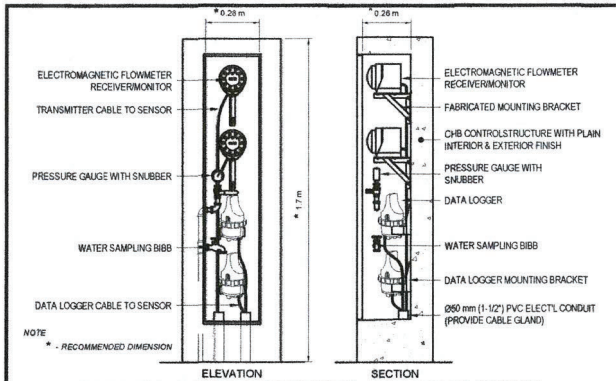
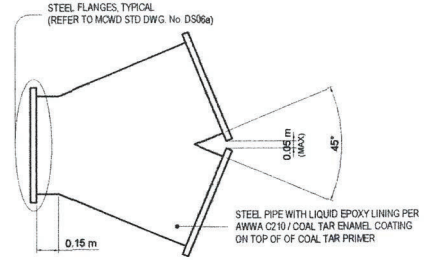
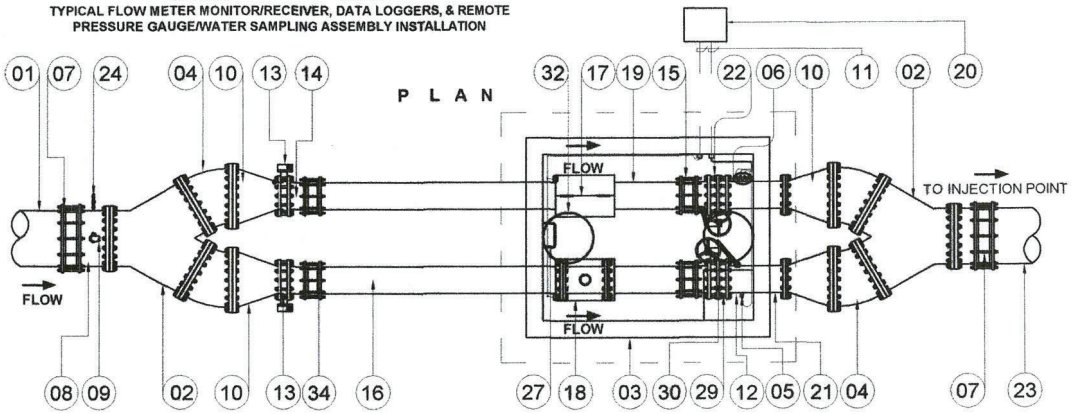


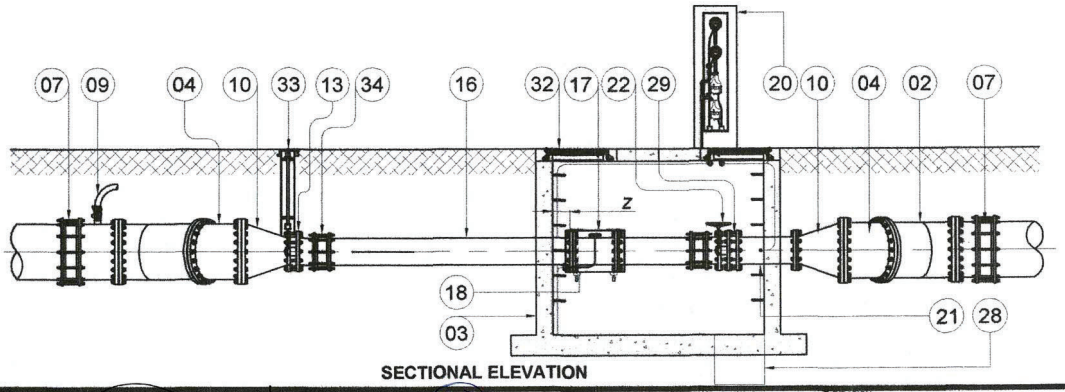
TYPICAL FLOW METER MONITOR/RECEIVER, DATA LOGGERS, & REMOTE PRESSURE GAUGE/WATER SAMPLING ASSEMBLY INSTALLATION



