Public works are a vital link in municipal construction projects: the Road-Smoothing Project will be implemented between 2009 and 2014 on trunk roads across Taipei City to provide travelers with smoother roads for driving. 82.10% of the sidewalks around the city have been improved to ensure smooth walkways for pedestrians. Also, by reinforcing flood control, drainage systems and wastewater sewage, citizens are spared the inconveniences and losses caused by flooding; these reinforcement measures were also designed to create quality leisure waterfront environments to encourage more positive, environmentally-conscious interactions between citizens and river systems. The wide array of themed flower expositions successfully wowed the public and created for them a delightful feast for the senses. A growing number of service improvement programs were implemented for public utility and public housing projects to upgrade the lifestyle quality in Taipei, and to build a healthier, more hospitable city for the public.
Public Infrastructure

Public works serve as a barometer by which one measures social progress and the quality of life. Inspired by a strong existing foundation, the Taipei City Government is actively promoting a wide array of renovation and construction initiatives, including road construction, flood control, river pollution reduction, the creation of waterfront spaces, the greening and beautification of the city, public utility programs and urban land consolidation in hopes of persistently upgrading Taipei City for the better, allowing it to shine as a beacon of modern cityscape in the international community.

1. Convenient Roadway Development

(1) Expressway Systems

The total length of Taipei City’s expressway systems is measured at approximately 59.6 kilometers; the systems consist primarily of the East Ring Expressway, the West Ring Expressway, the East-West Expressway, the North-South Expressway, and the Xinyi Expressway. 43.3 kilometers of the construction have been completed by 2010.

(2) Urban Roadway Construction

The city’s railway underground eastward extension construction to Nanggang is measured at 5.4 kilometers. The project began on November 1, 1998, and it is slated for completion in August, 2011. Upon completion, the project is expected to dissolve the current blockage obstructing the northern and southern stretches of the railway, to improve local traffic flow.

The construction of Shezhi Bridge kicked off in 2008 with a view to building a more robust regional roadway network. The project consists of two stages. Stage one begins at the mouth of Chengde road, traveling along the Beidou Turnpike 13 and crossing the Keelung River to Shezhi Island’s Roadway 1-1, where it meets the Shezhi-end embankment; the section is measured at 1,260 meters with a width of 40 to 50 meters. A designated space for an advanced public transportation system has been reserved (at approximately 9 meters in width). Work has begun for Construction Bid No.1, on May 6, 2009, and is expected to be completed in June, 2012. Stage two starts west of Shezhi Island along Roadway 1-1, extending all the way to the intersection.
of Roadways 1-2 and 1-3; construction for this particular stage will begin upon the approval of the Shezhi Island Development Project.

For the Jingmei Bridge renovation project, construction has begun to connect Jingwen Street in Jingmei with Shunan Street in Xindian, employing a steel arch bridge design that crosses over the Jingmei River. The new structure is 93 meters in length and 15 meters in width; the new bridge is wider than the old structure and is expected to effectively increase the breadth of the bridge, and make up for the lack of lanes and alleviate heavy traffic. Construction began on January 1, 2009, and was completed on September 27, 2010.

2. Roadway Quality Improvement

Taipei City’s total road area is measured at approximately 22 million square meters, totaling 675 roadways (there is actually a total of 829 roadways if measured by road sections). The Road-Smoothing project, which is being implemented between 2009 and 2014, is expected to include crack fortification and fresh pavement on trunk roads of over eight meters in length once in six years. From 2009 through 2010, 3,409,096 square meters of road surface were fortified and repaved; also, 15,211 manholes were leveled to ensure that the city’s roadway surface is smoother, so that pedestrians and drivers can travel safely and comfortably.

3. Smooth Pedestrian Space

Taipei City’s sidewalks cover about 2.5 million square meters. On average, 50,000 square meters of sidewalk space are renovated annually. By 2010, 2,052,421 square meters of walkways were revamped, accounting for 82.10% of the total sidewalk area in Taipei City. The rest of the sidewalk renovation project will be prioritized in accordance with the regional environment reform programs – sidewalks surrounding government agencies and schools that are frequently used and damaged severely take precedence for repair.

4. Bridge Safety and Maintenance

At present there are 190 beam bridges, 34 river-crossing bridges, 31 vehicle flyovers, 89 pedestrian overpasses, 12 tunnels, 12 vehicle underpasses and 55 underground walkways, totaling 423 bridges in Taipei City.

