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**DESIGN & SUBMISSION GUIDELINES  
FOR IMPLEMENTATION  
OF THE  
SINGAPORE RIVER PROMENADE**

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Revised: September 1999

<b>PART 1</b>	<b>:</b>	<b>GENERAL INFORMATION</b>
<b>PART 2</b>	<b>:</b>	<b>DESIGN GUIDELINES FOR THE PROMENADE</b>
<b>PART 3</b>	<b>:</b>	<b>SUBMISSION GUIDELINES</b>
<b>PART 4</b>	<b>:</b>	<b>PROMENADE DEVELOPMENT</b>
<b>ANNEXURE</b>	<b>:</b>	<b>A1 - Type A River wall</b> <b>A2 - Location of Type A Riverwall</b> <b>A3 - Typical cross section of promenade with Type A Riverwall</b>  <b>B1 - Type B Riverwall</b> <b>B2 - Location of Type B Riverwall</b> <b>B3 - Typical cross section of promenade with Type B Riverwall</b>  <b>C1 - Type C Riverwall</b> <b>C2 - Location of Type C Riverwall</b> <b>C3 - Typical cross section of promenade with Type C Riverwall</b>

## PART 1

### 1.0 GENERAL INFORMATION

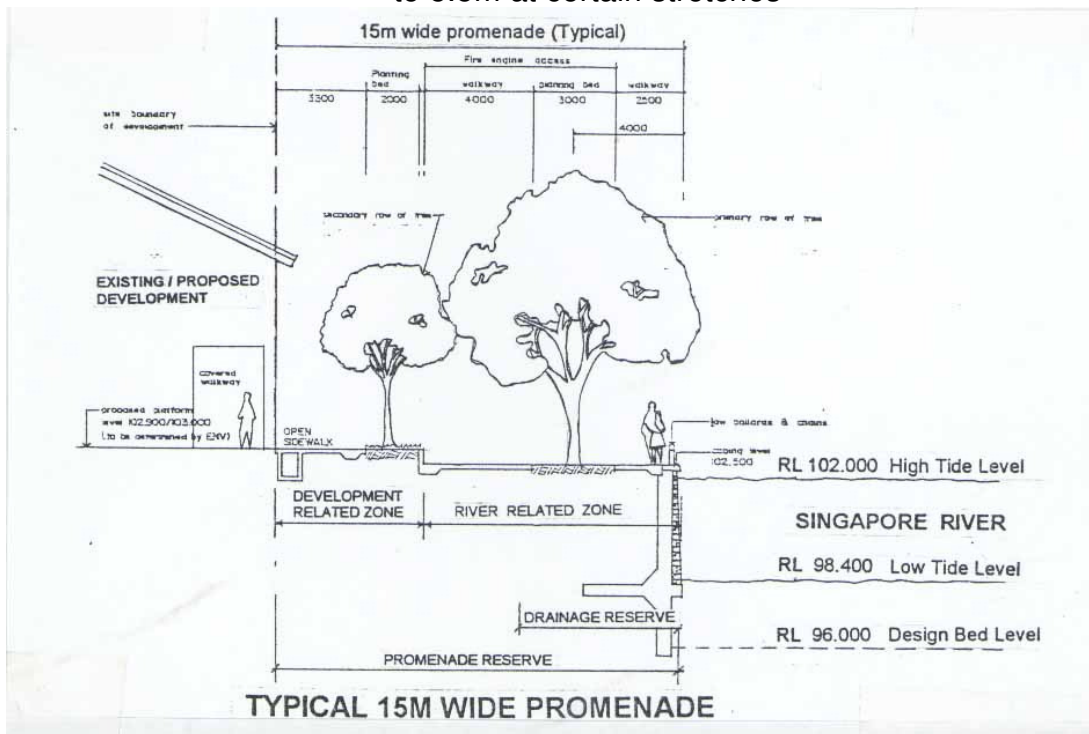
#### 1.1 Definitions

**Promenade Reserve** : Portion of riverbank adjacent to the Singapore River measured from the edge of the riverwall to the development site boundary. Generally, it is 15.0m wide but varies at certain stretches.

**Drainage Reserve** : 6.0m of the promenade width measured from the riverwall edge.

**River Related Zone** : Portion of the promenade reserve measured from the riverwall edge to the development related zone. It also incorporates the technical requirements of relevant departments. Generally, it is a minimum of 9.5m wide and varies to 11.0m at certain stretches of the river.

**Development Related Zone** : Portion of the promenade reserve from the River Related Zone to the development site boundary . Generally, it is 5.5m wide but varies between 2.5m to 5.5m at certain stretches



## PART 2

### 2.0 GUIDELINES FOR THE DESIGN OF PROMENADE

#### 2.1 Typical Sections

##### 2.1.1 Riverwall profile

There are three typical riverwall profile for the entire length of the Singapore River:

(i) **Type "A" Riverwall Profile :**

Feature : Vertical rubble wall up to RL 101.350m, with 4.0m of sloped embankment measured from top coping of rubble wall to platform level, RL 102.500m  
(See Annexure A1)

Location : North and part South Bank of Upper Robertson Quay between Kim Seng Bridge and Proposed Saiboo Bridge.  
(See Annexure A2)

(ii) **Type "B" Riverwall Profile :**

Feature : Vertical rubble wall up to RL 102.500m  
(See Annexure B1)

