

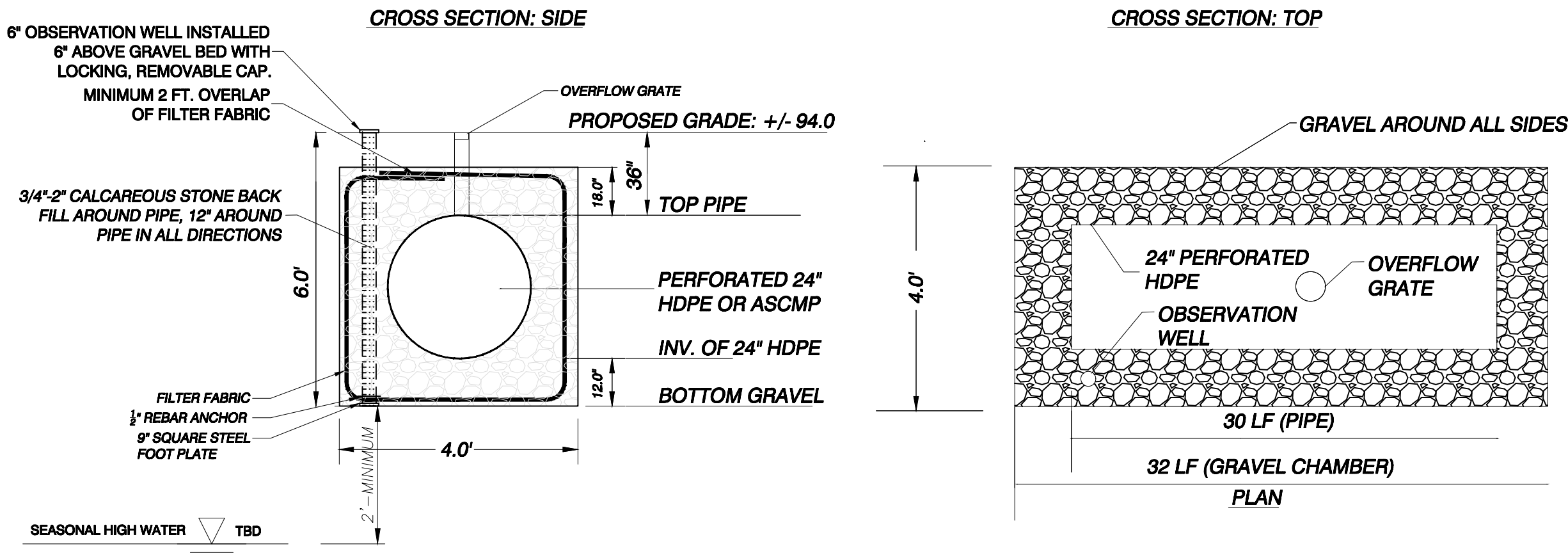
Existing + Proposed: 3,702 sq' 48.8%



Diagram illustrating the construction details of a fence section:

- Post Spacing:** 8' MAX POST SPACING
- Post Dimensions:** 4" x 4" post
- Top Rail Dimensions:** 1" x 6"
- Bottom Rail Dimensions:** 2" x 4"
- Height:** 5'
- Location:** OUTSIDE
- Spacing Requirement:** SPACING BETWEEN BOTTOM FENCE AND GRADE MAY NOT EXCEED 2"
- Footings:** 12" MIN FOOTING DEPTH
- Foundation:** 2" FILL DIRT ON TOP OF CONCRETE FOOTER

WATER QUALITY CHAMBER DETAIL
N.T.S.



TRENCH NOTES:

- GRAVEL SIZE 3/4"-2" NON-CALCAREOUS STONE
- PERIMETER AND PIPE ENDS TO BE WRAPPED IN FILTER FABRIC.
- FABRIC PER AASHTO M288 CLASS 2 NON-WOVEN GEO-TEXTILE ALL AROUND STONE ST-170 (7 OZ/SY) BY STRATA OR APPROVED EQUAL.
- PERFORATIONS TO BE 1/2" DIAMETER AT 6" O.C.
- SMEARING OF SOIL AT THE INTERFACE WITH THE TRENCHING BOTTOM AND SIDES SHALL BE AVOIDED.
- BEFORE ANY LAND DISTURBANCE CONTRACTOR SHALL ROPE OFF EXFILTRATION TRENCH AREA TO PREVENT EQUIPMENT FROM COMPACTING THE UNDERLYING SOILS.
- LIGHT EARTH-MOVING EQUIPMENT SHALL BE UTILIZED TO CONSTRUCT THE TRENCH. USE OF HEAVIER EQUIPMENT MAY CAUSE COMPACTION OF SOILS BENEATH TRENCH FLOOR AND SIDE SLOPES REDUCING PERCOLATION CAPACITY.

