

- NOTES:**
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  - ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE EXECUTING THE WORKS.
  - SHOP DRAWINGS SHALL BE APPROVED BEFORE COMMENCING OF CONSTRUCTION OR MANUFACTURING

**PROJECT**  
PROPOSED LPG STATION

**LOCATION**  
GDH.THINADHOO

**TYPE**  
INDUSTRIAL

**CLIENT**  
MALDIVES GAS

**DRAWING TITLE**  
AS GIVEN

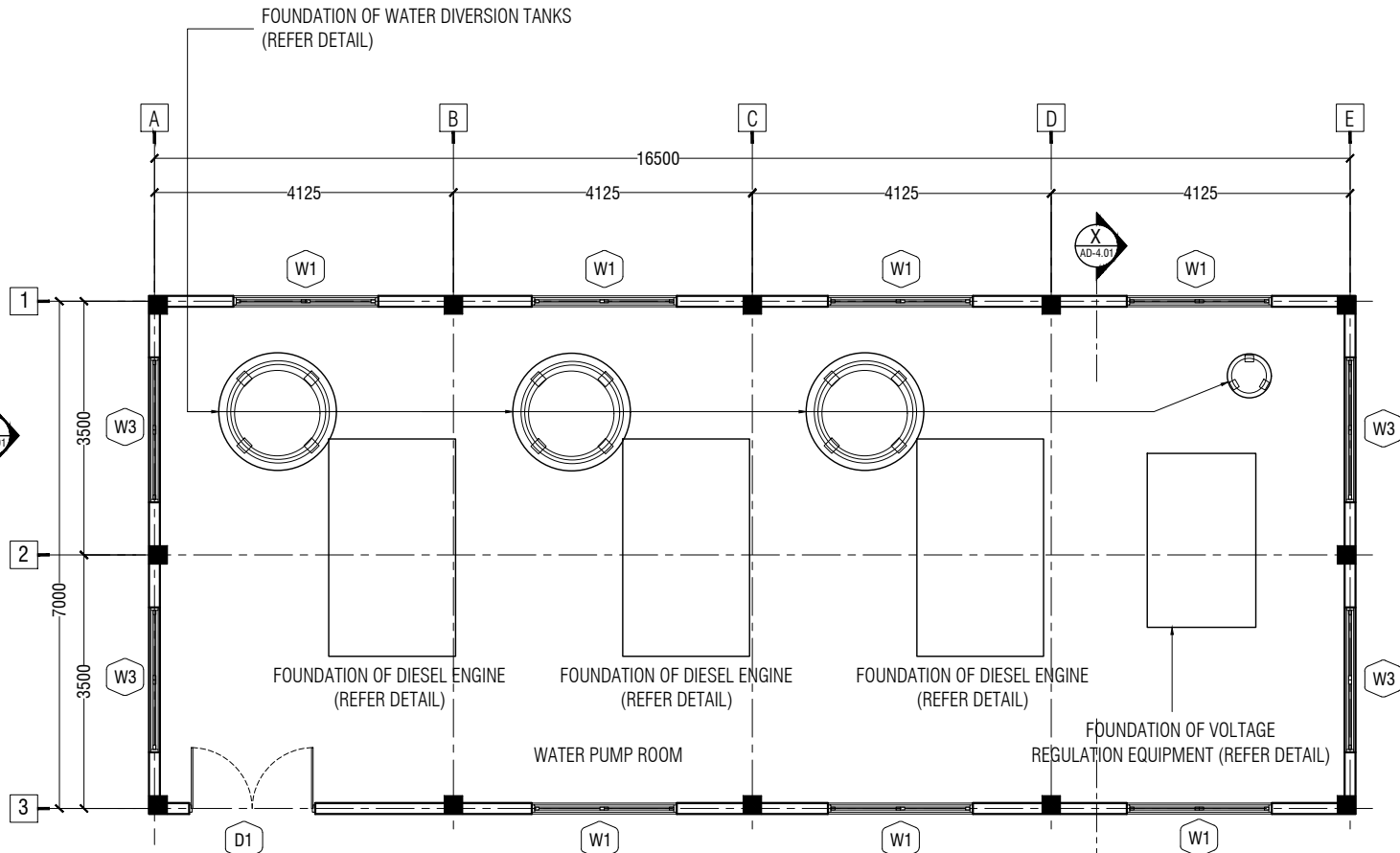
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AS GIVEN

**ARCHITECTURAL DRAWING**

DRAWN BY	-
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REV	DESCRIPTION	DATE

DATE APRIL 2021	<b>DRAWING NO:</b> AD-2.01
SHEET SIZE A4	

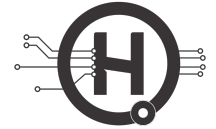


**NOTES:**

- GROUND SLAB THICKNESS = 150 MM UNLESS NOTED OTHERWISE
- GROUND SLAB REINFORCEMENT = T10@150 B/W T&B THROUGHOUT

**01 GROUND FLOOR PLAN (BUILDING 1)**  
SCALE 1:100





**HYDRON**  
ENGINEERING

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**PROJECT**

**PROPOSED LPG STATION**

**LOCATION**

GDH.THINADHOO

**TYPE**

INDUSTRIAL

**CLIENT**

MALDIVES GAS

**DRAWING TITLE**

AS GIVEN

**SCALE**

AS GIVEN

**ARCHITECTURAL DRAWING**

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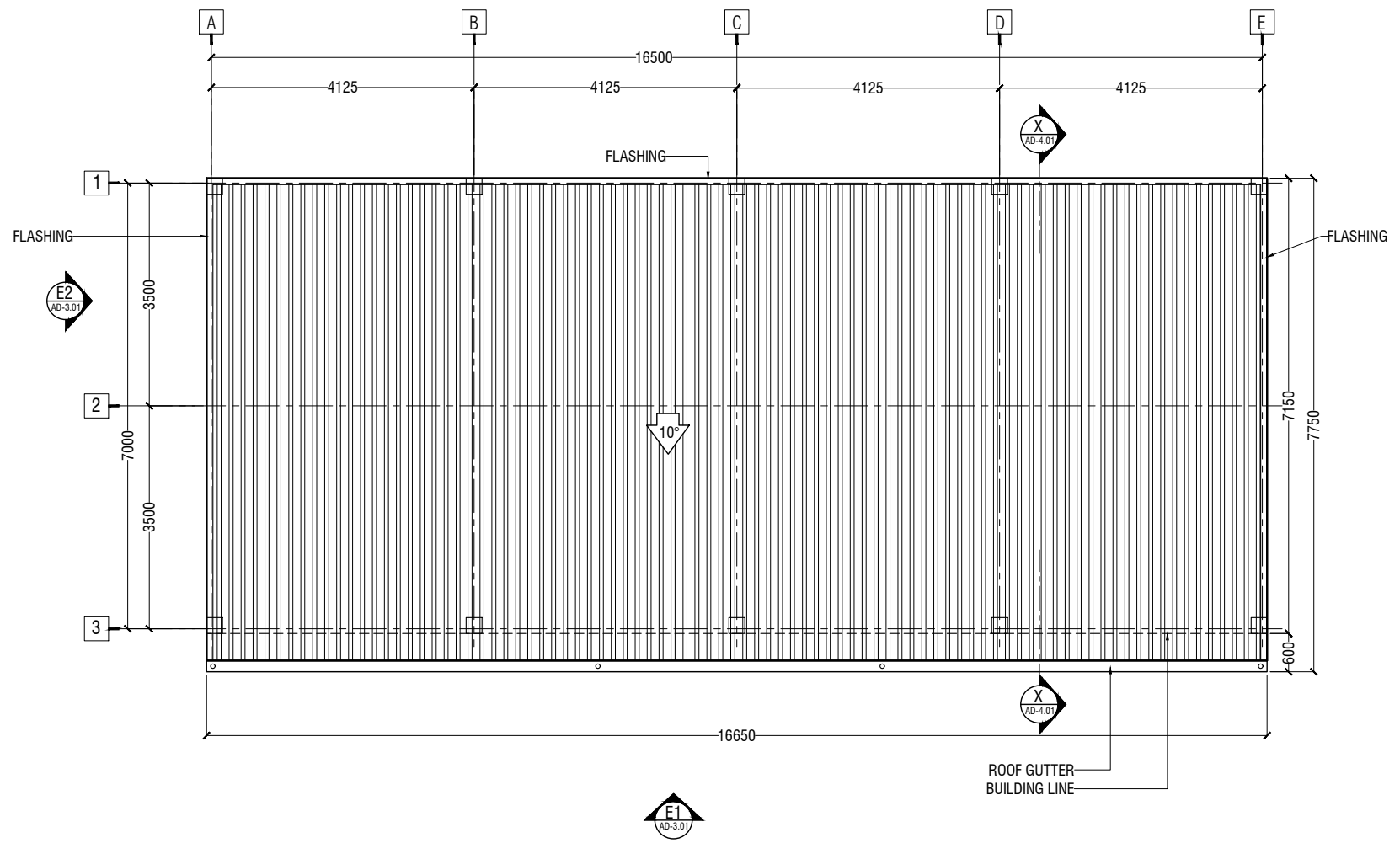
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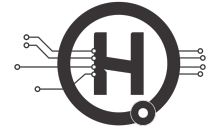
REV	DESCRIPTION	DATE

