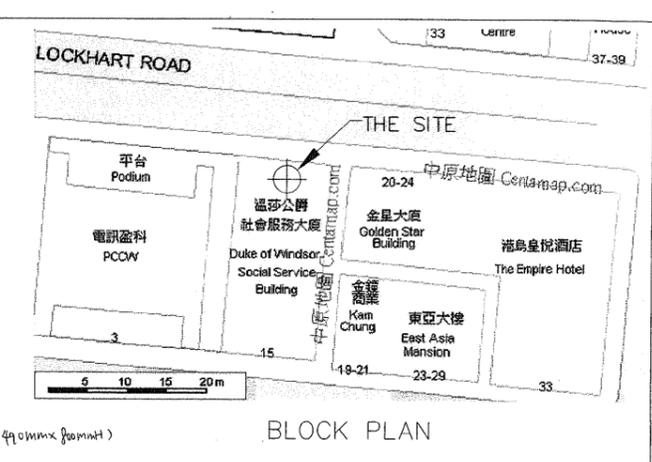
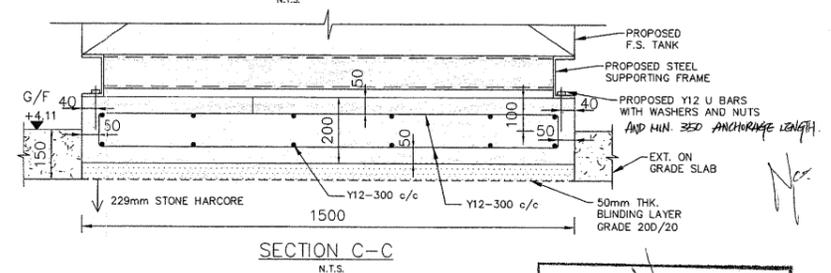
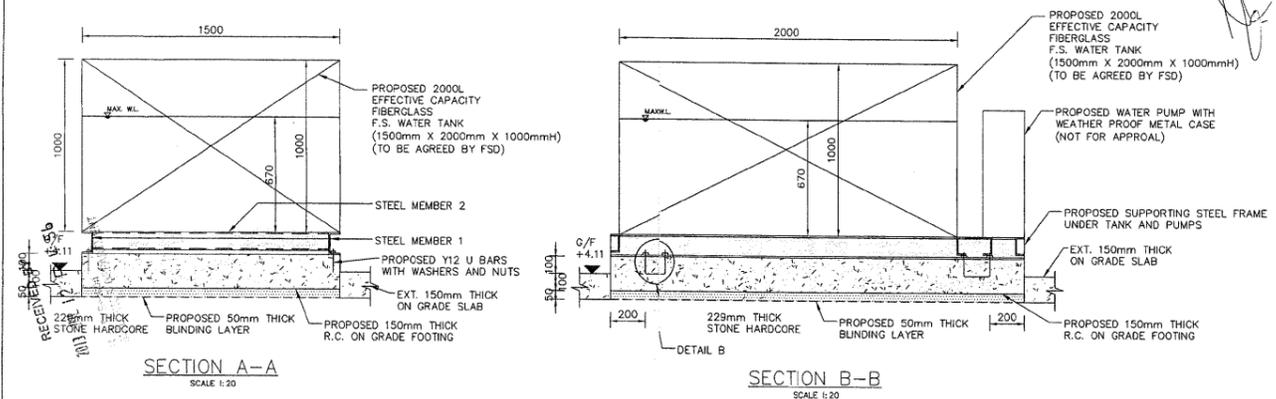