(1) Renovations on Xinsheng Viaduct’s Northern Tip Access Ramp

Renovations on the Xinsheng Viaduct’s northern tip access ramp begins at the southern tip of the Zhongshan North Road and Tonghe Street intersection in the north, connected to the Zhongshan New
Bridge and the Xinsheng Viaduct, respectively, totaling 284 meters in length (including the main steel arch bridge), and 16 meters in width. The construction project began on June 1, 2008. Construction on the viaduct section was completed on October 10, 2009 and opened to vehicular traffic. The whole construction project was completed on February 15, 2010.

(2) Bridge Inspection, Maintenance and Reinforcement

Inspections were conducted on a total of 160 bridges in 2010. Inspection work on earthquake structural components and river-crossing bridges for reinforcing flood control were included as additional inspection items. Follow-up exams and re-evaluations are conducted, especially for bridges that have caused misgivings and concerns during visual assessments. For bridges requiring improvement work, as indicated by inspection results, budgets would be earmarked for maintenance and reinforcement on these bridges to ensure their safety.

(3) Underground Walkways and Flyover Enhancements

Beautification constructions were completed on two underground walkways at the National Taipei University of Technology and Gongguan (1), and three flyovers at the intersection of Xinhai Road and Xinglong Road, Longshan Elementary School and the Taipei Municipal MingChuan Elementary School. Maintenance and beautification constructions continue on the five pedestrian flyovers by Nanhu Elementary School, etc.

(4) ZiQiang Tunnel Flood Control and Beautification

The Tze-chiang Tunnel is a two-way tunnel located on Beian Road in Dazhi of Shilin District leading to Gugong Road; it is 820 meters in total length (one-way). Construction projects which have been conducted include: wall surface renovation at the entrance, interior repairs and beautification. Flood control and beautification were completed on the eastside of the Tunnel on September 9, 2009; similar projects were completed on the west side of the tunnel on December 30, 2010.

5. Common Ducts Construction Projects

The construction of common ducts ensures a decrease in road excavation, the maintenance of roadway quality, and versatile road and land uses. The Taipei City Government has announced a network of nine common ducts in Taipei in order of their construction, according to “the Common Duct Act.” To date, Route Civic Boulevard, Route New Community (the Keelung River Bend straightened area), Route Zhoumei and the Nangang Commerce and Trade Park common duct constructions have been completed and are in full operation. Common duct construction projects slated for 2010 included: Route Dadu common duct, Route Xinyi Line common duct as part of the MRT network, MRT Songshan Line common duct, and common duct construction for railway underground extension eastward to Nanggang. Common duct construction on the Fuguo Road extension line is in the planning stage.
1. Flood Control and Drainage Construction Projects

(1) Establishing an Integrated Water Control Mechanism in Taipei City

The Taipei City Integrated Water Control Management Commission was inaugurated on January 1, 2006 with the objective of launching a new water management mechanism for “retaining upstream water resources, reducing midstream flood risks, and preventing downstream flooding,” by integrating support from the government and private sectors to create a safe, cozy, pleasant and healthy eco-metropolis. Three conventions, three public awareness workshops and one preventive technology exhibition were held in 2010 to formulate six quantified, integrated flood control objectives, including urban planning, mountain areas, rainwater drainage, river flood control systems, the setup of an early warning mechanism and public awareness campaigns. The goal is to enhance flood-prevention programs and develop an effective flood control initiative, to create a robust damage-control structure for promoting a full-scale flood control system.

(2) Flood Control Engineering in Northern Taiwan

With respect to “Flood Control Engineering in Taipei” by the Ministry of Economic Affairs, Taipei City’s overall flood control program is primarily characterized by embankment construction along rivers, complemented by watercourse dredging and river management. The city’s embankment construction in the planning is measured at 131,231 meters in length. By 2010, 109,141 meters of construction had been completed, with 22,090 meters awaiting flood control embankment installation. Of this amount, approximately 1,500 meters of the Zhoumei Embankment along the Keelung River await construction; the project will be administered in line with the “Beitou-Shilin Technology Park Development Project” for completion by the end of 2015. Approximately 5,268 meters along the Guandu Embankment await enforcement, and construction will be implemented along with the Central Government’s approval of the Shezi Island Development Project. Also, about 7,210 meters of embankment between Shuangxi’s Fuxing Bridge and the Jiannan Bridge require flood-control enforcement; the assignment has been listed as a mid- to long-term project. Budgets have been earmarked for protection installations from the Wanshou Bridge to the Wanfu Bridge along the Jingmei River, at 1,550 meters in length. 400 meters of embankment construction, stretching between Bid No. 1 MRT Bridge and Wanfang Road, are slated for completion in April, 2011; 480 meters of embankment construction, running between Bid No. 2 Wanfang Interchange and the MRT Bridge, are expected to be opened for construction bids in the early half of 2011. Finally, about 6,562 meters of area from upriver Wanfu Bridge down to the provincial/municipal border await flood prevention construction. This particular stretch is blessed with a pleasant landscape; only a limited area suffers from an insufficient outlet height. However, the problem is trivial and not a concern for flood control.

