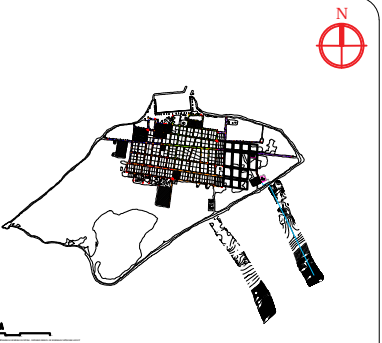


L. HITHADHOO SEWERAGE SYSTEM - DETAILED DESIGN OF SEWERAGE NETWORK LAYOUT  
1:7000



#### Legend

160mm Ø uPVC PS1 Gravity Sewer Main (SN4, SDR41)	- 1487m
160mm Ø uPVC PS2 Gravity Sewer Main (SN4, SDR41)	- 1501m
160mm Ø uPVC PS3 Gravity Sewer Main (SN4, SDR41)	- 2596m
160mm Ø uPVC PS4 Gravity Sewer Main (SN4, SDR41)	- 2064m
160mm Ø uPVC PS5 Gravity Sewer Main (SN4, SDR41)	- 1357m
110 mm Ø HDPE Pumping Main (PE100, PN16, SDR11)	- 3772m
160 mm Ø HDPE Sea Outfall Pipe (PE100, PN16, SDR11)	- 73m on land - 674m offshore - 747m total
800mm Ø PE/PP Maintenance Shaft	- 147 nos
160mmØ uPVC Clean Out	- 84 nos
PERMANENT SURVEY MARK PSM_5363 32059.407E, 199025.942N 0.996m From MSL	
PERMANENT SURVEY MARK PSM_5364 321119.956E, 198953.066N 1.066m From MSL	
PERMANENT SURVEY MARK PSM_5365 320825.261E, 198697.178N 0.996m From MSL	

#### Notes

- All levels shown are in meters.
- All levels shown are from mean sea level
- This drawing to be read in conjunction with all other relevant drawings and specifications.
- All gravity sewer pipes shall be uPVC to BS EN1401-1:2019.
- All gravity sewer mains shall be 160mm dia uPVC of wall thickness & stiffness rated to SN4 & SDR41.
- All gravity house laterals shall be 110mm dia uPVC of wall thickness & stiffness rated to SD4 & SDR41.
- All gravity sewer mains shall have minimum 0.4% slope.
- All gravity sewer pipes shall be jointed using rubber ring push fit jointing method & rubber rings comply with BS 2494 (typ2).
- Connection from the household to the inspection chamber is not included. Provision shall be given in IC for multiple connections.
- All sewer pipes shall be buried under earth cover of minimum 0.6 meters.
- Catchment over flow links are to be connected as indicated below:
  - CO3-25 and MH5-09
  - CO3-10 and MH3-26
  - CO3-11 and MH5-05
  - CO4-15 and MH5-05
  - CO4-12 and MH4-24
  - CO4-06 and CO4-17
  - CO4-02 and MH4-22
  - CO1-01 and MH3-01
  - CO2-03 and CO3-05
  - CO2-14 and MH1-16
  - CO2-20 and MH1-01

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
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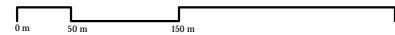
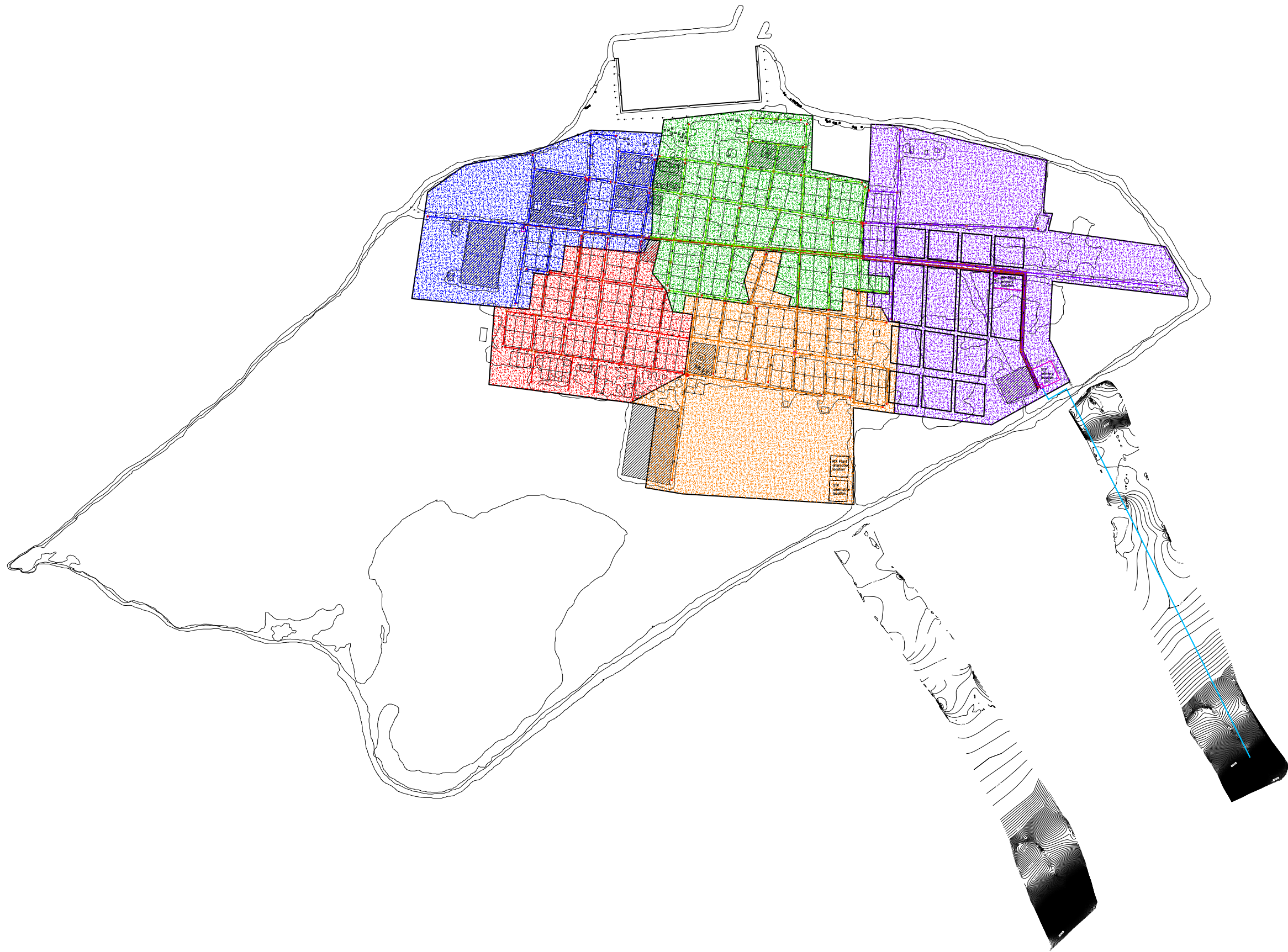
Sub Title:  
**Sewerage System in L. Hithadhoo**

Client:  
**Ministry of National Planning, Housing and Infrastructure, Republic of Maldives**

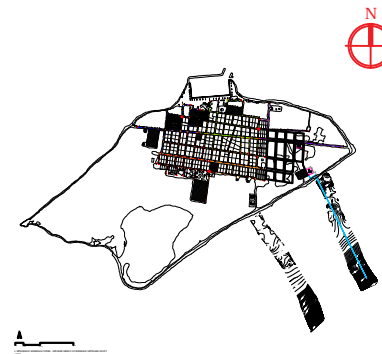
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Rev:	Page: A-(1)



L. HITHADHOO SEWERAGE SYSTEM - SEWERAGE NETWORK CATCHMENT AREAS  
1:7000



Legend

- PS-1 Catchment Area
- PS-2 Catchment Area
- PS-3 Catchment Area
- PS-4 Catchment Area
- PS-5 Catchment Area

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6

Sub Title:  
Sewerage System in L. Hithadhoo

Client:  
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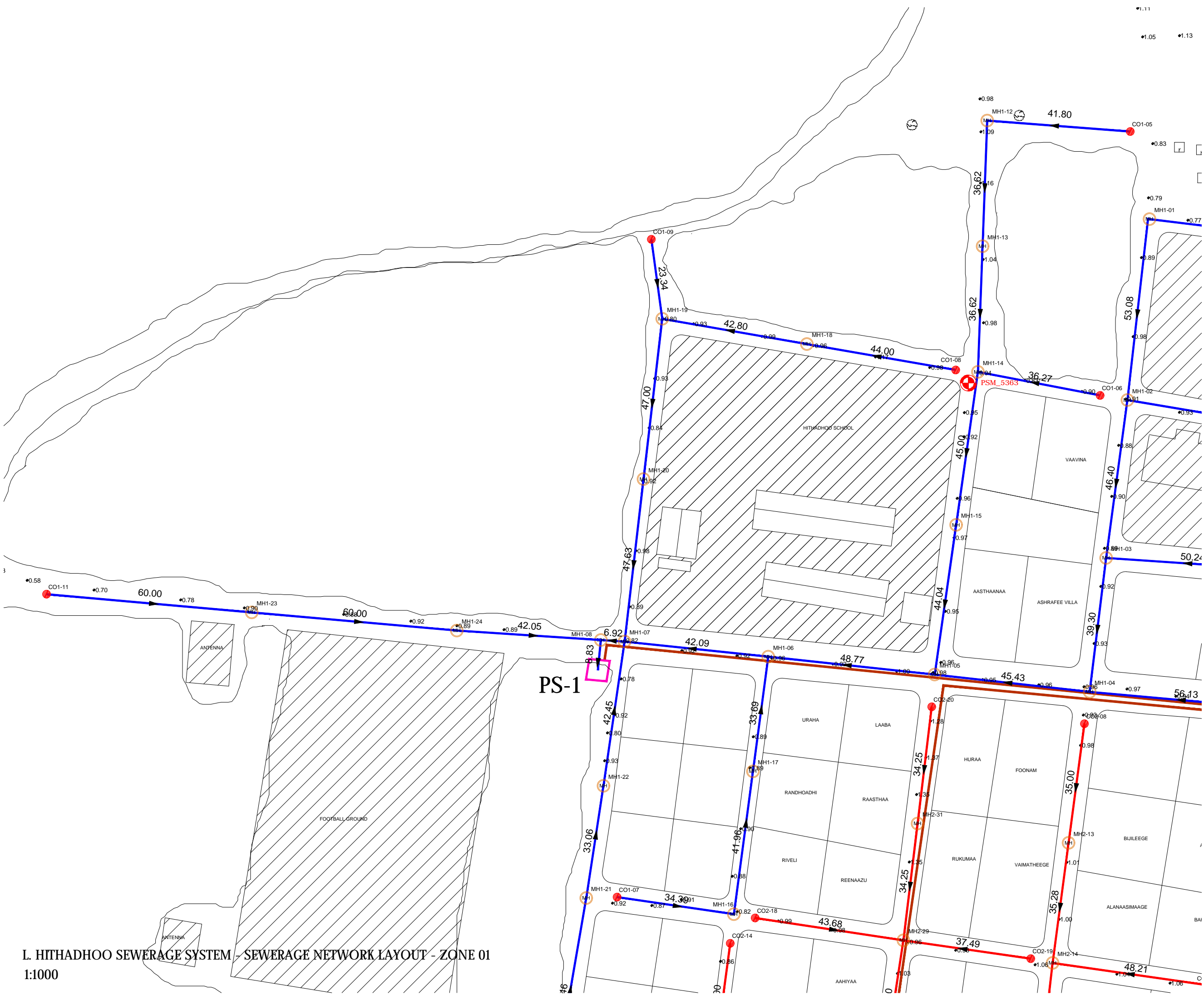
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L. HITHADHOO SEWERAGE SYSTEM - SEWERAGE NETWORK LAYOUT - ZONE 01  
1:1000

**Legend**

- 160mm Ø uPVC PS1 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS2 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS3 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS4 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS5 Gravity Sewer Main (SN4, SDR41)
- 600mm Ø PE/PP Maintenance Shaft
- 160mm Ø uPVC Clean Out
- 160 mm Ø HDPE Pumping Main (PE100, PN16, SDR11)
- 160 mm Ø HDPE Sea Outfall Pipe (PE100, PN16, SDR11)

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Title:  
**Consultancy Services for Survey, Design and EIA works of Water Supply and Sewerage Facilities in 5 islands, Maldives - Package 6**

Sub Title:  
**Sewerage System in L. Hithadhoo**

Client:  
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CONSULTANCY SERVICES FOR SURVEY, DESIGN AND EIA WORKS OF WATER SUPPLY AND  
SEWERAGE FACILITIES IN 5 ISLANDS, MALDIVES

PACKAGE 6

## SEWERAGE SYSTEM OF L. HITHADHOO, MALDIVES

For Ministry of National Planning, Housing and Infrastructure, Republic of Maldives



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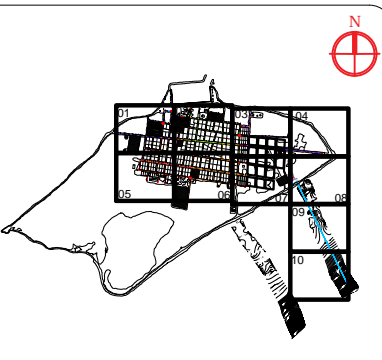
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L. HITHADHOO SEWERAGE SYSTEM - SEWERAGE NETWORK LAYOUT - ZONE 02

1:1000



Legend

- 160mm Ø uPVC PS1 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS2 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS3 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS4 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS5 Gravity Sewer Main (SN4, SDR41)
- 600mm Ø PE/PP Maintenance Shaft
- 160mm Ø uPVC Clean Out
- 160 mm Ø HDPE Pumping Main (PE100, PN16, SDR11)
- 160 mm Ø HDPE Sea Outfall Pipe (PE100, PN16, SDR11)

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Title:  
Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6

Sub Title:  
Sewerage System in L. Hithadhoo

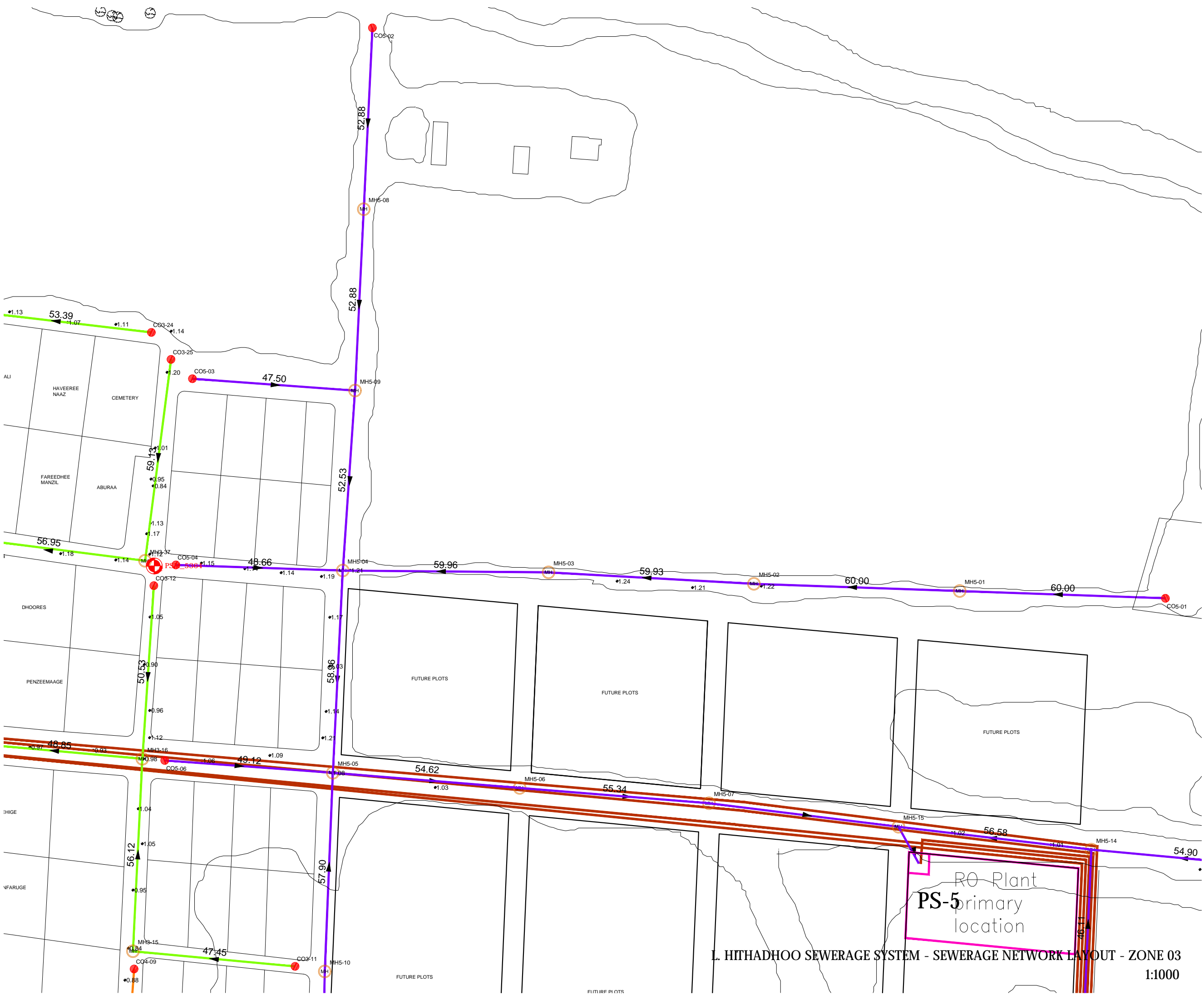
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**Legend**

- 160mm Ø uPVC PS1 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS2 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS3 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS4 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS5 Gravity Sewer Main (SN4, SDR41)
- 600mm Ø PE/PP Maintenance Shaft
- 160mmØ uPVC Clean Out
- 160 mm Ø HDPE Pumping Main (PE100, PN16, SDR11)
- 160 mm Ø HDPE Sea Outfall Pipe (PE100, PN16, SDR11)

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

**Title:**  
Consultancy Services for Survey, Design and EIA works of Water Supply and Sewerage Facilities in 5 islands, Maldives - Package 6

**Sub Title:**  
Sewerage System in L. Hithadhoo

**Client:**  
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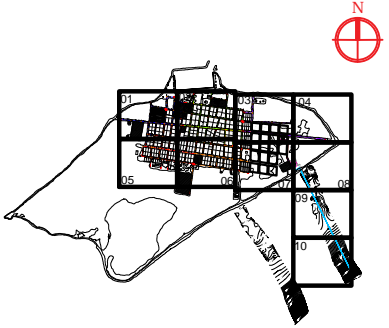
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L. HITHADHOO SEWERAGE SYSTEM - SEWERAGE NETWORK LAYOUT - ZONE 04

1:1000



Legend


- 160mm Ø uPVC PS1 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS2 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS3 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS4 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS5 Gravity Sewer Main (SN4, SDR41)
- 600mm Ø PE/PP Maintenance Shaft
- 160mmØ uPVC Clean Out
- 160 mm Ø HDPE Pumping Main (PE100, PN16, SDR11)
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Title:  
Consultancy Services for Survey,  
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Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6

Sub Title:  
Sewerage System in L. Hithadhoo

Client:  
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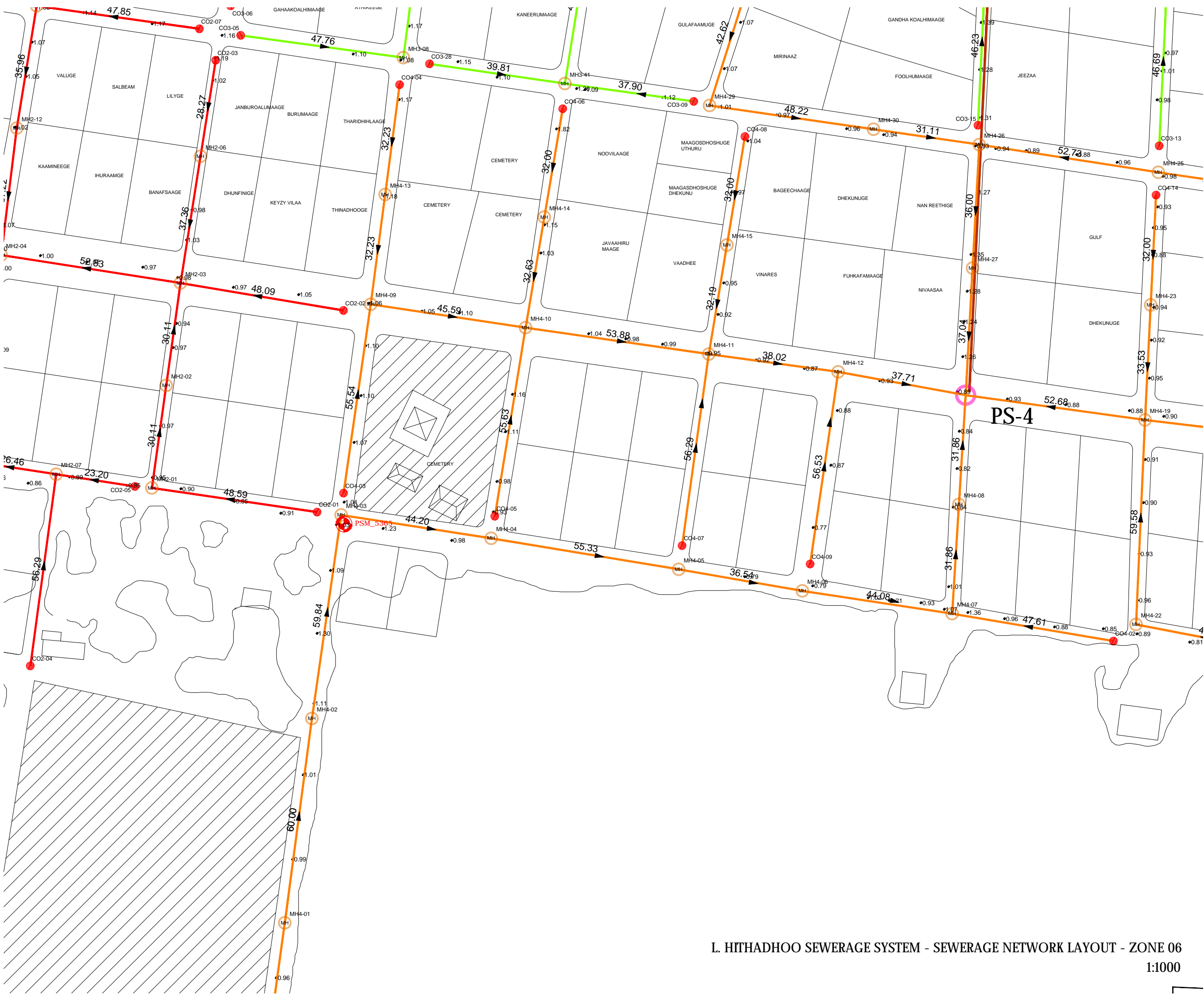
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<p><b>Title:</b></p> <p style="text-align: center;"><b>Consultancy Services for Survey, Design and EIA works of Water Supply and Sewerage Facilities in 5 islands, Maldives - Package 6</b></p> <p><b>Sub Title:</b></p> <p style="text-align: center;"><b>Sewerage System in L. Hithadhoo</b></p>	
<p><b>Client:</b></p> <p style="text-align: center;"><b>Ministry of National Planning, Housing and Infrastructure, Republic of Maldives</b></p>	
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**Legend**

- 160mm Ø uPVC PS1 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS2 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS3 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS4 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS5 Gravity Sewer Main (SN4, SDR41)
- 600mm Ø PE/PP Maintenance Shaft
- 160mm Ø uPVC Clean Out
- 160 mm Ø HDPE Pumping Main (PE100, PN16, SDR11)
- 160 mm Ø HDPE Sea Outfall Pipe (PE100, PN16, SDR11)

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
**Consultancy Services for Survey, Design and EIA works of Water Supply and Sewerage Facilities in 5 islands, Maldives - Package 6**

Sub Title:  
**Sewerage System in L. Hithadhoo**

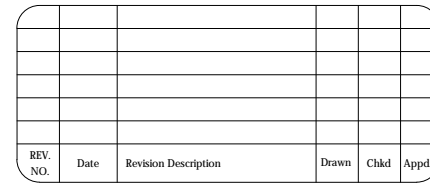
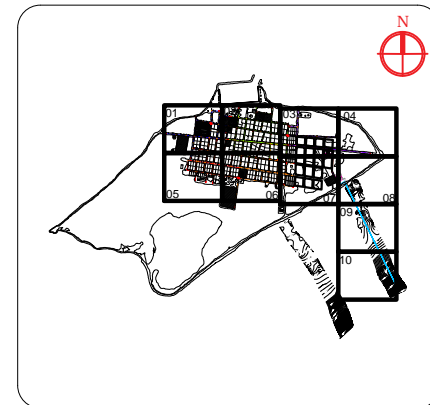
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L. HITHADHOO SEWERAGE SYSTEM - SEWERAGE NETWORK LAYOUT - ZONE 06  
1:1000





**Title:**  
**Consultancy Services for Survey, Design and EIA works of Water Supply and Sewerage Facilities in 5 islands, Maldives - Package 6**

**Sub Title:**  
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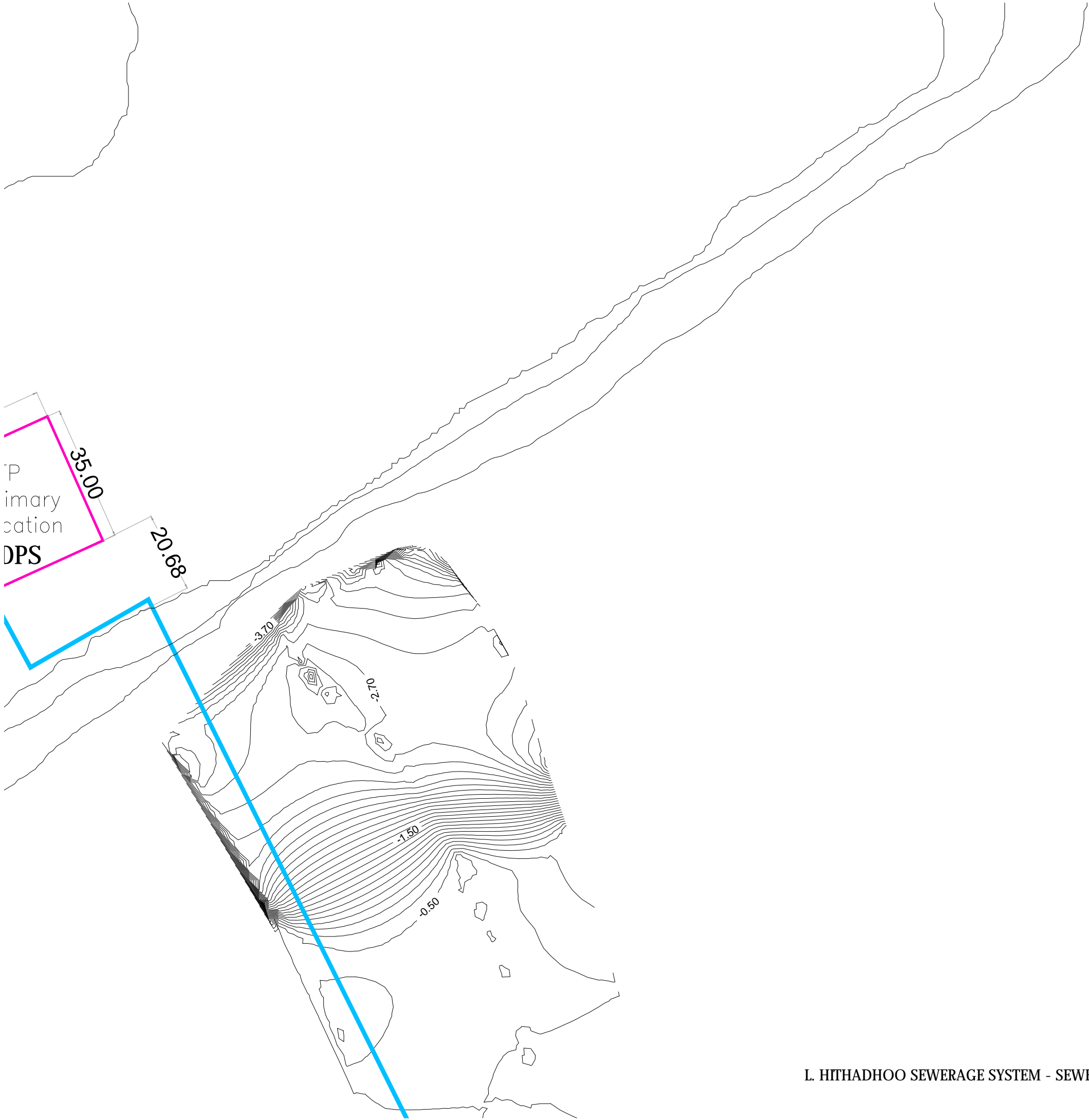
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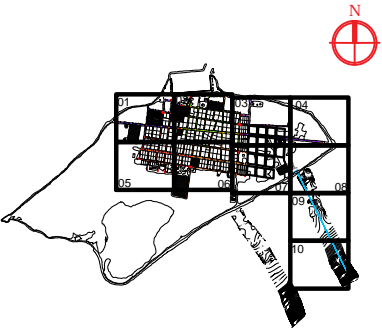
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L. HITHADHOO SEWERAGE SYSTEM - SEWERAGE NETWORK LAYOUT - ZONE 08  
1:1000



Legend


- 160mm Ø uPVC PS1 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS2 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS3 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS4 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS5 Gravity Sewer Main (SN4, SDR41)
- 600mm Ø PE/PP Maintenance Shaft
- 160mmØ uPVC Clean Out
- 160 mm Ø HDPE Pumping Main (PE100, PN16, SDR11)
- 160 mm Ø HDPE Sea Outfall Pipe (PE100, PN16, SDR11)

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.


Title:  
Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6

Sub Title:  
Sewerage System in L. Hithadhoo

Client:  
Ministry of National Planning, Housing and  
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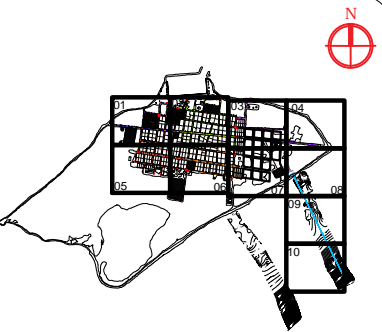
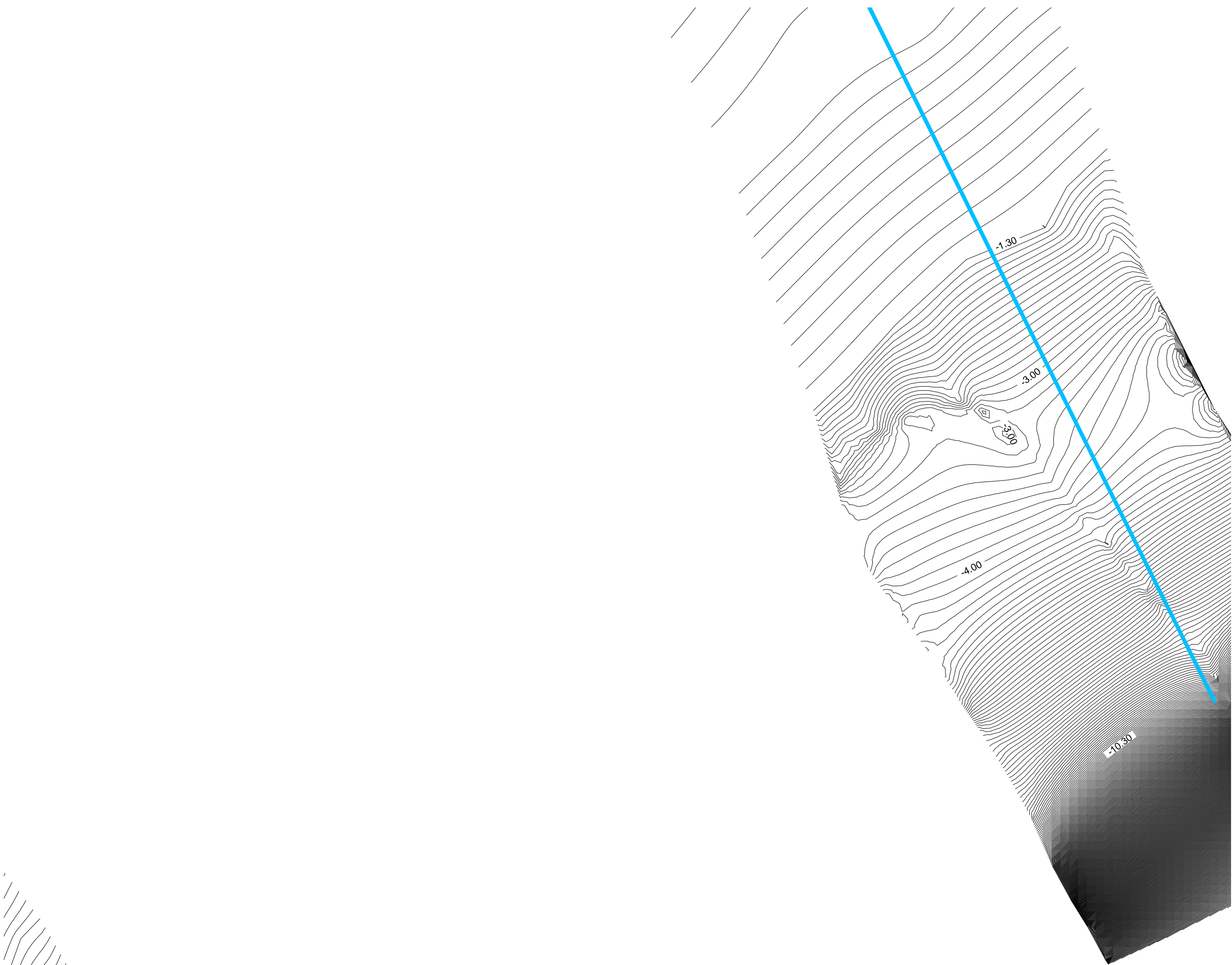
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Project No: EP-WS/2019/06	
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Legend

- 160mm Ø uPVC PS1 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS2 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS3 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS4 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS5 Gravity Sewer Main (SN4, SDR41)
- 600mm Ø PE/PP Maintenance Shaft
- 160mmØ uPVC Clean Out
- 160 mm Ø HDPE Pumping Main (PE100, PN16, SDR11)
- 160 mm Ø HDPE Sea Outfall Pipe (PE100, PN16, SDR11)

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6

Sub Title:  
Sewerage System in L. Hithadhoo

Client:  
Ministry of National Planning, Housing and  
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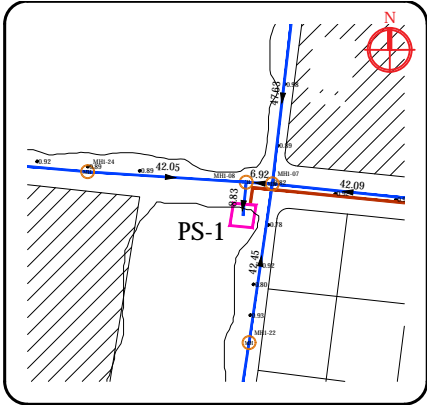
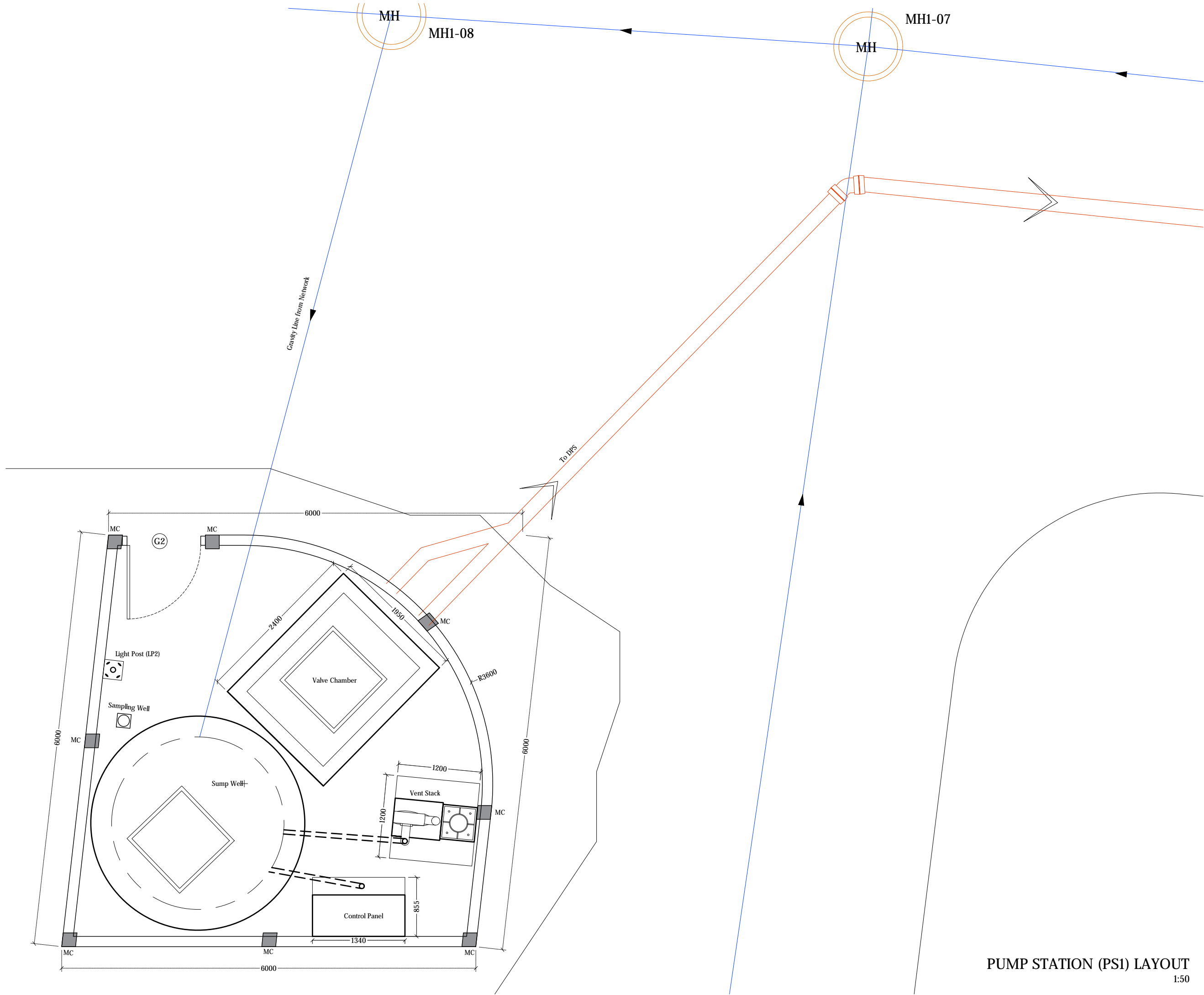
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Project No: EP-WS/2019/06

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Legend

160mm Ø uPVC PS1 Gravity Sewer Main (SN4, SDR41)

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

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Consultancy Services for Survey,  
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Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives

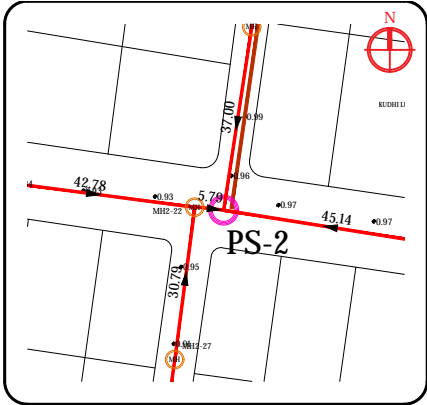
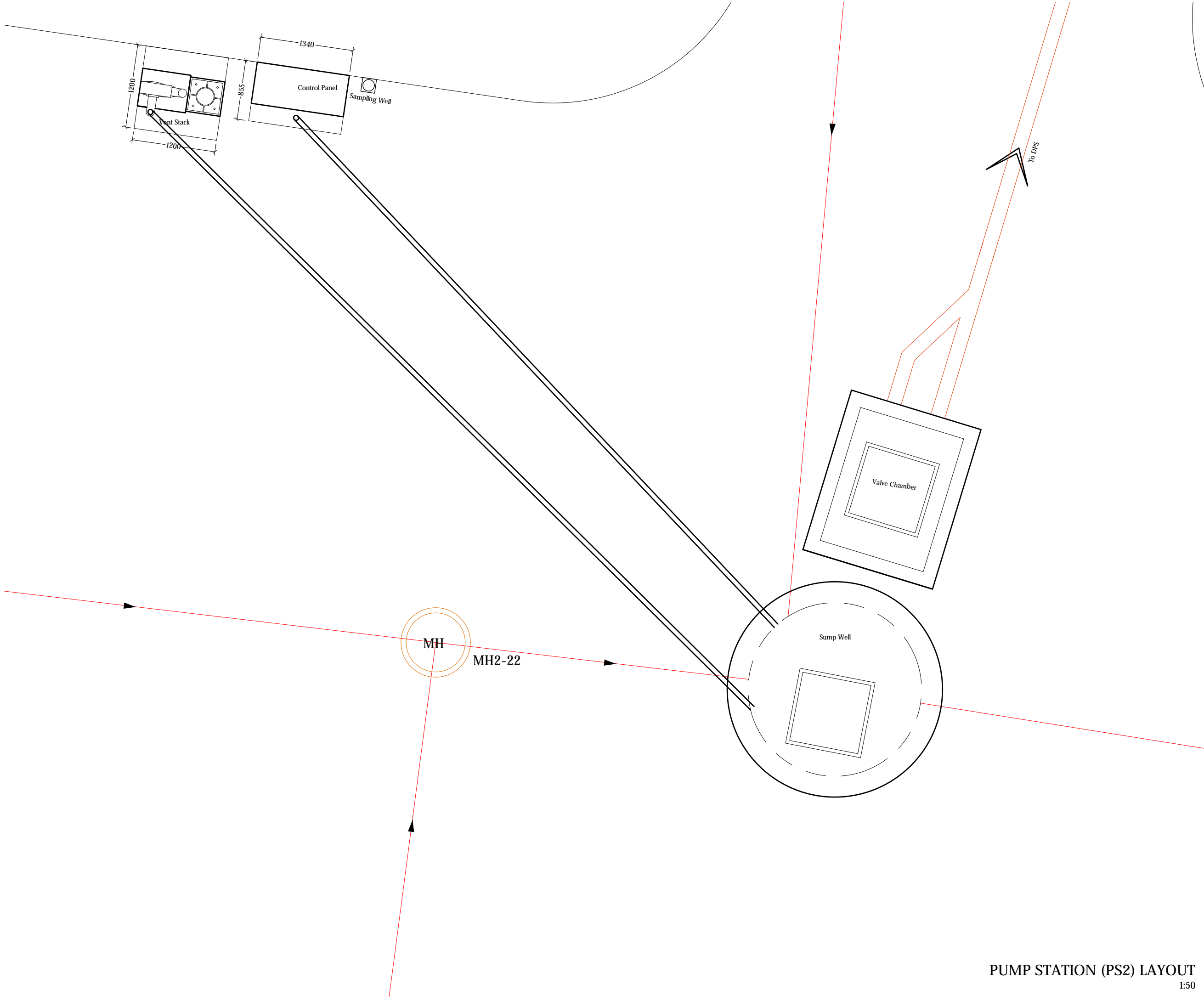
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Date: Sep 2020	SCALE (A3): 1:50
Project No: EP-WS/2019/06	Page: W-(1)

PUMP STATION (PS1) LAYOUT  
1:50





Legend

160mm Ø uPVC PS2 Gravity Sewer Main (SN4, SDR41)

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6

Sub Title:  
Sewerage System in L. Hithadhoo

Client:  
Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives



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Maldivian Infrastructure Development

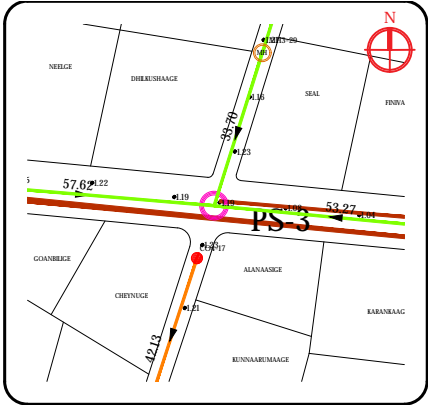
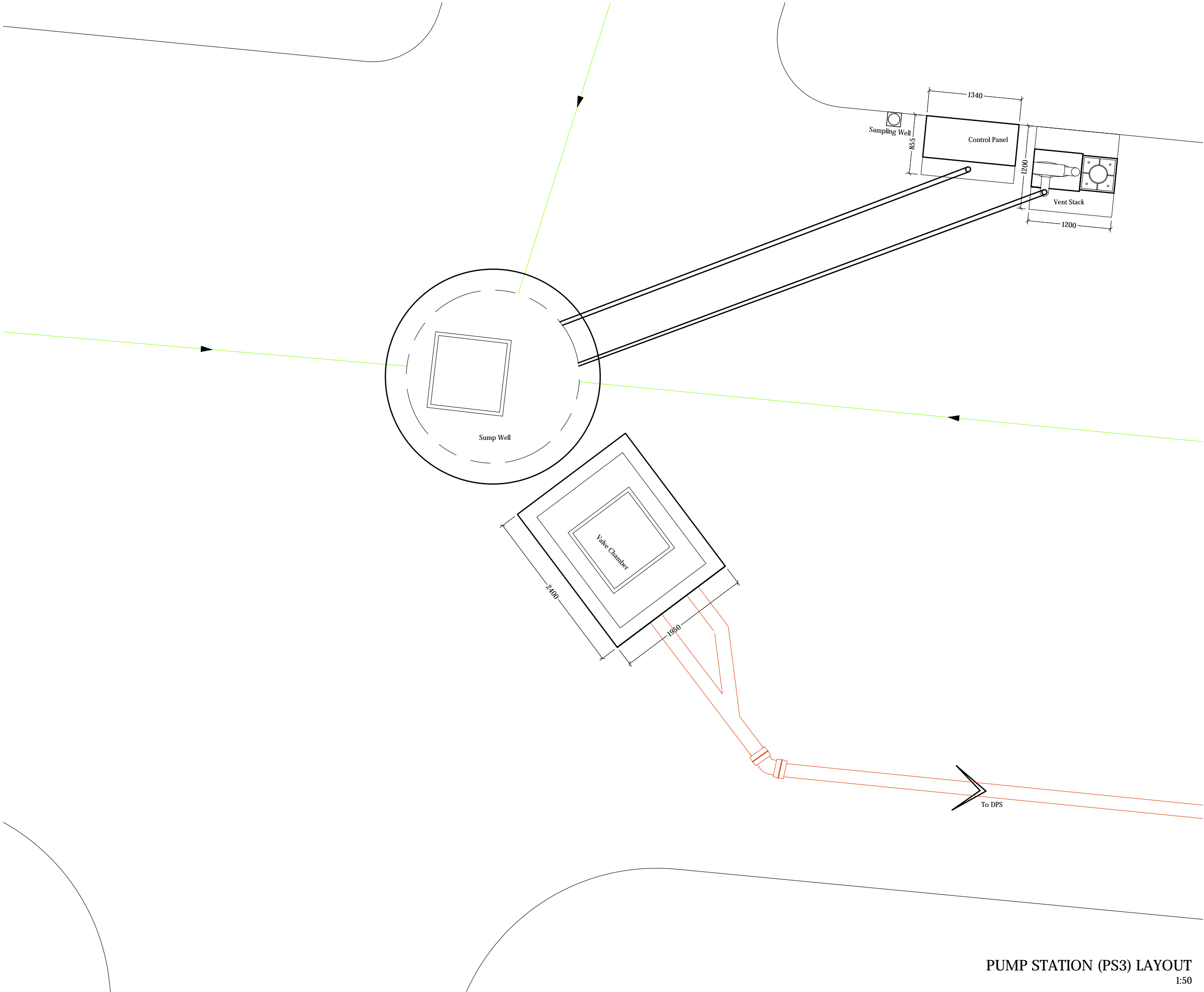
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Project No: EP-WS/2019/06

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Legend

160mm Ø uPVC PS3 Gravity Sewer Main (SN4, SDR41)

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6

Sub Title:  
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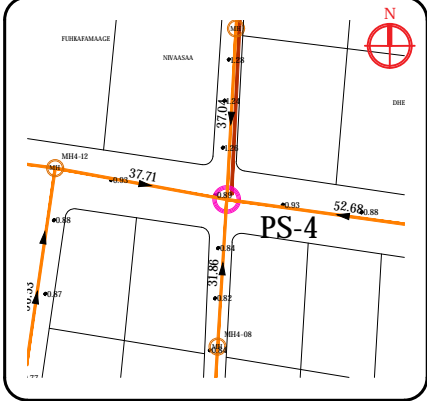
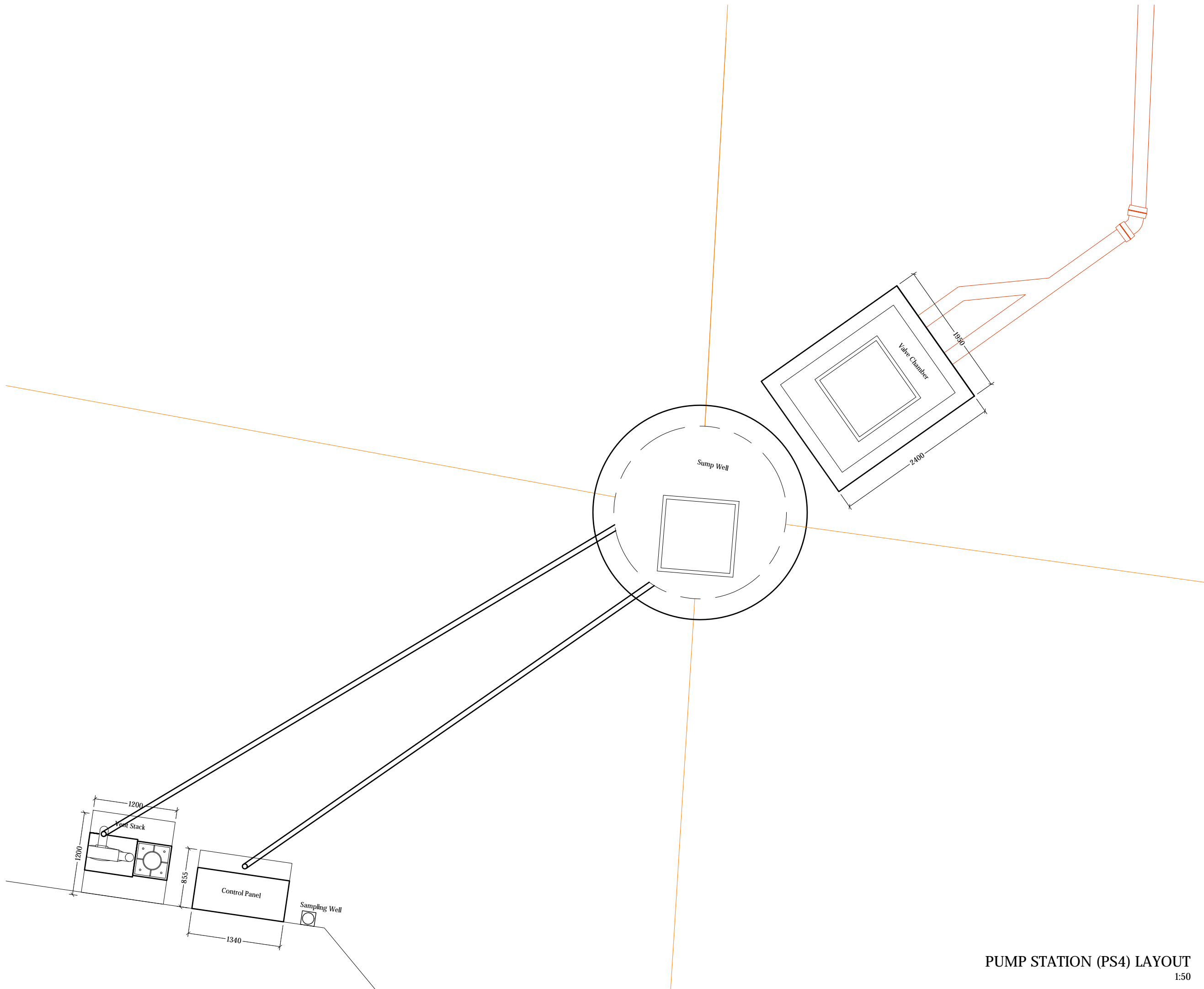
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Project No: EP-WS/2019/06

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Legend


160mm Ø uPVC PS4 Gravity Sewer Main (SN4, SDR41)

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.


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Sub Title:  
Sewerage System in L. Hithadhoo

Client:  
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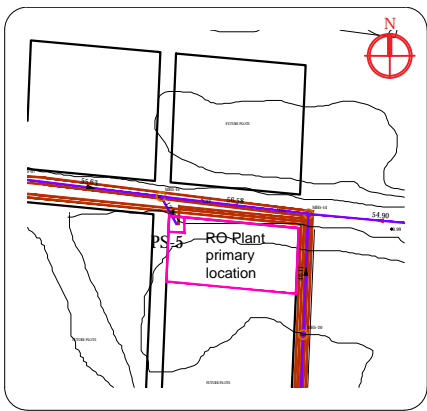
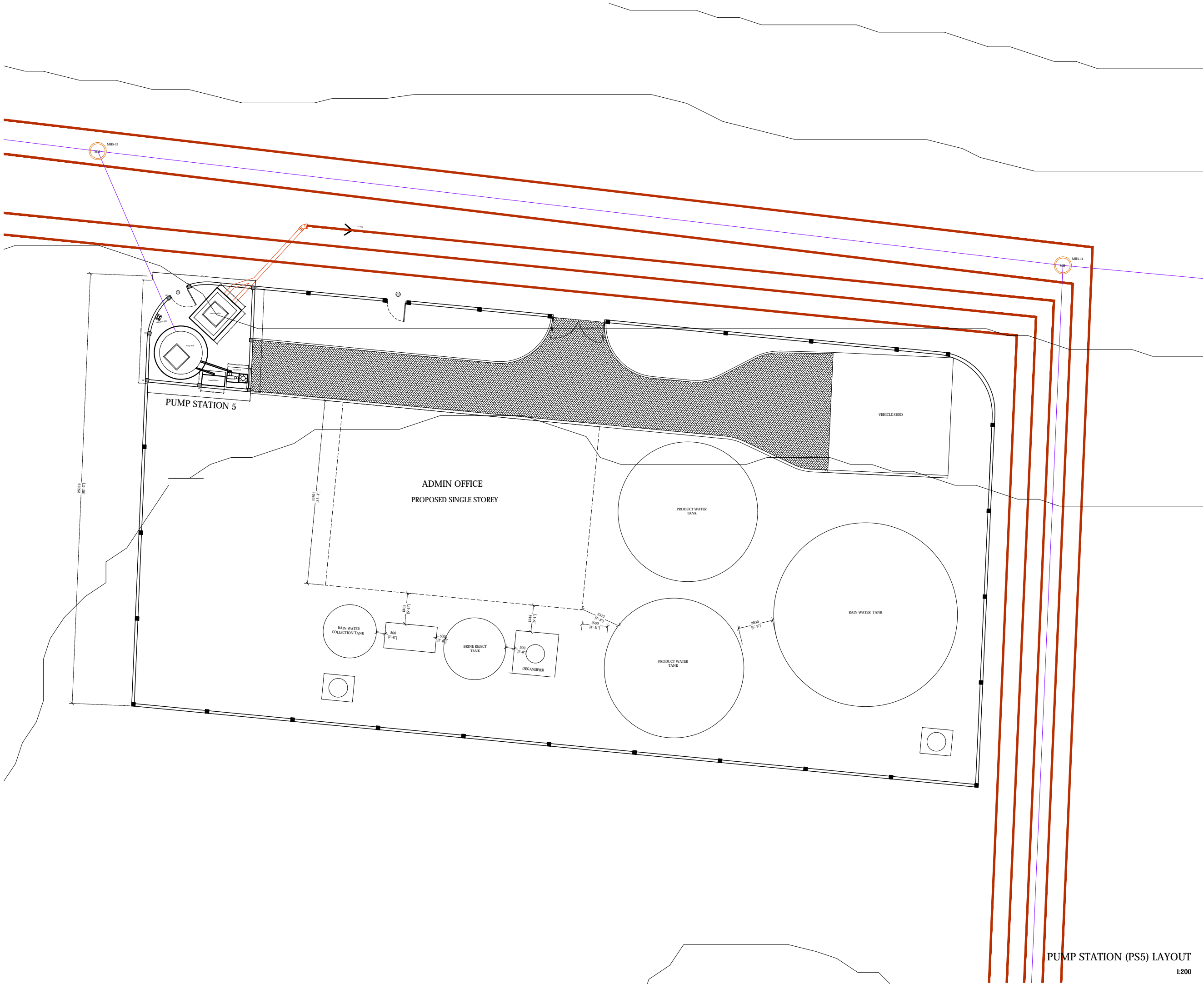
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Project No: EP-WS/2019/06	
Rev:	Page: W-(24)

PUMP STATION (PS4) LAYOUT  
1:50



Legend

160mm Ø uPVC PS5 Gravity Sewer Main (SN4, SDR41)

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
Consultancy Services for Survey,  
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Sub Title:  
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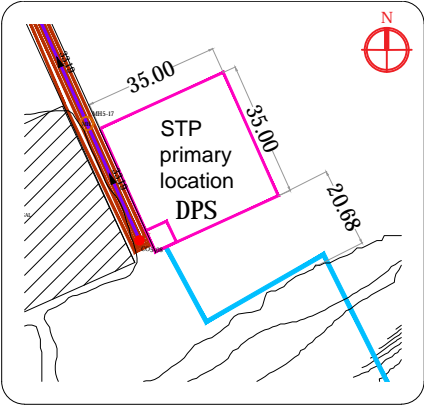
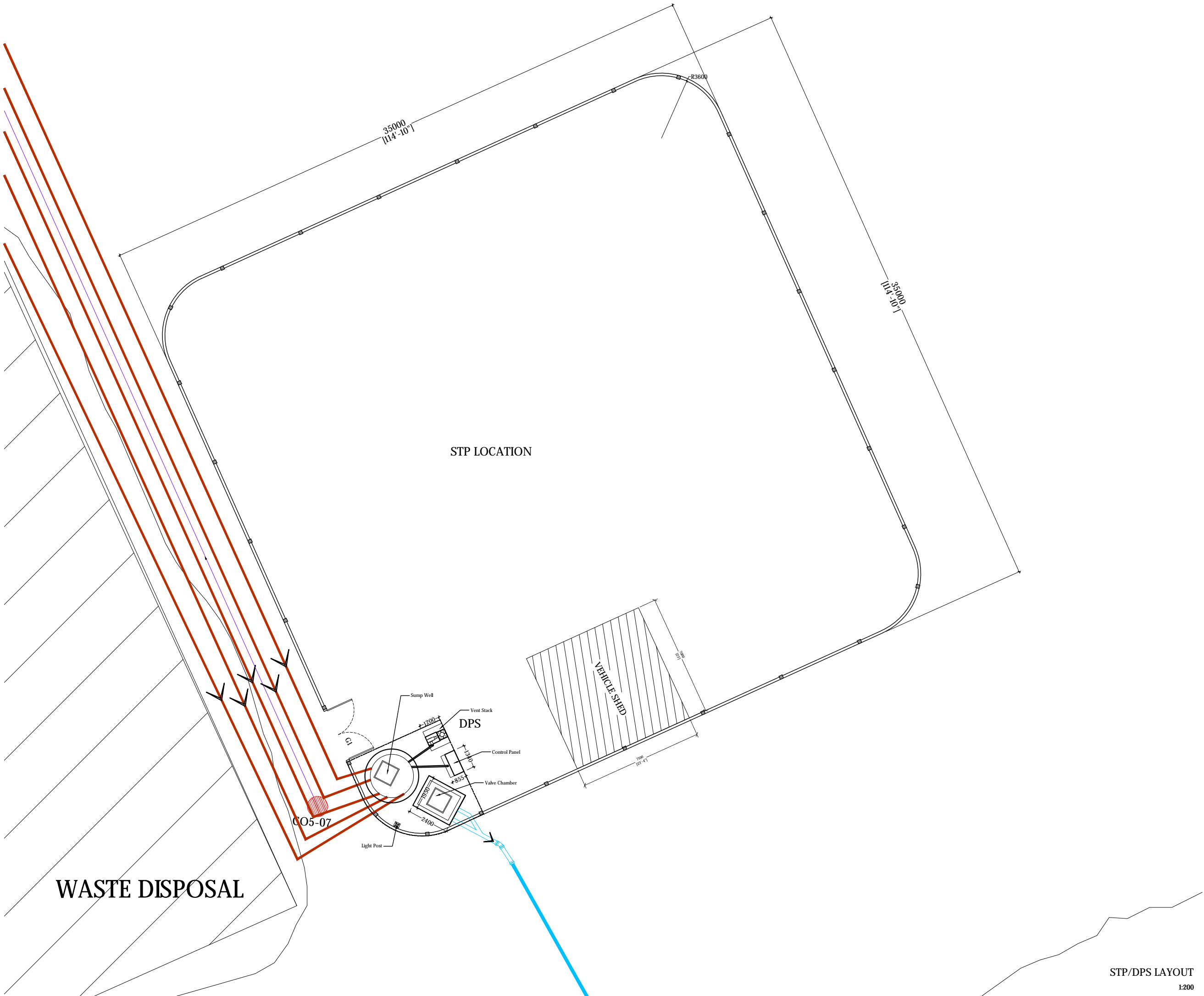


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Project No:	EP-WS/2019/06
Rev:	Page: W-(25)

PUMP STATION (PS5) LAYOUT  
1:200





Legend

- 160mm Ø uPVC Gravity Sewer Main (SN4, SDR41)
- 110 mm Ø HDPE Pumping Main (PE100, PN16, SDR11)
- 160 mm Ø HDPE Sea Outfall Pipe (PE100, PN16, SDR11)

