

CONSULTANCY SERVICES FOR SURVEY, DESIGN AND EIA WORKS OF WATER SUPPLY AND
SEWERAGE FACILITIES IN 6 ISLANDS, MALDIVES

PACKAGE 5

SEWERAGE SYSTEM OF M. NAALAAFUSHI, MALDIVES

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

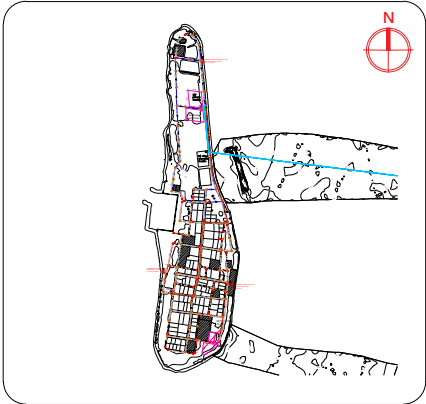
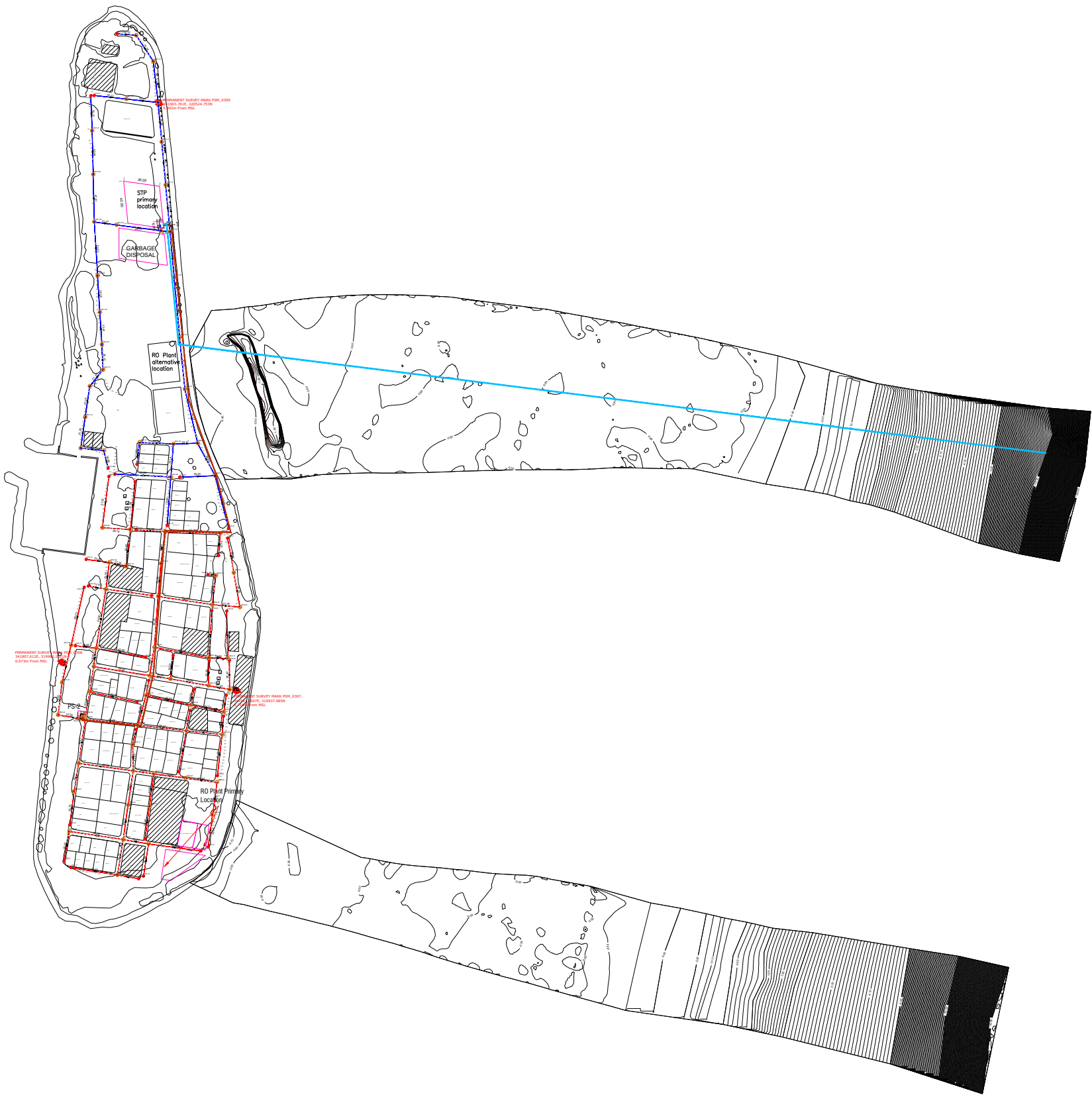


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Legend

- 160mm Ø uPVC PS1 Gravity Sewer Main (SN4, SDR41) - 1324 m
- 160mm Ø uPVC PS2 Gravity Sewer Main (SN4, SDR41) - 2739 m
- 160 mm Ø HDPE Pumping Main (PE100, PN16, SDR11) - 647 m
- 160 mm Ø HDPE Sea Outfall Pipe (PE100, PN16, SDR11) - 136 m on land, 861 m offshore, 997 m total
- 600mm Ø PE/PP Maintenance Shaft - 77 nos
- 160mmØ uPVC Clean Out - 43 nos
- PERMANENT SURVEY MARK PSM_0307 341981.3607E, 319937.985N 0.718m From MSL
- PERMANENT SURVEY MARK PSM_0308 341807.612E, 319966.2321N 0.673m From MSL
- PERMANENT SURVEY MARK PSM_0309 341903.701E, 320524.753N 0.802m 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 SN4 & 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:
 - a) CO2-33 and CO1-04
 - b) CO2-25 and MH2-20

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
Consultancy Services for Survey, Design and EIA works of Water Supply and Sewerage Facilities in 6 islands, Maldives – Package 5
Sewerage System in M. Naalaafushi

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

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Maldives Infrastructure & Planning

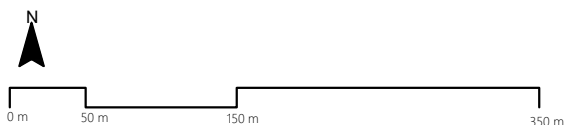
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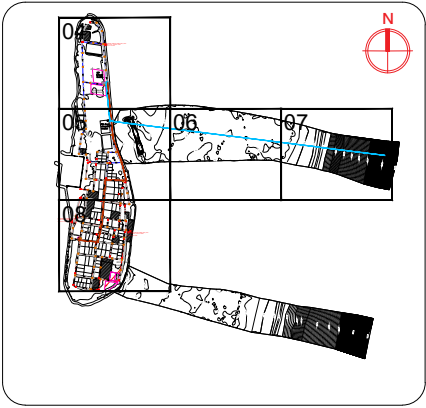
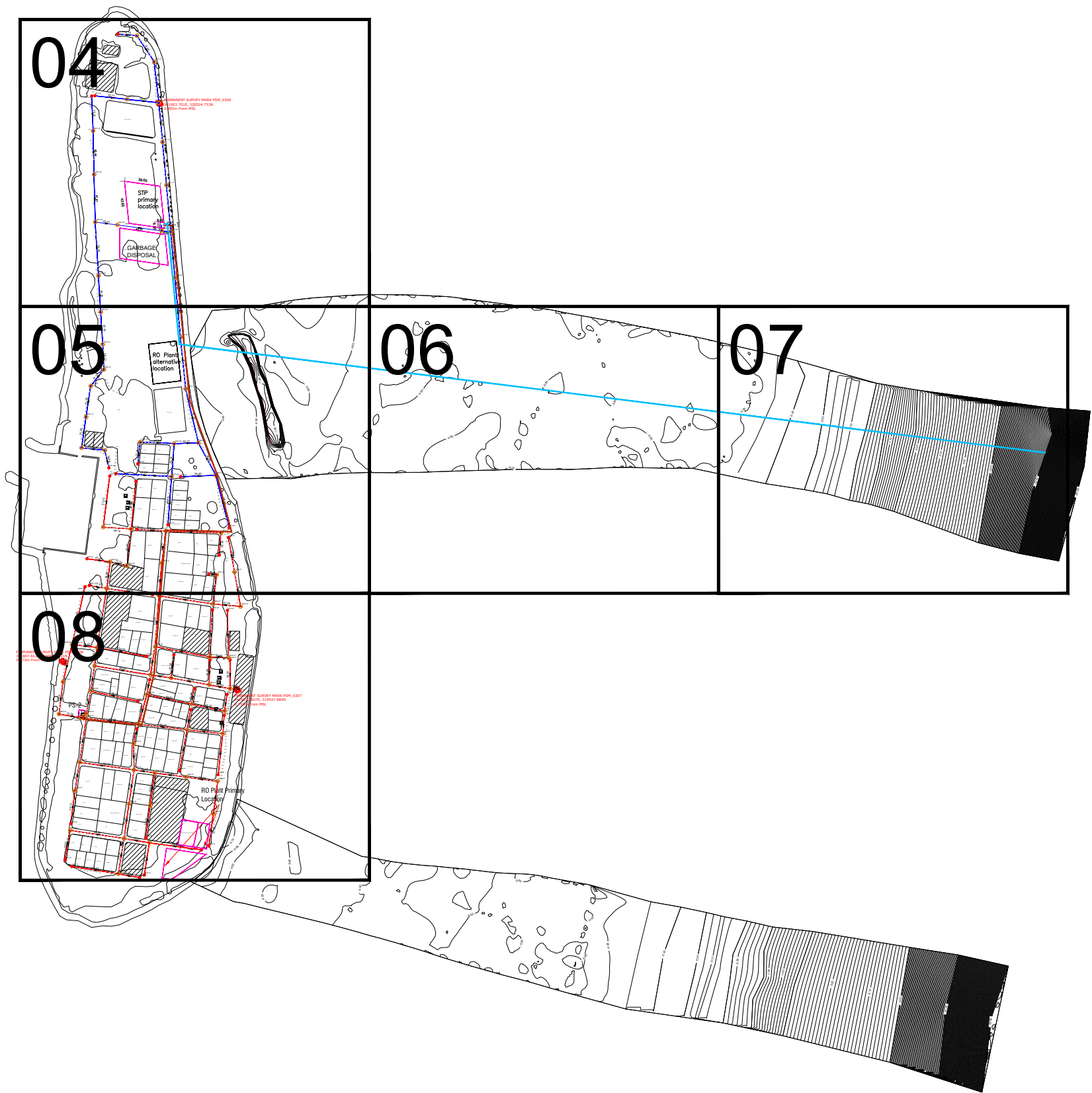
- PS-1 Catchment Area
-  PS-2 Catchment Area

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Legend

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- 160mm Ø uPVC PS2 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)

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Consultancy Services for Survey, Design and EIA works of Water Supply and Sewerage Facilities in 6 islands, Maldives – Package 5 Sewerage System in M. Naalaafushi

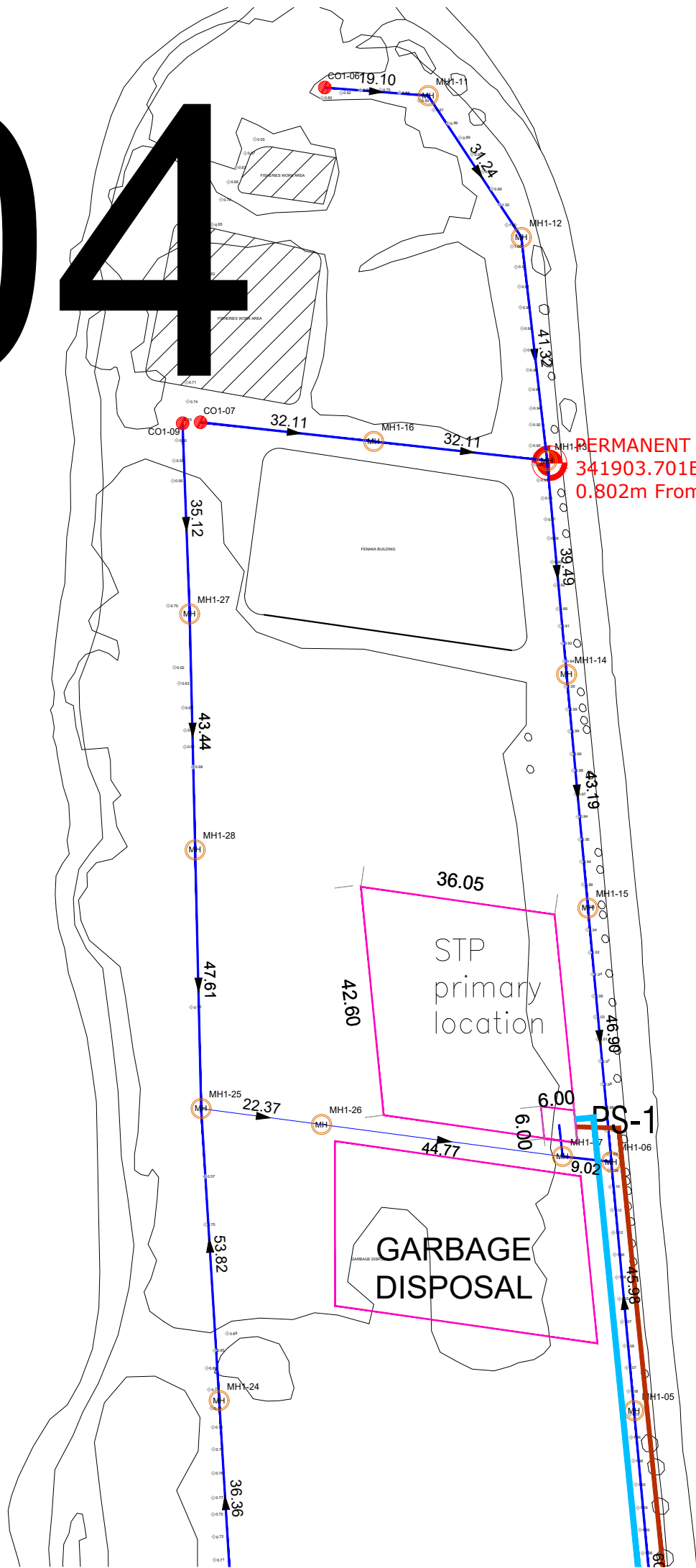
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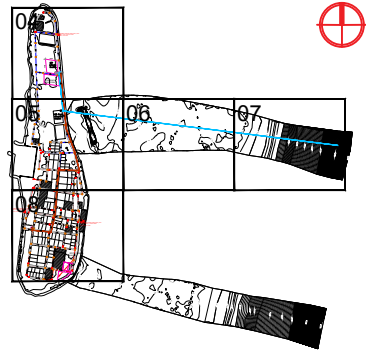
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04



PERMANENT SURVEY MARK PSM_0309
341903.701E, 320524.753N
0.802m From MSL



Legend

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

Sub Title:
Sewerage System in M. Naalaafushi

Client:
Ministry of National Planning, Housing and
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Maldivu Infomacros Hopper

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05



Legend

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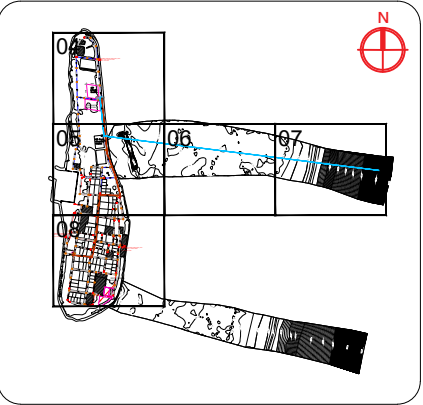
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A map of the North Pacific Ocean region, showing the coastline of North America on the left and the Aleutian Islands extending from the top left. A thick blue line runs diagonally from the upper left towards the lower right. The number '06' is printed in large black font near the top left end of this line. Several contour lines are drawn, with labels '-0.60' appearing in four locations and '-0.50' appearing once near the bottom center. The map uses a light gray background with black outlines for landmasses and contour lines.







Legend



	160mm Ø uPVC PS1 Gravity Sewer Main (SN4, SDR41)
	160mm Ø uPVC PS2 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)

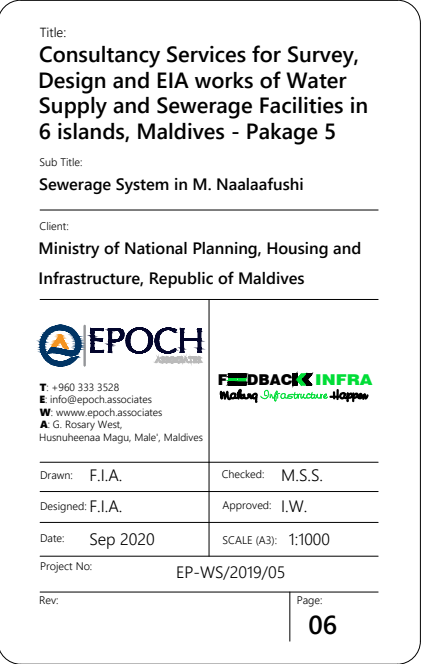
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- | | |
|---|---|
|  | 160mm Ø uPVC PS1 Gravity Sewer Main (SN4, SDR41) |
|  | 160mm Ø uPVC PS2 Gravity Sewer Main (SN4, SDR41) |
|  | 600mm Ø PE/PP Maintenance Shaft |
|  | 160mmØ uPVC Clean Out |
|  | 160 mm Ø HDPE Pumping Main (PE100, PN16, SDR11)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



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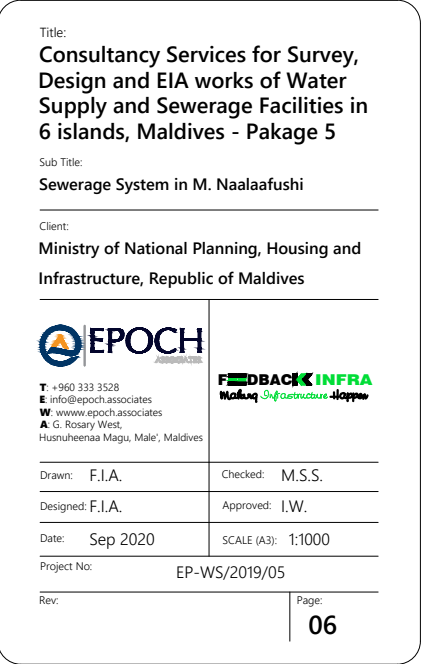
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Sub Title: Sewerage System in M. Naalaafushi	
Client: Ministry of National Planning, Housing and Infrastructure, Republic of Maldives	
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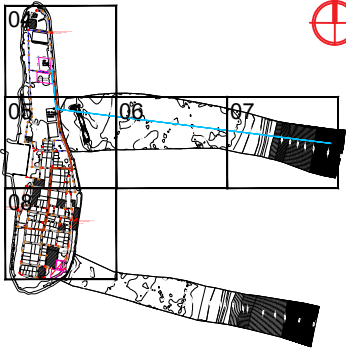
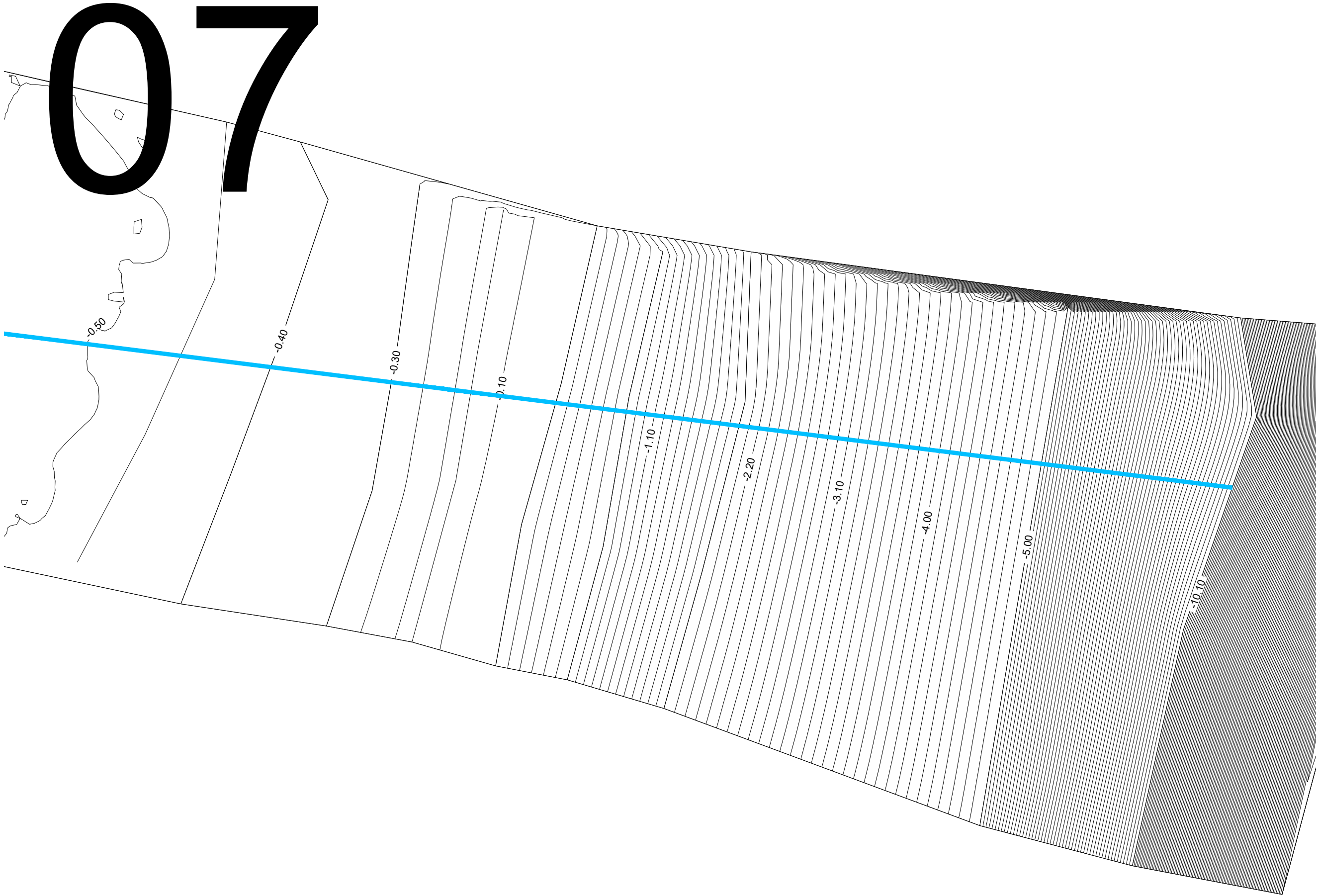
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Legend

- 160mm Ø uPVC PS1 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS2 Gravity Sewer Main (SN4, SDR41)
- 600mm Ø PEPP 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)

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

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Sewerage System in M. Naalaafushi

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



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08

PERMANENT SURVEY MARK PSM_0308
1807.612E, 319967.21N
673m From MSL



PERMANENT SURVEY MARK PSM_0307
341981.3607E, 319937.985N
0.718m From MSL

R0 Plant Primary Location

Legend

- 160mm Ø uPVC PS1 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS2 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)
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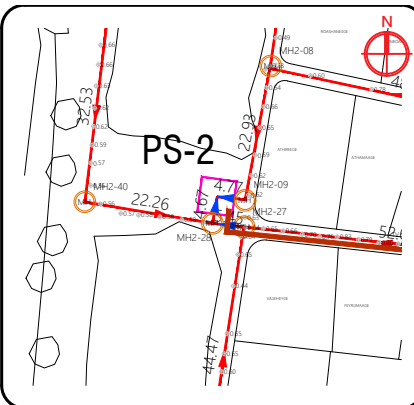
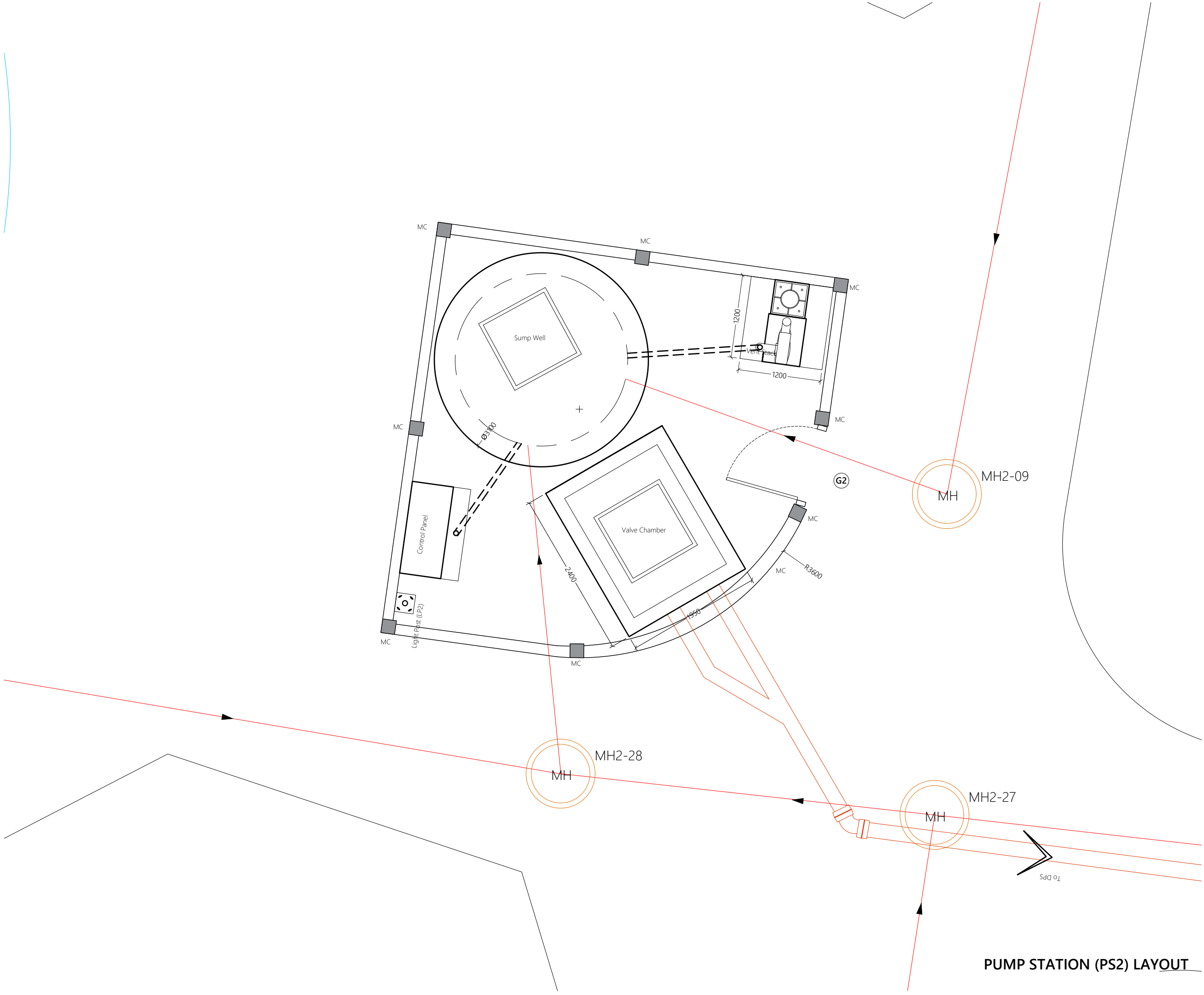
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Maldivian Infrastructure Development

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Legend

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

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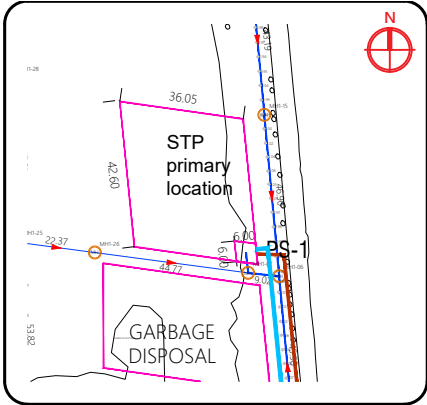
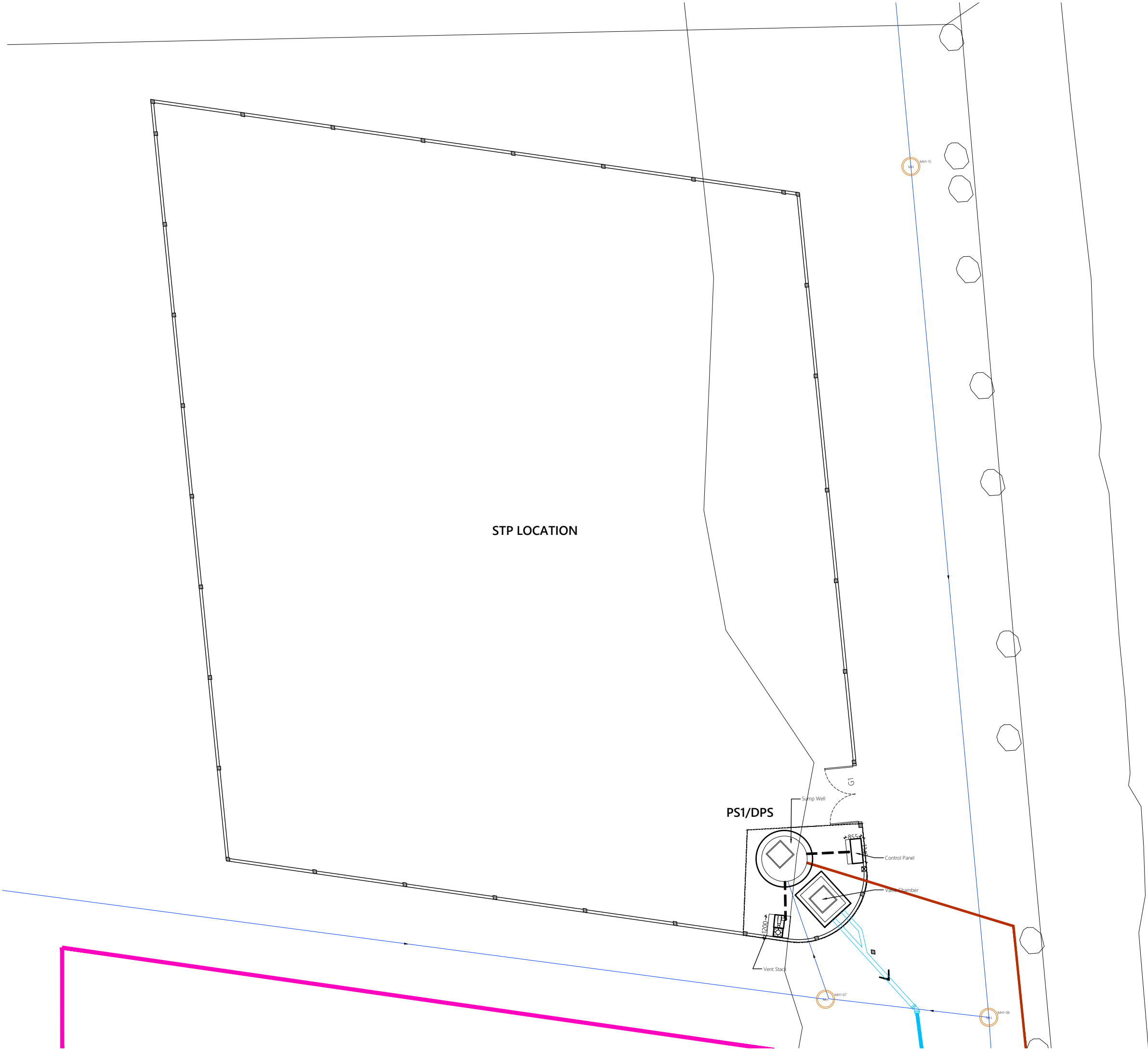
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Working with you to improve infrastructure