DATE  
APRIL 2021  
SHEET SIZE  
A4

DRAWING NO:  
**AD-2.02**



**02 ROOF PLAN (BUILDING 1)**  
SCALE 1:100



**HYDRON  
ENGINEERING**

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**PROJECT**

**PROPOSED LPG STATION**

**LOCATION**

GDH.THINADHOO

**TYPE**

INDUSTRIAL

**CLIENT**

MALDIVES GAS

**DRAWING TITLE**

AS GIVEN

**SCALE**

AS GIVEN

**ARCHITECTURAL DRAWING**

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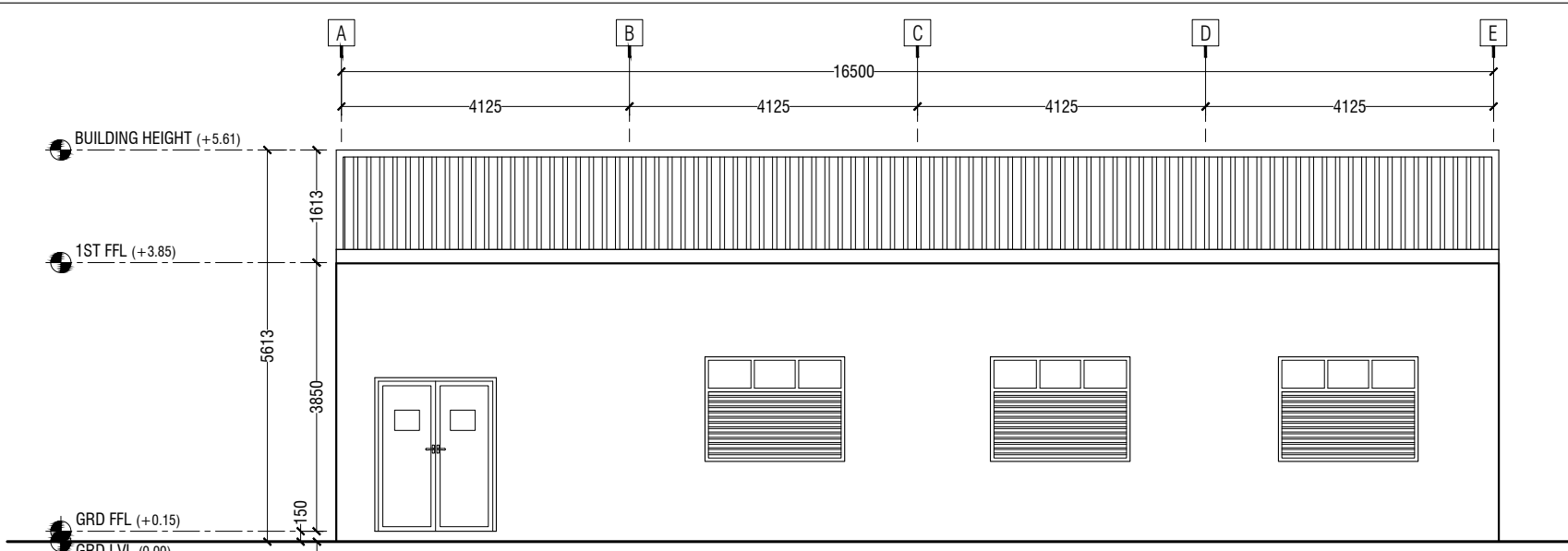
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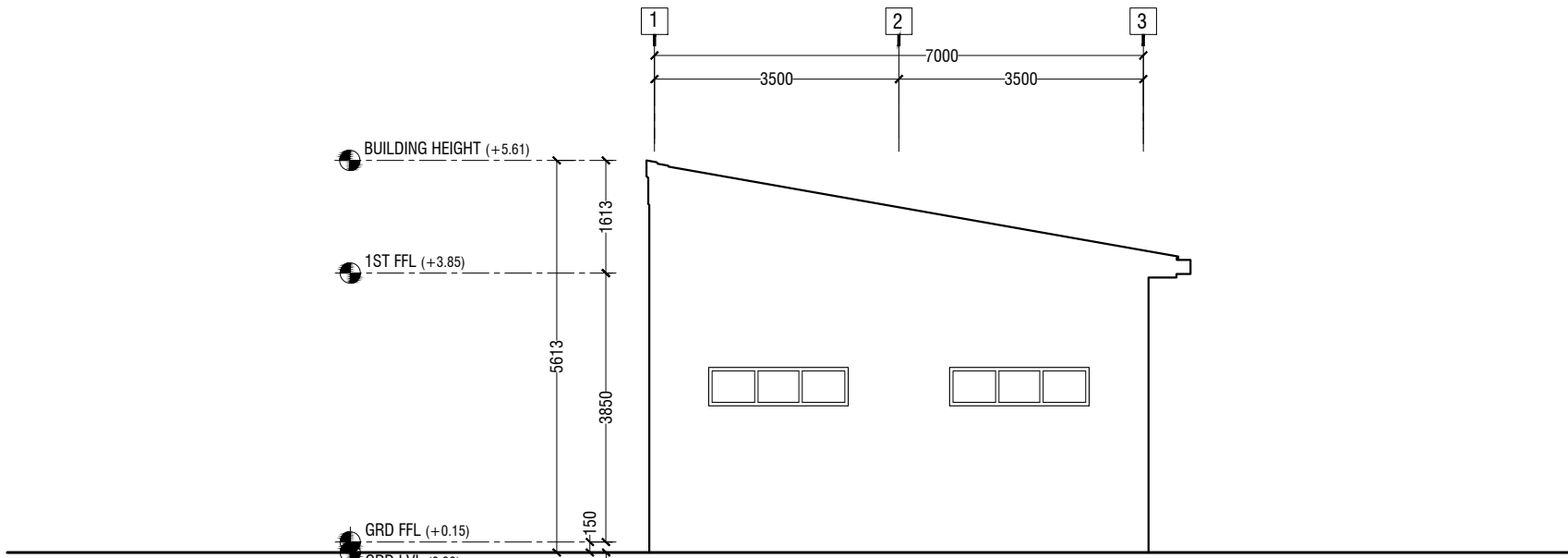
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APRIL 2021  
SHEET SIZE  
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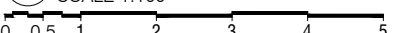
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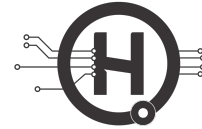


01 ELEVATION E1 (BUILDING 1)  
SCALE 1:100



02 ELEVATION E2 (BUILDING 1)  
SCALE 1:100





**HYDRON  
ENGINEERING**

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**PROJECT**

**PROPOSED LPG STATION**

**LOCATION**

GDH.THINADHOO

**TYPE**

INDUSTRIAL

**CLIENT**

MALDIVES GAS

**DRAWING TITLE**

AS GIVEN

**SCALE**

AS GIVEN

**ARCHITECTURAL DRAWING**

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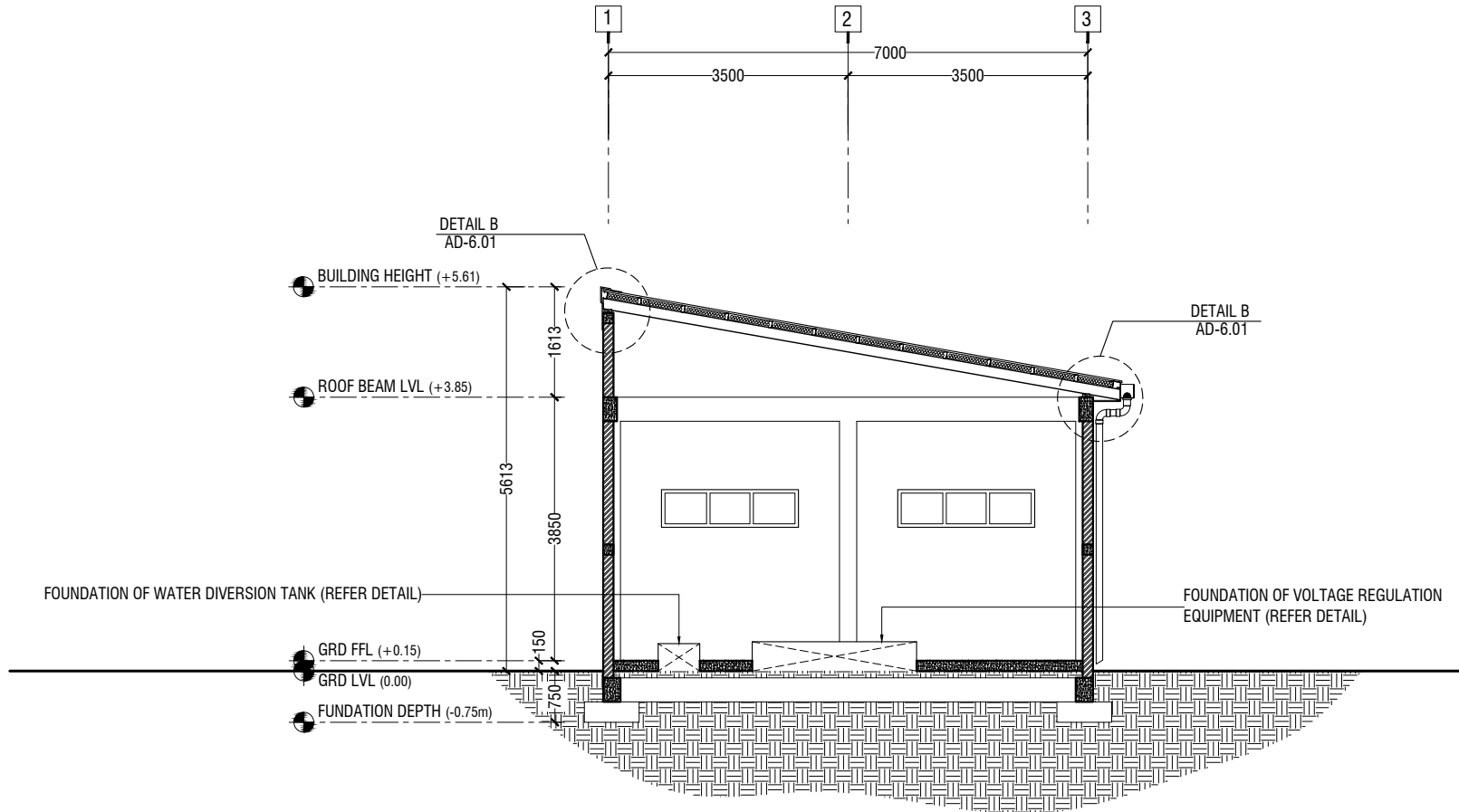
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REV	DESCRIPTION	DATE

