

New World First Bus Permanent Depot
at Chai Wan
Environmental Impact Assessment Study

Project Profile for the
Application of EIA Study Brief

June 1999

Westwood Hong & Associates Ltd.

A. BASIC INFORMATION

1. Project Title

New World First Bus Permanent Depot at Chai Wan

2. Purpose and Nature of Project

The objective of this project is to provide a permanent depot building for bus parking, maintenance facilities and provision of office accommodation to replace the existing depot in Chai Wan. The proposed bus depot is located to the north of the Chai Wan Cargo Handling Area and to the north-east of the temporary New World First Bus Depot which has only parking and washing facilities (Figure 1). The existing bus depot and temporary bus depot will be maintained in operation throughout the course of the project.

The proposed depot is a multi-storey building comprising various provisions to facilitate different repairing and maintenance operation needs. The depot will have an estimated population of 320 persons (maximum) in works/maintenance area and 180 persons (maximum) in office area. Details are shown in the following Table 1. Table 2 illustrates the provision of the depot facilities. Preliminary floor plans of the proposed depot are given in Appendix 1.

Table 1 Maximum No. of persons present within the proposed depot building

Time	Works / Maintenance Area	Office
Day (08:00 – 18:00)	320	180
Evening & night (18:00 – 02:00)	140	20
Night (02:00 – 08:00)	120	5

Table 2 Facility Provisions of the proposed depot

Facilities	Location
Bus parking	1/F, 2/F, 4/F, 6/F & 8/F
Re-fueling and washing area	G/F
Test lanes	G/F
Engine/gear box/axle assembly workshop	G/F
Battery charging	G/F
Workshop	G/F
Shower and changing facilities	G/F
Maintenance area (including sunken pit, steaming & painting)	G/F & 1/F
Tyre changing workshop	G/F
Air valve and air-con workshop	1/F
Fibre glass workshop	1/F
Maintenance office	1/F
Training rooms	3/F
Canteen & kitchen	4/F
Staff recreational area	5/F & 6/F
Function room	6/F
Administration office	7/F

Apart from the above facilities, the project also provides the following:-

- the provision of treatment facilities for handling bus wash wastewater, grease-laden water from maintenance area and used radiator water
- the provision to collect engine oil and chemicals for treatment at Treatment Centre

3. Name of Project Proponent

New World First Bus Services Ltd. (NWFB)

4. Location and Scale of the Project

Location: The proposed depot site is located to the north of the Chai Wan Cargo Handling Area as shown in Figure 1.

Site Area: 11,900m²

Total GFA: 60,000m² (Approximately)

Building height : 43m (Approximately)

5. History of Site

The proposed site is used as a temporary car park. According to Outline Zoning Plan No. S/H20/7, the proposed site is zoned as "Industrial".

6. Number and Types of Designated Projects to be Covered

This project profile covers only one designated project, which falls in Item A.6 (c) of Schedule 2 Part I of the Environmental Impact Assessment Ordinance.

7. Name and Telephone Number of Contact Person

The project will be planned and designed by the consultants as shown in the Table 3.

Table 3 Name and Telephone Number of Contact Person

Project Team	Company	Contact Person	Telephone Number	Fax Number
Project Proponent	New World First Bus Services Ltd			
Project Coordinator	Reliance China Project Management Ltd			
Project Architect	Ling Chan & Partners Ltd			
Environmental Consultant	Westwood Hong & Associates Ltd			
E&M Consultant	J Roger Preston Ltd			
Traffic Consultant	MVA Hong Kong Ltd (MVA)			
Engineering Consultant	Wong Pak Lam & Associates			
Quantity Surveyors	Levett & Bailey			

B. OUTLINE OF PLANNING AND IMPLEMENTATION PROGRAMME

The proposed project will be planned and designed by private consultants and contractors.

The EIA process will be started in June 1999 and to be completed by around end of 1999. The envisaged construction period of the project will be from around the beginning of 2000 to 2001. The depot is expected to be commissioned by mid 2001.

Concurrent projects near the proposed site as stated in the explanatory statement of the OZP No. S/H20/7 include the site at the junction of Shing Tai Road and Chong Fu Road which has been reserved for the joint Government departmental depot including an ambulance depot and, sites located to the west of the cargo handling basin along Shing Tai Road reserved for further industrial development including a lorry park/motor vehicle repair workshop.

C. POSSIBLE IMPACTS ON THE ENVIRONMENT

It should be noted that the re-fueling and washing facilities within the proposed depot will be instead of that currently used in Shing Tai Road temporary depot and thus no additional traffic movements will be generated on Shing Tai Road. The time period when major traffic movements are generated by the depot facility will not coincide with the operation of the Hong Kong Technical College. Since opening the temporary depot at Shing Tai Road in February 1999, which is closer to the Technical College than the proposed new depot at Chong Fu Road, it is understood that New World First Bus have not received any complaints concerning the noise generated by the vehicles being serviced at the depot.

From the preliminary environmental study, the possible transient and permanent impacts of this project on the environment are identified as the aspects of water quality, air quality, waste and noise impacts during construction and operational phases.

Construction Phase

1. Fugitive Dust Impact

Fugitive dust emission is the main air pollutant to the sensitive receivers during the construction phase of the proposed depot.

2. Construction Noise Impact

The dominant noise source will be from the use of the powered mechanical equipment (PME) during the construction of the depot building.

3. Water Quality Impact

Wastewater will inevitably be generated during site construction. Construction runoff contains increased loads of sediments, and other suspended solids and contaminants. Potential sources of pollution include runoff and erosion from the site surfaces, drainage channels, Bentonite slurries and other grouting materials, unused batching washout and drainage from dust suppression sprays, fuel, oil and lubricants from construction vehicles and other equipment.

Operational Phase

4. Air Quality Impact

The emission from buses performing normal manoeuvres within the depot compound, engine testing and painting activities will be the major air pollutant sources.

5. Industrial Noise Impact

Industrial noise sources from the proposed depot include buses travelling and parking, engine testing, maintenance operations and other workshop operations.

6. Night-time operations

All scheduled workshop operations will be stopped after 7pm everyday. The noise impact at night will be the noise from buses returning to the bus depot at night and from buses leaving the depot early in the morning.

7. Traffic Noise Impact

Traffic flow generated by the proposed depot including buses leaving the depot in the morning, incoming for maintenance and returning to depot at night.

