



MINNESOTA DEPARTMENT OF TRANSPORTATION  
WASHINGTON COUNTY PUBLIC WORKS DEPARTMENT

CONSTRUCTION PLAN FOR: GRADING, AGGREGATE BASE, BITUMINOUS SURFACING, STORM SEWER, SIGNING,  
PAVEMENT MARKING, CONCRETE C&G, SIDEWALK, AND ADA IMPROVEMENTS

LOCATED ON C.S.A.H. 23 (BEACH RD./PARIS AVE.) FROM UPPER 61ST ST. TO 65TH ST. (ORLEANS ST.)



### Background:

- The Preserver was specified to provide pretreatment prior to discharge to an infiltration basin.
- Drainage Area:
  - 1.94 acres, residential
  - 0.66 acres impervious (34.0%)
  - Mature tree canopy
- Structure:
  - 5' diameter
  - 3' sump depth
  - Ø15" inlet, with dissipator
  - Ø15" outlet, with skimmer



Structure located upstream of infiltration basin

### 2017 Year-End Performance:

- 2,418 lbs material captured, including:
  - 0.232 lbs phosphorus
  - Significant heavy metals
  - 1.50 specific gravity



Heavy leaf loading

### Observations:

- Heavy leaf loading resulted in some accumulation at the inlet, which cleared following larger storm events.
- Device functioned as intended; capturing & retaining material in the structure.
- Low specific gravity of retained material likely indicates high organic content.



Freezing conditions

## 2017 Year-End Analysis of Material Retained in Structure

	Composite Sample, Laboratory Analysis	Total Dry Weight <sup>1</sup> (lbs.)	
<b>All Material</b>	- Specific Gravity:	1.50	
	- Gradation (microns):		
	< 75	3.9%	
	75 - 2000	83.9%	
	> 2000	12.2%	
<b>Priority Pollutants<sup>2</sup></b>	- Pollutant Concentrations (mg/l):		
	Total Phosphorus	96	0.232
	Arsenic	11	0.027
	Copper	72	0.174
	Lead	5	0.012
	Zinc	85	0.206

1) Total weight retained in structure as of the material sampling date, 10/18/17.

2) Priority pollutant weights are a portion of the "All Material" total dry weight.

### Preserver Performance - C.S.A.H. 23

