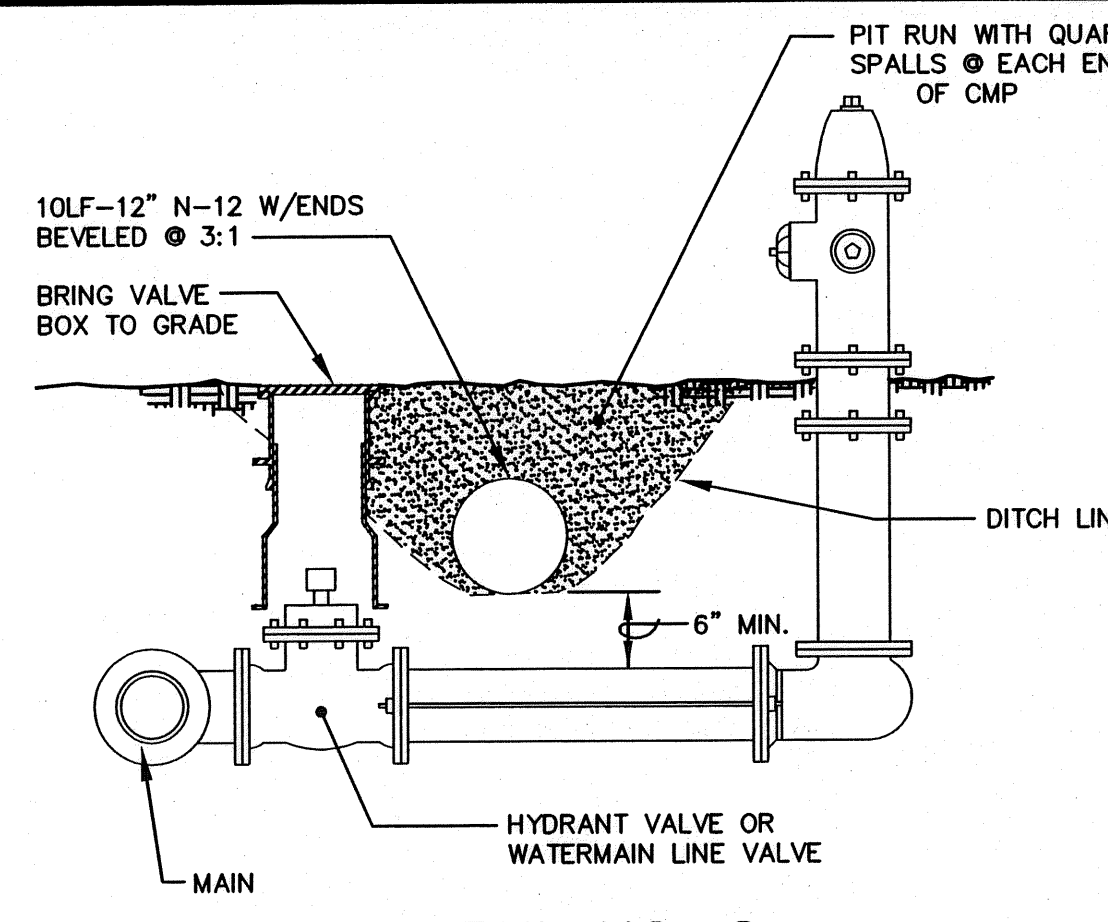


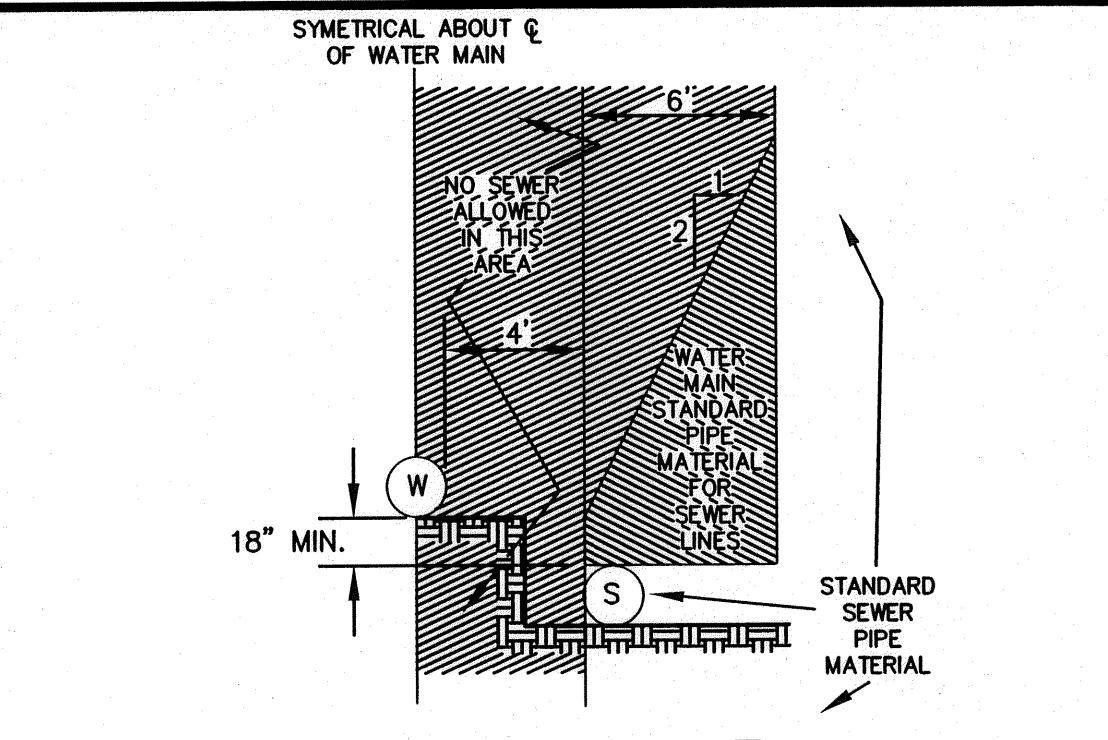
SECTION B-B
SCALE 1" = 5'-0"

