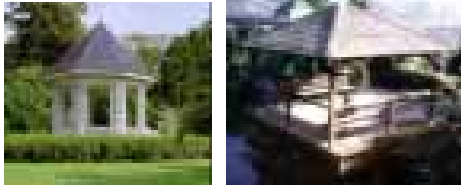


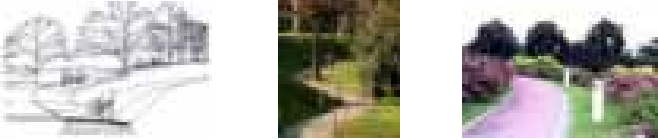

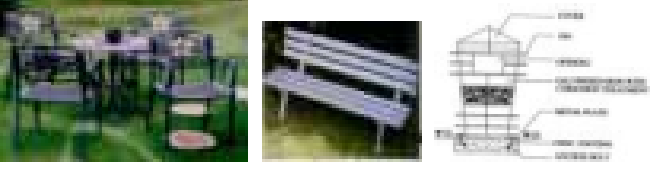
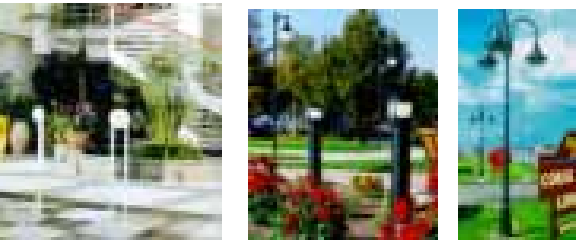
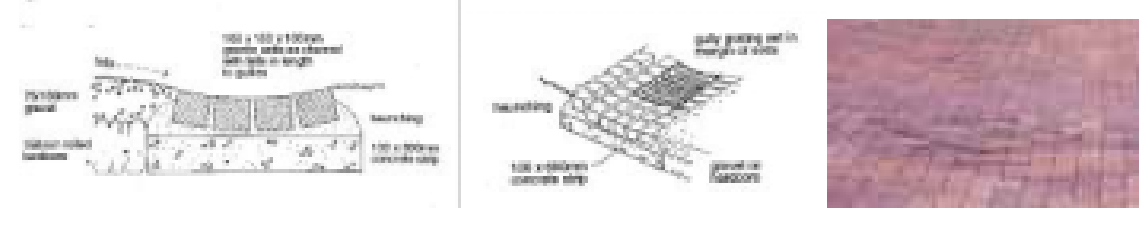
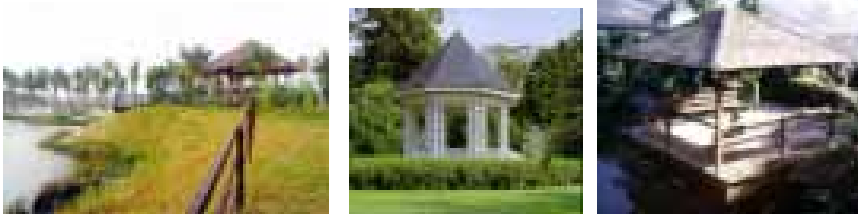
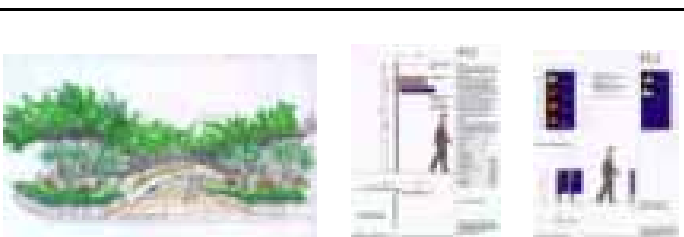
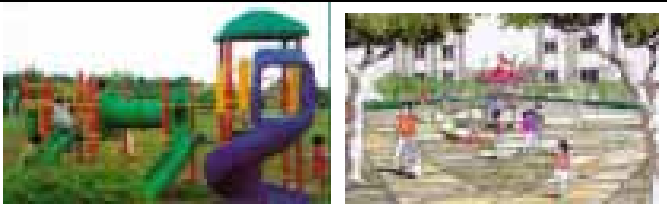

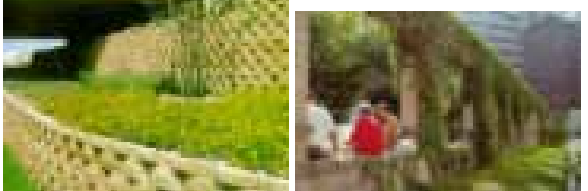

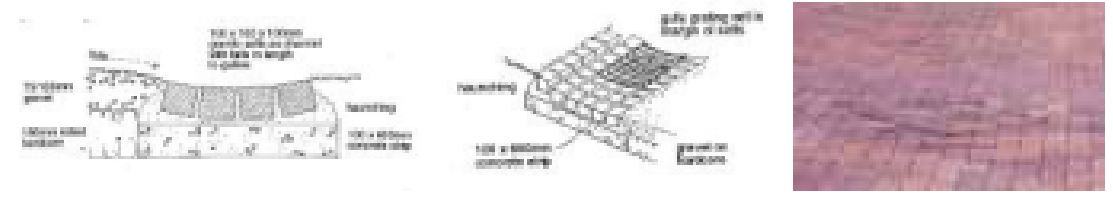









| PLANNING REQUIREMENT : LANDSCAPE | | | | | |
|--|--|--|---|---|---|
| LANDUSE | DESIGN STYLE | MATERIALS | GENERAL REQUIREMENT | USE/LOCATION | |
| <input type="checkbox"/> Office, Market, and Putrajaya Service Centre | ■ Structures and Shelter <input type="checkbox"/> Informal <input type="checkbox"/> Vernacular | – Hardwood – Concrete – Masonry – Metal | – To blend harmoniously with surrounding structure – Durable – Functional | – Plaza – Open space |  |
| | ■ Fences, Gate and Berries <input type="checkbox"/> Contemporary <input type="checkbox"/> Formal <input type="checkbox"/> Informal | – Engraved stone – Metal | – To suit architectural design – To blend naturally with surrounding environment – To follow Fencing Design Guideline Putrajaya | – Entrance – Boundary demarcation |  |
| | ■ Water features <input type="checkbox"/> Contemporary <input type="checkbox"/> Formal <input type="checkbox"/> Hi-tech | – Stone – Concrete – Metal | – Safe – Attractive – Clean | – Entrance – Plaza – Open space |  |
| <input type="checkbox"/> Residential (Condominium, Government apartment) | ■ Paving / Step, Wall <input type="checkbox"/> Formal | <input type="checkbox"/> Paving / Step – Clay brick – Concrete – Interlocking block etc | – Anti slippery surface – Max-gradient of 8% – Durable | – Open space – Walkway |  |
| | | <input type="checkbox"/> Wall – Keystone – Facing Brick – Concrete etc. | – Harmonize with surrounding environment | – Slope areas |  |
| | ■ Site Furniture <input type="checkbox"/> Contemporary <input type="checkbox"/> Elegant formal <input type="checkbox"/> Specific design for neighbourhood | – Hardwood – Metal – Concrete | – Vandalism proof – Durable – Functional – Safe | – Open space – Resting areas |  |
| | ■ Lighting <input type="checkbox"/> Contemporary <input type="checkbox"/> Elegant formal <input type="checkbox"/> Specific design for neighbourhood | – Concrete – Metal – Masonry | – Max. height 4m at open areas – Max. height 10m at roadside | – Open space – Entrance with bollard – Roadside |  |

| PLANNING REQUIREMENT : LANDSCAPE | | | | | |
|--|---|---|--|--|---|
| LANDUSE | DESIGN STYLE | MATERIALS | GENERAL REQUIREMENT | USE/LOCATION | |
| <input type="checkbox"/> Residential (Condominium, Government apartment) | ■ Drainage <input type="checkbox"/> Swales/Natural drain <input type="checkbox"/> Concealed drains | – Culvert – Concrete – Drain cover on walkway to follow walkway 's material | – To Harmonize with surrounding environment | – Where necessary |  |
| | ■ Structures and Shelter <input type="checkbox"/> Informal <input type="checkbox"/> Vernacular | – Hardwood – Concrete – Monsonary – Metal | – To blend harmoniously with surrounding structure – Durable – Safe | – Open space |  |
| | ■ Signage <input type="checkbox"/> Contemporary <input type="checkbox"/> Formal <input type="checkbox"/> Informal | – Metal – Hardwood – Masonry | – To follow Signage and Advertisement Design Guideline, PJC | – Entrance – Open space – Pedestrian walkway |  |
| | ■ Play feature <input type="checkbox"/> Integrated <input type="checkbox"/> Bright colour | – Metal – Rubber matting – Plastic | – Conform to SIRIM standard – Safe – Attractive – Durable | – Open space |  |
| <input type="checkbox"/> Open space | ■ Paving, walls and steps <input type="checkbox"/> Informal and contemporary <input type="checkbox"/> Informal and natural <input type="checkbox"/> Robust | □ Paving / Step – Clay brick – Concrete – Grasscreate etc | – Anti slippery surface – Max. gradient 8% – Durable – Accessible for disable | – Open space – Plaza – Roadside |  |
| | | □ Wall – Key stone – Facing brick – Concrete – Granite stone etc. | – Visually attractive – Harmonize with surrounding environment | – Slope areas |  |
| | ■ Site Furniture <input type="checkbox"/> Robust <input type="checkbox"/> Contemporary <input type="checkbox"/> Decorative | – Hardwood timber – Concrete – Metal | – Vandalism proof – Durable – Safe | – Open space – Plaza – Roadside |  |

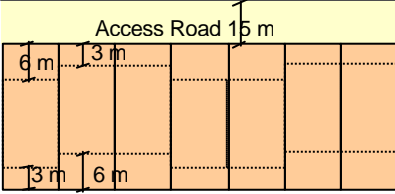
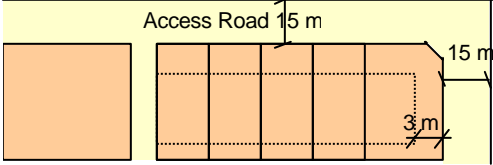
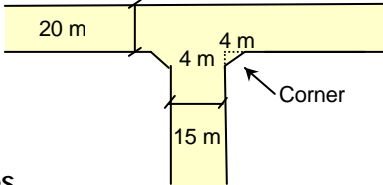
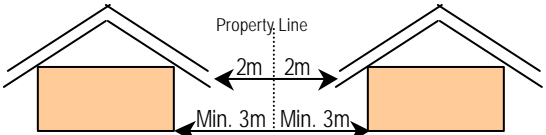
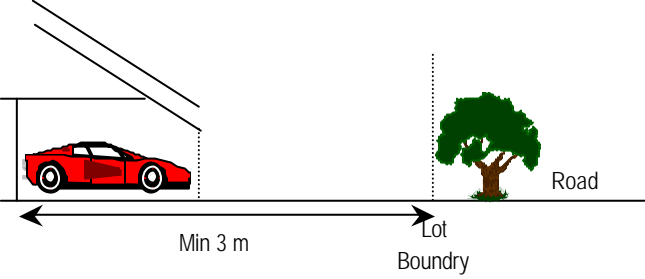
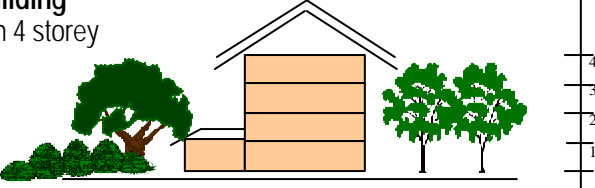
P U T R A J A Y A P R E C I N C T 11 L O C A L P L A N

| PLANNING REQUIREMENT : LANDSCAPE | | | | | |
|-------------------------------------|---|---|--|--|---|
| LANDUSE | DESIGN STYLE | MATERIALS | GENERAL REQUIREMENT | USE/LOCATION | |
| <input type="checkbox"/> Open space | ■ Drainage <input type="checkbox"/> Swales/Natural drain <input type="checkbox"/> Concealed drains | – Culvert – Concrete – Drain cover on walkway to follow walkway 's material | – Visually attractive – Naturally blend with surrounding | – Open space – plaza |  |
| | ■ Structures and Shelters <input type="checkbox"/> Contemporary <input type="checkbox"/> Simple <input type="checkbox"/> Informal | – Timber – Concrete – Metal | – Sustainable design – Proportion to surrounding scale – Durable | – Open space – Plaza |  |
| | ■ Play feature <input type="checkbox"/> Robust <input type="checkbox"/> Colorful <input type="checkbox"/> Safe | – Timber – Rubber matting – Metal | – Conform to SIRIM standard – Safe – Attractive | – Open space – Plaza |  |
| | ■ Sport feature <input type="checkbox"/> Robust <input type="checkbox"/> Colorful <input type="checkbox"/> Safe | – Timber – Rubber matting – Concrete | – Durable – Safe | – Open space |  |
| | ■ Signage <input type="checkbox"/> Contemporary <input type="checkbox"/> Formal | – Masonry – Metal | – As per Signage and Advertisement Design Guideline, PJC | – Entrance – Junction – Pedestrian – Sport areas |  |
| | ■ Water feature <input type="checkbox"/> Naturalistic <input type="checkbox"/> Contemporary | – Rock, Natural – Tile finish – Metal sculpture – Concrete sculpture | – Safe – Attractive | – Entrance – Open space – Plaza |  |
| | ■ Irrigation Strategy | Pipe reticulation from PHB and/or trucking | | | |
| <input type="checkbox"/> Buffer | ■ Planting <input type="checkbox"/> Natural <input type="checkbox"/> Informal | – Palm – Shrub – Forest species – Medium trees | – Able to Screen – Safe – Attractive | – Along Roadside – Public utilities boundary – Between TNB-Turbine area and Housing area |  |

| PLANNING REQUIREMENT : URBAN DESIGN | | | | |
|--|--|--|--|--|
| LAYOUT PLAN | BUILDING CHARACTER | HEIGHT, MASSING AND BUILDING SPACES | COLOUR TEXTURE | MISCELLANEOUS |
| <p>(i) The layout plan must demonstrate that the following elements are addressed in the design:</p> <ul style="list-style-type: none"> ▪ Development appropriate to topographical features ▪ Appropriate building orientation with respect to the sun ▪ Appropriate pedestrian and vehicular access systems ▪ Site infrastructure systems are designed in a manner which enhances site development <p>(ii) Illustrate the effective and efficient integration of the pedestrian, cycle and road systems</p> <p>(iii) Development is to be designed to work with site contours to avoid unnecessary cut and associated retaining structures</p> <p>(iv) Illustrate a high level of permeability between site uses within the Planning Block and with adjoining Planning Blocks</p> <p>(v) Illustrate appropriate site building setbacks from major traffic routes or other noise generating or potentially dangerous infrastructure</p> <p>(vi) Illustrate that the site will be developed in a logical sequence</p> <p>(vii) The layout plan should illustrate that the form of development effectively contributes to the Planning Block's sense of place and amenity with the context of Putrajaya</p> <p>(viii) Where applicable, the provisions of suraus, within apartment complexes should be a freestanding building.</p> <p>(ix) The apartment complex must include 'drop off' points for the convenience of residents.</p> <p>(x) Maximum plinth for apartment building is 60% of the site</p> | <p>(i) Avoid monotonous building designs – provide a range of housing types to meet different lifestyle choices, diversity in the marketplace and opportunity for an interesting street frontage</p> <p>(ii) Ensure that buildings are designed to respect the topographical features of the site ,eg buildings should step with steeper sites – do not cut substantial benches into steep land</p> <p>(iii) Building design should respect the amenity of adjoining and adjacent buildings and their residents</p> <p>(iv) Building design should interpret local image and character with new materials that are energy efficient</p> <p>(v) Building facades should be designed to accommodate a tropical environment</p> <p>(vi) Designers should look to the use of innovative building materials that are less maintenance intensive and more environmentally efficient</p> <p>(vii) While diversity is sought in building design, buildings should be designed with a common theme that provides a linkage to the style and nature of the development area</p> <p>(viii) Building design should ensure good living environments for residents that do not adversely impact on neighbours</p> <p>(ix) The building design should incorporate landscaping that contributes to a pleasant and safe environment and integrates well with the streetscape and adjoining open space areas</p> <p>(x) For high rise buildings:</p> <ul style="list-style-type: none"> ▪ Pedestrian spaces, courts, landscape or recreation areas should be more prominent than vehicle movement and utility spaces ▪ Vehicle parking design and location should minimise impact on adjacent dwellings ▪ Safe and convenient internal access to parking, residential and service areas | <p>(i) Building design must comply with all provisions relating to plot ratio, plinth, building height and setbacks as contained within these guidelines, and must comply with the UDG of Precinct 11 and 13.</p> <p>(ii) Spaces on any ground level should not directly overlook dwellings on adjacent land</p> <p>(iii) Ground floor levels must be responsive to pedestrian footpaths and continuity and flow between buildings</p> <p>(iv) Building design does not significantly reduce daylight to open space and habitable rooms in adjacent development</p> <p>(v) Roof pitch and overlay should be designed to meet local environmental requirements</p> <p>(vi) Roof overhang should be designed to minimise the impact on sight lines from adjacent buildings</p> <p>(vii) Buildings should be designed to encourage facade articulation and use of design elements that reduce building bulk and provide a pleasant street aspect. Any blank wall should be avoided.</p> <p>(xi) The design of free standing buildings should be sympathetic with adjoining buildings, yet provide for local identity and character</p> <p>(xii) Setbacks at ground level should provide for:</p> <ul style="list-style-type: none"> ▪ Connection between footpaths and public spaces ▪ Space for convenient and comfortable movement of pedestrians ▪ Standing areas bus stops, taxi ranks and display windows ▪ Queuing of patrons for entertainment facilities ▪ Street gradient | <p>(i) Building colours should harmonise with the predominant colours of the surrounding area</p> <p>(ii) Use of earth tones shall be encouraged</p> <p>(iii) Colours for specific building types will be subject to the approval of the Perbadanan. Pastel colours are to be encouraged</p> <p>(iv) The use of glass as building material must not be more than 50% of the total area of the façade</p> <p>(v) Use of sun-shading device to be encouraged to reduce glare</p> | <p>(i) Privacy and visual controls – overlooking to be controlled by appropriate orientation of windows and use of splay windows</p> <p>(ii) Air conditioning equipment including piping – all equipment should be contained in compartments that are designed as an integral component of the building to ensure the equipment is hidden from view</p> <p>(iii) Drying yards – building design should incorporate appropriate design for drying areas that allows for natural ventilation and light while ensuring they are hidden from public view</p> <p>(iv) Aerials and satellite dishes – in high rise buildings or multiple tenancy commercial buildings, a central reception system is to be incorporated in to the building design. On all other buildings, aerials and satellite dishes shall be located to avoid adverse impact on the amenity of adjoining buildings</p> <p>(v) Service ducting shall not be exposed on the external surfaces of buildings</p> <p>(vi) Carports and garages should:</p> <ul style="list-style-type: none"> ▪ Be designed to integrate with the design of associated buildings ▪ Not diminish the attractiveness of the streetscape ▪ Not visually dominate views of the house from the street ▪ Cover the full length of a car <p>(vii) Dwellings with green frontage must address that frontage with habitable spaces and not service areas only</p> <p>(viii) Dwelling design must provide sufficient outdoor open space that can act as an extension of the dwelling for relaxation, entertainment, recreation and children's play purposes</p> |

| PLANNING REQUIREMENT : URBAN DESIGN | | | | |
|-------------------------------------|--|---|----------------|---|
| LAYOUT PLAN | BUILDING CHARACTER | HEIGHT, MASSING AND BUILDING SPACES | COLOUR TEXTURE | MISCELLANEOUS |
| | <p>(vi) Building and landscape design in the town centre should reinforce Putrajaya's tropical character</p> <p>(vii) Building fenestration should be used to:</p> <ul style="list-style-type: none"> ▪ Shade buildings ▪ Reduce glare ▪ Assist in maintaining comfortable indoor temperatures ▪ Minimise cooling loads ▪ Conserve energy ▪ Enrich the tropical character ▪ Provide texture to building facades <p>(viii) The architectural treatment of facades and elevations avoids large blank walls – sheer walls will not be supported by PPj</p> <p>(ix) The use of glass shall not be more than 50% of the total facade surface area. The use of glass on building facade shall be accompanied by the use of sun-shading device to reduce glare</p> <p>(x) Important vistas to, from and through the centre are maintained and enhanced</p> <p>(xi) Pedestrian places:</p> <ul style="list-style-type: none"> ▪ Are designed and constructed to reinforce the character of the town centre ▪ Provide safe, convenient and comfortable movement for pedestrians and cyclists ▪ Enhance vistas and streetscapes ▪ Can accommodate outdoor dining providing pedestrian flow is not impeded ▪ Provide safe access to public transport and parking facilities <p>(xii) Signage and Advertisement to abide by the 'Signage and Advertisement Design Guidelines' for Putrajaya (SADG)</p> | <p>(xiii) Openings and setbacks are used to articulate vertical building surfaces and contribute positively to the centre's streetscape</p> <p>(xiv) Building rooftops and caps should be designed to:</p> <ul style="list-style-type: none"> ▪ Provide interest to the town centre skyline ▪ Be integrated in the design of the building ▪ Effectively cover rooftop plant and equipment <div style="text-align: center;">  </div> <p>(xv) Design of corridors between buildings to be sheltered from the sun and rain.</p> | | <p>(ix) No building should incorporate reflective glass surfaces that could create undue nuisance, discomfort or hazard to any part of the town centre or surrounding locality</p> <p>(x) The design of town centre buildings should have strong regard for:</p> <ul style="list-style-type: none"> ▪ The tropical nature of the environment and the opportunity for outdoor living and activities ▪ The impact of the sun and associated shadows – shaded areas should be designed for use around lunch times and onwards ▪ The effects of wind and rain need to be accommodated in the design of the buildings <p>(xi) For the installations of grills, residents need to abide by the guidelines on the Uniform Design and Installation of Grills for Buildings in Putrajaya (Department of Urban Services, Putrajaya)</p> <p>(xii) Any changes to the façade and design of buildings must seek planning permission for Perbadanan Putrajaya.</p> |

PHYSICAL PLANNING REQUIREMENTS PLANNING BLOCK 6 (PB 6)

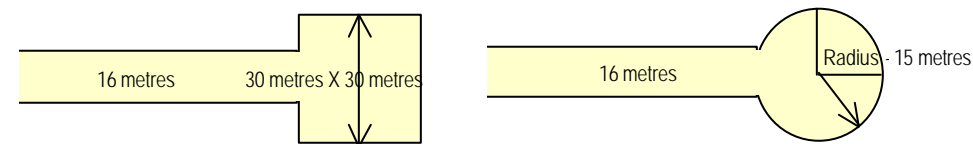
| MAIN LAND USES: | PLANNING REQUIREMENT : BUILDING | |
|---|---|--|
| KEY PROVISION | BUILDING SETBACKS | CAR PARK |
| <p>A. Residential</p> <p>(i) Permitted Types</p> <ul style="list-style-type: none"> ▪ Terrace <p>(ii) Density</p> <ul style="list-style-type: none"> ▪ Maximum 50 unit per ha <p>(iii) Composition</p> <ul style="list-style-type: none"> ▪ 80% for government use <p>(iv) Minimum Lot Size</p> <ul style="list-style-type: none"> ▪ 130 m² <p>(v) Height</p> <ul style="list-style-type: none"> ▪ Maximum 3 levels <p>(vi) Fencing</p> <ul style="list-style-type: none"> ▪ As per the Fencing Design Guidelines Manual, Volume 2, Chapter 3, page 52 <p>(vii) Layout Plan</p> <ul style="list-style-type: none"> ▪ Use the setback flexibility and building design variation to break up and vary the position of the houses. | <p>(i) Front / Rear Setback</p> <ul style="list-style-type: none"> ▪ Total setback distance for both the front and rear setbacks must total 9 metres comprised as follows ▪ Street frontage – Minimum 3 metres ▪ Rear setback – Minimum 3 metres  <ul style="list-style-type: none"> ▪ This variation in setback is only permissible within a single block of terraces and not for individual buildings. <p>(ii) Side Setback</p> <ul style="list-style-type: none"> ▪ Side setback to 15 metres road, for roads with 3 metres green buffer  <ul style="list-style-type: none"> ▪ Side setback to 15 metres road, without 3 metres buffer <p>(iii) Corner Splay</p> <ul style="list-style-type: none"> ▪ Minimum 4 metres  <p>(iv) Distance Between Roof Eaves</p>  | <p>(ii) Car Park</p> <ul style="list-style-type: none"> ▪ Min. 2 cps on site ▪ CPS to be clear of min. front setback  |
| <p>B. School Complex</p> <p>(i) Height of Building</p> <ul style="list-style-type: none"> ▪ Maximum 4 storey  <p>(ii) Fencing</p> <ul style="list-style-type: none"> ▪ As per Fencing Design Guidelines Manual, Vol 2, Chapter 11 | <p>(i) Setback</p> <ul style="list-style-type: none"> ▪ Setback from access road – 12m (min) ▪ Rear setback – Minimum 6 metres ▪ Side Setback – Minimum 6 metres | <p>(i) Car Park <u>School Complex</u></p> <ul style="list-style-type: none"> ▪ 1 cps : 8 staffs + 10% for visitors ▪ 1 mps : 10 staffs + 1 mps : 20 students (form 5 & 6) ▪ 1 BR : 50 students ▪ Bus bay : min. 6 bays ▪ Car lay-bye : min 10 for drop off / pick up |

PLANNING REQUIREMENTS : TRAFFIC AND TRANSPORTATION

ROAD NETWORK AND DESIGN STANDARD

(i) Network Type

- Spine Road - 32 metres reserve
- Local Road - 22 metres reserve
- Access Road - 16 metres reserve
- Cul-De-Sac - 15 metres reserve



(ii) Road Capacity

- Spine Road - 1000 pcu/hr/lane
- Local Road - 700 pcu/hr/lane

(iii) Junction Control Criteria

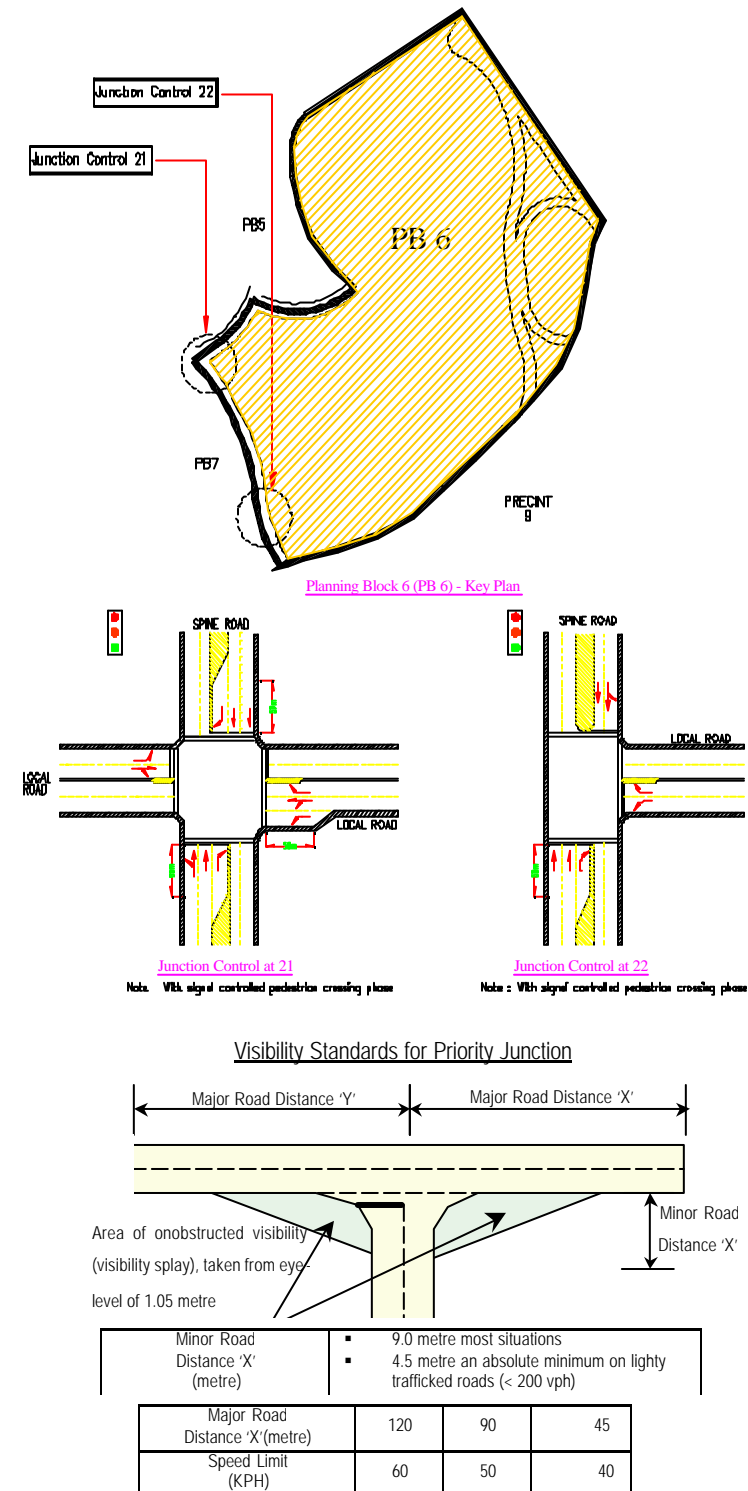
| Junction Control | Total sum of 2-way traffic on the major road and heavier approach on minor road (PCU) | |
|------------------|---|------------------------|
| | Spine Road | Local Road |
| Stop Control | up to 1500 | up to 1500 |
| Traffic Signal | Up to 4500 | Generally not required |
| Grade Separation | Generally not required | Generally not required |

(iv) Visibility Standards for Priority Junction

- Because minor road are uncontrolled. It is essential that adequate standards of visibility are achieved in the layout and that sight distances take account of the speed of traffic on the major road. The standards for providing clear visibility for minor road traffic are set out in the figure given

(v) Transport Design Guide for Putrajaya

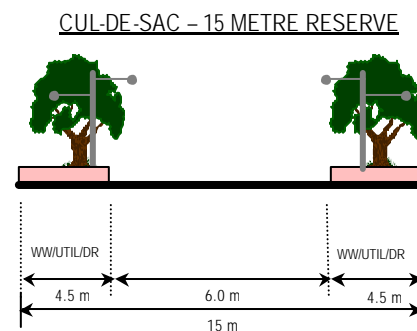
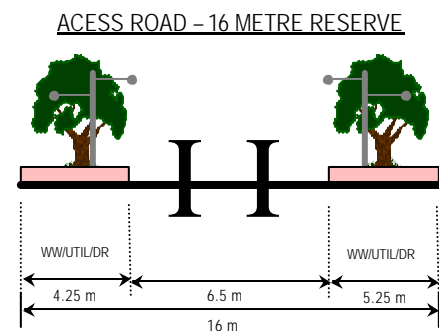
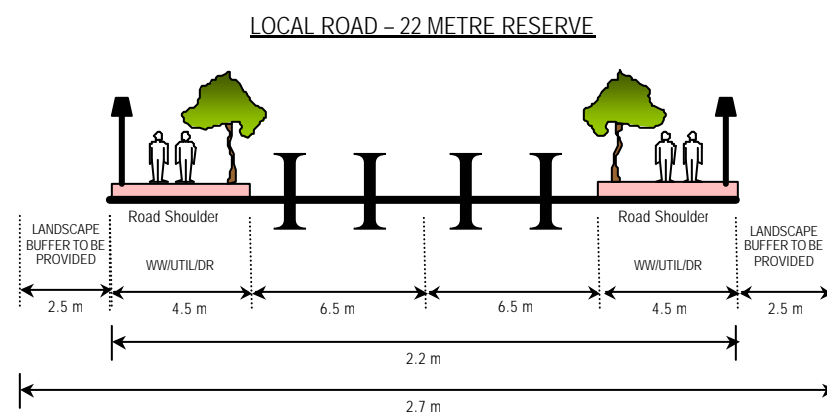
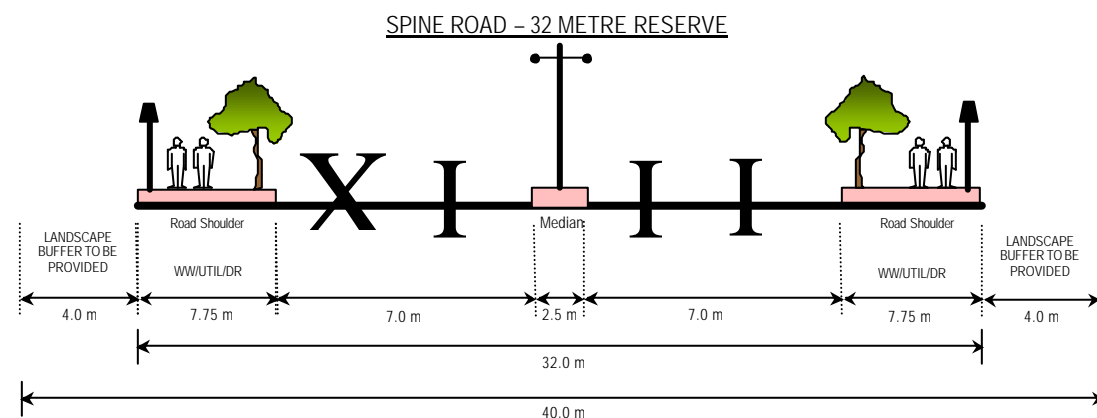
- Details on other design criteria to be referred to the Transport Design Guide for Putrajaya (1998)



PLANNING REQUIREMENTS : TRAFFIC AND TRANSPORTATION

ROAD NETWORK AND DESIGN STANDARD

(v) Typical Road Cross Section



- Note:**
- WW/UTIL/DR : Common pedestrians walkway utility and drainage reserve
 - Minimum cover to all utilities should be 15 metre
 - Cul-De-Sac are permitted for bungalows only serving typically no more than 25 units
 - Minimum cover to all utilities should be 15 metre

(vii)

Access to School

- To ensure adequate number of bus bays for drop-off and waiting school buses.
- To ensure continuity of walkway and cycle paths from PB5 and beyond to enable a high number of walk and bicycle mode trips.