(3) Rainwater Sewage Construction Projects

The total length of the city’s Rainwater Sewage Construction, including main and branch drainage lines, is 540 kilometers long. By 2010, 521.778 kilometers had been completed; the completion rate was estimated at 96.63%. In the same year, seven construction projects, including the improvements made
on the Dalong and Zhongxiao Pumping Stations Drainage Systems” were conducted to significantly ameliorate Taipei’s cityscape and bolster its drainage functions.

In order to strengthen water-level monitoring stations at the rainwater sewage network, Taipei City completed installations of 154 water level monitoring stations, two discharge gauge stations and four closed-circuit television stations for data monitoring and analysis in 2010 to effectively monitor water levels.

(4) Pumping Station Management

There is a total of 64 official pumping stations and 21 provisional pumping stations operating in Taipei City. Altogether, 398 sets of water pumps are installed around the city, totaling 2,079 cubic meters per second in pumping capacity. To strengthen flood control and drainage, and increase pumping capacity, construction (expansion) projects continued for Zhoumei, Zhoumei (1), Wenlin, Shezeng, Sanho and Changchun Pumping Stations in 2010. To safeguard the efficacy of pumping stations installed in early days, the Public Works Department did renovation work on Guting, Donghua, Zhongshan, Beixian, Zhishan, Fude and Jingzhou water pumping sets, while conducting evaluation for ameliorating noise emission at the pumping stations. Additionally, to reinforce flood control and emergency response capabilities, the Hydraulic Engineering Office of the Public Works Department hosted flood-control exercises on April 15, 2010, mobilizing a crew of 185 people and 29 mobile pumping stations to conduct simulated drills on the activation/shutoff of pumping stations and evacuation valves, and the operation of mobile pumping stations at the Beian Pumping Station, the 16th evacuation valve at the Melti Base, and Melti Riverside Park. The drills were designed to enhance disaster relief and emergency repair proficiency.

2. Reinvigorating Taipei’s Watershed Areas

(1) Wastewater Sewage Construction Projects

Pipeline construction improvements for wastewater sewage systems continued throughout the city: completion ratios for the sewage system’s primary main pipes, secondary main pipes, and the branch pipeline network were 100%, 95.30% and 83.32%, respectively. In 2010, a total of 699,906 households in Taipei City had wastewater sewage connections; pipe connection rates of door-plated households reached 65.50%; the projected users’ pipe connection rates have reached 100%, as illustrated in Figure 1. In 2010, pipe connections were completed in 41,065 door-plated households, registering 3.48% in growth rate, compared to 62.02% at year-end 2009. The city plans to jointly promote improvement measures via county/city collaboration with New Taipei City.

Government organizations, schools and the top-100 tap-water users in Taipei City are to receive priority pipe connection services. 71 units from the City’s top-100 tap-water users, 51 central government organizations (connections were completed for 22 agencies), 321 public and private schools (connections were completed for 233 campuses), and 55 public markets (connections were completed for 39 units) received connection services. Services will continue for government agencies and MRT stations throughout the city.

(2) Interception Stations: Development and Operating Status

Public Works Department set up and completed wastewater interception constructions in Liuguang and Zhongxiao (totaling 70,000 CMD in interception
capacity). There are a total of 112 wastewater interception stations in Taipei City, intercepting 360,000 CMD of wastewater. New Taipei City houses 15 such stations, and Keelung City, one. All 16 of these interception stations have been commissioned to Taipei City for operation and management. An additional seven interception facilities are in the planning in New Taipei City by 2010. Upon completion, there will be a network of 35 interception stations installed across the Tamsui River Station, effectively interception wastewater in Qingtian Interception Station, and discharged after processing at wastewater treatment plants.