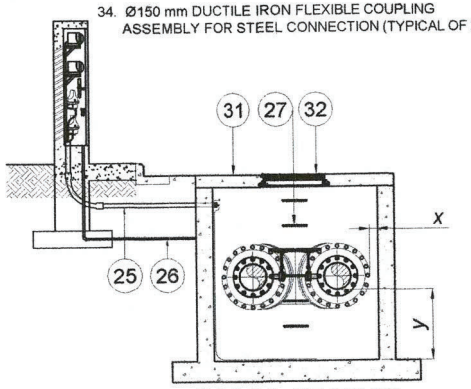
DETAIL OF FABRICATED SPECIAL STEEL WYE, EPOXY-LINED/COAL TAR ENAMEL COATED (EL/CEC)



OPTION 1 - FLUSHED TYPE FLOW METER ASSEMBLY AT DROP-OFF POINT USING CONCENTRIC (STRAIGHT) REDUCERS



SECTIONAL ELEVATION



CROSS-SECTION

LEGEND:

01. PROPOSED [D][M_p] CONNECTING PIPELINE FROM BWS PLANT
02. [D][M_p] (AT INFLOW)/Ø200 mm [M_p] (AT OUTFLOW); FABRICATED SPECIAL WYE, FFF, SEE DETAIL
03. PROPOSED REINF. CONC VAULT WITH REMOVABLE STEEL-FRAMED CONC. COVER PROVIDED WITH CONCEALED/RETRACTABLE LIFTING LUGS AND ACCESS MANHOLE WITH C.I. FRAME & COVER (TO BE PROVIDED BY THE WATER SUPPLIER)
04. [D x 22.5°][M_p] (AT INFLOW)/Ø200 mm x 22.5° DI (AT OUTFLOW); SHORT RADIUS ELBOW, FF
05. PRESSURE MONITORING SENSOR PORT
06. WATER QUALITY MONITORING SENSOR PORTS
07. [D] (AT INFLOW)/Ø200 mm (AT OUTFLOW); DUCTILE IRON FLEXIBLE COUPLING ASSEMBLY, (ADAPTION BASED ON SUPPLY PIPE MATL)
08. [D][M_p] (AT INFLOW)/Ø200 mm DI (AT OUTFLOW); FLANGE ADAPTOR, FS (TO ADAPT PIPE MATL TO BE CONNECTED)
09. Ø 50 mm AR/AV ASSEMBLY CONNECTION TAPPING POINT
10. [D x 150 mm][M_p] (AT INFLOW)/Ø200 x 150 mm DI (AT OUTFLOW); CONCENTRIC REDUCER, FF (TYPICAL OF 2 EACH)
11. WATER QUALITY & PRESSURE DATA CABLES TO CONTROL STRUCTURE
12. VALVE SECURITY AND LOCKING DEVICE, TYPICAL ON ALL VALVES INSIDE THE VAULT (SEE DETAIL ON SHT # 3)
13. Ø150 mm SEMI-LUG WAFER TYPE BUTTERFLY VALVE WITH SQUARE OPERATING NUT, TYP. OF 2 (SEE SPECS)
14. Ø150 mm D.I. FLANGE ADAPTOR FOR DI, FS, (TYPICAL)
15. Ø150 mm DUCTILE IRON FLEXIBLE COUPLING ASSEMBLY FOR STEEL CONNECTION (TYPICAL OF 2)
16. Ø150 mm x 750 mm LONG STEEL UPSTREAM FLOW STRAIGHTENING SPOOL, FS, (TYP. OF 2)
17. Ø150 mm FULL BORE ELECTROMAGNETIC FLOWMETER SENSOR/TRANSMITTER (SHOWN WITH ENCASEMENT), TYP. OF 2 (SEE SPECIFICATIONS)
18. FLOWMETER FABRICATED METAL CASING WITH LOCK, (TYPICAL OF 2, SEE DETAIL)
19. Ø 150 mm x 450 mm STEEL DOWNSTREAM FLOW STRAIGHTENING SPOOL, FS, (TYP. OF 2)
20. PROPOSED ABOVE-GROUND FLOWMETER-TRANSMITTER STRUCTURE, SEE DETAIL (LOCATION FOR ACTUAL VERIFICATION)
21. Ø150 mm STEEL CONNECTING SPOOL, (TYPICAL OF 2, FF)
22. Ø150 mm SEMI-LUG WAFER TYPE BUTTERFLY VALVE WITH HANDWHEEL, TYP. OF 2 (SEE SPECS)
23. Ø200 mm [M_p] CONNECTING PIPE TO INJECTION POINT
24. Ø 20 mm (½") WATER SAMPLING LINE SUCTION PORT
25. Ø 50 mm (1-1/2") PVC ELECTRICAL CONDUIT WITH 90° ELBOW, TYPICAL
26. Ø 20 mm (½") WATER LINE TO SAMPLING FAUCET/PRESSURE GAUGE
27. Ø 16 mm STAINLESS STEEL LADDER RUNGS
28. 600 mm SQR x 600 mm DEEP SUMP
29. Ø150 mm WAFER TYPE SWING CHECK VALVE WITH LEVER & COUNTERWEIGHT, TYP. OF 2 (SEE SPECIFICATIONS)
30. Ø150 mm STEEL RING (LOOSE) FLANGE, TYPICAL OF 2 (REFER TO MCWD STD SHOP DWG)
31. REMOVABLE CONCRETE COVER. TWO (2) WITH ACCESS MANHOLE EACH AND WITH JOINT SEAL
32. OUTLINE OF ACCESS MANHOLE (TYPICAL)
33. FABRICATED HANDHOLE WITH FRAME & COVER
34. Ø150 mm DUCTILE IRON FLEXIBLE COUPLING ASSEMBLY FOR STEEL CONNECTION (TYPICAL OF 2)