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PUMP STATION (PS2) LAYOUT



Legend

- 160mm Ø uPVC PS1 Gravity Sewer Main (SN4, SDR41)
- 110 mm Ø HDPE Pumping Main (PE100, PN16, SDR11)
- 160 mm Ø HDPE Sea Outfall Pipe (PE100, PN16, SDR11)

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



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

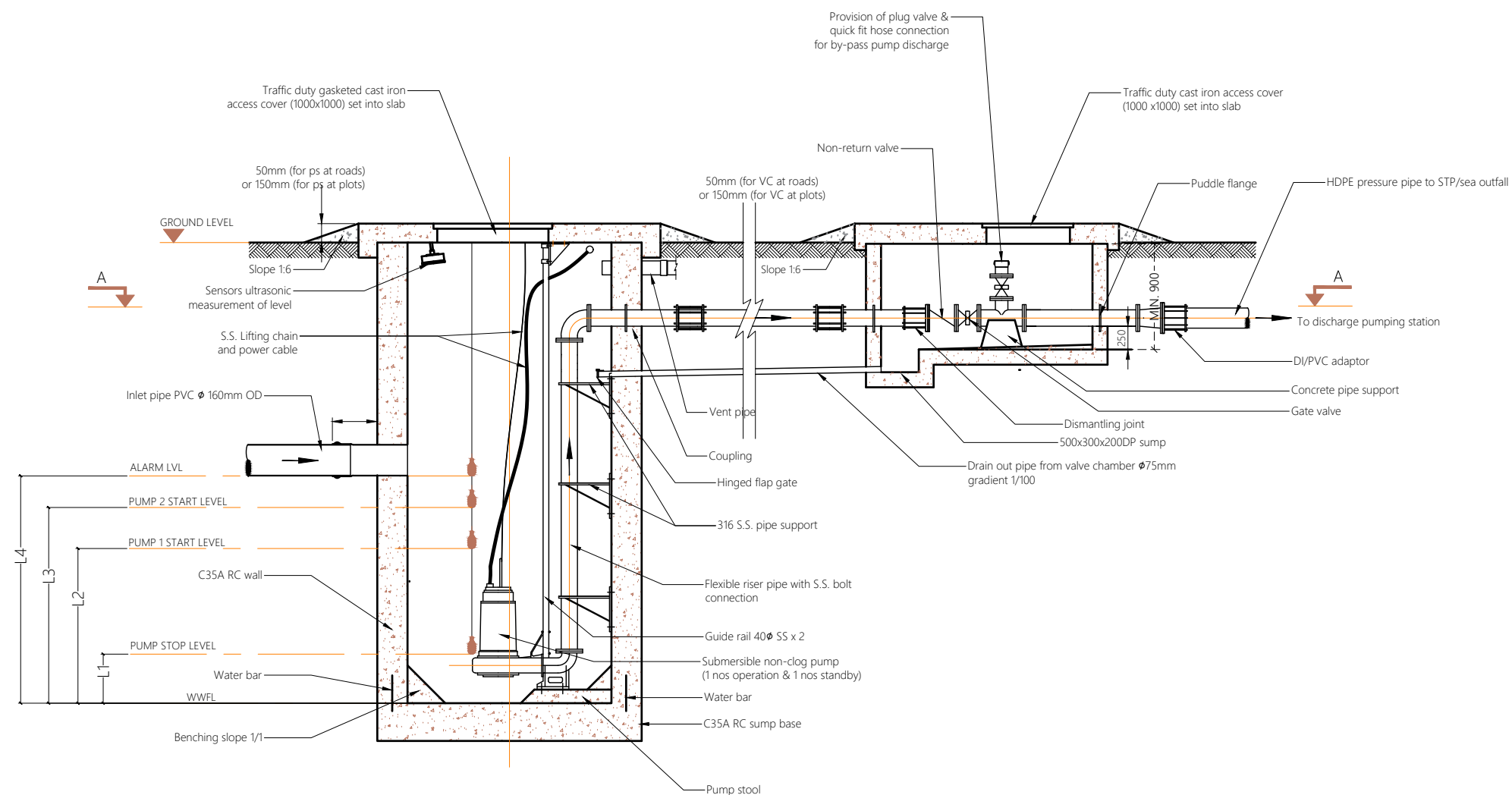
Designed: F.I.A. Approved: I.W.

Date: Sep 2020 SCALE (A3): 1:200

Project No: EP-WS/2019/05

Rev: Page: W-(2)

STP/DPS LAYOUT
1:200



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 polyethylene.

List of main instruments of pumping station:

1. Sewage pumps (1 duty & 1 standby)
2. Power cable
3. Auto-coupling with 400 SS 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.	Date	Revision Description	Drawn	Chkd	App

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

Sub Title:
Sewerage System in M. Naalaafushi

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.
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Designed: F.I.A.	Approved: I.W.
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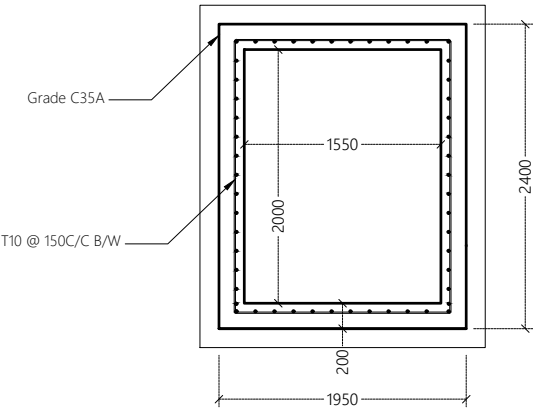
Date: Sep 2020	SCALE (A3): NTS
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Project No: FP-WS/2019/05

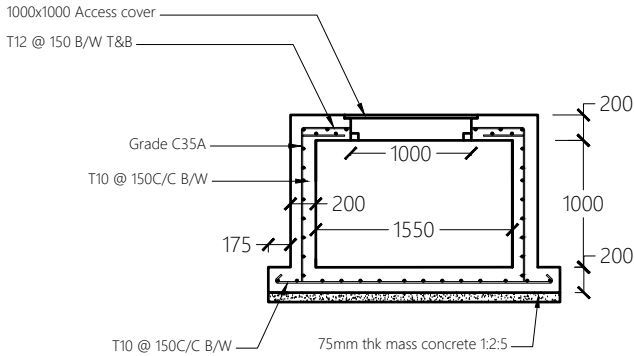
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Rev:	Page: W-(3
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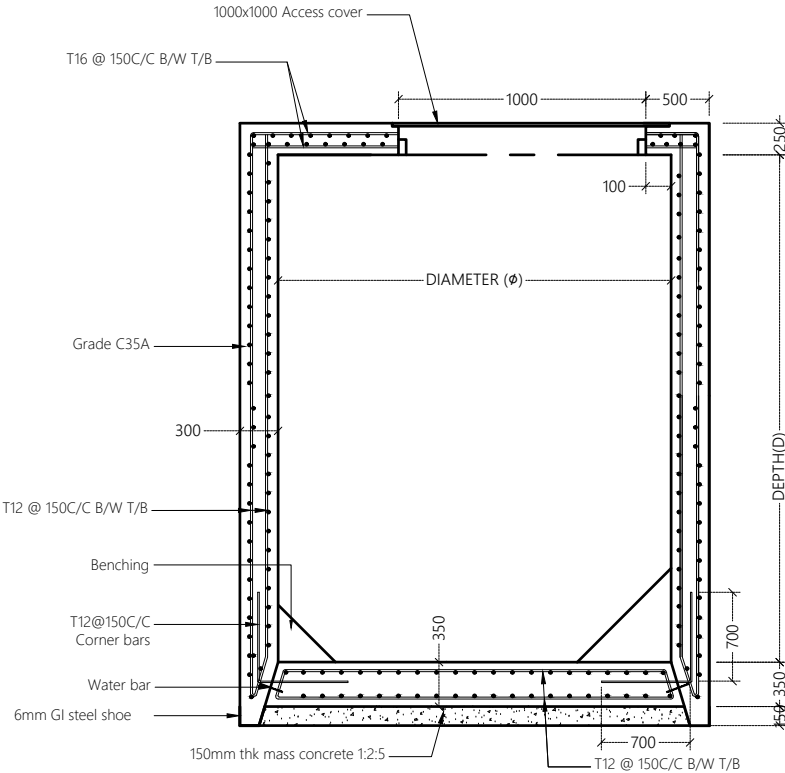
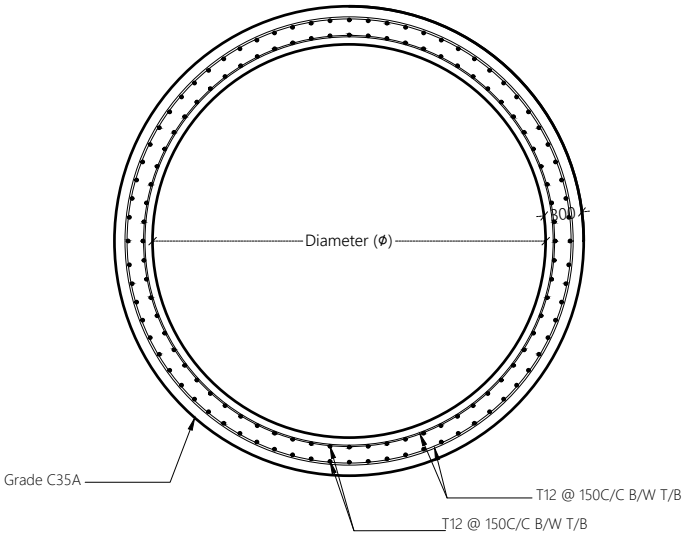
PLAN VIEW



SECTION



VALVE CHAMBER DETAIL



PUMP STATION DETAIL

Pump Station	Diameter (φ)	Depth (D)	Inlet Depth
PS1/ DPS	2.5m	3.20m	2.477m
PS2	2.5m	3.30m	2.075m, 1.823m

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.
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- List of main instruments of pumping station:
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 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 6 islands, Maldives - Package 5

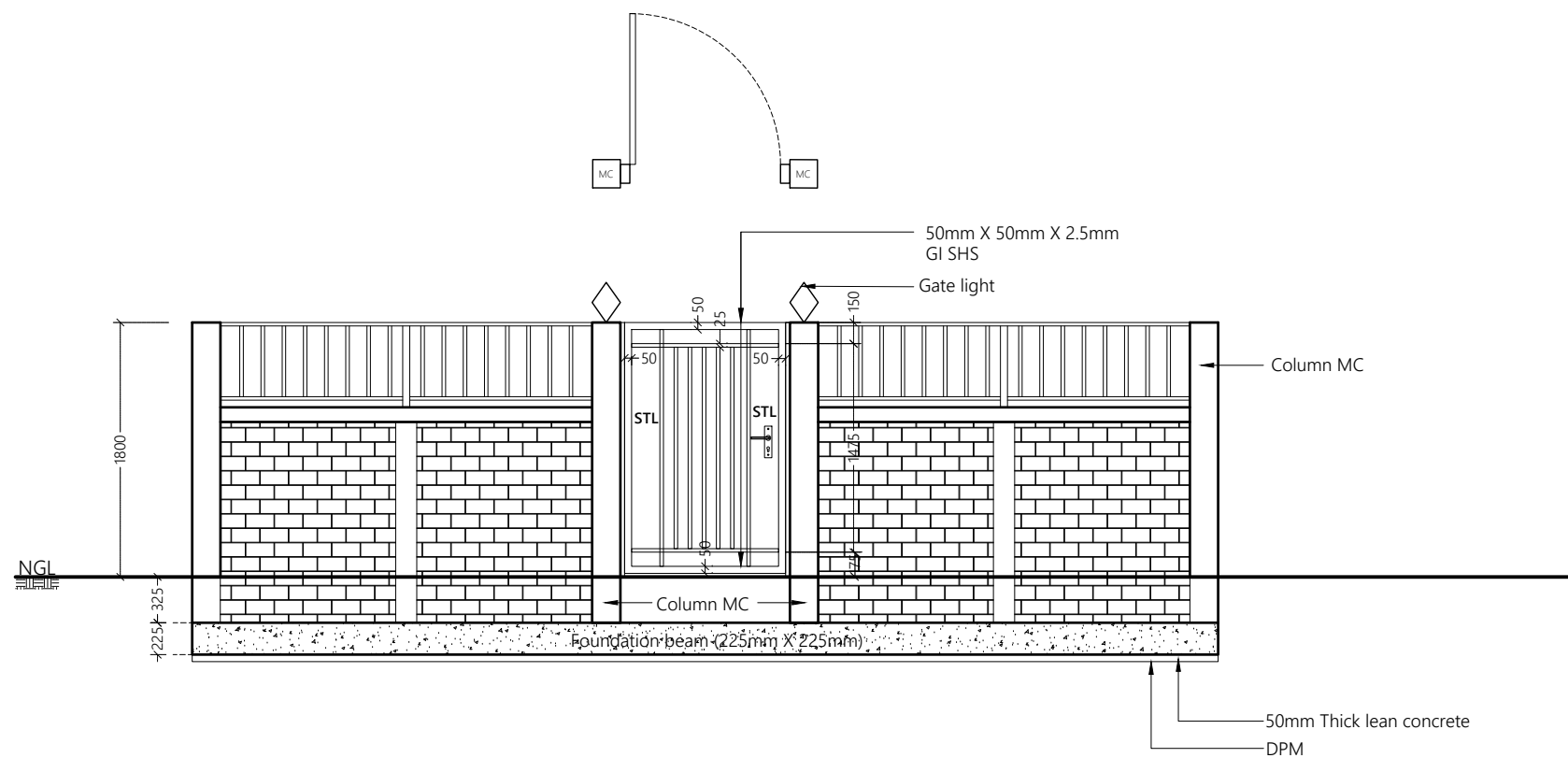
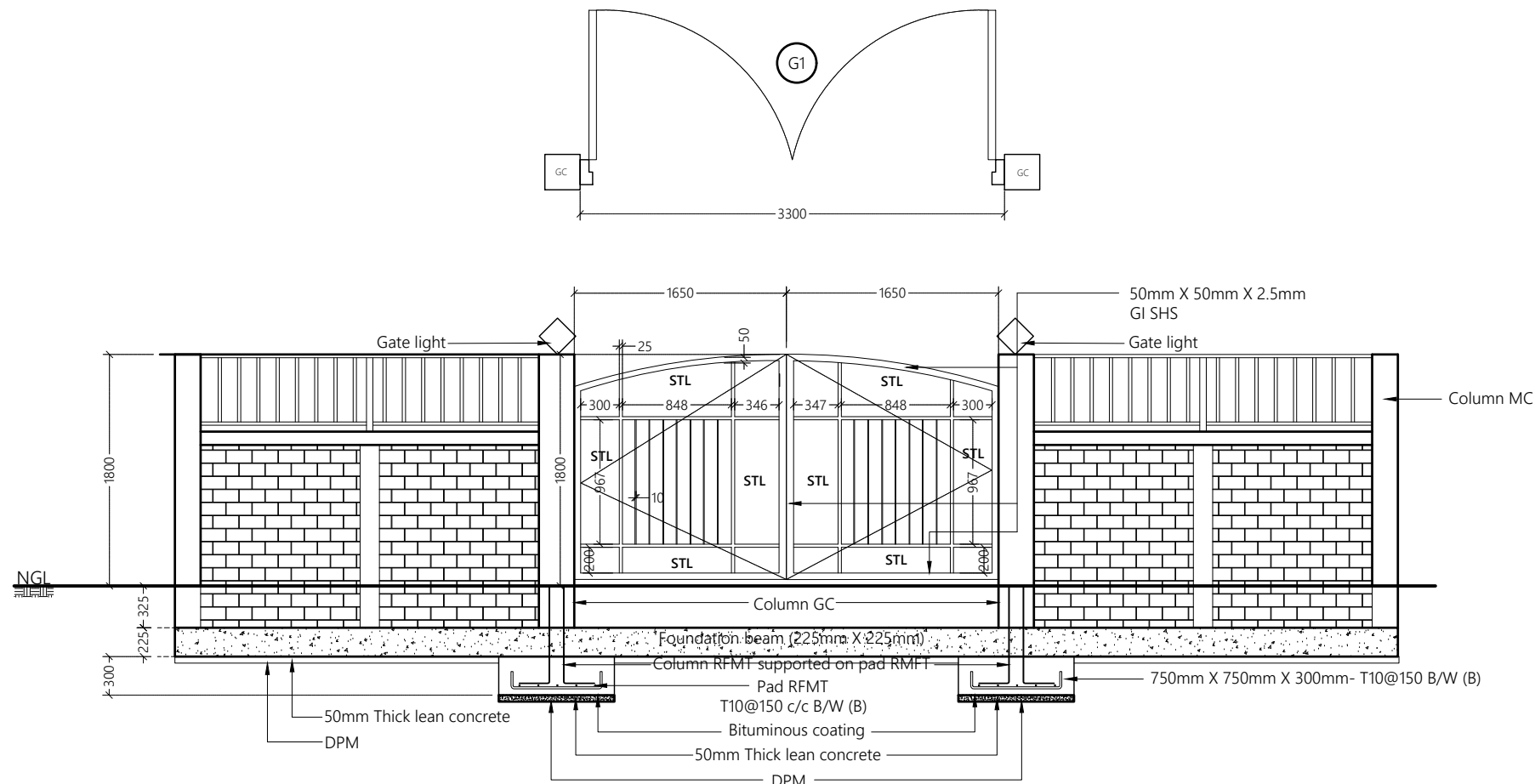
Sub Title:
Sewerage System in M. Naalaafushi

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

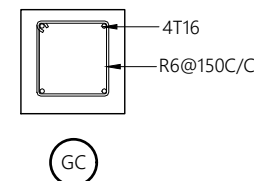
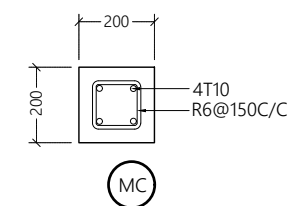
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INFRA
Maldives
Sustainable Infrastructure Development

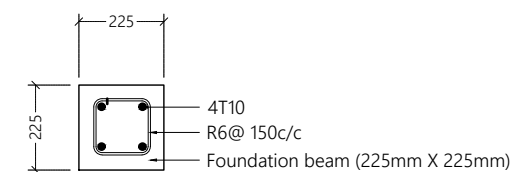
Drawn: F.I.A.	Checked: M.S.S.
Designed: F.I.A.	Approved: I.W.
Date: Sep 2020	SCALE (A3): NTS
Project No: EP-WS/2019/05	Rev: W-(5)



GATE DETAILS
1:50



COLUMN DETAILS
1:20



FOUNDATION BEAM DETAIL
1:20



Legend

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

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

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

Sub Title:
Sewerage System in M. Naalaafushi

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

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FEEDBACK INFRA
Maldives Infrastructure Support

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

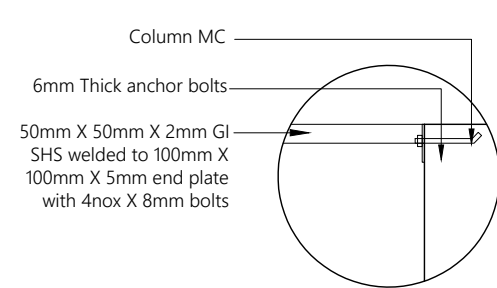
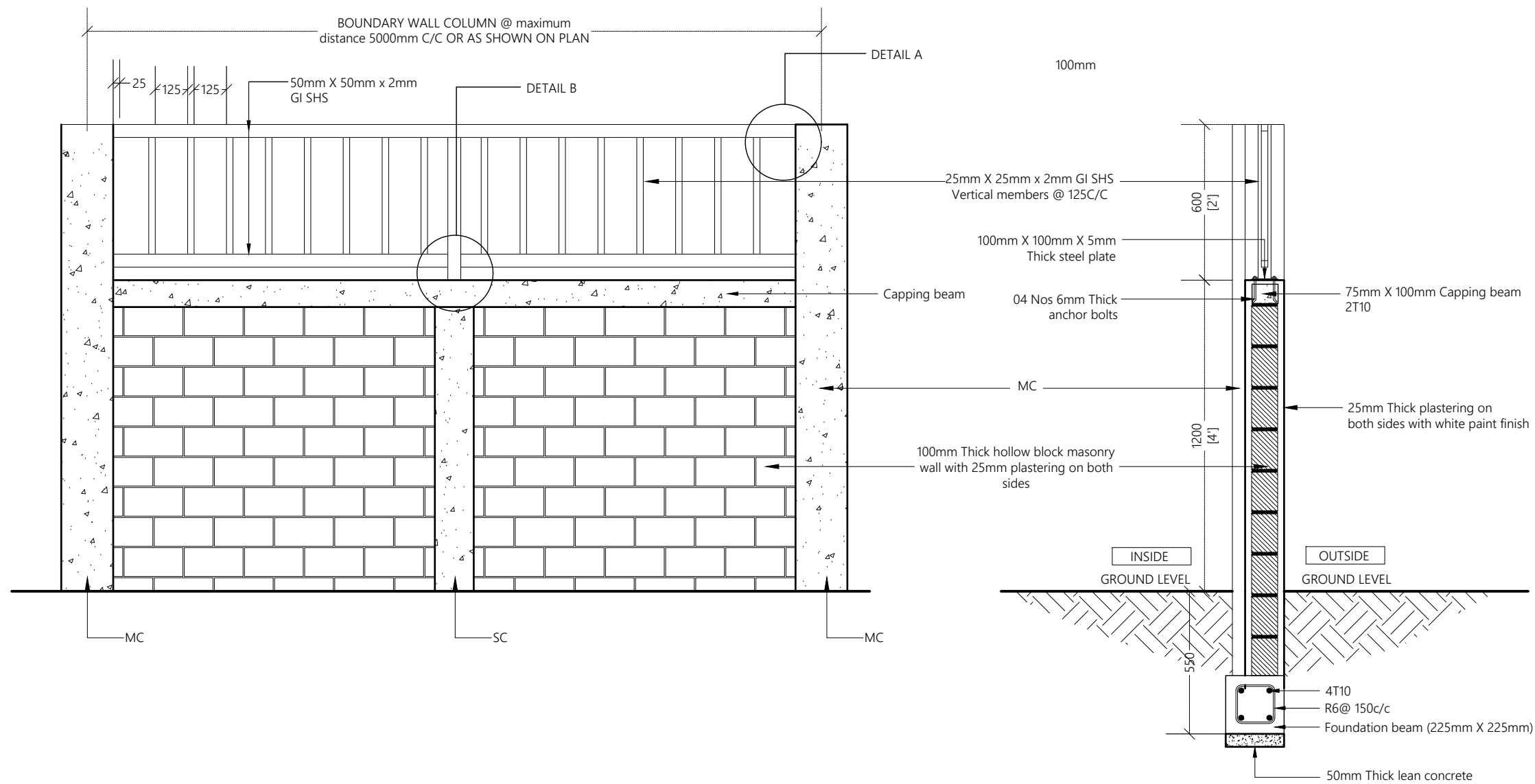
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Date: Sep 2020 SCALE (A3):

Project No: EP-WS/2019/05

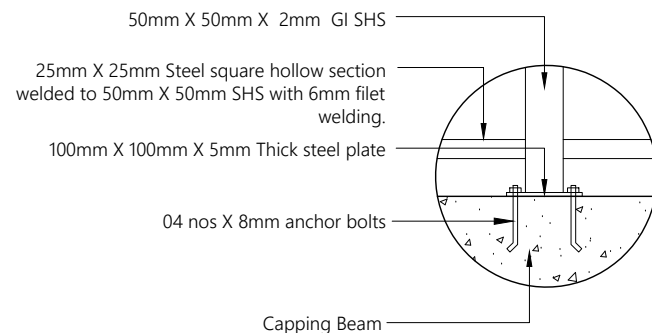
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W-(6)



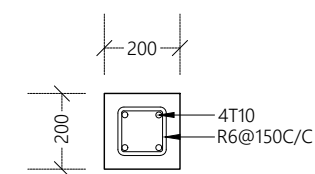
DETAIL A

1:10

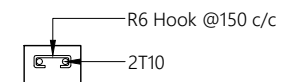


DETAIL B

1:10



MAIN COLUMN
@ maximum distance 5000mm C/C



STIFFENER COLUMN
(in between two main columns)

BOUNDARY WALL AND FENCING DETAILS

1:20



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

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

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

Sub Title:
Sewerage System in M. Naalaafushi

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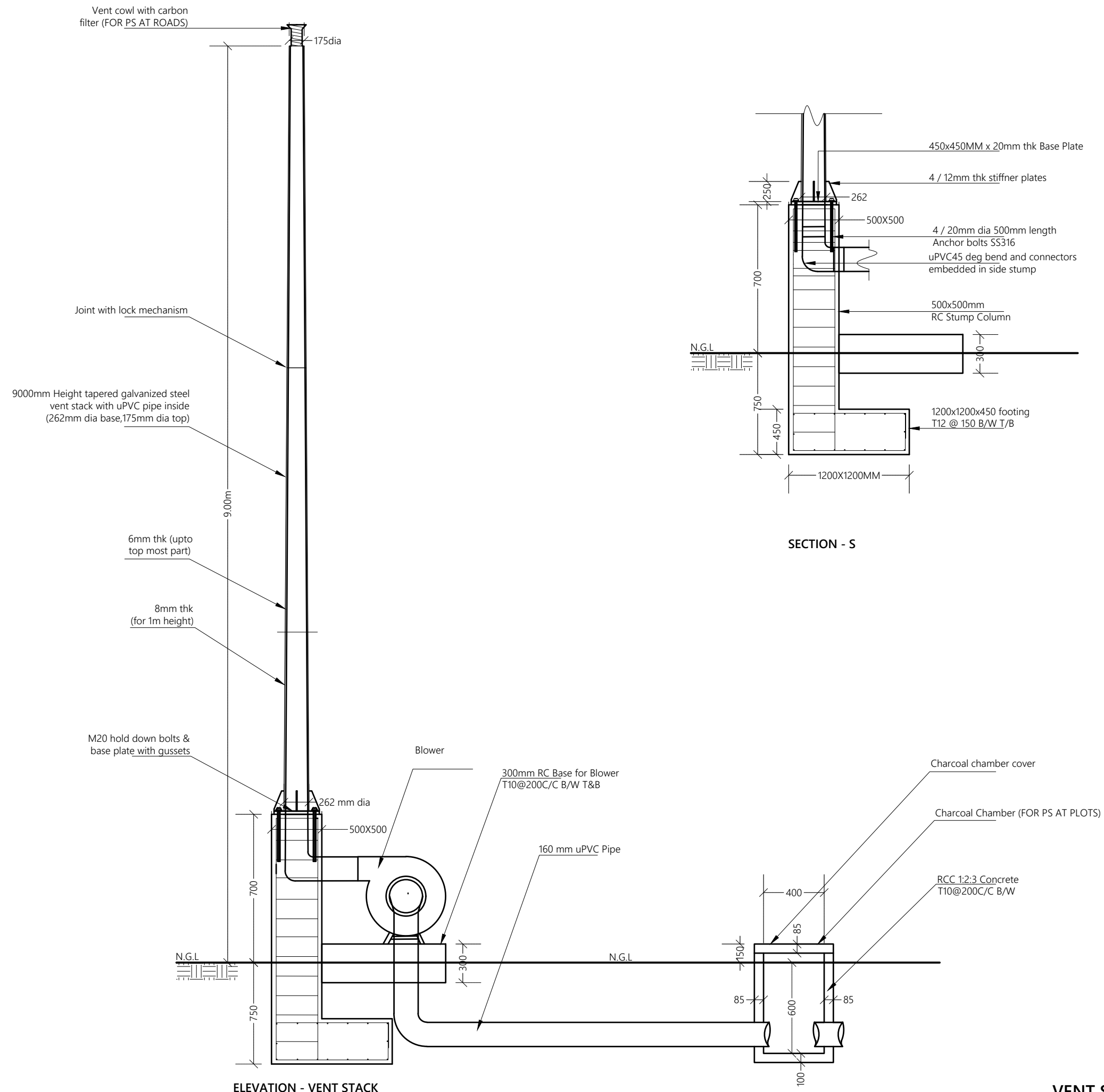
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Date: Sep 2020 SCALE (A3): 1:20

Project No: EP-WS/2019/05

Rev: Page:

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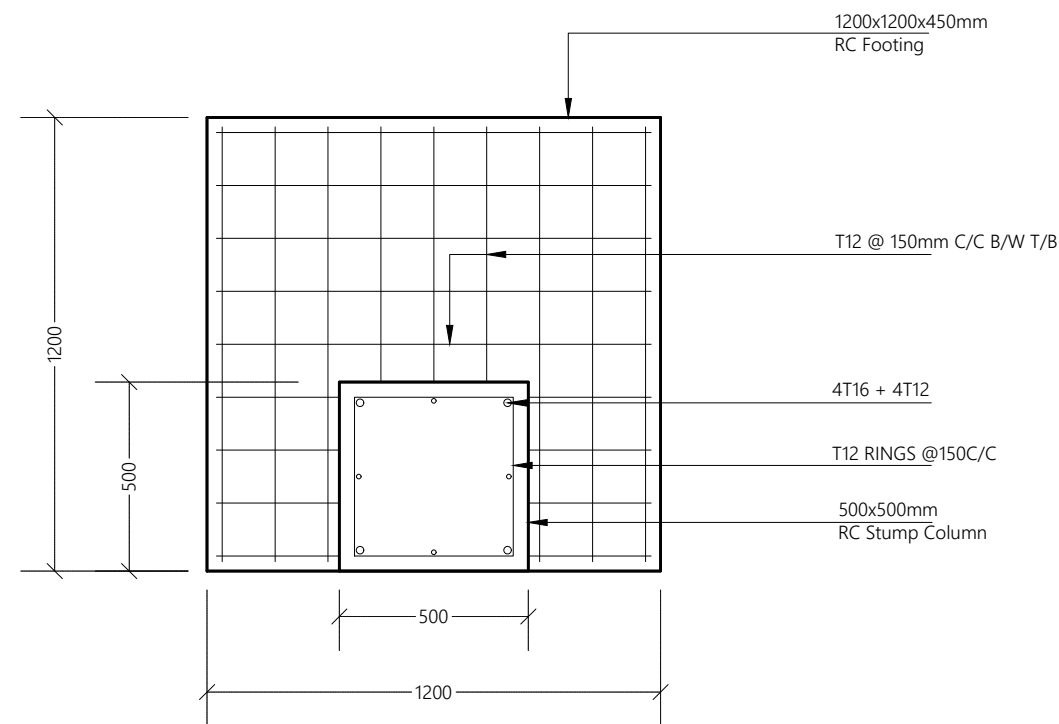


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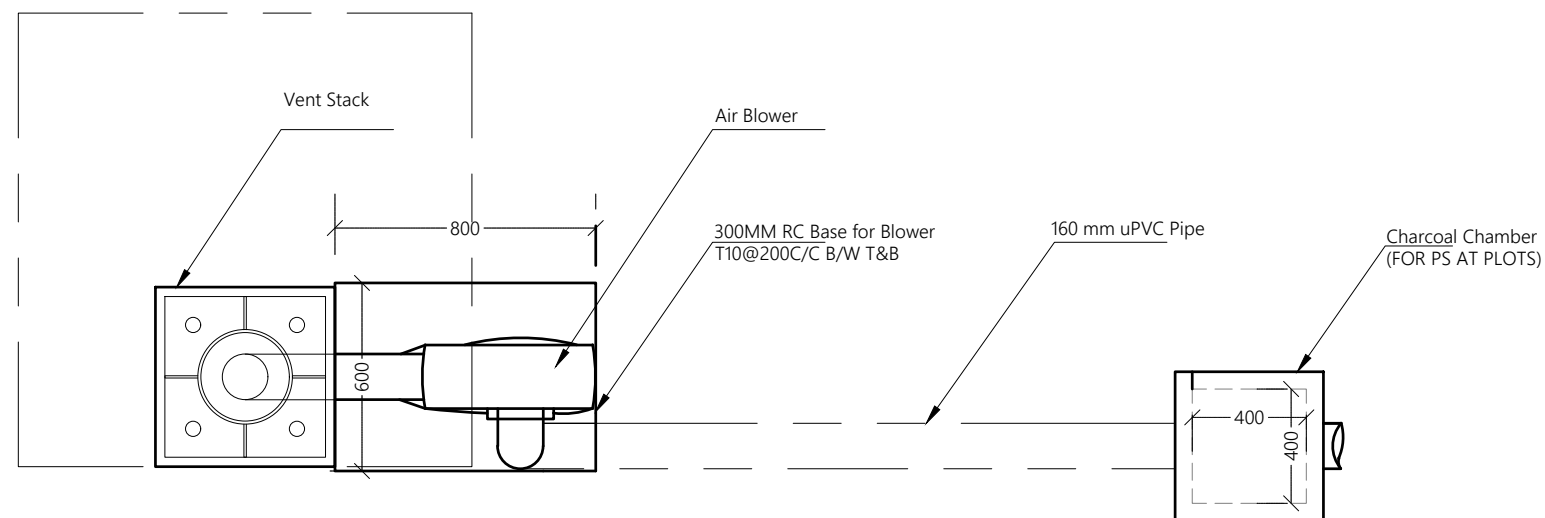
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Rev:
Page:

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FOOTING & STUMP DETAILS OF VENT STACK



AIR BLOWER DETAILS (Plan View)

VENT STACK AND AIR BLOWER DETAILS

NTS



Legend

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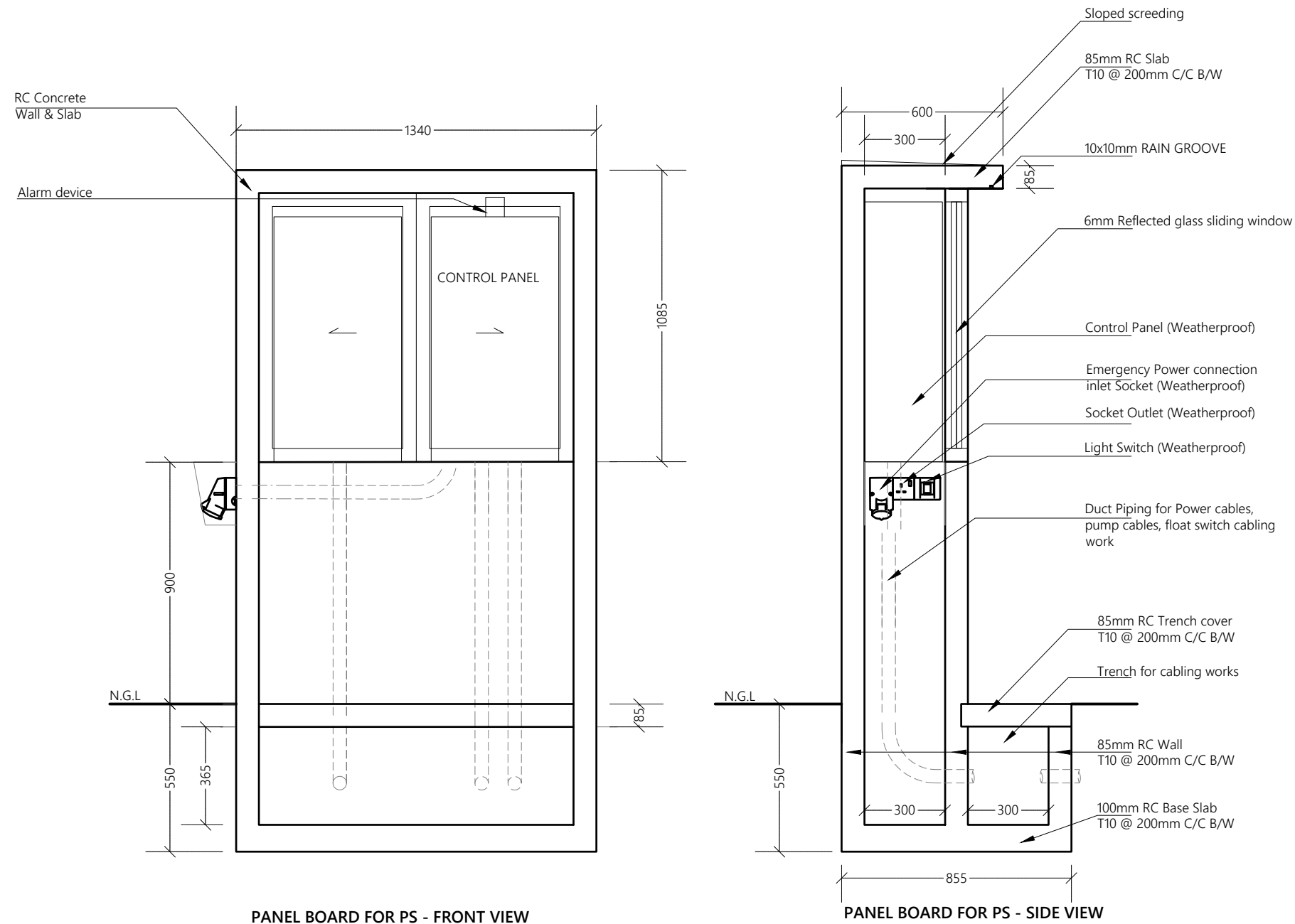
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Consultancy Services for Survey, Design and EIA works of Water Supply and Sewerage Facilities in 6 islands, Maldives - Package 5

Sub Title:
Sewerage System in M. Naalaafushi

Client:
Ministry of National Planning, Housing and Infrastructure, Republic of 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/2019/05	Page: W-(9)



CONTROL PANEL BOARD 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 6 islands, Maldives - Package 5

Sub Title:
Sewerage System in M. Naalaafushi

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

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FEEDBACK INFRA
Working with you to improve your infrastructure

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/2019/05	
Rev:	Page: W-(10)



LIGHT POST DETAILS

NTS



Legend

[illegible]

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

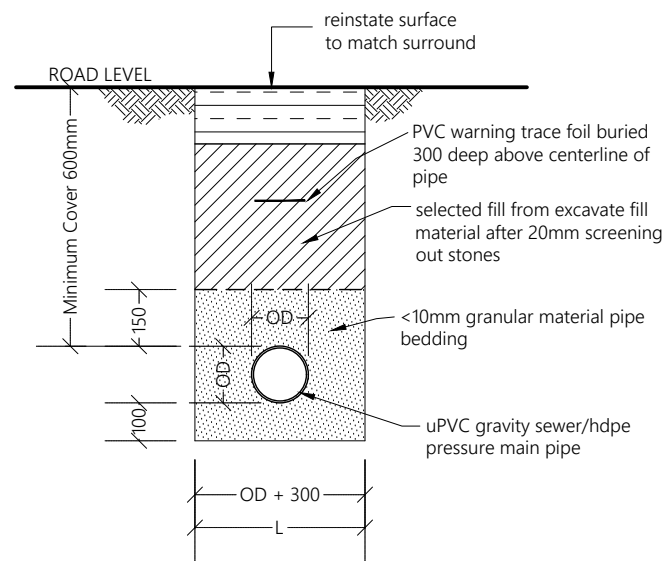
Sewerage System in M. Naalaafushi

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

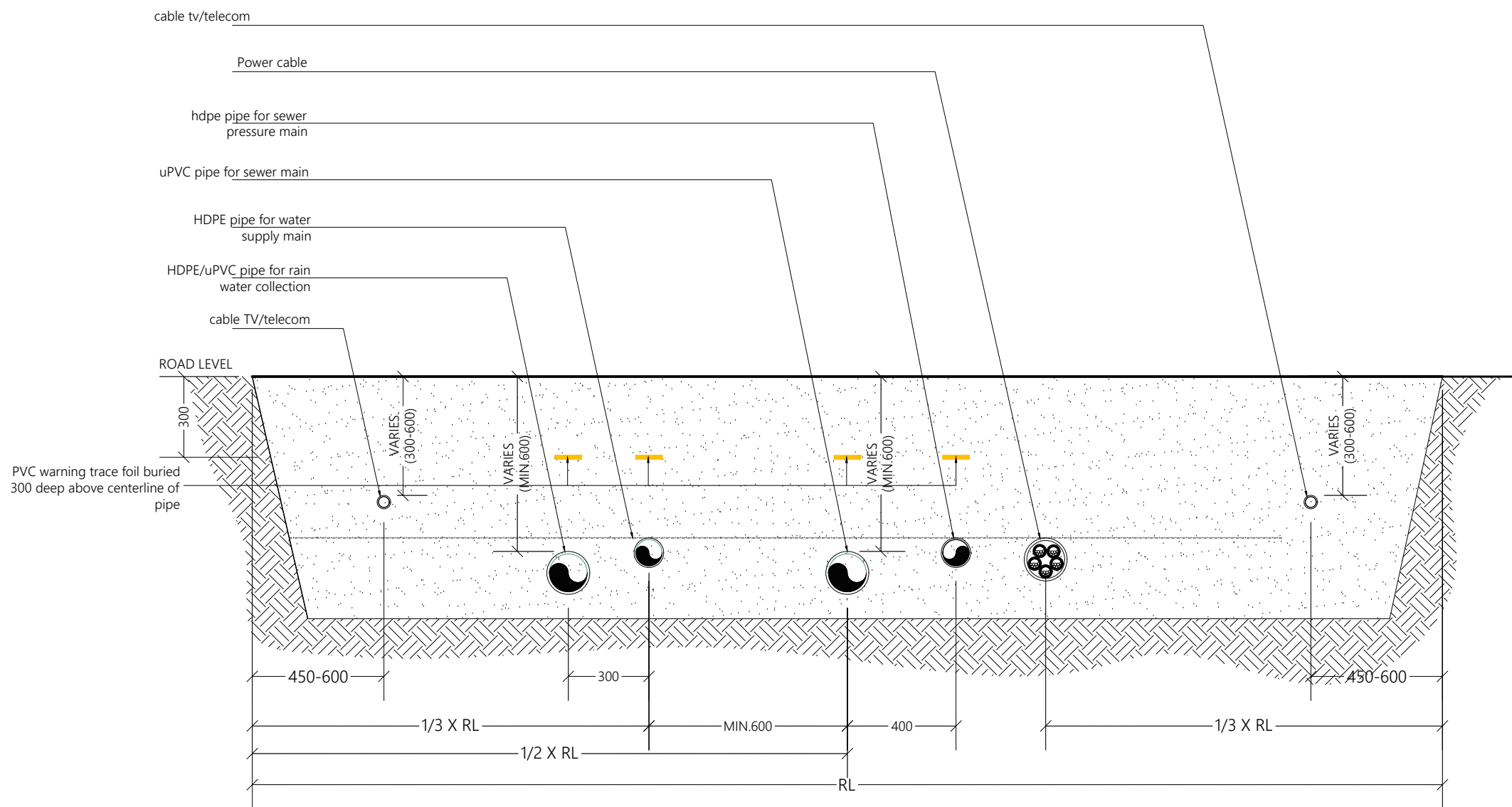


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Designed: F.I.A.	Approved: I.W.
Date: Sep 2020	SCALE (A3): NTS
Project No: EP-WS/2019/05	
Rev:	Page:

Page:
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TRENCH & BEDDING DETAILS



TYPICAL ROAD SECTION

TRENCH AND BEDDING DETAILS

1:20

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
6 Islands, Maldives - Package 5**

Sub Title:
Sewerage System in M. Naalaafushi

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



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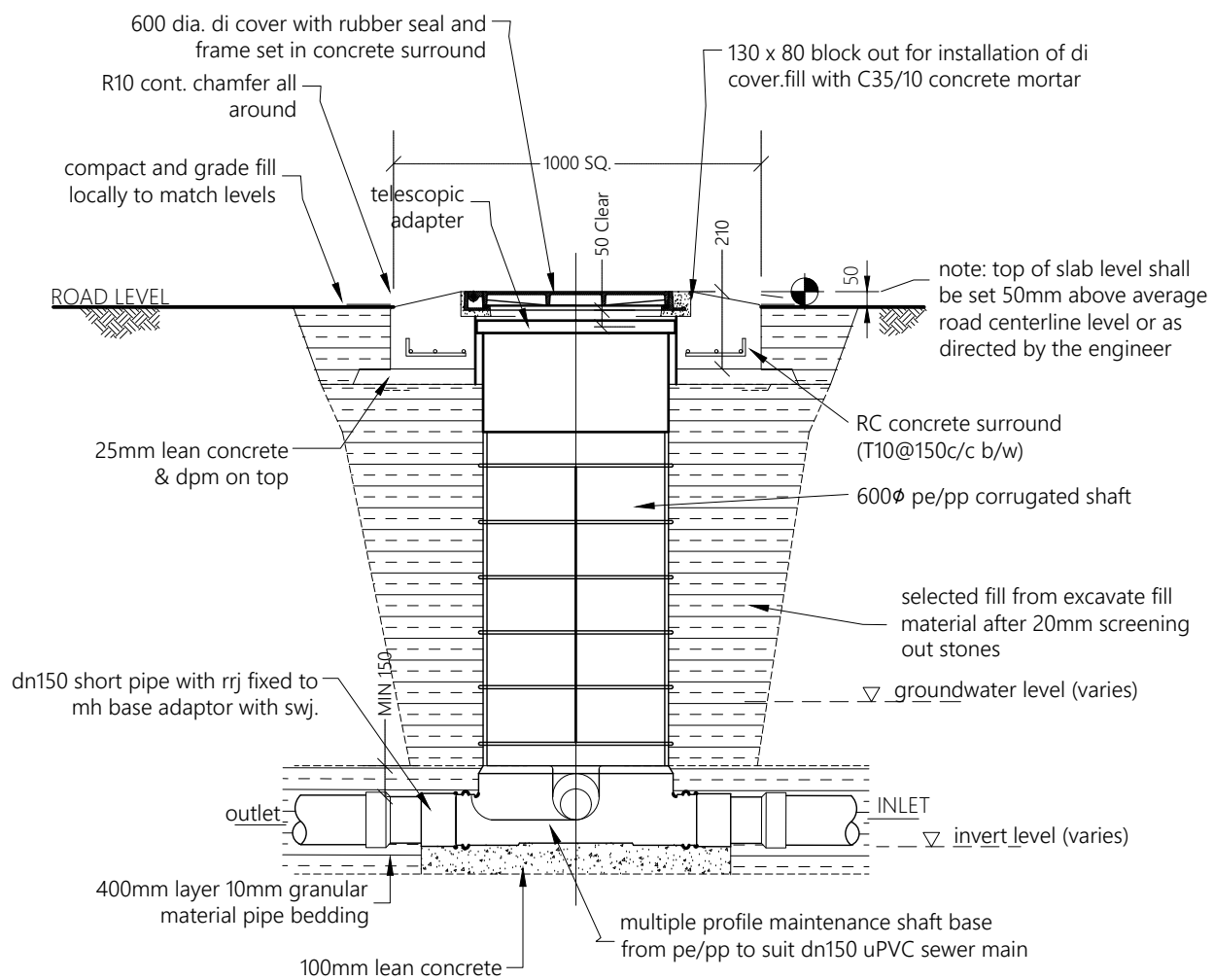
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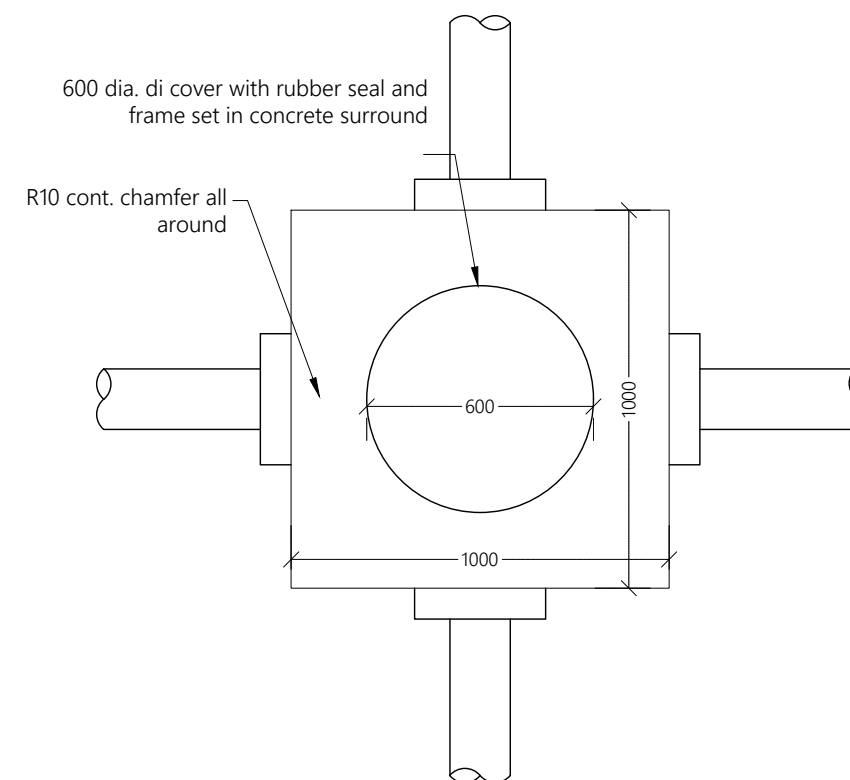
Project No: EP-WS/2019/05

Rev: Page:

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ELEVATION - MAINTENANCE SHAFT (MH)



PLAN VIEW - MAINTENANCE SHAFT (MH)

MAINTENANCE SHAFT (MH) DETAILS

1:20



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 6 islands, Maldives - Package 5

Sub Title:
Sewerage System in M. Naalaafushi

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

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

FEEDBACK INFRA
Maldives Infrastructure Development

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

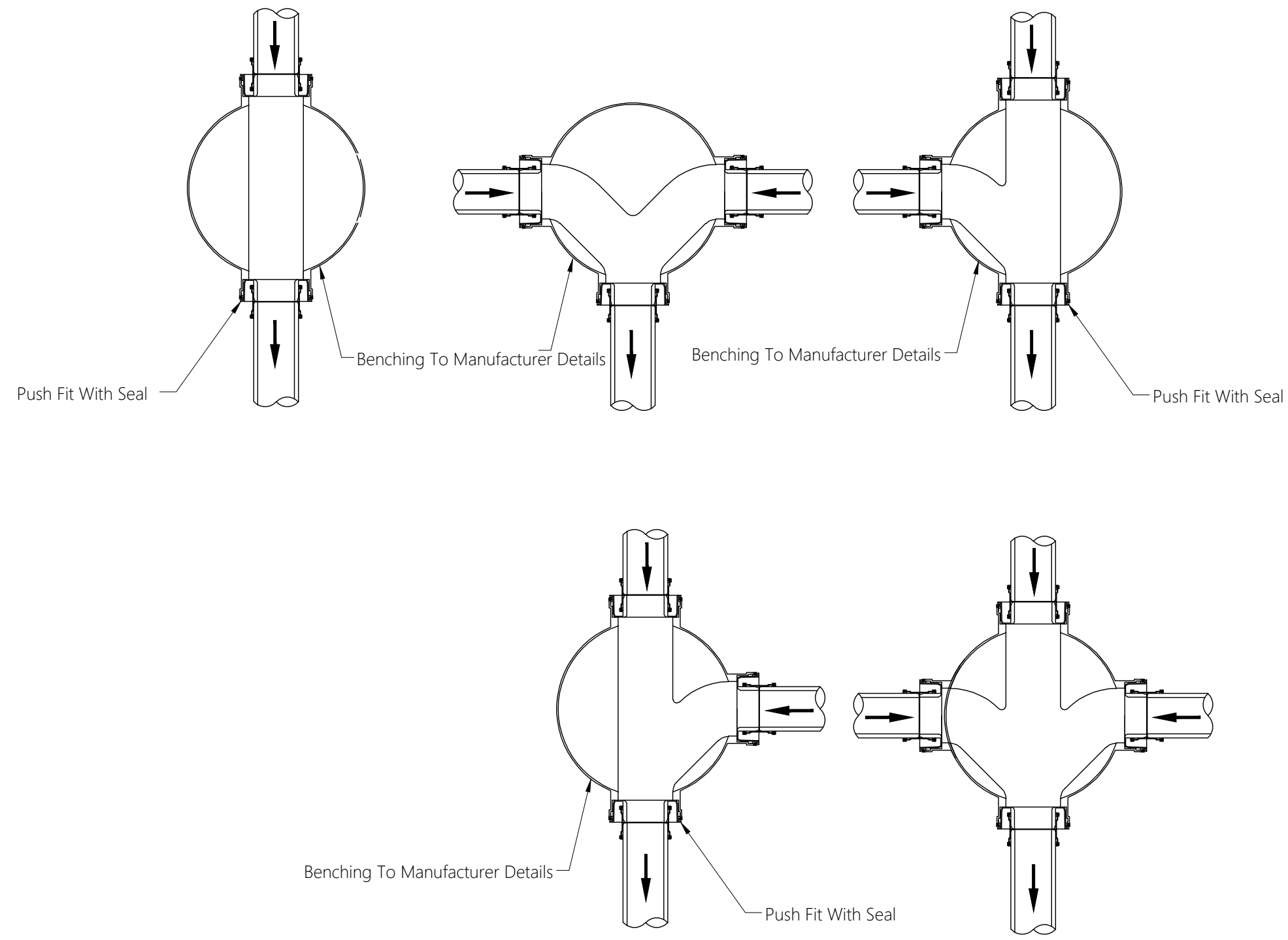
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Date: Sep 2020 SCALE (A3): 1:20

Project No: EP-WS/2019/05

Rev: Page:

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TYPICAL MANHOLE BASE 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 6 islands, Maldives - Package 5

Sub Title:
Sewerage System in M. Naalaafushi

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

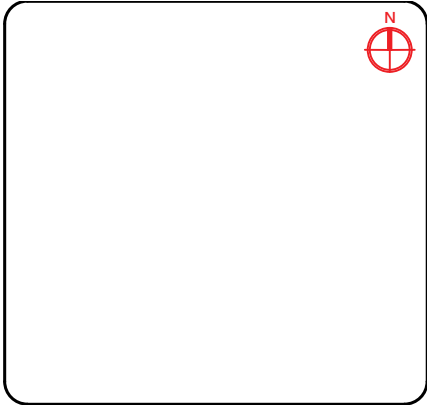


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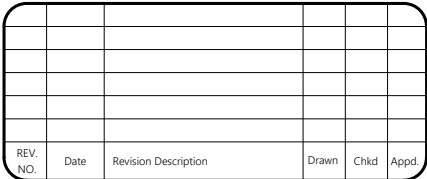


FEEDBACK INFRA
Working Safely, Constructing Happily

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/2019/05	
Rev:	Page: W-(14)

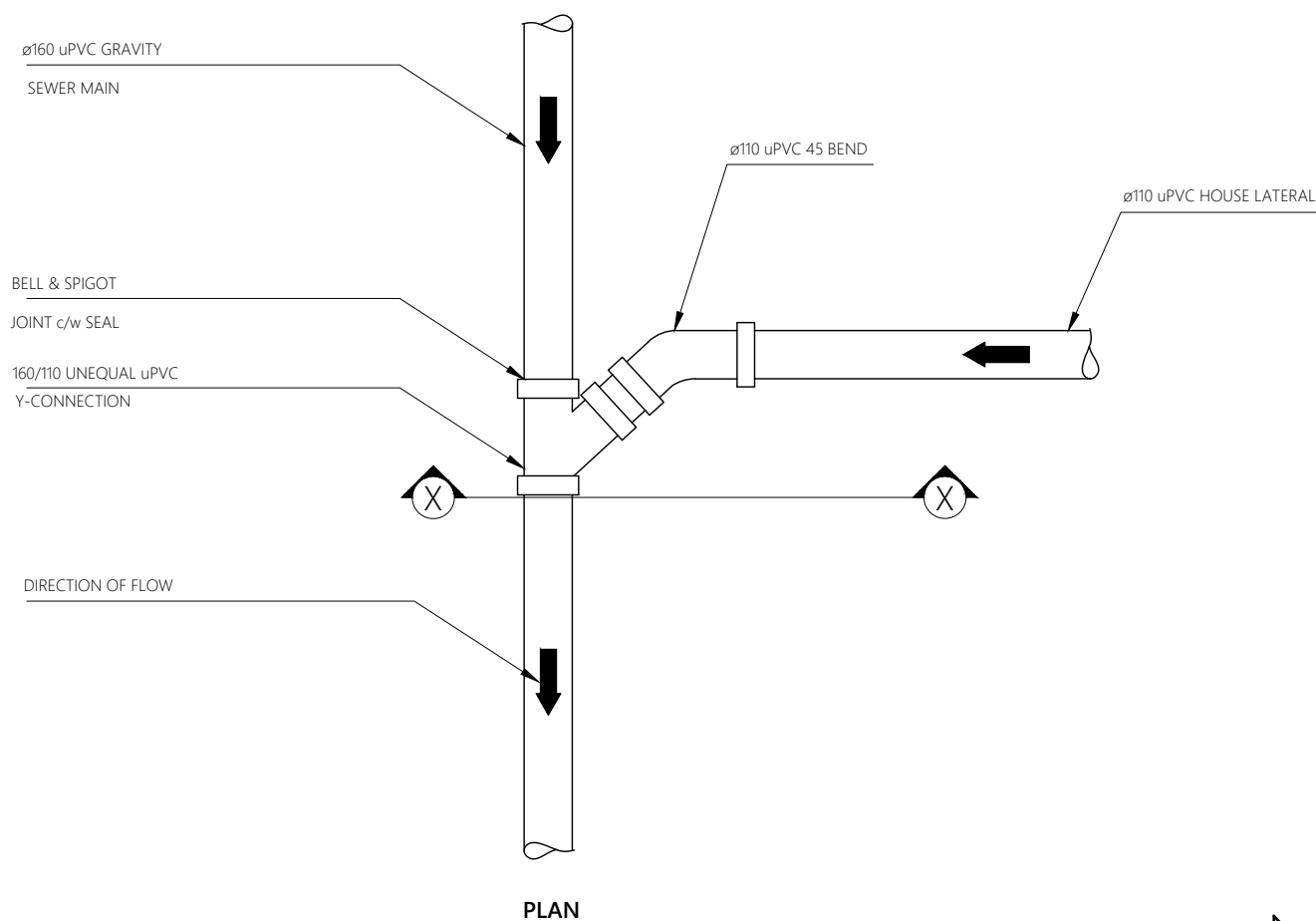


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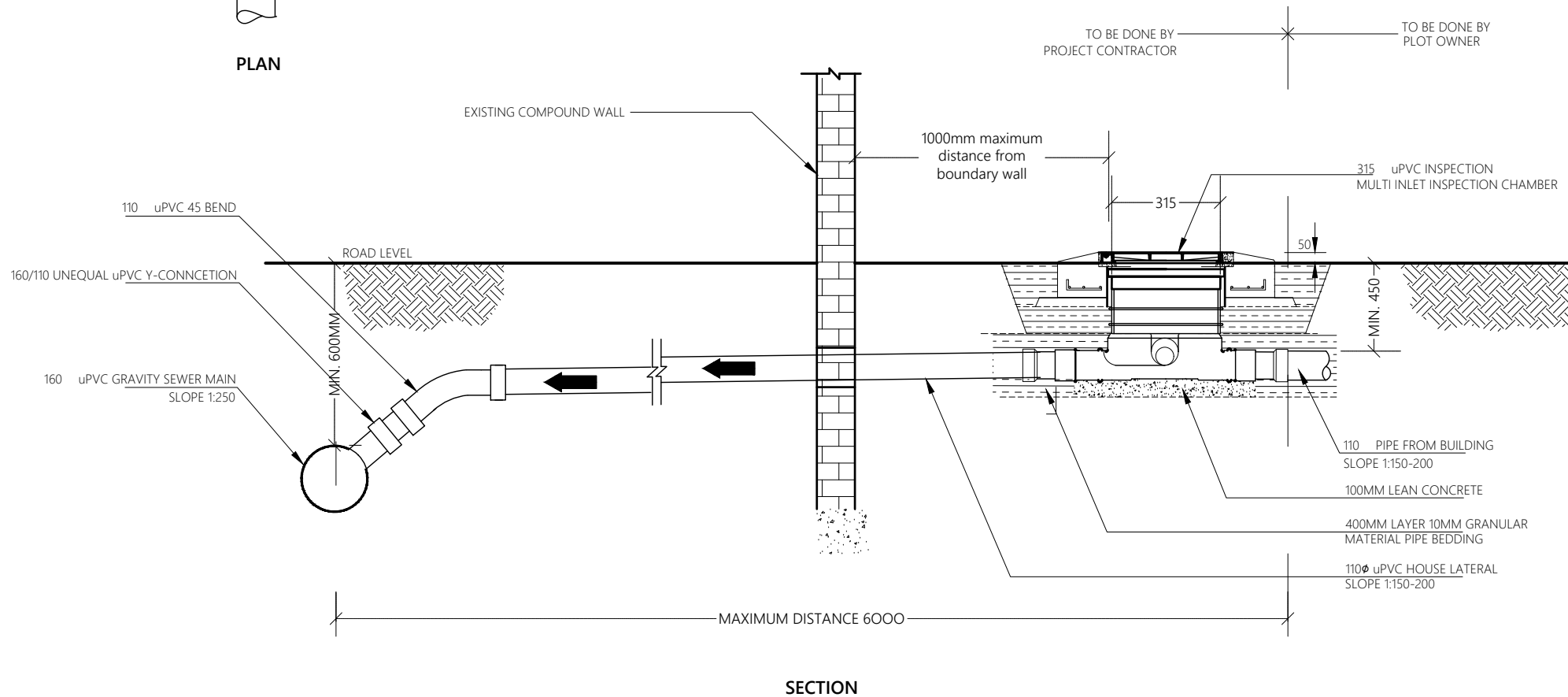


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Designed: F.I.A.	Approved: I.W.
Date: Sep 2020	SCALE (A3): NTS
Project No: EP-WS/2019/05	
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PLAN



SECTION

TYPICAL HOUSE CONNECTION DETAIL

NTS



Notes:

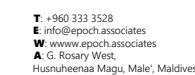
1. Invert level at house inspection chamber and invert level of the sewer main on the road should be checked during the house connection survey and invert level should be adjusted in order to facilitate gravity flow from house inspection chamber to sewer main.