DETAIL NO. 1

TYPICAL TRENCH CROSS SECTION WITH TWO PARALLEL WATER LINES



DETAIL NO. 2
INSTALLATION OF VALVES & HYDRANTS IN DITCHES



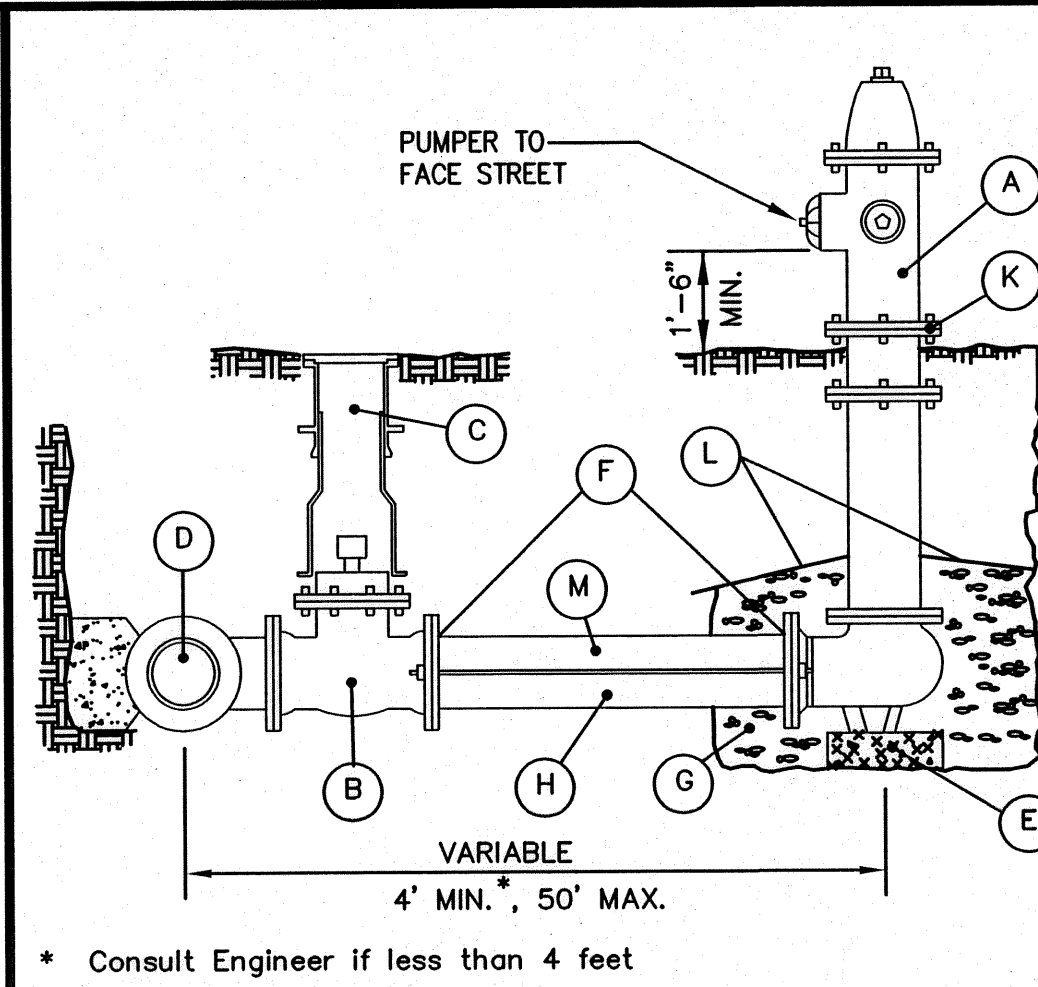
DETAIL NO. 7
FOR PARALLEL CONSTRUCTION

Table 1
WATER MAIN STANDARD PIPE MATERIAL

TYPE OF PIPE	AWWA (ASTM) STANDARD		
	PIPE	JOINT	FITTINGS
Ductile Iron	C 151 & C104	C 111	C 153

All water and sewer line separation shall meet DOE Standards.

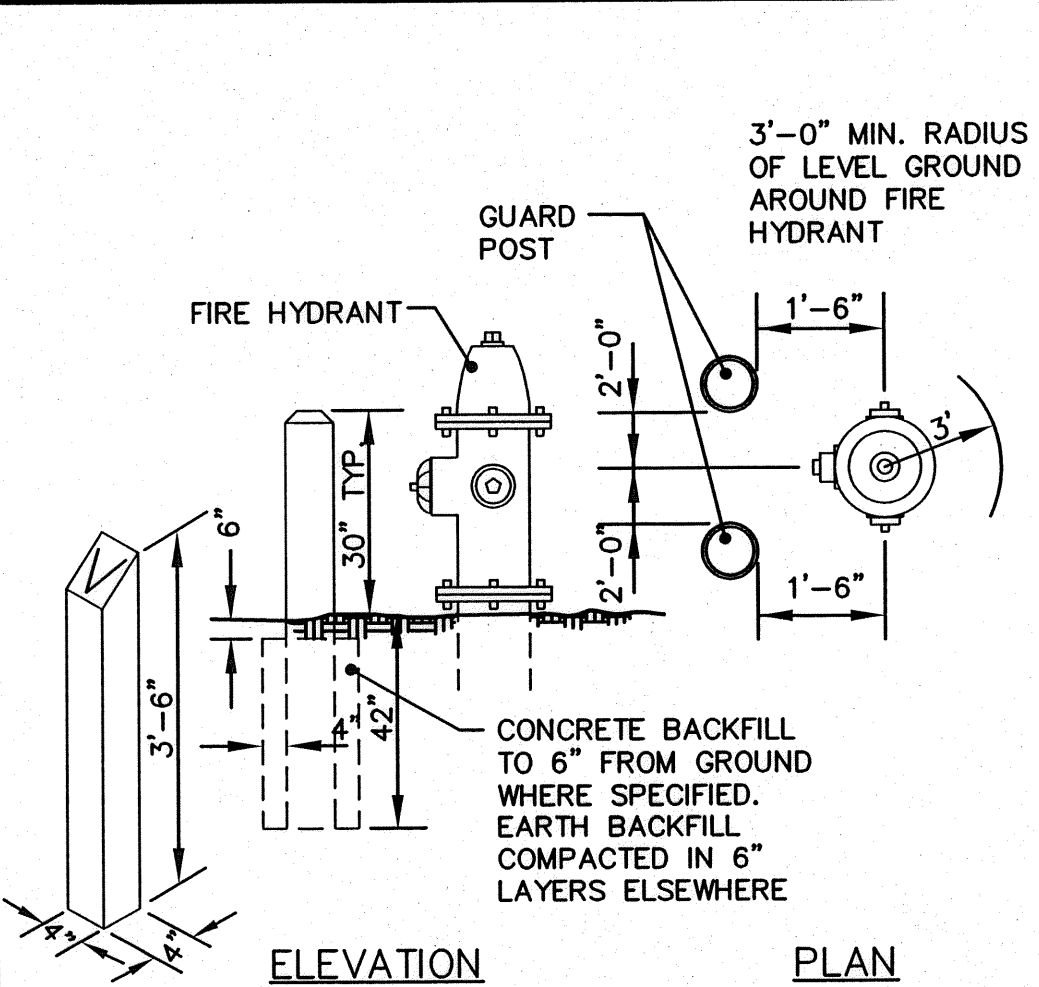
For Perpendicular Construction
For perpendicular sewer line crossings, lay sewer below water lines and provide 18 inches of separation between inverts of water lines and crown of sewer pipes. If this is not possible, use material standards as set forth above for the sewer with minimum 18 feet length centered over crossing to maximize joint separation.



