

# STORMVAULT BIOFILTRATION (SVBF)

**CONFIGURATION: TREE BOX (-TB)**

**MODEL: SVBF-TB 5X10.5**

## HYDRAULICS

STORMWATER QUALITY DESIGN FLOW (SQDF)	≤ XX.X-CFS
STORM DRAIN DESIGN CONVEYANCE FLOW	XX.X-CFS
RETURN REQUENCY / PERIOD OF PEAK DESIGN CONVEYANCE FLOW	XX-YRS

## TREATMENT

BIO SOILS FILTRATION MEDIA	PUBLIC DOMAIN BIO SOIL MEDIA*	JENSEN'S SIERRA BLEND **
BIO SOIL MEDIA UNITIZED TREATMENT FLUX RATE	10-IN/HR	193-IN/HR
HYDRAULIC SURFACE LOADING RATE (HSLR)	0.1-GPM/FT <sup>2</sup>	2-GPM/FT <sup>2</sup>
MODEL SVBF-TB 5X10.5 PEAK TREATMENT FLOW RATE	0.012-CFS	0.234-CFS
	5.25-GPM	105-GPM

\*JENSEN BIORETENTION & INFILTRATION TREE/PLANTER **STORMVAULT BIOFILTRATION** SIZED TO TREAT THE ENTIRE SQDF AT A RATE OF 10-INCHES/HR WHEN USING SPECIFIED PUBLIC DOMAIN BIO SOIL MEDIA.

\*\*JENSEN BIORETENTION & INFILTRATION TREE/PLANTER **STORMVAULT BIOFILTRATION** SIZED TO TREAT THE ENTIRE SQDF AT A RATE OF 193-INCHES/HR WHEN USING JENSEN'S ENGINEERED **SIERRA BLEND** BIO SOIL MEDIA.

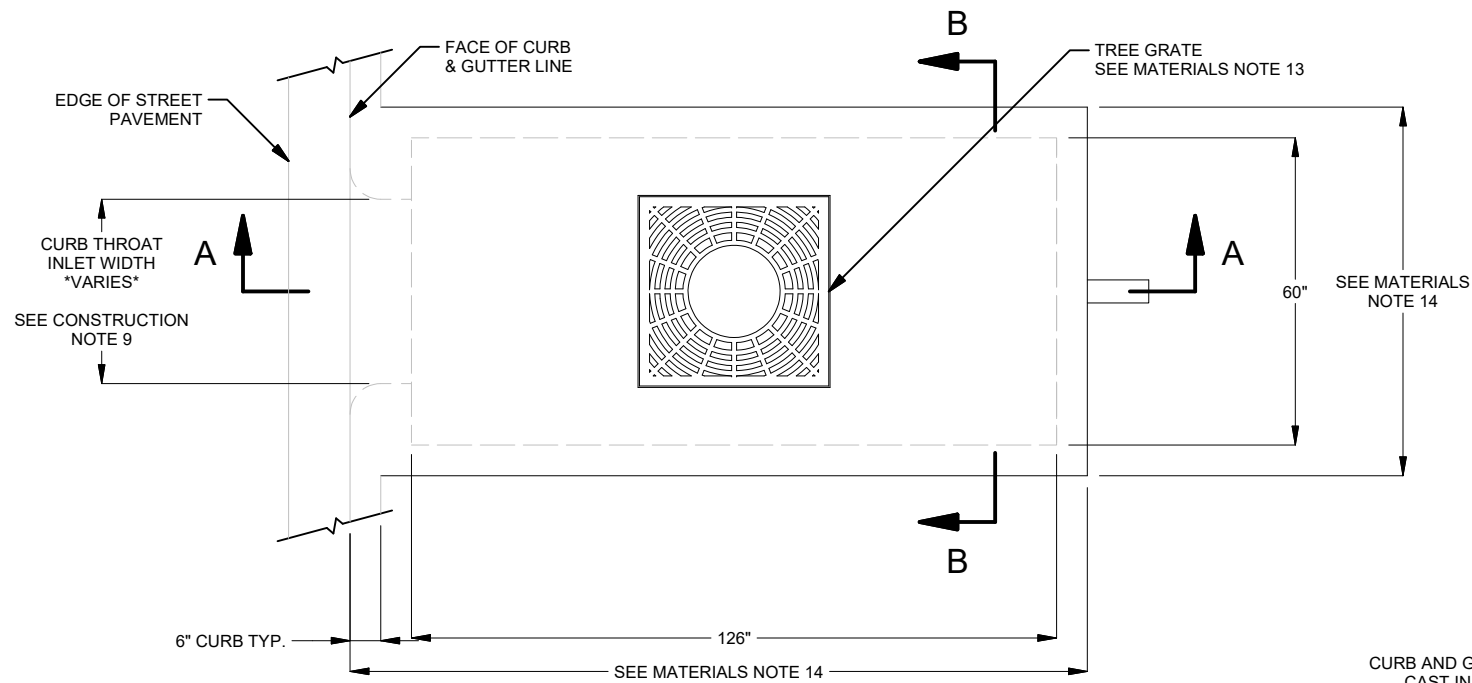
- JENSEN'S STORMVAULT BIOFILTRATION (**SVBF**) DESIGNED AND SIZED TO TREAT THE ENTIRE SQDF.
- CAPTURED WATER QUALITY CONSTITUENTS:
  - TOTAL SUSPENDED SOLIDS (TSS)
  - PHOSPHORUS
  - TOTAL AND DISSOLVED COPPER
  - TOTAL AND DISSOLVED ZINC
  - OIL & GREASE
  - FECAL COLIFORM