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6

Sub Title:  
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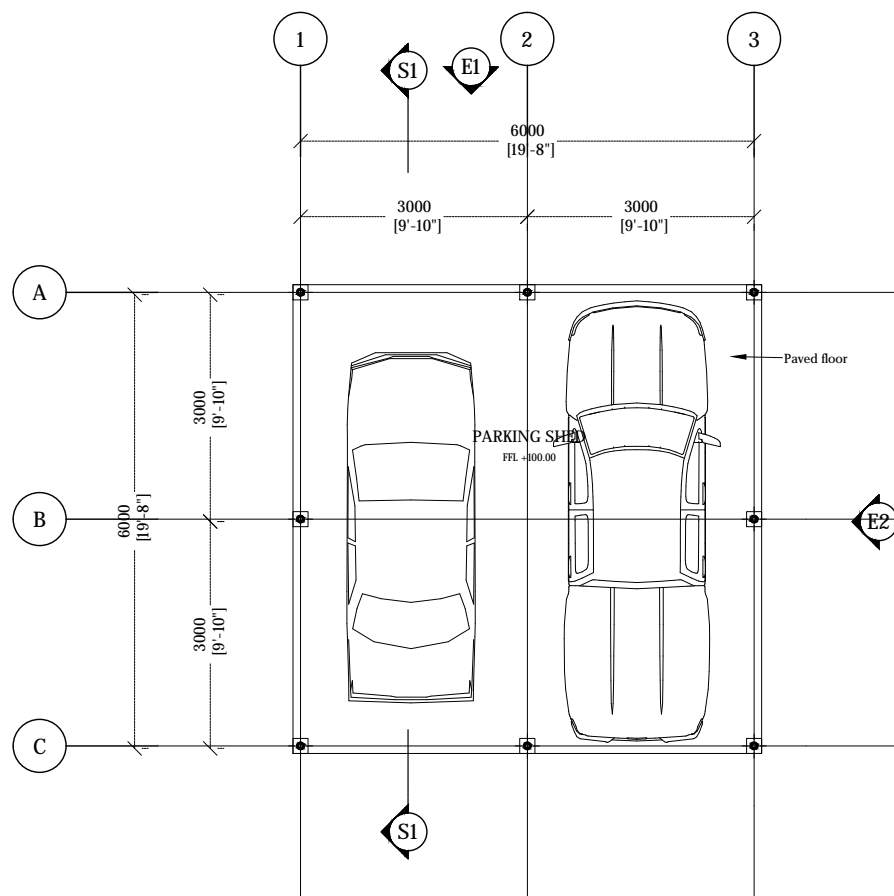
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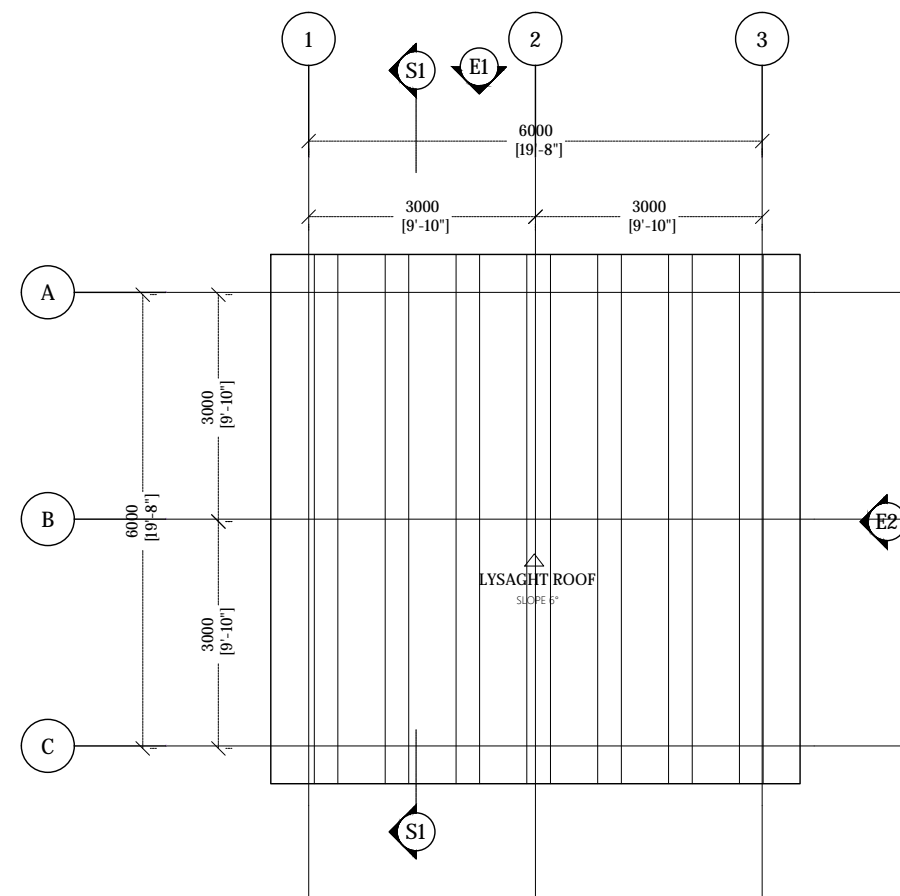
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Project No: EP-WS/2019/06

Rev: Page: W-(4)



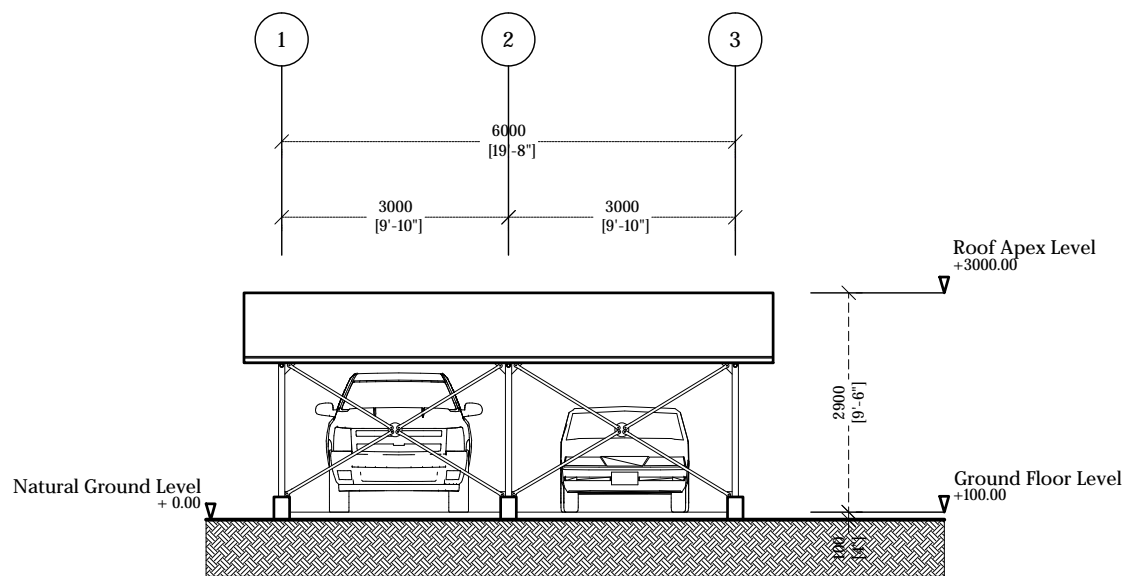
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1:100

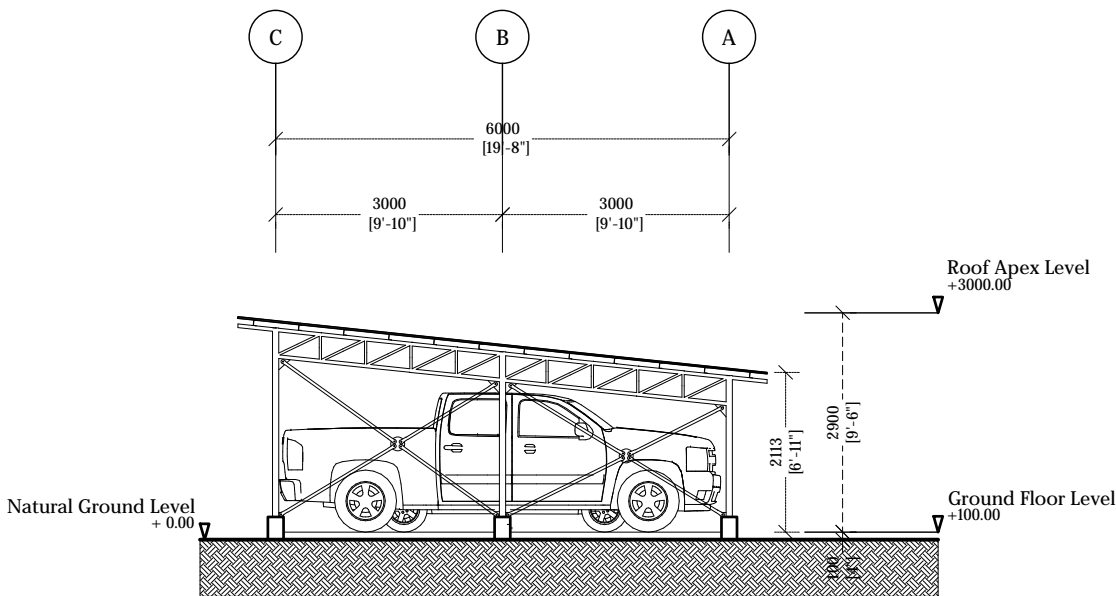
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VS-A(1)



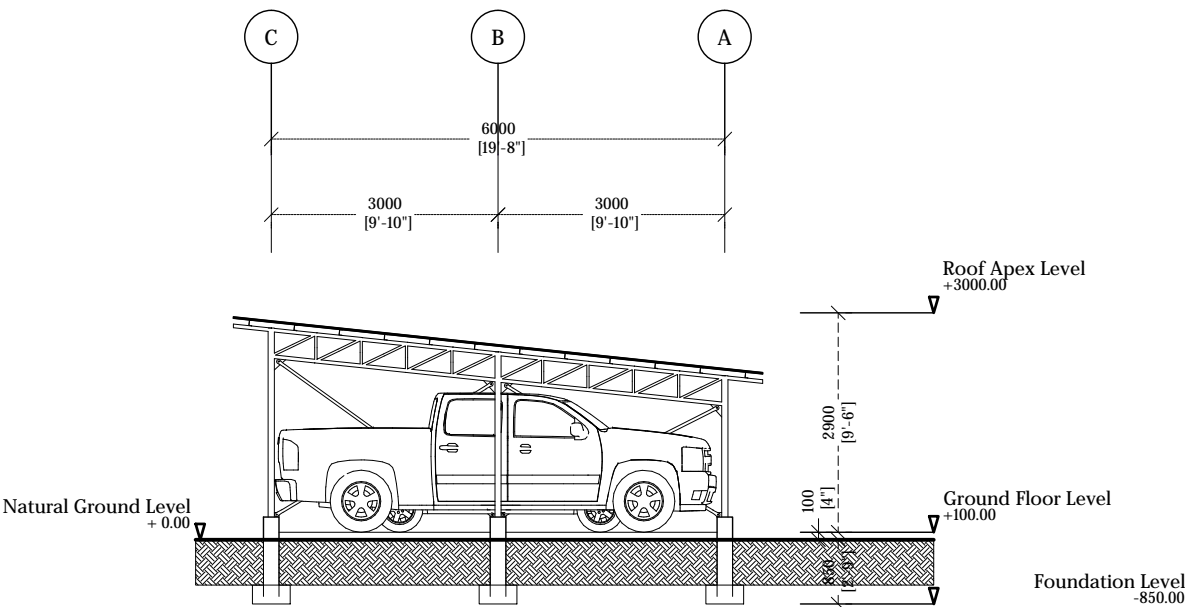
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1:100



VEHICLE SHED ELEVATION E2

1:100



VEHICLE SHED SECTION S1

1:100



Legend

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

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Consultancy Services for Survey,  
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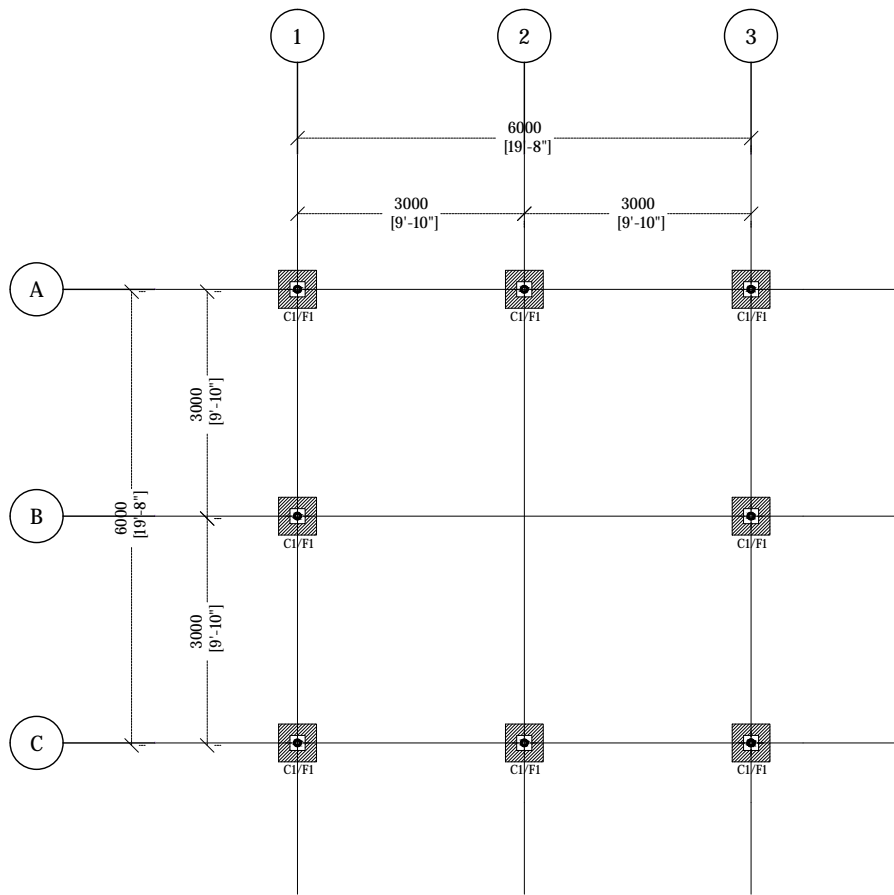
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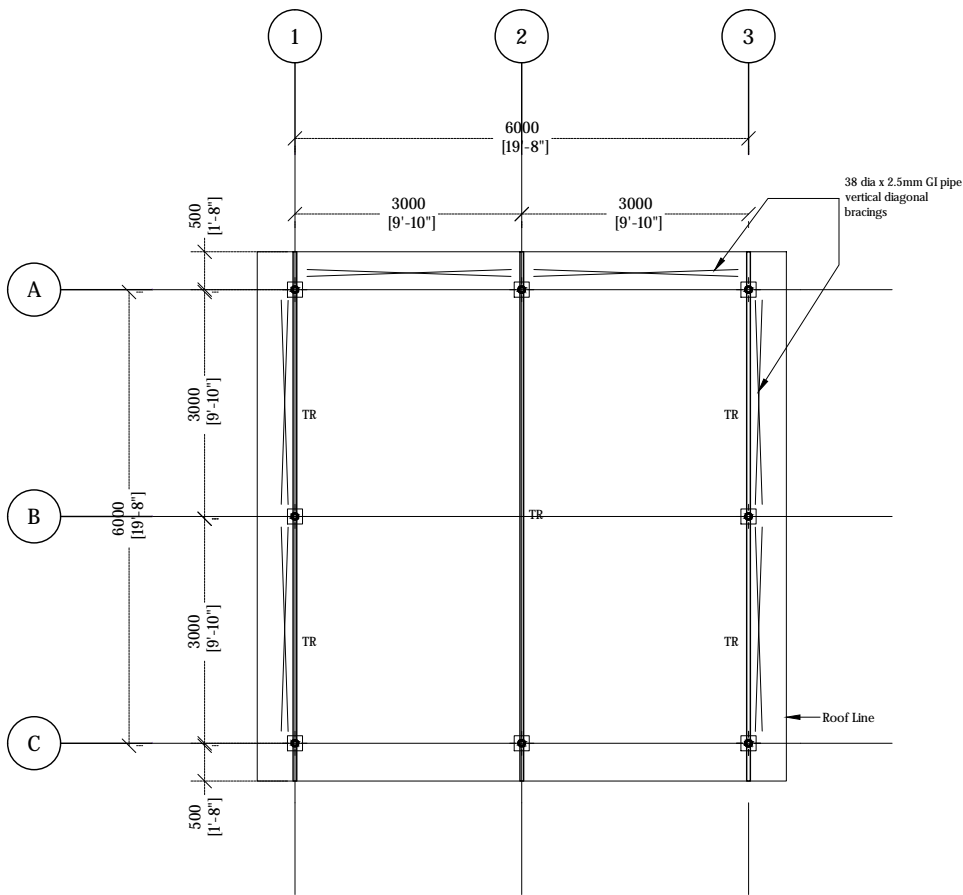
Rev: Page:

VS-A(2)



VEHICLE SHED FOUNDATION PLAN

1:100



VEHICLE SHED ROOF TRUSS PLAN

1:100



Legend

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
Consultancy Services for Survey,  
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5 islands, Maldives - Package 6

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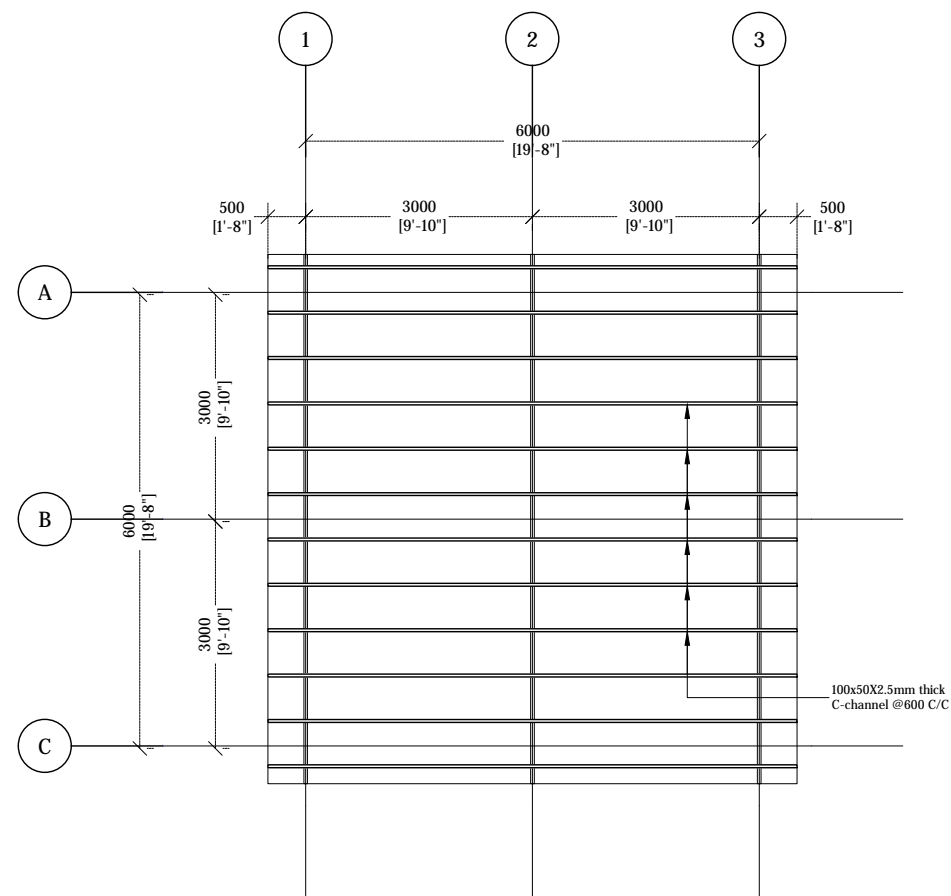
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Date: Sep 2020 SCALE (A3): 1:100

Project No: EP-WS/2019/06

Rev: Page: VS-S(1)





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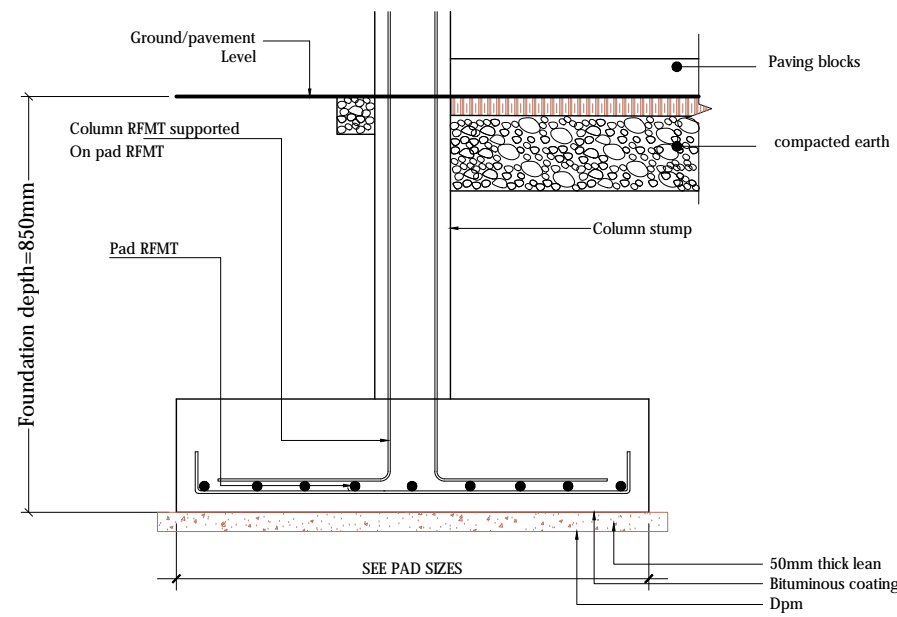


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Rev:	Page: VS-S(2)
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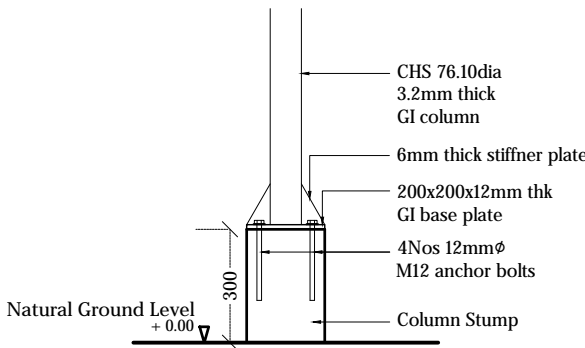


VEHICLE SHED FOOTING DETAIL

1:20

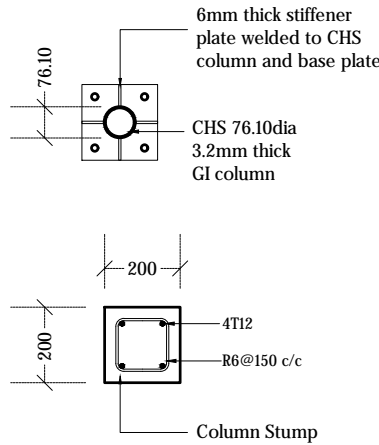
F1 - 500x500x250 - T10@150C/C B/W (B)

FOUNDATION PAD DETAILS



VEHICLE SHED COLUMN DETAIL

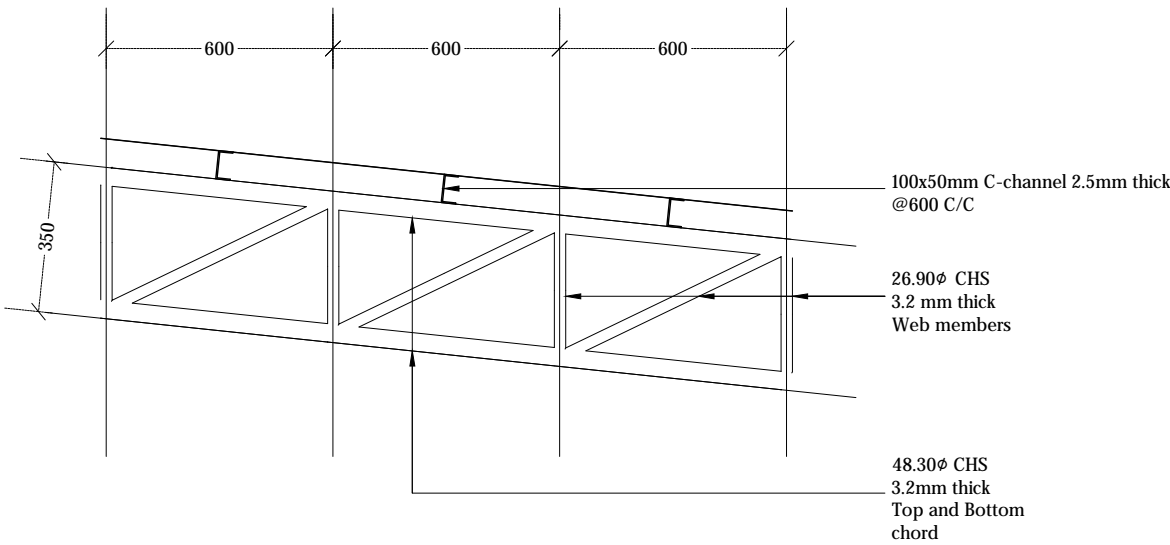
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Legend

Notes:

- \*All CHS shall have minimum yield stress of 275MPa
- \*All welds shall be 6mm thick full perimeter fillet welds
- \*All Truss ends shall be end capped with 6mm plates
- \*All truss members shall be protected with anti corrosive coatings
- \*38 dia x 2.5mm GI pipe to be used for all bracings.
- \*Cover for footings shall be 50mm.
- \*Cover for columns shall be 40mm.
- \*Concrete shall be of grade C25.



VEHICLE SHED TRUSS DETAIL

1:20

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

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5 islands, Maldives - Package 6

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Client:  
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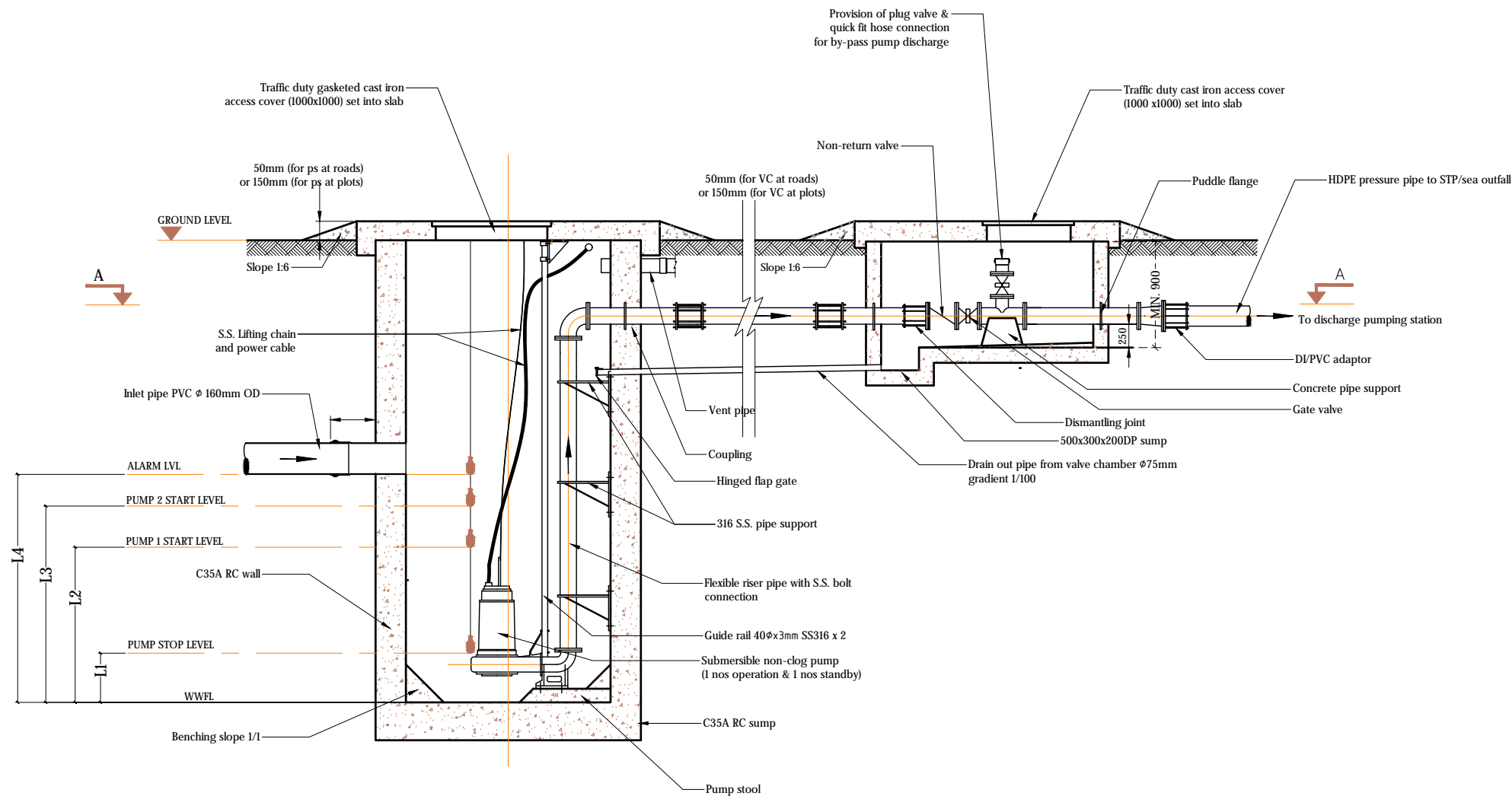
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Project No: EP-WS/2019/06

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PUMP STATION DESIGN DETAILS						(15 YEARS)			
Pump Station	Diameter (Ø)	Depth (D)	Inlet Depth	Pump Capacity	Head	Levels			
						L1	L2	L3	L4
PS1	2.0m	2.90m	1.954m	1.6 l/s	19.7 m	0.300m	0.672m	0.822m	0.972m
PS2	2.0m	2.90m	1.848m, 1.565m, 1.273m	2.0 l/s	20.3 m	0.300m	0.639m	0.789m	0.939m
PS3	2.0m	3.10m	2.178m, 2.145m, 2.259m	3.1 l/s	14.0 m	0.300m	0.629m	0.779m	0.929m
PS4	2.0m	3.20m	2.255m, 1.533m, 1.696m, 1.736m	2.2 l/s	15.8 m	0.300m	0.604m	0.754m	0.904m
PS5	2.0m	3.40m	2.467m	1.4 l/s	9.1 m	0.300m	0.653m	0.803m	0.953m

PUMP STATION DETAILS - LONGITUDINAL SECTION  
NTS

Legend

- Notes:
- Pumps, pipe work, fittings and control panel shall be installed in accordance with manufacturers recommendations.
  - Orientation of valve chamber pipework to suit location.
  - All structural concrete shall be of grade C35A.
  - All castings shall be done using sulphate resistant portland cement to BS 4027:1996.
  - All structural reinforcement shall be epoxy coating of non-pre-stressed reinforcement to ASTM-A775/A775M.
  - A cover of 75mm should be given for all reinforcements.
  - Internal concrete surfaces to be coated with 5mm thickness of epoxy bonded glass fibre and finished with gel coat or 500 microns epoxy paint coating.
  - External concrete surfaces to be painted with 3 coats of bitumen/rubber emulsion and protected by 500 micron polythene.
  - All concrete cold joints shall casted with bonding agent
- List of main instruments of pumping station:
1. Sewage pumps (1 duty & 1 standby)
  2. Power cable
  3. Auto-coupling with 40Øx3mm SS316 guide rails
  4. Stainless steel (316) suspension chain
  5. Cable with float control and weight
  6. Discharge pipe
  7. Puddle flange
  8. Bitumen emulsion and 500 micron polythene sheet protection to external concrete surfaces
  9. Construction joint / water bars
  10. Manhole cover double seal ductile heavy duty cast iron / SS 316 cover
  11. Vent pipe with vent cowl

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6

Sub Title:  
Sewerage System in L. Hithadhoo

Client:  
Ministry of National Planning, Housing and  
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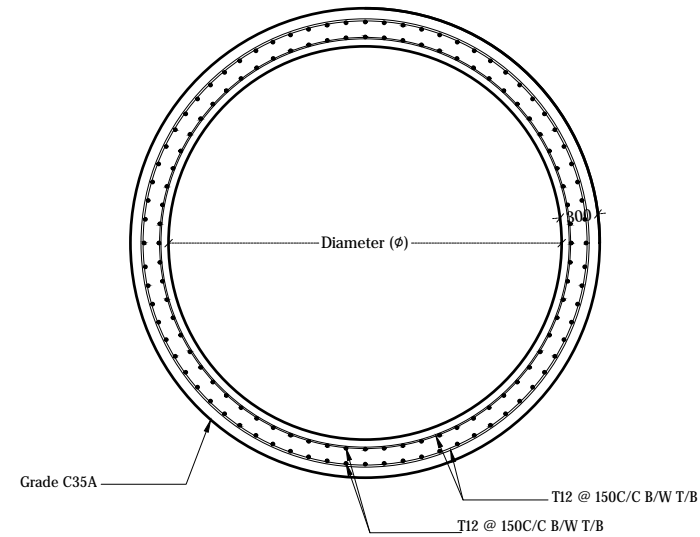
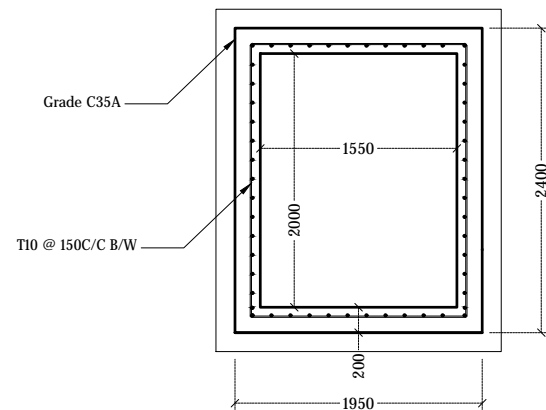
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Project No: EP-WS/2019/06	Page: W-(5)

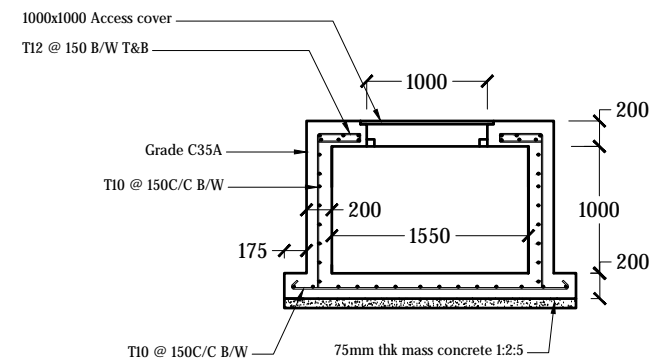




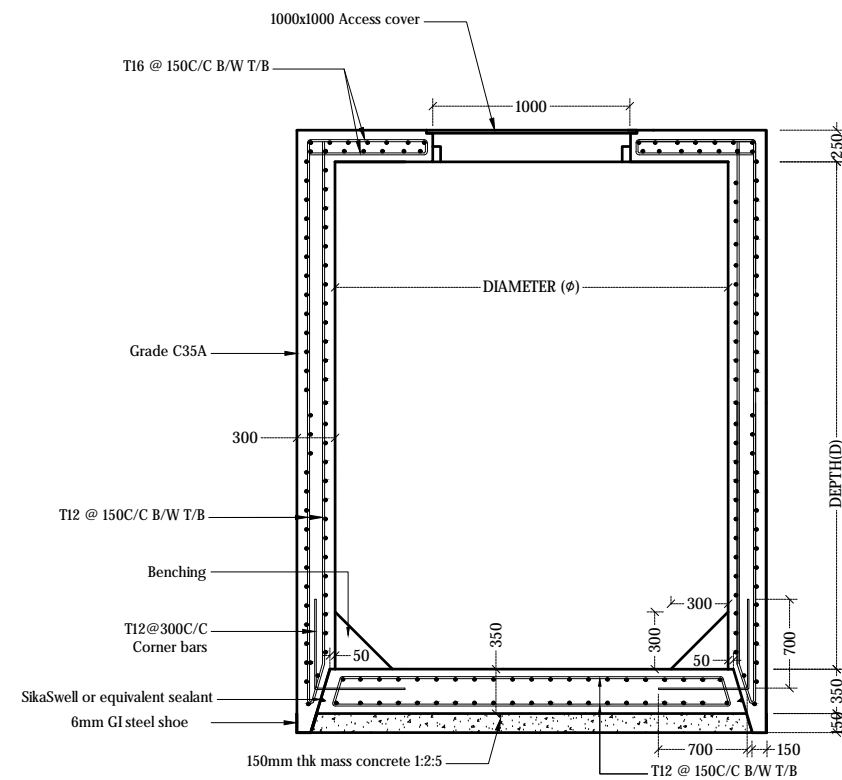
PLAN VIEW



SECTION



### VALVE CHAMBER DETAIL



### PUMP STATION DETAIL

Pump Station	Diameter ( $\phi$ )	Depth (D)	Inlet Depth
PS1	2.0m	2.90m	1.954m
PS2	2.0m	2.90m	1.848m, 1.565m, 1.273m
PS3	2.0m	3.10m	2.178m, 2.145m, 2.259m
PS4	2.0m	3.20m	2.255m, 1.533m, 1.696m, 1.736m
PS5	2.0m	3.40m	2.467m

## PUMP STATION STRUCTURAL DETAILS

NTS

### Legend

Notes:

- Pumps, pipe work, fittings and control panel shall be installed in accordance with manufacturers recommendations.
- Orientation of valve chamber pipework to suit location.
- All structural concrete shall be of grade C35A.
- All castings shall be done using sulphate resistant portland cement to BS 4027:1996.
- All structural reinforcement shall be epoxy coating of non-pre-stressed reinforcement to ASTM-A775/A775M.
- A cover of 75mm should be given for all reinforcements.
- Internal concrete surfaces to be coated with 5mm thickness of epoxy bonded glass fibre and finished with gel coat or 500 microns epoxy paint coating.
- External concrete surfaces to be painted with 3 coats of bitumen/rubber emulsion and protected by 500 micron polyethene.
- All concrete cold joints shall be casted with bonding agent
- Corner bars (3T16 @ 75C/C T/B) shall be provided around top slab openings

- List of main instruments of pumping station:
- 1. Sewage pumps (1 duty & 1 standby)
- 2. Power cable
- 3. Auto-coupling with 400x3mm SS316 guide rail
- 4. Stainless steel (316) suspension chain
- 5. Cable with float control and weight
- 6. Discharge pipe
- 7. Puddle flange
- 8. Bitumen emulsion and 500 micron polythene sheet protection to external concrete surfaces
- 9. Construction joint / water bars
- 10. Manhole cover double seal ductile heavy duty cast iron / SS 316 cover
- 11. Vent pipe with vent cowl

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

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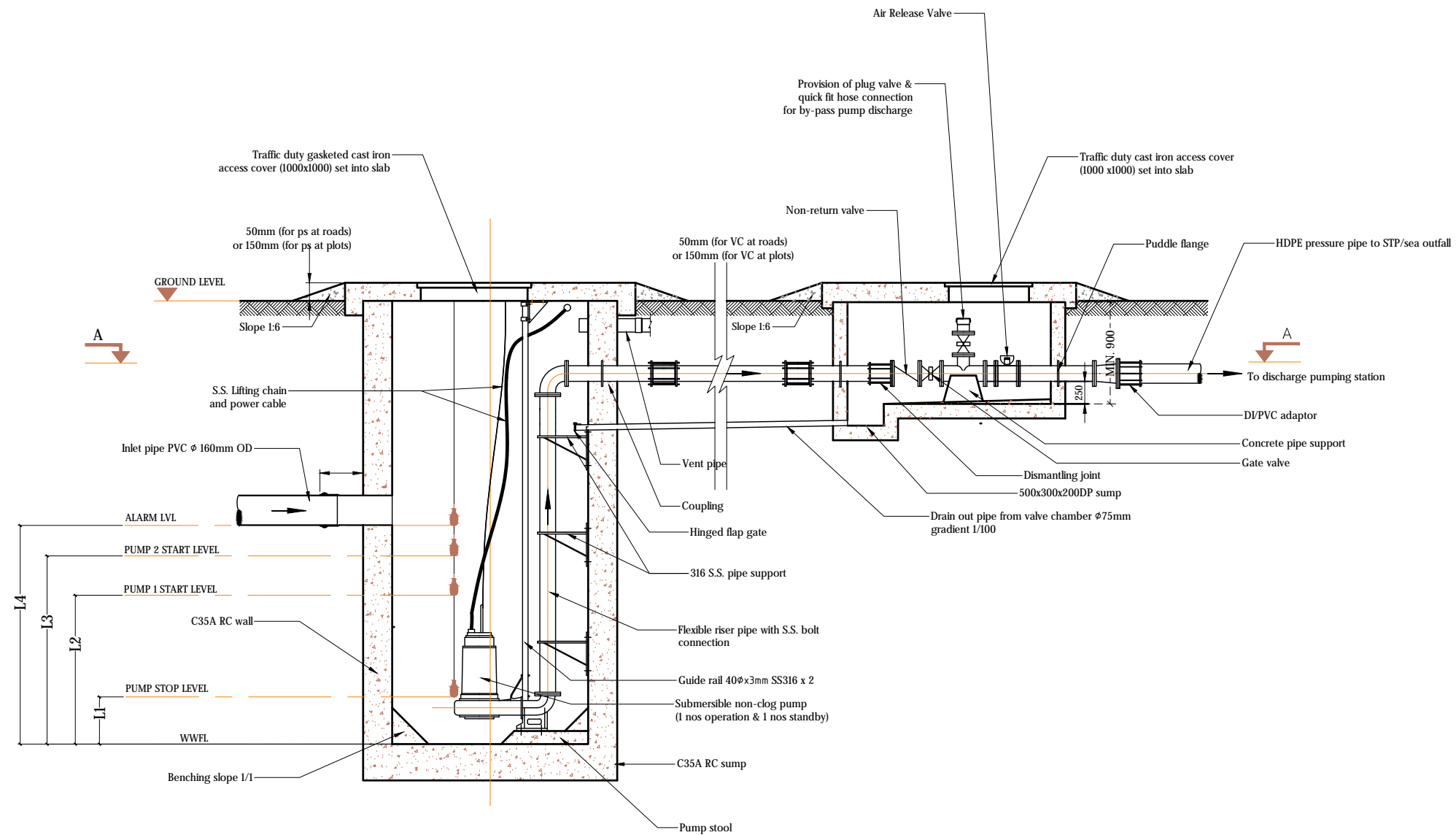
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Project No: EP-WS/2019/06

Rev:	Page:
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Rev:	Page: W-(7)
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DISCHARGE PUMP STATION DESIGN DETAILS (15 YEARS)

Pump Station	Diameter ( $\phi$ )	Depth (D)	Inlet Depth	Pump Capacity	Head	Levels			
						L1	L2	L3	L4
DPS	2.5m	3.00m	0.8m	10.2 l/s	25.7 m	0.300m	0.763m	0.913m	1.063m

DISCHARGE PUMP STATION DETAILS - LONGITUDINAL SECTION

NTS



Legend

Notes:

- Pumps, pipe work, fittings and control panel shall be installed in accordance with manufacturers recommendations.
- Orientation of valve chamber pipework to suit location.
- All structural concrete shall be of grade C35A.
- All castings shall be done using sulphate resistant portland cement to BS 4027:1996.
- All structural reinforcement shall be epoxy coating of non-pre-stressed reinforcement to ASTM-A775/A775M.
- A cover of 75mm should be given for all reinforcements.
- Internal concrete surfaces to be coated with 5mm thickness of epoxy bonded glass fibre and finished with gel coat or 500 microns epoxy paint coating.
- External concrete surfaces to be painted with 3 coats of bitumen/rubber emulsion and protected by 500 micron polythene.
- All concrete cold joints shall casted with bonding agent

List of main instruments of pumping station:

1. Sewage pumps (1 duty & 1 standby)
2. Power cable
3. Auto-coupling with 40 $\phi$ x3mm SS316 guide rails
4. Stainless steel (316) suspension chain
5. Cable with float control and weight
6. Discharge pipe
7. Puddle flange
8. Bitumen emulsion and 500 micron polythene sheet protection to external concrete surfaces
9. Construction joint / water bars
10. Manhole cover double seal ductile heavy duty cast iron / SS 316 cover
11. Vent pipe with vent cowl

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.
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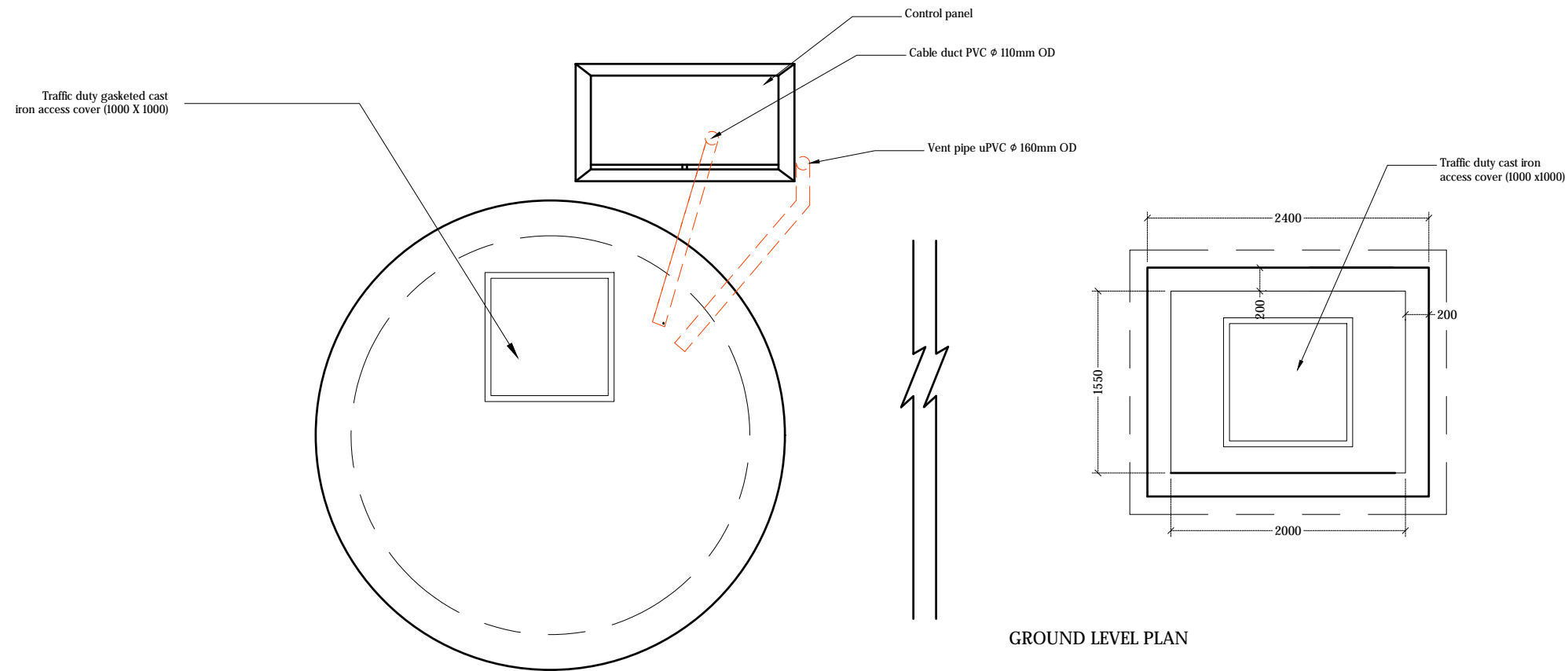
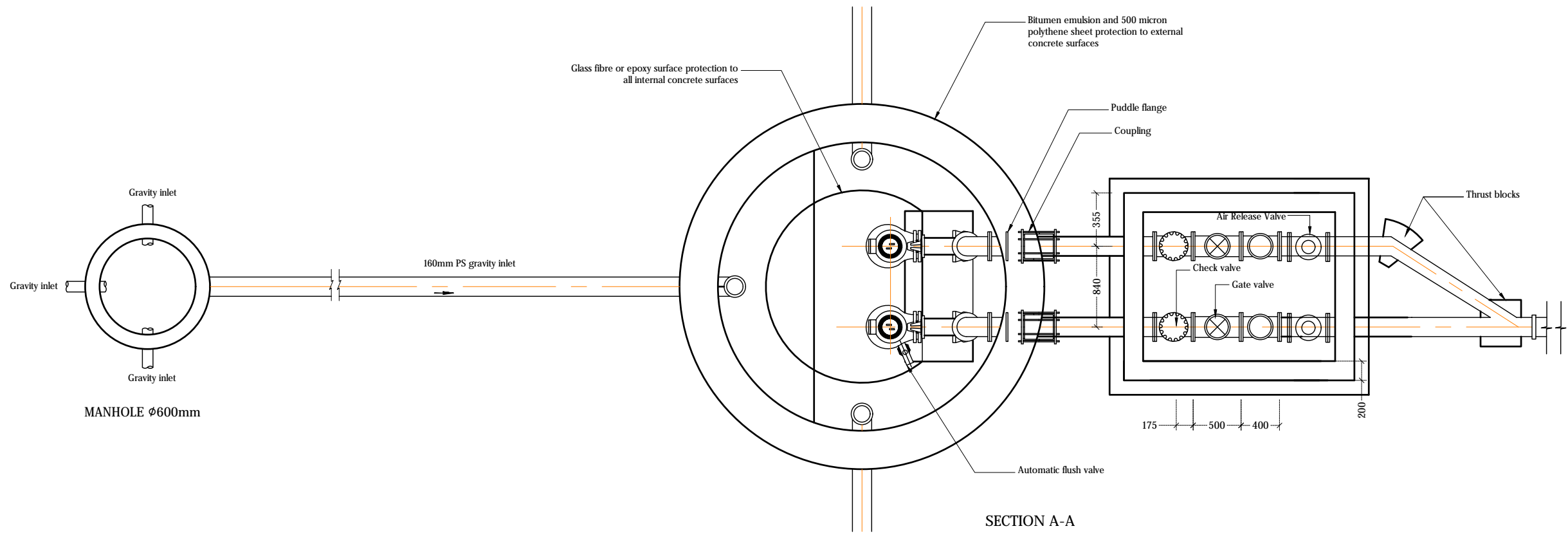
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Project No: EP-WS/2019/06

Rev: Page: W-(27)



DISCHARGE PUMP STATION DETAILS - PLAN VIEW

NTS



#### Legend

#### Notes:

- Pumps, pipe work, fittings and control panel shall be installed in accordance with manufacturers recommendations.
- Orientation of valve chamber pipework to suit location.
- All structural concrete shall be of grade C35A.
- All castings shall be done using sulphate resistant portland cement to BS 4027:1996.
- All structural reinforcement shall be epoxy coating of non-pre-stressed reinforcement to ASTM-A775/A775M.
- A cover of 75mm should be given for all reinforcements.
- Internal concrete surfaces to be coated with 5mm thickness of epoxy bonded glass fibre and finished with gel coat or 500 microns epoxy paint coating.
- External concrete surfaces to be painted with 3 coats of bitumen/rubber emulsion and protected by 500 micron polyethene.
- All concrete cold joints shall casted with bonding agent

#### List of main instruments of pumping station:

1. Sewage pumps (1 duty & 1 standby)
2. Power cable
3. Auto-coupling with 400x3mm SS316 guide rails
4. Stainless steel (316) suspension chain
5. Cable with float control and weight
6. Discharge pipe
7. Puddle flange
8. Bitumen emulsion and 500 micron polythene sheet protection to external concrete surfaces
9. Construction joint / water bars
10. Manhole cover double seal ductile heavy duty cast iron / SS 316 cover
11. Vent pipe with vent cowl

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

#### Title:

Consultancy Services for Survey, Design and EIA works of Water Supply and Sewerage Facilities in 5 islands, Maldives - Package 6

#### Sub Title:

Sewerage System in L. Hithadhoo

#### Client:

Ministry of National Planning, Housing and Infrastructure, Republic of Maldives



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Husnuheena Magu, Male', Maldives



Drawn: F.I.A. Checked: M.S.S.

Designed: F.I.A. Approved: I.W.

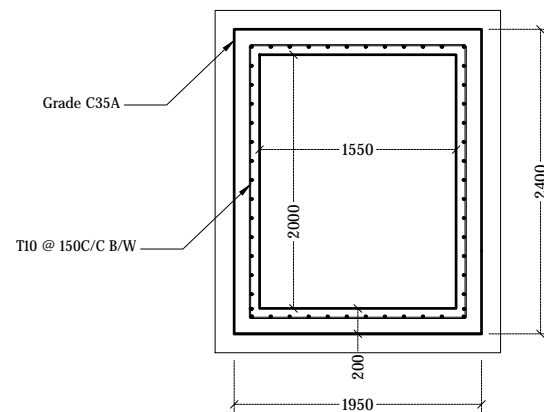
Date: Sep 2020 SCALE (A3): NTS

Project No: EP-WS/2019/06

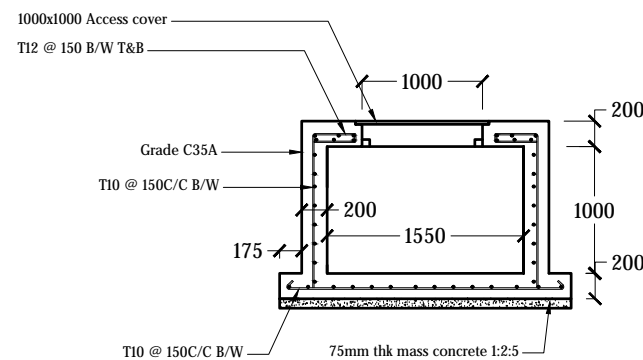
Rev: Page:

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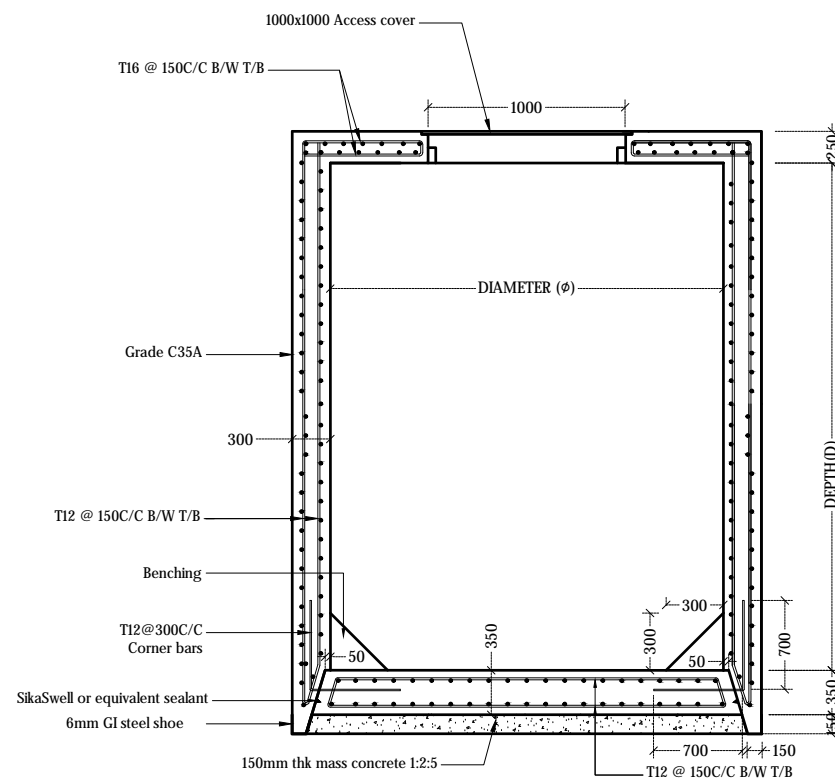
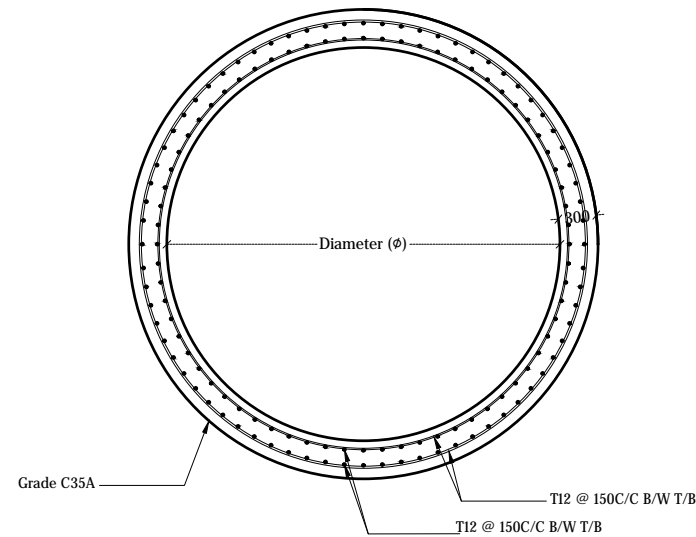
PLAN VIEW



SECTION



VALVE CHAMBER DETAIL



PUMP STATION DETAIL

Pump Station	Diameter (φ)	Depth (D)	Inlet Depth
DPS	2.5m	3.00m	0.8m

## DISCHARGE PUMP STATION STRUCTURAL DETAILS

NTS



## Legend

## Notes:

- Pumps, pipe work, fittings and control panel shall be installed in accordance with manufacturers recommendations.
- Orientation of valve chamber pipework to suit location.
- All structural concrete shall be of grade C35A.
- All castings shall be done using sulphate resistant portland cement to BS 4027:1996.
- All structural reinforcement shall be epoxy coating of non-pre-stressed reinforcement to ASTM-A775/A775M.
- A cover of 75mm should be given for all reinforcements.
- Internal concrete surfaces to be coated with 5mm thickness of epoxy bonded glass fibre and finished with gel coat or 500 microns epoxy paint coating.
- External concrete surfaces to be painted with 3 coats of bitumen/rubber emulsion and protected by 500 micron polyethene.
- All concrete cold joints shall casted with bonding agent
- Corner bars (3T16 @ 75C/C T/B) shall be provided around top slab openings

- List of main instruments of pumping station:
1. Sewage pumps (1 duty & 1 standby)
  2. Power cable
  3. Auto-coupling with 400x3mm SS316 guide rail
  4. Stainless steel (316) suspension chain
  5. Cable with float control and weight
  6. Discharge pipe
  7. Puddle flange
  8. Bitumen emulsion and 500 micron polythene sheet protection to external concrete surfaces
  9. Construction joint / water bars
  10. Manhole cover double seal ductile heavy duty cast iron / SS 316 cover
  11. Vent pipe with vent cowl

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.
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Title:  
Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6

Sub Title:  
Sewerage System in L. Hithadhoo

Client:  
Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives



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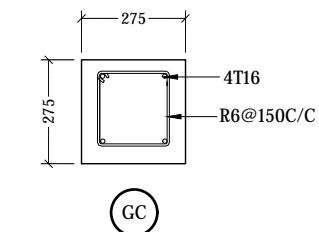
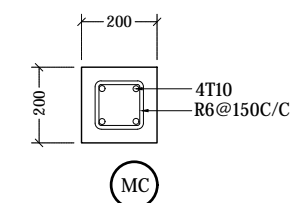
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Date: Sep 2020 SCALE (A3): NTS

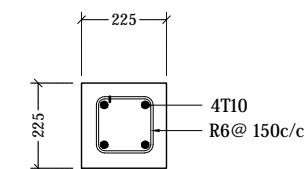
Project No: EP-WS/2019/06

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COLUMN DETAILS  
1:20



FOUNDATION BEAM DETAIL  
1:20



Notes:

- **FRAME MATERIAL** : Steel gate frame  
2.5mm thick GI sections RHS
- **PANEL MATERIAL** : Steel frame with steel panels (STL) as shown on elevation view
- All steel members and GI SHS to be applied with 2 coats of anti-corrosive paint with epoxy finishing paint
- Allowance shall be made to fix pad lock in Gates
- Cover for foundation pads and foundation beams shall be 50mm
- Cover for columns (GC) and (MC) shall be 40mm
- Concrete shall be of grade C25
- All concrete cold joints shall casted with bonding agent

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6

Sub Title:  
**Sewerage System in L. Hithadhoo**

Client:  
Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives

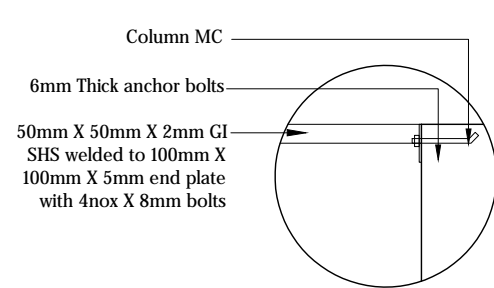
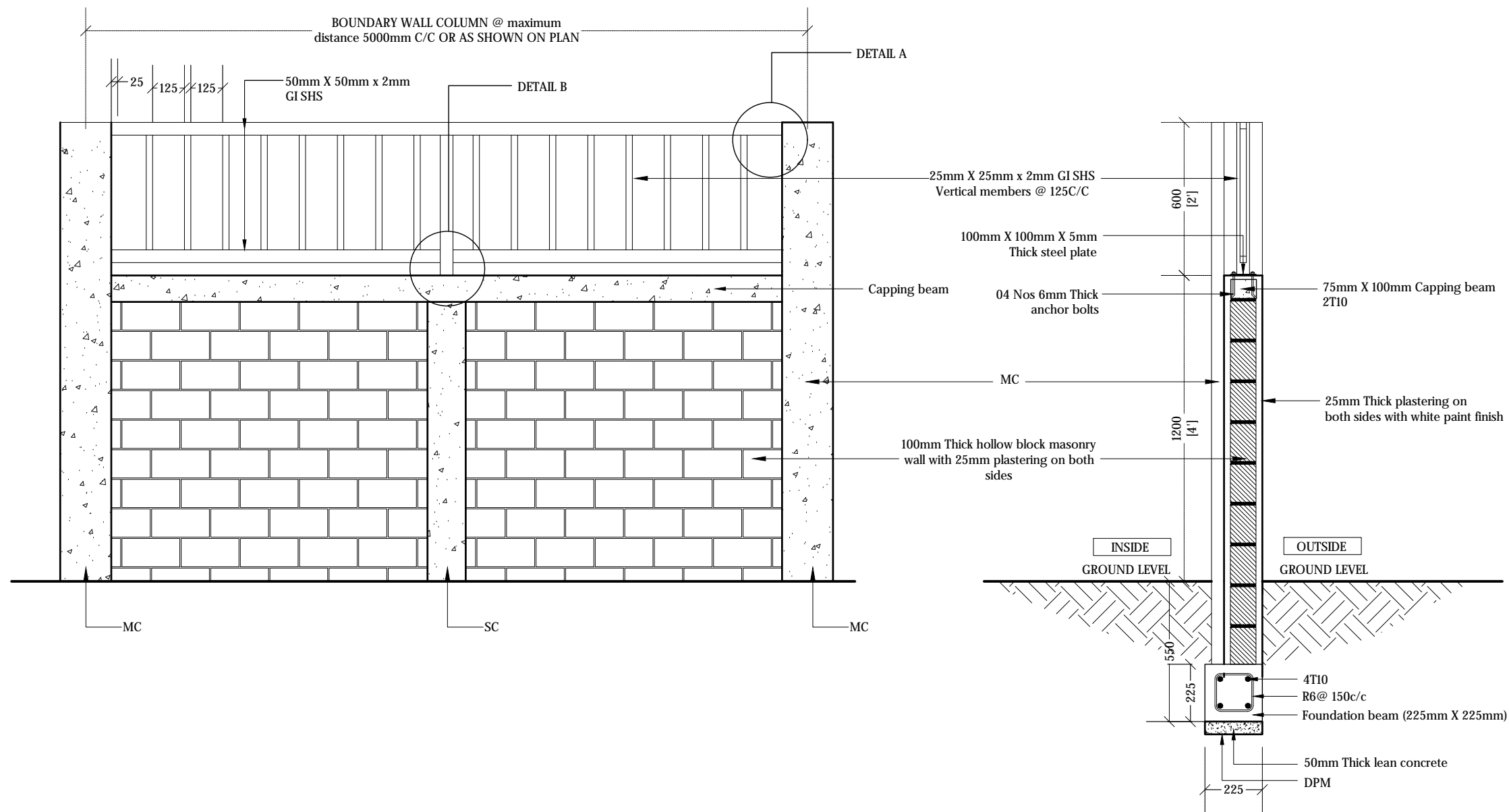


