





REV	BY	APP	DESCRIPTION	DATE

Revisions

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United Nation Development Programme

UNDP Lebanon

Social and Local Development Programme

P.O.Box: 11-3216 Beirut, Lebanon Tel: 961 1 962491

PROGRAMME:



Lebanese Host Communities Support Programme

CONSULTANT:

PROJECT:

BAR ELIAS MARKET (PART 2)

PLOT NO.:BLOCK:

Sheet Information

PROJECT NBR.	-
PROJECT PHASE	TENDER
DISCIPLINE	CIVIL ENGINEERING
SECTOR	-
BUILDING	-
DESIGNED	VB
DRAWN	GB
CHECKED	VB
APPROVED	VB
DATE	01.12.2015
SCALE	-
SHEET SIZE	A3

Sheet Title

Sheet nbr.

Phase	Discipline	Floor Area	Drawing Number	Revision
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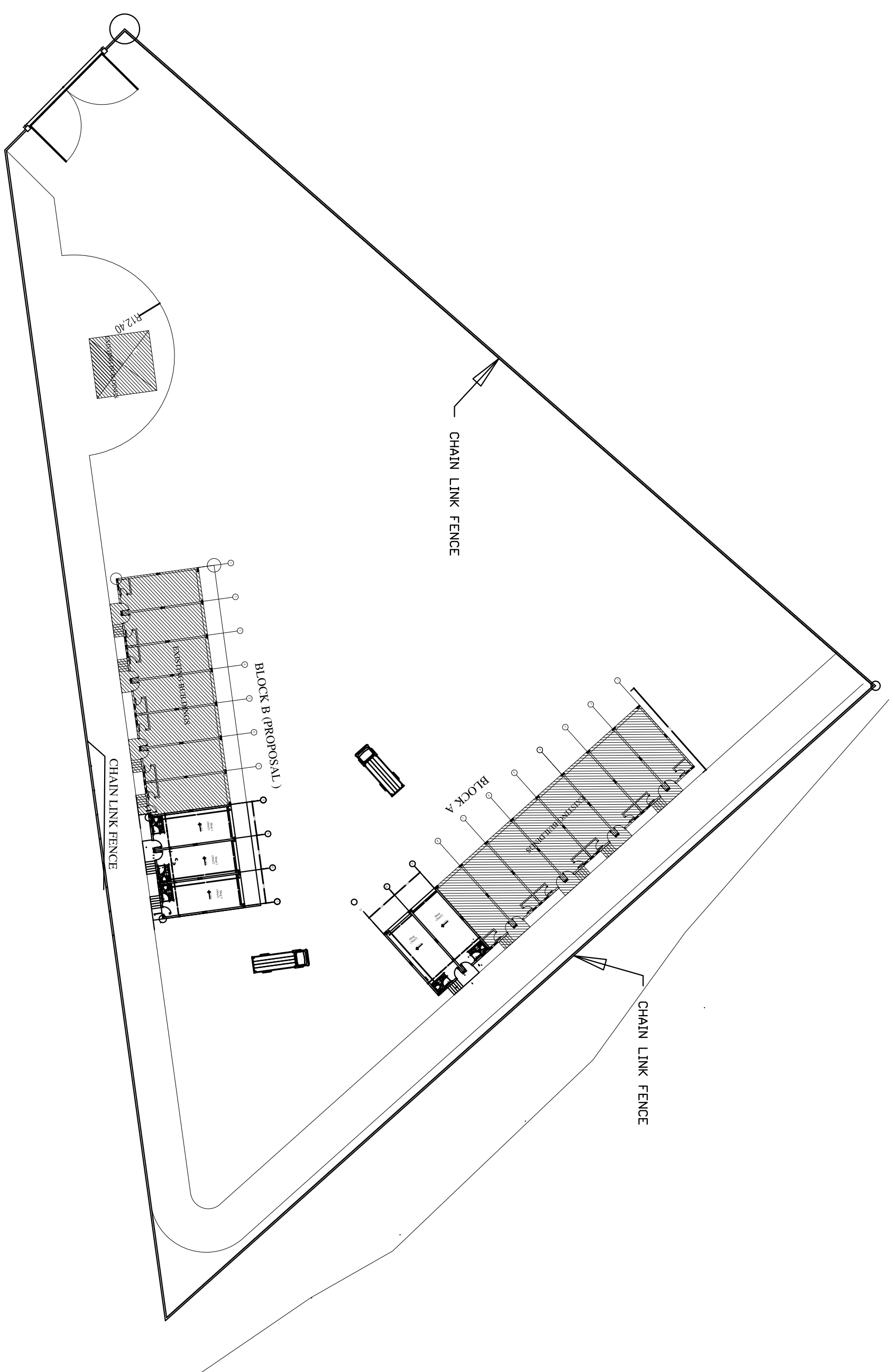
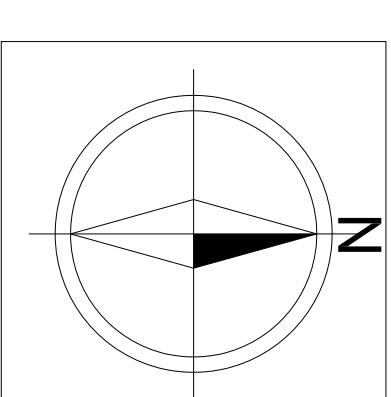
BAR ELIAS MARKET (PART 2)



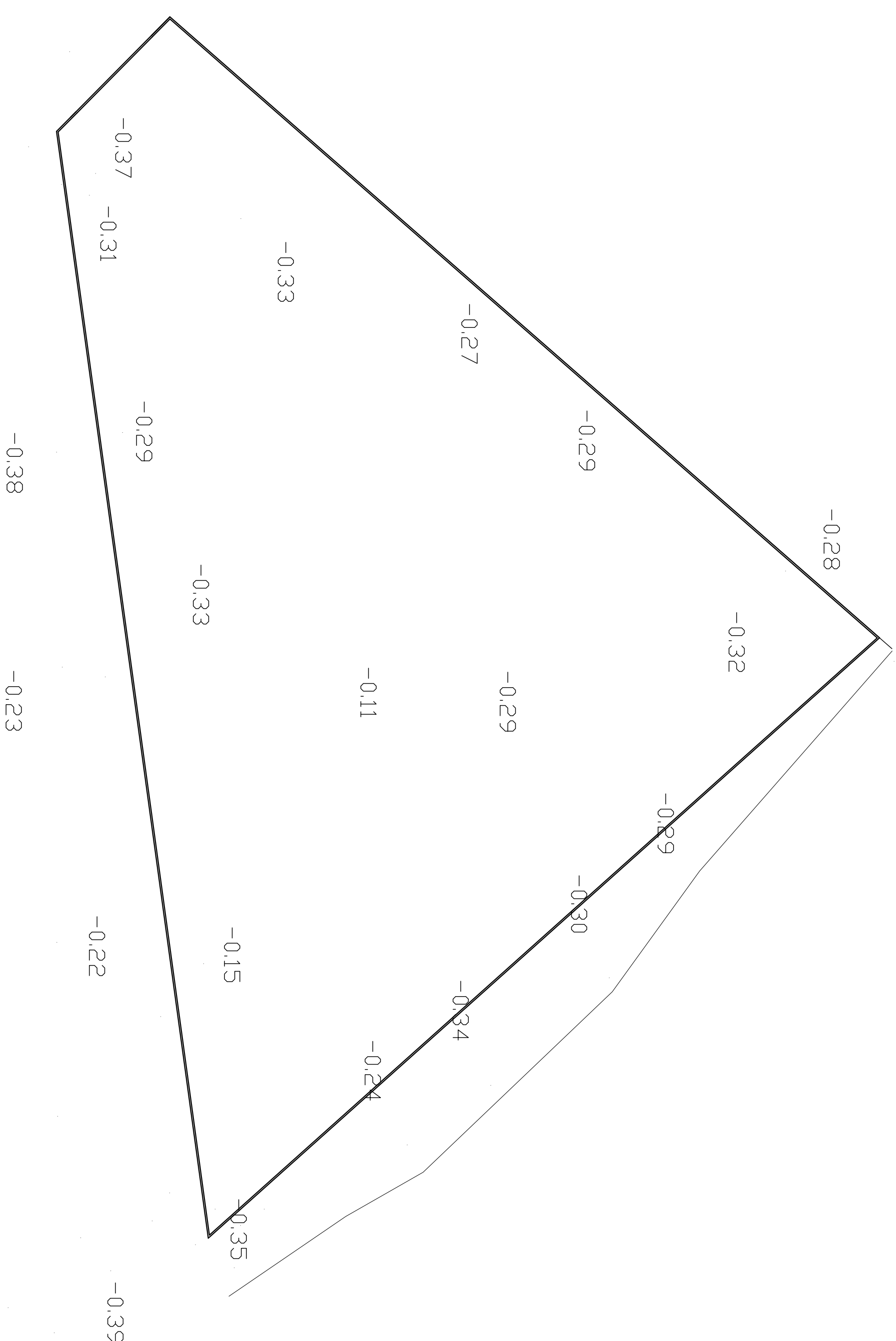
Site Location	
GOVERNORATE	BEKAA
DISTRICT	ZAHLE
CITY	BAR ELIAS
GPS N	33.784026
GPS E	35.956378
ALTITUDE	900 MTS

List of Drawings	
T-C-G-001	SITE AND TOPOGRAPHIC PLAN
T-C-G-002	TOP OF ROOFS AND TREES LOCATION PLAN
T-C-G-003	BLOCK A PLAN, ELEVATIONS 1 & 2 SECTIONS 1 & 2
T-C-G-004	BLOCK B PLAN, ELEVATIONS 1 & 2 SECTIONS 1 & 2
T-C-G-005	METALLIC STRUCTURE CONSTRUCTION DETAILS
T-C-G-006	GENERAL ARCHITECTURAL DETAILS
T-C-G-007	DOORS AND WINDOWS DETAILS
T-C-G-008	CONSTRUCTION DETAILS
T-C-G-009	STRUCTURAL DETAILS
T-C-G-010	DRAINAGE AND WATER SUPPLY LAYOUTS
T-C-G-011	MECHANICAL DETAILS 1/2
T-C-G-012	MECHANICAL DETAILS 2/2
T-C-G-013	LIGHTING AND POWER LAYOUTS
T-C-G-014	SEPTIC TANK DETAILS

Key Plan



SITE PLAN



NOTES:

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UNDP Lebanon
Social and Local Development Programme
P.O.Box: 11-3216 Beirut, Lebanon Tel: 961 1 962491

PROGRAMME

Lebanese Host Communities
Support Programme

CONSULTANT:

CONSULTANT:	
PROJECT:	
BAR ELIAS MARKET (PART 2)	
PLOT NO.:	BLOCK:

Sheet Information

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SECTOR	-
BUILDING	-
DESIGNED	VB
DRAWN	GB
CHECKED	VB
APPROVED	VB
DATE	01.12.2015
SCALE	-
SHEET SIZE	A1

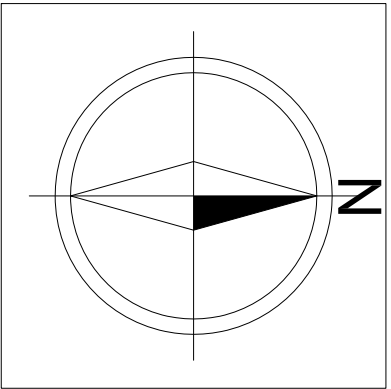
Sheet Title
SITE AND
TOPOGRAPHIC PLAN

Sheet nbr.

T - G - G - 001 - R00

Phase	Discipline	Floor Area	Drawing Number	Revision
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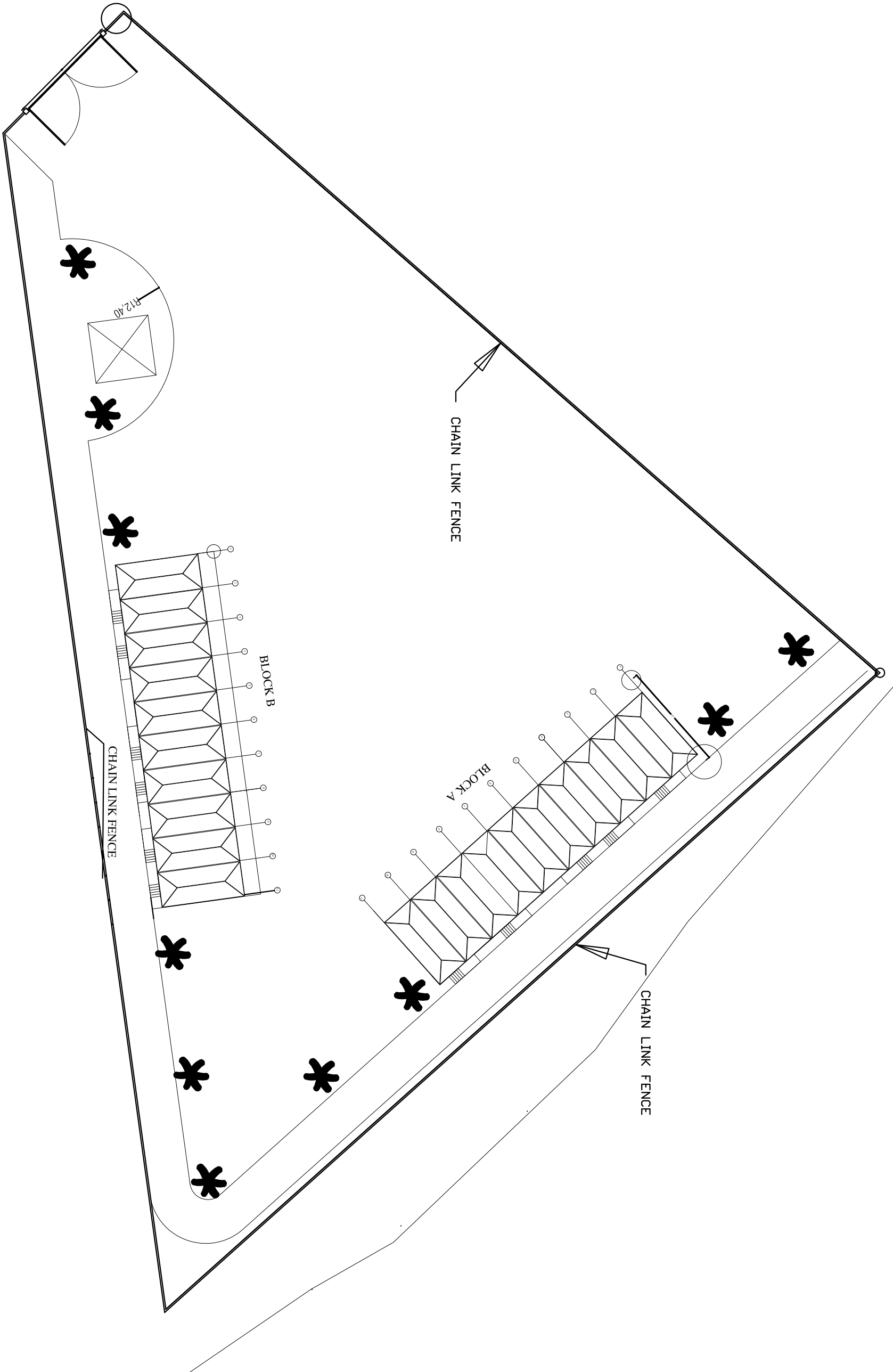
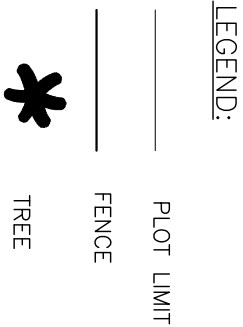
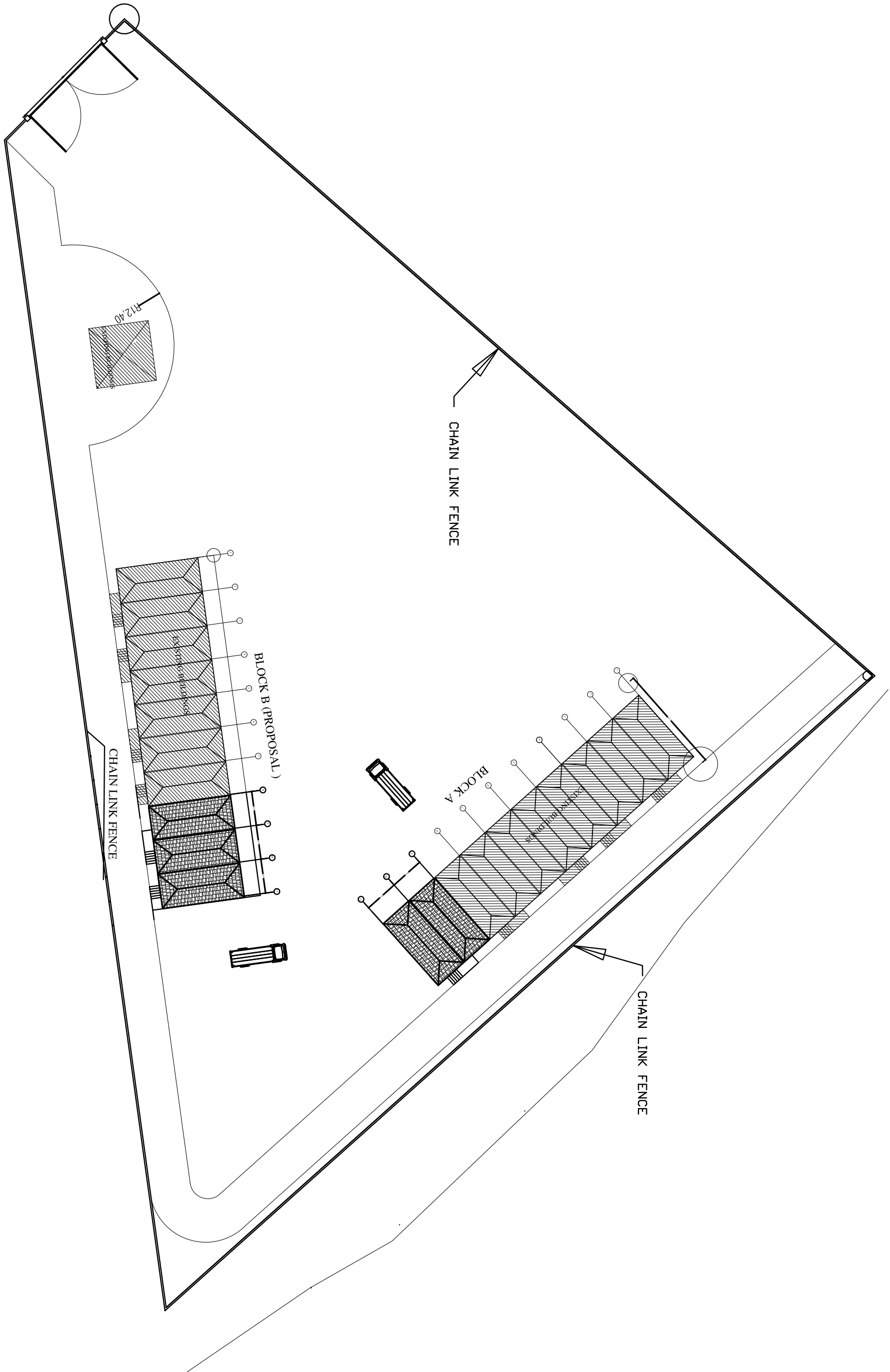
Key Plan



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TOP OF ROOFS PLAN





TREES LOCATIONS

REV	BY	APP	DESCRIPTION	DATE	

Revisions

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 United Nation Development Programme
UNDP Lebanon
Social and Local Development Programme
P.O.Box: 11-3216 Beirut, Lebanon Tel: 961 1 962491

 Lebanese Host Communities
Support Programme

CONSULTANT:

PROJECT:

BAR ELIAS MARKET (PART 2)

PLOT NO.:

BLOCK:

Sheet Information

PROJECT NBR.	-
PROJECT PHASE	TENDER
DISCIPLINE	CIVIL ENGINEERING
SECTOR	-
BUILDING	-
DESIGNED	VB
DRAWN	GB
CHECKED	VB
APPROVED	VB
DATE	01.12.2015
SCALE	-
SHEET SIZE	A1

Sheet Title

TOP OF ROOFS &
TREES LOCATION PLAN

Sheet nbr.

