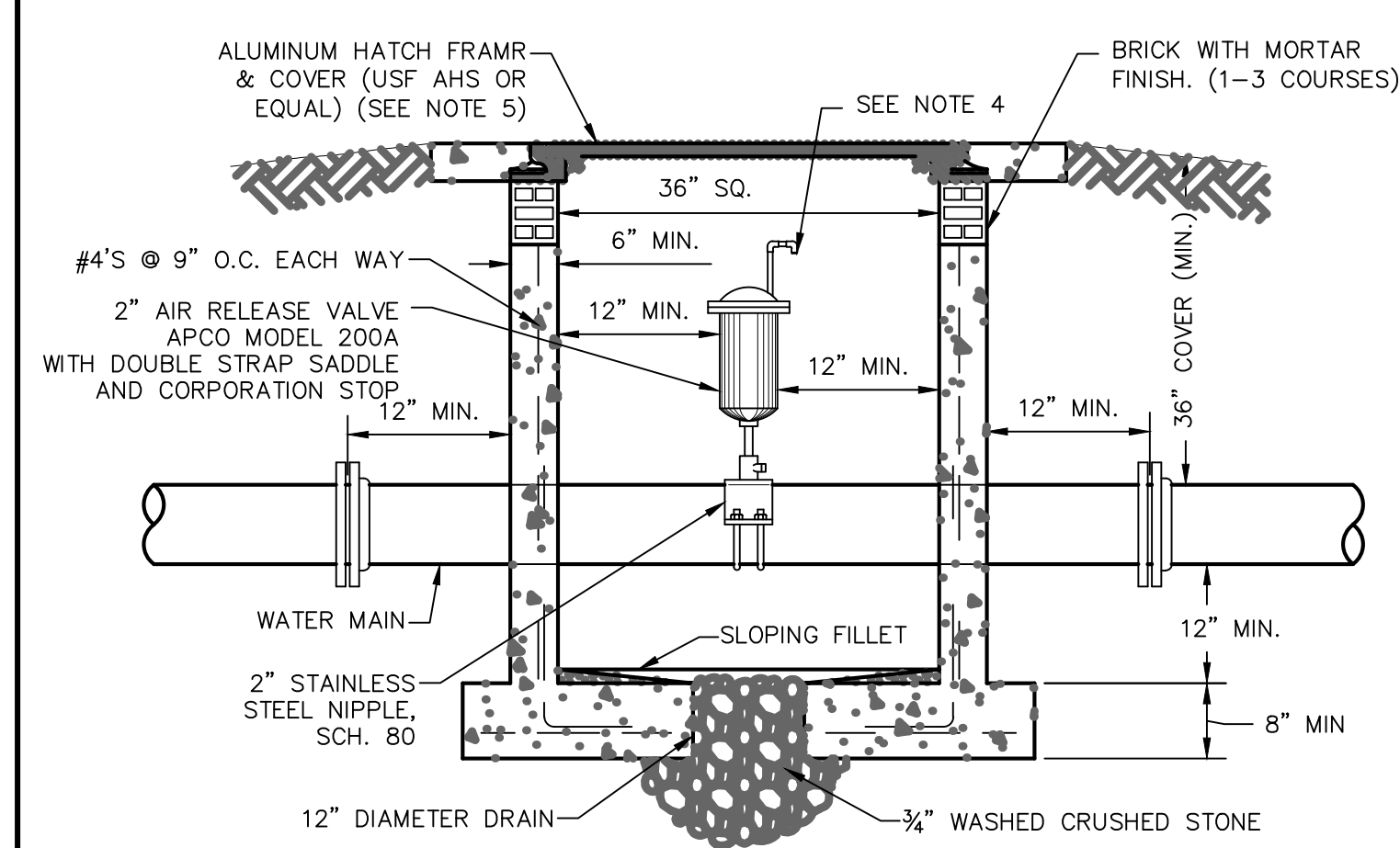


NOTES:
1. EXTEND TRACING WIRE INTO METER BOXES TO CURB STOP AND ATTACH TO PIPING FOR DOUBLE SERVICES, CONNECT TO ONE CURB STOP ONLY.