DETAIL NO. 3
FIRE HYDRANT ASSEMBLY

Item	Quantity	Item Description
A	1	FIRE HYDRANT: 1-4" PUMPER-SEATTLE STANDARD THREAD 2-2 1/2" HOSE NOZZLES-NATIONAL STD. MECHANICAL JOINT SHOE
B	1	AUXILIARY GATE VALVE: 6" - AWWA C509 RESILIENT SEAT, MJ x FL
C	1	VALVE BOX: CAST IRON SLIDE EXTENSION & BASE LID TO HAVE DROP IN HANDLE.
D	1	TEE: 6" FLANGED OUTLET
E	1	CONCRETE BRICK: 8" x 16" x 4"
F	2	RESTRAINED JOINT GLAND: MEGA-LUG OR EQUAL
G	1/4 CY	1 1/2" WASHED ROCK
H	Var.	6" DUCTILE IRON PIPE: CEMENT LINED, CLASS 52
J	1	DELETED
K	1	HYDRANT EXTENSION, WHERE REQUIRED
L	1	PLASTIC SHEETING OVER WASHED ROCK.
M	Var.	FIELD LOCK GASKETS AT PIPE BELLS

1. Hydrants shall be painted with two coats of Seymour/Krylon Paint Equipment No. 00481 (Yellow).
2. All hydrants shall be break-away type, per King County standards.
3. Pumper Cap shall be located one foot minimum behind sidewalk.
4. Hydrant to be located five feet behind curb if no sidewalk is present.