REV. NO.	Date	Revision Description	Drawn	Chkd	App

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

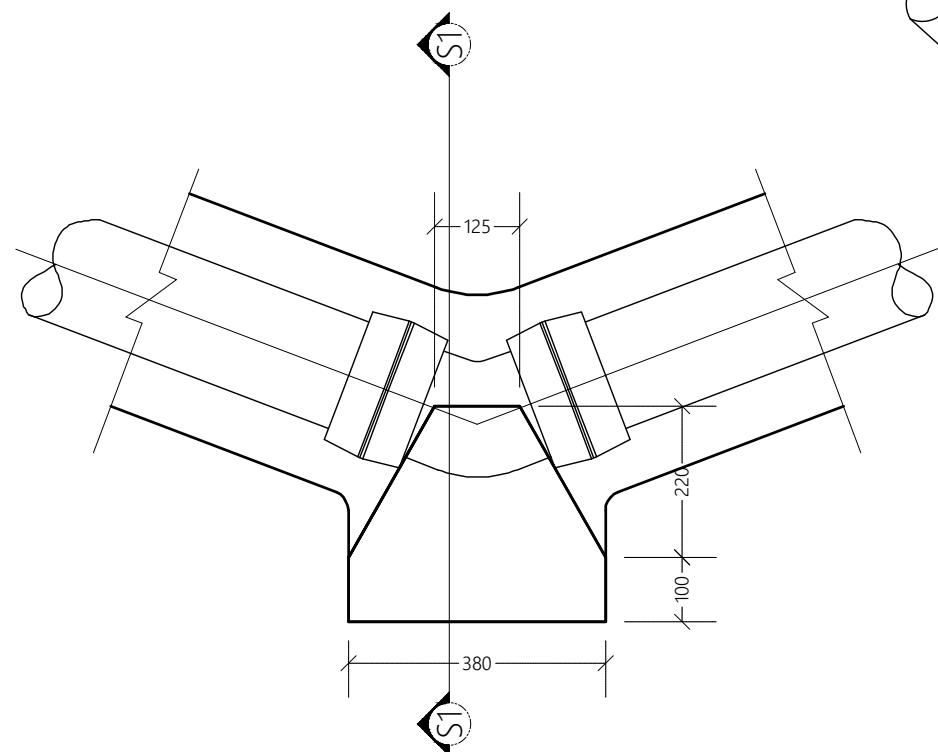
Sub Title:
Sewerage System in M. Naalaafushi

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

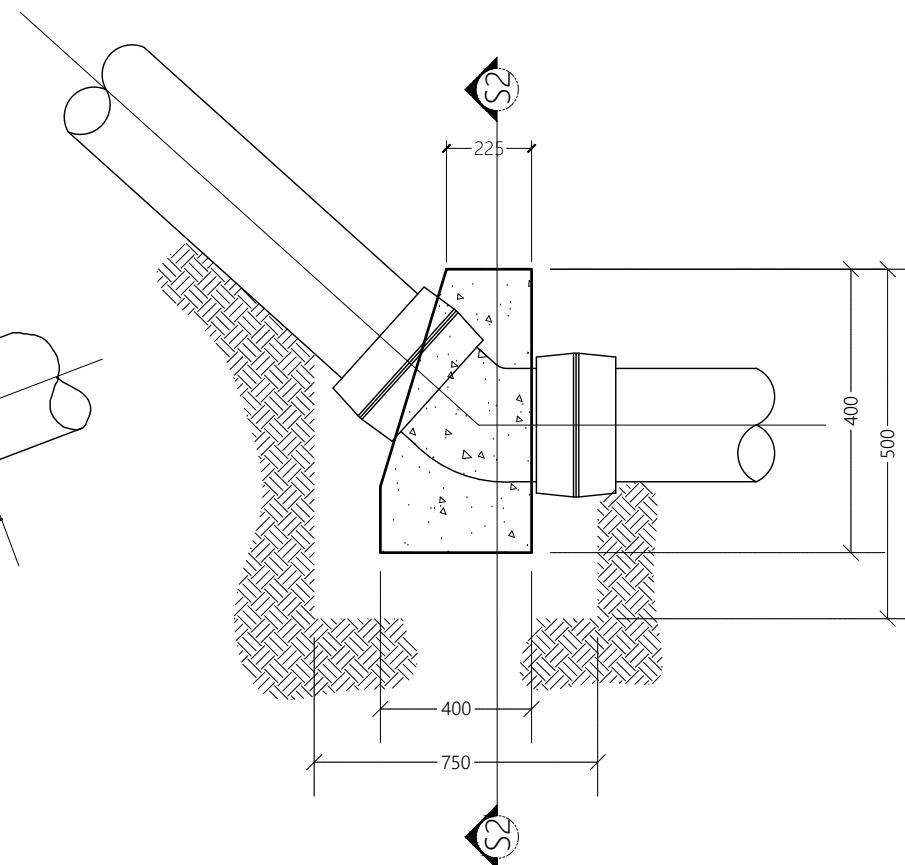


Drawn: F.I.A.	Checked: M.S.S.
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Date: Sep 2020	SCALE (A3): NTS
Project No: EP-WS/2019/05	
Rev:	Page:

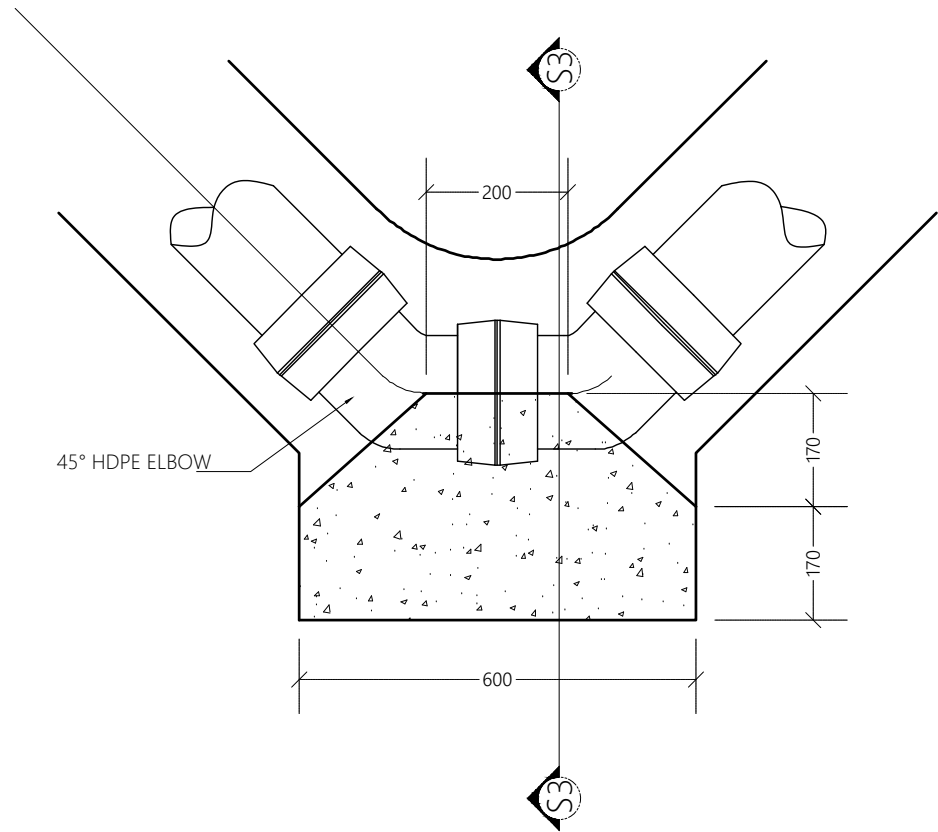
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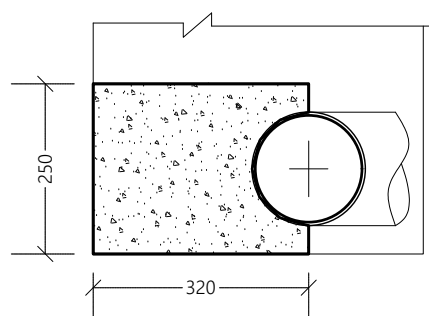
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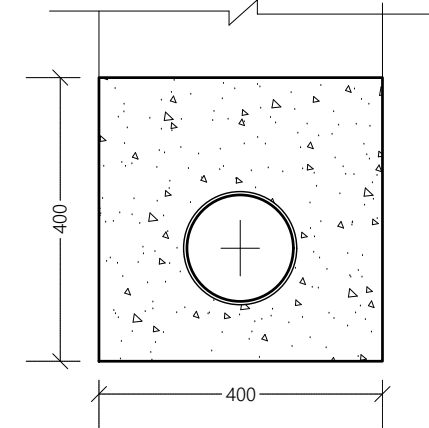
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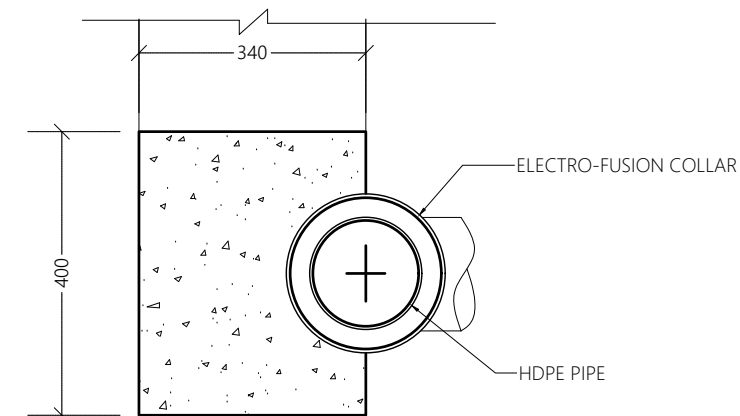
HORIZONTAL 90° BEND
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SECTION S1-S1
NTS



SECTION S2-S2
NTS



SECTION S3-S3
NTS

THRUST BLOCK DETAILS

NTS

Legend

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
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Maldives www.feedbackinfra.com info@feedbackinfra.com

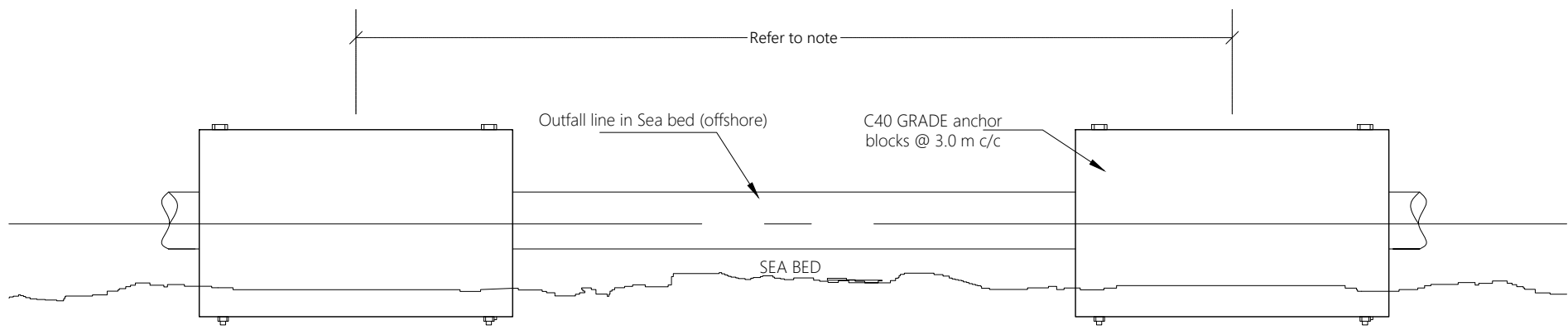
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Designed: F.I.A. Approved: I.W.

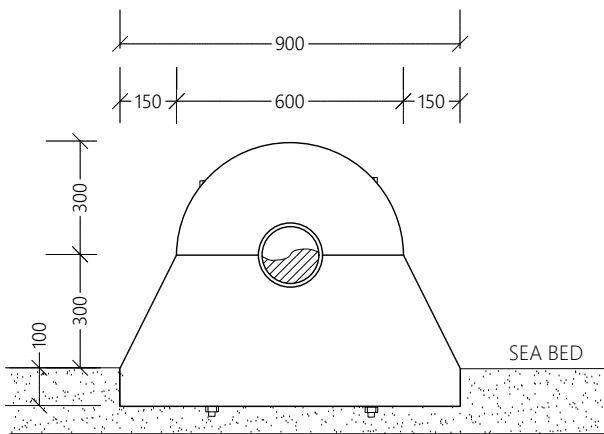
Date: Sep 2020 SCALE (A3): NTS

Project No: EP-WS/2019/05

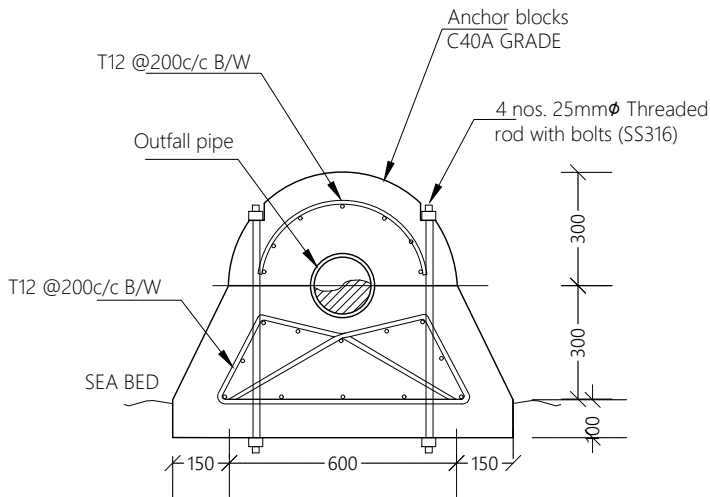
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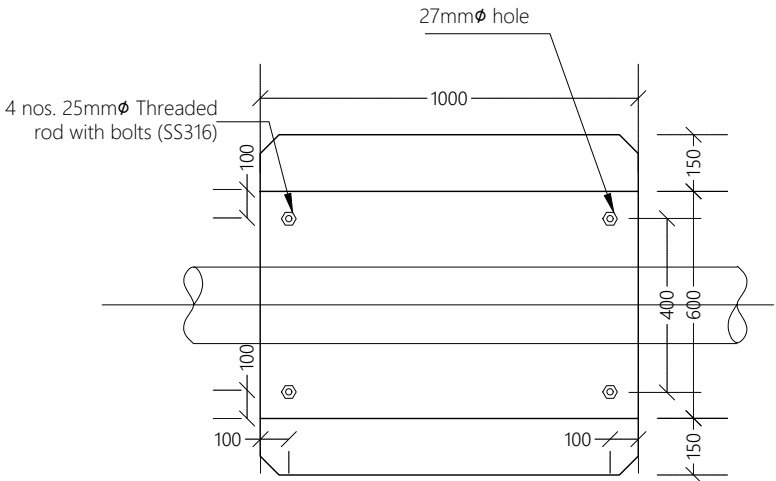
BALLAST BLOCK SIDE ELEVATION



BALLAST BLOCK FRONT ELEVATION



BALLAST BLOCK SECTION



BALLAST BLOCK PLAN

BALLAST BLOCK 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 6 islands, Maldives - Package 5

Sub Title:

Sewerage System in M. Naalaafushi

Client:

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

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FEEDBACK

INFRA

Maldives

Infrastructure

Maldives

Drawn: F.I.A.

Checked: M.S.S.

Designed: F.I.A.

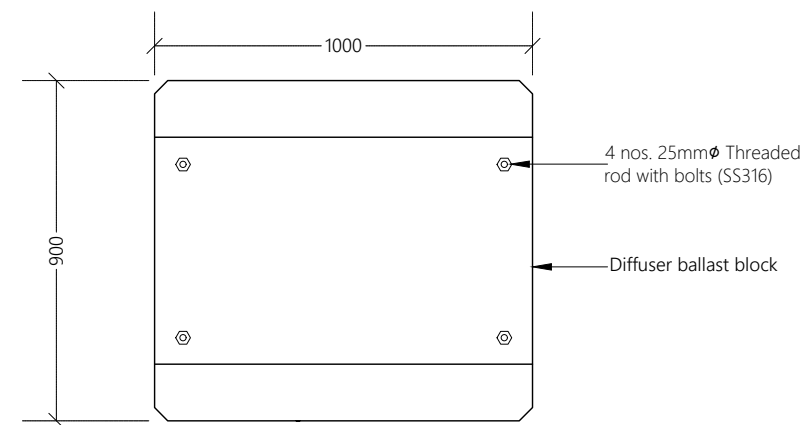
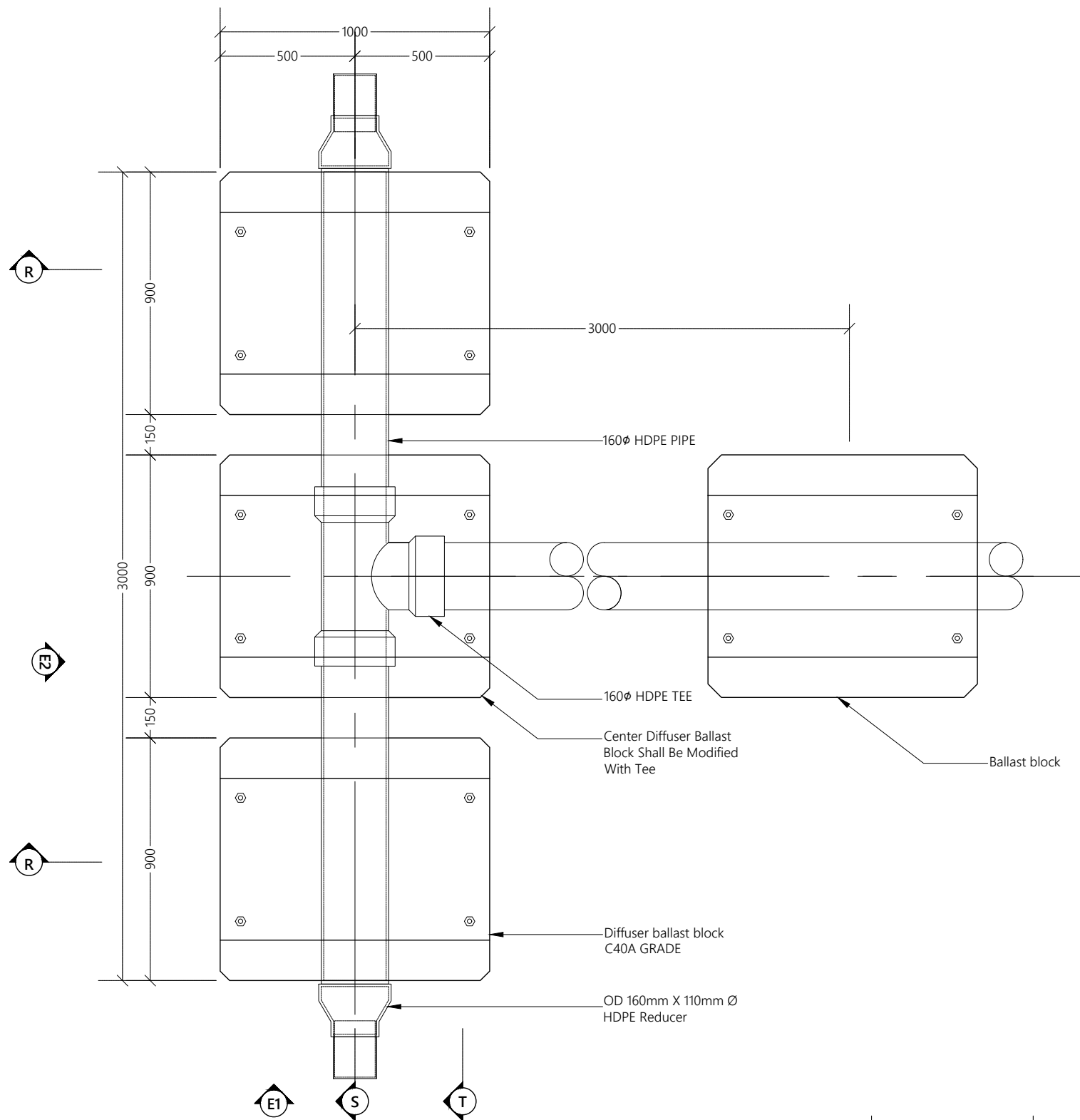
Approved: I.W.

Date: Sep 2020

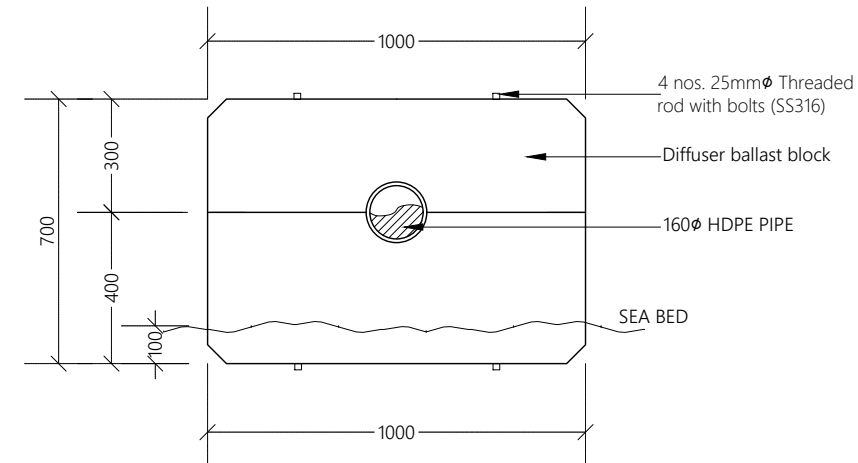
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Project No: EP-WS/2019/05

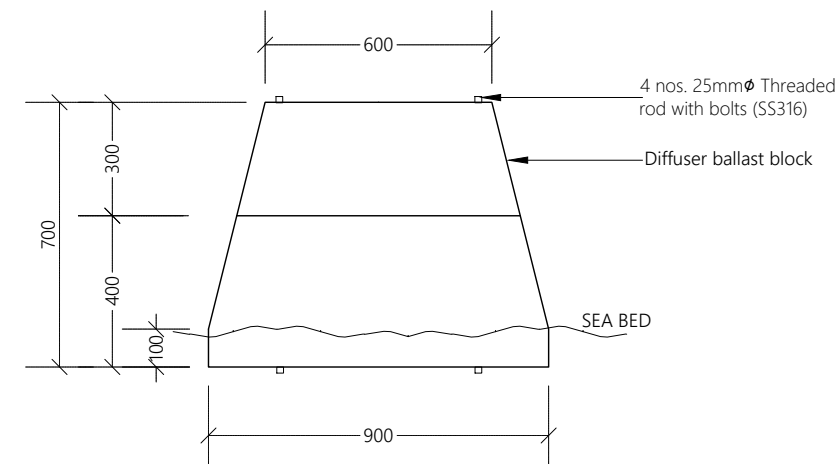
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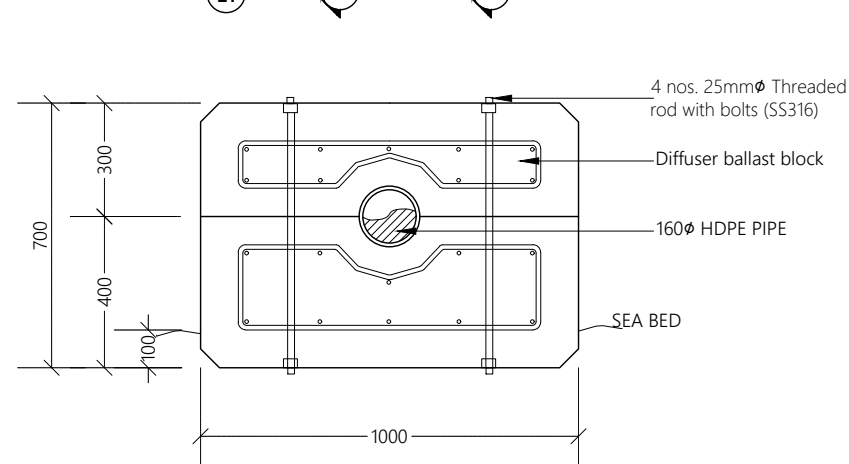
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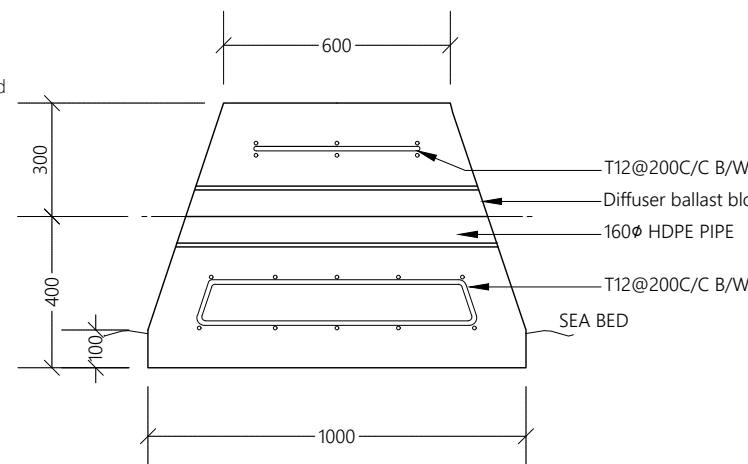
DIFFUSER BALLAST BLOCK FRONT ELEVATION - E1



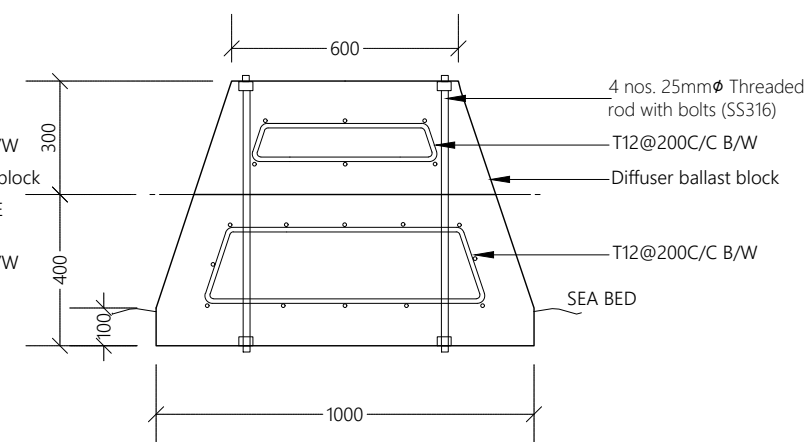
DIFFUSER BALLAST BLOCK FRONT ELEVATION - E2



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 6 islands, Maldives - Package 5

Sub Title:
Sewerage System in M. Naalaafushi

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

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

FEEDBACK INFRA
Working Safely, Smartly, Happily

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

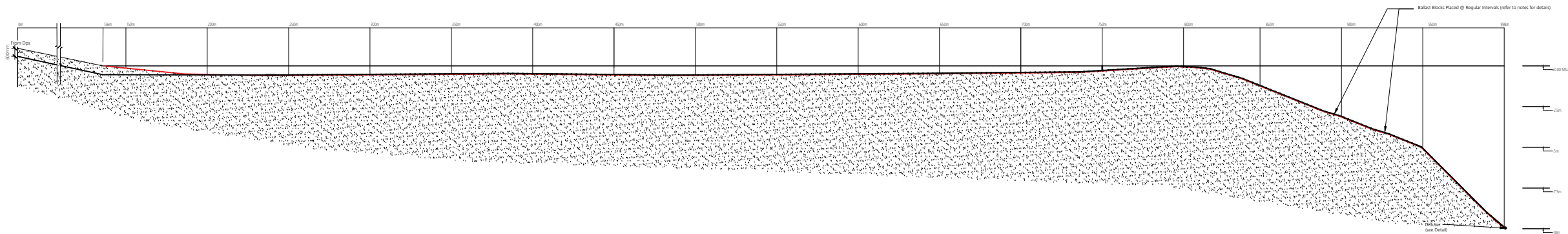
Designed: F.I.A. Approved: I.W.