NOTES:
1. ALL OPENINGS SHALL BE SEALED WITH WATERPROOF NON-SHRINKING GROUT.
2. VAULT SHALL BE PRECAST OR CAST IN PLACE CONCRETE WITH STEEL REINFORCING AND 4000 P.S.I. CONCRETE.
3. 1/2" STAINLESS STEEL NIPPLES AND ELLS.
4. ELBOW OF DOWN FACING SCREEN ON OUTLET 20-MESH ST. STL.
5. WITHIN PAVEMENT AND SHOULDER AREAS, FRAME AND COVER SHALL BE TRAFFIC BEARING.

MINIMUM LENGTH OF PIPE (IN FEET) REQUIRED TO BE RESTRAINED ON EACH SIDE OF A VALVE OR FITTING FOR SANDY SOILS (SW, SP, SM, SC)

PIPE TYPE	PIPE SIZE	90° BEND	45° BEND	≤22.5° BEND	TEE OR CROSS	VERTICAL OFFSET ^a		REDUCER ^b	VALVE	DEAD END
						LOW	HIGH			
PVC	≤4	18	18	18	18	18	22	36	18	52
	6	24	18	18	18	18	30	38	36	73
	8	31	18	18	18	18	40	69	36	96
	10	37	18	18	18	18	48	93	54	115
	12	43	18	18	18	18	56	99	54	136
	14	49	20	18	18	18	64	101	72	155
	16	55	23	18	18	18	72	103	72	174
DUCTILE IRON	18	60	25	18	36	20	80	104	72	192
	20	65	27	18	36	21	87	105	72	211
	24	75	31	18	36	25	102	134	90	246
	30	88	37	18	36	29	122	185	90	295
	≤4	18	18	18	18	18	18	18	18	33
	6	20	18	18	18	18	19	35	36	47
	8	26	18	18	18	18	25	44	36	61
10	31	18	18	18	18	30	60	54	73	
12	37	18	18	18	18	36	63	54	86	
14	41	18	18	18	18	41	64	72	98	
16	46	19	18	18	36	18	46	66	72	111
18	51	21	18	36	18	51	66	72	122	
20	56	23	18	36	18	56	67	72	134	
24	64	27	18	36	21	65	85	90	156	
30	75	31	18	36	25	78	118	90	188	

CITY OF GROVELAND STANDARD DETAILS: WATER

WATER SERVICE CONNECTION DETAIL

DATE: JULY 7, 2008
SCALE: N.T.S.

W-11

CITY OF GROVELAND STANDARD DETAILS: WATER

AIR RELEASE VALVE

DATE: JULY 7, 2008
SCALE: N.T.S.