## CONSTRUCTION & INSTALLATION NOTES

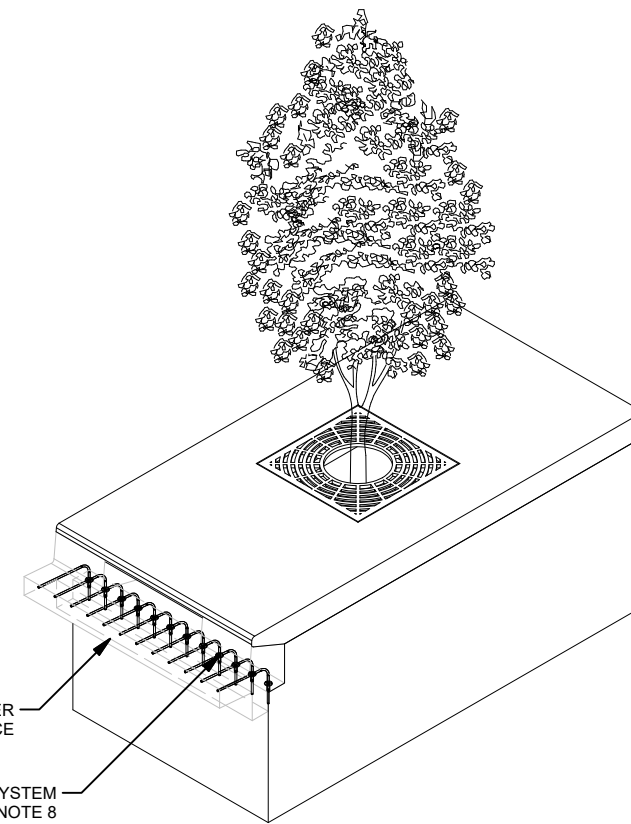
- CONTRACTOR TO VERIFY ALL DIMENSIONS AND ELEVATIONS IN FIELD PRIOR TO INSTALLATION.
- THE CONNECTION BETWEEN THE INTERNAL DRAIN PIPING OF THE **SVBF** SHALL BE MADE USING CONNECTORS CONFORMING TO ASTM C923, AS MADE BY KOR-N-SEAL, A-LOK, OR APPROVED EQUAL AND SHALL BE WATERTIGHT.
- CONTRACTOR MAY ALSO GROUT ALL PIPE PENETRATIONS IN PRECAST CONCRETE OPENINGS IN FIELD AS NECESSARY.
- CONTRACTOR TO PROVIDE FIELD POUR OF CURB TO THE ELEVATIONS SHOWN ON THE SITE DRAWINGS AS NECESSARY.
- THE CONNECTION BETWEEN THE STORM DRAIN LINE AND THE **SVBF** SHALL BE MADE USING A RESILIENT CONNECTOR CONFORMING TO ASTM C923, AS MADE BY KOR-N-SEAL, A-LOK, OR APPROVED EQUAL AND SHALL BE WATERTIGHT.
- VEGETATION, FOUNDATION, SUBGRADE, AND BACKFILL TO BE DESIGNED BY OTHERS.
- SVBF** CAN READILY BE RECONFIGURED AS AN OPEN TOP SWALE SYSTEM TO RECEIVE SURFACE FLOW FROM ALL SIDES, ELIMINATING TOP SLAB AND TREE GRATE.
- SVBF** MAY BE DEPLOYED WITH UNFINISHED TOP OF WALLS TO BE POURED IN FIELD ALLOWING FOR CONSTRUCTION OF CONTINUOUS STREETSCAPE AND LANDSCAPE FEATURES.
- INLETS THROUGH CURB CAN BE LOCATED ON ANY SIDE OF THE BOX AND THEIR DIMENSIONS VARY PER DESIGN.