(viii)

Traffic Calming

- To use road narrowing and pedestrian crossings in the approach area to the school.

(ix)

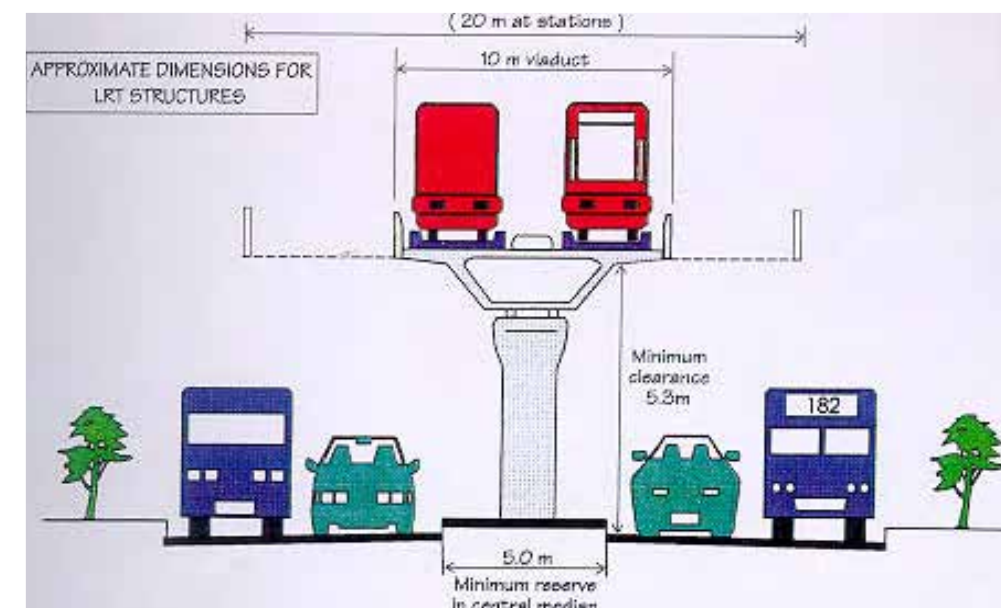
Noise Control

- The main ingress and egress to the precinct is via a two leaf clover from the strategic road network for the area. High volumes of traffic are expected and extensive landscaping or other methods to mitigate noise levels must be provided around the ramps.

(x)

Monorail Reserves

- The Monorail line in this planning block is to be elevated along the central medium of the road.



PLANNING REQUIREMENTS : INFRASTRUCTURE AND UTILITIES

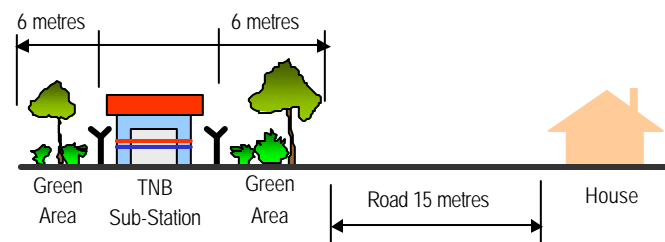
UTILITIES

(i) Environment

- PB6 fronts the environmentally sensitive Wetland Lake on the northern and eastern boundaries. A Wetland promenade of 20 metres shall be included in the detail layout plan. This promenade shall be given a proper landscape treatment as outlined in the Landscaped section.
- All earthworks must comply with the Environmental Management Guidelines of Putrajaya and Earthwork By-Laws (Perbadanan Putrajaya 1996)

(ii) Electricity

- The electricity supply for PB6 is mostly used for residential which are approximately 90% of the total Electrical Energy required.
- Provision of adequate numbers of 33KV Main Distribution Station (MDS) to be supported by a series of 11KV Sub-Stations (Single & Double Chambers) and feeder pillars at strategic locations to comply with the electricity provider's (TNB) requirement.
- Feeder pillars along public roads and areas shall have all doors to open away from road and public view.
- Electrical cabling network for overall development of PB6 shall consist of 33KV, 11KV and 415V distribution network systems.
- The electrical cabling network system shall be placed along the utility reserves to conform to the no dig policy. All electrical cabling shall be of the underground system.
- Sub-Station: shall have a minimum 6 metres setback on all sides to the nearest residential building. These shall be extensively landscaped.
- Fencing of utility buildings shall abide by Fencing Design Guidelines-Vol. 2, Chap. 15 pg. 132

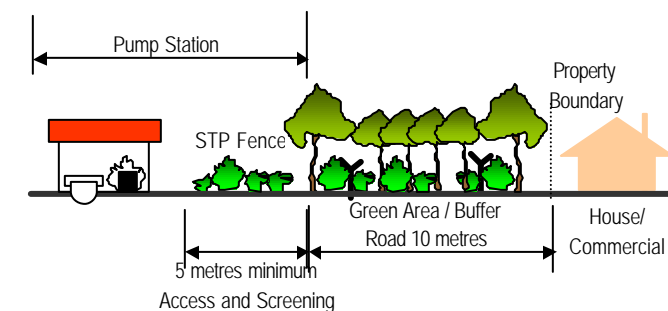


(iii) Drainage

- Drainage to the site shall be provided in terms of collection, conveyance and retention of flow from the site.
- Gross Pollutant Traps to be provided at the outlet of discharge points.
- The drainage design shall comply with the Putrajaya Stormwater Management Design Guidelines Guidelines and Urban Stormwater Management Manual for Malaysia, (JPS, 2000)

(iv) Sewerage

- A network of gravity sewer reticulation to collect sewage from the precinct. (Level 3 works.)
- From these reticulation networks, sewage will be discharged into the centralized trunk sewer system of Putrajaya (Level 1 & 2 works) at appropriate points.
- The trunk sewers will terminate at two pump-stations. These two pump stations are PS1 in Precinct 9 and PS9 (Levels 1 & 2 works) located at the south of precinct 11, next to Road R3.
- From PS1 and PS9, sewage will be conveyed via the centralized trunk sewer system to STP2 for treatment. However, STP2 is not scheduled to be ready until Year 2003. In the interim, sewage discharge will be temporary directed to the sewage switching station PS5 for onward conveyance to STP1 for treatment until the completion of STP2.
- The buffer for a closed STP shall be 10 m to the nearest property boundary
- The buffer for an open STP system shall be 30 m to the nearest property boundary



(v) Gas

- The gas supply for PB6 is mostly used for residential which are approximately 80% of the total gas requirements.
- Gas supply for PB6 will be served from a District Gas Station located at Precinct 9 through a medium pressure gas pipeline.
- Provisions of 4 nos. of area Gas Station are allocated within the Precinct 11 development to cater for the projected gas loading requirements, with total area reserve of 1.13 acres.
- Low-pressure gas pipeline reticulation from the Area Gas Station is planned to serve the gas requirements for the residential, commercial and other amenities.
- Safety provision for construction within the vicinity.
- (For details of Gas Pipeline Reserve Design refer Appendix 1)

PLANNING REQUIREMENTS : INFRASTRUCTURE AND UTILITIES

UTILITIES



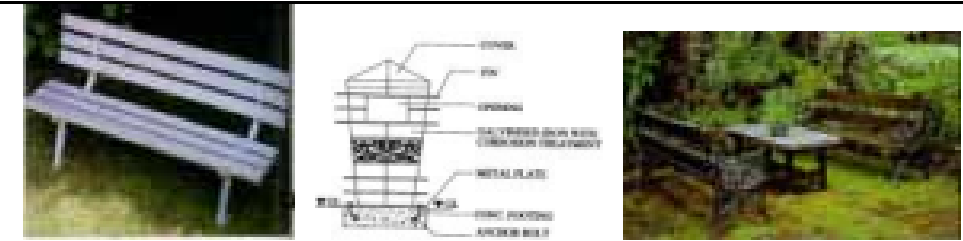
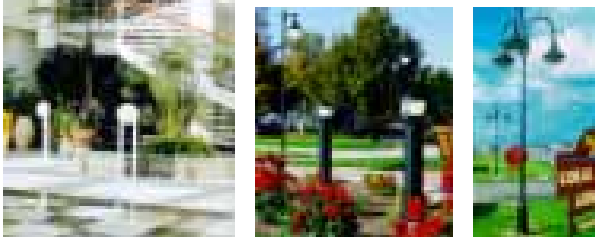
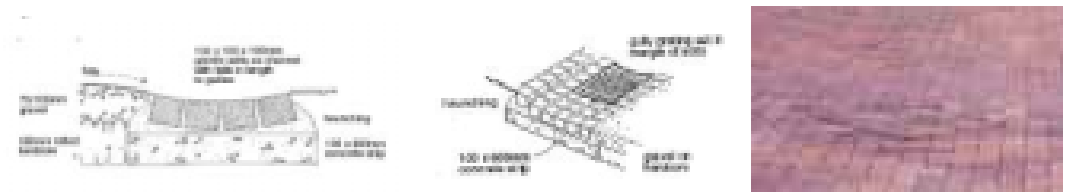
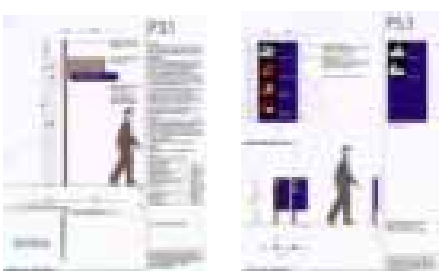
(vi) Waste Disposal

- Solid waste management in PB6 shall address reduction, reuse, recycling and recovery, the 4 R's of waste management.
- Solid waste is proposed to be separated at source, by residents or employees, into three streams; dry recycles, wet waste and rubbish (all other wastes). The dry recyclable is to be further separated at source into containers and fiber materials.
- The sensitivity of the site in terms of waste management relates to the operational requirements of Precinct 11, which require that no burial of material is undertaken during the construction phase.
- In addition to control odour nuisance to any sensitive receptors biodegradable waste cannot be left at the site for extended periods.
- The waste management shall comply with Urban Design Guidelines and Environmental Guidelines for Putrajaya.
- For low rise residential, refuse chamber is to be placed in front of the house, either left or right of the driveway and near to main road for the ease of mechanical collection. The estimated generation of solid waste is 5kg/unit/day.
- For non-residential building, refuse chamber center can be built at the ground floor / basement or apart from the main building. The estimated generation of solid waste for recreation park/public transport stop station are 0.2 kg/visitor, 300L/1000m²(gross floor area) for shopping complex and 500L/1000m²(gross floor area) for restaurant.
- Access road must be constructed for the ease of mechanical collection and public use. Obstructions to any collection vehicle's access must be disallowed at all time.

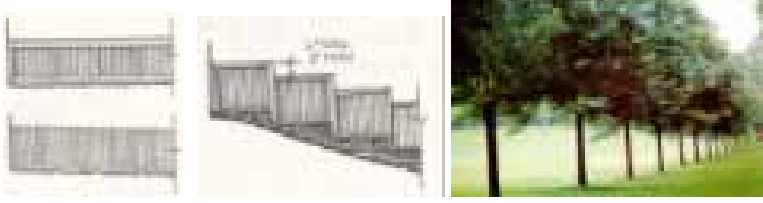
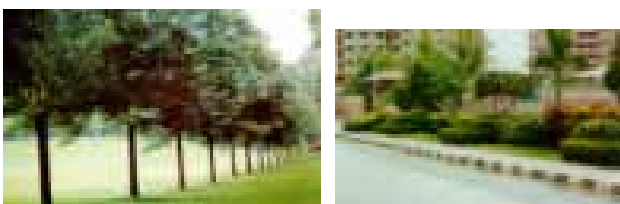


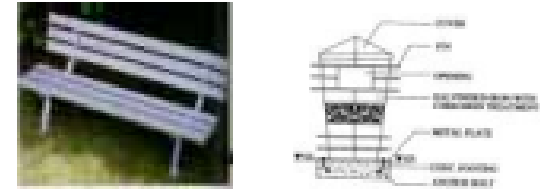
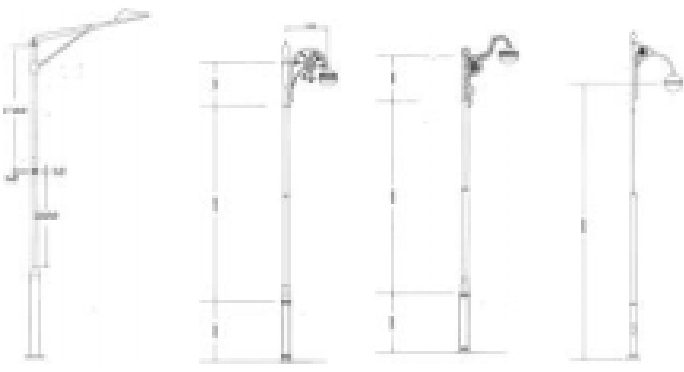


(vii) Water Supply

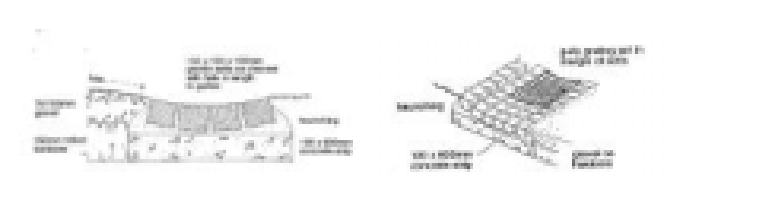


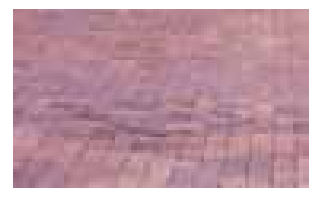


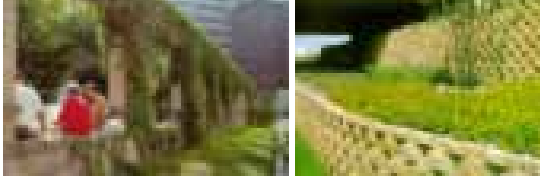
- Water supply to PB6 shall be consistent with the provision of water supply master plan for Putrajaya.
- Storage reservoir and pumping station together with the rising and falling mains shall be planned to serve this area in compliance with Jabatan Bekalan Air (JBA) requirement, and Design Criteria and Standards for Water Supply System, JKR (1989).

| PLANNING REQUIREMENT : LANDSCAPE | | | | | |
|----------------------------------|---|---|---|--|---|
| LANDUSE | DESIGN STYLE | MATERIALS | GENERAL REQUIREMENT | USE/LOCATION | |
| <input type="checkbox"/> School | ■ Paving, walls and steps <input type="checkbox"/> Formal <input type="checkbox"/> Contemporary | <input type="checkbox"/> Paving / Step – Clay brick – Concrete – Interlocking block etc <input type="checkbox"/> Walls – Key stone – Concrete – Fencing brick etc. | – Anti slippery surface – Max. gradient 8% – Max. gradient 2% for supper elevation – Durable | – Pedestrian walkway – Open space |  |
| | | | – Harmonize with surrounding environment | – Slope areas |  |
| | ■ Site furniture <input type="checkbox"/> Contemporary | – Hardwood – Metal – Stone | – Vandalism proof – Durable – Safe | – Resting areas – Reading areas |  |
| | ■ Lighting <input type="checkbox"/> Contemporary <input type="checkbox"/> Simple | – Hardwood – Metal – Concrete | – Max height of 4m for open space – Max height of 10m for roadside – Attractive – Safe | – Entrance – Play field – Roadside |  |
| | ■ Drainage <input type="checkbox"/> Swales <input type="checkbox"/> Concealed drains | – Culvert – Concrete – Drain cover on walkway to follow walkway 's material | – To harmonize with surrounding environment – Preferable covered drain | – Where necessary |  |
| | ■ Signage <input type="checkbox"/> Contemporary | – Metal – Hardwood – Concrete | – To follow Signage and Advertisement Design Guideline Putrajaya | – Entrance – Play areas |  |
| | ■ Irrigation Strategy | Pipe reticulation from PHB and/or trucking | | | |

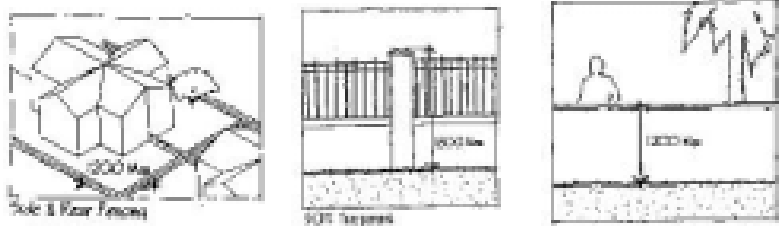

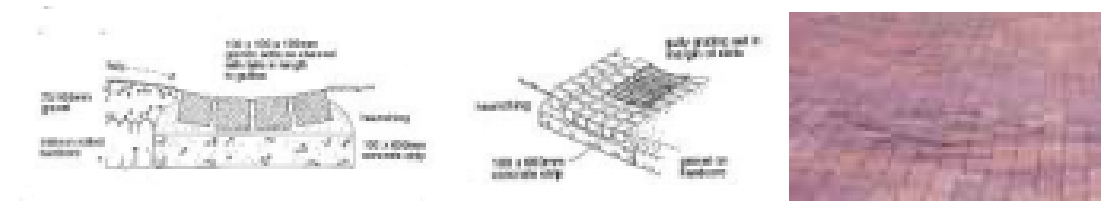
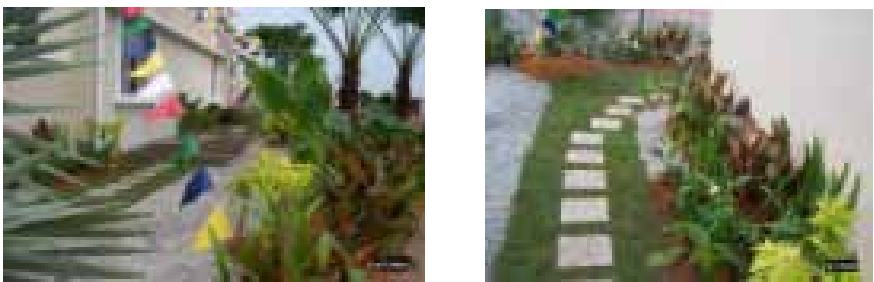
P U T R A J A Y A P R E C I N C T 11 L O C A L P L A N



| PLANNING REQUIREMENT : LANDSCAPE | | | | | |
|-----------------------------------|---|---|---|--|---|
| LANDUSE | DESIGN STYLE | MATERIALS | GENERAL REQUIREMENT | USE/LOCATION | |
| <input type="checkbox"/> School | ■ Fences, Railings and Barriers <input type="checkbox"/> Natural <input type="checkbox"/> Formal <input type="checkbox"/> Informal | – Planting – Metal – Hardwood | – To following Fencing Design Guideline Putrajaya | – Entrance – Play areas |  |
| | ■ Planting <input type="checkbox"/> Formal <input type="checkbox"/> | – Tree – Palm – Shrub – Groundcover – Turfing | – Able to provide shade – Non-poisonous species – Attractive | – All green areas |  |
| <input type="checkbox"/> Roadside | ■ Paving, walls and steps <input type="checkbox"/> Formal <input type="checkbox"/> Contemporary | <input type="checkbox"/> Paving / Step – Clay brick – Concrete – Interlocking paver etc. | – Anti slippery surface – Max. gradient 8% – Max. Gradient for super elevation 2% | – Roadside |  |
| | | <input type="checkbox"/> Wall – Key stone – Concrete – Granite stone etc. | – Harmonize with surrounding environment | Slope areas |  |
| | ■ Site Furniture <input type="checkbox"/> Contemporary | – Hardwood – Masonry – Metal | – Vandalism proof – Safe – Attractive | – Junction |  |
| | ■ Lighting <input type="checkbox"/> Robust <input type="checkbox"/> Minimal <input type="checkbox"/> Reflect character of adjacent neighbourhood | – Timber – Metal | – Max. height 10m at roadside | – Footpaths – Cycle track – Car park |  |

P U T R A J A Y A P R E C I N C T 11 L O C A L P L A N

| PLANNING REQUIREMENT : LANDSCAPE | | | | | |
|---|--|---|---|-------------------------|---|
| LANDUSE | DESIGN STYLE | MATERIALS | GENERAL REQUIREMENT | USE/LOCATION | |
| <input type="checkbox"/> Roadside | ■ Drainage <input type="checkbox"/> Swales/Natural drain <input type="checkbox"/> Concealed drains | – Culvert – Concrete – Drain cover on walkway to follow walkway 's material | – Visually attractive – Naturally blend with surrounding | – Open space – plaza |  |
| | ■ Signage <input type="checkbox"/> Contemporary <input type="checkbox"/> Formal <input type="checkbox"/> Simple <input type="checkbox"/> Clear | – Masonry – Metal – Hardwood | – Clear – Vandalism proof | – Junction |  |
| | ■ Planting <input type="checkbox"/> Formal | – Palm – Tree – Shrub | – Provide ample shade – Hardy Plants – Attractive | – Roadside |  |
| | ■ Irrigation Strategy | – Trucking | | |  |
| <input type="checkbox"/> Buffer | ■ Planting <input type="checkbox"/> Natural <input type="checkbox"/> Dense | – Palm – Shrub – Bamboo – Tree – Medium trees | – Non-poisonous species | – Buffer zone |  |
| <input type="checkbox"/> Residential (Landed) | ■ Paving, walls and steps <input type="checkbox"/> Informal <input type="checkbox"/> Formal <input type="checkbox"/> Contemporary | ■ Paving / Step – Clay brick – Concrete – Interlocking block etc | – Anti slippery surface – Max. gradient 8% – Durable | – Building compound |  |
| | | ■ Walls – Key stone – Concrete – Fencing brick etc. | – Harmonize with surrounding | Building compound |  |

P U T R A J A Y A P R E C I N C T 1 1 L O C A L P L A N

| PLANNING REQUIREMENT : LANDSCAPE | | | | | |
|---|---|---|---|---|---|
| LANDUSE | DESIGN STYLE | MATERIALS | GENERAL REQUIREMENT | USE/LOCATION | |
| <input type="checkbox"/> Residential (Landed) | <ul style="list-style-type: none"> ▪ Fence, Gate and Barrier <ul style="list-style-type: none"> <input type="checkbox"/> Contemporary <input type="checkbox"/> Formal <input type="checkbox"/> Traditional | <ul style="list-style-type: none"> - Hardwood - Metal - Masonry | <ul style="list-style-type: none"> - To follow Fencing Design Guideline Putrajaya | <ul style="list-style-type: none"> - Boundary line |  |
| | <ul style="list-style-type: none"> ▪ Lighting <ul style="list-style-type: none"> <input type="checkbox"/> Contemporary <input type="checkbox"/> Informal <input type="checkbox"/> Formal | <ul style="list-style-type: none"> - Hardwood - Metal - Concrete | <ul style="list-style-type: none"> - Durable - Attractive - Safe | <ul style="list-style-type: none"> - Building compound |  |
| | <ul style="list-style-type: none"> ▪ Drainage <ul style="list-style-type: none"> <input type="checkbox"/> Swales <input type="checkbox"/> Concealed drains | <ul style="list-style-type: none"> - Culvert - Concrete - Drain cover on walkway to follow walkway 's material | <ul style="list-style-type: none"> - Visually attractive - Concealed drains | <ul style="list-style-type: none"> - Building lot |  |
| | <ul style="list-style-type: none"> ▪ Planting <ul style="list-style-type: none"> <input type="checkbox"/> Formal <input type="checkbox"/> Informal | <ul style="list-style-type: none"> - Tree - Palm - Shrub - Groundcover | <ul style="list-style-type: none"> - Non-poisonous species - Strong branch - Medium size trees | <ul style="list-style-type: none"> - Building compound |  |
| | <ul style="list-style-type: none"> ▪ Irrigation Strategy | Tap from storage tank or JBA main or tap from JBA main | | | |

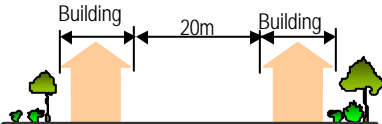
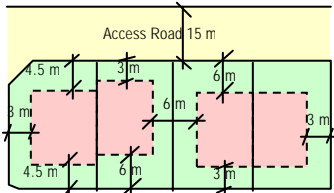
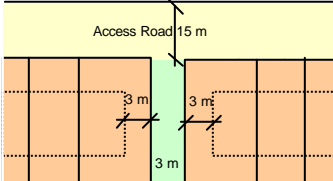
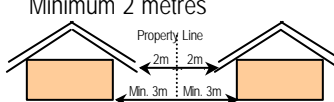
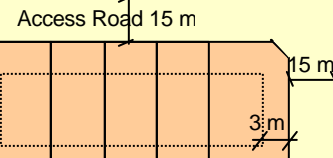
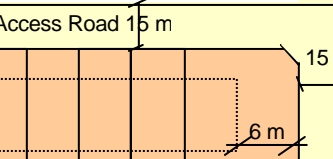
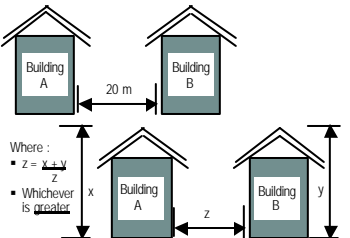
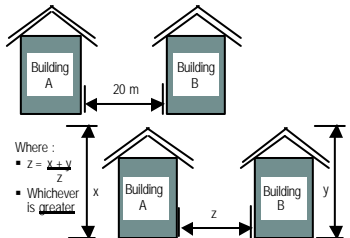
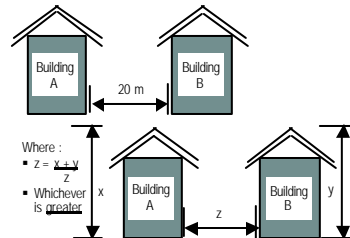
| PLANNING REQUIREMENT : URBAN DESIGN | | | | |
|---|--|---|---|--|
| LAYOUT PLAN | BUILDING CHARACTER | HEIGHT, MASSING AND BUILDING SPACES | COLOUR TEXTURE | MISCELLANEOUS |
| <p>(i) The layout plan must demonstrate that the following elements are addressed in the design:</p> <ul style="list-style-type: none"> ▪ Development appropriate to topographical features ▪ Appropriate building orientation with respect to the sun ▪ Appropriate pedestrian and vehicular access systems ▪ Site infrastructure systems are designed in a manner which enhances site development <p>(ii) Illustrate the effective and efficient integration of the pedestrian, cycle and road systems</p> <p>(iii) Development is to be designed to work with site contours to avoid unnecessary cut and associated retaining structures</p> <p>(iv) Illustrate a high level of permeability between site uses within the Planning Block and with adjoining Planning Blocks</p> <p>(v) Illustrate appropriate site building setbacks from major traffic routes or other noise generating or potentially dangerous infrastructure</p> <p>(vi) Illustrate that the site will be developed in a logical sequence</p> <p>(vii) The layout plan should illustrate that the form of development effectively contributes to the Planning Block's sense of place and amenity with the context of Putrajaya</p>  | <p>(i) Avoid monotonous building designs – provide a range of housing types to meet different lifestyle choices, diversity in the marketplace and opportunity for an interesting street frontage</p> <p>(ii) Ensure that buildings are designed to respect the topographical features of the site ,eg buildings should step with steeper sites – do not cut substantial benches into steep land</p> <p>(iii) Building design should respect the amenity of adjoining and adjacent buildings and their residents</p> <p>(iv) Building design should interpret local image and character with new materials that are energy efficient</p> <p>(v) Building facades should be designed to accommodate a tropical environment</p> <p>(vi) Designers should look to the use of innovative building materials that are less maintenance intensive and more environmentally efficient</p> <p>(vii) While diversity is sought in building design, buildings should be designed with a common theme that provides a linkage to the style and nature of the development area</p> <p>(viii) Building design should ensure good living environments for residents that do not adversely impact on neighbours</p> <p>(ix) The building design should incorporate landscaping that contributes to a pleasant and safe environment and integrates well with the streetscape and adjoining open space areas</p> | <p>(i) Building design must comply with all provisions relating to plot ratio, plinth, building height and setbacks as contained within these guidelines, and must comply with the UDG of Precinct 11 and 13.</p> <p>(ii) Spaces on any ground level should not directly overlook dwellings on adjacent land</p> <p>(iii) Ground floor levels must be responsive to pedestrian footpaths and continuity and flow between buildings</p> <p>(iv) Building design does not significantly reduce daylight to open space and habitable rooms in adjacent development</p> <p>(v) Roof pitch and overlay should be designed to meet local environmental requirements</p> <p>(vi) Roof overhang should be designed to minimise the impact on sight lines from adjacent buildings</p> <p>(vii) Buildings should be designed to encourage facade articulation and use of design elements that reduce building bulk and provide a pleasant street aspect. Any blank wall should be avoided.</p> <p>(viii) The design of free standing buildings should be sympathetic with adjoining buildings, yet provide for local identity and character</p>  | <p>(i) Building colours should harmonise with the predominant colours of the surrounding area</p> <p>(ii) Use of earth tones shall be encouraged</p> <p>(iii) Colours for specific building types will be subject to the approval of the Perbadanan. Pastel colours are to be encouraged.</p> | <p>(i) Privacy and visual controls – overlooking to be controlled by appropriate orientation of windows and use of splay windows</p> <p>(ii) Air conditioning equipment including piping– all equipment should be contained in compartments that are designed as an integral component of the building to ensure the equipment is hidden from view</p> <p>(iii) Drying yards – building design should incorporate appropriate design for drying areas that allows for natural ventilation and light while ensuring they are hidden from public view</p> <p>(iv) Aerials and satellite dishes – in high rise buildings or multiple tenancy commercial buildings, a central reception system is to be incorporated in to the building design. On all other buildings, aerials and satellite dishes shall be located to avoid adverse impact on the amenity of adjoining buildings</p> <p>(v) Service ducting shall not be exposed on the external surfaces of buildings</p> <p>(vi) Carports and garages should:</p> <ul style="list-style-type: none"> ▪ Be designed to integrate with the design of associated buildings ▪ Not diminish the attractiveness of the streetscape ▪ Not visually dominate views of the house from the street ▪ Cover the full length of a car <p>(vii) Dwellings with green frontage must address that frontage with habitable spaces and not service areas only</p> <p>(viii) Dwelling design must provide sufficient outdoor open space that can act as an extension of the dwelling for relaxation, entertainment, recreation and children's play purposes.</p> |

