

## 房屋署 Housing Department

Our Ref. : HD(ICU)S2-3/3/052(K)AA(12)-D(12)

Your Ref.: G3188/60/A09724

Tel. No. : 3162 0533

Fax No. : 2762 9230

11 January 2012

Mr. William Ng  
c/o Jacobs China Limited  
15/F., Cornwall House,  
Taikoo Place, 979 King's Road,  
Quarry Bay,  
Hong Kong.

Dear Sir,

### Improvement of Pedestrian Access at Oi Man Estate, Ho Man Tin, Kowloon (K.L.L. No 9826 S.B)

I refer to your application dated 6 December 2011 and received by us on 12 December 2011 for approval of proposals in respect of Alteration and Addition (Structure) amendment plans for the new lift tower.

2. Your submission of plans has been checked under the curtailed check system announced in Practice Notes for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers ADM-19. On this basis, I am satisfied that your submission is fundamentally acceptable and may be approved.

3. You are reminded that the curtailed check system covers only the fundamental issues of a building proposal. Although non-fundamental issues will not be raised as reasons for disapproving a submission, I expect that all contravention of the Buildings Ordinance and its subsidiary legislation are rectified as and when they are discovered and in any event, before completion of the works is certified. In this connection, I ask you to note that the Independent Checking Unit attaches great importance to the proper assumption of duties and responsibilities by authorized persons and registered structural engineers.

4. In accordance with the provisions of regulation 30(1) of the Building (Administration) Regulations, this is to notify that the above-mentioned plans submitted with your application dated 6 December 2011 are hereby approved. One set of the said plans, on which I have signified my approval, is enclosed. Your client has been sent a copy of this letter but I would request that you ensure that the contents are understood by him.

5. This approval should not be deemed to confer any title to land or to act as a waiver of any term in any lease or licence. This approval does NOT authorize the commencement or the carrying out of any works shown in the approved plans. Section 14(2) of the Buildings Ordinance refers.

-2-

Our Ref. : HD(ICU)S2-3/3/052(K)AA(12)-D(12)

6. You are reminded that the approval given herein is subject to the conditions and requirements contained in paragraph 6 to 15 of my approval letter dated 22 October 2010 under the same reference. The conditions and requirements shall remain in full force and effect as they apply to the approval dated 22 October 2010.

Yours sincerely,



(Edmund K.N.CHUNG)  
Senior Structural Engineer  
Independent Checking Unit/Housing Department  
for Director of Housing

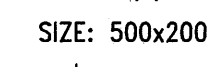
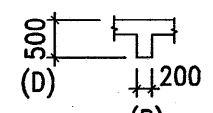
c.c. AP - Mr. Tseng Yen Wei William (fax: 2520 2218)  
HKHA - Mr. Simon Yik / Mr. Henry Law (fax : 2761 7340)