T - C - G - 002 - R00

Phase	Discipline	Floor Area	Drawing Number	Revision
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Key Plan




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PROGRAMME:
Lebanese Host Communities
Support Programme

CONSULTANT:

PROJECT: BAR ELIAS MARKET (PART 2)	
PLOT NO.:	BLOCK:
-	-

Sheet Information

PROJECT NBR.	-
PROJECT PHASE	TENDER
DISCIPLINE	CIVIL ENGINEERING
SECTOR	-
BUILDING	-
DESIGNED	VB
DRAWN	GB
CHECKED	VB
APPROVED	VB
DATE	01.12.2015
SCALE	-
SHEET SIZE	A1

Sheet Title

BLOCK A
PLAN , ELEVATIONS 1 & 2
SECTIONS 1-1 & 2-2

Sheet nbr.

T - C - G - 003 - R00

Phase	Discipline	Floor Area	Drawing Number	Revision




Key Plan



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Social and Local Development Programme
P.O.Box: 11-3216 Beirut, Lebanon Tel: 961 1 962491

PROGRAMME: Lebanese Host Communities Support Programme



CONSULTANT:

PROJECT:	BAR ELIAS MARKET (PART 2)
PLOT NO.:	-
BLOCK:	-

Sheet Information

PROJECT NBR.	-
PROJECT PHASE	TENDER
DISCIPLINE	CIVIL ENGINEERING
SECTOR	-
BUILDING	-
DESIGNED	VB
DRAWN	GB
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APPROVED	VB
DATE	01.12.2015
SCALE	-
SHEET SIZE	A1

Sheet Title

BLOCK B

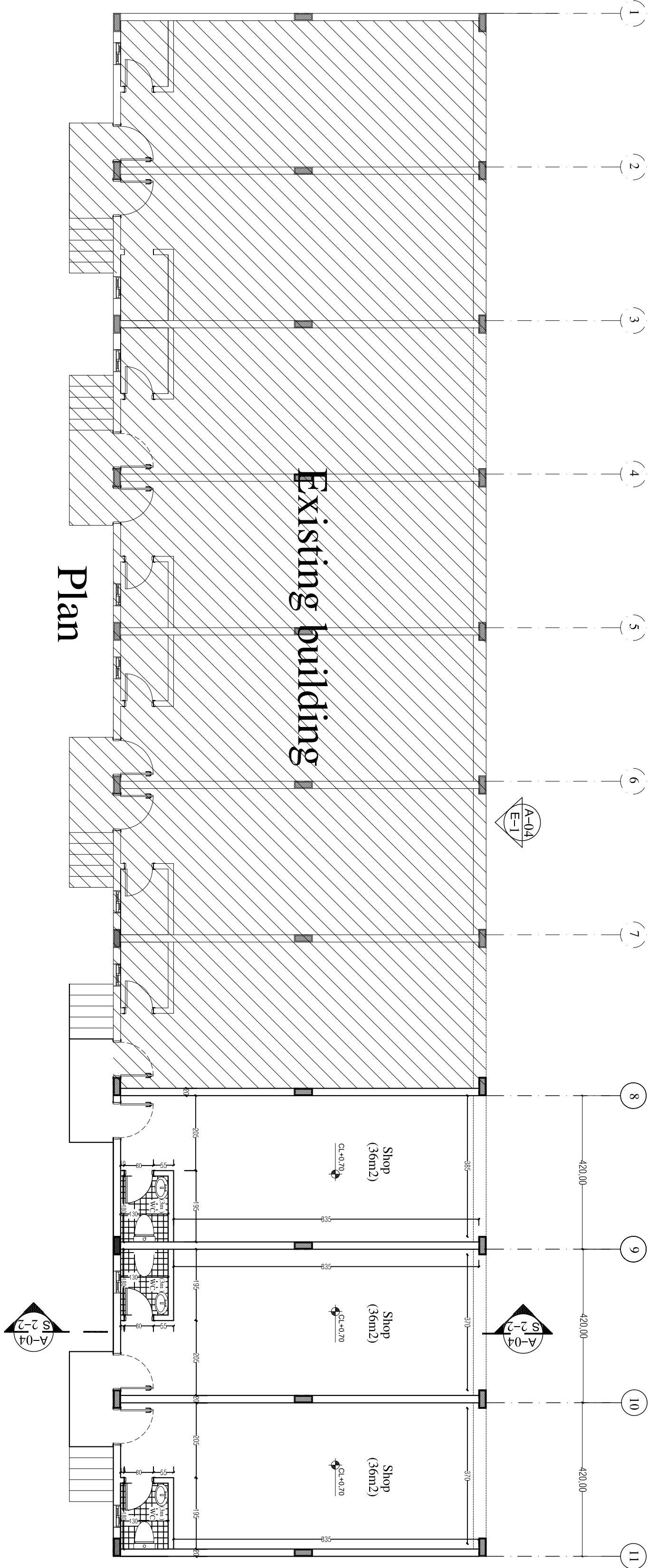
PLAN , ELEVATIONS 1 & 2

SECTIONS 1-1 & 2-2

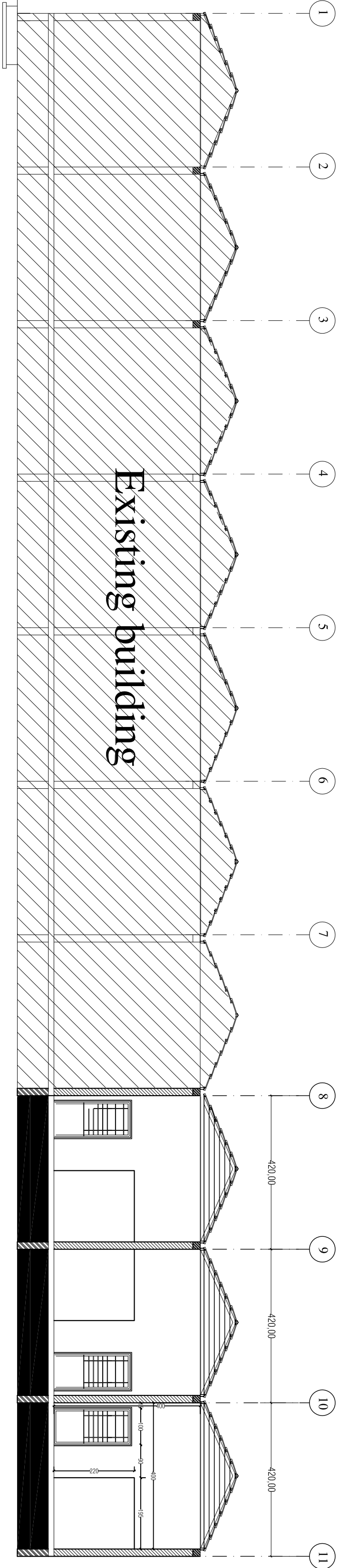
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T - C - G - 004 - R00

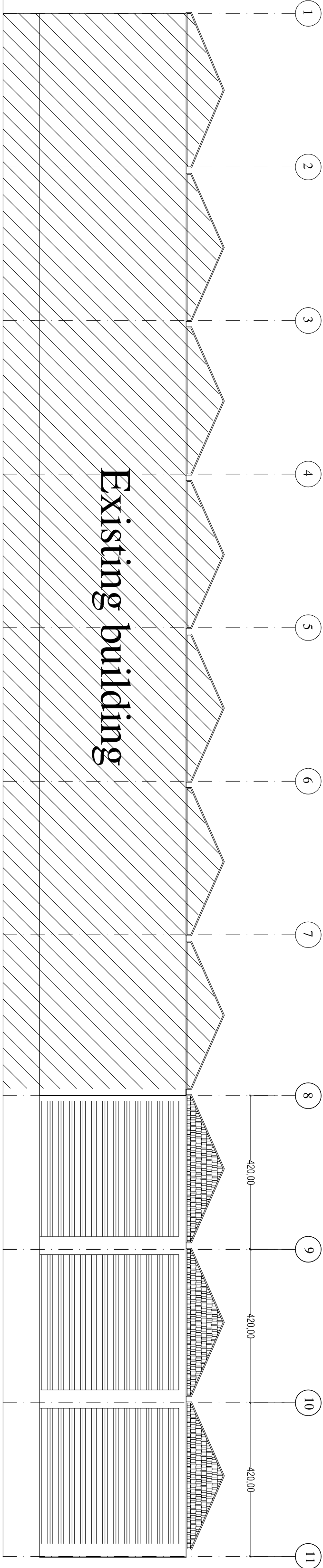
Phase	Discipline	Floor Area	Drawing Number	Revision
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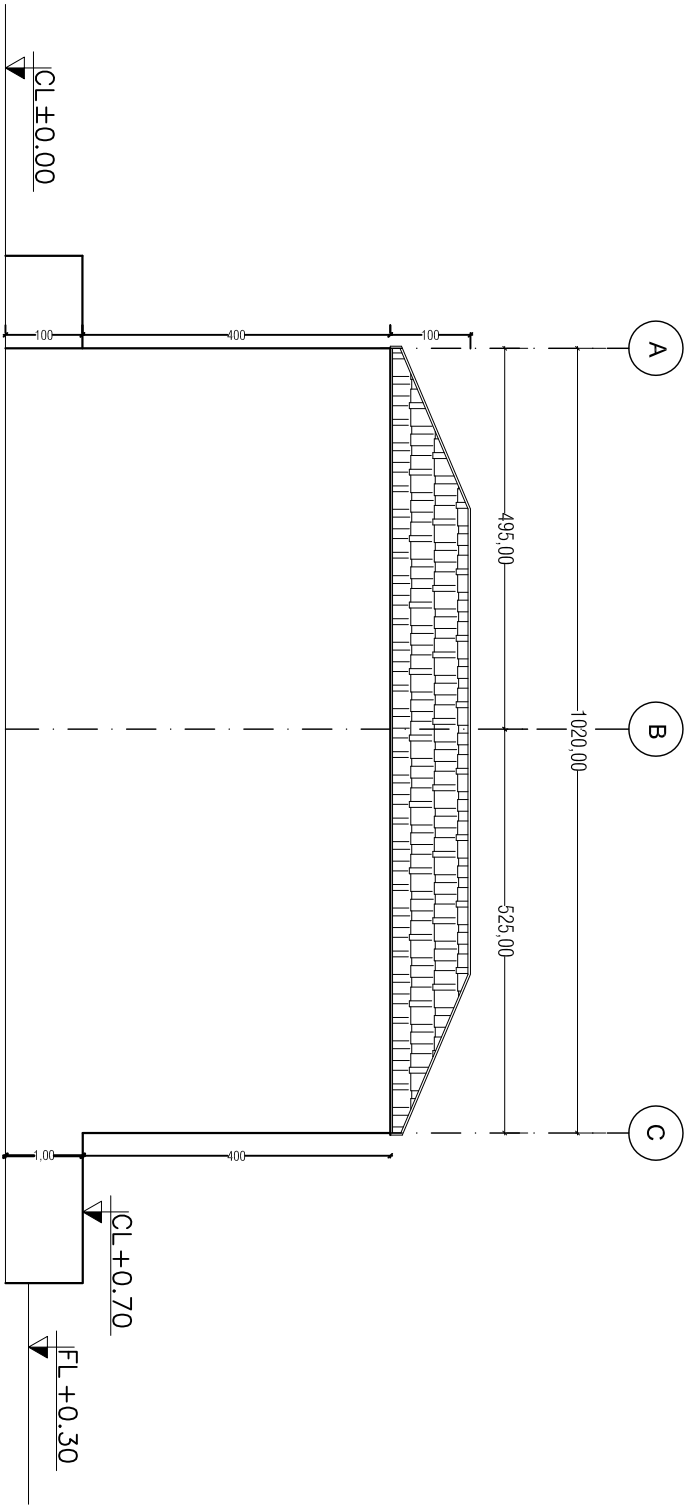
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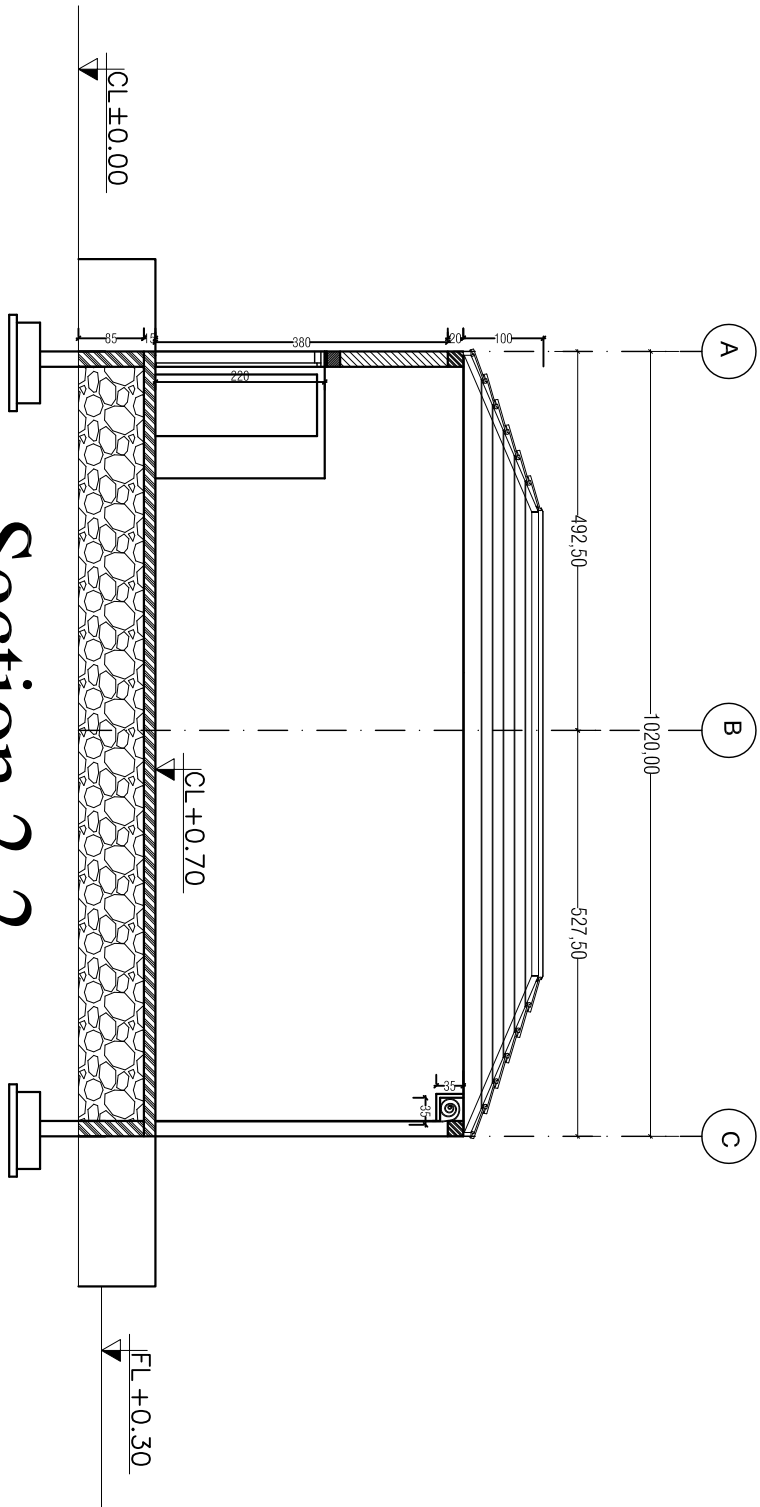
Section 1-1



Elevation 1



Elevation 2



Section 2-2




Key Plan



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PROGRAMME:
Lebanese Host Communities
Support Programme

CONSULTANT:

PROJECT:

BAR ELIAS MARKET (PART 2)

PLOT NO.:

BLOCK:

Sheet Information

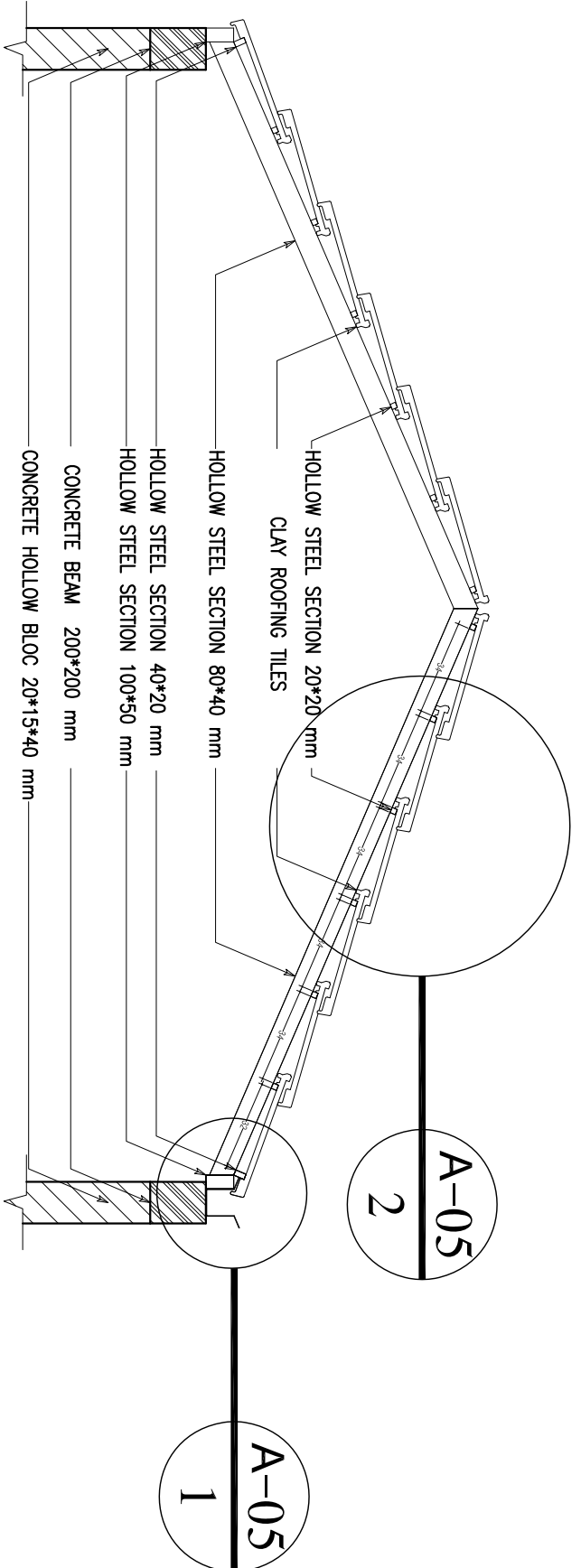
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DISCIPLINE	CIVIL ENGINEERING
SECTOR	-
BUILDING	-
DESIGNED	VB
DRAWN	GB
CHECKED	VB
APPROVED	VB
DATE	01.12.2015
SCALE	-
SHEET SIZE	A1