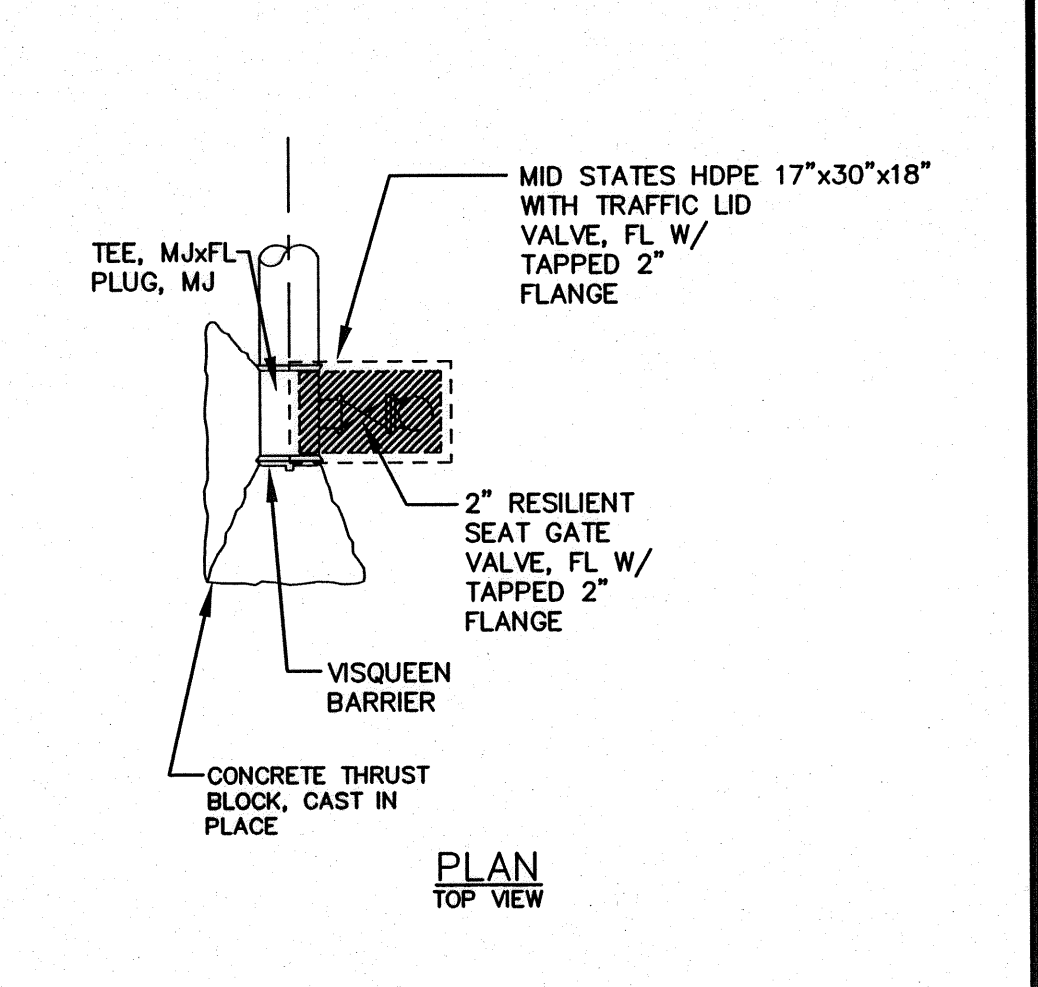


DETAIL NO. 4
VALVE MARKER POST

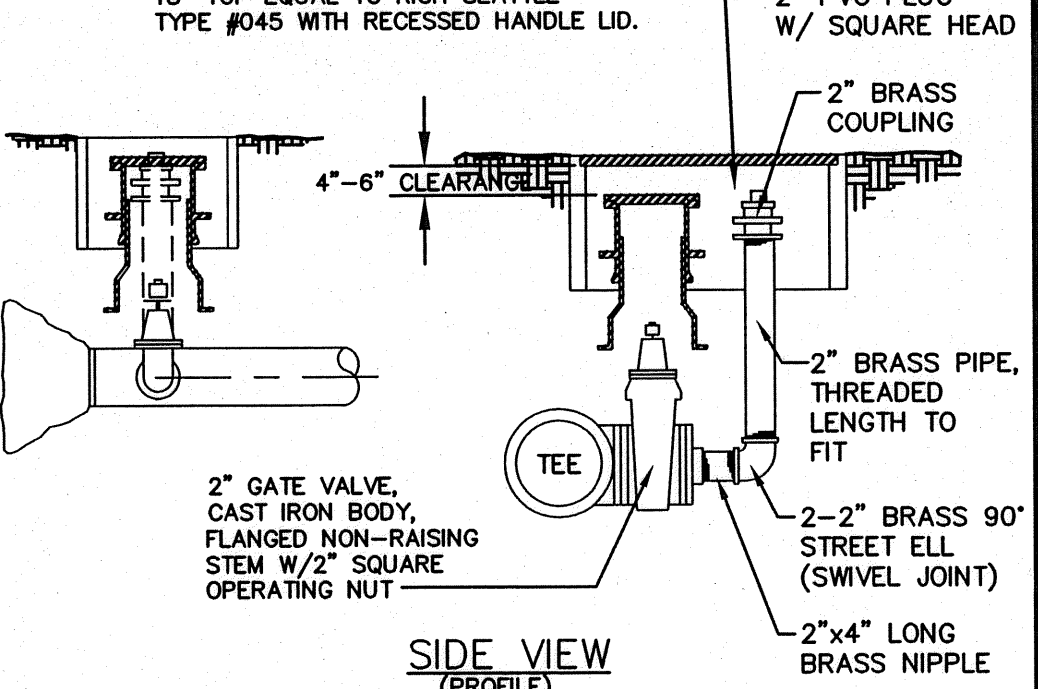
VALVE MARKER POST
GUARD POST WILL NOT BE ALLOWED IN THE STREET CLEAR ZONE AS PER KING COUNTY REQUIREMENTS

Notes:
1. Guard post shall be 9" diameter x 6' long precast concrete posts as per technical specifications. Paint with two (2) coats of Seymour/Krylon Paint Equipment Yellow No. 00481.
2. Valve marker post as specified. Paint as specified for hydrant guard post. Paint distance from the valve marker to the valve on the post with black enamel paint, using 2" high numerals.