WHERE:

[D] = Diameter of Inflow & outflow pipes

[d] = Diameter of flowmeter & its immediate fittings & appurtenances

[M_p] = Material of pipe

MANDATORY REQUIREMENTS:

> Air release valve shall be installed in location that can not obstruct both motorist & pedestrians and shall be provided with cover conforming to MCWD standard;

> All G.I. pipes & fittings to be installed shall be applied with multiple coatings of coal tar enamel prior to installation;

> The following dimensions shall be applied:

x = min. of 250 mm working space between the rim of the largest flange to the wall;

y = min. height of 350 mm from finish floor level of the vault to bottom of pipe;

z = min. clearance of 150 mm between flange face & conc wall

REPUBLIC OF THE PHILIPPINES
DPWH
OFFICE OF THE BUILDING OFFICIAL
CEBU CITY

RECOMMENDING APPROVAL:

HEAD, MECH'L SECTION — DATE

APPROVED:

BUILDING OFFICIAL — DATE

FROM THE OFFICE OF:
MCWD ENGINEERING DEPARTMENT
7th FLR. MCWD MAIN BLDG. CORNER MAGALLANES & LAPU-LAPU STREETS, CEBU CITY

JULIET R. PE — ACTING MANAGER, PLANNING DIVISION
RICHARD G. MISAL — MANAGER, DESIGN DIVISION
ANDREW L. MAGNO — MANAGER, ENGINEERING DEPT.

PREPARED BY: NELSON N. RUIZ
DATE: OCT 12, 2022

DRAWN BY: NELSON N. RUIZ
DATE: OCT 12, 2022

PROFESSIONAL MECHANICAL ENGINEER
REG. No. | PTR No. | DATE:
PLACE: | T.I.N.
SEAL

REVISION:

No.	DESCRIPTION	DATE	REVIEWED	APPROVED

OWNER:
Metropolitan Cebu Water District
CORNER MAGALLANES & LAPU-LAPU STREETS, CEBU CITY
RECOMMENDING APPROVAL: JORGE L. GABRIENTE — ASST. TECHNICAL SERVICES MANAGER
APPROVED: EDGAR H. DONOSO — GENERAL MANAGER

NAME OF PROJECT: SUPPLY AND DELIVERY OF POTABLE DESALINATED SEAWATER - CEBU CITY SOUTH PROJECT
PROJECT No.:
LOCATION: BRGYS. PARDO AND INAYAWAN, CEBU CITY

SHEET CONTENT: ANNEX "D" DROP-OFF POINT FLOWMETER ASSY INSTALLATION DETAILS (OPTION 1)
SCALE: AS INDICATED
SHEET NUMBER: 05 / 08