8. Water Quality Impact

Effluent and wastewater will be generated from the depot, such as from the bus washing area and kitchen.

9. Generation of Waste

A certain amount of chemical waste (mainly of engine oil and lubricants from maintenance operations) or scraps will be generated in various operations or workshops.

10. Risk of accident

It is not anticipated that the proposed project will cause hazardous impact to human life.

11. Visual impact

There are no significant visual effects and interference with the key views caused by the appearance of the project.

12. Ecological impact

The proposed site is considered as an ecologically unimportant area. The proposed project will not cause significant ecological impact at the site.

D. MAJOR ELEMENTS OF THE SURROUNDING ENVIRONMENT

The surrounding areas are zoned as "Industrial", "Government, Institutions or Community" and "Open Space" according to Outline Zoning Plan No. S/H20/7. The majority of the areas are used as temporary car and coach parks. The temporary bus depot with an associated electricity substation is located to the south-west of the site. A steel godown and Government Logistics Centre are located to the north-east. Oil tanks are located at about 100m north of the proposed depot building. A new GIC building (under construction) is located to the west at the I site. Chai Wan Cargo Handling Area is located to the south. Construction works of underground water pipes at the Cargo Handling Area to the south-east are being undertaken by the Water Supply Department.

The nearest sensitive receiver is Hong Kong Technical College (Chai Wan) and staff quarters located at approximately 160m to the west of the site, being buffered by the MTR tracks, Shing Tai Road, the new GIC building at the I site and a planned road (Chong Fu Road Extension). The nearest residential blocks of Hang Fa Chuen is located at more than 230m away from the north and Tsui Wan Estate located at more than 430m to the south-west of the site.

The dominant noise sources in the vicinity are the traffic noise from Shing Tai Road and rail noise from MTR tracks and, Chai Wan Cargo Handling Area.

E. ENVIRONMENTAL PROTECTION MEASURES

Construction Phase

1. Protection measures

During the construction period, all precautionary measures applicable to construction works such as dust suppression measures, noise control, existing drainage, control of dispersion of waste materials and wheel washing facilities would be implemented during the construction. In particular the following control Ordinances and other relevant ProPECC Notes will be strictly followed to ensure compliance:

- Air Pollution Control (Construction Dust) Regulation
- Noise Control Ordinance
- Water Pollution Control Ordinance

2. General Management

As a general guidance, the emission of dust and noise should be controlled by providing a high standard of housekeeping. This can be done by adopting precautionary procedures to reduce the amount of dust and noise emission whilst carrying out loading, unloading, handling and storage of building materials and debris.

An Environmental Monitoring and Audit (EM&A) Programme can be set up if necessary in order to minimise the construction air and noise impacts as practicable.

Operational Phase

3. Air Quality

A ventilation system for the proposed depot will be designed according to the design guidelines of the relevant Practice Note and HKPSG. Considerations will be given to reduce any adverse air impacts to the surrounding environment with possible mitigation measures : -

- Painting work shall be carried out in an enclosed room with proper ventilation.
- The ventilation exhaust for the depot including bus maintenance areas and engine testing bays should be properly located to avoid causing nuisance to nearby Air Sensitive Receptors.

4. Noise Impact

Noisy operations or activities should be located in workshops and in areas with adequate noise screening. In order to meet the criteria as stipulated in the Technical Memorandum under Noise Control Ordinance, appropriate noise mitigation measures, such as a noise barrier or enclosure and acoustic absorptive material, may be incorporated into the design of the envelope and internal space of the depot, if required.

The off-site traffic noise impact on the nearby NSRs shall be minimised by proper routing and depot management.

5. Water Quality

Wastewater generated from all operational processes including bus washing and kitchen should be treated before discharge into government sewers for ultimate disposal. An in-house treatment system with oil interceptors and grease traps and independent drainage system to storage tanks shall be provided within the depot. The treated effluent discharge should be complied with the limits stipulated in the Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters under Water Pollution Control Ordinance.

In view of the close proximity of Chai Wan Cargo Handling Basin, no discharge of waste or wastewater will be made into the basin. The operation of the depot shall be designed in order to minimise the production of wastewater. This may include the implementation of recycling or reuse of the treated wastewater for operation within the depot and other management and operation practices that could help minimise the wastewater at source.

Adequate drainage, including peripheral channel around the site, should be provided for collection of surface water run off from the site. Adequately designed pretreatment facilities (e.g. petrol interceptor, silt trap, etc) should be provided. Appropriate measures should be taken to avoid land contamination due to chemical or oil leaks from vehicles or machinery.

6. Waste Management

Adequate, environmentally acceptable waste handling, storage, collection, transfer, treatment and disposal facilities should be provided to deal with the waste arising from the depot operation.

The waste should be treated to meet all the relevant requirements under the Waste Disposal Ordinance and its regulations.

The waste which is required to be disposed of at the Chemical Waste Treatment Centre or other registered centres should be separated from main stream wastes. Other type of wastes, such as scraps which are non-recyclable, will in due course be transferred, via the Island East Transfer Station, to a landfill site.

7. Site Layout and Building Design

The proposed depot shall be designed in a way that adverse impacts on the environment can be minimised and to blend in with the surroundings.

8. Hazard Impact from Oil Tanks

The oil tanks are located at about 100m from the northern facade of the proposed depot building. The proposed depot building will be adequately equipped with fire fighting devices as per the FSD requirements to ensure the safety of individuals against the potential fire hazards caused by the nearby oil tanks as well as from the bus maintenance operations.