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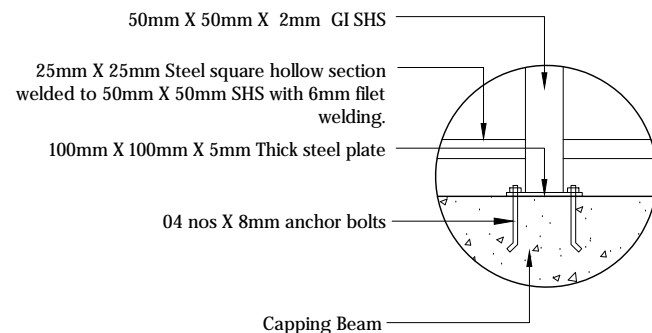


Drawn: F.I.A.	Checked: M.S.S.
Designed: F.I.A.	Approved: LW.
Date: Sep 2020	SCALE (A3):
Project No: EP-WS/2019/06	
Rev:	Page:

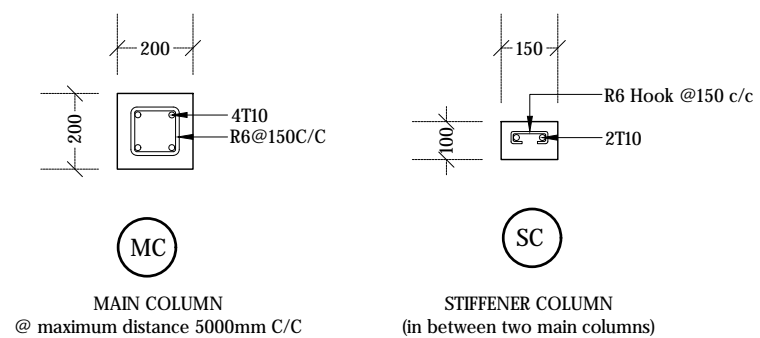
Rev:	Page: W-(8)
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DETAIL A  
1:10



DETAIL B  
1:10



#### Legend

#### Notes:

- FRAME MATERIAL : Steel gate frame 2.5mm thick GI sections SHS
- All steel members and GI SHS to be applied with 2 coats of anti-corrosive paint with epoxy finishing paint
- Allowance shall be made to fix pad lock in Gates
- Cover for foundation beams shall be 50mm
- Cover for columns (MC) shall be 40mm
- Concrete shall be of grade C25
- All concrete cold joints shall casted with bonding agent

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
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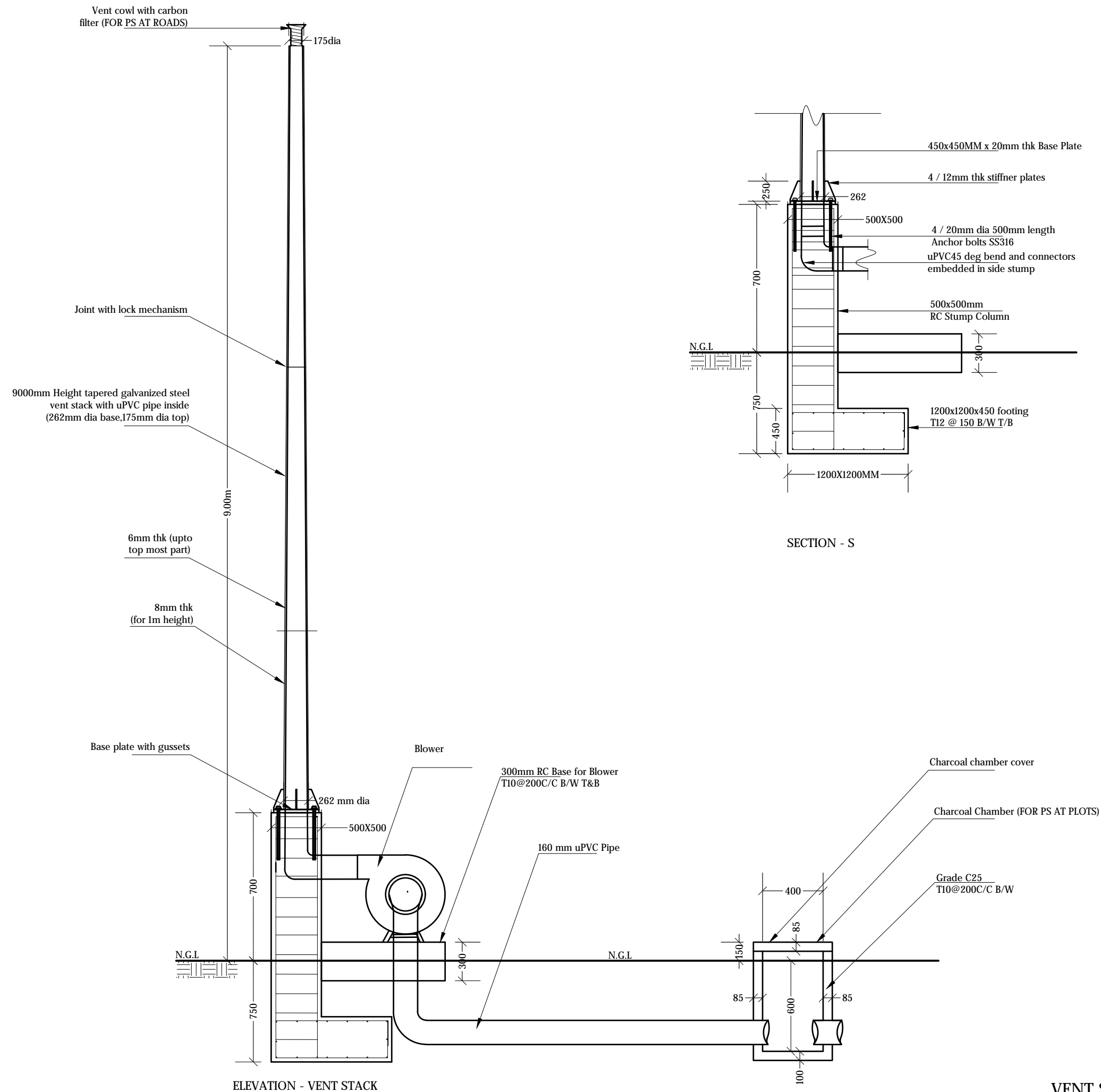
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Date: Sep 2020 SCALE (A3): 1:20

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## PS & STP BOUNDARY WALL AND FENCING DETAILS



## VENT STACK DETAILS

NTS



### Legend

#### Notes:

- Vent stack shall be galvanized (minimum 250 micron) and finished with epoxy paint
- All anchor bolts shall be SS316
- Cover for footings shall be 50mm
- Cover for stump shall be 40mm
- Concrete shall be of grade C25
- All concrete cold joints shall casted with bonding agent

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

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Sub Title:  
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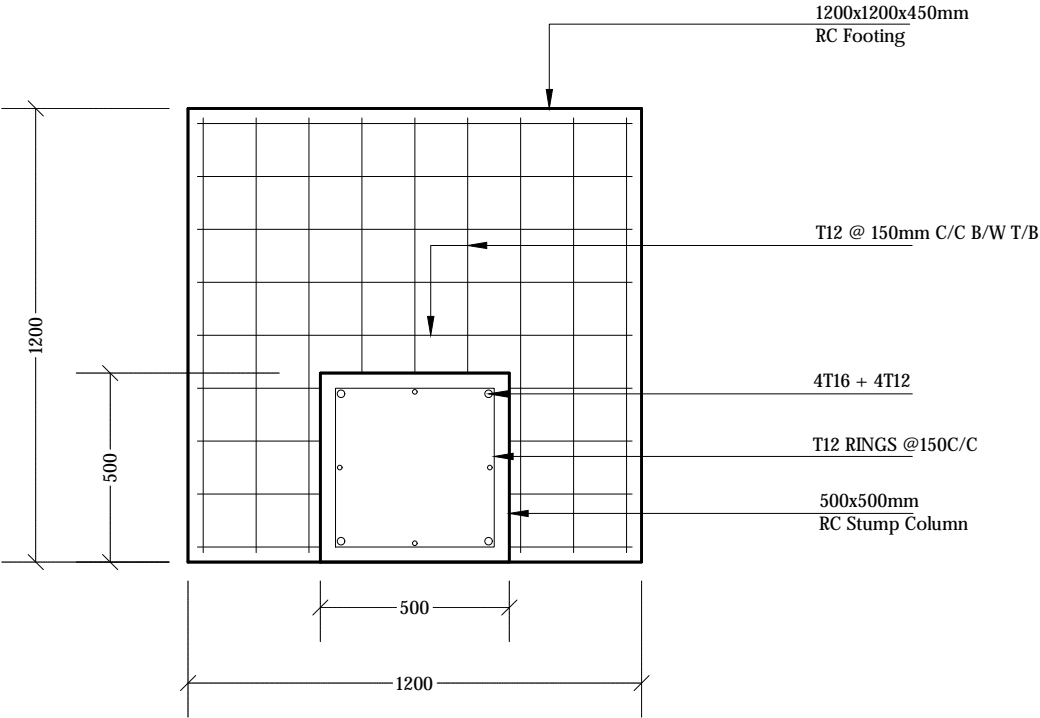
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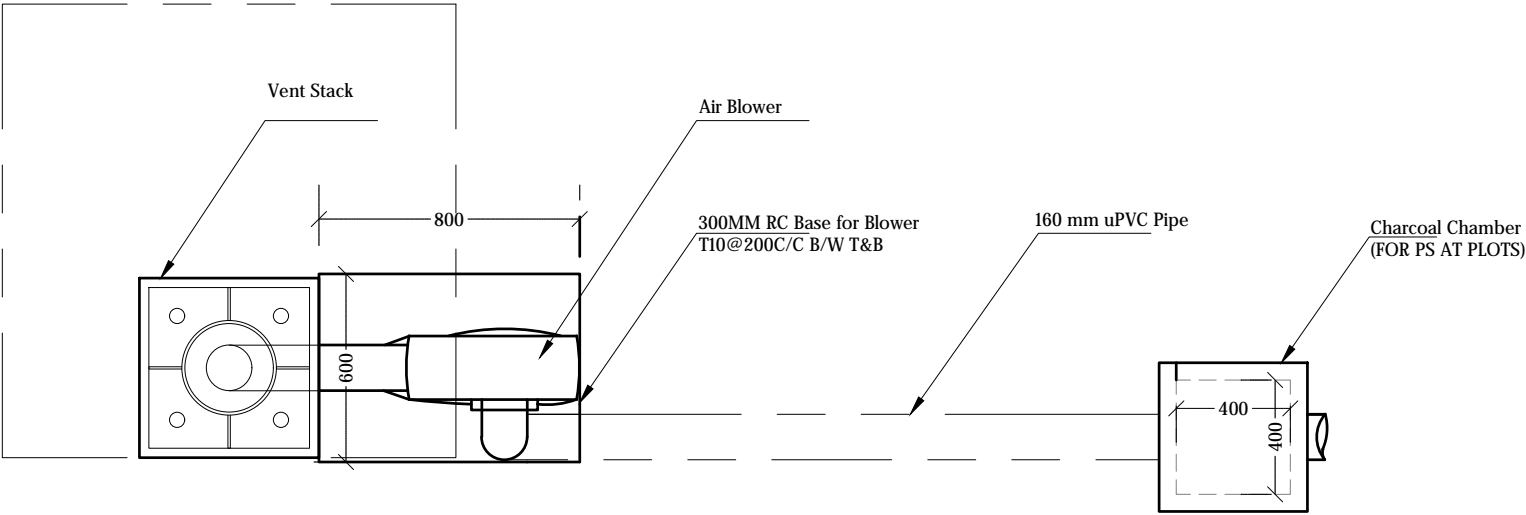
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FOOTING & STUMP DETAILS OF VENT STACK



AIR BLOWER DETAILS (Plan View)

VENT STACK AND AIR BLOWER DETAILS

NTS



Legend

- Notes:
- All anchor bolts shall be SS316
  - Cover for footings shall be 50mm
  - Cover for stump shall be 40mm
  - Concrete shall be of grade C25
  - All concrete cold joints shall be casted with bonding agent

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
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Sub Title:  
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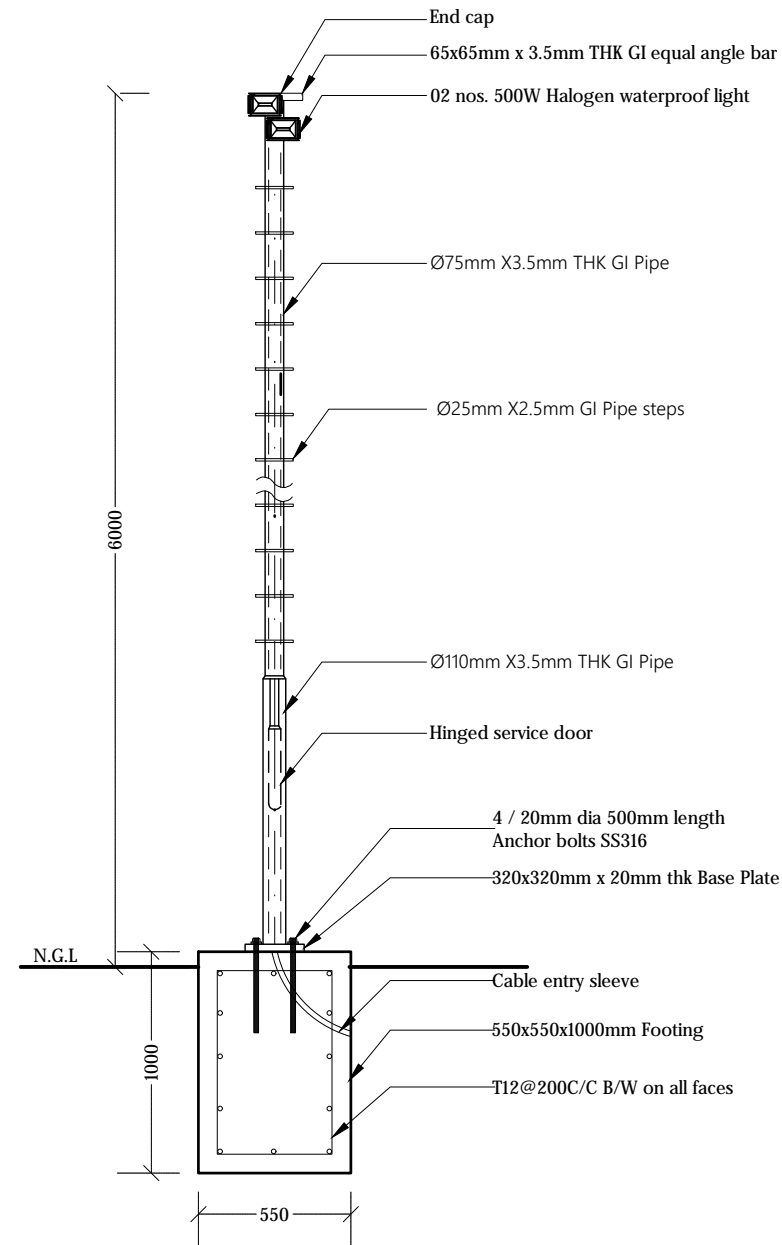
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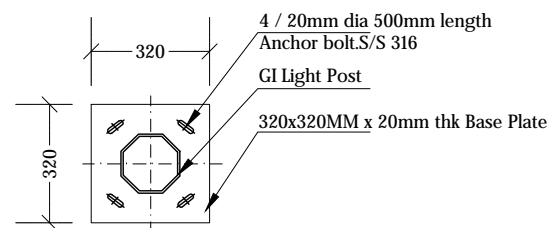
Project No: EP-WS/2019/06

Rev: Page:

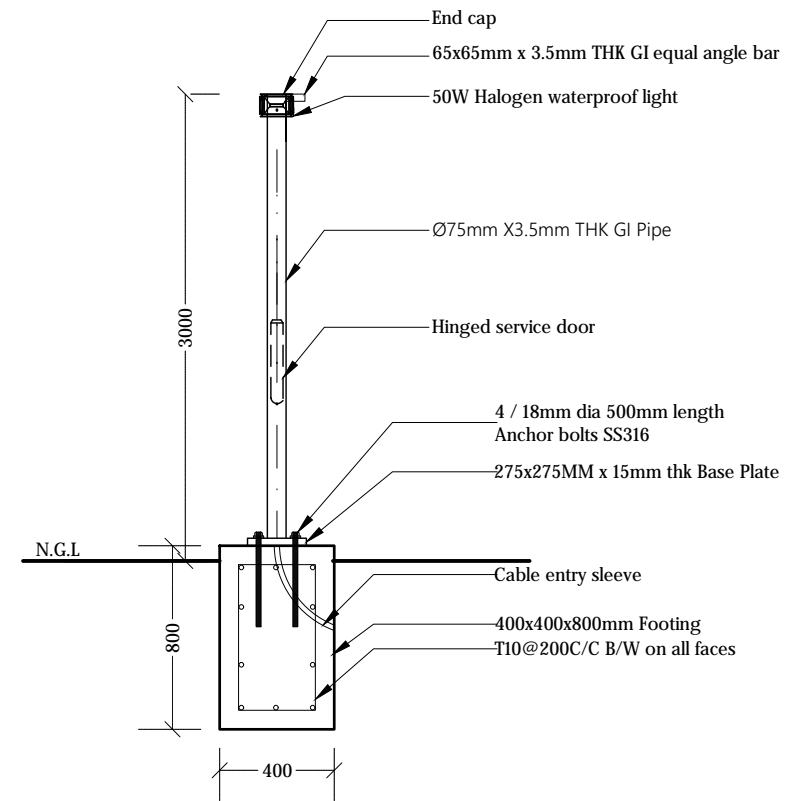
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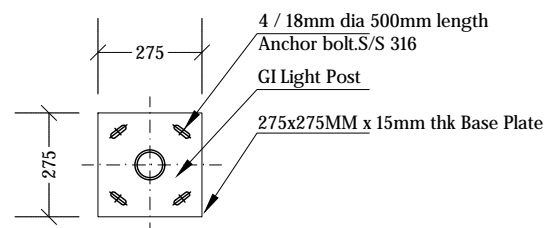
LIGHT POST DETAILS FOR STP COMPOUND (LP1)



BASE PLATE (LP1)



LIGHT POST DETAILS FOR PUMP STATION (LP2)



BASE PLATE (LP2)

## LIGHT POST DETAILS

NTS



Legend

- All anchor bolts shall be SS316
- Cover for footings shall be 50mm
- Concrete shall be of grade C25
- All steel members and GI members to be applied with 2 coats of anti-corrosive paint with epoxy finishing paint
- All concrete cold joints shall be casted with bonding agent

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Title:  
Consultancy Services for Survey,  
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Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6

Sub Title:  
**Sewerage System in L. Hithadhoo**

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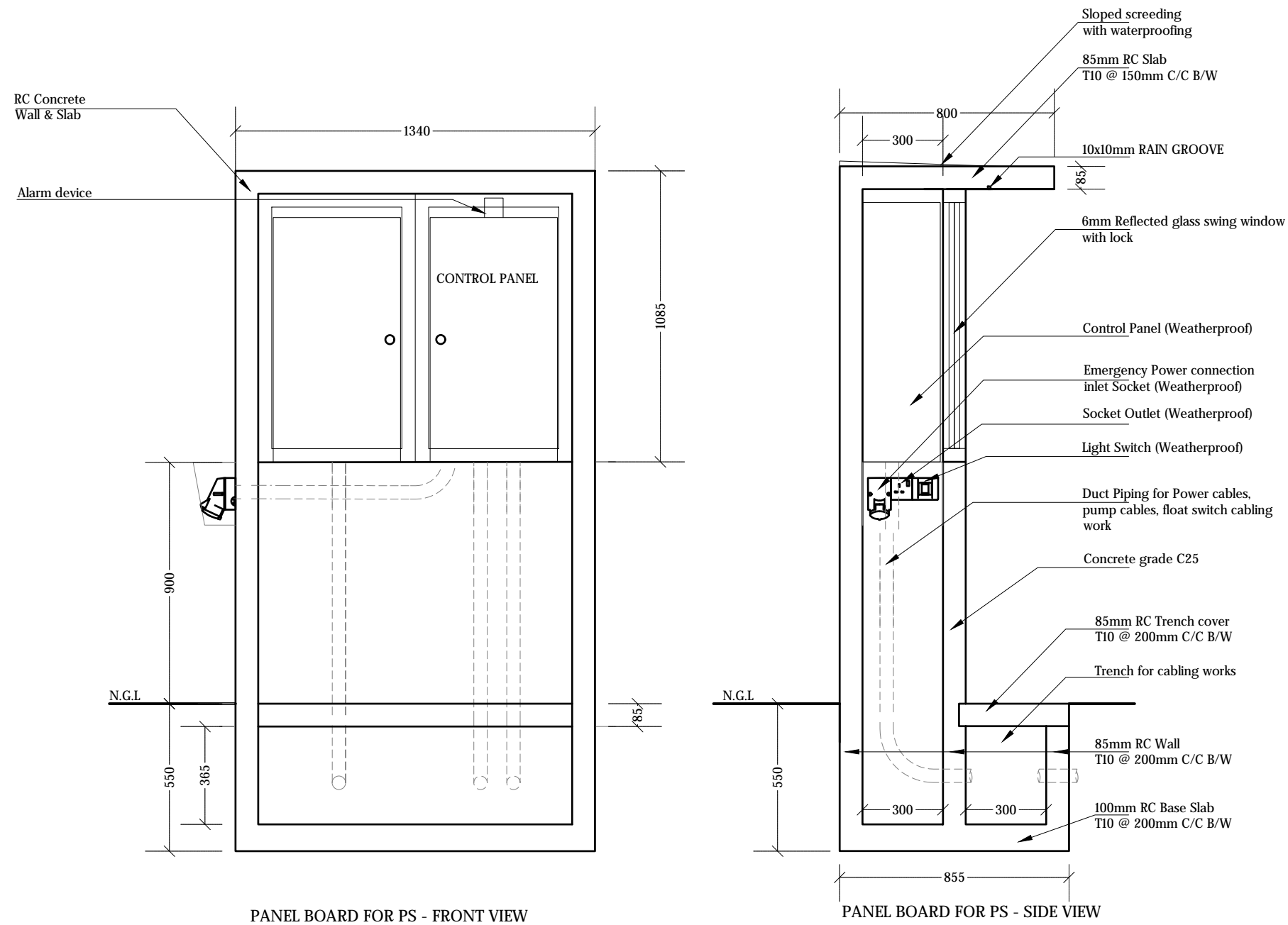
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## CONTROL PANEL BOARD DETAILS

NTS



### Legend

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Consultancy Services for Survey,  
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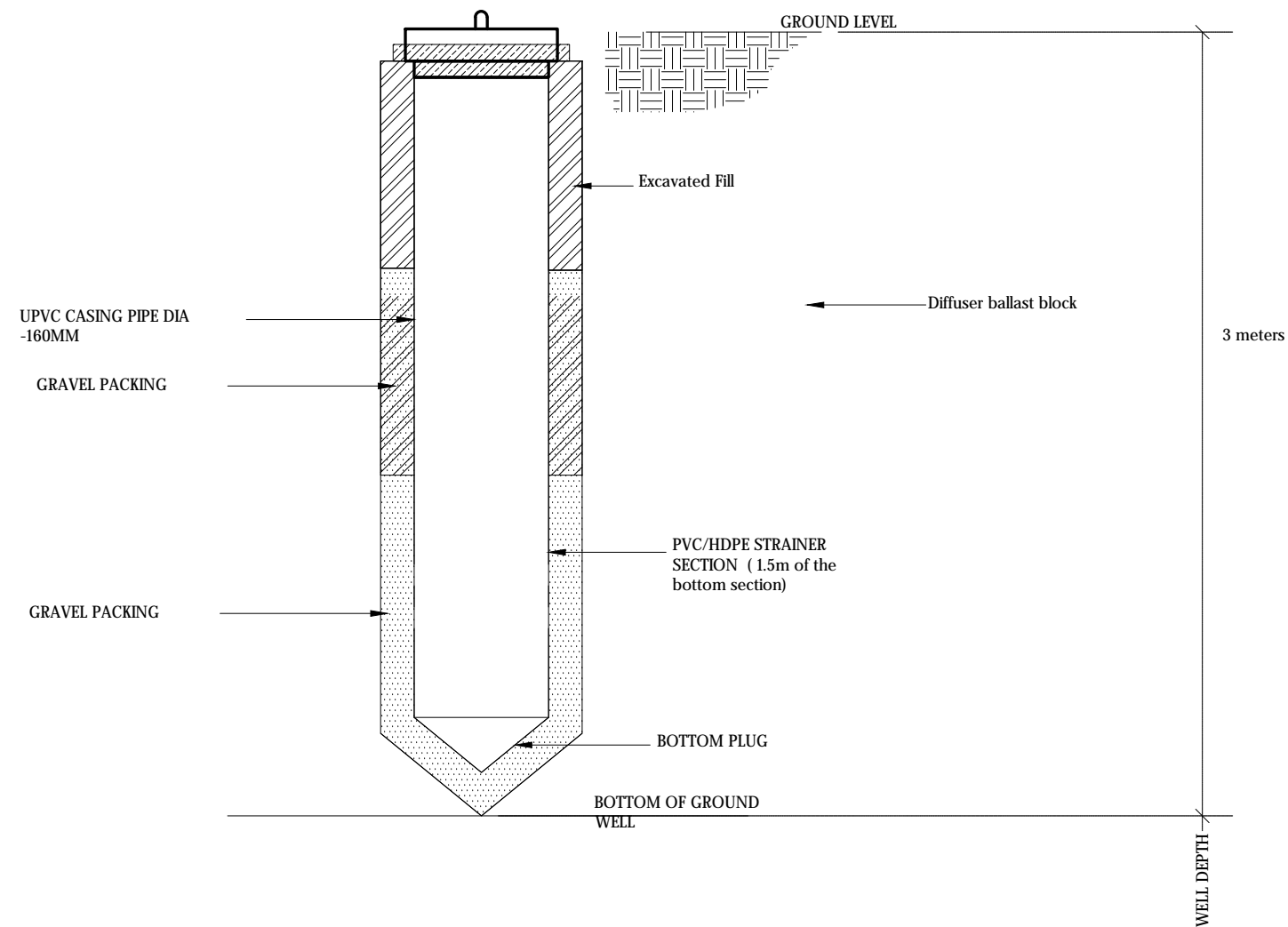
Sub Title:  
Sewerage System in L. Hithadhoo

Client:  
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Building Infrastructure Happen

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Date: Sep 2020	SCALE (A3): NTS
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SAMPLING WELL SECTION

NTS



Legend

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Consultancy Services for Survey,  
Design and EIA works of Water  
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5 islands, Maldives - Package 6

Sub Title:  
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Client:  
Ministry of National Planning, Housing and  
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**DBACK INFRA**  
Building Sustainable Infrastructure

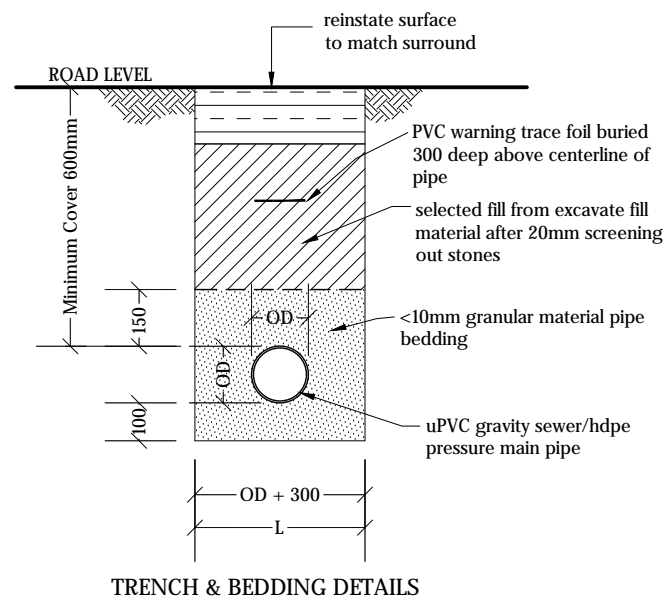
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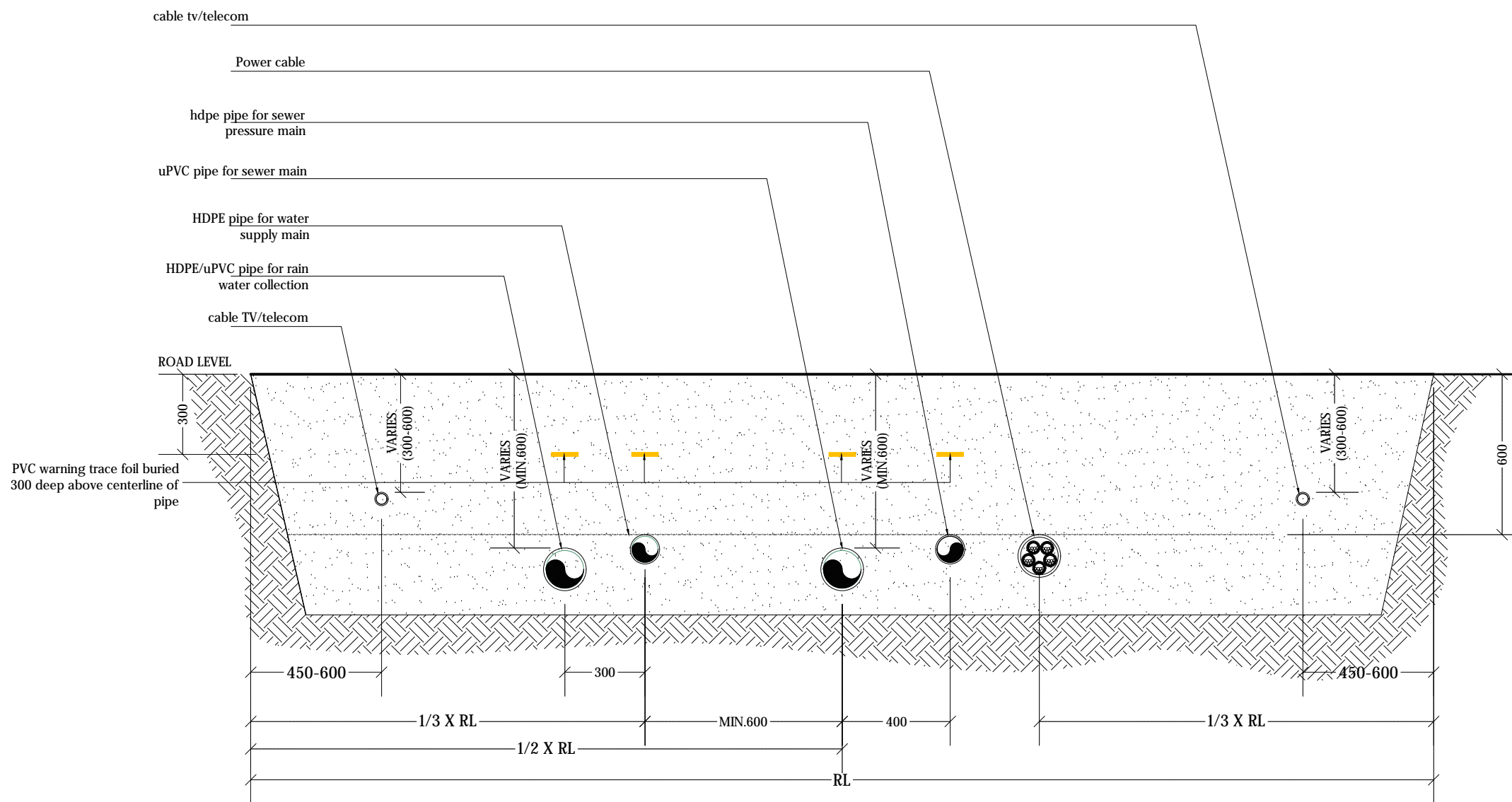
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TRENCH & BEDDING DETAILS



TYPICAL ROAD SECTION

## TRENCH AND BEDDING DETAILS

1:20

### Legend

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Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6

Sub Title:  
Sewerage System in L. Hithadhoo

Client:  
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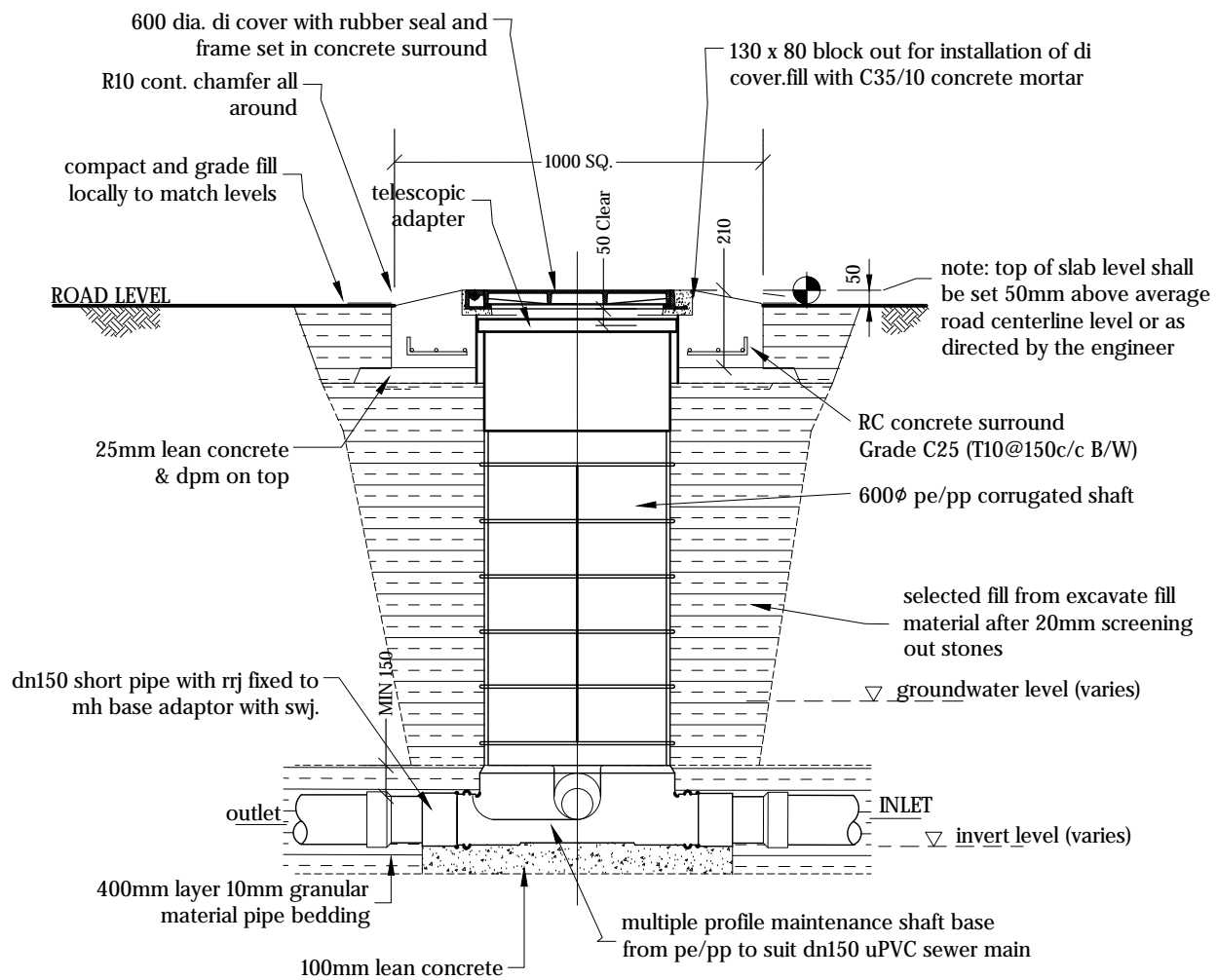
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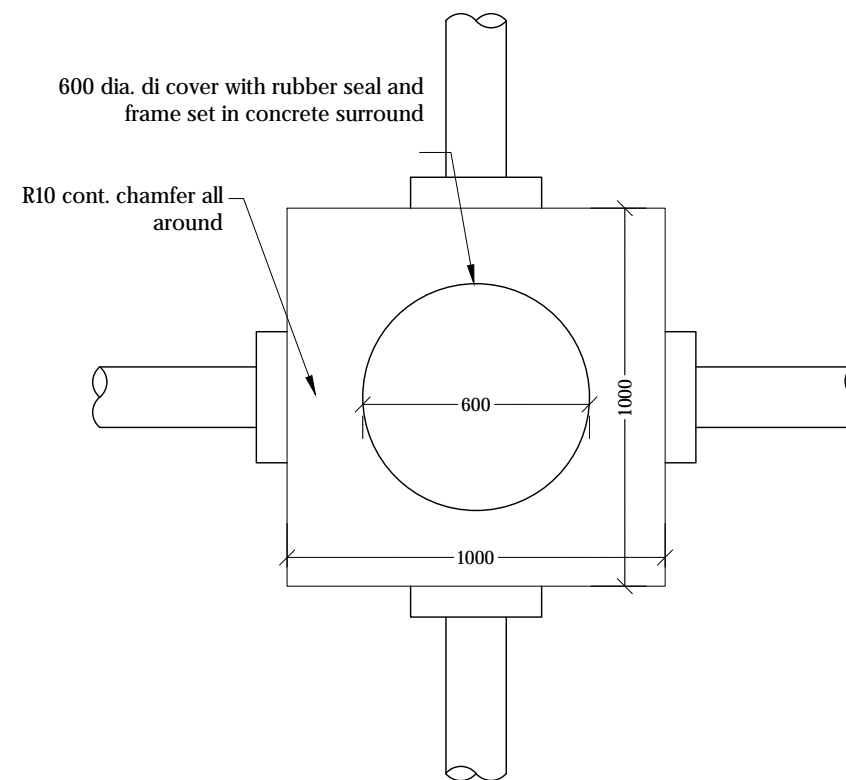
Project No: EP-WS/2019/06

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ELEVATION - MAINTENANCE SHAFT (MH)



PLAN VIEW - MAINTENANCE SHAFT (MH)

## MAINTENANCE SHAFT (MH) DETAILS

1:20



Legend

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Title:  
Consultancy Services for Survey, Design and EIA works of Water Supply and Sewerage Facilities in 5 islands, Maldives - Package 6

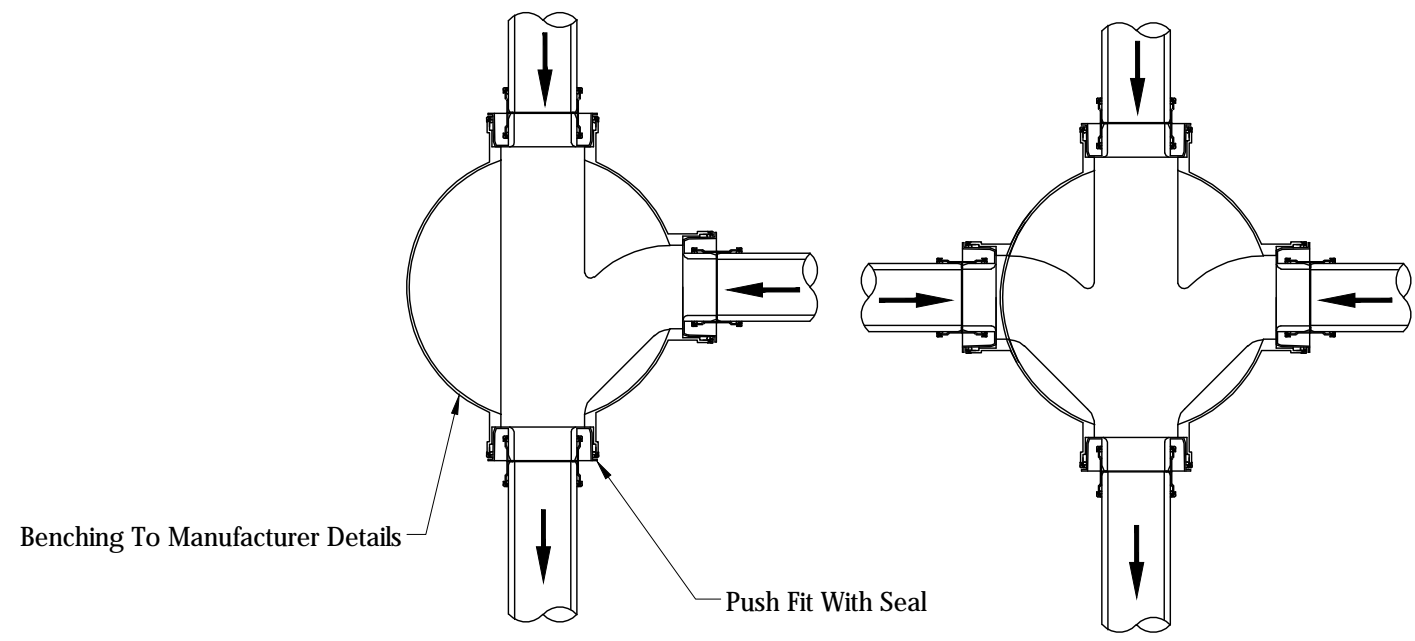
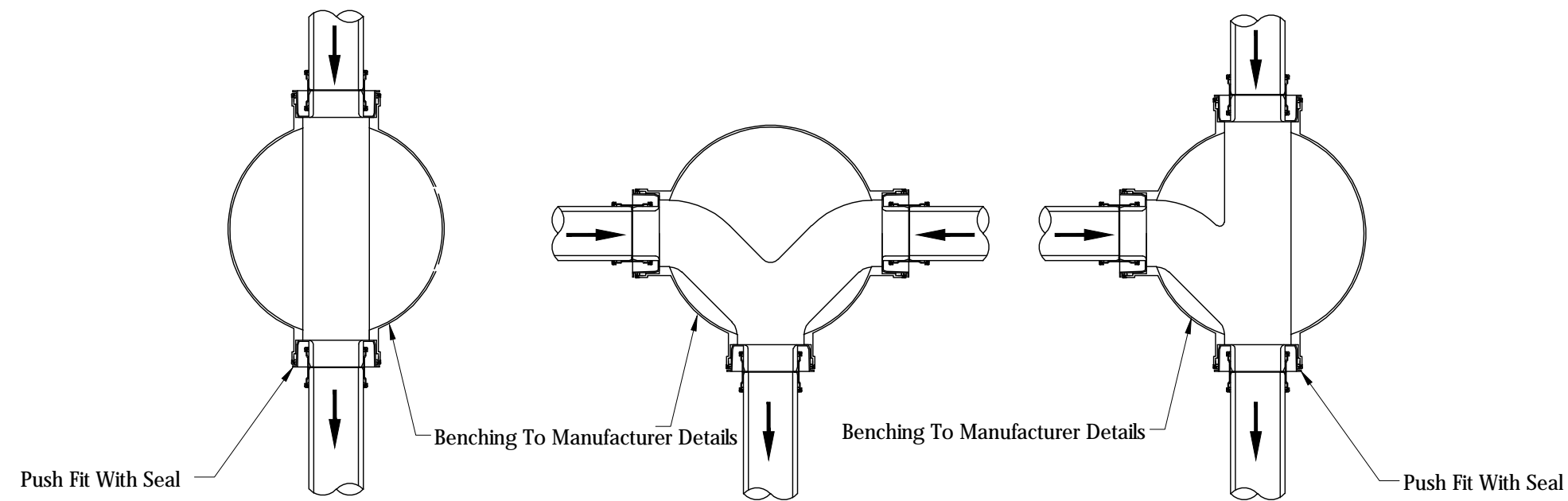
Sub Title:  
Sewerage System in L. Hithadhoo

Client:  
Ministry of National Planning, Housing and Infrastructure, Republic of Maldives

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**DBACK INFRA**  
Building Infrastructure Happens

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Date: Sep 2020	SCALE (A3): 1:20
Project No: EP-WS/2019/06	Page: W-(15)



TYPICAL MANHOLE BASE DETAILS

NTS



Legend

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

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Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6

Sub Title:  
Sewerage System in L. Hithadhoo

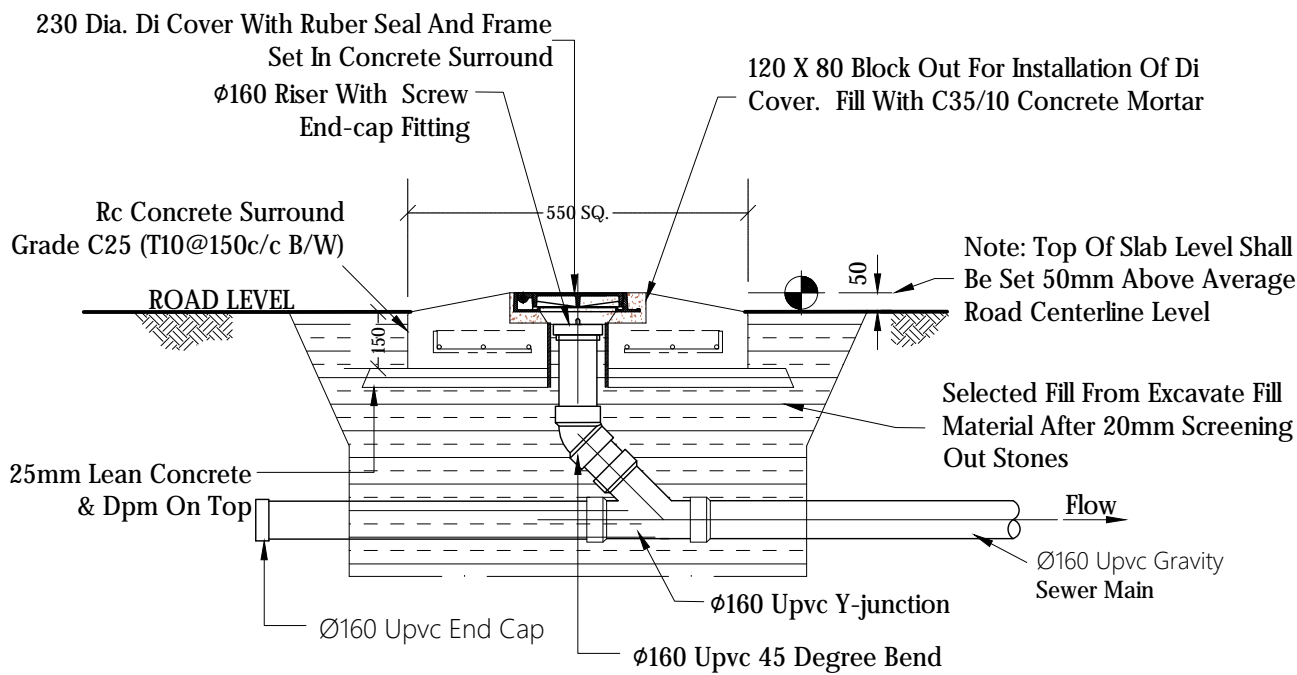
Client:  
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Infrastructure, Republic of Maldives

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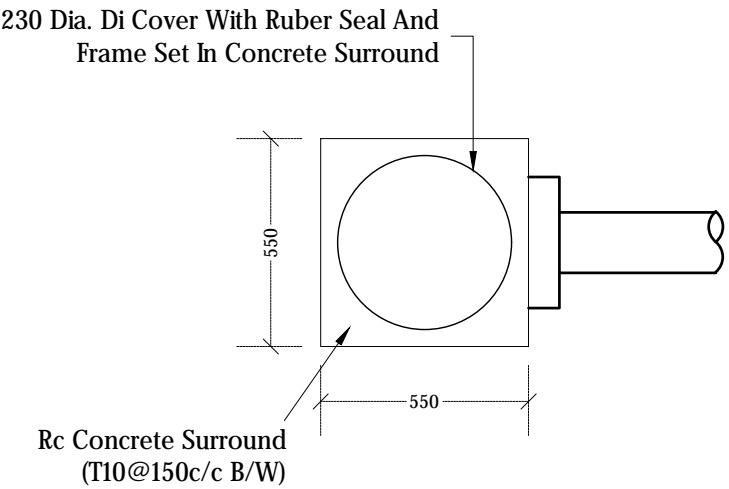
**FDBACK INFRA**  
Maldivian Infrastructure Development

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Designed: F.I.A.	Approved: I.W.
Date: Sep 2020	SCALE (A3): NTS
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ELEVATION - CLEANOUT (CO)



PLAN VIEW - CLEANOUT (CO)

### CLEAN OUT DETAILS

NTS

Legend

REV.	NO.	Date	Revision Description	Drawn	Chkd	Appd.

**Title:**  
Consultancy Services for Survey, Design and EIA works of Water Supply and Sewerage Facilities in 5 islands, Maldives - Package 6

**Sub Title:**  
Sewerage System in L. Hithadhoo

**Client:**  
Ministry of National Planning, Housing and Infrastructure, Republic of Maldives

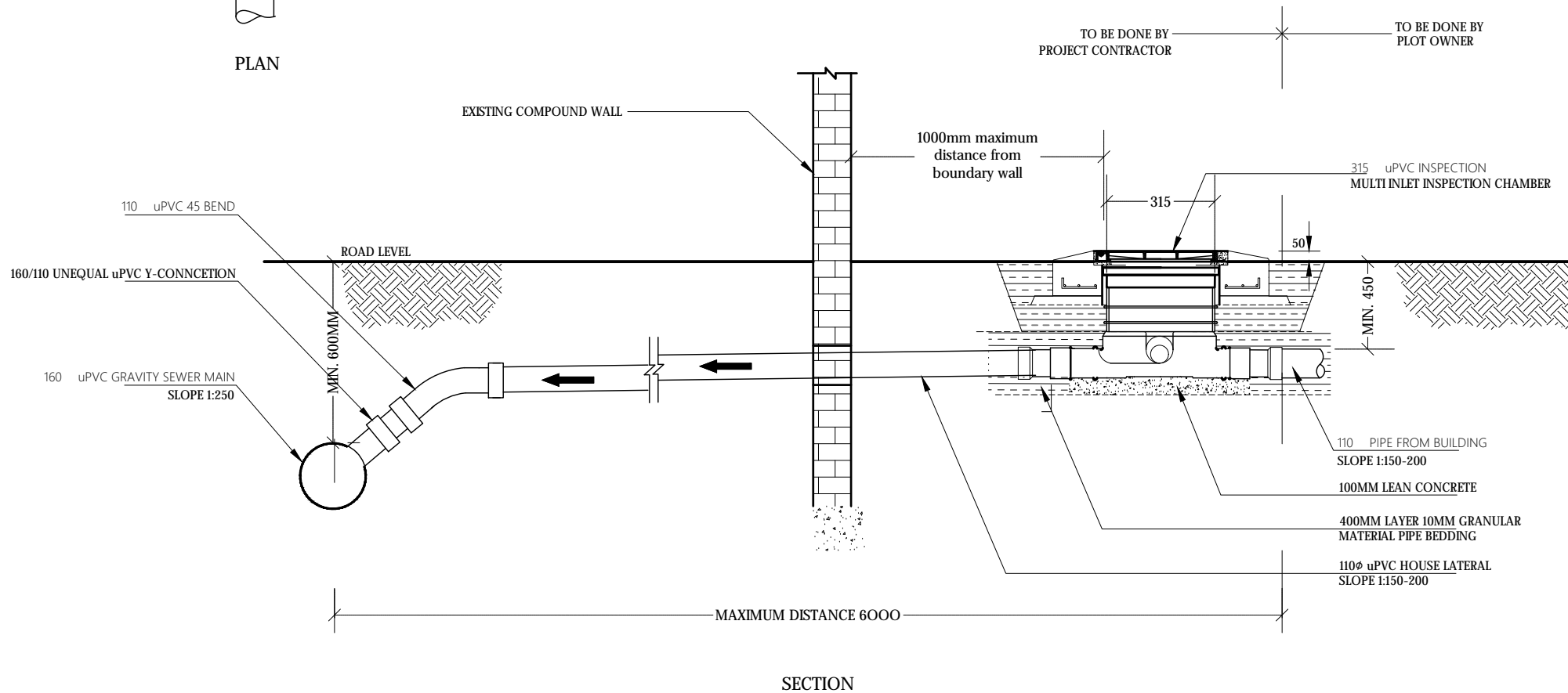
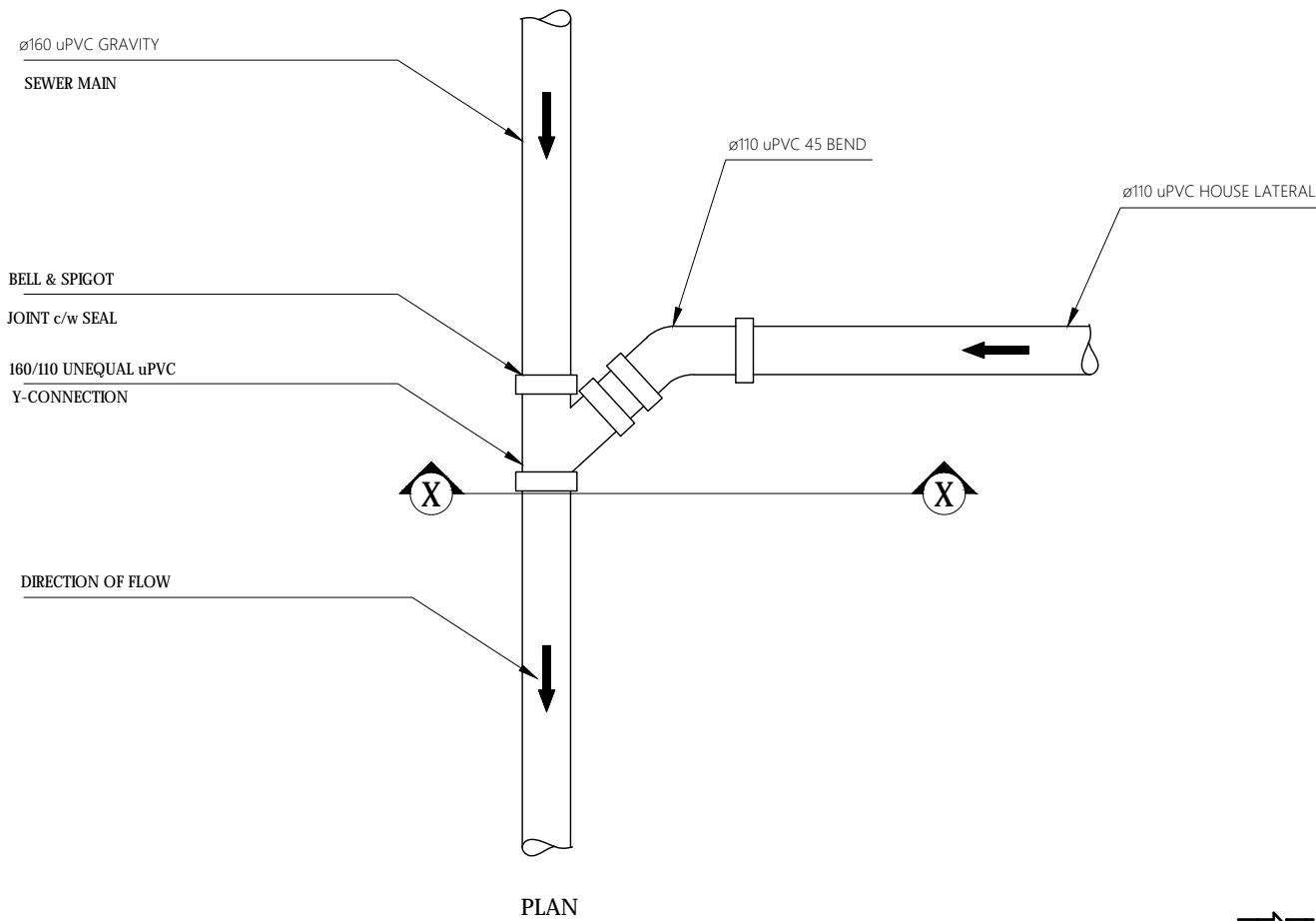
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A: G. Rosary West,  
Husuheena Magu, Male', Maldives

FDBACK INFRA  
Maldives Infrastructure Development

Drawn: F.I.A.	Checked: M.S.S.
Designed: F.I.A.	Approved: I.W.
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Project No: EP-WS/2019/06	

Rev:

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## TYPICAL HOUSE CONNECTION DETAIL

NTS



### Legend

#### Notes:

1. Invert level at house inspection chamber and invert level of the sewer main on the road should be checked during the house connection survey and invert level should be adjusted in order to facilitate gravity flow from house inspection chamber to sewer main.

