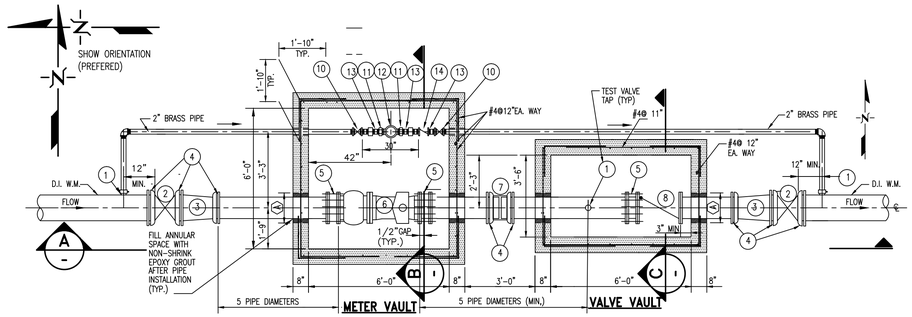
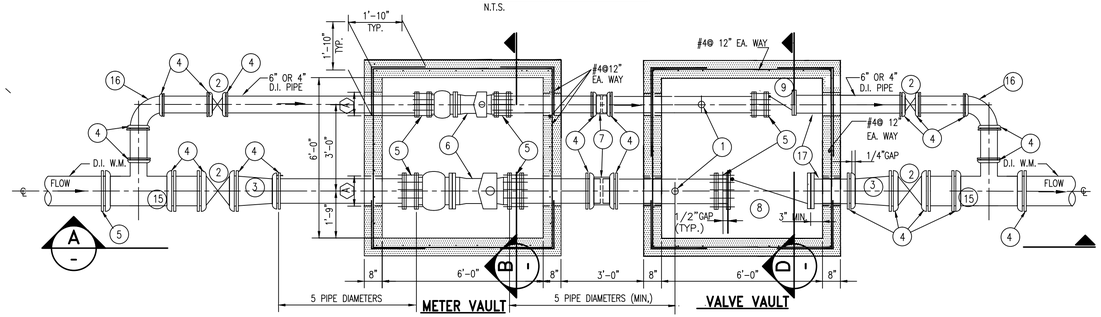


METER W/2" BY PASS (STANDARD) SECTIONAL PLAN

N.T.S.

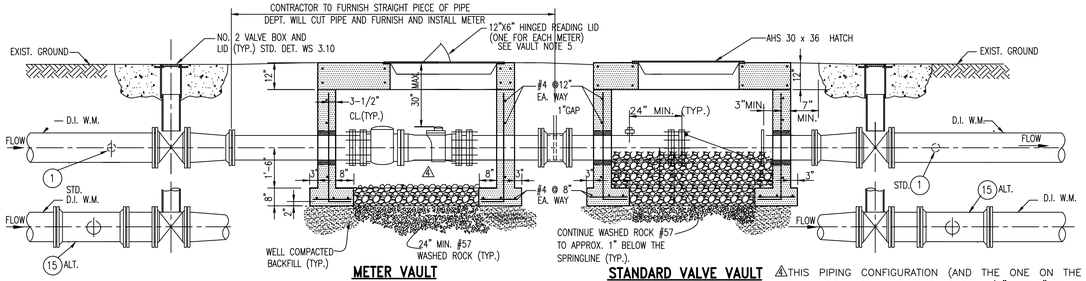
SEE TYPICAL SECTION FOR 4" METER IN NON-TRAFFIC AREAS AT LOW-RIGHT CORNER OF THIS DRAWING.



METER W/4" OR 6" BY-PASS (SPECIAL APPLICATIONS ONLY*) SECTIONAL PLAN

N.T.S.

* FOR COMMERCIAL/INDUSTRIAL/MUNICIPAL SPECIAL APPLICATIONS THAT HAVE BEEN PRE-APPROVED BY THE DEPARTMENT.



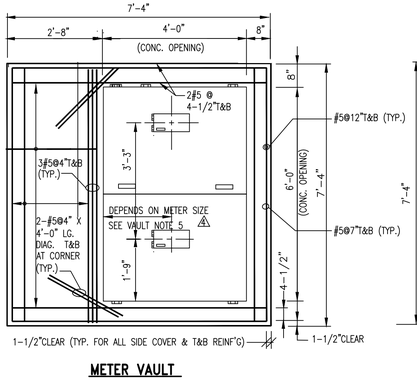
METER VAULT — STANDARD VALVE VAULT

⚠ THIS PIPING CONFIGURATION (AND THE ONE ON THE LEFT SIDE), SHALL BE USED WHEN THE METER W/4" OR 6" BY PASS (SPECIAL APPLICATIONS) IS USED; IF THIS WILL BE THE CASE, SUBSTITUTE THE PIPING LAYOUT SHOWN ON BOTH SIDES OF SECTION "A" WITH THIS MODIFIED LAYOUT, OTHERWISE ERASE THEM.