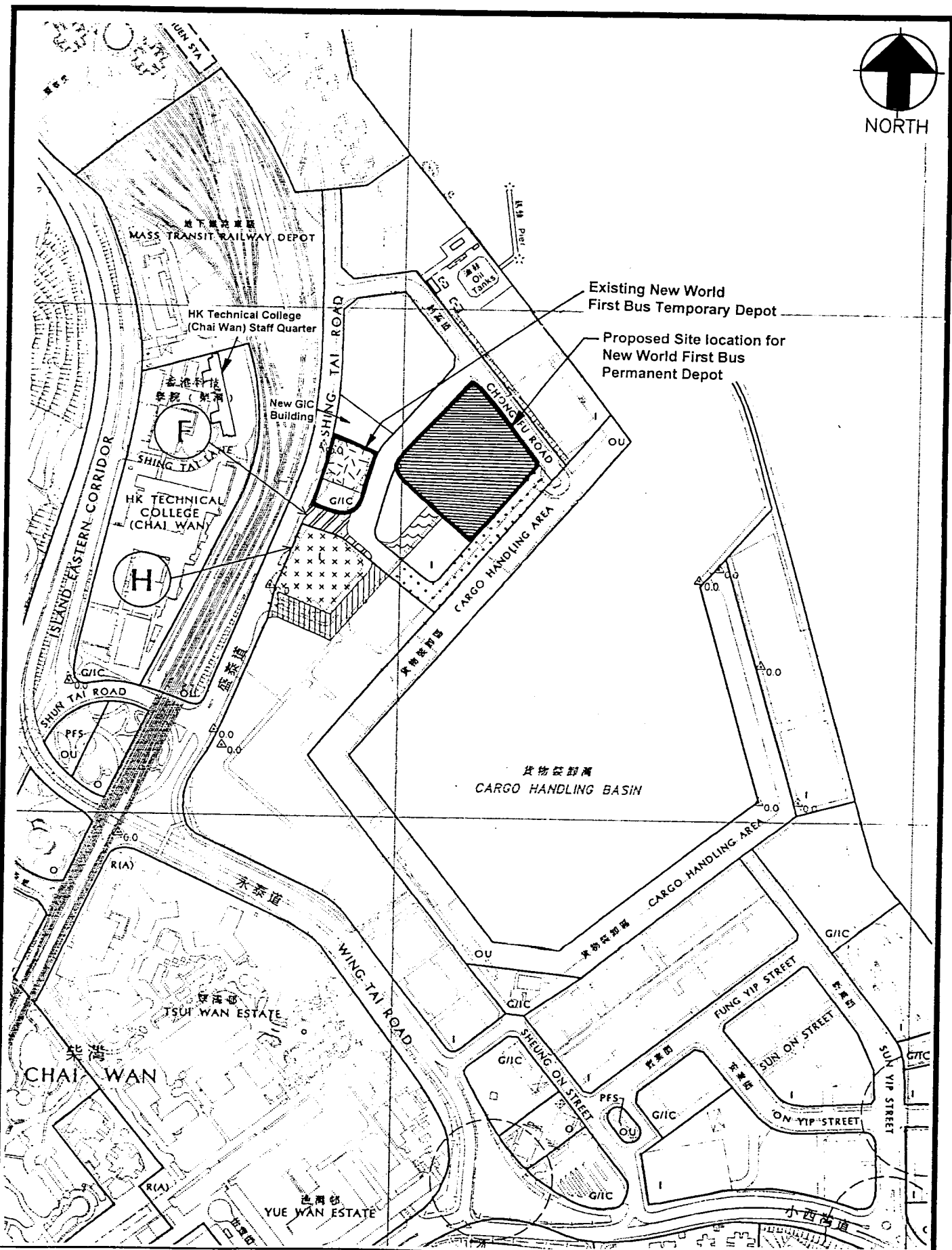
9. Environmental Management Plan

An Environmental Management Plan (EMP) shall be drawn up so that the effectiveness of the proposed control measures can be supervised during the construction and operation phase. The compliance of existing legislation in Hong Kong will be ensured by use of the EMP which should be an extension of the depot management operation. The EMP shall include the monitoring and audit requirements during construction and operational phase of the depot.

The future operator of the depot should agree on the necessary operational requirements of the EMP and the details should be described in the contractual agreement. The plan is required to be regularly reviewed and revised by the depot's operator.

F. USE OF PREVIOUSLY APPROVED EIA REPORTS

No previously approved EIA reports are found to be relevant to this proposed project.



<i>Westwood Hong & Associates Ltd</i>	TITLE :	FIGURE
PROJECT : 21270 New World First Bus Permanent Depot at Chai Wan	Site location	1

Appendix 1

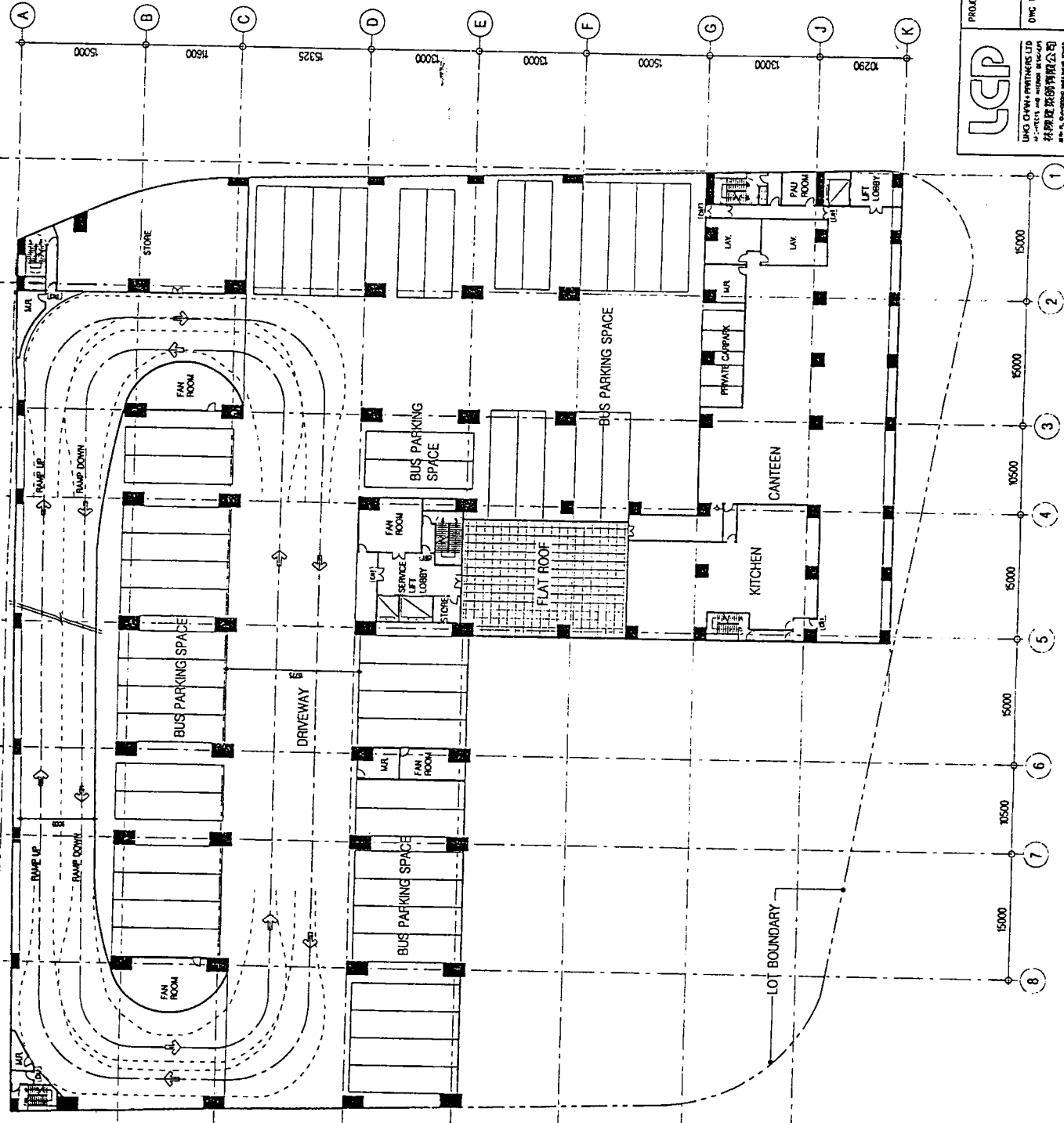
Preliminary layout plans
of
the Proposed New World First Bus Depot