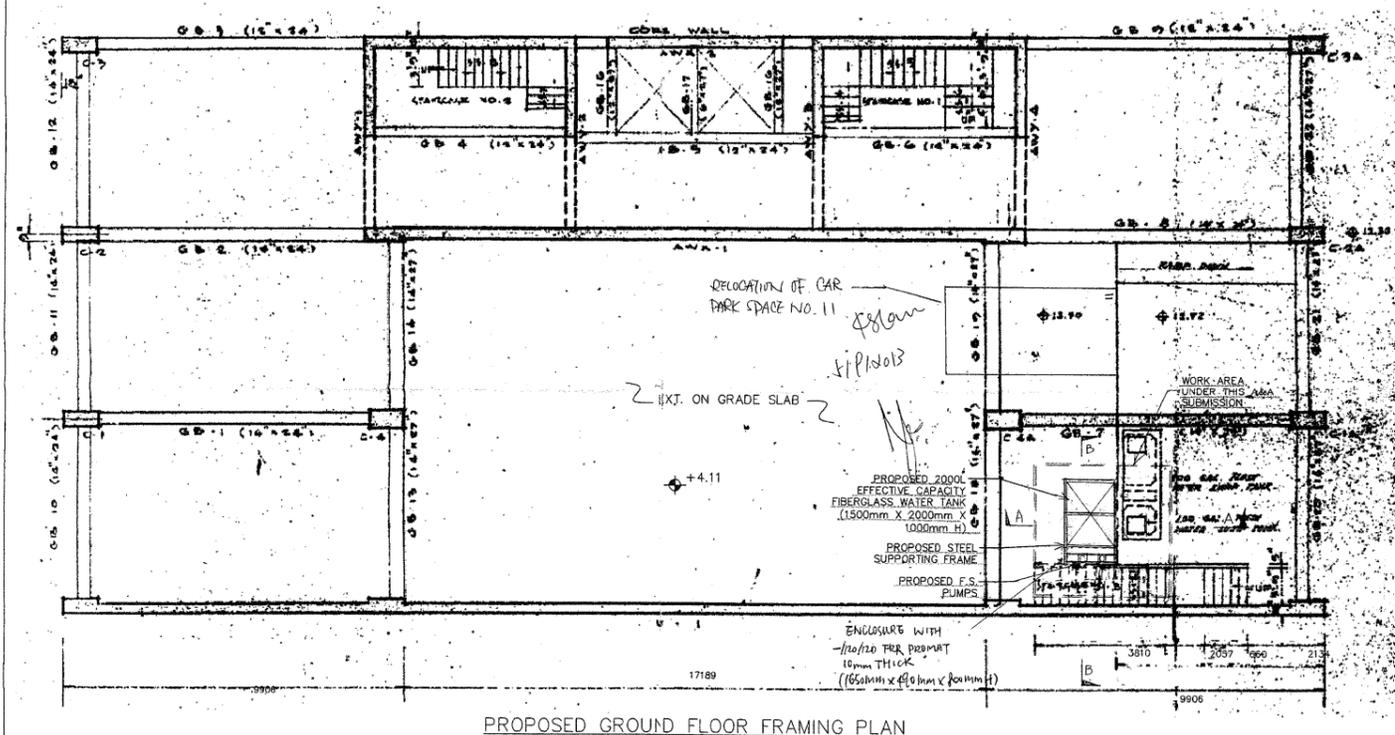
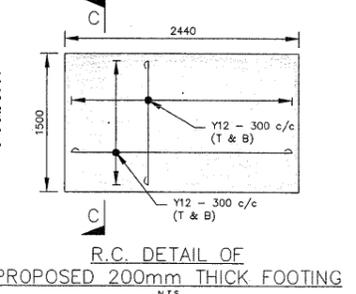
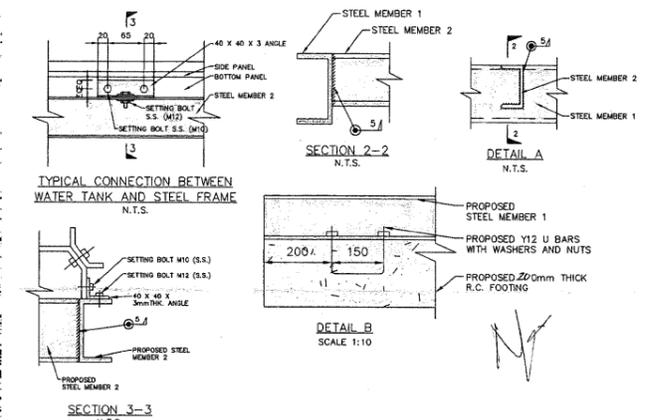