Sheet Title
METALLIC STRUCTURE
CONSTRUCTION DETAILS

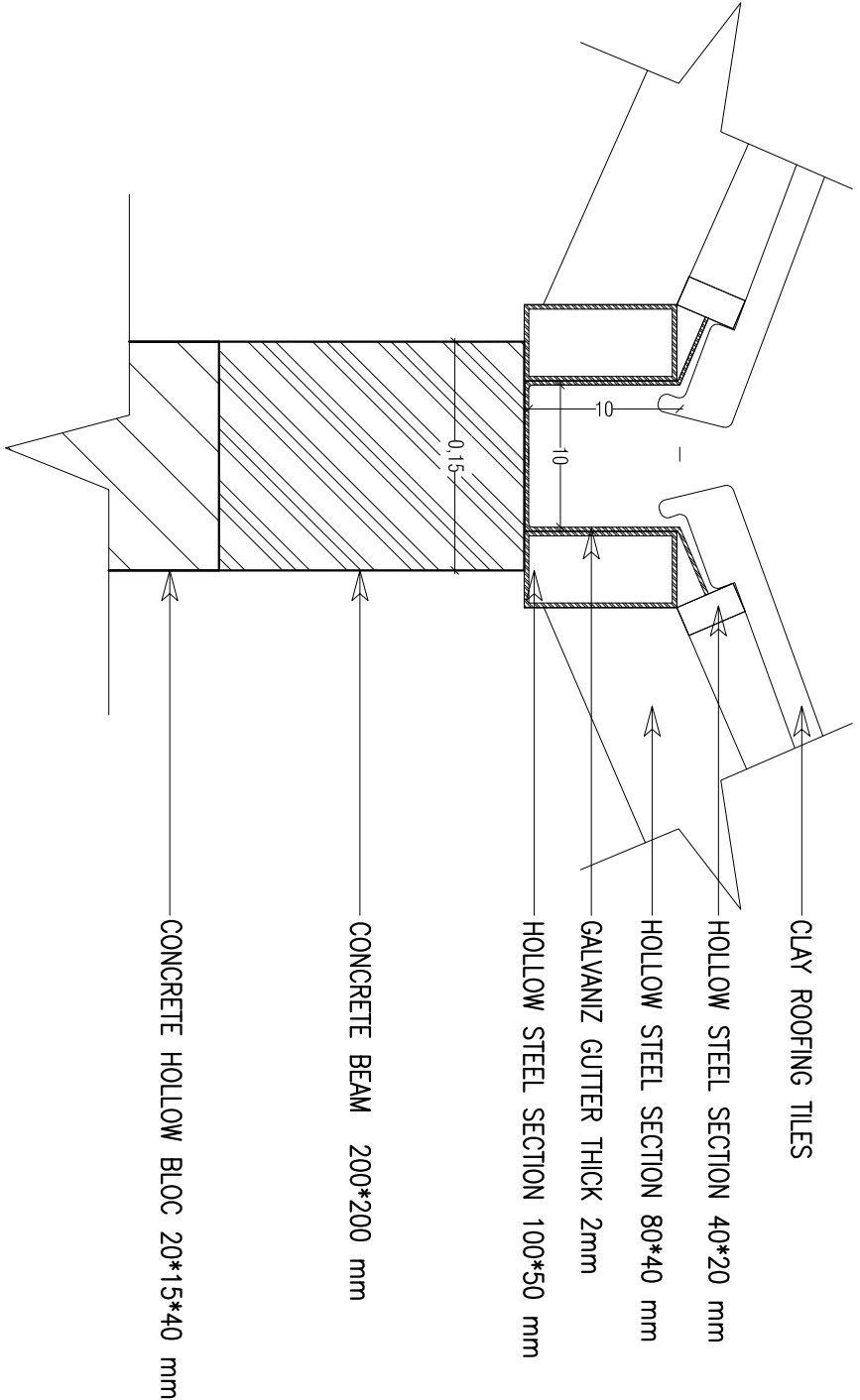
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T - C - G - 005 - R00

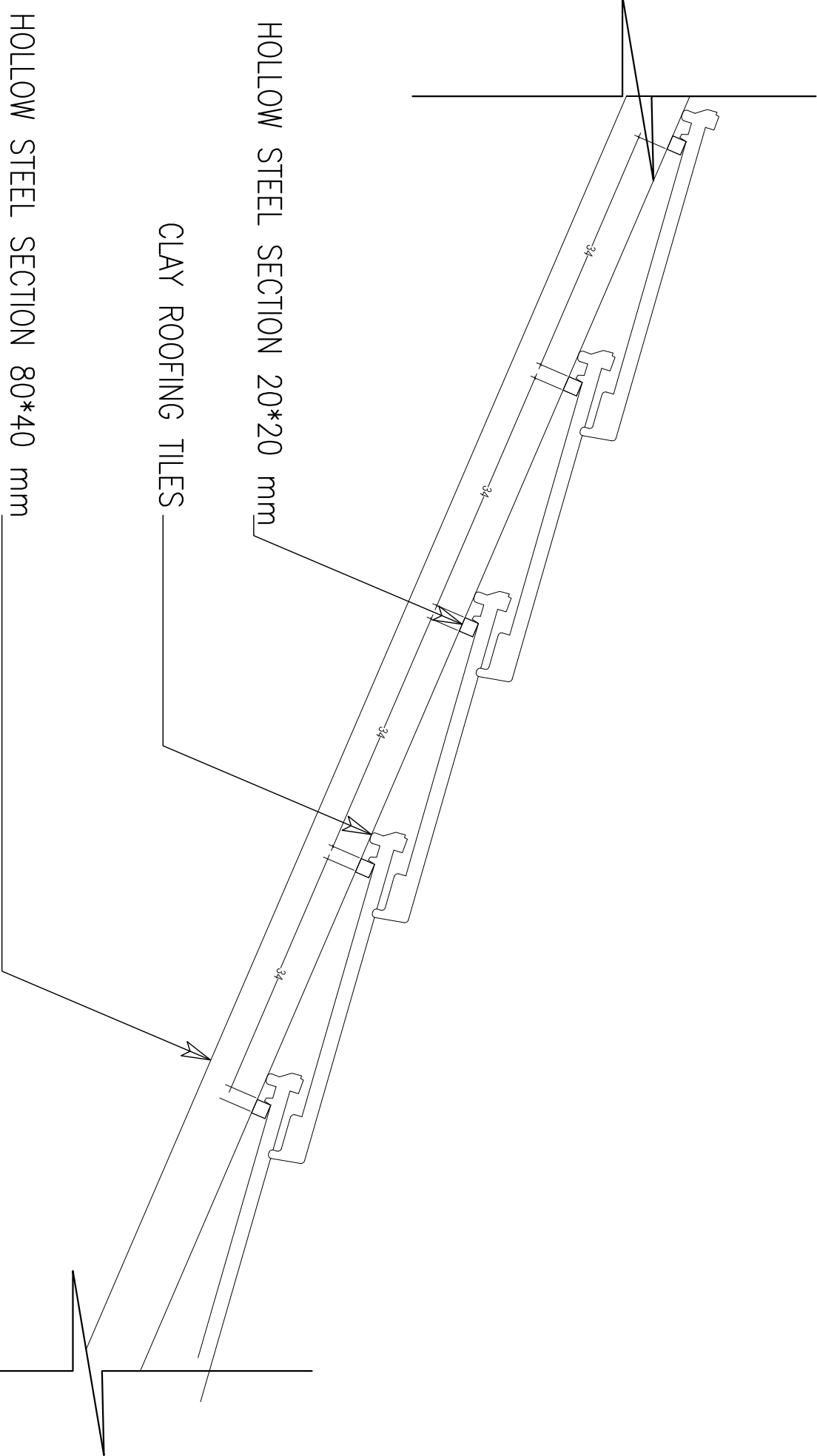
Phase	Discipline	Floor Area	Drawing Number	Revision
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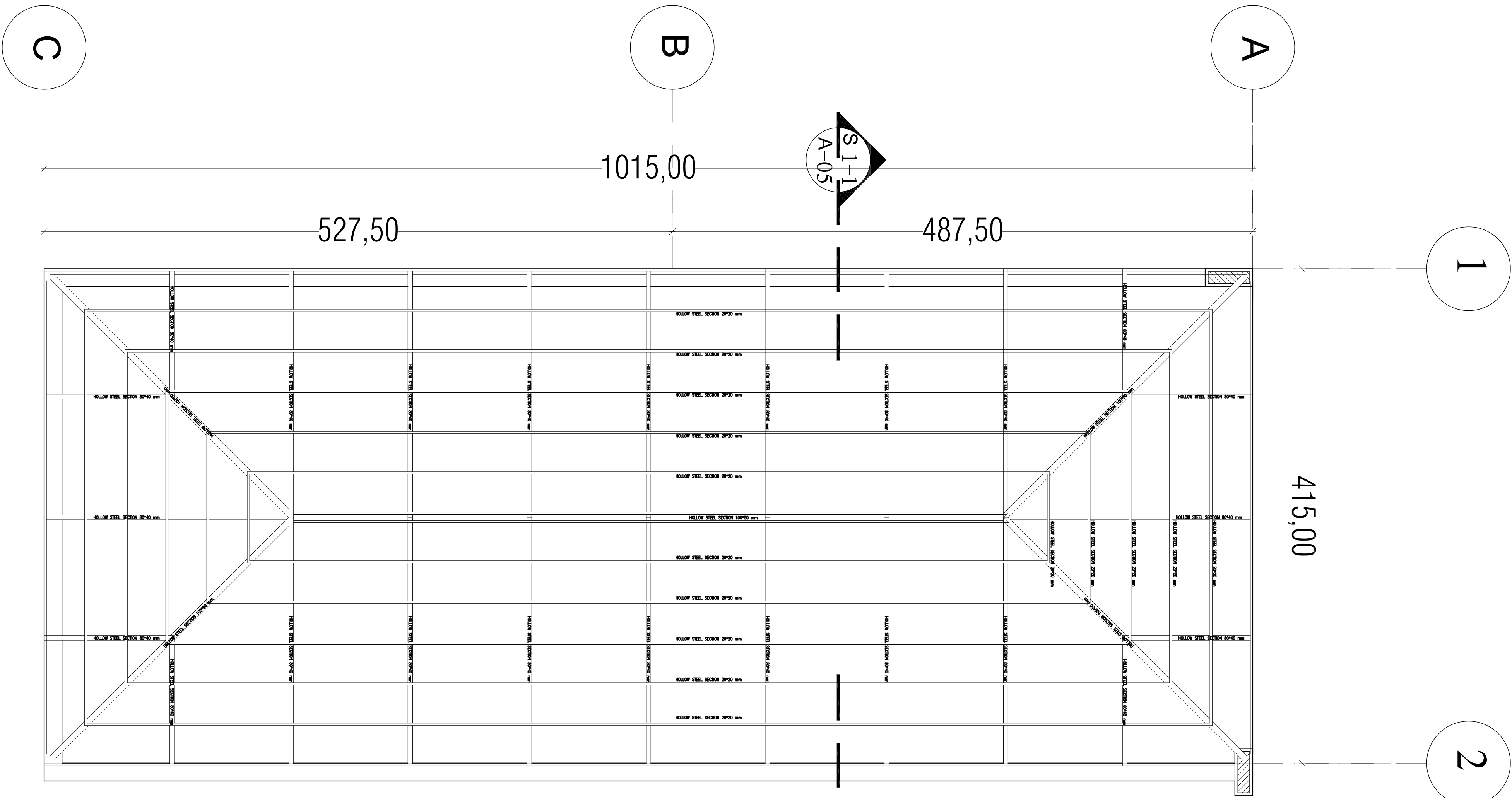
SECTION 1-1



DETAIL 1: GUTTER



DETAIL 2: CLAY ROOFING TILES



METALLIC STRUCTURE

Key Plan



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PROGRAMME:
Lebanese Host Communities
Support Programme

CONSULTANT:

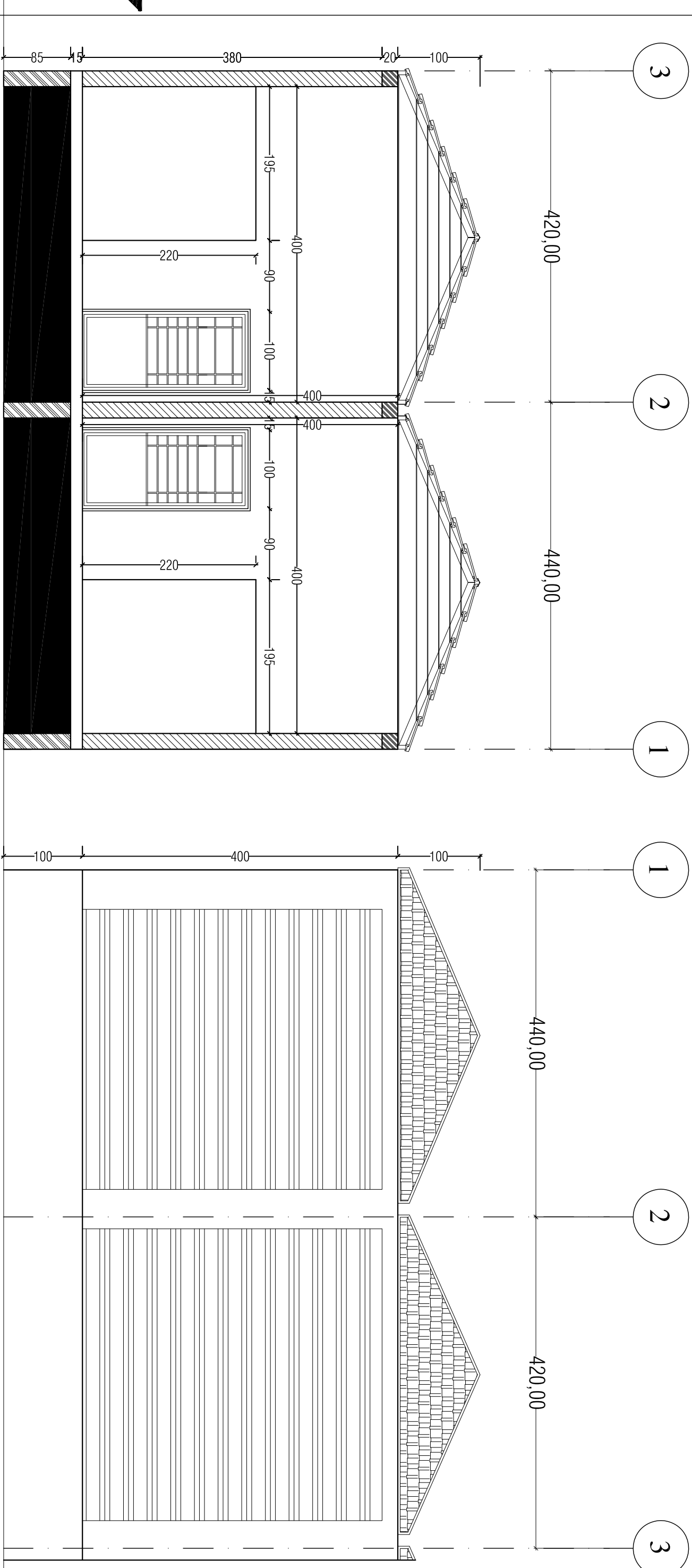
PROJECT:	BAR ELIAS MARKET (PART 2)
PLOT NO.:	BLOCK:

Sheet Information

PROJECT NBR.	-
PROJECT PHASE	TENDER
DISCIPLINE	CIVIL ENGINEERING
SECTOR	-
BUILDING	-
DESIGNED	VB
DRAWN	GB
CHECKED	VB
APPROVED	VB
DATE	01.12.2015
SCALE	-
SHEET SIZE	A1

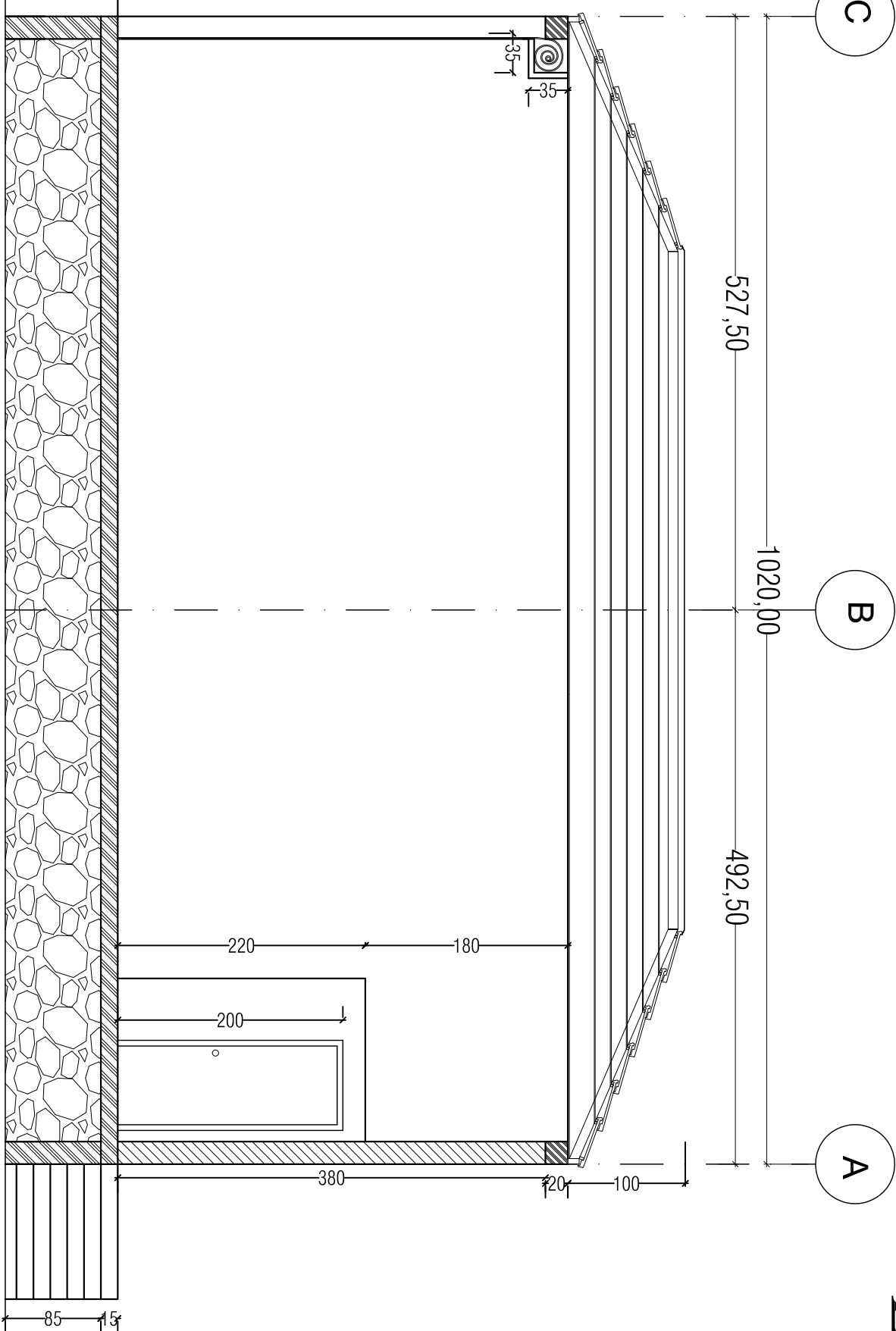
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GENERAL ARCHITECTURAL
DETAILS