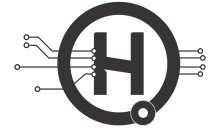
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APRIL 2021  
SHEET SIZE  
A4

DRAWING NO:  
**AD-4.01**



**01** SECTION X-X (BUILDING 1)  
SCALE 1:100





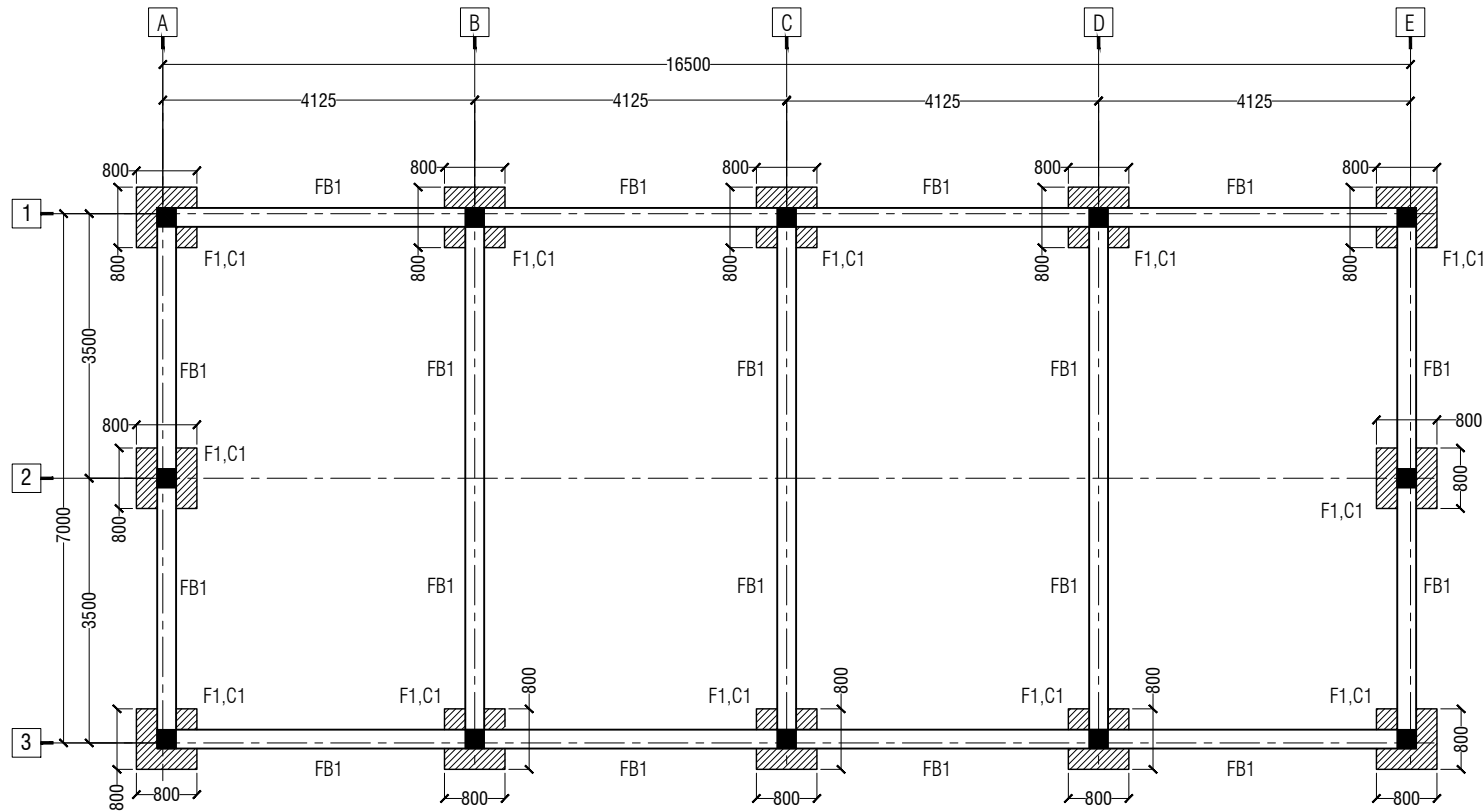
**HYDRON**  
ENGINEERING

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<b>PROJECT</b>	<b>PROPOSED LPG STATION</b>
<b>LOCATION</b>	GDH.THINADHOO
<b>TYPE</b>	INDUSTRIAL
<b>CLIENT</b>	MALDIVES GAS
<b>DRAWING TITLE</b>	AS GIVEN
<b>SCALE</b>	AS GIVEN
<b>STRUCTURAL DRAWING</b>	
DRAWN BY	-
DESIGNED BY	-
CHECKED BY	-

REV	DESCRIPTION	DATE

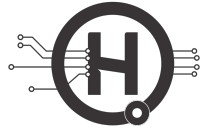
<b>DATE</b> APRIL 2021	<b>DRAWING NO:</b> <b>SD-2.01</b>
<b>SHEET SIZE</b> A4	



