

## Underground Fire Storage Tank Requirements

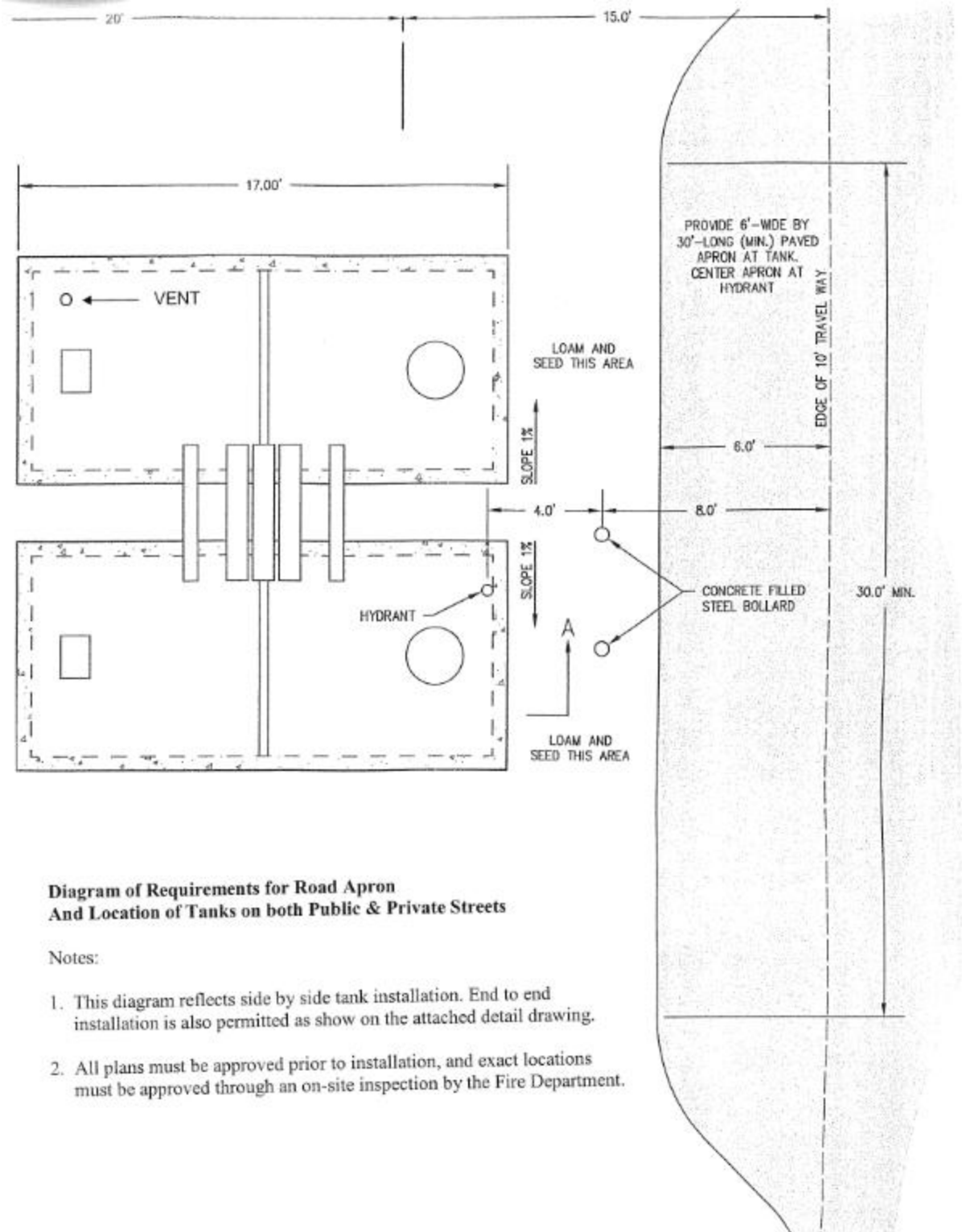
All developers/installers must meet with the Scarborough Fire Department prior to beginning any installation of dry hydrants and/or holding tanks to cover the required criteria. Additionally, the Fire Department must be notified 7 days prior to any such installation to allow scheduling of an on-site inspection.