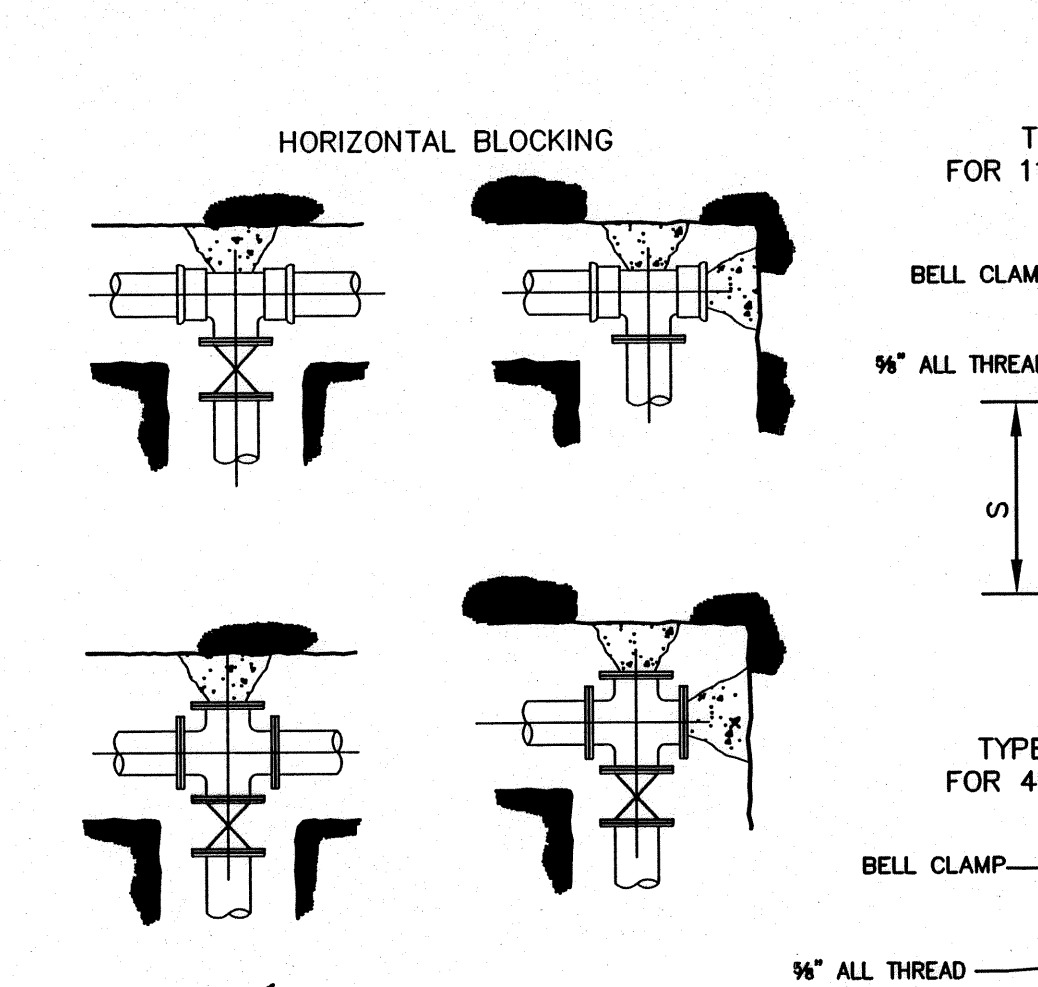
DETAIL NO. 4
GUARD AND MARKER POSTS



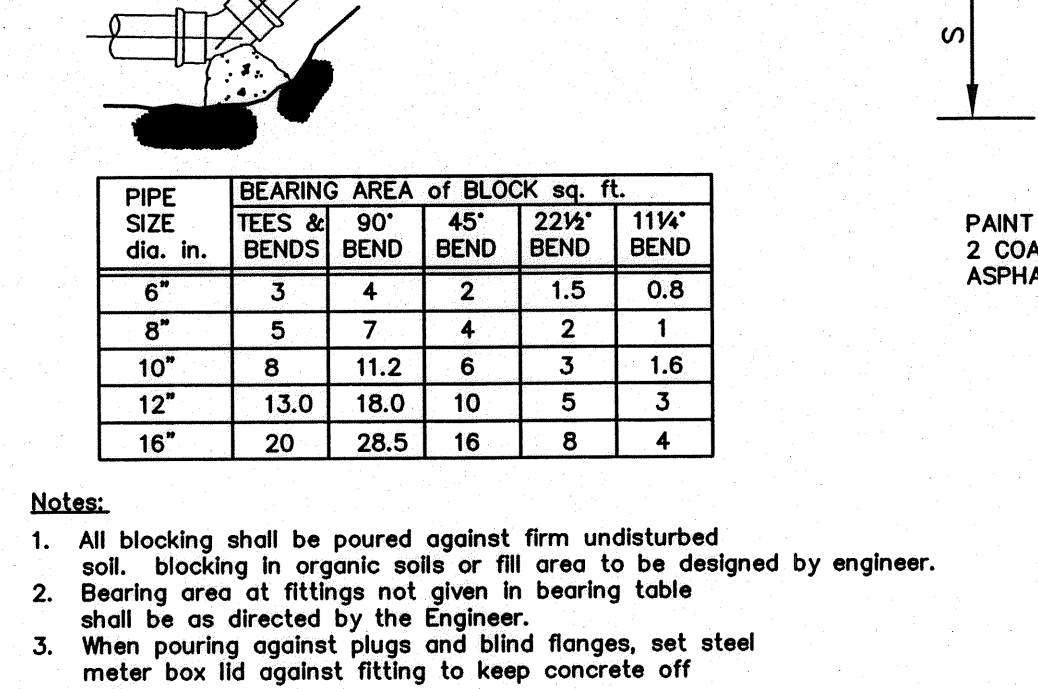
DETAIL NO. 5
2" BLOW OFF



DETAIL NO. 6
CONCRETE BLOCKING



DETAIL NO. 11
REPLACEMENT OF EXISTING SERVICE



DETAIL NO. 10
TRENCH CROSS SECTION FOR D.I. PIPE

TYPE "A" BLOCKING FOR 1 1/4"/2 1/2" VERTICAL BENDS

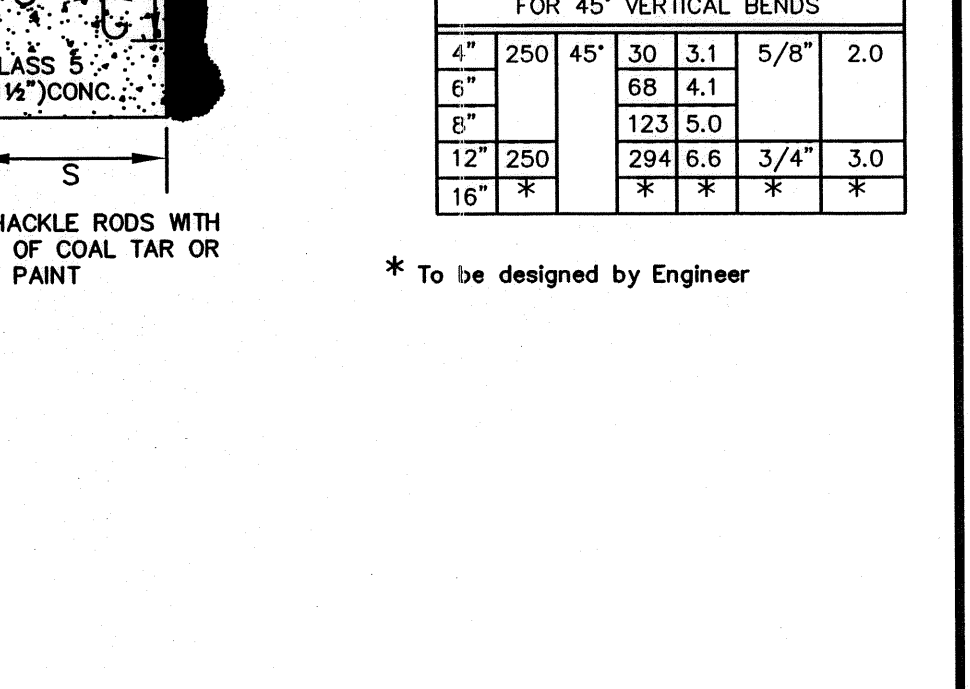
PIPE SIZE Nom. diameter - inches	TEST PRESSURE psi	VERTICAL BEND CONG. BLOCKING cu. ft.	SIZE OF BLOCK (CLASS 5 (1 1/2" CONC.)	DEPTH OF ROADS SHAKLE RODS IN CONCRETE (inches)	DEPTH OF ROADS IN CONCRETE (feet)
4"	250	11 1/4	11	2.2	5/8"
6"	250	11 1/4	11	2.2	5/8"
8"	250	11 1/4	16	2.5	5/8"
12"	250	11 1/4	54	3.8	5/8"
16"	250	11 1/4	120	5.0	3/4"

