

## **Stormwater Management Report**

Site Improvement Plan

Camp Oakdale – Pickleball Court Parking Lot Improvements

176 Meeting House Lane / 20 Simpson Lane

CLA-7928M

April 2, 2026

### Narrative:

The proposed development is the reconstruction of an existing bituminous concrete parking lot located at the Camp Oakdale facility, 176 Meeting house Lane as shown on the site plans. The parking lot is located near the pickleball and tennis courts and does have a separate address of 20 Simpson Lane. A location map is included on the site plans.

The existing bituminous concrete parking lot will be excavated, regraded, and repaved as shown on the plans. The proposed parking lot will generally match the existing bituminous concrete parking lot footprint. Minor widening will be done at the exit drive, but the change in area is negligible. The project will disturb approximately 0.47-acres of the 79.81-acre Camp Oakdale recreation facility.

The proposed site grading has been designed to match the existing drainage patterns as closely as possible. Stormwater flows via sheet flow across the lot from west to east to an existing catch basin. The catch basin discharges through a 15” RCP culvert to a swale east of the project area. Due to areas of site grading at less than 1% slope, addition catch basins and culverts have been proposed to help prevent ponding in the parking lot.

There is no change in the contributing watershed area and no change in the impervious area for the project. Therefore, there is no change in peak flow rate or stormwater volume leaving the site.

### Stormwater Quality:

The addition of a rain garden or stone filter strip was explored to promote stormwater infiltration from the lot. The stormwater flows to the eastern area of the site that lies in the Haven Silt Loam (703B) soil type. This soil typically has a restrictive layer between 18” and 36” below grade. Due to the elevations of the existing drainage system, a rain garden or other infiltration measure wasn’t feasible.

As a low impact development measure for the redevelopment and to meet the goals of the 2024 CTDEEP Stormwater Quality Manual, permanent inlet filters have been proposed in the catch basin tops. ADS FlexStorm inlet filters have been proposed. A construction detail and specifications are included on the plans. A water quality flow rate calculation was performed in accordance with the Stormwater Quality Manual, and is summarized below. The permanent inlet filters will treat up to 6.8 CFS which exceeds the 0.275 CFS required water quality flow rate.

In our opinion, the proposed redevelopment will meet the goals of the 2024 CTDEEP Stormwater Quality Manual, and will have no negative impact to downstream properties or infrastructure.



**CLA Engineers, Inc.**

Kyle Haubert, P.E.

<u>Water Quality Volume (WQV)</u>		
Sizing in Accordance with Chapter 4 of the DEEP 2024 Storm Water Quality Manual		
Water Quality Volume (WQV) = (1'')(R)(A) / 12		
P = 1.3"		
R = 0.05 + 0.009(I)		
I = percent of impervious cover		
A = watershed area		
Total Watershed Area (Ac.) :	1.20	
Watershed Impervious Area (Ac.) :	0.47	
I =	39.2%	
R =	0.403	
Required WQV =	0.0523	Ac.-Ft
	2,279.3	CF
<u>Water Quality Flow (WQF)</u>		
Sizing in Accordance with Appendix D of the DEEP 2024 Storm Water Quality Manual		
Water Quality Flow (WQF) = (qu)(A)(Q)		
qu = unit peak discharge (cfs/mi <sup>2</sup> /inch)		
A = watershed area (mi <sup>2</sup> )		
Q = runoff depth (in watershed inches)		
P (1.3" for water quality flow) :	1.3	in
Q =	0.52	
CN =	73	
Ia (from Table 4-1) :	0.703	in
Ia / P =	0.541	
Tc (Time of Concentration) :	0.167	Hr
qu (from Exhibit 4-III) :	280	csm/in
Total Watershed Area (Square Miles) =	0.00188	mi <sup>2</sup>
Required WQF =	<b>0.275</b>	CFS
	123.3	GPM