STEEL MEMBER SCHEDULE

MEMBER	STEEL SECTION	WEB SIZE	FLANGE SIZE
1	127 X 64 X 14.9kg/m CHANNEL	6.4mm	9.2mm
2	102 X 51 X 10.42kg/m CHANNEL	6.1mm	7.6mm
3	50 X 50 X 4mm THK. ANGLE	4mm	4mm



- GENERAL NOTES
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS STATED OTHERWISE.
 - ALL LEVEL ARE IN M.P.D.
 - ALL DIMENSIONS SHALL BE VERIFIED ON SITE. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY DISCREPANCY IS FOUND.
 - CONSTRUCTION WORKS ARE TO COMPLY WITH HONG KONG BUILDING (CONSTRUCTION) REGULATION 1996.
 - THE CONTRACTOR SHALL SUBMIT ALL INFORMATION AS STATED IN THE HONG KONG BUILDING (CONSTRUCTION) REGULATION AND FURTHER INFORMATION REQUESTED BY THE BUILDING AUTHORITY.
 - NO CHANGE IN USE AND O.F.A. OF THE LOT DUE TO THIS ALTERATION AND ADDITION WORKS.
 - NO CHANGED IN COMPARTMENT VOLUME DUE TO THIS ALTERATION AND ADDITION WORKS.
 - ALL DEAD AND IMPOSED LOAD ARE TO COMPLY WITH COP FOR DEAD AND IMPOSED LOADS 201.
 - EXISTING CONCRETE GRADE 1:2:4 MIX FOR SLABS AND BEAMS AND GRADE 1:1:2A MIX FOR COLUMNS UNDER L.C.C. BY LAW 1965.
 - EXISTING REINFORCEMENT TO BE HIGH TENSILE DEFORMED BARS EXCEPT REINFORCEMENT IN COLUMNS, SLABS, STAIRCASE WALLS, STIRRUPS IN BEAMS & TIES IN COLUMNS WHICH ARE MILD STEEL ROUND BARS TO B.S. 785.
 - DESIGN BASIC WIND PRESSURE IS 1.52kPa with Cr = 2 IN COMPLY WITH COP ON WIND EFFECTS IN HONG KONG 2004.
 - DESIGN SOIL BEARING PRESSURE IS 50kPa.
 - ACCORDING TO PNAP APP-100, NO STRUCTURAL SUBMISSION FOR WATER TANK WITH CAPACITY OF LESS THAN 9000L FOR B.D. APPROVAL TO BE REQUIRED.
 - PRIMARY AND SECONDARY ELECTRICAL SUPPLY SHALL BE PROVIDED TO ALL FIRE SERVICES INSTALLATION.
 - ALL NEW INSTALLED PIPE WORKS TO BE GALVANIZED MILD STEEL PIPE TO BS 1387 MEDIUM GRADE.

- NOTES FOR STRUCTURAL STEELWORKS
- ALL STRUCTURAL STEEL ARE TO BE OF GRADE S275 CLASS 1 TO BSEN 10025:2004.
 - ALL STEEL MEMBER DESIGN SHALL COMPLY WITH THE HONG KONG CODE OF PRACTICE ON THE STRUCTURAL USE OF STEEL - 2011.
 - ALL WELDING TO BE MANUAL METAL-ARC WELDING AND CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF BSEN 1011-1:1998 AND BSEN 1101-2:2001 BY EXPERIENCED COMPETENT AND CERTIFIED WELDERS AND SHOULD BE UNDER THE CONTINUOUS SUPERVISION OF A SKILLED OPERATOR WHO SHOULD BE QUALIFIED IN ACCORDANCE WITH HONG KONG CODE OF PRACTICE ON THE STRUCTURAL USE OF STEEL 2005.
 - ALL WELDING SHALL BE OF 5 MM FILLET WELD ALL ROUND UNLESS OTHERWISE SPECIFIED. ELECTRODES SHALL COMPLY WITH BSEN 150:250:2005.
 - EXAMINATION AND TESTS MAY BE REQUIRED IF CONSIDERED NECESSARY BY THE AP/RSE ON ALL FIXING AND INSTALLATION.
 - CORROSION PREVENTION SHALL BE HOT-DIP GALVANIZING TO A MINIMUM 85 MICRONS OR EQUIVALENT TO BS EN ISO 1461:1999.
 - ALL STRUCTURAL STEEL TO BE PROTECTED BY FIRE PROTECTIVE PAINT WITH FRR OF 1 HR. ALL BOLTS ARE STAINLESS STEEL GRADE 8.8 TO BS EN 3506 PART 1&2 1998.