GROSS FLOOR AREA = 8536 s.m.



CANTEEN = 1377 s.m.

BUS PARKING SPACE (3250 x 5000) = 48 NOS.

PRIVATE CARPARK (2500 x 5000) = 4 NOS.



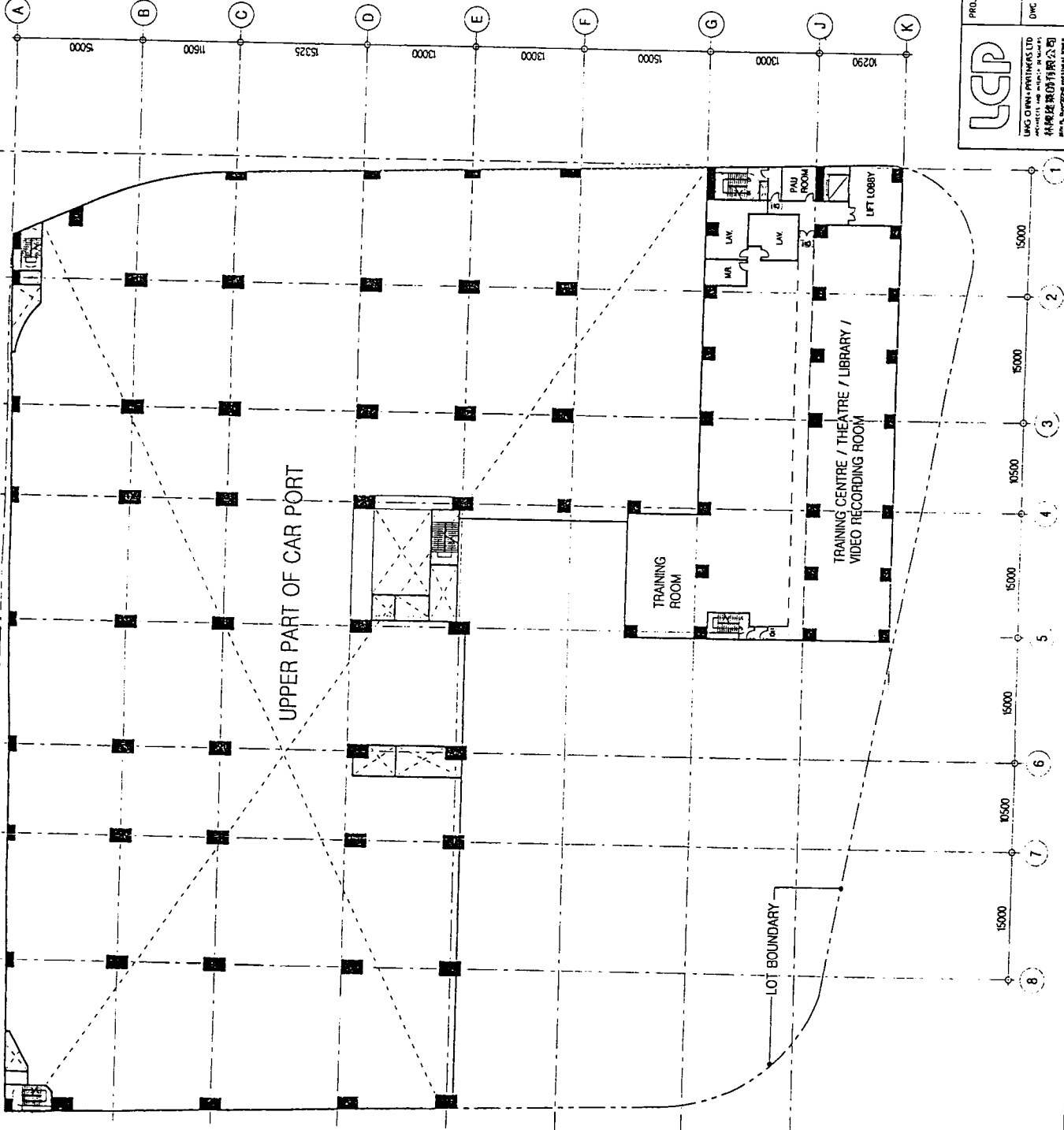
 2nd FLOOR PLAN

 <p>LUNG CHEUNG SERVICES LTD 隆豐服務有限公司 10/F, GUANGSHAN BLDG, 200A HONG KONG ROAD, HONG KONG 10/F, GUANGSHAN BUILDING, 200A HONG KONG ROAD, HONG KONG</p>	PROJECT: NEW WORLD FIRST BUS PERMANENT DEPOT CHAI WAN DWG TITLE: 2nd FLOOR PLAN	NO. & DATE: 05/93 REV. GENERAL REVISION JOB NO: 99003 DRAWN: TUNG SCALE: 1:500 CAD FILE: APPROXIMATION.DWG DWG NO: 103(b)	DATE: 02/99 CHECK: APPROVE:  DWG NO: 103(b)
	CONDITIONS OF READY TO BUILD AS SHOWN. ALL WORK IS TO BE IN ACCORDANCE WITH THE SPECIFICATIONS AND TO VERIFY ALL DIMENSIONS ON SITE.		