Date: Sep 2020 SCALE (A3): NTS

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SEA OUTLET DETAILS
NTS



Legend

Notes:

1. Contractor should carry out a detailed bathymetric survey for the proposed area, revise and present a shop drawing for the outfall layout prior to commencement of outfall works.
2. 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.

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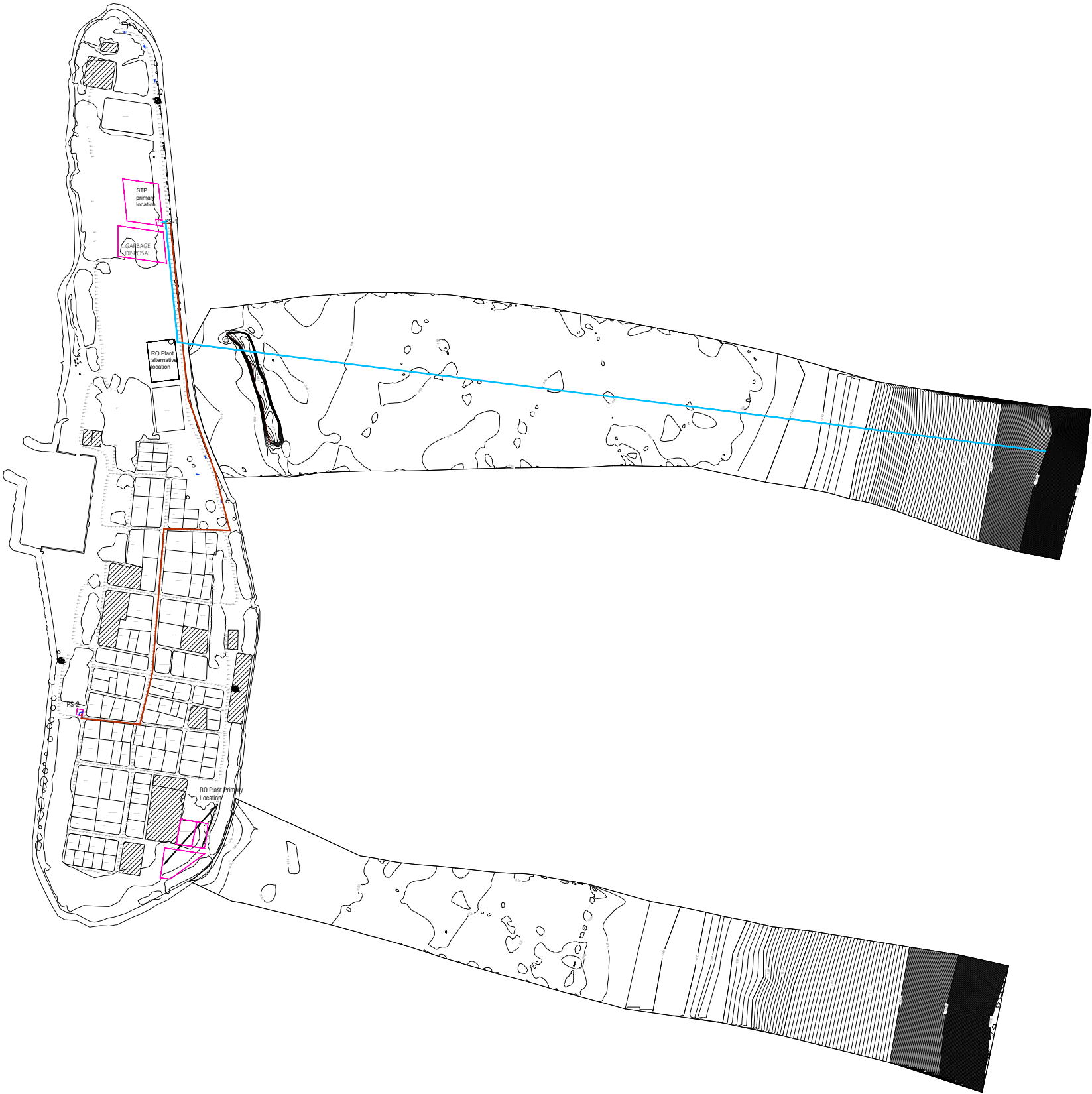
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M. NAALAAFUSHI SEWERAGE SYSTEM - PRESSURE NETWORK LAYOUT
1:5000



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

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Title:
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in 6 islands, Maldives – Package 5
Sewerage System in M. Naalaafushi**

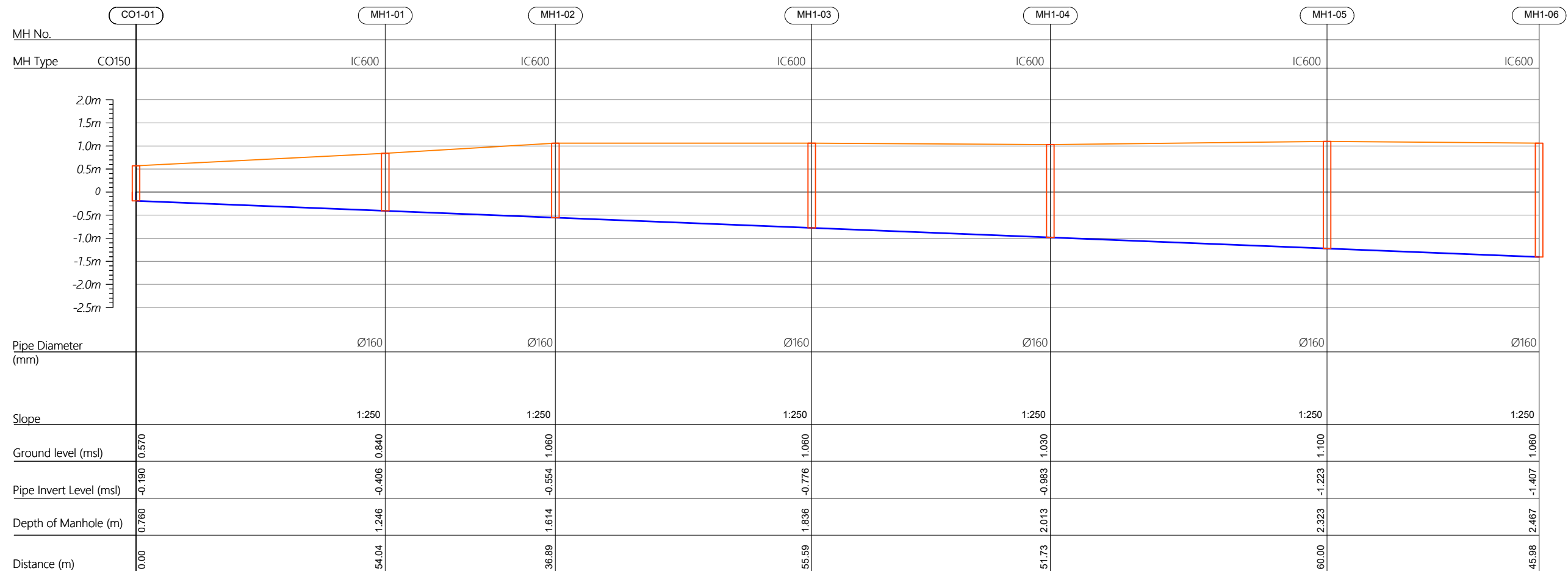
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Maldives Infrastructure Development

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Designed: F.I.A.	Approved: I.W.
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Project No: EP-WS/2019/05	
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Profile 01



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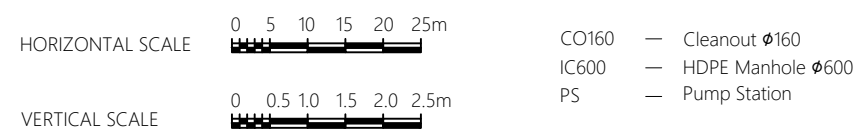
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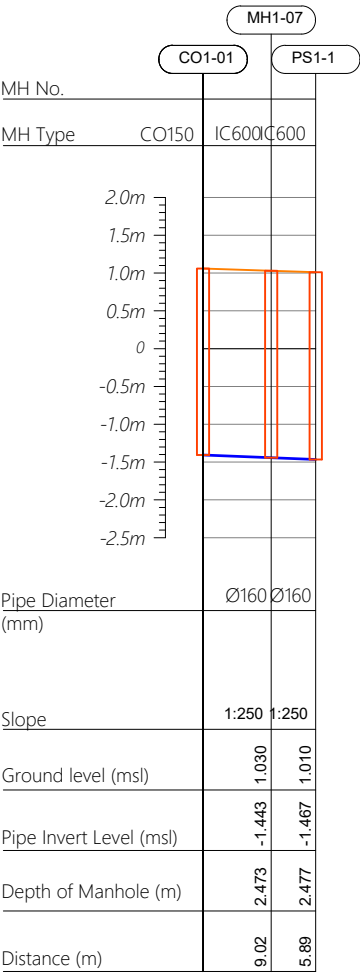
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Project No: 01010101

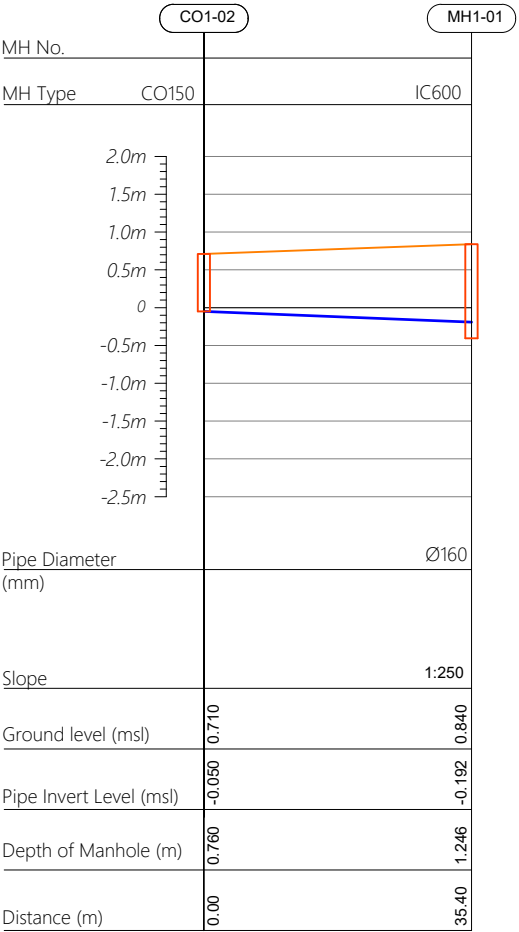
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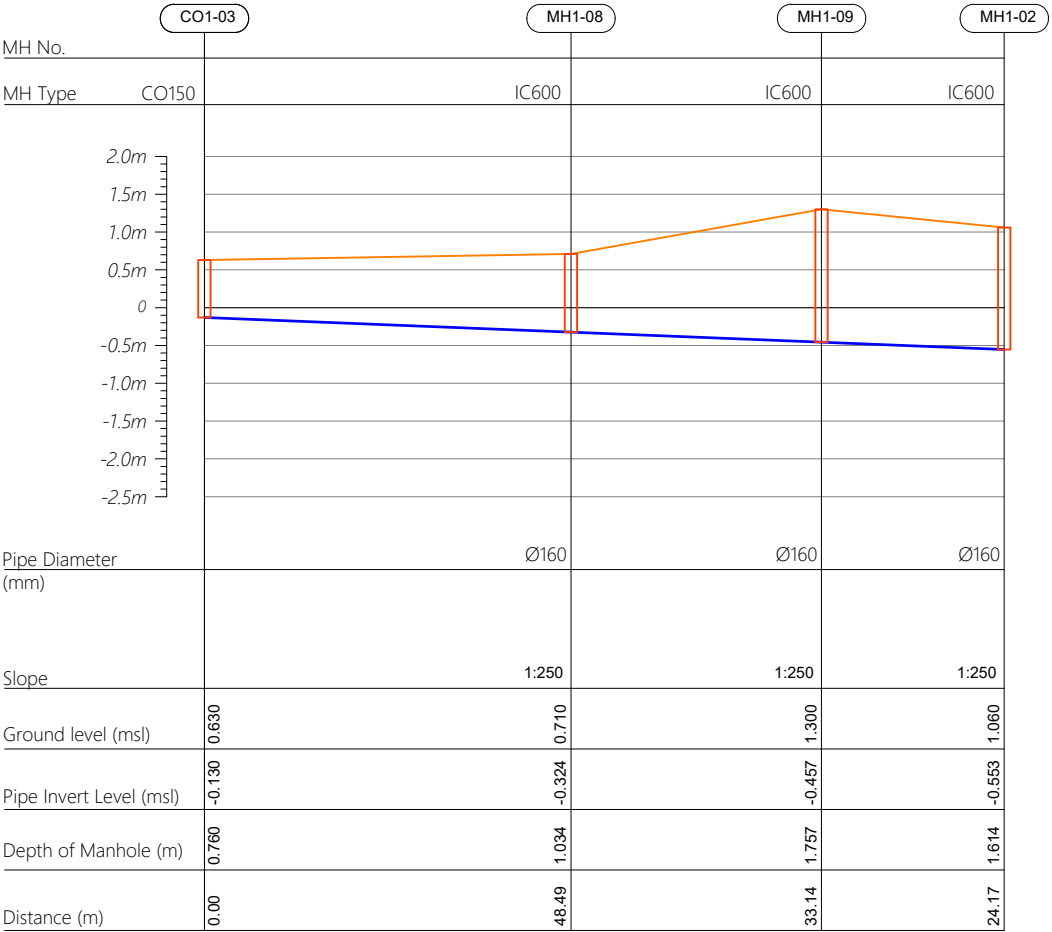
Profile 01



Profile 02



Profile 03



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.

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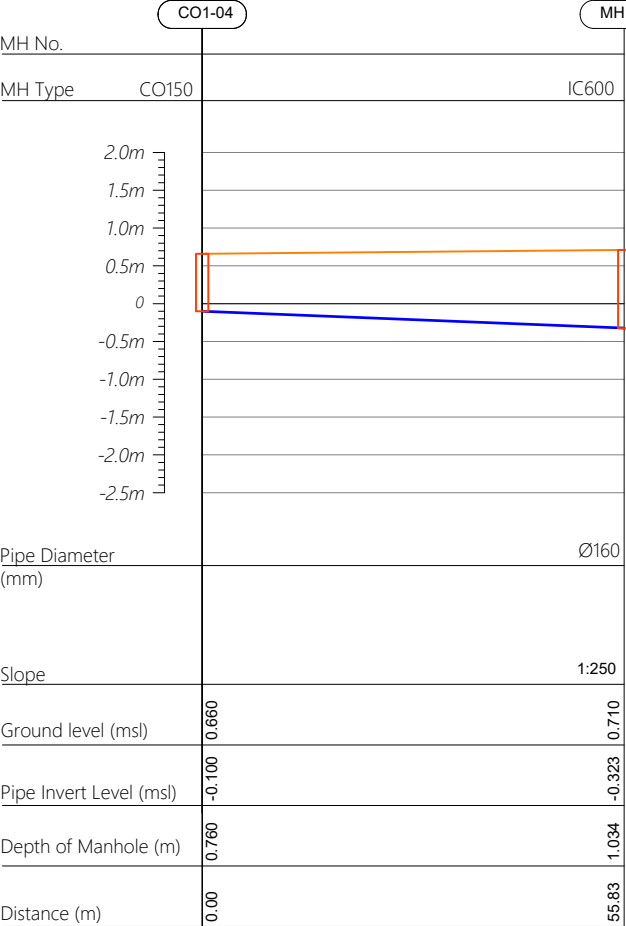
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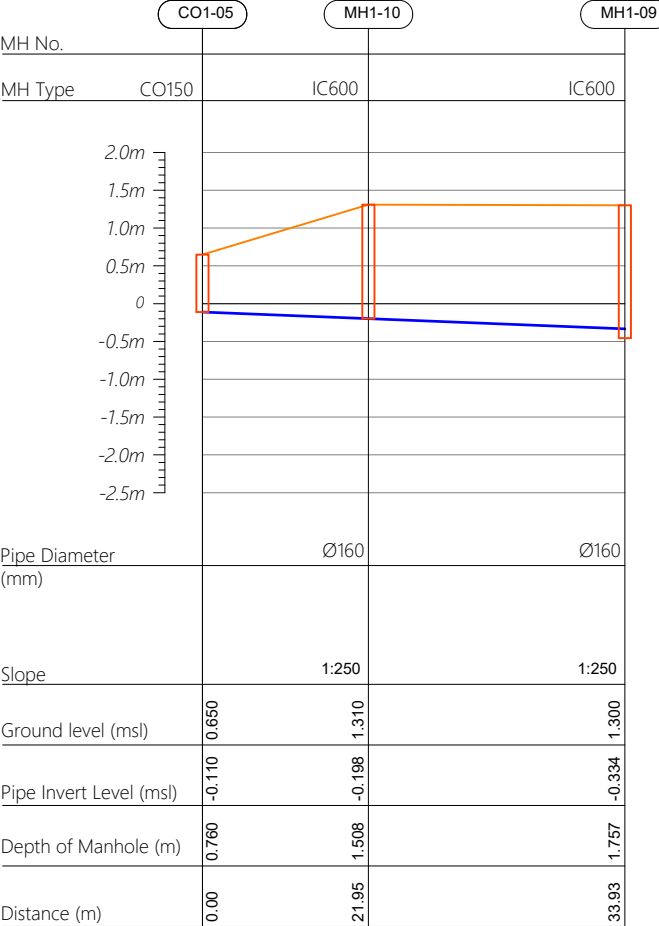
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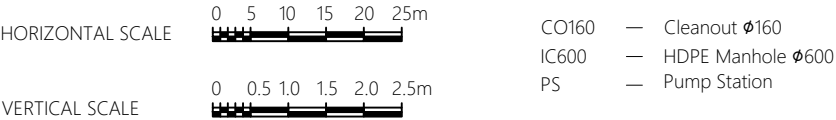
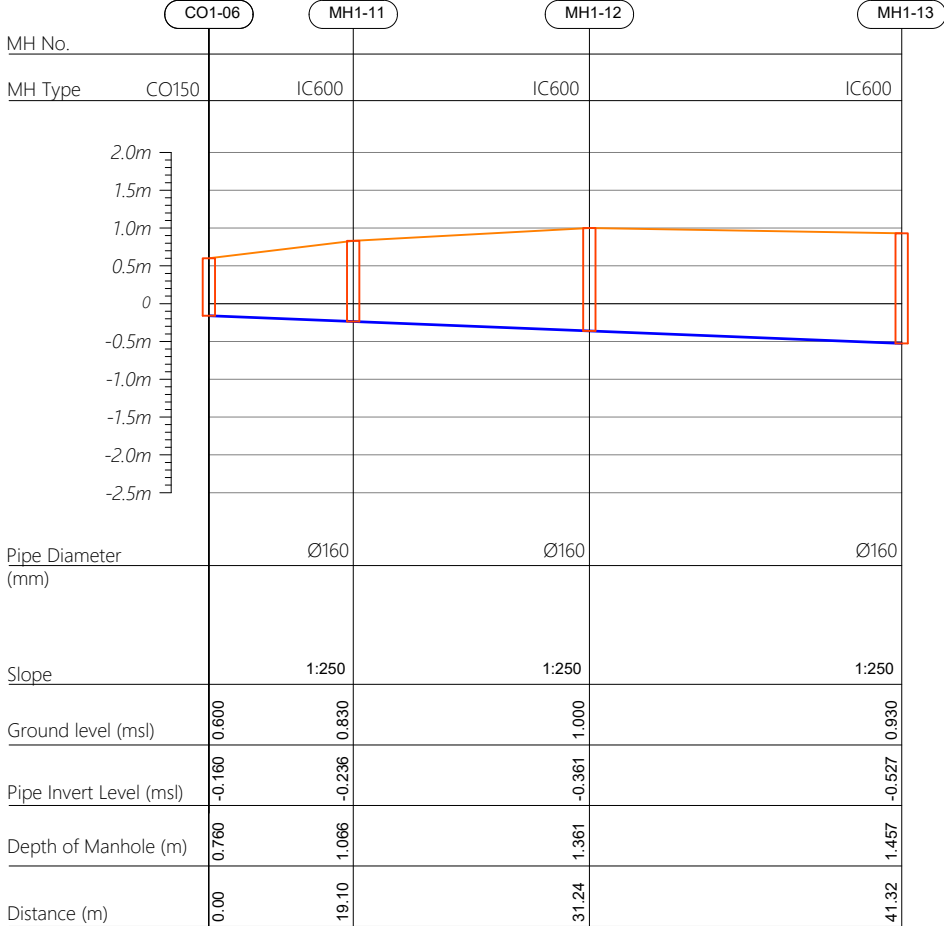
Profile 04



Profile 05



Profile 06



R00	JUNE 2020	STAGE -1	PD	SBC	SD
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Title: *Consultancy Services for Survey, Design and EIA works of Water Supply and Sewerage Facilities in 6 islands, Maldives - Package 5*

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



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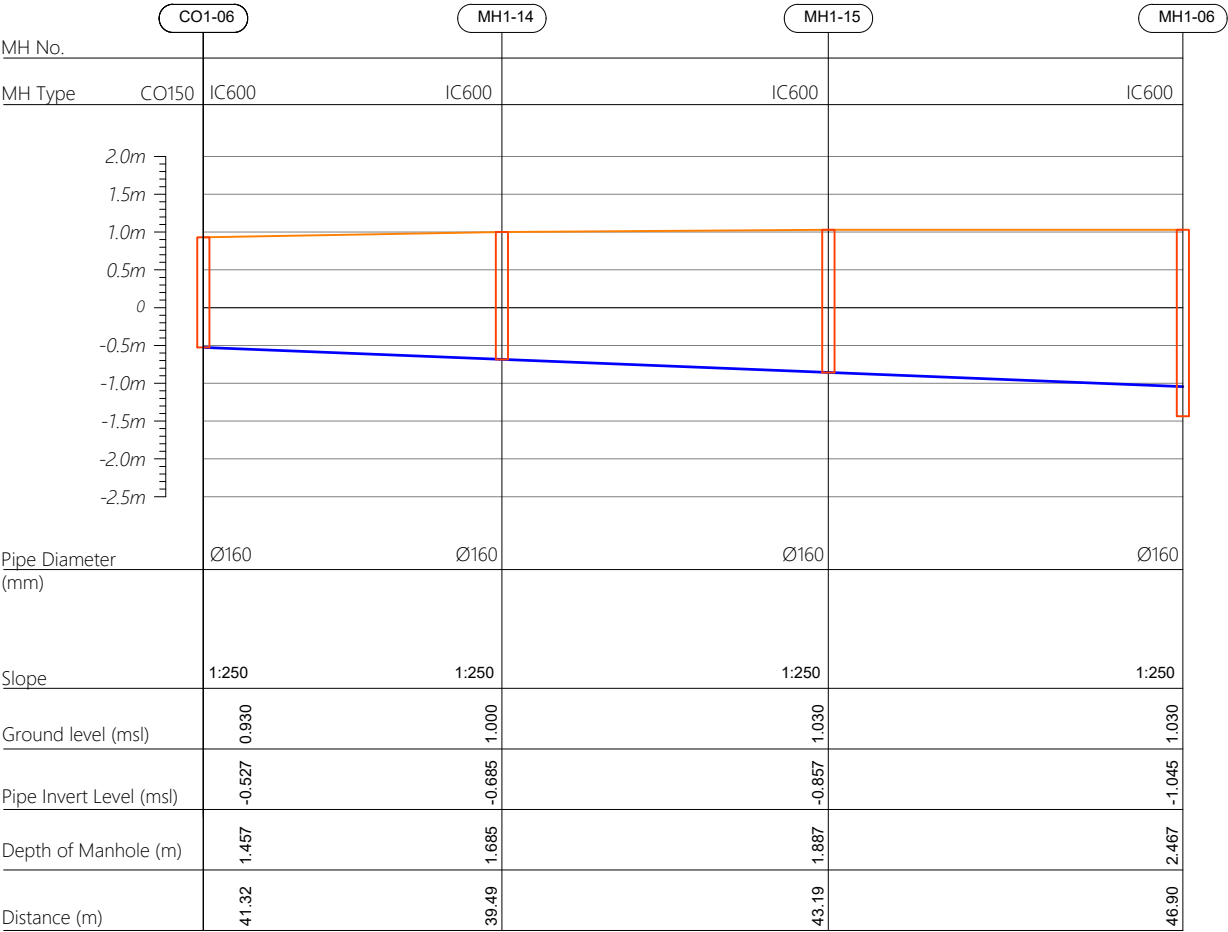
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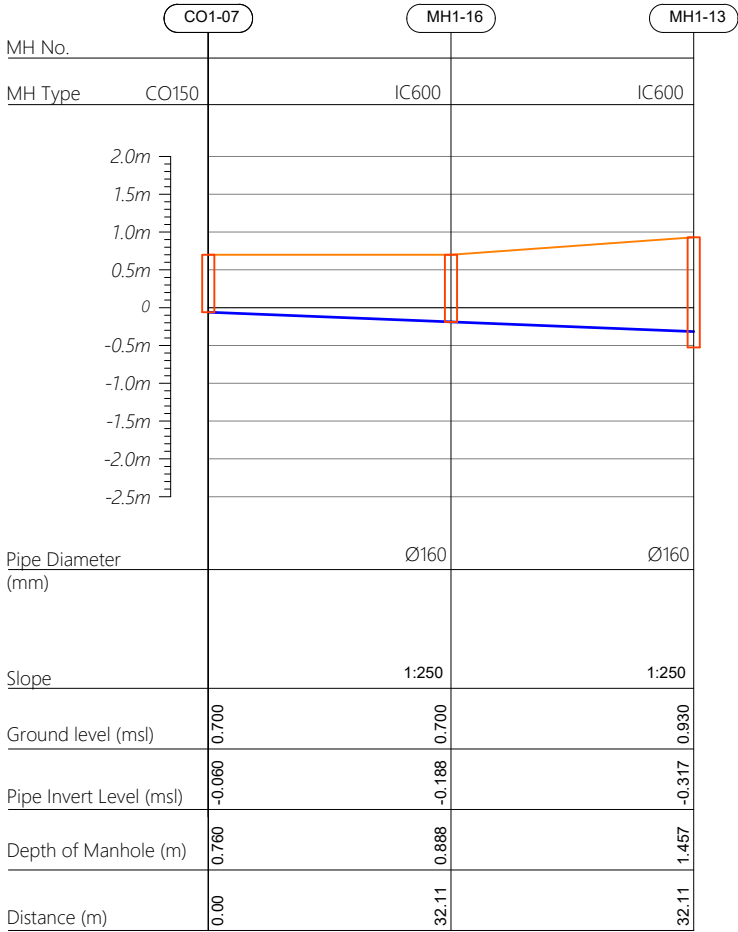
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Profile 06



Profile 07



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Sub Title:
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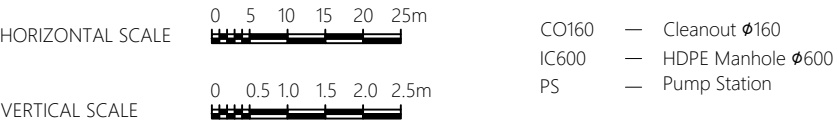
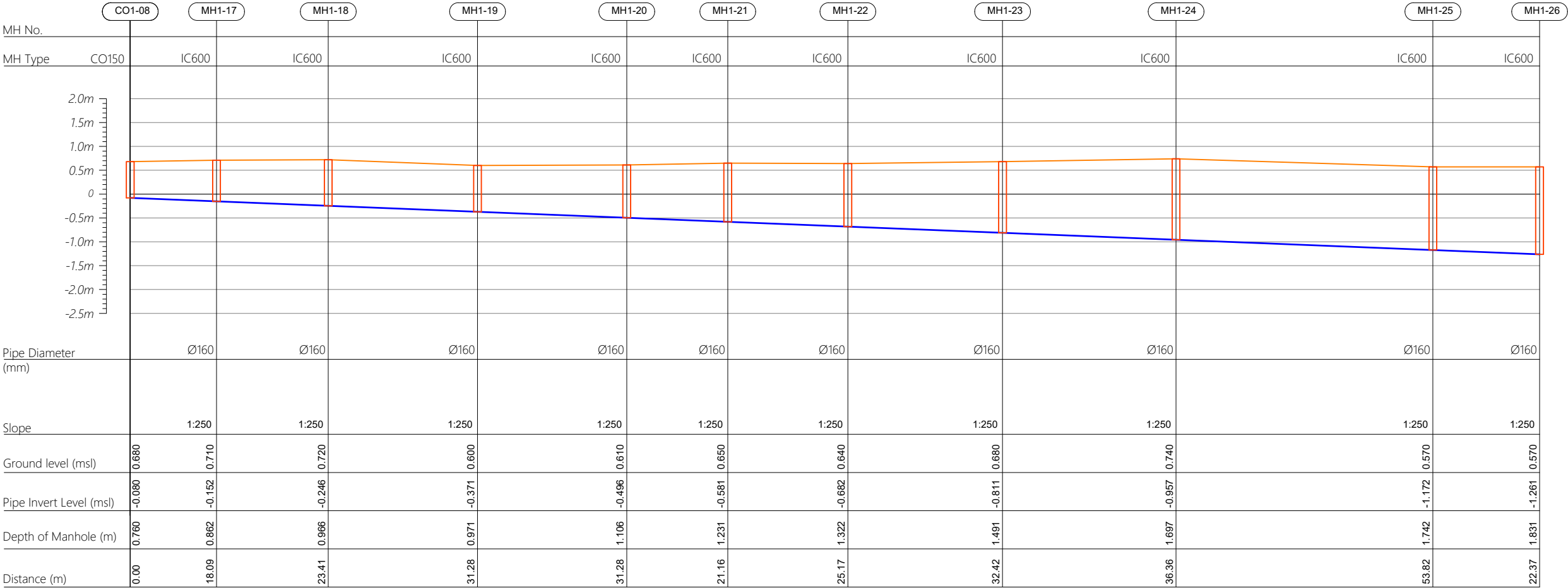
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Profile 08