**01 FOUNDATION PLAN (BUILDING 1)**  
SCALE 1:100

NOTE:  
- FOUNDATION DEPTH = 750 mm





**HYDRON  
ENGINEERING**

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**PROJECT**

**PROPOSED LPG STATION**

**LOCATION**

**GDH.THINADHOO**

**TYPE**

**INDUSTRIAL**

**CLIENT**

**MALDIVES GAS**

**DRAWING TITLE**

**AS GIVEN**

**SCALE**

**AS GIVEN**

**STRUCTURAL DRAWING**

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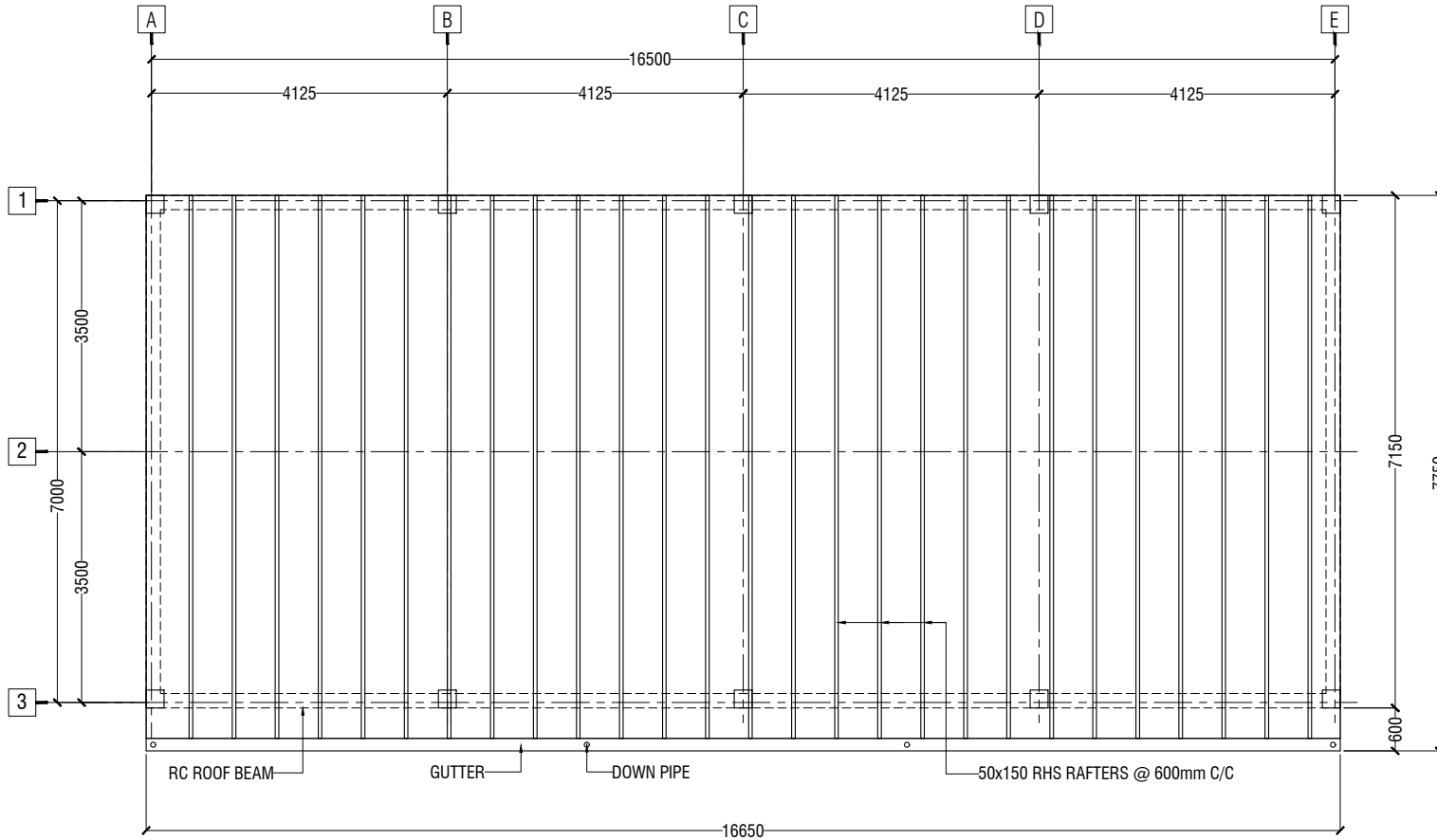
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REV	DESCRIPTION	DATE

DATE  
APRIL 2021  
SHEET SIZE  
A4

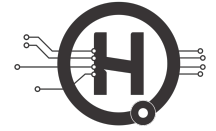
DRAWING NO:  
**SD-2.09**



**01 ROOF STRUCTURE PLAN (BUILDING 1)**  
SCALE 1:100



NOTE:  
- Provide 50x100x3mm THK C PURLINGS @600 c/c FIXED PERPENDICULAR TO RAFTERS (NOT SHOWN)



**HYDRON  
ENGINEERING**

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**PROJECT**

**PROPOSED LPG STATION**

**LOCATION**

GDH.THINADHOO

**TYPE**

INDUSTRIAL

**CLIENT**

MALDIVES GAS

**DRAWING TITLE**

AS GIVEN

**SCALE**

AS GIVEN

**ARCHITECTURAL DRAWING**

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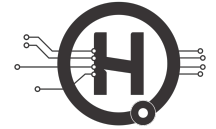
REV	DESCRIPTION	DATE

PLAN						
	ELEVATION					
ID		<b>D1</b>	DOUBLE SWING DOOR	<b>D2</b>	SINGLE SWING DOOR	<b>D3</b>
OPEN AREA	3.52m²		1.94m²		1.47m²	
DETAILS	SOUND PROOF FIRE RATED METAL DOOR WITH DOUBLE GLAZED CLEAR GLASS PANEL		SOUND PROOF FIRE RATED METAL DOOR WITH DOUBLE GLAZED CLEAR GLASS PANEL		ALUMINUM FRAME WITH CLEAR TEMPERED GLASS	

**01 DOOR WINDOW SCHEDULE 01**  
SCALE 1:50



DATE APRIL 2021	<b>DRAWING NO:</b> <b>AD-5.01</b>
SHEET SIZE A4	



**HYDRON  
ENGINEERING**

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**PROJECT**

**PROPOSED LPG STATION**

**LOCATION**

GDH.THINADHOO

**TYPE**

INDUSTRIAL

**CLIENT**

MALDIVES GAS

**DRAWING TITLE**

AS GIVEN

**SCALE**

AS GIVEN

**ARCHITECTURAL DRAWING**

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REV	DESCRIPTION	DATE

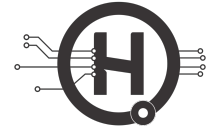
DATE  
APRIL 2021  
SHEET SIZE  
A4

DRAWING NO:  
**AD-5.02**

PLAN				
ELEVATION				
ID	<b>W1</b>	ALUMINUM LOUVERS WITH FIXED GLASS	<b>W2</b>	DOUBLE SWING WINDOW
OPEN AREA	2.52m <sup>2</sup>		1.96m <sup>2</sup>	
DETAILS	ALUMINUM LOUVERS WITH 6mm THK DOUBLE TEMPERED GLAZING		ALUMINUM FRAME WITH 6mm THK CLEAR TEMPERED GLASS	

**01** DOOR WINDOW SCHEDULE 02  
SCALE 1:50





**HYDRON**  
ENGINEERING

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**PROJECT**

**PROPOSED LPG STATION**

**LOCATION**

GDH.THINADHOO

**TYPE**

INDUSTRIAL

**CLIENT**

MALDIVES GAS

**DRAWING TITLE**

AS GIVEN

**SCALE**

AS GIVEN

**ARCHITECTURAL DRAWING**

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REV	DESCRIPTION	DATE

DATE  
APRIL 2021  
SHEET SIZE  
A4

DRAWING NO:  
**AD-5.06**

PLAN		
ELEVATION		
ID	<b>W3</b>	TOP HUNG WINDOW
OPEN AREA	0.81m <sup>2</sup>	
DETAILS	ALUMINUM FRAME WITH 6mm THK DOUBLE TEMPERED GLAZING	

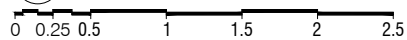
NOTES:  
SHOP DRAWINGS AND TECHNICAL SPECIFICATIONS FOR ALL DOORS AND WINDOWS SHOWING DETAILS OF SECTIONS, ASSEMBLY, TYPE OF LOCKS, HINGES, BOLTS AND HANDLES SHOULD BE SUBMITTED BY THE CONTRACTOR FOR THE CONSULTANTS APPROVAL.

- ALL MEASUREMENTS TO BE CHECKED ON SITE
- ALL ELEVATIONS SHOWN FROM OUTSIDE AND ALL SWINGS OPEN OUT (UNLESS NOTED OTHERWISE)

CG = CLEAR GLAZING  
 FG = FIXED GLAZING  
 RG = REFLECTIVE GLASS  
 FRG = FIXED REFLECTIVE GLASS  
 FCG = FIXED CLEAR GLASS  
 TG = TEMPERED GLASS  
 ST = SOLID TIMBER  
 AL = ALUMINUM LOUVERS  
 SL = SLIDING