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
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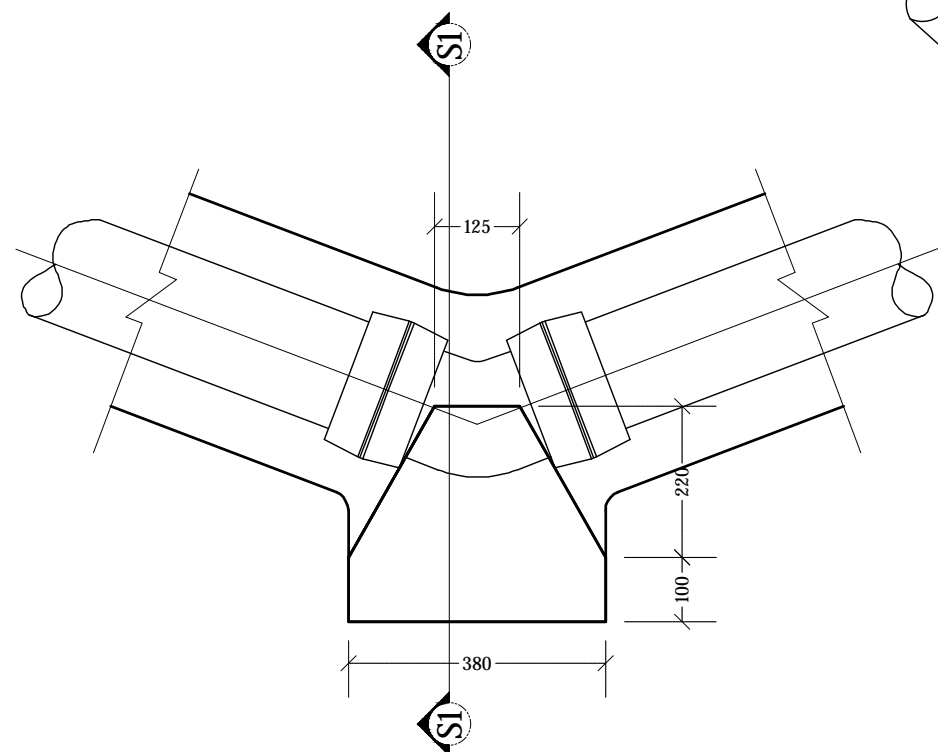
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Date: Sep 2020 SCALE (A3): NTS

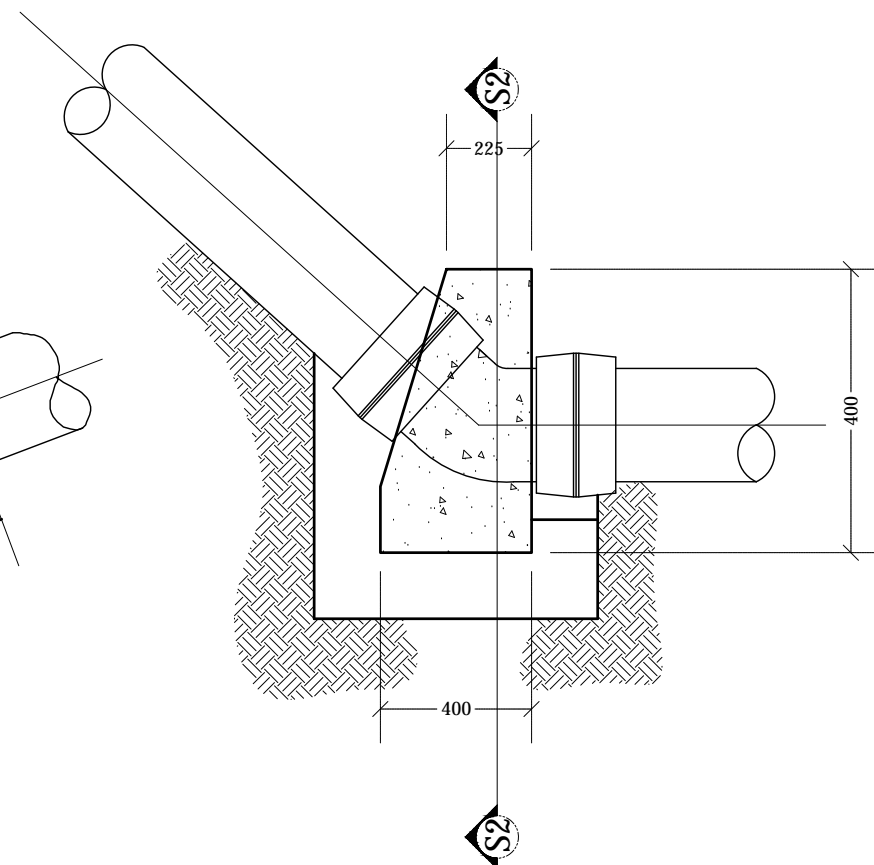
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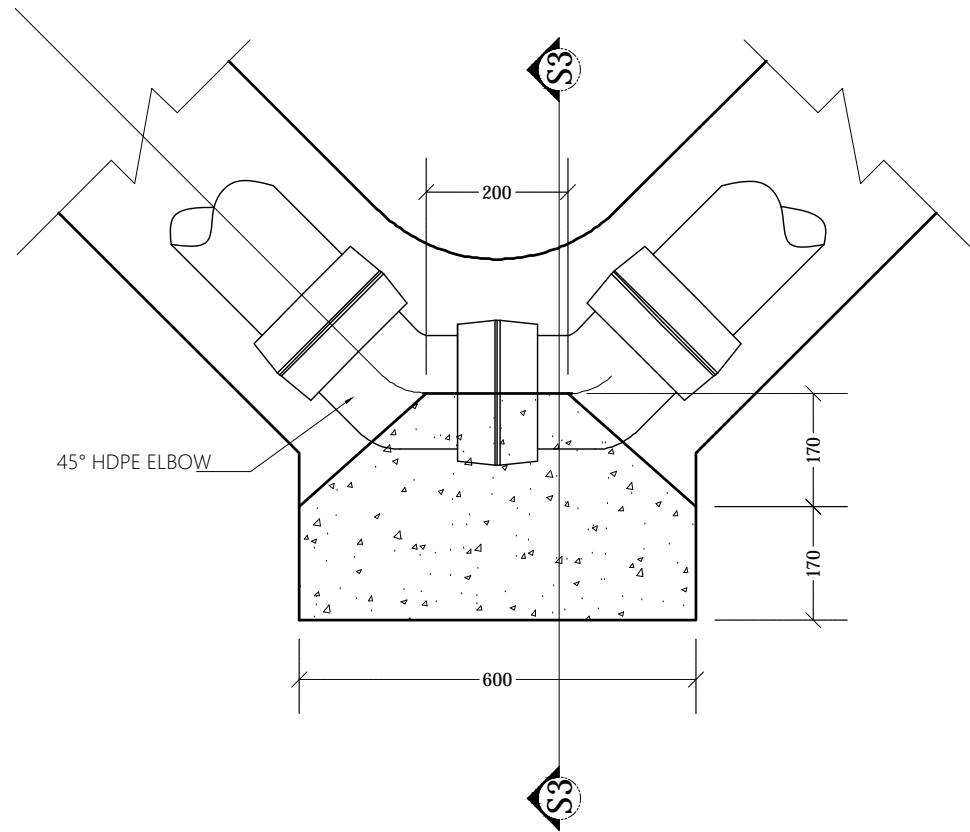
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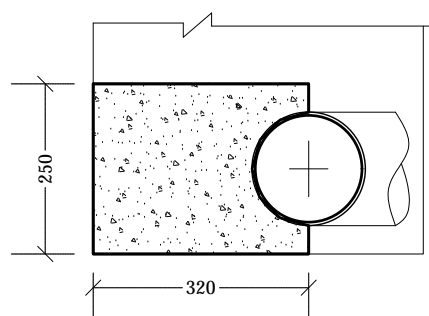
HORIZONTAL 45° BEND  
NTS



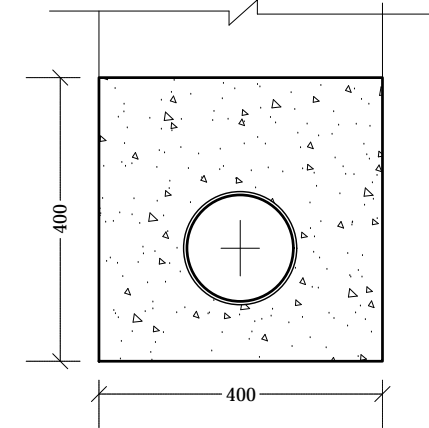
VERTICAL 45° BEND  
NTS



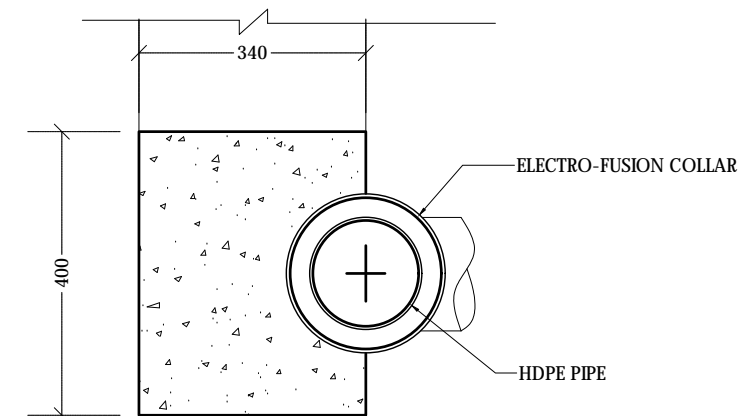
HORIZONTAL 90° BEND  
NTS



SECTION S1-S1  
NTS



SECTION S2-S2  
NTS



SECTION S3-S3  
NTS

## THRUST BLOCK DETAILS

NTS

### Legend

### Notes:

- Concrete shall be of grade C25

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6

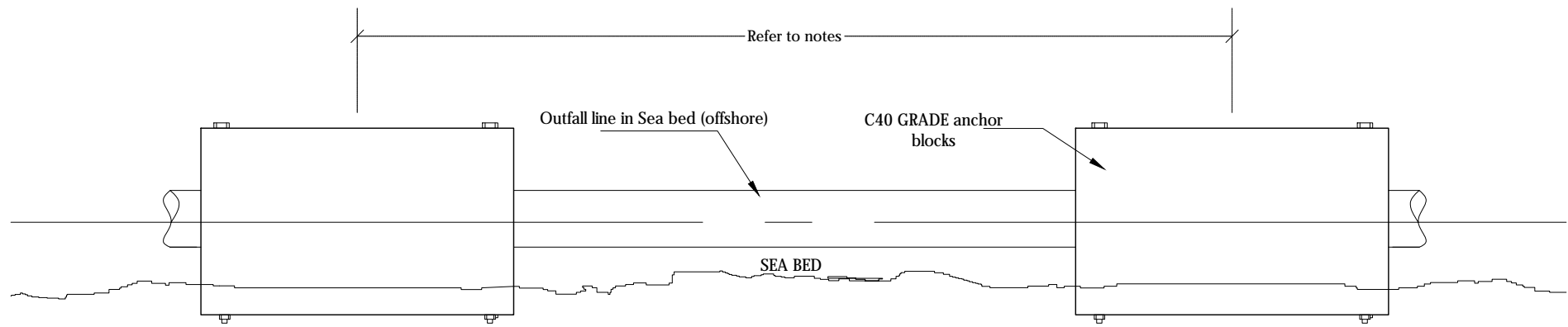
Sub Title:  
Sewerage System in L. Hithadhoo

Client:  
Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives

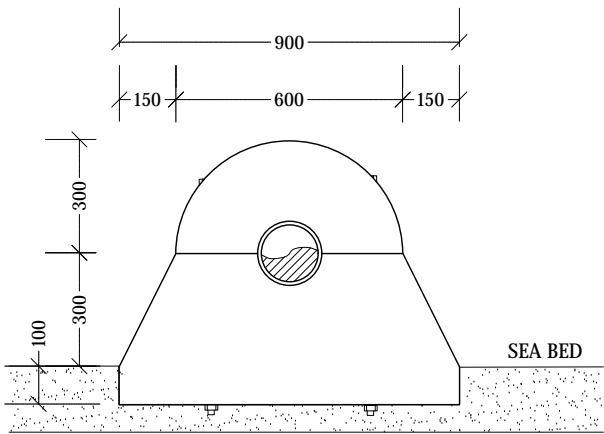
**EPOCH**  
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W: www.epochassociates  
A: G. Rosary West,  
Husuheena Magu, Male', Maldives

**FOODBACK INFRA**  
Maldivian Infrastructure Development

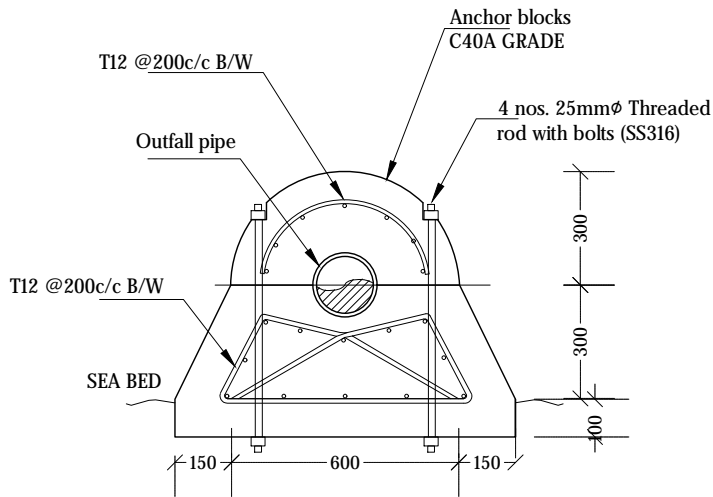
Drawn: F.I.A.	Checked: M.S.S.
Designed: F.I.A.	Approved: I.W.
Date: Sep 2020	SCALE (A3): NTS
Project No: EP-WS/2019/06	Page: W-(19)



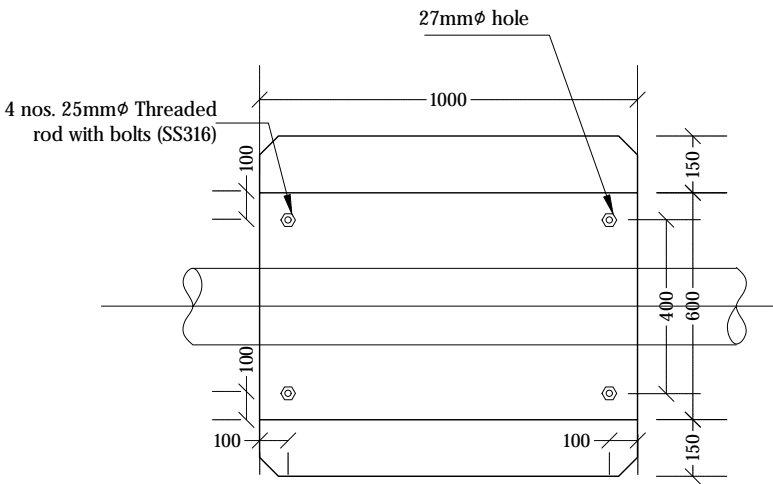
BALLAST BLOCK SIDE ELEVATION



BALLAST BLOCK FRONT ELEVATION



BALLAST BLOCK SECTION



BALLAST BLOCK PLAN

BALLAST BLOCK DETAILS

NTS



Legend

Notes:

1. All backing rings for stub flanges , nuts and bolts shall be grade 316 stainless steel.
2. All pipe work shall be bedded on 10mm thick neoprene rubber seat in semicircular recess matching the O.D. the pipe.
3. Fabricate specific pipe clamps to provide firm clamping action according to pipe O.D.
4. All structural concrete shall be of grade C40A.
5. All castings shall be done using sulphate resistant portland cement to BS 4027:1996.
6. All structural reinforcement shall be epoxy coating of non-pre-stressed reinforcement to ASTM-A775/A775M.
7. A cover of 75mm should be given for all reinforcements.
8. In shallow water (regions where the depth is less than 1m), the ballast block spacing is 3.5m. In deeper water (regions where the depth is greater than 1m), the ballast block spacing is 2.0m. All distances are from c/c of blocks.
9. All pipe connections are within blocks

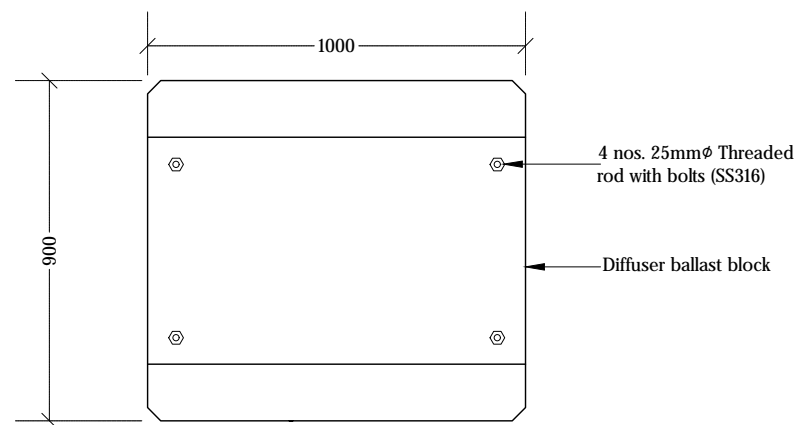
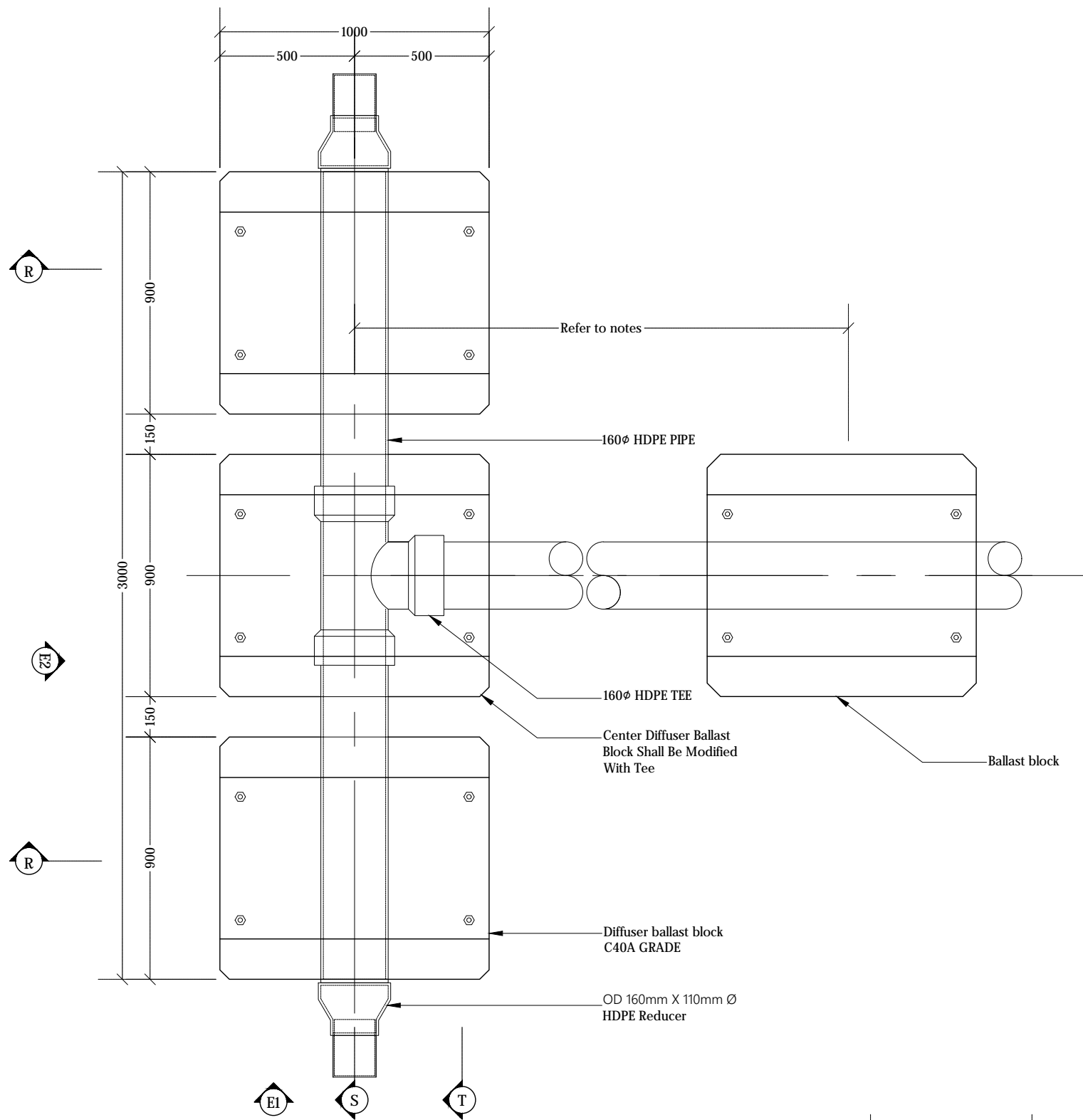
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
**Consultancy Services for Survey, Design and EIA works of Water Supply and Sewerage Facilities in 5 islands, Maldives - Package 6**

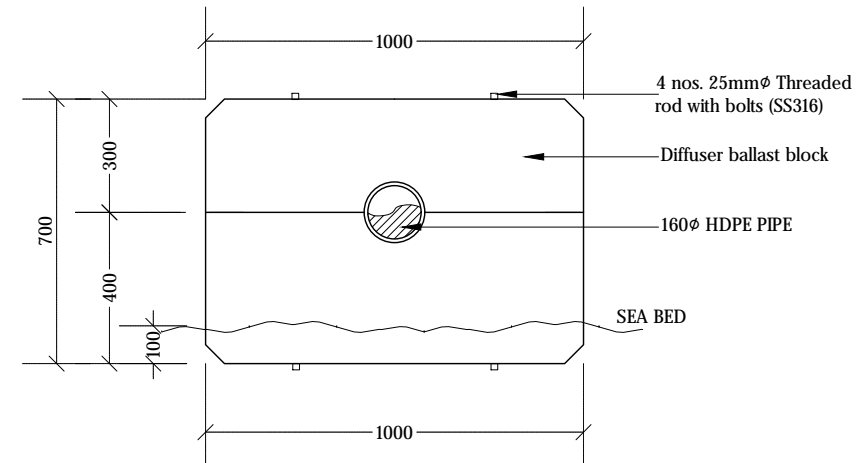
Sub Title:  
**Sewerage System in L. Hithadhoo**

Client:  
**Ministry of National Planning, Housing and Infrastructure, Republic of Maldives**

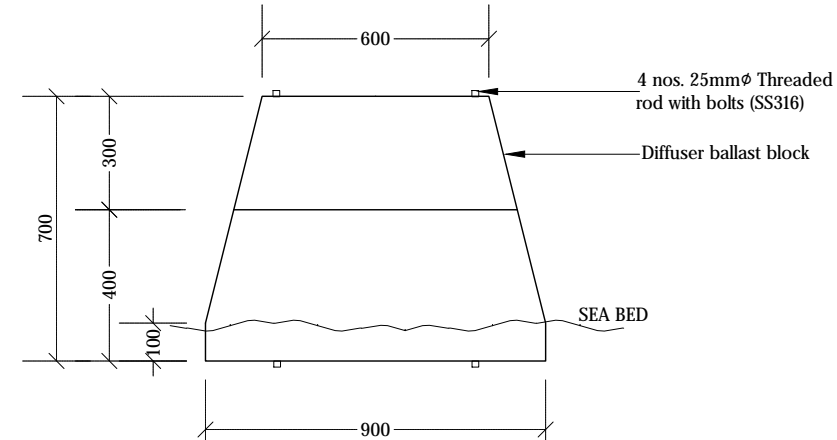
 T: +960 333 3528 E: info@epochassociates W: www.epochassociates A: G. Rosary West, Huseenuena Magu, Male', Maldives	 <b>Feedback Infrastructure</b>	Drawn: F.I.A.	Checked: M.S.S.
		Designed: F.I.A.	Approved: I.W.
		Date: Sep 2020	SCALE (A3): NTS
		Project No: EP-WS/2019/06	
		Rev: W-(20)	Page:



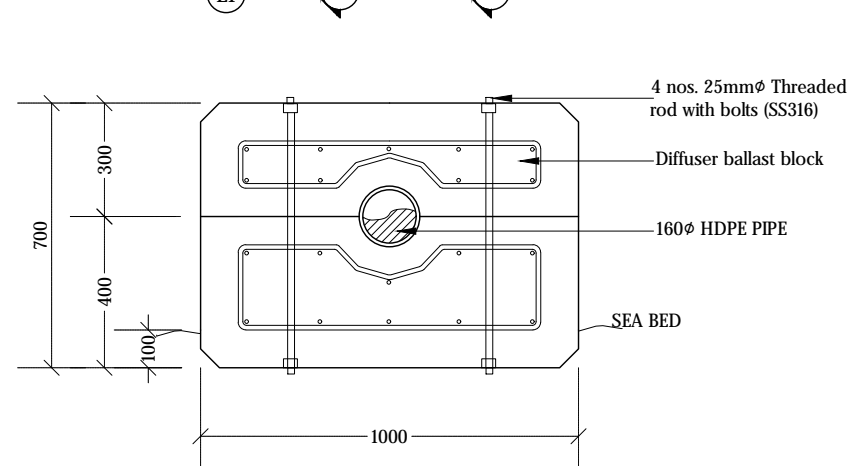
DIFFUSER BALLAST BLOCK PLAN



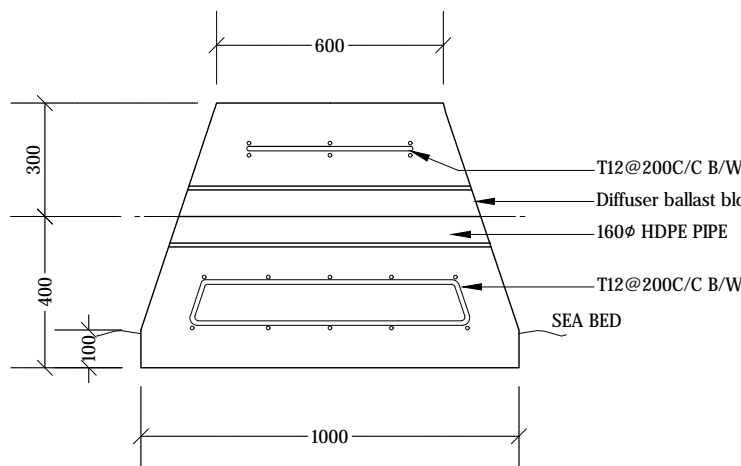
DIFFUSER BALLAST BLOCK FRONT ELEVATION - E1



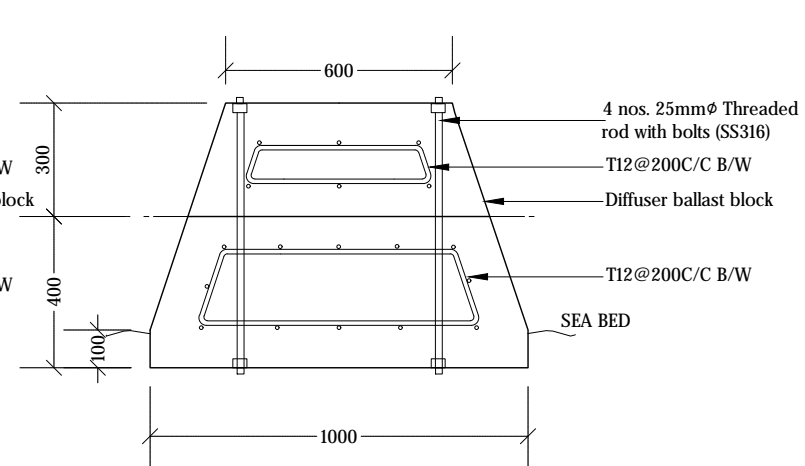
DIFFUSER BALLAST BLOCK FRONT ELEVATION - E2



DIFFUSER BALLAST BLOCK SECTION - R



DIFFUSER BALLAST BLOCK SECTION - S



DIFFUSER BALLAST BLOCK SECTION - T

DIFFUSER DETAILS  
NTS

Legend

Notes:

1. All backing rings for stub flanges , nuts and bolts shall be grade 316 stainless steel.
2. All pipe work shall be bedded on 10mm thick neoprene rubber seat in semicircular recess matching the O.D. the pipe.
3. Fabricate specific pipe clamps to provide firm clamping action according to pipe O.D.
4. All structural concrete shall be of grade C40A.
5. All castings shall be done using sulphate resistant portland cement to BS 4027:1996.
6. All structural reinforcement shall be epoxy coating of non-pre-stressed reinforcement to ASTM-A775/A775M.
7. A cover of 75mm should be given for all reinforcements.
8. In shallow water (regions where the depth is less than 1m), the ballast block spacing is 3.5m. In deeper water (regions where the depth is greater than 1m), the ballast block spacing is 2.0m. All distances are from c/c of blocks.

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6

Sub Title:  
Sewerage System in L. Hithadhoo

Client:  
Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives

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Hunnuheenna Magu, Male', Maldives

**INFRA**  
Maldives

Drawn: F.I.A. Checked: M.S.S.

Designed: F.I.A. Approved: I.W.

Date: Sep 2020 SCALE (A3): NTS

Project No: EP-WS/2019/06

Rev: Page:

W-(21)



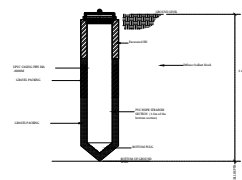
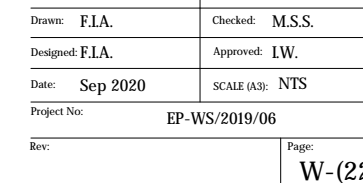


Diagram illustrating the cross-section of a trench installation. The horizontal axis shows distance in meters (0m to 74m). The vertical axis shows depth in meters (0.00 M to 10m). The diagram shows a 160mm OD HDPE pipe laid to a natural profile with a minimum 0.2% gradient. The pipe is shown with a 600mm diameter at the top left. The trench is filled with ballast blocks placed at regular intervals. A note indicates "Ballast Blocks Placed @ Regular Intervals (refer to notes for details)". A detail callout shows a "Difference (see Detail)" at the bottom right corner.

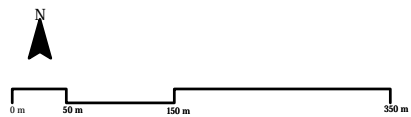
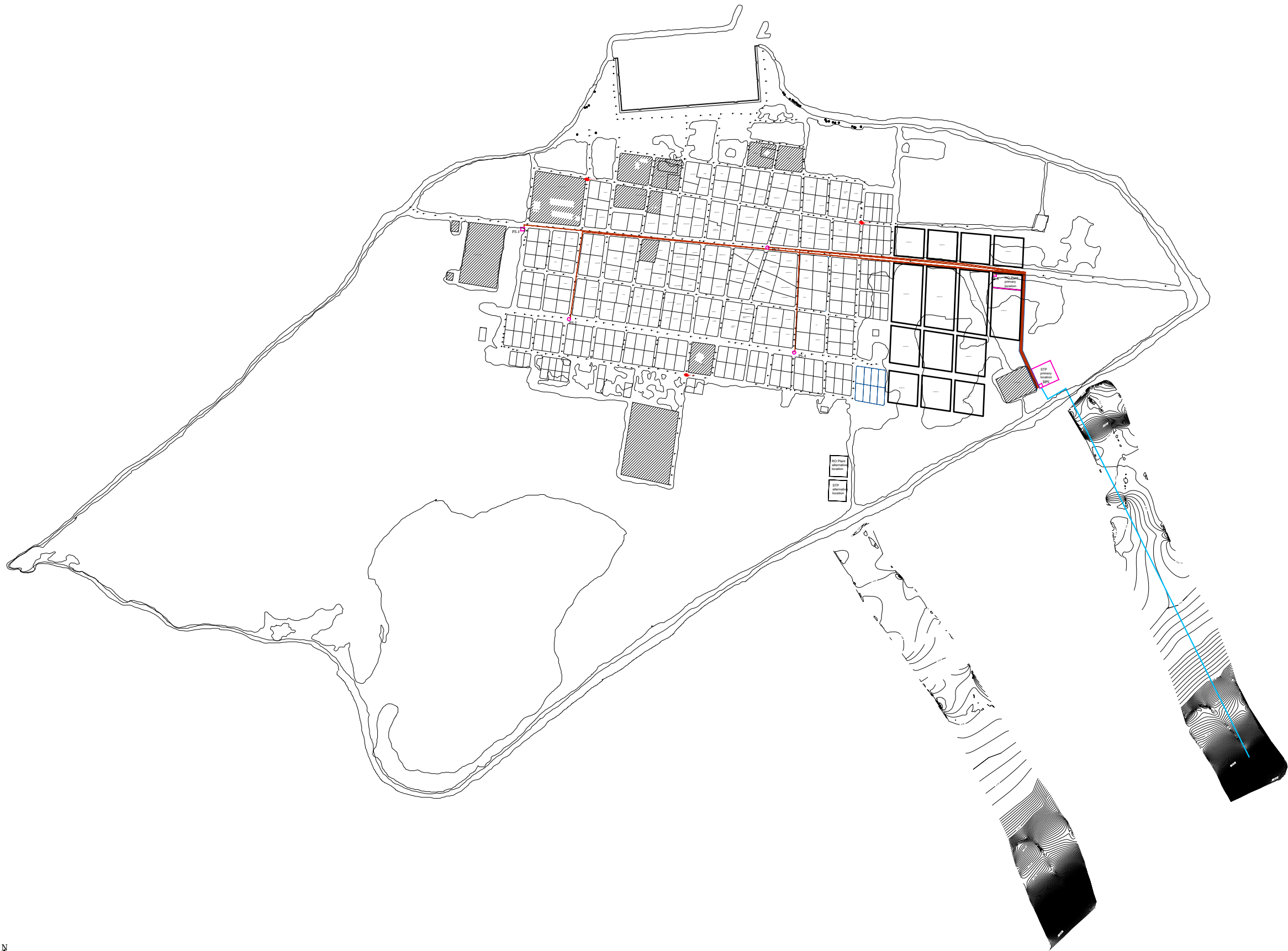
REV. NO.	Date	Revision Description	Drawn	Chkd	App

Sub Title:  
**Sewerage System in L. Hithadhoo**

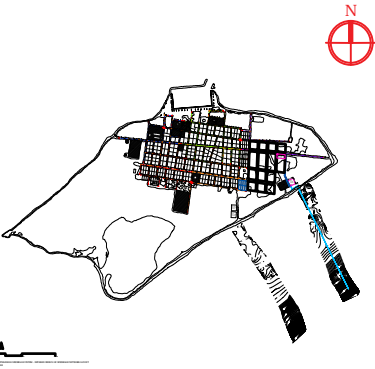
Client:  
Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives



NTS



L. HITHADHOO SEWERAGE SYSTEM - PRESSURE NETWORK LAYOUT  
1:7000



#### Legend

- 110 mm Ø HDPE Pumping Main (PE100, PN16, SDR11)
- 160 mm Ø HDPE Sea Outfall Pipe (PE100, PN16, SDR11)

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6

Sub Title:  
Sewerage System in L. Hithadhoo

Client:  
Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives

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Hunnuheena Magu, Male', Maldives

**DBACK INFRA**  
Maldivian Infrastructure Development

Drawn: F.I.A. Checked: M.S.S.

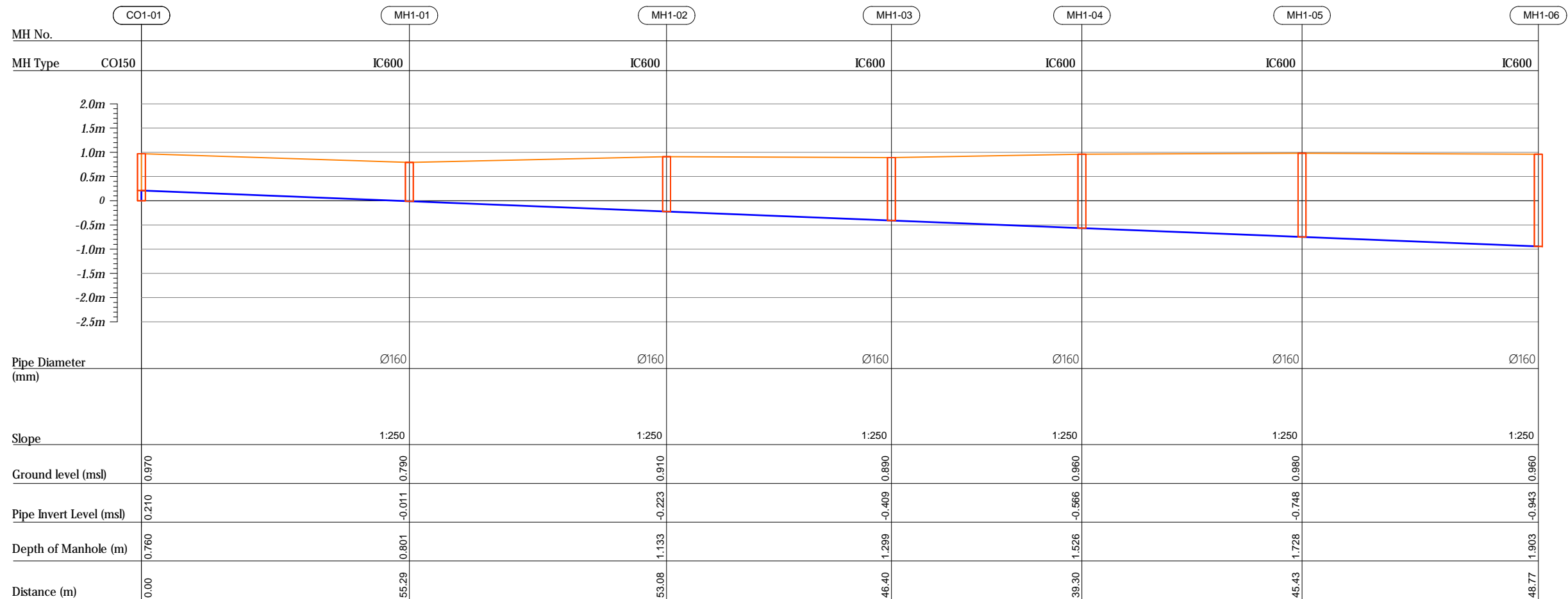
Designed: F.I.A. Approved: I.W.

Date: Sep 2020 SCALE (A3): 1:7000

Project No: EP-WS/2019/06

Rev: Page: W-(23)

## Profile 01



R00	JUNE 2020	STAGE -1	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

**Title:**  
*Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6*

Sub Title:  
*Sewerage System in L.Hithadhoo*

**Client:**  
*Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives*

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W: www.epoch.associates  
A: G. Rosary West,  
Husnuheena Magu, Male', Maldives

**FEEDBACK INFRA**  
*Making Infrastructure Happen*

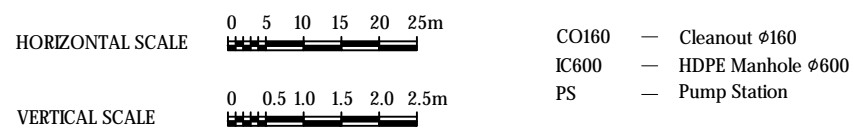
Drawn: A.R.W	Checked: M.S.S
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Designed: F.L.A	Approved: LW
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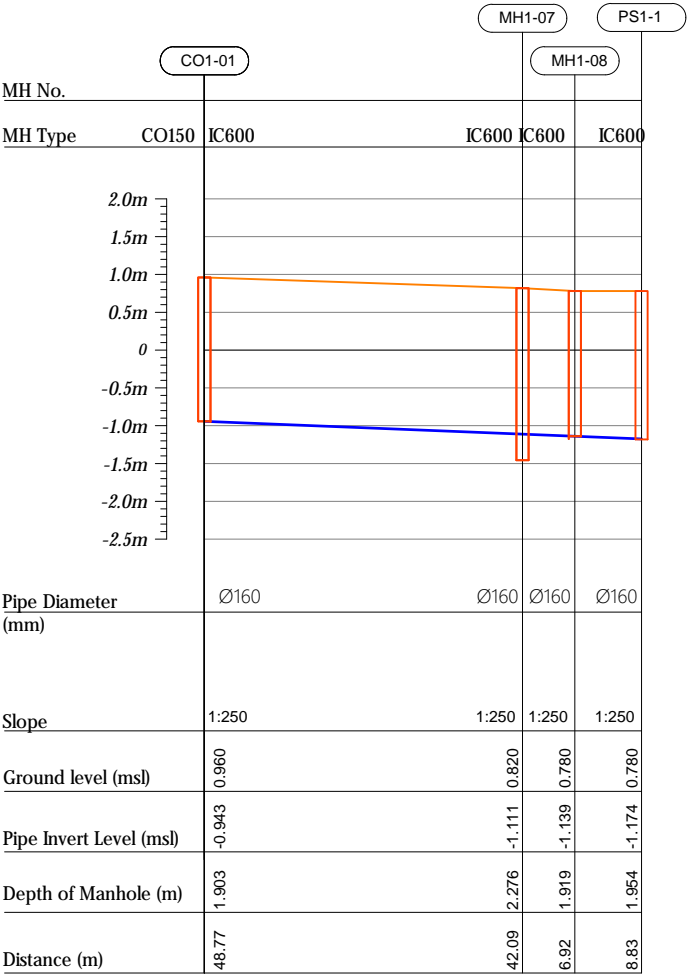
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Project No: 01010101

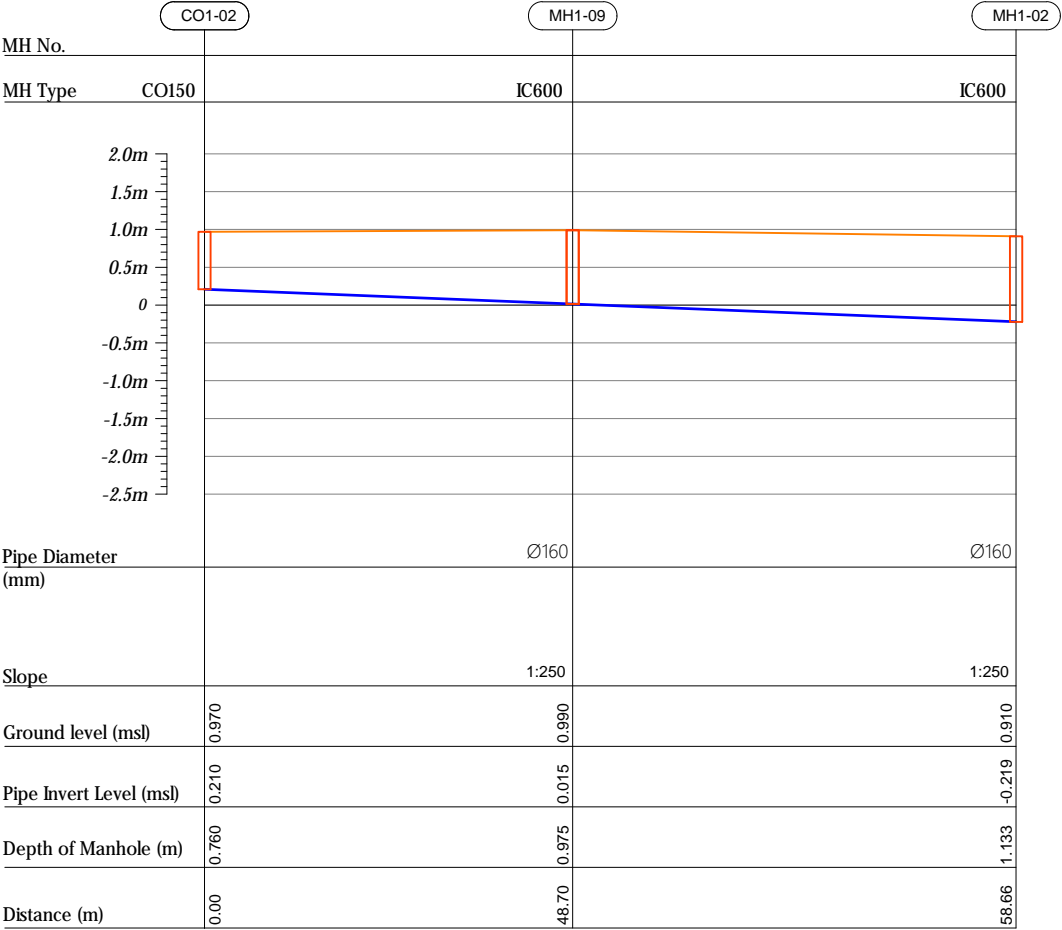
Rev: <i>R-01</i>	Page: <i>PS1-01</i>
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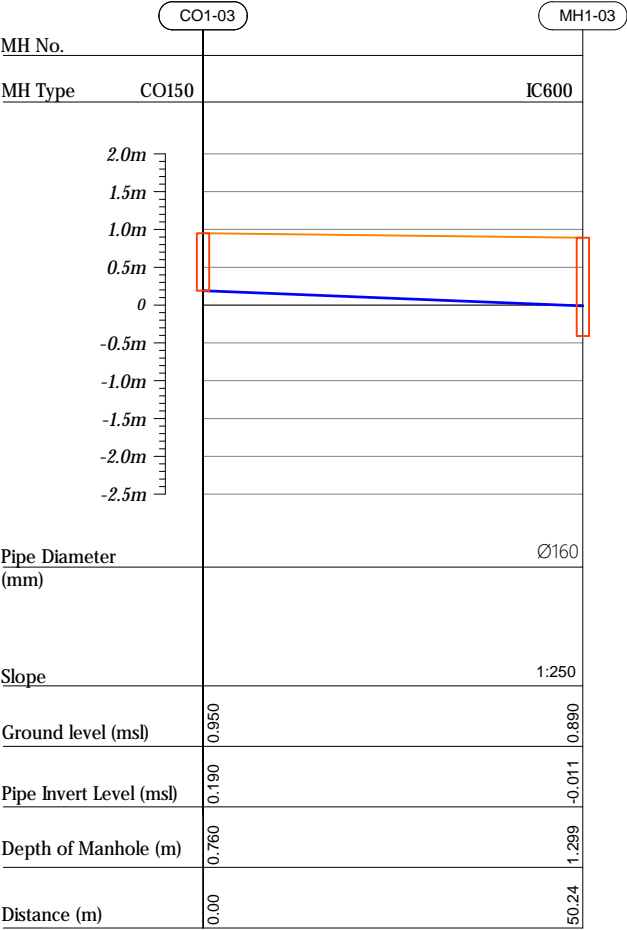
Profile 01



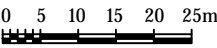
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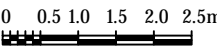
Profile 03



HORIZONTAL SCALE



VERTICAL SCALE



CO160 — Cleanout Ø160  
IC600 — HDPE Manhole Ø600  
PS — Pump Station

R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6

Sub Title:  
Sewerage System in L.Hithadhoo

Client:  
Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives



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A: G. Rosary West,  
Hussuvehemaa Magu, Male', Maldives

INFRA  
Maldivuq Infrastructure Happa

Drawn: A.R.W Checked: M.S.S

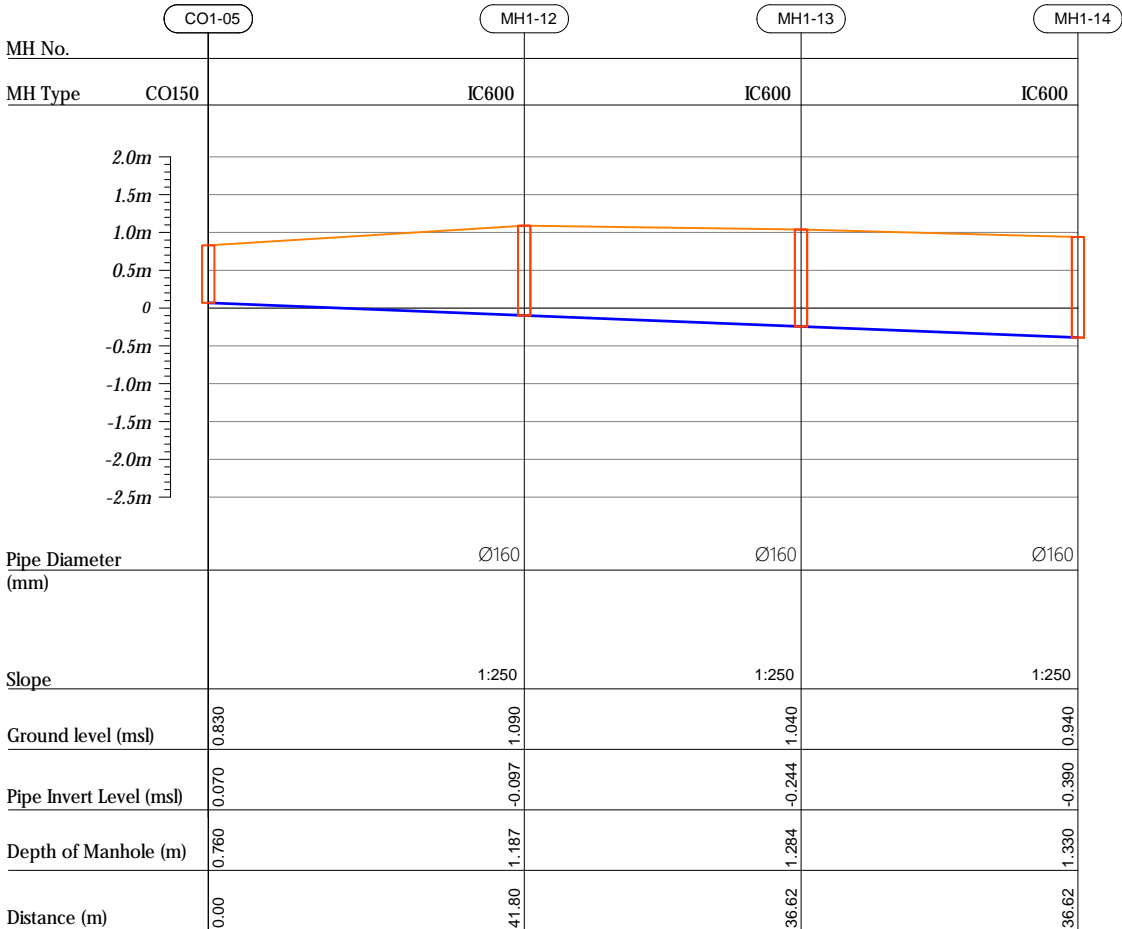
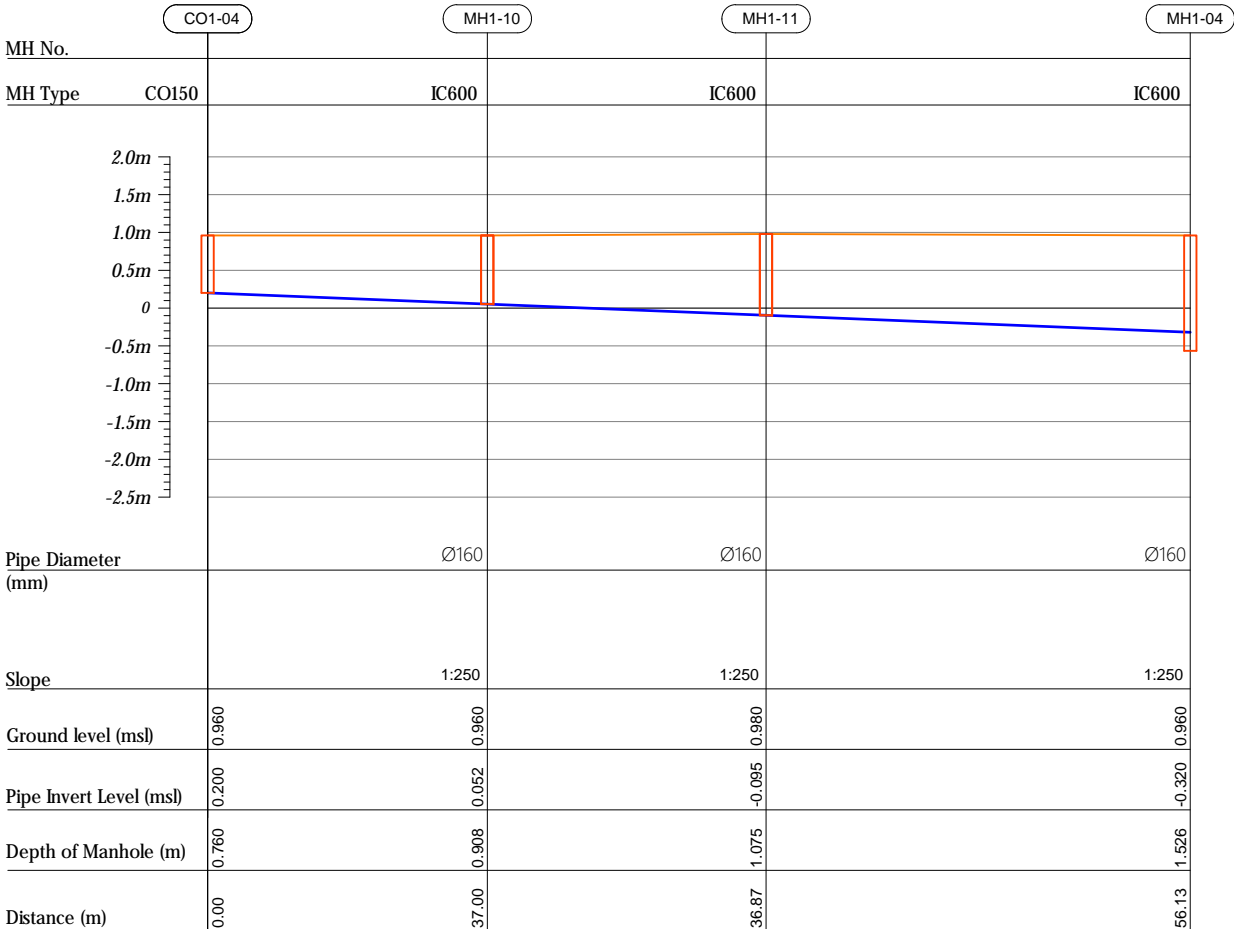
Designed: F.I.A Approved: L.W

Date: Aug 2020 SCALE (A3): 1:100

Project No: 01010101

Rev: R-01 Page: PS1-02

## Profile 04



REV. NO.	DATE	STAGE -1	PD	SBC	SD
	Date	Revision Description	Drawn	Chkd	Appd.

**Title:**  
*Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6*

Sub Title:  
*Sewerage System in L.Hithadhoo*

**Client:**  
*Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives*

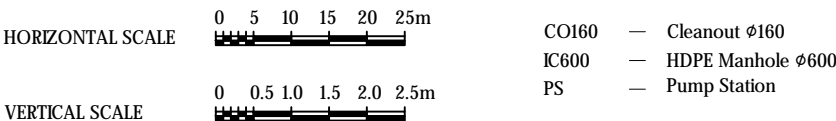


Drawn: A.R.W	Checked: M.S.S
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Designed: F.L.A	Approved: LW
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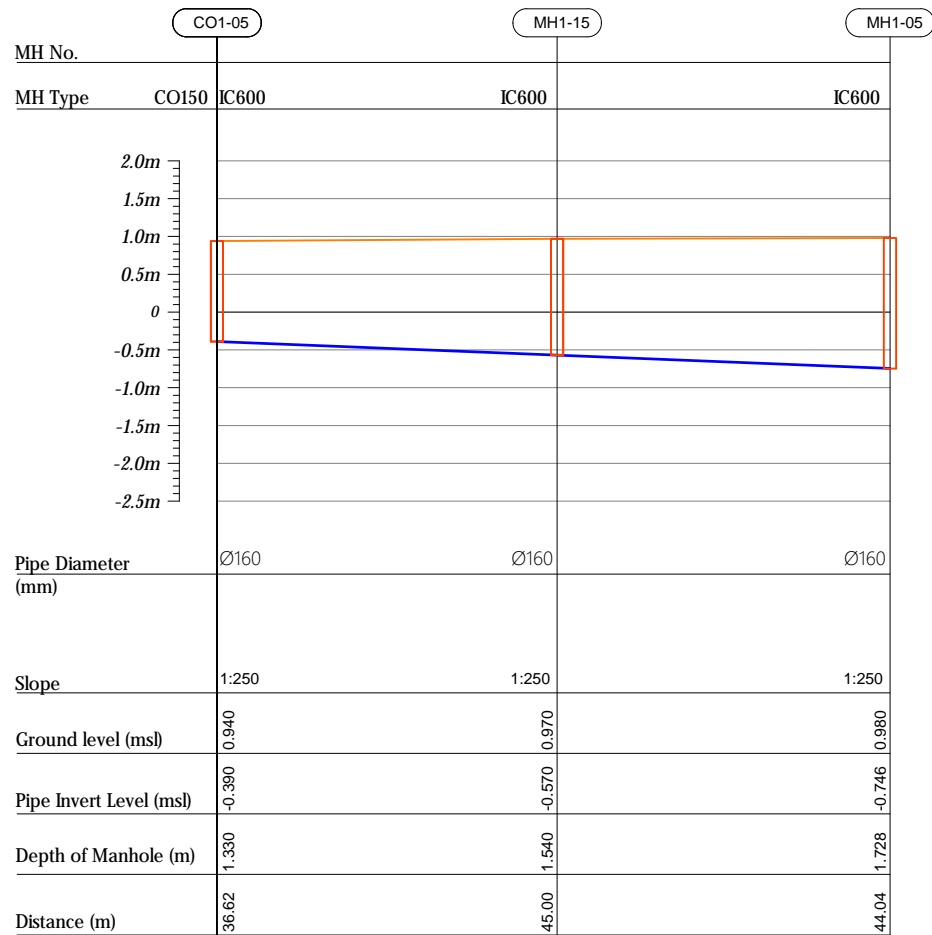
Date: Aug 2020 SC

Rev:	Page:
R-01	PS1-03

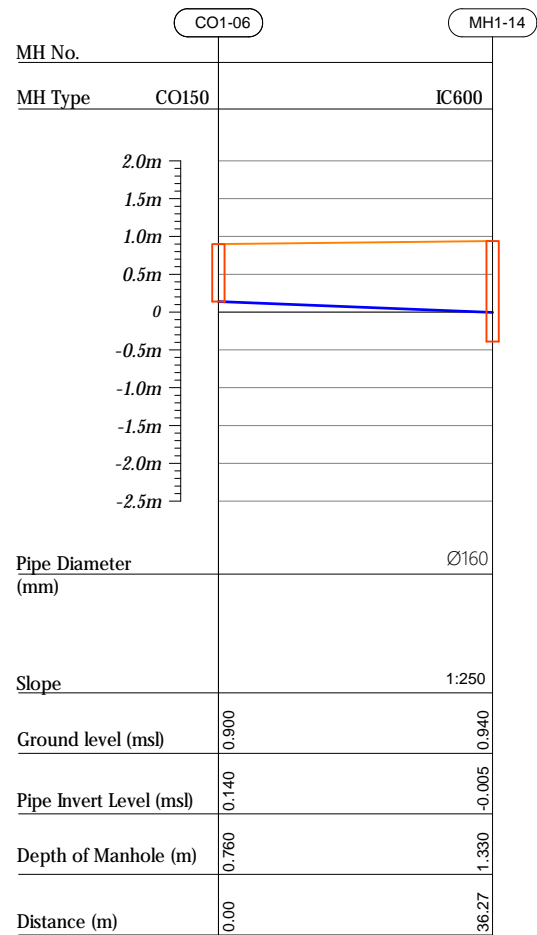




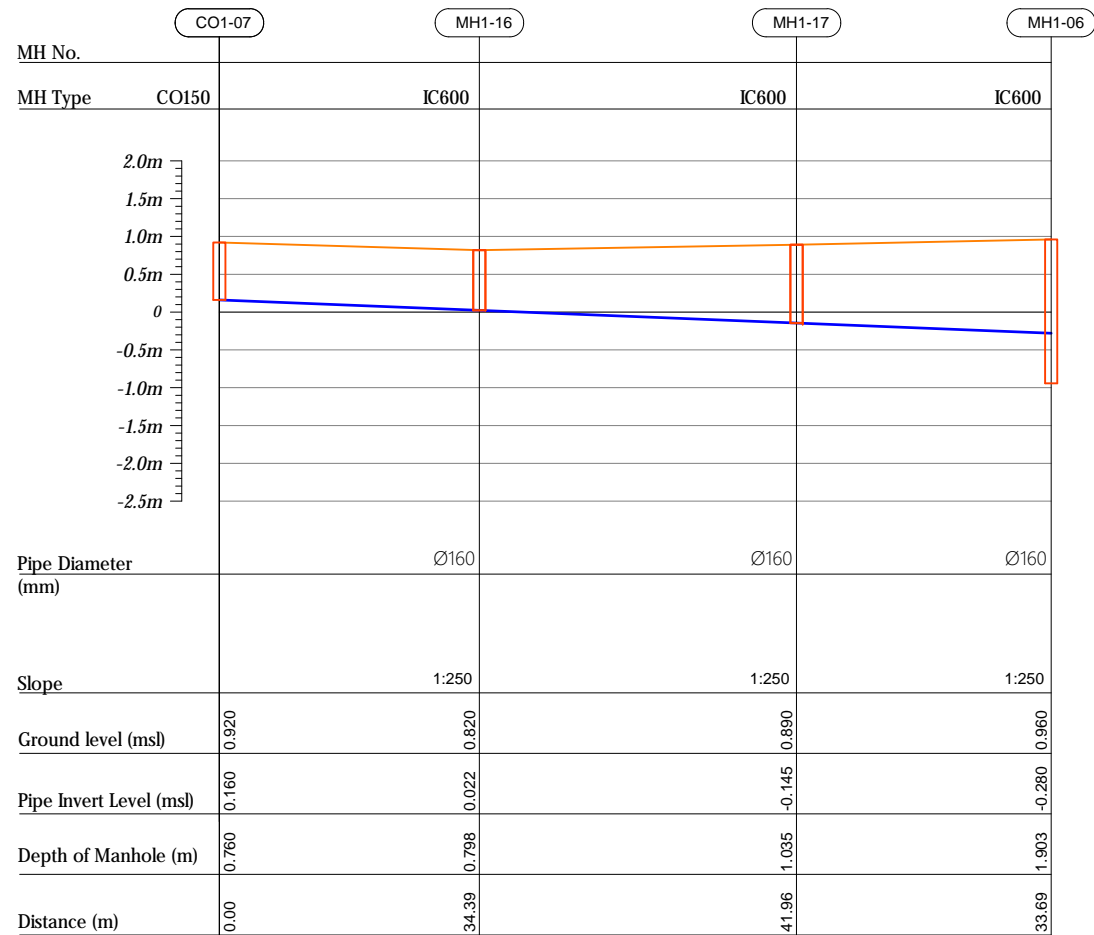
## Profile 05



## Profile 06



## Profile 07



R00	JUNE 2020	STAGE -1	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

**Title:**  
*Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6*

Sub Title:  
*Sewerage System in L.Hithadhoo*

Client:  
*Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives*

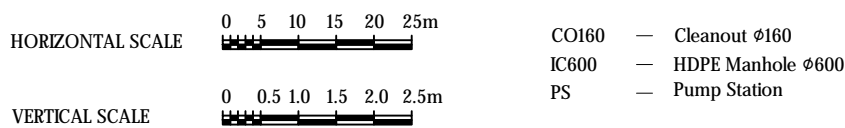
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W: www.epoch.associates  
A: G. Rosary West,  
Husnuheenna Magu, Male', Maldives

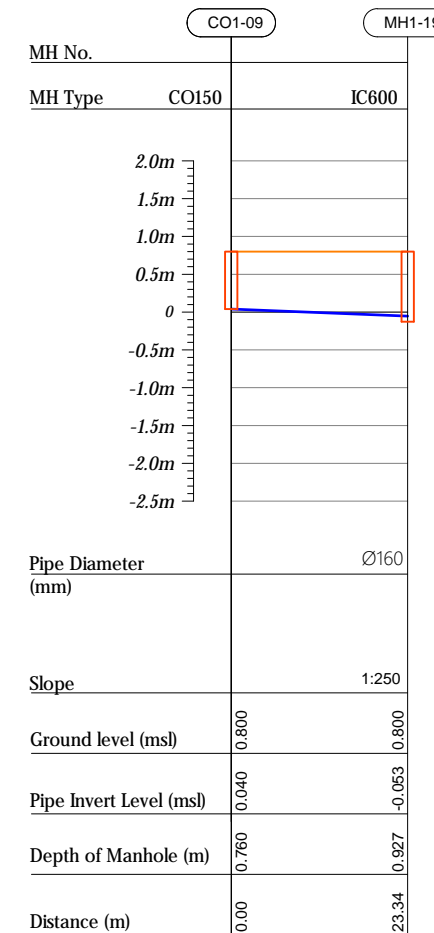
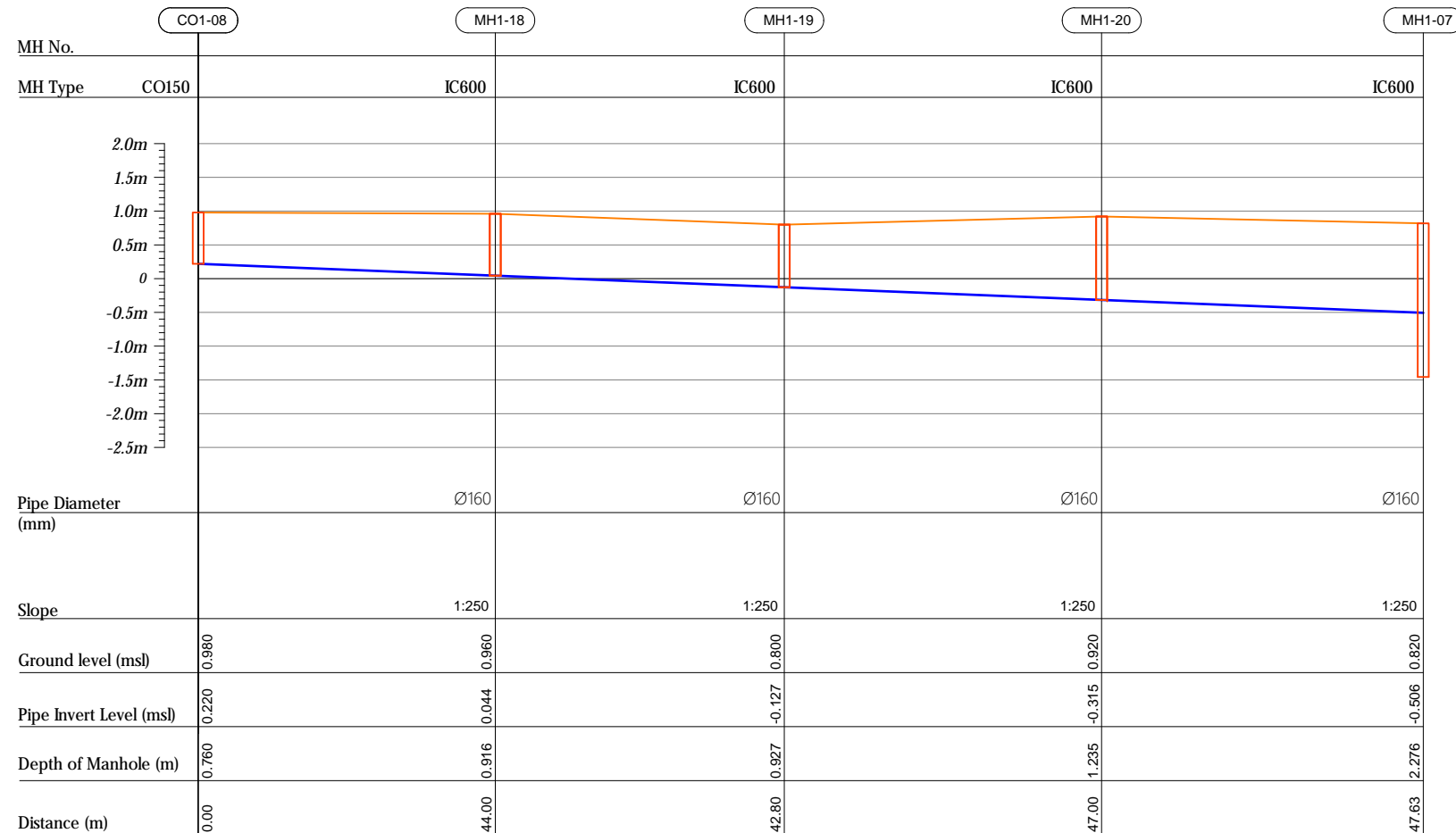
**FEEDBACK INFRA**  
*Making Infrastructure Happen*

Drawn: A.R.W	Checked: M.S.S
Designed: F.I.A	Approved: I.W
Date: Aug 2020	SCALE (A3): 1:100

Project No: 01010101	
Rev: R-01	Page: PS1-04



## Profile 08



R00	JUNE 2020	STAGE -1	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
*Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6*

Sub Title:  
*Sewerage System in L.Hithadhoo*

Client:  
Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives



Drawn: A.R.W	Checked: M.S.S
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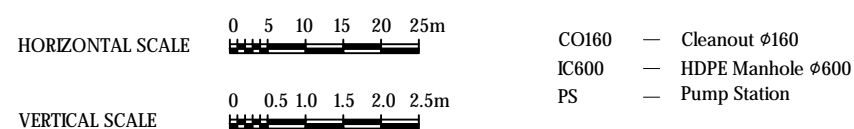
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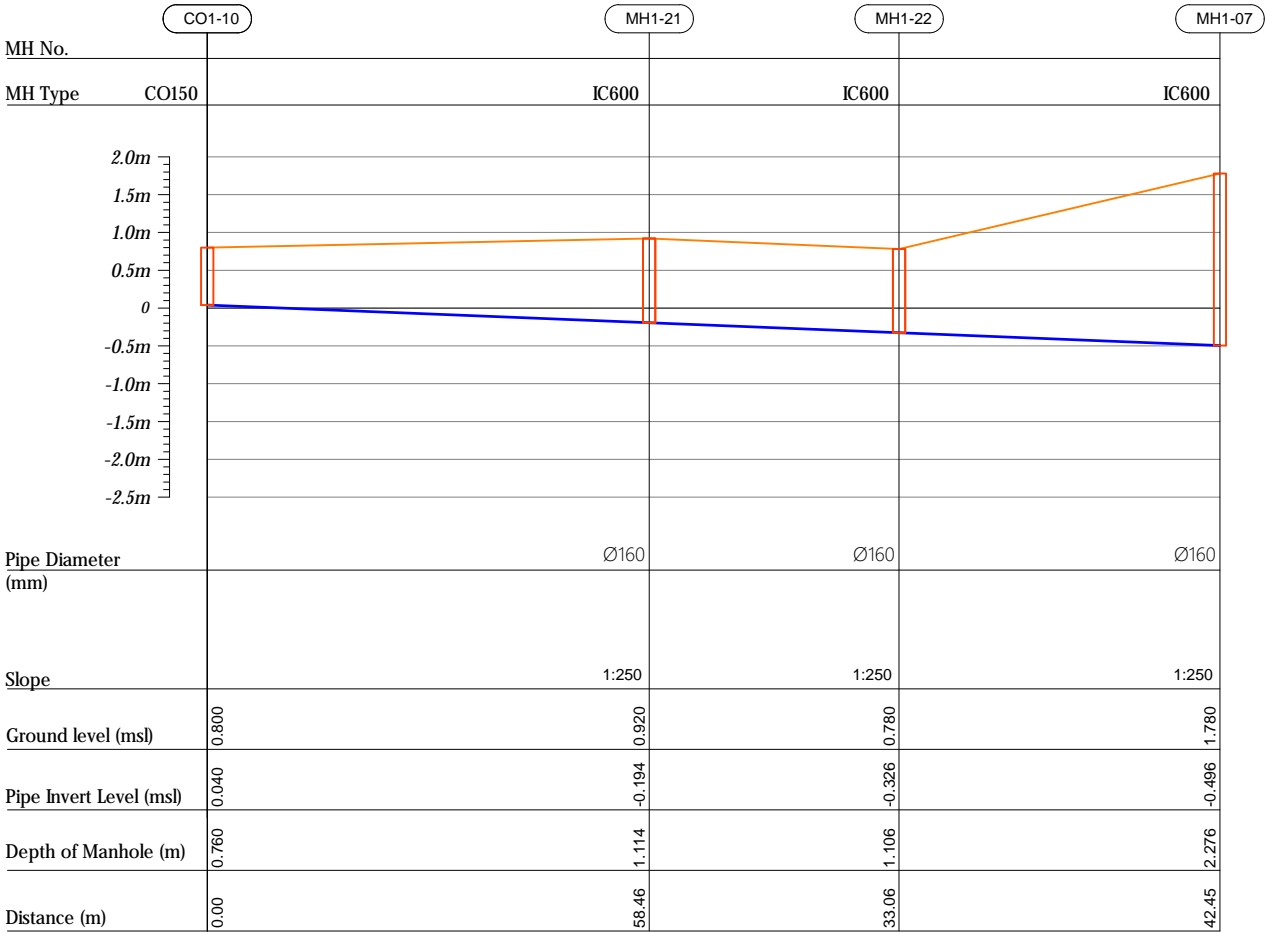
Project No: 01010101

Rev:	Page:
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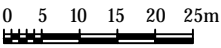
R-01	PS1-05
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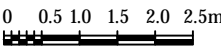
Profile 10



HORIZONTAL SCALE



VERTICAL SCALE



- CO160 — Cleanout Ø160
- IC600 — HDPE Manhole Ø600
- PS — Pump Station

R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6

Sub Title:  
Sewerage System in L.Hithadhoo

Client:  
Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives



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W: www.epoch.associates  
A: G. Rosary West,  
Hussuvehemaa Magu, Male', Maldives

FDBAC INFRA  
Maldivuq Infrastructure Happa

Drawn: A.R.W. Checked: M.S.S.