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Consultancy Services for Survey,
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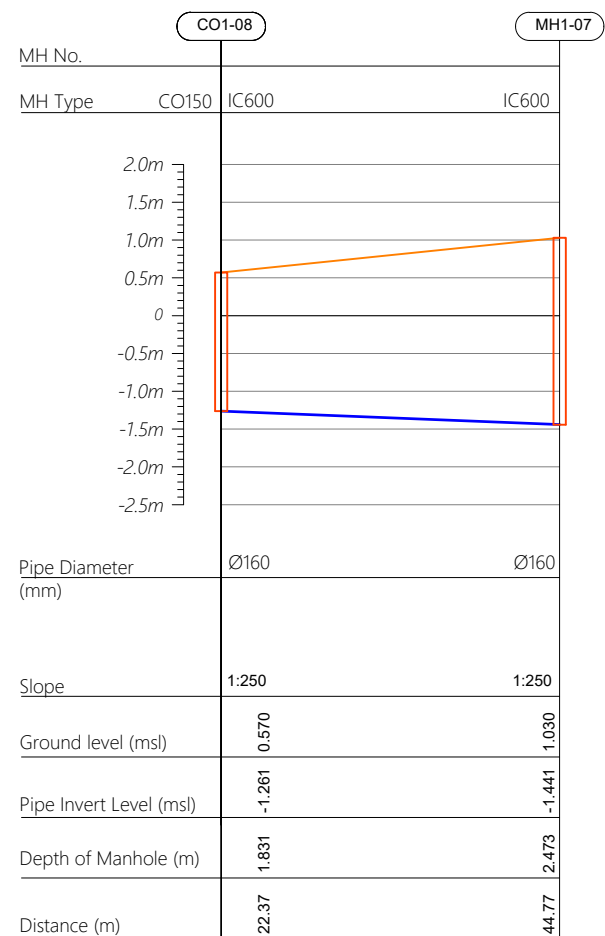
Client:
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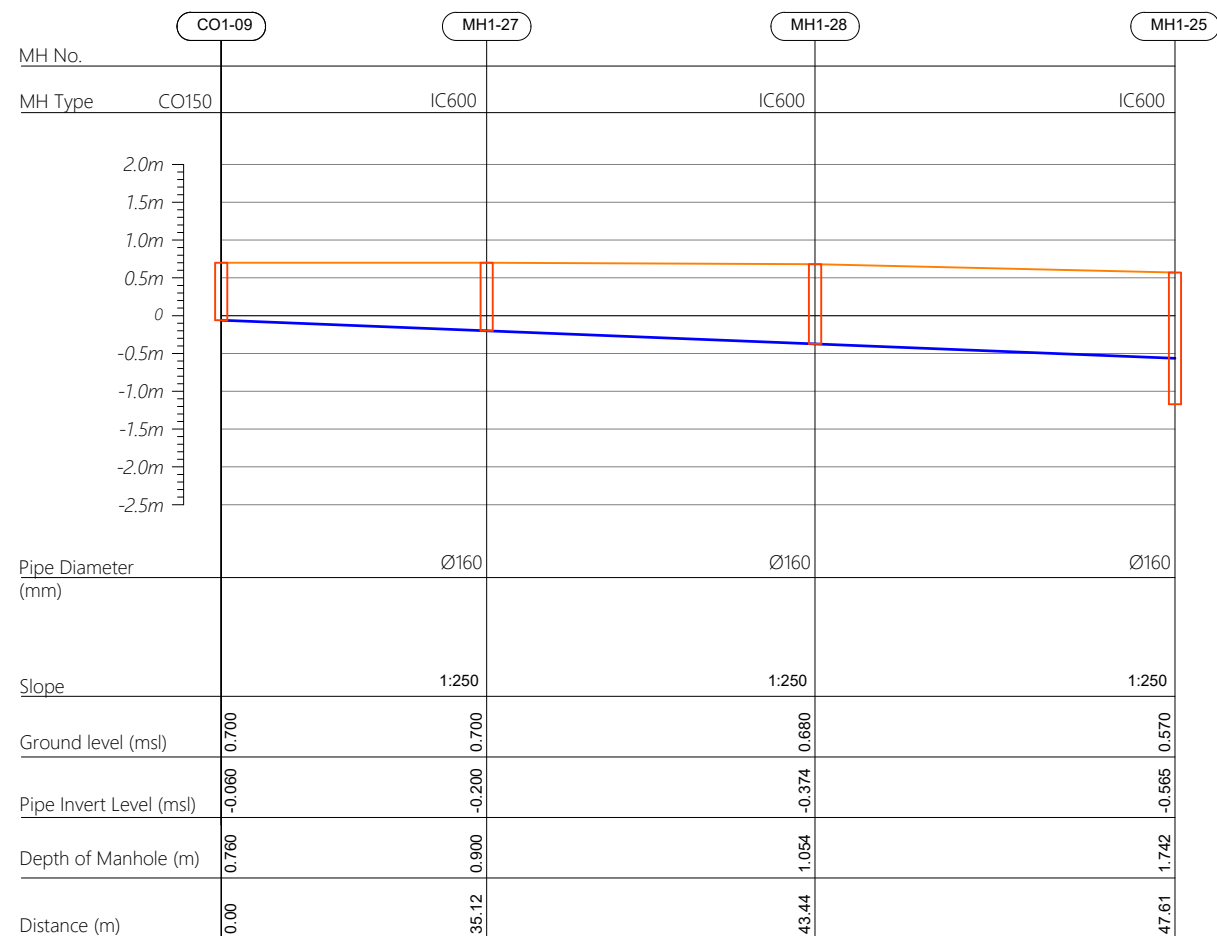
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Profile 08



Profile 09



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

R00	JUNE 2020	STAGE -1	PD	SBC	SD
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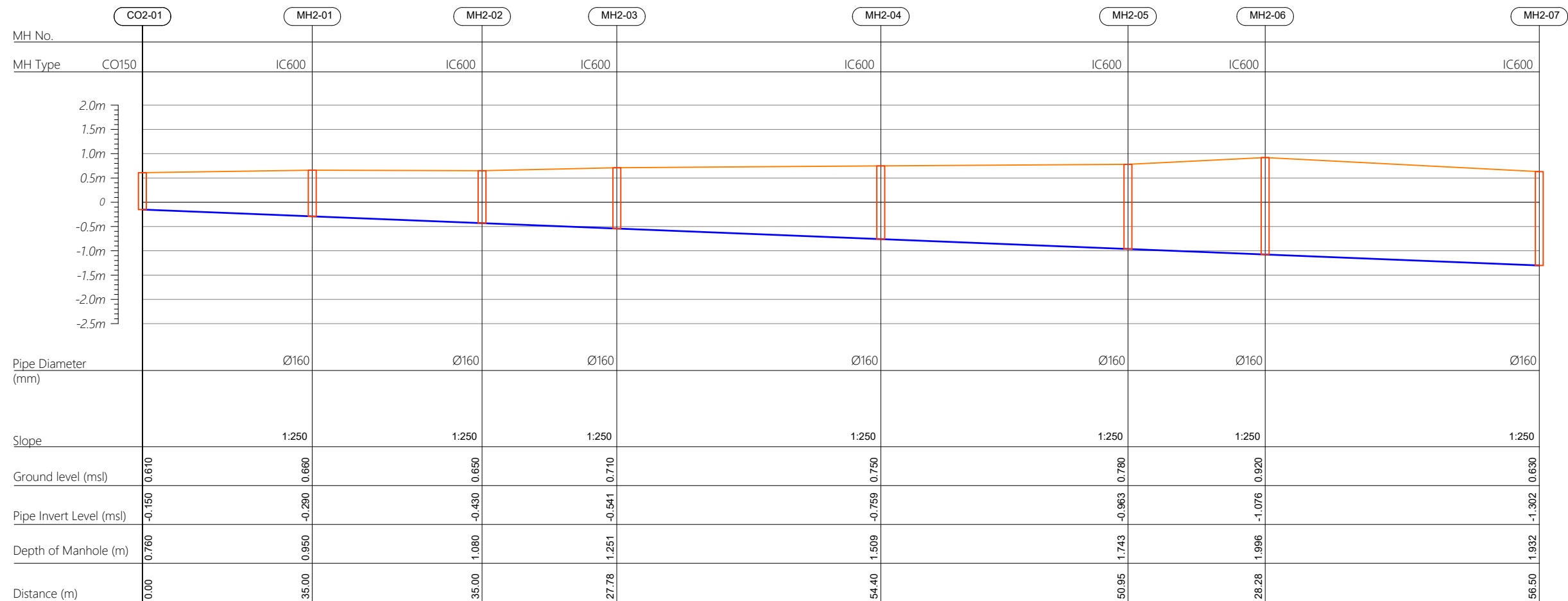
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Project No: 01010101

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Profile 01



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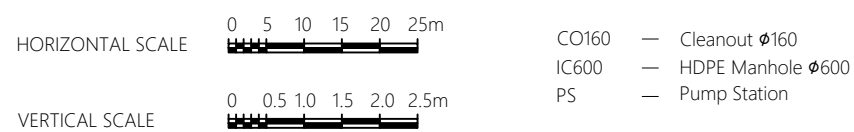
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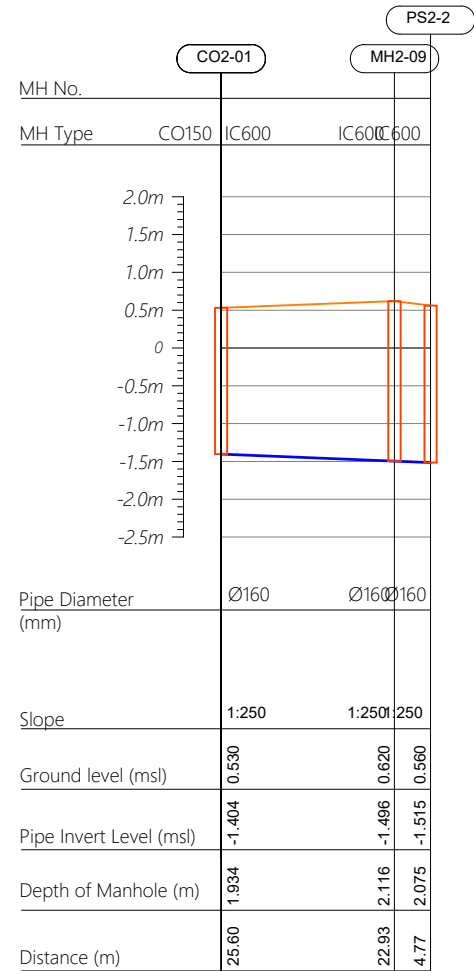
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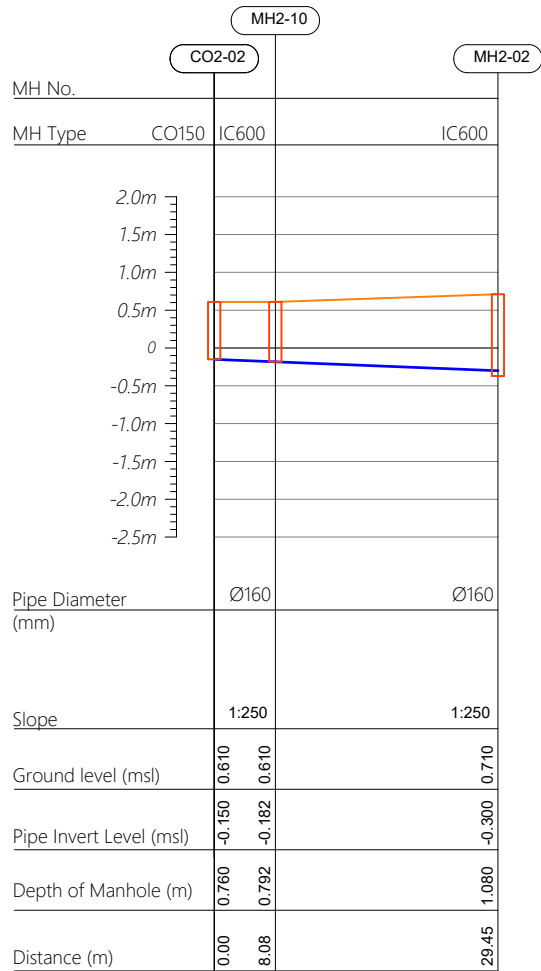
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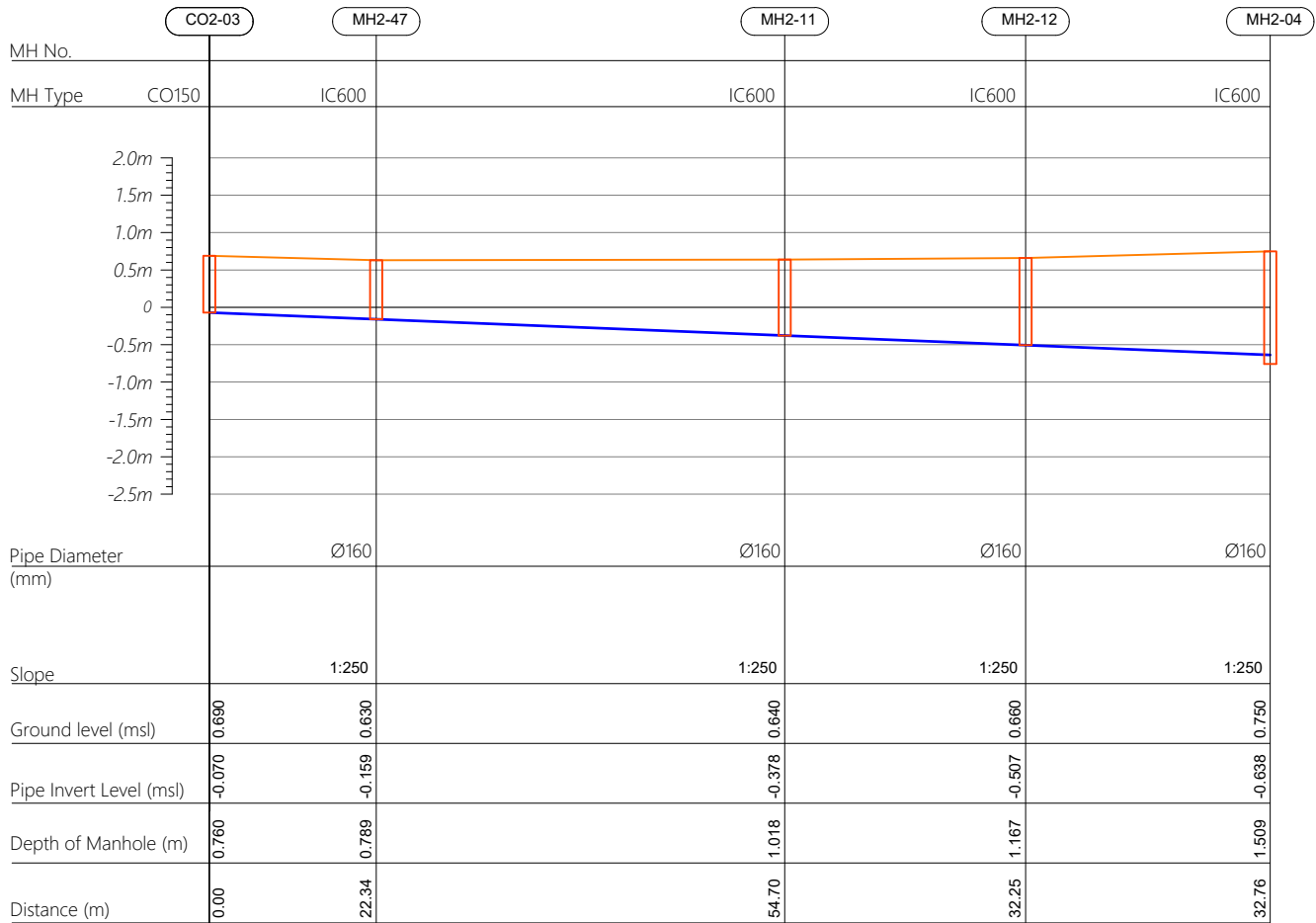
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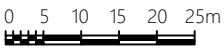
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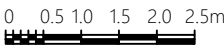
Profile 03



HORIZONTAL SCALE



VERTICAL SCALE



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

R00	JUNE 2020	STAGE -1	PD	SBC	SD
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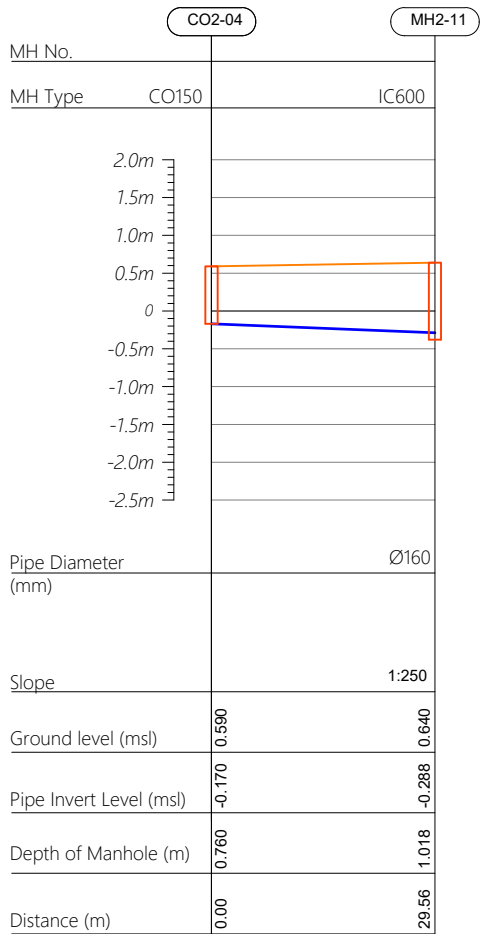
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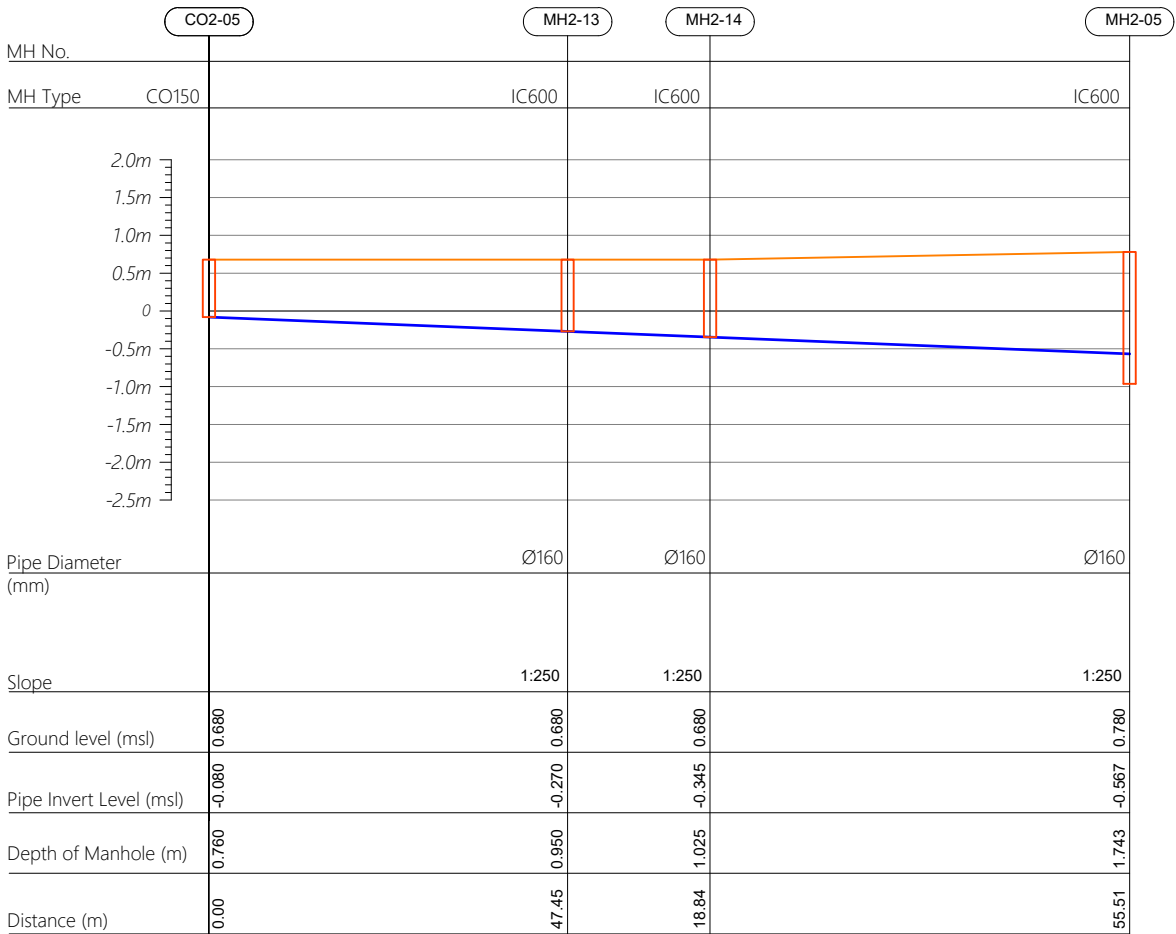
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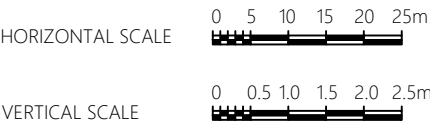
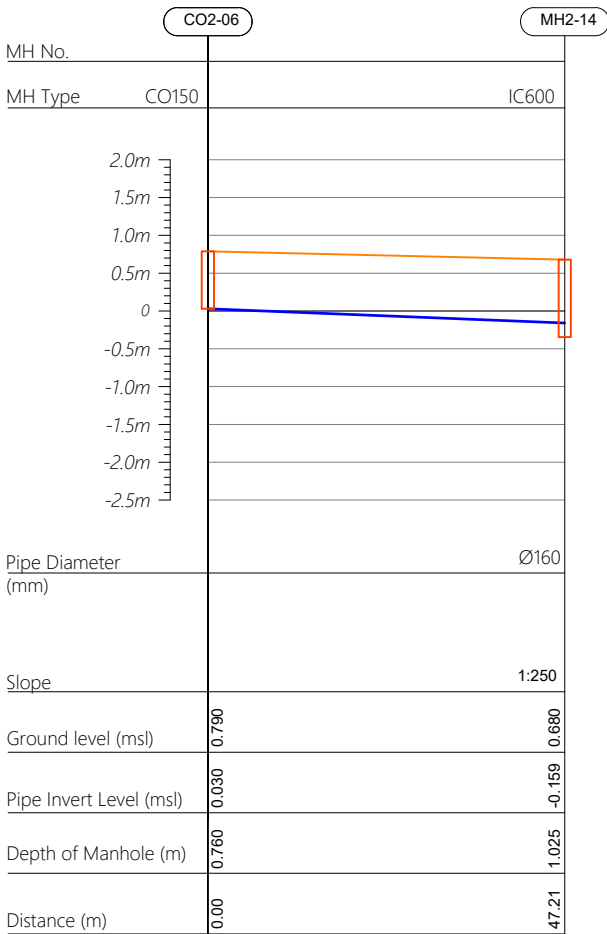
Profile 04



Profile 05



Profile 06



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

R00	JUNE 2020	STAGE -1	PD	SBC	SD
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Consultancy Services for Survey, Design and EIA works of Water Supply and Sewerage Facilities in 6 islands, Maldives - Package 5

Sub Title:
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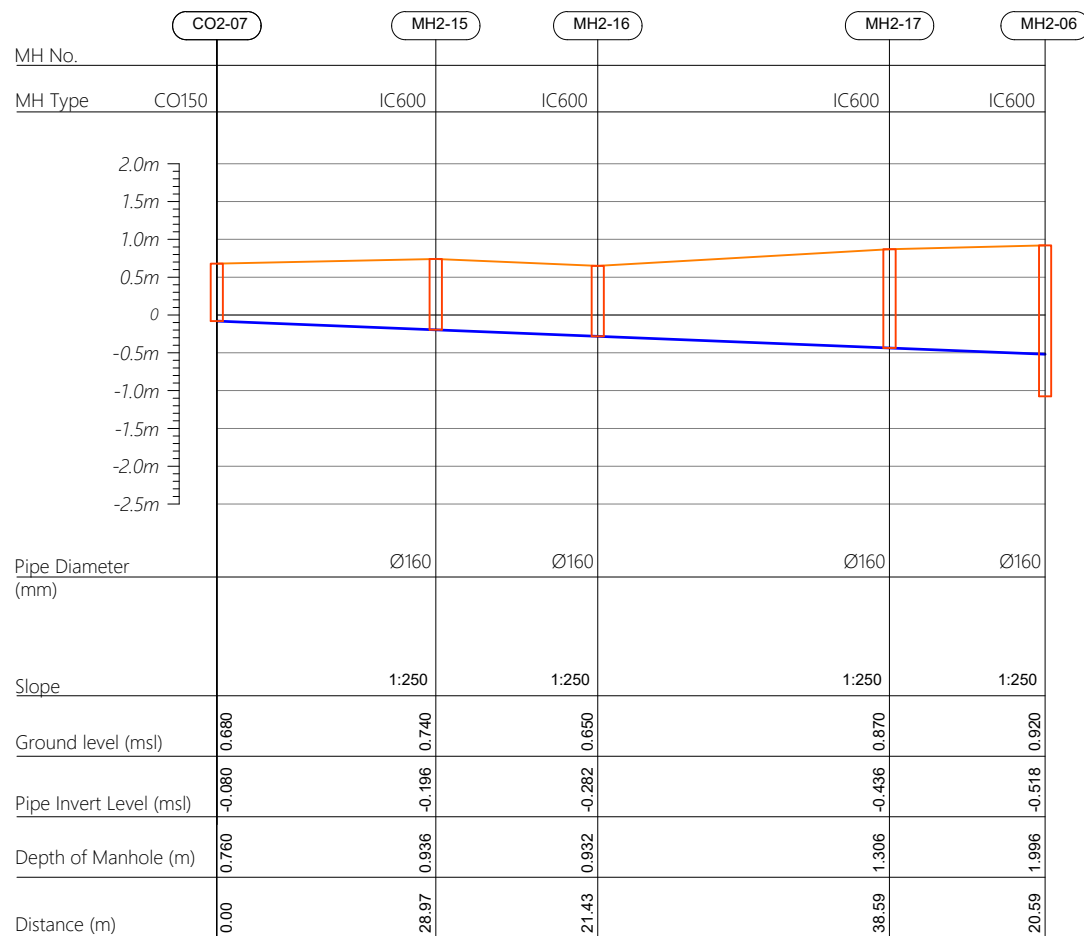
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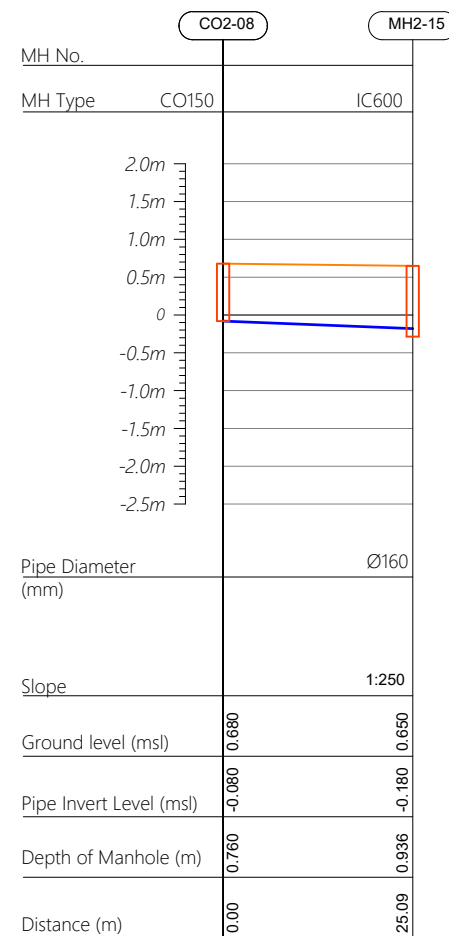
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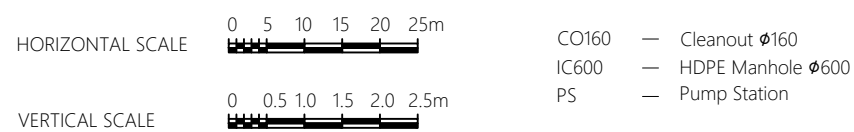
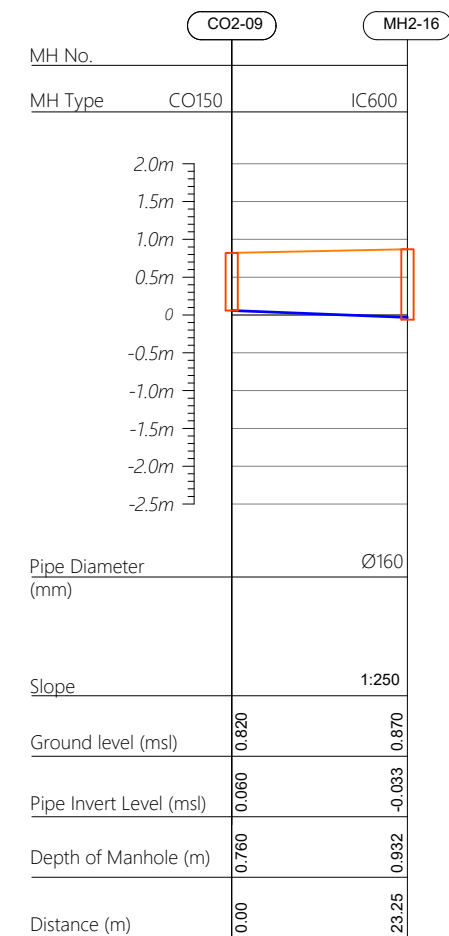
Profile 07