— SLIDING DIRECTION

**01 DOOR WINDOW SCHEDULE 03**  
SCALE 1:50



**NOTES:**

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**PROJECT**

**PROPOSED LPG STATION**

**LOCATION**

GDH.THINADHOO

**TYPE**

INDUSTRIAL

**CLIENT**

MALDIVES GAS

**DRAWING TITLE**

AS GIVEN

**SCALE**

AS GIVEN

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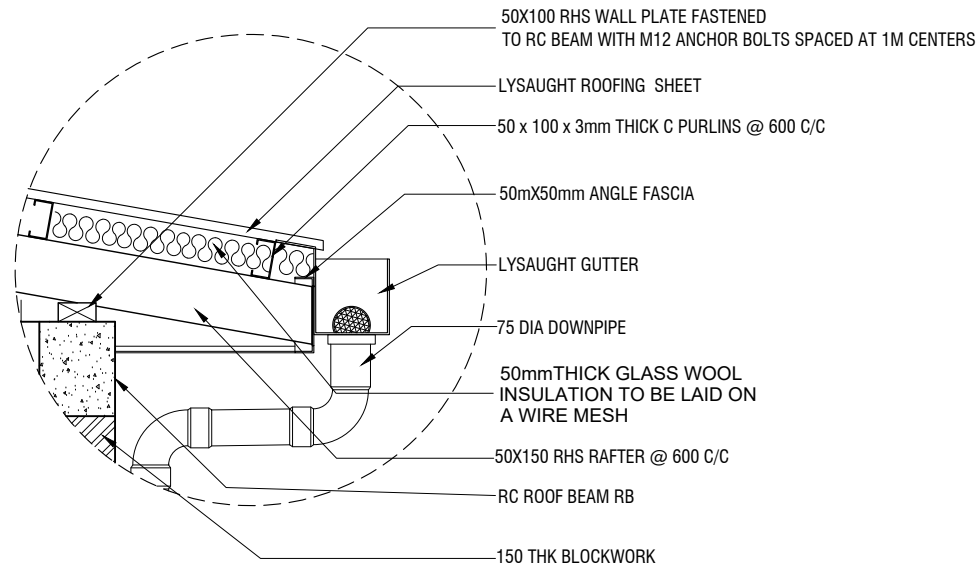
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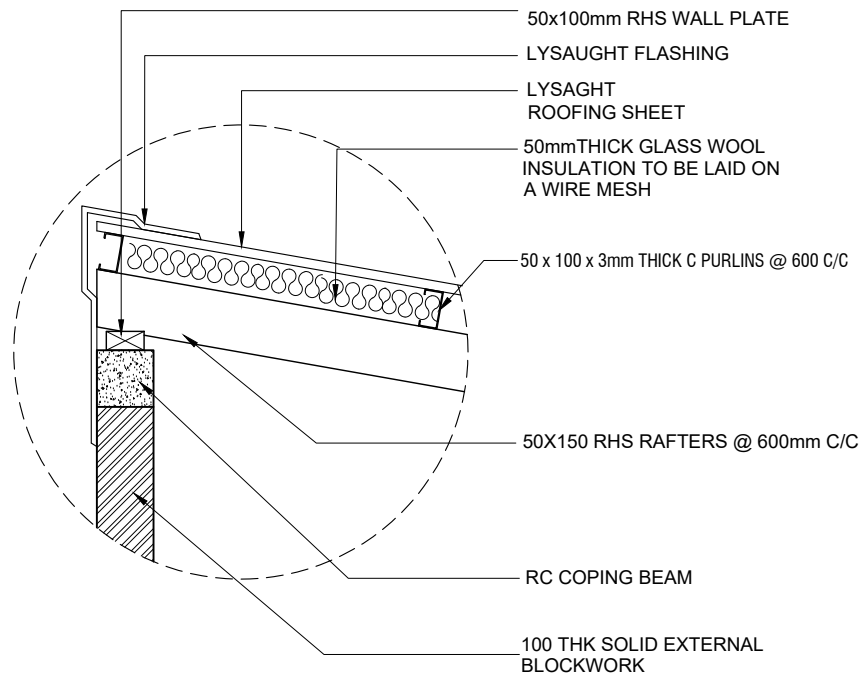
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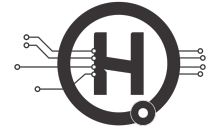


**01** **DETAIL - A**  
SCALE 1:20



**02** **DETAIL - B**  
SCALE 1:20





**HYDRON**  
ENGINEERING

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**SCALE**

AS GIVEN

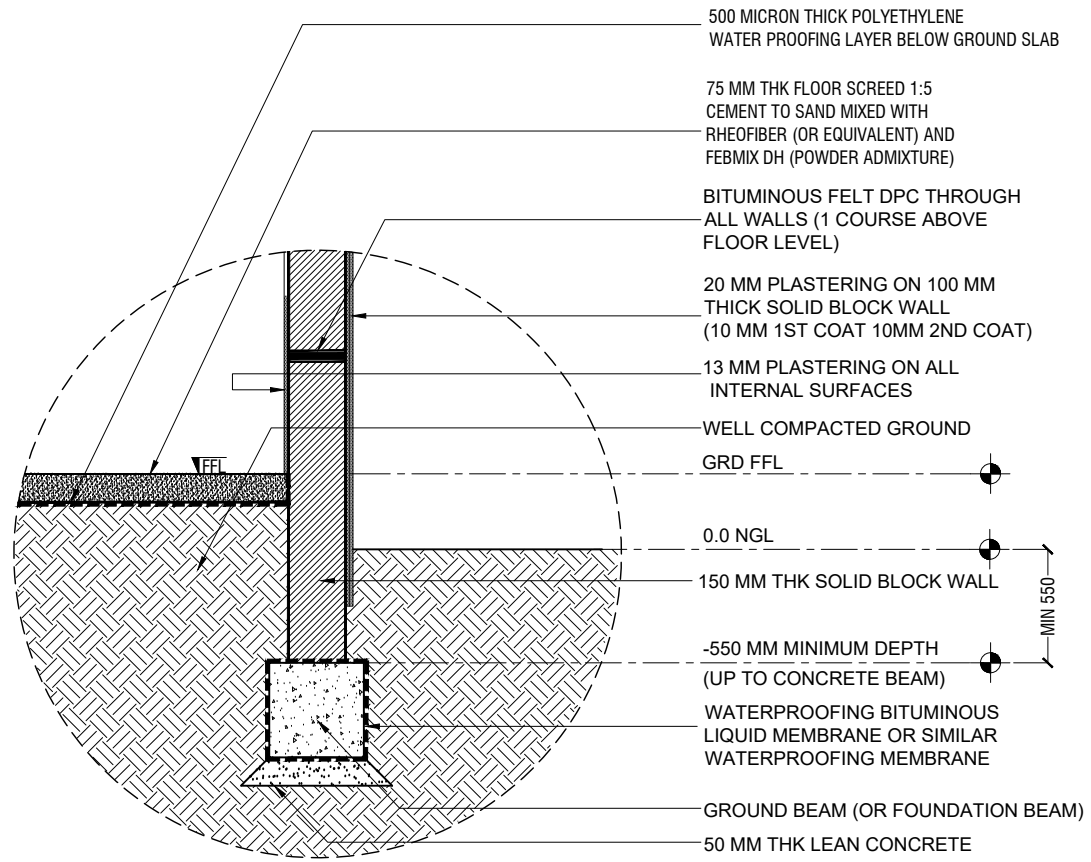
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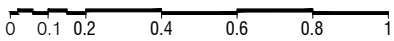
DESIGNED BY -

CHECKED BY -

REV	DESCRIPTION	DATE



**01** DETAIL C - PERIMETER WALL  
SCALE 1:20



# GENERAL NOTES

## GENERAL

1. THE CONTRACTOR IS REQUIRED TO SUBMIT COORDINATED M&E PENETRATION DRAWINGS FOR APPROVAL.
2. ALL STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND SERVICE DRAWINGS, SPECIFICATIONS AND WRITTEN INSTRUCTIONS IF ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED FOR DECISION BEFORE PROCEEDING WITH THE WORK. IF A CONFLICT OCCURS BETWEEN GENERAL SPECIFICATIONS AND ANY OF THESE DRAWINGS, THE INDIVIDUAL DRAWINGS SHALL GOVERN.
3. THE DRAWINGS SHALL NOT BE SCALED. ALL DIMENSIONS RELEVANT TO SETTING OUT AND OFF-SITE SHALL BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION AND FABRICATION IS COMMENCED.
4. DURING THE CONSTRUCTION PERIOD THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN THE STABILITY OF STRUCTURE AND ENSURE THAT NO STRUCTURAL ELEMENT BE OVERSTRESSED UNDER CONSTRUCTION ACTIVITIES.
5. WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE RELEVANT RECENT BS CODES OR OTHER ACCEPTABLE STANDARDS.
6. BASED ON THE DRAWINGS AND SPECIFICATIONS THE CONTRACTOR SHALL PRODUCE STRUCTURAL SHOP DRAWINGS FOR APPROVAL IF REQUESTED.
7. ALL DIMENSIONS TO STRUCTURAL DRAWINGS ARE IN MILLIMETERS UNLESS STATED OTHERWISE. ALL LEVELS ARE EXPRESSED IN METERS.
8. THE REINFORCED CONCRETE DESIGN IS BASED ON BS 8110 'STRUCTURAL USE OF CONCRETE'
9. REFER TO STANDARD AND TYPICAL DETAILS AS SHOWN IN THE TYPICAL DRAWINGS FOR DETAILS NOT SHOWN SPECIFICALLY.
10. ALL PROPS AND FRAMEWORK FOR BEAMS AND SLABS SHALL BE REMOVED BEFORE CONSTRUCTION OF ANY MASONRY WALLS OR OTHER PERMANENT LOADING ON THE SLAB.
11. ALL NON-LOAD BEARING WALLS SHALL BE KEPT CLEAR OFF THE UNDERSIDE OF SLABS AND BEAMS BY 30MM. THE JOINT SHALL BE FILLED WITH FIBRE BOARD OR COMPRESSIBLE MATERIAL PRESSED METAL COVERING BOTH SIDES OF THE JOINT, AND THE METAL COVERING SHALL BE FIXED TO SOFFIT OF THE BEAM OR SLAB AS THE CASE MAYBE.
12. THE CONTRACTOR IS REQUIRED TO SUBMIT A DRAWING SHOWING THE INTENDED SEQUENCE OF POURING, LOCATION AND DETAILS OF CONSTRUCTION JOINTS TO MINIMIZE THE POSSIBILITY OF OCCURRENCE OF SHRINKAGE CRACKS.
13. PRIOR TO COMMENCEMENT OF WORK THE CONTRACTOR SHALL SUBMIT THE FOLLOWING FOR THE APPROVAL BY THE EMPLOYER'S PERSONNEL:
  - 13.1. METHOD AND SEQUENCE OF CONSTRUCTION.
  - 13.2. DESIGN AND CALCULATION OF TEMPORARY SUPPORT TO EXCAVATION PREPARED AND APPROVED BY AN ACCREDITED GEOTECHNICAL ENGINEER.
  - 13.3. INSTRUMENTATION PROGRAMME TO MONITOR SOIL MOVEMENT, WATER TABLE AND SETTLEMENT.
  - 13.4. EFFECTS OF GROUND WATER LEVEL DRAW-DOWN.
  - 13.5. PRECAUTIONARY MEASURES TO AVOID DAMAGE TO NEIGHBORING BUILDING STRUCTURES.