Location : Part South Bank of Upper Robertson Quay between Kim Seng Bridge and Proposed Saiboo Bridge;

North and South Bank of Lower Robertson Quay between Proposed Saiboo Bridge and Clemenceau Bridge;

North and part South Bank of Clarke Quay and Boat Quay.  
(See Annexure B2)

(iii) **Type "C" Riverwall Profile :**

Feature : Vertical rubble wall up to RL 98.400m, with granite steps from top edge of rubble wall to platform level, RL 102.500m.  
(See Annexure C1)

Location : Part South Bank of Clarke Quay between Read Bridge and Coleman Bridge;

Part South Bank of Boat Quay between Elgin Bridge and Cavenagh Bridge.  
(See Annexure C2)

**2.1.2 Cross-section of Promenade Along Singapore River**

There are three typical cross-sections of promenade along the Singapore River, based on the typical riverwall profiles described above. (See Annexure A3, B3 & C3) Each cross-section consists of two distinct zones:

- (i) **River Related Zone**
- Portion of the promenade width measured from the riverwall edge.
  - This zone incorporates all the technical requirements of relevant Authorities stipulated in item 2.3 below.
  - Platform level of this zone is generally a minimum of RL 102.500m.
  - Width is 11.0m for promenade with Type A riverwall profile and 9.5m for Type B and C riverwall profile.

- (ii) **Development Related Zone**
  - Portion of promenade reserve from the River Related Zone to the development site boundary.
  - This zone incorporates the secondary row of tree planting. Developer has the flexibility of designing this zone to tie in with his development.
  - Platform level of this zone is of a minimum RL 102.900m to tie in with the development levels.
  - Width is generally 4.0m for promenade with Type A riverwall profile and 5.5m for promenade with Type B and C riverwall profile. This width varies along certain stretches of the river.

## **2.2 Technical Requirements of Relevant Authorities**

The developer is to comply with the technical requirements of the following Authorities or relevant departments.

### **2.2.1 Fire Safety Bureau (FSB)**

- (i) Fire Engine Access
  - A fire engine access of 7.0m clear width is required. A 4.0m fire engine access width is acceptable along certain portions to allow for street furniture and planting areas.
  - The fire engine access need not be straight. It could meander within the width of the promenade allowing for the required turning radius.
  - The edge of the fire engine access must be more than 2.0m but not more than 10.0m from the edge of the building facade fronting Singapore River.
  - The loading and other requirements are subject to the approval of FSB.
- (ii) Hard Standing Areas

- Hard standing areas (minimum 7.0m x 15.0m) need to be provided along the promenade. The dimension, interval and detailed design of these areas are subject to FSB's approval. Their location should also take into account the promenade design.

(iii) Fire Hydrants

- Hydrants are to be provided at intervals and in compliance with Code of Practice for Fire Precautions in Buildings 1991.

## **2.2.2 Land Transport Authority (LTA)**

(i) Public Walkway

- A 2.5m wide (minimum) public walkway measured from the riverwall edge is to be provided along the riverwall. The walkway need not be straight but should be on the same level. If the walkway is to be used as outdoor refreshment area, an alternative walkway has to be provided.
- The covered walkway should not be used as outdoor refreshment areas and should be kept free of obstructions.

(ii) Roads

- The extent of road reserve safeguarded along the river promenade is to be clearly indicated.

### 2.2.3 National Parks Board (NParks)

(i) Primary row of trees

- The primary row of trees are to be planted 4.0m (minimum) from the riverwall and should form a continuous canopy shade along the promenade.

Sub-zone	Species	Planting Distance
Boat Quay	Dalbergia Oliveri	6- 8m apart
	Calophyllum Inophyllum	8- 10m apart
	Erythrophleum Guineense	8- 10m apart
Clarke Quay	Dalbergia Oliveri	4- 5m apart
	Hura Capitans apart	4- 5m apart
Robertson Quay	Tabebuia Rosea (primary row) Leptospermum sp. (along embankments where applicable as water edge features.	6m

(ii) Secondary Row of Trees

- The secondary row of tree planting (within the development related zone) need not be planted at regular intervals and can be of other species. They may be planted to the landscaping theme of the development to provide maximum shade.
- Developer may propose the tree species subject to NParks approval. The distance between the trees is dependent on the tree species proposed, but should be planted so as not to obstruct fire fighting.
- Planting troughs / beds with ground covers are to be incorporated with tree planting. Shrubs and ground cover species are subject to NParks approval.
- For Type A riverwall (with sloped embankment), suitable ground cover planting can be proposed along the embankment to provide a "softer" water edge.

(iii) Aeration and Irrigation System

- Continuous planting beds are encouraged in order to provide NParks requirement of 16 square metres per tree, for adequate aeration.
- Automatic irrigation system or a dry pipe irrigation with breeching inlets accessible to NParks water tankers is required for shrub and ground cover planting beds should the landscaping be maintained by NParks.

#### **2.2.4 Drainage Department, ENV**

(i) Drainage Reserve

- The primary row of trees is to be planted 4.0m away from the riverwall edge.
- No piling or permanent buildings shall be allowed within 15.0m of the edge of the riverwall/top of the embankment.