Sheet nbr.				
T - C - G - 006 - R00				
Phase	Discipline	Floor Area	Drawing Number	Revision

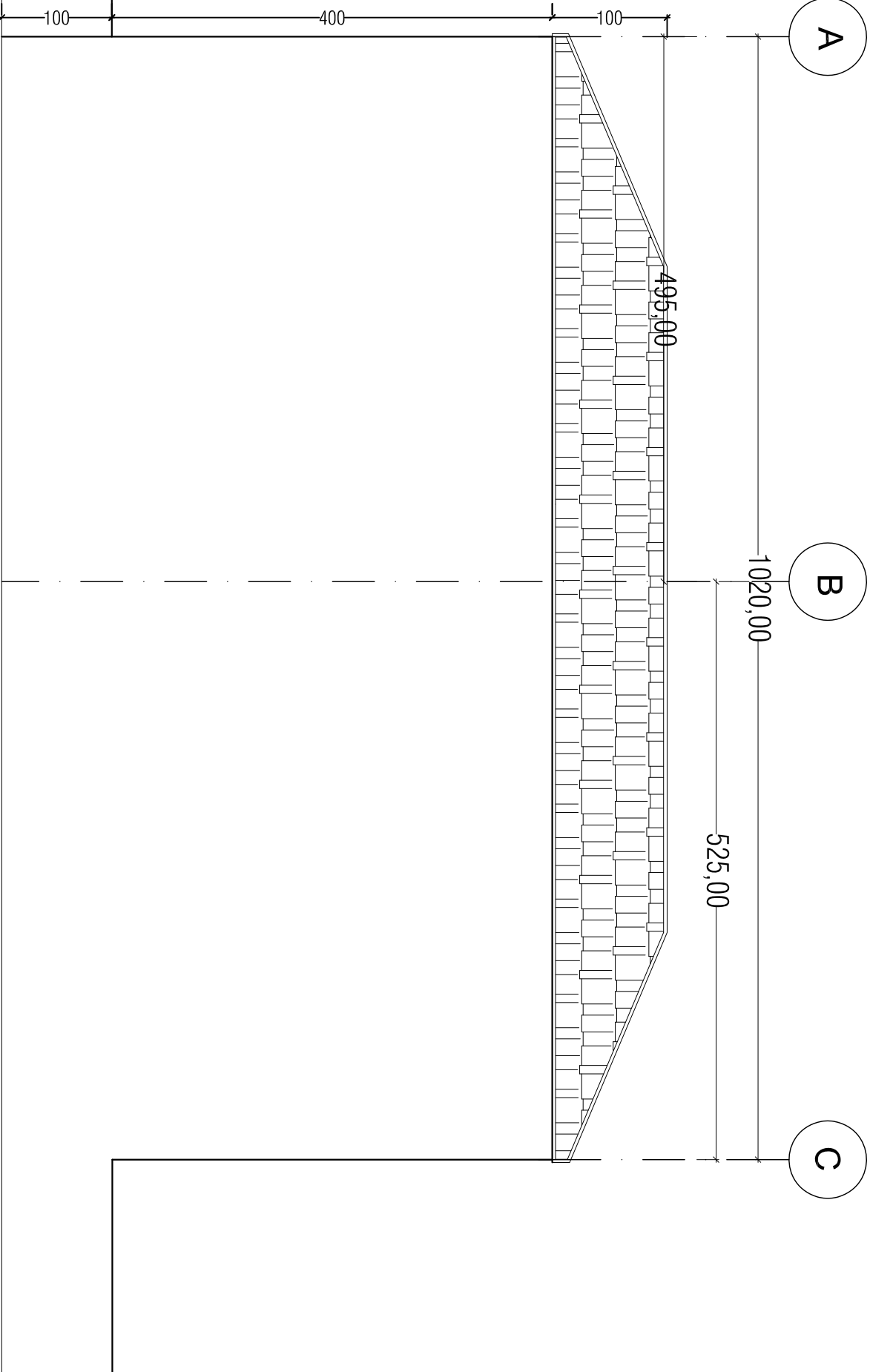


SECTION 1-1

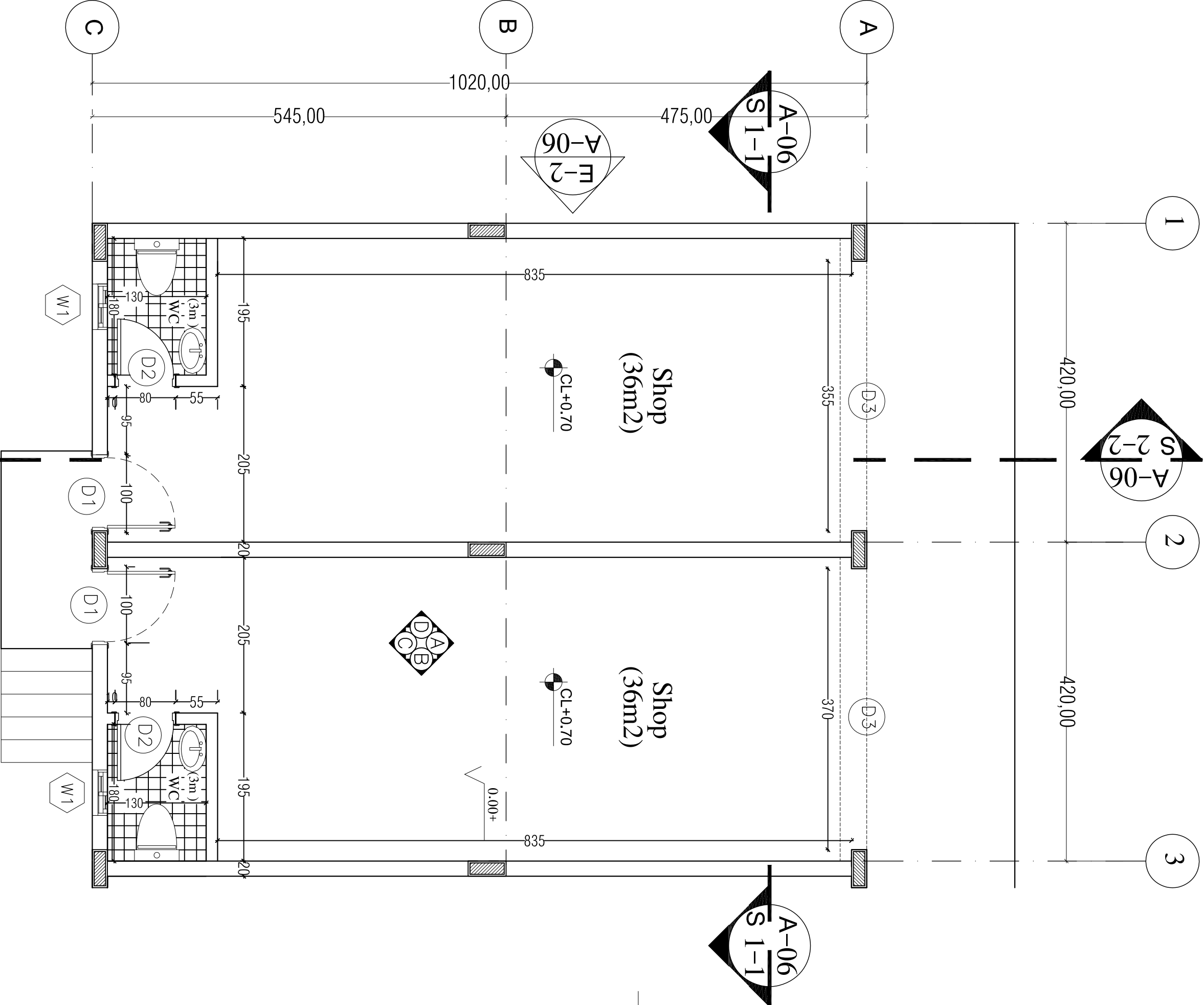
Elevation 1



SECTION 2-2



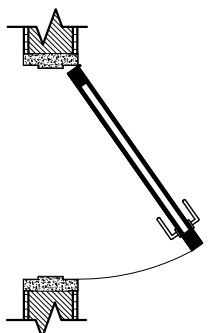
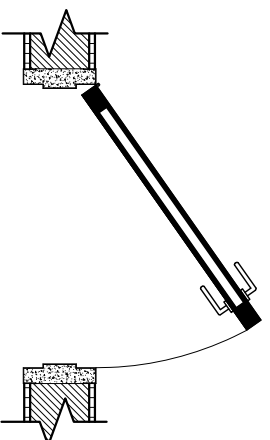
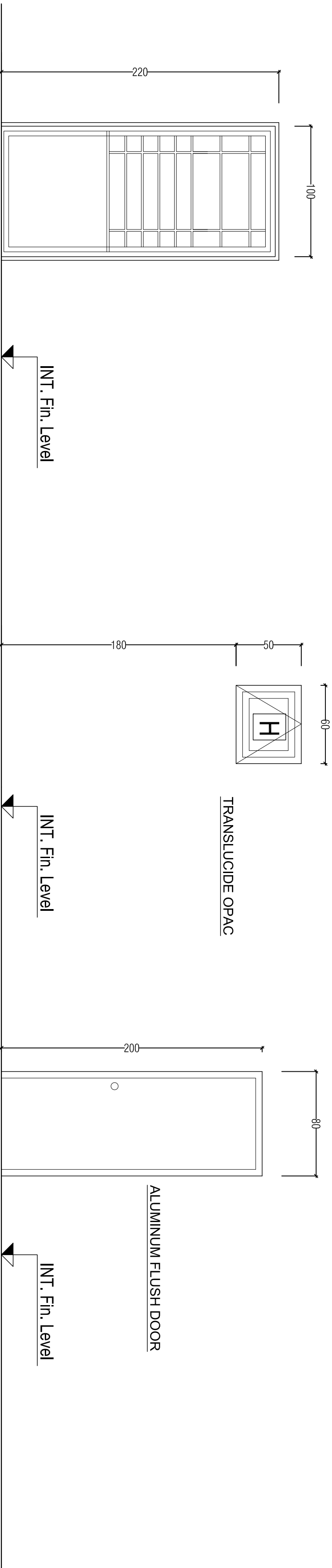
Elevation 2



PLAN

SCHEDULE OF FINISHES						
RM. #	ROOM NAME	FLOOR	WALLS Low Level	WALLS High Level	CLNG	SKIRT.
	Shop	CONCRETE	PLASTER & PAINT	PLASTER & PAINT	RED CLAY TILES	
	Toilet	CERAM. TILES	PLASTER & PAINT	PLASTER & PAINT	PLASTER & PAINT	CERAM.

Key Plan



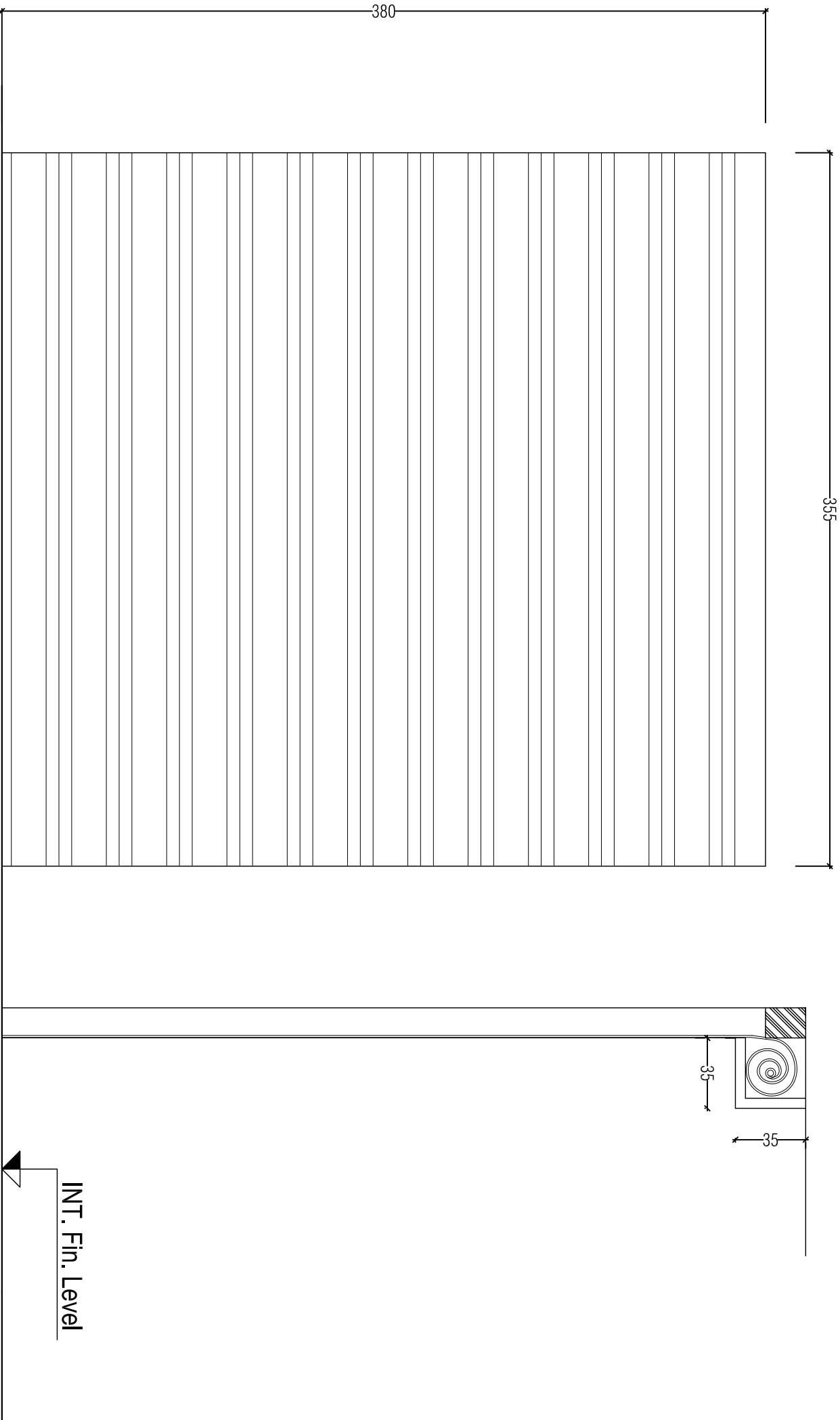
D1

W1

D2

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D3

DOOR AND WINDOWS DETAILS / SCHEDULE

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Social and Local Development Programme
P.O.Box: 11-3216 Beirut, Lebanon Tel: 961 1 962491

PROGRAMME:
Lebanese Host Communities
Support Programme

CONSULTANT:

PROJECT:

BAR ELIAS MARKET (PART 2)

PLOT NO.:

BLOCK:

Sheet Information

PROJECT NBR.	-
PROJECT PHASE	TENDER
DISCIPLINE	CIVIL ENGINEERING
SECTOR	-
BUILDING	-
DESIGNED	VB
DRAWN	GB
CHECKED	VB
APPROVED	VB
DATE	01.12.2015
SCALE	-
SHEET SIZE	A1

Sheet Title
DOORS AND WINDOWS
DETAILS

Sheet nbr.

T - C - G - 007 - R00

Phase	Discipline	Floor Area	Drawing Number	Revision
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Key Plan




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PROGRAMME:
Lebanese Host Communities
Support Programme


Supporting Host Communities

CONSULTANT:

PROJECT:	BAR ELIAS MARKET (PART 2)
PLOT NO.:	BLOCK:

PROJECT NBR.	-
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DISCIPLINE	CIVIL ENGINEERING
SECTOR	-
BUILDING	-
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DRAWN	GB
CHECKED	VB
APPROVED	VB
DATE	01.12.2015
SCALE	-
SHEET SIZE	A1

Sheet Title
CONSTRUCTION
DETAILS

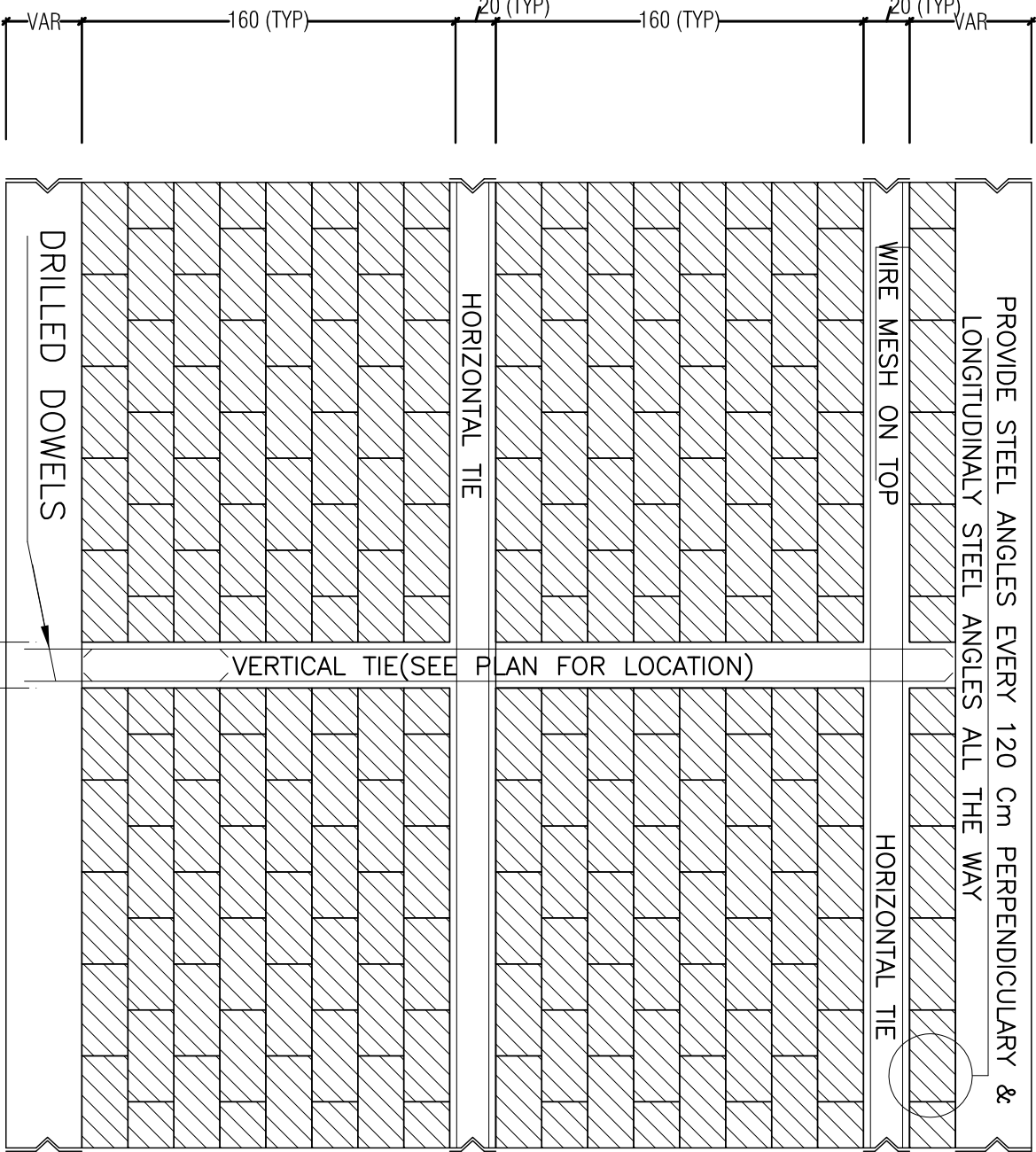
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T - C - G - 008 - R00