P U T R A J A Y A P R E C I N C T 11 L O C A L P L A N


| PLANNING REQUIREMENT : URBAN DESIGN | | | | |
|---|--|-------------------------------------|----------------|---|
| LAYOUT PLAN | BUILDING CHARACTER | HEIGHT, MASSING AND BUILDING SPACES | COLOUR TEXTURE | MISCELLANEOUS |
| (vii) The location of schools and tadikas should: <ul style="list-style-type: none"> ▪ Be in a highly accessible position for the community ▪ Minimise the introduction of non-local traffic into minor residential streets ▪ Provide safe and convenient pedestrian and cycle access to residential areas | (x) For school buildings: <ul style="list-style-type: none"> ▪ Building design should be of a character that responds to the tropical environment and does not adversely impact on adjacent buildings ▪ Vehicle parking and pick up/set down areas should be designed and located to minimise impact on adjacent dwellings | | | (ix) The design of schools and tadikas should: <ul style="list-style-type: none"> ▪ Ensure that the playground is visually interesting and environmentally safe for children ▪ The play area is protected from on site and off site hazards ▪ The play area has adequate shade and shelter areas ▪ The landscaping assist the educational role of the facility ▪ Be reasonably compatible in appearance and scale with nearby buildings ▪ Include appropriate screening and buffering that maintains or improves the amenity of adjoining uses (x) For the installations of grills, residents need to abide by the guidelines on the Uniform Design and Installation of Grills for Buildings in Putrajaya (Department of Urban Services, Putrajaya) |
| | | | | (xi) Any changes to the façade and design of buildings must seek planning permission for Perbadanan Putrajaya. |

P U T R A J A Y A P R E C I N C T 11 L O C A L P L A N

PHYSICAL PLANNING REQUIREMENTS PLANNING BLOCK 7 (PB 7)

| MAIN LAND USES: | CONDOMINIUM | MEDIUM COST APARTMENT | MEDIUM LOW COST APARTMENT | SEMI-DETACHED HOUSES | TERRACE HOUSES | MAIN INTAKE STATION |
|---------------------------------|---|---|---|--|--|---|
| (i) Density | ▪ 60 units per acre | ▪ 70 units per acre | ▪ 74 units per acre | ▪ 12-18 units per acre | ▪ 20 units per acre | ▪ One in PB7 |
| (ii) Composition | ▪ High cost | ▪ Medium Cost | ▪ Medium Low Cost | ▪ Government | ▪ Government | |
| (iii) Minimum Lot Size | ▪ N/A | ▪ N/A | ▪ N/A | ▪ 300m ² | ▪ 130m ² | ▪ 1.54 hac. |
| (iv) Height | ▪ Max. 8 storey Note: 17 storey upon approval from PJC | ▪ Max. 12 storey Note: 17 storey upon approval from PJC | ▪ Max. 12 storey Note: 17 storey upon approval from PJC | ▪ 2 levels on flat or gently sloping land ▪ 3 levels on step land | ▪ 2 levels on flat or gently sloping land | |
| (v) Setbacks: | | | | | | |
| ▪ Building to Building | <ul style="list-style-type: none"> Minimum 20 metres  | <ul style="list-style-type: none"> Minimum 20 metres | <ul style="list-style-type: none"> Minimum 20 metres | <ul style="list-style-type: none"> Total setback distance for both the front and rear setbacks must total 9 metres Street frontage – Min. 3.0 metres Rear setback – Min. 3.0 metres  | <ul style="list-style-type: none"> Total setback distance for both the front and rear setbacks must total 9 metres Street frontage – Min. 3.0 metres Rear setback – Min. 3.0 metres Variation of setback is permissible within a single block of terraces and not for individual buildings  | <ul style="list-style-type: none"> Street frontage – min. 6 metres Rear – min. 3 metres |
| ▪ Side Boundary | <ul style="list-style-type: none"> N/A | <ul style="list-style-type: none"> N/A | <ul style="list-style-type: none"> N/A | <ul style="list-style-type: none"> Minimum 3 metres | <ul style="list-style-type: none"> Where applicable minimum 3 metres | <ul style="list-style-type: none"> N/A |
| ▪ Distance Between Roofs' Eaves | <ul style="list-style-type: none"> Minimum 6 metres | <ul style="list-style-type: none"> Minimum 6 metres | <ul style="list-style-type: none"> Minimum 6 metres | <ul style="list-style-type: none"> Minimum 2 metres  | <ul style="list-style-type: none"> Side setback to 15 metres road, for roads with 3 metres green buffer  | <ul style="list-style-type: none"> Minimum 3 metres |
| ▪ Street Boundary | <ul style="list-style-type: none"> Minimum 6 metres | <ul style="list-style-type: none"> Minimum 6 metres | <ul style="list-style-type: none"> Minimum 6 metres | <ul style="list-style-type: none"> Minimum 3 metres | <ul style="list-style-type: none"> Side setback to 15 metres without 3 metres buffer  | <ul style="list-style-type: none"> Minimum 6 metres |
| ▪ Distance Between Buildings | <ul style="list-style-type: none"> 20 metres setback between buildings or average of building heights  | <ul style="list-style-type: none"> 20 metres setback between buildings or average of building heights  | <ul style="list-style-type: none"> 20 metres setback between buildings or average of building heights  | | | |
| ▪ Car Park | <ul style="list-style-type: none"> Minimum 1 cps per unit + 10% for visitors Car parking for disabled at 1% of total number of cps MPS – 50% of total housing units BPS – 1 rack : 50 housing units | <ul style="list-style-type: none"> Minimum 1 cps per unit + 10% for visitors Covered motorcycle bays at 1:1 Car parking for disabled at 1% on top of the required parking provision or min. 2 parking spaces whichever is higher | <ul style="list-style-type: none"> Minimum 1 cps per unit + 10% for visitors Covered motorcycle bays at 1:1 Car parking for disabled at 1% on top of the required parking provision or min. 2 parking spaces whichever is higher | <ul style="list-style-type: none"> Min 2 CPS per unit on site CPS to be clear of minimum front setback. | <ul style="list-style-type: none"> Min 2 CPS per unit on site CPS to be clear of minimum front setback. | <ul style="list-style-type: none"> N/A |

P U T R A J A Y A P R E C I N C T 11 L O C A L P L A N

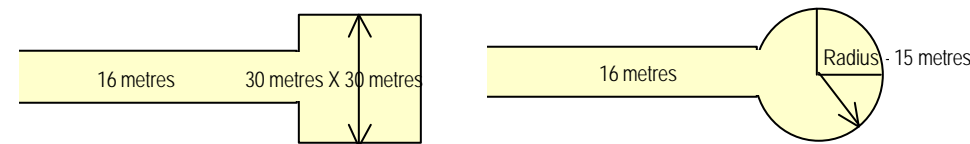
| MAIN LAND USES: | CONDOMINIUM | MEDIUM COST APARTMENT | MEDIUM LOW COST APARTMENT | SEMI-DETACHED HOUSES | TERRACE HOUSES | MAIN INTAKE STATION |
|---|--|--|---|---|---|---|
| (vi) As per the Fencing Design Guidelines Manual, Volume 1 and Volume 2, chapter 1, 2 and 3 | <ul style="list-style-type: none"> ▪ Refer Fencing Design Guidelines Manual, Volume 2, chapter 8 | <ul style="list-style-type: none"> ▪ Refer Fencing Design Guidelines Manual, Volume 2, chapter 8 | <ul style="list-style-type: none"> ▪ Refer Fencing Design Guidelines Manual, Volume 2, chapter 8 | <ul style="list-style-type: none"> ▪ Refer Fencing Design Guidelines Manual, Volume 2, chapter 5 | <ul style="list-style-type: none"> ▪ Refer Fencing Design Guidelines Manual, Volume 2, chapter 6 | <ul style="list-style-type: none"> ▪ Refer Fencing Design Guidelines Manual, Volume 2, chapter 15 |
| (vii) Layout Plan | <ul style="list-style-type: none"> ▪ Provide a fenced children's playground – Minimum 500m2 ▪ Club House/Community Hall ▪ Suitable size surau + ruang jenazah - 50%XNo of unitsX0.4m2 ▪ Car park to be well landscaped ▪ Min 2m landscape buffer to all boundaries. ▪ Service areas to be aesthetically screened ▪ Other community provision: <ul style="list-style-type: none"> <input type="checkbox"/> Kindergarten <input type="checkbox"/> Day Care Centre <input type="checkbox"/> Laundry <input type="checkbox"/> Car Wash Area <input type="checkbox"/> Convenient Shop <input type="checkbox"/> Courts Sepaktakraw or Volleyball | <ul style="list-style-type: none"> ▪ Provide a fenced children's playground – Minimum 500m2 ▪ Club House/Community Hall ▪ Suitable size surau + ruang jenazah - 50%XNo of unitsX0.4m2 ▪ Car park to be well landscaped ▪ Min 2 m landscape buffer to all boundaries. ▪ Service areas to be aesthetically screened. ▪ Community Hall ▪ Other community provision: <ul style="list-style-type: none"> <input type="checkbox"/> Kindergarten <input type="checkbox"/> Day Care Centre <input type="checkbox"/> Laundry <input type="checkbox"/> Car Wash Area <input type="checkbox"/> Convenient Shop <input type="checkbox"/> Courts Sepaktakraw or Volleyball | <ul style="list-style-type: none"> ▪ Provide a fenced children's playground. Standard : 40%XNo of unitsX0.3m2 ▪ Club House/Community Hall ▪ Suitable size surau + ruang jenazah. Standard: 80%XNo of unitsX0.4m2 ▪ Car park to be well landscaped ▪ Min 2 m landscape buffer to all boundaries. ▪ Service areas to be aesthetically screened. ▪ Community Hall ▪ Other community provision: <ul style="list-style-type: none"> <input type="checkbox"/> Kindergarten <input type="checkbox"/> Day Care Centre <input type="checkbox"/> Laundry <input type="checkbox"/> Car Wash Area <input type="checkbox"/> Convenient Shop <input type="checkbox"/> Courts Sepaktakraw or Volleyball | <ul style="list-style-type: none"> ▪ Use the setback flexibility and building design variation to break up and vary the position of the houses | <ul style="list-style-type: none"> ▪ Use the setback flexibility and building design variation to break up and vary the position of the houses  | <ul style="list-style-type: none"> ▪ Layout plan to show the design concept including: <ul style="list-style-type: none"> <input type="checkbox"/> Location of all key facilities. <input type="checkbox"/> Location of car parking spaces <input type="checkbox"/> Location of screening devices to minimise impact of noise producing machinery. <input type="checkbox"/> Effective screening to abutting residential uses. |

PLANNING REQUIREMENTS : TRAFFIC AND TRANSPORTATION

ROAD NETWORK AND DESIGN STANDARD

(i) Network Type

- Spine Road - 32 metres reserve
- Local Road - 22 metres reserve
- Access Road - 16 metres reserve
- Cul-De-Sac - 15 metres reserve



(ii) Road Capacity

- Spine Road - 1000 pcu/hr/lane
- Local Road - 700 pcu/hr/lane

(iii) Junction Control Criteria

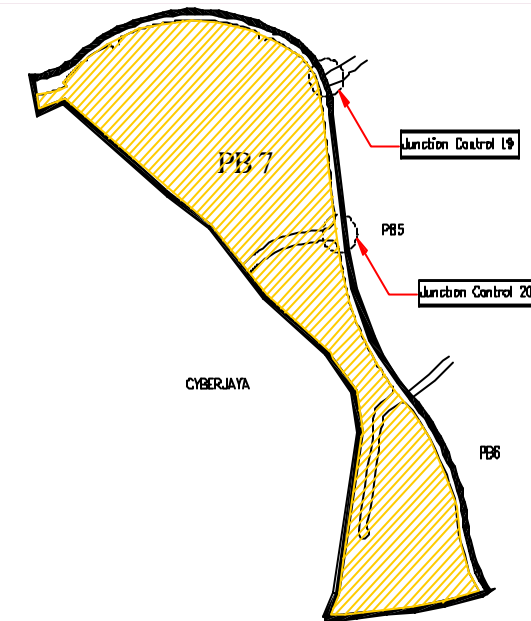
| Junction Control | Total sum of 2-way traffic on the major road and heavier approach on minor road (PCU) | |
|------------------|---|------------------------|
| | Spine Road | Local Road |
| Stop Control | up to 1500 | up to 1500 |
| Traffic Signal | Up to 4500 | Generally not required |
| Grade Separation | Generally not required | Generally not required |

(iv) Visibility Standards for Priority Junction

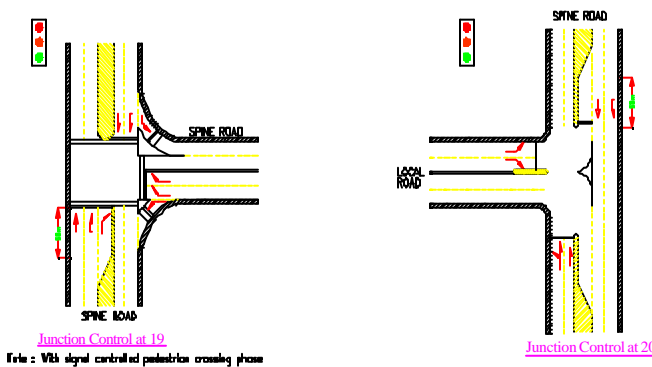
- Because minor road are uncontrolled. It is essential that adequate standards of visibility are achieved in the layout and that sight distances take account of the speed of traffic on the major road. The standards for providing clear visibility for minor road traffic are set out in the figure given

(v) Transport Design Guide for Putrajaya

- Details on other design criteria to be referred to the Transport Design Guide for Putrajaya (1998)

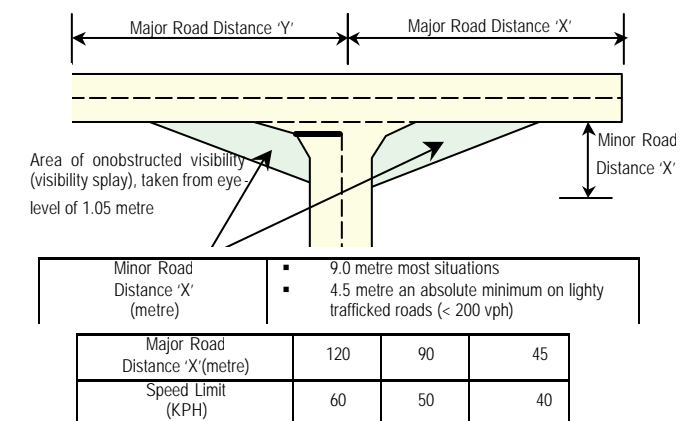


Planning Block 7 (PB 7) - Key Plan



File : With signal controlled pedestrian crossing phase

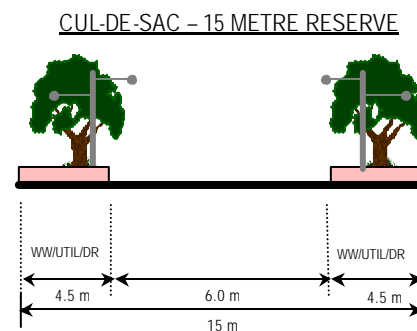
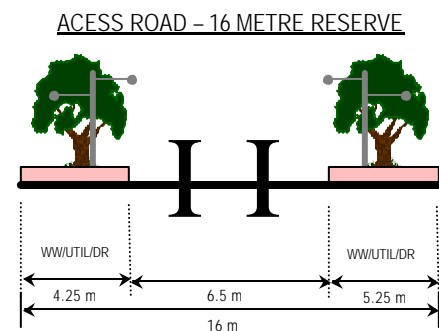
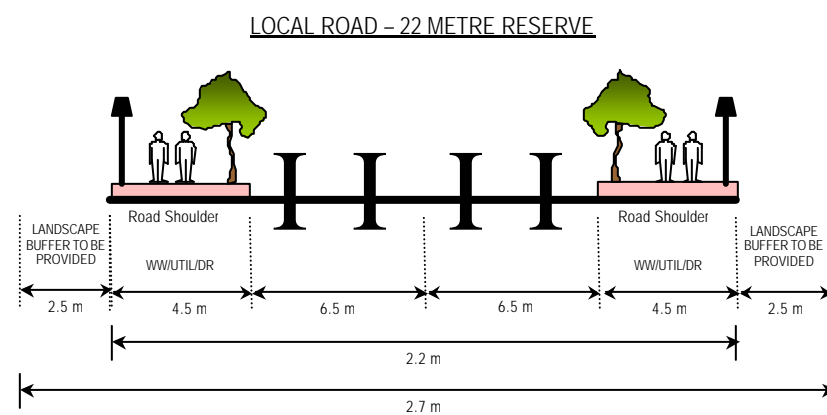
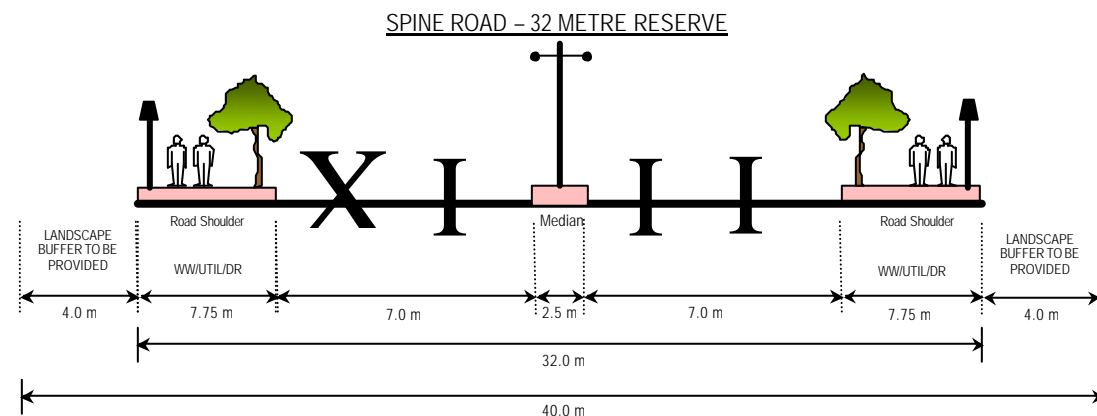
Visibility Standards for Priority Junction



PLANNING REQUIREMENTS : TRAFFIC AND TRANSPORTATION

ROAD NETWORK AND DESIGN STANDARD

(v) Typical Road Cross Section

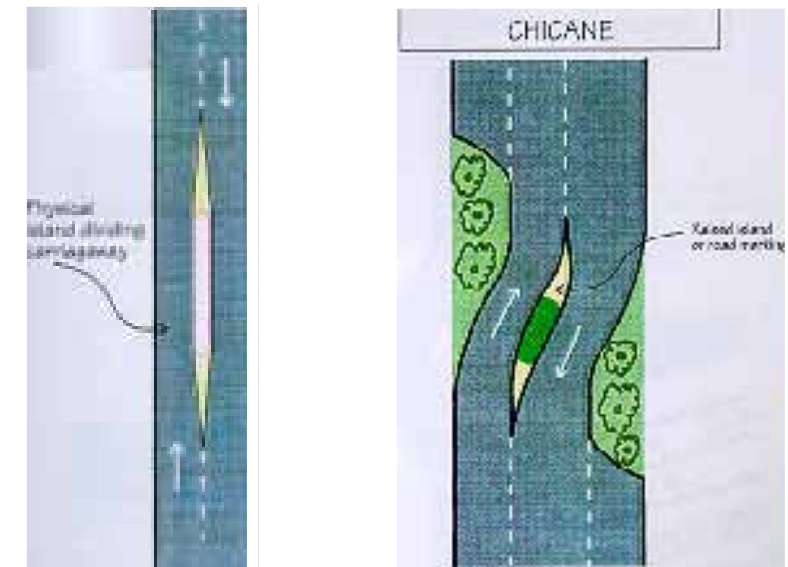


Note:

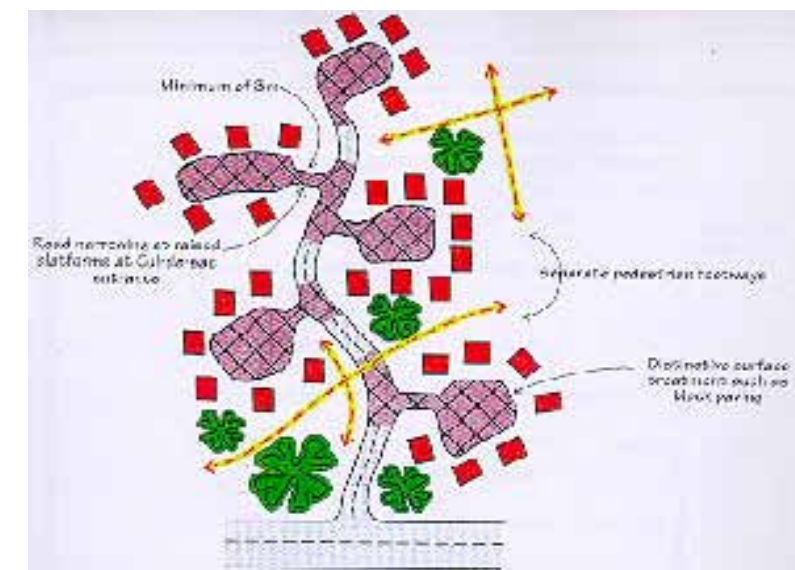
- WW/UTIL/DR : Common pedestrian walkway utility and drainage reserve
- Minimum cover to all utilities should be 15 metre
- Cul-De-Sac are permitted for bungalows only serving typically no more than 25 units
- Minimum cover to all utilities should be 15 metre

(iv) Traffic Calming

- Use Chicanes and dividers along local distributor



- The road naming at junction leading from local distributor roads into access roads.



PLANNING REQUIREMENTS : INFRASTRUCTURE AND UTILITIES

UTILITIES

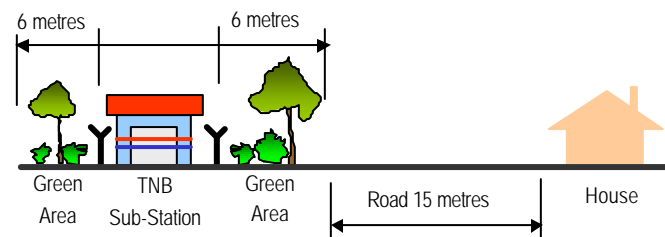
(i) Environment

- This planning block contains the southern part of the Masterplan Park. Development works this park which is on steep land, must conform to the Earthwork By-Laws (Perbadanan Putrajaya 1996)
- The detailed platform levels shall be determined at the D.0 approval stage
- All earthworks must comply with the Environmental Management Guidelines of Putrajaya and Earthwork By-Laws (Perbadanan Putrajaya 1996)



(ii) Electricity

- The electricity supply for PB7 is mostly used for residential which are approximately 90% of the total Electrical Energy required.
- Provision of adequate numbers of 33KV Main Distribution Station (MDS) to be supported by a series of 11 KV Sub-Stations (Single & Double Chambers) and feeder pillars at strategic locations to comply with the electricity provider's (TNB) requirement.
- Feeder pillars along public roads and areas shall have all doors to open away from road and public view.
- Electrical cabling network for overall development of PB7 shall consist of 33KV, 11KV and 415V distribution network systems.
- The electrical cabling network system shall be placed along the utility reserves to conform to the no dig policy. All electrical cabling shall be of the underground system.
- Sub-Station: shall have a minimum 6 metres setback on all sides to the nearest residential building. These shall be extensively landscaped.
- Fencing of utility buildings shall abide by Fencing Design Guidelines-Vol 2, Chap. 15 pg 132

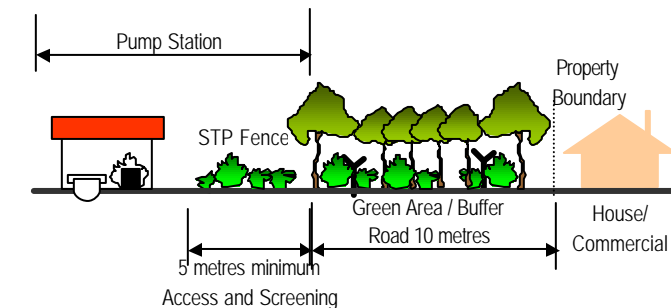


(iii) Drainage

- Drainage to the site shall be provided in terms of collection, conveyance and retention of flow from the site.
- Gross Pollutant Traps to be provided at the outlet of discharge points.
- The drainage design shall comply with the Putrajaya Stormwater Management Design Guidelines and Urban Stormwater Management Manual for Malaysia, (JPS, 2000)

(iv) Sewerage

- A network of gravity sewer reticulation to collect sewage from the precinct. (Level 3 works.)
- From these reticulation networks, sewage will be discharged into the centralized trunk sewer system of Putrajaya (Level 1 & 2 works) at appropriate points.
- The trunk sewers will terminate at two pump-stations. These two pump stations are PS1 in Precinct 9 and PS9 (Levels 1 & 2 works) located at the south of precinct 11, next to Road R3.
- From PS1 and PS9, sewage will be conveyed via the centralized trunk sewer system to STP2 for treatment. However, STP2 is not scheduled to be ready until Year 2003. In the interim, sewage discharge will be temporary directed to the sewage switching station PS5 for onward conveyance to STP1 for treatment until the completion of STP2.
- The buffer for a closed STP shall be 10 m to the nearest property boundary
- The buffer for an open STP system shall be 30 m to the nearest property boundary



PLANNING REQUIREMENTS : INFRASTRUCTURE

UTILITIES

(v) Gas

- The gas supply for PB7 is mostly used for residential which are approximately 80% of the total gas requirements.
- Gas supply for PB7 will be served from a District Gas Station located at Precinct 9 through a medium pressure gas pipeline.
- Provisions of 4 nos. of area Gas Station are allocated within the Precinct 11 development to cater for the projected gas loading requirements, with total area reserve of 1.13 acres.
- Low-pressure gas pipeline reticulation from the Area Gas Station is planned to serve the gas requirements for the residential, commercial and other amenities.
- Safety provision for construction within the vicinity.
- (For details of Gas Pipeline Reserve Design refer Appendix 1)

(vi) Waste Disposal



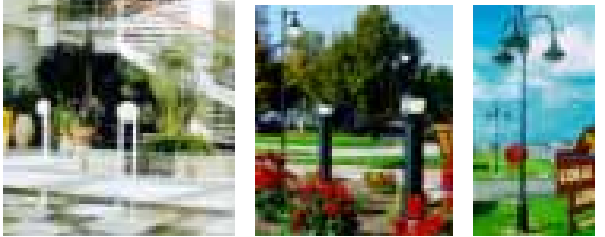


- Solid waste management in PB7 shall address reduction, reuse, recycling and recovery, the 4 R's of waste management.
- Solid waste is proposed to be separated at source, by residents or employees, into three streams; dry recycles, wet waste and rubbish (all other wastes). The dry recyclable is to be further separated at source into containers and fiber materials.
- The sensitivity of the site in terms of waste management relates to the operational requirements of Precinct 11, which require that no burial of material is undertaken during the construction phase.
- In addition to control odour nuisance to any sensitive receptors biodegradable waste cannot be left at the site for extended periods.
- The waste management shall comply with Urban Design Guidelines and Environmental Guidelines for Putrajaya.
- For low rise residential, refuse chamber is to be placed in front of the house, either left or right of the driveway and near to main road for the ease of mechanical collection. The estimated generation of solid waste is 5kg/unit/day.
- The estimated generation of solid waste for recreation park/public transport stop station are 0.2 kg/visitor, 300L/1000m²(gross floor area) for shopping complex and 500L/1000m²(gross floor area) for restaurant.

