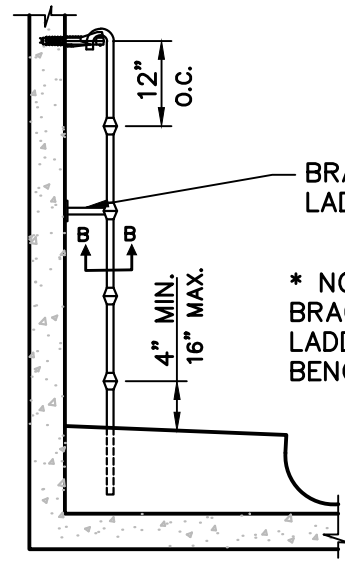
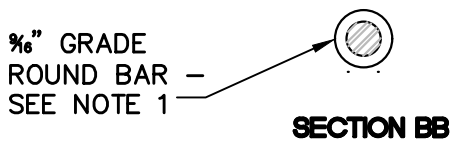


MANHOLE STEP

HAND HOLD DETAIL

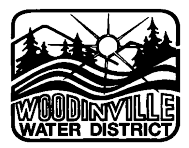


BRACKET MOUNTING FOR HANGING LADDER

\* NOTE: PROVIDE MOUNTING BRACKET AT BASE IF LADDER NOT EMBEDDED IN BENCH.

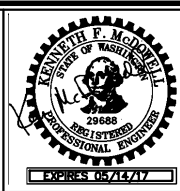
**NOTES:**

1. POLYPROPYLENE TO CONFORM WITH ASTM-4104. STEPS SHALL MEET THE REQUIREMENT OF ASTM C-478 AND AASHTO M-199. STEPS SHALL HAVE 1/2" GRADE 60 DEFORMED REINFORCING BAR THAT MEETS ASTM A-615. LADDERS TO MEET ASTM C-497 LOAD REQUIREMENTS. HANGING LADDERS SHALL USE 5/16" COLD DRAWN BAR PER C-1018.
2. HANDHOLD OR RECESSED STEP TO BE USED AT TOP OF CONE. LADDER RUNGS AND HANDHOLD STEP SIDES SHALL BE IN A STRAIGHT VERTICAL LINE. SEE STANDARD PLAN 2.
3. POSITION LADDER PER STANDARD PLAN 19.
4. MAXIMUM HEIGHT FOR HANGING LADDER IS 4'.
5. MAXIMUM ALLOWABLE DISTANCE FROM TOP OF CASTING TO TOP OF CONE STEP IS 22". ADD HANDHOLD @ 12" O.C. IF GREATER THAN 22".



**Woodinville  
Water District**

**STEP AND LADDER  
DETAILS**



**SEWER STD.  
PLAN NO. (18)**

REVISION DATE  
10-12