

## Appendix 1

# **“HooWave Resilient Township & Waterfront Landscape Design and Construction Supervision” Prospectus of commissioned service project**

## **I. Introduction**

### **1. Project background**

#### **1) Origin**

#### **(1) Building a resilient city paradigm for Taiwan in response to future extreme climates**

Faced with climate abnormalities in recent years, previous urban water conservancy projects have been unable to respond to the challenges brought by extreme climates, such as sudden downpours or droughts. It is important to design an urban space combining “runoff allocation” and “detention on site” strategies to control the urban environment in response to floods and droughts under future extreme climates, and reinforce the environmental relationship as humans and the waters are separated. It should also build Taiwan’s urban characteristics with prospective basic water environment projects that integrate riverbank culture, local literature and history, local characteristics, industrial resources, and people’s needs to the overall urban planning in order to drive urban and rural development.

#### **(2) Building a water environment for safety, culture, ecology, and aesthetics in response to the modern development trend**

In order to bring innovation to traditional water conservancy projects that focus on flood control of watercourses, this project intends to optimize the spatial landscape, humanistic beauty, landscape ecology, and local revitalization of water conservancy projects and their surrounding areas through comprehensive and cross-field design integration, so as to build an amenity-oriented environment and amenity

space. By breaking through the traditional thinking of watercourse management, this project intends to solve local problems or regional development bottlenecks relating to water by design thinking and design innovation. It also attempts to build a resilient city that co-exists and creates with water, integrating “water and safety”, “water and environment” as well as “water and culture”, and an aesthetic paradigm of surrounding areas of rivers to promote the riverbank stitching development vision of Taiwan.

This project further intends to allow Huwei Township, which often suffers from floods a “resilient city”, to combine the functions of “runoff allocation” and “detention on site”, and improve and adjust the river environment through paradigmatic riverbank stitching. The surrounding areas of Huwei Sugar Factory River Section of Beigang River (Pinghe Flood Detention Pond to Xingnan Bridge), Huwei Sugar Factory River Section of Anqing Channel (Alley 93 of Guangming Road to Zhongshan Road), and Pinghe Flood Detention Pond are connected with the local cultural heritage (e.g., alcohol tanks, warehouse group, factories, Huwei Railway Bridge, and Tongxin Park). The goals are to build an urban activity space with “water and culture” and create a friendly riverbank stitching environment, so that the relationship between rivers and residents is no longer cut off by dikes, flood barrier roads, and neighboring land.

## 2) Project goals

In order to overall improve the river environment and achieve the vision of “water and safety”, “water and environment”, as well as “water and culture”, the objectives of this project are as follows:

### (1) Water and safety

**To carry out multi-purpose design with public land and space, and reduce the urban flooding damage with the strategies and measures of “runoff allocation and detention on site”**

It is important in this proposal to introduce the strategies and measures of “runoff allocation and detention on site”, based on public urban land or facilities, such as pedestrian walkways, bikeways, parking lots, campuses, libraries, and swimming pools, to create cities with flood resilience.

## **(2) Water and environment**

### **To create a resilient water environment, and build an eco-friendly design paradigm through low impact strategies.**

Surrounding ecological environments were not considered in the early hardware construction of water conservancy facilities, and a large number of cement works breaks or impacts the water environment and ecology. This proposal shall integrate the landscape, history, and culture around riverbanks, and to create good links between natural ecology and water conservancy projects through the integration of nature, space, ecology, water quality optimization, or water recycling by design. This proposal shall put forward the idea of making the maximum number of people enjoy the riverbank or landscape design so that the relationship between rivers and residents is no longer be cut off by dikes, flood barrier roads, and neighboring land.

In addition, based on the design principle of low impact development (LID), this proposal shall build resilient water environments in cities and towns by respecting species diversity in the design, reducing resource loss in the project, protecting water resources, maintaining habitat quality, introducing an environment-friendly design to cope with different natural disasters, interacting with the nature, showing local characteristics by design, adjusting water and integrating water-related environments.

## **(3) Water and culture**

### **To integrate with local history and culture, and combine water and culture to build urban characteristics.**

The proposal shall conform to the urban plan of Huwei Township,

integrate existing plans of the entity, integrate riverbank memories, local culture, history, and industrial resource connections in the resilient city through the cultural context and spatial connection planning, and connect all types of cultural heritages (alcohol tanks, warehouse group, factories, Huwei Railway Bridge, and Tongxin Park) of neighboring areas, so as to create the urban image of “water and culture”, new recreation space and landmark.

## **2. Reason for commissioning (reason for unable to execute the project and adopting the lowest bid) and difficulty in project execution**

In addition to water conservancy engineering, this project needs to integrate with professional technology in aesthetic urban space planning and design, riverbank surrounding landscape construction, eco-friendly design, humanities and arts, and cultural landscape. Due to the lack of experience and manpower, the Water Resources Agency plans to commission a contractor/supplier with professional technical abilities to carry out overall planning, design, and supervision of this project. In order to balance the project execution efficiency and quality, the lowest bid is inappropriate. Moreover, in order to attract first-class domestic and foreign contractors/suppliers, the Water Resources Agency intends to commission a professional and technical contractor/supplier by means of restricted tender to select a professional and technical contractor/supplier publicly and objectively through international competition.

## **II. Referenced past projects**

Water Resources Agency’s commissioned the service project - “Administrative project for the action plan of guiding river design into water culture innovative strategies and spatial aesthetics”.

## **III. Commissioned projects and contents**

This project aims to improve flood resilience and introduce the concept of riverbank stitching to Huwei Township, carry out an overall plan and design and

supervise the riverbank stitching. Moreover, it aims to build a paradigmatic area integrating multiple fields, such as water conservancy, design aesthetics, ecology, landscape, culture, and urban development. The project tasks are as follows:

#### 1. **Overall planning:**

The overall planning of downtown Huwei, Huwei Sugar Factory and its surrounding area, Beigang River, and Anqing Channel aims to improve the flood resilience of Huwei while achieving the stitching of urban context, regional development, historical culture, landscape ecology, and riverbanks. The project proposal shall present a design master plan integrating with the aesthetics of urban public space, and develop major project plans for complex projects and items of the entity of this proposal. Under the framework of the design master plan, many sub-plans can be developed to provide a reference for the competent entity to promote follow-up works in the future.

The concept of the master plan will be presented in a written form by the tenderers in the first phase of the project drawing competition.

##### 1) Planning scope:

The scope of the master plan is shown in Figure 1, including the riverbank and landscape ecology of the urban planning area in Huwei Township, Huwei Sugar Factory, Pinghe Detention Basin, Beigang River (Pinghe Bridge to Xingnan Bridge), and Anqing Channel (Pinghe Flood Detention Pond to Zhongshan Road).

##### 2) Work items and contents:

###### **(1) Data collection, investigation, and analysis**

1. The proposal shall collect, investigate and analyze the basic data needed by the project, such as hydrology, physiography, land use, culture, ecology, water resources utilization, of potential disaster history and cultural assets, and analyze the flood risk, blue-green network conservation and riverbank stitching of Huwei Township.
2. The proposal shall collect and analyze master plan data, and discuss

related laws and regulations.

## **(2) Topics, visions, and objectives**

The proposal shall analyze the flood risk, blue-green network conservation, riverbank stitching, cultural context, and spatial aesthetics of Huwei Township as a town with flood resilience capability. It shall also explore the current situation and the effects of climate change, and propose a project balancing spatial aesthetics and flood resilience for the resilient city master plan of the whole region and key areas. The proposal seeks to develop a multi-dimensional overall plan co-existing with water for the urban texture, activity behaviors, and cultural landscape of built-up areas, underdeveloped, and undeveloped areas within the planned scope.

