Highway No.7 5k~11.7k" to participate in the "Environmental Facility Category." "Provincial Highway No.21 136k Tongfu-142k Tatajia) The Last Mile to Yushan, Simple Forest Life New Central Cross-island Highway to participate in the "Special Theme Category: Ecological Preservation." Both won honorable mention awards.

交通部林佳龍部長主持「109年公路公共運輸多元推升計畫成果暨110年展望研討會」。公路總局為強化中央、地方及業者合作關係,共同推動公路公共運輸,邀請地方政府交通單位、學界以及客運業者等共同研討交流。

12/21 Minister Lin Chia-lung hosted the "2020 Road and Public Transportation Diversity Upgrading Plan Achievement and 2021 Outlook Seminar." In order to reinforce the cooperation relationships with government agencies and operators, DGH invited local governments, scholars, and bus operators to have further discussions.

交通部林佳龍部長率隊出席「屏東地區新創幸福巴士2.0整合示範服務」通車啟用典禮,並發表及展示幸福巴士預約媒合平台、法規鬆綁導入NGO服務、企業社會責任(CSR)車輛捐贈及幸福巴士CIS設計等相關成果。

Minister Lin Chia-lung participated inaugural ceremony of the Happiness bus 2.0 integrated service in Pingtung, in which rolls out the happiness bus reservation service, vehicle donation (CSR) and happiness bus CIS design, etc.

交通部林佳龍部長出席苗栗生活圈道路系統「苗栗縣北橫公路斗煥坪-三灣路段」通車典禮。

12/30 Minister Lin Chia-lung attended the Miaoli life sphere highway system Miaoli County Northern Cross-Island Highway Douhuanping-Sanwan Section opening ceremony.

## 預算執行與保留 ◆ Budget Execution and Reservation

### 一、公務預算 Administrative Budget

#### (一) 歲入部分 Revenues

109年度 2020 本年度預算數82億992萬4千元,實收數100億9,388萬3千元,應收數2億6,355萬7千元(占預算數3.21%),合計103億5,743萬9千元,執行率126.16%。

The DGH had budgeted revenue of NT\$8,209,924,000 in 2020, with receipts of NT\$10,093,883,000 and accounts receivable of NT\$263,557,000 (3.21 percent of budgeted revenue) for a total of NT\$10,357,439,000. Execution rate was 126.16 percent.

以前年度 Previous year 以前年度歲入應收款3億7,228萬7千元,實收數2億5,767萬3千元(占應收款69.21%),6,505萬3千元轉入下年度繼續執行(占預算數17.47%)。

The DGH had annual receivables of NT\$372,287,000, with receipts of NT\$257,673,000 (69.21 percent of annual receivables). NT\$65,053,000 (17.47 percent of annual receivables) was carried forward to the following year.

			歲入預 Revenues E	算執行表 xecution (	Chart	單位:新臺幣千元 Unit: NT thousand dollars	
				應收數 Accounts Receivable		執行數 Execution Amount	
109年度 2020	預算數 Budget (1)	實收數 Actual Receipts (2)		金額 Amount (3)	占預算數 Share of Budget % (3)/(1)	金額 Amount (4)=(2)+(3)	% (4)/(1)
	8,209,924	10,	093,883	263,557	3.21	10,357,439	126.16
	歲入應收款	實收數 A	ctual Receipts	轉入下年度繼續執行數 Transferred to the Next Year's Budget for Execution			xecution
以前年度 Previous year	Annual Receivables (1)	金額 Amount (2)	占應收款 Share of Annual Receivables % (2)/(1)	Aı	金額 mount (3)	占應收款 Share of Anr Receivables (3)/(1	nual %
	372,287	257,673	69.21	6	5,053	17.47	

#### (二)歲出部分 Expenditures

#### 1. 歲出預算執行 Expenditures Execution

109年度 2020 本年度預算數420億6,046萬2千元,實支數412億9,595萬1千元,應付數495萬9千元,賸餘數551萬6千元(占預算數0.01%),預付款4億2,201萬元,執行率(含預付款)99.21%。 The DGH had budgeted expenditures of NT\$42,060,462,000 in 2020, with payments of NT\$41,295,951,000, accounts payable of NT\$4,959,000, treasury payments of NT\$5,516,000 (0.01 percent of budgeted expenditures) and suspense payments of NT\$422,010,000. Execution rate including suspense payments was 99.21 percent.

以前年度 Previous year 保留轉入數15億4,126萬6千元,實支數14億3,798萬2千元,註銷減免數790萬7千元(占保留數0.51%),預付款5,073萬5千元,執行率(含預付款)97.10%。

Encumbrances totaled NT\$1,541,266,000, with payments of NT\$1,437,982,000, write-offs and deductions of NT\$7,907,000 (0.51 percent of encumbrances), and suspense payments of NT\$50,735,000. Execution rate including suspense payments was 97.10 percent.