- Access road must be constructed for the ease of mechanical collection and public use. Obstructions to any collection vehicle's access must be disallowed at all time.





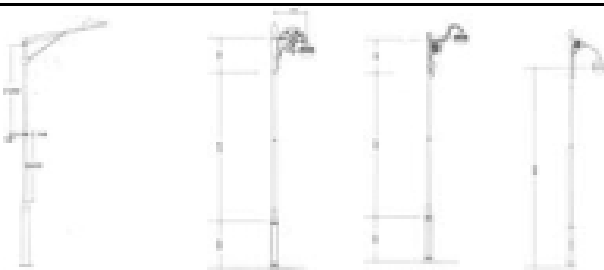
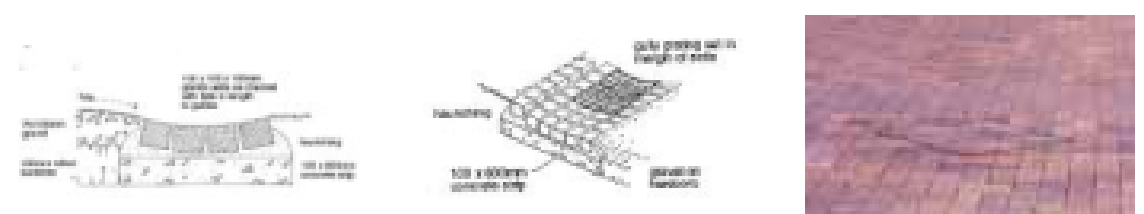


(vii) Water Supply



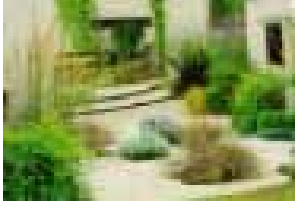

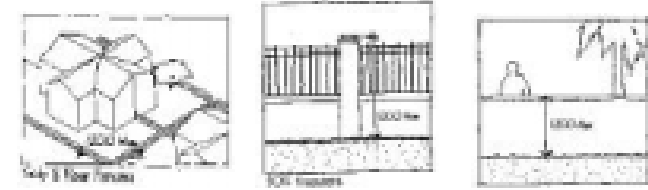
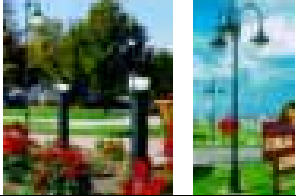


- Water supply to PB7 shall be consistent with the provision of water supply master plan for Putrajaya.
- Storage reservoir and pumping station together with the rising and falling mains shall be planned to serve this area in compliance with Jabatan Bekalan Air (JBA) requirement, and Design Criteria and Standards for Water Supply System, JKR (1989).

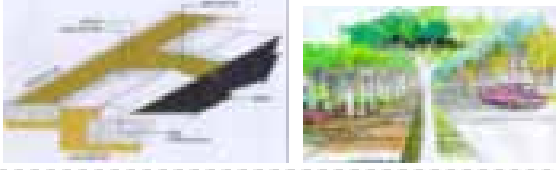


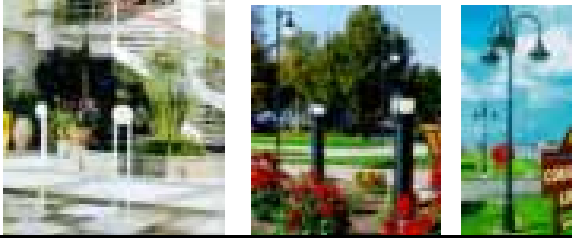
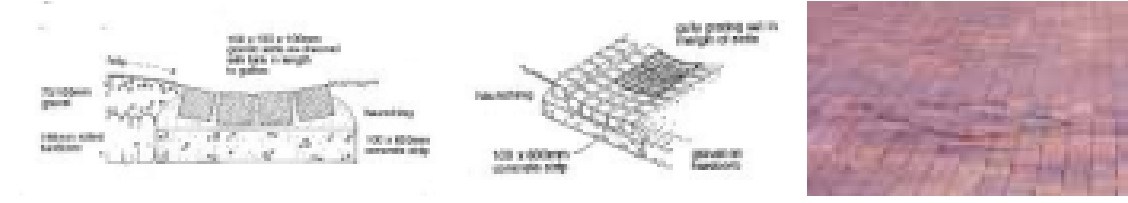


| PLANNING REQUIREMENT : LANDSCAPE | | | | | |
|---|---|---|--|--|---|
| LANDUSE | DESIGN STYLE | MATERIALS | GENERAL REQUIREMENT | USE/LOCATION | |
| <input type="checkbox"/> Catchment Lake | ■ Paving, walls and steps <input type="checkbox"/> Informal <input type="checkbox"/> Natural | <input type="checkbox"/> Paving / Step – Clay brick – Concrete – Interlocking block etc <input type="checkbox"/> Walls – Key stone – Concrete – Granite stone etc. | – Anti slippery surface – Max. gradient 8% – Max. gradient 2% for superelevation – Durable – Harmonize with surrounding – Visually attractive | – Open space – Plaza – Slope areas |  |
| | ■ Site Furniture <input type="checkbox"/> Simple <input type="checkbox"/> Informal | – Hardwood – Metal – Stone | – Vandalism proof – Durable – Functional – Safe | – Open space – Plaza |  |
| | ■ Lighting <input type="checkbox"/> Contemporary <input type="checkbox"/> Hi-tech | – Concrete – Metal – Masonry | – Max. height 4m at open areas – Max. height 10m at roadside | – Bollard at pedestrian entrance – Plaza – Road side |  |
| | ■ Drainage <input type="checkbox"/> Swales/Natural drain <input type="checkbox"/> Concealed drains | – Rock boulder – Culvert – Concrete – Granite stone wall – Drain cover on walkway to follow walkway 's material | – Natural fence if necessary – Accessible for maintenance works | – All drainage system |  |
| | ■ Structures and Shelters <input type="checkbox"/> Informal, Vernacular, <input type="checkbox"/> Hi-tech | <input type="checkbox"/> Structures – Hardwood timber – Metal – Concrete – Masonry <input type="checkbox"/> Roof – Clay tile – Metal decking – Poly cabonate | – Sustainable design – Proportion to human scale and surrounding structure – Functional – To blend harmoniously with surrounding environment | – Open areas – Plaza |  |


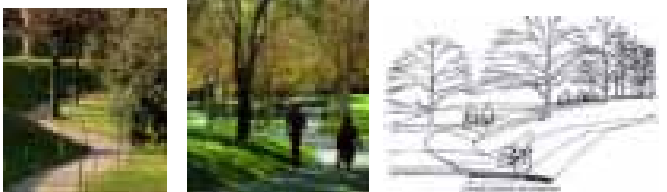
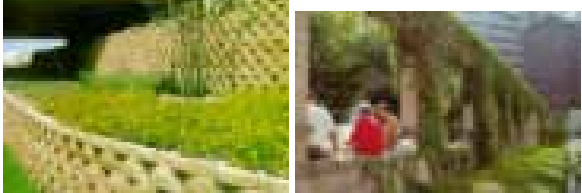

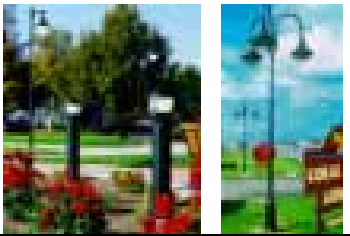
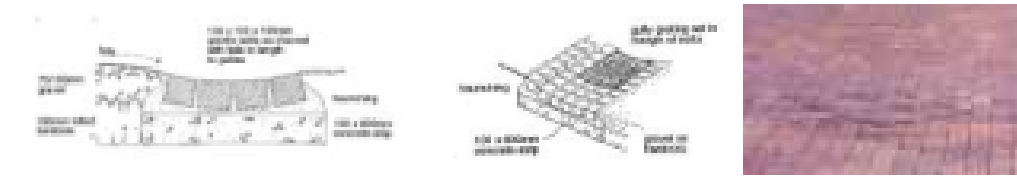

P U T R A J A Y A P R E C I N C T 11 L O C A L P L A N



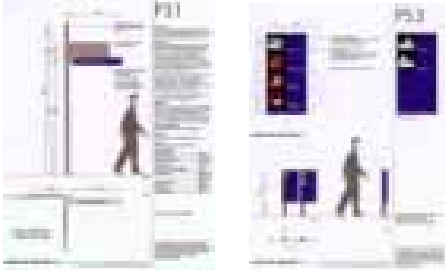
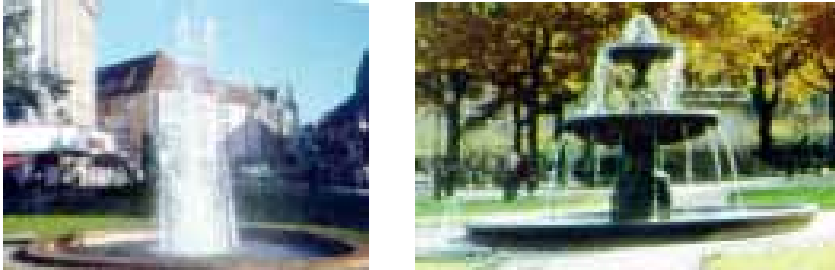

| PLANNING REQUIREMENT : LANDSCAPE | | | | | | |
|---|---|---|---|---|--|---|
| LANDUSE | DESIGN STYLE | MATERIALS | GENERAL REQUIREMENT | USE/LOCATION | | |
| <ul style="list-style-type: none"> <input type="checkbox"/> Catchment Lake | <ul style="list-style-type: none"> ▪ Play feature <ul style="list-style-type: none"> <input type="checkbox"/> Contemporary <input type="checkbox"/> Robust <input type="checkbox"/> Bright | <ul style="list-style-type: none"> - Steel frame - Rubber matting | <ul style="list-style-type: none"> - Conform to SIRIM standard | <ul style="list-style-type: none"> - Open space |  | |
| <ul style="list-style-type: none"> <input type="checkbox"/> Roadside | <ul style="list-style-type: none"> ▪ Paving, walls and steps <ul style="list-style-type: none"> <input type="checkbox"/> Formal <input type="checkbox"/> Contemporary | <ul style="list-style-type: none"> <input type="checkbox"/> Paving / Step <ul style="list-style-type: none"> - Clay brick - Concrete - Interlocking paver etc. | <ul style="list-style-type: none"> - Anti slippery surface - Max. gradient 8% - Max. Gradient for super elevation 2% | <ul style="list-style-type: none"> - Roadside |  | |
| | | <ul style="list-style-type: none"> <input type="checkbox"/> Wall <ul style="list-style-type: none"> - Key stone - Concrete - Granite stone etc. | <ul style="list-style-type: none"> - Harmonize with surrounding environment | <ul style="list-style-type: none"> - Slope areas |  | |
| | | <ul style="list-style-type: none"> ▪ Site Furniture <ul style="list-style-type: none"> <input type="checkbox"/> Contemporary | <ul style="list-style-type: none"> - Hardwood - Masonry - Metal | <ul style="list-style-type: none"> - Vandalism proof - Safe - Attractive | <ul style="list-style-type: none"> - Junction |  |
| | | <ul style="list-style-type: none"> ▪ Lighting <ul style="list-style-type: none"> <input type="checkbox"/> Robust <input type="checkbox"/> Minimal <input type="checkbox"/> Reflect character of adjacent neighbourhood | <ul style="list-style-type: none"> - Timber - Metal | <ul style="list-style-type: none"> - Max. height 10m at roadside | <ul style="list-style-type: none"> - Footpaths - Cycle track - Car park |  |
| | | <ul style="list-style-type: none"> ▪ Drainage <ul style="list-style-type: none"> <input type="checkbox"/> Swales/Natural drain <input type="checkbox"/> Concealed drains | <ul style="list-style-type: none"> - Culvert - Concrete - Drain cover on walkway to follow walkway 's material | <ul style="list-style-type: none"> - Visually attractive - Naturally blend with surrounding | <ul style="list-style-type: none"> - Open space - Plaza |  |
| | <ul style="list-style-type: none"> ▪ Irrigation Strategy | <ul style="list-style-type: none"> - Trucking | | | | |

P U T R A J A Y A P R E C I N C T 11 L O C A L P L A N

| PLANNING REQUIREMENT : LANDSCAPE | | | | | |
|--|--|--|---|--|---|
| LANDUSE | DESIGN STYLE | MATERIALS | GENERAL REQUIREMENT | USE/LOCATION | |
| <input type="checkbox"/> Drain reserve (Covered) | <ul style="list-style-type: none"> ▪ Planting <ul style="list-style-type: none"> <input type="checkbox"/> Natural <input type="checkbox"/> Tropical | <ul style="list-style-type: none"> – Palm – Tree – Shrub | <ul style="list-style-type: none"> – Non-poisonous species – Harmonize with surrounding environment | <ul style="list-style-type: none"> – Drain reserve |  |
| <input type="checkbox"/> Main Substation | <ul style="list-style-type: none"> ▪ Plants <ul style="list-style-type: none"> <input type="checkbox"/> Tropical <input type="checkbox"/> Heavy plants | <ul style="list-style-type: none"> – Palm – Shrub – Tree | <ul style="list-style-type: none"> – Non-poisonous species – Harmonize with surrounding environment | <ul style="list-style-type: none"> – Boundary line – Green areas |  |
| <input type="checkbox"/> Residential (Landed) | <ul style="list-style-type: none"> ▪ Paving, walls and steps <ul style="list-style-type: none"> <input type="checkbox"/> Informal <input type="checkbox"/> Formal <input type="checkbox"/> Contemporary | <ul style="list-style-type: none"> □ Paving / Step <ul style="list-style-type: none"> – Clay brick – Concrete – Interlocking block etc | <ul style="list-style-type: none"> – Anti slippery surface – Max. gradient 8% – Durable | <ul style="list-style-type: none"> – Building compound |  |
| | | <ul style="list-style-type: none"> □ Walls <ul style="list-style-type: none"> – Key stone – Concrete – Fencing brick etc. | <ul style="list-style-type: none"> – Harmonize with surrounding | <ul style="list-style-type: none"> – Building compound |  |
| | <ul style="list-style-type: none"> ▪ Fence, Gate and Barrier <ul style="list-style-type: none"> <input type="checkbox"/> Contemporary <input type="checkbox"/> Formal <input type="checkbox"/> Traditional | <ul style="list-style-type: none"> – Hardwood – Metal – Masonry | <ul style="list-style-type: none"> – To follow Fencing Design Guideline Putrajaya | <ul style="list-style-type: none"> – Boundary line |  |
| | <ul style="list-style-type: none"> ▪ Lighting <ul style="list-style-type: none"> <input type="checkbox"/> Contemporary <input type="checkbox"/> Informal <input type="checkbox"/> Formal | <ul style="list-style-type: none"> – Hardwood – Metal – Concrete | <ul style="list-style-type: none"> – Durable – Attractive – Safe | <ul style="list-style-type: none"> – Building compound |  |
| | <ul style="list-style-type: none"> ▪ Drainage <ul style="list-style-type: none"> <input type="checkbox"/> Swales <input type="checkbox"/> Concealed drains | <ul style="list-style-type: none"> – Culvert – Concrete – Drain cover on walkway to follow walkway 's material | <ul style="list-style-type: none"> – Visually attractive – Concealed drains | <ul style="list-style-type: none"> – Building lot |  |
| | <ul style="list-style-type: none"> ▪ Planting <ul style="list-style-type: none"> <input type="checkbox"/> Formal <input type="checkbox"/> Informal | <ul style="list-style-type: none"> – Tree – Palm – Shrub – Groundcover | <ul style="list-style-type: none"> – Non-poisonous species – Strong branch – Medium size trees | <ul style="list-style-type: none"> – Building compound |  |
| | <ul style="list-style-type: none"> ▪ Irrigation Strategy | <ul style="list-style-type: none"> – Tap from storage tank or JBA main or tap from JBA main | | | |

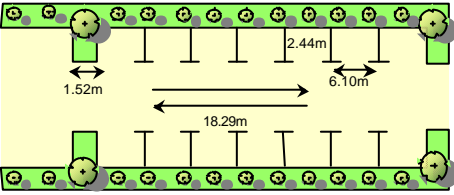
| PLANNING REQUIREMENT : LANDSCAPE | | | | | |
|--|--|--|---|---|---|
| LANDUSE | DESIGN STYLE | MATERIALS | GENERAL REQUIREMENT | USE/LOCATION | |
| <input type="checkbox"/> Residential (Condominium, Government apartment) | ■ Paving / Step, Wall <input type="checkbox"/> Formal | <input type="checkbox"/> Paving / Step – Clay brick – Concrete – Interlocking block etc | – Anti slippery surface – Max-gradient of 8% – Durable | – Open space – Walkway |  |
| | | <input type="checkbox"/> Wall – Keystone – Facing Brick – Concrete etc. | – Harmonize with surrounding environment | – Slope areas |  |
| | ■ Site Furniture <input type="checkbox"/> Contemporary <input type="checkbox"/> Elegant formal <input type="checkbox"/> Specific design for neighbourhood | – Hardwood – Metal – Concrete | – Vandalism proof – Durable – Functional – Safe | – Open space – Resting areas |  |
| | ■ Lighting <input type="checkbox"/> Contemporary <input type="checkbox"/> Elegant formal <input type="checkbox"/> Specific design for neighbourhood | – Concrete – Metal – Masonry | – Max. height 4m at open areas – Max. height 10m at roadside | – Open space – Entrance with bollard – Roadside |  |
| | ■ Drainage <input type="checkbox"/> Swales/Natural drain <input type="checkbox"/> Concealed drains | – Culvert – Concrete – Drain cover on walkway to follow walkway 's material | – To harmonize with surrounding environment | – Where necessary |  |
| | ■ Structures and Shelter <input type="checkbox"/> Informal <input type="checkbox"/> Vernacular | – Hardwood – Concrete – Masonry – Metal | – To blend harmoniously with surrounding structure – Durable – Safe | – Open space |  |
| | ■ Signage <input type="checkbox"/> Formal <input type="checkbox"/> Informal | – Metal | – To following Signage and Advertisement Design Guideline Putrajaya | – Entrance – Open space – Pedestrian walkway |  |

| PLANNING REQUIREMENT : LANDSCAPE | | | | | |
|--|---|---|--|--|---|
| LANDUSE | DESIGN STYLE | MATERIALS | GENERAL REQUIREMENT | USE/LOCATION | |
| <input type="checkbox"/> Residential (Condominium, Government apartment) | <ul style="list-style-type: none"> ▪ Play feature <ul style="list-style-type: none"> <input type="checkbox"/> Integrated <input type="checkbox"/> Bright colour | <ul style="list-style-type: none"> - Metal - Rubber matting - Plastic | <ul style="list-style-type: none"> - Conform to SIRIM standard - Safe - Attractive - Durable | <ul style="list-style-type: none"> - Open space |  |
| <input type="checkbox"/> Open space | <ul style="list-style-type: none"> ▪ Paving, walls and steps <ul style="list-style-type: none"> <input type="checkbox"/> Informal and contemporary <input type="checkbox"/> Informal and natural <input type="checkbox"/> Robust | <ul style="list-style-type: none"> □ Paving / Step <ul style="list-style-type: none"> - Clay brick - Concrete - Grasscrete etc | <ul style="list-style-type: none"> - Anti slippery surface - Max. gradient 8% - Durable - Accessible for disable | <ul style="list-style-type: none"> - Open space - Plaza - Roadside |  |
| | | <ul style="list-style-type: none"> □ Wall <ul style="list-style-type: none"> - Key stone - Facing brick - Concrete - Granite stone etc. | <ul style="list-style-type: none"> - Visually attractive - Harmonize with surrounding environment | <ul style="list-style-type: none"> - Slope areas |  |
| | <ul style="list-style-type: none"> ▪ Site Furniture <ul style="list-style-type: none"> <input type="checkbox"/> Robust <input type="checkbox"/> Contemporary Decorative | <ul style="list-style-type: none"> - Hardwood timber - Concrete - Metal | <ul style="list-style-type: none"> - Vandalism proof - Durable - Safe | <ul style="list-style-type: none"> - Open space - Plaza - Roadside |  |
| | <ul style="list-style-type: none"> ▪ Lighting <ul style="list-style-type: none"> <input type="checkbox"/> Contemporary <input type="checkbox"/> Robust <input type="checkbox"/> Decorative | <ul style="list-style-type: none"> - Hardwood timber - Metal - Fiberglass | <ul style="list-style-type: none"> - Max. height compound lighting 4m - Anti-corrosion finishes - Durable | <ul style="list-style-type: none"> - Plaza - Open space - Road side |  |
| | <ul style="list-style-type: none"> ▪ Drainage <ul style="list-style-type: none"> <input type="checkbox"/> Swales/Natural drain <input type="checkbox"/> Concealed drains | <ul style="list-style-type: none"> - Culvert - Concrete - Drain cover on walkway to follow walkway 's material | <ul style="list-style-type: none"> - Visually attractive - Naturally blend with surrounding | <ul style="list-style-type: none"> - Open space - plaza |  |
| | <ul style="list-style-type: none"> ▪ Structures and Shelters <ul style="list-style-type: none"> <input type="checkbox"/> Contemporary <input type="checkbox"/> Simple <input type="checkbox"/> Informal | <ul style="list-style-type: none"> - Timber - Concrete - Metal | <ul style="list-style-type: none"> - Sustainable design - Proportion to surrounding scale - Durable | <ul style="list-style-type: none"> - Open space - Plaza |  |
| | <ul style="list-style-type: none"> ▪ Irrigation Strategy | <ul style="list-style-type: none"> - Pipe reticulation from pond & supported by trucking or tap from JBA main | | | |

| PLANNING REQUIREMENT : LANDSCAPE | | | | | |
|-------------------------------------|---|---|---|--|---|
| LANDUSE | DESIGN STYLE | MATERIALS | GENERAL REQUIREMENT | USE/LOCATION | |
| <input type="checkbox"/> Open space | ■ Play feature <input type="checkbox"/> Robust <input type="checkbox"/> Colorful <input type="checkbox"/> Safe | – Timber – Rubber matting – Metal | – Conform to SIRIM standard – Safe – Attractive | – Open space – Plaza |  |
| | ■ Sport feature <input type="checkbox"/> Save <input type="checkbox"/> Informal <input type="checkbox"/> Formal | – Sand – Grass – Concrete | – Durable – Safe | – Open space |  |
| | ■ Signage <input type="checkbox"/> Contemporary <input type="checkbox"/> Formal | – Metal | – As per Signage and Advertisement Design Guideline Putrajaya | – Entrance – Junction – Pedestrian – Sport areas |  |
| | ■ Water feature <input type="checkbox"/> Naturalistic <input type="checkbox"/> Contemporary | – Rock, Natural – Tile finish – Metal sculpture – Concrete sculpture | – Safe – Attractive | – Entrance – Open space – Plaza |  |
| <input type="checkbox"/> Buffer | ■ Planting <input type="checkbox"/> Natural <input type="checkbox"/> Informal | – Palm – Shrub – Forest species – Medium trees | – Able to Screen – Safe – Attractive | – Along Roadside – Public utilities boundary – Between TNB-Turbine area and Housing area |  |

| PLANNING REQUIREMENT : URBAN DESIGN | | | | |
|--|--|--|--|--|
| LAYOUT PLAN | BUILDING CHARACTER | HEIGHT, MASSING AND BUILDING SPACES | COLOUR TEXTURE | MISCELLANEOUS |
| <p>(i) The layout plan must demonstrate that the following elements are addressed in the design:</p> <ul style="list-style-type: none"> ▪ Development appropriate to topographical features ▪ Appropriate building orientation with respect to the sun ▪ Appropriate pedestrian and vehicular access systems ▪ Site infrastructure systems are designed in a manner which enhances site development <p>(ii) Illustrate the effective and efficient integration of the pedestrian, cycle and road systems</p> <p>(iii) Development is to be designed to work with site contours to avoid unnecessary cut and associated retaining structures</p> <p>(iv) Illustrate a high level of permeability between site uses within the Planning Block and with adjoining Planning Blocks</p> <p>(v) Illustrate appropriate site building setbacks from major traffic routes or other noise generating or potentially dangerous infrastructure</p> <p>(vi) Illustrate that the site will be developed in a logical sequence</p> <p>(vii) The layout plan should illustrate that the form of development effectively contributes to the Planning Block's sense of place and amenity with the context of Putrajaya</p> <p>(viii) Where applicable, the provisions of suraus, within apartment complexes should be a freestanding building.</p> <p>(ix) The apartment complex must include 'drop off' points for the convenience of residents.</p> <p>(x) Maximum plinth for apartment building is 60% of the site</p> | <p>(i) Avoid monotonous building designs – provide a range of housing types to meet different lifestyle choices, diversity in the marketplace and opportunity for an interesting street frontage</p> <p>(ii) Ensure that buildings are designed to respect the topographical features of the site, eg buildings should step with steeper sites – do not cut substantial benches into steep land</p> <p>(iii) Building design should respect the amenity of adjoining and adjacent buildings and their residents</p> <p>(iv) Building design should interpret local image and character with new materials that are energy efficient</p> <p>(v) Building facades should be designed to accommodate a tropical environment</p> <p>(vi) Designers should look to the use of innovative building materials that are less maintenance intensive and more environmentally efficient</p> <p>(vii) While diversity is sought in building design, buildings should be designed with a common theme that provides a linkage to the style and nature of the development area</p> <p>(viii) Building design should ensure good living environments for residents that do not adversely impact on neighbours</p> <p>(ix) The building design should incorporate landscaping that contributes to a pleasant and safe environment and integrates well with the streetscape and adjoining open space areas</p> <p>(x) For high rise buildings:</p> <ul style="list-style-type: none"> ▪ Pedestrian spaces, courts, landscape or recreation areas should be more prominent than vehicle movement and utility spaces ▪ Vehicle parking design and location should minimise impact on adjacent dwellings ▪ Safe and convenient internal access to parking, residential and service areas | <p>(i) Building design must comply with all provisions relating to plot ratio, plinth, building height and setbacks as contained within these guidelines, and must comply with the UDG of Precinct 11 and 13.</p> <p>(ii) Spaces on any ground level should not directly overlook dwellings on adjacent land</p> <p>(iii) Ground floor levels must be responsive to pedestrian footpaths and continuity and flow between buildings</p> <p>(iv) Building design does not significantly reduce daylight to open space and habitable rooms in adjacent development</p> <p>(v) Roof pitch and overlay should be designed to meet local environmental requirements</p> <p>(vi) Roof overhang should be designed to minimise the impact on sight lines from adjacent buildings</p> <p>(vii) Buildings should be designed to encourage facade articulation and use of design elements that reduce building bulk and provide a pleasant street aspect. Any blank wall should be avoided</p> <p>(viii) The design of free standing buildings should be sympathetic with adjoining buildings, yet provide for local identity and character</p> | <p>(i) Building colours should harmonise with the predominant colours of the surrounding area</p> <p>(ii) Use of earth tones shall be encouraged</p> <p>(iii) Colours for specific building types will be subject to the approval of the Perbadanan. Pastel colours are to be encouraged</p> | <p>(i) Privacy and visual controls – overlooking to be controlled by appropriate orientation of windows and use of splay windows</p> <p>(ii) Air conditioning equipment including piping – all equipment should be contained in compartments that are designed as an integral component of the building to ensure the equipment is hidden from view</p> <p>(iii) Drying yards – building design should incorporate appropriate design for drying areas that allows for natural ventilation and light while ensuring they are hidden from public view</p> <p>(iv) Aerials and satellite dishes – in high rise buildings or multiple tenancy commercial buildings, a central reception system is to be incorporated into the building design. On all other buildings, aerials and satellite dishes shall be located to avoid adverse impact on the amenity of adjoining buildings</p> <p>(v) Service ducting shall not be exposed on the external surfaces of buildings</p> <p>(vi) Carports and garages should:</p> <ul style="list-style-type: none"> ▪ Be designed to integrate with the design of associated buildings ▪ Not diminish the attractiveness of the streetscape ▪ Not visually dominate views of the house from the street ▪ Cover the full length of a car <p>(vii) Dwellings with green frontage must address that frontage with habitable spaces and not service areas only</p> <p>(viii) Dwelling design must provide sufficient outdoor open space that can act as an extension of the dwelling for relaxation, entertainment, recreation and children's play purposes</p> <p>(ix) Utility and service areas associated shall be suitably enclosed in structures and materials sympathetic with the design of the buildings</p> <p>(x) For the installations of grills, residents need to abide by the guidelines on the Uniform Design and Installation of Grills for Buildings in Putrajaya (Department of Urban Services, Putrajaya)</p> <p>(xi) Any changes to the façade and design of buildings must seek planning permission for Perbadanan Putrajaya.</p> |

PHYSICAL PLANNING REQUIREMENTS PLANNING BLOCK 8 (PB 8)

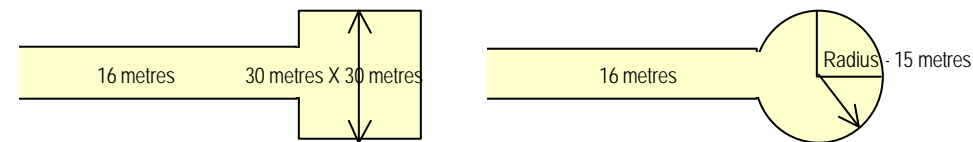
| MAIN LAND USES: | PLANNING REQUIREMENT : BUILDING | |
|--|--|--|
| KEY PROVISION | BUILDING SETBACKS | CAR PARKS |
| <p>(i) Permitted Use</p> <ul style="list-style-type: none"> ▪ Religious Reserve ▪ Fencing : As per Fencing Design Guidelines Manual Volume 2, Chapter 13 ▪ Reservoir ▪ Max. height : 1 storey | <p>(i) Front / Rear Setback</p> <ul style="list-style-type: none"> ▪ Setback from access road – 12m (min.) ▪ Rear setback – Minimum 6 metres ▪ Side setback – Minimum 6 metres | <p>(i) Car Parking</p> <ul style="list-style-type: none"> ▪ 1 cps per 100m² ▪ Provision for cps for the handicap at 1% of total cps <div style="text-align: center;">  <p>The diagram illustrates a rectangular car parking area with a yellow background. It shows two rows of parking spaces. The top row has 10 spaces, and the bottom row has 10 spaces. The width of the parking area is 18.29m. The distance between the centerlines of two adjacent spaces in a row is 2.44m. The width of a single parking space is 6.10m. The distance from the centerline of a space to the side boundary is 1.52m.</p> </div> <ul style="list-style-type: none"> ▪ 1 MPS : 150 GFA ▪ Min. 1 bicycle rack ▪ Min. 2 handicapped parking space |