Phase	Discipline	Floor Area	Drawing Number	Revision

NOTES:

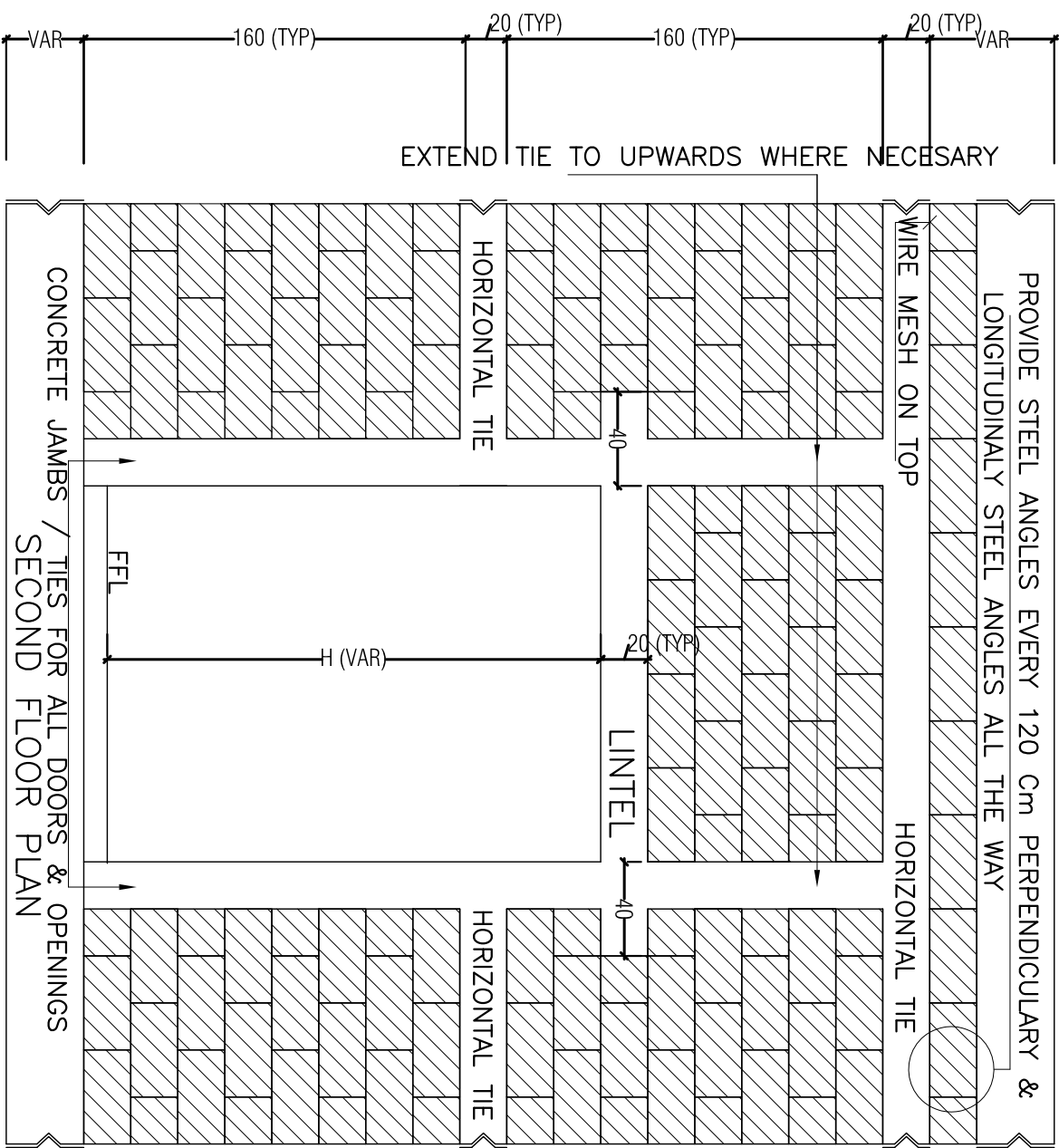
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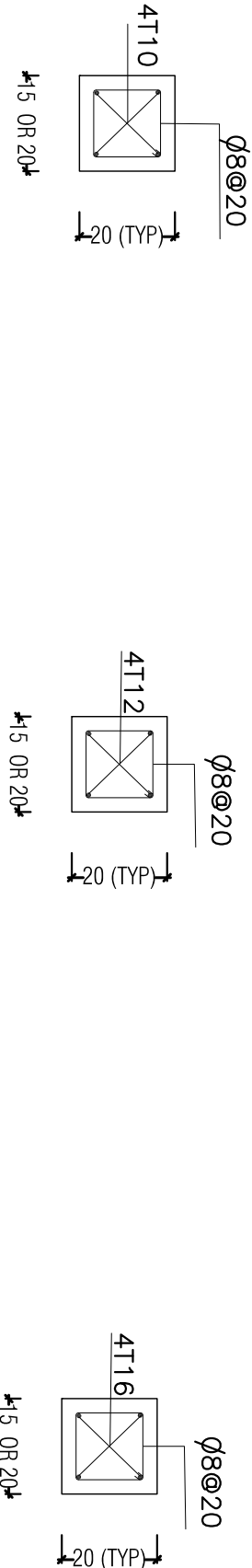
PART OF CONCRETE BLOCK WALL



DIMENSION & REINFORCEMENT OF VERTICAL & HORIZONTAL TIES

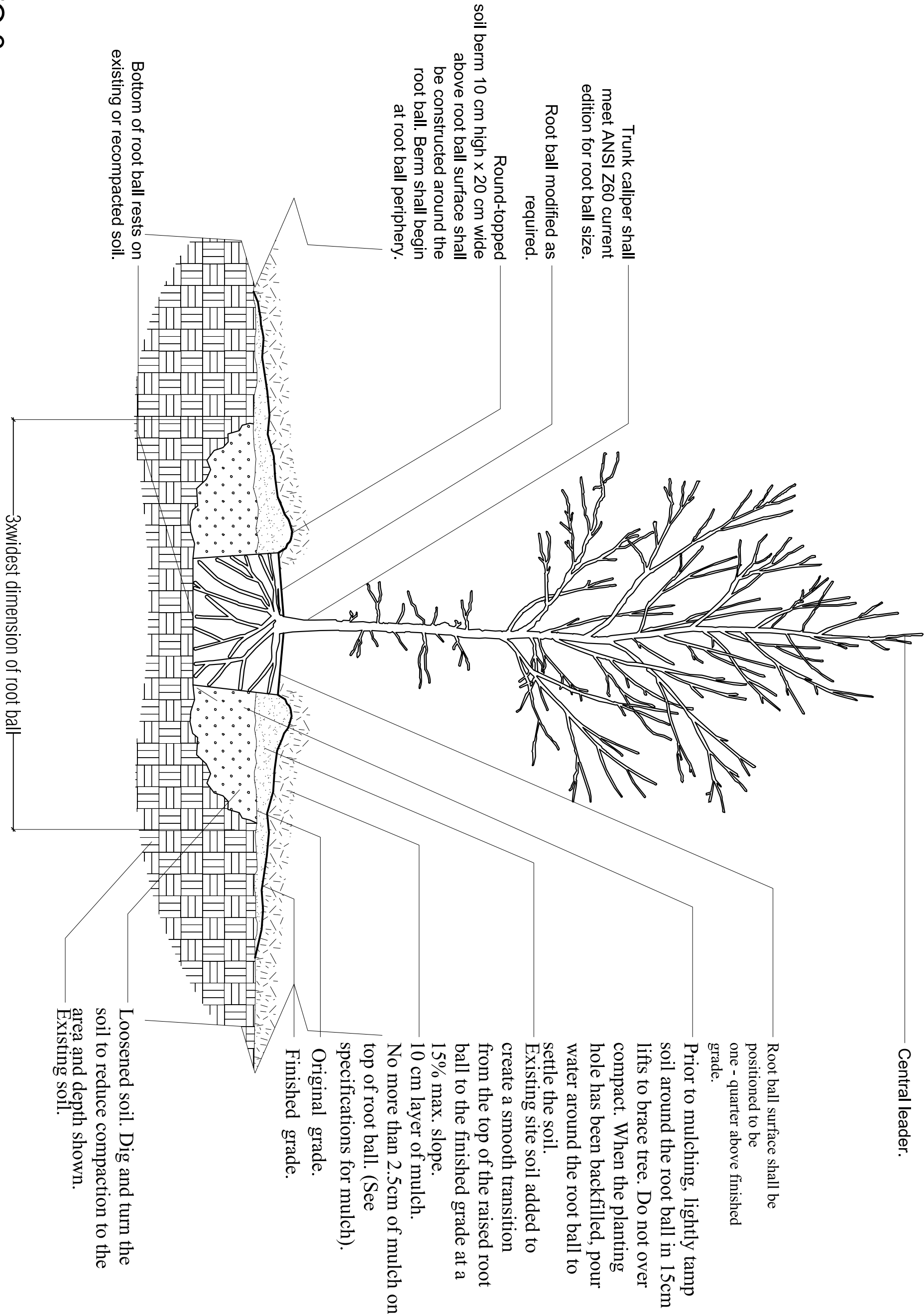


PART OF CONCRETE BLOCK WALL



CLEAR SPAN UP TO 1m CLEAR SPAN 1 TO 2m CLEAR SPAN 2 TO 3m

DIMENSION & REINFORCEMENT OF LINTELS



SECTION VIEW TREE PLANTING DETAIL

Key Plan



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PROGRAMME:
Lebanese Host Communities
Support Programme

CONSULTANT:

PROJECT:

BAR ELIAS MARKET (PART 2)

PLOT NO.: -

BLOCK: -

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CHECKED	VB
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DATE	01.12.2015
SCALE	-
SHEET SIZE	A1

Sheet Title
STRUCTURAL
DETAILS

Sheet nbr.

T - C - G - 009 - R00

Phase | Discipline | Floor Area | Drawing Number | Revision

GENERAL NOTES

1- CONCRETE MIXES & PLACING

- 1-1 TWO TYPES OF CONCRETE ARE SPECIFIED.
- CONCRETE FOR BLINDING AND CYCLOPEAN CONCRETE :
250 KG CEMENT OF ORDINARY PORTLAND CEMENT PER CUBIC METER OF CONCRETE.
CONCRETE FOR INFRASTRUCTURAL ELEMENTS FOOTINGS,RAFT PILES,PILE CAPS,SLAB ON GRADE:
350 KG OF ORDINARY PORTLAND CEMENT PER CUBIC METER OF CONCRETE. MAX W/C=0.40
 - CONCRETE FOR STRUCTURAL ELEMENTS COLUMNS,BEAMS WALLS,SLABS:
350 KG OF ORDINARY PORTLAND CEMENT PER CUBIC METER OF CONCRETE. MAX W/C=0.40
- 1-2 UNLESS OTHERWISE SPECIFIED, THE MINIMUM 28 DAYS COMPRESSIVE STRENGTHS ARE:
ON CYLINDER

- BLINDING/LEAN CONCRETE..... f'c=17 MPa
 - COLUMNS, RETAINING WALL f'c=25 MPa
 - GROUND SLAB,SLAB & BEAMS..... f'c=25 MPa
- 1-3 ALL CONCRETE SHALL BE MOST FOR A MINIMUM OF SEVEN CONSECUTIVE DAYS IMMEDIATELY AFTER POURING BY THE USE OF WET BURLAP, FOG SPRAYING OR OTHER APPROVED METHODS.
- 1-4 ORDINARY PORTLAND CEMENT TYPE I SHALL BE USED IN ALL INFRASTRUCTURE ELEMENTS.
- 1-5 CONCRETE SHALL BE DEPOSITED IN ITS FINAL POSITION WITHOUT SEGREGATION, RE-HANDLING OR FLOWING, NO DEPOSITING OF CONCRETE SHALL BE ALLOWED WITHOUT THE USE OF VIBRATORS, UNLESS AUTHORIZED IN WRITING BY THE DESIGNERS.
- 1-6 ALL REINFORCED CONCRETE TO BE VIBRATED
- 1-7 SLUMP TEST: MAXIMUM 7 TO 9 CM.

2- REINFORCED CONCRETE

UNLESS NOTED ON DRAWINGS, THE FOLLOWING IS TO BE CONSIDERED AS TYPICAL AND APPLICABLE:

2-1 BASIS OF DESIGN: THE BAEL 91-M0099 CODE

2-2 PARTICULAR CARE SHOULD BE GIVEN TO THE PLACING OF REINFORCEMENT, THE MIXING AND CASTING OF CONCRETE, AND ACCORDING TO THE SPECIFICATIONS FOR THIS TRADE.

2-3 CONCRETE JOINTS SHALL PREFERABLY BE CONTINUOUS BETWEEN JOINTS.

2-4 THE MINIMUM CONCRETE PROTECTIVE COVER FOR REINFORCEMENT SHALL BE AS FOLLOWS:

- FOR SOLID SLABS:
 - EXTERNAL 2.5 cm
 - INTERNAL 2.5 cm
- FOR BEAMS:
 - EXTERNAL 4 cm
 - INTERNAL 2.5 cm
- FOR COLUMNS:
 - EXTERNAL 4 cm
 - INTERNAL 4 cm
- FOR INTERNAL WALLS NOT EXPOSED TO WEATHER : 2.5 cm
- FOR EXTERNAL WALLS EXPOSED TO WEATHER : 4 cm
- FOR WALLS EXPOSED TO EARTH: 5 cm
- FOR FOOTINGS: 5 cm
- FOR SLAB ON GRADE: 5 cm

2-5 FOR ALL ELECTROMECHANICAL RESERVATIONS IN WALLS, SLABS AND BEAMS, EXACT LOCATION TO BE COORDINATED WITH ELECTROMECHANICAL DRAWINGS.

2-6 OPENINGS SMALLER THAN 150mm MAY BE FORMED EITHER BY BOXING OUT OR BY CAREFUL DRILLING BY CORE CUTTER AFTER CASTING.

2-7 ALL CONCRETE REINFORCEMENT SHALL BE DETAILED, FABRICATED, LABELED, SUPPORTED AND SPACED IN FORMS AND SECURED IN PLACE IN ACCORDANCE WITH THE PROCEDURES AND REQUIREMENTS OUTLINED IN THE FRENCH CODE NF P 02 016

2-8 ALL CONSTRUCTION JOINTS SHALL BE WIRE BRUSHED AND CLEANED IMMEDIATELY PRIOR TO POURING NEW CONCRETE,THE SURFACE OF THE CONCRETE AT ALL JOINTS SHALL BE ROUGHENED MINIMUM 6mm,THOROUGHLY CLEANED AND ALL LANTIANE REMOVED PRIOR TO PLACING ADJOINING CONCRETE.

2-9 THE SEQUENCE OF POURING CONCRETE SHALL BE SUCH AS TO MINIMIZE SHRINKAGE.

2-10 ALL REINFORCEMENT SHALL BE CONTINUED ACROSS CONSTRUCTION JOINTS UNLESS NOTED OTHERWISE

2-11 PROVIDE WATERPROOFING COATING IN MANHOLES.

2-12 PROVIDE CONSTRUCTION JOINTS EVERY 25 METERS WITH PROPER WATERSTOPPING

2-13 REINFORCING STEEL TO BE BENT AND PLACED IN ACCORDANCE WITH MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES (BAEL91-M0099)".

2-14 MAXIMUM AGGREGATE SIZE TO BE 2cm

2-15 PROVIDE CONTINUOUS KEYWAYS AT RETAINING WALL CONSTRUCTION JOINTS.

2-16 ALL REINFORCING STEEL SHALL BE SECURELY WIRED IN PLACE BEFORE CONCRETE IS PLACED

2-17 MAXIMUM SPACING OF BAR SUPPORTS IN SLAB ON GRADE TO BE 12m

2-18 DRILLING IN BEAMS AND COLUMNS FOR NAILDUNG INSTALLATION OR ANY OTHER PURPOSE, SHOULD BE DONE WITH EXTREME CARE TO AVOID CUTTING ANY OF THE STEEL REINFORCING. LOCATE BARS AND STRIRUPS BEFORE ANY DRILLING,THE CONTRACTOR TO PROVIDE INFORMATION ON HIS PROCEDURE IN WRITING TO STRUCTURAL ENGINEER BEFORE ANY DRILLING.

3- STRENGTH,SIZES,USED,SPUCE LENGTH

HIGH TENSILE STEEL

T8 T10 T12 T16 T20 T25 T32

MILD STEEL

ø6 ø8

- UNLESS OTHERWISE NOTED ON DRAWINGS, ALL REINFORCEMENT SHALL BE TIES AND STRIRUPS (PLAIN STEEL BAR) Fe E235

- OTHER BARS (HIGH TENSILE STEEL (MIN. YIELD STRENGTH)) Fe E300

- UNLESS OTHERWISE NOTED, MINIMUM SPUCE LENGTH FOR HIGH TENSILE STEEL TO BE AS FOLLOWS:

- HTS HIGH TENSILE STEEL : 50 x BAR DIAMETER
- T8 - 40cm
 - T10 - 50cm
 - T12 - 60cm
 - T16 - 80cm
 - T20 - 100cm
 - T25 - 125cm
 - T32 - 160cm

Key Plan




REV	BY	APP	DESCRIPTION	DATE

Revisions

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United Nation Development Programme
UNDP Lebanon
Social and Local Development Programme
P.O.Box: 11-3216 Beirut, Lebanon Tel: 961 1 962491



Lebanese Host Communities
Support Programme

CONSULTANT:

PROJECT:
BAR ELIAS MARKET (PART 2)

PLOT NO.: -BLOCK: -

Sheet Information			
PROJECT NBR.	-	TENDER	-
PROJECT PHASE	-	DISCIPLINE	CIVIL ENGINEERING
SECTOR	-	BUILDING	-
DESIGNED	VB	DRAWN	GB
CHECKED	VB	APPROVED	VB
DATE	01.12.2015	SCALE	-
SHEET SIZE	A0		

Sheet Title

DRAINAGE AND WATER
SUPPLY LAYOUTS

Sheet nbr.

T - C - G - 010 - R00

Phase	Discipline	Floor Area	Drawing Number	Revision
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
THE CONSULTANT MUST BE INFORMED ABOUT CONTRADICTIONS OF ANY KIND BEFORE CONSTRUCTION BEGINS.


ALL DIMENSIONS ARE IN CENTIMETERS UNLESS OTHERWISE INDICATED.

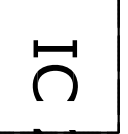
ALL LEVELS ARE IN METERS UNLESS OTHERWISE INDICATED.