GROSS FLOOR AREA
(TRAINING CENTRE)

= 1439 s.m.

3rd FLOOR PLAN



LCP
 LUNG CHUN-PRINERS LTD
 PROJECTS AND DESIGN SERVICES
 林煥傑有限公司
 10/F, 100, THE UNIVERSITY MALL
 100, UNIVERSITY MALL, HONG KONG
 TEL: 2778 1111 FAX: 2778 1112

PROJECT: NEW WORLD FIRST BUS PERMANENT DEPOT CHAI WAN	NO. 9	DATE: 23/07/99	REV. GENERAL REVISION	GENERAL REVISION
DWG TITLE: 3rd FLOOR PLAN	JOB NO: 99003	DATE: 02/99	CHECK	
	DRAWN: TUNG			
	SCALE: 1:500		APPROVE:	
	CAD FILE: J:\PROJECTS\99003\DWG		DWG NO: 104(b)	

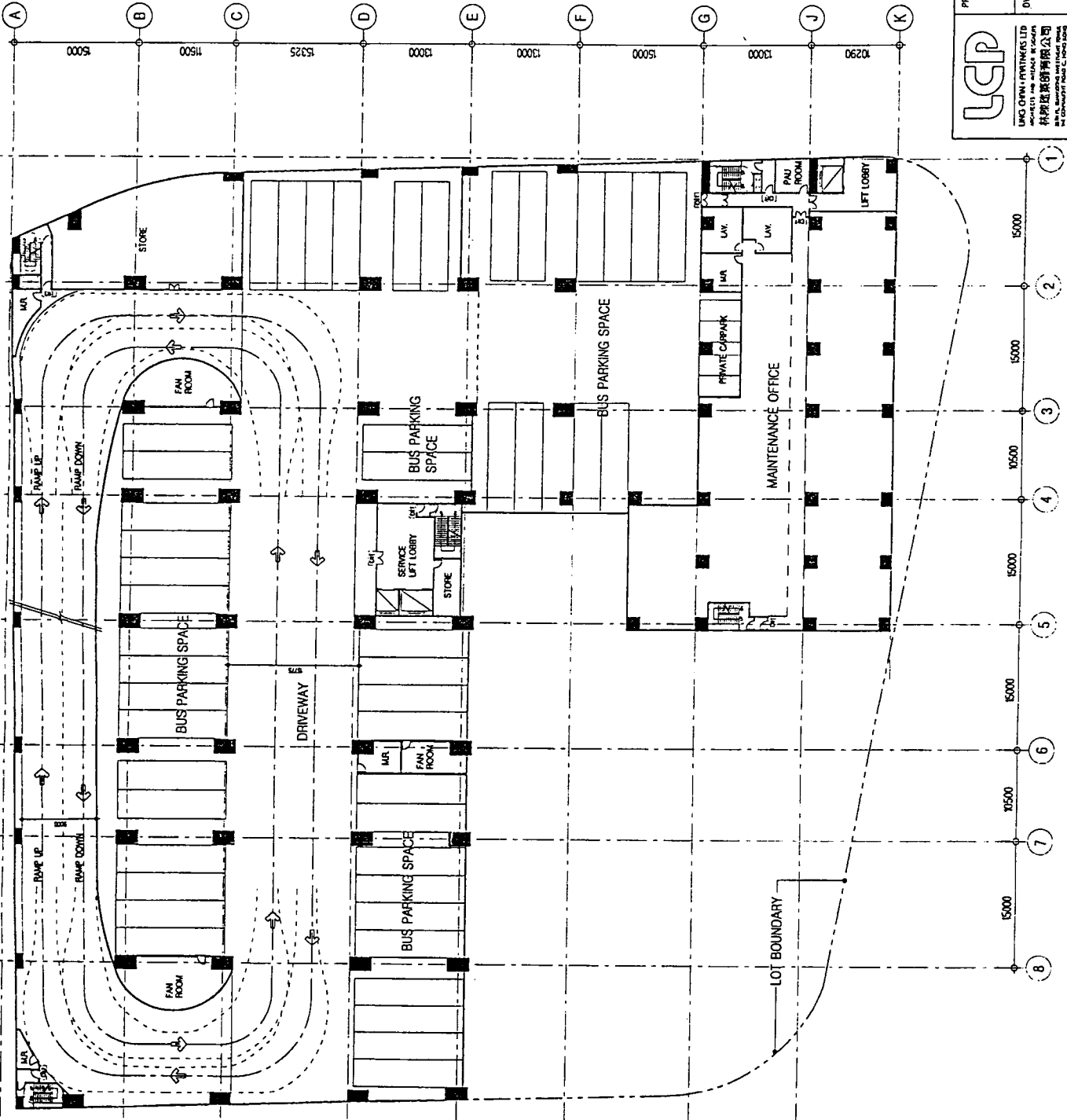
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GROSS FLOOR AREA = 8536 s.m.

MAINTENANCE OFFICE = 1377 s.m.

BUS PARKING SPACE (3250 x 1000) = 48 NOS.

PRIVATE CARPARK (2500 x 5000) = 4 NOS.

