

## **CYBERPORT DEVELOPMENT & ASSOCIATED ENGINEERING INFRASTRUCTURE**

### **PROJECT PROFILE FOR MATERIAL CHANGE TO A DESIGNATED PROJECT**

#### **1. BASIC INFORMATION**

##### **1.1 Project Description**

As part of the Engineering Feasibility Study for the Proposed Infrastructure Works at Telegraph Bay, an environmental impact assessment (EIA) for Scheme 2 (i.e. the Cyberport Development) was conducted and the EIA Study Report was approved in April 1999 under the Environmental Impact Assessment Ordinance (EIAO). The works commenced in September 1999. Recently, an on-site concrete batching plant has been proposed to supply concrete directly to the site for the construction.

As this is a material change to the project assumed in the above EIA report, an EIA Study is required to address the proposal for the concrete batching plant. This project profile is to provide preliminary information for the Director of Environmental Protection to determine the scope of the environmental issues, which shall be, addressed in the EIA Study, together with the technical and procedural requirements the EIA Study shall meet.

##### **1.2 Nature of the project, and the proposed addition, modification or alternation**

The proposed Cyberport Development is a comprehensive development to support a professional community of information technology. The development will provide sustained, long term economic benefits to Hong Kong and also contribute significantly in the area of education, the environment, culture and entertainment. It will also enhance Hong Kong's position as the premier telecommunication and broadcasting hub in Asia.

The infrastructure works for Cyberport Development involve construction of the Southern Access Road, Roads D1, D2 and L1 and a sewerage treatment plant.

Instead of using barges to ship in ready mixed concrete for the above mentioned Cyberport development and associated engineering infrastructure works, an on-site concrete batching plant is proposed during the construction phase.

For ease of delivering raw materials to the plant, it requires marine access. Figure 1 shows the location of the proposed concrete batching plant.

##### **1.3 Name of project proponent**

Cyber-Port Limited

## 1.4 Location of project

Telegraph Bay is located on the south-west side of Hong Kong Island. The site is mostly vacant and has remained undeveloped since the reclamation was completed in 1988. The seaward edge of the reclamation is retained by a sloping seawall with a 150m long vertical seawall over the central portion. The landward side of the reclamation is surrounded by slopes covered with heavy vegetation and mature trees.

## 1.5 Name and telephone number of contact person(s)

### Contact Particulars

Location: 38/F, Citibank Tower, Citibank Plaza, 3 Garden Road, Central, Hong Kong.

## 1.6 Time-table for the addition, modification or alternation

Submission of Project Profile and Application for an EIA Study Brief to EPD	: May 2000
Submission of EIA Report for Concrete Batching Plant	: July 2000
Public Inspection of the EIA Report for Concrete batching Plant	: September 2000
Receipt of Comments on the EIA Report from ACE	: October 2000
Approval of the EIA Report for Concrete Batching Plant	: November 2000
Application for an Environmental Permit	: November 2000
Commencement of Concrete Production	: December 2000
Completion of Concrete Production (tentative)	: December 2001

## 2. POSSIBLE IMPACT ON THE ENVIRONMENT

### 2.1 General Description of the Proposed Concrete Batching Plant

Ready Mixed Concrete (H.K.) Limited (RMC) has proposed to install a concrete batching plant with a maximum hourly production rate of 300 m<sup>3</sup> approximately. Location of the proposed concrete batching plant is shown in Figure 1.

A mobile batching plant of total silo capacity of 45 tonnes would be employed for temporary production in Stage 1 while a complete batching plant of total capacity of 800 tonnes would be operated in Stage 2. A block layout plant of the proposed concrete batching plant is presented in Figure 2.

### ***Stage 1***

A mobile batching plant Mob 60 with total silo capacity of 45 tonnes – one 30 tonnes and one 15 tonnes, would be employed in stage 1. The mixer capacity is 1.25 m<sup>3</sup>/batch. Cement and aggregates are delivered to the site by barges. Predetermined mixing ratios of cement and aggregates are set to produce different grades of concrete for application. Appropriate amount of water is also injected to form the mixture.