(A) GENERAL NOTES

- 1. THE FOLLOWING NOTES APPLY, WHERE APPLICABLE, TO ALL STRUCTURAL DRAWINGS EXCEPT OTHERWISE STATED.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCHITECTURAL BUILDING SERVICES AND ALL OTHER RELEVANT DRAWINGS.
3. ALL DIMENSIONS AND LEVELS SHOWN ON DRAWINGS ARE MEASURED FROM THE STRUCTURAL SURFACES.
4. ALL DIMENSIONS ARE GIVEN IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
5. ALL DESIGN AND CONSTRUCTION SHALL COMPLY WITH--
(I) HONG KONG BUILDING (CONSTRUCTION) REGULATIONS 1990
(II) CODE OF PRACTICE FOR STRUCTURAL USE OF CONCRETE 2004
(III) CODE OF PRACTICE ON WIND EFFECTS IN HONG KONG 2004
(IV) CODE OF PRACTICE FOR THE STRUCTURAL USE OF STEEL 2005
(V) CONSTRUCTION OF CANTILEVER STRUCTURES SHALL COMPLY WITH PNAP 173 (APP-68)
(VI) STRUCTURES DESIGN MANUAL FOR HIGHWAYS AND RAILWAYS, THIRD EDITION
6. THE FOLLOWINGS INCLUDING THEIR LOCATIONS AND DIMENSIONS SHALL BE REFERRED TO THE RELEVANT ARCHITECTURAL, BUILDING SERVICES OR SPECIALIST'S DRAWINGS AS APPROPRIATE--
(a) SERVICE OPENINGS, FINISHES, METAL ROOFING AND CLADDING DETAILS ETC.
(b) ARCHITECTURAL FEATURES.
(c) NON-STRUCTURAL BRICKWORK OR BLOCK WORK.
SPECIALIST REQUIREMENTS FOR ANY POCKETS, OPENINGS, FIXINGS, ETC. ARE TO BE APPROVED PRIOR TO CONSTRUCTION IN ACCORDANCE WITH THE SPECIFICATIONS, DETAILS OF ALL OPENINGS NOT SHOWN ON FRAMING PLANS, REQUIRED TO FORM ON STRUCTURAL MEMBERS, SHALL BE SUBMITTED TO PSE FOR APPROVAL PRIOR TO CONSTRUCTION.
7. NO TEMPORARY OPENING SHALL BE ALLOWED IN STRUCTURAL MEMBERS WITHOUT PRIOR WRITTEN APPROVAL OF THE PSE.
8. VERIFY ALL SETTING OUT DIMENSIONS AND LEVELS AGAINST THE LATEST RELEVANT ARCHITECT'S AND SERVICES DRAWINGS BEFORE THE COMMENCEMENT OF WORK. INFORM THE ARCHITECT IMMEDIATELY IF DISCREPANCY FOUND.

(B) LEGEND

BEAM SIZE ARE INDICATED THUS:- 500x200 i.e. Dxh, SUFFIX (U) OR (NV) DENOTES UPSTAND OR PART UPSTAND.



SIZE: 500x200(U) OR 500x200(NV)

(125) THICKNESS OF SLAB IN mm

+5.40 STRUCTURAL LEVEL IN PLAN

+10.40 STRUCTURAL LEVEL IN ELEVATION

(C) CONCRETE AND REINFORCEMENT NOTES

- 1. UNLESS NOTED OTHERWISE, CONCRETE SHALL BE DESIGNED MIX WITH THE FOLLOWING CONCRETE GRADE FOR VARIOUS STRUCTURAL ELEMENTS:-

Table with 2 columns: STRUCTURAL ELEMENT and CONCRETE GRADE. Rows include PILE CAP / FOOTING, SLAB / BEAM, COLUMN / WALL, and PARAPET / CURB.

Table with 2 columns: MASS CONCRETE FILL and BLINDING LAYER. Rows include MASS CONCRETE FILL and BLINDING LAYER.