(ii) Fire Engine Hard Standing

- All foundations of fire engine hard standing areas within 15.0m of the edge of the riverwall/top of the embankment shall not cause any instability to or affect the integrity of the existing riverwall/embankment.

(iii) Maintenance Access to Riverwall/Top of the embankment

- Any temporary structures and planting within 6.0m of the Riverwall edge may be removed if there is a need to access the riverwall for structural maintenance.

#### **2.2.5 Urban Redevelopment Authority (URA)**

(i) Underground Services

No services are to be allowed within the promenade reserve other than provision of :-

- water supply for irrigation system to landscaping works and hydrants;
- electricity supply to public lighting of the promenade
- covered drain at edge of development site boundary.
- required scuppers and sub-soil drains.

(ii) Foreshores Act (CAP 113)

- No piling or permanent buildings shall be allowed within 15.0m of the edge of the riverwall/top of the embankment. If piling or permanent buildings is required, the approval from the Development Control Division, URA, should be obtained.
- All foundations of fire engine hard standing areas within 15.0m of the edge of the riverwall/top of the embankment shall be able to withstand the required FSB loadings. It shall not cause any instability to or affect the integrity of the existing riverwall/embankment.
- Any temporary structures and planting within 6.0m of the riverwall edge may be removed if there is a need to access the riverwall for structural maintenance.

(iv) Linkage

Ramps and steps are to be provided to link the two different platforms levels of the two zones within the promenade reserve. Alternative barrier free access is to be provided between the two levels for the handicapped.

(v) Covered Walkway

Platform level of covered walkway is to match the platform level of promenade adjacent to the development, (development related zone) at RL 102.900m.

(vi) Design Concept / Usage

The design concept and allowable usage within the promenade reserve is to be in accordance with the "Singapore River

Environmental Design Master Plan" and to the approval of the Singapore River Steering Committee, URA.

## **2.3 Paving Materials**

**2.3.1** For Boat Quay and Clarke Quay, the use of granite is recommended. For Robertson Quay, the use of both granite and heavy duty, reddish brown tone clay paver is recommended.

**2.3.2** The use of 300mm granite border along the boundaries of the promenade area is recommended. This granite should be either mid black or dark grey in colour to provide consistency in the various stretches and interface the individual promenade areas implemented by different developers.

**2.3.3** All proposed materials and finishes are subject to the evaluation and approval of the Singapore River Steering Committee.

## **2.4 Public Lighting and Street Furniture**

### **2.4.1 Building façade/ promenade lighting**

- (i) Public lighting and street furniture shall be of good quality and design; consistent with the ambience of the area based on the guidelines set out by the Singapore River Lighting Plan.
- (ii) Lamppost design must incorporate provisions for banners and brackets to mount streamers across the River should the need arise.
- (iii) The lighting of building façades facing the River and the promenade will be evaluated according to the guidelines set out in the Singapore River Lighting Plan and subject to the approval of the Singapore River Steering Committee. The plan could be obtained from Thematic Development, Singapore Tourism Board.

#### **2.4.2 Railings/ Bollard & chains**

- (i) Safety barriers such as railings or bollards with chains are to be provided along the edge of the riverwall or top of the embankment. Designs of such safety barriers are subject to approval by the Singapore River Steering Committee.
- (ii) Railings or bollards & chains should be of good quality and design and blend in with the riverfront character of the area and the adjacent developments.
- (iii) Bollards and chain to be provided with life buoys and other necessary safety devices. All safety devices should also be maintained by the developer as part of the TOL.

#### **2.5 Structures Within the Promenade Reserve**

No permanent structure is allowed within the promenade reserve (both Development and River Related Zones).

#### **2.6 Temporary Occupation License**

##### **2.6.1 Construction or maintenance**

- (i) The Developer shall seek prior approval of the Commissioner of Lands and comply with all conditions and requirements to obtain a Temporary Occupation License for the carrying out of any works on the promenade reserve or maintaining the promenade upon completion of works.
- (ii) The issuance of the Temporary Occupation License (TOL) shall be subject to such terms and conditions as may be imposed by the Commissioner of Lands as well as the payment of the relevant fees as may be determined by the same.
- (iii) For the sole purpose of construction, landscaping and maintenance of the promenade / mall; only a nominal fee would be charged.

### **2.6.2 Outdoor Refreshment Areas (ORA) or other commercial uses**

- (i) Prior to any application for Planning Permission, the Developer shall obtain the written approval of the Commissioner of Lands, Land Office if he proposes to use any part of the promenade reserve for outdoor refreshment or other commercial uses (e.g. food kiosks) for TOL at market rates to be assessed by Chief Valuer.
- (ii) No food preparation is allowed within the ORA except with the prior written approval of the relevant Authorities. The Environmental Health Department, Ministry of the Environment should be consulted on the issue of food preparation on the promenade.
- (iii) The developer shall at all times maintain the outdoor refreshment area(s) and any other area(s) occupied under Temporary Occupation License to such satisfactory standards as may be imposed by relevant Authorities.
- (iv) Upon the expiry of the Temporary Occupation License (TOL), the Developer, at his own costs and expense, reinstate all area(s) occupied under TOL to the satisfaction of relevant Authorities for handing over.