PLANNING REQUIREMENTS : TRAFFIC AND TRANSPORTATION

ROAD NETWORK AND DESIGN STANDARD

(i) Network Type

- Access Road - 16 metres reserve
- Cul-De-Sac - 15 metres reserve

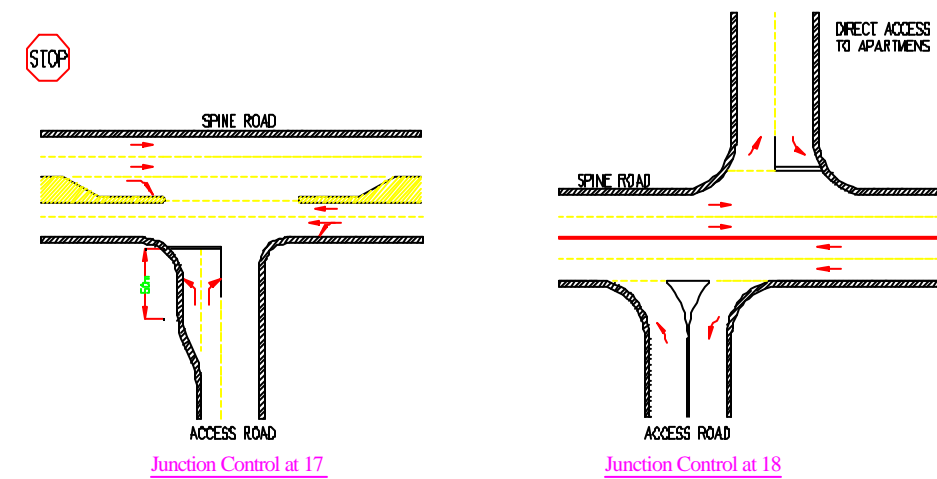
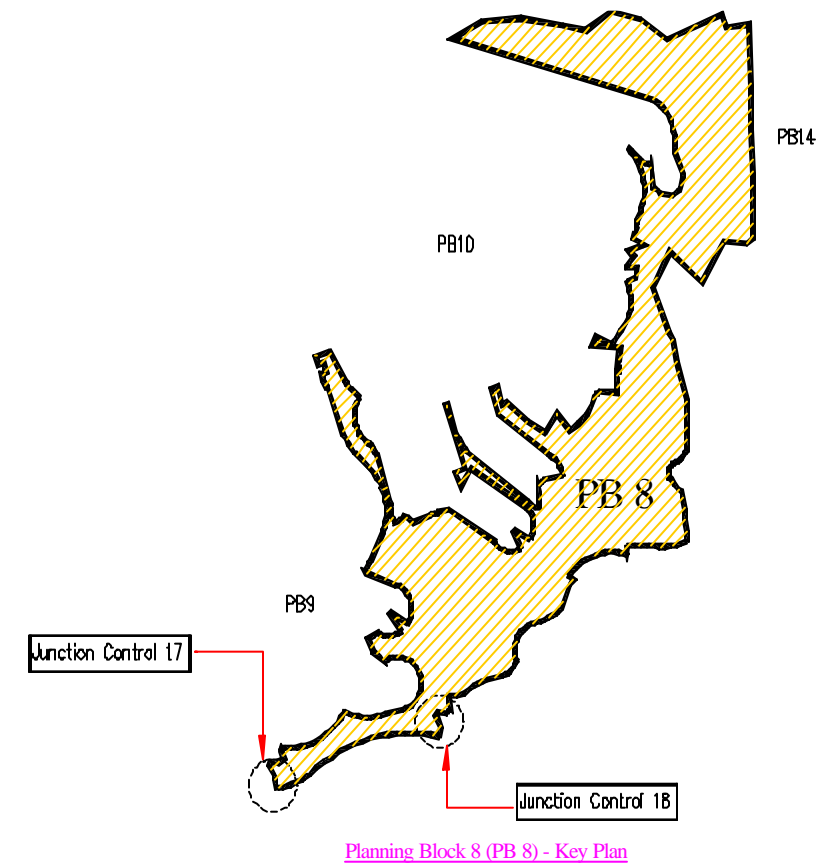


(ii) Junction Control Criteria

| Junction Control | Total sum of 2-way traffic on the major road and heavier approach on minor road (PCU) | |
|------------------|---|------------------------|
| | Spine Road | Local Road |
| Stop Control | up to 1500 | up to 1500 |
| Traffic Signal | Up to 4500 | Generally not required |
| Grade Separation | Generally not required | Generally not required |

(iii) Transport Design Guide for Putrajaya

- Details on other design criteria to be referred to the Transport Design Guide for Putrajaya (1998)



PLANNING REQUIREMENTS : INFRASTRUCTURE AND UTILITIES

UTILITIES

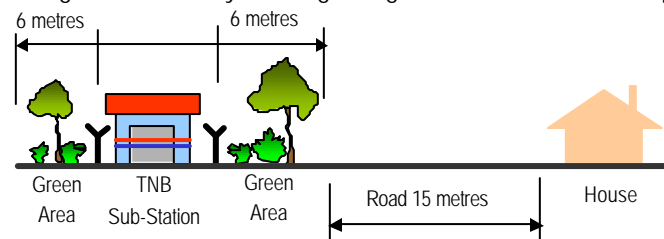
(i) Environment

- PB8 consists mainly of the Metropolitan Park (Taman Saujana). The development of this area must conform to the Habitat Creation aspects of the Urban Design Guidelines on Environment, Chapter 6
- Earthwork for building sites around the foothills of the area should not intrude into the Park. Any earthworks must be given a landscape treatment.
- The detailed platform levels shall be determined at the D.0 approval stage
- All earthworks must comply with the Environmental Management Guidelines of Putrajaya and Earthwork By-Laws (Perbadanan Putrajaya 1996)



(ii) Electricity

- The electricity supply for PB8 is mostly used for residential which are approximately 90% of the total Electrical Energy required.
- Provision of adequate numbers of 33KV Main Distribution Station (MDS) to be supported by a series of 11KV Sub-Stations (Single & Double Chambers) and feeder pillars at strategic locations to comply with the electricity provider's (TNB) requirement.
- Feeder pillars along public roads and areas shall have all doors to open away from road and public view.
- Electrical cabling network for overall development of PB8 shall consist of 33KV, 11KV and 415V distribution network systems.
- The electrical cabling network system shall be placed along the utility reserves to conform to the no dig policy. All electrical cabling shall be of the underground system.
- Sub-Station: shall have a minimum 6 metres setback on all sides to the nearest residential building. These shall be extensively landscaped.
- Fencing of utility buildings shall abide by Fencing Design Guidelines-Vol. 2, Chap. 15 pg. 132

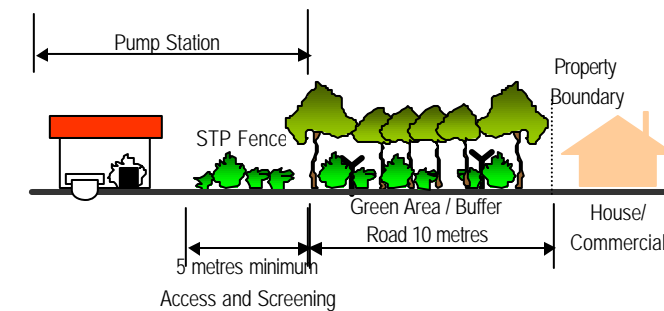


(iii) Drainage

- Drainage to the site shall be provided in terms of collection, conveyance and retention of flow from the site.
- Gross Pollutant Traps to be provided at the outlet of discharge points.
- The drainage design shall comply with the Putrajaya Stormwater Management Design Guidelines (1998), Drainage Masterplan Study Report for Putrajaya (1996) and Urban Stormwater Management Manual for Malaysia, (JPS, 2000)
- Detention pond to be provided for Drainage Water discharging outside the Putrajaya area

(iv) Sewerage

- A network of gravity sewer reticulation to collect sewage from the precinct. (Level 3 works.)
- From these reticulation networks, sewage will be discharged into the centralized trunk sewer system of Putrajaya (Level 1 & 2 works) at appropriate points.
- The trunk sewers will terminate at two pump-stations. These two pump stations are PS1 in Precinct 9 and PS9 (Levels 1 & 2 works) located at the south of precinct 11, next to Road R3.
- From PS1 and PS9, sewage will be conveyed via the centralized trunk sewer system to STP2 for treatment. However, STP2 is not scheduled to be ready until Year 2003. In the interim, sewage discharge will be temporary directed to the sewage switching station PS5 for onward conveyance to STP1 for treatment until the completion of STP2.
- The buffer for a closed STP shall be 10 m to the nearest property boundary.
- The buffer for an open STP system shall be 30 m to the nearest property boundary.



PLANNING REQUIREMENTS : INFRASTRUCTURE AND UTILITIES

UTILITIES

(v) Gas

- The gas supply for PB8 is mostly used for residential which are approximately 80% of the total gas requirements.
- Gas supply for PB8 will be served from a District Gas Station located at Precinct 9 through a medium pressure gas pipeline.
- Provisions of 4 nos. of area Gas Station are allocated within the Precinct 11 development to cater for the projected gas loading requirements, with total area reserve of 1.13 acres.
- Low-pressure gas pipeline reticulation from the Area Gas Station is planned to serve the gas requirements for the residential, commercial and other amenities.
- Safety provision for construction within the vicinity.
- (For details of Gas Pipeline Reserve Design refer Appendix 1)

(vi) Waste Disposal

- Solid waste management in PB8 shall address reduction, reuse, recycling and recovery, the 4 R's of waste management.
- Solid waste is proposed to be separated at source, by residents or employees, into three streams; dry recycles, wet waste and rubbish (all other wastes). The dry recyclable is to be further separated at source into containers and fiber materials.
- The sensitivity of the site in terms of waste management relates to the operational requirements of Precinct 11, which require that no burial of material is undertaken during the construction phase.
- In addition to control odour nuisance to any sensitive receptors biodegradable waste cannot be left at the site for extended periods.
- The waste management shall comply with Urban Design Guidelines and Environmental Guidelines for Putrajaya.
- For low rise residential, refuse chamber is to be placed in front of the house, either left or right of the driveway and near to main road for the ease of mechanical collection. The estimated generation of solid waste is 5kg/unit/day.
- For non-residential building, refuse chamber center can be built at the ground floor / basement or apart from the main building. The estimated generation of solid waste for recreation park/public transport stop station are 0.2 kg/visitor, 300L/1000m²(gross floor area) for shopping complex and 500L/1000m²(gross floor area) for restaurant.

- Access road must be constructed for the ease of mechanical collection and public use. Obstructions to any collection vehicle's access must be disallowed at all time.

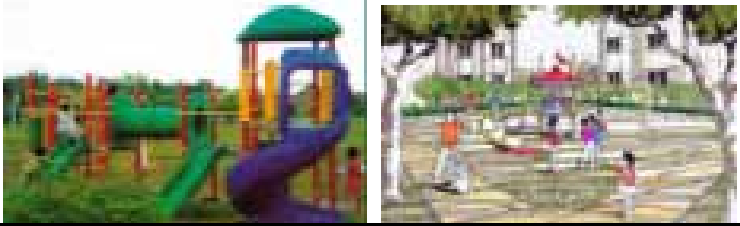
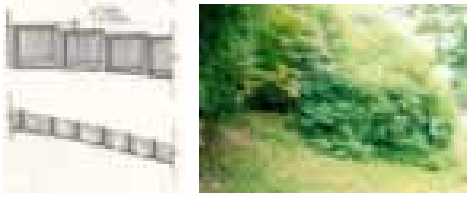

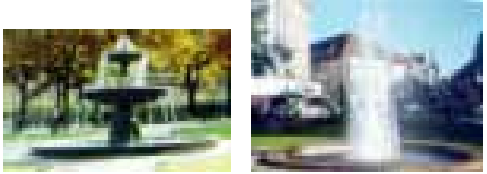

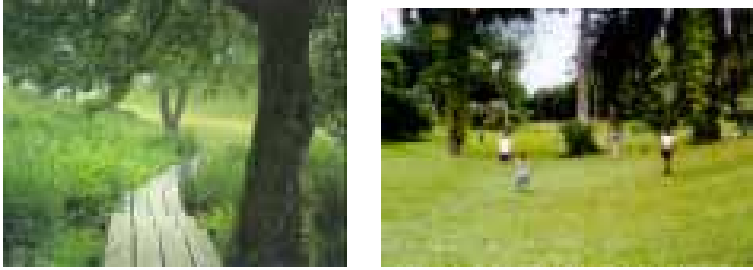


(vii) Water Supply



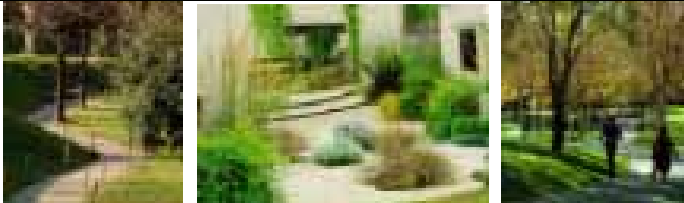
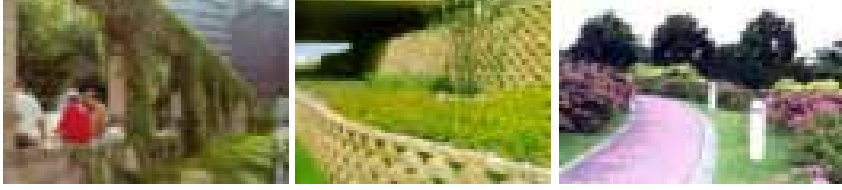
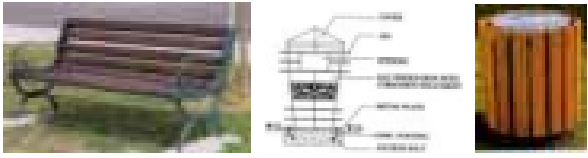
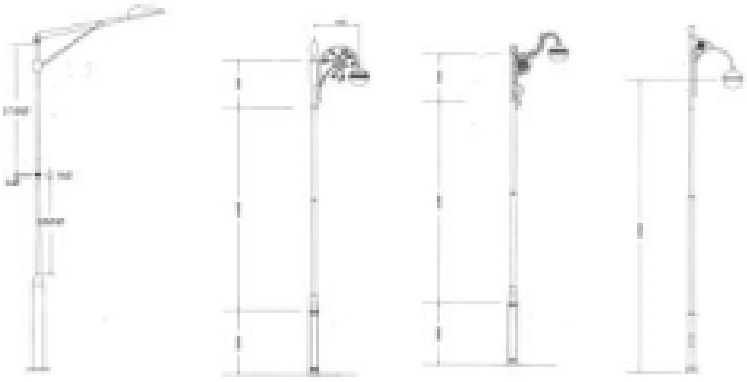
- Water supply to PB8 shall be consistent with the provision of water supply master plan for Putrajaya
- Storage reservoir and pumping station together with the rising and falling mains shall be planned to serve this area in compliance with Jabatan Bekalan Air (JBA) requirement, and Design Criteria and Standards for Water Supply System, JKR (1989)
- Platform for reservoir to follow landform and earthworks required should be sympathetic to the terrain
- Land reserve for reservoir should provide for all setback requirement and necessary slopes to be accommodated
- The design of reservoir shall comply with Design Criteria and Standards for Water Supply Systems
- Approach road may be designed for occasional usage
- The reservoir structure shall not intrude into the natural state of its surrounding area

| PLANNING REQUIREMENT : LANDSCAPE | | | | | |
|--|---|--|---|---|--|
| LANDUSE | DESIGN STYLE | MATERIALS | GENERAL REQUIREMENT | USE/LOCATION | |
| <input type="checkbox"/> Metropolitan Park | ■ Paving, walls and steps <input type="checkbox"/> Informal | <input type="checkbox"/> Paving / Step - Clay brick - Concrete - Interlocking block etc | - Anti slippery surface - Max. gradient 8% - Max. gradient 2% for superelevation - Durable | - Open space - Plaza | |
| | | <input type="checkbox"/> Walls - Key stone - Concrete - Granite stone etc. | - Harmonize with surrounding - Visually attractive | - Slope areas | |
| | ■ Site Furniture <input type="checkbox"/> Contemporary <input type="checkbox"/> Informal | - Hardwood - Metal - Stone | - Vandalism proof - Durable - Functional - Safe | - Open space - Plaza | |
| | ■ Lighting <input type="checkbox"/> Robust <input type="checkbox"/> Contemporary | - Concrete - Metal - Masonry | - Max. height 4m at open areas | - Bollard at pedestrian entrance - Plaza - Pedestrian walkway | |
| | ■ Drainage <input type="checkbox"/> Swales/Natural drain <input type="checkbox"/> Concealed drains | - Rock boulder - Culvert - Concrete - Granite stone wall - Drain cover on walkway to follow walkway 's material | - Preferable covered drain - Natural fence if necessary - Accessible for maintenance works | - All drainage system | |
| | ■ Structures and Shelters <input type="checkbox"/> Informal, Vernacular, <input type="checkbox"/> Hi-tech | <input type="checkbox"/> Structures - Hardwood timber - Metal - Concrete - Masonry <input type="checkbox"/> Roof - Clay tile - Metal decking - Poly cabonate | - Sustainable design - Proportion to human scale and surrounding structure - Functional - To blend harmoniously with surrounding environment | - Open areas - Plaza | |

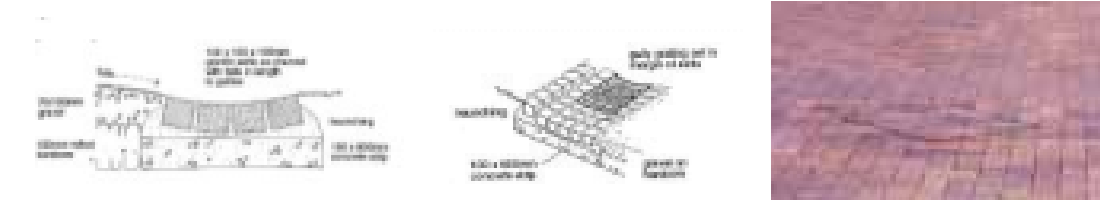



P U T R A J A Y A P R E C I N C T 11 L O C A L P L A N

| PLANNING REQUIREMENT : LANDSCAPE | | | | | | |
|--|--|---|--|--|---|--|
| LANDUSE | DESIGN STYLE | MATERIALS | GENERAL REQUIREMENT | USE/LOCATION | | |
| <input type="checkbox"/> Metropolitan Park | <ul style="list-style-type: none"> ▪ Play feature <ul style="list-style-type: none"> <input type="checkbox"/> Contemporary <input type="checkbox"/> Robust <input type="checkbox"/> Bright | <ul style="list-style-type: none"> - Steel frame - Rubber matting | <ul style="list-style-type: none"> - Conform to SIRIM standard | <ul style="list-style-type: none"> - Open space |  | |
| | <ul style="list-style-type: none"> ▪ Fences, Gate and Berries <ul style="list-style-type: none"> <input type="checkbox"/> Contemporary <input type="checkbox"/> Formal <input type="checkbox"/> Informal | <ul style="list-style-type: none"> - Engraved stone - Metal | <ul style="list-style-type: none"> - To suit architectural design - To blend naturally with surrounding environment - To follow FDG Putrajaya | <ul style="list-style-type: none"> - Entrance - Boundary demarcation |  | |
| | <ul style="list-style-type: none"> ▪ Signage <ul style="list-style-type: none"> <input type="checkbox"/> Informal <input type="checkbox"/> Formal | <ul style="list-style-type: none"> - Metal | <ul style="list-style-type: none"> - To following Signage and Advertisement Design Guideline Putrajaya | <ul style="list-style-type: none"> - Plaza - Open space - Pedestrian walkway - Bicycle track |  | |
| | <ul style="list-style-type: none"> ▪ Water features <ul style="list-style-type: none"> <input type="checkbox"/> Contemporary <input type="checkbox"/> Formal <input type="checkbox"/> Hi-tech | <ul style="list-style-type: none"> - Stone - Concrete - Metal | <ul style="list-style-type: none"> - Safe - Attractive - Clean | <ul style="list-style-type: none"> - Entrance - Plaza - Open space |  | |
| | <ul style="list-style-type: none"> ▪ Sport feature <ul style="list-style-type: none"> <input type="checkbox"/> Natural <input type="checkbox"/> Formal <input type="checkbox"/> Informal | <ul style="list-style-type: none"> - Timber - Rubber matting - Concrete - Grass | <ul style="list-style-type: none"> - Durable - Safe | <ul style="list-style-type: none"> - Open space |  | |
| | <ul style="list-style-type: none"> ▪ Planting <ul style="list-style-type: none"> <input type="checkbox"/> Formal <input type="checkbox"/> Informal | <ul style="list-style-type: none"> - Tree - Palm - Shrub - Groundcover | <ul style="list-style-type: none"> - Non-poisonous species - Strong branch - Medium size trees | <ul style="list-style-type: none"> - Building compound |  | |
| | | <ul style="list-style-type: none"> ▪ Irrigation Strategy | <ul style="list-style-type: none"> - No permanent irrigation facilities will be required | | | |

P U T R A J A Y A P R E C I N C T 11 L O C A L P L A N

| PLANNING REQUIREMENT : LANDSCAPE | | | | | |
|---|---|---|---|--|---|
| LANDUSE | DESIGN STYLE | MATERIALS | GENERAL REQUIREMENT | USE/LOCATION | |
| <input type="checkbox"/> TNB Reserve | <ul style="list-style-type: none"> ▪ Planting <ul style="list-style-type: none"> □ Heavy planting | <ul style="list-style-type: none"> - Tree - Palm - Shrub | <ul style="list-style-type: none"> - Non-poisonous species - Able to act as barrier | <ul style="list-style-type: none"> - Boundary line |  |
| <input type="checkbox"/> Gas pipe reserve | <ul style="list-style-type: none"> ▪ Planting <ul style="list-style-type: none"> □ Informal | <ul style="list-style-type: none"> - Tree - Palm - Shrub | <ul style="list-style-type: none"> - Non-poisonous species | <ul style="list-style-type: none"> - Reserve areas |  |
| <input type="checkbox"/> Roadside | <ul style="list-style-type: none"> ▪ Paving, walls and steps <ul style="list-style-type: none"> □ Formal □ Contemporary | <ul style="list-style-type: none"> □ Paving / Step <ul style="list-style-type: none"> - Clay brick - Concrete - Interlocking paver etc. | <ul style="list-style-type: none"> - Anti slippery surface - Max. gradient 8% - Max. Gradient for super elevation 2% | <ul style="list-style-type: none"> - Roadside |  |
| | | <ul style="list-style-type: none"> □ Wall <ul style="list-style-type: none"> - Key stone - Concrete - Granite stone etc. | <ul style="list-style-type: none"> - Harmonize with surrounding environment | <ul style="list-style-type: none"> - Slope areas |  |
| | <ul style="list-style-type: none"> ▪ Site Furniture <ul style="list-style-type: none"> □ Contemporary | <ul style="list-style-type: none"> - Hardwood - Masonry - Metal | <ul style="list-style-type: none"> - Vandalism proof - Safe - Attractive | <ul style="list-style-type: none"> - Junction |  |
| | <ul style="list-style-type: none"> ▪ Lighting <ul style="list-style-type: none"> □ Robust □ Minimal □ Reflect character of adjacent neighbourhood | <ul style="list-style-type: none"> - Timber - Metal | <ul style="list-style-type: none"> - Max. height 10m at roadside | <ul style="list-style-type: none"> - Footpaths - Cycle track - Car park |  |

P U T R A J A Y A P R E C I N C T 11 L O C A L P L A N

| PLANNING REQUIREMENT : LANDSCAPE | | | | | |
|-----------------------------------|--|---|---|--|---|
| LANDUSE | DESIGN STYLE | MATERIALS | GENERAL REQUIREMENT | USE/LOCATION | |
| <input type="checkbox"/> Roadside | ■ Drainage <input type="checkbox"/> Swales/Natural drain <input type="checkbox"/> Concealed drains | – Culvert – Concrete – Drain cover on walkway to follow walkway 's material | – Visually attractive – Naturally blend with surrounding | – Open space – plaza |  |
| | ■ Signage <input type="checkbox"/> Contemporary <input type="checkbox"/> Formal <input type="checkbox"/> Simple <input type="checkbox"/> Clear | – Masonry – Metal – Hardwood | – Clear – Vandalism proof | – Junction |  |
| | ■ Planting <input type="checkbox"/> Formal | – Shade medium size tree – Palm – Shrub | – Provide ample shade – Hardy Plants – Attractive | – Roadside |  |
| | ■ Irrigation Strategy | – Trucking | | | |
| <input type="checkbox"/> Buffer | ■ Planting <input type="checkbox"/> Natural <input type="checkbox"/> Informal | – Palm – Shrub – Forest species – Medium trees | – Able to Screen – Safe – Attractive | – Along Roadside – Public utilities boundary – Between TNB-Turbine area and Housing area |  |

P U T R A J A Y A P R E C I N C T 11 L O C A L P L A N


| PLANNING REQUIREMENT : URBAN DESIGN | | | | |
|--|---|--|---|--|
| LAYOUT PLAN | BUILDING CHARACTER | HEIGHT, MASSING AND BUILDING SPACES | COLOUR TEXTURE | MISCELLANEOUS |
| <p>(i) The layout plan must demonstrate that the following elements are addressed in the design:</p> <ul style="list-style-type: none"> ▪ Development appropriate to topographical features ▪ Appropriate building orientation with respect to the sun ▪ Appropriate pedestrian and vehicular access systems ▪ Site infrastructure systems are designed in a manner which enhances site development <p>(ii) Illustrate the effective and efficient integration of the pedestrian, cycle and road systems</p> <p>(iii) Development is to be designed to work with site contours to avoid unnecessary cut and associated retaining structures</p> <p>(iv) Illustrate a high level of permeability between site uses within the Planning Block and with adjoining Planning Blocks</p> | <p>(i) Ensure that buildings are designed to respect the topographical features of the site ,eg buildings should step with steeper sites – do not cut substantial benches into steep land</p> <p>(ii) Building design should interpret local image and character with new materials that are energy efficient</p> <p>(iii) Building facades should be designed to accommodate a tropical environment</p> <p>(iv) Designers should look to the use of innovative building materials that are less maintenance intensive and more environmentally efficient</p> <p>(v) The building design should incorporate landscaping that contributes to a pleasant and safe environment and integrates well with the streetscape and adjoining open space areas</p> | <p>(i) Roof pitch and overhang should be designed to meet local environmental requirements</p> | <p>(i) Building colours should harmonise with the predominant colours of the surrounding area</p> <p>(ii) Use of earth tones shall be encouraged</p> <p>(iii) No uncoated metals should be used for the sidings of the bus depot building(s) – should metal sidings be utilised, these should be coated in suitable colours, preferably earth tones</p> <p>(iv) Profiled metals may be used for the sidings for bus depot buildings</p> | <p>(i) Buildings associated with the bus depot should:</p> <ul style="list-style-type: none"> ▪ Be reasonably compatible in appearance and scale with nearby buildings ▪ Include appropriate screening and buffering that maintains or improves the amenity of adjoining uses ▪ The bus depot is to be designed to contain within the site any potential adverse visual or environmental impacts ▪ Access, parking and servicing of buses at the bus depot must not reduce the amenity of lands in the vicinity of the depot <p>(ii) Any changes to the façade and design of buildings must seek planning permission for Perbadanan Putrajaya.</p> |

P U T R A J A Y A P R E C I N C T 1 1 L O C A L P L A N

PHYSICAL PLANNING REQUIREMENTS PLANNING BLOCK 9 (PB 9)

| MAIN LAND USES: | BUNGALOWS | SEMI-DETACHED HOUSES | TERRACE HOUSE | PRIMARY SCHOOL | INTEGRATED NEIGHBOURHOOD COMPLEX |
|------------------------|--|---|---|---|---|
| (i) Density | <ul style="list-style-type: none"> 8-10 unit/acre | <ul style="list-style-type: none"> 12-18 units/acre | <ul style="list-style-type: none"> 20 units/acre | <ul style="list-style-type: none"> One in PB9 Maximum Plint Area : 30% | <ul style="list-style-type: none"> One in PB9 |
| (ii) Composition | <ul style="list-style-type: none"> High cost | <ul style="list-style-type: none"> 90% government housing | <ul style="list-style-type: none"> 5% government housing | | <ul style="list-style-type: none"> Government service centre, Government Health Clinic, Petrol Station, Com. & Rec. Complex, Open Plaza, maximum 3Sorey Shop-Office |
| (iii) Minimum Lot size | <ul style="list-style-type: none"> 740m2 | <ul style="list-style-type: none"> 300m2 | <ul style="list-style-type: none"> 130m2 | <ul style="list-style-type: none"> 3.5 ha | <ul style="list-style-type: none"> 13 acres |
| (iv) Height | <ul style="list-style-type: none"> 2 levels on flat or gently sloping land 3 levels on steep land | <ul style="list-style-type: none"> 2 levels on flat or gently sloping land 3 levels on steep land | <ul style="list-style-type: none"> 2 levels on flat or gently sloping land | <ul style="list-style-type: none"> Maximum 4 storey | <ul style="list-style-type: none"> Maximum height of 4 storey |
| (v) Setbacks: | <ul style="list-style-type: none"> Front/Rear setbacks <ul style="list-style-type: none"> Total setback distance for both the front and rear setbacks must total 9 metres Street frontage – min. 3.0 metres Rear setback – min. 3.0 metres Non-Party/side boundary <ul style="list-style-type: none"> Minimum 3 metres Street boundary <ul style="list-style-type: none"> Minimum 3 metres Setback Between Roofs' Eaves <ul style="list-style-type: none"> Minimum 2 metres <div style="text-align: center;"> </div> | <ul style="list-style-type: none"> Front/Rear setbacks <ul style="list-style-type: none"> Total setback distance for both the front and rear setbacks must total 9 metres Front setback – min. 3.0 metres Rear setback – min. 3.0 metres Non-Party/side boundary <ul style="list-style-type: none"> Minimum 3 metres Street boundary <ul style="list-style-type: none"> Minimum 3 metres Setback Between Roofs' Eaves <ul style="list-style-type: none"> Minimum 2 metres | <ul style="list-style-type: none"> Front/Rear setbacks <ul style="list-style-type: none"> Total setback distance for both the front and rear setbacks must total 9 metres Street frontage – min. 3.0 metres Rear setback – min. 3.0 metres Any variation in setback is permissible within a single block of terraces and not for individual building Non-Party/side boundary <ul style="list-style-type: none"> Where applicable minimum 3 metres Street boundary <ul style="list-style-type: none"> Side setback to 15 metres road, for roads with 3 metres green buffer Side setback to 15 metres road, without 3 metres buffer Setback Between Roofs' Eaves <ul style="list-style-type: none"> Minimum 3 metres <div style="text-align: center;"> </div> | <ul style="list-style-type: none"> Front/Rear setbacks <ul style="list-style-type: none"> Setback from access road – 12m min. Rear – Minimum 6 metres Non-Party/side boundary <ul style="list-style-type: none"> Minimum 6 metres Street boundary <ul style="list-style-type: none"> Setback from access road – 12m (min) | <ul style="list-style-type: none"> Front/Rear setbacks <ul style="list-style-type: none"> Minimum 6 metres setback all around the lot boundary Minimum distance between building: 20 metres Non-Party/side boundary <ul style="list-style-type: none"> N/A |