## FOUNDATIONS

1. ALL FOUNDATIONS HAS BEEN DESIGNED FOR SAFE GROUND PRESSURE OF 150 kN/m<sup>2</sup>
2. ALL BACKFILL SHOULD BE DONE WITH APPROVED MATERIAL AND SOURCE. ALL BACKFILL SHOULD BE STRUCTURAL FILL, COMPACTED IN LAYERS AS SPECIFIED.
3. WEAK POCKETS FOUND BELOW THE ASSUMED FOUNDATION LEVELS SHALL BE REMOVED AND REPLACED BY PLAIN CONCRETE.
4. IN CASE OF EXCAVATIONS BELOW THE ASSUMED LEVEL OF THE FOUNDATION, THE SOIL SHALL BE REPLACED BY PLAIN CONCRETE.
5. IN CASE GROUND WATER IS PRESENT ABOVE FOUNDATION LEVEL, THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING THE SITE, AND LOWERING THE GROUND WATER TO AT LEAST 70 cm BELOW LEVEL OF FOUNDATIONS.
6. THE CONTRACTOR SHALL MAINTAIN DRY WORKING CONDITIONS THROUGHOUT THE CONSTRUCTION PERIOD. RESTORING WATER TABLE CAN BE DONE AFTER BACKFILLING AND COMPACTION UP TO THE SLAB ON GRADE LEVEL, OR AS DIRECTED BY THE ENGINEER.
7. NO BACK FILLING SHALL BE PLACED AGAINST WALLS RETAINING EARTH, UNLESS THE WALLS ACHIEVE SUFFICIENT STRENGTH TO PREVENT MOVEMENT OR STRUCTURAL DAMAGE.

## CONCRETE

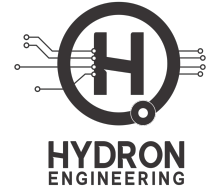
1. CEMENT SHALL BE ORDINARY PORTLAND CEMENT TO BS 12.
2. CONCRETE GRADE:
  - 2.1. ALL IN-SITU STRUCTURAL CONCRETE SHALL HAVE MINIMUM 28 DAYS CUBE STRENGTH AS SPECIFIED ON FOUNDATION PLAN TO THE RELEVANT CLAUSES OF BS5328.
  - 2.2. ALL PLAIN CONCRETE (OR BLINDING) SHALL HAVE MINIMUM 28 DAYS CUBE STRENGTH OF 15 N/mm<sup>2</sup>, TO THE RELEVANT CLAUSES OF BS5328.
3. AGGREGATES SHALL BE TO BS 882 WITH A NOMINAL SIZE OF 20 mm
4. SULPHATE RESISTING CEMENT SHALL BE USED FOR ALL CONCRETE IN CONTACT WITH GARBAGE.
5. NO OPENINGS, HOLES, CHASES OR EMBEDMENT OF PIPES OTHER THAN THOSE IN THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT PRIOR APPROVAL.
6. CONSTRUCTION AND EXPANSION JOINTS SHALL BE PROPERLY FORMED AND USED ONLY WHERE SHOWN OR SPECIFICALLY APPROVED.
7. NO ELECTRICAL CONDUIT AND PIPES ARE TO BE CAST IN COLUMNS OR THROUGH BEAMS WITHOUT PRIOR APPROVAL UNLESS OTHERWISE SHOWN IN THE DRAWINGS.
8. OPENING IN SLABS:
  - 8.1. FOR OPENING LESS THAN 300 x 300 mm, BARS SHALL BE RE-ARRANGED AROUND THE OPENING.
  - 8.2. FOR OPENINGS GREATER THAN 300 x 300 mm BUT LESS THAN 450 x 450 mm AND NOT SHOWN ON PLAN, PROVIDE 2 DIA 12 TOP AND BOTTOM ALONG EACH SIDE AND T16 DIAGONALLY AT CORNERS OR AS OTHERWISE DETAILED. AMOUNT OF BARS DISCONTINUED DUE TO THE OPENING SHALL BE PLACED AT THE RESPECTIVE SIDES.
  - 8.3. OPENINGS GREATER THAN 450 x 450 mm AND NOT SHOWN ON PLAN SHALL BE APPROVED.
9. SHEAR KEY SHALL BE PROVIDED AT ALL CONSTRUCTION JOINTS.
10. WATERPROOFING SYSTEM AS SPECIFIED IN THE SPECIFICATIONS SHALL BE USED IN STRUCTURAL ELEMENTS WHICH ARE CONTINUOUSLY IN CONTACT WITH SOIL OR WATER ON LIFT PIT, ROOF SLAB, R.C. RETAINING WALL AND RAFT ETC.
11. TO PROVIDE INTEGRAL SEALING BETWEEN CONCRETE CAST IN-SITU IN SEPARATE POUR, APPROVED WATERSTOP HAS TO BE INSTALLED FOR ALL CONSTRUCTION JOINTS IN CONTACT WITH WATER AND SOIL.
12. SPECIAL RULES REGARDING CONCRETING IN HOT WEATHER SHALL BE OBSERVED.

## REINFORCEMENT

1. HIGH STRENGTH DEFORMED BARS DENOTED T SHALL CONFIRM TO BS-4449 WITH MINIMUM YIELD STRENGTH Fy= 460 N/mm<sup>2</sup>, MILD STEEL DENOTED R SHALL HAVE 250 N/mm<sup>2</sup> YIELD STRENGTH. WELDED WIRE MESH SHALL COMPLY WITH BS-4483.
2. SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN THE POSITION SHOWN OR AS OTHERWISE APPROVED
3. SPACER BARS SHALL BE PROVIDED AT 100cm CENTERS WHEREVER REINFORCEMENT IS PLACED IN MORE THAN ONE LAYER, UNLESS STATED OTHERWISE
4. WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED. IF REINFORCEMENT SHOULD BE WELDED, APPROVAL IS REQUIRED.
5. ALL REINFORCEMENT SHALL BE SUPPORTED IN ITS CORRECT POSITION DURING CONCRETING BY APPROVED BAR CHAIRS, SPACERS, OR SUPPORT BARS.
6. TYPICAL DEVELOPMENT AND SPLICES OF DEFORMED BARS WITH Fy = 460 N/mm<sup>2</sup> AND Fcu = 30 N/mm<sup>2</sup>, (CUBE STRENGTH) SHALL BE AS FOLLOWS, UNLESS OTHERWISE MENTIONED IN DRAWINGS:
  - 6.1. BASIC TENSION DEVELOPMENT LENGTH, LD = 56 x BAR DIA
  - 6.2. MINIMUM COMPRESSION DEVELOPMENT LENGTH, LDC = 40 x BAR DIA (OR 300mm WHICH EVER IS MORE)
7. BENDING OF REINFORCEMENTS SHALL BE IN ACCORDANCE WITH BS 4466.

## ABBREVIATIONS

APPROX	-APPROXIMATE
B	-BEAM
B.W.	-BOTHWAYS
BOT OR BTM	-BOTTOM
BOB	-BOTTOM OF BASE
BOS	-BOTTOM OF STEEL
BOT	-BOTTOM OF TRUSS
(B1)	-BOTTOM STEEL BOTTOM RNFMT.
(B2)	-BOTTOM STEEL TOP RNFMT.
BLDG	-BUILDING
¢	-CENTER LINE
C/C	-CENTER TO CENTER
C	-COLUMN
CO-ORD	-CO-ORDINATE
DPC	-DAMP PROOF COURSE
DET OR DTL	-DETAIL
DIA	-DIAMETER
D/B	-DISTRIBUTION BAR
DWG	-DRAWING
EF	-EACH FACE
EW	-EACH WAY
EL	-ELEVATION (HEIGHT)
ELEV	-ELEVATION (VIEW)
FF	-FAR FACE
FS	-FAR SIDE
FW	-FILLET WELD
FFL	-FINISHED FLOOR LEVEL
FDN OR FND	-FOUNDATION
FB	-FOUNDATION BEAM
GA	-GENERAL ARRANGEMENT
G.I.	-GALVANIZED IRON
IL	-INVERT LEVEL
LG	-LONG OR LENGTH
MAX	-MAXIMUM
MKD	-MARKED
MIN	-MINIMUM
MISC	-MISCELLANEOUS
N/F	-NEAR FACE
N/S	-NEAR SIDE
NOM	-NOMINAL
NTS	-NOT TO SCALE
Nos	-NUMBERS
O/D	-OUTSIDE DIAMETER
PL	-PAVEMENT LEVEL
PROJ	-PROJECTION
QTY	-QUANTITY
RAD	-RADIUS
R.C.	-REINFORCED CONCRETE
REQ'D	-REQUIRED
SW	-SHEAR WALL
STIFF	-STIFFENER
SQ	-SQUARE
SFL	-STRUCTURAL FINISH LEVEL
THK	-THICK (NESS)
TEMP	-TEMPORARY
TOB	-TOP OF BEAM
TOC	-TOP OF COLUMN
TOG	-TOP OF GROUT
TO Platf	-TOP OF PLATFORM
TS	-TOP OF SLAB
TOS	-TOP OF STEEL
TOT	-TOP OF TRUSS
TYP	-TYPICAL
U/S	-UNDERSIDE
UNO	-UNLESS NOTED OTHERWISE
(T1)	-TOP STEEL TOP RNFMT.
(T2)	-TOP STEEL BOTTOM RNFMT.
(UPB)	-UPSTAND BEAM