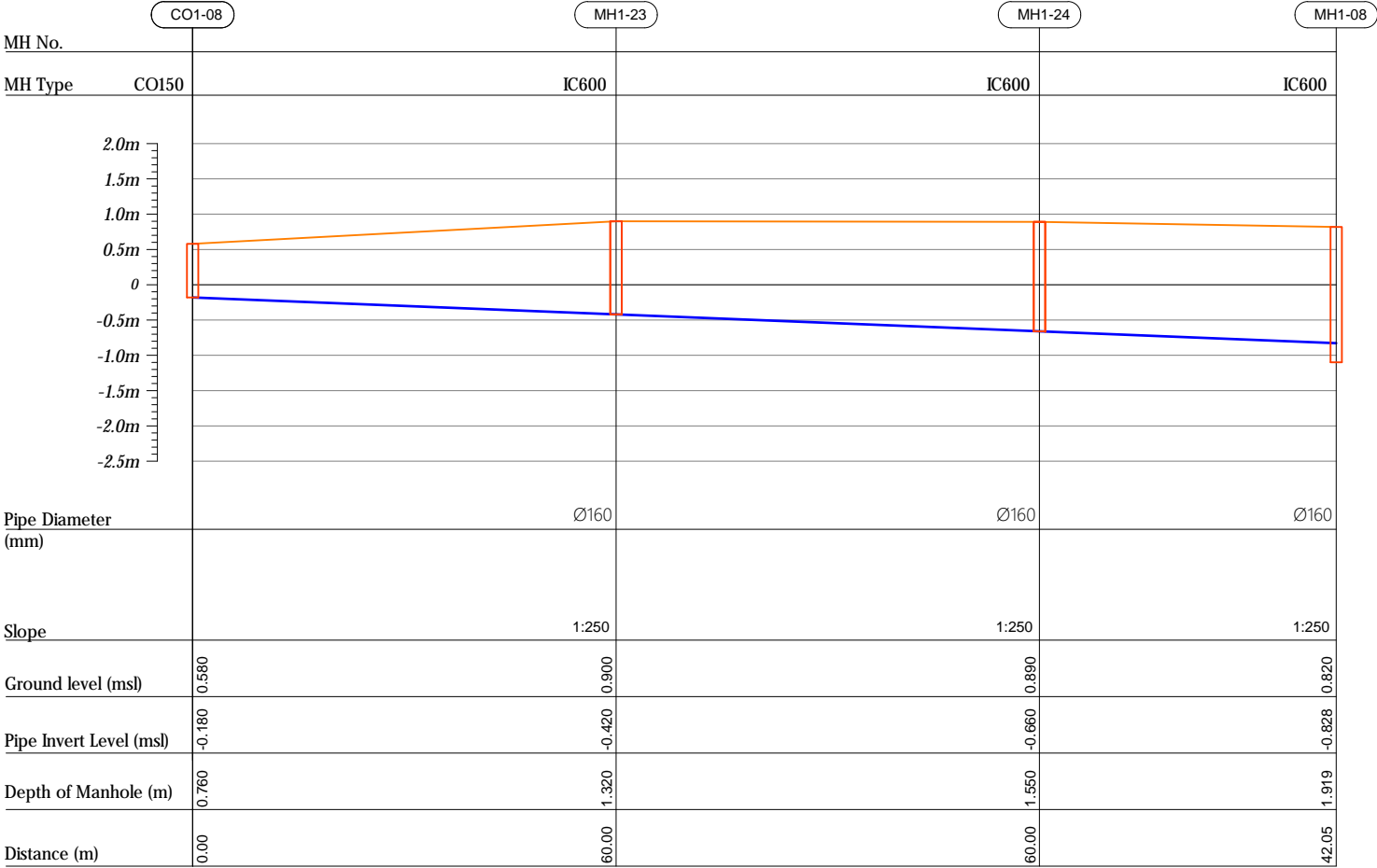
Designed: F.L.A. Approved: L.W.

Date: Aug 2020 SCALE (A3): 1:100

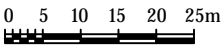
Project No: 01010101

Rev: R-01 Page: PS1-06

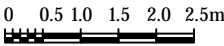
Profile 11



HORIZONTAL SCALE



VERTICAL SCALE



- CO160 — Cleanout Ø160
- IC600 — HDPE Manhole Ø600
- PS — Pump Station

R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6

Sub Title:  
Sewerage System in L.Hithadhoo

Client:  
Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives



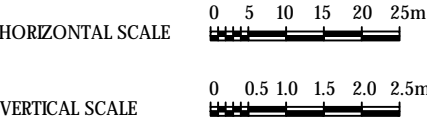
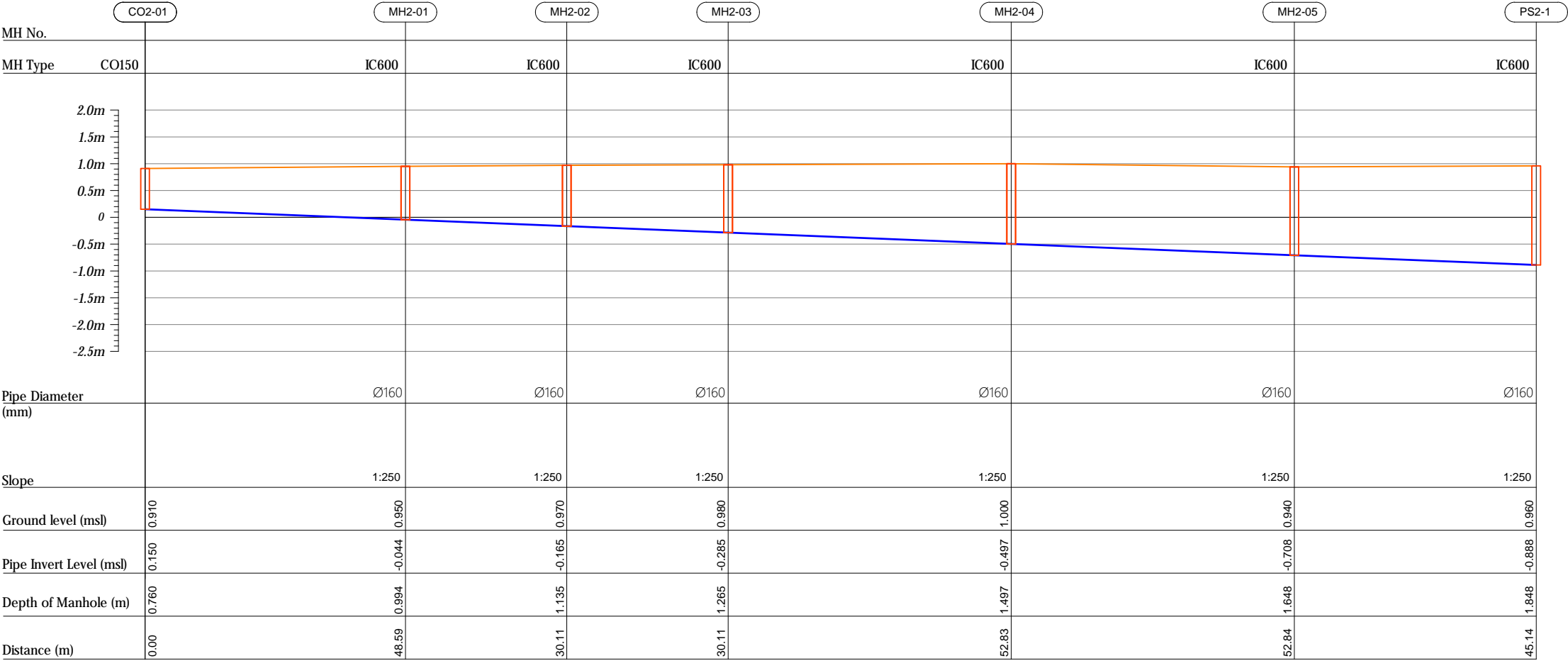
T: +960 333 3528  
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A: G. Rosary West,  
Hussuvehemaa Magu, Male', Maldives



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Drawn: A.R.W	Checked: M.S.S
Designed: F.L.A	Approved: L.W
Date: Aug 2020	SCALE (A3): 1:100
Project No: 01010101	
Rev: R-01	Page: PS1-07

Profile 01



- CO160 — Cleanout Ø160
- IC600 — HDPE Manhole Ø600
- PS — Pump Station

R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6

Sub Title:  
Sewerage System in L.Hithadhoo

Client:  
Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives



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E: info@epoch.associates  
W: www.epoch.associates  
A: G. Rosary West,  
Hussuvehemaa Magu, Male', Maldives

DBAC INFRA  
Maldivu Infrastructure Happpu

Drawn: A.R.W Checked: M.S.S

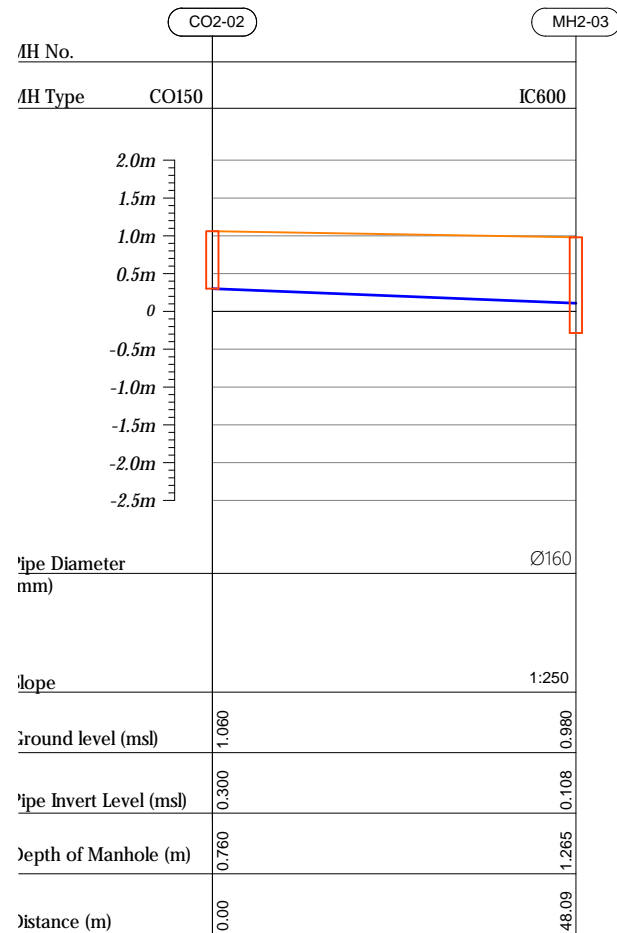
Designed: F.L.A Approved: L.W

Date: Aug 2020 SCALE (A3): 1:100

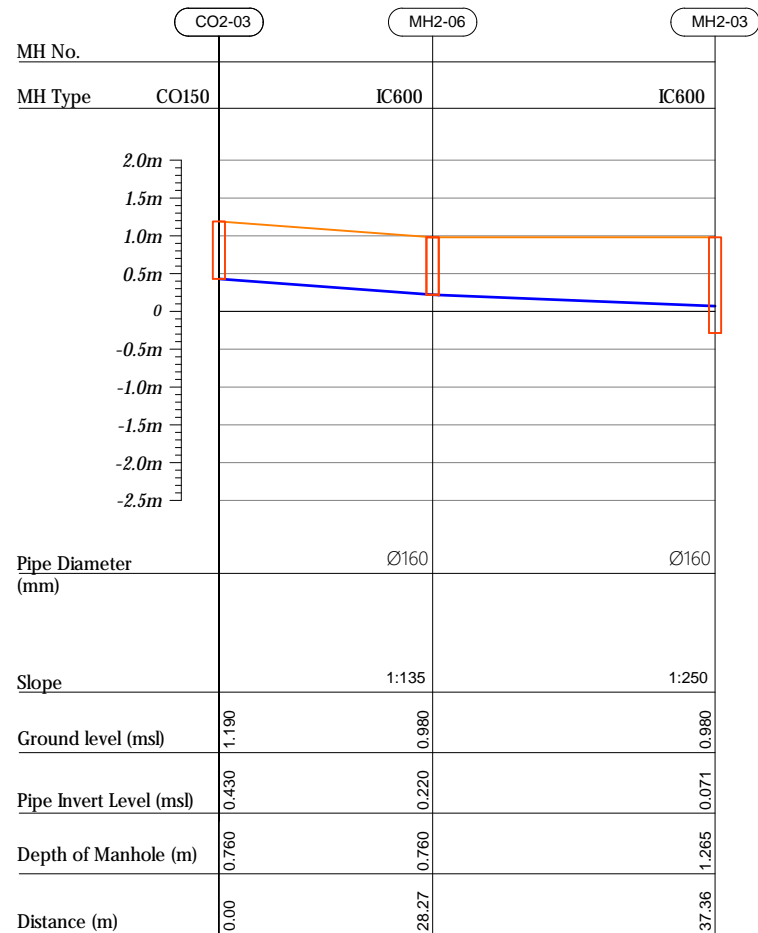
Project No: 01010101

Rev: R-01 Page: PS2-01

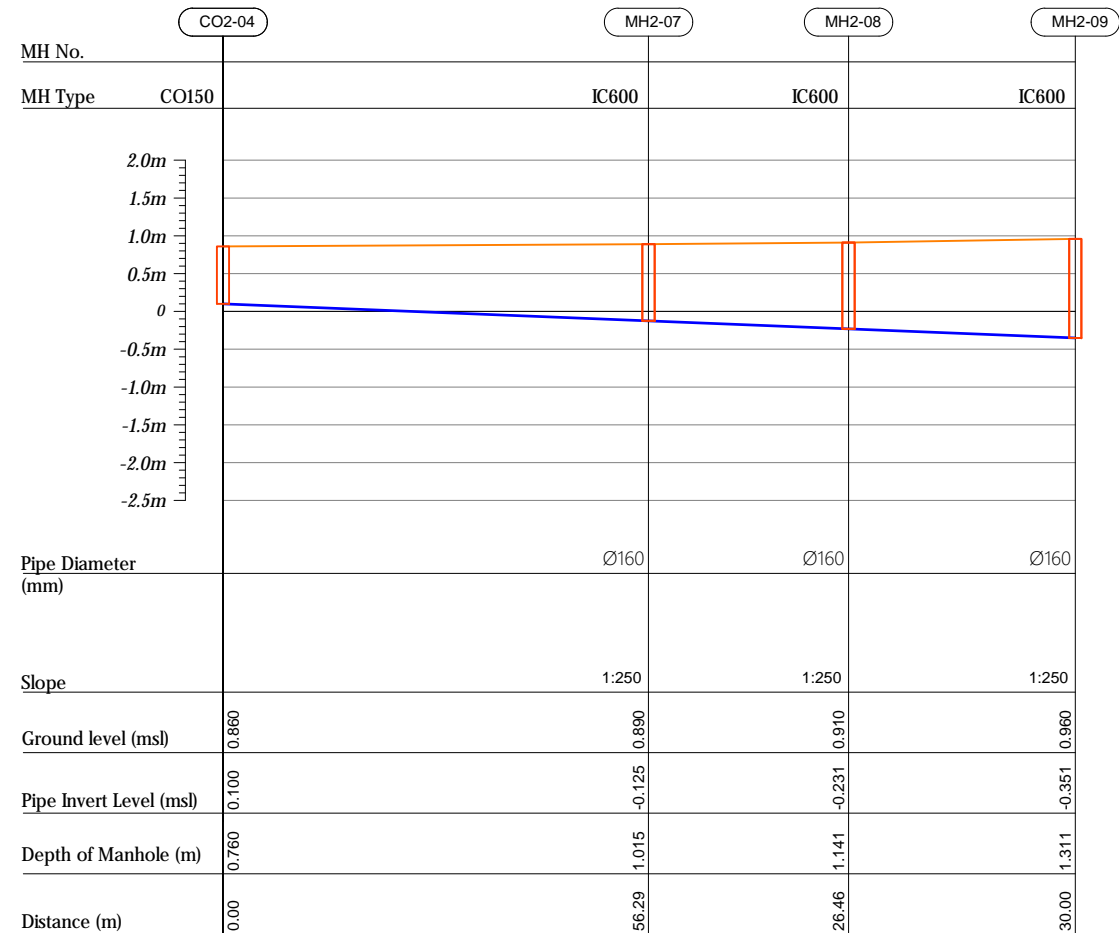
## Profile 02



## Profile 03



## Profile 04



R00	JUNE 2020	STAGE -1	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
*Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6*

Sub Title:  
*Sewerage System in L.Hithadhoo*

Client:  
*Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives*

 **EPOCH**  
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A: G. Rosary West,  
Husnuheena Magu, Male', Maldives

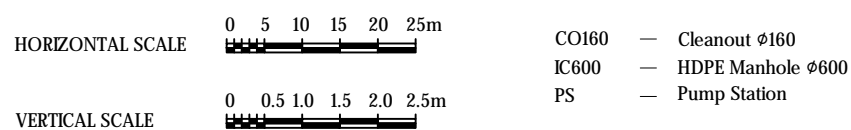
**FEEDBACK INFRA**  
*Making Infrastructure Happen*

Drawn: A.R.W	Checked: M.S.S
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Designed: F.L.A	Approved: I.W
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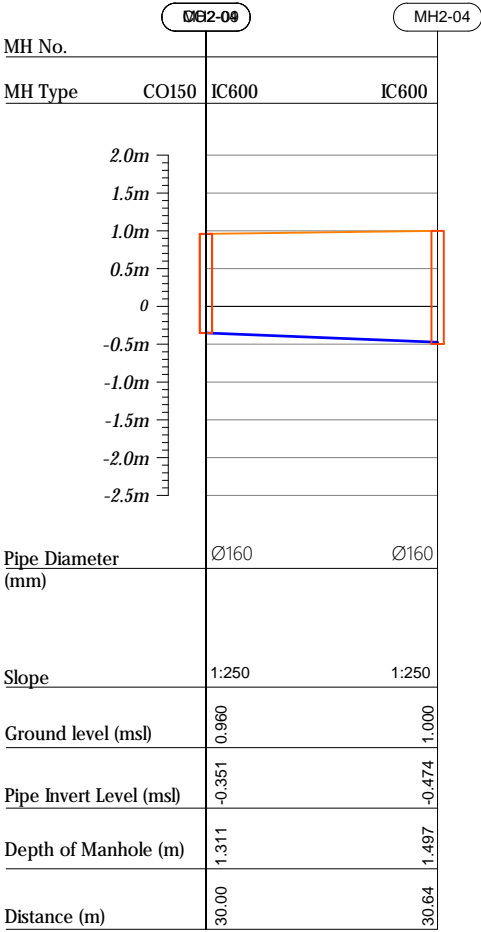
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Rev: <i>R-01</i>	Page: <i>PS2-02</i>
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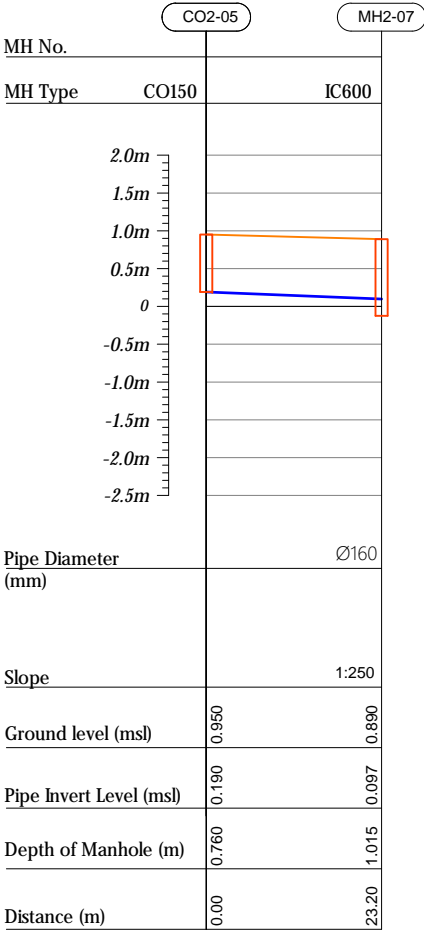




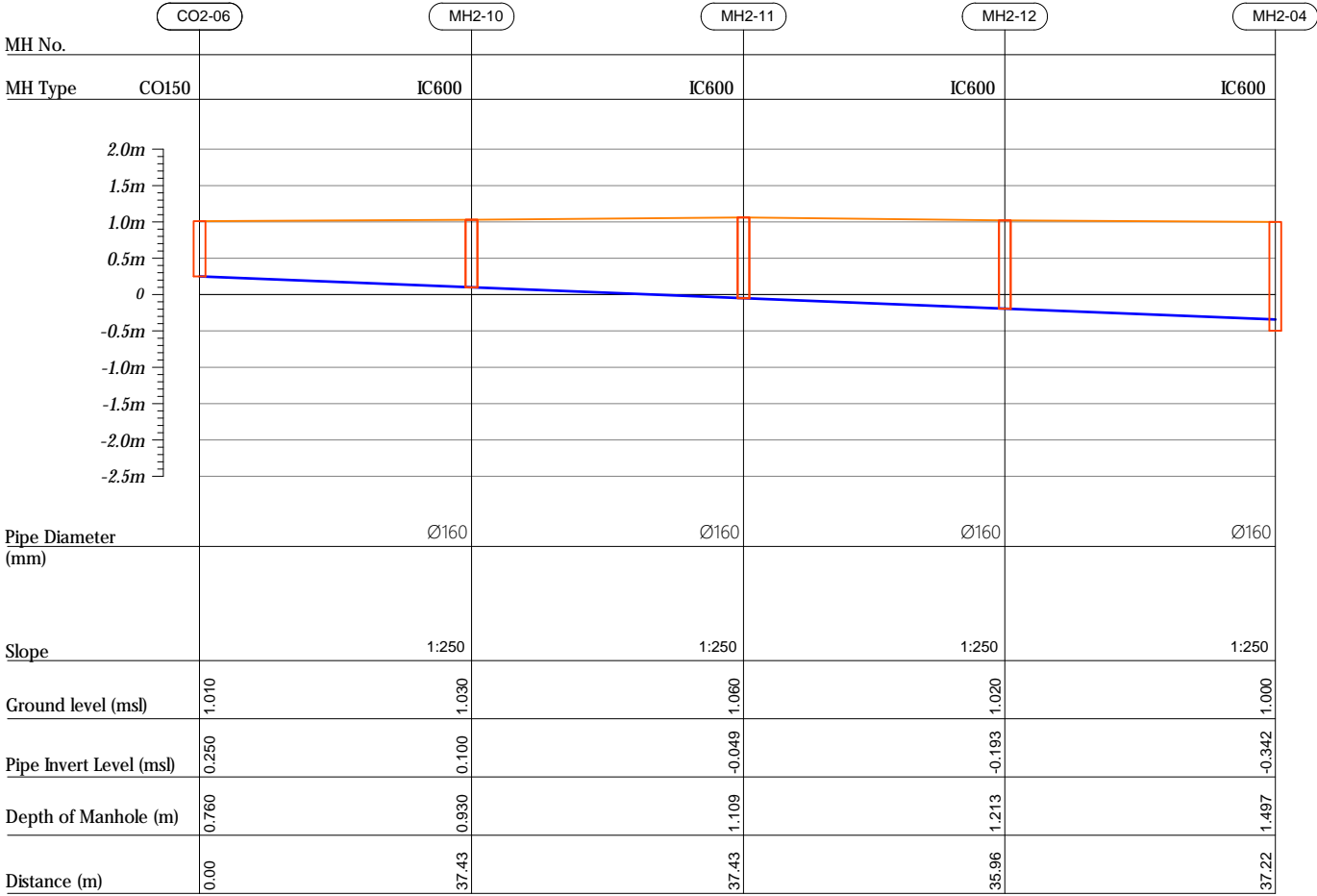
Profile 04



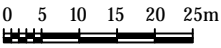
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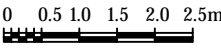
Profile 06



HORIZONTAL SCALE



VERTICAL SCALE



- CO160 — Cleanout Ø160
- IC600 — HDPE Manhole Ø600
- PS — Pump Station

R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6

Sub Title:  
Sewerage System in L.Hithadhoo

Client:  
Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives



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Hussuvehemaa Magu, Male', Maldives

DBAC INFRA  
Maldivu Infrastructure Develop

Drawn: A.R.W Checked: M.S.S

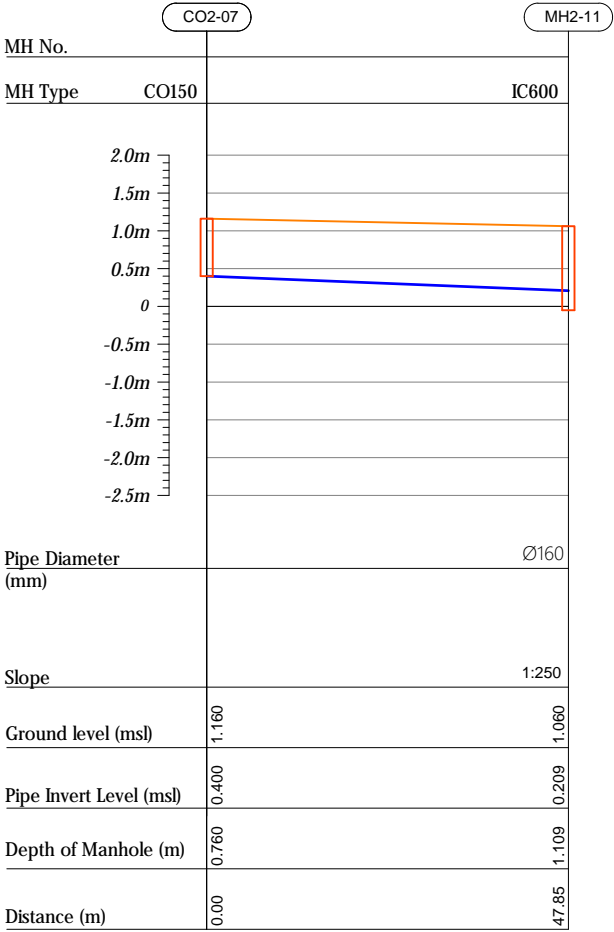
Designed: F.L.A Approved: L.W

Date: Aug 2020 SCALE (A3): 1:100

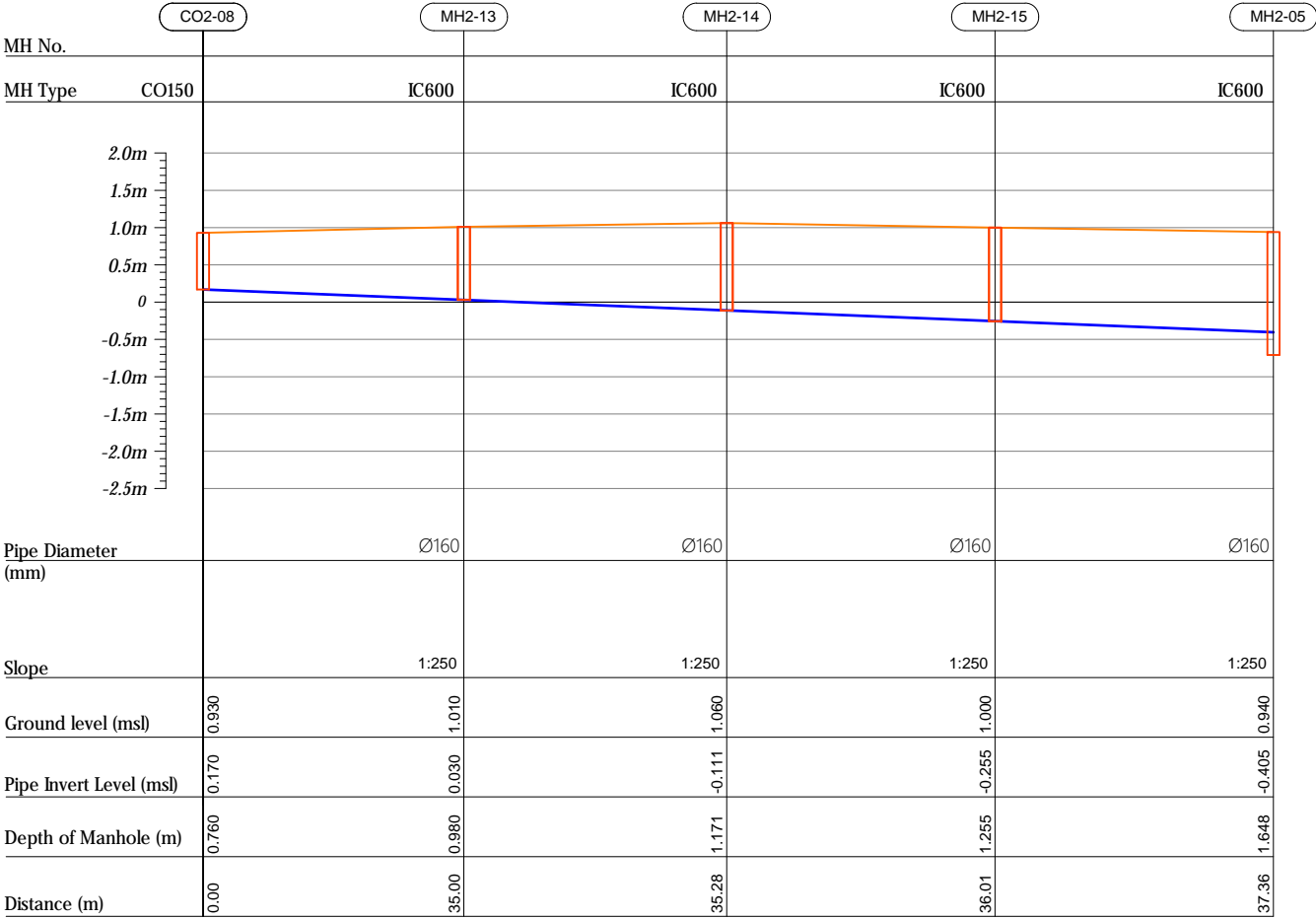
Project No: 01010101

Rev: R-01 Page: PS2-03

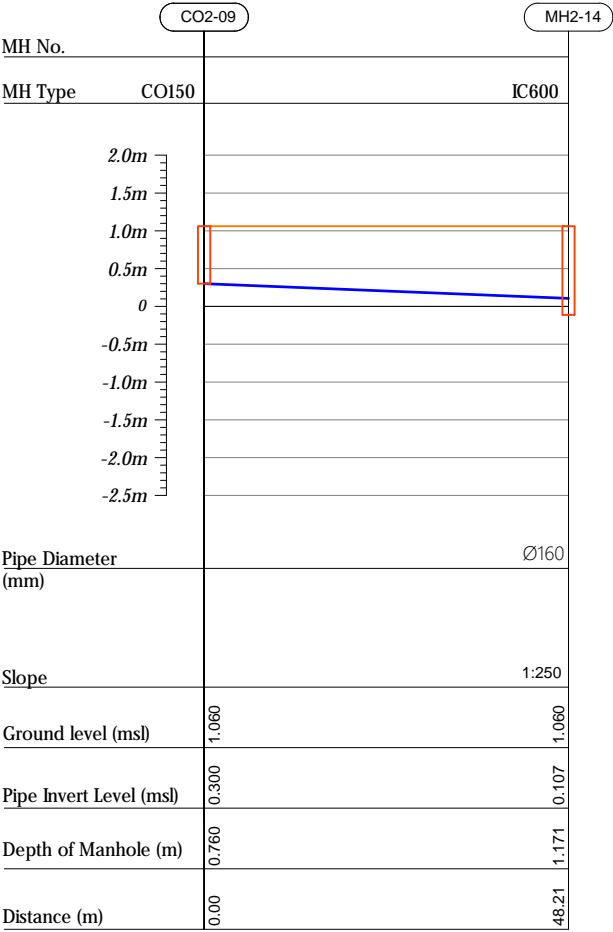
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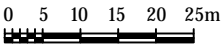
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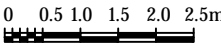
Profile 09



HORIZONTAL SCALE



VERTICAL SCALE



- CO160 — Cleanout Ø160
- IC600 — HDPE Manhole Ø600
- PS — Pump Station

R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6

Sub Title:  
Sewerage System in L.Hithadhoo

Client:  
Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives



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Hussuvehemaa Magu, Male', Maldives



Maldivu Infrastructure Develop

Drawn: A.R.W      Checked: M.S.S

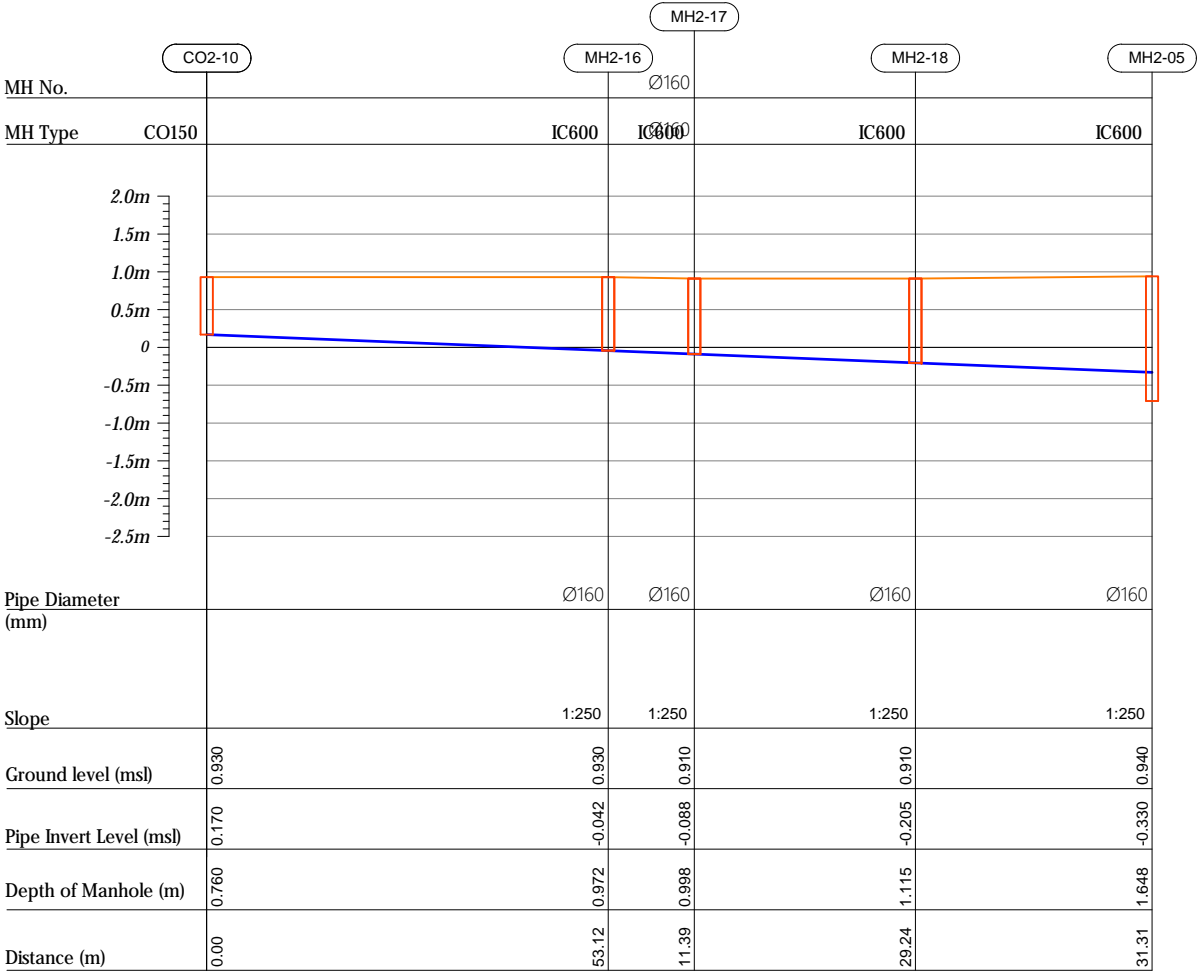
Designed: F.L.A      Approved: L.W

Date: Aug 2020      SCALE (A3): 1:100

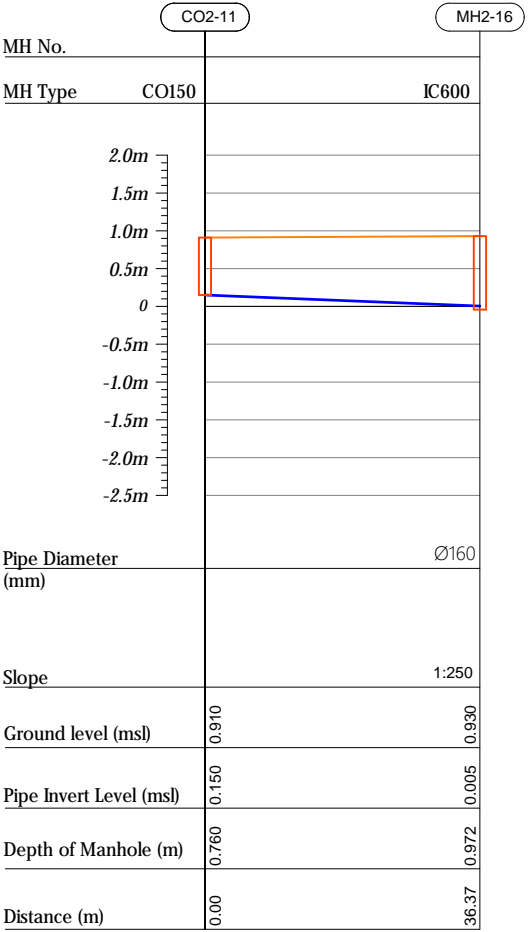
Project No: 01010101

Rev: R-01      Page: PS2-04

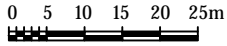
Profile 10



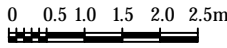
Profile 11



HORIZONTAL SCALE



VERTICAL SCALE



CO160 — Cleanout Ø160  
IC600 — HDPE Manhole Ø600  
PS — Pump Station

R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
*Consultancy Services for Survey, Design and EIA works of Water Supply and Sewerage Facilities in 5 islands, Maldives - Package 6*

Sub Title:  
*Sewerage System in L.Hithadhoo*

Client:  
*Ministry of National Planning, Housing and Infrastructure, Republic of Maldives*

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Husnuheemaa Magu, Male', Maldives

**INFRA**  
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Drawn: A.R.W. Checked: M.S.S.

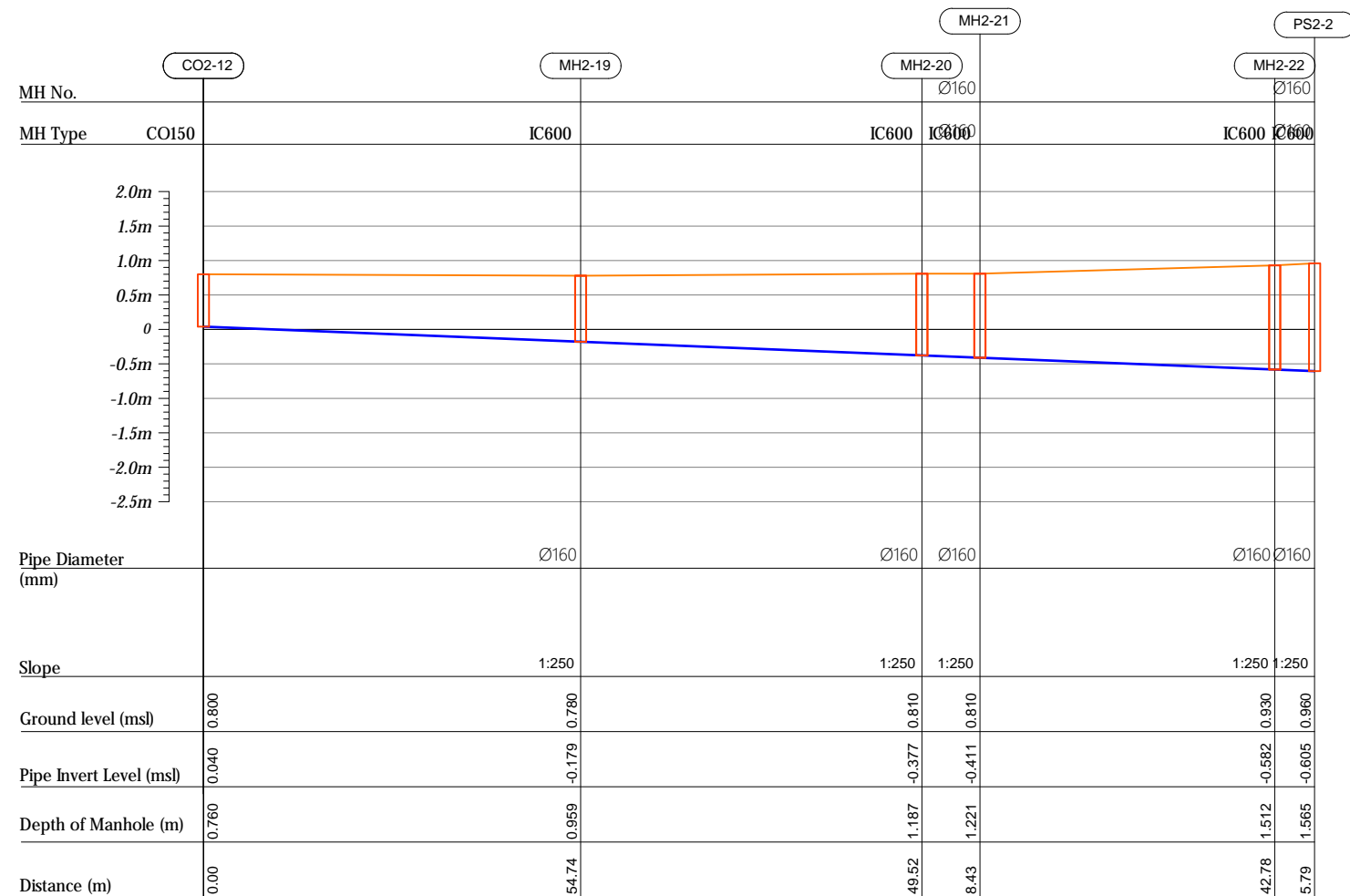
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Date: Aug 2020 SCALE (AS): 1:100

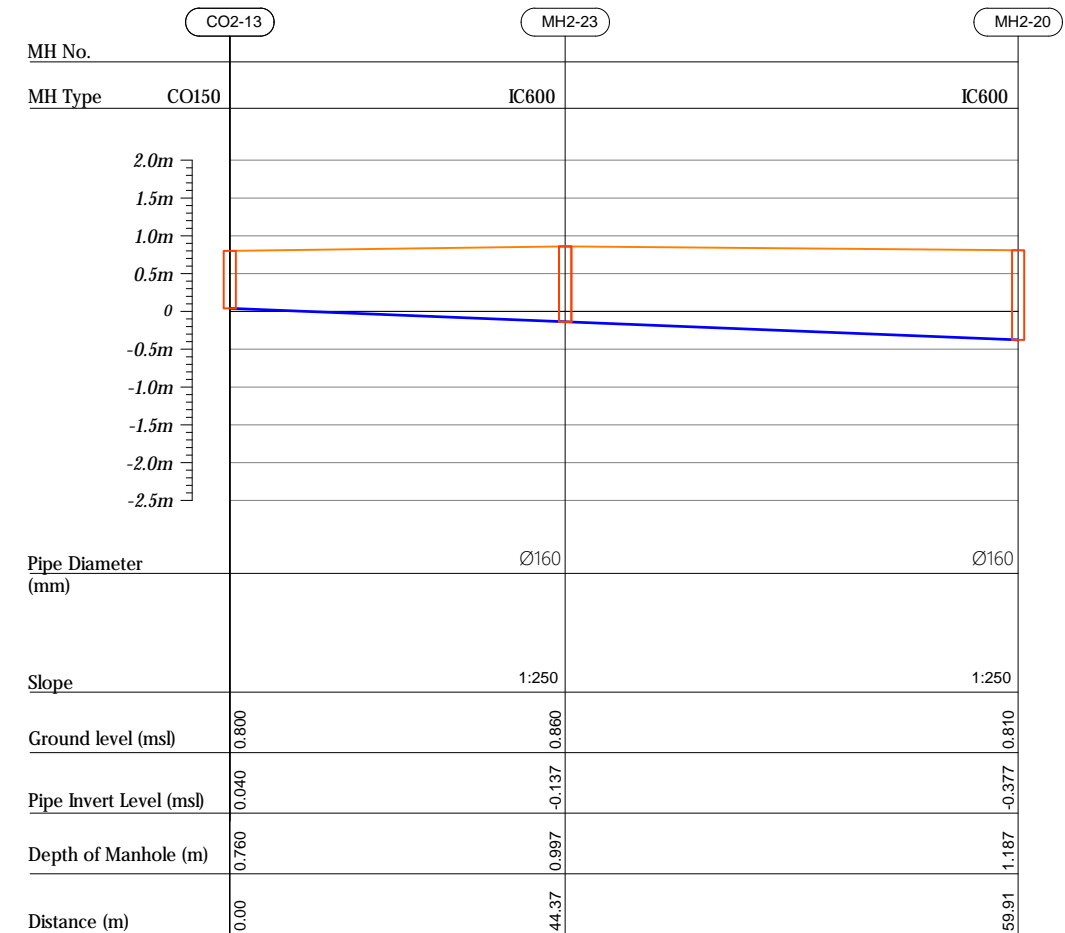
Project No: 01010101

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## Profile 12



## Profile 13



R00	JUNE 2020	STAGE -1	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

**Title:**  
*Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6*

Sub Title:  
*Sewerage System in L.Hithadhoo*

Client:  
*Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives*

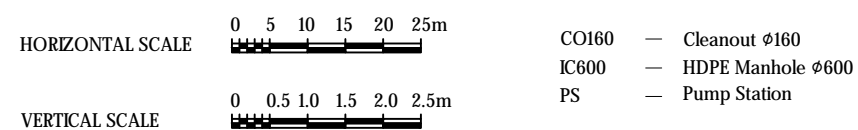
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A: G. Rosary West,  
Husnuheenna Magtu, Male', Maldives

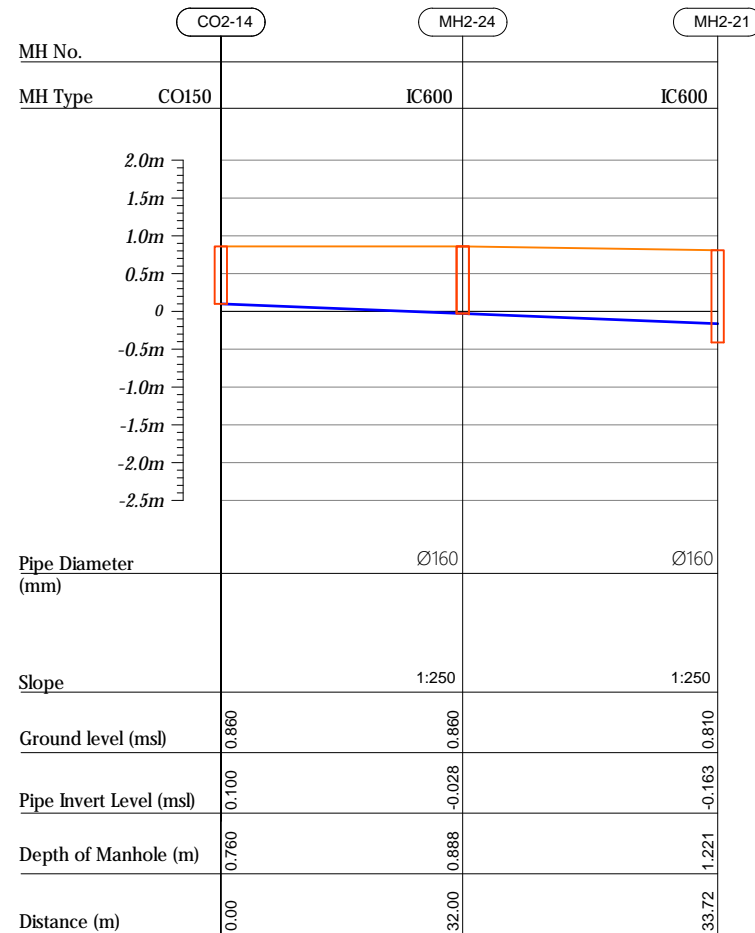
**DBACK INFRA**  
*Making Infrastructure Happen*

Drawn: A.R.W	Checked: M.S.S
Designed: F.L.A	Approved: L.W
Date: Aug 2020	SCALE (A3): 1:100
Project No: 01010101	

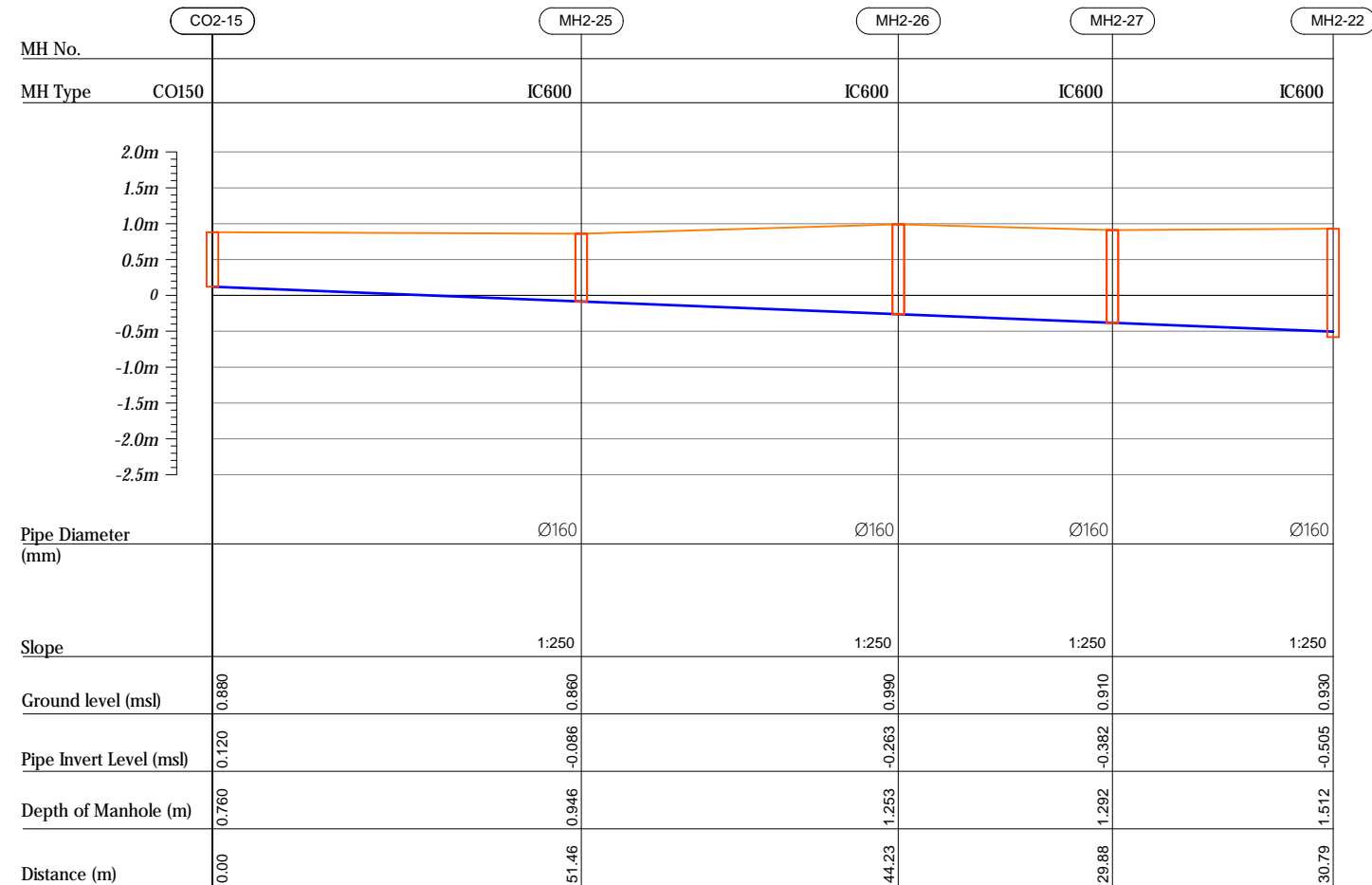
Rev: <i>R-01</i>	Page: <i>PS2-06</i>
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## Profile 14



## Profile 15



R00	JUNE 2020	STAGE -1	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
*Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6*

Sub Title:  
*Sewerage System in L.Hithadhoo*

Client:  
*Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives*



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Husnuheena Magu, Male', Maldives

**FEEDBACK INFRA**  
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Drawn: A.R.W	Checked: M.S.S
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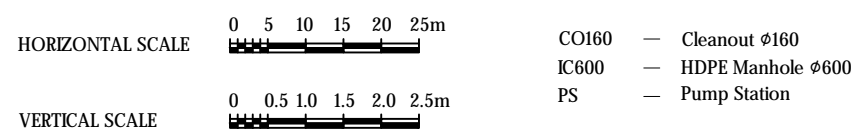
Designed: <u>EJA</u>	Approved: <u>LW</u>
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Date: Aug 2020	SCALE (A3): 1:100
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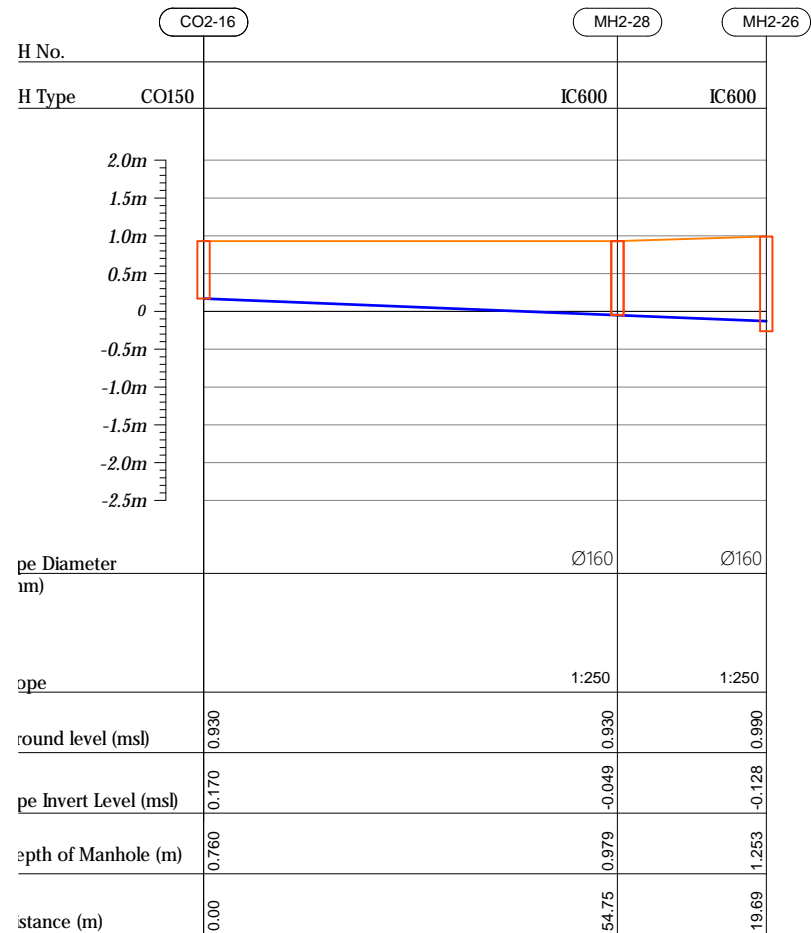
Project No: 01010101