P U T R A J A Y A P R E C I N C T 11 L O C A L P L A N

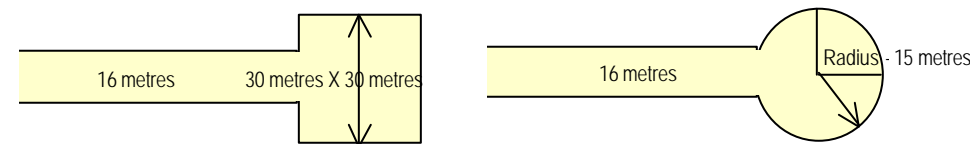
| MAIN LAND USES: | BUNGALOWS | SEMI-DETACHED HOUSES | TERRACE HOUSE | PRIMARY SCHOOL | INTEGRATED NEIGHBOURHOOD COMPLEX |
|---|--|---|---|--|---|
| <ul style="list-style-type: none"> ▪ Car Park | <ul style="list-style-type: none"> ▪ Min. 2 cps on site ▪ CPS to be clear of min. front setback. | <ul style="list-style-type: none"> ▪ Min. 2 cps on site ▪ CPS to be clear of min. front setback. | <ul style="list-style-type: none"> ▪ Minimum 1 cps per unit ▪ CPS to be clear of minimum front setback | <ul style="list-style-type: none"> ▪ 1 CPS per 4 teachers + 20% visitors ▪ Parking for disabled at 1% of total cps | <ul style="list-style-type: none"> ▪ 1 CPS per 500m2 GFA ▪ Parking for disabled at 1% of total cps |
| (vi) Fencing As per the Fencing Design Guidelines Manual, Volume 1 and Volume 2, chapter 1, 2 and 3 | <ul style="list-style-type: none"> ▪ Refer Fencing Design Guidelines Manual, Volume 2, chapter 4 | <ul style="list-style-type: none"> ▪ Refer Fencing Design Guidelines Manual, Volume 2, chapter 5 | <ul style="list-style-type: none"> ▪ Refer Fencing Design Guidelines Manual, Volume 2, chapter 6 | <ul style="list-style-type: none"> ▪ Refer Fencing Design Guidelines Manual, Volume 2, chapter 11 | <ul style="list-style-type: none"> ▪ Refer Fencing Design Guidelines Manual, Volume 2, chapter 19 |
| (vii) Layout Plan | <ul style="list-style-type: none"> ▪ Use the setback flexibility and building design variation to break up and vary the position of the houses.  | <ul style="list-style-type: none"> ▪ Use the setback flexibility and building design variation to break up and vary the position of the houses | <ul style="list-style-type: none"> ▪ Use the setback flexibility and building design variation to break up and vary the position of the houses ▪ To provide for a Tadika site of 0.5 acre | <ul style="list-style-type: none"> ▪ Layout plans to show the design concept including: <ul style="list-style-type: none"> ❑ Total gross net areas of indoor play, outdoor play, roofed shade and other outdoor shade areas. ❑ Service areas to be aesthetically screened. ❑ Site car parking to be clearly indicated. ❑ Site car parking to be landscaped. ❑ Min 2 metre landscaped buffer between car parking spaces and any boundary. ❑ Initiate stacked outdoor play areas, carparking. ❑ Indicate car parking set down/pick up areas – to be visible from road. ❑ Indicate pedestrian access to/from the site and connection to surrounding pedestrian pathways. ❑ Where boundaries aren't residential dwellings, carefully locate potentially noisy activities to minimise impacts. ❑ Show appropriate screening that protects the amenity of abutting residential uses. | <ul style="list-style-type: none"> ▪ Layout plan to show the design concept including: <ul style="list-style-type: none"> ❑ Total gross net areas of indoor play, outdoor play, roofed shade and other outdoor shade areas. ❑ Service areas to be aesthetically screened. ❑ Site car parking to be clearly indicated. ❑ Site car parking to be landscaped. ❑ Min 2 metre landscaped buffer between car parking spaces and any boundary. ❑ Initiate stacked outdoor play areas, carparking. ❑ Indicate car parking set down/pick up areas – to be visible from road. ❑ Indicate pedestrian access to/from the site and connection to surrounding pedestrian pathways. ❑ Where boundaries aren't residential dwellings, carefully locate potentially noisy activities to minimise impacts. ❑ Show appropriate screening that protects the amenity of abutting residential uses ❑ Effective screening to abutting residential use |

PLANNING REQUIREMENTS : TRAFFIC AND TRANSPORTATION

ROAD NETWORK AND DESIGN STANDARD

(i) Network Type

- Spine Road - 32 metres reserve
- Local Road - 22 metres reserve
- Access Road - 16 metres reserve
- Cul-De-Sac - 15 metres reserve



(ii) Road Capacity

- Spine Road - 1000 pcu/hr/lane
- Local Road - 700 pcu/hr/lane

(iii) Junction Control Criteria

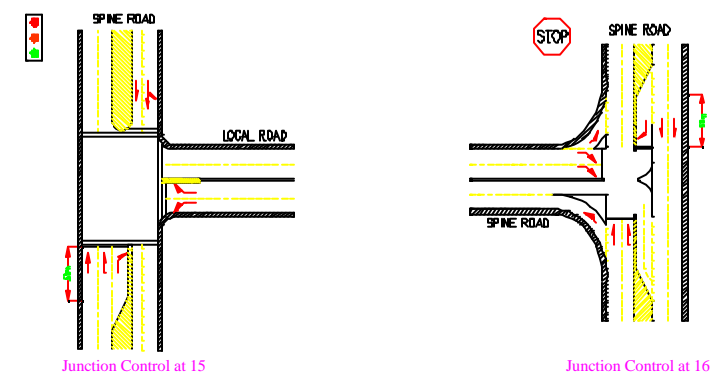
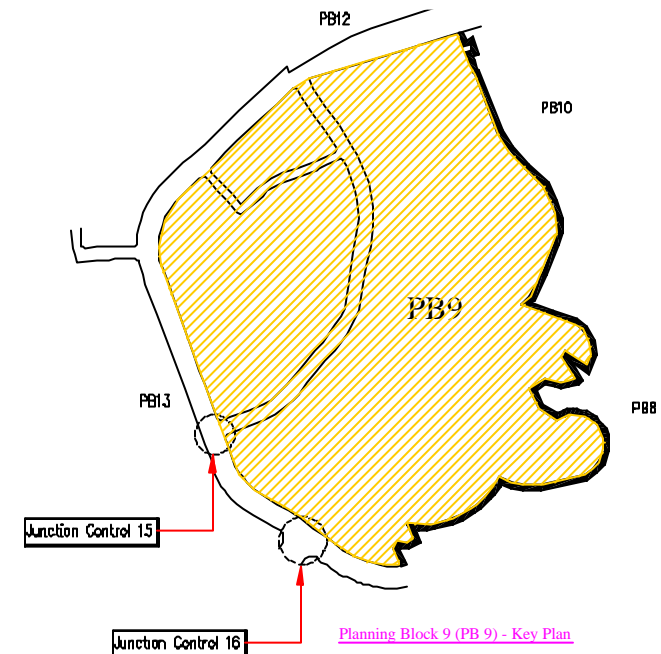
| Junction Control | Total sum of 2-way traffic on the major road and heavier approach on minor road (PCU) | |
|------------------|---|------------------------|
| | Spine Road | Local Road |
| Stop Control | up to 1500 | up to 1500 |
| Traffic Signal | Up to 4500 | Generally not required |
| Grade Separation | Generally not required | Generally not required |

(iv) Visibility Standards for Priority Junction

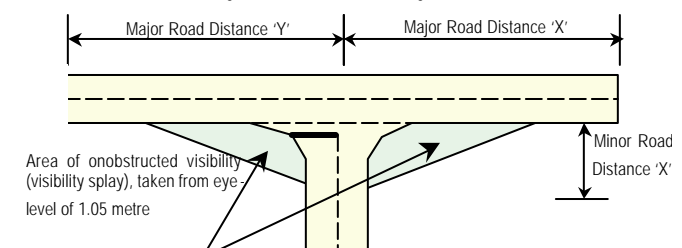
- Because minor road are uncontrolled. It is essential that adequate standards of visibility are achieved in the layout and that sight distances take account of the speed of traffic on the major road. The standards for providing clear visibility for minor road traffic are set out in the figure given

(v) Transport Design Guide for Putrajaya

- Details on other design criteria to be referred to the Transport Design Guide for Putrajaya (1998)



Visibility Standards for Priority Junction

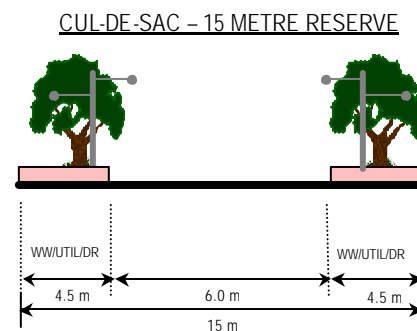
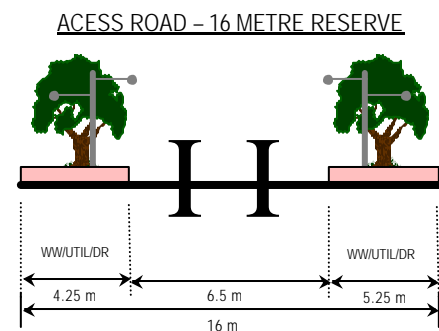
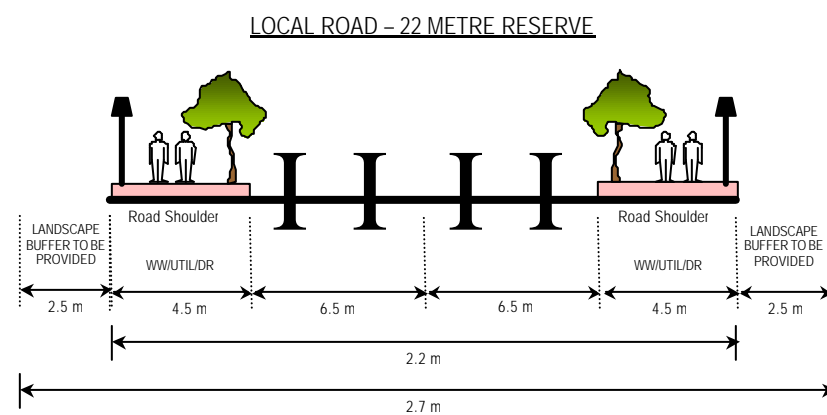
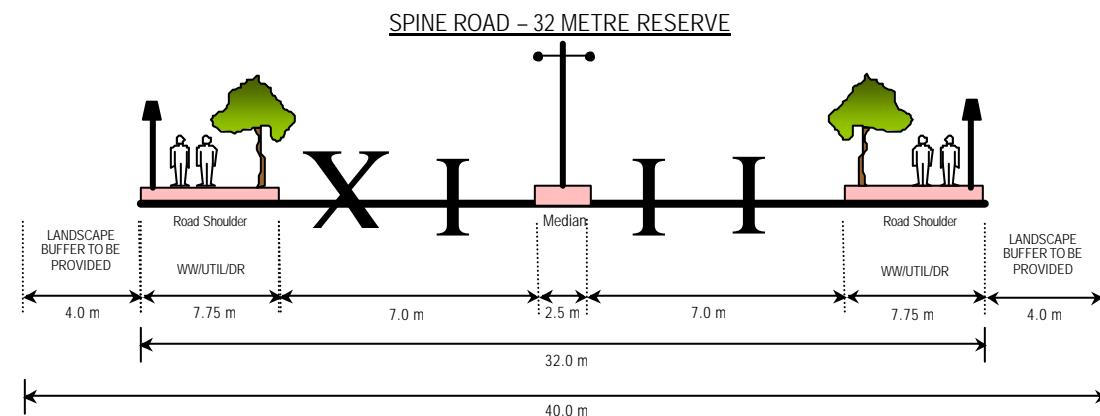


| | | | |
|---------------------------------|---|----|----|
| Minor Road Distance 'X' (metre) | <ul style="list-style-type: none"> ▪ 9.0 metre most situations ▪ 4.5 metre an absolute minimum on lightly trafficked roads (< 200 vph) | | |
| Major Road Distance 'X' (metre) | 120 | 90 | 45 |
| Speed Limit (KPH) | 60 | 50 | 40 |

PLANNING REQUIREMENTS : TRAFFIC AND TRANSPORTATION

ROAD NETWORK AND DESIGN STANDARD

(v) Typical Road Cross Section



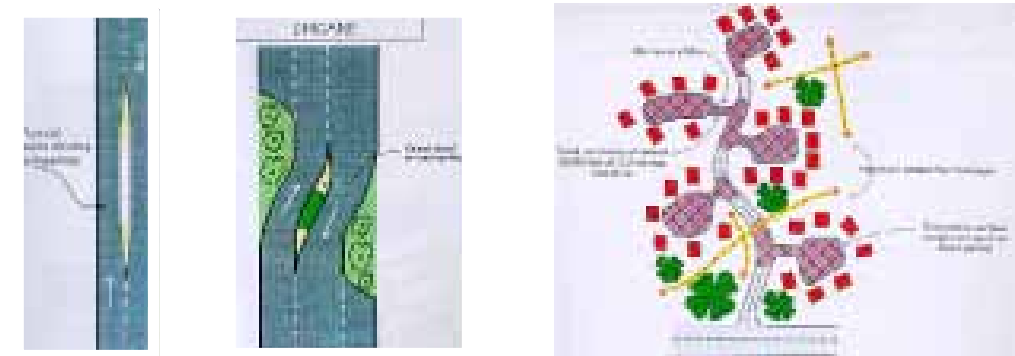
- Note:**
- WW/UTIL/DR : Common pedestrians walkway utility and drainage reserve
 - Minimum cover to all utilities should be 15 metre
 - Cul-De-Sac are permitted for bungalows only serving typically no more than 25 units
 - Minimum cover to all utilities should be 15 metre

(vii) Access to School

- To ensure adequate number of bus bays for drop-off and waiting school buses.
- To ensure continuity of walkway and cycle paths for PB5 and beyond to enable a high number of walk and bicycle mode trips.

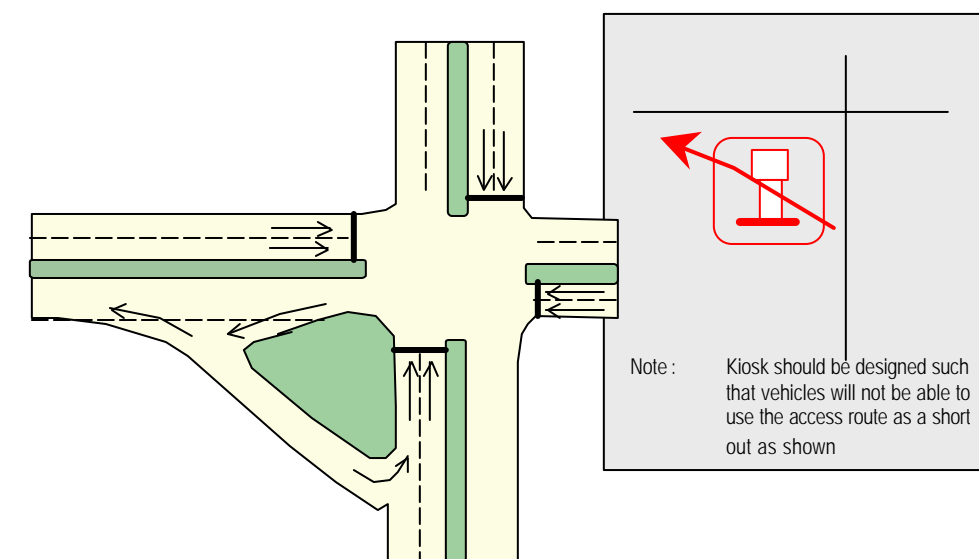
(viii) Traffic Calming

- Use Chicanes and dividers along local distributor
- The road narrowing at junction leading from local distributor roads into access roads.



(iv) Petrol Station Access

- To ensure that access egress points do not become "rat running" routes



PLANNING REQUIREMENTS : INFRASTRUCTURE AND UTILITIES

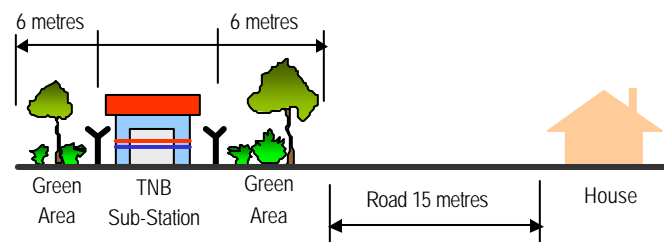
UTILITIES

(i) Environment

- The detailed platform levels shall be determined at the D.0 approval stage
- All earthworks must comply with the Environmental Management Guidelines of Putrajaya and Earthwork By-Laws (Perbadanan Putrajaya 1996)

(ii) Electricity

- The electricity supply for PB9 is mostly used for residential which are approximately 90% of the total Electrical Energy required.
- Provision of adequate numbers of 33KV Main Distribution Station (MDS) to be supported by a series of 11 KV Sub-Stations (Single & Double Chambers) and feeder pillars at strategic locations to comply with the electricity provider's (TNB) requirement.
- Feeder pillars along public roads and areas shall have all doors to open away from road and public view.
- Electrical cabling network for overall development of PB9 shall consist of 33KV, 11KV and 415V distribution network systems.
- The electrical cabling network system shall be placed along the utility reserves to conform to the no dig policy. All electrical cabling shall be of the underground system.
- Sub-Station: shall have a minimum 6 metres setback on all sides to the nearest residential building. These shall be extensively landscaped.
- Fencing of utility buildings shall abide by Fencing Design Guidelines-Vol 2, Chap. 15 pg 132

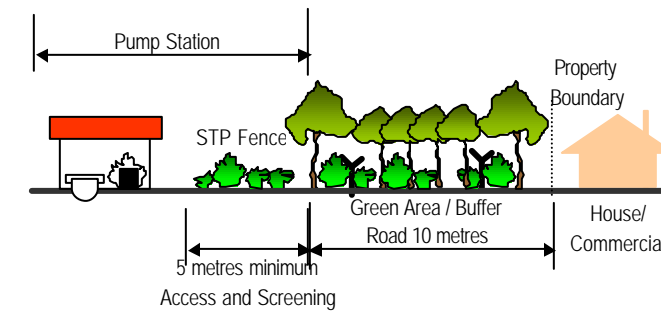


(iii) Drainage

- Drainage to the site shall be provided in terms of collection, conveyance and retention of flow from the site.
- Gross Pollutant Traps to be provided at the outlet of discharge points.
- The drainage design shall comply with the Putrajaya Stormwater Management Design Guidelines (1998), Drainage Masterplan Study Report for Putrajaya (1996) and Urban Stormwater Management Manual for Malaysia (JPS,2000)

(iv) Sewerage

- A network of gravity sewer reticulation to collect sewage from the precinct. (Level 3 works.)
- From these reticulation networks, sewage will be discharged into the centralized trunk sewer system of Putrajaya (Level 1 & 2 works) at appropriate points.
- The trunk sewers will terminate at two pump-stations. These two pump stations are PS1 in Precinct 9 and PS9 (Levels 1 & 2 works) located at the south of precinct 11, next to Road R3.
- From PS1 and PS9, sewage will be conveyed via the centralized trunk sewer system to STP2 for treatment. However, STP2 is not scheduled to be ready until Year 2003. In the interim, sewage discharge will be temporary directed to the sewage switching station PS5 for onward conveyance to STP1 for treatment until the completion of STP2.
- The buffer for a closed STP shall be 10 m to the nearest property boundary.
- The buffer for an open STP system shall be 30 m to the nearest property boundary.



(v) Gas

- The gas supply for PB9 is mostly used for residential which are approximately 80% of the total gas requirements.
- Gas supply for PB9 will be served from a District Gas Station located at Precinct 9 through a medium pressure gas pipeline.
- Provisions of 4 nos. of area Gas Station are allocated within the Precinct 11 development to cater for the projected gas loading requirements, with total area reserve of 1.13 acres.
- Low-pressure gas pipeline reticulation from the Area Gas Station is planned to serve the gas requirements for the residential, commercial and other amenities.
- Safety provision for construction within the vicinity.
- (For details of Gas Pipeline Reserve Design refer Appendix 1)

PLANNING REQUIREMENTS : INFRASTRUCTURE

UTILITIES

(vi) Waste Disposal


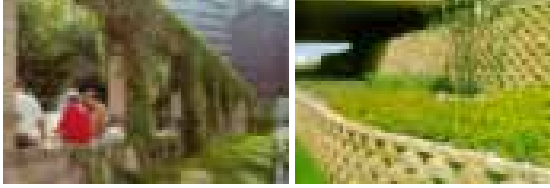
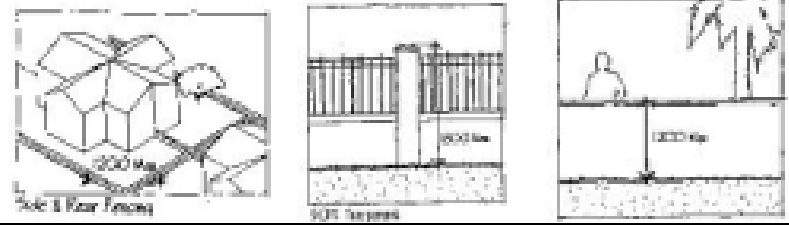
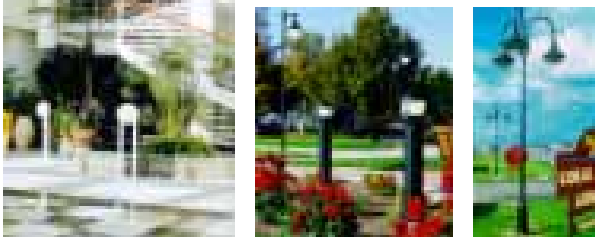
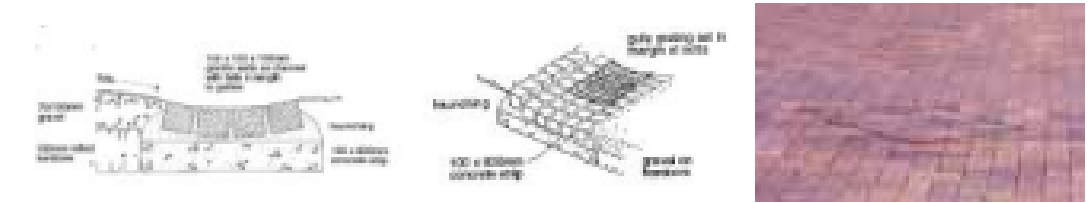

- Solid waste management in PB9 shall address reduction, reuse, recycling and recovery, the 4 R's of waste management.
- Solid waste is proposed to be separated at source, by residents or employees, into three streams; dry recycles, wet waste and rubbish (all other wastes). The dry recyclable is to be further separated at source into containers and fiber materials.
- The sensitivity of the site in terms of waste management relates to the operational requirements of Precinct 11, which require that no burial of material is undertaken during the construction phase.
- In addition to control odour nuisance to any sensitive receptors biodegradable waste cannot be left at the site for extended periods.
- The waste management shall comply with Urban Design Guidelines and Environmental Guidelines for Putrajaya.
- For low rise residential, refuse chamber is to be placed in front of the house, either left or right of the driveway and near to main road for the ease of mechanical collection. The estimated generation of solid waste is 5kg/unit/day.
- For non-residential building, refuse chamber center can be built at the ground floor / basement or apart from the main building. The estimated generation of solid waste for recreation park/public transport stop station are 0.2 kg/visitor, 300L/1000m²(gross floor area) for shopping complex and 500L/1000m²(gross floor area) for restaurant.
- Access road must be constructed for the ease of mechanical collection and public use. Obstructions to any collection vehicle's access must be disallowed at all time.



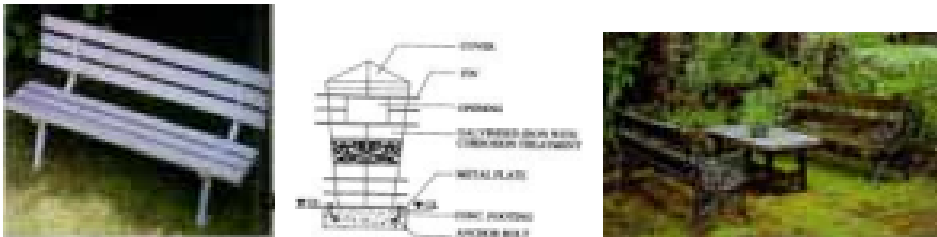

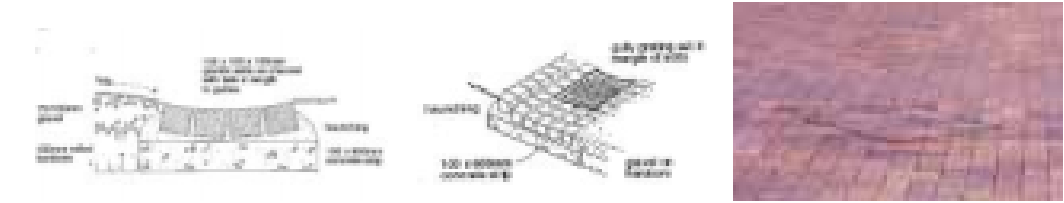



(vii) Water Supply

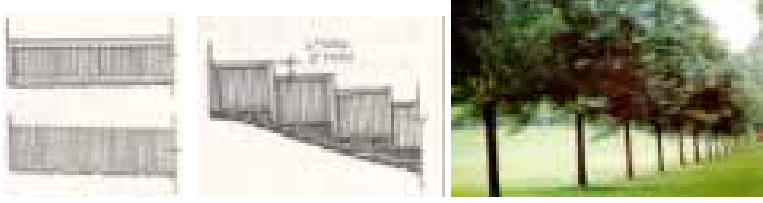
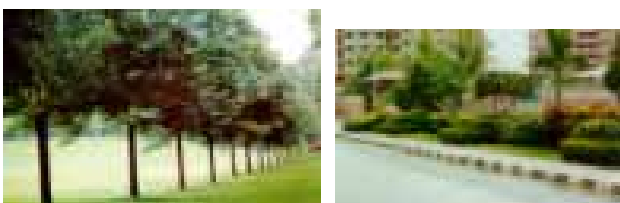
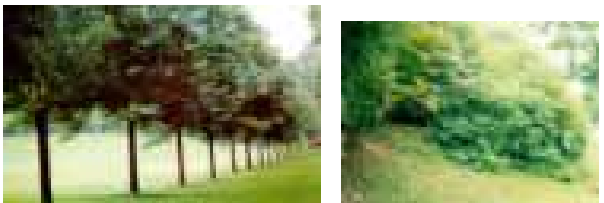


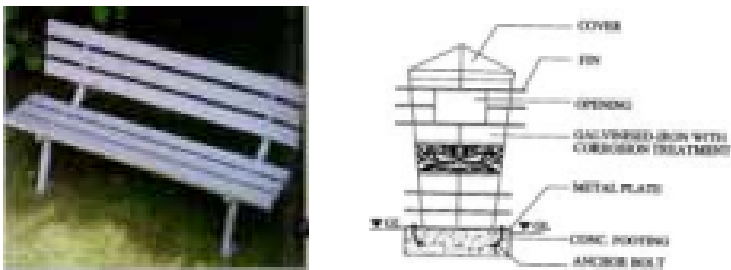
- Water supply to PB9 shall be consistent with the provision of water supply master plan for Putrajaya.
- Storage reservoir and pumping station together with the rising and falling mains shall be planned to serve this area in compliance with Jabatan Bekalan Air (JBA) requirement, and Design Criteria and Standards for Water Supply System, JKR (1989).