## **(3) Propose improvement and adaptation strategies and measures**

### **1. Strategies and measures concerning flood risks**

In response to the effects of future extreme climates, the proposal shall consider the concurrence of territorial space planning, land use, and potential flood disasters. It shall analyze how to implement the flood control concept in the spatial planning of Huwei Township, and develop the strategies and measures of “runoff allocation and detention on site” to improve the overall land disaster resistance capacity.

### **2. Strategies and measures concerning blue-green network conservation**

The proposal intends to adopt nature-based solutions (NBS), habitat construction, water quality improvement, and environmental and ecological basic flow maintenance to enhance habitat improvement and connect blue (water area) and green (land area) ecology in Huwei Township.

### **3. Strategies and measures concerning riverbank stitching**

Riverbank and landscape stitching break the traditional path and

equipment configuration. On the premise of considering public safety, the proposal shall put forward creative ideas to break down the barrier between people and the river, build an open, blended, and diversified featured urban riverbank. Therefore, upon completion of the project, there will be a tree-lined landscape, breaking the image of the site at the beginning of the project, making the overall environment greener during construction, and encouraging people to get close to and enjoy the riverbank actively.

#### **A. Developing the riverbank and landscape environment for the Beigang River**

The proposal shall plan the surrounding environment around the riverbank of Beigang River (including the high riverbank) and Huwei Railway Bridge, which is a county-level relic, within the area from Beigang River Pinghe Flood Detention Pond to Xingnan Bridge, as well as the public land of the high riverbank on both sides of Beigang River.

Based on enhancing the original ecology and returning to the natural landscape, under the principles of LID, maintenance of ecological and species diversity, and habitat protection, the proposal shall put forward the landscape planning of low-density planting and environmental adjustment, so that people can see the landscape of Beigang River when passing the embankment road.

#### **B. Environmental construction for Anqing Channel riverbank stitching**

The proposal shall plan the overall landscape series along Anqing Channel and the overall river landscape of Anqing Channel from Pinghe Flood Detention Pond to Zhongshan Road (about 2,800 m, see Figure 2) and of the uncovered culvert as a paradigmatic section of urban cultural riverbank. It shall put forward the water quality purification program to rebuild the close

relationship between Anqing Channel and people based on riverbank stitching, make people willing to get close to the creek and create a recreational path for the urban creek.

### **C. Landscape integration for the surrounding area of Pinghe Detention Basin**

The proposal shall be based on the existing footpath around Pinghe Flood Detention Pond and the surrounding green area, analyze and reorganize the footpaths around Anqing Channel and Beigang River to create a friendly environment through overall planning.

## **4. Strategies and measures concerning the integration of cultural context and spatial aesthetics**

- A. The proposal shall integrate riverbank memories, local culture, history, and industrial resource connections in the resilient city through the cultural context and spatial connection planning, take the construction of Huwei as the core, and connect the river and neighboring areas for overall improvement and adjustment.
- B. The proposal shall introduce water culture innovative strategies and link the spatial aesthetic nodes of rivers and cities, including the flood resilience of public open space (e.g., Tongxin Park).
- C. The proposal shall put forward the circulation and landscape planning as well as rainwater and sewage recycling of Huwei Sugar Factory, including cultural heritages, such as recycling planning and space image integration of the sugar factory, old warehouse group, alcohol tanks, sugar railway, and dormitories (see Figure 3).
- D. The proposal shall put forward the overall landscape of historical buildings of landmarks, such as Huwei Railway Bridge and alcohol tanks, build new public activity space (including night lighting planning), so as to show the design thinking of “water and culture”



and create the core highlights of spatial aesthetics into river design.

**(4) Holding at least two sessions of public hearings**

At least two meetings or activities shall be held, explaining the implementation of the planning, discussing with public and private sectors, organizing public participation and collecting opinions (summarize different aspects and subjects according to actual needs, and manage them together or separately).

**(5) Division of labor and maintenance management planning**

1. After the development of strategies and measures, the tenderer shall clarify the roles of all units and people during execution, and make suggestions on the division of labor for all units.
2. The tenderer shall estimate the operation model, management model, and charging mechanism of riverbank landscape space and consider the measures for desilting during the follow-up management.

**(6) Holding 1 result seminar**

**(7) Other matters to be handled in cooperation with the entity**

1. The project results shall be shown by planning drawings, including overall layout drawings, perspective simulation drawings (including at least day views, night views, and other major space drawings designated by the entity), and representative cross-section drawings.
2. The tenderer shall make 3D simulations to show the master plan.
3. The tenderer shall attend explanation sessions of the project.
4. The tenderer shall, as required by ceremonies, explanation sessions, and seminars held by the entity, provide colorful drawings mounted with hard boards, including urban planning layout drawings, planning description analysis and perspective drawings. The tenderer shall give presentations (including preparation of presentation materials) and prepare materials related to the project as required by the entity, and the entity may require the contractor/supplier to report matters related to this contract from time to time.

5. The entity may, according to the actual needs, require the leader to attend important activities, major meetings, or tasks of the project in person (authorized representatives may be appointed with the consent of the entity in special cases).
6. The tenderer shall create an overview animation of three versions, which are 30 seconds, 1 minute, and 5 minutes in length.
7. The tenderer shall edit a film about their performance results. The photos and films taken during the performance of the contract shall be edited into a film at least 8 minutes in length, and a 3-minute film of distilled version shall be edited for the entity.
8. The tenderer shall produce 100 albums (at least 50 pages, including editorial design and art, color printing, paper over 150 pounds) and 20 CDs of their results.

## 2. Design

According to the master plan of Huwei, or the plans of the following areas in the master plan which have not been fully completed, the project shall be designed according to the riverbank stitching and spatial aesthetics design plan agreed by all parties (the total project scale is estimated to be NTD 450 million). The design concept of the riverbank stitching will be used in the presentation and model by the tenderer in the second phase of the project drawing competition.

### 1) Project scope:

The design scope is shown in Figure 4, and described as follows:

- (1) The right side of Huwei Riverbank of Beigang River (Pinghe Flood Detention Pond to Xingnan Bridge) and flood barrier road, about 3,370 m, and the public land of the right high riverbank, about 20 hectares:** Provided the embankment of Beigang River meets the flood protection standards and the existing embankment height is not reduced, the design concepts are to design embankments to make the circulation of people and vehicles allow the maximum number of people to enjoy

the riverbank landscape, and to create the high riverbank landscape environment under the principles of low impact design (LID), maintenance of ecological and species diversity, and habitat protection.

**(2) Anqing Channel (Alley 93 of Guangming Road to Zhongshan Road), about 1,200 m:** The design concepts are to rebuild the relationship between people and river through this project, use the creek as a paradigmatic river for the future riverbank stitching in Huwei, put forward a short-term water quality purification solution, and create a comprehensive amenity-oriented recreation space in combination with landscape design.

**(3) Surrounding green area of Pinghe Detention Basin, about 5 hectares:** The design concepts are to connect Beigang River and Anqing Channel, and focus on ecology landscape in design.

2) Work items and contents:

The number, format, and printing specifications of result reports (including editable electronic files) and electronic documents submitted during design shall be handled according to the requirements of the responsible entity and the project management unit. The task contents in this phase shall include at least:

**1) Survey on current situations**

The detailed base survey, detailed geological surveys, drilling and tests, existing planting survey, other detailed surveys in tender documentations, tests or surveys or other detailed surveys, tests or surveys, or other detailed surveys necessary to carry out the proposal shall be included to determine the rationality and feasibility of the design.

**1. Design scope and peripheral surveys on topography, hydrometeorology, and underground pipeline**

A. Surveys on sewerage connections, drainage culverts, drainpipes, or

other contents necessary to complete this project shall be included. The survey area shall extend at least 25 meters from the base (including the scope of the landscape).