1. The minimum size accepted will be 10,000 gallons.
2. **Construction:** Construction must be designed to safely withstand the service to which they are subjected. This includes pressure of the earth or pavement above the tank.
3. **Materials:** Suitable materials include concrete, stainless steel, fiberglass, or lined concrete.
4. **Installation:** Tanks should be set on firm foundations and surrounded with soft sand, well compacted into place. Tanks must be anchored or weighted to prevent floating in locations where the water table is high or may rise. Underground tanks must be protected against damaging loads.
5. **Hardware:** Each tank will be provided with a 4.5" National Standard male thread Fire Department connection with .5" NST cap and chain. This connection will be located within 6 feet from the hot top or hard surface suitable for support of fire apparatus. The center-to-cap elevation shall be 30" from final grade. An appropriate vent must be provided for normal operation (1000 GPM) of any tank to permit filling and emptying and for the maximum expansion or contraction of the tank contents with changes in temperature. A screen shall be provided to prevent clogged vents, which may result in the rupturing of tanks from the internal pressure or collapse due to internal vacuum. Inadequately sized vents may have the same result. The vent shall be a minimum of 6" in circumference (schedule 80 PVC pipe) and terminate a minimum 6 feet above grade. Pipe materials that are resistant to corrosion and have adequate strength to withstand the maximum service pressure, shall be used.
6. **Tank Fill:** A tank fill assembly shall be included in the vent pipe, 18" above final grade. It shall consist of a 6" schedule 80 PVC wye socket, 45 degree street elbow spigot & socket, and 6" x 4" Storz hydrant adaptor with cap and chain as illustrated below:



7. The installer, owner, and/or responsible party for the project shall insure in writing to the Planning Board and the Scarborough Fire Department, that the water in the tank and vertical lift of the hydrant will be protected from freezing. To clarify the pond or river water will rise in the vertical lift of the hydrant, equal to the level of the pond or river, and the water in the tank will rise in the hydrant connection exactly to the water level in the tank, and the water in the vertical lift in all cases must not be subject to freezing.
8. The owner or contractor shall be responsible for all maintenance for a one-year period.
9. An inspection cover shall be provided that will allow any required maintenance to be done from the inside.
10. Two tanks may be connected, or the connection of several tanks to hold the required gallons is allowed if approved by the Town Engineers. There shall be 3 (8") cross connections at the bottom of the tanks of (8") schedule 80 PVC pipe. There shall be 2 top cross connection vents of (6") schedule 80 PVC pipe.
11. Dry Hydrants are allowed in lieu of holding tanks if the Town Engineer and the Fire Department approve the water source.
12. The piping for the Fire Department connection MUST be constructed so that it comes through the interior of the tank, not through the end or underside.
13. There must be 6' of level ground around the Fire Department connection.
14. Protective bollards shall be installed and approved by the Fire Department.
15. The suction pipe inside the tank must be 6" schedule 80 PVC to the top of the water level, then minimum Schedule 40 6"ID iron pipe from the top of the tank to the Fire Department connection.
16. Threaded or welded connections are acceptable.
17. Tanks are required to be re-inspected internally 30 days after installation.
18. The developer will be responsible for pumping any existing water, totally removing any foreign material of any kind, i.e. gasket material, dirt, leaves, concrete dust, etc., prior to on-site inspection by the Fire Dep
19. The developer will be responsible for filling the tank under Fire Department supervision.
20. A 24" concrete collar around the Fire Department connection shall be poured into place.

Note: Please see the attached drawings regarding requirements off a public or private way and design specifics.