## Part 3

### 3.0 **GUIDELINES FOR DC SUBMISSION**

#### 3.1 **Planning Application**

**3.1.1** There are two options for submitting a planning application for the riverside promenade :

- (i) To include the promenade with the submission for the development.
- (ii) To have a separate application for the promenade. This option requires a separate processing fee as an application for infrastructure works.

**3.1.2** DC Submission for the construction of river promenade related to the development :

- (i) In general, the following types of drawings are required :
  - Proposal plans (including location plan)- 12 sets  
Scales : 1:200 or 1:500
  - Topographical plans (contours and spot levels) - 1 set  
Scales: same as proposal plan
  - Sketch plans - 5 sets  
(layout, landscaping, elevations & intended use)  
Scales : 1:100 or 1:200
  - Cross-sections  
Scales : 1:50 or 1:100
  - Design details where appropriate.
  - Finishes and material indication.
  - Street furniture and promenade.

- Lighting proposal:
  - Lighting concept
  - Lighting plan for Building façade facing the River and the promenade
  - Position and installation for lighting proposal
  - Technical specifications for lighting proposal
  - Artist's impressions of the lighting effect for the building and the promenade. (Optional).
- Proposed ORA boundary if any.
- For very large development, other appropriate scales may be used to facilitate handling of plans.

(ii) In addition, the following are required :

- **"In-principle no objection" letters** from Commissioner of Lands, Land Office for the Developer to undertake the design and construction of the promenade reserve with his development.
- A **sample board** of the proposed materials to be used for the promenade accompanied by a **coloured plan** showing the colour of materials to be used for the promenade.
- Indication of whether the develop will be applying for TOL for maintenance or ORA upon completion of works.
- Every DC Submission application must be accompanied with Form DC 3, 3 copies of Record Plans, 1 Road Interpretation Plan, 1 Drainage Interpretation Plan.

**3.1.3** The Developer should refer to the design and technical guidelines for the design of the promenade.

**3.1.4** The Developer will be required to obtain approvals from the following departments :-

- (i) **Commissioner of Lands** - at DC stage for endorsement of plans if promenade is on state land.
- (ii) **Maritime Port Authority** - at DC stage
- (iii) **Fire Safety Bureau** - at BP stage
- (iv) **LTA(Development and Building Control)** - for submission requirements under the Street Improvement Act.
- (v) **LTA (architectural)** - at DC stage
- (vi) **National Parks Board** - at DC stage
- (vii) **CBPU/PCD** - at DC stage
- (viii) **URA (Development Control Division)** - at DC stage

## **3.2 Planning Application for Outdoor Refreshment Areas (ORA)**

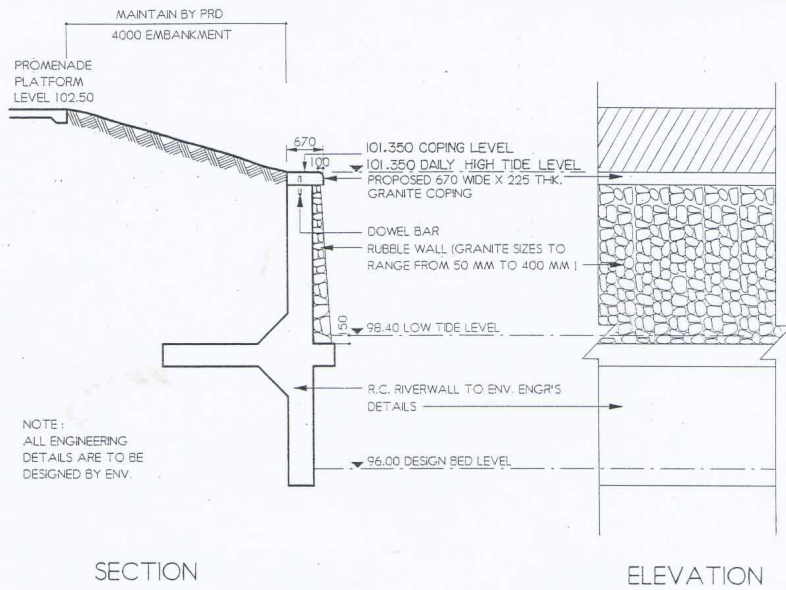
The following details must be included in the planning application for Outdoor Refreshment Areas :

- 3.2.1** The proposed uses within the development and the proposed ORA should be indicated on the plans;
- 3.2.2** The extent of the proposed ORA should be clearly indicated with separate distinct colours on the plans;
- 3.2.3** Proposed materials used in the proposed ORA should be stated on the plans.
- 3.2.4** The Gross Floor Area (GFA) for the proposed ORA. Please note ORA, even if it is opened to the sky, constitutes GFA.

## **PART 4**

#### **4.0 PROMENADE DEVELOPMENT**

- 4.1** If the Developer intends to use the promenade reserve and to integrate it as part of his development, he must have approval from the Land Office as owner and administrator of Leased State Land, before DC submission.
- 4.2** The Developer / Owner shall :-
- 4.2.1** design the promenade reserve as outlined in these guidelines;
  - 4.2.2** obtain approval for the proposal from the Singapore River Steering Committee during the DC submission;
  - 4.2.3** allow Drainage Department or its agent access to carry out drainage works within the Drainage Reserve as and when necessary;
  - 4.2.4** be responsible for safeguarding the structural integrity of the river wall within the Drainage Reserve;
  - 4.2.5** not construct any structures or facilities on, over or under the Promenade Reserve without the prior approval of the relevant Competent Authorities;
  - 4.2.6** be responsible for public safety and maintenance within the Promenade Reserve.
- 4.3** In addition, if the developer intends to modify the edge profile of the river wall, ENV, Drainage Department's approval is required before planning submission.
- 4.4** The developer constructing the promenade shall have the option to TOL for commercial uses or for landscaping and maintenance as part of the overall development.