- NOTES FOR REINFORCED CONCRETE
- ALL REINFORCED CONCRETE DESIGN SHALL COMPLY WITH THE HONG KONG CODE OF PRACTICE ON THE STRUCTURAL USE OF CONCRETE 2013.
 - ALL CONCRETE TO BE GRADE 30/20 DESIGN MIX TO CS1, 1990.
 - ALL REINFORCEMENT TO BE HIGH TENSILE BAR CONFORM WITH CS2, 1995 (DENOTED BY 'Y'). THE REACTIVE ALKALI OF CONCRETE EXPRESSED AS THE EQUIVALENT SODIUM OXIDE PER METER OF CONCRETE SHOULD NOT EXCEED 3.0KG WHEN DETERMINE IN ACCORDANCE WITH THE APPENDIX A OF PNAP APP-74.
 - LAP LENGTH OF REINFORCEMENT TO BE 40 DIAMETERS OF BAR UNLESS OTHERWISE SPECIFIED.
 - MINIMUM CONCRETE COVER IS 40mm UNLESS SPECIFIED ON PLAN.

- NOTES FOR FIBERGLASS WATER TANK AND PUMPS
- GRP WATER TANK SHALL COMPLY TO SS245:1981, BS4994:1997 AND HONG KONG WATER AUTHORITY REQUIREMENT.
 - WEIGHT OF EACH PUMP ON GROUND FLOOR IS 28kg.
 - DESIGN TOTAL WEIGHT OF WATER TANK = 2110kg (WITH WATER)
 - DESIGN LIVE LOAD ON TOP OF WATER TANK = 110kg
 - GRP PHYSICAL PROPERTIES

PROPERTY	VALUE
SPECIFIC GRAVITY	1.8
GLASS CONTENT	>30%
TENSILE STRENGTH	110MPa
YOUNG'S MODULUS	10000MPa
FLEXURAL STRENGTH	160MPa
COMPRESSIVE STRENGTH	150MPa
THERMAL EXPANSION	0.002/°C
WATER ABSORPTION RATE	0.5%
MIN. FACTOR OF SAFETY	6

- CONSTRUCTION SEQUENCE OF WATER TANK
- REMOVE PART OF EXISTING CONCRETE SLAB AS STATED IN THE PLAN
 - ENSURE MATERIAL BENEATH PROPOSED CONCRETE PAD IS STONE HARCORE OR COMPACTED SOIL BEFORE CONSTRUCTION.
 - INSTALL PROPOSED CONCRETE PAD AND STEEL FRAME
 - INSTALL PROPOSED WATER TANK AND PUMPS.

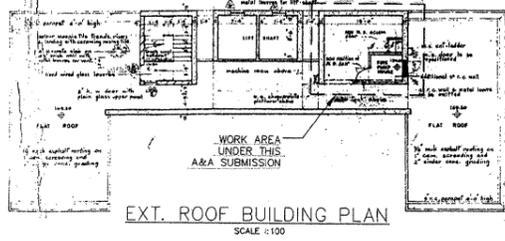
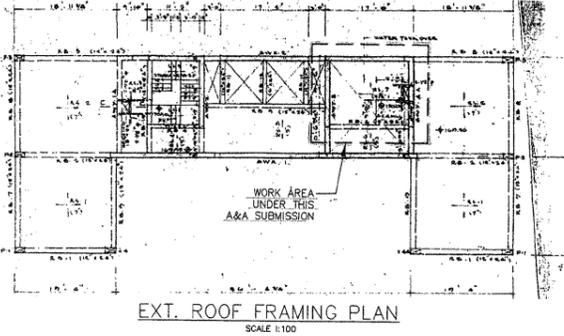
Plan Approved