B. Topographic maps (including topography, geomorphology, cadastral maps of construction land, or relationship and location in urban planning, with the scale depending on needs) shall be surveyed. Basic data of hydrology, meteorology, and original buildings shall be collected and analyzed. Basic design drawings, outline specifications, and detailed design principles shall be developed. Various materials, wages, and unit prices shall be surveyed and analyzed. Control survey, alignment survey, horizontal survey, profile, and cross-section survey, boundary pile lofting, construction control pile laying, embankment pile lofting and laying, coordinate data setup shall be included.

## **2. Survey on geological drilling of the base**

A. The geological drilling survey shall be conducted, and the survey, analysis, and evaluation report shall be submitted in accordance with the requirements of the external inspection, license application, and the responsible entity's review required by this project.

B. The geological drilling survey shall be conducted according to design requirements on locations, types, foundation depths of buildings. Sufficient boreholes, drilling surveys, sampling, tests, and analyses shall be carried out. According to the properties of site strata, the standard penetration test (including split-spoon sampling), compression test, penetration test, direct shear test, and triaxial compression test shall be conducted to obtain the required soil design parameters and carry out future design, analysis, and construction.

C. The geological survey, analysis, and evaluation report shall be written and verified by licensed technicians. The report shall include a geological drilling description, an overview of

stratigraphic distribution, stratum engineering properties (analysis on test data and suggestions on soil parameters), groundwater distribution, suggestions on excavation retaining methods, excavation stability analysis, bearing capacity analysis, and settlement analysis. The drilling results shall be documented in the engineering geological exploration database system of the Central Geology Survey of the Ministry of Economic Affairs, and columnar section drawings of borehole geology shall be printed (including the test results of general physical properties) and included in the report.

D. The contractor/supplier shall conduct field surveys, tests, and analyses in accordance with construction technology codes and actual needs. In case of inadequate existing geological survey data, the contractor/supplier shall conduct a survey and submit two copies of the result report verified by professional technicians after each task is finished to the entity for future reference. The cost shall be included in the service charge, and the entity shall not pay.

### **3. Survey on current environmental situations**

A. Base survey and topographic map data collection

B. Surveys on base geology, soil, and groundwater level in wet and dry seasons

C. Relevant conditions regarding base hydrology, geography, meteorology, and cultural history

### **4. Survey and planning on the urban project or other related projects**

Existing plans to be integrated and other integration plans proposed by the entity shall be studied and surveyed, and plans shall be analyzed and integrated.

### **5. Other necessary surveys for the design and construction**

#### **2) Basic design stage**

1. **The basic design drawing book including but not limited to (the**

**drawing scale is specified by the entity):** index, basic design drawings (such as plan, elevation, and section drawings), base survey map, topographic map, geological histogram of the base, drawing of stratigraphic profile and groundwater level, drawing of falsework, base-related drawing (including support types, and component sizes must be marked), buildings and their environment configuration planning design drawing, structured system design drawing, electromechanical system design drawing, landscape design drawing, water purification planning design drawing, street design drawing, index system design drawing and perspective simulation drawing.

2. **The basic design report including but not limited to (the drawing scale is specified by the entity):** engineering material evaluation and comparison, evaluation and comparison of building types and construction methods, evaluation and comparison of special building plans, evaluation report of seismic countermeasures for buildings, evaluation report of seismic countermeasures for buildings, evaluation report of anti-corrosion countermeasures for buildings, circulation of people and vehicles, review of barrier-free facilities and environment, general design plan, evaluation of main engineering material plan, material specification, lighting plan, landscape plan (including planting, landscape drainage, paving, lighting, planting and landscaping), traffic demand analysis and evaluation, index system, maintenance management plan (based on the project characteristics, the necessary functions shall be designed to reduce maintenance management costs and manpower upon completion), falsework description, construction planning development, outline specification, project schedule (including overall anticipated schedule and milestones, divisional schedule), design calculation, quantity calculation and project cost estimate (at least including the sub-divisional budgetary estimates for major projects; the contents

shall be calculated in accordance with the itemized work estimation and quantitatively calculated in “unit, ton and square meter”, to avoid being calculated by “one equation”), annual and monthly project budgets, procurement strategies and principles of tender division, and development of tender division schedule (at least including tender division contents, procurement strategies and schedule plan).

3. Drawings and reports are required by other authorities.
4. Other drawings and reports show the key points in this phase of investigation.
5. Plans shall be analyzed, compared and evaluated (including value engineering research and analysis) as required by the entity, to help the entity make incisions.
6. The work items and contents in this phase may be increased or decreased according to the scale or nature of the project and actual needs (including those to be changed or revised as required by laws).
7. The tenderer shall submit phase results, attend investigation meetings and give presentations.
8. The original survey data and research data shall be transferred to the entity when the basic design report of this project is approved.
9. Other technical services related to the basic design and specified in the project contract.

### **3) Detailed design period**

1. **The detailed design drawing book** including but not limited to (the drawing scale is specified by the entity): index, base survey map, topographic map, geological histogram of the base, drawing of stratigraphic profile and groundwater level, drawing of falsework, lofting graph, safety monitoring drawing, detailed basic design drawing (including support types, and component size must be marked), detailed building design drawing, node drawing and construction drawing, detailed structured system design drawing, node

drawing and construction drawing, component size and material construction drawing, electromechanical system design drawing and node drawing, equipment node drawing and construction drawing, equipment/pipeline layout plan, detailed landscape design drawing, node drawing and construction drawing, detailed flood storage and drainage design drawing, node drawing and construction drawing, profile and cross-section profiles and node drawings of roads and drainage facilities, detailed road design drawing, node drawing and construction drawing, detailed index system design drawing, node drawing and construction drawing, and perspective simulation drawing.

2. **The detailed design report** including but not limited to:

A. Specifications of construction outline and materials

- (a) Functions, specifications, inspection (test) items, test specifications, and necessary reference brands and models
- (b) The functions, efficiency, and technical specifications of materials or equipment shall be properly developed. The quality and performance shall meet CNS standards. Domestic products are preferred, with quality and performance requirements marked on building materials or equipment specifications, and forms specified in detail. If CNS standard products are not used, or imported products or patented construction methods are adopted, sufficient reasons shall be presented and entity approval shall be obtained.
- (c) For any relevant regulation, the construction specifications of the Water Resources Agency shall be adopted. If the Water Resources Agency has no construction specifications, the Public Construction Commission's "Construction Specifications for Public Works Construction" shall prevail.

3. Preparation of **divisional plan, divisional schedule, and**



**construction progress** (including but not limited to the expected construction progress of all divisional projects) (including overall schedule and milestones).

4. **Design calculation, structural stability analysis, earthwork excavation calculation, and road drainage calculation.**
5. **Preparation of traffic improvement plan during construction**
6. **Analysis on the effects of construction on adjacent buildings and review and explanation on facility protection of adjacent buildings**
7. **Maintenance management (manual) plan** during operation (based on the project characteristics, the necessary functions shall be designed to reduce maintenance management costs and manpower upon completion).
8. **Quantity calculation and project budget**, including but not limited to:
  - A. Project contents, items, descriptions, detailed prices, and unit price analysis. The budget shall be prepared by the “PCCES” operation system of the Public Construction Commission.
  - B. The project or material quantity shall be estimated or prepared in accordance with the format prescribed by the entity. The size and position shall be indicated in detail for reference of the entity.
  - C. If the budget is calculated by one equation, a separate itemized detail list shall be included.
  - D. The falsework shall be budgeted under the following principles:
    - (a) If the project proposal involves the cost of occupational safety facilities, the designer shall explain and budget the occupational safety facility cost of the falsework in the contract. Quantifiable items shall be quantified as far as possible. Only those that cannot be quantified can be calculated by one equation, but the task contents shall be explained in the specifications and drawings.

- (b) The cost of falsework for engineering interfaces in different areas shall be clearly divided and listed in the construction tender.
- (c) The list of building material and equipment brands shall be submitted when the budget is submitted.
- (d) Inquiry results of important materials and equipment.
- (e) Annual and monthly budgets of the project shall be submitted when the budget is submitted.