TYPE A RIVERWALL

DETAILS OF TYPE 'A' RIVERWALL

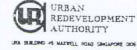
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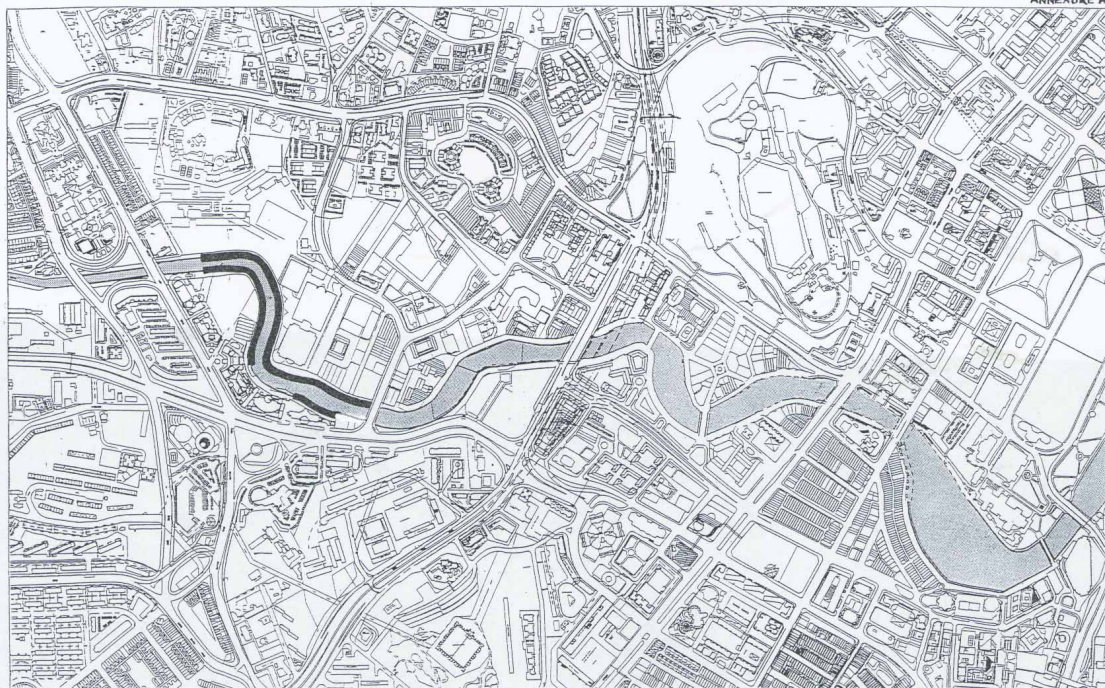


PROJECT SERVICES DIVISION

DATE  
NOV 14  
DRAWING NO.