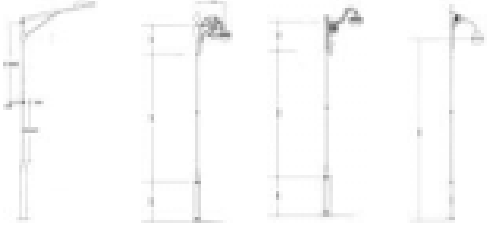
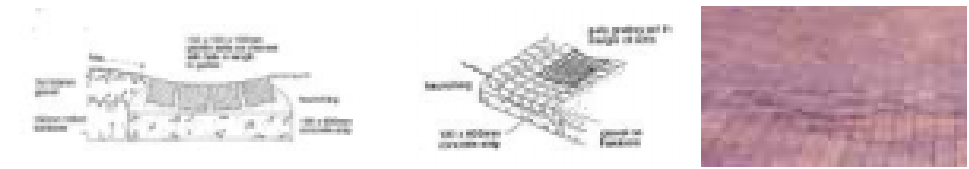
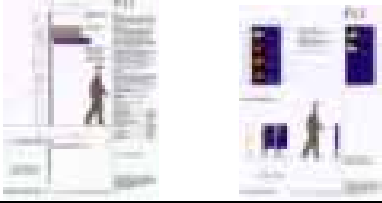
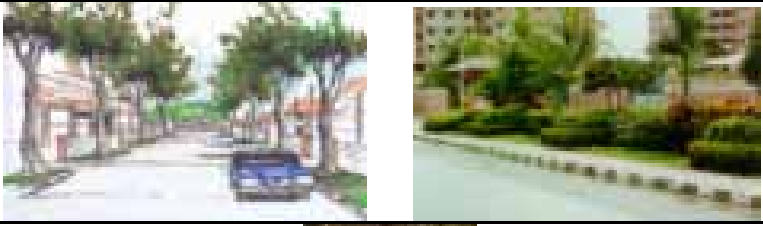


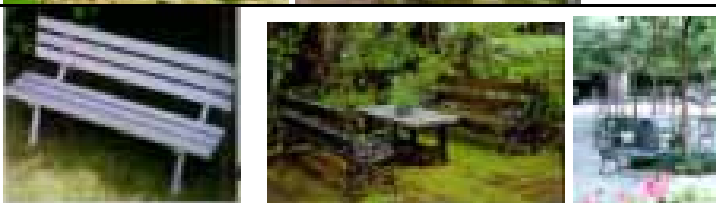
P U T R A J A Y A P R E C I N C T 1 1 L O C A L P L A N

| PLANNING REQUIREMENT : LANDSCAPE | | | | | |
|---|---|--|---|---------------------|---|
| LANDUSE | DESIGN STYLE | MATERIALS | GENERAL REQUIREMENT | USE/LOCATION | |
| <input type="checkbox"/> Residential (Landed) | ■ Paving, walls and steps <input type="checkbox"/> Informal <input type="checkbox"/> Formal <input type="checkbox"/> Contemporary | <input type="checkbox"/> Paving / Step – Clay brick – Concrete – Interlocking block etc | – Anti slippery surface – Max. gradient 8% – Durable | – Building compound |  |
| | | <input type="checkbox"/> Walls – Key stone – Concrete – Fencing brick etc. | – Harmonize with surrounding | – Building compound |  |
| | ■ Fence, Gate and Barrier <input type="checkbox"/> Contemporary <input type="checkbox"/> Formal <input type="checkbox"/> Traditional | – Hardwood – Metal – Masonry | – To follow Fencing Design Guideline Putrajaya | – Boundary line |  |
| | ■ Lighting <input type="checkbox"/> Contemporary <input type="checkbox"/> Informal <input type="checkbox"/> Formal | – Hardwood – Metal – Concrete | – Durable – Attractive – Safe | – Building compound |  |
| | ■ Drainage <input type="checkbox"/> Swales <input type="checkbox"/> Concealed drains | – Culvert – Concrete – Drain cover on walkway to follow walkway 's material | – Visually attractive – Covered | – Building lot |  |
| | ■ Planting <input type="checkbox"/> Formal <input type="checkbox"/> Informal | – Tree – Palm – Shrub – Groundcover | – Non-poisonous species – Strong branch – Medium size trees | – Building compound |  |
| | ■ Irrigation Strategy | Tap from storage tank or JBA main or tap from JBA main | | | |

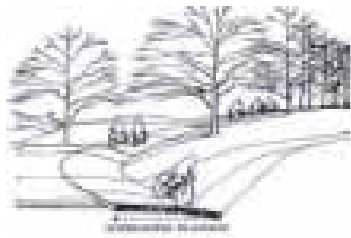



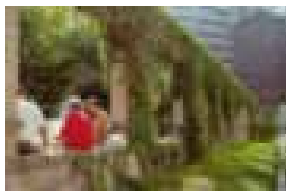


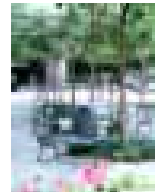
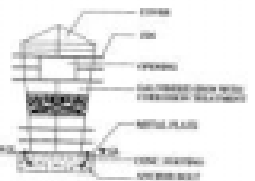

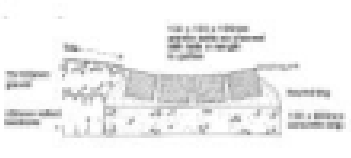
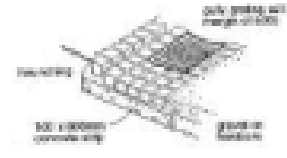



| PLANNING REQUIREMENT : LANDSCAPE | | | | | |
|----------------------------------|---|--|---|--|---|
| LANDUSE | DESIGN STYLE | MATERIALS | GENERAL REQUIREMENT | USE/LOCATION | |
| <input type="checkbox"/> School | ■ Paving, walls and steps <input type="checkbox"/> Formal <input type="checkbox"/> Contemporary | <input type="checkbox"/> Paving / Step – Clay brick – Concrete – Interlocking block etc | – Anti slippery surface – Max. gradient 8% – Max. gradient 2% for supper elevation – Durable | – Pedestrian walkway – Open space |  |
| | | <input type="checkbox"/> Walls – Key stone – Concrete – Fencing brick etc. | – Harmonize with surrounding environment | – Slope areas |  |
| | ■ Site furniture <input type="checkbox"/> Contemporary | – Hardwood – Metal – Stone | – Vandalism proof – Durable – Safe | – Resting areas – Reading areas |  |
| | ■ Lighting <input type="checkbox"/> Contemporary <input type="checkbox"/> Simple | – Hardwood – Metal – Concrete | – Max height of 4m for open space – Max height of 10m for roadside – Attractive – Safe | – Entrance – Play field – Roadside |  |
| | ■ Drainage <input type="checkbox"/> Swales <input type="checkbox"/> Concealed drains | – Culvert – Concrete – Drain cover on walkway to follow walkway 's material | – Harmonious with surrounding environment – Preferable covered drain | – Where necessary |  |
| | ■ Signage <input type="checkbox"/> Contemporary | – Metal – Hardwood – Concrete | – To follow Signage and Advertisement Design Guideline Putrajaya | – Entrance – Play areas |  |

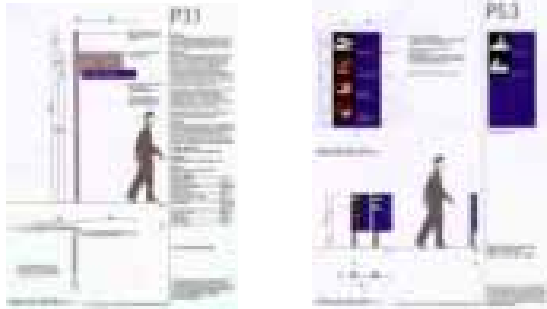


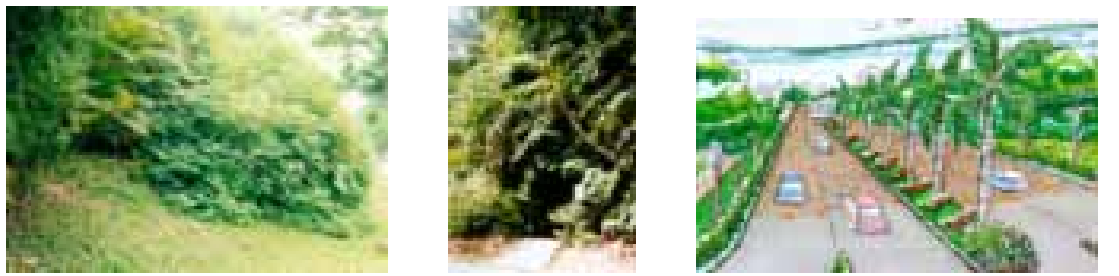
P U T R A J A Y A P R E C I N C T 11 L O C A L P L A N

| PLANNING REQUIREMENT : LANDSCAPE | | | | | |
|---|--|--|---|--|---|
| LANDUSE | DESIGN STYLE | MATERIALS | GENERAL REQUIREMENT | USE/LOCATION | |
| <input type="checkbox"/> School | ■ Fences, Railings and Barriers <input type="checkbox"/> Formal <input type="checkbox"/> Natural | – Planting – Metal – Hardwood | – To follow Fencing Design Guideline Putrajaya | – Entrance – Play areas – Boundary |  |
| | ■ Planting <input type="checkbox"/> Formal | – Tree – Palm – Shrub – Groundcover – Turfing | – Able to provide shade – Non-poisonous species – Attractive | – All green areas |  |
| | ■ Irrigation Strategy | – Pipe reticulation from PHB and/or trucking | | | |
| <input type="checkbox"/> Gas pipe reserve | ■ Planting <input type="checkbox"/> Formal | – Tree – Palm – Shrub | – Non-poisonous species | – Reserved areas |  |
| <input type="checkbox"/> Roadside | ■ Paving, walls and steps <input type="checkbox"/> Formal <input type="checkbox"/> Contemporary | ■ Paving / Step – Clay brick – Concrete – Interlocking paver etc. | – Anti slippery surface – Max. gradient 8% – Max. Gradient for super elevation 2% | – Roadside |  |
| | | ■ Wall – Key stone – Concrete – Granite stone etc. | – Harmonize with surrounding environment | – Slope areas |  |
| | ■ Site Furniture <input type="checkbox"/> Contemporary | – Hardwood – Masonry – Metal | – Vandalism proof – Safe – Attractive | – Junction |  |

| PLANNING REQUIREMENT : LANDSCAPE | | | | | |
|-------------------------------------|--|--|--|--|---|
| LANDUSE | DESIGN STYLE | MATERIALS | GENERAL REQUIREMENT | USE/LOCATION | |
| <input type="checkbox"/> Roadside | ■ Lighting <input type="checkbox"/> Robust <input type="checkbox"/> Minimal <input type="checkbox"/> Reflect character of adjacent neighbourhood | – Timber – Metal | – Max. height 10m at roadside | – Footpaths – Cycle track – Car park |  |
| | ■ Drainage <input type="checkbox"/> Swales/Natural drain <input type="checkbox"/> Concealed drains | – Culvert – Concrete – Drain cover on walkway to follow walkway 's material | – Visually attractive – Naturally blend with surrounding | – Road reserve |  |
| | ■ Signage <input type="checkbox"/> Contemporary <input type="checkbox"/> Formal <input type="checkbox"/> Simple <input type="checkbox"/> Clear | – Masonry – Metal – Hardwood | – Clear – Vandalism proof – To follow Signage and Advertisement Design Guideline Putrajaya | – Junction |  |
| | ■ Planting <input type="checkbox"/> Formal | – Shade medium size tree – Palm – Shrub | – Provide ample shade – Hardy Plants – Attractive | – Roadside |  |
| <input type="checkbox"/> Open space | ■ Paving, walls and steps <input type="checkbox"/> Informal and contemporary <input type="checkbox"/> Informal and natural <input type="checkbox"/> Robust | □ Paving / Step – Clay brick – Concrete – Grasscrete etc | – Anti slippery surface – Max. gradient 8% – Durable – Accessible for disable | – Open space – Plaza – Roadside |  |
| | | □ Wall – Key stone – Facing brick – Concrete – Granite stone etc. | – Visually attractive – Harmonize with surrounding environment | – Slope areas |  |
| | ■ Site Furniture <input type="checkbox"/> Robust <input type="checkbox"/> Contemporary <input type="checkbox"/> Decorative | – Hardwood timber – Concrete – Metal | – Vandalism proof – Durable – Safe | – Open space – Plaza – Roadside |  |

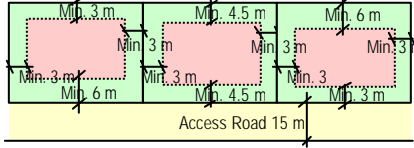
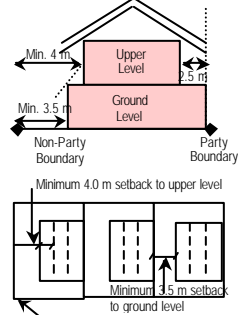
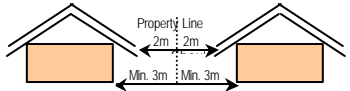
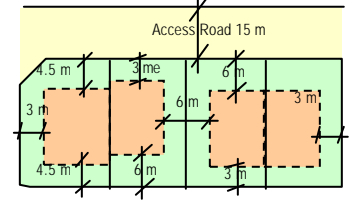
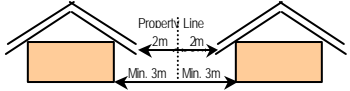
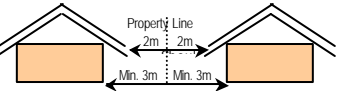
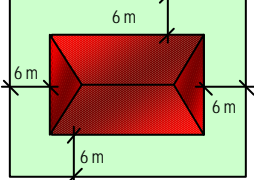
| PLANNING REQUIREMENT : LANDSCAPE | | | | | |
|-------------------------------------|---|---|--|---|---|
| LANDUSE | DESIGN STYLE | MATERIALS | GENERAL REQUIREMENT | USE/LOCATION | |
| <input type="checkbox"/> Open space | <ul style="list-style-type: none"> ▪ Lighting <ul style="list-style-type: none"> <input type="checkbox"/> Contemporary <input type="checkbox"/> Robust <input type="checkbox"/> Decorative | <ul style="list-style-type: none"> - Hardwood timber - Metal - Fiberglass | <ul style="list-style-type: none"> - Max. height compound lighting 4m - Anti-corrosion finishes - Durable | <ul style="list-style-type: none"> - Plaza - Open space - Road side |  |
| | <ul style="list-style-type: none"> ▪ Drainage <ul style="list-style-type: none"> <input type="checkbox"/> Swales/Natural drain <input type="checkbox"/> Concealed drains | <ul style="list-style-type: none"> - Culvert - Concrete - Drain cover on walkway to follow walkway 's material | <ul style="list-style-type: none"> - Visually attractive - Naturally blend with surrounding | <ul style="list-style-type: none"> - Open space - plaza |  |
| | <ul style="list-style-type: none"> ▪ Structures and Shelters <ul style="list-style-type: none"> <input type="checkbox"/> Contemporary <input type="checkbox"/> Simple <input type="checkbox"/> Informal | <ul style="list-style-type: none"> - Timber - Concrete - Metal | <ul style="list-style-type: none"> - Sustainable design - Proportion to surrounding scale - Durable | <ul style="list-style-type: none"> - Open space - Plaza |  |
| | <ul style="list-style-type: none"> ▪ Play feature <ul style="list-style-type: none"> <input type="checkbox"/> Robust <input type="checkbox"/> Colorful <input type="checkbox"/> Safe | <ul style="list-style-type: none"> - Timber - Rubber matting - Metal | <ul style="list-style-type: none"> - Conform to SIRIM standard - Safe - Attractive | <ul style="list-style-type: none"> - Open space - Plaza |  |
| | <ul style="list-style-type: none"> ▪ Sport feature <ul style="list-style-type: none"> <input type="checkbox"/> Robust <input type="checkbox"/> Colorful <input type="checkbox"/> Safe | <ul style="list-style-type: none"> - Timber - Rubber matting - Concrete | <ul style="list-style-type: none"> - Durable - Safe | <ul style="list-style-type: none"> - Open space |  |
| | <ul style="list-style-type: none"> ▪ Signage <ul style="list-style-type: none"> <input type="checkbox"/> Contemporary <input type="checkbox"/> Formal | <ul style="list-style-type: none"> - Masonry - Metal | <ul style="list-style-type: none"> - As per Signage and Advertisement Design Guideline Putrajaya | <ul style="list-style-type: none"> - Entrance - Junction - Pedestrian - Sport areas |  |
| | <ul style="list-style-type: none"> ▪ Water feature <ul style="list-style-type: none"> <input type="checkbox"/> Naturalistic <input type="checkbox"/> Contemporary | <ul style="list-style-type: none"> - Rock, Natural - Tile finish - Metal sculpture - Concrete sculpture | <ul style="list-style-type: none"> - Safe - Attractive | <ul style="list-style-type: none"> - Entrance - Open space - Plaza |  |
| | <ul style="list-style-type: none"> ▪ Irrigation Strategy | <ul style="list-style-type: none"> - Pipe reticulation from pond and supported by trucking or tap from JBA main | | | |

| PLANNING REQUIREMENT : LANDSCAPE | | | | | |
|---|--|--|---|---|---|
| LANDUSE | DESIGN STYLE | MATERIALS | GENERAL REQUIREMENT | USE/LOCATION | |
| <ul style="list-style-type: none"> □ Office, Market and Putrajaya Service Centre | <ul style="list-style-type: none"> ▪ Paving / Step, Wall <ul style="list-style-type: none"> □ Formal □ Geometric | <ul style="list-style-type: none"> □ Paving/Step <ul style="list-style-type: none"> - Clay brick - Concrete - Interlocking block etc | <ul style="list-style-type: none"> - Anti-Slippery surface - Max. gradient 8% - Durable | <ul style="list-style-type: none"> - Plaza |    |
| | | <ul style="list-style-type: none"> □ Wall <ul style="list-style-type: none"> - Key stone - Facing brick finish - Concrete finish etc. | <ul style="list-style-type: none"> - Harmonize with surrounding structure | <ul style="list-style-type: none"> - Slope areas |   |
| | <ul style="list-style-type: none"> ▪ Site Furniture <ul style="list-style-type: none"> □ Contemporary □ Hi-tech | <ul style="list-style-type: none"> - Hardwood - Metal - Concrete | <ul style="list-style-type: none"> - Vandalism proof - Durable - Functional - Safe | <ul style="list-style-type: none"> - Pocket space - Plaza - Roadside |     |
| | <ul style="list-style-type: none"> ▪ Lighting <ul style="list-style-type: none"> □ Contemporary □ Hi-tech | <ul style="list-style-type: none"> - Concrete - Metal - Masonry | <ul style="list-style-type: none"> - Max. height 4m at open areas - Max. height 10m at roadside | <ul style="list-style-type: none"> - Bollard at pedestrian entrance - Plaza - Roadside |  |
| | <ul style="list-style-type: none"> ▪ Drainage <ul style="list-style-type: none"> □ Swales/Natural drain □ Concealed drains | <ul style="list-style-type: none"> - Culvert - Concrete - Drain cover on walkway to follow walkway 's material | <ul style="list-style-type: none"> - Harmonious with surrounding design | <ul style="list-style-type: none"> - Plaza - Open space |    |
| | <ul style="list-style-type: none"> ▪ Structures and Shelter <ul style="list-style-type: none"> □ Informal □ Vernacular | <ul style="list-style-type: none"> - Hardwood - Concrete - Masonry - Metal | <ul style="list-style-type: none"> - To blend harmoniously with surrounding structure - Durable - Functional | <ul style="list-style-type: none"> - Plaza - Open space |   |

| PLANNING REQUIREMENT : LANDSCAPE | | | | | |
|---|---|---|--|--|---|
| LANDUSE | DESIGN STYLE | MATERIALS | GENERAL REQUIREMENT | USE/LOCATION | |
| <input type="checkbox"/> Office, Market, and Putrajaya Service Centre | ■ Signage <input type="checkbox"/> Formal <input type="checkbox"/> Informal | – Metal | – To following Signage and Advertisement Design Guideline Putrajaya | – Plaza – Open space – Pedestrian walkway – Bicycle track |  |
| | ■ Fences, Gate and Berries <input type="checkbox"/> Contemporary <input type="checkbox"/> Formal <input type="checkbox"/> Informal | – Engraved stone – Metal | – To suit architecture design – To blend naturally with surrounding environment – To follow Fencing Design Guideline Putrajaya | – Entrance – Boundary demarcation |  |
| | ■ Water features <input type="checkbox"/> Contemporary <input type="checkbox"/> Formal <input type="checkbox"/> Hi-tech | – Stone – Concrete – Metal | – Safe – Attractive – Clean | – Entrance – Plaza – Open space |  |
| | ■ Irrigation Strategy | Pipe reticulation from PHB and/or trucking | | | |
| <input type="checkbox"/> Buffer | ■ Planting <input type="checkbox"/> Natural <input type="checkbox"/> Informal | – Palm – Shrub – Forest species – Medium trees | – Able to Screen – Safe – Attractive | – Along Roadside – Public utilities boundary – Between TNB-Turbine area and Housing area |  |

| PLANNING REQUIREMENT : URBAN DESIGN | | | | |
|--|---|---|---|--|
| LAYOUT PLAN | BUILDING CHARACTER | HEIGHT, MASSING AND BUILDING SPACES | COLOUR TEXTURE | MISCELLANEOUS |
| <p>(i) The layout plan must demonstrate that the following elements are addressed in the design:</p> <ul style="list-style-type: none"> ▪ Development appropriate to topographical features ▪ Appropriate building orientation with respect to the sun ▪ Appropriate pedestrian and vehicular access systems ▪ Site infrastructure systems are designed in a manner which enhances site development <p>(ii) Illustrate the effective and efficient integration of the pedestrian, cycle and road systems</p> <p>(iii) Development is to be designed to work with site contours to avoid unnecessary cut and associated retaining structures</p> <p>(iv) Illustrate a high level of permeability between site uses within the Planning Block and with adjoining Planning Blocks</p> <p>(v) Illustrate appropriate site building setbacks from major traffic routes or other noise generating or potentially dangerous infrastructure</p> <p>(vi) Illustrate that the site will be developed in a logical sequence</p> <p>(vii) The layout plan should illustrate that the form of development effectively contributes to the Planning Block's sense of place and amenity with the context of Putrajaya</p> <p>(viii) The location of schools and tadika should:</p> <ul style="list-style-type: none"> ▪ Be in a highly accessible position for the community ▪ Minimise the introduction of non-local traffic into minor residential streets ▪ Provide safe and convenient pedestrian and cycle access to residential areas | <p>(i) Avoid monotonous building designs – provide a range of housing types to meet different lifestyle choices, diversity in the marketplace and opportunity for an interesting street frontage</p> <p>(ii) Ensure that buildings are designed to respect the topographical features of the site ,eg buildings should step with steeper sites – do not cut substantial benches into steep land</p> <p>(iii) Building design should respect the amenity of adjoining and adjacent buildings and their residents</p> <p>(iv) Building design should interpret local image and character with new materials that are energy efficient</p> <p>(v) Building facades should be designed to accommodate a tropical environment</p> <p>(vi) Designers should look to the use of innovative building materials that are less maintenance intensive and more environmentally efficient</p> <p>(vii) While diversity is sought in building design, buildings should be designed with a common theme that provides a linkage to the style and nature of the development area</p> <p>(viii) Building design should ensure good living environments for residents that do not adversely impact on neighbours</p> <p>(ix) The building design should incorporate landscaping that contributes to a pleasant and safe environment and integrates well with the streetscape and adjoining open space areas</p> <p>(x) For school buildings:</p> <ul style="list-style-type: none"> ▪ Building design should be of a character that responds to the tropical environment and does not adversely impact on adjacent buildings ▪ Vehicle parking and pick up/set down areas should be designed and located to minimise impact on adjacent dwellings <p>(xi) Building and landscape design in the neighbourhood centre should reinforce Putrajaya's tropical character</p> <p>(xii) Building fenestration should be used to:</p> <ul style="list-style-type: none"> ▪ Shade buildings ▪ Reduce glare ▪ Assist in maintaining comfortable indoor temperatures ▪ Minimise cooling loads ▪ Conserve energy ▪ Enrich the tropical character ▪ Provide texture to building facades <p>(xiii) The architectural treatment of facades and elevations avoids large blank walls – sheer walls will not be supported by PPJ</p> <p>(xiv) Important vistas to, from and through the neighbourhood centre are maintained and enhanced</p> <p>(xv) Pedestrian places:</p> <ul style="list-style-type: none"> ▪ Are designed and constructed to reinforce the character of the neighbourhood centre ▪ Provide safe, convenient and comfortable movement for pedestrians and cyclists ▪ Enhance vistas and streetscapes ▪ Can accommodate outdoor dining providing pedestrian flow is not impeded ▪ Provide safe access to public transport and parking facilities | <p>(i) Building design must comply with all provisions relating to plot ratio, plinth, building height and setbacks as contained within these guidelines</p> <p>(ii) Habitable spaces above ground level should not directly overlook dwellings on adjacent land</p> <p>(iii) Ground floor levels must be responsive to pedestrian footpaths and continuity and flow between buildings</p> <p>(iv) Building design does not significantly reduce daylight to open space and habitable rooms in adjacent development</p> <p>(v) Roof pitch should be designed to meet local environmental requirements</p> <p>(vi) Roof overhang should be designed to minimise the impact on sight lines from adjacent buildings</p> <p>(vii) Buildings should be designed to encourage facade articulation and use of design elements that reduce building bulk and provide a pleasant street aspect</p> <p>(viii) The design of free standing buildings should be sympathetic with adjoining buildings, yet provide for local identity and character</p> <p>(ix) Setbacks at ground level should provide for:</p> <ul style="list-style-type: none"> ▪ Connection between footpaths and public spaces ▪ Space for convenient and comfortable movement of pedestrians ▪ Standing areas bus stops, taxi ranks and display windows ▪ Queuing of patrons for entertainment facilities ▪ Street gradient <p>(x) Openings and setbacks are used to articulate vertical building surfaces and contribute positively to the centre's streetscape</p> | <p>1. Building colours should harmonise with the predominant colours of the surrounding area</p> <p>2. Use of earth tones shall be encouraged</p> <p>3. Brighter colours for specific building types will be subject to the approval of PPJ</p> | <p>(i) Privacy and visual controls – overlooking to be controlled by appropriate orientation of windows and use of splay windows</p> <p>(ii) Air conditioning equipment – all equipment should be contained in compartments that are designed as an integral component of the building to ensure the equipment is hidden from view</p> <p>(iii) Drying yards – building design should incorporate appropriate design for drying areas that allows for natural ventilation and light while ensuring they are hidden from public view</p> <p>(iv) Aerials and satellite dishes – in high rise buildings or multiple tenancy commercial buildings, a central reception system is to be incorporated in to the building design. On all other buildings, aerials and satellite dishes shall be located to avoid adverse impact on the amenity of adjoining buildings</p> <p>(v) Service ducting shall not be exposed on the external surfaces of buildings</p> <p>(vi) Carports and garages should:</p> <ul style="list-style-type: none"> ▪ Be designed to integrate with the design of associated buildings ▪ Not diminish the attractiveness of the streetscape ▪ Not visually dominate views of the house from the street <p>(vii) Dwellings with green frontage must address that frontage with habitable spaces and not service areas only</p> <p>(viii) Dwelling design must provide sufficient outdoor open space that can act as an extension of the dwelling for relaxation, entertainment, recreation and children's play purposes</p> <p>(ix) The design of schools and tadika should:</p> <ul style="list-style-type: none"> ▪ Ensure that the playground is visually interesting and environmentally safe for children ▪ The play area is protected from on site and off site hazards ▪ The play area has adequate shade and shelter areas ▪ The landscaping assist the educational role of the facility ▪ Be reasonably compatible in appearance and scale with nearby buildings ▪ Include appropriate screening and buffering that maintains or improves the amenity of adjoining uses <p>(x) No building should incorporate reflective glass surfaces that could create undue nuisance, discomfort or hazard to any part of the neighbourhood centre or surrounding locality</p> <p>(xi) The design of neighbourhood centre buildings should have strong regard for:</p> <ul style="list-style-type: none"> ▪ The tropical nature of the environment and the opportunity for outdoor living and activities ▪ The impact of the sun and associated shadows – shaded areas should be designed for use around lunch times and onwards ▪ The effects of wind and rain need to be accommodated in the design of the buildings <p>(xii) Service station design shall:</p> <ul style="list-style-type: none"> ▪ Ensure safety, minimise pollution and maintain visual amenity ▪ Be reasonably compatible in appearance and scale with nearby buildings ▪ Include appropriate screening and buffering that maintains or improves the amenity of adjoining uses ▪ Ensure that no noise emissions or vibrations from the site cause a nuisance to nearby residents |

PHYSICAL PLANNING REQUIREMENTS PLANNING BLOCK 10 (PB 10)

| MAIN LAND USES: | BUNGALOWS | SEMI-DETACHED HOUSES | TERRACE HOUSES | TADIKA | WATER PUMP STATION | OTHER RELIGIOUS |
|------------------------|---|---|--|--|---|---|
| (i) Density | <ul style="list-style-type: none"> 6-12 Units/Acre | <ul style="list-style-type: none"> 12 – 18 Units/Acre | <ul style="list-style-type: none"> 20 Units/Acre | <ul style="list-style-type: none"> One in PB10 Maximum Plint Area : 30% | <ul style="list-style-type: none"> One in PB10 | <ul style="list-style-type: none"> One in PB10 Maximum Plint Area 50% |
| (ii) Composition | <ul style="list-style-type: none"> High Cost | <ul style="list-style-type: none"> Government | <ul style="list-style-type: none"> 3% Government | | | |
| (iii) Minimum Lot size | <ul style="list-style-type: none"> 418m² | <ul style="list-style-type: none"> 300 m² | <ul style="list-style-type: none"> 130 m² | <ul style="list-style-type: none"> 0.50 acre | <ul style="list-style-type: none"> 0.50 ha | <ul style="list-style-type: none"> Minimum 0.6 ha |
| (iv) Height | <ul style="list-style-type: none"> 2 levels on flat or gently sloping land, 3 levels on steeply sloping land | <ul style="list-style-type: none"> 2 levels on flat or gently sloping land 3 levels on steep land | <ul style="list-style-type: none"> 2 levels on flat or gently sloping land | <ul style="list-style-type: none"> 2 storey (max) | <ul style="list-style-type: none"> N/A | <ul style="list-style-type: none"> 1 storey (max) |
| (v) Setbacks: | <ul style="list-style-type: none"> Front/Rear setbacks <ul style="list-style-type: none"> Total setback distance for both the front and rear setbacks must total 9 metres Front setback – min. 3.0 metres Rear setback – min. 3.0 metres  Non-Party/side boundary <ul style="list-style-type: none"> Minimum 3 metres  Street Frontage <ul style="list-style-type: none"> Minimum 3 metres Setback Between Roofs' Eaves <ul style="list-style-type: none"> Minimum 2 metres  Car Park <ul style="list-style-type: none"> Min. 2 cps on site CPS to be clear of min. front setback. | <ul style="list-style-type: none"> Front/Rear setbacks <ul style="list-style-type: none"> Total setback distance for both the front and rear setbacks must total 9 metres Front setback – Minimum 3 metres Rear setback – Minimum 3 metres  Non-Party/side boundary <ul style="list-style-type: none"> Minimum 3 metres Street Frontage <ul style="list-style-type: none"> Minimum 3 metres Setback Between Roofs' Eaves <ul style="list-style-type: none"> Minimum 2 metres  Car Park <ul style="list-style-type: none"> Min. 2 cps on site CPS to be clear of min. front setback. | <ul style="list-style-type: none"> Front/Rear setbacks <ul style="list-style-type: none"> Total setback distance for both the front and rear setbacks must total 9 metres Front setback – min. 3.0 metres Rear setback – min. 3.0 metres Variation in setbacks is permissible only for blocks and not individual houses Non-Party/side boundary <ul style="list-style-type: none"> Where applicable– Minimum 3 metres Street Frontage <ul style="list-style-type: none"> Side setback to 15 metres road, for roads with 3 metres green buffer Side setback to 15 metres road, without 3 metres buffer  Car Park <ul style="list-style-type: none"> Min. 2 cps on site CPS to be clear of min. front setback. | <ul style="list-style-type: none"> Front/Rear setbacks <ul style="list-style-type: none"> Front – Minimum 6 metres Rear – Minimum 6 metres  Non-Party/side boundary <ul style="list-style-type: none"> Minimum 6 metres Street Frontage <ul style="list-style-type: none"> Setback from access road – 12m (min) Car Park <ul style="list-style-type: none"> 1 cps per 500 sq ft floorspace 1 cps : 4 staffs min. 3 car length for pick up & drop off point | <ul style="list-style-type: none"> Front/Rear setbacks <ul style="list-style-type: none"> Front – Minimum 6 metres Rear – Minimum 6 metres Non-Party/side boundary <ul style="list-style-type: none"> Minimum 6 metres Street Frontage <ul style="list-style-type: none"> Setback from access road – 12m (min) Car Park <ul style="list-style-type: none"> N/A | <ul style="list-style-type: none"> Front/Rear setbacks <ul style="list-style-type: none"> Front – Minimum 6 metres Rear – Minimum 6 metres Non-Party/side boundary <ul style="list-style-type: none"> Minimum 6 metres Street Frontage <ul style="list-style-type: none"> Setback from access road – 12m (min) Car Park <ul style="list-style-type: none"> 1 cps/100m² of net floor space 1 CPS : 75 GFA (m²) 1 MPS : 150 GFA Min 1 bicycle rack Min 2 handicapped parking space |

