

Color Coding Legend	
	Existing Trees 2 - < 8" Caliper
	Existing Trees 8 - < 19" Caliper
	Existing Trees 19 - < 24" Caliper
	Existing Trees 24" - Caliper
	Existing Trees 30" - Caliper

Size Category	TREE TAG	TREE TYPE	SINGLE TRUNK	MULTI-TRUNK	TOTAL CALIPER (INCHES)	REPLACEMENT FACTOR	REPLACEMENT INCHES REQUIRED	REASON FOR REMOVAL/MITIGATION	REPLACEMENT VALUE	MITIGATION VALUE
2 - < 8"	2432	Cedar	3.50	2.5	4.75	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2433	Cedar	5.50	3.5	7.25	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2434	Cedar	4.00		4.00	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2435	Cedar	3.00	3.0	4.50	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2436	Cedar	6.00		6.00	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2437	Cedar	4.00		4.00	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2438	Cedar	5.00		5.00	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2439	Cedar	3.00		3.00	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2440	Cedar	3.00		3.00	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2441	Cedar	5.00		5.00	0%	-	To Remain	\$ -	\$ -
8 - < 19"	2442	Cedar	5.00	4.0	8.50	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2443	Cedar	5.00	5.0	7.75	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2444	Ash	7.00		7.00	0%	-	To Remain	\$ -	\$ -
8 - < 19"	2445	Cedar	6.50	4.5	10.75	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2446	Sycamore	5.50		5.50	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2447	Cedar	5.00		5.00	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2448	Cedar	4.00	3.0	7.00	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2449	Cedar	3.00		3.00	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2450	Cedar	4.50		4.50	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2451	Cedar	4.00		4.00	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2452	Cedar	3.50		3.50	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2453	Cedar	5.50		5.50	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2454	Cedar	4.00	4.0	6.00	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2455	Cedar	2.50		2.50	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2456	Cedar	6.00		6.00	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2457	Cedar	3.00		3.00	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2458	Cedar	2.00		2.00	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2459	Cedar	2.50		2.50	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2460	Cedar	2.00		2.00	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2461	Cedar	3.00		3.00	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2462	Cedar	3.00		3.00	0%	-	To Remain/Dead	\$ -	\$ -
19 - < 24"	2463	Live Oak	20.00		20.00	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2464	Cedar	2.00		2.00	0%	-	To Remain/Dead	\$ -	\$ -
2 - < 8"	2465	Cedar	2.50	2.0	3.50	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2466	Cedar	4.00		4.00	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2470	Cedar	3.00		3.00	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2492	Cedar	5.50		5.50	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2493	Cedar	3.00		3.00	0%	-	To Remain	\$ -	\$ -
8 - < 19"	2494	Cedar	9.50	3.0	12.50	0%	-	To Remain	\$ -	\$ -
8 - < 19"	2495	Cedar	8.00	3.0	11.00	0%	-	To Remain	\$ -	\$ -
8 - < 19"	2496	Cedar	6.00	5.0	11.00	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2497	Cedar	3.00	3.0	6.00	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2498	Cedar	8.00	3.0	11.00	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2499	Cedar	5.50		5.50	50%	2.75	Construction Access	\$ 200.00	\$ 550.00
2 - < 8"	2500	Cedar	5.00		5.00	50%	2.50	Construction Access	\$ 200.00	\$ 500.00
8 - < 19"	2501	Cedar	9.50		9.50	50%	4.75	Construction Access	\$ 200.00	\$ 950.00
2 - < 8"	2502	Cedar	8.50		8.50	50%	4.25	Construction Access	\$ 200.00	\$ 850.00
2 - < 8"	2503	Cedar Elm			3.00	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	2504	Cedar	3.00	3.0	4.50	50%	2.25	Construction Access	\$ 200.00	\$ 450.00
2 - < 8"	2505	Cedar	3.50		3.50	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2511	Cedar	7.50		7.50	3.75	Construction Access	\$ 200.00	\$ 750.00	
2 - < 8"	2512	Cedar	2.50		2.50	0%	-	Construction Access/Dead	\$ -	\$ -
2 - < 8"	2513	Cedar	2.50		2.50	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	2514	Cedar	2.00	1.5	3.50	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2515	Cedar	2.00		2.00	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2516	Cedar	2.50		2.50	0%	-	To Remain	\$ -	\$ -
24"	2517	Live Oak	25.00		25.00	0%	-	To Remain	\$ -	\$ -