Cement is pumped from the barge to a cement tanker. The cement tanker transfers the cement to the fully enclosed cement silos. Cement is stored in the silos and properly weighted for mixing. Dust collectors would be installed at the cement silos and the concrete mixer. Totally three dust collectors would be employed.

Aggregates would be transferred from a barge to a tripper truck through the sea front receiving hopper. The tripper truck then transports the aggregates to the aggregate storage yard. A wheel loader would transfer the aggregates to an aggregate receiving hopper. Finally, the aggregates are conveyed to a fully enclosed aggregate storage bin with total capacity of 30 tonnes by a belt conveyor. Aggregates are stored in the overhead storage bins and ready for mixing in the mixer.

### ***Stage 2***

A fixed batching plant with total silo capacity of 800 tonnes – two 200 tonnes and four 100 tonnes, would be employed. The mobile batching plant Mob 60 would be used as a standby. The Stage 2 plant composes of two identical mixers. Both are batch mode and the capacity is 3.5 m<sup>3</sup>/batch each. Cement and aggregates are also delivered to the site by barges.

Cement is directly pumped from the barge to the cement silos via underground pipes. There are totally six cement silos – two are 200 tonnes and four are 100 tonnes. Two 100 tonnes silos are interconnected while the remaining silos are also connected as a group. Each group would be served by two dust collectors. In addition, two mixers are connected to one single dust collector. Therefore, totally five dust collectors would be employed.

Aggregates would be transferred from a barge to the sea front receiving hopper. Afterwards, the aggregates would be transported to a group of five 200 tonnes aggregate storage bins by belt conveyors. Moreover, each mixer is equipped with an overhead storage bin with four compartments. Each compartment can hold 40 tonnes aggregates.

Three sets of generators would be used in the Stage 2 plant - two sets for the batching plant and the other for maintenance workshop.

A schematic process flow diagram for the proposed concrete batching as shown in Figure 3 detail illustrates the future operation of the plant in Stage 1 and 2.

## 2.2 Description of the Environmental Changes arising from Concrete Batching Plant

Major environmental issues associated with the construction and operation of activities for the proposed concrete batching plant include noise and dust.

Nearby sensitive receivers for noise and air quality in the vicinity of the study area are identified. The selected sensitive receivers are made with reference to the Final EIA Report of the Infrastructural Works for the Proposed Development at Telegraph Bay. Description of the sensitive receivers is provided in Table 2.1.

Table 2.1 Selected Sensitive Receivers (SRs) for Noise and Air Quality Assessment

NSR	ASR	SR No.	Description	Land Use <sub>1</sub>
-	1	SR1	Stanley Ho Sports Centre	Rec
1	2	SR2	Tam Villa	R
2	3	SR3	HKU Staff Quarters	R
3	4	SR4	42 Sasson Road	R
4	5	SR5	45 Sasson Road	R
5	6	SR6	47 Sasson Road	R
6	7	SR7	50 Sasson Road	R
7	8	SR8	60 Sasson Road	R
8	9	SR9	Magnolia Villas	R
9	10	SR10	Point Breeze	R
10	11	SR11	Carriana Sasson	R
11	12	SR12	Stone Manor	R
12	13	SR13	Provident Villas	R
-	14	SR14	HKU Medical Faculty	S
-	15	SR18	Ebenezer Home for the Blind	S
13	16	SR19	16-18, Baguio Villas	R
14	-	SR19a	45, Baguio Villas	R
15	-	SR19b	46, Baguio Villas	R
16	17	SR21	Pok Fu Lam Training Centre	S
17	18	SR22	Pok Fu Lam Garden	R
18	19	SR23	Wah Fu Estate	R
19	20	SR24	Lui Ming Choi Secondary School	S
20	21	SR25	Precious Blood Primary School	S
21	22	SR26	Tsui Ching Tong School for the Handicap	S
22	23	SR27	Kong Sin Wan Tsuen	R
23	24	SR28	Boarding Clinic and Veterinary Clinic	O/C
24	25	SR40	Pui Ying Secondary School	S
-	26	SR41	Telegraph Bay Playground	Rec

1. Residential uses (R); School (S); Recreational uses (Rec); Office/Commercial (O/C); Medial (Med)

### **2.3 Findings or Recommendations of Previous EIA Report**

The key findings or recommendations of the previous EIA Study Report are summarised as below:

#### Construction Dust

The unmitigated 1-hour TSP criterion and 24-hour AQO are exceeded at a number of air sensitive receivers such as Precious Blood Primary School, Tsui Chin Tong School and Kong Sin Wan Tsuen.