LEGEND:-


Floor Clean Out


Floor Drain

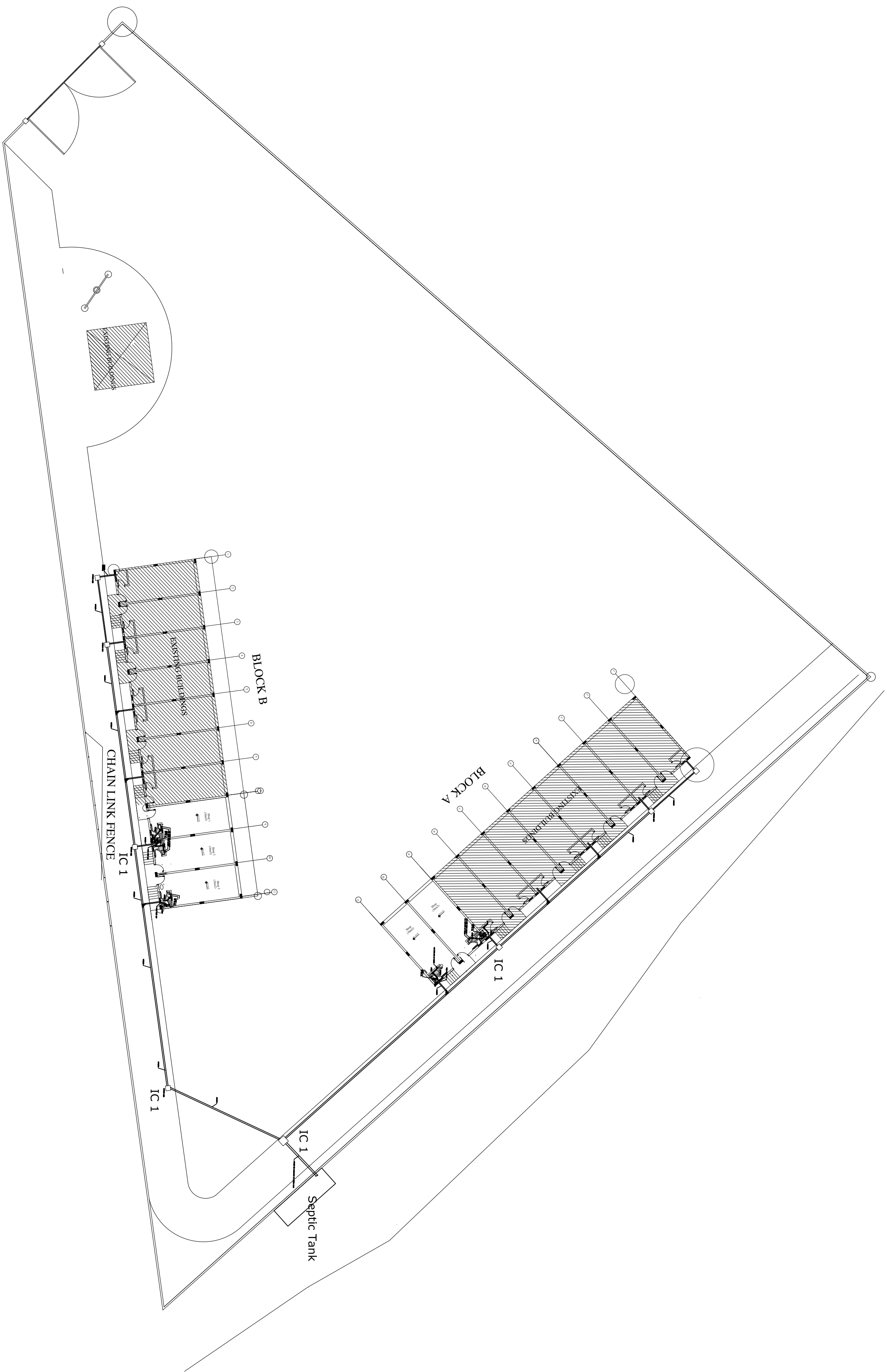
IC 1 Inspection Chamber Type 1

IC 2 Inspection Chamber Type 1

CW COLD WATER SUPPLY PIPE

D DRAIN OR CONDENSATE DRAIN PIPE

PW POTABLE WATER PIPE



DRAINAGE LAYOUT



WATER SUPPLY LAYOUT

Key Plan



REV	BY	APP	DESCRIPTION	DATE

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United Nation Development Programme
UNDP Lebanon
Social and Local Development Programme
P.O.Box: 11-3216 Beirut, Lebanon Tel: 961 1 962491

PROGRAMME:
Lebanese Host Communities
Support Programme

CONSULTANT:

PROJECT:
BAR ELIAS MARKET (PART 2)

PLOT NO.: - BLOCK: -

Sheet Information

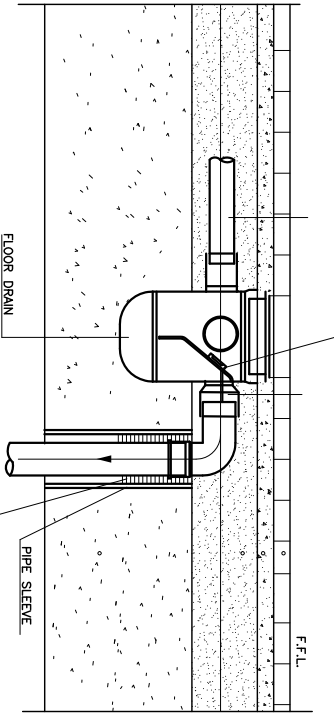
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PROJECT PHASE	TENDER
DISCIPLINE	CIVIL ENGINEERING
SECTOR	-
BUILDING	-
DESIGNED	VB
DRAWN	GB
CHECKED	VB
APPROVED	VB
DATE	01.12.2015
SCALE	-
SHEET SIZE	A1

Sheet Title
MECHANICAL DETAILS 1/2

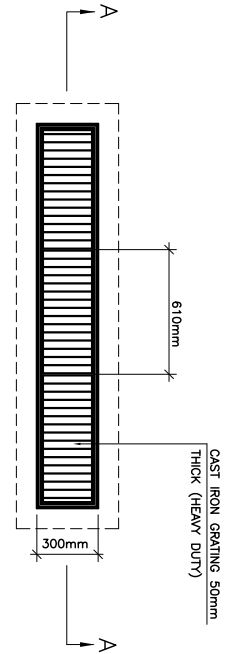
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T - C - G - 011 - R00

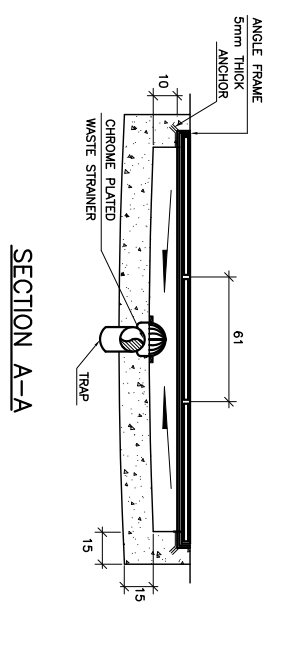
Phase	Discipline	Floor Area	Drawing Number	Revision
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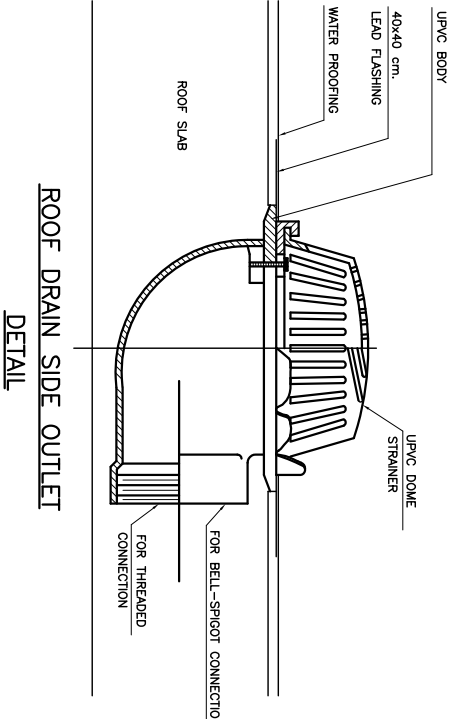
JUPIC FLOOR DRAIN WITH CLEAN OUT



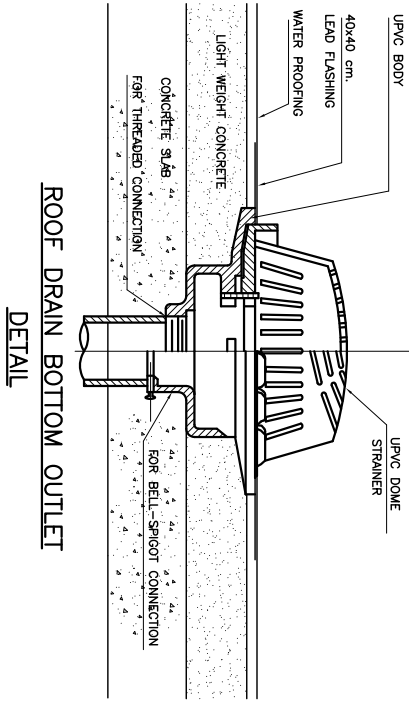
GUTTER DRAIN PLAN



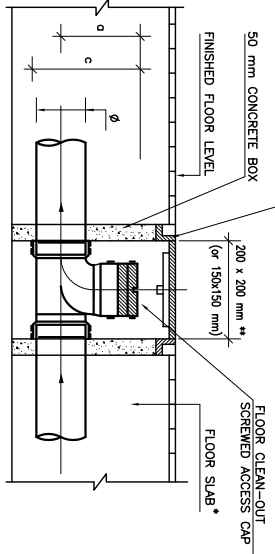
SECTION A-A



ROOF DRAIN SIDE OUTLET
DETAIL

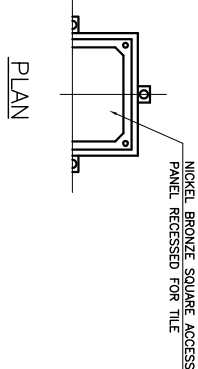


ROOF DRAIN BOTTOM OUTLET
DETAIL

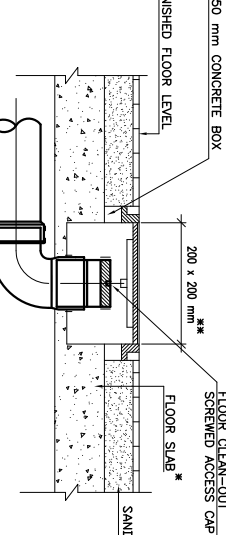


JUPIC FLOOR CLEAN-OUT DETAIL

• SUB CONSTRUCTION COULD BE ADDED FOR EACH APPLICATION INDIVIDUALLY
• THIS DIMENSION SHOULD SUIT FLOOR THICK DIMENSIONS

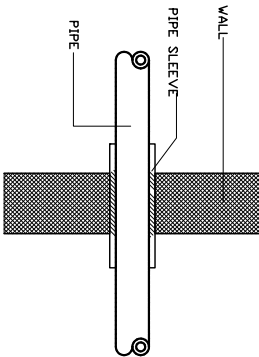


PLAN

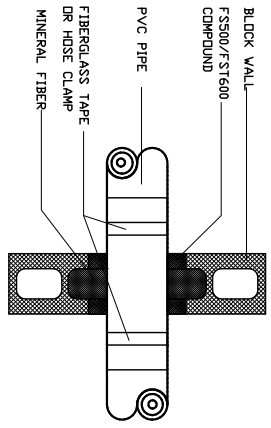


JUPIC FLOOR CLEAN-OUT DETAIL
(80° INCLINED)

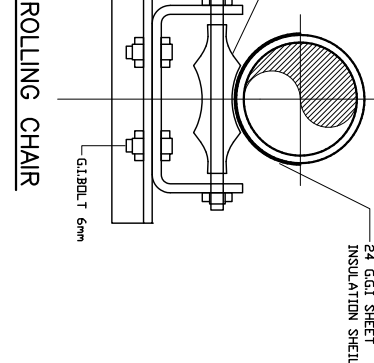
• SUB CONSTRUCTION COULD BE ADDED FOR EACH APPLICATION INDIVIDUALLY
• THIS DIMENSION SHOULD SUIT FLOOR THICK DIMENSIONS



DESIGNED IN BRICK/WALLS
ALL TYPES OF PIPES

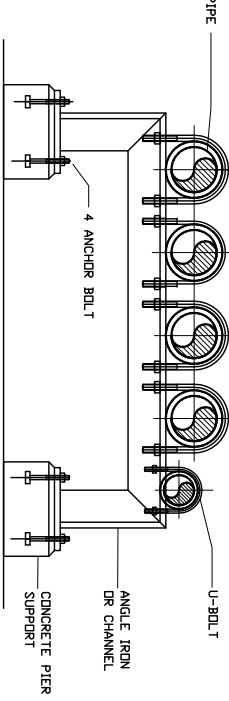


PIPE PVC PIPE CROSSING THRU BLOCK WALL

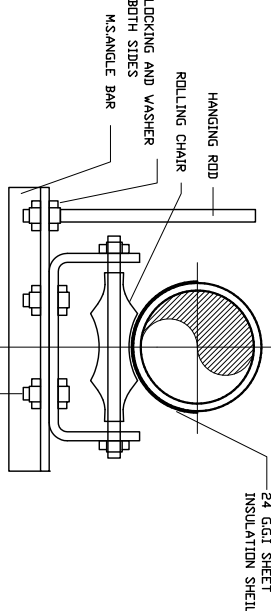


ROLLING CHAIR

PIPE THRU WALL DETAILS

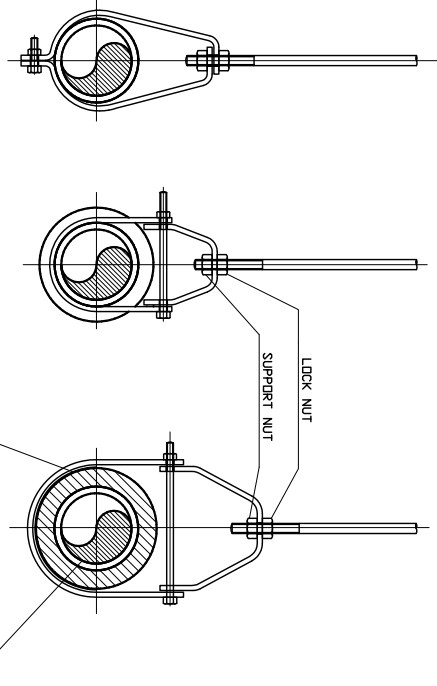


MULTIPLE PIPE SUPPORT



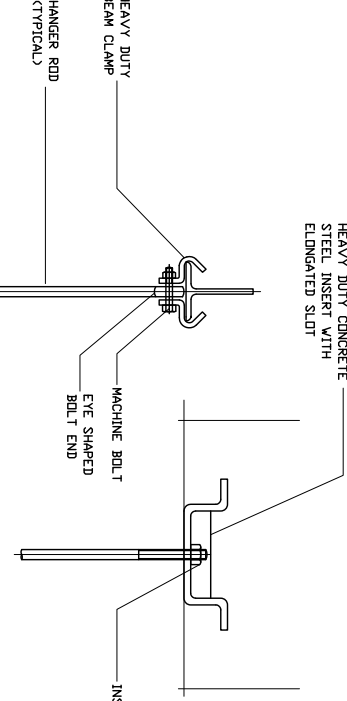
ROLLING CHAIR

FLOOR SUPPORTS

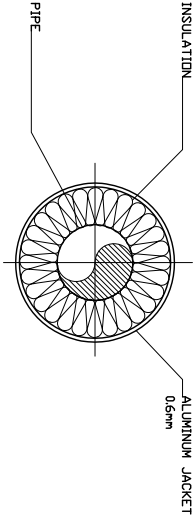


BOLTED BAND HANGER
CLEVIS HANGER
CLEVIS HANGER

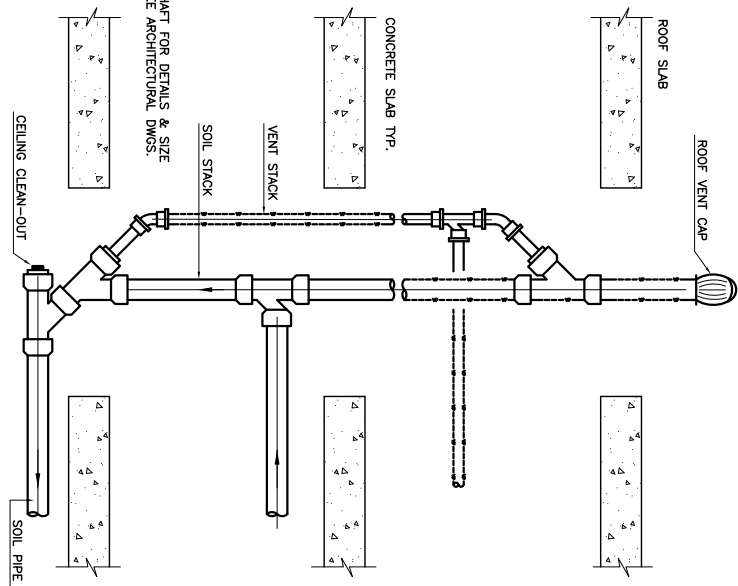
PIPE HANGERS



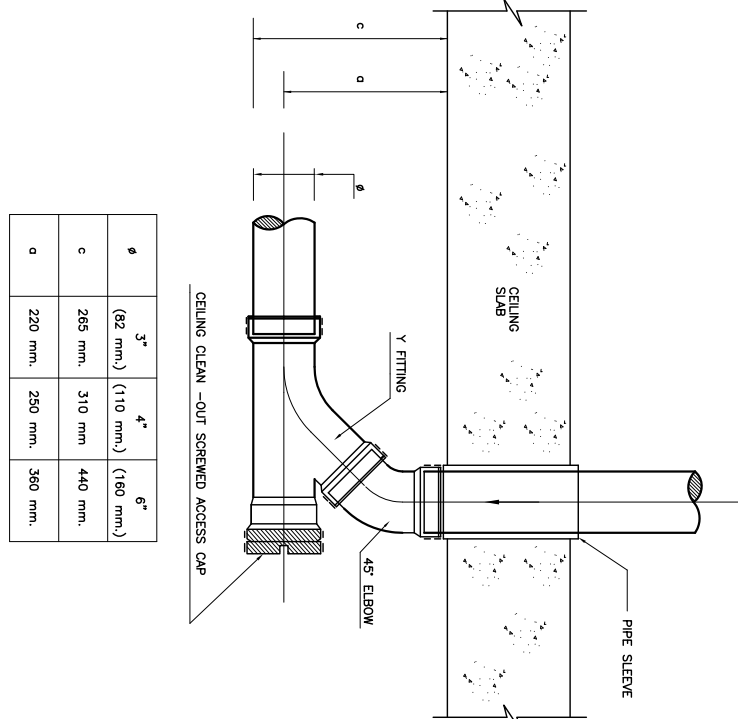
METHODS OF ATTACHMENT TO CEILINGS
(USE APPROPRIATE TYPE)