Rev:	Page:
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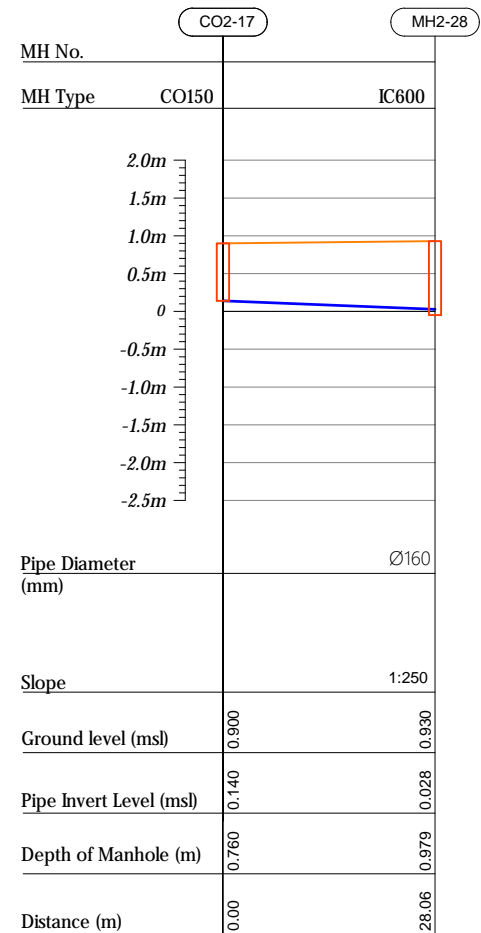
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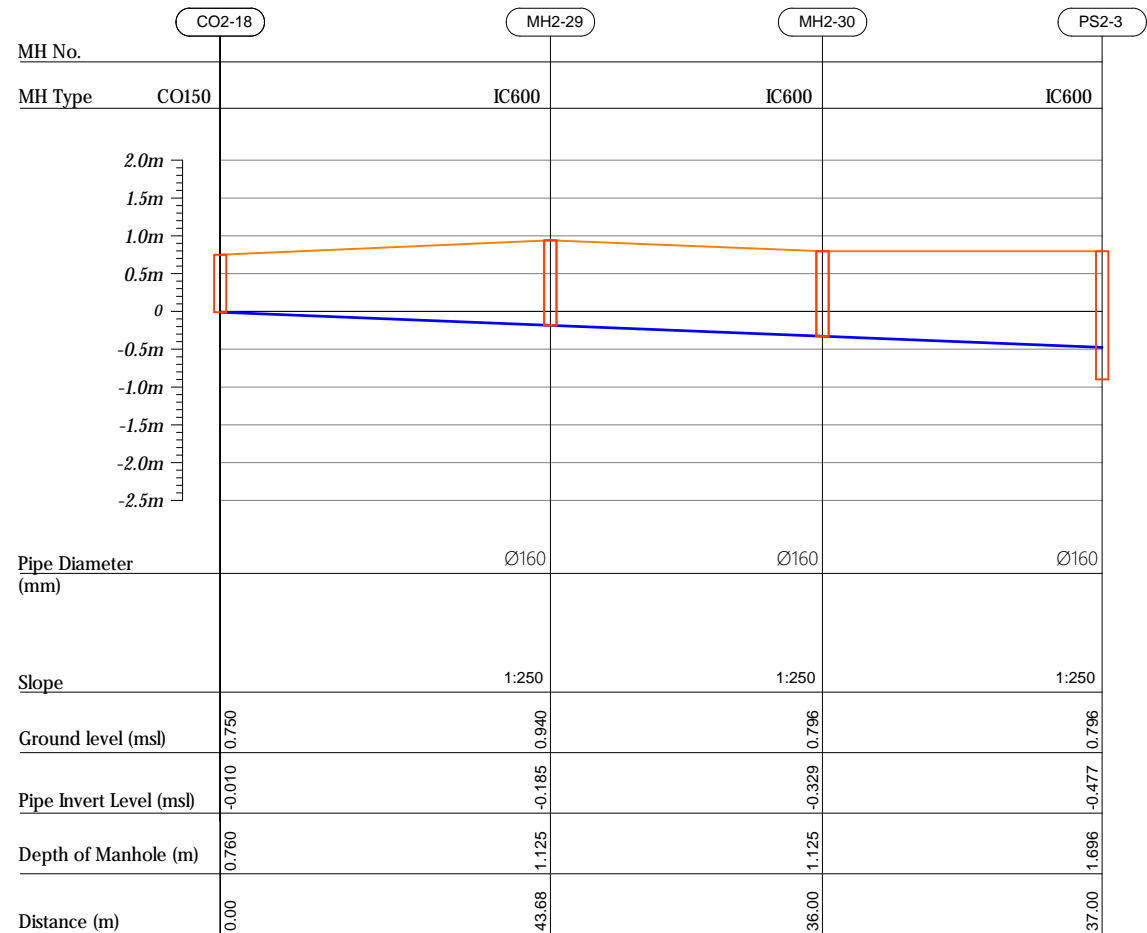
## Profile 16



## Profile 17



## Profile 18



R00	JUNE 2020	STAGE -1	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

**Title:**  
*Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6*

Sub Title:  
*Sewerage System in L.Hithadhoo*

**Client:**  
*Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives*

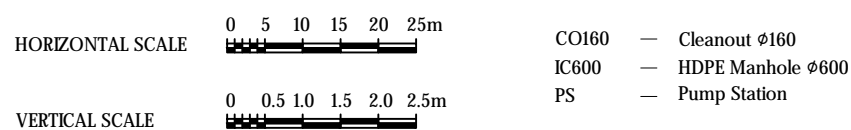
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W: www.epoch.associates  
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Husnuheena Magu, Male', Maldives

**FEEDBACK INFRA**  
*Making Infrastructure Happen*

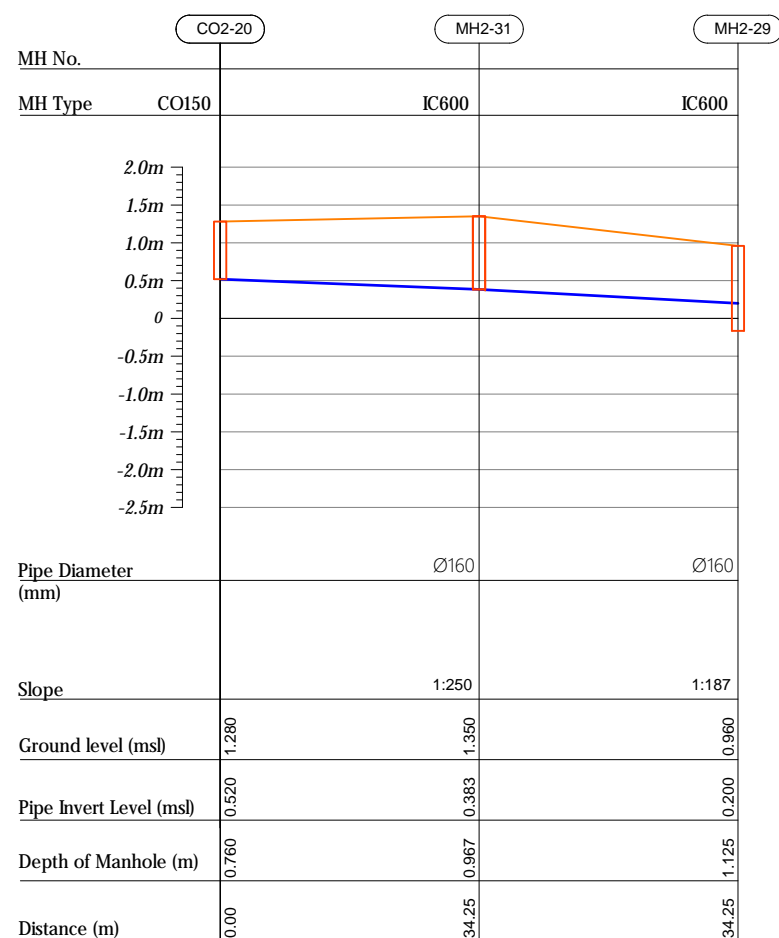
Drawn: A.R.W	Checked: M.S.S
Designed: F.L.A	Approved: L.W
Date: Aug 2020	SCALE (A3): 1:100
Project No: 01010101	

Rev. <i>R-01</i>	Page: <i>PS2-08</i>
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## Profile 20



REV. NO.	Date	Revision Description	Drawn	Chkd	App

Title:  
*Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6*

Sub Title:  
*Sewerage System in L.Hithadhoo*

Client:  
*Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives*



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A: G. Rosary West,  
Husnuheena Magu, Male', Maldives

**FEEDBACK INFRA**  
Making Infrastructure Happen

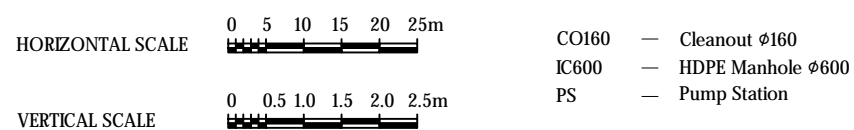
Drawn: A.R.W	Checked: M.S.S
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Designed: EJA	Approved: LW
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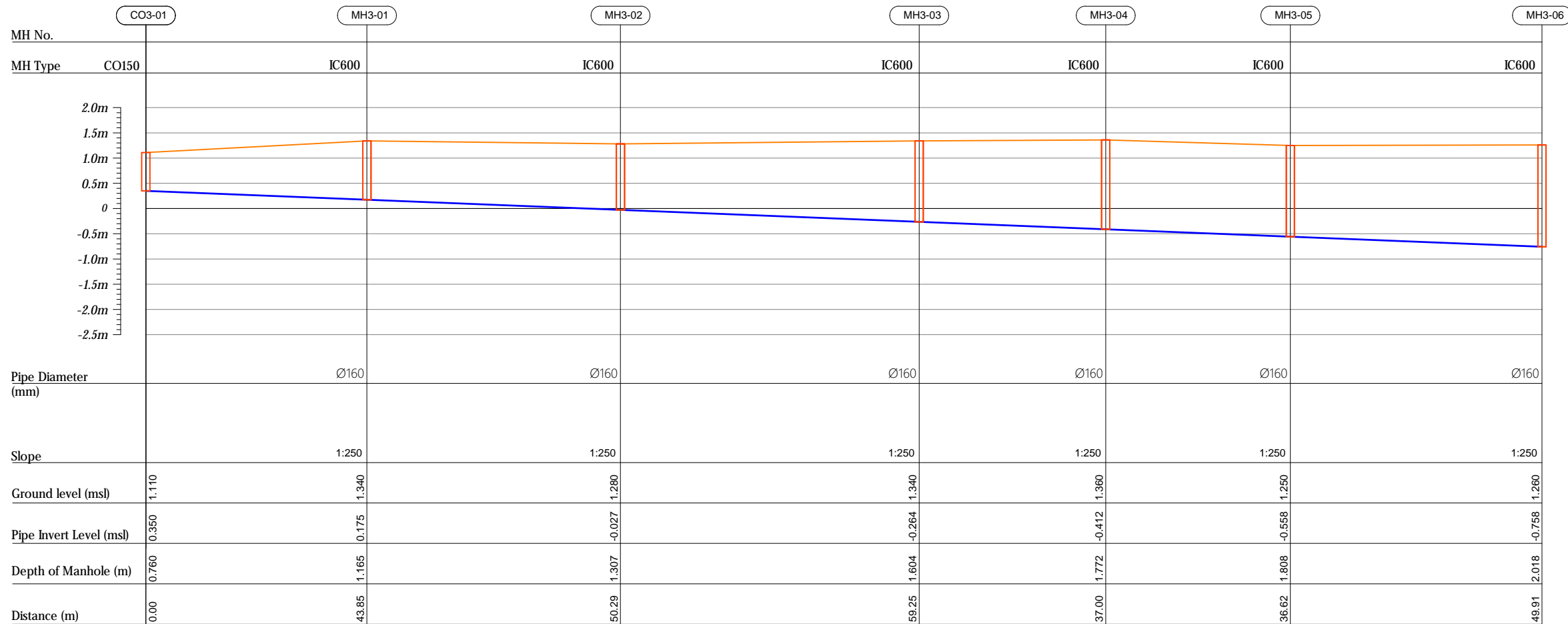
Date: Aug 2020	SCALE (A3): 1:100
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Project No:	01010101
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Rev:	Page:
R-01	PS2-1



## Profile 01



R00	JUNE 2020	STAGE -1	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
*Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6*

Sub Title:  
*Sewerage System in L.Hithadhoo*

Client:  
Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives

**EPOCH ASSOCIATES**

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W: www.epoch.associates  
A: G. Rosary West,  
Husnuheena Magu, Male', Maldives

**EBACK INFRA**  
*Making Infrastructure Happen*

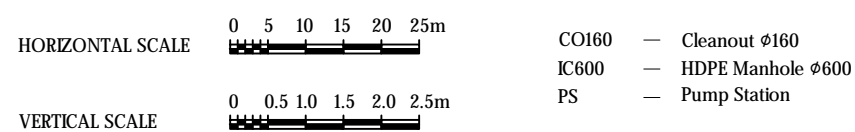
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Designed: F.LA	Approved: LW
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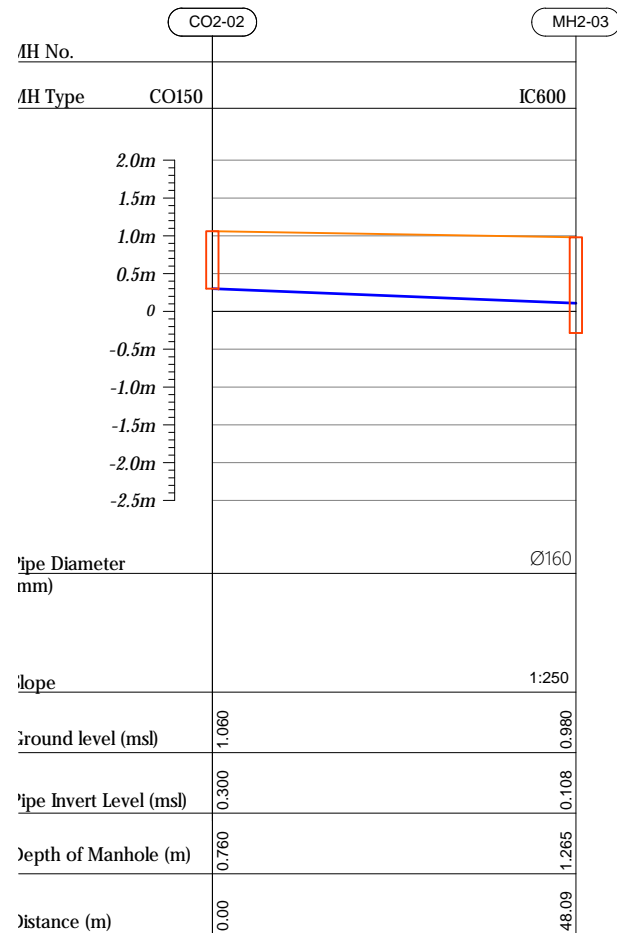
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Project No: 01010101

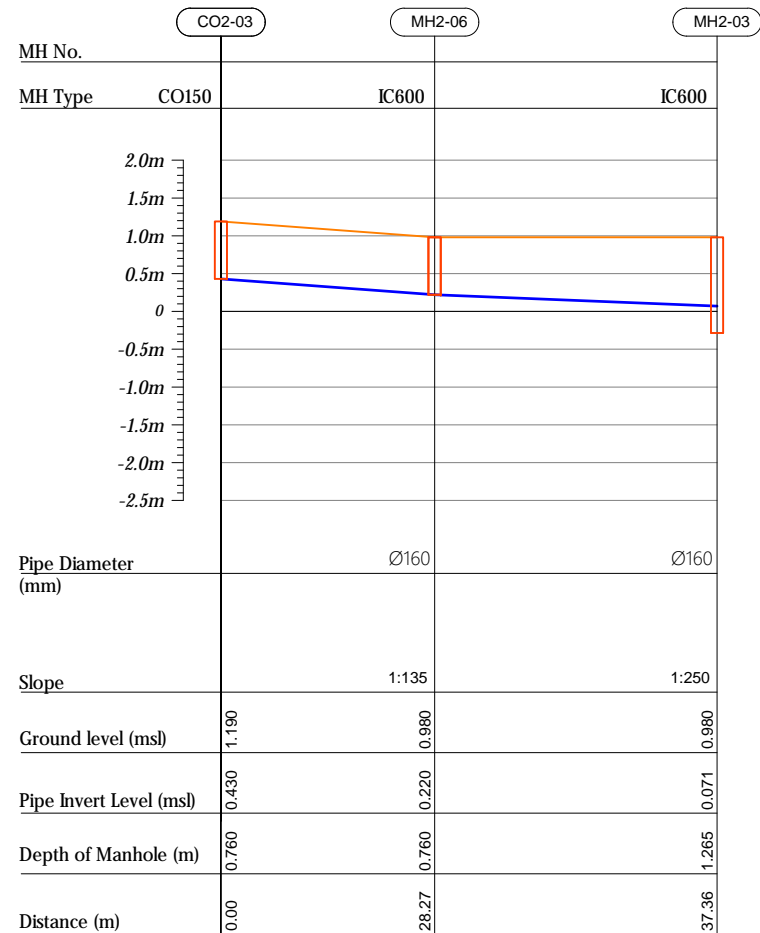
Rev: <i>R-01</i>	Page: <i>PS3-01</i>
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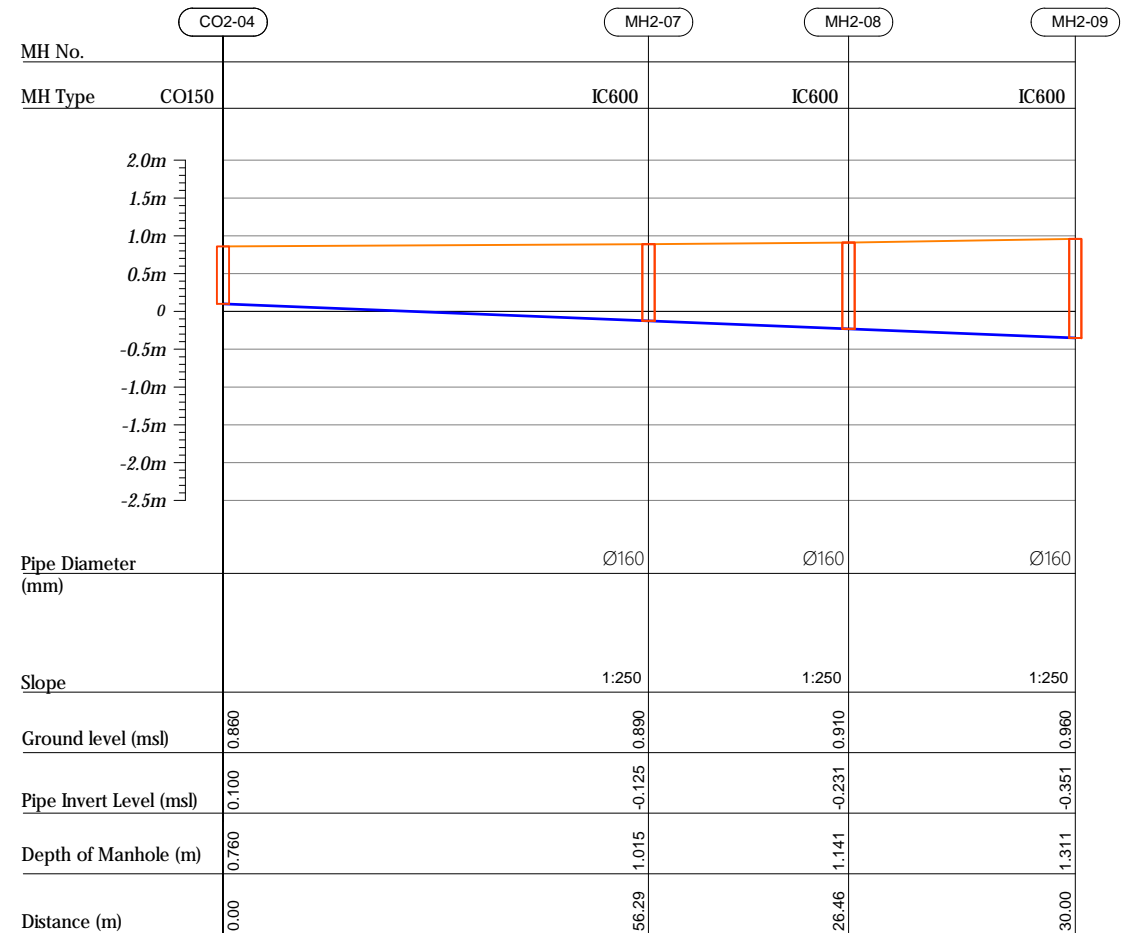
## Profile 02



## Profile 03



## Profile 04



R00	JUNE 2020	STAGE -1	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

**Title:**  
*Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6*

Sub Title:  
*Sewerage System in L.Hithadhoo*

Client:  
*Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives*

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Husnuheena Magu, Male', Maldives

**FEEDBACK INFRA**  
*Making Infrastructure Happen*

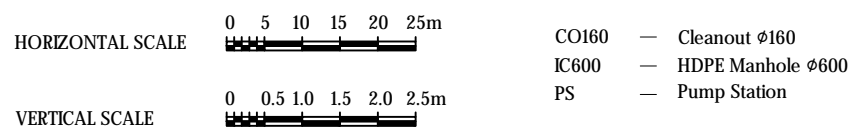
Drawn: A.R.W	Checked: M.S.S
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Designed: F.I.A	Approved: LW
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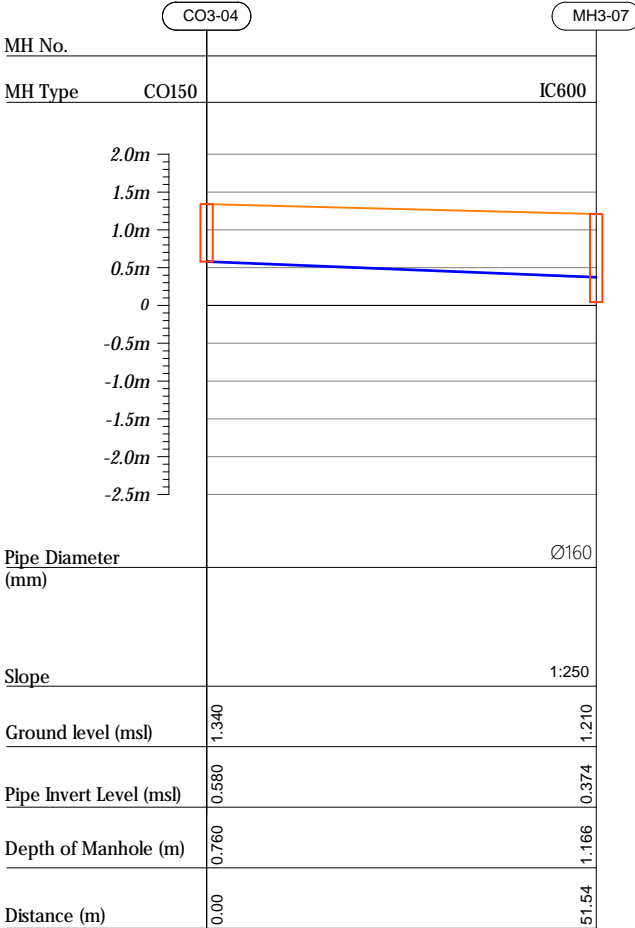
Date: Aug 2020	SCALE (A3): 1:100
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Project No: 01010101

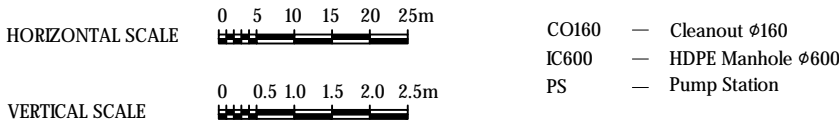
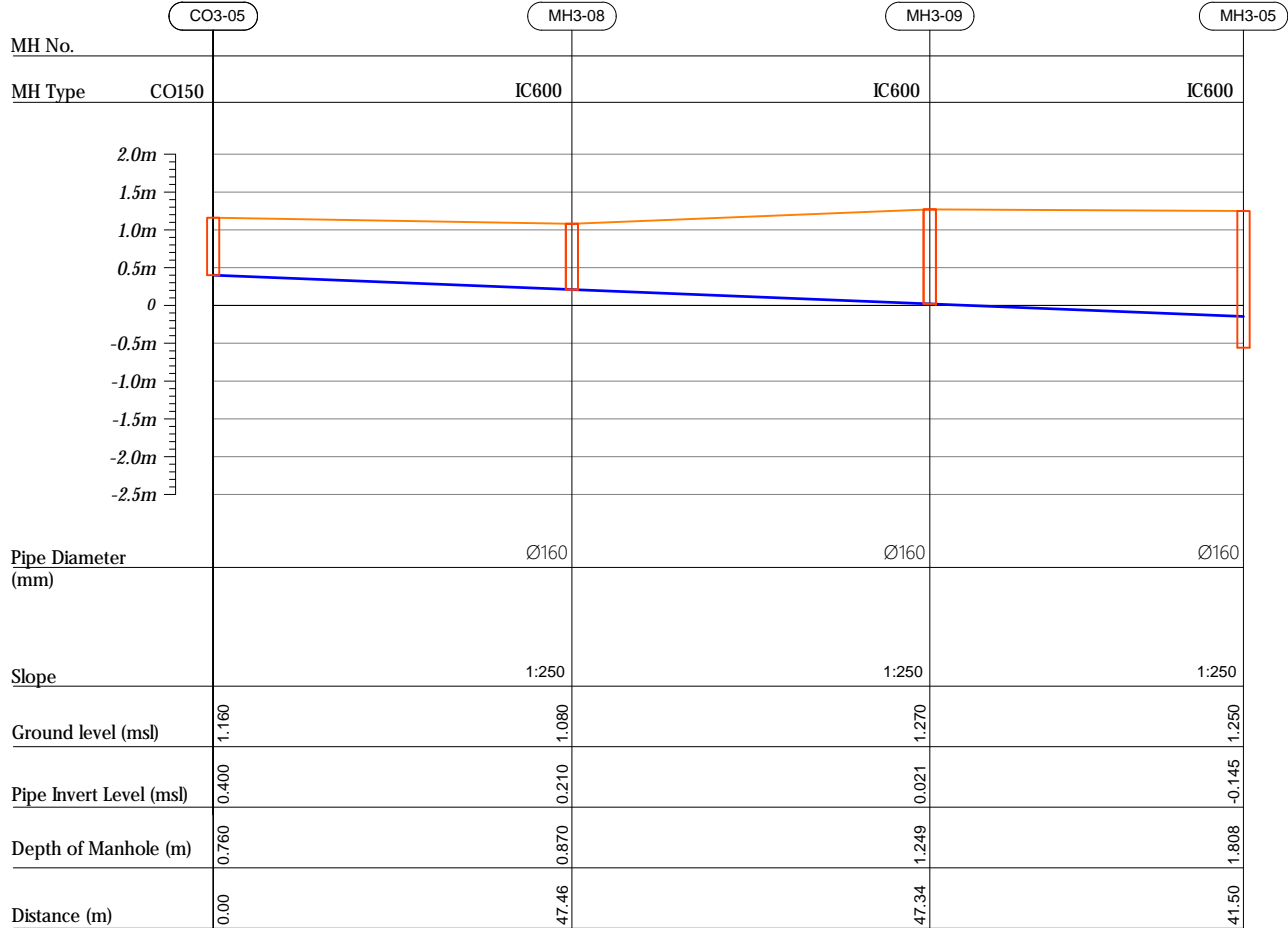
Rev:	Page:
R-01	PS3-02



## Profile 04



## Profile 05



R00	JUNE 2020	STAGE -1	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

**Title:**  
*Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6*

Sub Title:  
*Sewerage System in L.Hithadhoo*

**Client:**  
*Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives*



Drawn: A.R.W	Checked: M.S.S
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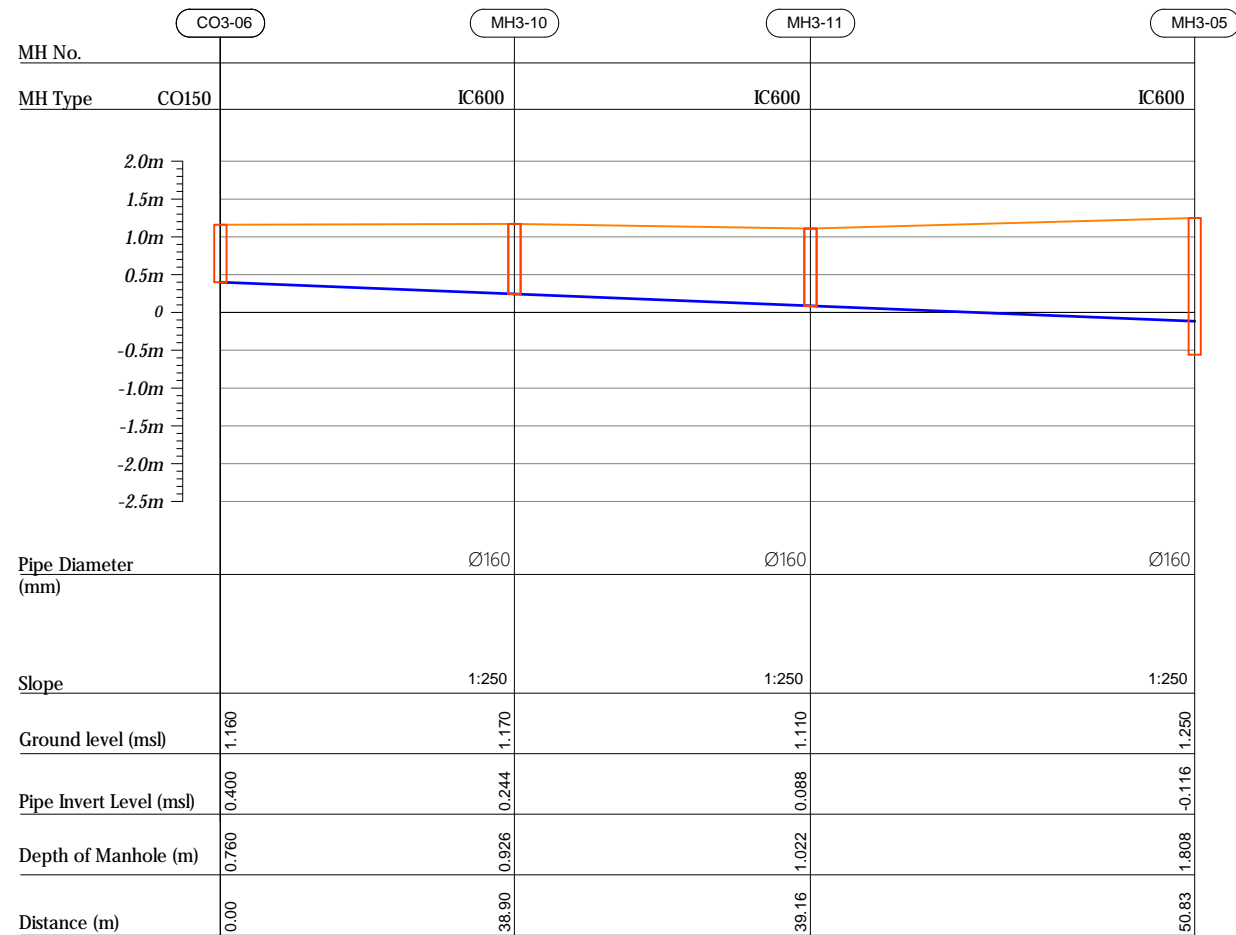
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Date: Aug 2020	SCALE (A3): 1:100
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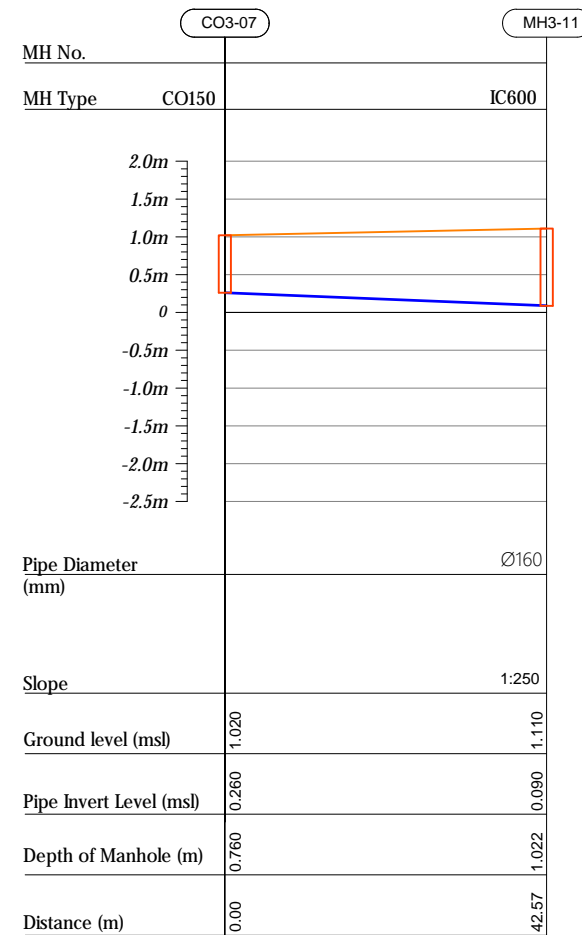
Project No: 01010101

Rev: <i>R-01</i>	Page: <i>PS3-03</i>
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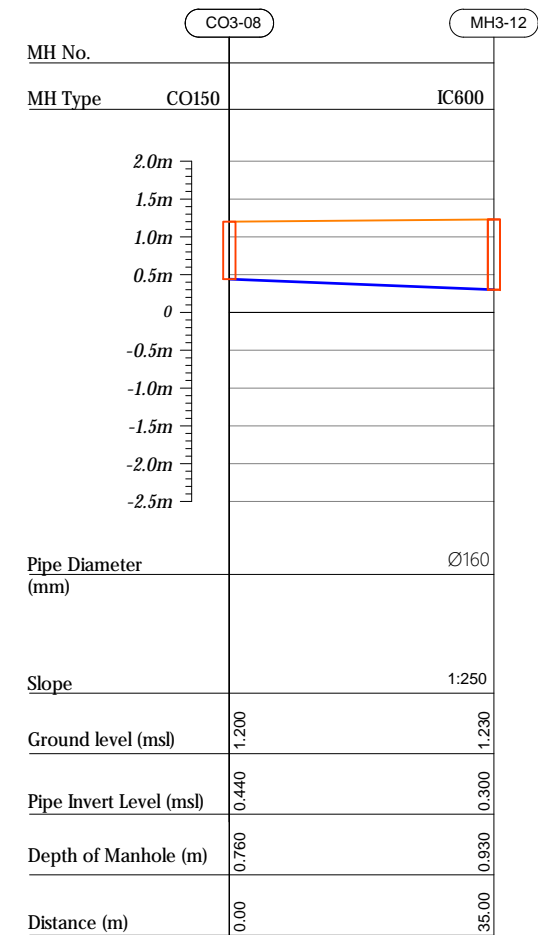
## Profile 06



## Profile 07



## Profile 08



R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

**Title:**  
*Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6*

Sub Title:  
*Sewerage System in L.Hithadhoo*

**Client:**  
*Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives*



Drawn: A.R.W	Checked: M.S.S
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Designed: F.I.A	Approved: LW
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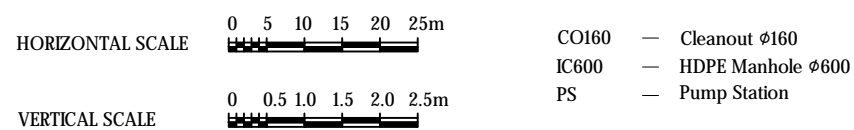
Date: Aug 2020	SCALE (A3): 1:100
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Project No: 01010101

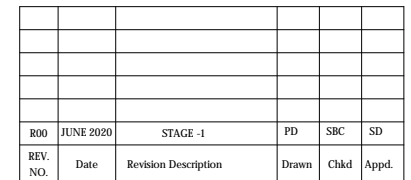
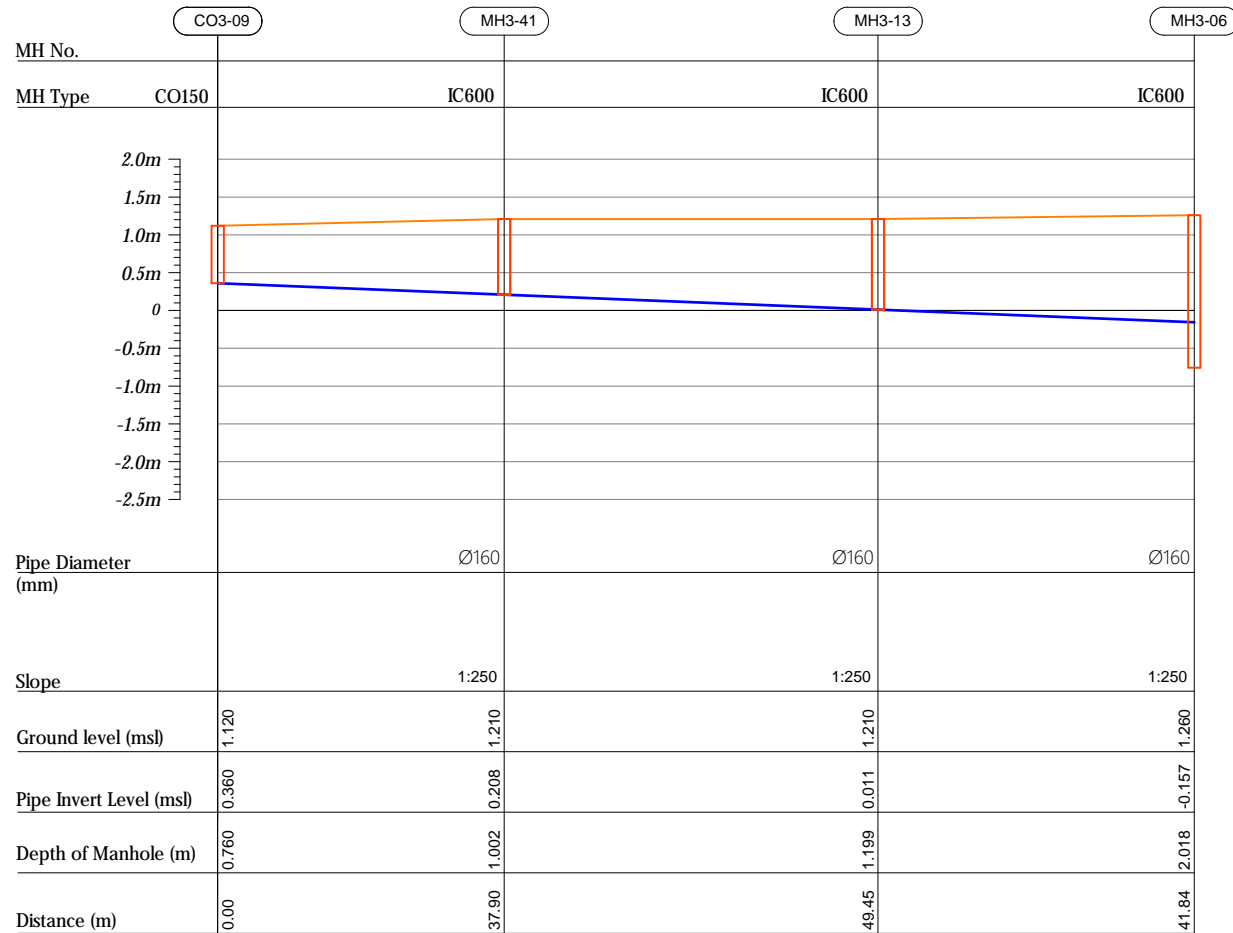
Rev:	Page:
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REV:	FIG.:
R-01	PS3-04

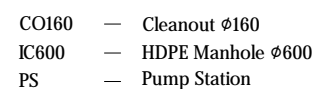
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## Profile 09

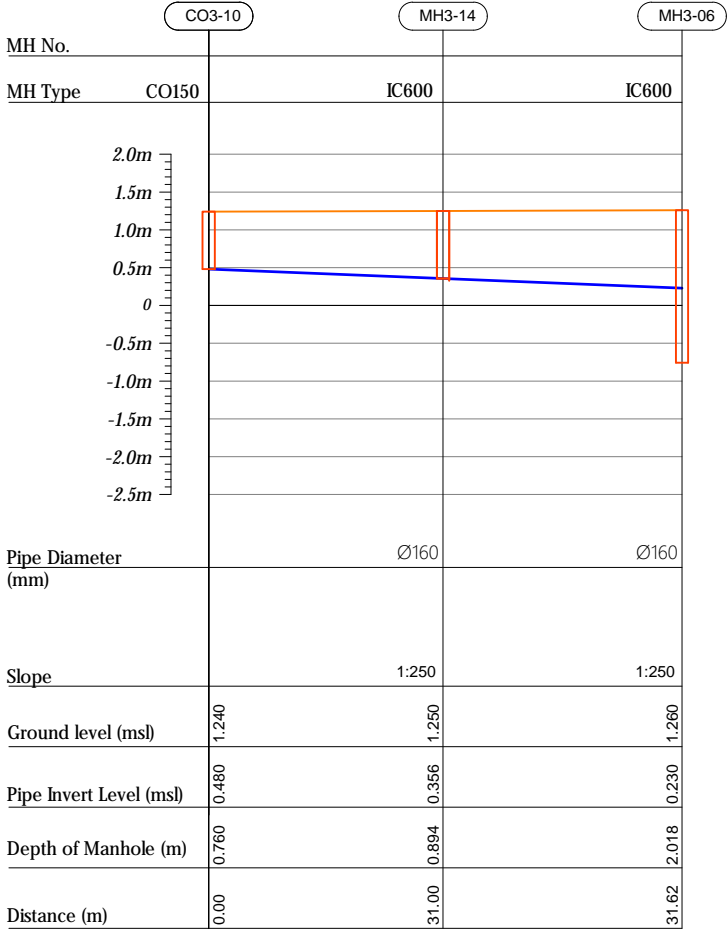


REV: *R-01*      Page: *PS3-05*

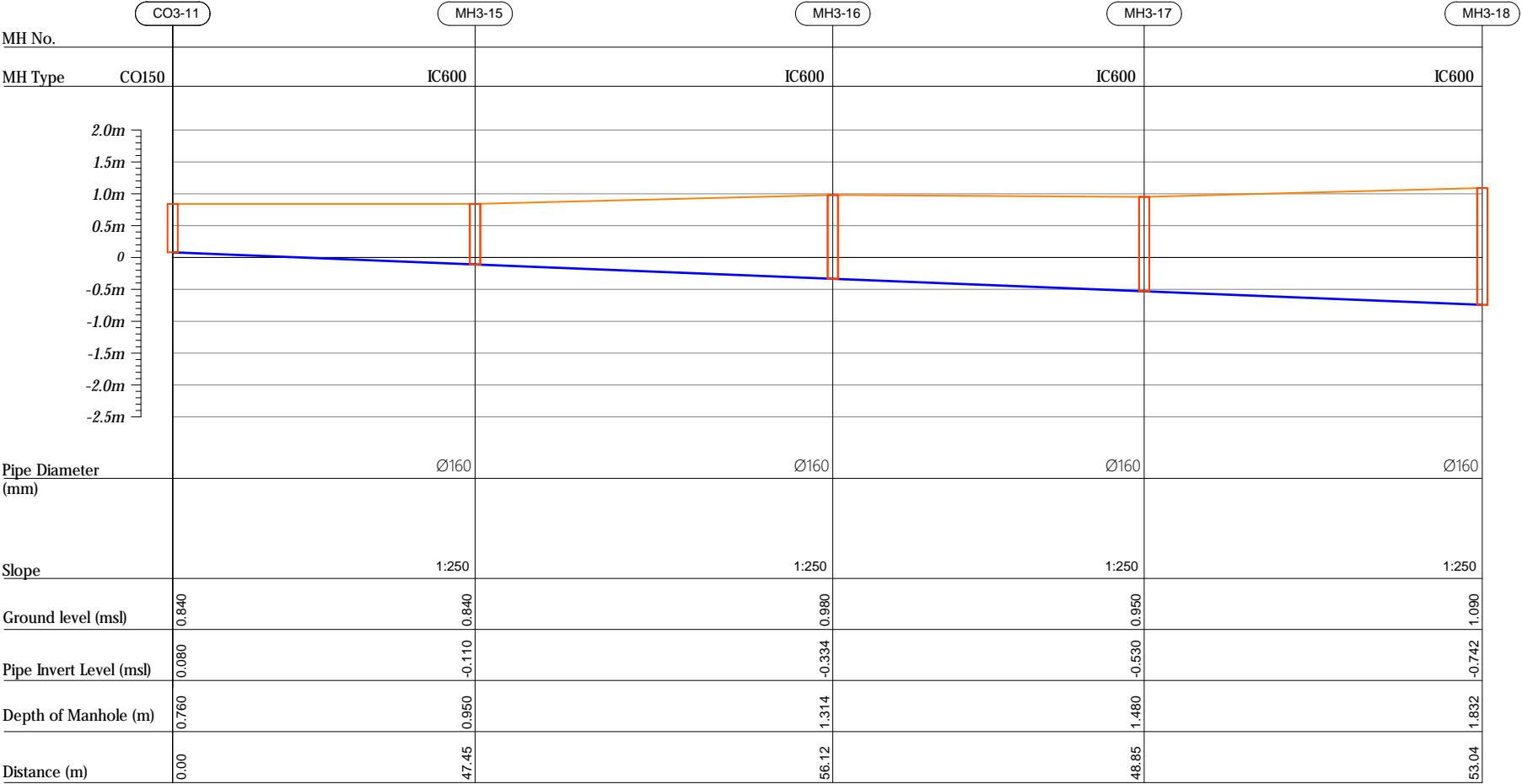




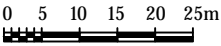
Profile 10



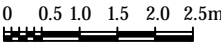
Profile 11



HORIZONTAL SCALE



VERTICAL SCALE



- CO160 — Cleanout Ø160
- IC600 — HDPE Manhole Ø600
- PS — Pump Station

R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6

Sub Title:  
Sewerage System in L.Hithadhoo

Client:  
Ministry of National Planning, Housing and  
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Hussuvehemaa Magu, Male', Maldives

DBAC INFRA  
Maldivu Infrastructure Develop

Drawn: A.R.W Checked: M.S.S

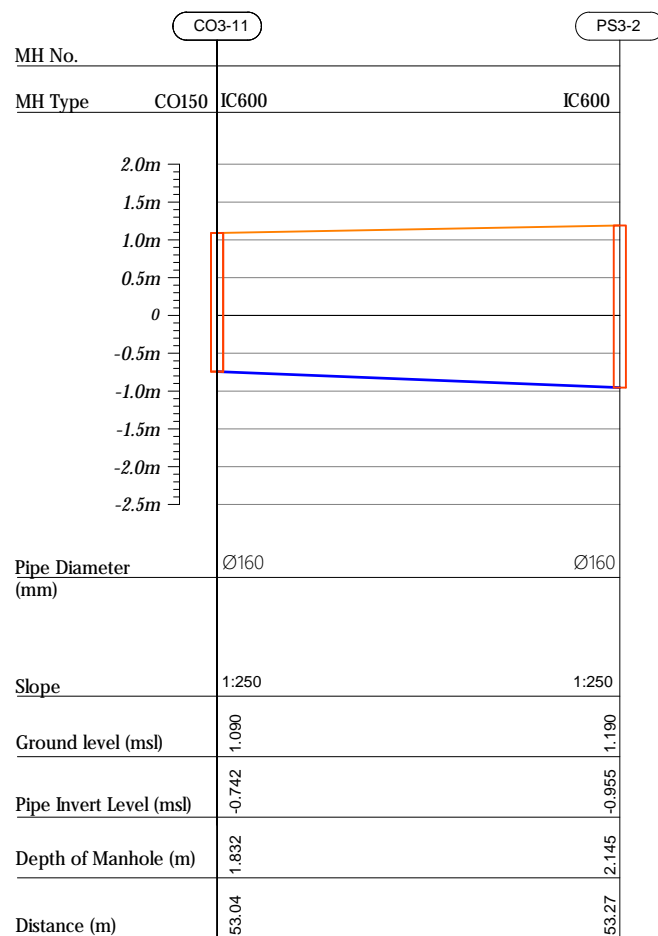
Designed: F.L.A Approved: L.W

Date: Aug 2020 SCALE (A3): 1:100

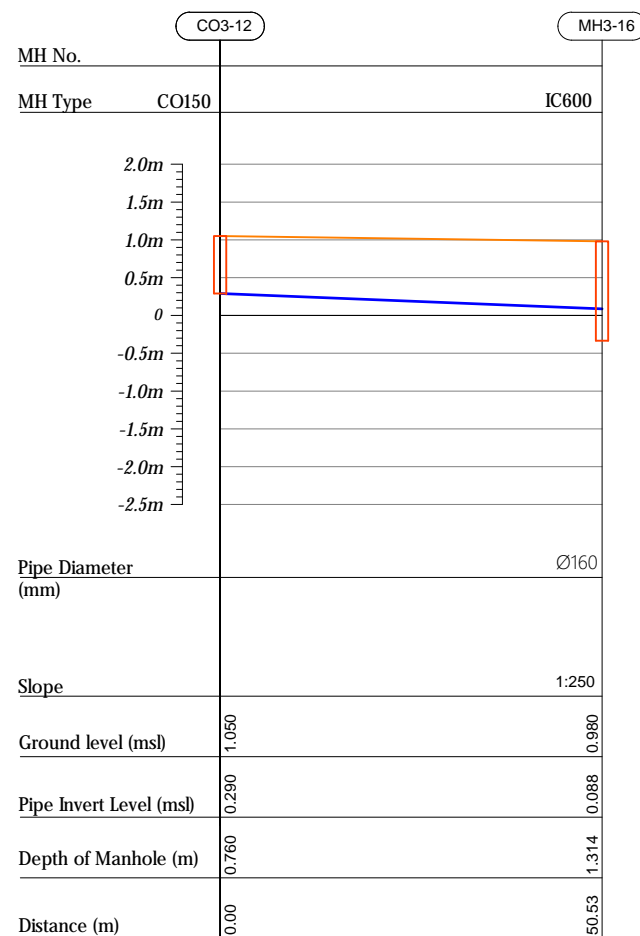
Project No: 01010101

Rev: R-01 Page: PS3-06

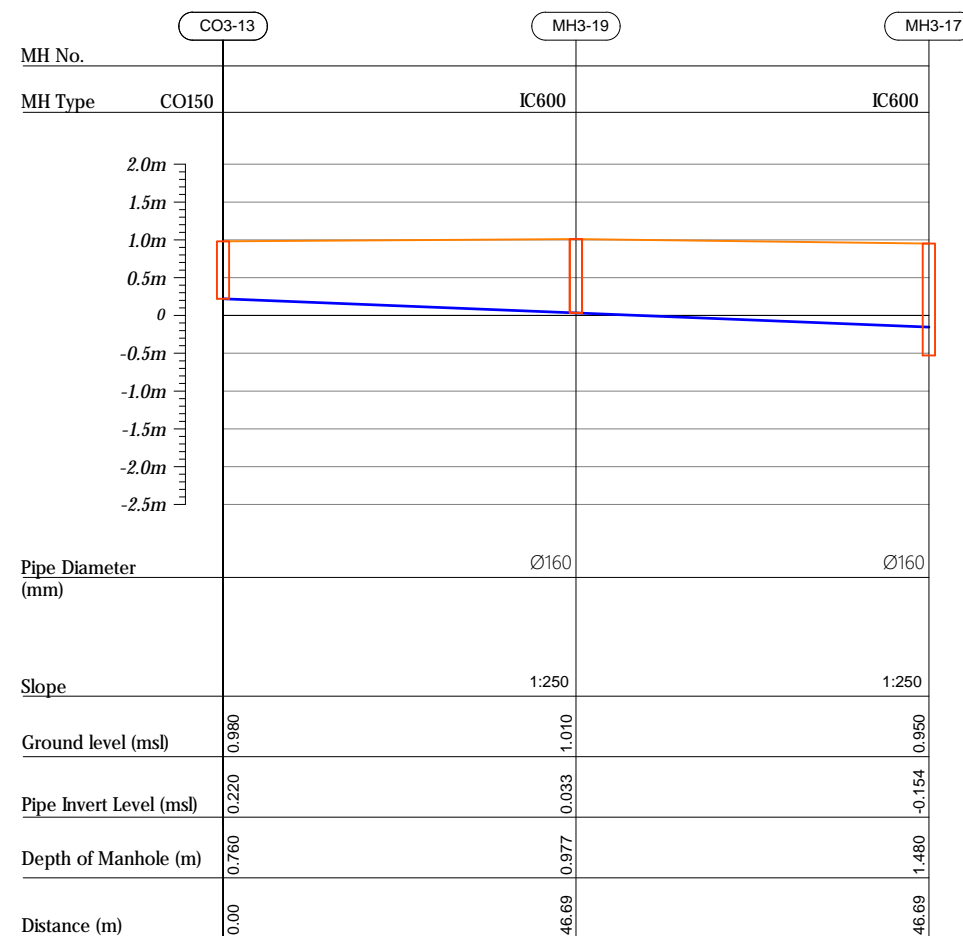
## Profile 11



## Profile 12



## Profile 13



000	JUNE 2020	STAGE -1	PD	SEC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	App

**Title:**  
*Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6*

Sub Title:  
*Sewerage System in L.Hithadhoo*

Client:  
Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives



T: +960 333 3528  
E: info@epoch.associates  
W: www.epoch.associates  
A: G. Rosary West,  
Husnuheenaa Magu, Male', Maldives



Drawn: A.R.W	Checked: M.S.S
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Designed: F.L.A	Approved: L.W
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Date: Aug 2020	SCALE (A3): 1:100
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Project No:	01010101
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Rev: <i>R-01</i>	Page: <i>PS3-</i>
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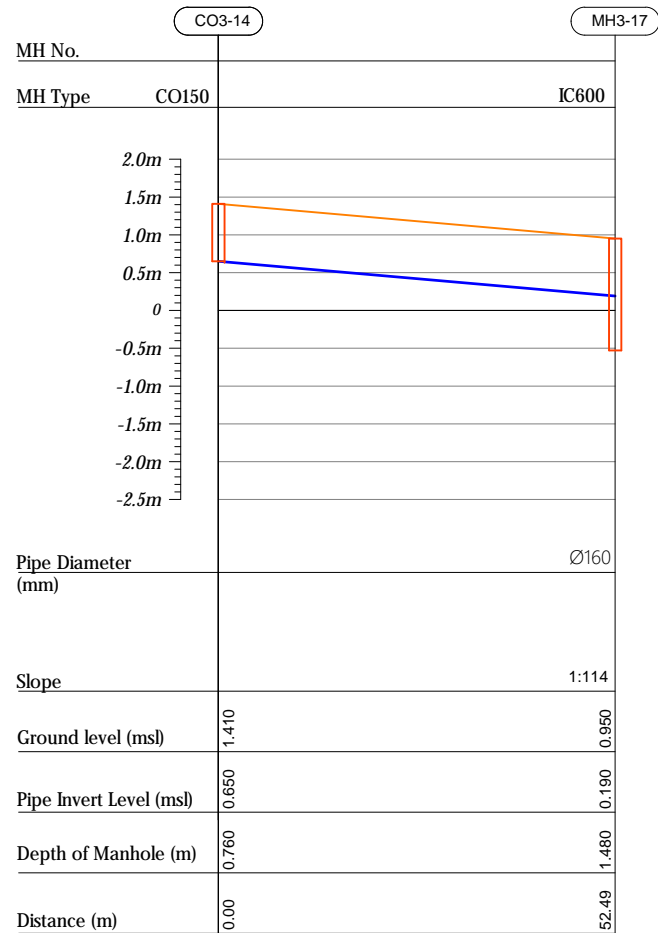
HORIZONTAL SCALE 

VERTICAL SCALE

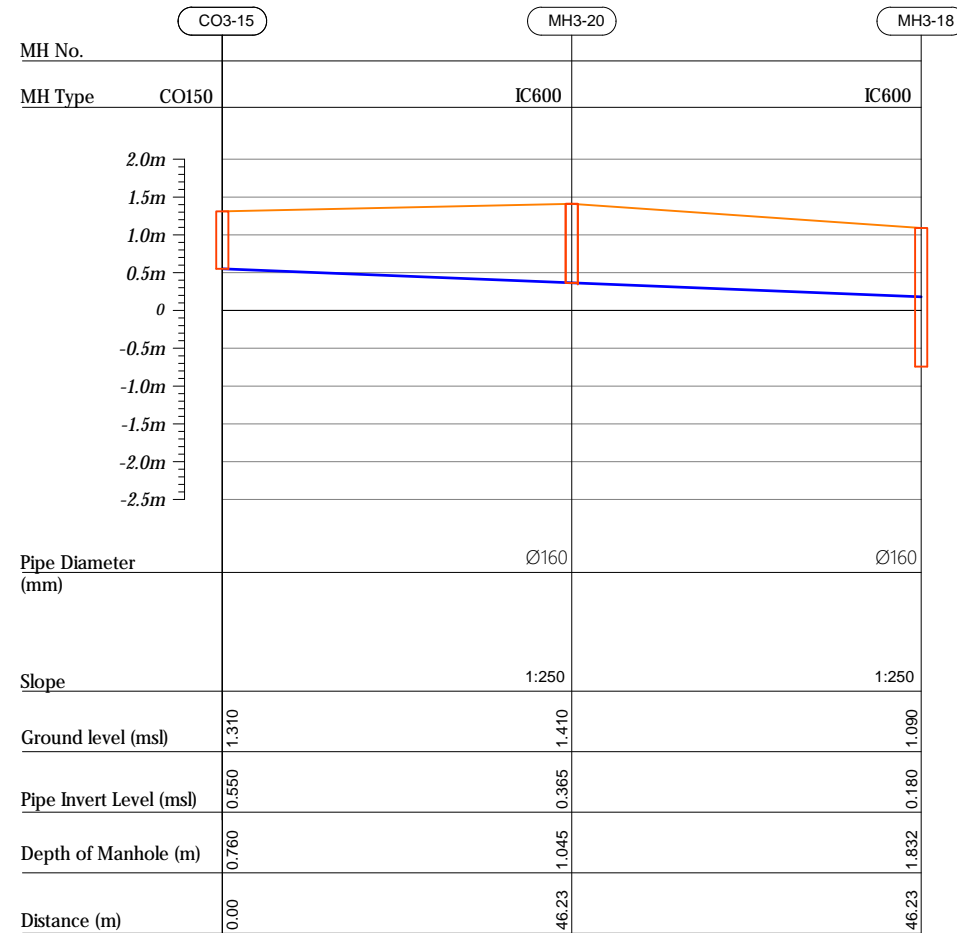
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CO160	—	Cleanout $\phi 160$
IC600	—	HDPE Manhole $\phi 600$
PS	—	Pump Station

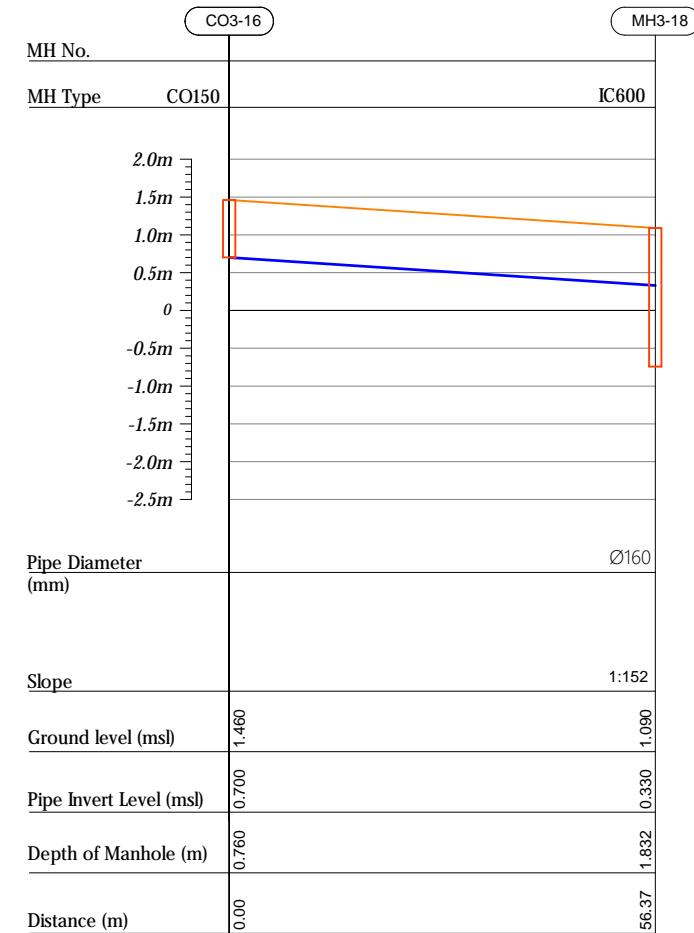
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## Profile 15



## Profile 16



R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

**Title:**  
*Consultancy Services for Survey,  
Design and EIA works of Water  
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5 islands, Maldives - Package 6*

Sub Title:  
*Sewerage System in L.Hithadhoo*

**Client:**  
*Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives*

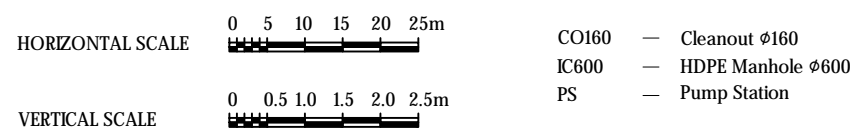
**EPOCH ASSOCIATES**

T: +960 333 3528  
E: info@epoch.associates  
W: www.epoch.associates  
A: G. Rosary West,  
Husnuheena Magu, Male', Maldives