			Ex	歲出預算執行表 Expenditures Execution Chart			單位:新臺幣千元 Unit: NT thousand dollars		
109年度 2020	預算數 Budget (1)	Payments	應付數 Accounts Payable	金額	easury Payments 占預算數 Share of Budget %	預付款 Suspense Payments	執行數 Execution A 金額 Amount	4mount % (6)/(1)	
2020	42,060,462	41,295,951	(2)     (3)       41,295,951     4,959		(4)/(1) 0.01	(5) 422,010	(6) = (2) + (3) + (4) + (5) 41,728,436	99.21	
	保留轉入數實支數		動	註銷減免數 Write-offs and Deductions		預付款	執行數 Execution Amount		
以前年度 Previous year	下田特八数 Encumbrances (1)	更又 Actual Pa (2)	yments	金額 Amount (3)	占保留轉入數 Share of Encumbrances % (3)/(1)	Suspense Payments (4)	金額 Amount (5) = (2) + (3) + (4)	% (5)/(1)	
	1,541,266	1,437,	982	7,907	0.51	50,735	1,496,624	97.10	

### 2. 歲出預算保留 Expenditures Reservation

109年度	預算保留申請數7億5,403萬6千元(占預算數1.79%)。
2020	Budgeted encumbrances totaled NT\$754,036,000 (1.79 percent of the budgeted amount).
以前年度	預算保留申請數9,537萬8千元(占保留轉入數6.19%)。
Previous year	Budgeted encumbrances totaled NT\$95,378,000 (6.19 percent of encumbrances).

<b>歲出預算保留表</b>					
	保留申請數 Budgeted Encumbrances	申請數占預算(保留轉入)數 Share of Budget / Encumbrances %			
109年度 2020	754,036	1.79			
以前年度 Previous year	95,378	6.19			
合計 Total	849,414	1.95			

### 二、特別預算 Special Budget

- (一)第二期前瞻基礎建設計畫 Second Phase of Forward-Looking Infrastructure Plan
  - 1. 歲入部分 Revenues

109年度 2020

本年度預算數0元,實收數1億2,784萬2千元,應收數0千元,合計1億2,784萬2千元。 The second phase of the plan had total revenue 127,842,000 in 2020, with receipts of NT\$127,842,000.

<b>歲入預算執行表</b> 單位:新臺幣千元 <b>Revenues Execution Chart</b> Unit: NT thousand dollars						
109年度 2020	預算數 Budget (1)	實收數 Actual Receipts (2)	應收數 Accounts Receivable (3)	執行數 Execution Amount (4)=(2)+(3)		
	0	127,842	0	127,842		

#### 2. 歲出部分 Expenditures

109年度 2020 本年度預算數79億368萬9千元,實支數68億6,360萬7千元,預付款10億3,075萬4千元,執 行率(含預付款)99.88%。

The second phase of the plan had budgeted expenditures of NT\$7,903,689,000 in 2020, with payments of NT\$6,863,607,000 and suspense payments of NT\$1,030,754,000. Execution rate including suspense payments was 99.88 percent.

<b>歲出預算執行表</b> 單位:新臺幣千元 <b>Expenditures Execution Chart</b> Unit: NT thousand dollars								
	預算數	實支數	預付款	執行 Execution				
109年度 2020	Budget (1)	Actual Payments (2)	Suspense Payments (3)	金額 Amount (4)=(2)+(3)	% (4)/(1)			
	7,903,689	6,863,607	1,030,754	7,894,361	99.88			

(二)嚴重特殊傳染性肺炎防治及紓困振興 Prevention, Relief and Revitalization Measures for Severe Pneumonia with Novel Pathogens

歲出部分 Expenditures

109年度 2020 本年度預算數80億6,876萬元,實支數75億1,361萬1千元,預付款1億4,673萬5千元,執行率(含預付款)94.94%。

The DGH had budgeted expenditures of NT\$8,068,760,000 in 2020, with payments of NT\$7,513,611,000 and suspense payments of NT\$146,735,000. Execution rate including suspense payments was 94.94 percent.

<b>歲出預算執行表</b> 單位:新臺幣刊 Expenditures Execution Chart    Unit: NT thousand dol						
	預算數 Budget (1)	實支數 Actual Payments (2)	預付款 Suspense Payments (3)	執行數 Execution Amount		
109年度 2020				金額 Amount (4)=(2)+(3)	% (4)/(1)	
	8,068,760	7,513,611	146,735	7,660,346	94.94	

#### 交通部公路總局109年年報

#### 2020 Annual Report of Directorate General of Highways, MOTC

出版機關 交通部公路總局 出版年月 中華民國110年7月

發行人 許鉦漳

址 108234 臺北市萬華區東園街65號 地

話 (02) 2307-0123

網 址 https://www.thb.gov.tw (選單路徑:首頁》本局資訊》影音及出版品)

編輯指導 黃渾貴

撰稿人員

總編輯 林福山、劉雅玲

王東琪、王在莒、林義勝、吳季娟、孟伯鈞、胡家萍、唐述如、陳敬明、陳松堂、 編輯委員

許碩茱、曾信池、葉双福、蔡境列、薛讚添、魏悦容(依姓氏筆劃)