The recommended mitigation measures include: (a) regular watering of all haul roads with complete coverage; (b) speed control for all on-site vehicle movement to 10kph in all sites; and (c) covering/dampening all stockpiles over 50m<sup>3</sup> during dry/windy conditions for all sites.

#### Construction Noise

The unmitigated construction noise levels exceed the noise standard of 75 dB(A) by up to 3 dB(A) at a number of noise sensitive receives such as Baguio Villa, Wah Fu Estate, Kong Sin Wan Tsuen and Pui Ying Secondary School.

The recommended mitigation measures include: (a) adoption of quiet plant; (b) erection of 3m high barrier (or site hoarding) for Kong Sin Wan Tsuen; and (c) provision of portable acoustic barriers during school examination periods.

#### Water Quality

No adverse marine water quality impact would be expected by using control dredging techniques; collection and off-site disposal of sewage; coverage and containment of loose materials and associated runoff.

#### Waste Impact

The piers, jetties and marina will be constructed on piles, therefore the wastes generated and any impacts would be minimal. With the adequate waste collection, treatment and disposal facilities, there would not be any unacceptable residual waste impacts.

### **2.4 Description of Possible Environmental Impacts Arising from Concrete Batching Plant**

The possible severity of environmental effects arising from the proposed batching plant is the air quality impact during operation of the proposed batching plant. It is because there are several dust emission points in the plant and it will be installed with an hourly production of 300 m<sup>3</sup> concrete.

For the construction and operation noise assessment, it is unlikely to have any adverse impact as the sound power level for a batching plant is not very high and it will be setbacked from the NSRs over 300 metres. Noise impacts arising from the associated

barges and concrete trucks have been already assessed in the previous EIA Report for the transportation of ready mixed concrete.

The following environmental issues will be addressed in the coming EIA Study Report:

#### Construction Dust

Construction dust generation is due to vehicle movement on haul road for equipment conveying. The concentration of dust generation will depend on the vehicle flow rate.

#### Operation Dust

During the operation of the proposed batching plant, dust emission sources can be identified in the Stage 1 and Stage 2 plants. They involve:

- Emissions from the dust collectors;
- Emissions for unloading of materials to receiving hopper;
- Emissions from aggregate stockpile; and
- Emissions from paved access road.

#### Construction and Operation Noise

Construction and operation noise generation is due to the items of PME use and their locations. In addition, barges and concrete trucks related to the operation of the proposed plant are taken into account.

#### Operation Wastewater

Surface runoff may be generated due to spray of on-site paved access roads.

#### Visual Impact

As the major equipment and components of the proposed batching concrete plant will be enclosed and it will be located about 300 metres away from the closest sensitive receiver, the visual impact is unlikely to be a major issue from the environmental point of view.

With reference to the tentative schedule of the proposed batching plant (December 2000 to December 2001), the cumulative impacts on other works within the Cyberport site will also be assessed.

### **3. DESCRIPTIONS OF MITIGATION MEASURES**

#### **3.1 Dust Emission**

To reduce pollutant emission rates and concentration, a number of control measures have been incorporated into the construction and operation of the proposed concrete batching plant, in accordance with the requirements stipulated in Best Practicable

Means Requirements for Cement Works (Concrete Batching Plant). Air pollution control measures installed include the followings:

#### *Concrete Batching Process*

- Aggregate receiving hopper with 3 sided enclosure and roof and water spraying system;
- Aggregate storage yard with 3 sided enclosure and roof, curtain at entrance and water spraying system;
- Full enclosures with scrapers for belt conveyors;
- Fully enclosed aggregates storage bins;
- Fully enclosed cements silos;
- Fully enclosed transfer points;
- Dust collectors installation for the fully enclosed cement silos and the mixers; and
- High level visual and audible alarm and automatic cut-off system when the silo is full.