Size Category	TREE TAG	TREE TYPE	SINGLE TRUNK	MULTI-TRUNK			TOTAL CALIPER (INCHES)	REPLACEMENT FACTOR	REPLACEMENT INCHES REQUIRED	REASON FOR REMOVAL/MITIGATION	REPLACEMENT VALUE	MITIGATION VALUE	
2 - < 8"	2518	Cedar	2.00				2.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2519	Cedar	3.00	2.0			4.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2520	Cedar	2.00				2.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2521	Cedar	3.00				3.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2522	Cedar	3.50				3.50	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2523	Cedar	7.00				7.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2524	Cedar	6.00				6.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2525	Cedar	2.50				2.50	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2526	Cedar	2.50				2.50	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2527	Cedar	3.00				3.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2528	Cedar	2.00				2.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2529	Cedar	3.50				3.50	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2530	Cedar	3.00				3.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2531	Cedar	2.50				2.50	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2532	Cedar	5.50				5.50	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2533	Cedar	5.00				5.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2534	Cedar	4.00				4.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2536	Cedar	2.50				2.50	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2537	Cedar	3.00				3.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2538	Cedar	4.00				4.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2539	Cedar	2.00				2.00	0%	-	To Remain/Dead	\$ -	\$ -	
2 - < 8"	2540	Cedar	6.00				6.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2541	Cedar	4.00				4.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2542	Cedar	3.00	2.0			4.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2543	Cedar	3.00	2.5			4.25	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2544	Cedar	3.50				3.50	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2545	Cedar	3.00	2.5			4.25	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2546	Cedar	3.50				3.50	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2547	Cedar	3.00				3.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2548	Cedar	4.00	4.0			6.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2549	Cedar	5.00				5.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2550	Cedar	6.50				6.50	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2551	Cedar	7.00				7.00	0%	-	To Remain	\$ -	\$ -	
8 - < 19"	2552	Cedar	6.00	4.5	4.0		10.25	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2553	Cedar	5.50	4.5			7.75	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2554	Cedar	5.00				5.00	0%	-	To Remain	\$ -	\$ -	
8 - < 19"	2556	Cedar	8.00				8.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2557	Cedar	5.00	4.0			7.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2558	Cedar	5.00				5.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2559	Cedar	3.50				3.50	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2560	Cedar	3.00				3.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2561	Cedar	4.00				4.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2562	Cedar	4.00				4.00	0%	-	To Remain	\$ -	\$ -	
8 - < 19"	2566	Hackberry	8.00				8.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2567	Cedar	6.50				6.50	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2568	Cedar	6.00				6.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2570	Mountain Laurel	3.00	3.0	2.5		5.75	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2571	Cedar	3.00				3.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2572	Cedar	4.00				4.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2573	Cedar	2.00				2.00	0%	-	To Remain/Dead	\$ -	\$ -	
2 - < 8"	2574	Cedar	6.00				6.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2575	Cedar	3.50				3.50	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2576	Cedar	6.00				6.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2577	Hackberry	6.00				6.00	0%	-	To Remain	\$ -	\$ -	
8 - < 19"	2578	Hackberry	9.50				9.50	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	2579	Cedar	4.50	3.0			6.00	0%	-	To Remain	\$ -	\$ -	
8 - < 19"	2580	Cedar	3.00	3.0	3.0	3.0	2.5	8.75	0%	-	To Remain	\$ -	\$ -

MCGRAY CONDUCTED THE SURVEY IN DECEMBER 2018.