URBAN REDEVELOPMENT AUTHORITY  
URA BUILDING 15 MARVELL ROAD SINGAPORE 069



TYPE 'A' RIVER WALL - LOCATION

LOCATION OF TYPE 'A' RIVER WALL

DRAWING TITLE  
SINGAPORE RIVER  
ENVIRONMENTAL DESIGN  
MASTER PLAN

SCALE  
NOT TO SCALE

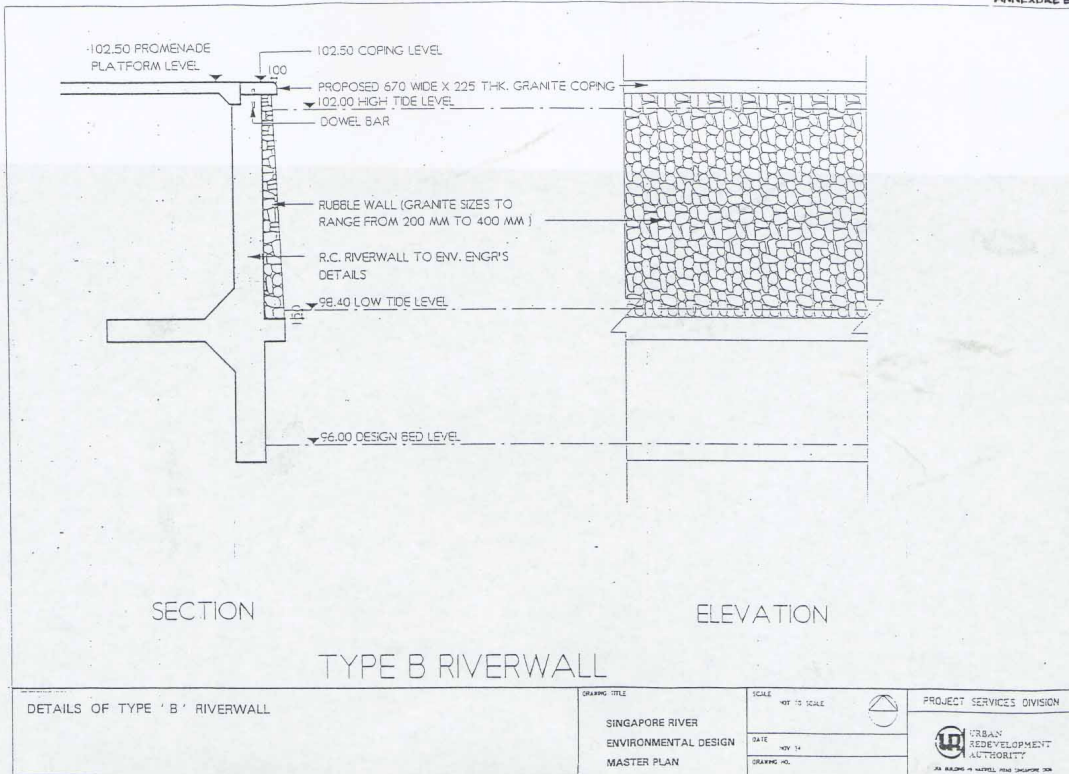
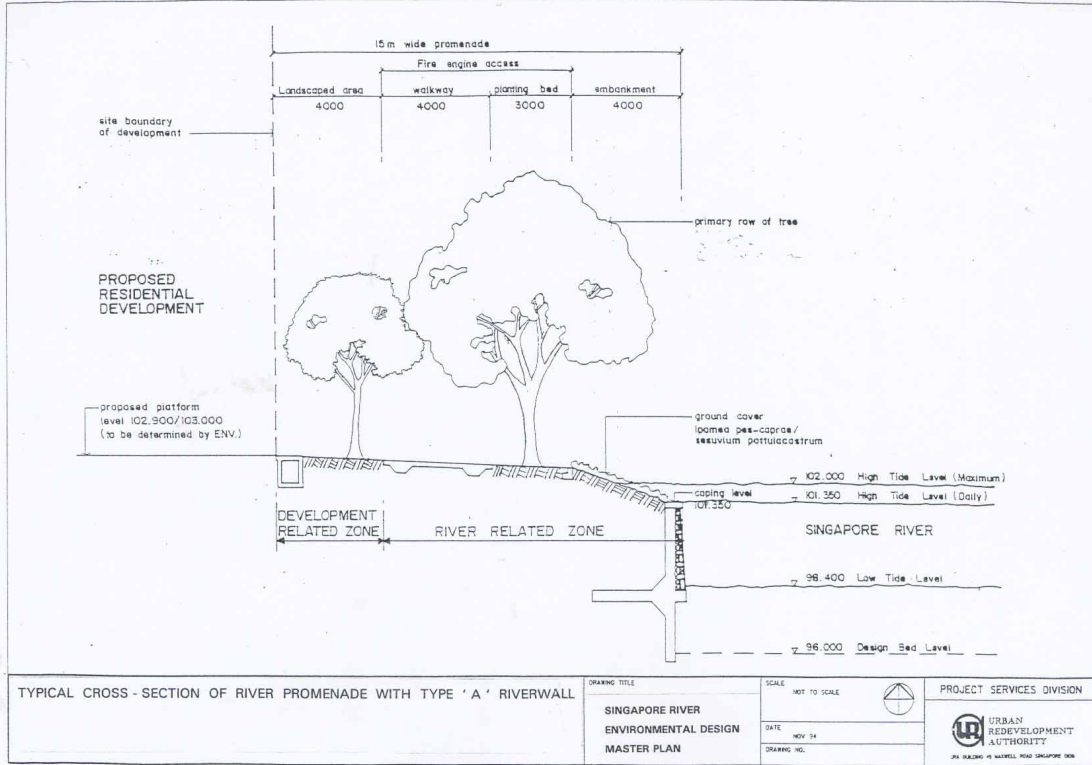


PROJECT SERVICES DIVISION

DATE  
NOV 14  
DRAWING NO.