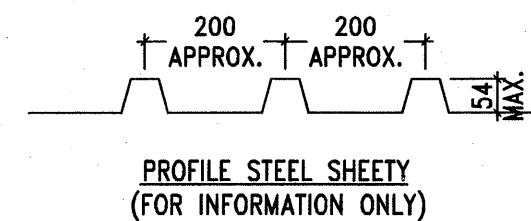
D: NORMAL DESIGN MIX

- 2. UNLESS OTHERWISE STATED, TESTING OF CONCRETE SHALL COMPLY WITH CS1.
3. ALL CONCRETE SHALL COMPLY WITH CS1:1990
4. ALL CONCRETE MATERIALS SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS:-
(i) CEMENT TO BS 12:1996
(ii) AGGREGATE TO BS 882:1983
5. MAX. AGGREGATE SIZE IS 20 MM.
6. THE CONCRETE MIX SHALL COMPLY WITH APP-74 TO CATER FOR THE EFFECT OF ALKALI-AGGREGATE REACTION.
7. ALL BAR REINFORCEMENT SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS:-
(i) HOT ROLLED STEEL BAR TO CS2:1995
8. THE CHARACTERISTIC STRENGTH OF REINFORCEMENT fy SHALL BE :TYPE R : PLAIN ROUND STEEL - 250 N/mm² TYPE T : HIGH YIELD STEEL - 460 N/mm²
9. ALL REINFORCEMENT IS TO BE BENT IN ACCORDANCE WITH BS8666:2000.
10. UNLESS SPECIFIED OTHERWISE, BLINDING LAYER TO BE PROVIDED ON UNDERSIDE OF THE FOLLOWING :-
(i) 75mm THKCK - FOR PILE CAPS, FOOTINGS AND ALL OTHER FOUNDATION WORKS
(ii) 50mm THICK - FOR GROUND BEAMS AND GROUND SLABS
11. ABBREVIATION:
T - TOP
B - BOTTOM
EF - EACH FACE
EW - EACH WAY
NF - NEAR FACE
FF - FAR FACE
BF - BOTH FACE
VB - VERTICAL BAR
HB - HORIZONTAL BAR
CL - CLOSE LINK
HL - HOOK LINK
UB - 'U' BAR
T1 - TOP BAR TOP LAYER
T2 - TOP BAR 2ND LAYER
B1 - BOTTOM BAR BOTTOM LAYER
B2 - BOTTOM BAR 2ND LAYER
SS - SINGLE STIRRUP
DS - DOUBLE STIRRUP
TS - TRIPLE STIRRUP
LV - LENGTH VARIES
AS - ALTERNATE BAR STAGGERED
ALT. - ALTERNATELY PLACED
ABR - ALTERNATE BAR REVERSED
STGD - STAGGERED
Ø - DIAMETER OF BAR
T.L. - TENSION LAP LENGTH
T.A.L. - TENSION ANCHORAGE LENGTH
F.R.P. - FIRE RESISTANCE PERIOD
FW - FILLET WELD
12. UNLESS SPECIFIED OTHERWISE, CONCRETE COVER TO ALL REINFORCEMENT FOR ALL STRUCTURAL MEMBERS IS AS FOLLOWS:

Table with 2 columns: ELEMENT and CONCRETE COVER (mm). Rows include BEAM, SLAB, WALL, and PILE CAP.