(3) The Construction of In-situ Processing Facilities and Operation Status

Operations continue at Nanhu and Chengmei aerated gravel contact oxidation processing facilities and Guandu Shuimokeng Brook Artificial Wetland; a construction project for transporting discharge from the Kangning Plant to the Nanhu Facility for gravel contact treatment was completed. 15 in-situ processing facilities have been set up in New Taipei City. In 2010, Taipei City continued the construction of Zhongxiao and Guiyang aerated gravel contact oxidation facilities, with processing capacity estimated at 370,000 CMD to effectively improve the water quality of the Tamsui River.

(4) Reinforcing Wastewater Sewage Systems in Greater Taipei

The overall wastewater treatment capacity of Greater Taipei’s wastewater sewage systems is estimated to reach 1.97 million CMD (including the Bali Wastewater Treatment Plant, at 1.32 million CMD of capacity, the Dihua Wastewater Treatment Plant, at 500,000 CMD of capacity, and the Neihu Wastewater Treatment Plant, at 150,000 CMD of capacity). In July, 2010, LongXing sewerage piping inspection and repair engineering was completed to temporarily mitigate the wastewater transport demand of the tunnel prior to the completion of LongXing second sewerage piping engineering. In November, expansion was completed for Longxing second sewage piping engineering (civil engineering and electrical engineering bids) to attain dual-systemization, minimize risks, and improve operating stability.

3. Creating More Waterfront Spaces

The average pollution level of the Tamsui River’s mainstream by the Guandu Bridge, the Chongyang Bridge and the Zhongxiao Bridge has been ameliorated from “severe” to “medial” since 2008. 29 riverside parks are dotted around the city’s rivers, attracting throngs of people to participate in leisure activities. Among all parks, the Dajia Riverside Park was included as one of the four major venues in the 2010 Taipei International Flora Exposition.

Taipei’s riverside bikeways are measured at 109 kilometers in total length. Six distinct riverside bikeways are in the planning according to the variety of riverscapes and local features, so that the public can enjoy biking while feasting on the pleasant riverscapes.
1. Increasing the Park and Green Area Per Capita

Presently in Taipei’s urban planning, a total of 1,036 lots of land (including riverside parks and 39 other sites)—covering 1,976 hectares—have been reserved for parks, greening areas, plazas, and children’s playgrounds. By 2010, 821 parks (including some 42 partially constructed parks) and green areas have been developed, totaling 1,361 hectares, equaling 5.17 square meters of green area coverage accessible to Taipei citizens per capita. Table 1 shows the green area coverage per capita from 2001 to 2010.

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<th>Year</th>
<th>2001</th>
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<td>Green Area Coverage per capita (square meters / per capita)</td>
<td>4.80</td>
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<td>5.11</td>
<td>5.16</td>
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2. Park Construction (Expansions)

Some of the vital new (expansion) park projects in 2010 included: environmental regeneration engineering at Dahu Park by transforming the premises into an urban oasis that accentuates cultural, ecological, disaster prevention and lifestyle wellbeing offerings; the construction of the new Ga Lao Bie Park for integrating the existing natural resources with the nearby spaces to highlight the image of the park as a refreshing, natural haven; the construction of the No.206 Shilin Green Area, which offers the public the largest green relaxation space through the thoughtful landscaping of plants and the embellishments of nearby facilities. Finally, the construction of the No.207 Shilin Green Area, the expansion of Lohas Park, and the new construction of Mingmei Park were completed, increasing the size of leisure space for the public while beautifying the area’s landscape.

3. Road Greening and Beautification

(1) Greening Embellishments for Streets and Roadways throughout the City

Roadway embellishments were conducted on key areas, such as trunk roads in the cities, incoming and outgoing pathways connecting the neighboring cities and counties, traffic circles, traffic islands and green areas. Shrubs were planted to complement the arrangements of colorful potted flowers, and bonsai plants in these designated regions in geometric and stylish patterns in gradational layers to create a rich variety of visual effects along the roadways. Also, the city worked in keeping...
with the unique environmental makeup and plant features, using ground cover plants, perennial plants, flowering shrubs, long-lasting herbaceous flowers and lawns to replace flowering plants to cut costs.

Also, street trees have been planted along the city’s sidewalks wider than 2.5 meters; special attention was paid to planting trees in empty tree holes and renewing tree species to enhance the effects of roadside greening. In 2010, the new plant additions (replacements) totaled 940 street trees, 274,961 shrubs, 10,523 square meters of lawns and 56,236 ground cover flowering plants. Through renovating the cityscape and beautifying the landscape with plants, the city hopes to integrate “the Green Network” philosophy into Taipei’s future urban development.