E. Drawings required by other authorities.

F. Other drawings showing key points of the investigation in this phase.

G. During the design period, analysis, plans shall be analyzed, compared and evaluated (including value engineering research and analysis) as required by the entity, to help the entity make incisions.

H. The tenderer shall attend detailed design result review meetings and give presentations.

I. Upon the completion of the detailed design, when the project budget is submitted, all design drawings in A3 size, original engineering design drawings, and original sheets shall be submitted to the entity, accompanied with copied computer files and drawing files, in the format specified by the entity. In addition, design drawings (including master plan and original drawings) and bottom project price estimates shall be verified by legally licensed architects or professional technicians.

J. Other technical services related to detailed design and specified in the project contract.

#### **4) External inspection, license application, and the responsible entity' review**

- (1) In accordance with the project schedule, the tenderer shall be responsible for legal external inspections, license application (including excavation permit), and the responsible entity's

review, and for the preparation of submitted data, application documents, and presentations. The aforementioned inspections shall be completed before the tender announcement.

- (2) All drawings for approval in this phase shall be submitted to the entity for future reference. The number, format, and printing specifications of the report and electronic documents shall be handled according to the requirements of the entity and the project management unit.

#### **5) Other matters needing attention**

According to the objectives of this proposal, the project design and the verification of professional engineer shall be conducted as follows:

- (1) The location plan, plan drawing, profile and cross-section drawings, earthwork drawing, detailed design drawing, structural design drawing, structural calculation, hydraulic calculation, and other necessary drawings for project design or required by the entity shall be prepared, and detailed graphic data and calculations shall be made. 3D simulation drawings, 3D animations, display models shall be made as required by the overall presentation and highlights for an explanation. Size, scale, illustrations, material specifications, and construction instructions shall be specified in all detailed design drawings.
- (2) The contractor/supplier shall review the above-mentioned design drawings according to the Public Construction Commission's "Collection of base maps for fundamental public works" and the Ministry of the Interior's "Building Technical Regulations". Any deficiency shall be made up by the contractor/supplier. In addition, construction or material specifications shall be prepared in accordance with the requirements of the Water Resources Agency, including functions, specifications, inspection (test) items, and test specifications.
- (3) The tenderer shall prepare the project budget (including a detailed

budget, unit price analysis, quantity calculation, material specifications, structural calculation, various construction specifications, project schedule, and proposed construction period), and divide the tender as required by the owner. The task items in the budget shall be coded in accordance with the regulations of the Public Construction Commission, with an overall accuracy of at least 60%.

- (4) The building materials and construction methods shall be selected on economic and practical principles, according to the Public Construction Commission's "Construction Specifications for Public Works Construction" (integrated engineering technology information at [www.pcc.gov.tw](http://www.pcc.gov.tw)). Any deficiency shall be made up by the contractor/supplier. The concrete and reinforcement specifications of the latest version issued by the Water Resources Agency shall be adopted.
- (5) The contractor/supplier shall be responsible for preparing the application materials for the project review (or permit) by the entity. For example, for construction land acquisition and evaluation, the contractor/supplier shall, as required by the entity, set the boundary markers and help the local entity survey the land for division and measurement.
- (6) The tenderer shall assist in obtaining necessary building licenses, water, electricity, and telecommunication engineering design drawings which comply with the government's laws and regulations. If imported goods, patented products, or special construction methods are selected, the reasons shall be specified and the advantages and disadvantages shall be analyzed to obtain the approval of the entity (owner). For example, in order to maintain the quality, in design, designated brands shall be chosen, and at least 3 brands shall be specified, marked with "or equivalent" and respectively listing the models. The engineering material brands shall be true. If the quality

standards are different or prices vary widely, the name, telephone, and address of the contractor/supplier inquiring the prices of designated brands shall be listed and submitted to the entity, accompanied with the budget. The tenderer shall provide equivalent product brands and their information before using them. The technical service provider shall review whether their functions, efficiency, standards, and characteristics meet the design requirements, provide review opinions and supporting documents (including price analysis), and abide by regulations and procedures for matters needing attention in accordance with Article 26 of the Government Procurement Act.

- (7) The contractor/supplier shall sign on the drawings and sheets upon completion of the contract and have them legally verified, which shall be the same as those verified by other professional technicians according to laws. The above drawings and sheets include budget, design drawings, codes, specifications, and other documents to be submitted as required by laws and contracts.
- (8) The tenderer shall alter the engineering design and prepare the budget for the altered design.
- (9) In case of land expropriation, land boundary lines (piles) shall be clearly defined, and land division and pile position delivery shall be conducted as required by the local affairs office (at the time of pile delivery, photographs or films of the current land use shall be taken and the results shall be delivered to the entity).
- (10) The operation time and standards of the electromechanical devices, flood warning, and evacuation measures shall be defined.
- (11) After the flood, damaged locations may be recovered.
- (12) The feasibility of tender inviting in the most advantageous manner after similar projects shall be estimated.
- (13) The effects of the analysis on adjacent buildings and the review of protective facilities shall be explained.

- (14) The detailed engineering design drawings shall be drawn: the plan, elevation, detailed section drawing, geological section map, interior and exterior decoration, mechanical and instrument control equipment specifications and system drawing, and landscape drawing of necessary structures, as well as design details of other ancillary works.
- (15) Detailed drawings of equipment and systems of architecture, civil engineering, structure, green photoelectric cells, lighting, mechanics, instrument control, electrical engineering, and fire protection.
- (16) The structural calculation shall be made and design data shall be provided: if the contractor/supplier uses a computer for structural analysis, the name and function outline of the software shall be used as the reference for review by the entity. Moreover, the program data, such as input, output, reference data, computational formula, and their sources shall be clearly specified in the calculation sheet.
- (17) The surrounding interfaces, overall landscape engineering configuration drawing and detailed design drawing (written and graphic data of Beigang River, Anqing Channel, local images, entrance images, planting design, color and pavement plan, circulation planning, lighting, and projection mapping shall be provided to the entity for reference) shall be provided, and whether to set up landscape artworks shall be discussed.
- (18) The earthwork excavation calculation of various facilities and utilization plan of surplus earth shall be provided.
- (19) The main materials and equipment specifications shall refer to the contractor/supplier sheet and catalogue. The brands, models, reference unit prices, inspection (test) items, test specifications, and contact information of more than three irrelevant contractors/suppliers shall be taken as examples. Exclusive products

and patented construction methods shall be actively submitted to the entity for approval, and procurement methods shall be recommended and not concealed. The regulations and procedures for matters needing attention shall be abided by in accordance with Article 26 of the Government Procurement Act.

- (20) Construction specifications and instructions for civil engineering, structure, architecture, and electromechanics shall be made, including the general list of material inspection (required proposals for the main technical people, machines, and tools of steel structure shall be included if steel structure is used), according to the “Enforcement Guidelines for the Construction Specifications of Public Works Construction”.
- (21) The anticipated project schedule shall be prepared (including the overall construction plan, anticipated fund demands, and network diagram).
- (22) A project budget shall be prepared in sextuplicate, according to the owner’s requirements on tender division. (According to the “Construction Specifications for Public Works Construction”, and item number and the Public Construction Cost Estimate System (PCCES). The budget is prepared in the format stipulated by the entity, including the detailed budget, unit price analysis, bill of quantities, material calculation, and supervision plan).
- (23) In the case of an application for a building license, miscellaneous license and fire protection, water, and electricity equipment drawing examination to the responsible entity, the contractor/supplier shall cooperate in handling the application in accordance with the regulations (for any design result shall be modified after being reviewed by other competent authorities, the contractor/supplier shall cooperate unconditionally).