(D) GENERAL NOTES FOR STRUCTURAL STEELWORK

- 1. GENERAL
1.1 STRUCTURAL STEELWORK SHALL COMPLY WITH THE BUILDING (CONSTRUCTION) REGULATIONS 1990 AND CODE OF PRACTICE FOR STRUCTURAL USE OF STEEL 2005.
1.2 ALL STRUCTURAL STEEL SECTIONS (OTHER THAN HOLLOW SECTIONS) SHALL BE GRADE S275 (CLASS 1) COMPLY WITH BS EN 10025 : 2004 UNLESS OTHERWISE STATED.
1.3 ALL STRUCTURAL STEEL HOLLOW SECTIONS SHALL BE GRADE S355 (CLASS 1) COMPLY WITH BS EN 10210 : 1994 UNLESS OTHERWISE STATED.
1.4 ALL STRUCTURAL SECTIONS SHALL BE HOT FORMED. THE USE OF COLD FORMED SECTIONS WILL NOT BE PERMITTED.
1.5 THE FOLLOWING ABBREVIATIONS HAVE BEEN USED :
SHS : SQUARE HOLLOW SECTION
CHS : CIRCULAR HOLLOW SECTION
RHS : RECTANGULAR HOLLOW SECTION
UC : UNIVERSAL COLUMN SECTION
UB : UNIVERSAL BEAM SECTION
RSC OR [ : ROLLED STEEL CHANNEL SECTION
L : ROLLED ANGLE SECTION
1.6 BASE PLATES HAVE BEEN DESIGNED FOR FULL BEARING AND ALL LEVEL PACKERS SHOULD BE REMOVED AFTER GROUTING.
1.7 CUTTING MAY BE EFFECTED BY SHEARING OR SAWING. GAS CUTTING IS NOT ALLOWED UNLESS APPROVED BY PSE AND IN NO CASE SHALL LOADS BE TRANSMITTED THROUGH A GAS CUT SURFACE.
1.8 MAXIMUM LENGTH OF ALL STRUCTURAL MEMBERS BE 12m. A MEMBER WHICH IS LONGER THAN 12m SHALL BE CONSTRUCTED BY SEPARATE MEMBERS WITH FULL PENETRATION BUTT WELD SPLICING UNLESS OTHERWISE SPECIFIED.
1.9 A COPY OF THE MILL CERTIFICATE OF THE STRUCTURAL STEEL USED, TO CONFIRM THAT THE REQUIREMENTS OF CHEMICAL COMPOSITION AND MECHANICAL PROPERTIES APPROPRIATE TO THE TYPE OF STEEL HAVE BEEN COMPLIED WITH, SHALL BE SUBMITTED (AT LEAST ONE MONTH PRIOR TO ERECTION).
1.10 ALL OPEN END OF HOLLOW SECTION OF CHORDS AND COLUMNS SHALL BE CAPPED BY 16mm THICK END PLATE AND OTHER HOLLOW SECTIONS SHALL BE CAPPED BY 5mm THICK END PLATE UNLESS OTHERWISE STATED.
1.11 ALL STAINLESS STEEL HOLDING DOWN BOLTS SHALL BE GRADE A4-80 COMPLYING WITH DIN 975:1986 AND ITS MECHANICAL PROPERTIES SHALL COMPLY WITH BS EN ISO 3506.
1.12 ALL STAINLESS STEEL NUTS SHALL BE GRADE A4-80 COMPLYING WITH DIN 934:1987 AND ITS MECHANICAL PROPERTIES SHALL COMPLY WITH BS EN ISO 3506.
2. WELDING
2.1 ALL WELDS SHALL COMPLY WITH BS EN 1011-1 : 1998 AND ALL ELECTRODES SHALL COMPLY WITH BS EN ISO 2560 : 2005.
2.2 ALL FILLET WELD SIZES SHOWN ARE LEG THICKNESSES. STRENGTH OF ELECTRODE SHOULD NOT LESS THAN 220N/mm2 FOR GRADE S275 STEEL.
2.3 ALL BUTT WELDS SHALL BE SINGLE-BEVEL FULL STRENGTH BUTT WELDS UNLESS OTHERWISE STATED. STRENGTH OF ELECTRODES SHOULD GREATER THAN OF THE PARENT MATERIALS.
2.4 ALL SPICES ON STRUCTURAL MEMBERS SHALL BE KEPT TO THE MINIMAL AND TO THE APPROVAL OF THE ENGINEER. THE RESULTING MEMBER SHALL PARALLEL IN ALL PLANES AND THE JOINT SHALL BE FLUSHED WITH FULL STRENGTH PENETRATION BUTT WELDS.