(2) Cityscape Beautification

Greening efforts were made to improve the appearance of substations and gas pressurization stations – including any protruding fixtures - in parks, green areas and traffic islands to efficaciously enhance roadside landscape. These fixtures are eyesores that disfigured the overall cityscape. Using the natural beauty of plants, the city conducted a series of appearance embellishments on spaces surrounding these substations and gas pressurization stations to mitigate the negative visual impression.

Also, in coordination with drainage facilities for household wastewater sewage construction, the city embarked on construction projects to transform back alleys into pleasant gardens. For gardens that meet the criterion (more than two meters in length), back alley beautification constructions will be implemented upon the completion of user’s pipe connection constructions and repairs. 124 back alleys were given a facelift in 2010; to date, landscape improvement has been completed on a total sum of 461 back alleys.

4. Flower Exhibitions

(1) Camellia Exposition

“The 2010 Taipei Camellia Exposition-Once upon a Time” was held from January 22 through the 31, totaling 10 days, at the Yangmingshan Flower Experimentation Center, attracting approximately 30,000 visitors. The Exposition featured the different styles of camellia arrangements; roses and “rose-shaped camellias” were showcased simultaneously with the main show. The event was complemented by musical events to create a romantic, flower-watching atmosphere.
(2) Yangmingshan Flower Festival

“The 2010 Yangmingshan Flower Festival—the Spring Portrait” was held from February 26 through March 28, totaling 31 days, to attract an estimated 1.27 million visitors on Yangmingshan for breathtaking seas of flowers. The beautiful cherry blossoms and riotously blooming azaleas wowed many flower lovers. Yangmingshan is well established as one of the most popular tourist high spots among both domestic and foreign tourists alike.

(3) The Chrysanthemum Exposition at the Shilin Presidential Residence

“The 2010 Chrysanthemum Exposition at the Shilin Presidential Residence—the Feast of Chrysanthemums in Taipei City” kicked off on November 20 and continued until December 12, 2010, totaling 23 days, and drawing over 350,000 visitors. The number of Dali chrysanthemum blossoms on a single stem set a new record at 1,039 blossoms.

5. Streetlamp Construction and Maintenance

(1) Streetlamp Construction across the City

As a vital part of municipal works, city streetlamps serve to ensure convenience for nighttime activities, beautify the cityscape, prettify street blocks, maintain traffic order, prevent crimes and eliminate vulnerable public security weaknesses. In 2010, 1,500 new streetlamps were installed; for the past five years, the City’s streetlamp installation has been steadily growing at the rate of 1.6% per year. By December, 2010, Taipei City had a total of 146,791 streetlamps; the streetlamp breakdown ratio is registered at 0.15%.

(2) Nighttime Illumination Improvement for Bikeways along Riverside Parks

In considering leisure activity safety for the public, the city government installed projection floodlights atop upper platforms and embankments to enhance nighttime lighting for activity areas in parks. A total of 3,806 such lights had been installed around 28 riverside parks by the end of December, 2010.

Part 4 Robust and Comprehensive Public Facilities

1. Water Supply Facilities

(1) Continued Water Supply Network Improvements and International Awards

After weathering the draught crisis in 2002 and 2003, the Taipei Water Department has thus
formulated a 20-year, long-term water resource utilization and improvement program. In 2006, stage one of the "water supply network improvement and management" kick-started, which included four major initiatives: pipeline replacement, hydraulic gauge management, spontaneous leak inspections and efficient leak repairs. These initiatives were supported by zoned metering to inspect leaks and control effectiveness. In 2010, 92 sections of zoned metering were demarcated, 161 kilometers of pipeline replacements were completed, and 4,991 leak inspections were conducted.

In reference to success stories and examples of advanced countries, the Taipei Water Department conducted research to launch a zoned meter engineering formula befitting Taipei's metropolitan character, and selected areas where water resource management efficiency is less desirable for priority pipelines replacements, inspections and leak repairs. “Zoned Metering Engineering Application in Leakage Control and Management” produced remarkable results and was declared the winner in the Planning Category in the East Asia Regional Award Ceremony during the International Water Association Project Innovations Awards (PIA); in September, 2010, Taipei advanced a step further to win the more challenging award at the 2010 Project Innovations Awards (PIA) as the Global Winner in the Planning Category.

(2) Enhancing Water Supply Capabilities in the Nangang and Neihu Areas

In response to the substantial water demand due to the swift development of the Nangang Commerce and Trade Park, the Neihu Technology Park and many re-zoned/reconsolidated areas, MRT construction and operation, the City Government therefore planned and embarked on a Minsheng and Neihu Line water transmission pipeline project, totaling NT$1.34 billion in cost. The project began in September, 2006. The entirety of the project was designed and constructed using a 1,500mm diameter, at 7,673 meters in total length.