TYPE "B" BLOCKING FOR 45° VERTICAL BENDS

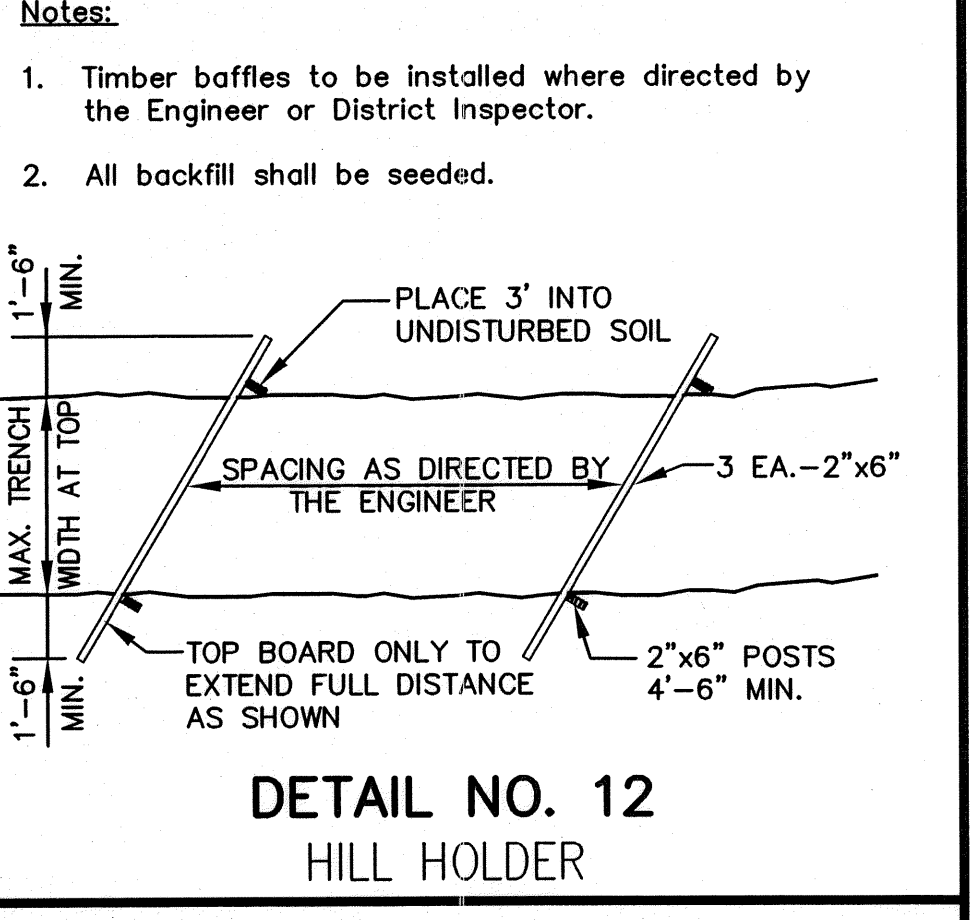
PIPE SIZE Nom. diameter - inches	TEST PRESSURE psi	VERTICAL BEND CONG. BLOCKING cu. ft.	SIZE OF BLOCK (CLASS 5 (1 1/2" CONC.)	DEPTH OF ROADS SHAKLE RODS IN CONCRETE (inches)	DEPTH OF ROADS IN CONCRETE (feet)
4"	250	45	30	3.1	5/8"
6"	250	45	68	4.1	5/8"
8"	250	45	123	5.0	5/8"
12"	250	45	294	6.6	3/4"
16"	250	45	610	10.0	3/4"

Notes:
1. All blocking shall be poured against firm undisturbed soil. blocking in organic soils or fill area to be designed by engineer.
2. Bearing area of fittings not given in bearing table shall be as directed by the Engineer.
3. When pouring against plugs and blind flanges, set steel meter box lid against fitting to keep concrete off bolts.
4. Layout to be approved by District prior to concrete pour.
5. For blocking scheme other than shown above, contact District Engineer for detail.