2.5 BEFORE FABRICATION OF THE STEELWORK, THE CONTRACTOR SHALL SUBMIT A FULL SET OF WORKSHOP DRAWINGS TOGETHER WITH CALCULATIONS AND DETAILS OF PROPOSED METHOD OF HANDLING, TRANSPORTATION AND ERECTION OF THE COMPLETED STEELWORK TO THE ENGINEER FOR APPROVAL.
2.6 TEMPORARY WORKS DURING ERECTION SHALL BE DESIGNED AND PROVIDED BY THE CONTRACTOR TO ENSURE THAT THE INTEGRITY OF THE STEEL SECTIONS IS MAINTAINED.
2.7 CONTRACTOR SHALL COMPLY WITH CLEARANCE RESTRICTION IMPOSED BY THE RELEVANT AUTHORITIES FOR THE OVERHEAD CONSTRUCTION OF ELEVATED STRUCTURES.
2.8 ALL STUD CONNECTORS ARE 19mm DIA. 100mm LONG TO CODE OF PRACTICE FOR STRUCTURAL USE OF STEEL 2005 AND WELDED TO THE STEEL SECTION STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFIED OTHERWISE.
3. WELD TESTING
3.1 ALL WELDS SHALL BE VISUALLY EXAMINED, WITH THE AID OF OPTICAL INSTRUMENTS IF NECESSARY, TO GIVE 100% VISUAL INSPECTION.
3.2 TESTING AND ACCEPTANCE OF WELDS SHALL BE IN ACCORDANCE WITH THE CODE OF PRACTICE FOR THE STRUCTURAL USE OF STEEL 2005.
3.3 NON-DESTRUCTIVE TESTS BY ULTRASONIC EXAMINATION ARE REQUIRED TO BE CARRIED OUT TO ALL WELDED JOINTS AT THE SUPPORTS OF ALL CANTILEVERED STRUCTURAL ELEMENTS TO VERIFY THE INTEGRITY AND ADEQUACY OF THE WELDS.
4. CORROSION PROTECTION
4.1 ALL STRUCTURAL STEELWORKS INCLUDING STRUCTURAL STEEL, BOLTS, NUTS AND WASHER ETC. SHALL BE HOT DIPPED GALVANISED IN ACCORDANCE WITH BS EN ISO 1461 : 1999. MINIMUM THICKNESS OF GALVANIZING COATING SHALL BE 85µm.
4.2 FINISH TO GALVANISED STEELWORK-PRETREATMENT PRIMER AND FINISH COAT SHALL BE FULLY COMPATIBLE WITH THE GALVANISED STEELWORK.
5. NOTES FOR PROFILED STEEL SHEET
5.1 THE CONTRACTOR SHALL PROPOSE AND DESIGN THE PROFILED STEEL SHEET AS PERMANENT FORMWORK TO SUSTAIN THE LOADING DURING CONCRETING WITH A DEFLECTION LIMIT OF L/150 WHERE L IS THE SPAN OF SHEET.
5.2 PROFILED STEEL SHEET SHALL BE OF SUCH FORM AND PROFILE AS INDICATED IN THE DRAWING IN ACCORDANCE WITH BS 2989 OR BS EN 10147.
5.3 STEEL USED TO MANUFACTURE THE SHEET SHALL HAVE A MINIMUM SPECIFIED YIELD STRENGTH > 200N/mm².
5.4 ZINC COATING TO PROFILED STEEL SHEETS TO BE OF TYPE G275 IN ACCORDANCE WITH BS2989 (I.E. A COATING OF 275g/m² TOTAL, INCLUDING BOTH SIDES).
5.5 THE EXPOSED SURFACE OF THE PROFILED STEEL SHEET SHALL BE COLOR-COATED TO THE SATISFACTION OF THE C.M.
5.6 THE CONTRACTOR SHALL PROVIDE ADEQUATE PROPPING SYSTEM IN ACCORDANCE WITH THIS DESIGN.
5.7 UNLESS OTHERWISE STATED, THE USE OF PROFILED STEEL SHEETING IS TO BS 5950: PART 4.
5.8 ALL PROFILE STEEL SHEETING SHALL BE SECURELY FASTENED, SUPPORTED AND CLOSED TO AVOID GROUT LEAKAGE DURING CONCRETING.