The Minsheng-Neihu Line water transmission pipeline construction was completed on May 14, 2010 to increase the daily water transport capacity in the region by 280,000 tons, and to construct a dual-system water supply backup for the 380,000 residents in the Neihu and Nangang areas, so that the high-tech industry in the area can focus on economic development at ease. Also, the system is connected to the water supply system in Xizhi to support water demand in the area and increase the distribution flexibility of water resources.
(3) **The 6th Water Purification Processing Facility Construction at the Zhitan Purification Plant**

In honoring the spirit of water resource sharing championed by the Water Resources Agency under the Ministry of Economic Affairs, the city government actively promotes a water supply improvement program supporting the Banqiao and Xindian areas. The Taipei Water Department worked in coordination with the project’s stage-two engineering to introduce "water diversion, purification and distribution improvement works for deploying Xindian River water supply in meeting the demand in Banqiao and Xindian areas." The 6th Water Purification Processing Facility at the Zhitan Purification Plant was built to meet that demand. Upon completion, the facility is expected to supply a daily maximum of 100.5 million tons of clear water outside the city’s jurisdiction area to improve water use safety and stability in Northern Taiwan, while enhancing operating flexibility at the Zhitan Purification Plant.

The project cost nearly NT$1.2 billion: one pretreatment unit and a rapid sand filter unit for processing 700,000 CMD of water, one clear water cistern of 50,000 tons of capacity and related facilities were in the planning. Construction began in May, 2009. It is slated for completion in mid-2013.

2. **Hot Spring Resources Management**

(1) **Implementing Hot Spring Resources Monitoring**

With a view to effectively keeping track of hot spring resources, the city government installed 30 hot spring monitoring wells. In addition to being a frame of reference for follow-up acquisition of hot springs and supply management, data collected will be combined with cultural and landscape features of hot spring resorts to establish hot spring experience facilities, so as to reinvigorate, utilize and create hot spring resources conservation and leisure parks.

(2) **Developing Hot Spring Acquisitions and Supplies, Reviewing Operating Permit Applications**

"The Taipei City Hot Springs Development and Operating Permit Application Review Commission" was established to work with the Taipei City Hot Spring Management Project and assist in the establishment of the hot spring acquisition program. The commission is in charge of issuing development permits for hot spring acquisition and supplies, and reviewing hot spring operating permit applications.

(3) **The Hot Spring Management Fund**

The Hot Spring Management Fund and Designated Account were set up to more effectively implement hot spring acquisition free expropriation and exclusive use. The Fund Management Commission is in charge of keeping the balance and safekeeping of funds, making budgets and applying for subsidies. In 2010, subsidies were provided to five organizations: the Taipei Municipal Hushan Elementary School in Beitou District, the Taipei Municipal Yi-Fang Elementary School in Beitou District, the Taipei City Hot Spring Development Association, the Shamaoshan Hot Spring Development Association of Taipei City, and the Caoshan Hot Spring Community Development Association in Beitou. The subsidies were distributed to...
facilitate hot spring resource conservation and management, promote sustainable hot spring resource development, and encourage hot spring resource conservation.

3. Natural Gas Utilities

Natural gas supplies in Taipei City come from four city gas corporations: the Great Taipei Gas Corporation supplies gas to: Zhongzheng, Daan, Xinyi, Songshan, Zhongshan, Wanhua and Datong administrative districts, and Shilin District (including just two boroughs: Mingsheng and Fuhua). The Yang Ming Shan Gas Corporation provides gas to the Shilin (excluding Mingsheng and Fuhua boroughs) and Beitou administrative districts. Shin Shin Natural Gas Corporation supplies gas to Wenshan District; Shin Hu Gas Corporation supplies gas to the Nangang and Neihu districts. By the end of December, 2010, these four corporations supplied a total of 289,105,004 million cubic meters of gas to 635,816 households, accounting for 65% of the total households in the city’s supply area.

All the gas companies in the city completed the installation of a central monitoring system successively to readily keep track of the status of each gas storage tank, gas pressure regulator station, and high-pressure pipeline gas supply, to ensure gas supply safety and gas transmission service quality. 32 gas supply regions in the service area are demarcated and emergency containment valves and pipeline network connections are deployed to ensure better disaster prevention and service restoration. Regular disaster-prevention drills are conducted on the network of pipes to improve public safety.