Size Category	TREE TAG	TREE TYPE	SINGLE TRUNK	MULTI-TRUNK						TOTAL CALIPER (INCHES)	REPLACEMENT FACTOR	REPLACEMENT INCHES REQUIRED	REASON FOR REMOVAL/MITIGATION	REPLACEMENT VALUE	MITIGATION VALUE
8 - < 19"	2733	Willow	10.50							10.50	50%	5.25	Construction Access	\$ 200.00	\$ 1,050.00
24"	2734	Willow	25.00							25.00	0%	-	Construction Access/50% Canopy Loss	\$ -	\$ -
8 - < 19"	2735	Cedar	6.50	5.0	3.5					10.75	50%	5.38	Construction Access	\$ 200.00	\$ 1,075.00
2 - < 8"	2736	Cedar	6.50							6.50	0%	-	To Remain/Dead	\$ -	\$ -
8 - < 19"	2737	Grapevine	3.00	3.0	3.0	2.0	2.0	2.0	2.0	9.00	0%	-	Removal/Vine	\$ -	\$ -
8 - < 19"	2738	Spanish Oak	11.00							11.00	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2739	Cedar	3.50							3.50	0%	-	To Remain	\$ -	\$ -
2 - < 8"	2774	Cedar	4.00							4.00	50%	2.00	Construction Access	\$ 200.00	\$ 400.00
2 - < 8"	2775	Hackberry	7.00							7.00	50%	3.50	Construction Access	\$ 200.00	\$ 700.00
2 - < 8"	2776	Gum Bumelia	2.00							2.00	0%	-	Construction Access	\$ -	\$ -
19 - < 24"	2777	Cedar Elm	21.00							21.00	100%	21.00	Construction Access/ 20% Canopy Loss	\$ 200.00	\$ 4,200.00
2 - < 8"	2778	Cedar	6.00							6.00	0%	-	Construction Access/Dead	\$ -	\$ -
30"	2779	Spanish Oak	14.00	13.0	12.5	11.5	9.5			37.25	0%	-	Dam Construction/Lost One of the Larger Trunks & 40% Canopy Loss	\$ -	\$ -
2 - < 8"	2780	Poison Oak Vine	3.00							3.00	0%	-	Removal/Vine	\$ -	\$ -
2 - < 8"	2781	Sageberry	4.00							4.00	50%	2.00	Dam Construction	\$ 200.00	\$ 400.00
2 - < 8"	2782	Grapevine	3.50							3.50	0%	-	Removal/Vine	\$ -	\$ -
30"	2813	Live Oak	31.00							31.00	300%	93.00	Construction Access	\$ 200.00	\$ 18,600.00
2 - < 8"	2814	Cedar	2.50							2.50	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	2815	Yaupon Holly	2.00							2.00	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	2816	Yaupon Holly	2.00							2.00	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	2817	Cedar	3.50							3.50	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	2818	Cedar	2.00							2.00	0%	-	Construction Access/Dead	\$ -	\$ -
8 - < 19"	2819	Cedar	8.50							8.50	50%	4.25	Construction Access	\$ 200.00	\$ 850.00
2 - < 8"	2820	Cedar	3.00							3.00	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	2821	Cedar	2.00							2.00	0%	-	Construction Access/Dead	\$ -	\$ -
2 - < 8"	2822	Cedar	5.50							5.50	50%	2.75	Construction Access	\$ 200.00	\$ 550.00
2 - < 8"	2823	Yaupon Holly	2.00	2.0	1.5	1.5				4.50	50%	2.25	Construction Access	\$ 200.00	\$ 450.00
2 - < 8"	2824	Cedar	2.00	1.5						2.75	0%	-	Construction Access	\$ -	\$ -
19 - < 24"	2825	Live Oak	21.00							21.00	100%	21.00	Construction Access	\$ 200.00	\$ 4,200.00
2 - < 8"	2827	Rusty Blackhaw	2.00							2.00	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	2828	Hoptree	4.75							4.75	0%	-	Construction Access/Dead	\$ -	\$ -
2 - < 8"	2829	Cedar	4.50							4.50	50%	2.25	Construction Access	\$ 200.00	\$ 450.00
2 - < 8"	2830	Spanish Oak	4.00							4.00	2.00	2.00	Construction Access	\$ 200.00	\$ 400.00
2 - < 8"	2831	Cedar	6.50							6.50	50%	3.25	Construction Access	\$ 200.00	\$ 650.00
8 - < 19"	2832	Cedar	10.00							10.00	50%	5.00	Construction Access	\$ 200.00	\$ 1,000.00
2 - < 8"	2834	Spanish Oak	3.00							3.00	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	2835	Walnut	7.50							7.50	4.00%	3.75	Dam Construction	\$ 200.00	\$ 750.00
2 - < 8"	2836	Cedar	4.00							4.00	50%	2.00	Dam Construction	\$ 200.00	\$ 400.00
30"	2837	Spanish Oak	17.00	15.5	13.0					31.25	300%	93.75	Dam Construction	\$ 200.00	\$ 18,750.00
2 - < 8"	2838	Yaupon Holly	3.00	2.0	2.0	1.5	1.5			6.50	50%	3.25	Construction Access	\$ 200.00	\$ 650.00
2 - < 8"	2839	Cedar	2.50							2.50	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	2840	Cedar	2.50							2.50	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	2841	Cedar	3.00							3.00	0%	-	Dam Construction	\$ -	\$ -
2 - < 8"	2843	Cedar	2.00							2.00	0%	-	Dam Construction	\$ -	\$ -
2 - < 8"	2844	Cedar	3.00							3.00	0%	-	Dam Construction	\$ -	\$ -
8 - < 19"	2845	Spanish Oak	10.25							10.25	0%	-	Dam Construction/Dead	\$ -	\$ -
2 - < 8"	2846	Cedar	4.00							4.00	50%	2.00	Dam Construction	\$ 200.00	\$ 400.00
2 - < 8"	2847	Horseshaw	2.00							2.00	0%	-	Dam Construction	\$ -	\$ -
19 - < 24"	2848	Walnut	19.50							19.50	0%	-	Dam Construction/30% Canopy Loss	\$ -	\$ -
8 - < 19"	2853	Spanish Oak	13.50							13.50	50%	6.75	Construction Access	\$ 200.00	\$ 1,350.00
2 - < 8"	2854	Cedar	5.00	3.5						8.50	3.0%	3.38	Construction Access	\$ 200.00	\$ 875.00
2 - < 8"	2855	Spanish Oak	7.50							7.50	0%	-	Construction Access/Dead	\$ -	\$ -