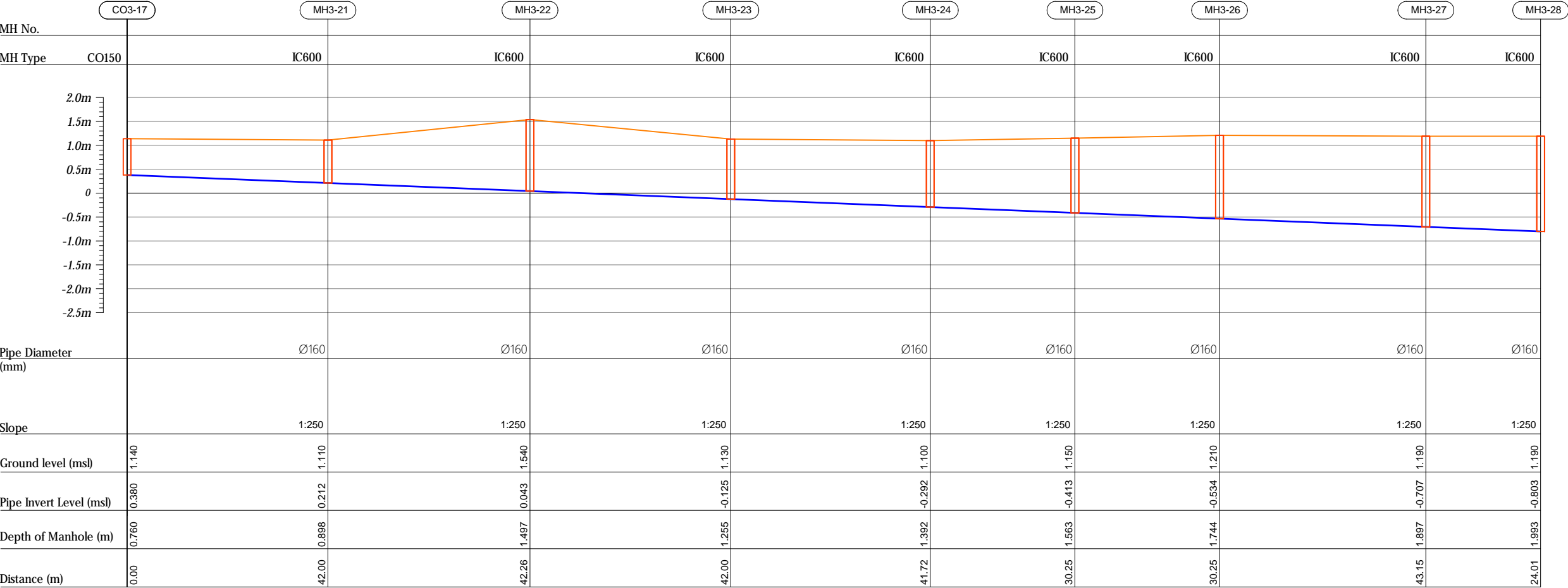
**FEEDBACK INFRA**  
*Making Infrastructure Happen*

Drawn: A.R.W	Checked: M.S.S
Designed: F.L.A	Approved: L.W
Date: Aug 2020	SCALE (A3): 1:100
Project No: 01010101	

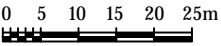
Rev. <i>R-01</i>	Page: <i>PS3-08</i>
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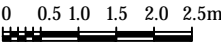
Profile 17



HORIZONTAL SCALE



VERTICAL SCALE



- CO160 — Cleanout Ø160
- IC600 — HDPE Manhole Ø600
- PS — Pump Station

R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6

Sub Title:  
Sewerage System in L.Hithadhoo

Client:  
Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives

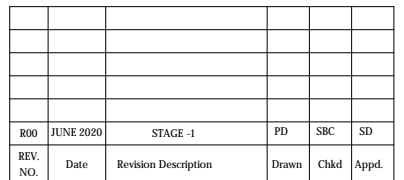
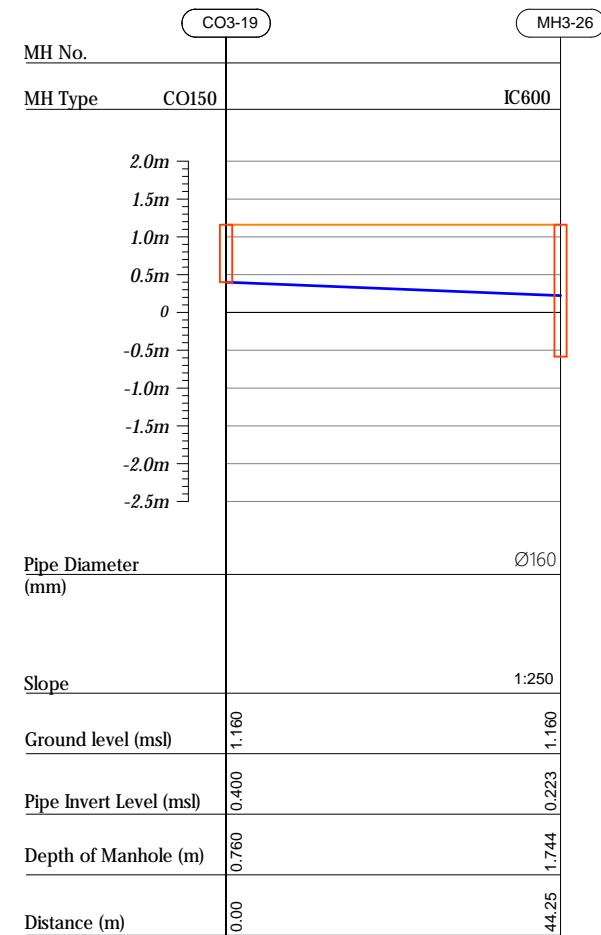


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W: www.epoch.associates  
A: G. Rosary West,  
Hussuvehemaa Magu, Male', Maldives

DBAC INFRA  
Maldivu Infrastructure Happa

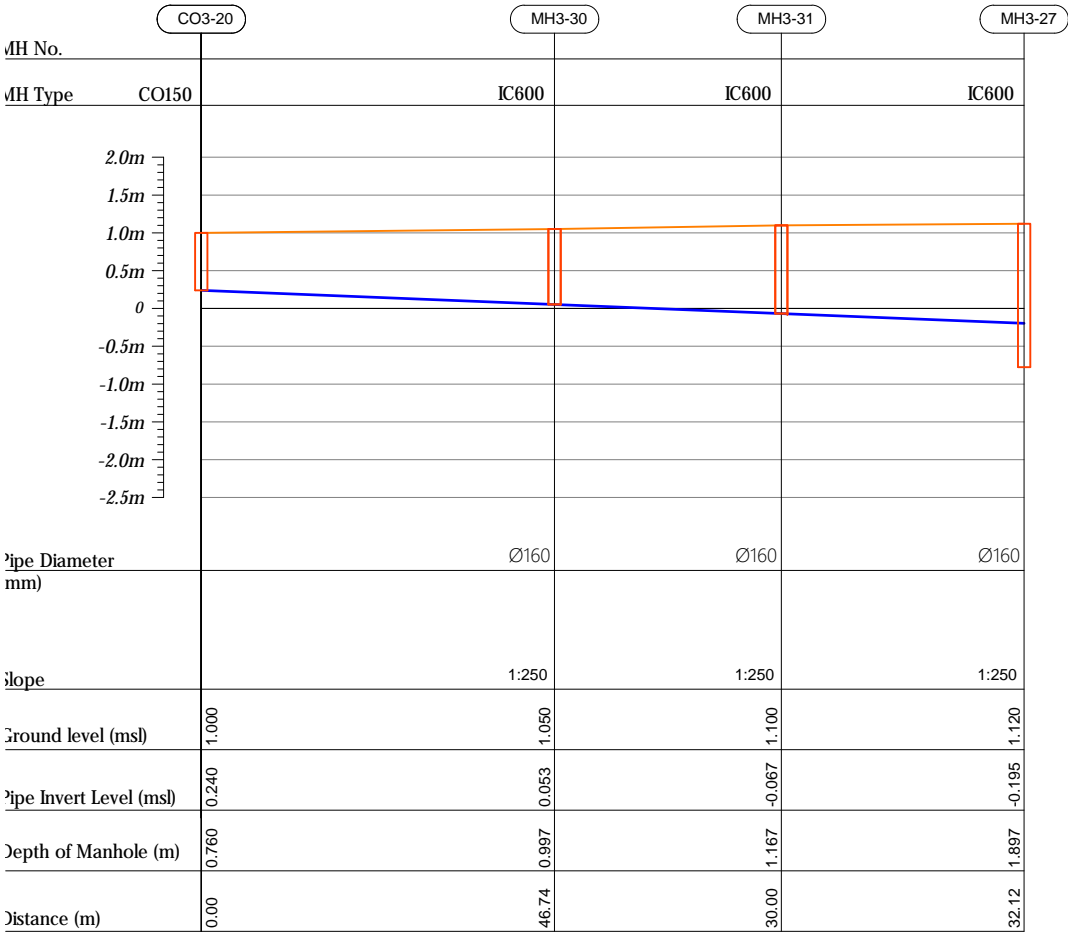
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Date: Aug 2020	SCALE (A3): 1:100
Project No:	01010101

## Profile 19

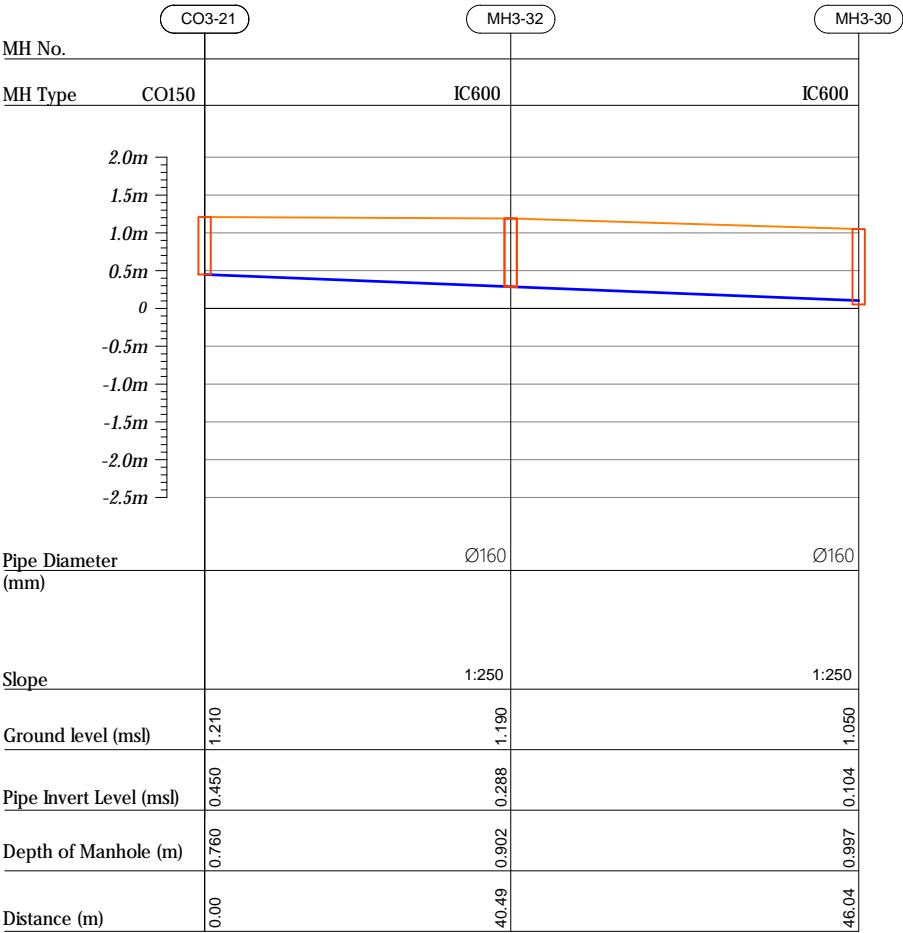


Project No: 01010101	
Rev: R-01	Page: PS3-10

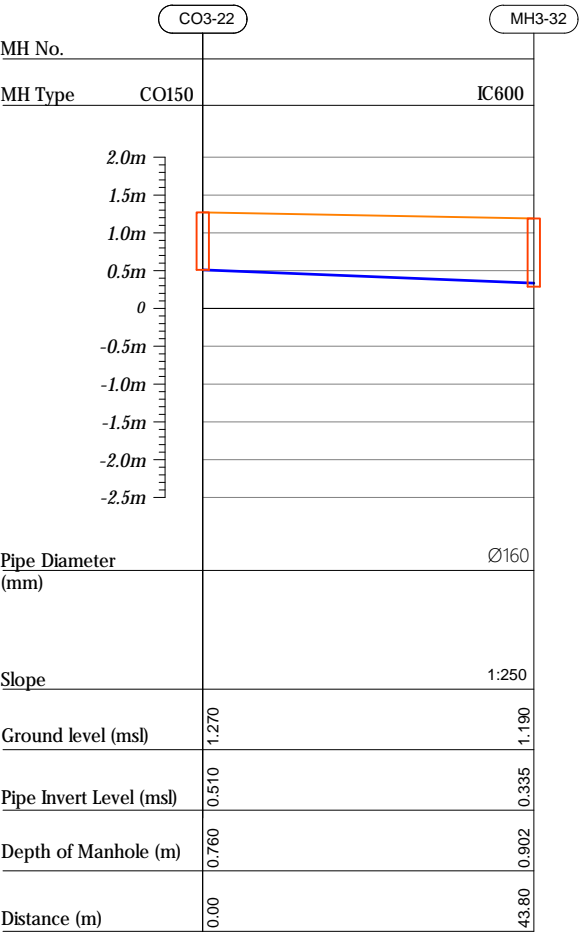
Profile 20



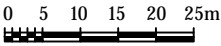
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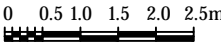
Profile 22



HORIZONTAL SCALE



VERTICAL SCALE



- CO160 — Cleanout Ø160
- IC600 — HDPE Manhole Ø600
- PS — Pump Station

R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6

Sub Title:  
Sewerage System in L.Hithadhoo

Client:  
Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives



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A: G. Rosary West,  
Hussuvehemaa Magu, Male', Maldives



Drawn: A.R.W

Checked: M.S.S

Designed: F.L.A

Approved: L.W

Date: Aug 2020

SCALE (A3): 1:100

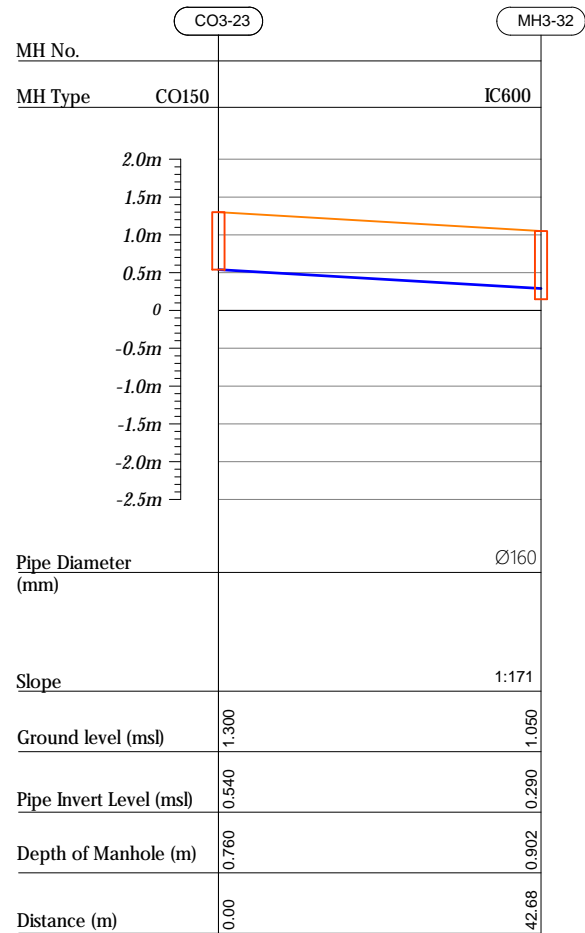
Project No: 01010101

Rev: R-01

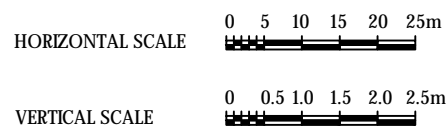
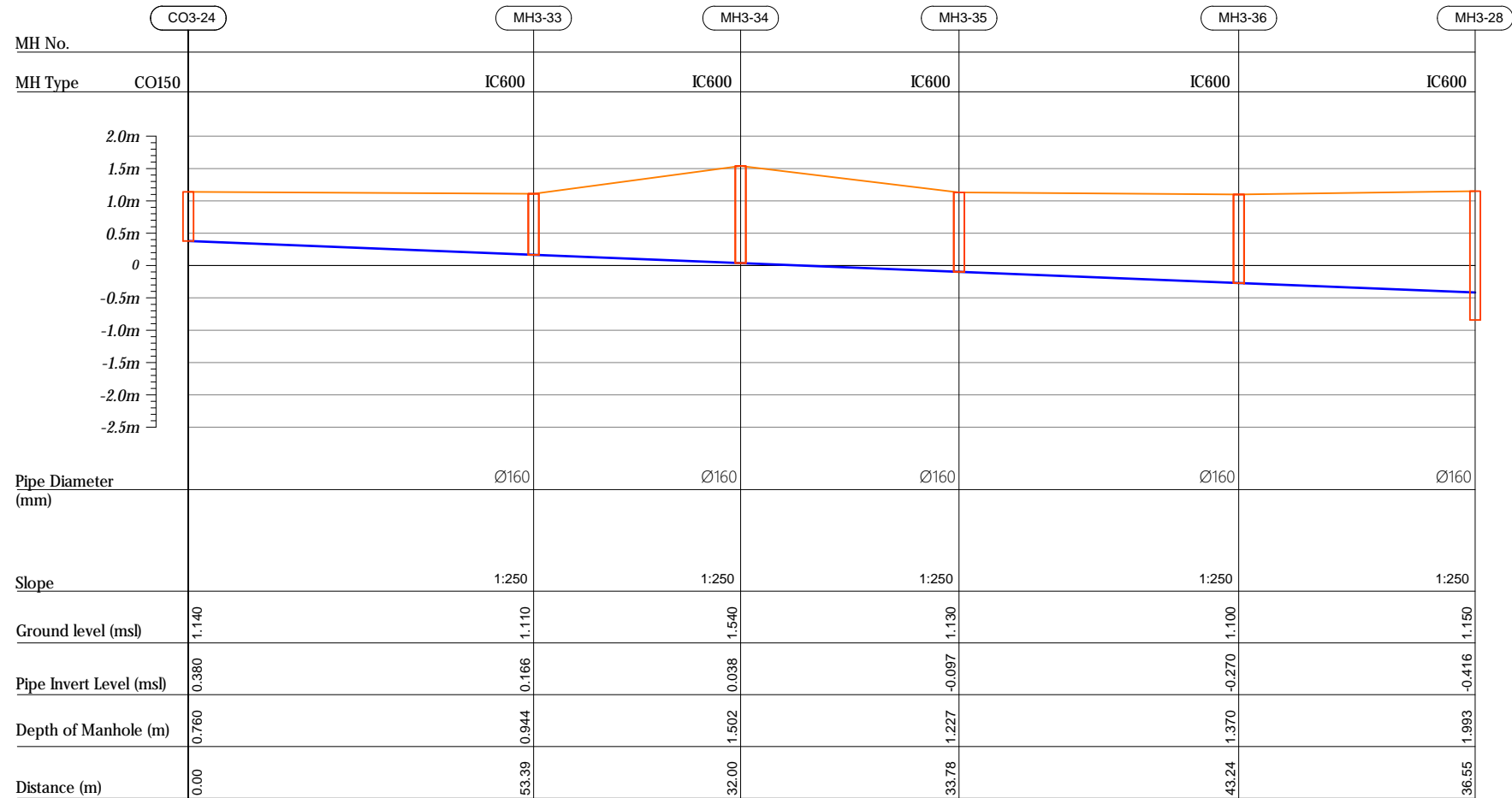
Page: PS3-11



## Profile 23



## Profile 24




CO160	—	Cleanout $\phi 160$
IC600	—	HDPE Manhole $\phi 600$
PS	—	Pump Station

R00	JUNE 2020	STAGE -1	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

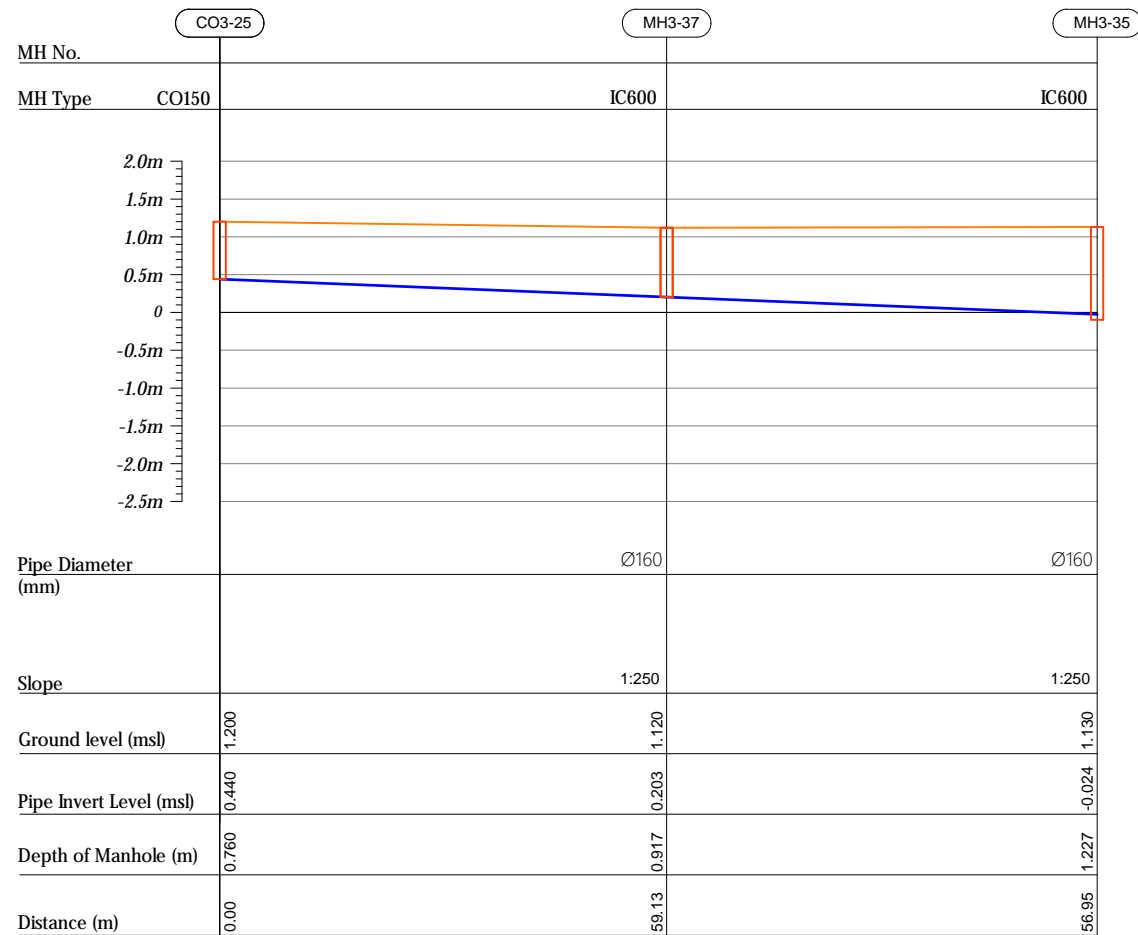
**Title:**  
*Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6*

Sub Title:  
*Sewerage System in L.Hithadhoo*

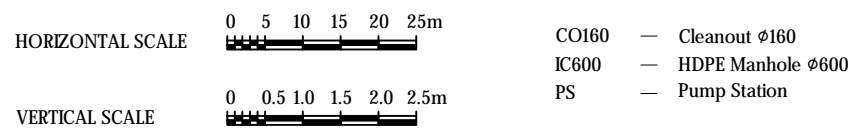
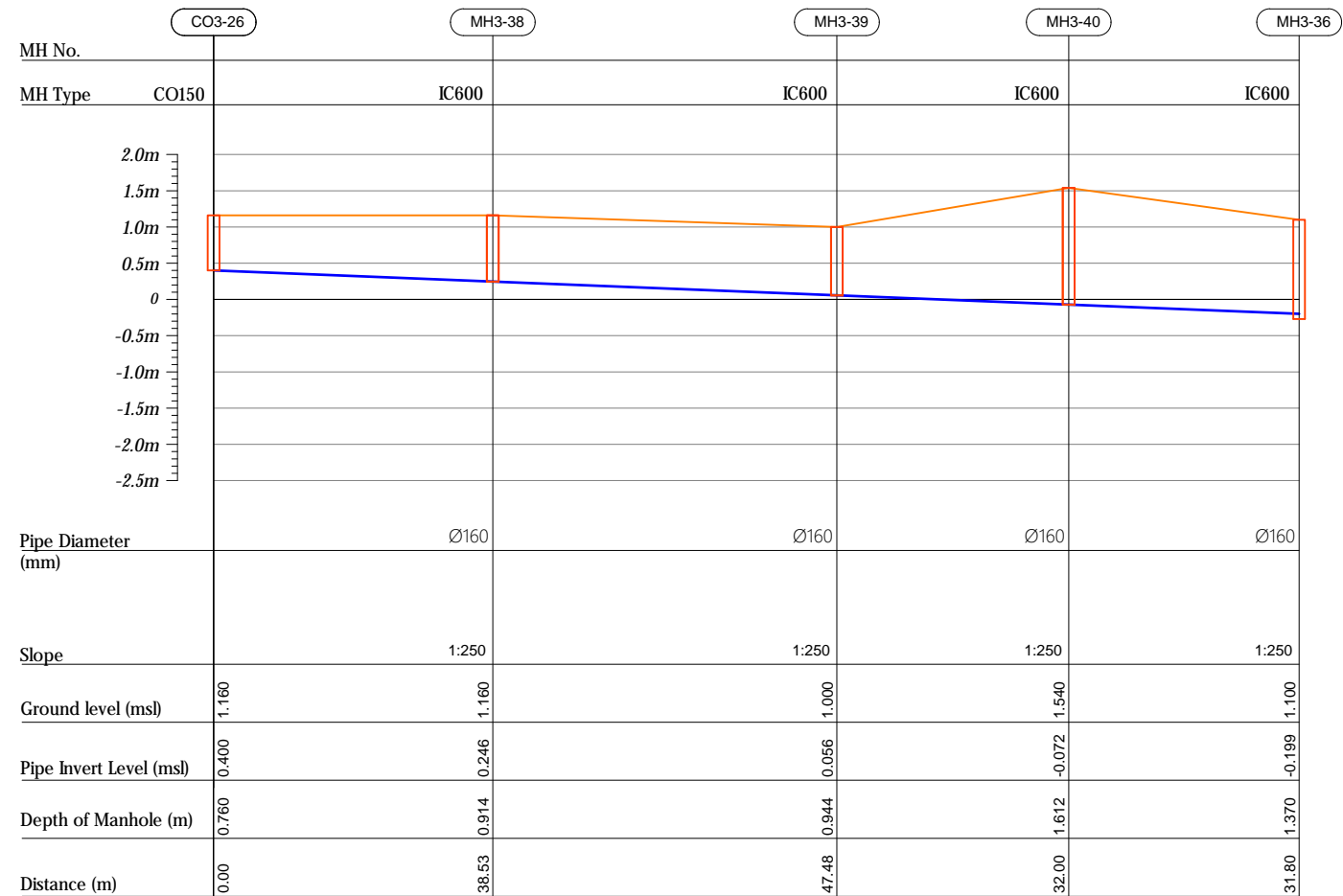
Client:  
*Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives*

 <b>EPOCH</b> ASSOCIATES	<b>FEEDBACK INFRA</b> <i>Making Infrastructure Happen</i>
T: +960 333 3528 E: info@epoch.associates W: www.epoch.associates A: G. Rosary West, Humshemna Magu, Male', Maldives	
Drawn: A.R.W	Checked: M.S.S
Designed: F.I.A	Approved: L.W
Date: Aug 2020	SCALE (ASR: 1:100)
Project No:	01010101
Rev: R-01	Page: PS3-12

## Profile 25



## Profile 26




R00	JUNE 2020	STAGE -1	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

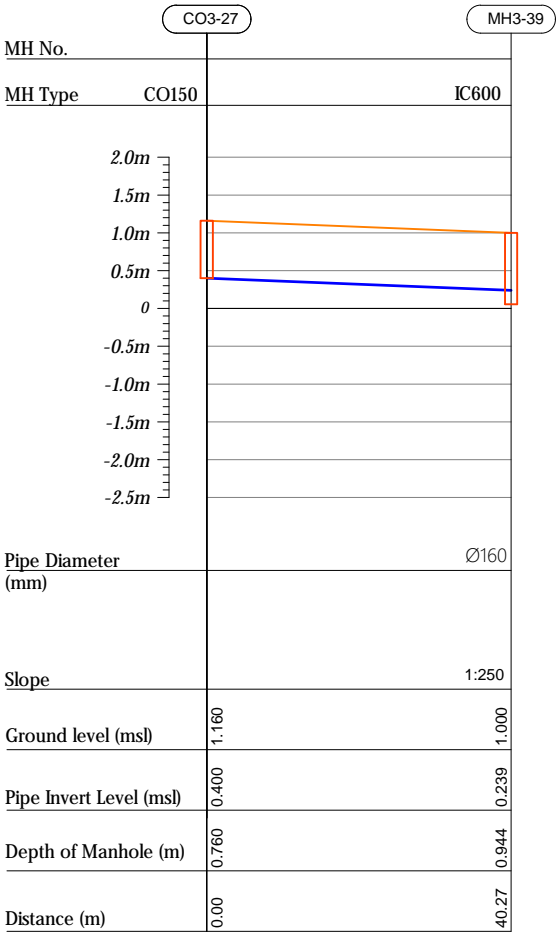
**Title:**  
*Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6*

Sub Title:  
*Sewerage System in L.Hithadhoo*

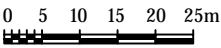
Client:  
*Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives*

 <b>EPOCH</b> ASSOCIATES	<b>FEEDBACK INFRA</b> <i>Making Infrastructure Happen</i>
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Drawn: A.R.W	Checked: M.S.S
Designed: F.I.A	Approved: L.W
Date: Aug 2020	SCALE (ASR: 1:100
Project No:	01010101
Rev: R-01	Page: PS3-13

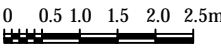
Profile 27



HORIZONTAL SCALE



VERTICAL SCALE



- CO160 — Cleanout Ø160
- IC600 — HDPE Manhole Ø600
- PS — Pump Station

R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
Consultancy Services for Survey,  
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5 islands, Maldives - Package 6

Sub Title:  
Sewerage System in L.Hithadhoo

Client:  
Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives



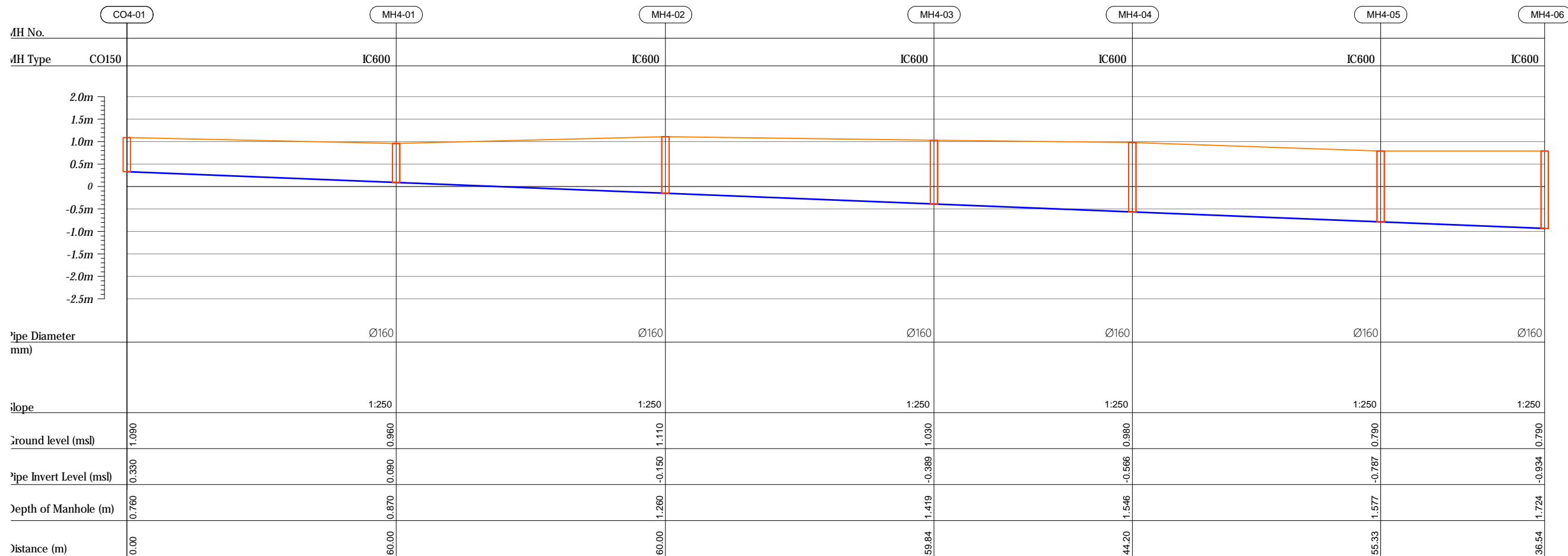
T: +960 333 3528  
E: info@epoch.associates  
W: www.epoch.associates  
A: G. Rosary West,  
Hussuiveemaa Magu, Male', Maldives



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Designed: F.L.A	Approved: L.W
Date: Aug 2020	SCALE (A3): 1:100
Project No: 01010101	
Rev: R-01	Page: PS3-14

## Profile 01




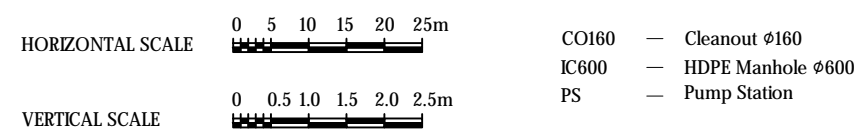
R00	JUNE 2020	STAGE -1	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
*Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6*

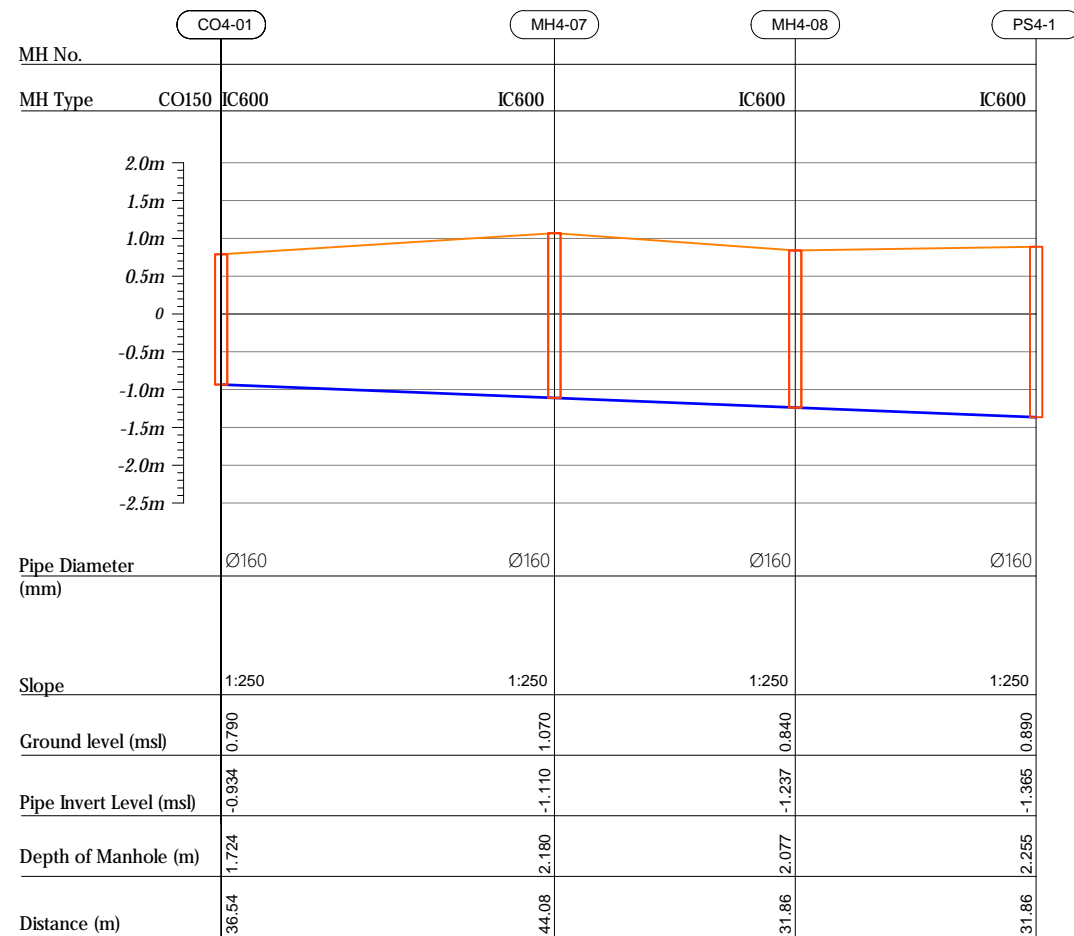
Sub Title:  
*Sewerage System in L.Hithadhoo*

Client:  
*Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives*

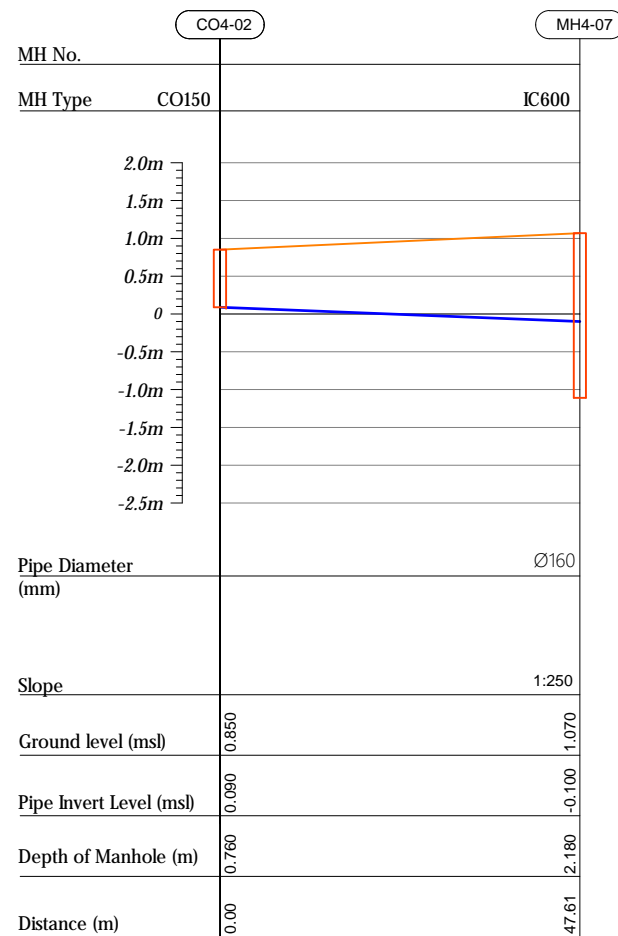
 <b>EPOCH</b> ASSOCIATES	<b>FEDBACK INFRA</b> <i>Machining Software/ware -Hoppers</i>
T: +960 333 3528 E: info@epochassociates W: www.epochassociates A: G. Rosary West, Husumbeema Magu, Male', Maldives	
Drawn: A.R.W	Checked: M.S.S
Designed: F.I.A	Approved: I.W
Date: Aug 2020	SCALE (A3): 1:100
Project No: 01010101	
Rev: R-01	Page: PS4-01



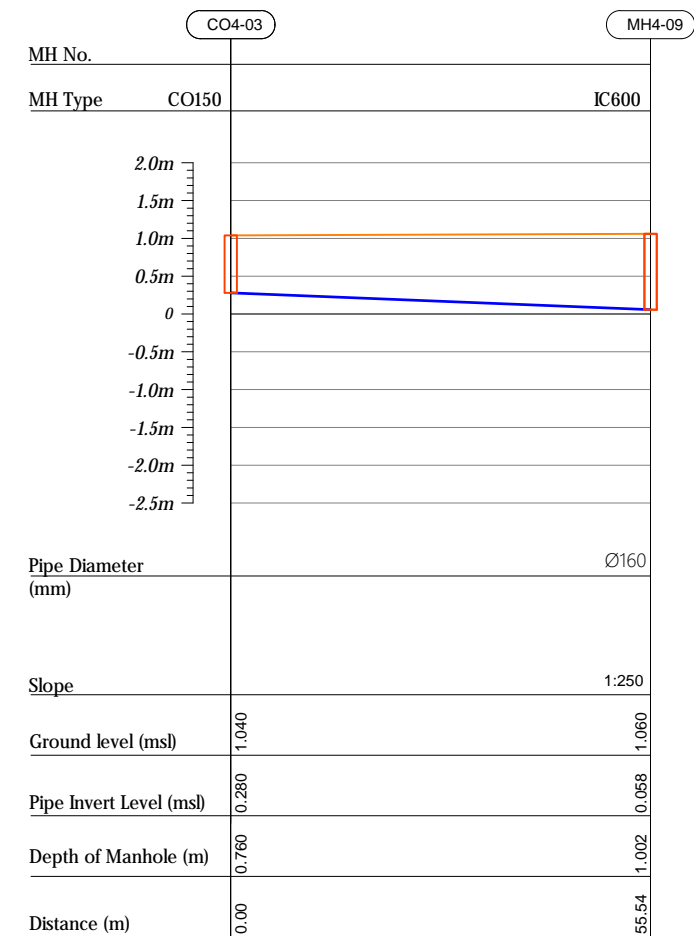
## Profile 01



## Profile 02



### Profile 03



R00	JUNE 2020	STAGE -1	PD	SEC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

**Title:**  
*Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6*

Sub Title:  
*Sewerage System in L.Hithadhoo*

Client:  
Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives



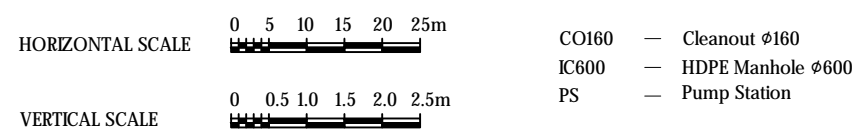
Drawn: A.R.W	Checked: M.S.S
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Designed: EJA	Approved: LW
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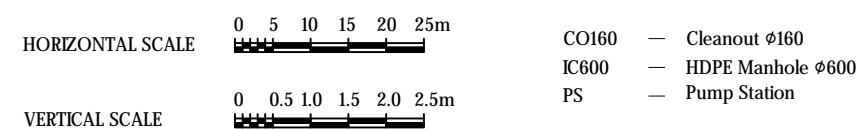
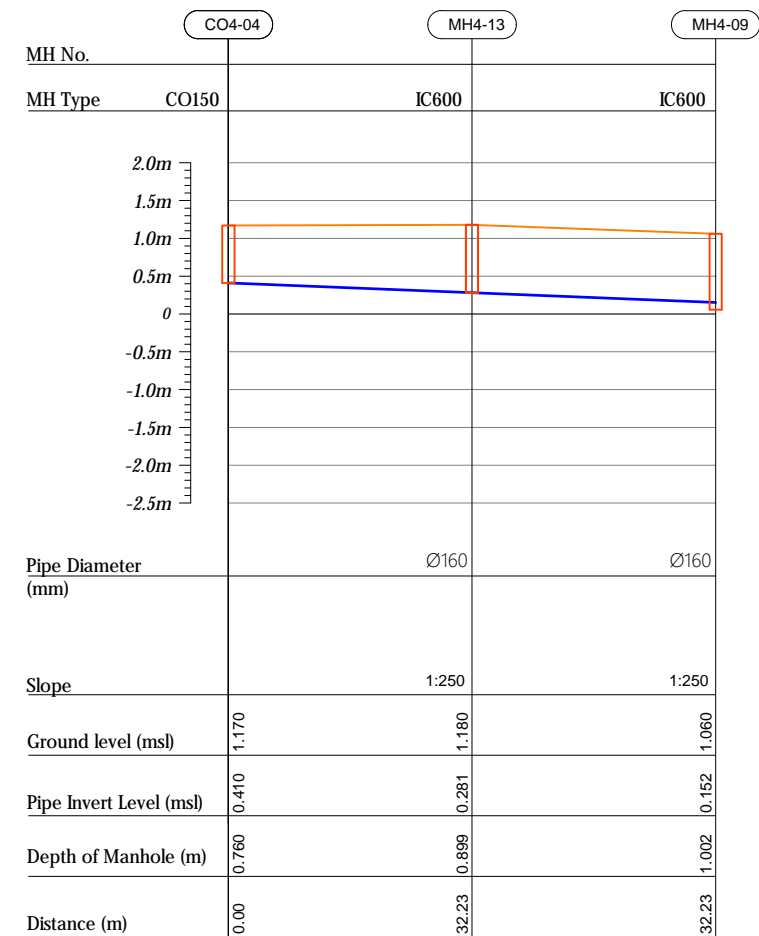
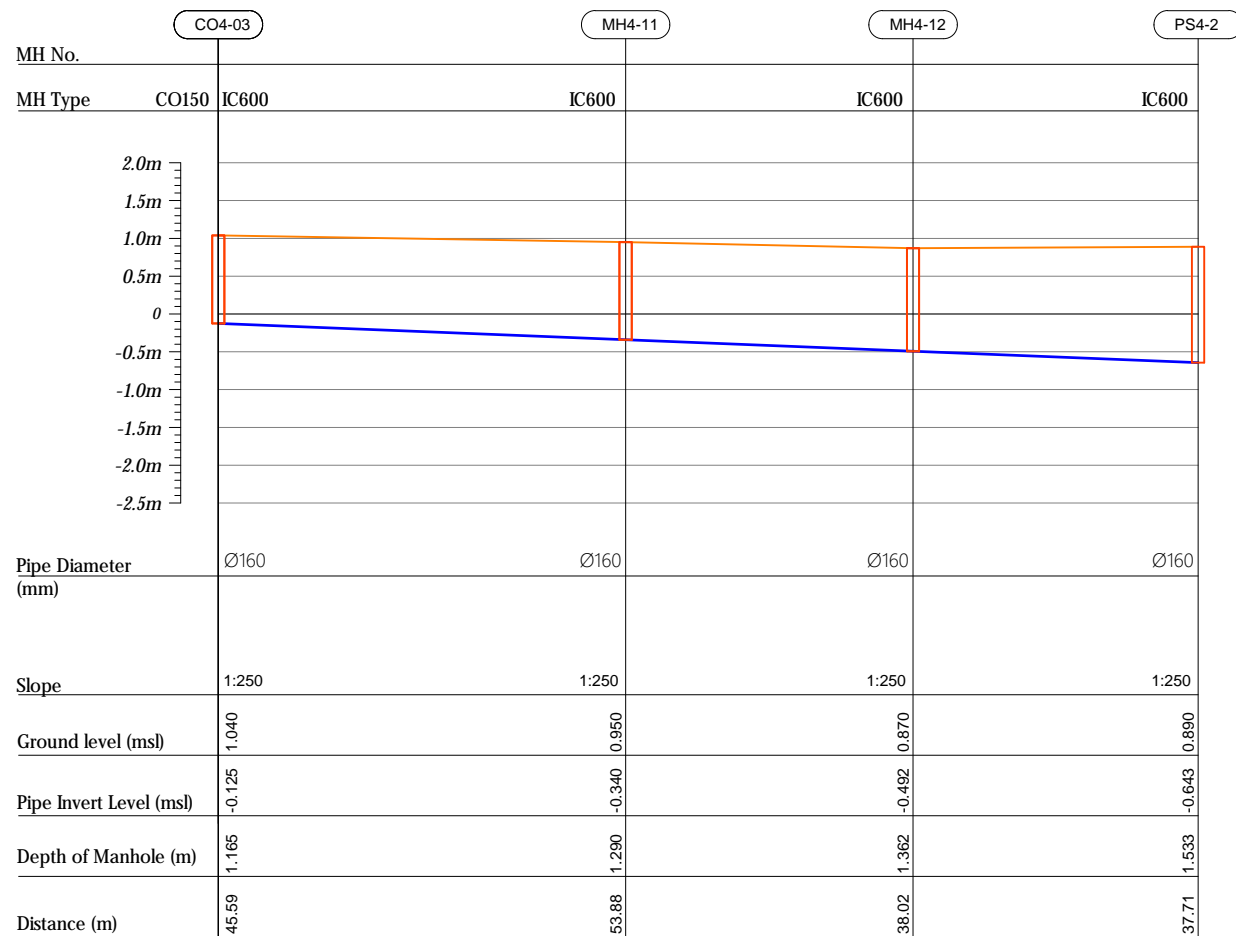
Date: Aug 2020	SCALE (A3): 1:100
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Project No: 01010101

Rev:	Page:
R-01	PS4-02



## Profile 03



R00	JUNE 2020	STAGE -1	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
*Consultancy Services for Survey,  
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5 islands, Maldives - Package 6*

Sub Title:  
*Sewerage System in L.Hithadhoo*

Client:  
*Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives*



Drawn: A.R.W	Checked: M.S.S
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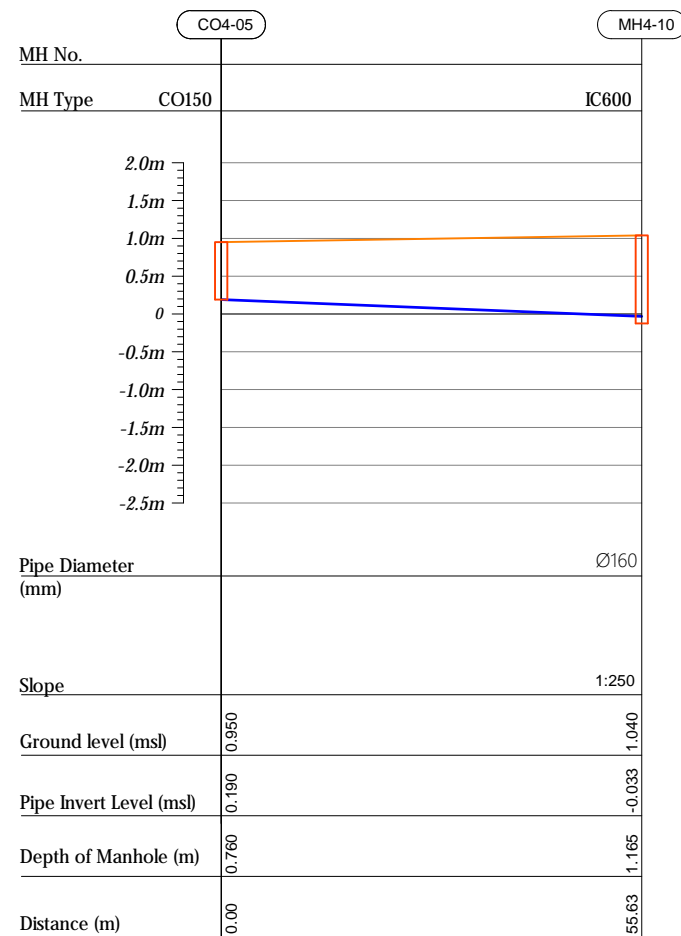
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Date: Aug 2020	SCALE (A3): 1:100
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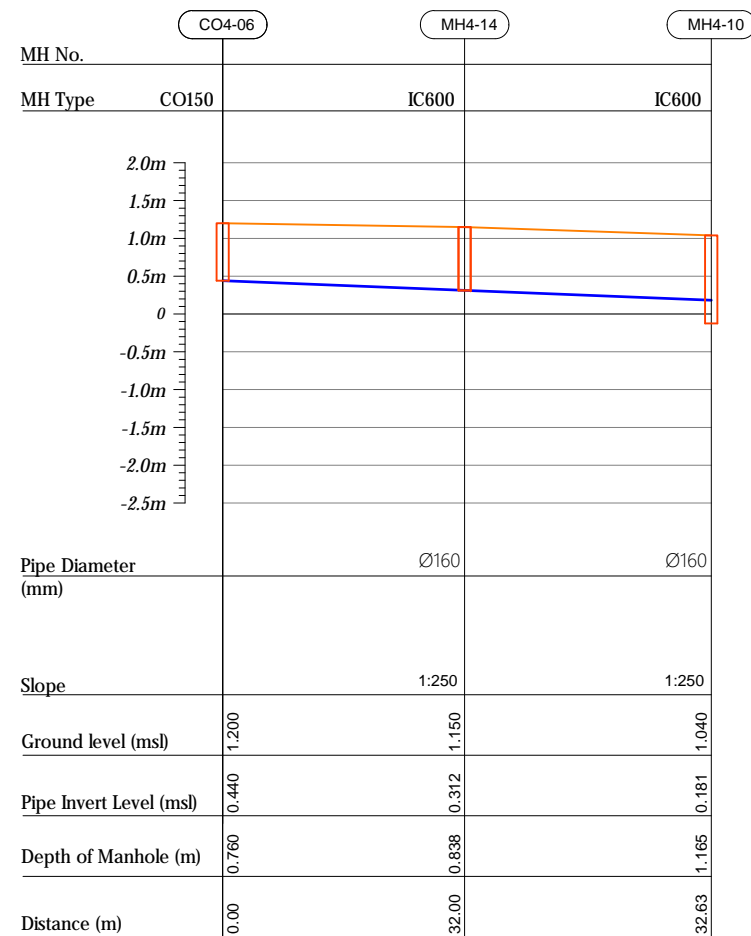
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Rev:	Page:
R-01	PS4-03

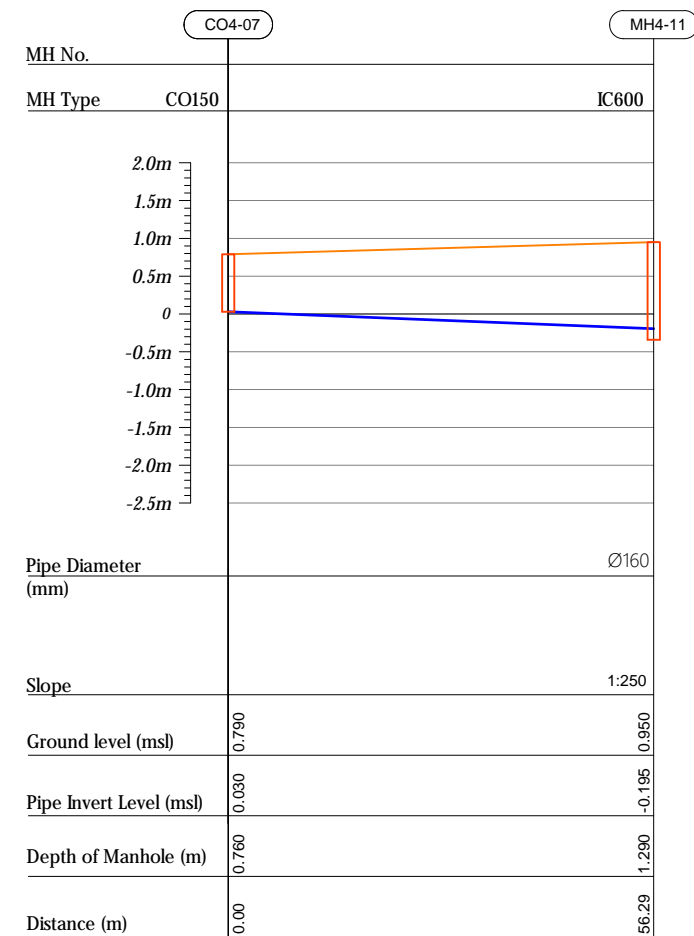
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## Profile 06



## Profile 07



R00	JUNE 2020	STAGE -1	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

**Title:**  
*Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6*

Sub Title:  
*Sewerage System in L.Hithadhoo*

Client:  
*Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives*



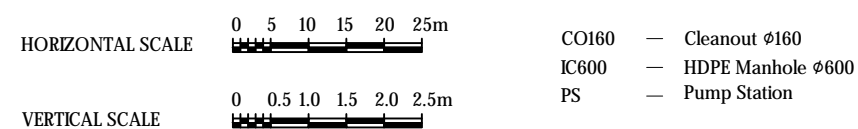
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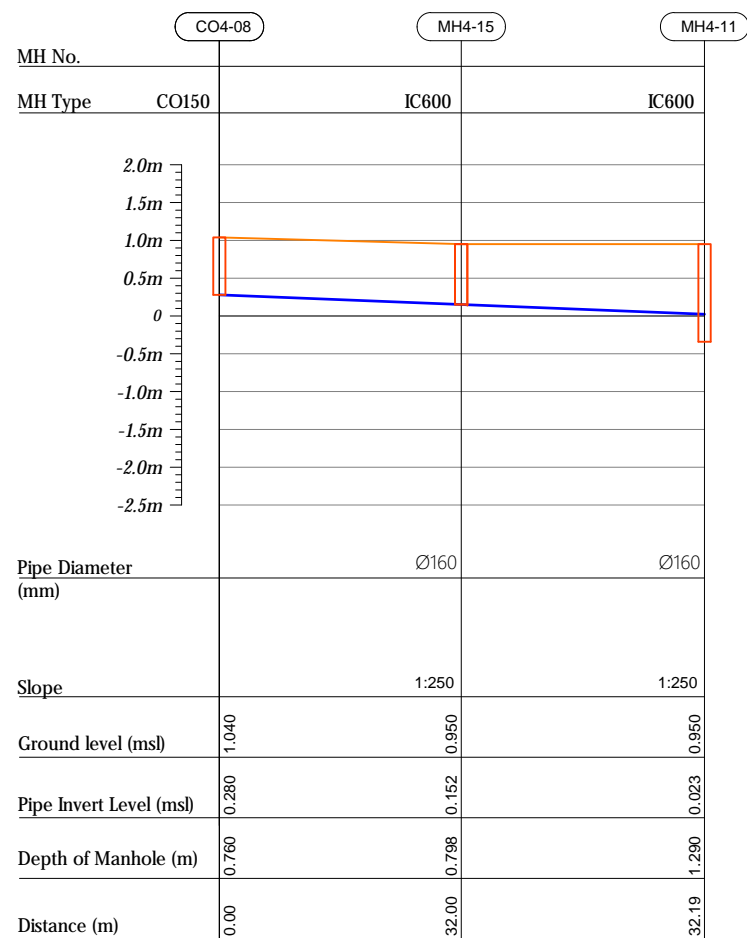
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Rev:	Page:
R-01	PS4-04

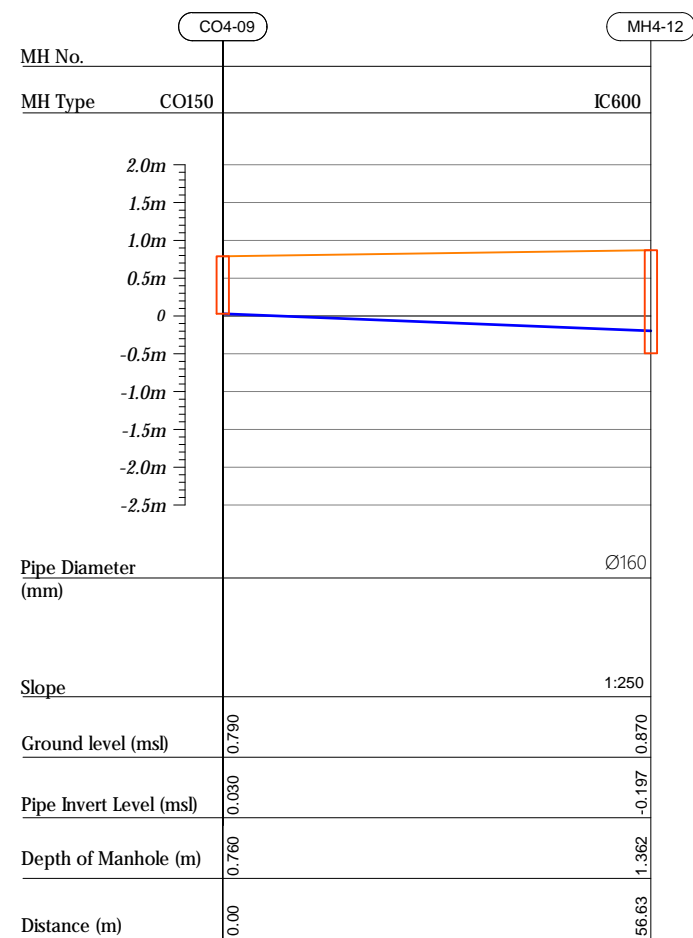




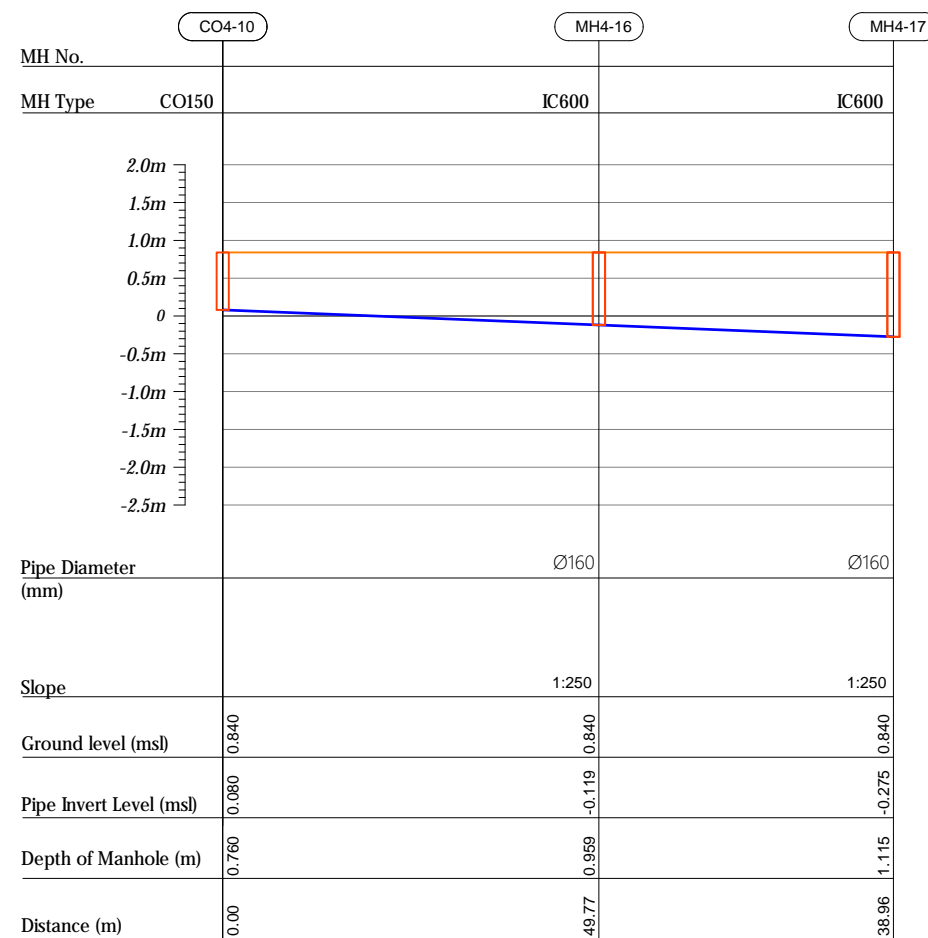
## Profile 08



## Profile 09



## Profile 10



000	JUNE 2020	STAGE -1	PD	SEC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	App

**Title:**  
*Consultancy Services for Survey,  
Design and EIA works of Water  
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Sub Title:  
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W: www.epoch.associates  
A: G. Rosary West,  
Husnuheena Magu, Male', Maldives