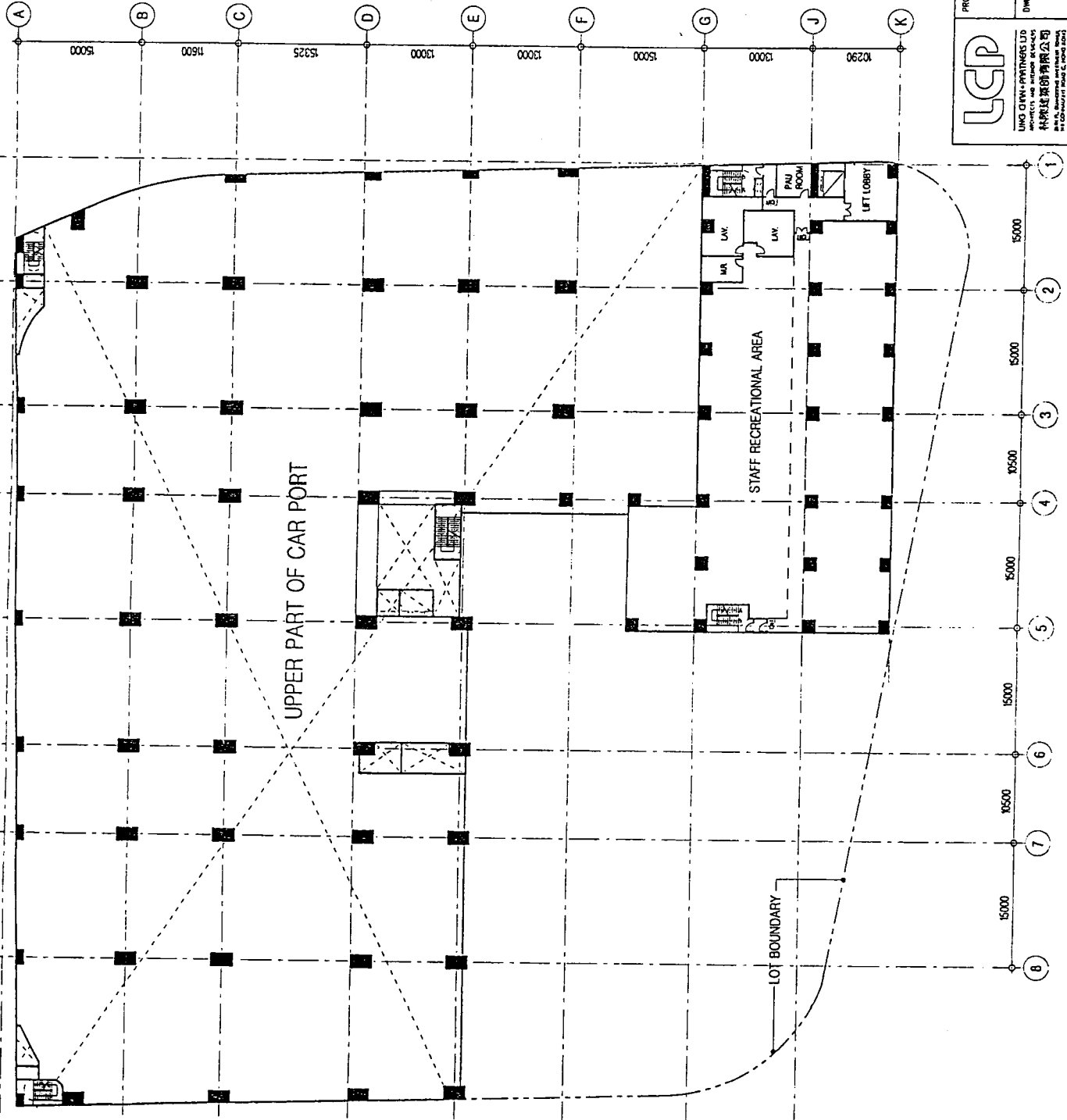




4th FLOOR PLAN

<p>LUNG CHEE CONTRACTORS LTD PROJECT: NEW WORLD FIRST BUS PERMANENT DEPOT CHAI WAN 林炳强有限公司</p>	NO. & DATE: 99003 REV: GENERAL REVISION	DATE: 02/99 CHECK:
	DRAWN: TUNG	SCALE: 1:500
DWG TITLE: 4th FLOOR PLAN	CAD FILE:	DWG NO: 105(b)
COMPANY OF DIRECTORS: (MEMBERS) AS RETURNED BY I.C.P. CONTRACTORS AND TO VERIFY ALL DIMENSIONS ON P.T.		

GROSS FLOOR AREA
(STAFF RECREATIONAL AREA)
= 1439 sm.

5th FLOOR PLAN



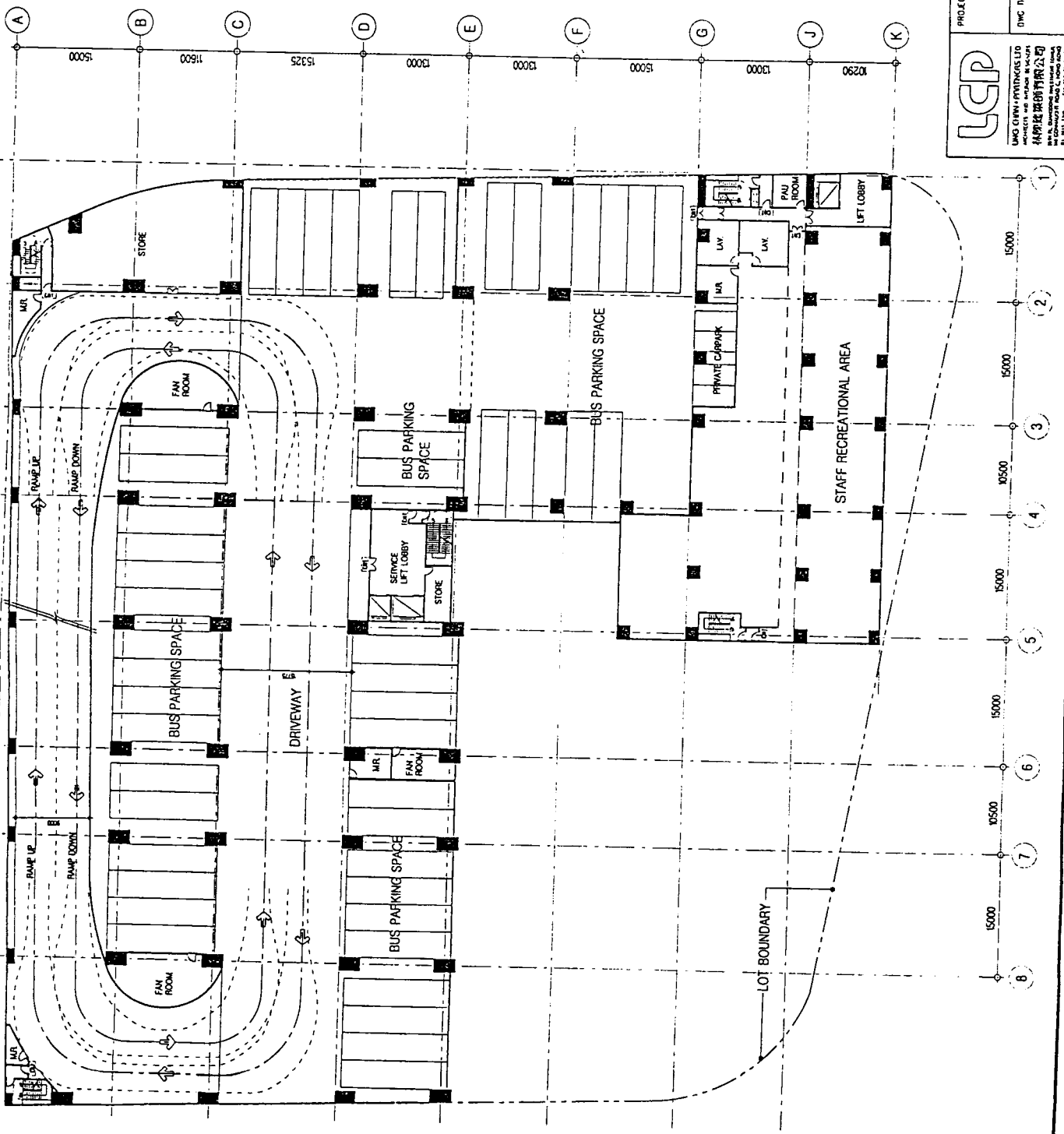
 <p>LING GIUW-PARTNERS LTD PROJECT AND ARCHITECT SERVICES LING GIUW PARTNERS 有限公司 PROJECT AND ARCHITECT SERVICES 11/F, 110 HONG KONG ROAD HONG KONG</p>	<p>PROJECT: NEW WORLD FIRST BUS PERMANENT DEPOT CHAI WAN</p>	<p>NO. & DATE: 02/99 REV: GENERAL REVISION</p>	<p>DATE: 02/99</p>
	<p>DWG TITLE: 5th FLOOR PLAN</p>	<p>JOB NO: 99003</p>	<p>CHECK: TUNG</p>
	<p>SCALE: 1:500</p>	<p>APPROVE: </p>	<p>DWG NO: 106(b)</p>
<p>COMPANY OF DESIGN SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION AND TO VERIFY ALL DIMENSIONS ON SITE.</p>			