#### *Access to the Proposed Batching Plant*

- Paved and adequately wetted

### **3.2 Water Quality**

A sedimentation tank is designed to treat the on-site wastewater. Surface runoff will be collected by surface channel and then treated before discharge or recycle.

## **4. USE OF PREVIOUSLY APPROVED EIA REPORTS**

The following EIA report was approved on 26 April 1999 under the EIA Ordinance and will be used as a reference for this project:

Engineering Feasibility Study  
Infrastructural Works for the Proposed Development at Telegraph  
Environmental Impact Assessment Study  
Volume 2 - Report for Scheme 2 (March 1999)

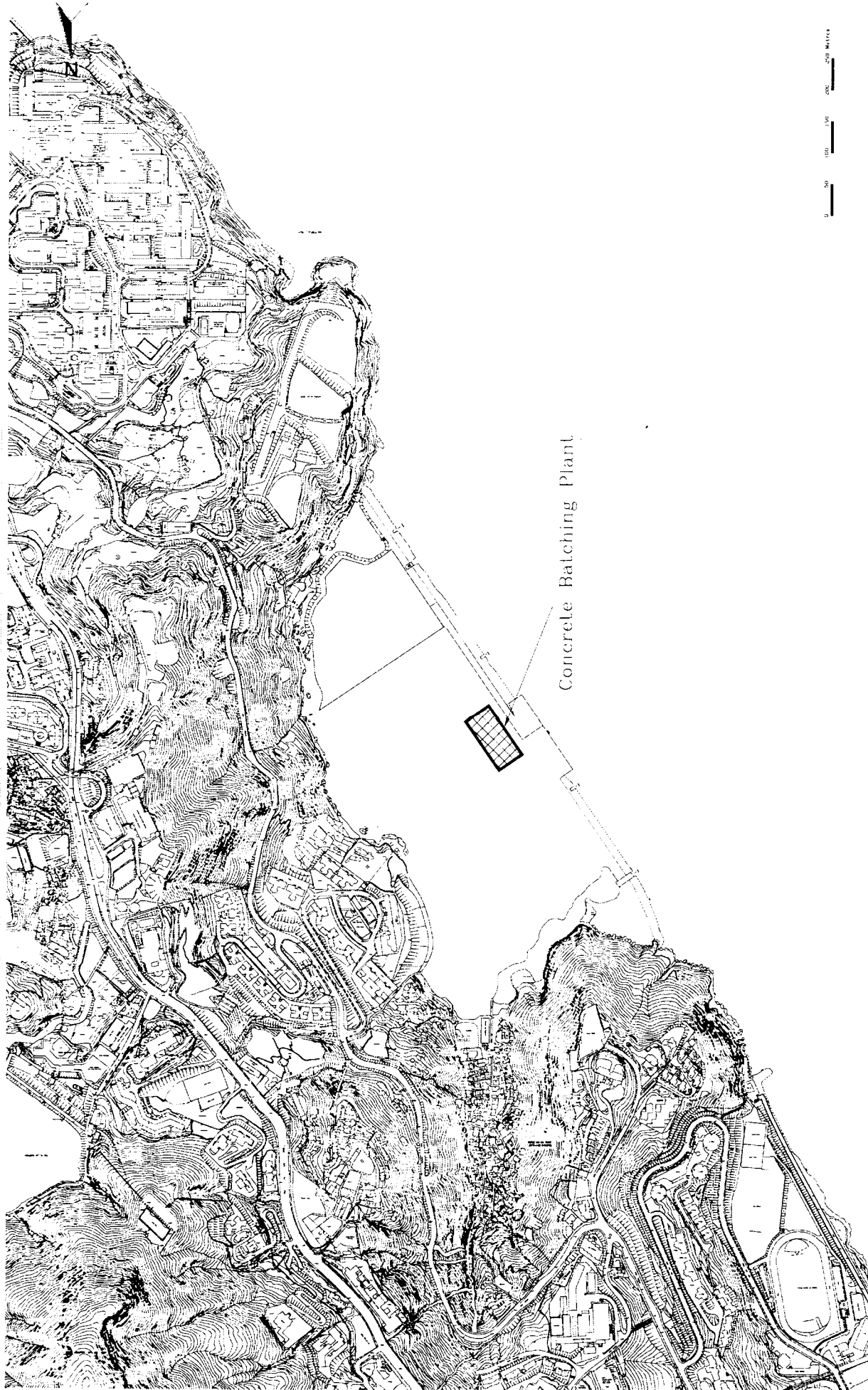
The environmental aspects that have been assessed in the previously approved EIA report include air quality, noise, water quality, waste, ecology, landscape & visual, and cultural & heritage. The findings are summarised in Table 1 below. However, the major environmental changes arising from the material change (i.e. construction and operation of the on-site concrete batching plant) during the construction phase would be air quality, noise, water quality and landscape & visual. It is anticipated that the impacts on ecology and cultural & heritage would be similar to that for Scheme 2 and therefore similar mitigation measures would also be required.