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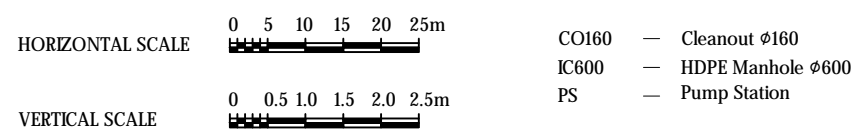
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Designed: EJA	Approved: LW
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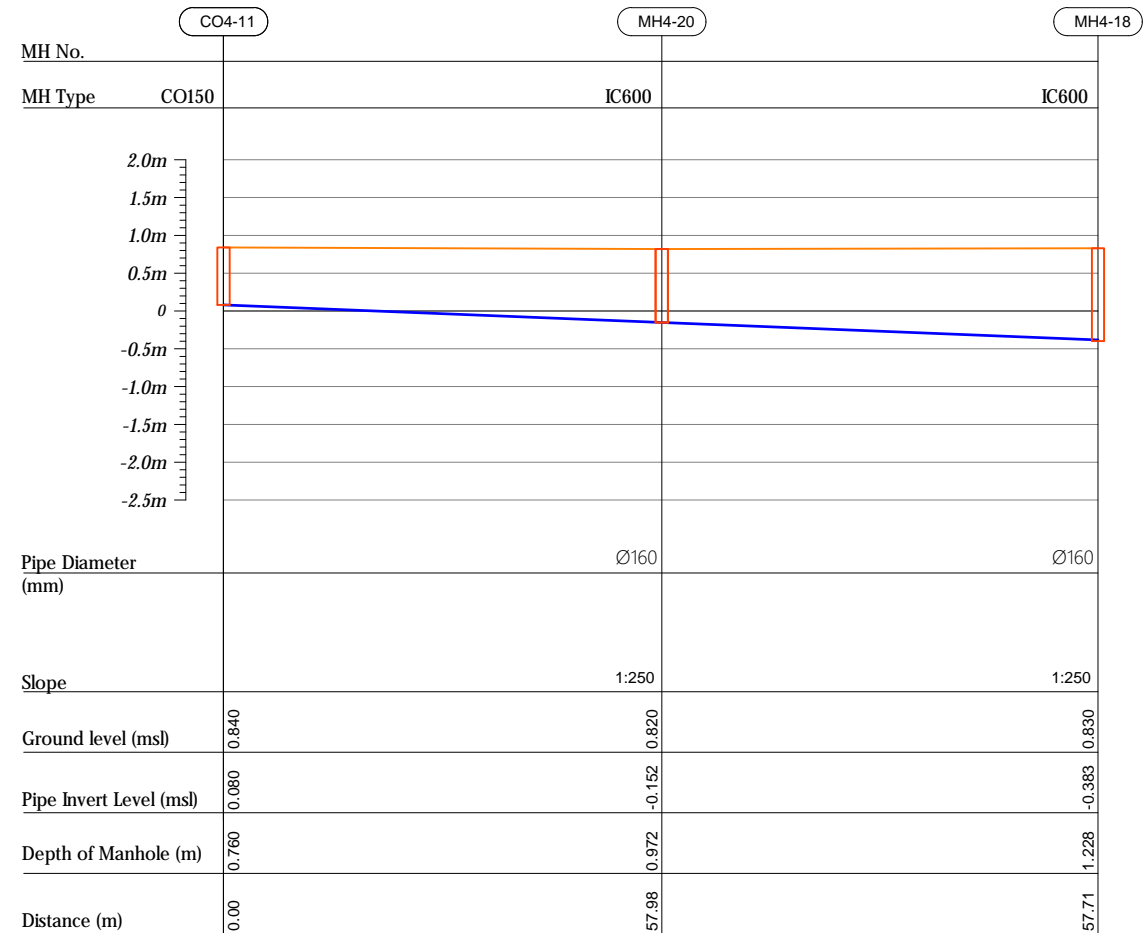
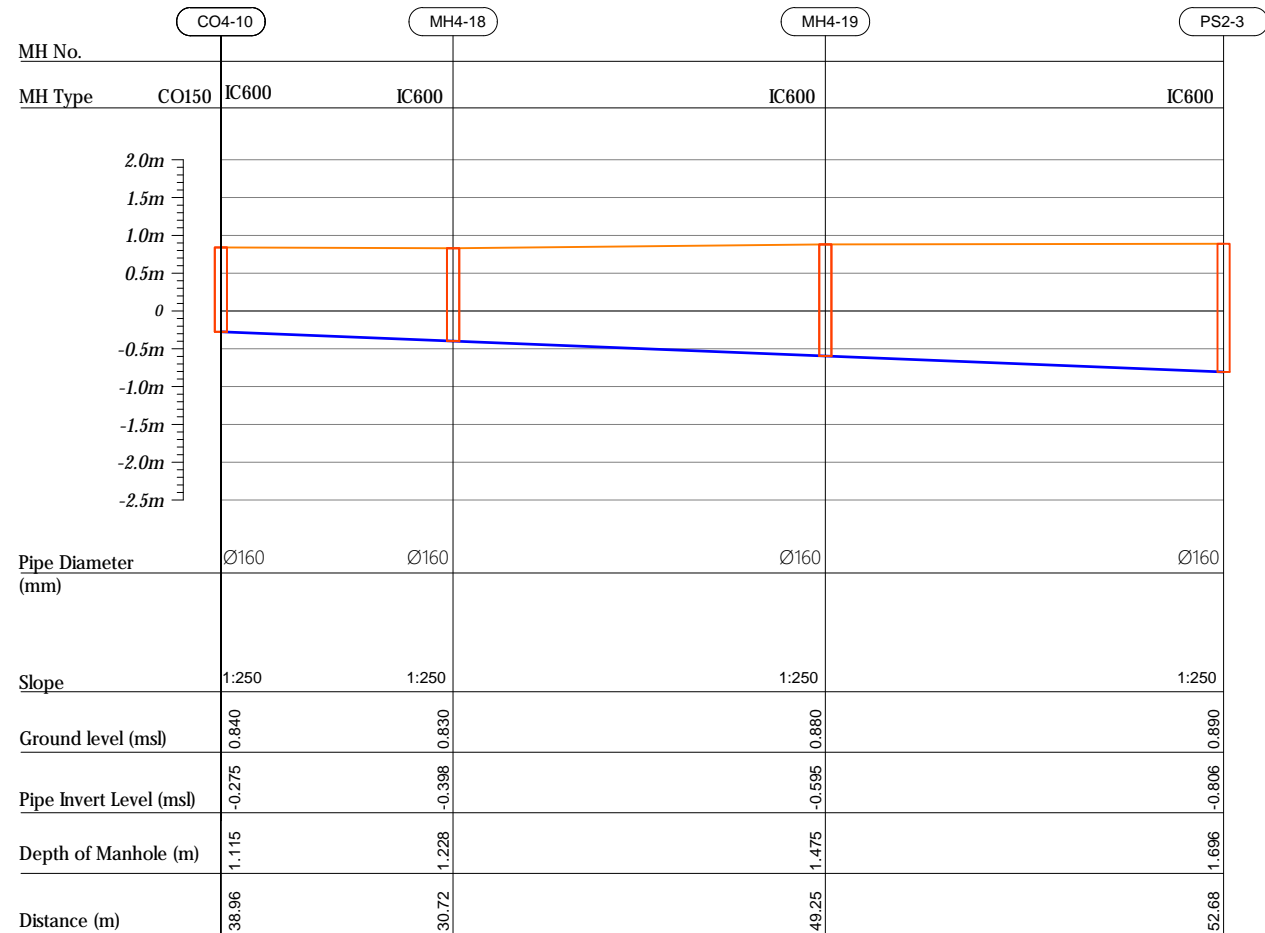
Date: Aug 2020	SCALE (A3): 1:100
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Project No:	01010101
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Rev: <i>R-01</i>	Page: <i>PS4-0</i>
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## Profile 10



R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

**Title:**  
*Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6*

Sub Title:  
*Sewerage System in L.Hithadhoo*

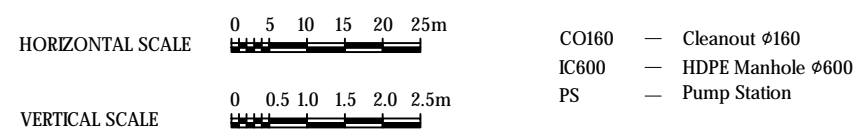
Client:  
*Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives*

**EPOCH**  
ASSOCIATES

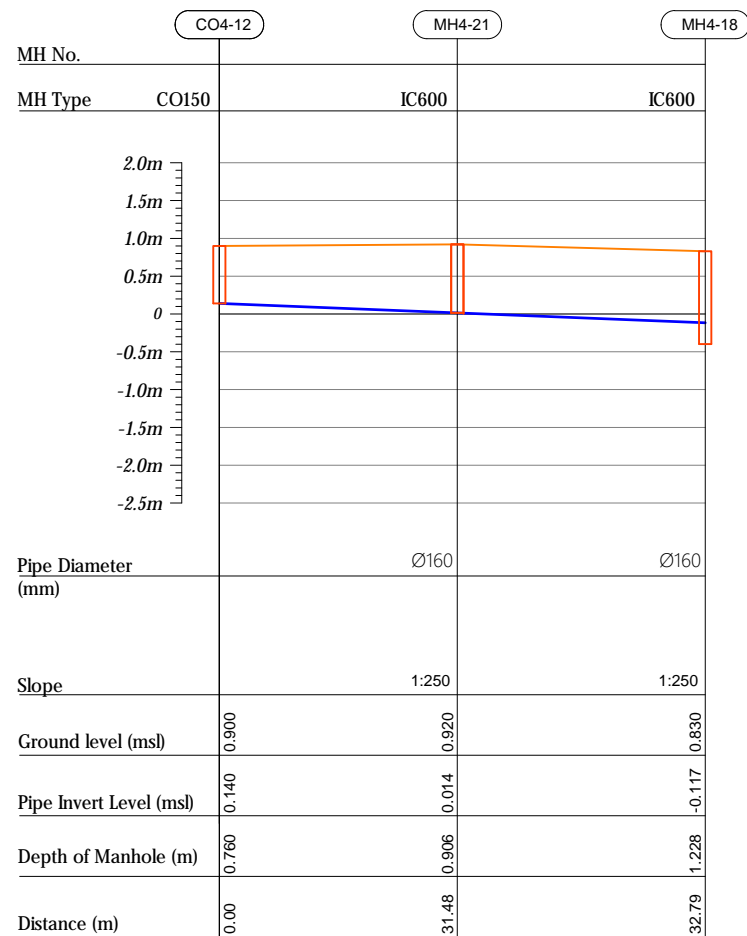
T: +960 333 3528  
E: info@epoch.associates  
W: www.epoch.associates  
A: G. Rosary West,  
Husumbeena Magu, Male', Maldives

Drawn: A.R.W	Checked: M.S.S
Designed: F.L.A	Approved: L.W
Date: Aug 2020	SCALE (A3): 1:100
Project No: 01010101	

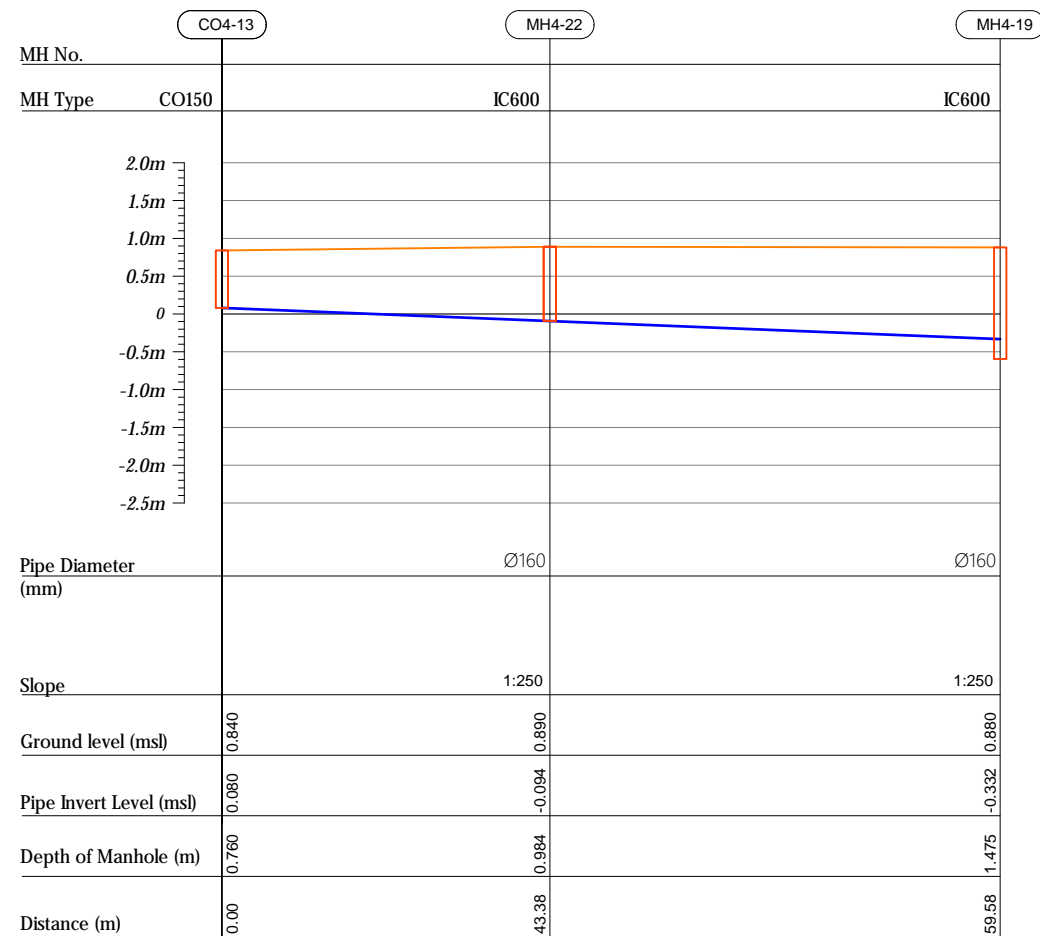
Rev. <i>R-01</i>	Page: <i>PS4-06</i>
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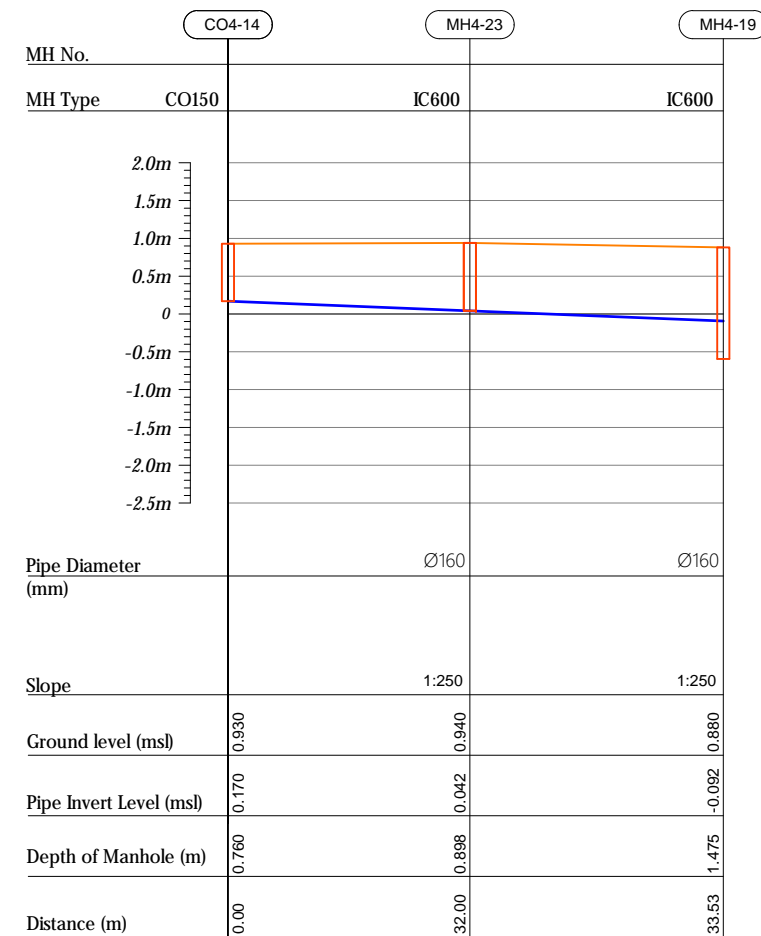
## Profile 12



## Profile 13



## Profile 14



R00	JUNE 2020	STAGE -1	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
*Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6*

Sub Title:  
*Sewerage System in L.Hithadhoo*

Client:  
Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives



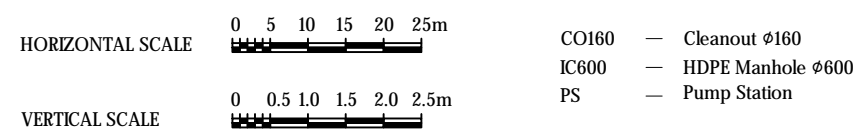
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Designed: <u>EJA</u>	Approved: <u>LW</u>
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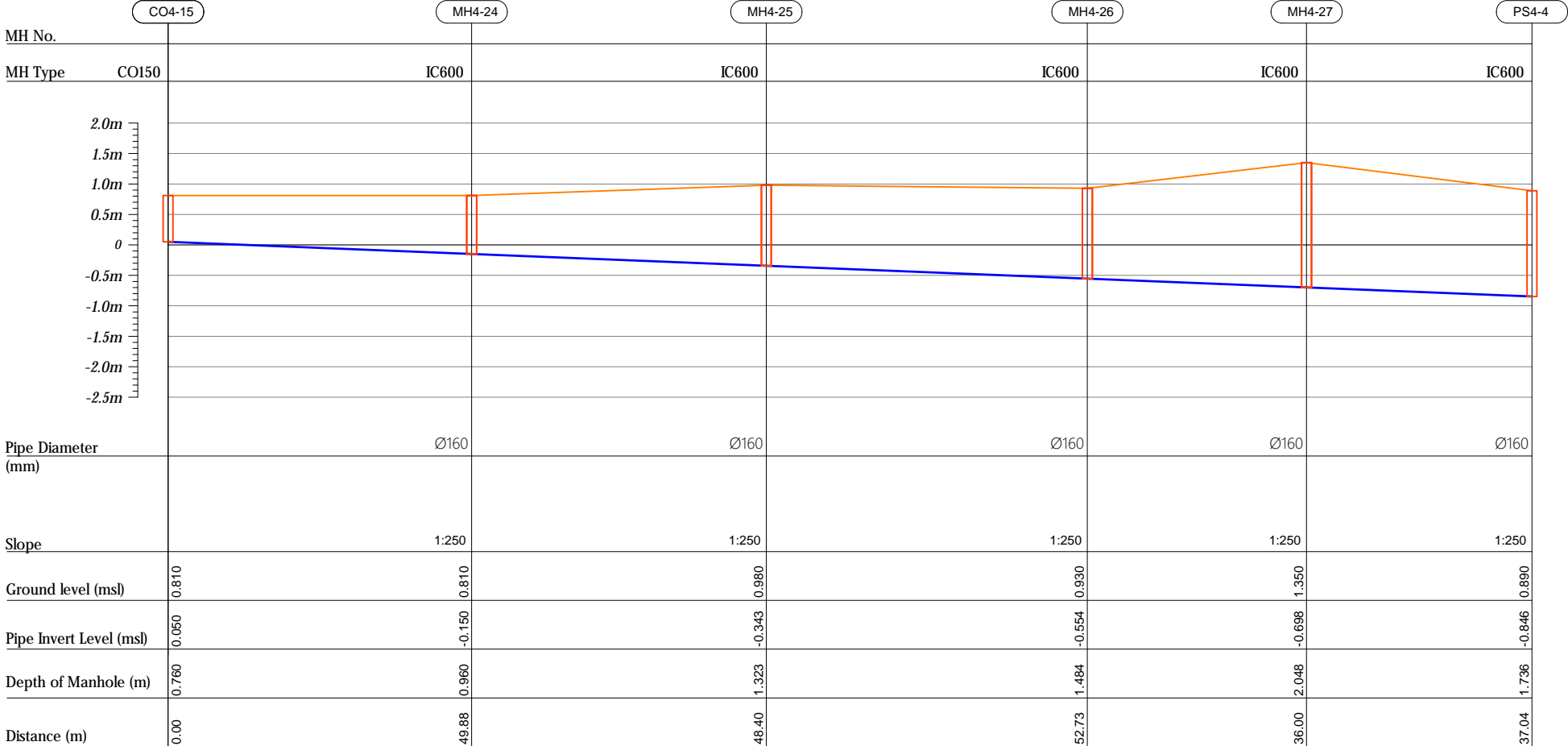
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Project No: 01010101

Rev: <i>R-01</i>	Page: <i>PS4-07</i>
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## Profile 15



R00	JUNE 2020	STAGE -1	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

**Title:**  
*Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6*

Sub Title:  
*Sewerage System in L.Hithadhoo*

Client: *Ministry of National Planning, Housing and Infrastructure, Republic of Maldives*



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W: www.epoch.associates  
A: G. Rosary West,  
Husnuheena Magu, Male', Maldives

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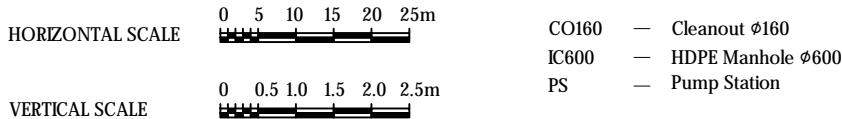
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Designed: F.L.A	Approved: LW
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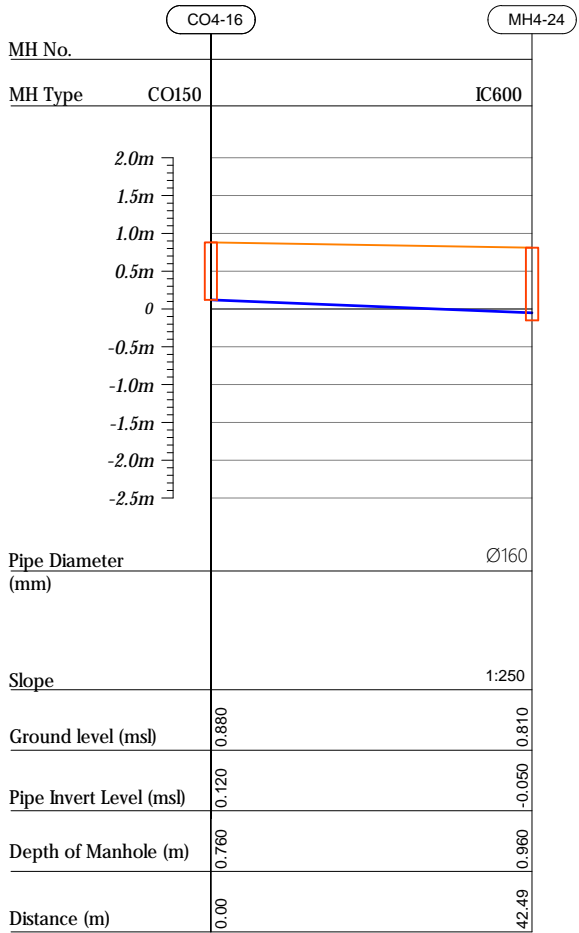
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Project No: 01010101

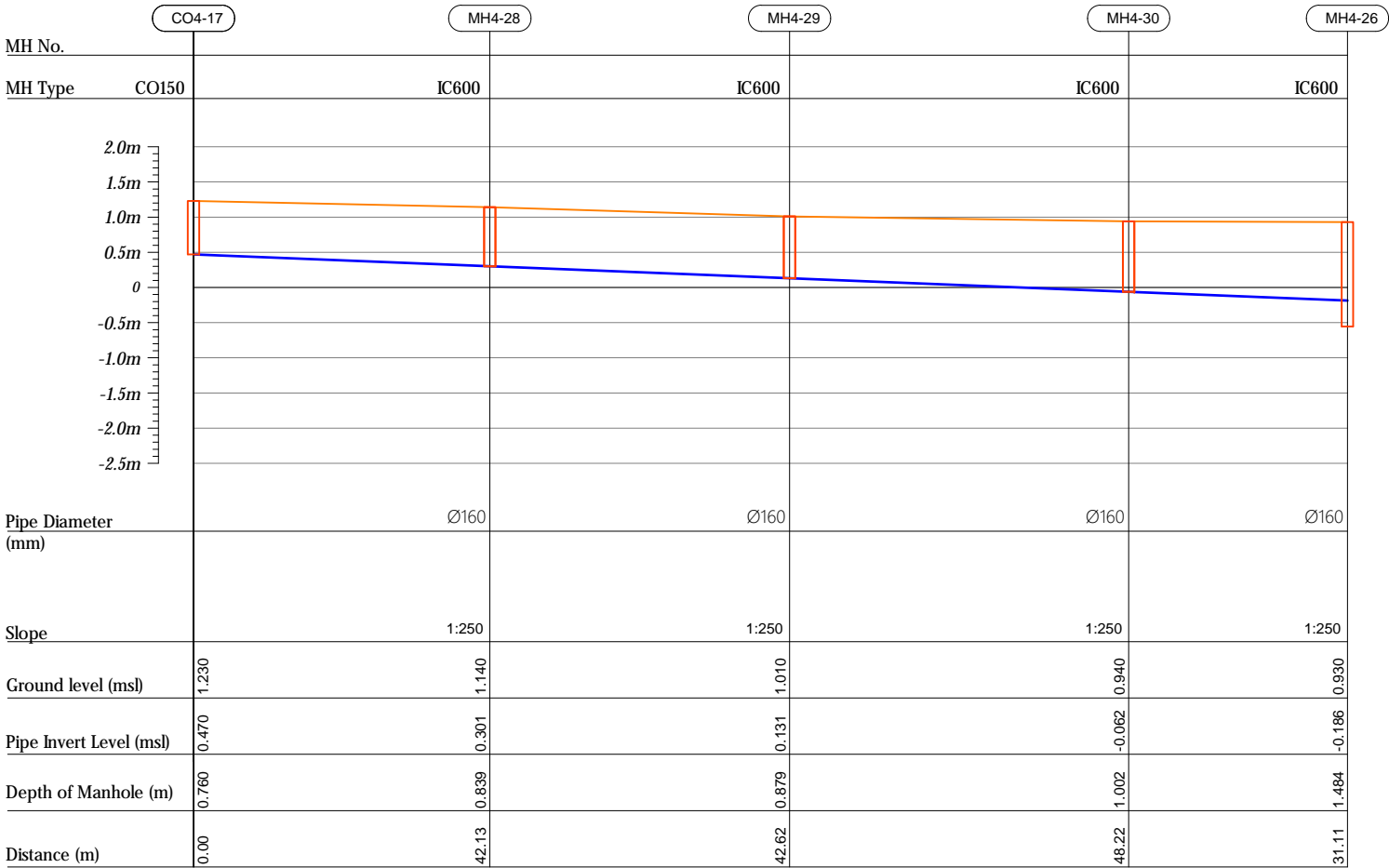
Rev:	Page:
R-01	PS4-08



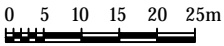
Profile 16



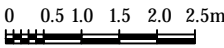
Profile 17



HORIZONTAL SCALE



VERTICAL SCALE



- CO160 — Cleanout Ø160
- IC600 — HDPE Manhole Ø600
- PS — Pump Station

R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6

Sub Title:  
Sewerage System in L.Hithadhoo

Client:  
Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives



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Husnuheemaa Magu, Male', Maldives



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Drawn: A.R.W Checked: M.S.S

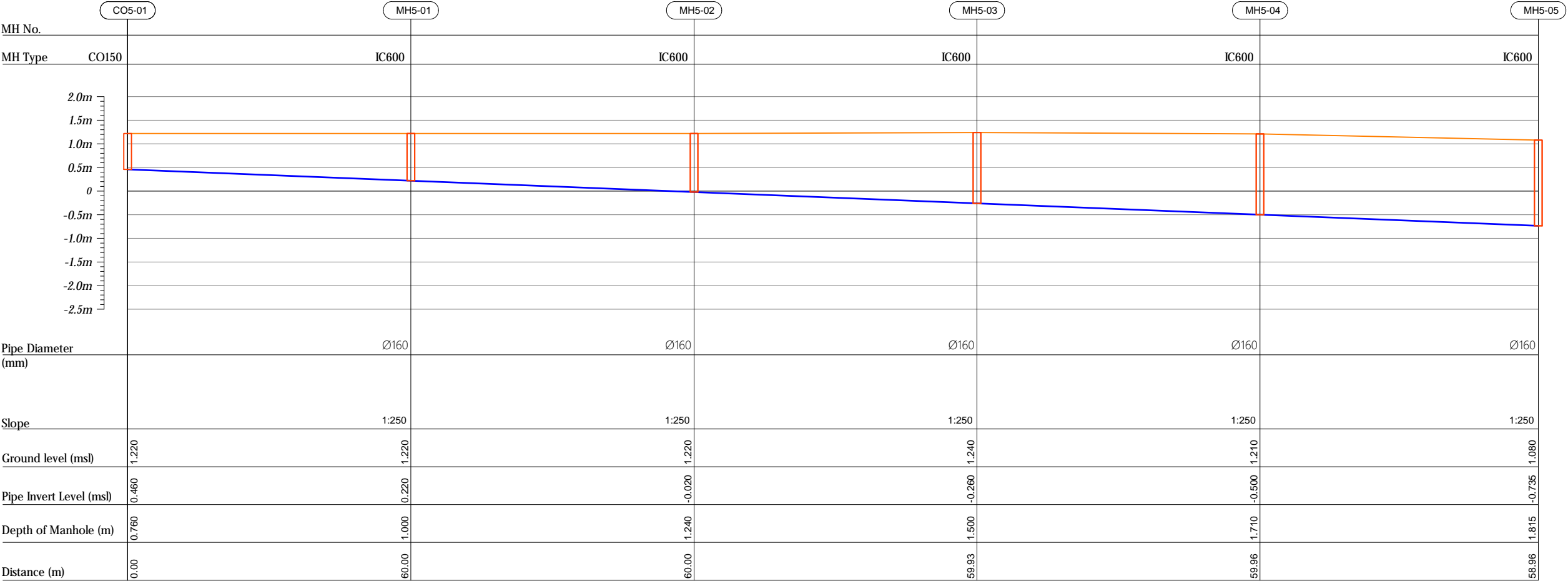
Designed: F.I.A Approved: L.W

Date: Aug 2020 SCALE (A3): 1:100

Project No: 01010101

Rev: R-01 Page: PS4-09

Profile 01



R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6

Sub Title:  
Sewerage System in L.Hithadhoo

Client:  
Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives

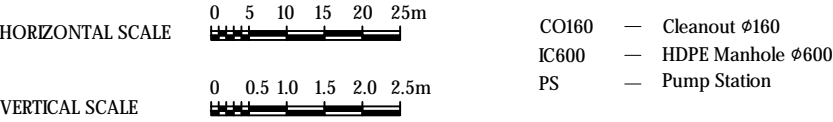


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Husnuheemaa Magu, Male', Maldives

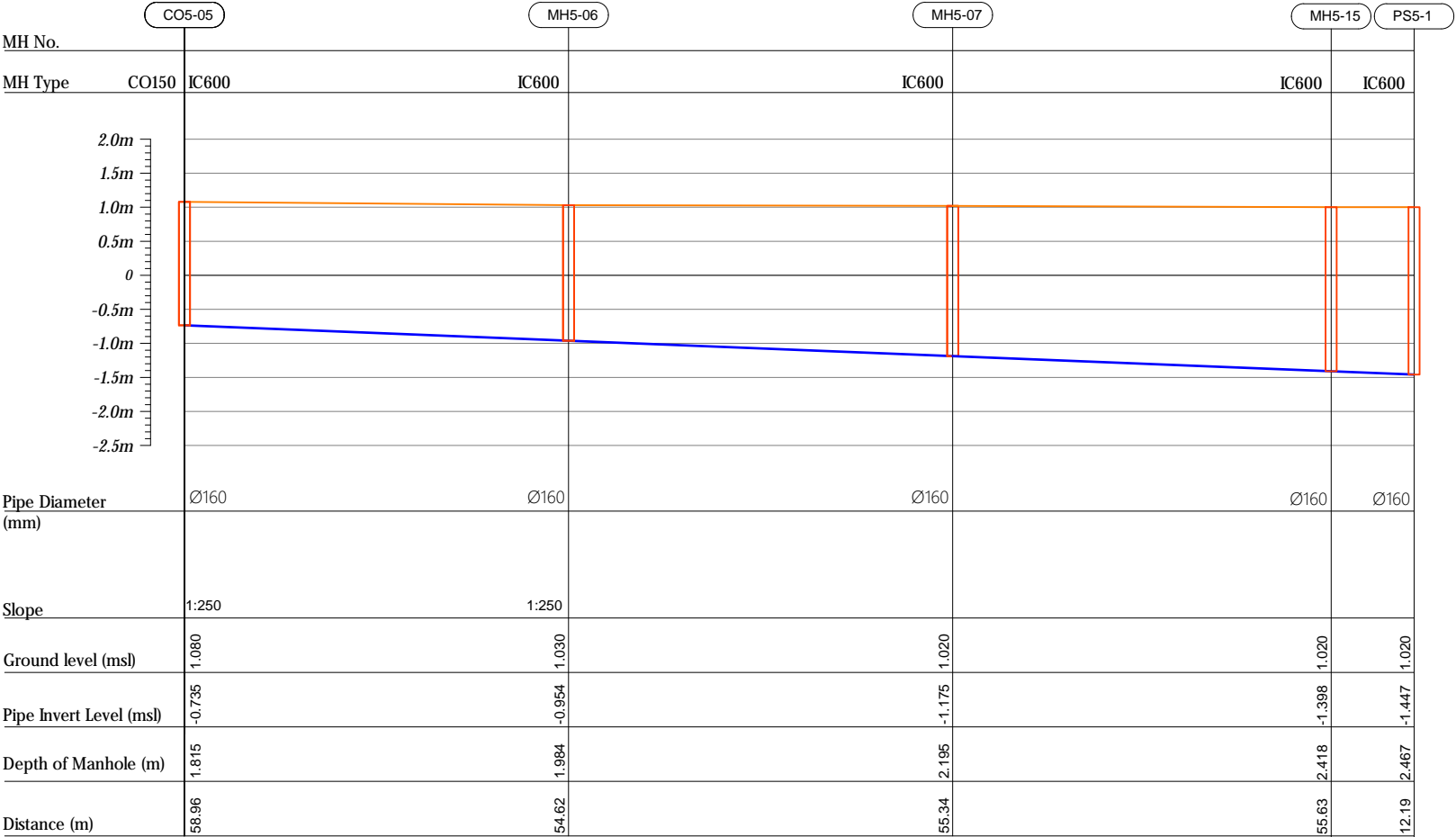


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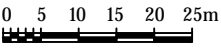
Drawn: A.R.W	Checked: M.S.S
Designed: F.L.A	Approved: LW
Date: Aug 2020	SCALE (A3): 1:100
Project No:	01010101



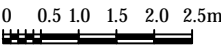
Profile 01



HORIZONTAL SCALE



VERTICAL SCALE



- CO160 — Cleanout Ø160
- IC600 — HDPE Manhole Ø600
- PS — Pump Station

R00	JUNE 2020	STAGE -1	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6

Sub Title:  
Sewerage System in L.Hithadhoo

Client:  
Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives



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Husnuheemaa Magu, Male', Maldives

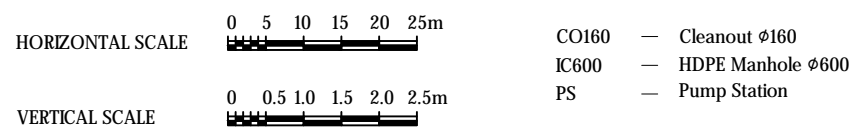
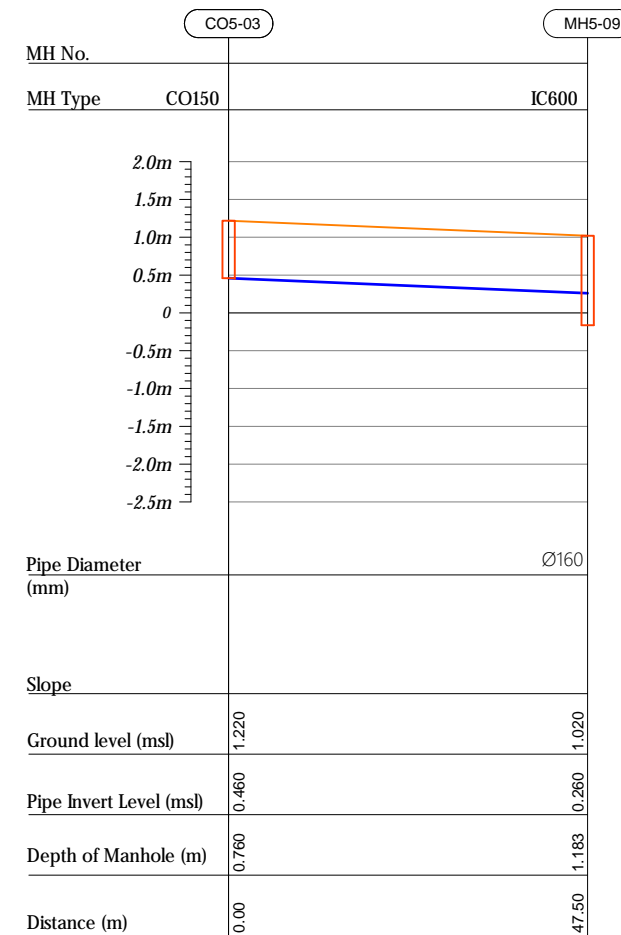
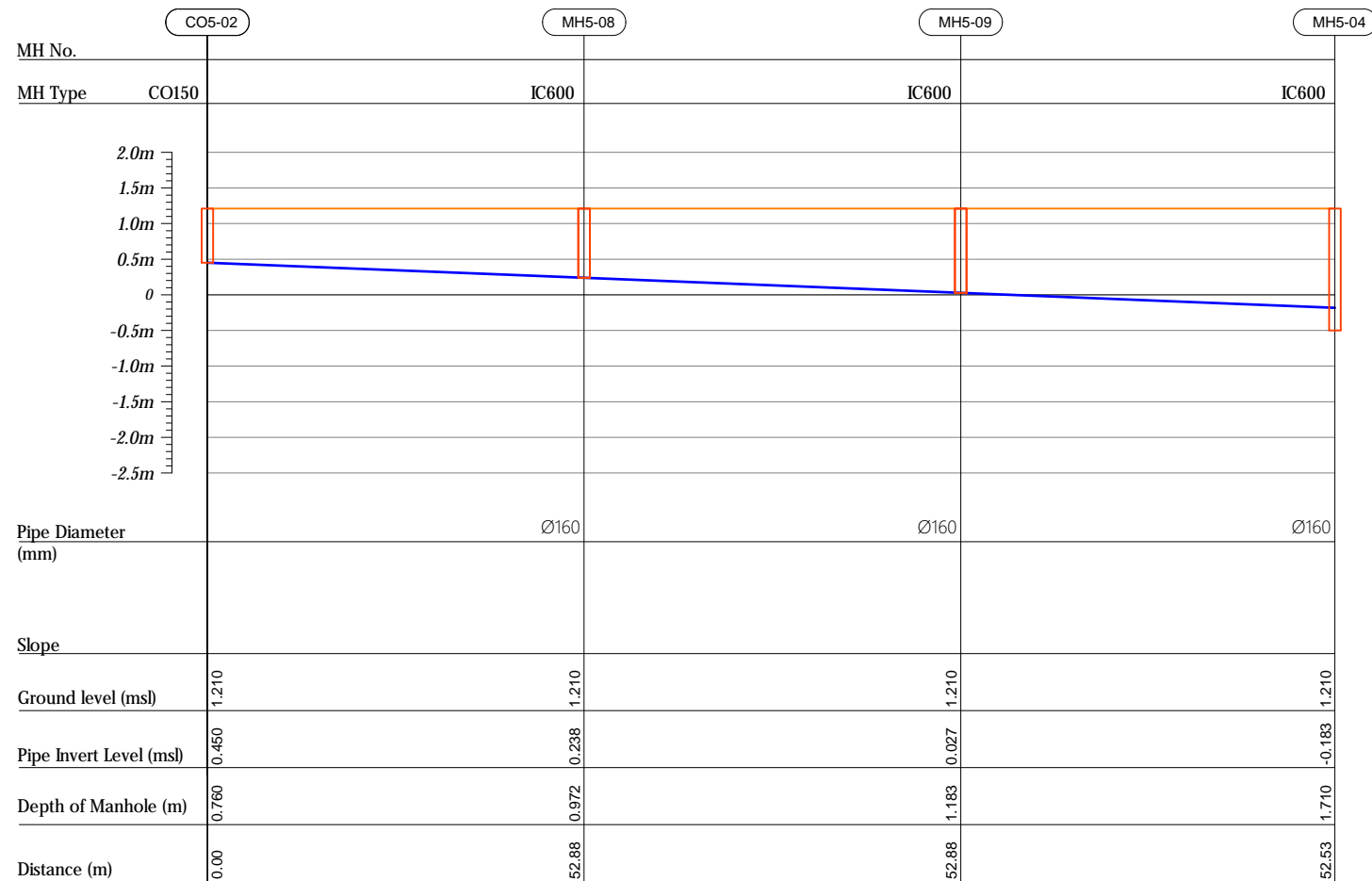


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Drawn: A.R.W	Checked: M.S.S
Designed: F.L.A	Approved: L.W
Date: Aug 2020	SCALE (A3): 1:100
Project No:	01010101



## Profile 02




R00	JUNE 2020	STAGE -1	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

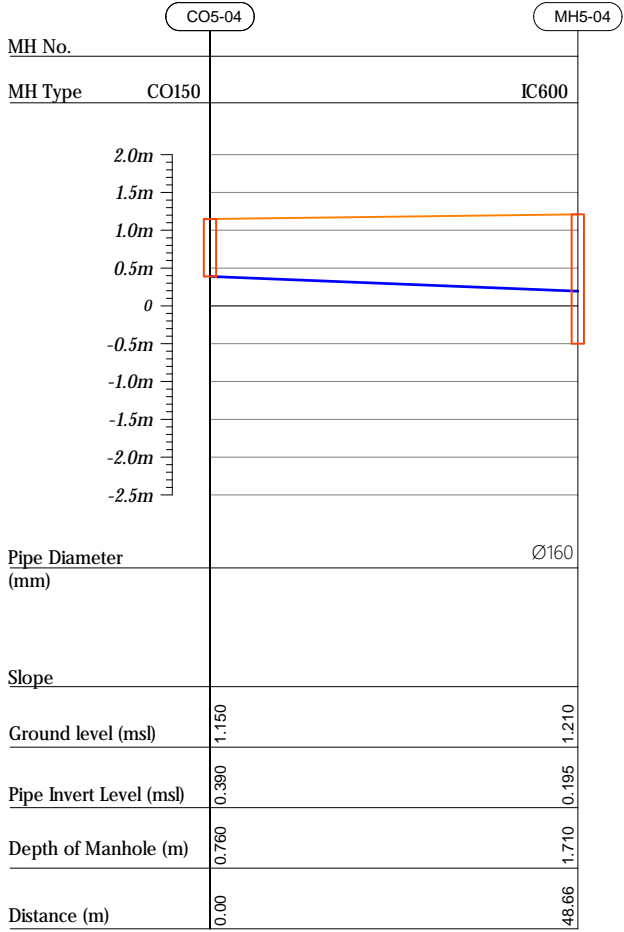
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*Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6*

Sub Title:  
*Sewerage System in L.Hithadhoo*

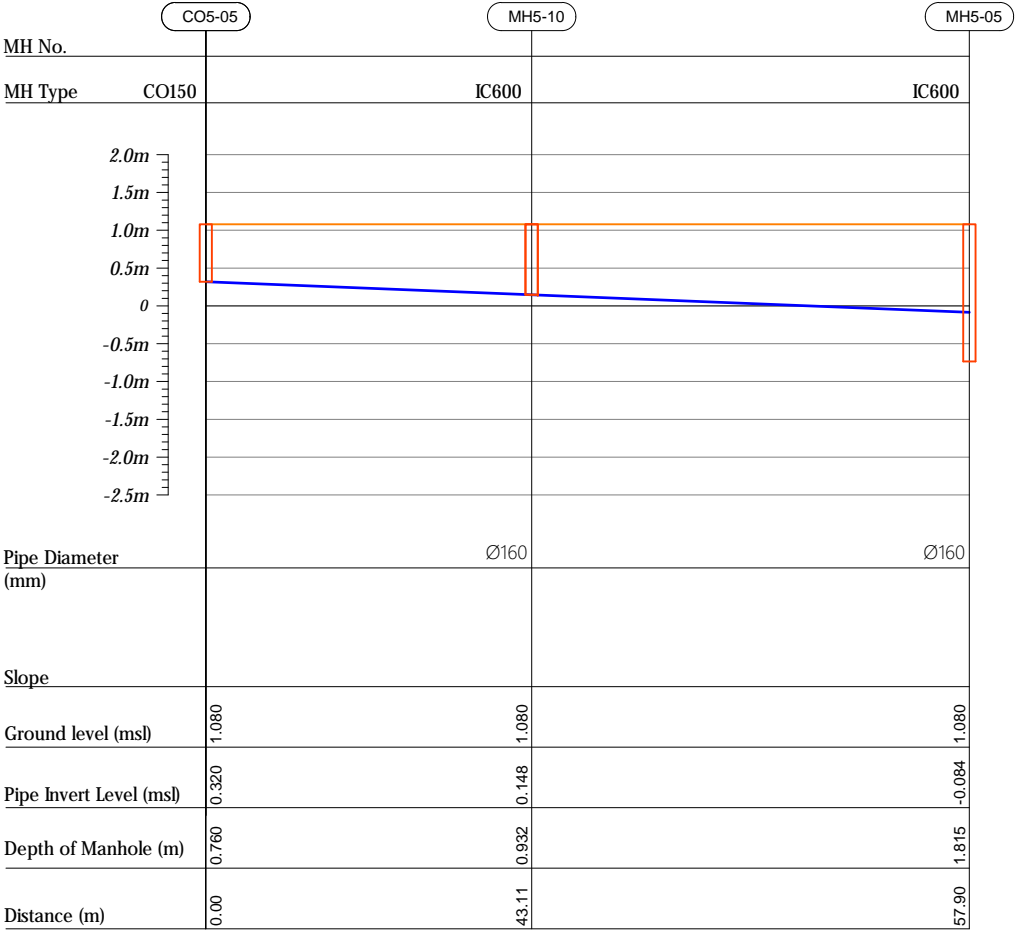
Client:  
Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives

 <b>EPOCH</b> ASSOCIATES	<b>FIBERBACK INFRA</b> <i>Making Infrastructure Happen</i>
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Drawn: A.R.W	Checked: M.S.S
Designed: F.I.A	Approved: L.W
Date: Aug 2020	SCALE (A3): 1:100
Project No:  01010101	Page:
Rev:  <i>R-01</i>	<i>PS5-03</i>

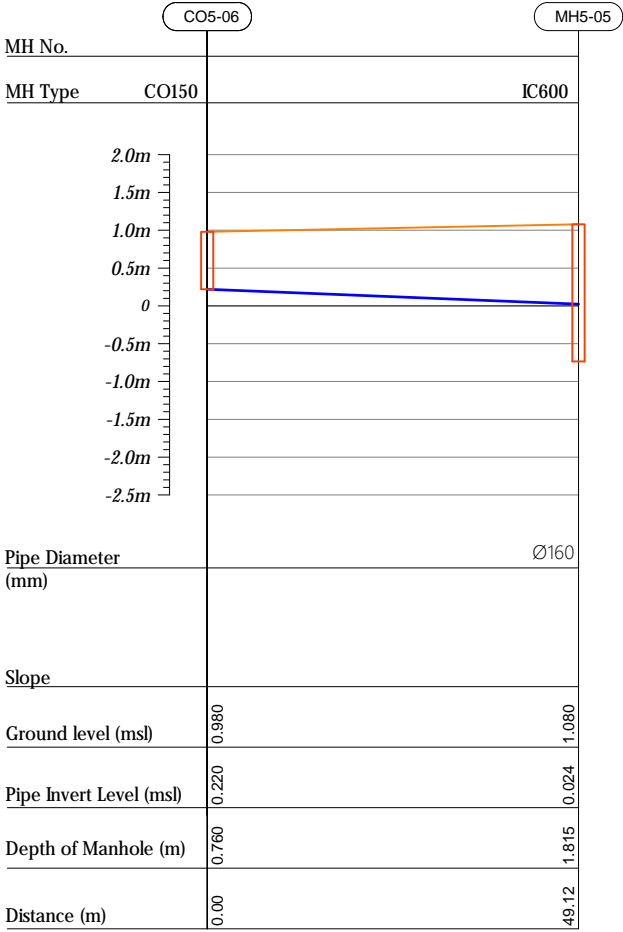
Profile 04



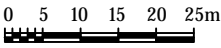
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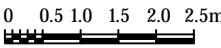
Profile 06



HORIZONTAL SCALE



VERTICAL SCALE



- CO160 — Cleanout Ø160
- IC600 — HDPE Manhole Ø600
- PS — Pump Station

R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6

Sub Title:  
Sewerage System in L.Hithadhoo

Client:  
Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives



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A: G. Rosary West,  
Hussuvehemaa Magu, Male', Maldives

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Drawn: A.R.W Checked: M.S.S

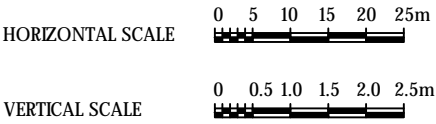
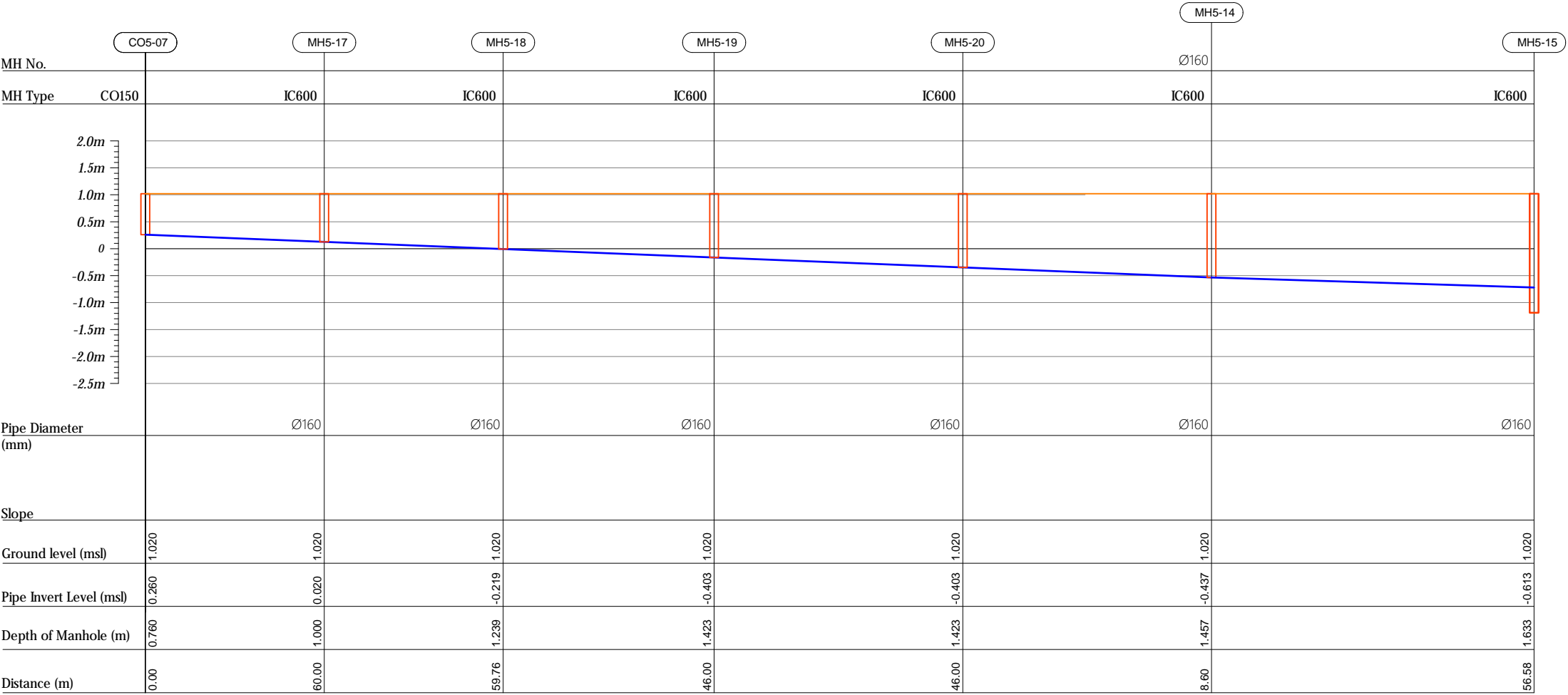
Designed: F.L.A Approved: L.W

Date: Aug 2020 SCALE (A3): 1:100

Project No: 01010101

Rev: R-01 Page: PS5-04

Profile 07



CO160 — Cleanout Ø160  
IC600 — HDPE Manhole Ø600  
PS — Pump Station

R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6

Sub Title:  
Sewerage System in L.Hithadhoo

Client:  
Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives



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Hussuvehemaa Magu, Male', Maldives

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Drawn: A.R.W Checked: M.S.S

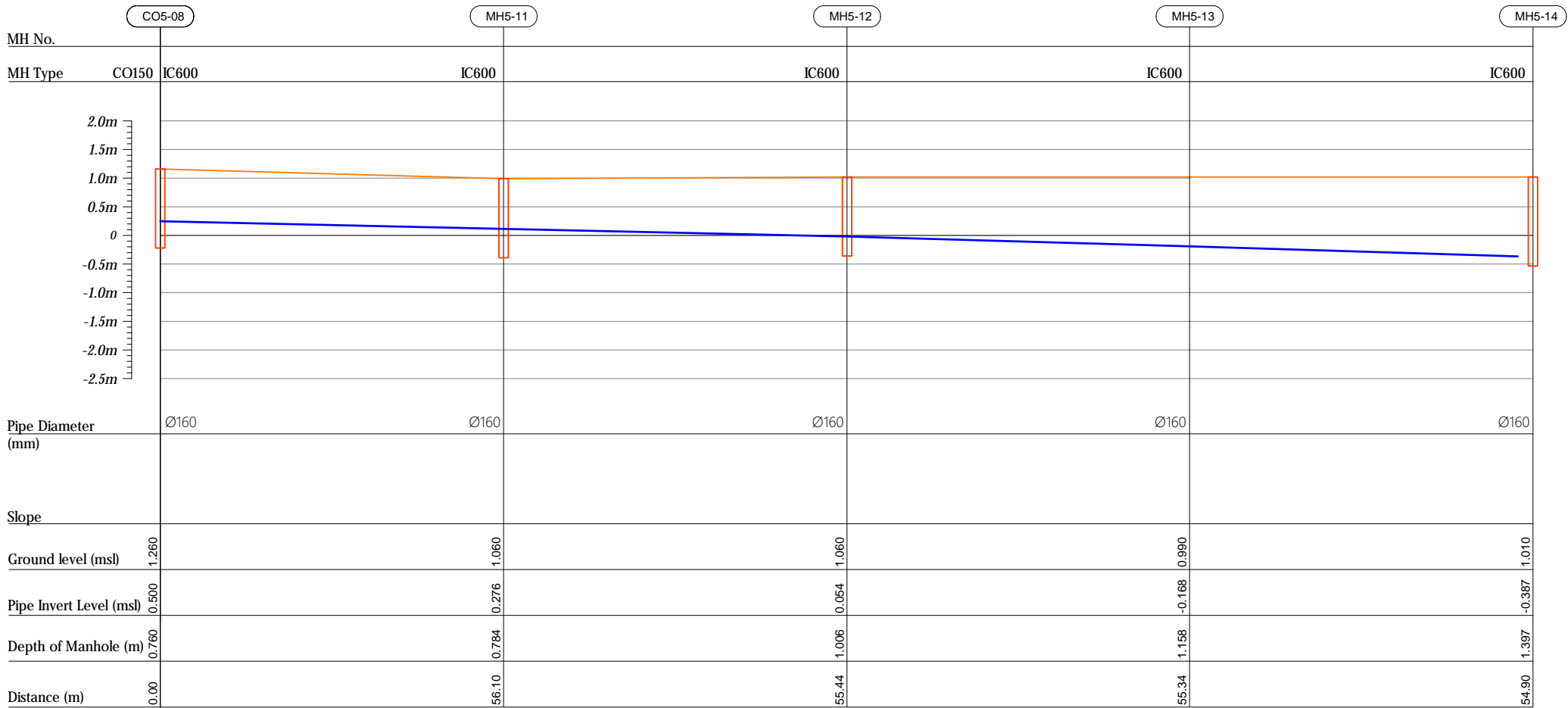
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Date: Aug 2020 SCALE (A3): 1:100

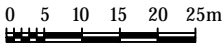
Project No: 01010101

Rev: R-01 Page: PS5-05

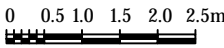
Profile 08



HORIZONTAL SCALE



VERTICAL SCALE



- CO160 — Cleanout Ø160  
IC600 — HDPE Manhole Ø600  
PS — Pump Station

R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6

Sub Title:  
Sewerage System in L.Hithadhoo

Client:  
Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives



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Maldivu Suvastruaktu Happa

Drawn: A.R.W. Checked: M.S.S.

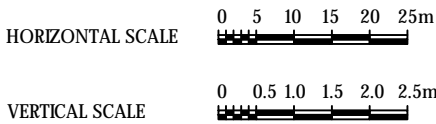
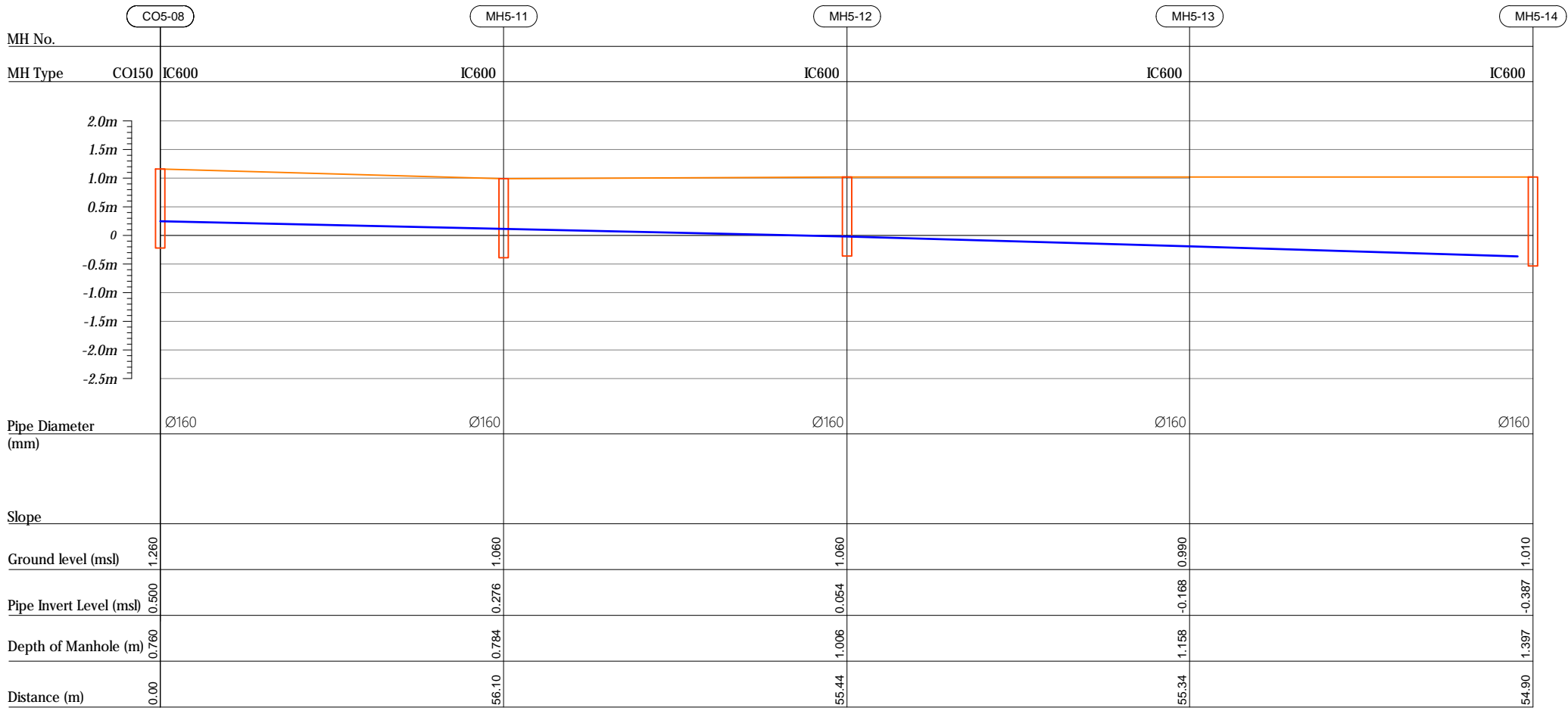
Designed: F.L.A. Approved: L.W.

Date: Aug 2020 SCALE (A3): 1:100

Project No: 01010101

Rev: R-01 Page: PS5-06

Profile 08



CO160 — Cleanout Ø160  
IC600 — HDPE Manhole Ø600  
PS — Pump Station

R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:  
*Consultancy Services for Survey,  
Design and EIA works of Water  
Supply and Sewerage Facilities in  
5 islands, Maldives - Package 6*

Sub Title:  
*Sewerage System in L.Hithadhoo*

Client:  
*Ministry of National Planning, Housing and  
Infrastructure, Republic of Maldives*



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Hussuvehemaa Magu, Male', Maldives

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Maldivu Infrastructure Happa

Drawn: A.R.W Checked: M.S.S

Designed: F.L.A Approved: L.W

Date: Aug 2020 SCALE (A3): 1:100

Project No: 01010101

Rev: R-01 Page: PS5-07