- (24) Tenderer qualifications shall be recommended.
- (25) Project tender documentations shall be prepared (draft project contract, design drawing, blank tender sheet, construction specifications, and codes shall be in sextuplicate, together with one copy of original design drawing and one secondary master copy (including data of drawing files compiled by computer software and of the project budget), and each entity shall hold one copy. The budget shall be verified by legally licensed professional technicians (for example, the design and supervision of electromechanical, mechanical, instrument control, and electrical equipment shall be verified by professional mechanical and electrical technicians).
- (26) The tenderer shall determine the project planning and design period according to the project scale and characteristics, analyze potential construction risks, prepare safety and health drawings and specifications in accordance with the occupational safety and health regulations, and quantify the safety and health budget.

**6) Assist in tender and tender decision**

- (1) The tenderer shall prepare tender documentations for each division according to the tender division strategy approved by the entity, and submit them for investigation within the time limit specified by the entity.
- (2) The tenderer shall assist in project tender opening, review, and decision (including attending the pre-tender meeting).
- (3) The tenderer shall submit the bottom project price estimate and blank tender sheet according to the approved design results.
- (4) The tenderer shall help the entity for tender division and tender inviting, including attending the pre-tender meeting, design, and construction sessions.
- (5) Preparation, explanation, modification, or supplement of tender documentations.



- (6) Review and consultation of the qualifications of tenderers, subcontractors, and equipment contractors/suppliers.
- (7) The tenderer shall assist in tender opening, tender evaluation, and selection.
- (8) The tenderer shall assist in signing the project contract.
- (9) The tenderer shall assist in tender invitation, tender opening, tender evaluation, and tender decision.
- (10) Recommendation and review of alternatives.
- (11) In case of any failure of tender, the tenderer shall unconditionally review and revise its design results within seven days after the notice by the entity, and shall not claim for enhancing the contract price, performance period, or other rights.
- (12) If the project contract and tender documentations are submitted, it is necessary to verify whether the project contract is consistent with the tender documentations and whether the unit contract price is adjusted in accordance with the provisions. If there is no error after the verification, stamps shall be at the place where the pages meet in the project contract and the tender documentations, and documents verifying there are no errors shall be issued.
- (13) After the design is completed and approved by the entity, electronic files (such as CAD files) of contract drawings shall be submitted to the entity after the tender decision.
- (14) Other technical services related to tender invitation and tender decision and specified in the project contract.
- (15) The contract project, quantity, unit price, and equivalent products shall be negotiated and approved.

### **3. Supervision**

#### **1) Project scope:**

The supervision scope is shown in Figure 4, and described as follows:

- (1) The right bank of Huwei Riverbank of Beigang River (Pinghe Flood Detention Pond to Xingnan Bridge) and flood barrier road, about 3,370

m, and the public land of the right high riverbank, about 20 hectares.

(2) Anqing Channel (Alley 93 of Guangming Road to Zhongshan Road), about 1,200 m.

(3) The surrounding area of Pinghe Detention Basin, about 5 hectares.

2) Work items and contents:

(1) **Before construction:** the “Directions for Construction Supervision by the Water Resources Agency, Ministry of Economic Affairs” shall prevail.

(2) **During construction:**

1. Supervisors shall be dispatched to stay at the site, to supervise whether the construction side of the project carries out the construction according to the contract and design drawings, and to check the performance of the contract.
2. A supervision office shall be set up, and qualified supervisors shall be dispatched to stay at the site and implement the supervision plan.
3. The full-time project supervisors who enter the construction site shall stay at the site during the construction.
4. The supervisors who stay at the construction site shall not be changed in principle. If necessary, they shall be changed only upon approval of the entity and after the completion of handover.
5. All construction items shall be inspected according to the supervision plan, so as to complete the construction quality inspection record. In case of any deficiency, the construction side is required to make improvements within a time limit.
6. According to the supervision plan, the factory certificates, inspection documents, test reports, specifications, and effective date of the construction side shall be inspected in details for on-site comparison and sampling inspection. The sampling inspection results shall be filled in the quality sampling inspection record. In case of any deficiency, the construction side is required to make improvements

within a time limit. The major deficiency shall be notified to the entity, so as to help the entity track and control.

7. The supervision report for this project shall be prepared.
8. The appropriate circulation shall be planned and recommended for the project construction.
9. The construction plan (at least including construction equipment and manpower), construction drawings, quality control plan, anticipated schedule, construction network drawing, construction details, equipment samples, trial run plan, training plan, operation and maintenance manual, and forms of other operations shall be reviewed and can be submitted to the entity for approval according to its regulations to urge the contractor to execute. The above construction plan and quality control plan must be investigated by “quality control personnel”.
10. The qualifications of major subcontractors and equipment contractors/suppliers shall be investigated.
11. The lofting, construction reference measurement, and other measurements of the construction side shall be verified.
12. The construction side shall be supervised to implement site safety and sanitation, traffic maintenance and environmental protection, and comply with the soil and water conservation law. Construction safety shall be checked.
13. The whole process of the project safety monitoring shall be supervised.
14. The construction side of this project shall be supervised and inspected for the quality management of materials and equipment.
15. Verification and management of performance progress and review of performance evaluation and valuation
16. The “construction progress report” submitted by the construction

side of this project shall be reviewed when the construction side applies for estimation, and the “checklist for quality control documents” shall be completed and submitted to the entity for estimating the construction side.

17. Design doubts shall be reviewed actively during construction, and handled according to the provisions after being submitted to the entity for an explanation.
18. The performance progress of the construction side shall be checked, the performance appraisal and valuation shall be inspected, and verification and valuation investigation shall be conducted according to the regulations to complete written record.
19. The contents, specifications, and effective date of (divisional) inspection, material samples, factory certificates, inspection documents, and test reports put forward by the construction side shall be reviewed, for on-site comparison and sampling inspection. The sampling inspection results shall be filled in the quality sampling inspection record. In case of any deficiency, the construction side shall be notified to make improvements within a time limit.
20. The daily or monthly reports submitted by the construction side, as well as the daily supervision reports, weather reports, and monthly project reports prepared by the construction side, shall be signed and approved.
21. Monthly reports shall be submitted to the entity before the 5<sup>th</sup> of each month, which shall contain at least the following matters. Presentations shall be given if necessary:
  - A. Abnormities in task matters, task progress, number of workers, and working hours in the phase of design and construction before this time shall be explained and analyzed, and countermeasures shall be taken.

- B. Special attention shall be paid to the task to be implemented, progress, number of workers, and working hours in the phase after this time.
- C. The tenderer shall attend site coordination meetings (at least once a week) and crash meetings, and propose feasible crash proposals, presentations, and plans.
22. All construction items shall be inspected according to the supervision plan, so as to complete the construction quality inspection record. In case of any deficiency, the construction side shall be notified to make improvements within a time limit.
  23. The construction side shall be supervised to establish a quality management system and develop independent checklists.
  24. The “independent checklists” signed by the quality control organization leaders or site leaders of the construction side shall be inspected.
  25. All quality control documents and records shall be properly kept and filed for future reference.
  26. The professional engineering shall be coordinated with matters, the project construction shall cooperate with the operation, and interface coordination shall be conducted with other projects.
  27. The design or prescribed drawings, or doubts in specifications shall be explained, and construction consultation shall be provided.
  28. The surplus resource (including surplus earth and stones or construction mud) of this project shall be investigated and supervised within 20 days after the construction side proposes the surplus resource (including surplus earth and stones or construction mud) disposal proposal, and then placed in the actual receiving and processing place.
  29. According to the instructions of the entity, review data such as progress, construction period, and budget enforcement, and supervision or presentation data such as superior construction quality

inspection, guidance, inquiry, and coordination, shall be provided regularly or irregularly.