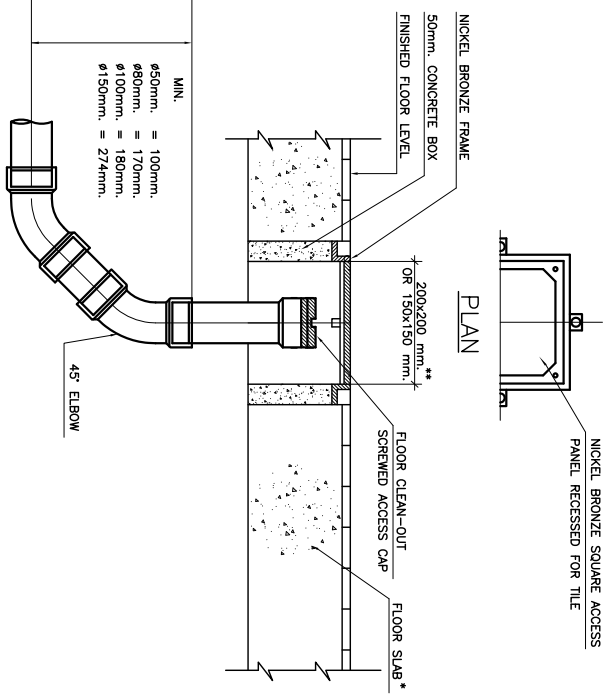
CLADDING (WHERE REQUIRED)
SUIT BASIS AND DISCREET TO CLADDING DESIGN



VENT & SOIL PIPE CONNECTION
AT LOW & HIGH LEVELS

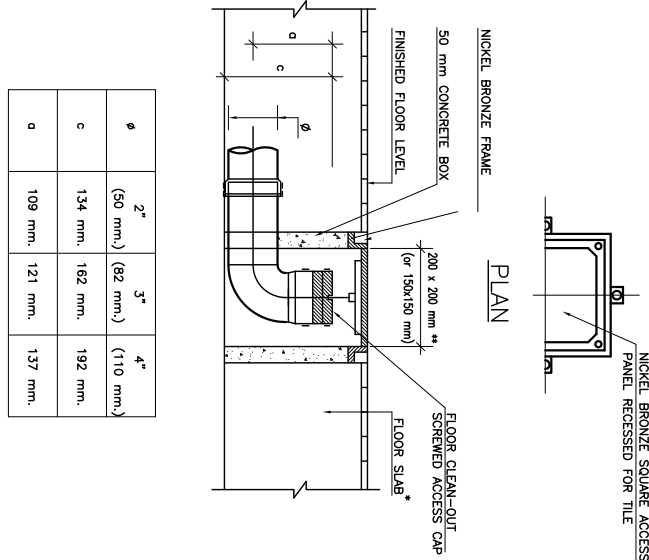


JUPIC CEILING CLEAN-OUT DETAIL



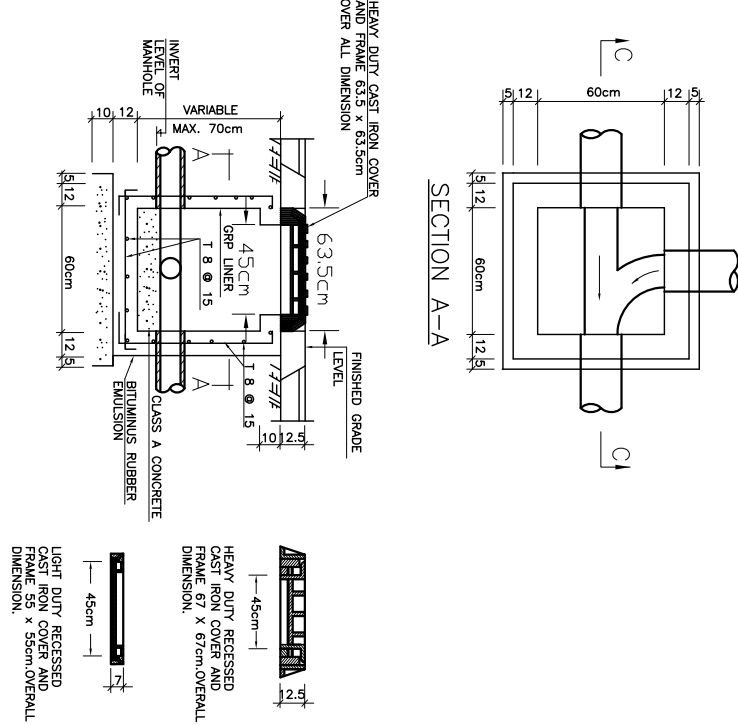
JUPIC FLOOR CLEAN-OUT DETAIL

• SUB CONSTRUCTION COULD BE ADDED FOR EACH APPLICATION INDIVIDUALLY
• THIS DIMENSION SHOULD SUIT FLOOR THICK DIMENSIONS

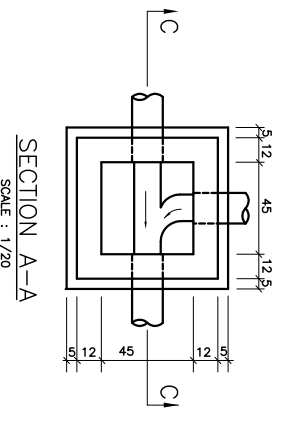


JUPIC FLOOR CLEAN-OUT DETAIL
(80° INCLINED)

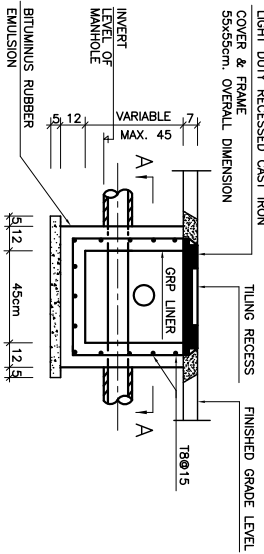
• SUB CONSTRUCTION COULD BE ADDED FOR EACH APPLICATION INDIVIDUALLY
• THIS DIMENSION SHOULD SUIT FLOOR THICK DIMENSIONS



SECTION C-C
INSPECTION CHAMBER
TYPE I



SECTION A-A



SECTION C-C
INSPECTION CHAMBER
TYPE II

SCALE: 1/20

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ALL LEVELS ARE IN METERS UNLESS OTHERWISE INDICATED.




Key Plan



REV	BY	APP	DESCRIPTION	DATE

Revisions

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United Nation Development Programme

UNDP Lebanon

Social and Local Development Programme

P.O.Box: 11-32716 Beirut, Lebanon Tel: 961 1 962491

PROGRAMME:



Lebanese Host Communities

Support Programme

CONSULTANT:

PROJECT:

BAR ELIAS MARKET (PART 2)

PLOT NO.:

BLOCK:

Sheet Information

PROJECT NBR.	-
PROJECT PHASE	TENDER
DISCIPLINE	CIVIL ENGINEERING
SECTOR	-
BUILDING	-
DESIGNED	VB
DRAWN	GB
CHECKED	VB
APPROVED	VB
DATE	01.12.2015
SCALE	-
SHEET SIZE	A2

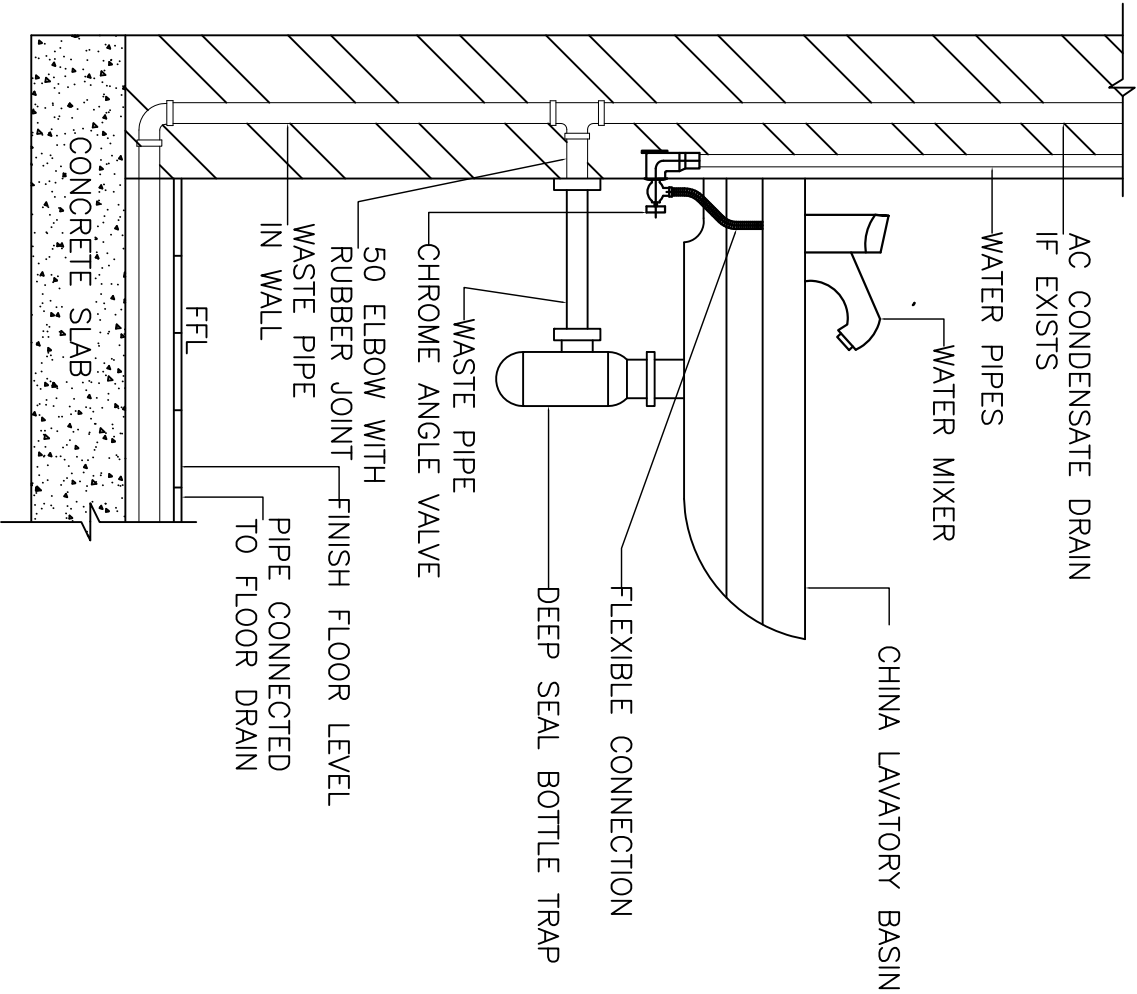
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MECHANICAL DETAILS 2/2

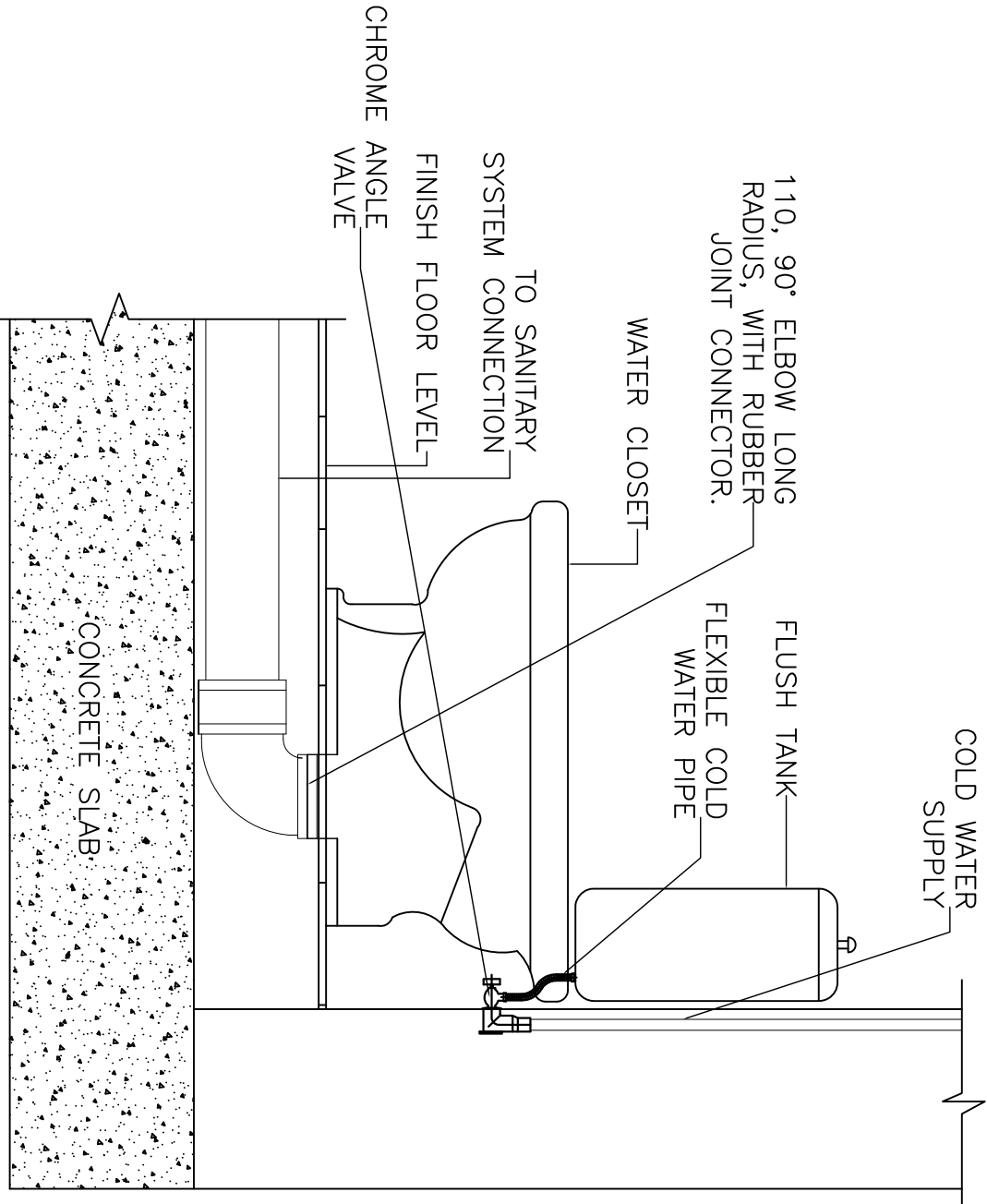
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T - C - G - G - 012 - R00

Phase	Discipline	Floor Area	Drawing Number	Revision
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LAVATORY
SINK DETAIL



WATER CLOSET DETAILS

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Key Plan



REV	BY	APP	DESCRIPTION	DATE	

Revisions

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United Nation Development Programme
UNDP Lebanon
Social and Local Development Programme
P.O.Box: 11-3216 Beirut, Lebanon Tel: 961 1 962491

PROGRAMME:
Lebanese Host Communities
Support Programme

CONSULTANT:

PROJECT: BAR ELIAS MARKET (PART 2)	
PLOT NO.:	BLOCK:
-	-

Sheet Information

PROJECT NBR.	-
PROJECT PHASE	TENDER
DISCIPLINE	CIVIL ENGINEERING
SECTOR	-
BUILDING	-
DESIGNED	VB
DRAWN	GB
CHECKED	VB
APPROVED	VB
DATE	01.12.2015
SCALE	-
SHEET SIZE	A0

Sheet Title
LIGHTING AND POWER
LAYOUTS

Sheet nbr.

T - C - G - 013 - R00

Phase	Discipline	Floor Area	Drawing Number	Revision
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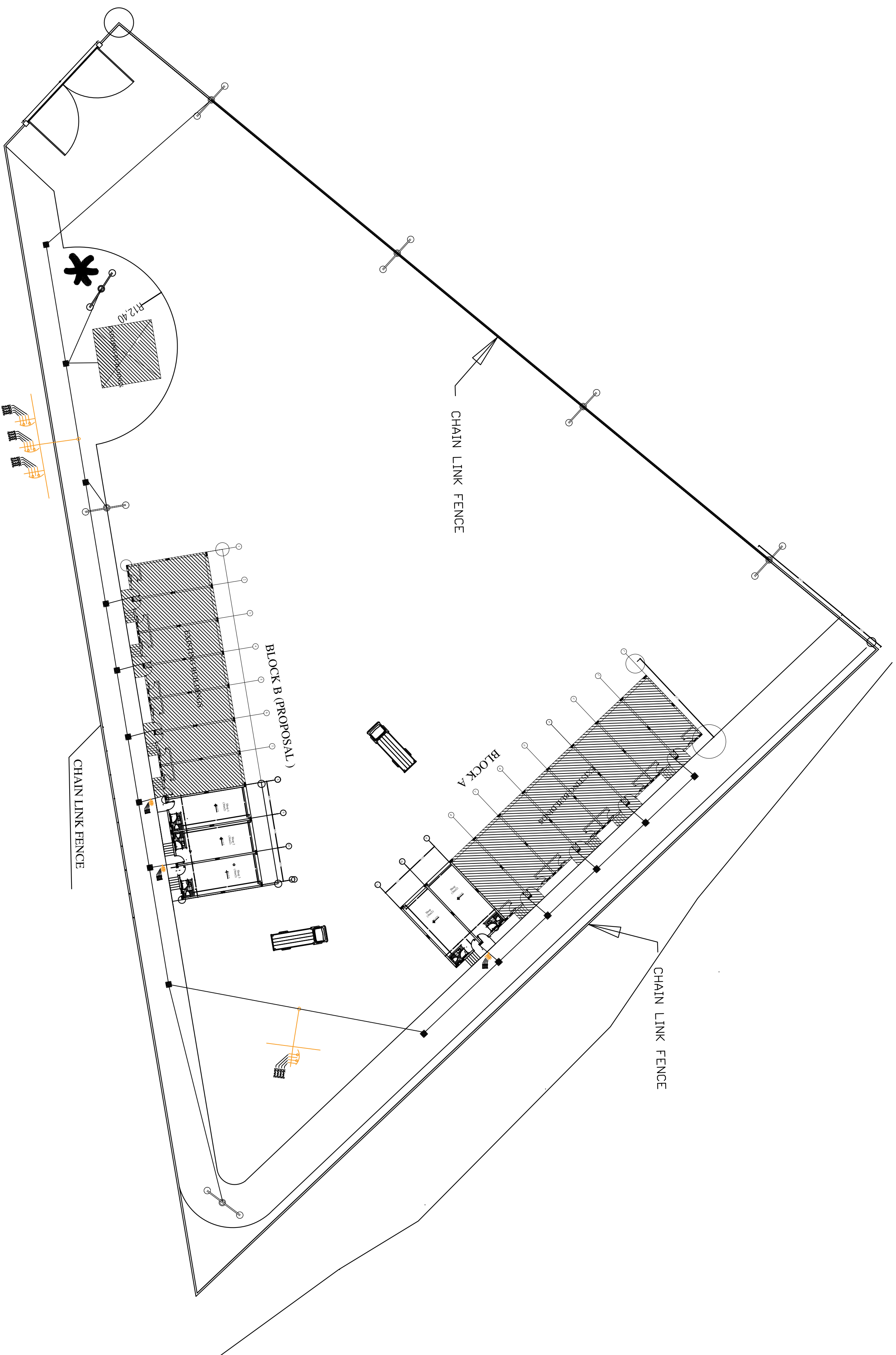
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ALL LEVELS ARE IN METERS UNLESS OTHERWISE INDICATED.