SHUM Luk-cheung
Chief Building Surveyor
for BUILDING AUTHORITY

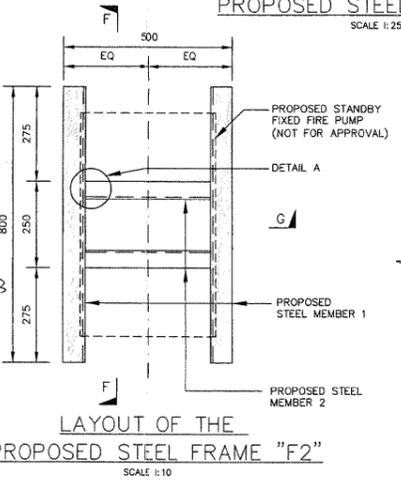
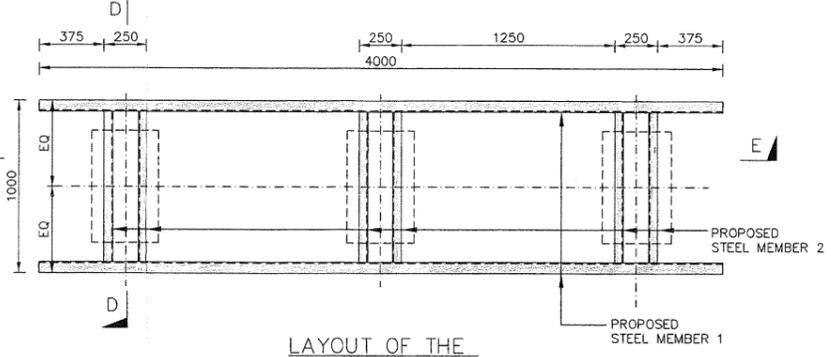
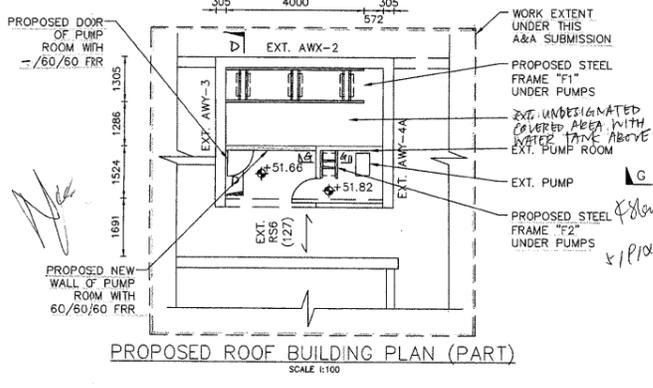
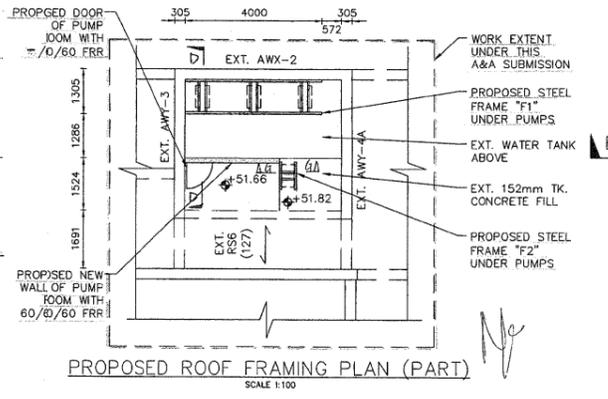
- 9 SEP 2013

Note: This plan has been processed on a curtailed check basis under the centralized processing system as promulgated in PNAP ADM-19. The duties of the authorized person, registered structural engineer and/or registered geotechnical engineer concerned as specified under section 4(3)(b) and the provision of section 14(2)(c) of the Buildings Ordinance are of particular relevance in this regard.