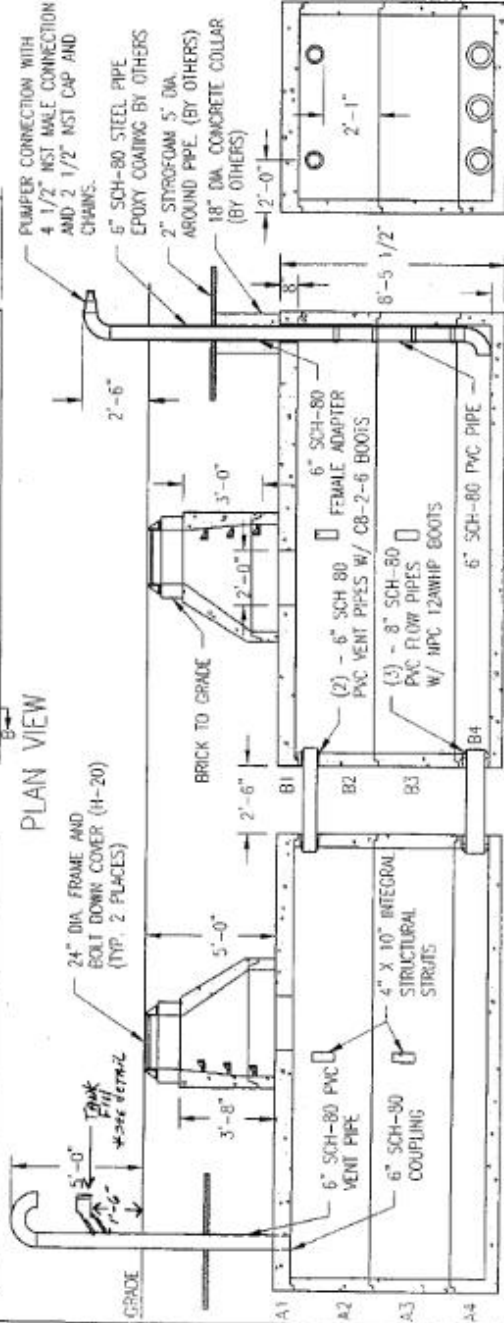
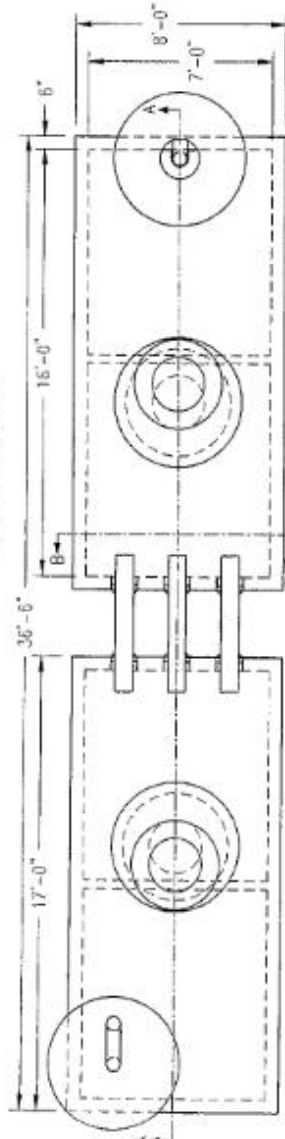
**Diagram of Requirements for Road Apron  
And Location of Tanks on both Public & Private Streets**

Notes:

1. This diagram reflects side by side tank installation. End to end installation is also permitted as show on the attached detail drawing.
2. All plans must be approved prior to installation, and exact locations must be approved through an on-site inspection by the Fire Department.

# 10,000 GALLON FIRE TANK

WEIGHT - 100,400 LBS



DESIGN NOTES:

- 1 - CONCRETE 5000 PSI AT 28 DAYS.
- 2 - SHIFLAP JOINTS ARE SEALED WITH A 2" X 1 1/4" STRIP OF ASPHALTIC BUTYL RUBBER.

ITEM	WEIGHT
BASE	15,000 LBS
3'-0" RISER	10,600 LBS
TOP	13,800 LBS

- 1' BARREL TO BE CAST INTO TOP WITH 8" EXPOSED OUT TOP.
- 8" HOLE ON END WITH CONCRETE COLLAR.