The four gas companies also conducted regular, automated inspections and maintenance work on various gas storage, transmission and distribution facilities, while periodically conducting pipeline inspections and replacements. In 2010, 5,545 kilometers of pipelines were inspected, and 42 kilometers of the pipes were renewed, at a replacement rate of 1.8%. Additionally, each individual gas company provides free, once-every-two-years household gas pipeline facility security checks to users. In total, 201,646 households received checks in 2010; meanwhile, the companies also strengthen user safety education during security inspections to raise awareness about – and prevent – carbon monoxide poisoning.

4. Taipower Electricity Supply and Gas Stations Safety Management

Taiwan Power Company houses three operating centers in Taipei City, servicing 110,000 households. The Taipei City Operating Center is in charge of the Daan, Zhongzheng, Zhongshan, Wanhua, Xinyi, Songshan, and Datong administrative districts; the Taipei City Southern Region Operating Center is responsible for Wenshan District, while the Northern Region Operating Center oversees the Shilin, Beitou, Neihu and Nangan administrative districts.

In hopes of reinforcing gas station management, inspections are conducted continuously on the safety management of gas stations. 79 gas stations and six liquefied petroleum gas stations received inspections in 2010. A majority of these stations successfully met safety standards; those which failed the inspections were able to rectify failings and make improvements within a short time.
housing subsidies, plus promoting uniform housing designs and expanding the Residential Service
Platform.

(1) Public House Leasing Continues

In coordination with tenants whose contracts expired for their public housing tenancy, the Taipei City
Government conducts reviews of tenant qualifications for extending leasing contracts, and public housing
leasing and notarization procedures. By the end of December, 2010, a total of 2,008 units extended their
contracts for leasing public housing units, including Zhongzheng (3 units), Wanfang C (183 units), Qiyan
(63 units), Nangang No. 1 (235 units), Maosan (104 units), Jungong (33 units), Xining (2 units), Huaisheng
(181 units), Yanping (37 units), Rongxing (32 units), Wanning (8 units), Longshan (33 units), Yanshou P (6
units), Taiwan Fertilizer (216 units), Wanning (174 units), Donghu C (1 unit), Dali Street (4 units), Jisan (6
units), Wanfang Community Center (275 units), Wanle (4 units), Donghu E (5 units), and Huachang (440
units).

(2) Providing Transitional Housing Assistance and Promoting Renovations for Old
and Decrepit Residences

In a move to maximize the benefits of the city’s residential resources, while alleviating the financial
burdens on young families in finding housing, the Taipei City Government is leasing transitional public
housing units to young families for short-term residence when the units are vacant. By the end of
December, 2010, a total of 46 units were opened up for short-term leasing, including 29 units in the
Keelung River Phase 3 Public Housing, and 17 units in the Yongping Public Housing Complex.

(3) Regulating Public Housing Community Management

In 2010, the Taipei City Government successfully assisted 165 public housing communities in setting
up community management systems (203 management commissions have been established as of now)
in accordance with statutes governing the management of apartment housing. By the end of December,
2010, 178 completed structural preparations and filed for applications with the Building Administration
Office, and 151 completed management maintenance funds for community public works.

(4) Improving the Landscape of Public Housing Leaseholds

In 2009, building front landscape beautification and environmental renovation projects were conducted
in Xining Community: landscaping efforts were taken to renovate the building front of Xining High-Rise,
the frontal view and nighttime lighting along Huanhe South and North Roads. Also, to improve the decrepit
exterior of the Wanmei Public Housing Community, new paint was applied on the walls to create the
impression of a stonewashed exterior. Waterproof and heat insulation projects were conducted as well,
making them energy-saving and CO2-neutral building structures.

(5) Comprehensive Housing Subsidy Assistance for Taipei Citizens

The Taipei City Government works with the Interior Ministry to provide housing subsidy services. In
2010, service items available included: rent subsidies (the highest subsidy was NT$ 3,600 dollars monthly
for each individual for up to one year), housing mortgage interest subsidies (as high as NT$2.2 million
for up to 20 years) and housing renovation mortgage interest subsidies (as high as NT$800,000 dollars
for up to 15 years). There were 6,572 eligible households in Taipei City for these services. Also, the city
government initiated a Happy Family Project for Young Couples that provided rent subsidies (for as high as
NT$3,600 for as long as 2 years) and housing mortgage interest subsidies (for as high as NT$2 million for
as long as 20 years). A total of 5,609 houses benefited from the project.
(6) Barrier-free Residential Spaces for “Aging in Place and Housing for All Ages”

The Taipei City Government adopts a “design-for-all” general design principle to build a living space that is accessible and user-friendly to the elderly, the weak, womenfolk and toddlers. In 2011, demonstrative renovations were conducted on a household in the Wanle Public Housing Complex. The city government also produced a CD and compiled a booklet that highlighted these achievements for promotional purposes. These plans will be made universally available to all public housing communities.