王富生、王韻瑾、李清澤、李映才、李香怡、李玟萱、李君睿、何仲康、吳品賢、 呂東隆、周士淳、周晏鋒、林平經、林育如、林哲偉、范怡伶、洪峻越、洪善達、 侯文欽、桂秀媛、陳美秀、陳博揚、陳元吉、莊江隆、畢華昆、黃舒瑜、黃鴻文、 黄國亭、黃伯晟、黃懷瑩、黃柬雯、黃益羣、曾心乃、葉建宏、楊輔仁、楊智文、

蔡幸樺、劉牧宇、盧瑜典(依姓氏筆畫)

編印單位 秘書室(02)2307-0123 展售地點:

設計印製 暐昕創意設計有限公司 國家書店(松江門市):104472臺北市中山區松江路209號1樓

(02) 2553-6152 電話: (02) 2518-0207/傳真: (02) 2518-0778

中華民國110年7月初版1刷 網路書店: http://www.govbooks.com.tw

ISBN 978-986-531-306-7 五南文化廣場(臺中總店):400002臺中市中區中山路6號 GPN 1011000824 電話: (04) 2226-0330/傳真: (04) 2225-8234

定價:新臺幣 500元 網路書店: http://www.wunanbooks.com.tw

著作財產權屬交通部公路總局,欲利用本書全部或部分內容者,須徵求著作財產權人(公路總局)同意或書面授權,請洽 公路總局秘書室(電話同編印單位)

Publishing Agency: Directorate General of Highways, MOTC

Publishing Date: July, 2021

Publisher: Hsu Cheng-chang

Address: No.65, Dongyuan Street, Wanhua District, Taipei City, 108234, Taiwan, ROC

+886-2-2307-0123 Tel:

Website: https://www.thb.gov.tw (menu route: Home) About the DGH) Publications) Index)

Supervising Editors: Huang Yung-kuei Chief Editor: Lin Fu-shan, Liu Ya-ling

Wang Dong-qi, Wang Zai-ju, Lin Yi-sheng, Wu Ji-juan, Meng Bo-jun, Hu Jia-ping, Tang Shu-Editors:

ru, Chen Jing-ming, Chen Song-tang, Xu Suo-mo, Zeng Xin-ci, Ye Shuang-fu, Cai Jing-lie, Xue

Zan-tian, Wei Yue-rong (in Chinese surname stroke order)

Writing Committee: Wang Fu-sheng, Wang Yun-jin, Li Qing-ze, Li Ying-cai, Li Xiang-yi, Li Mei-xuan, Li Jun-rui, He

Zhong-kang, Wu Pin-xian, Lu Dong-long, Chou Shi-chun, Chou Yan-feng, Lin Ping-jing, Lin Yuru, Lin Zhe-wei, Fan Yi-lin, Hong Jun-yue, Hong San-da, Hou Wen-qin, Gui Xiu-yuan, Chen Mei-xiu, Chen Bo-yang, Chen Yuan-ji, Zhuang, Jiang-long, Bi Hua-kun, Huang Shu-yu, Huang Hong-wen, Huang Guo-ting, Huang Bo-sheng, Huang Huai-ying, Huang Jian-wen, Huang Yiqun, Zeng Xin-nai, Ye Jiang-hong, Yang Fu-ren, Yang Zi-wen, Cai Xing-hua, Liu Mu-yu, Lu Yu-

dian (based the surname stroke order)

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

Art design and printing: Wish Creative Design Co., Ltd.

+886-2-2553-6152

The first printing: July, 2021

ISBN 978-986-531-306-7 GPN 1011000824 Price: NT\$500 Selling locations:

GovBooks (Songjiang Store): No.209, 1F, Songjiang Road, Zhongshan District, Taipei City, 104472

Tel: +886-2-2518-0207 / Fax: +886-2-2518-0778 Internet Bookstore: http://www.govbooks.com.tw

Wunan Books (Taichung main store): No.6 Zhongshan Road, Central District, Taichung City, 400002

Tel: +886-4-2226-0330 / Fax: +886-4-2225-8234 Internet Bookstore: http://www.wunanbooks.com.tw

Copyright © Directorate General of Highways, Ministry of Transportation and Communications. All rights reserved. No part of this publication may be reproduced without the prior written permission of the Directorate General of Highways. Please contact the DGH Secretariat at +886-2-2307-0123 for more information.

國家圖書館出版品預行編目(CIP)資料

交通部公路總局年報. 109 = Directorate general of highways,MOTC annual report. 2020/林福山, 劉 雅玲總編輯. -- 初版. -- 臺北市: 交通部公路總局, 民110.07

公分 中英對照

ISBN 978-986-531-306-7(平裝)

1.交诵部公路總局 557.32

110009557









108234臺北市萬華區東園街 65 號電洽: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)

www.thb.gov.tw





GPN: 1011000824 定價:新臺幣 500 元