(E) ADDITIONAL NOTES FOR FOOTBRIDGE

- 1. THE FOOTBRIDGE SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE STRUCTURES DESIGN MANUAL FOR HIGHWAYS AND RAILWAYS, THIRD EDITION.
2. MATERIAL AND WORKMANSHIP ARE COMPLIED WITH BS 5400: PART 6.
3. FOOTBRIDGE BEARING, SOLE PLATE AND BASE PLATE TO BE DESIGNED BY THE CONTRACTOR, APPROVED BY ICU AND C.M.
4. ALL STUD CONNECTORS ARE 19mm DIA. 100mm LONG TO BS 5400: PART 5 AND WELDED TO THE STEEL SECTION BY AUTOMATIC AND WELDING GUN STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFIED OTHERWISE.
5. CORROSION PROTECTION AND PAINTING FOR STEELWORKS OF FOOTBRIDGE
5.1 ALL STRUCTURAL STEEL SECTIONS TO BE HOT DIP GALVANIZED TO BS EN ISO 1461 BY SPECIALIST CONTRACTOR IN THE CLASS V OF THE SPECIALIZED OPERATIONS FOR HIGHWAY STRUCTURES CATEGORY OF THE LIST OF APPROVED SUPPLIERS OF MATERIALS AND SPECIALIST CONTRACTORS FOR PUBLIC WORKS.
5.2 THE SURFACE OF STEELWORK TO BE PAINTED SHALL BE THOROUGHLY CLEANED AND PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF BS EN ISO 12944 PART 4.
5.3 THE FOLLOWING PAINT SYSTEM SHALL BE APPLIED:
PRETREATMENT: TWO - PACK ETCH PRIMER
PRIMER: TWO - PACK EPOXY ZINC PHOSPHATE PRIMER, 80µm MINIMUM TOTAL DRY - FILM THICKNESS.
UNDERCOAT: TWO - PACK MICACEOUS IRON OXIDE EPOXY UNDERCOAT, 140µm MINIMUM TOTAL DRY-FILM THICKNESS.
FINISH: TWO - PACK POLYURETHANE FINISH COAT, 100µm MINIMUM TOTAL DRY - FILM THICKNESS.

(F) FIRE RESISTANT OF STRUCTURAL STEEL MEMBERS

- 1. ALL STRUCTURAL STEEL MEMBERS LISTED ON THE FOLLOWING TABLE TO BE COATED WITH "FIRECUT FM-900" COATING FOR FIRE RESISTANCE (BD REFERENCE NO. BD-FP 085)
2. APPLICATION OF THE COATING SHOULD BE STRICTLY COMPLIED TO THE MANUFACTURER'S RECOMMENDATIONS.

Table with 4 columns: TYPE, HP/A (4 SIDES) (m²), THICKNESS OF FIRECUT FM-900 (mm). Rows are categorized by FOR LIFT TOWER (2 HR) and FOR FOOTBRIDGE (1 HR).

NOTES

- 1. GENERAL NOTES SHALL ALSO REFER TO DRAWING NO. 3188/OM/FD/S/EG003.

Plan Approved stamp with signature of Chung Kwong-nung, Edmund, Senior Structural Engineer/ICU1 Independent Checking Unit. Date: 11 Jan., 2012. ICU Ref: HD(CU)S-2-3/5/052(E) M(12)-D(12)

REVISIONS

Table with 5 columns: NO, DESCRIPTION ON DATE, DWN, CKD, AUTH. Row 1: ICU APPROVAL ON 22/10/2010. Row 2: 3rd AMENDMENT ON 06/12/2011.

Table with 4 columns: AUTHORIZED, CHECKED, DRAWN, NAME AND DESIGNATION, INITIAL, DATE. Entries include WILLIAM NG PD, ALBERT LEUNG DPD, DANIEL CHIU PE, and MAY CHAN.

PROJECT: IMPROVEMENT OF PEDESTRIAN ACCESS CB20090022

DRAWING TITLE: OI MAN ESTATE GENERAL NOTES

SCALE: N.T.S.

DRAWING NO.: 3188/OM/GN/S/EG001/A

SOURCE:

ICU NO.:

JACOBS logo and contact information: 15th Floor, Cornwell House, Taloo Place, 979 King's Road, Quarry Bay, Hong Kong, China. Tel: 852-2860-9788 Fax: 852-2965-5561 www.jacobsoffice.com.hk

HOUSING DEPARTMENT logo and stamp with signature of Chiu Chung Lai, Registered Structural Engineer.

COUNTERCHECKED