GROSS FLOOR AREA = 8536 s.m.

MAINTENANCE OFFICE = 1377 s.m.

BUS PARKING SPACE (3250 x 3000) = 48 NOS.
PRIVATE CARPARK (2500 x 5000) = 4 NOS.

6th FLOOR PLAN

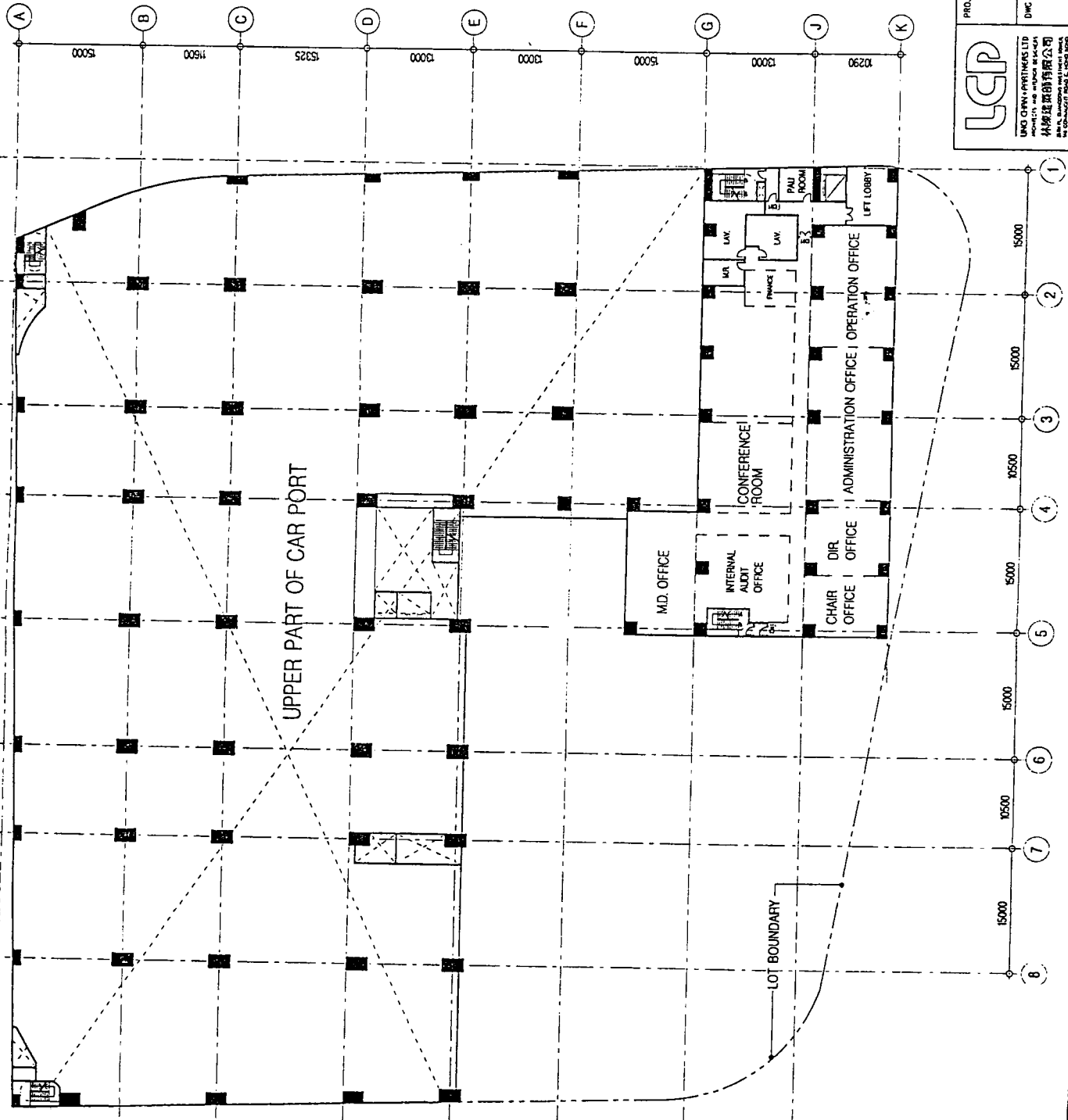


LCP LUNG CHEUNG PAPERINGS LTD ARCHITECTS 香港建築師有限公司 香港中環皇后大道中 211號21樓2111室	PROJECT: NEW WORLD FIRST BUS PERMANENT DEPOT CHAI WAN	NO. & DATE: 05/99	GENERAL REVISION	JOB NO: 99003	DATE: 02/99
	DWG FILE: 6th FLOOR PLAN	NO. & DATE: 25/02/99	REV: GENERAL REVISION	DRAWN: TUNG	CHECK:
				SCALE: 1:500	APPROVE:
				CAD FILE: PROJECT/WORKSHOP/	DWG NO: 107(b)

CONTRACTOR'S DESIGN SHALL BE CHECKED BY THE CONTRACTOR AND TO VERIFY ALL DIMENSIONS & S.I.