**Table 1 Summary of Findings in Previously Approved EIA Report**

Environmental Aspect	Key Impacts (without mitigation measures)	Proposed Mitigation Measures	Residual Impacts (after mitigation)
Air Quality (Construction)	Short term elevated dust levels	Water of road surfaces at least twice daily, on-site vehicle speed control, covering/dampening of stockpiles in dry/windy conditions	Acceptable
Air Quality (Operational)	Vehicle Emissions Odour from STW	No mitigation measures required Odour control measures at STW	Acceptable
Noise (Construction)	Elevated construction noise levels	Adoption of quiet plant, 3m noise barrier along northern site adjacent to NSRs, use of acoustic barrier	Acceptable
Noise (Operational)	Traffic noise impacts from Route 7 and distributor roads Fixed Noise Sources at STW & Salt Water Pumping Station 275 KV Electricity Substation	Noise barriers  Enclosure of noisy equipment in building structure  Use of Low Noise Transformers & enclosure of noisy equipment in acoustically treated structure	Acceptable
Water Quality (Construction)	Elevated suspended sediment concentration in the vicinity of construction works	Use of control dredging techniques as required. Collection and off-site disposal of sewage, coverage and containment of loose materials and associated runoff. Treatment of effluent prior to discharge.	Acceptable
Water Quality (Operational)	Sewage discharge to marine water	CEPT plus disinfection treatment, discharge via 300m offshore outfall prior to SSDS Stage III/IV; Preliminary treatment and discharge to SSDS deep sewer after SSDS Stage III/IV Package secondary treatment plant to treat sewage from early phases of development (up to end 2002)	Acceptable
Water Quality and Marine Impact	Marina and breakwaters	Separate EIA study to be carried out	Note 1
Wastes (Construction)	Limited dredging, spoil, excess surcharge and construction wastes	Site management, marine disposal control, segregation of waste, waste minimisation	Acceptable
Waste (Operational)	Sewage and municipal wastes	Provision of adequate collection, treatment and disposal facilities	Acceptable
Ecology	Loss of habitat, disturbance to habitat	Clearance of woodland in phases to allow for re-colonisation of affected mobile species, good site practice to minimise disturbance, compensation planting Protection of plants at Telegraph Bay	Acceptable
Cultural and Heritage	Important sites at Telegraphy Bay and Waterfall Bay	Separate study during preliminary design stage to address impacts of proposed school construction at Kong Sin Wan Avoid disturbance to important sites	Note 1