Date	By	Descriptions	CHK	APD
DRAWING STATUS: BD Submission				
<p>TROIKA ENGINEERING LIMITED Consulting Engineers</p> <p>Flat D, 19th Floor, European Asian Bank Building 749 Nathan Road, Kowloon, Hong Kong Tel: (852) 23956678 Fax: (852) 23956332 Email: info@troika.net Web: www.troika.net</p>				
Client: The Hong Kong Council of Social Services				
Project: FIRE IMPROVEMENT WORKS AT DUKE OF WINDSOR SOCIAL SERVICES BUILDING 15 HENNESSY ROAD, WAN CHAI, HONG KONG				
Title: Layout Plan and Details of Proposed Transfer Water Tank on Gound Floor				
Scale and Size	Checked	Approved		
As Shown	HYN	HYN		
Cad File	Design/Drawn	Date		
	HYN/AN	9 JUL 2013		
Job No.	Drawing No.	Rev.		
J13024	DWS-01			

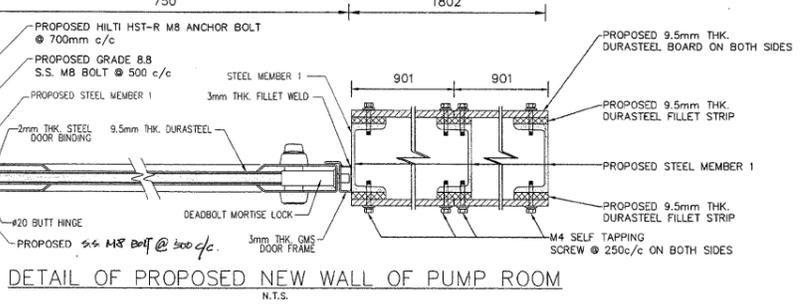
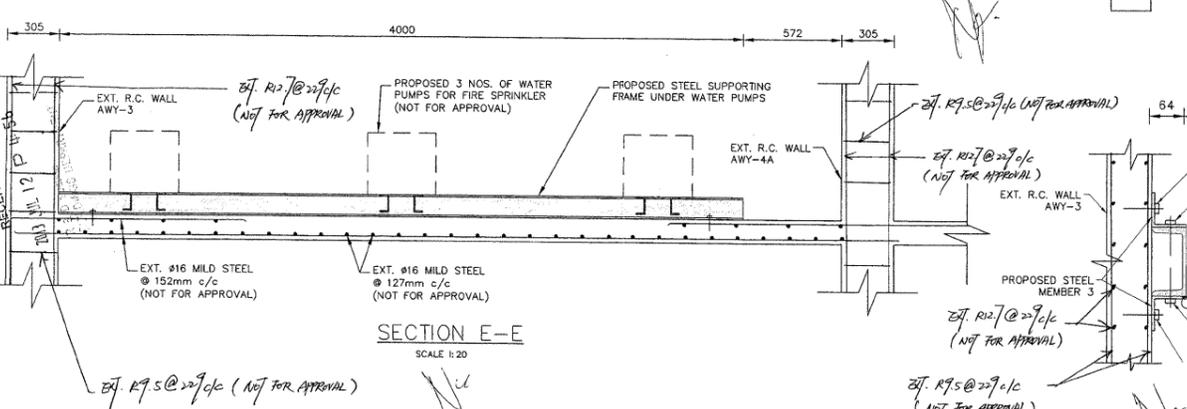
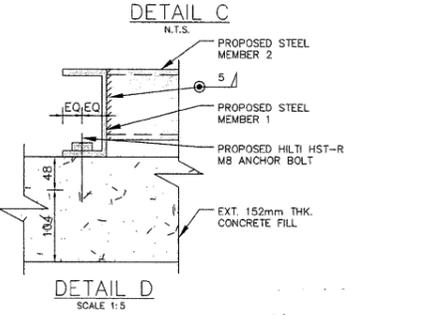
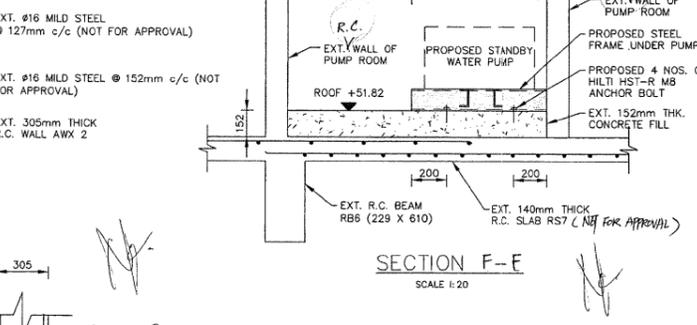
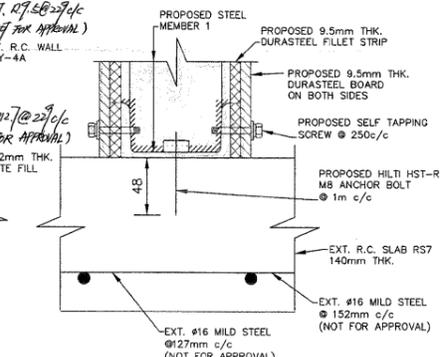
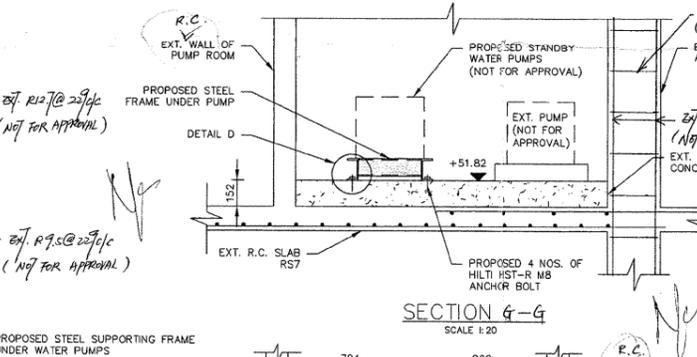
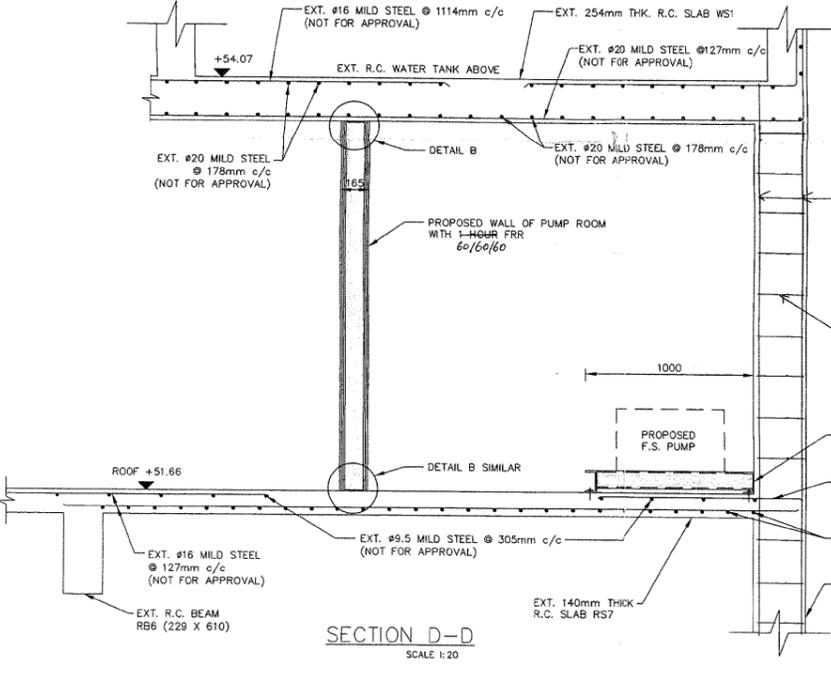
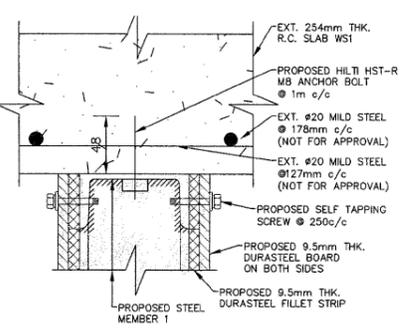