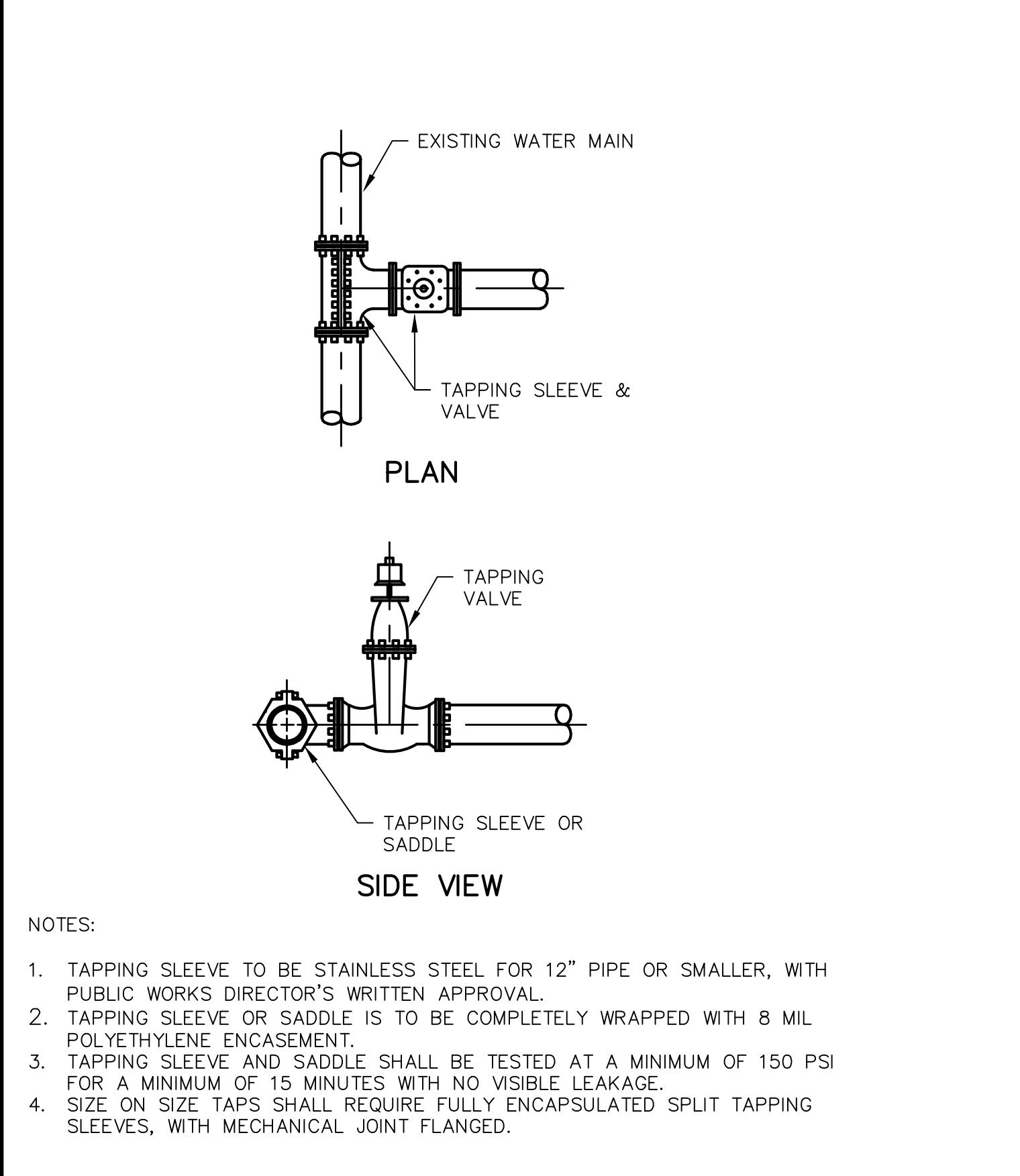
W-13A

CITY OF GROVELAND STANDARD DETAILS: WATER

PIPE RESTRAINT SCHEDULE

DATE: JULY 7, 2008
SCALE: N.T.S.