Profile 08



Profile 09



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Title:
*Consultancy Services for Survey,
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Sub Title:
Sewerage System in M.Naalaafushi

Client:
*Ministry of National Planning, Housing and
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Designed: F.J.A	Approved: J.W
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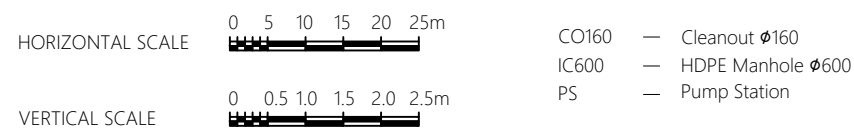
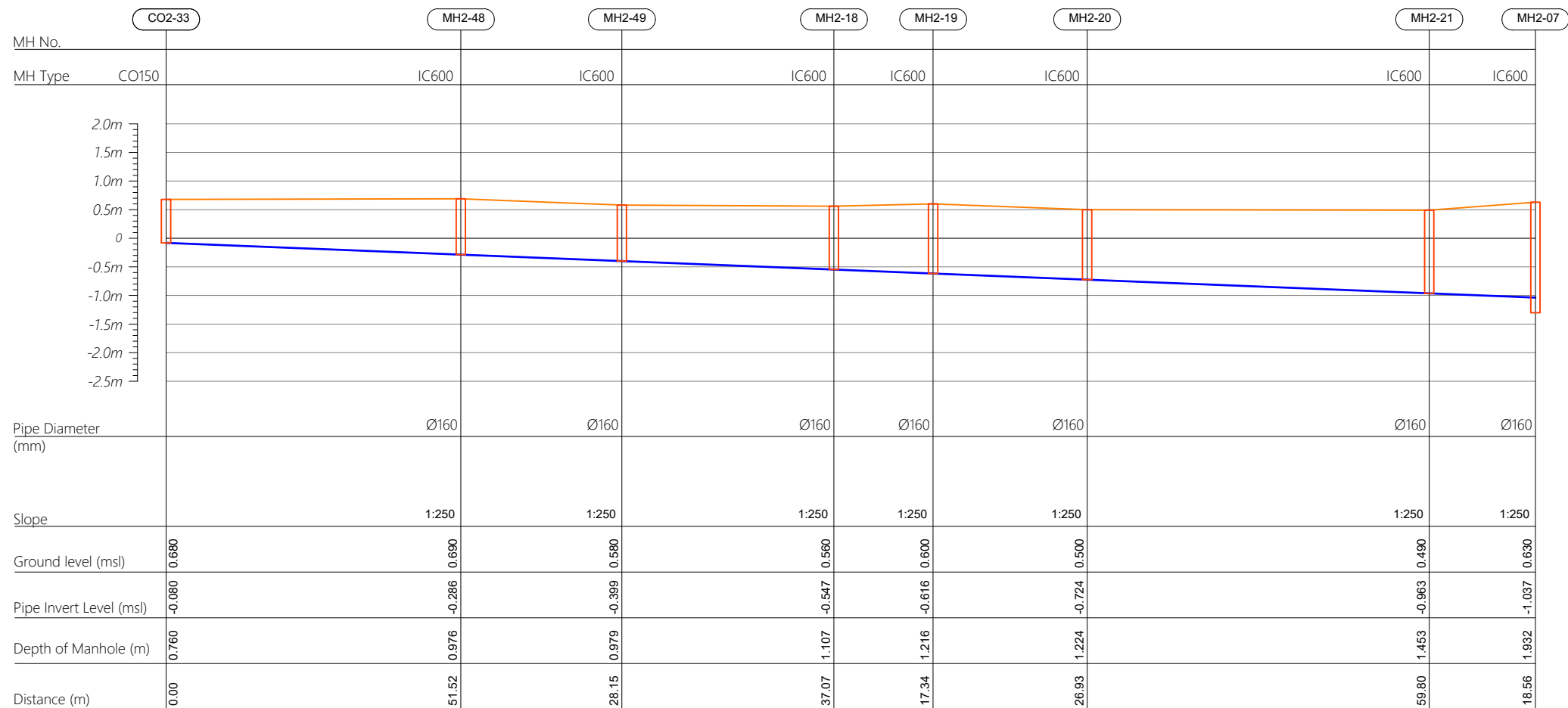
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Drawn: A.R.W	Checked: M.S.S
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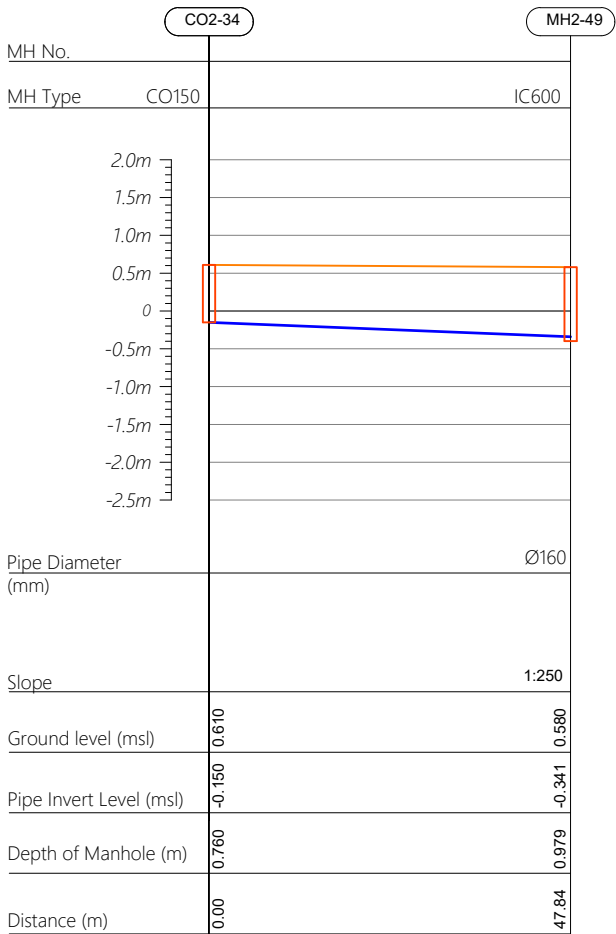
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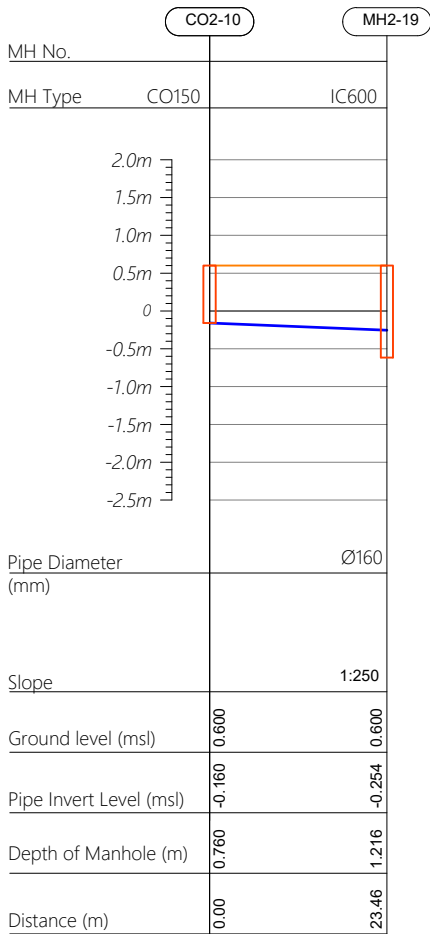
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R-01 PS2-05

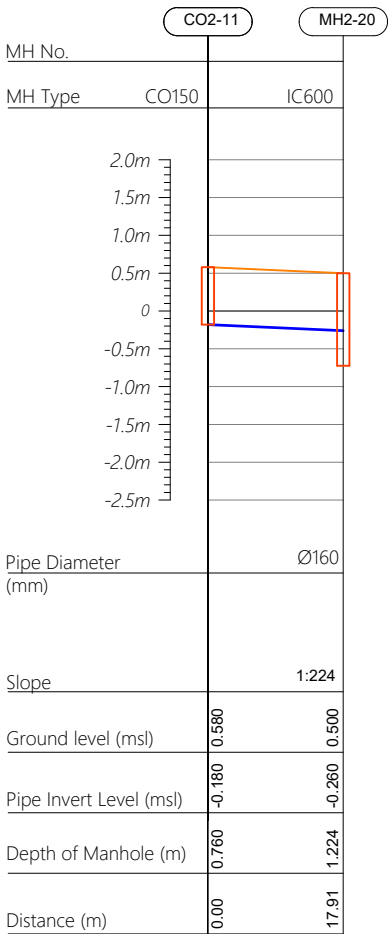
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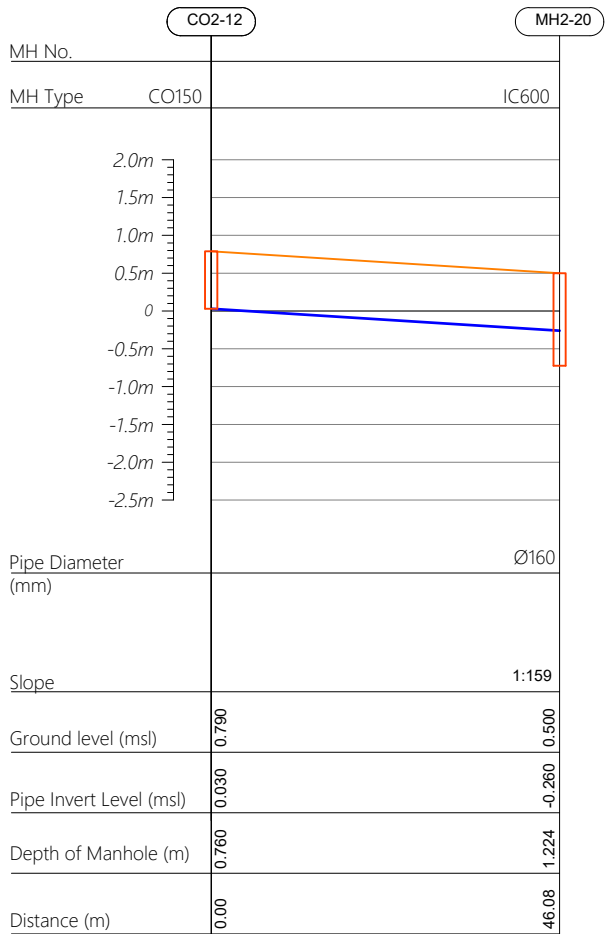
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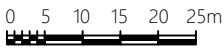
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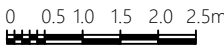
Profile 12



HORIZONTAL SCALE



VERTICAL SCALE



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

R00	JUNE 2020	STAGE -1	PD	SBC	SD
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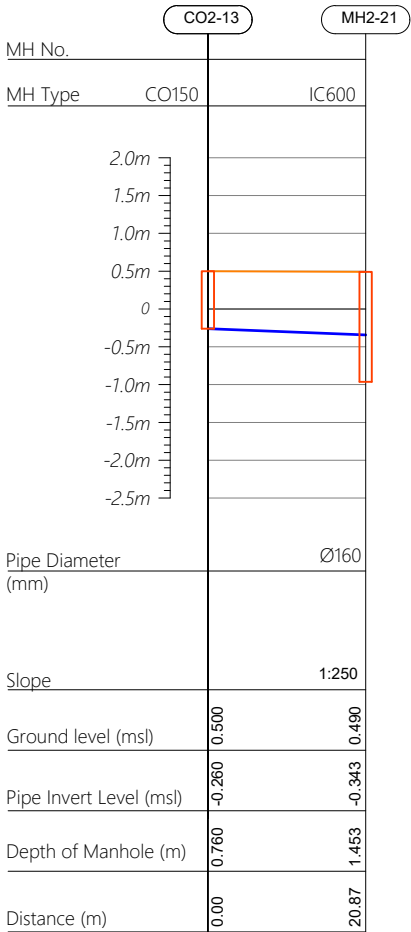
Designed: F.I.A Approved: I.W

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

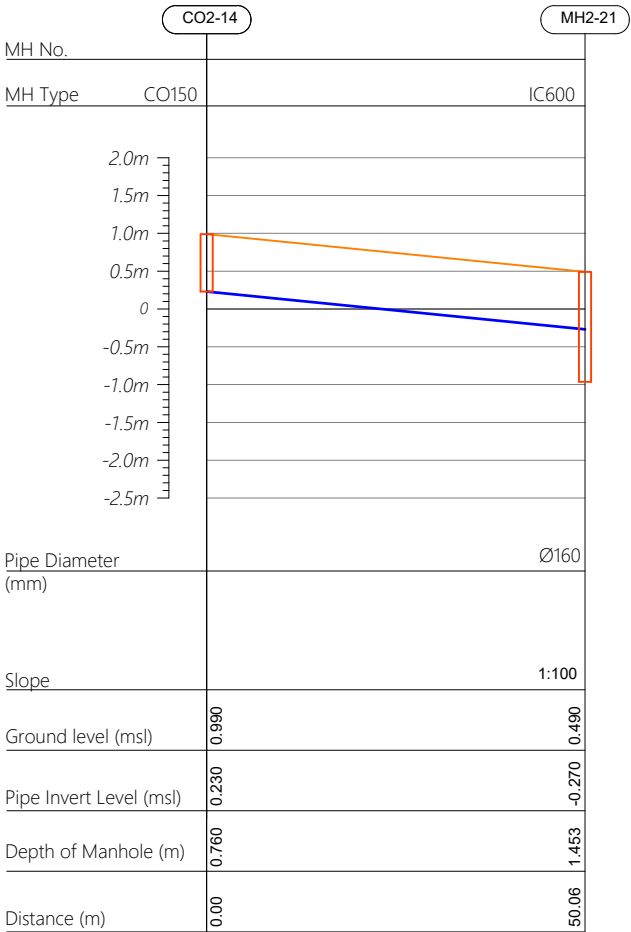
Project No: 01010101

Rev: R-01 Page: PS2-06

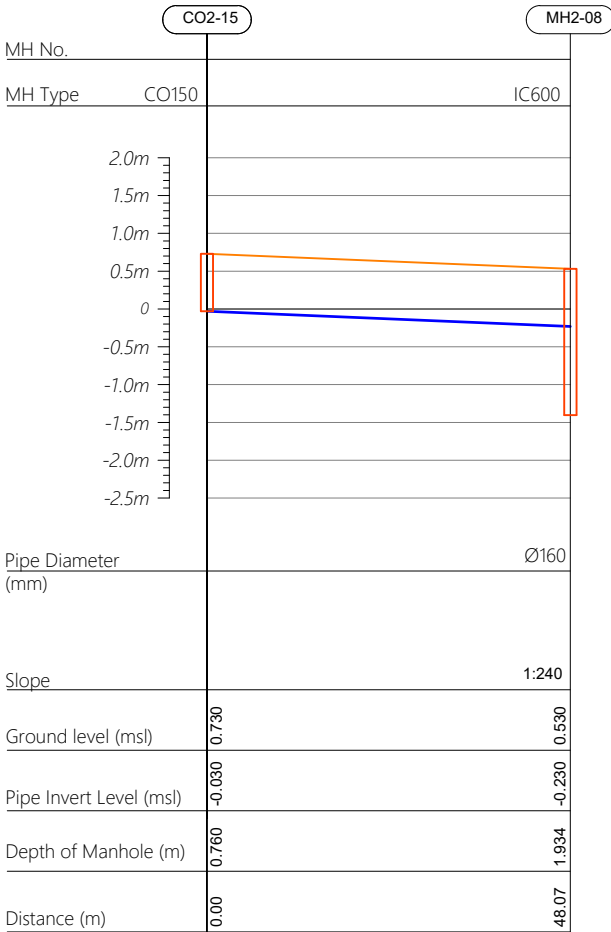
Profile 13



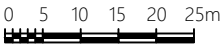
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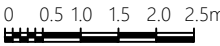
Profile 15



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 6 islands, Maldives - Package 5

Sub Title:
Sewerage System in M.Naalaafushi

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

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

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Maldivu Infrastructure Happpu

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

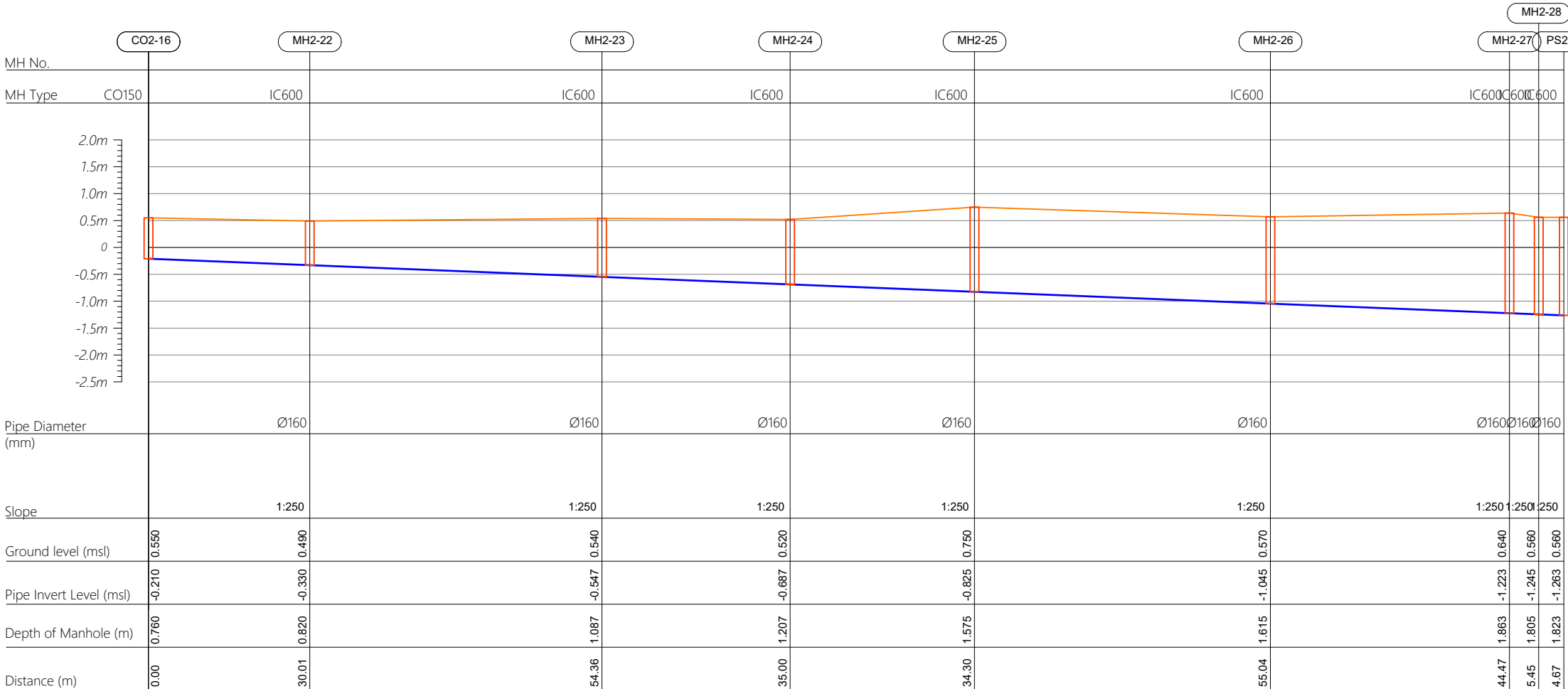
Designed: F.I.A Approved: I.W

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

Project No: 01010101

Rev: R-01 Page: PS2-07

Profile 16



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 6 islands, Maldives - Package 5*

Sub Title:
Sewerage System in M.Naalaafushi

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: I.W

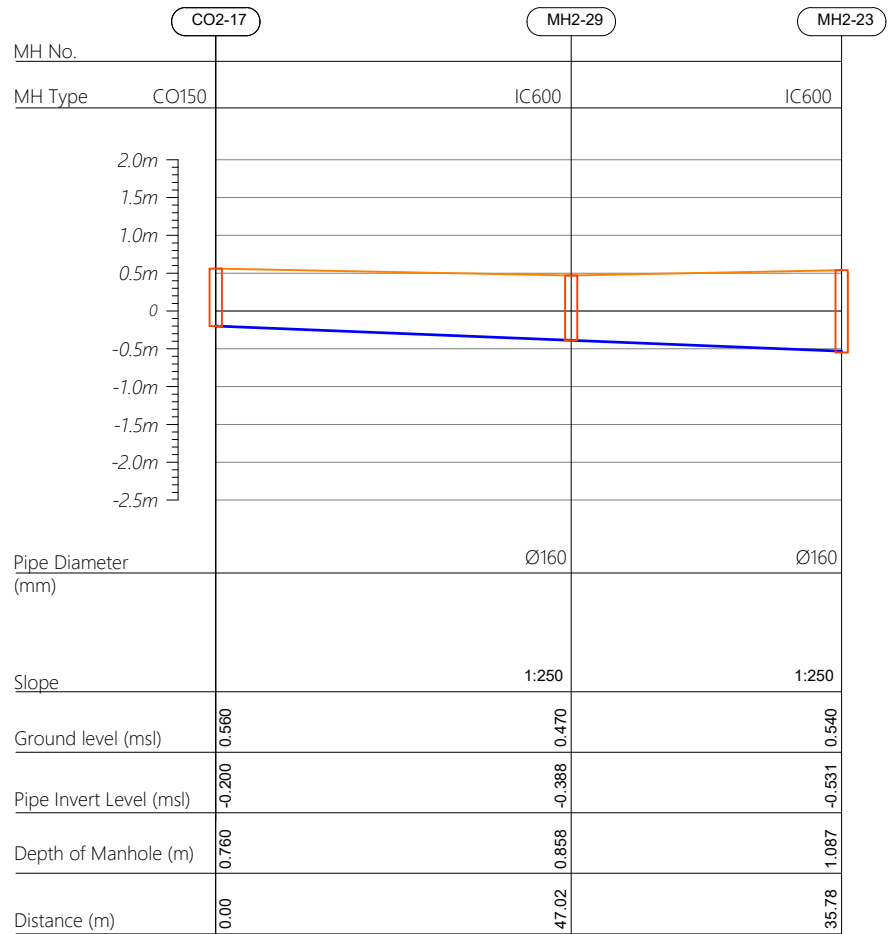
Date: Aug 2020 SCALE (A3): 1:100

Project No: 01010101

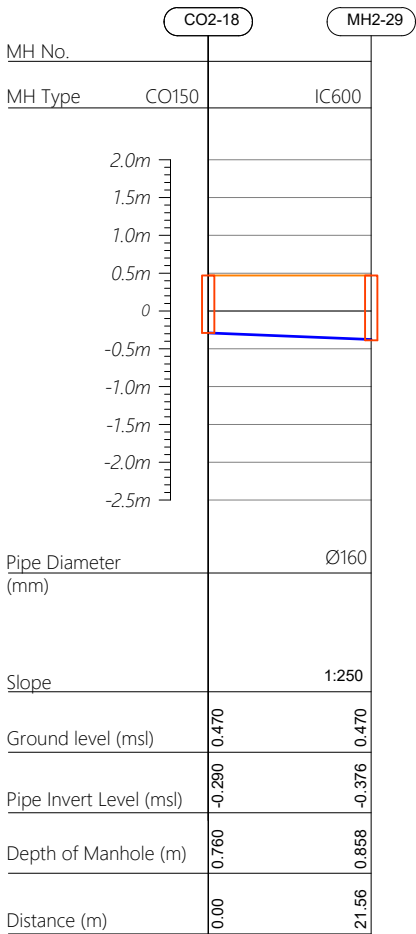
Rev.	Page:
R-01	PS2-08



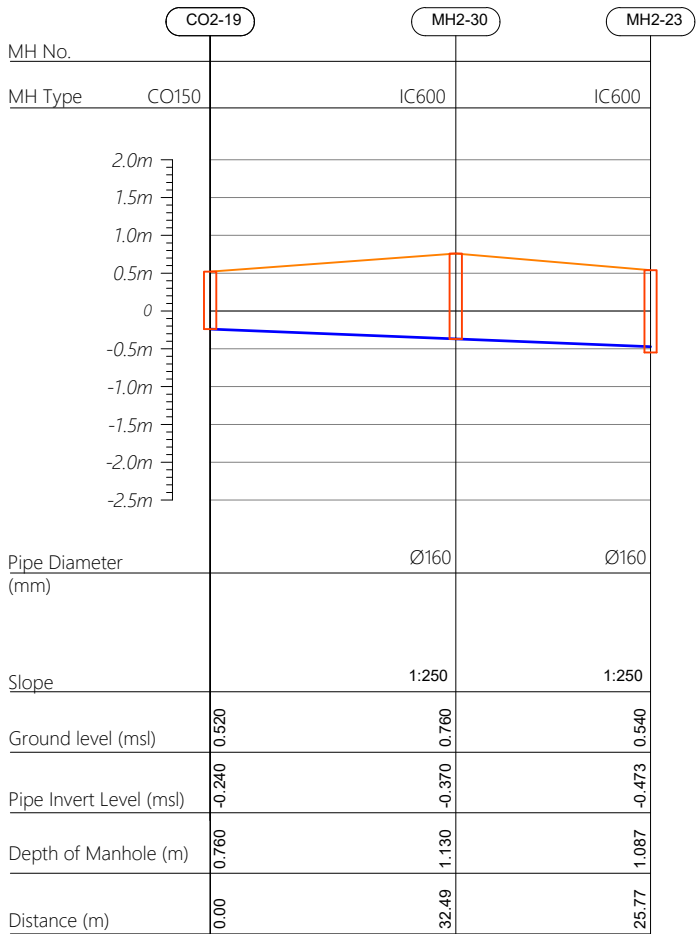
Profile 17



Profile 18



Profile 19



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 6 islands, Maldives - Package 5

Sub Title:
Sewerage System in M.Naalaafushi

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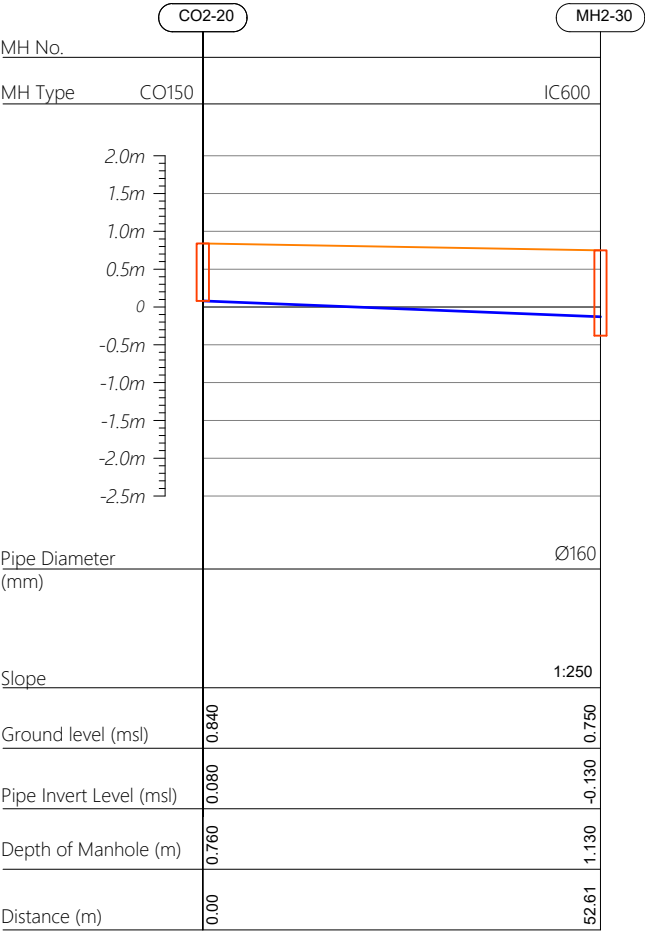
Designed: F.I.A Approved: I.W