ORIGINAL DESIGN L.L. OF ROOF SLAB RS7 : 7.32kPa
 PROPOSED LOADING OF ADDITIONAL PUMPS : 3.35kPa
 PROPOSED FRR OF NEW PUMP ROOM: 60/60/60
 EXT. FRP = 1 HOUR



STEEL MEMBER SCHEDULE

MEMBER	STEEL SECTION	WEB SIZE	FLANGE SIZE
1	127 X 64 X 14.9kg/m CHANNEL	6.4mm	9.2mm
2	102 X 51 X 10.42kg/m CHANNEL	6.1mm	7.6mm



- NOTES FOR BOLT
1. ALL ANCHOR BOLTS USED SHALL BE HILTI-HST-R M8 BOLTS WITH MINIMUM EMBEDMENT DEPTH OF 48mm IN SOUND AND INTACT CONCRETE, MINIMUM SPACING AT 300mm, MINIMUM EDGE DISTANCE OF 50mm, MAXIMUM TENSILE CAPACITY OF
 2. INSTALLATION OF ANCHOR SHALL STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
 3. ALL BOLTS ARE STAINLESS STEEL GRADE 8.8 TO BS EN 3506 PART 1&2 1988.

- NOTES FOR INSTALLATION OF PUMPS ON ROOF
1. ANY DAMAGE TO THE EXISTING WATER PROOFING SHALL BE REINSTALLED TO THE SATISFACTION OF AP/RSE.
 2. NO OTHER LOADING SHALL BE PLACED INSIDE THE AREA BOUNDED BY PERIMETER OF STEEL PLATFORM.
 3. SHOCK ABSORBER SHALL BE PROVIDED TO AVOID EXCESSIVE VIBRATION INDUCED TO ROOF SLAB FROM THE OPERATION OF THE PUMPS.
 4. ALL DURASTEEL SHOULD BE BD-D262 IN BD'S REFERENCE LIST WITH MIN 60/60/60 FRR.
 5. DESIGN FRR OF PUMP ROOM IS 60/60/60.
 6. DESIGN FRR OF PUMP ROOM IS 60/60/60.
 7. WEIGHT OF EACH PUMP ON ROOF IS 134kg.

Plan Approved
 SHUM Luk-chung
 Chief Building Surveyor
 for BUILDING AUTHORITY
 9 SEP 2013

Note: This plan has been processed on a curtailed check basis under the centralized processing system as promulgated in PNAP ADM-18. The duties of the authorized person, registered structural engineer and/or registered geotechnical engineer assumed as specified under section 4(3)(b) and the provision of section 14(2)(c) of the Buildings Ordinance are of particular relevance in this regard.

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DRAWING STATUS: BD Submission				
TROIKA ENGINEERING LIMITED Consulting Engineers Flat D, 10 th Floor, European Asian Bank Building 719 Nathan Road, Kowloon, Hong Kong Tel: (852) 23956678 Fax: (852) 23956332 Email: info@troika.net Web: www.troika.net				
Client: The Hong Kong Council of Social Service				
Project: FIRE IMPROVEMENT WORKS AT DUKE OF WINDSOR SOCIAL SERVICES BUILDING 15 HENNESSY ROAD, WAN CHAI, HONG KONG				
Title: Layout Plan and Details of Proposed FS Pump Room on Roof				
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Job No.	Drawing No.	Rev.		
J13024	DWS-02			