30. For altered project design, the suggestion, evaluation, drawing and calculation change, and investigation shall be put forward.
31. Affairs to be handled shall be in accordance with the “Construction Contract Template of the Public Construction Commission”.
32. Coordination and integration of the interface of contract performance.
33. Suggestions on and processing of contract change.
34. The tenderer shall assist in the settlement of disputes arising from contract performance.
35. The tenderer shall assist people in public protests, disaster rescue, or pipeline relocation.
36. When the superior unit conducts the inspection, architects or technicians of the supervision unit shall cooperate and make explanations on the site (in accordance with Article 5 Paragraph 3 of the “Operational Rules for Construction Inspection Units”).
37. The tenderer shall be responsible for supervising the construction side to test the equipment, make adjustments, improve defects and complete the written record.
38. The tenderer shall investigate the construction side to manage materials and quality, inspect construction materials and equipment, and provide early warning information on quality, progress, and construction interface integration to the entity.
  - A. The tenderer shall investigate materials completed by the contractor, and the factory certificates, submitted data, inspection documents, and test reports of materials and equipment provided by the contractor.
  - B. The tenderer shall examine and approve the certificates of materials and equipment, and recognize the inspection reports and test results (including tests entrusted to outsourcing units).

C. The tenderer shall conduct factory inspection of electromechanical equipment and assist in on-site supervision of electromechanical equipment.

D. The tenderer shall produce and supervise landscape artworks (if any).

39. Other matters shall be done by supervisors in accordance with the construction laws and regulations.

40. Other matters shall be done in accordance with the project contract.

41. Matters that shall be submitted to the entity for reference according to the acceptance standards in laws and regulations and accepted under the assistance of the supervisor.

**(3) After completion:**

1. The tenderer shall help the construction side to obtain completion certificates after completion and before acceptance and to deliver water and electricity according to the design results. The entity may agree to issue the settlement and acceptance certificates after the completion inspection.

2. The tenderer shall develop the acceptance standards according to laws and regulations, submit them to the entity for reference, and assist in acceptance.

3. The tenderer shall supervise the construction site to prepare and investigate the completion report and settlement data, complete the completion verification before the preliminary inspection, and report to and assist the entity in an official acceptance.

4. The tenderer shall investigate the project completion settlement, confirm the completion date, and provide the review data of the construction period according to the project contract.

5. The completion settlement, as-built drawing, and settlement documents shall be investigated according to the time limit, method, and requirements specified by the entity.

6. After the completion acceptance of the contract project, the supervision report (the contents are project overview, construction supervision, schedule control and coordination, quality management, construction, safety, hygiene and environmental protection, quantity statistics and analysis, review, and suggestions) in the format designated or approved by the entity, and includes the execution process and results of the supervision plan and quality plan.
  7. Important documents shall be compiled during the supervision (including photos in all phases of construction) and submitted to the entity for storage.
  8. The electromechanical equipment testing and commissioning shall be supervised.
  9. The as-built drawings, project settlement details, and other settlement data specified in the contract shall be investigated.
  10. A file system shall be established to provide electronic records of files.
  11. Before the completion acceptance, supervision reports provided by the construction side, such as the management and maintenance plan, equipment operation and maintenance manual, and supervision and construction process test records, shall be supervised and investigated, and then handed over to the accepting unit.
  12. The tenderer shall provide necessary assistance for this project together with the entity, and offer services until the project is fully accepted.
  13. The tenderer shall help to settle disputes arising from the contract performance.
  14. Matters that shall be done in accordance with the project contract.
  15. The settlement or drawings after acceptance shall be modified and prepared.
- 3) Other matters to be handled together with the entity:
- (1) The tenderer shall help to solve technical issues in construction



- according to the terms in the contract.
- (2) The tenderer shall alter and verify the project design together with the owner.
  - (3) The tenderer shall supervise the equipment functions and conduct running tests together with the owner.
  - (4) The tenderer shall operate the equipment and conduct operation management together with the owner.
  - (5) The tenderer shall participate in and assist in the project supervision or inspection by the entity or superior entity.
  - (6) Some tasks shall be fulfilled according to the “Directions for Construction Supervision by the Water Resources Agency, Ministry of Economic Affairs”.
  - (7) The tenderer shall be responsible for establishing various engineering reporting systems (including data required by the project supervision system, such as daily supervision reports, level 3 quality control data system, sheets, and occupational safety and health inspection lists).
  - (8) The supervision plan shall be developed together with the project design budget according to the “Directions for Construction Supervision by the Water Resources Agency, Ministry of Economic Affairs”.
  - (9) In accordance with Article 6 Paragraph 1 on the engineering certification, stated in Letter Gong-Cheng-Chi-Tze-No. 10200167470 issued by the Public Construction Commission on May 9, 2013: Those designing, supervising and verifying public works and the competent entity shall specify the designed, supervised and verified project or contents in the tender-inviting documents commissioning design and supervision services, and stipulate that the successful tenderer shall submit its execution plan of design, supervision, and verification and then implement it with the consent of the competent entity.
  - (10) Services provided upon project completion:

1. The contractor's proposed equipment, facility operation manual, and operation management shall be investigated.
  2. The contractor's engineering drawings, design alteration, and as-built drawings shall be investigated.
  3. The contractor's project settlement data shall be investigated.
  4. The detailed task items and quantity shall be examined according to engineering drawings and specifications.
  5. The project settlement shall be investigated.
  6. The project shall be accepted and verified together with the owner.
  7. The contractor's warranty and guarantees shall be investigated.
  8. The tenderer shall help the owner to hand it over.
- (11) Technicians shall verify the project according to the "rules for professional technicians to verify public works".
- (12) The project presentation shall be prepared before the project contract is signed (drawings or slides, calculation files).
- (13) The tenderer shall cooperate with the project verification or examination of the entity or superior entity (according to the "Directions for Construction Supervision by the Water Resources Agency, Ministry of Economic Affairs" and "Operational Rules for Construction Inspection Units", the designer shall dispatch people to attend the on-site session for description).
- (14) Altered design, change quantity, and fund increase shall be conducted as required by the project or as instructed by the entity.
- (15) The estimate shall be reduced, and the altered design and modified construction budget shall be submitted to the entity for approval.
- (16) The supervision plan shall be submitted before the project contract is signed.
- (17) The construction plan and quality plan provided by the construction side shall be investigated.

- (18) The lofting, construction reference measurement, and other measurements of the construction side shall be verified.
- (19) The electromechanical equipment testing and commissioning shall be supervised.
- (20) The tenderer shall help to settle disputes arising from the contract performance.
- (21) During the construction of the project, if design alteration is needed, the measurement for design alteration shall be unconditionally and the design alteration budget shall be prepared.
- (22) The tenderer shall participate in and cooperate with project supervision or verification by the entity or superior entity (according to the “Operational Rules for Construction Inspection Units”, the tenderer shall attend to explain)
- (23) The tenderer shall assist in carrying out altered design, altered quantity and fund increase/decrease as required by the project or as instructed by the entity, and prepare altered design and modified construction budget for approval of the entity.
- (24) During the service period, the contractor/supplier shall designate specific people as the contact window of the entity. If there is any personnel change for any reason, the contractor/supplier shall provide replacements and report to the entity for approval.
- (25) The sources of reference data and books used by the contractor/supplier in design shall be specified, and the entity may require the contractor/supplier to provide a copy for reference and verification if necessary.
- (26) Where the project design drawings are patented, the contractor/supplier shall provide the data, such as patent benefit analysis, previous performance, and patent number, in proposed detailed design drawings 15 days before submission to the entity for

approval. Without approval, the data shall not be used. If the time limit is disclosed before the expiration, it shall be deemed as expiry. The regulations and procedures in matters needing attention shall be in accordance with Article 26 of the Government Procurement Act.

(27) Matters shall be handled according to the “Directions for Construction Supervision by the Water Resources Agency, Ministry of Economic Affairs” and “Regulations for Supplier Quality Control by the Water Resources Agency, Ministry of Economic Affairs”.