### NOTES:

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- SHOP DRAWINGS SHALL BE APPROVED BEFORE COMMENCING OF CONSTRUCTION OR MANUFACTURING

### PROJECT

**PROPOSED LPG STATION**

### LOCATION

GDH.THINADHOO

### TYPE

INDUSTRIAL

### CLIENT

MALDIVES GAS

### DRAWING TITLE

AS GIVEN

### SCALE

AS GIVEN

### STRUCTURAL DRAWING

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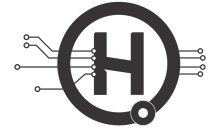
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CHECKED BY -

REV	DESCRIPTION	DATE

DATE  
APRIL 2021  
SHEET SIZE  
A4

DRAWING NO:  
**SD-1.01**



**HYDRON**  
ENGINEERING

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**PROJECT**  
**PROPOSED LPG STATION**

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MALDIVES GAS

**DRAWING TITLE**  
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**SCALE**  
AS GIVEN

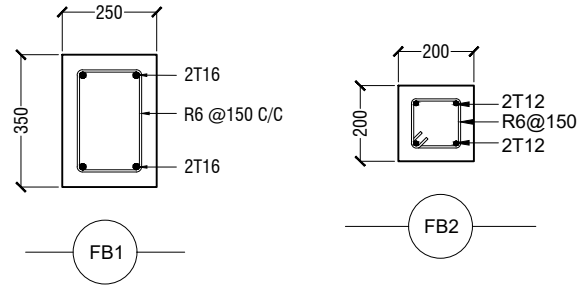
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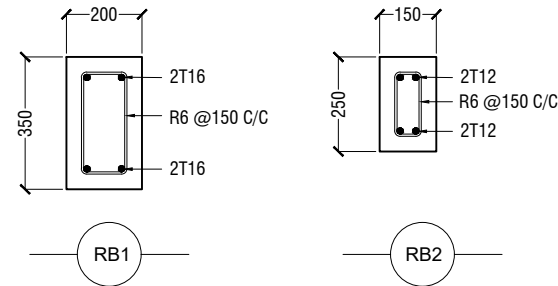
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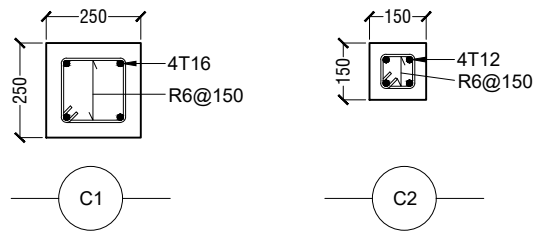
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**01 FOUNDATION BEAM DETAILS**



**02 ROOF BEAM DETAILS**



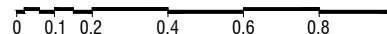
**03 RC COLUMN DETAILS**

**RC COVER & CONCRETE GRADE SCHEDULE (BS 5328)**

MEMBER	COVER	CONCRETE GRADE
FOUNDATION BEAMS AND PADS	50 mm	C30
COLUMNS	40 mm	
FLOOR BEAMS	40 mm	
FLOOR SLABS & STAIRCASES	30 mm	
STIFFENER AND LINTEL	30 mm	C25
MASS CONCRETE	-	C25
LEAN CONCRETE	-	C15

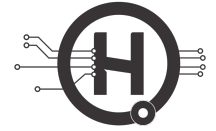
**STRUCTURAL DETAILS 1**

SCALE 1:20



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APRIL 2021  
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**SD-6.01**



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ENGINEERING

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**PROJECT**

**PROPOSED LPG STATION**

**LOCATION**

GDH.THINADHOO

**TYPE**

INDUSTRIAL

**CLIENT**

MALDIVES GAS

**DRAWING TITLE**

AS GIVEN

**SCALE**

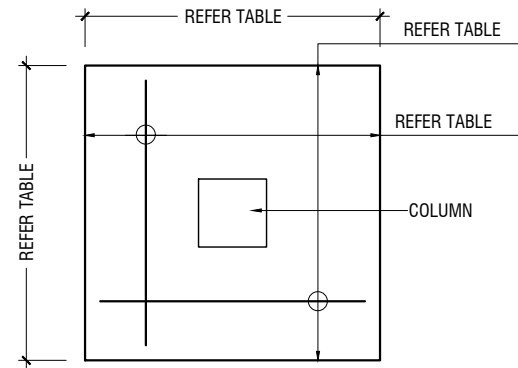
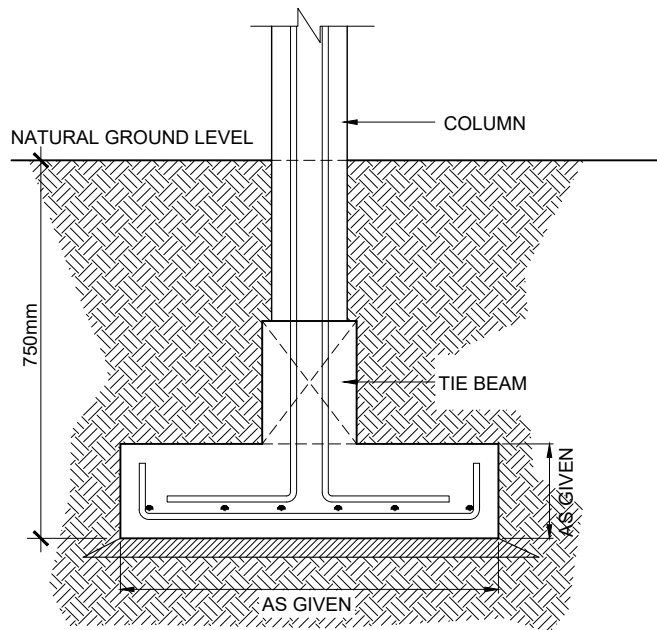
AS GIVEN

**STRUCTURAL DRAWING**

DRAWN BY -

DESIGNED BY -

CHECKED BY -



TYPE	DIMENSIONS	REINFORCEMENT
F1	800mm x 800mm x 300mm	T12@150 C/C B/W BOTTOM
FOUNDATION DEPTH = 750mm BELOW NATURAL GROUND LEVEL		

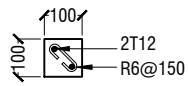
01 TYPICAL FOOTING DETAILS

SCALE 1:20



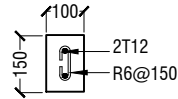
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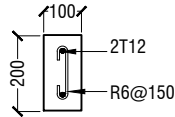
**STIFFENER COLUMN (SC)**

COVER = 30 MM



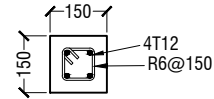
**COPING BEAM (CB)**

COVER = 30 MM (T/B)



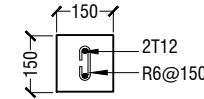
**LINTEL BEAM**

COVER = 30 MM



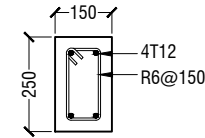
**STIFFENER COLUMN (SC)**

COVER = 30 MM



**COPING BEAM (CB)**

COVER = 30 MM (T/B)



**LINTEL BEAM**

COVER = 30 MM

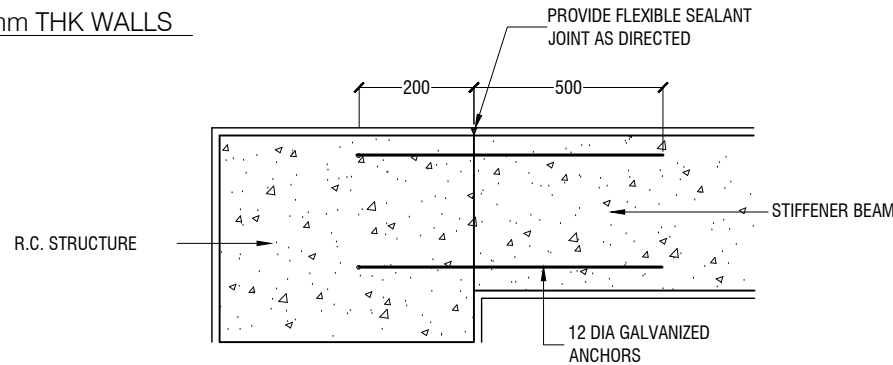
**01 TYPICAL RC MEMBER DETAILS FOR 100mm AND 150mm THK WALLS**