URBAN REDEVELOPMENT AUTHORITY  
URA BUILDING 15 MARVELL ROAD SINGAPORE 069





TYPE 'B' RIVER WALL - LOCATION

LOCATION OF TYPE 'B' RIVER WALL

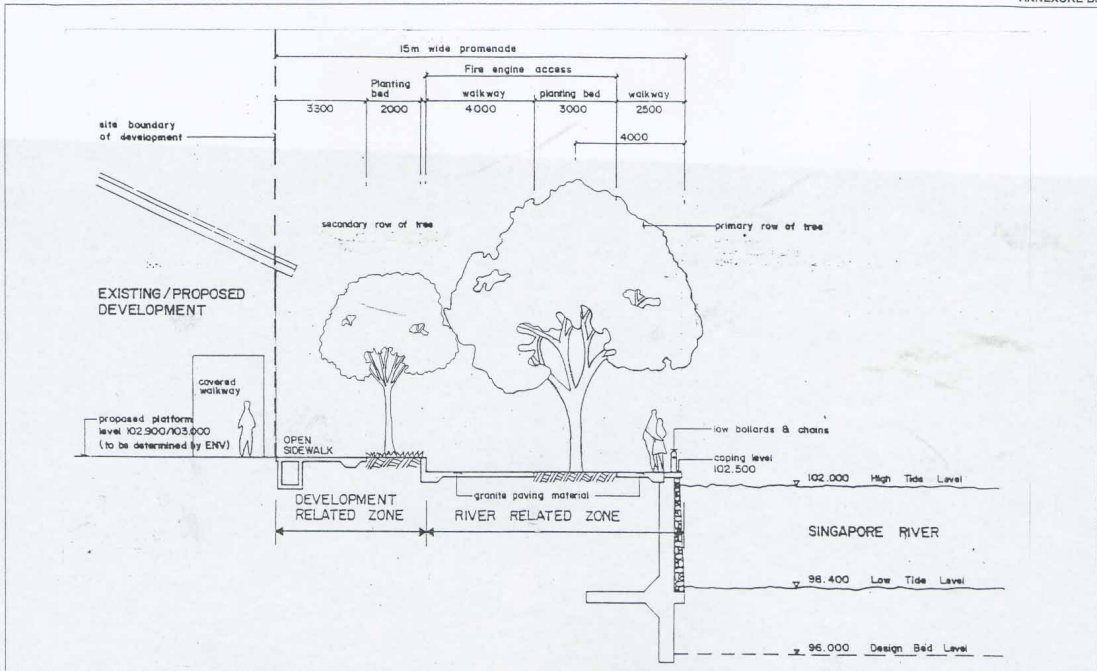
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SINGAPORE RIVER  
ENVIRONMENTAL DESIGN  
MASTER PLAN

SCALE NOT TO SCALE

DATE NOV 24  
DRAWING NO.

PROJECT SERVICES DIVISION



TYPICAL CROSS-SECTION OF RIVER PROMENADE WITH TYPE 'B' RIVER WALL

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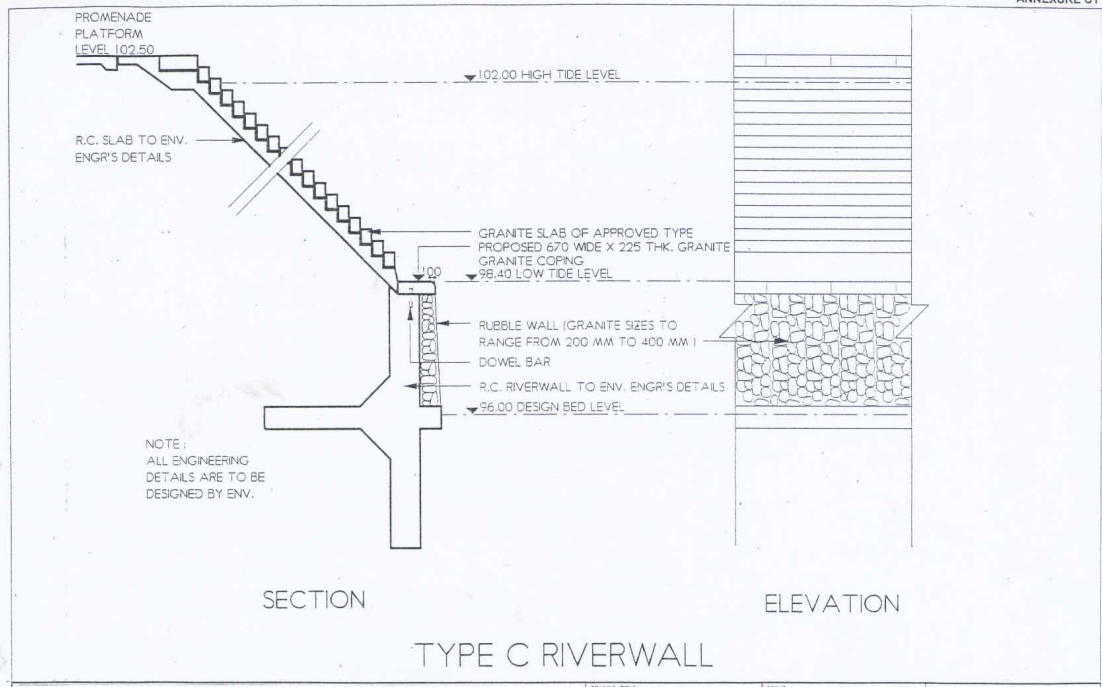
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ENVIRONMENTAL DESIGN  
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SCALE NOT TO SCALE

DATE NOV 24  
DRAWING NO.