#### **IV. Nature of project**

**This proposal is in accordance with the labor procurement under Article 7**

#### **Paragraph 3 of the Government Procurement Act (please select directly)**

- Professional services (refer to services providing specialized knowledge or skills, including law, accounting, finance, administrative affairs, medical care, health care, epidemic prevention or pest control, culture and arts, research and development, social welfare, and other services providing specialized knowledge or skills. )
- Technical services (refer to feasibility studies, planning, design, supervision, project management, or other services related to technology provided by engineering technical consulting firms, technician firms, architect firms, and other natural or legal persons providing technical services by laws.)
- Information services (refer to services related to computer software or hardware; including overall planning, system integration, system audit, system management, network management, software development, software verification, software maintenance, hardware maintenance, hardware operation, machine room facility management, backup services, network services, consulting, database construction, data processing, data input or training, and promotion services. )
- Others (not the above-mentioned commissioned services, and those who put forward plans in the format of this proposal shall specify the nature of this proposal.)

#### **V. Project period and itemized work schedule**

Project period: from the date of tender decision to December 15, 2025.

#### **VI. Budget amount**

1. Prize of the international drawing competition

A two-phase evaluation and selection are adopted, with the total prize of NTD 3 million:

1) Phase 1: a written selection will be conducted mainly based on the overall planning and design concept of the project scope. A total of 5 contractors/suppliers will be selected and each will be awarded with NTD 200,000 as the prize, totally NTD 1 million.

2) Phase 2: an on-site presentation and model selection will be conducted mainly based on detailed design plans in design and supervision. The first winner will get the right of priority to negotiate, the second winner will be awarded NTD 1.2 million and the third winner will be awarded NTD 800,000, totally NTD 2 million.

2. Charging method of commissioned services

The total package price method shall be adopted, the planned procurement cost is NTD 51 million, including the master plan fee of NTD 18 million and the design supervision fee of NTD 33 million.

## **VII.Expected benefits and results**

1. Expected overall benefits and results

1) Build paradigmatic highlights of water conservancy projects and establish benchmarks for water conservancy projects

This proposal takes Huwei Township as the benchmark to build a “resilient city”, to use it as a paradigmatic highlight of the integration of water conservancy project and design, and promote it to various water conservancy projects of different sizes in the country.

2) Effectively reduce flooding problems in areas with high flooding potential

The “resilient city” master plan integrates the strategies and measures of “runoff allocation and detention on site” of Anqing Channel, and greatly reduces the flooding problems for urban residents in heavy rain, so as to enhance the capacity of the land to store flood instead of flood control, and effectively protect residents from the threat of flooding.

3) Integrate local history and culture, and create unique urban characteristics of water and culture

The proposal will drive the development of business, industrial innovation activities of Beigang River, Anqing Channel Sugar Factory Section, Zhongshan Road, and the old central line of Huwei, and build the new recreation space and landmark with the urban image of “water and culture” to create a “resilient city” and achieve the vision of “riverbank stitching”.

4) Enhance the willingness of domestic and foreign high-quality contractors/suppliers to participate in Taiwan’s water conservancy projects in the future

This technical service procurement can improve participant capabilities of engineering technology, administrative management, coordination, and operation, and improve the planning capabilities of domestic water conservancy engineering and overall spatial landscape planning through cooperation with international professional contractors/suppliers, so as to enhance the willingness of future contractors/suppliers to participate in water conservancy projects.

## 2. Expected annual benefits and results

2022-2023: this proposal collects, investigates, analyzes and evaluates basic data within the scope of the base in the master plan, develop planning and design concepts with spatial aesthetics and flood resilience, and puts forward the planning and design program with spatial aesthetics and flood resilience, so that Huwei Sugar Factory River Section of Beigang River and neighboring areas can become a paradigm of innovative strategies and spatial aesthetics for introducing water and culture into river design, and the new recreation space and landmark with the urban image of “water and culture” can be built.

2024-2025: this proposal conducts subsequent design and supervision according to the planning results, build the riverbank stitching of Beigang River Huwei Riverbank section and neighboring areas, improve the living environment quality of the overall public space, build a friendly environment of riverbank stitching, and make people get more comfortable life.

## VIII. Tender method and contractor/supplier qualifications

### 1. Tender method

#### 1) Restricted tender

(1-1) Public selection:

(1-1-1) In accordance with Article 22 Paragraph 1 Subparagraph 9 of the Government Procurement Act.

(1-1-2) In accordance with Article 22 Paragraph 1 Subparagraph 10 of the Government Procurement Act.

(1-2) Others

(2) Public tender

(3) Selective tender

(4) The written quotation or prospectus shall be obtained according to Article 49 of the Government Procurement Act. (The procurement case failing to reach the announced amount shall be feasible).

The methods specified in the “announced amount of commissioned technical services” of Article 22 Paragraph 1 Subparagraph 9 of the Government Procurement Act, “matters needing attention in authorizes’ international drawing competition of public works” and “selection and billing methods for technical service contractors/suppliers commissioned by authorizes” of the Public Construction Commission shall be adopted for the two-phase international drawing competition. The first-phase selection includes the principle of planning concept and professional technology application, and the second-phase selection includes concrete and substantial design.

#### 2) Contractor/supplier qualifications

This commissioned service plan shall be verified due to the design and supervision of public works. Any foreign contractor/supplier failing to obtain the permit according to Taiwan’s laws shall jointly tender with Taiwan’s contractor/supplier to avoid disqualifications.

The first-phase selection: contractors/suppliers are allowed not to attach joint tender documentations for the time being, and one of the following methods shall be adopted for tender:

1. Taiwan's contractors/suppliers tender individually or jointly.
  2. Foreign contractors/suppliers tender individually or jointly.
  3. Foreign contractors/suppliers and Taiwan's contractors/suppliers tender jointly.
- 3) The second-phase selection (if tenderers choose co-tenderers [up to 3 companies] in the first phase and the joint tender combination can be maintained, new co-tenderers can be increased): if one of the following tender methods is adopted, the joint tender is adopted without attaching the joint tender agreement in the first-phase selection shall attach the following matters in the phase:
1. The following contractors/suppliers that have passed the first-phase investigation shall submit their tenders under their original names:
    - (1) Taiwan's contractors/suppliers
    - (2) Co-tenderers including Taiwan's contractors/suppliers
    - (3) Foreign contractors/suppliers licensed by Taiwan's laws to operate within the licensed scope.
  2. The foreign contractors/suppliers that have passed the first-phase selection and failed to be licensed by Taiwan's laws jointly tender with Taiwan's contractors/suppliers.

The contractors/suppliers not selected in the first phase may be the co-tenderer or sub-contractor of other selected candidates in the second phase.

**Please refer to Articles 64 and 68 of the Instructions to Tenderers in the tender documentations for tenderer (including foreign contractors/suppliers) qualifications and certificates that shall be attached. Copies of all certificates shall be provided. If certificates are not attached (including notaentityrizations or notarized Chinese version), they shall be disqualified.**

#### **IX. Matters that shall be compared or supported by the competent entity**

1. In the execution of this project, the contractor/supplier shall actively keep



close contact with the Water Resources Agency before and during the project to discuss working principles and guidelines and hold work meetings if necessary.

2. The existing basic data of this project shall be provided for the reference of the commissioned contractor/supplier.
3. If the commissioned contractor/supplier needs the data from the government, the authority shall offer assistance and issue letters.
4. Other supporting matters are approved by the entity.