SCALE 1:20



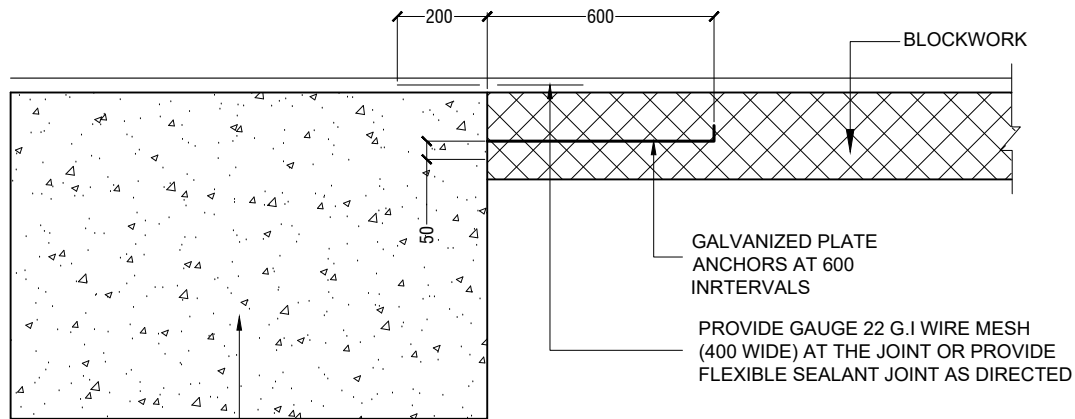
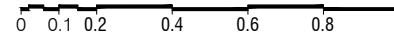
**NOTE:**

1. STIFFNER BEAMS/ COLUMNS SHALL BE REQUIRED TO WALL AREAS GREATER THAN 12 SQ.M WHICH ARE UNSUPPORTED Laterally BY CONCRETE WALLS OR COLUMNS
2. APPROVED FLEXIBLE SEALANT SHALL BE PROVIDED AT THE INTERFACE OF CONCRETE AND BLOCKWORK MASONRY AS SHOWN
3. BLOCK WORK RATES SHOULD INCLUDE FOR ALL CONSTRUCTION OF R.C. STIFFENER COLUMN / BEAMS FLEXIBLE JOINTS, ANCHORS ETC
4. BLOCK WORK FOR EXTERIOR SHALL BE USED GALVANIE "X" MESH



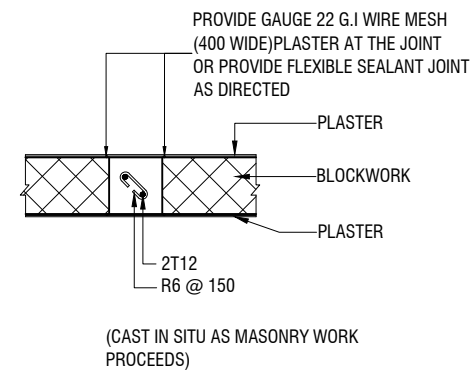
**03 STIFFENER BEAM TO MAIN RC FRAME DETAIL**

SCALE 1:20



**02 BLOCK WORK ANCHOR DETAIL**

SCALE 1:20



**04 STIFFENER TO WALL DETAIL**

SCALE 1:20



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**PROJECT**

**PROPOSED LPG STATION**

**LOCATION**

GDH.THINADHOO

**TYPE**

INDUSTRIAL

**CLIENT**

MALDIVES GAS

**DRAWING TITLE**

AS GIVEN

**SCALE**

AS GIVEN

**STRUCTURAL DRAWING**

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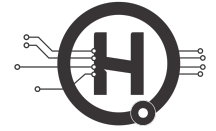
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**SD-6.03**



**HYDRON**  
ENGINEERING

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**LOCATION**

GDH.THINADHOO

**TYPE**

INDUSTRIAL

**CLIENT**

MALDIVES GAS

**DRAWING TITLE**

AS GIVEN

**SCALE**

AS GIVEN

**STRUCTURAL DRAWING**

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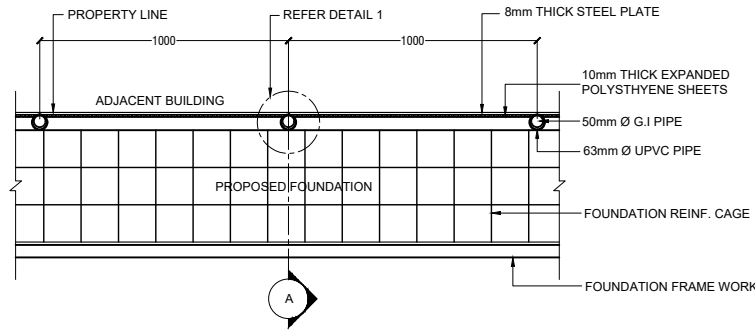
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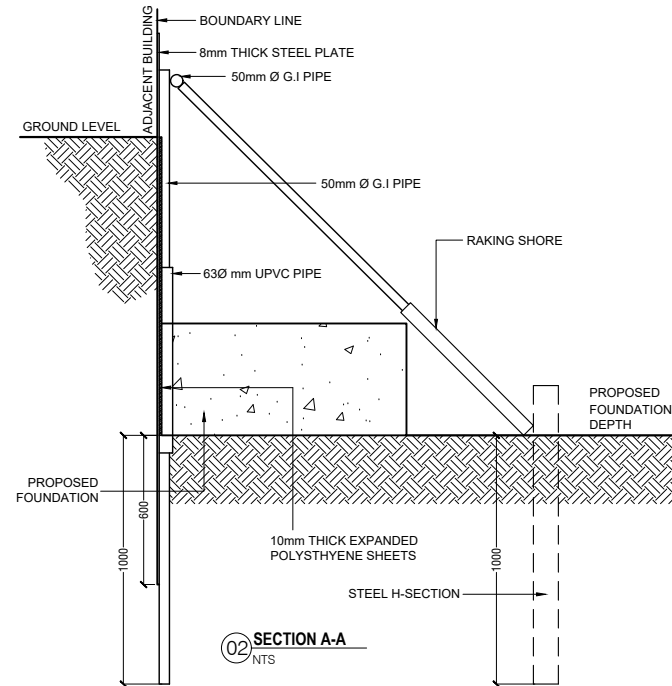
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APRIL 2021  
SHEET SIZE  
A4

DRAWING NO:  
**SD-6.04**



**01 SHORING DETAIL PLAN VIEW**

NTS



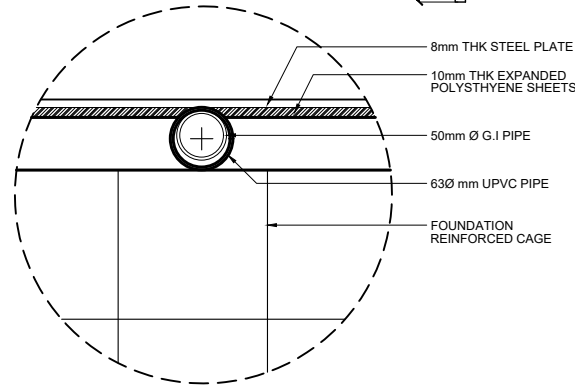
**02 SECTION A-A**

NTS

**METHOD OF PROTECTING ADJACENT STRUCTURES DURING EXCAVATION FOR FOUNDATION**

1. BEFORE THE LEVEL OF EXCAVATION REACHES THE BOTTOM OF THE ADJACENT FOUNDATION, PLACE THE STEEL PLATE AGAINST THE ADJACENT PROPERTY AND DRIVE THE UPRIGHT G.I PIPES (WITH THE UPVC SLEEVES) INTO THE GROUND.
2. DRIVE THE STEEL PLATES 400-500 mm INTO THE GROUND
3. EXCAVATE ANOTHER 300mm DEEPER.
4. DRIVE THE STEEL PLATE ANOTHER 300mm DEEPER.
5. FOLLOW THIS PROCEDURE UNTIL THE REQUIRED DEPTH (AS SHOWN IN THE DIAGRAM) IS REACHED.
6. PROP THE G.I PIPES USING WALING AND RAKING SHORES AS SHOWN IN THE DIAGRAM.
7. POUR THE FOUNDATION.
8. AFTER 3 DAYS REMOVE THE UPRIGHT G.I PIPES AND PLACE THE WALING AGAINST THE STEEL SHEET, USING RAKING SHORES AS BEFORE.
9. GROUT THE SPACE INSIDE UPVC PIPES.
10. WHILE BACKFILLING, REMOVE STEEL SHEETS AND RAKING SHORES.

NOTE  
STEEL PLATES MAY REQUIRE STIFFENING WITH WELDED ANGLES IN BOTH DIRECTIONS. EXCAVATION & SHORE PROTECTION MUST PROCEED IN PORTIONS, DECIDED BASED ON SITE CONDITIONS FOR MAXIMUM SAFETY & PROTECTION.



**03 FOUNDATION PROTECTION METHOD**

NTS

**04 DETAIL 1**

NTS