GROSS FLOOR AREA
(STAFF RECREATIONAL AREA)
= 1439 sqm.

7th FLOOR PLAN

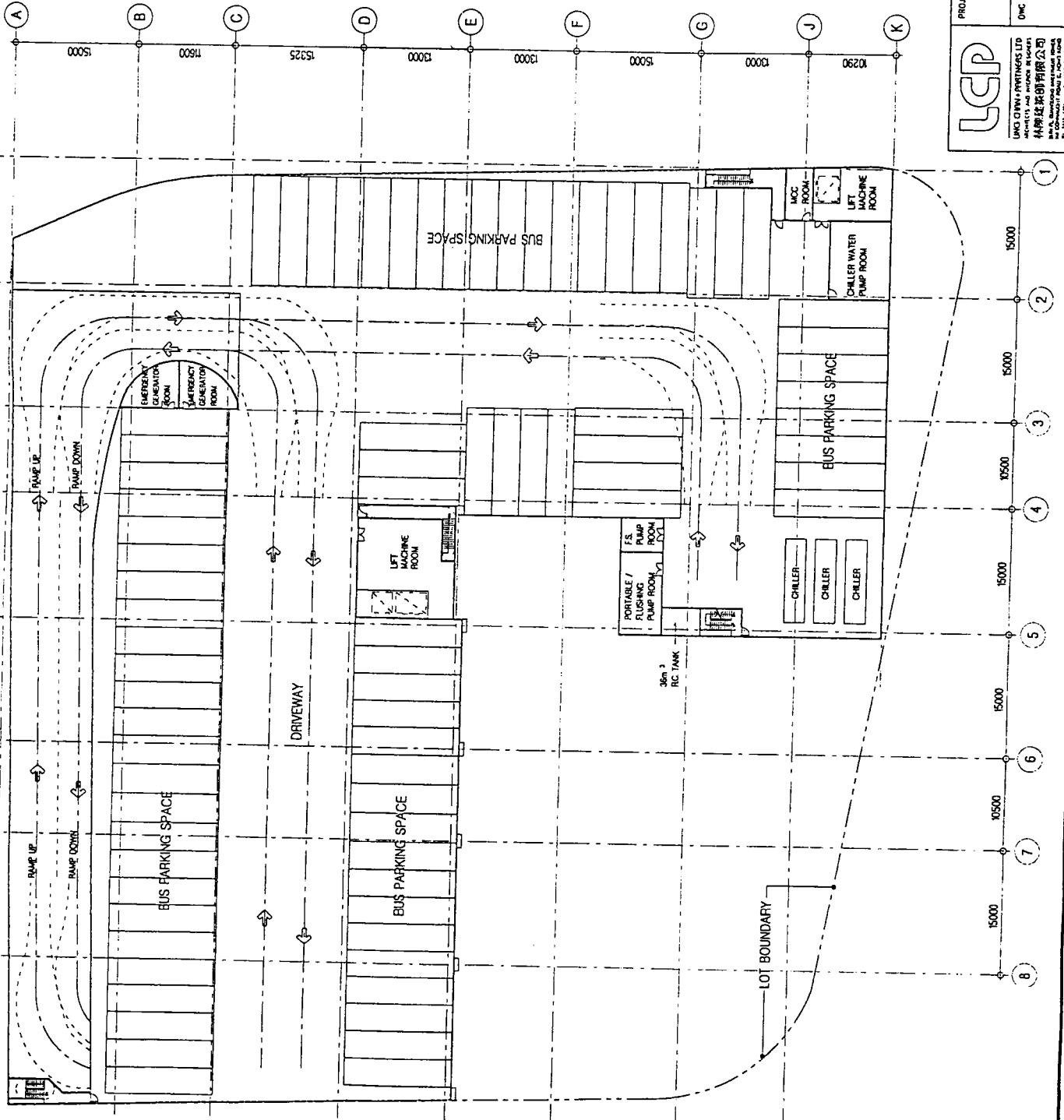


PROJECT:	NEW WORLD FIRST BUS PERMANENT DEPOT CHAI WAN	DATE:	02/99
DWG FILE:	7th FLOOR PLAN	DRAWN:	TUNG
SCALE:	1:500	CHECK:	
CAD FILE:	J:\PROJECT\990208	APPROVE:	
COMMENTS: 05/99 GENERAL REVISION NO. & DATE: 25/02/99 REV. GENERAL REVISION		JOB NO: 99003	
DWC NO: 108(b)		DWG NO: 108(b)	

LCP
LUNG CHEE PARTNERS LTD
ARCHITECTS AND ENGINEERS
有限公司
LUNG CHEE PARTNERS LTD
ARCHITECTS AND ENGINEERS
有限公司
11/F, 110, QUEEN'S ROAD EAST, HONG KONG
TEL: 2522 1111 FAX: 2522 1111

BUS PARKING SPACE (3250 x 1000) = 80 NOS.

8th FLOOR PLAN (ROOF)



<p>LAND SURVEYING & PLANNING LTD LAND SURVEYING & PLANNING (HONG KONG) 林樂基測量師有限公司 香港中環皇后大道中159號15樓 電話: 2521 1111</p>	<p>PROJECT: NEW WORLD FIRST BUS PERMANENT DEPOT CHAI WAN</p>	<p>NO. & DATE: 05/99 REV.: GENERAL REVISION</p>	<p>JOB NO: 99003</p>	<p>DATE: 02/99</p>
	<p>DWG TITLE: 8th FLOOR PLAN (ROOF)</p>	<p>SCALE: 1:500</p>	<p>DRAWN: TUNG</p>	<p>CHECK:</p>
		<p>APPROVE: [Signature]</p>		<p>DWG NO: 109(b)</p>

CONTRACT NO. 109(b) CONTRACTOR: [Signature]