W-14A

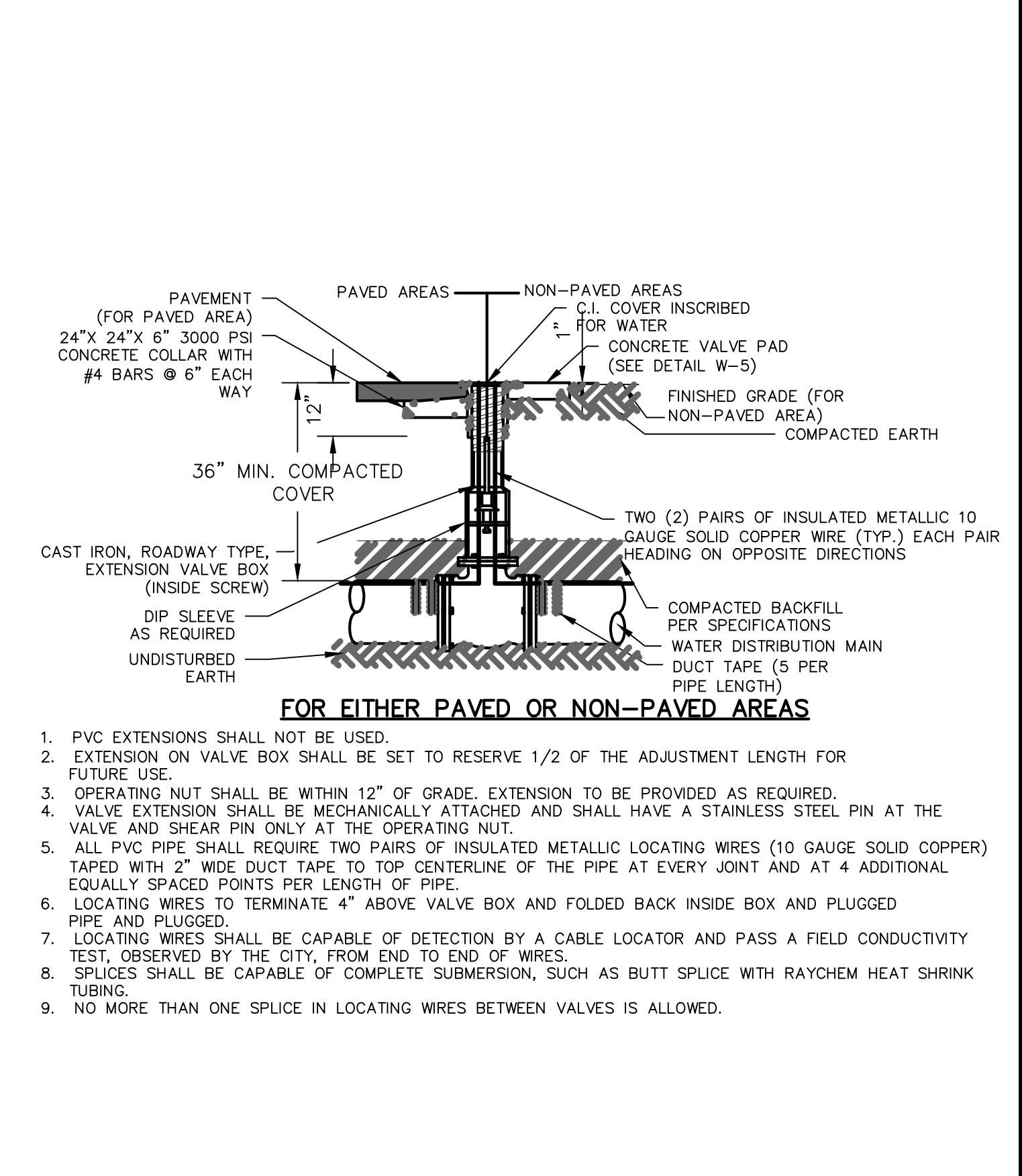


CITY OF GROVELAND STANDARD DETAILS: WATER

TAPPING SLEEVE/SADDLE DETAIL

DATE: JULY 7, 2008
SCALE: N.T.S.