PROJECT SERVICES DIVISION



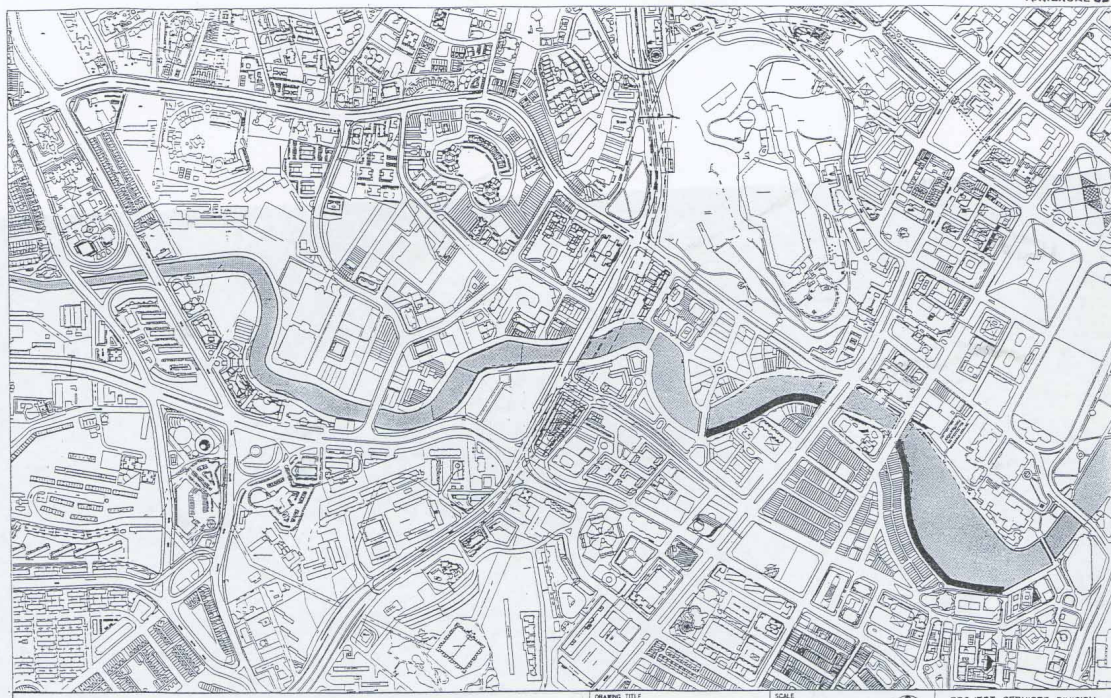


SECTION

ELEVATION

TYPE C RIVERWALL

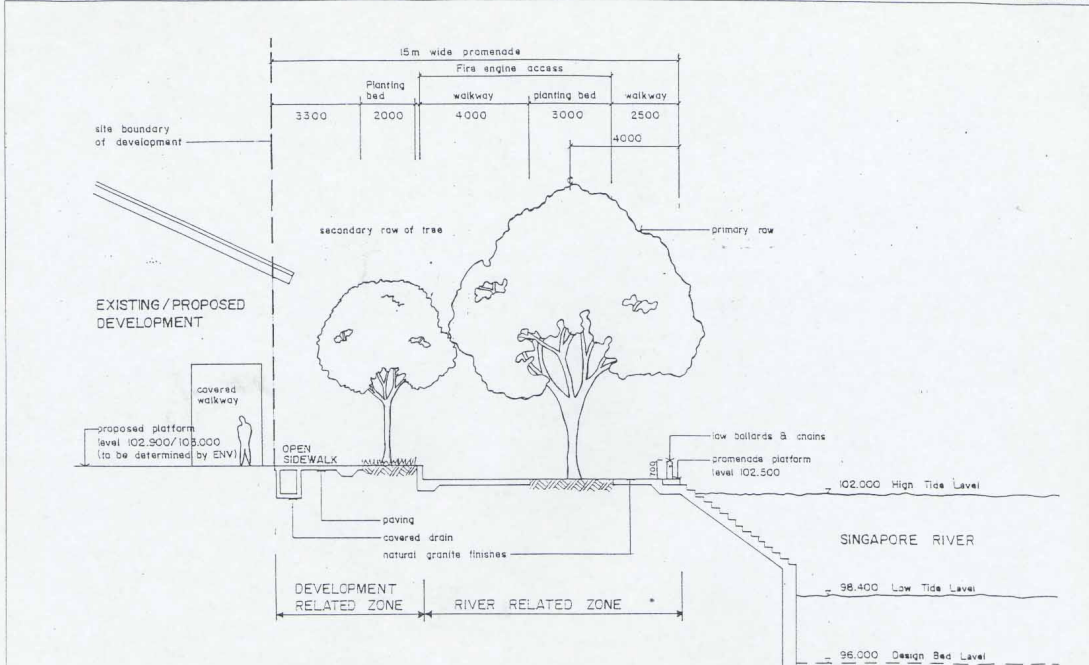
DETAILS OF TYPE 'C' RIVERWALL	DRAWING TITLE SINGAPORE RIVER ENVIRONMENTAL DESIGN MASTER PLAN	SCALE NOT TO SCALE	PROJECT SERVICES DIVISION URBAN REDEVELOPMENT AUTHORITY URA BUILDING 16 RAFFLES ROAD SINGAPORE 06A
	DATE NOV 14	DRAWING NO.	



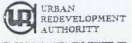
TYPE 'C' RIVER WALL - LOCATION

LOCATION OF TYPE  
 'C' RIVER WALL

TYPE 'C' RIVER WALL - LOCATION LOCATION OF TYPE 'C' RIVER WALL	DRAWING TITLE SINGAPORE RIVER ENVIRONMENTAL DESIGN MASTER PLAN	SCALE NOT TO SCALE	PROJECT SERVICES DIVISION URBAN REDEVELOPMENT AUTHORITY URA BUILDING 16 RAFFLES ROAD SINGAPORE 06A
	DATE NOV 14	DRAWING NO.	



TYPICAL CROSS-SECTION OF RIVER PROMENADE WITH TYPE 'C' RIVERWALL

DRAWING TITLE		SCALE	PROJECT SERVICES DIVISION
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ENVIRONMENTAL DESIGN		DATE	
MASTER PLAN		NOV 24	
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