BMP WATER QUALITY CALCULATION

LOT CALCULATIONS : PROPERTY BOUNDARY
TOTAL LOT AREA: 7,572.15 S.F. \approx 0.17 ACRES

EXISTING IMPERVIOUS AREA:

HOUSE: 2,140 S.F.

DECKS: 390 S.F.

PORCH: 110 S.F.

WALKWAY: 166 S.F.

DRIVEWAY: 380 S.F.

RETAINING WALL: 50 S.F.

PROPOSED IMPERVIOUS AREA:

POOL & SPA COPING: 104 S.F.

PAVER (POOL DECKING): 418 S.F.

STONE STEPS: 12 S.F.

EQUIPMENT: 12 S.F.

TOTAL IMPERVIOUS AREA: 3,782 S.F. \approx 0.09 ACRES (98 CN)

PERVIOUS AREA: 3,790.15 S.F. \approx 0.08 ACRES (61 CN)

COMPOSITE WEIGHTED CN: 80.6

$$WQ_v = \frac{(1.2) (R_v) (A)}{12}$$

WQ_v = WATER QUALITY VOLUME (ACRE-FEET)

R_v = VOLUMETRIC RUNOFF COEFFICIENT

A = TOTAL DRAINAGE AREA (ACRES)

I = PERCENT IMPERVIOUS COVER

I = 52.9%

$$R_v = 0.05 + 0.009(I)$$

$$R_v = 0.05 + 0.009(52.9\%)$$

$$R_v = 0.05 + 0.4761$$

$$R_v = 0.5261$$

A = 0.17 ACRES (PROPERTY BOUNDARY)

$$WQ_v = \frac{(1.2) (R_v) (A)}{12} = \frac{(1.2) (0.4761) (0.17)}{12}$$

$$WQ_v = 0.0080937 \text{ AC.-FT.}$$

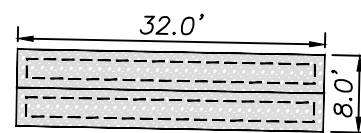
$$WQ_v = 0.0080937 * 43,560 = 352.56 \text{ CU-FT} \approx 353 \text{ CU.-FT.}$$

$$WQ_v = 353 \text{ CU.-FT.}$$

WATER QUALITY NOTES

- SLOTTED/PERFORATED FLEX PIPE ALLOWED UNDERGROUND WITH INFILTRATION TRENCH.
- PVC (SCHEDULE 20 MINIMUM) REQUIRED ABOVE GROUND WITH POSITIVE DRAINAGE (1% MIN.) AND UNDERGROUND CONNECTING DOWNSPOUTS/WATER QUALITY DEVICE.
- A CLEAN OUT / EMERGENCY BYPASS SHALL BE PROVIDED. OVERFLOW FROM WATER QUALITY BMP(S) SHALL NOT ADVERSELY AFFECT ADJACENT PROPERTIES
- QUALITY BMP(S) TO BE INSTALLED AT THE TIME OF FINAL LANDSCAPING.
- ALL ROOF DOWN SPOUTS AND COLLECTED WATER SHALL BE DIRECTED TO THE WATER QUALITY BMP(S).
- CONTRACTOR TO PERFORM SOIL BORING IN CENTER OF STORMWATER MANAGEMENT BASIN TO VERIFY SEASONAL HIGH WATER TABLE MEETS MINIMUM TWO (2) FOOT SEPARATION BETWEEN BOTTOM OF SOIL MEDIA AND SEASONAL HIGH WATER.
- CONTRACTOR TO PROVIDE A PERCOLATION TEST TO VERIFY WATER ABSORPTION RATE OF NATIVE SOIL HAS A MINIMUM INFILTRATION RATE OF 0.5IN/HR. OR MORE.

CHAMBER DESIGN VOLUME PROVIDED:



1. PIPE VOLUME CALCULATION:

DIAM. OF WQ PIPE: 24"

VOL./L.F.: 3.14 C.F./L.F.

LENGTH OF PIPE: 30 LF

VOLUME IN PIPE: 94.2 C.F. (30 LF X 3.14 C.F./L.F.)

2. GRAVEL VOLUME CALCULATION:

CROSS SECTION DIMENSIONS: 4.0' X 4.5'

AREA: 18.0 S.F.

LENGTH OF GRAVEL: 32 L.F.

GROSS VOLUME: 576.0 C.F. (18.0 S.F. X 32 L.F.)

NET VOLUME: 481.8 C.F. (576.0 C.F. - 94.2 C.F.)

VOID RATIO: 0.4

EFFECTIVE VOLUME: 192.7 C.F. (481.8 C.F. X 0.4)

VOLUME PROVIDED PER CHAMBER: 286.9 C.F. (94.2 C.F. + 192.7 C.F.)

NUMBER OF CHAMBERS: 2

TOTAL VOLUME PROVIDED: 573.8 CU.-FT.