W-3

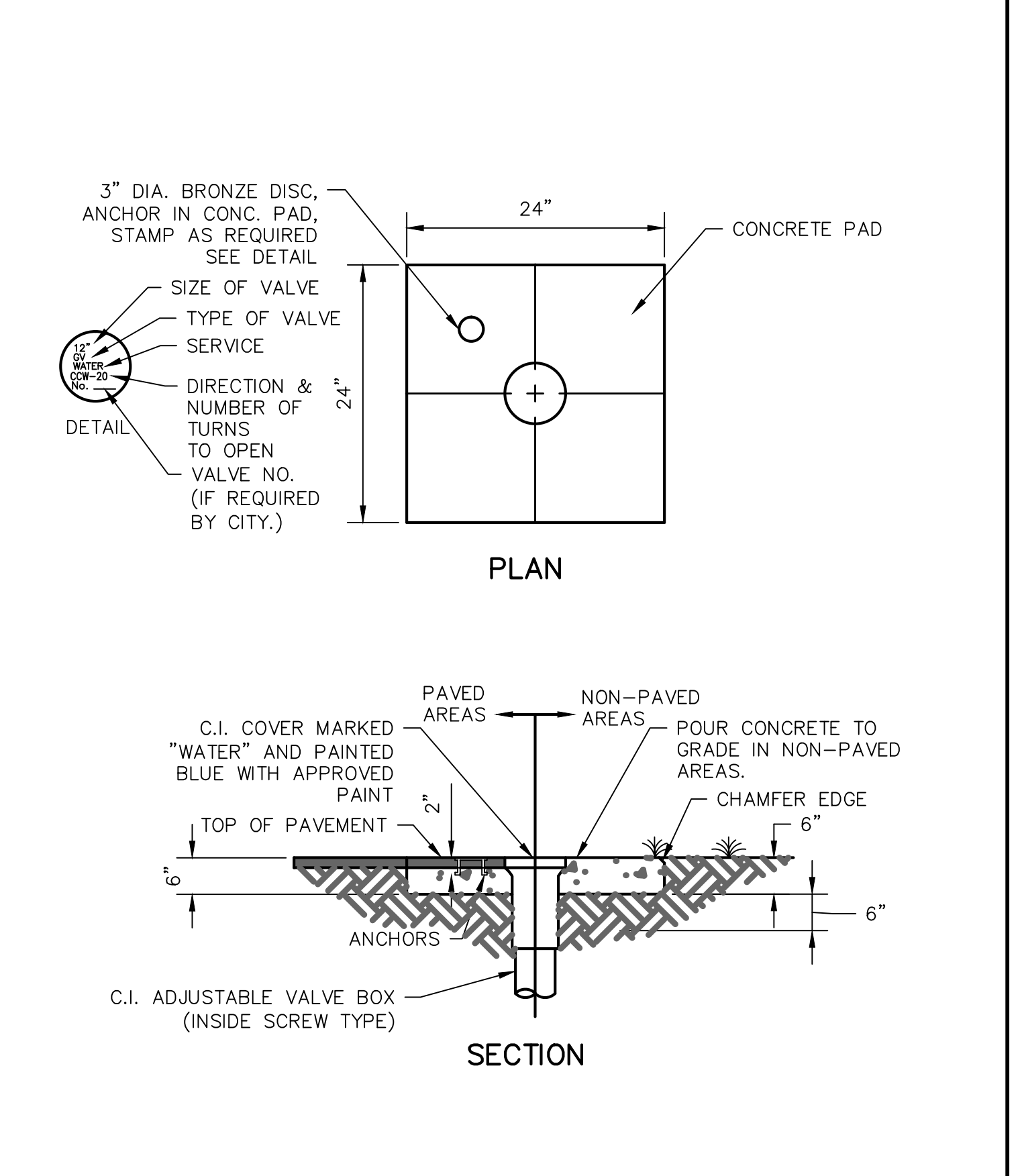


CITY OF GROVELAND STANDARD DETAILS: WATER

RESILIENT SEATED GATE VALVE DETAIL

DATE: JULY 7, 2008
SCALE: N.T.S.

W-4



CITY OF GROVELAND STANDARD DETAILS: WATER

VALVE PAD DETAIL 2" THRU 12"

DATE: JULY 7, 2008
SCALE: N.T.S.

W-5

REVISIONS

10/15	Added Turn Lanes CR 561A
10/15	Listed lot No's. per Lake Co.
4/16	Lake County comments from 4-11-16

UTILITY DETAILS

H & B CONSULTING ENGINEERS, INC.
Certificate of Authorization # 4829
P.O. Box 520
218 N. Florida Street - Suite 3
Bushnell, Florida 33513
Phone : (352) 793-2113

Lake Minneola Landings
C.R. 561
Groveland, FL 34711

Drawn: WSR Checked: MZB
Date: 06/16 Scale: as shown Sheet 17 Of 18