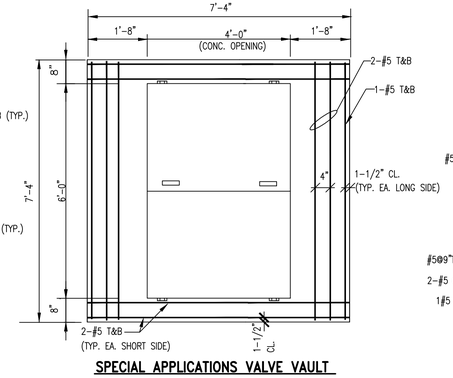
⚠ NOTES:

LEAVE 12" MIN SPACE BETWEEN THE BOTTOM OF PIPE AND TOP OF WASHED ROCK #57 UNTIL METER IS INSTALLED

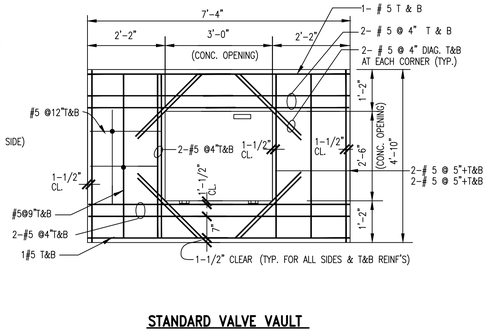
SECTION A — N.T.S.



METER VAULT



SPECIAL APPLICATIONS VALVE VAULT



STANDARD VALVE VAULT

TOP VIEWS

N.T.S.

NOTES ABOUT THE USE THESE GUIDELINES: ⚠(READ, COMPLY AND ERASE)

1) THESE GUIDELINES ARE MINIMUM DESIGN REQUIREMENTS PROPOSED BY THE DEPARTMENT. THE USER OF THESE DRAWINGS SHALL VERIFY AND MODIFY INFORMATION SHOWN HERE TO MAKE HIS DESIGN COMPLY WITH ALL APPLICABLE CODES AND STANDARDS.
2) USER OF THESE DESIGN GUIDELINES NEEDS TO MODIFY PLANS AND SECTIONS SHOWN HERE TO REFLECT HIS ACTUAL DESIGN CONDITIONS.
3) THE DEPARTMENT HAS THE RIGHT TO CALL FOR ADDITIONAL REQUIREMENTS.
4) FINALLY, THE USER OF THESE GUIDELINES MUST ERASE THE COMPLETE TITLE BLOCK ON THE RIGHT MARGIN OF THIS DRAWING AND SUBSTITUTE IT WITH HIS DESIGN FIRM NAME AND LOGO, TITLE OF THE SPECIFIC PROJECT, SHEET NAME AND NUMBER, ENGINEER OF RECORD NAME AND REGISTRATION NUMBER WITH SPACE FOR SIGNATURE AND SEAL, AND ALL OTHER INFORMATION THAT HE DEEMS APPROPRIATE.

INSTALLATION NOTES:

⚠1) PRESSURE REDUCING OR FLOW DISTURBING DEVICE SHALL NOT BE INSTALLED CLOSER THAN 5-PIPE DIAMETERS UPSTREAM OR DOWNSTREAM FROM THE METERS.
2) ALL PIPES SHALL BE WRAPPED WITH TWO LAYERS OF 30# ROOFING FELT, WHERE THEY PASS TROUGH VAULT WALLS AND THE ANNULAR SPACE FILLED WITH GROUT AFTER PIPE INSTALLATION.
3) CONCRETE VAULTS SHALL BE AS MANUFACTURED BY U.S. PRECAST OR APPROVED EQUAL.
4) CONCRETE TO OBTAIN A MAX. COMPRESSIVE STRENGTH f'= 4,000 psi. AT 28 DAYS.
5) REINFORCEMENT TO COMPLY WITH ASTM-A-615 WITH A MIN. YIELD STRENGTH F=60,000 psi.
6) ALL PIPE AND FITTINGS SHALL BE DUCTILE IRON, CEMENT LINED, UNLESS OTHERWISE CALLED FOR.
⚠7) RESTRAIN ALL MECHANICAL JOINTS WITH MEGALUGS OR APPROVED EQUAL
8) ALLOW A ½" GAP BETWEEN FACE OF FLANGE AND CONNECTING PIPE TO FACILITATE ASSEMBLY/DISASSEMBLY AT ALL MEGA-FLANGE ADAPTERS (MARK 5).