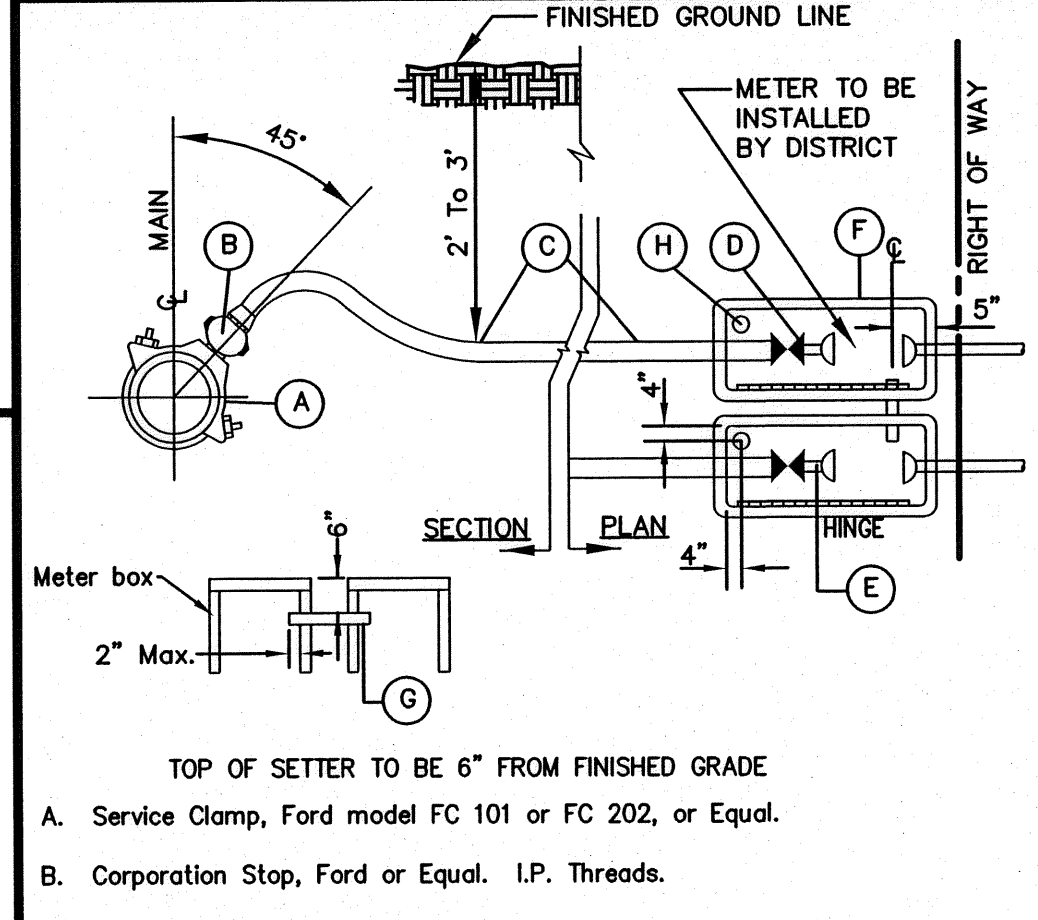
DETAIL NO. 12
HILL HOLDER



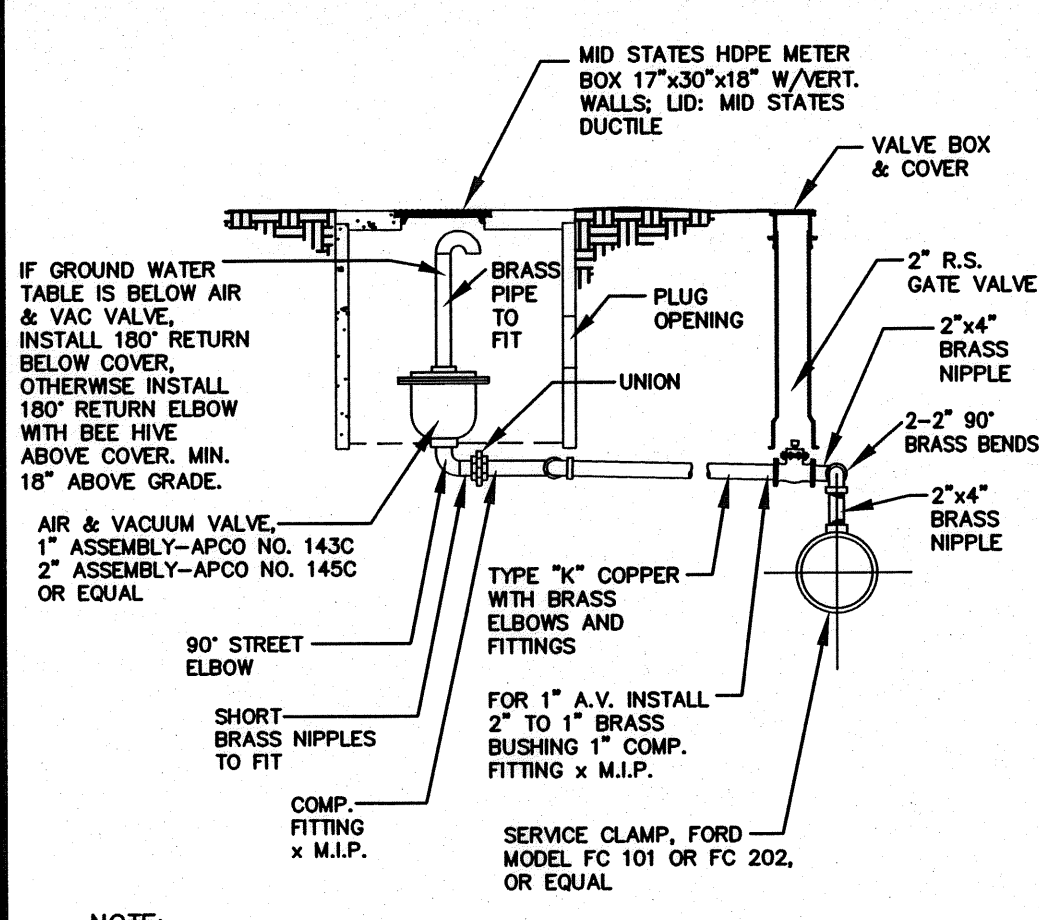
DETAIL NO. 12
HILL HOLDER



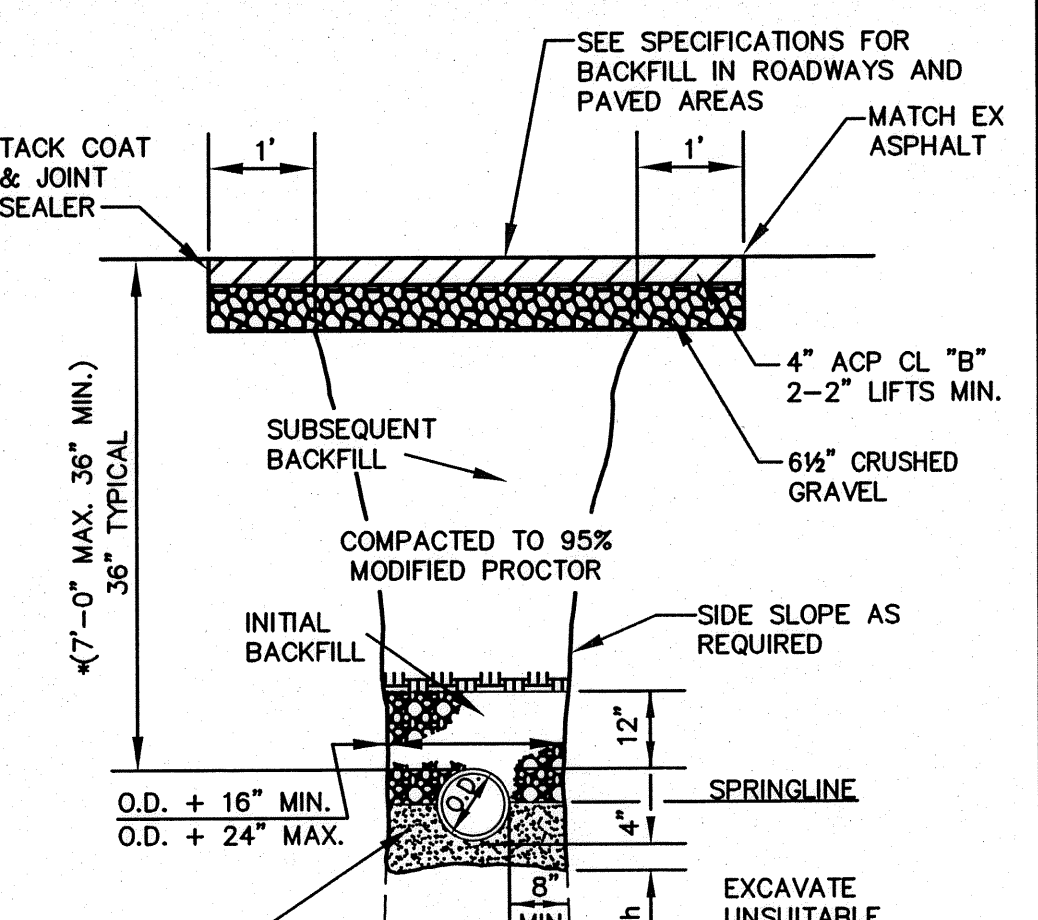
DETAIL NO. 13
PIPE ANCHORS



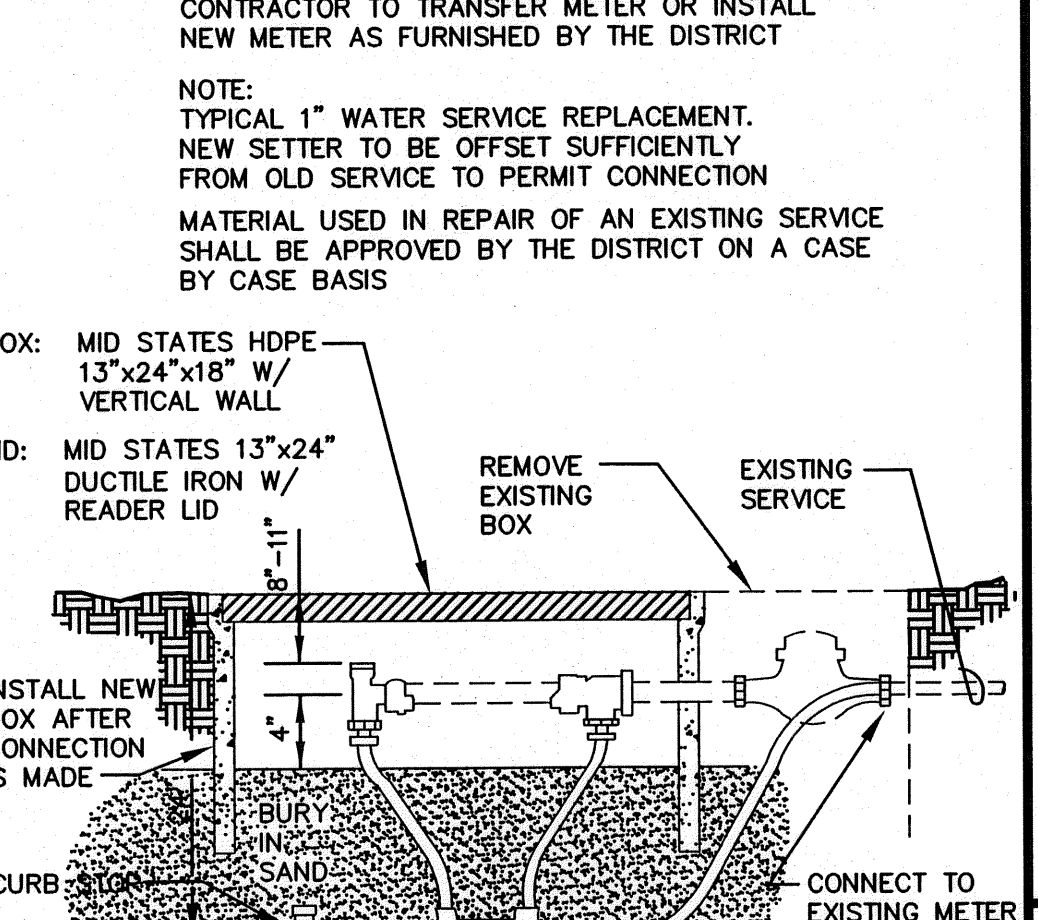
DETAIL NO. 8
SERVICE CONNECTIONS BEHIND SIDEWALK



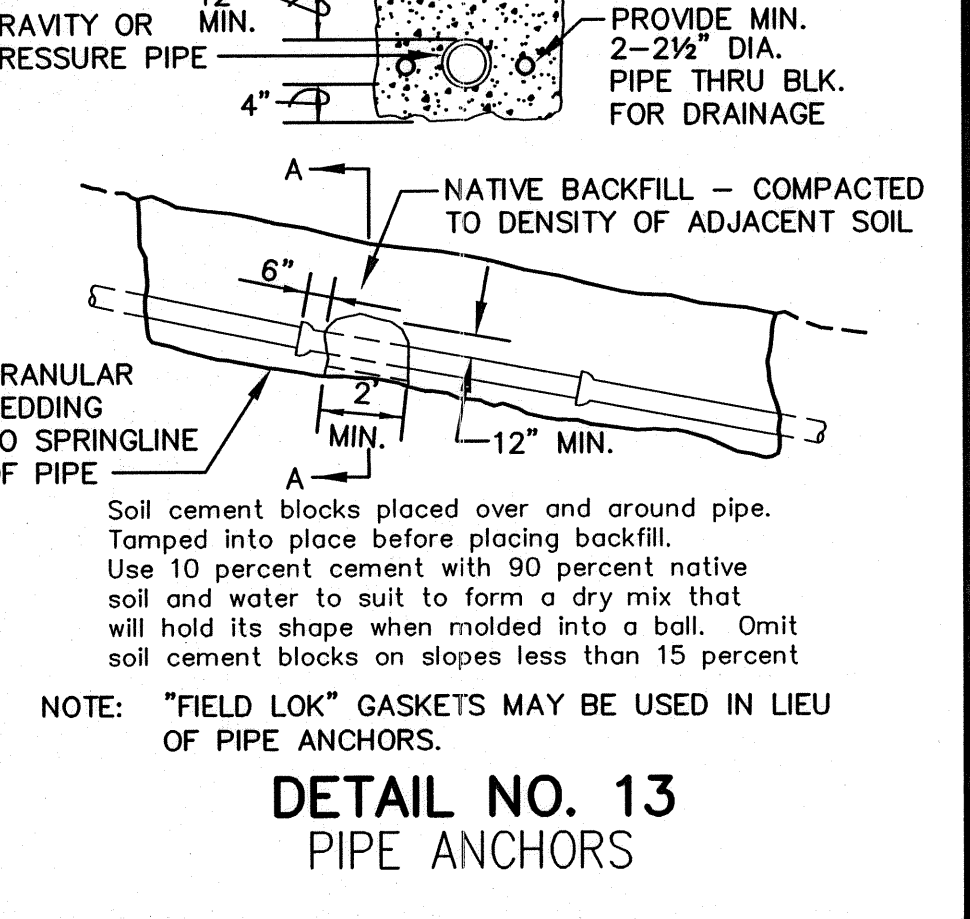
DETAIL NO. 9
AIR AND VACUUM RELEASE ASSEMBLY



DETAIL NO. 14
SERVICE CONNECTIONS IN PLANTER STRIP



DETAIL NO. 11
REPLACEMENT OF EXISTING SERVICE



DETAIL NO. 13
PIPE ANCHORS

DESIGNED	REVISED PER DISTRICT COMMENTS	DATE	BY	APPD
JRL		6/8/07	TLR/CB	DGS
DGS		6/27/08	BCS	DGS

DATE	BY	APPD
6/8/07	TLR/CB	DGS
6/27/08	BCS	DGS

Pacific Engineering Design, LLC
15445 53RD AVE. S. SEATTLE, WA 98188
PHONE: (206) 431-7970 FAX: (206) 388-1648 WEB SITE: PACENG.COM
Civil Engineering and Planning Consultants

COAL CREEK UTILITY DISTRICT
6801 132ND PLACE S.E.
NEWCASTLE, WASHINGTON 98059

REFERENCE INFORMATION
FIELD BOOK: DATE: JUNE 27, 2008
SURV. CPU FILE: SCALE: NOTED
DATUM: NGVD29

LAWRENCE PARK STANDARD DETAILS
JOB NUMBER: 07025.00
DWG NO. 051919WADT-P3.DWG
SHEET 3 OF 3