Note 1: To be determined subject to the results of separate study

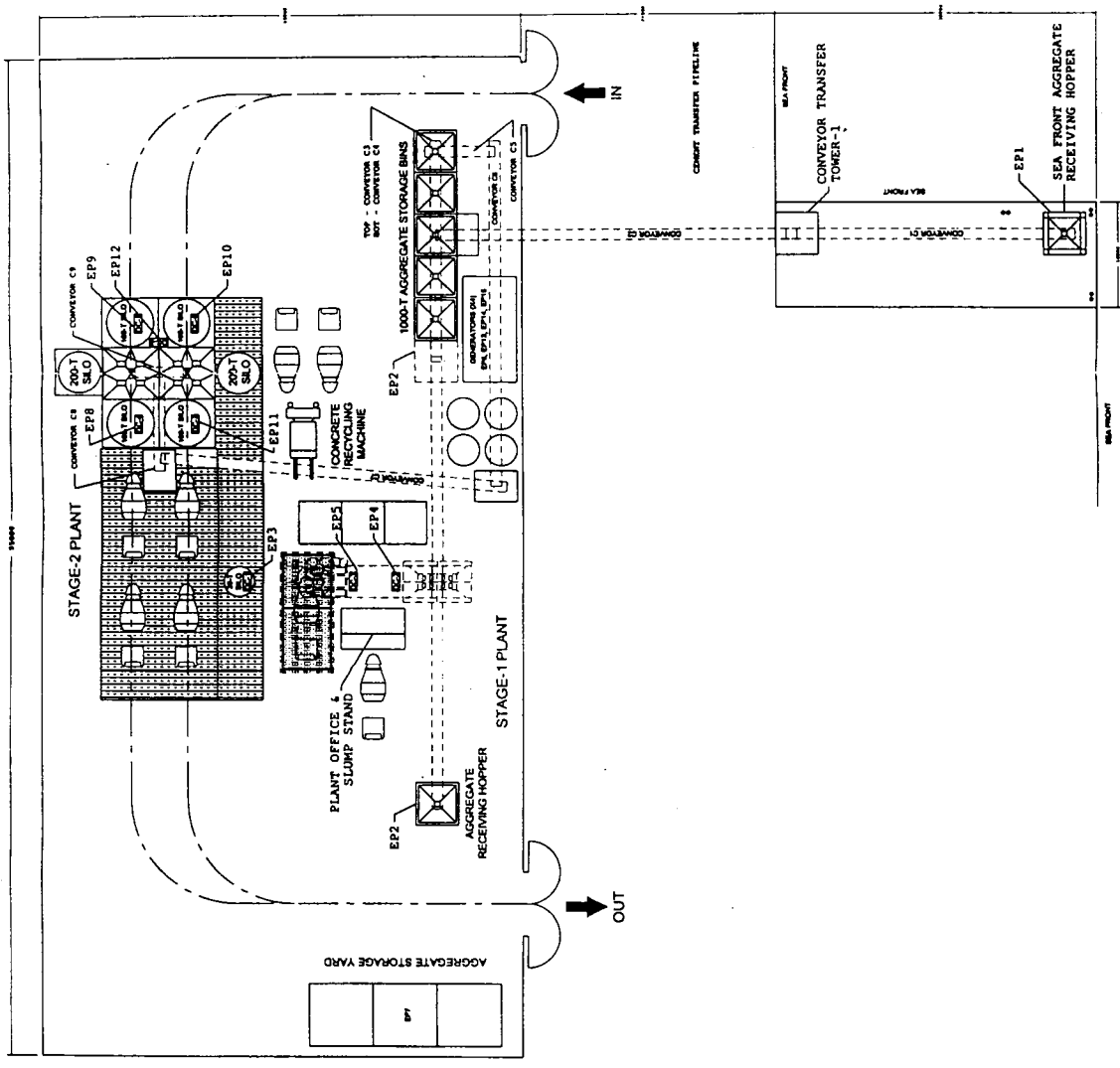




Cyber-Port Development - Proposed RMC Concrete Batching Plant

Location of the Proposed Concrete Batching Plant

Scale	AS SHOWN	Project No.	A02/200
Date	April 2000	Equip. No.	1



Title

Cyber-Port Development - Proposed RMC Concrete Batching Plant

Layout of the Proposed Concrete Batching Plant

Scale AS SHOWN

Project No. A02700

Date April 2000

Figure No. 2