LIST OF MATERIALS

MARK	ITEM		QTY.	METER SIZE 4	6	8	10
				DIAM. ACCORDING TO METER SIZE			
1	AWWA/CC TAPER THREAD X FEMALE I.P. THREAD OUTLET, FORD FB 1600 SERIES OR EQUAL.	-STD.2"	3	1-1/2x 2	1-1/2x 2	2 x 2	2 x 2
		SP. APL.	2				
2	N.R.S. GATE VALVE, M.J.	-STD.2"	2	6	8	10	12
		SP. APL.	4	–	–	4 OR 6	4 OR 6
3	SMALL END M.J. BELL x P.E. REDUCER		2	6 x 4	8 x 6	10 x 8	12 x 10
4	MEGALUG RETAINER GLAND OR	-STD.2"	AS	A S R E Q U I R E D			
5	MEGAFLANGE ADAPTER	SP. APL.	REQ'D	A S R E Q U I R E D			
6	SENSUS TURBO-METER W/ STRAINER, FLG.		1 OR 2	A S R E Q U I R E D			
7	SOLID SLEEVE, M.J.	-STD.2"	1	4	6	8	10
		SP. APL.	2	4	6	8	10
8	DETECTOR CHECK VALVE W/O METER TRM, FLG. AMES 1000 SS OR EQUAL	STD.2"	1	4	6	8	10
		SP. APL.	1	–	–	4 OR 6	4 OR 6
9	SWING CHECK VALVE		1	A S R E Q U I R E D			
⚠ 10	BALL VALVE FORD #B11-777 OR EQUAL		2	2	2	2	2
11	COMPRESSION COUPLING (LOK-PAK)		2	2	2	2	2
12	DISPLACEMENT TYPE METER		1	2	2	2	2
13	G.S. SHORT NIPPLE		3	2	2	2	2
14	CHECK VALVE, THD.		1	2	2	2	2
15	TEE, M.J.		2	–	–	10 X 4	12 X 4 12 X 6
16	90° M.J. BEND		2	–	–	4	4 OR 6
17	FLG. X P.E., LGTH. AS REQ'D		A S R E Q U I R E D				

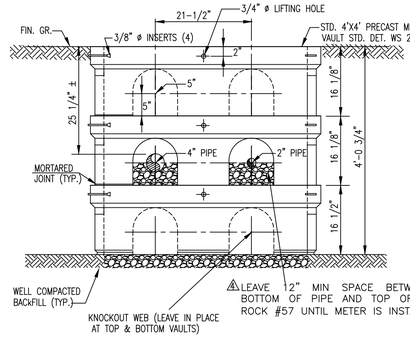
⚠ PLEASE EDIT OR INDICATE METER(S) SIZE — ALL SIZES ARE GIVEN IN INCHES

CAPACITY TABLE BASED ON SENSUS OMNI T-2 METER				
MAIN SIZE	MAIN GPM @ 5 FPS	METER SIZE	OPERATING RANGE (GPM) LOW - MAX	PRESSURE LOSS AT MAX. FLOW (psi)
6"	440	4"	3.0 - 1000	8.7
8"	785	6"	4.0 - 2000	8.2
10"	1225	8"	5.0 - 3500	5.1
12"	1760	10"	6.0 - 5500	7.2

SUGGESTED REDUCTION ON SIZE FROM MAIN TO METER SIZE SHALL BE BASED ON ESTIMATED FLOWS.

VAULT NOTES:

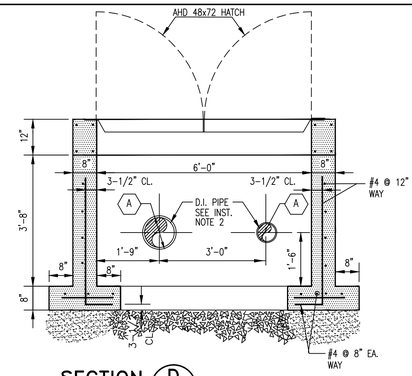
1) FRAME OF HATCH IS NOT SHOWN ON THE TOP VIEWS.
2) FOR 6' x 6' VAULT, USE AHD 48" X 72" ALUMINUM HATCH WITH S.S. VERTICAL COMPRESSION SPRINGS AND S.S. ACCESSORIES..
3) FOR 6' x 3'-6" VAULT, USE AHS 30" X 36" ALUMINUM HATCH WITH S.S. VERTICAL COMPRESSION SPRINGS AND S.S. ACCESSORIES..
4) PER MANUFACTURER, U.S. FOUNDRY, (OR APPROVED EQUAL), THESE HATCHES ARE INTENDED FOR USE ON OFF STREET LOCATIONS THAT MAY OCCASIONALLY RECEIVE AASHTO H-20 WHEEL LOADS.
⚠5) CENTER 12" X 6" HINGED READING LID OVER METER DIAL AT BOTH METERS. CONFIRM DIMENSIONS PRIOR TO ORDERING.



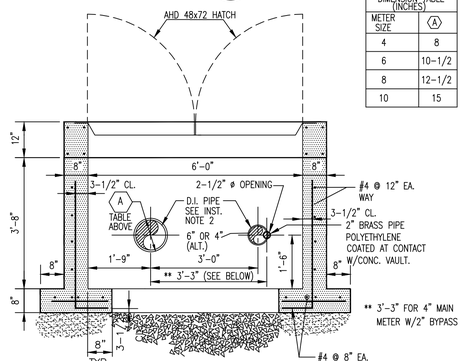
TYPICAL SECTION FOR 4" METERS IN NON-TRAFFIC AREAS
N.T.S.

NOTES:

1) THIS ARRANGEMENT SHALL BE USED ONLY FOR CASES WHERE THERE IS NO POSSIBILITY OF RUNNING OR PARKING A VEHICLE OVER THE METER AND CHECK VALVE VAULTS. IT IS RECOMMENDED TO PROTECT THE ACCESS PERIMETER TO THESE VAULTS WITH DENSE SHRUBBERY OR STEEL GUARD POSTS FILLED WITH CONCRETE.
2) VAULT COVER TO BE TWO (2) STANDARD 2' X 4' STL. COVERS FOR NON-TRAFFIC VAULT PER WASD STD. DET. WS 2.17
3) 4" CHECK VALVE VAULT SHALL BE THE STANDARD 2 X 4 FEET PRECAST VAULT AS PER WASD STD DET. WS. 2.17

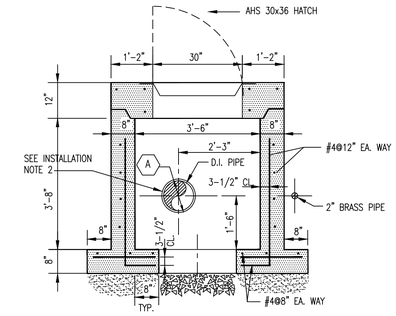


SECTION D — N.T.S.



DIMENSION TABLE (INCHES)	
METER SIZE	A
4	8
6	10-1/2
8	12-1/2
10	15

SECTION B — N.T.S.



SECTION C — N.T.S.

MIAMI-DADE COUNTY
Delivering Excellence Every Day

WATER AND SEWER DEPARTMENT
ENGINEERING DIVISION

3071 SW 38TH AVENUE
MIAMI, FLORIDA 33146-2221
305-665 7471
miamidade.gov

METER FACILITY NAME
OFFICIAL ADDRESS, FLORIDA 33100-0000
PROJECT TITLE
CONTRACT/ PROJECT No.

WATER MAIN TURBINE METER DESIGN GUIDE PLAN, SECTIONS AND DETAILS

DRAWING HISTORY

RELEASED FOR		DATE	BY
REVIEW 30%	X	00/00/05	XX
REVIEW 70%			
REVIEW 100%			
PERMIT			

REVISIONS

No.	DESCRIPTION	DATE	BY
1	REVISION	03/28/06	H.S.
2	REVISION	05/30/08	H.S.
3	REVISION	01/03/12	H.S.
4	REVISION	08/01/14	H.S.

APPROVALS

CHIEF ENGINEER:	
SECTION HEAD:	
PROJECT MGR.:	
DESIGNED: HS	CHECKED: RZ
DRAWN: AAA	FINAL CHECK: HS

XXXXXXX XXXXX
XXXXXXXXX Engineer
State of Florida - License No. 00000
Date:_____

ER No. : 00000

FILE NAME: 47179WM-1.DWG

DATE: XX, XX 20XX | SCALE: AS NOTED

SHEET WM-1

DWG. No. W-13230-A