P U T R A J A Y A P R E C I N C T 11 L O C A L P L A N

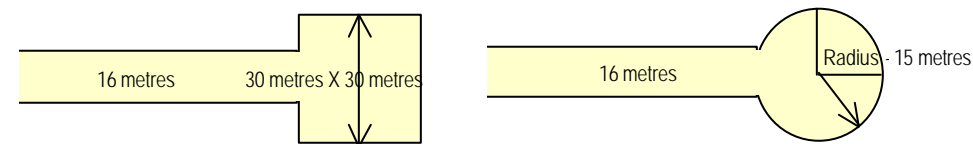
| MAIN LAND USES: | BUNGALOWS | SEMI-DETACHED HOUSES | TERRACE HOUSES | TADIKA | WATER PUMP STATION | OTHER RELIGIOUS |
|---|--|--|---|--|---|---|
| (vi) Fencing As per the Fencing Design Guidelines Manual, Volume 1 and Volume 2, chapter 1, 2 and 3 | <ul style="list-style-type: none"> ▪ Refer Fencing Design Guidelines Manual, Volume 2, Chapter 4, page 32 | <ul style="list-style-type: none"> ▪ Refer Fencing Design Guidelines Manual, Volume 2, chapter 5 | <ul style="list-style-type: none"> ▪ Refer Fencing Design Guidelines Manual, Volume 2, chapter 2 and 6 | <ul style="list-style-type: none"> ▪ Refer Fencing Design Guidelines Manual, Volume 2, chapter 11 | <ul style="list-style-type: none"> ▪ Refer Fencing Design Guidelines Manual, Volume 2, chapter 15 | <ul style="list-style-type: none"> ▪ Refer Fencing Design Guidelines Manual, Volume 2, chapter 13. |
| (vii) Layout Plan | <ul style="list-style-type: none"> ▪ Use the setback flexibility and building design variation to break up and vary the position of the houses. | <ul style="list-style-type: none"> ▪ Use the setback flexibility and building design variation to break up and vary the position of the houses. | <ul style="list-style-type: none"> ▪ Use the setback flexibility and building design variation to break up and vary the position of the houses | <ul style="list-style-type: none"> ▪ Layout plans to show the design concept including: <ul style="list-style-type: none"> ❑ Total gross net areas of indoor play, outdoor play, roofed shade and other outdoor shade areas. ❑ Service areas to be aesthetically screened. ❑ Site car parking to be clearly indicated. ❑ Site car parking to be landscaped. ❑ Min 2m landscaped buffer between car parking spaces and any boundary. ❑ Initiate stacked outdoor play areas, carparking. ❑ Indicate set-down/pick-up areas to be visible from road and must be covered. ❑ Indicate pedestrian access to/from the site and connection to surrounding pedestrian pathways. ❑ Where boundaries are not residential dwellings, carefully locate potentially noisy activities to minimise impacts. ❑ Show appropriate screening that protects the amenity of abutting residential uses. | <ul style="list-style-type: none"> ▪ Layout plan to show the design concept including: <ul style="list-style-type: none"> ❑ Location of all key facilities. ❑ Location of car parking spaces ❑ Location of screening devices to minimise impact of noise producing machinery. ❑ Effective screening to abutting residential uses. | |

PLANNING REQUIREMENTS : TRAFFIC AND TRANSPORTATION

ROAD NETWORK AND DESIGN STANDARD

(i) Network Type

- Spine Road - 32 metres reserve
- Local Road - 22 metres reserve
- Access Road - 16 metres reserve
- Cul-De-Sac - 15 metres reserve



(ii) Road Capacity

- Spine Road - 1000 pcu/hr/lane
- Local Road - 700 pcu/hr/lane

(iii) Junction Control Criteria

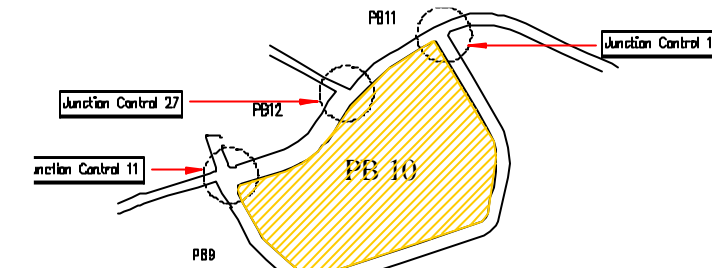
| Junction Control | Total sum of 2-way traffic on the major road and heavier approach on minor road (PCU) | |
|------------------|---|------------------------|
| | Spine Road | Local Road |
| Stop Control | up to 1500 | up to 1500 |
| Traffic Signal | Up to 4500 | Generally not required |
| Grade Separation | Generally not required | Generally not required |

(iv) Visibility Standards for Priority Junction

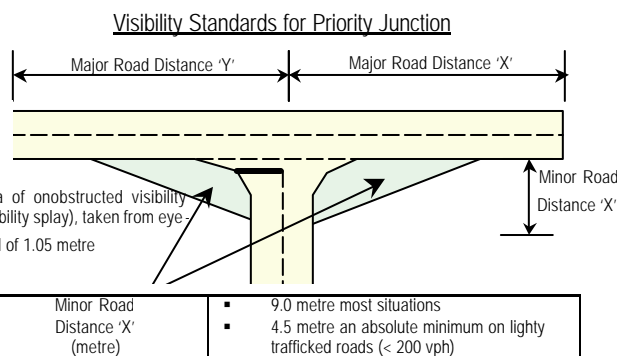
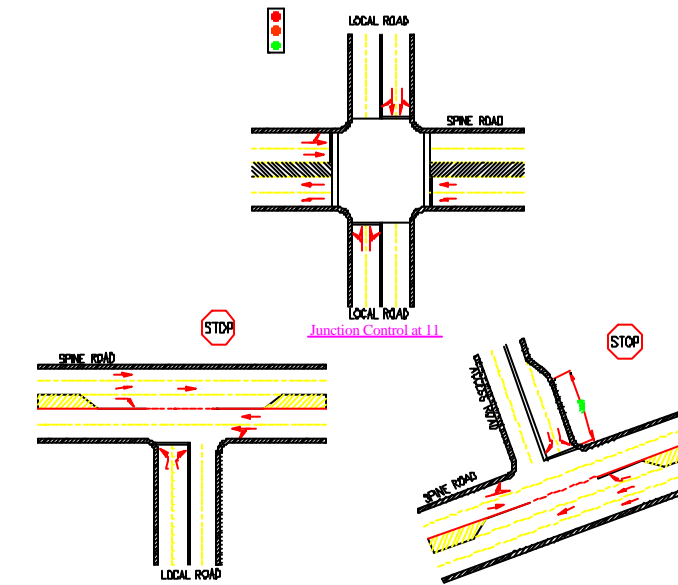
- Because minor road are uncontrolled. It is essential that adequate standards of visibility are achieved in the layout and that sight distances take account of the speed of traffic on the major road. The standards for providing clear visibility for minor road traffic are set out in the figure given

(v) Transport Design Guide for Putrajaya

- Details on other design criteria to be referred to the Transport Design Guide for Putrajaya (1998)



Planning Block 10 (PB 10) - Key Plan

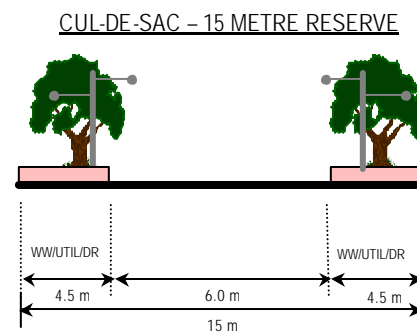
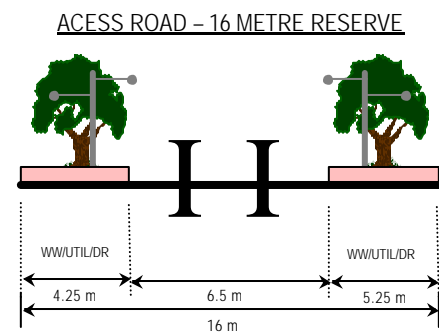
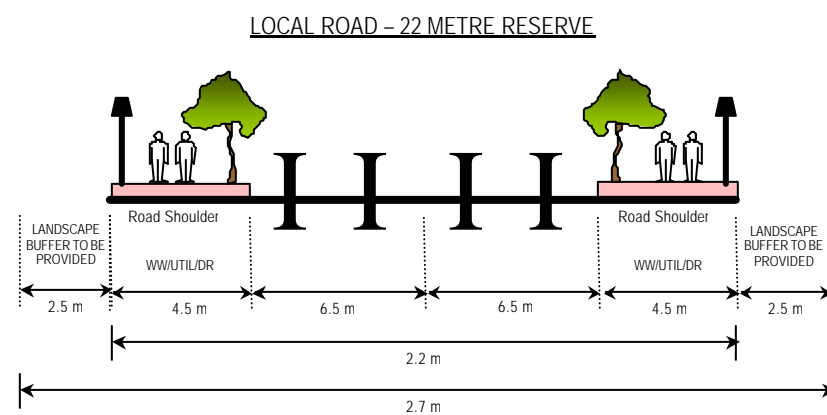
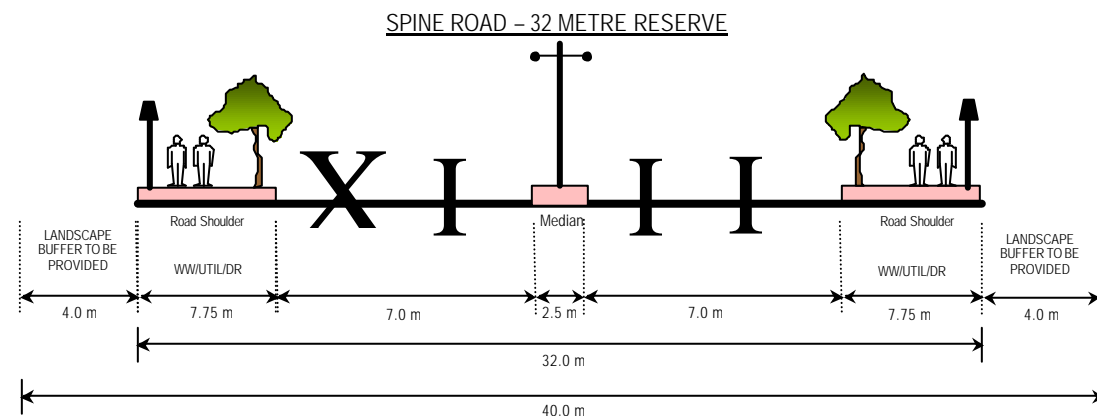


| | | | |
|---------------------------------|-----|----|----|
| Major Road Distance 'X' (metre) | 120 | 90 | 45 |
| Speed Limit (KPH) | 60 | 50 | 40 |

PLANNING REQUIREMENTS : TRAFFIC AND TRANSPORTATION

ROAD NETWORK AND DESIGN STANDARD

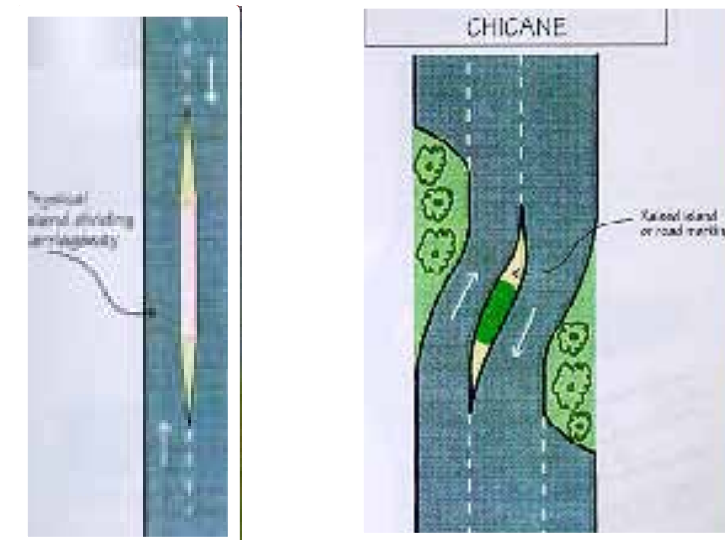
(v) Typical Road Cross Section



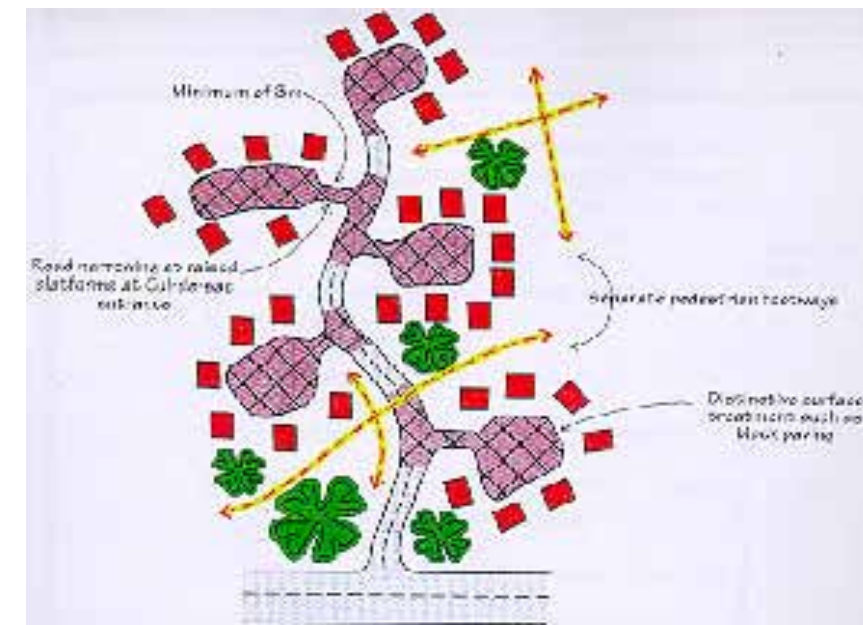
- Note:
- WW/UTIL/DR : Common pedestrians walkway utility and drainage reserve
 - Minimum cover to all utilities should be 15 metre
 - Cul-De-Sac are permitted for bungalows only serving typically no more than 25 units
 - Minimum cover to all utilities should be 15 metre

(iv) Traffic Calming

- Use Chicanes and dividers along local distributor



- The road naming at junction leading form local distributor roads into access roads.



PLANNING REQUIREMENTS : INFRASTRUCTURE AND UTILITIES

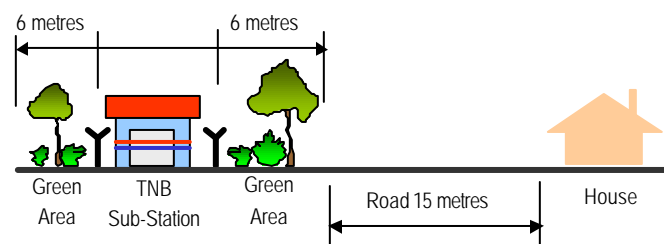
UTILITIES

(i) Environment

- The detailed platform levels shall be determined at the D.0 approval stage
- All earthworks must comply with the Environmental Management Guidelines of Putrajaya and Earthwork By-Laws (Perbadanan Putrajaya 1996)

(ii) Electricity

- The electricity supply for PB10 is mostly used for residential which are approximately 90% of the total Electrical Energy required.
- Provision of adequate numbers of 33KV Main Distribution Station (MDS) to be supported by a series of 11 KV Sub-Stations (Single & Double Chambers) and feeder pillars at strategic locations to comply with the electricity provider's (TNB) requirement.
- Feeder pillars along public roads and areas shall have all doors to open away from road and public view.
- Electrical cabling network for overall development of PB10 shall consist of 33KV,11KV and 415V distribution network systems.
- The electrical cabling network system shall be placed along the utility reserves to conform to the no dig policy. All electrical cabling shall be of the underground system.
- Sub-Station: shall have a minimum 6 metres setback on all sides to the nearest residential building. These shall be extensively landscaped.
- Fencing of utility buildings shall abide by Fencing Design Guidelines-Vol 2, Chap. 15 pg 132

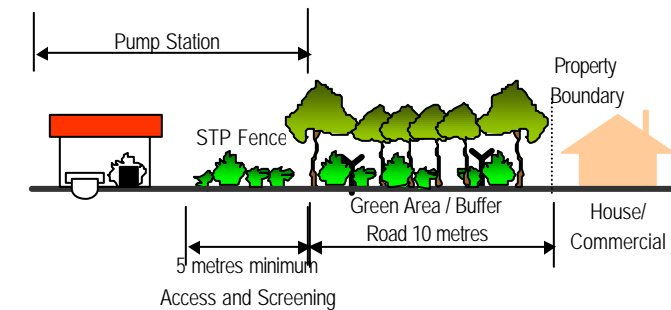


(iii) Drainage

- Drainage to the site shall be provided in terms of collection, conveyance and retention of flow from the site.
- Gross Pollutant Traps to be provided at the outlet of discharge points.
- The drainage design shall comply with the Putrajaya Stormwater Management Design Guidelines (1998), Drainage Masterplan Study Report for Putrajaya (1996) and Urban Stormwater Management Manual for Malaysia (JPS,2000)

(iv) Sewerage

- A network of gravity sewer reticulation to collect sewage from the precinct. (Level 3 works.)
- From these reticulation networks, sewage will be discharged into the centralized trunk sewer system of Putrajaya (Level 1 & 2 works) at appropriate points.
- The trunk sewers will terminate at two pump-stations. These two pump stations are PS1 in Precinct 9 and PS9 (Levels 1 & 2 works) located at the south of precinct 11, next to Road R3.
- From PS1 and PS9, sewage will be conveyed via the centralized trunk sewer system to STP2 for treatment. However, STP2 is not scheduled to be ready until Year 2003. In the interim, sewage discharge will be temporary directed to the sewage switching station PS5 for onward conveyance to STP1 for treatment until the completion of STP2.
- The buffer for a closed STP shall be 10 m to the nearest property boundary.
- The buffer for an open STP system shall be 30 m to the nearest property boundary.



(v) Gas

- The gas supply for PB10 is mostly used for residential which are approximately 80% of the total gas requirements.
- Gas supply for PB10 will be served from a District Gas Station located at Precinct 9 through a medium pressure gas pipeline.
- Provisions of 4 nos. of area Gas Station are allocated within the Precinct 11 development to cater for the projected gas loading requirements, with total area reserve of 1.13 acres.
- Low-pressure gas pipeline reticulation from the Area Gas Station is planned to serve the gas requirements for the residential, commercial and other amenities.
- Safety provision for construction within the vicinity.
- (For details of Gas Pipeline Reserve Design refer Appendix 1)

PLANNING REQUIREMENTS : INFRASTRUCTURE AND UTILITIES

UTILITIES

(vi) Waste Disposal

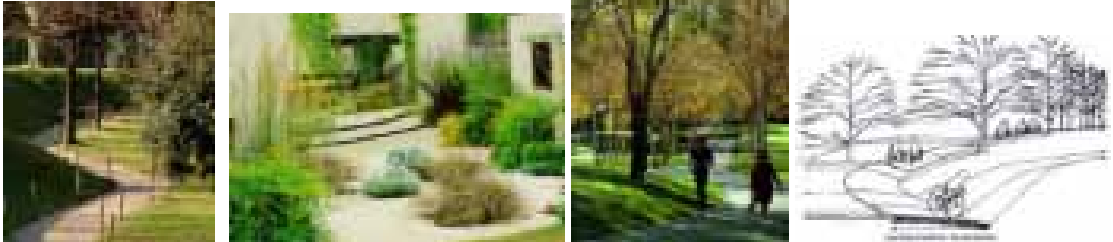
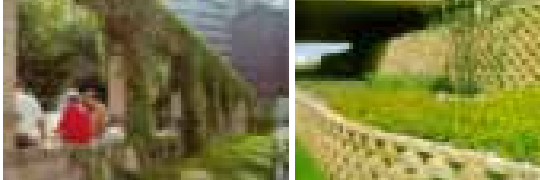
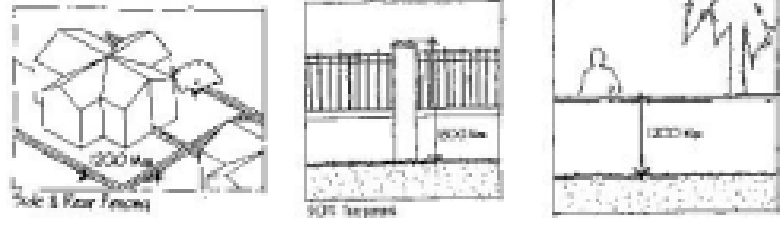

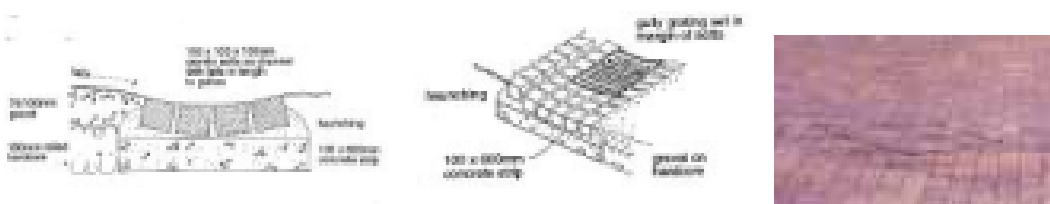

- Solid waste management in PB10 shall address reduction, reuse, recycling and recovery, the 4 R's of waste management.
- Solid waste is proposed to be separated at source, by residents or employees, into three streams; dry recycles, wet waste and rubbish (all other wastes). The dry recyclable is to be further separated at source into containers and fiber materials.
- The sensitivity of the site in terms of waste management relates to the operational requirements of Precinct 11, which require that no burial of material is undertaken during the construction phase.
- In addition to control odour nuisance to any sensitive receptors biodegradable waste cannot be left at the site for extended periods.
- The waste management shall comply with Urban Design Guidelines and Environmental Guidelines for Putrajaya.
- For low rise residential, refuse chamber is to be placed in front of the house, either left or right of the driveway and near to main road for the ease of mechanical collection. The estimated generation of solid waste is 5kg/unit/day.
- For non-residential building, refuse chamber center can be built at the ground floor / basement or apart from the main building. The estimated generation of solid waste for recreation park/public transport stop station are 0.2 kg/visitor, 300L/1000m²(gross floor area) for shopping complex and 500L/1000m²(gross floor area) for restaurant.
- Access road must be constructed for the ease of mechanical collection and public use. Obstructions to any collection vehicle's access must be disallowed at all time.




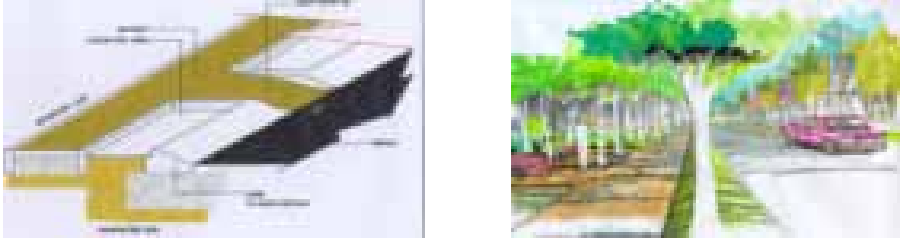

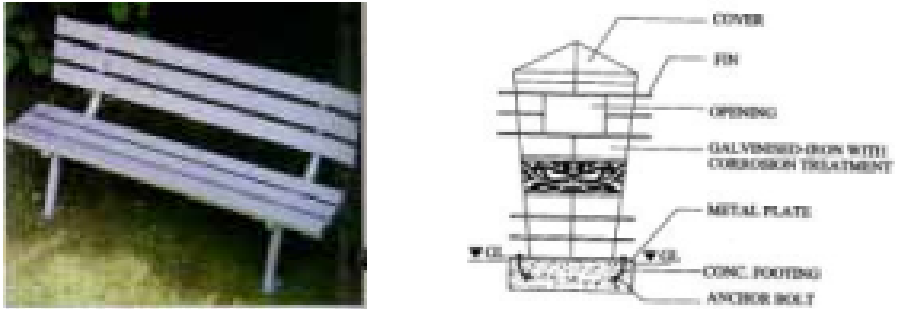
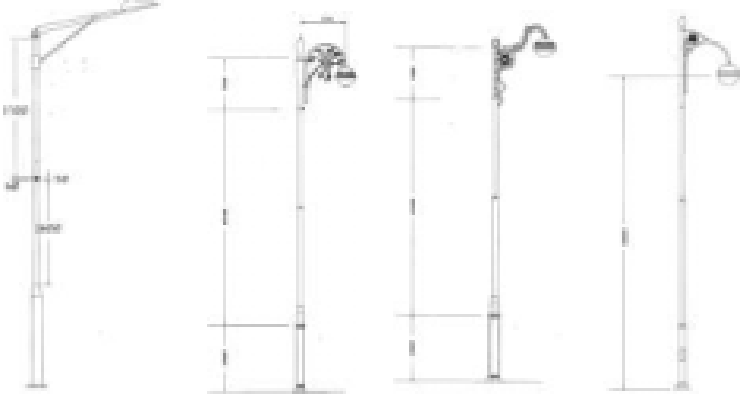
(vii) Water Supply

- Water supply to PB10 shall be consistent with the provision of water supply master plan for Putrajaya.
- Storage reservoir and pumping station together with the rising and falling mains shall be planned to serve this area in compliance with Jabatan Bekalan Air (JBA) requirement, and Design Criteria and Standards for Water Supply System, JKR (1989).

P U T R A J A Y A P R E C I N C T 1 1 L O C A L P L A N

| PLANNING REQUIREMENT : LANDSCAPE | | | | | |
|---|---|--|---|---------------------|---|
| LANDUSE | DESIGN STYLE | MATERIALS | GENERAL REQUIREMENT | USE/LOCATION | |
| <input type="checkbox"/> Residential (Landed) | ■ Paving, walls and steps <input type="checkbox"/> Informal <input type="checkbox"/> Formal <input type="checkbox"/> Contemporary | <input type="checkbox"/> Paving / Step – Clay brick – Concrete – Interlocking block etc | – Anti slippery surface – Max. gradient 8% – Durable | – Building compound |  |
| | | <input type="checkbox"/> Walls – Key stone – Concrete – Fencing brick etc. | – Harmonize with surrounding | – Building compound |  |
| | ■ Fence, Gate and Barrier <input type="checkbox"/> Contemporary <input type="checkbox"/> Formal <input type="checkbox"/> Traditional | – Hardwood – Metal – Masonry | – To follow Fencing Design Guideline Putrajaya | – Boundary line |  |
| | ■ Lighting <input type="checkbox"/> Contemporary <input type="checkbox"/> Informal <input type="checkbox"/> Formal | – Hardwood – Metal – Concrete | – Durable – Attractive – Safe | – Building compound |  |
| | ■ Drainage <input type="checkbox"/> Swales <input type="checkbox"/> Concealed drains | – Culvert – Concrete – Drain cover on walkway to follow walkway 's material | – Visually attractive – Concealed drains | – Building lot |  |
| | ■ Planting <input type="checkbox"/> Formal <input type="checkbox"/> Informal | – Tree – Palm – Shrub – Groundcover | – Non-poisonous species – Strong branch – Medium size | – Building compound |  |
| ■ Irrigation Strategy | – Tap from storage tank or JBA main or tap from JBA main | | | | |

P U T R A J A Y A P R E C I N C T 1 1 L O C A L P L A N

| PLANNING REQUIREMENT : LANDSCAPE | | | | | |
|---|--|--|---|--|---|
| LANDUSE | DESIGN STYLE | MATERIALS | GENERAL REQUIREMENT | USE/LOCATION | |
| <ul style="list-style-type: none"> <input type="checkbox"/> Gas pipe reserve | <ul style="list-style-type: none"> ▪ Planting <ul style="list-style-type: none"> <input type="checkbox"/> Formal <input type="checkbox"/> Informal | <ul style="list-style-type: none"> - Tree - Palm - Shrub | <ul style="list-style-type: none"> - Non-poisonous species | <ul style="list-style-type: none"> - Reserved areas |  |
| <ul style="list-style-type: none"> <input type="checkbox"/> Roadside | <ul style="list-style-type: none"> ▪ Paving, walls and steps <ul style="list-style-type: none"> <input type="checkbox"/> Formal <input type="checkbox"/> Contemporary | <ul style="list-style-type: none"> <input type="checkbox"/> Paving / Step <ul style="list-style-type: none"> - Clay brick - Concrete - Interlocking paver etc. | <ul style="list-style-type: none"> - Anti slippery surface - Max. gradient 8% - Max. Gradient for super elevation 2% | <ul style="list-style-type: none"> - Roadside |  |
| | | <ul style="list-style-type: none"> <input type="checkbox"/> Wall <ul style="list-style-type: none"> - Key stone - Concrete - Granite stone etc. | <ul style="list-style-type: none"> - Harmonize with surrounding environment | <ul style="list-style-type: none"> - Slope areas |  |
| | <ul style="list-style-type: none"> ▪ Site Furniture <ul style="list-style-type: none"> <input type="checkbox"/> Contemporary | <ul style="list-style-type: none"> - Hardwood - Masonry - Metal | <ul style="list-style-type: none"> - Vandalism proof - Safe - Attractive | <ul style="list-style-type: none"> - Junction |  |
| | <ul style="list-style-type: none"> ▪ Lighting <ul style="list-style-type: none"> <input type="checkbox"/> Robust <input type="checkbox"/> Minimal <input type="checkbox"/> Reflect character of adjacent neighbourhood | <ul style="list-style-type: none"> - Timber - Metal | <ul style="list-style-type: none"> - Max. height 10m | <ul style="list-style-type: none"> - Footpaths - Cycle track - Car park |  |