(7) Enhancing Information Transparency for the Housing Market

In keeping with the Taipei City Government’s “a Robust House-Leasing Market for Promoting Houses for Rent instead of House Purchases” policy, The city government reviewed information available on the Taipei City Residential Service Platform from the public's perspective. The city government was awarded subsidies from the Central Government to add “Central Rent Subsidy Inquiry,” “Real-Time Inquiry for Apartments for Rent in Taipei City” and “3D Simulated Housing Environment Evaluation on Apartments for Rent in Taipei City” systems. The city hopes to pioneer and build a quality service model by means of integrating various residential service resources.

2. Enhancing Land / Property Utilization

(1) Expropriation and Appropriation of Land

In light of the dense urban population and the flourishing economy, land acquisition becomes increasingly difficult as land value rises sharply. The Taipei City Government actively processes land acquisition deals needed for public infrastructure. In 2010, there were a total of 24 cases of private land expropriation, including 171 lots, and 2,152 households; the total area of which was measured at 1.6281 hectares with compensation totaling NT$1,195,836,437. The city government also completed 53 cases of public land appropriation and 122 lots with an area of 10.6244 hectares in hopes of facilitating public infrastructure implementations.

(2) Zone Expropriation

In order to expedite the completion of Taipei’s urban planning blueprint, the city government has undertaken 14 areas of zone expropriation totaling 781.17 hectares by year-end 2010. The completion of this project availed 215.40 hectares of land to construction; 565.77 hectares were earmarked for public facilities such as roadways, parks, public schools and other public facilities.

The Taipei City Government is working on Zone Expropriation projects covering the new community in Qiyuan, and Beitou-Shilin Technology Park, the total size of which was 106.91 hectares. Upon completion, 52.08 hectares of land will be available for construction projects, and 54.83 hectares will be allotted for construction of public facilities. The completion of the redevelopment is expected to increase land use efficiency, multiply land appreciation value, improve cityscapes, and fortify the overall urban development.
(3) Urban Land Consolidation

The Taipei City Government has been promoting urban land consolidation for over 40 years. The land is earmarked for public facilities needed for urban construction; the project also bears witness to the development history of various major construction projects in Taipei City, such as the Taipei 101 skyscraper, Nangang Business and Trade Park, Taipei Neihu Technology Park, the National Taiwan Science Education Center, Songshan Minsheng Community, Shilin Central Community, and Songshan Station. These projects bespeak the city’s many achievements in urban land consolidation. By year-end 2010, Taipei City had completed 945.81 hectares of property in its urban land consolidation project, constituting 45 blocks; and the total construction-ready area totaled 564.96 hectares for building purposes. The city also acquired another 380.85 hectares of property for the construction of roadways, parks, and public schools.

Urban construction projects are a great means to incentivize participation from the private sector. In addition to the infusion of plentiful funding and input from the private sector, spontaneous public participation also forges a collective public consensus and builds regional identity to encourage local construction development and prosperity. The Taipei City Government rewards landowners to initiate and organize their own unions for urban land consolidation efforts. Assistance has been provided to Yucheng in the Nangang District, the southeast side of Nangang No 1 Park, Huaisheng in Daan District, the 6-6 residences in Shilin District, Shitan Borough in Neihu District, and 12 residences in Beitou for land consolidation.

Conclusion

Public works are intimately linked to the wellbeing of the general public. The Taipei City Government champions the goal of creating a city where “the flowers are fragrant, the water is clear, and the riverfront is beautiful,” and where “the roads are even and level, and the lighting service is reliable to build an extraordinary city that's called Taipei,” so as to build a convenient, pleasant and safe roadway and bridge system, and a robust drainage and flood control facility. In so doing, the residents of Taipei can thus enjoy quality waterfront spaces, and a metropolis enriched by the sight of many vibrant, luscious gardens. The city also successfully improved sewage users’ pipe connections, upgraded lifestyles and river quality. A comprehensive and robust public works system also ensures premium lifestyle quality for Taipei residents; public housing and land acquisitions for public construction projects facilitated the successes of various public works. With the completion of each and every public works project, a new, beautiful and quality city of Taipei becomes a reality.