#### **X. Other matters**

1. In this procurement case, the Water Resources Agency is the tender entity and contracting party, and the Fifth River Management Office of the Water Resources Agency is the contract enforcement entity. The contractor/supplier shall agree that drawing competition results will be handed over to the Fifth River Management Office of the Water Resources Agency after signing the contract. After the contract is signed, investigation of the master plan provided by the contractor/supplier, design, and supervision, payment request, evaluation and valuation, acceptance, contract modification, and contract dispute shall be reviewed by the Fifth River Management Office of the Water Resources Agency on behalf of the Water Resources Agency.
2. The entity may hire experts to investigate drafts, illustrations, reports, and suggestions provided by the contractor/supplier. Party A shall bear the attendance fees, investigation fees, travel expenses, and overtime meal allowance during design, supervision, and investigation, and the contractor/supplier shall bear all other expenses (attendance fees, investigation fees, travel expenses, overtime meal allowance, and venue rental charges). In addition, Party B shall bear the expenses of local explanatory meetings held together with the entity.
3. During the construction, if the actual situation is inconsistent with the design, or if it is inappropriate or impossible to carry out the construction exactly according to design drawings due to geology, ground conditions, or other

special reasons, or in order to meet the actual needs, if the entity considers or the construction side reflects that altered design is required, or if supervisors consider that original design drawings cannot be carried out, or if the site needs fail to be met, the contractor/supplier shall, within 3 days after receiving the notice from the entity, submit one copy of the proposed altered design to and explain to the entity. If the entity considers it necessary to alter the design, the contractor/supplier shall, within 7 days after receiving the notice from the entity (or within the time limit specified by the entity), complete the design alteration budget, bind drawings and documents in quintuplicate, and submit them to the entity for review.



Figure 1– Project scope

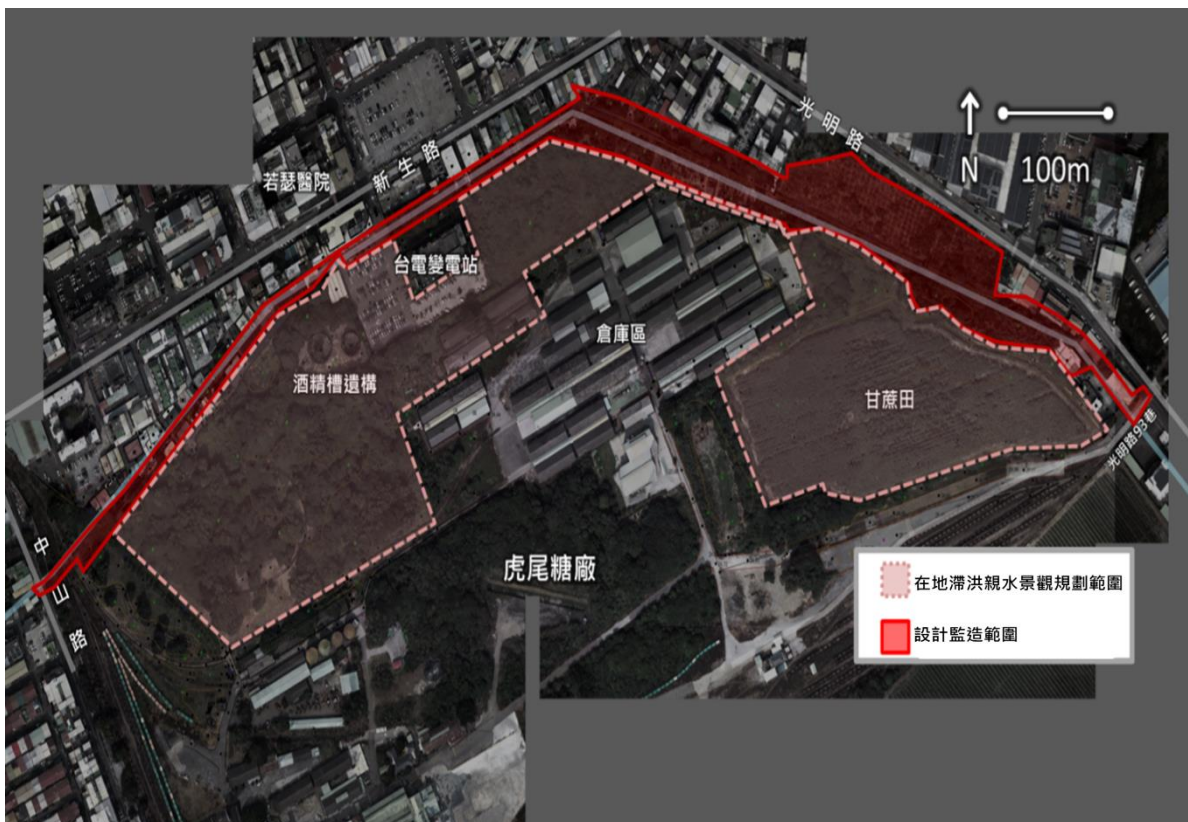


Figure 2–Environmental scope of Anqing Channel



(圖示面積僅供參考·應以實際測量為準)



Figure 3– Location map of planning area of Huwei Sugar Factory

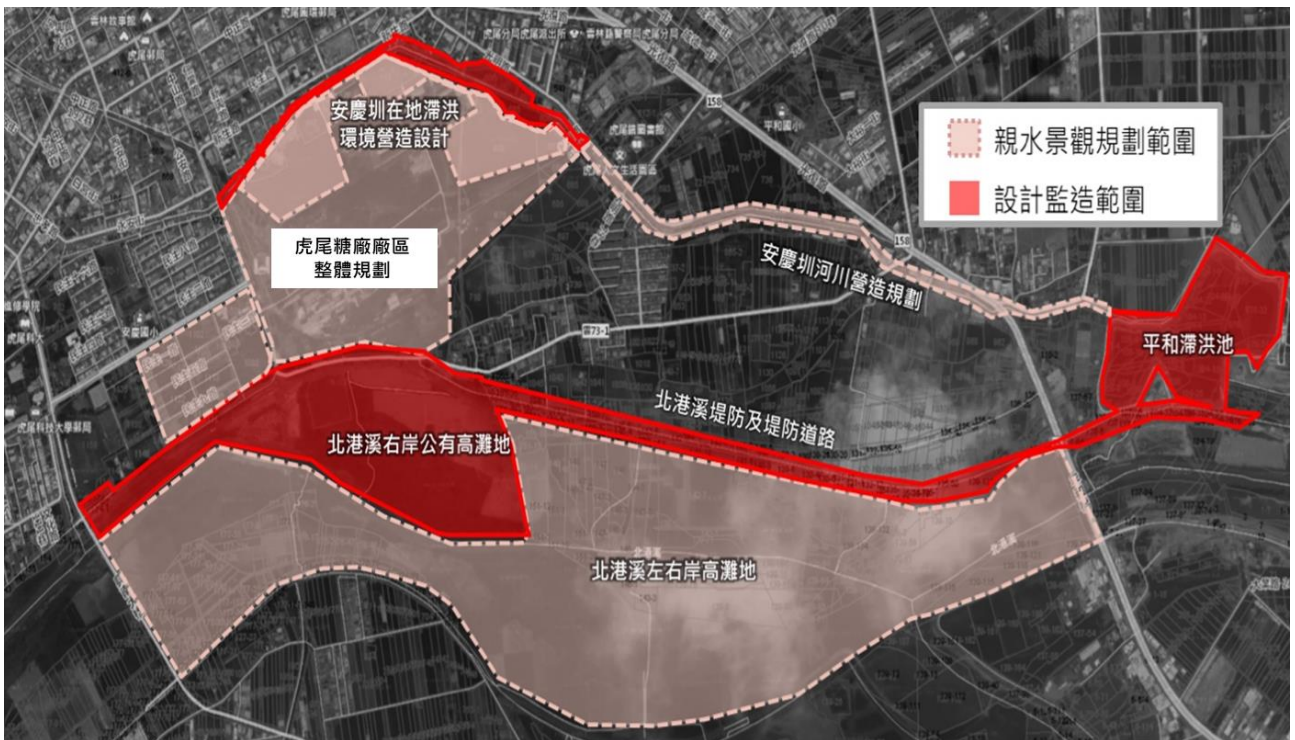


Figure 4–Scope of design and supervision of Beigang River and Anqing Channel