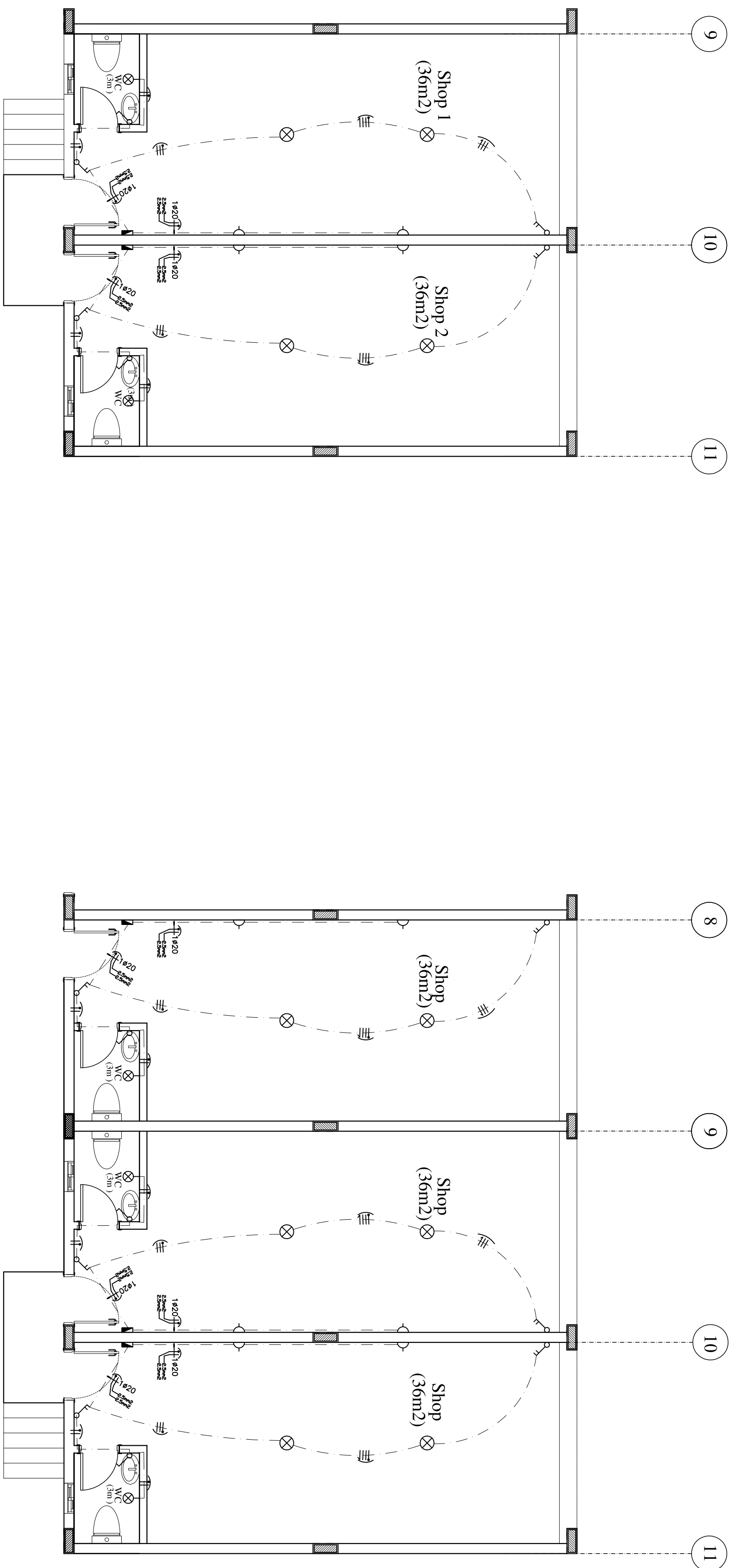
Conduits (or Cables)	
Symbols.	Designations.
	Concealed in Ceiling or Embedded in Wall
	Underfloor or Underlies

Lighting Switches Legend	
Symbols.	Designations.
	One Way One Gang
	One Way One Gang (Waterproof)
	One Way Two Gang
	One Way Two Gang (Waterproof)
	Two Way One Gang
	Two Way One Gang (Waterproof)
	Two Way Two Gang
	Two Way Two Gang (Waterproof)

Sockets Legend	
Symbols.	Designations.
	Simple wall type electrical socket.
	Double wall type electrical socket.
	U.P.S. Sp. wall type socket connected to U.P.S.
	U.P.S. Db. wall type socket connected to U.P.S.
	Wall type el. socket for refrigerator.
	Wall type el. outlet for A/C and Fan unit.
	Sp. wall type el. outlet for sat. antenna.
	Simple wall type telephone socket.
	Computer terminal wall outlet.
	Simple floor type socket for internet.
	Simple floor type el. socket.
	Double floor type el. socket.
	U.P.S. Sp. floor type socket connected to U.P.S.
	U.P.S. Db. floor type socket connected to U.P.S.
	Computer terminal floor outlet.
	Simple floor type telephone socket.
	Router outlet.
	UPS
	Camers Video Recorder
	Control camera



EXTERNAL POWER LAYOUT



BLOCK A LIGHTING AND POWER LAYOUTS

BLOCK B LIGHTING AND POWER LAYOUTS




Key Plan



REV	BY	APP	DESCRIPTION	DATE	

Revisions

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United Nation Development Programme

UNDP Lebanon

Social and Local Development Programme

P.O.Box: 11-3216 Beirut, Lebanon Tel: 961 1 962491



PROGRAMME:

Lebanese Host Communities Support Programme

CONSULTANT:

PROJECT:

BAR ELIAS MARKET (PART 2)

PLOT NO.: -

BLOCK: -

PROJECT NBR.	-
PROJECT PHASE	TENDER
DISCIPLINE	CIVIL ENGINEERING
SECTOR	-
BUILDING	-
DESIGNED	VB
DRAWN	GB
CHECKED	VB
APPROVED	VB
DATE	01.12.2015
SCALE	-
SHEET SIZE	A2

Sheet Title

SEPTIC TANK DETAILS

Sheet nbr.

T - C - G - 014 - R00

Phase

Discipline

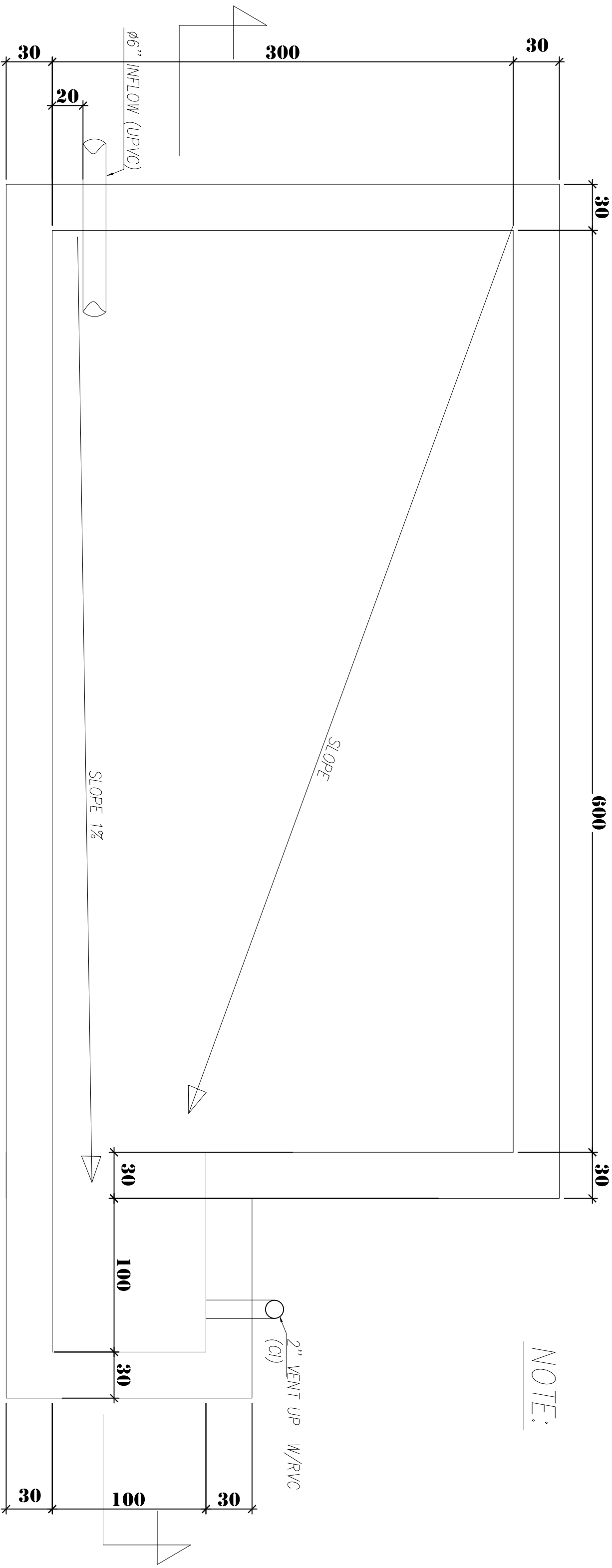
Floor Area

Drawing Number

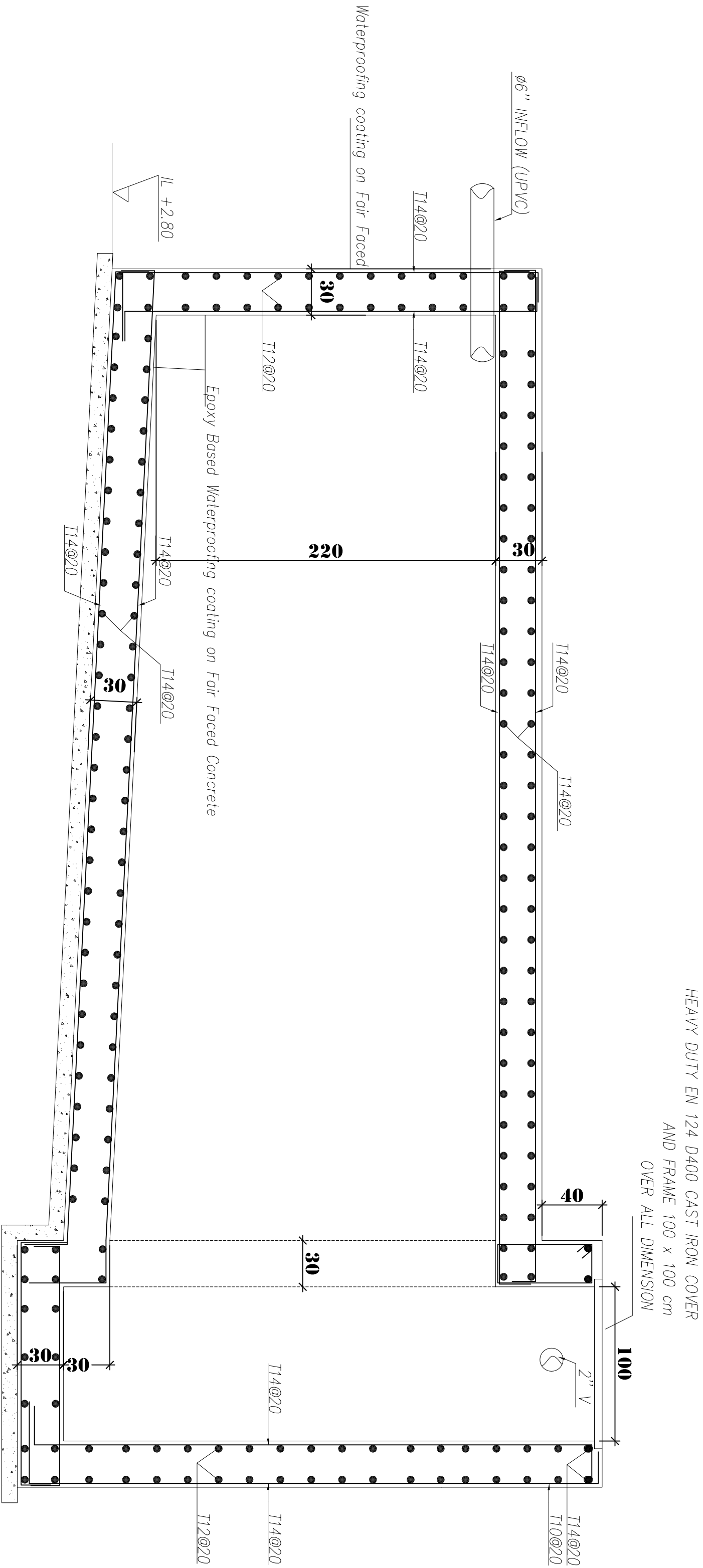
Revision

GENERAL NOTES

- 1- CONCRETE MIXES & PLACING
- 1-1 TWO TYPES OF CONCRETE ARE SPECIFIED
- CONCRETE FOR BLINDING AND CYCLOPEAN CONCRETE :
- 250 KG CEMENT OF ORDINARY PORTLAND CEMENT PER CUBIC METER OF CONCRETE
- CONCRETE FOR INFRASTRUCTURAL ELEMENTS FOOTINGS,RAFT,PILES,PILE CAPS,SLAB ON GRADE: 350 KG OF ORDINARY PORTLAND CEMENT PER CUBIC METER OF CONCRETE. MAX W/C=0.40
- CONCRETE FOR STRUCTURAL ELEMENTS COLUMNS,BEAMS,WALLS,SLABS: 350 KG OF ORDINARY PORTLAND CEMENT PER CUBIC METER OF CONCRETE. MAX W/C=0.40
- 1-2 UNLESS OTHERWISE SPECIFIED, THE MINIMUM 28 DAYS COMPRESSIVE STRENGTHS ARE: ON CYLINDER
- BLINDING/LEAN CONCRETE.....f'c=17 MPa
- COLUMNS, RETAINING WALL.....f'c=25 MPa
- GROUND SLAB,SLAB & BEAMS.....f'c=25 MPa
- 1-3 ALL CONCRETE SHALL BE MOST FOR A MINIMUM OF SEVEN CONSECUTIVE DAYS IMMEDIATELY AFTER POURING BY THE USE OF WET BURLAP, FOG SPRAYING OR OTHER APPROVED METHODS.
- 1-4 ORDINARY PORTLAND CEMENT TYPE I SHALL BE USED IN ALL INFRASTRUCTURE ELEMENTS.
- 1-5 CONCRETE SHALL BE DEPOSITED IN ITS FINAL POSITION WITHOUT SEGREGATION, RE-HANDLING OR FLOWING. NO DEPOSITING OF CONCRETE SHALL BE ALLOWED WITHOUT THE USE OF VIBRATORS, UNLESS AUTHORIZED IN WRITING BY THE DESIGNERS.
- 1-6 ALL REINFORCED CONCRETE TO BE VIBRATED
- 1-7 SLUMP TEST: MAXIMUM 7 TO 9 CM.
- 2- REINFORCED CONCRETE
- UNLESS NOTED ON DRAWINGS, THE FOLLOWING IS TO BE CONSIDERED AS TYPICAL AND APPLICABLE:
- 2-1 BASIS OF DESIGN: THE BAEL 91-M0099 CODE
- 2-2 PARTICULAR CARE SHOULD BE GIVEN TO THE PLACING OF REINFORCEMENT, THE MIXING AND CASTING OF CONCRETE, AND ACCORDING TO THE SPECIFICATIONS FOR THIS TRADE.
- 2-3 CONCRETE JOINTS SHALL PREFERABLY BE CONTINUOUS BETWEEN JOINTS.
- 2-4 THE MINIMUM CONCRETE PROTECTIVE COVER FOR REINFORCEMENT SHALL BE AS FOLLOWS:
- FOR SOLID SLABS:
- FOR BEAMS: EXTERNAL 4 cm
- INTERNAL 2.5 cm
- FOR COLUMNS: EXTERNAL 4 cm
- INTERNAL 2.5 cm
- FOR INTERNAL WALLS NOT EXPOSED TO WEATHER : 4 cm
- FOR EXTERNAL WALLS EXPOSED TO WEATHER : 5 cm
- FOR WALLS EXPOSED TO EARTH: 5 cm
- FOR FOOTINGS: 5 cm
- FOR SLAB ON GRADE: 5 cm
- 2-5 FOR ALL ELECTROMECHANICAL RESERVATIONS IN WALLS, SLABS AND BEAMS, EXACT LOCATION TO BE COORDINATED WITH ELECTROMECHANICAL DRAWINGS.
- 2-6 OPENINGS SMALLER THAN 150mm MAY BE FORMED EITHER BY BOXING OUT OR BY CAREFUL DRILLING BY CORE CUTTER AFTER CASTING.
- 2-7 ALL CONCRETE REINFORCEMENT SHALL BE DETAILED, FABRICATED, LABELED, SUPPORTED AND SPACED IN FORMS AND SECURED IN PLACE IN ACCORDANCE WITH THE PROCEDURES AND REQUIREMENTS OUTLINED IN THE FRENCH CODE NF P 02 016
- 2-8 ALL CONSTRUCTION JOINTS SHALL BE WIRE BRUSHED AND CLEANED IMMEDIATELY PRIOR TO POURING NEW CONCRETE.THE SURFACE OF THE CONCRETE AT ALL JOINTS SHALL BE ROUGHENED MINIMUM 6mm,THOROUGHLY CLEANED AND ALL LANTANCE REMOVED PRIOR TO PLACING ADJOINING CONCRETE.
- 2-9 THE SEQUENCE OF POURING CONCRETE SHALL BE SUCH AS TO MINIMIZE SHRINKAGE.
- 2-10 ALL REINFORCEMENT SHALL BE CONTINUED ACROSS CONSTRUCTION JOINTS UNLESS NOTED OTHERWISE
- 2-11 PROVIDE WATERPROOFING COATING IN MANHOLES
- 2-12 PROVIDE CONSTRUCTION JOINTS EVERY 25 METERS WITH PROPER WATERSTOPPING
- 2-13 REINFORCING STEEL TO BE BENT AND PLACED IN ACCORDANCE WITH MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES (BAEL91-M0099)'.
- 2-14 MAXIMUM AGGREGATE SIZE TO BE 2cm
- 2-15 PROVIDE CONTINUOUS KEYWAYS AT RETAINING WALL CONSTRUCTION JOINTS.
- 2-16 ALL REINFORCING STEEL SHALL BE SECURELY WIRED IN PLACE BEFORE CONCRETE IS PLACED
- 2-17 MAXIMUM SPACING OF BAR SUPPORTS IN SLAB ON GRADE TO BE 12m
- 2-18 DRILLING IN BEAMS AND COLUMNS FOR MOLDING INSTALLATION OR ANY OTHER PURPOSE, SHOULD BE DONE WITH EXTREME CARE TO AVOID CUTTING ANY OF THE STEEL REINFORCING. LOCATE BARS AND STIRRUPS BEFORE ANY DRILLING.THE CONTRACTOR TO PROVIDE INFORMATION ON HIS PROCEDURE IN WRITING TO STRUCTURAL ENGINEER BEFORE ANY DRILLING.
- 3- STRENGTH,SIZES,USED,SPUCE LENGTH
- HIGH TENSILE STEEL
- T8 T10 T12 T16 T20 T25 T32
- MILD STEEL
- ø6 ø8
- UNLESS OTHERWISE NOTED ON DRAWINGS, ALL REINFORCEMENT SHALL BE TIES AND STIRRUPS (PLAIN STEEL BAR) Fe E235
- OTHER BARS (HIGH TENSILE STEEL (MIN. YIELD STRENGTH)) Fe E300
- UNLESS OTHERWISE NOTED, MINIMUM SPICE LENGTH FOR HIGH TENSILE STEEL TO BE AS FOLLOWS:
- HITS HIGH TENSILE STEEL : 50 x BAR DIAMETER
- T8 - 40cm
- T10 - 50cm
- T12 - 60cm
- T16 - 80cm
- T20 - 100cm
- T25 - 125cm
- T32 - 160cm



SEPTIC TANK 60m3
PLAN



SEPTIC TANK 60m3
SECTION