## MATERIALS & DESIGN PARAMETERS

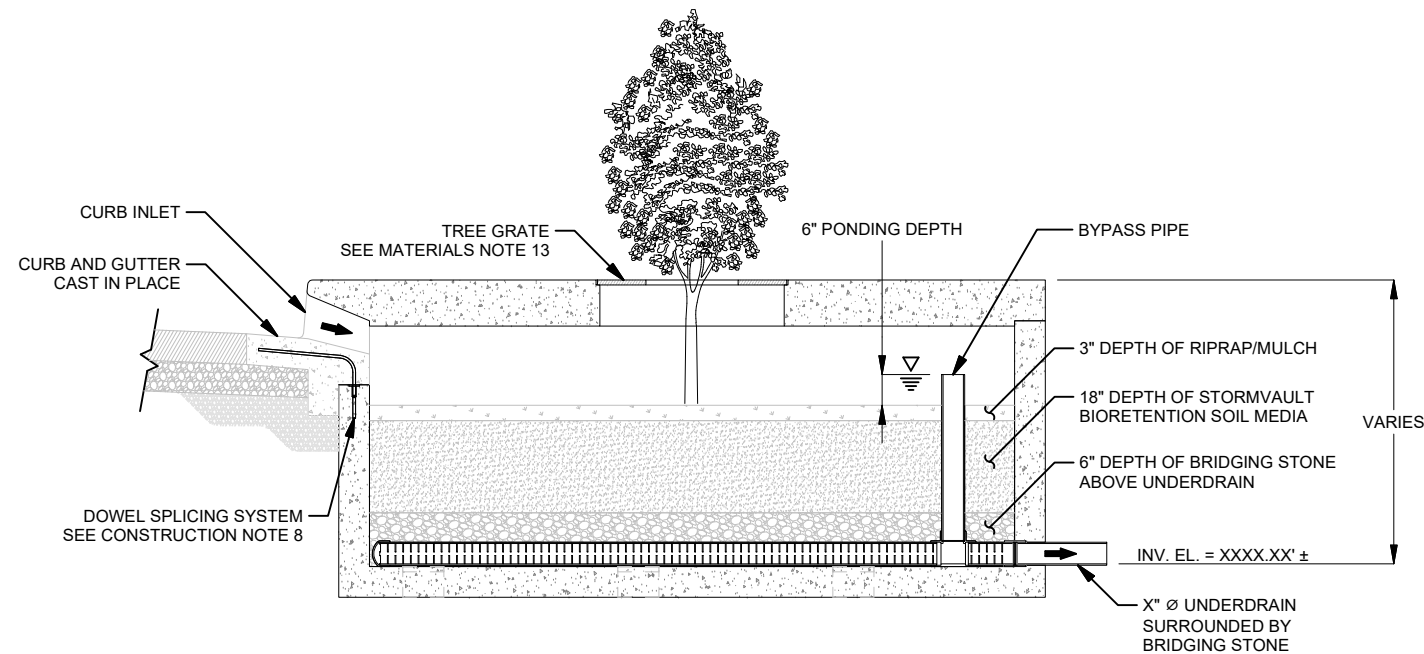
- ALL DIMENSIONS ARE IN DECIMAL INCHES.
- CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH F<sub>c</sub> = 5,000-psi AT 28-DAYS.
- THE PORTLAND CEMENT USED IN THE PRECAST SECTION SHALL MEET THE REQUIREMENTS OF TYPE II/V HIGH SULFATE RESISTANT CEMENT IN ACCORDANCE WITH ASTM CLASS M C-150.
- VAULT SECTIONS DESIGNED AND MANUFACTURED IN ACCORDANCE WITH ASTM C857 & C858
- ALL PRECAST CONCRETE COMPONENTS TO BE MANUFACTURED IN AN NPCA CERTIFIED PLANT.
- IF REQUIRED, JENSEN WILL FURNISH VAULT WITH FLUID-APPLIED WATERPROOFING COATING AROUND ENTIRE INSIDE SURFACE OF **SVBF**.
- BRIDGING STONE SHALL BE CLEAN, WASHED.
- ALL PVC PIPE SHALL CONFORM TO ASTM D 3034 (SDR-35) PIPE.
- GROUNDWATER ELEVATION IS ASSUMED TO BE BELOW THE BOTTOM OF PRECAST STRUCTURE. CONTACT JENSEN STORMWATER SYSTEMS FOR HIGH GROUNDWATER CONDITIONS.
- STANDARD CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE READILY AVAILABLE. CONTACT JENSEN STORMWATER SYSTEMS FOR CUSTOM DESIGNS, [www.jensenengineeredsystems.com](http://www.jensenengineeredsystems.com).
- FOR COMPLETE DESIGN AND PRODUCT INFORMATION, CONTACT JENSEN STORMWATER SYSTEMS.
- JENSEN STORMWATER SYSTEMS TO PROVIDE ALL MATERIALS AS SHOWN, UNLESS OTHERWISE NOTED.
- TREE GRATES TYPICALLY AVAILABLE IN 36" X 36" & 48" X 48"; OTHER GRATE SIZES AVAILABLE UPON REQUEST.
- ALL CONCRETE COMPONENT THICKNESSES, DIMENSIONS, AND JOINT ORIENTATIONS MAY VARY ACROSS JENSEN PRECAST'S MANUFACTURING FACILITIES.