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

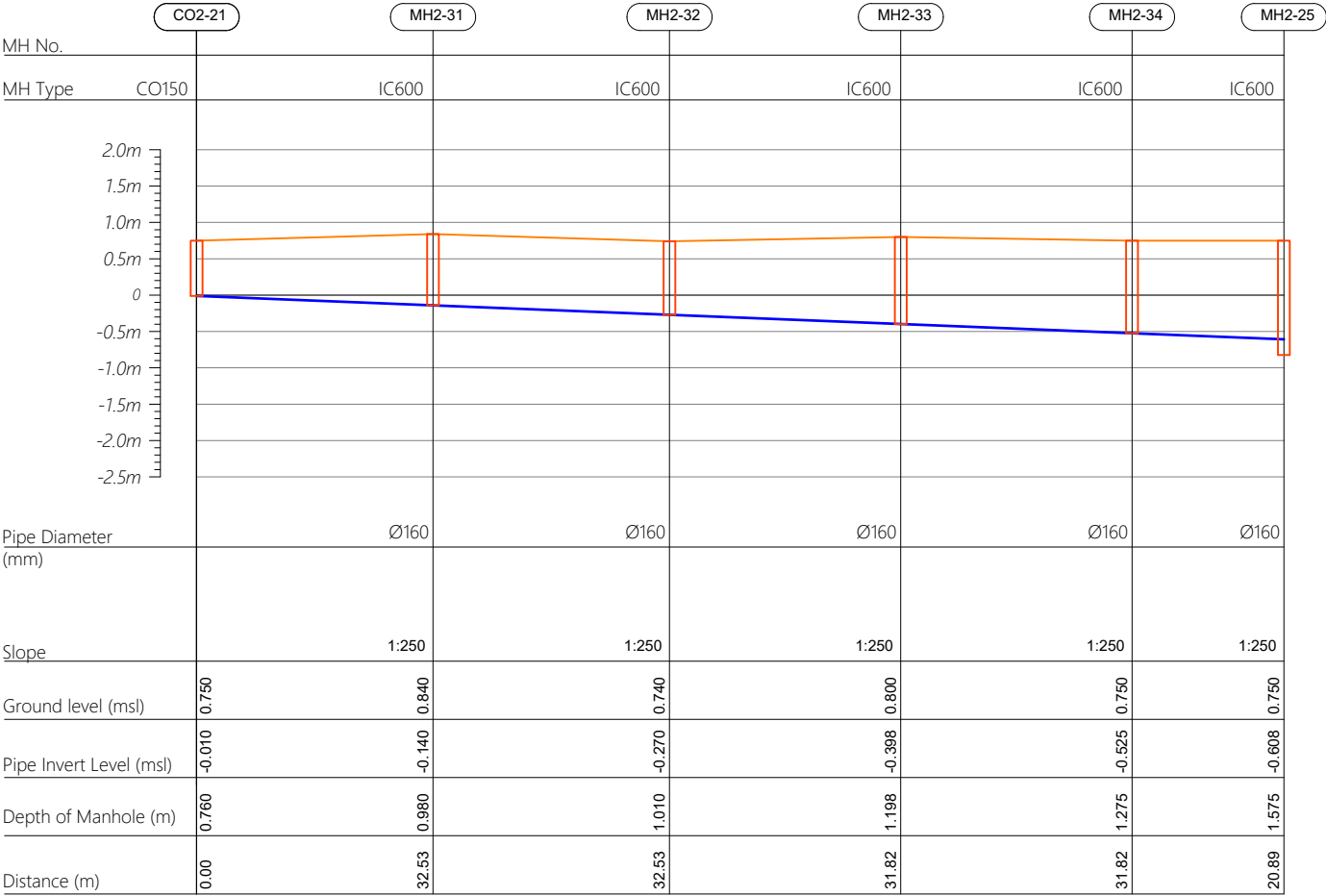
Project No: 01010101

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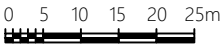
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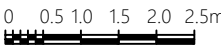
Profile 21



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 6 islands, Maldives - Package 5

Sub Title:
Sewerage System in M.Naalaafushi

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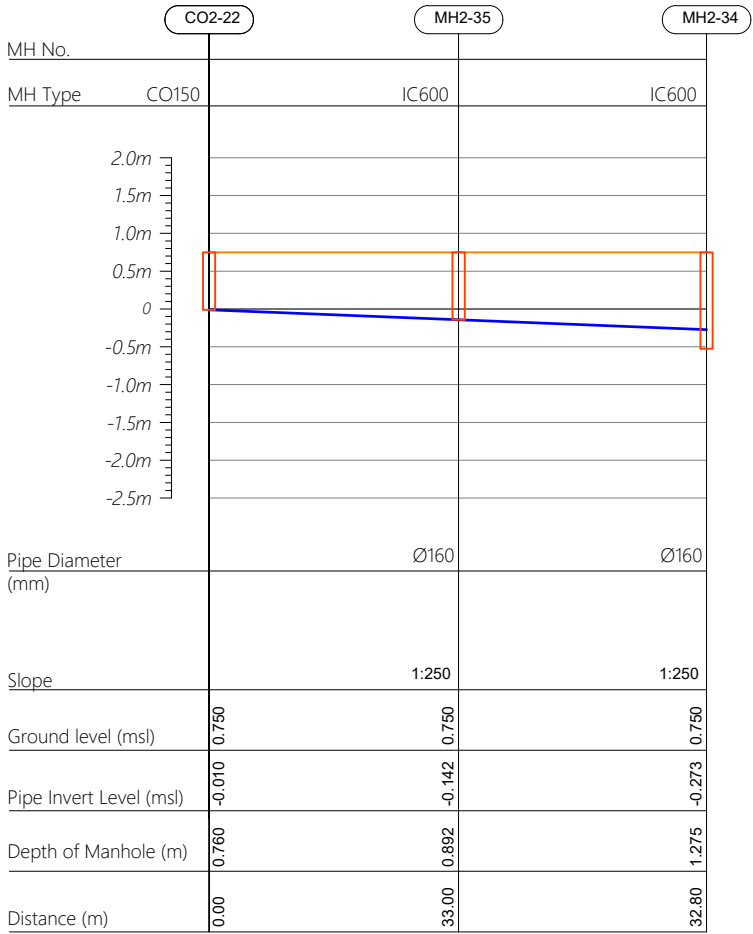
Designed: F.I.A Approved: I.W

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

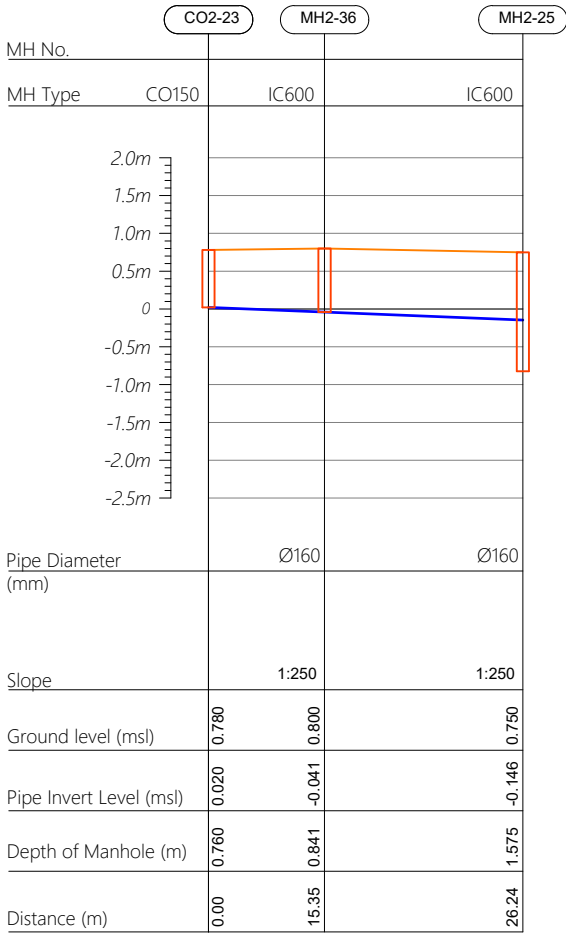
Project No: 01010101

Rev: R-01 Page: **PS2-10**

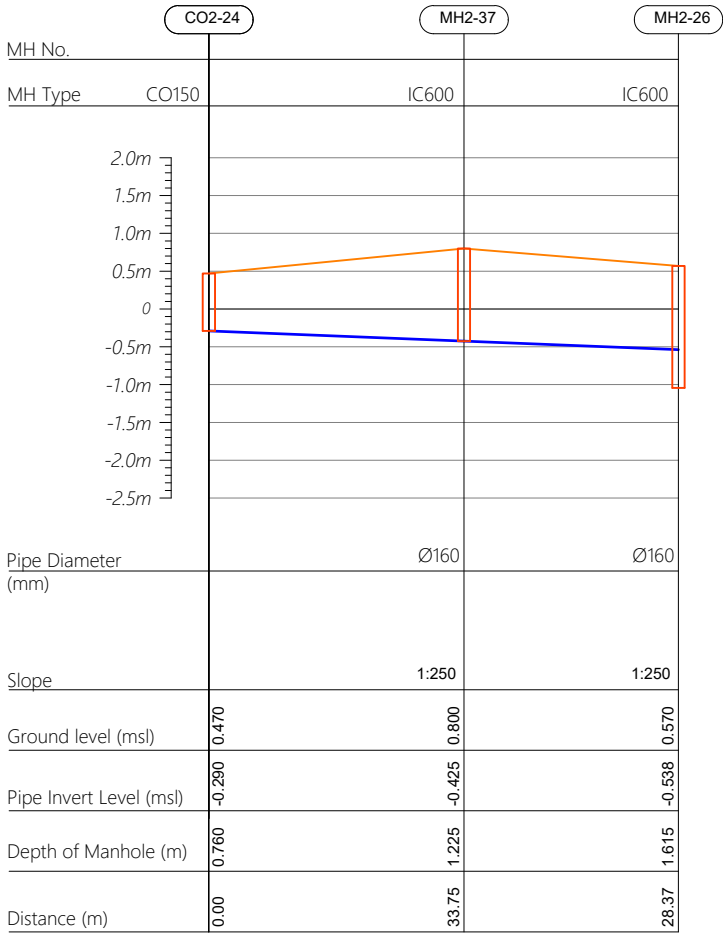
Profile 22



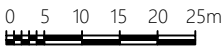
Profile 23



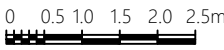
Profile 24



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 6 islands, Maldives - Package 5

Sub Title:
Sewerage System in M.Naalaafushi

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



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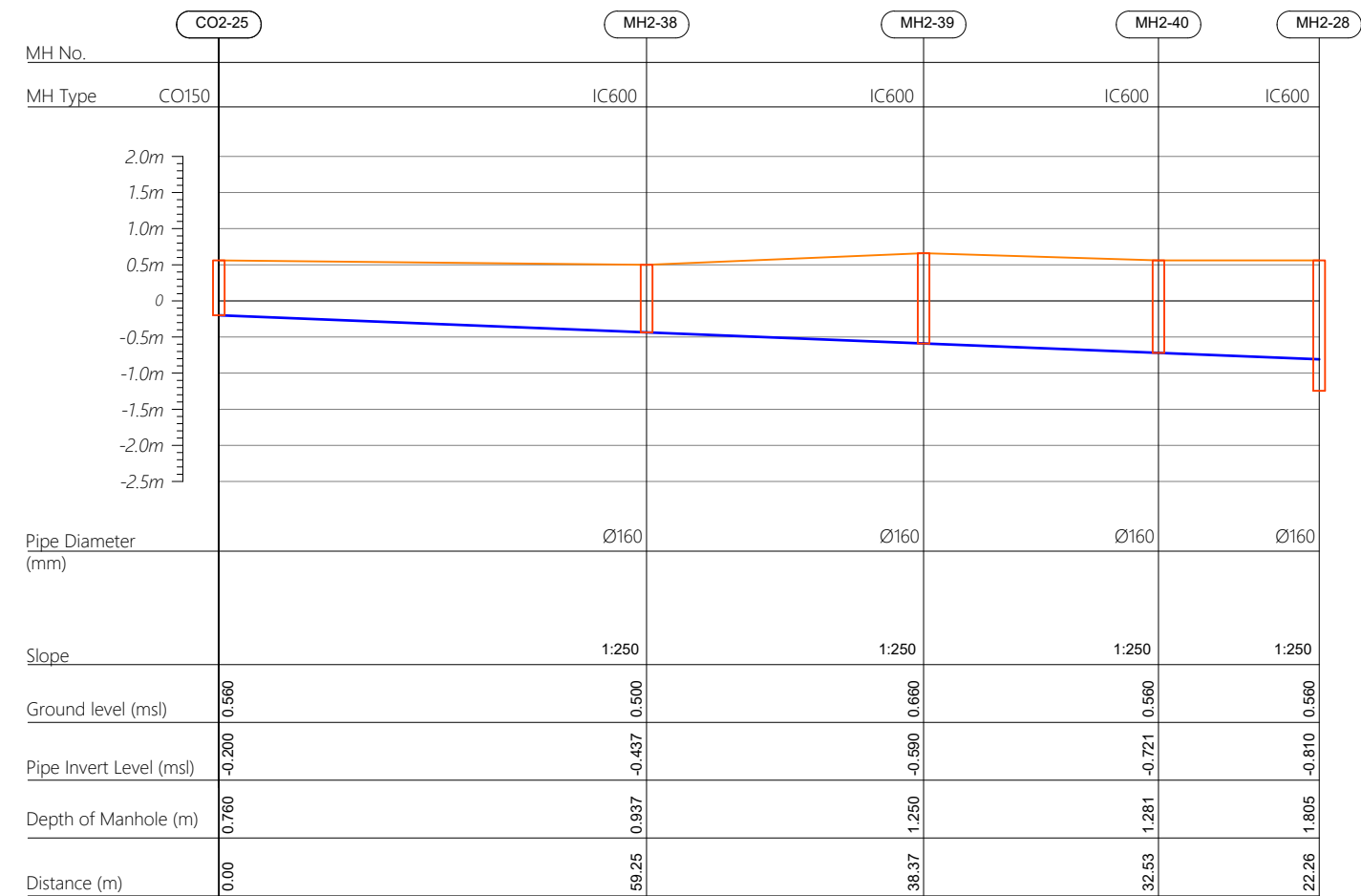
Designed: F.I.A Approved: I.W

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

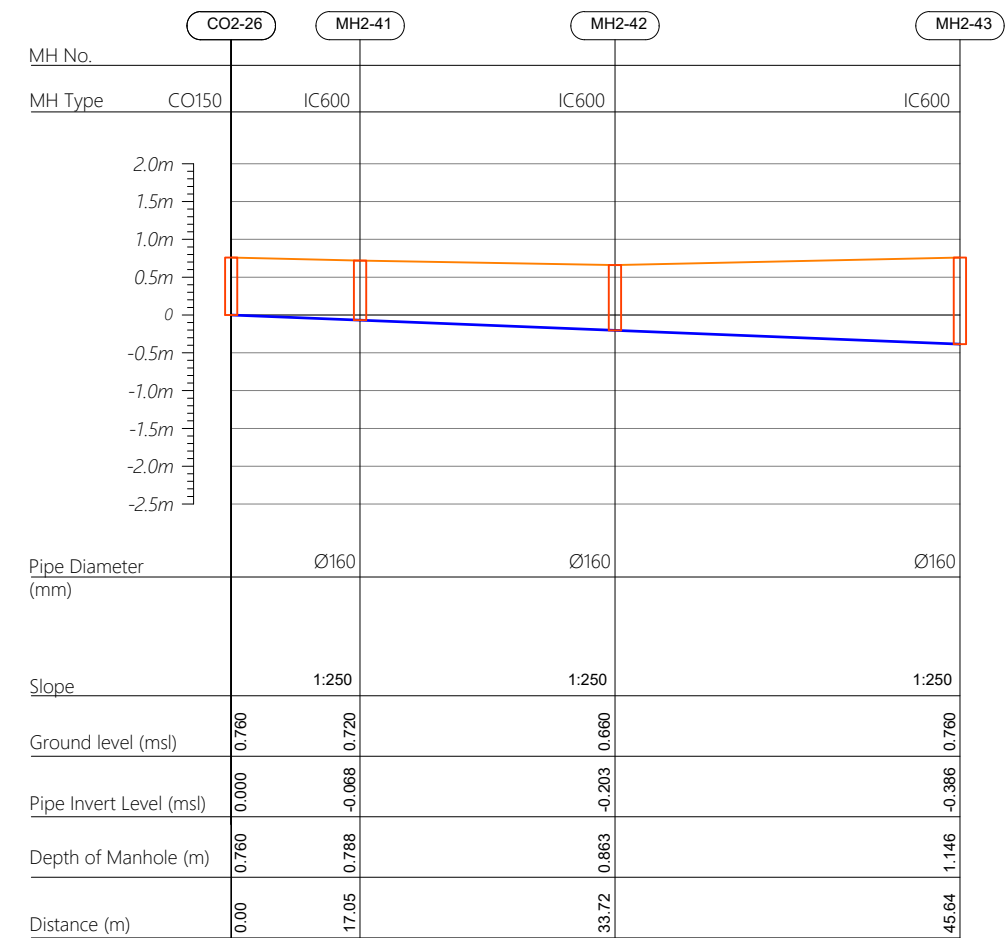
Project No: 01010101

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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 6 islands, Maldives - Package 5

Sub Title:
Sewerage System in M.Naalaafushi

Client:
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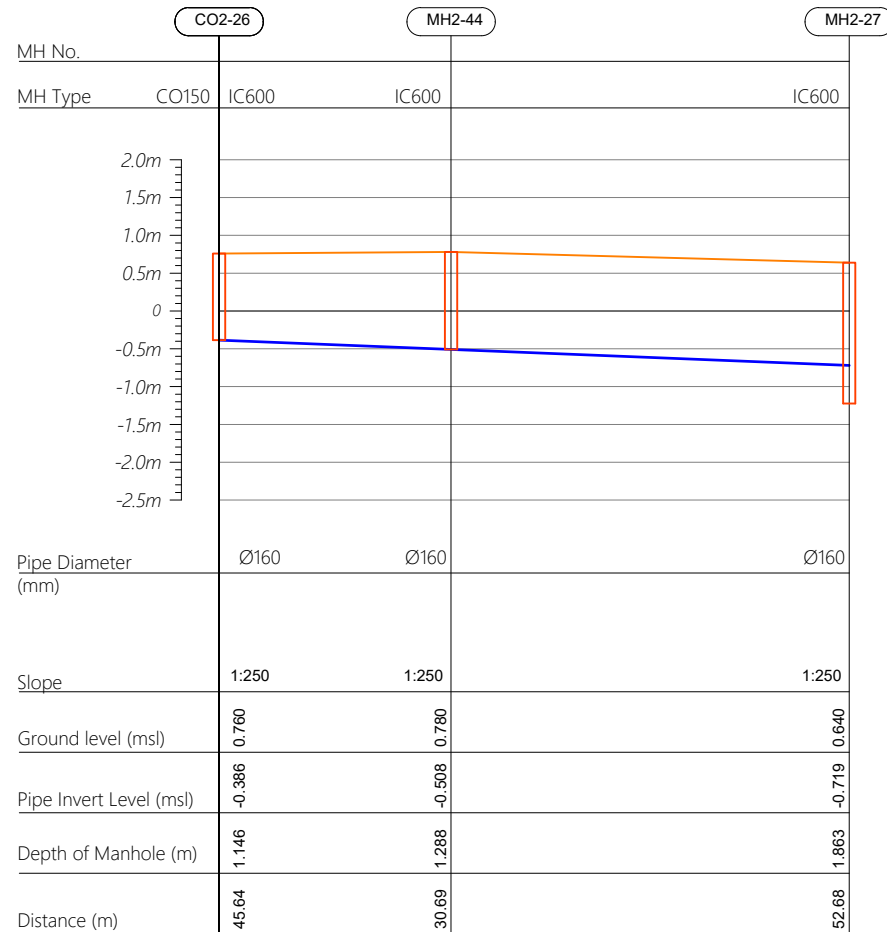
Drawn: A.R.W
Designed: F.I.A
Date: Aug 2020
Project No: 01010101

Checked: M.S.S
Approved: I.W
SCALE (A3): 1:100

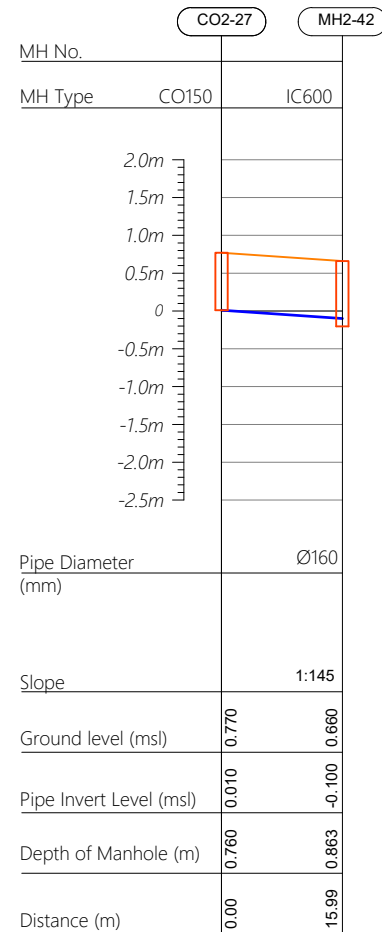
Rev: R-01

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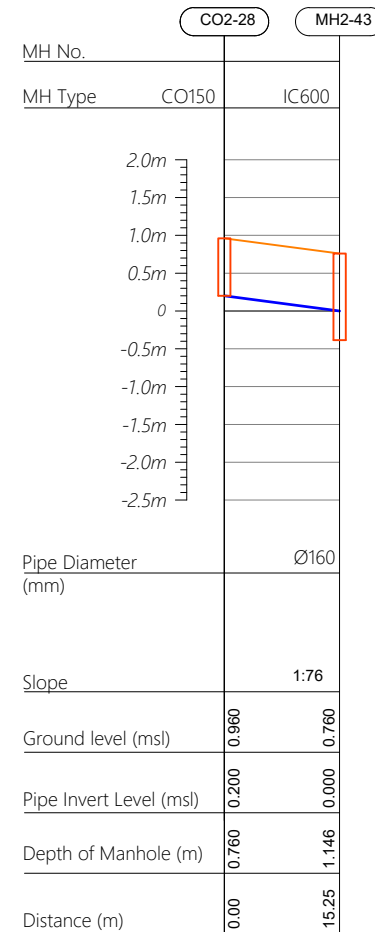
Profile 26



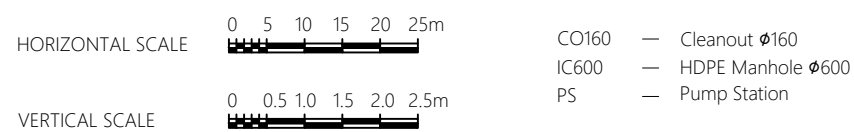
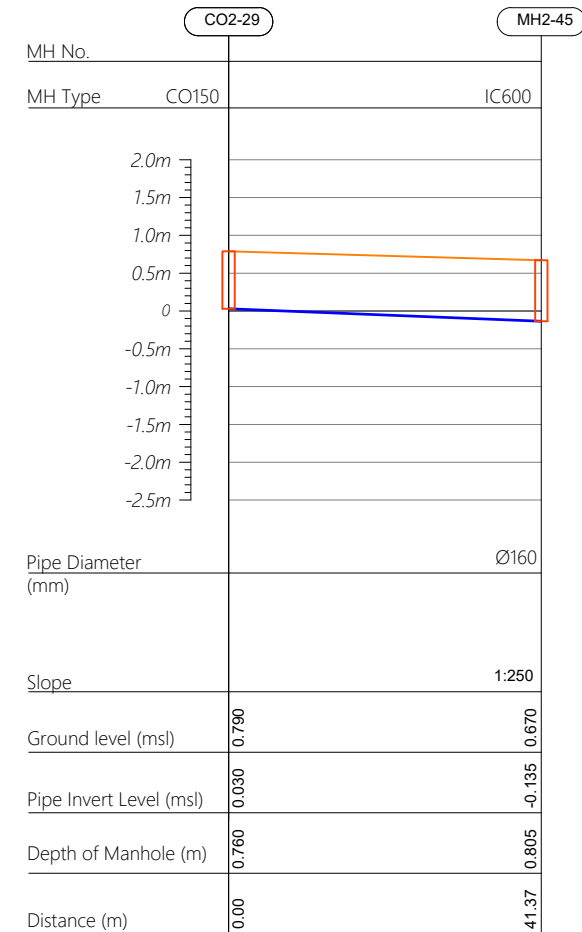
Profile 27



Profile 28



Profile 29



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
6 islands, Maldives - Package 5*

Sub Title:
Sewerage System in M.Naalaafushi

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



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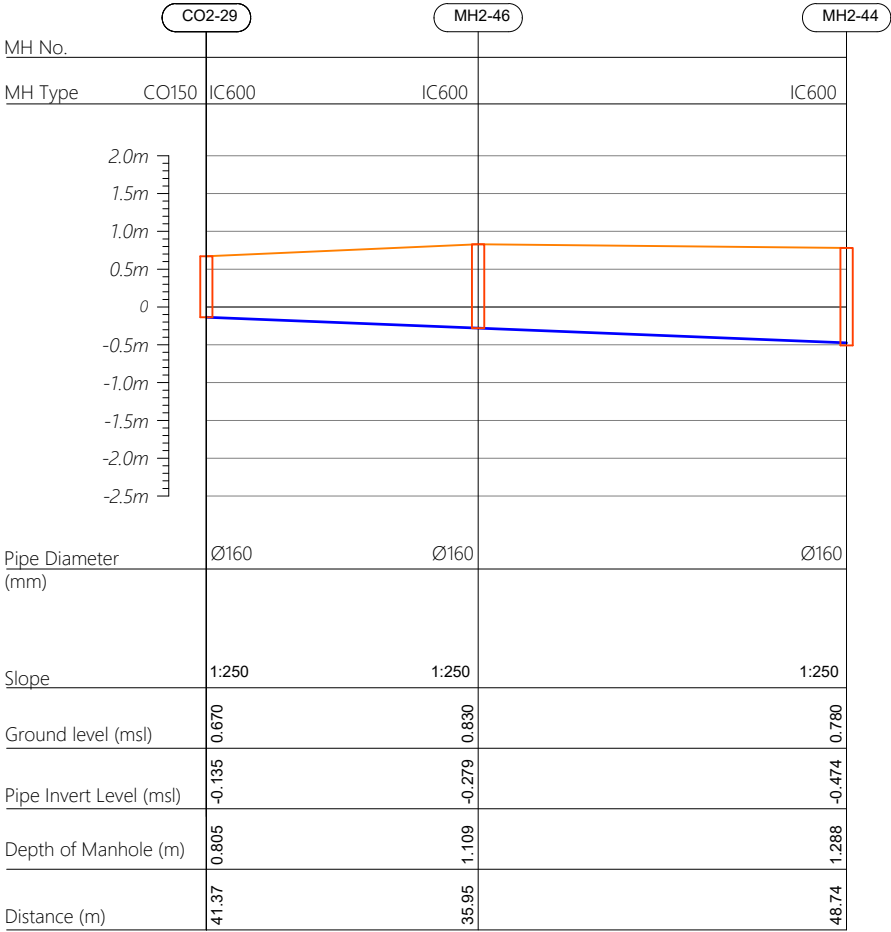
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Date: Aug 2020 SCALE (A3): 1:100

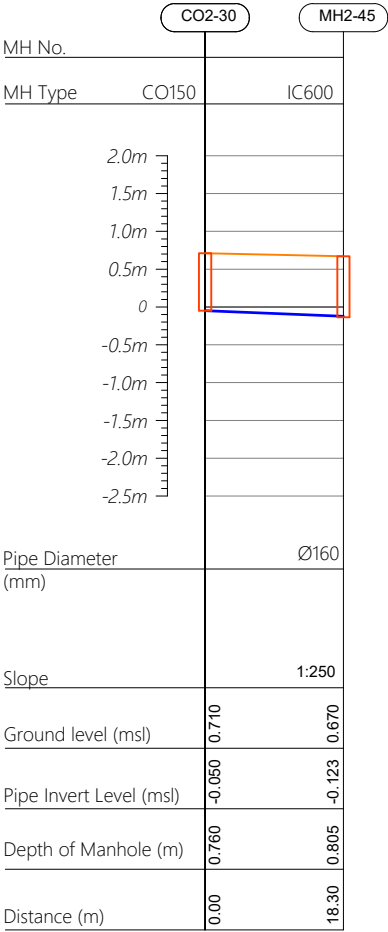
Project No: 01010101

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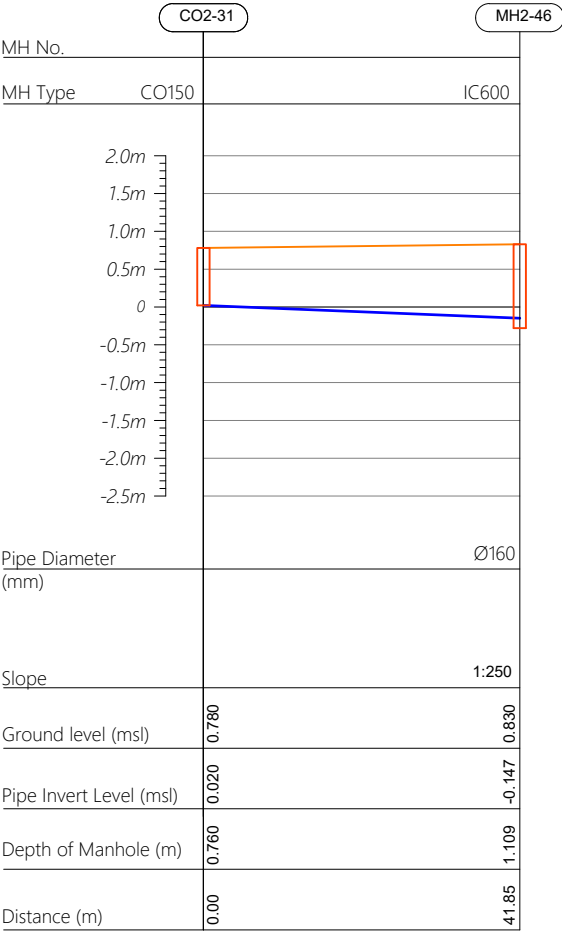
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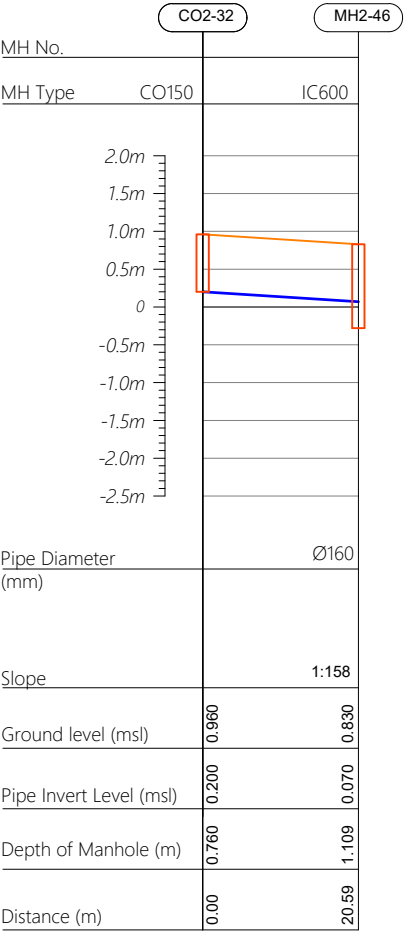
Profile 30



Profile 31



Profile 32



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
6 islands, Maldives - Package 5**

Sub Title:
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Client:
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Designed: F.I.A Approved: I.W

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

Project No: 01010101

Rev: R-01 Page: PS2-14