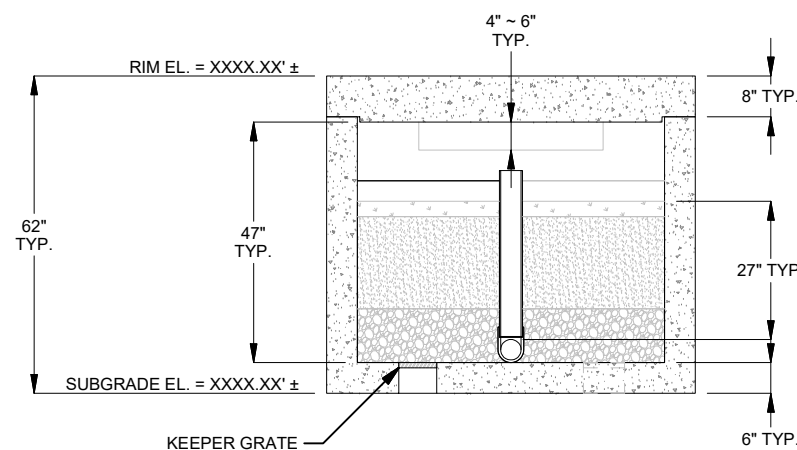
**PLAN VIEW**



**ISOMETRIC VIEW**



**SECTION A-A**



**SECTION B-B**

DISCLAIMERS, INCLUDING BUT NOT LIMITED TO:  
 1.) All elevations have been provided by others, and have not been verified by Jensen Precast. Contractor to verify all dimensions and elevations in field prior to installation.  
 2.) These layout drawings are intended to show overall system design only. All concrete component thicknesses, dimensions, and joint orientations may vary across Jensen Precast's manufacturing facilities. Contractor to confirm all thicknesses, dimensions, and joint orientations prior to installation.  
 3.) System design criteria has been provided to Jensen Precast. Others are responsible for verification that system meets intended application.  
 4.) Foundation, subgrade, and backfill to be designed by others.

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MODEL:  
 STORMVAULT BIOFILTRATION  
 TREE BOX  
 MODEL: SVBF-TB 5X10.5

PROJECT: PROJECT NAME  
 CITY, STATE

PART NUMBER: SVBF-TB 5x10.5 Assembly DRAWN BY: R. Luo

CREATED: MODIFIED: 3/16/2020

REV: SHEET: 1 OF 1