Color Coding Legend	
	Existing Trees 2' - < 8" Caliper
	Existing Trees 8' - < 19" Caliper
	Existing Trees 19' - < 24" Caliper
	Existing Trees 24" + Caliper
	Existing Trees 30" + Caliper

Size Category	TREE TAG	TREE TYPE	SINGLE TRUNK	MULTI-TRUNK			TOTAL CALIPER (INCHES)	REPLACEMENT FACTOR	REPLACEMENT INCHES REQUIRED	REASON FOR REMOVAL/MITIGATION	REPLACEMENT VALUE	MITIGATION VALUE
2' - < 15'	3033	Spanish Oak	9.00	4.5			11.25	50%	5.63	Dam Construction	\$ 200.00	\$ 1,125.00
2' - < 8"	3034	Cedar	6.00	2.5			7.25	50%	3.63	Dam Construction	\$ 200.00	\$ 725.00
2' - < 8"	3035	Cedar	3.00				3.00	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3036	Cedar Elm	4.00				4.00	50%	2.00	Dam Construction	\$ 200.00	\$ 400.00
2' - < 15'	3037	Cedar	5.00	4.0	3.5		8.50	50%	4.28	Dam Construction	\$ 200.00	\$ 875.00
2' - < 8"	3038	Spanish Oak	5.50	4.0			9.50	50%	4.75	Dam Construction	\$ 200.00	\$ 950.00
2' - < 15'	3039	Live Oak	15.50				15.50	50%	7.75	Dam Construction	\$ 200.00	\$ 1,550.00
2' - < 8"	3040	Cedar	3.50	2.5			6.00	50%	3.00	Dam Construction	\$ 200.00	\$ 600.00
2' - < 8"	3041	Cedar	3.50				3.50	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3042	Cedar	5.00				5.00	50%	2.50	Dam Construction	\$ 200.00	\$ 500.00
2' - < 8"	3043	Cedar	5.50				5.50	50%	2.75	Dam Construction	\$ 200.00	\$ 550.00
2' - < 15'	3044	Cedar	8.00	5.5	5.0		13.25	50%	6.63	Dam Construction	\$ 200.00	\$ 1,325.00
2' - < 8"	3045	Cedar	3.00	2.5	2.5		5.50	50%	2.75	Dam Construction	\$ 200.00	\$ 550.00
2' - < 8"	3046	Cedar	4.00				4.00	50%	2.00	Dam Construction	\$ 200.00	\$ 400.00
2' - < 8"	3047	Cedar	4.50				4.50	50%	2.25	Dam Construction	\$ 200.00	\$ 450.00
2' - < 8"	3048	Cedar	5.00				5.00	50%	2.50	Dam Construction	\$ 200.00	\$ 500.00
2' - < 8"	3049	Cedar	3.00				3.00	0%	-	Dam Construction/Dead	\$ -	\$ -
2' - < 8"	3050	Cedar Elm	5.50				5.50	50%	2.75	Dam Construction	\$ 200.00	\$ 550.00
2' - < 8"	3051	Cedar Elm	2.50				2.50	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3052	Cedar	5.00	4.0			9.00	50%	4.50	Dam Construction	\$ 200.00	\$ 900.00
2' - < 15'	3053	Tree of Heaven					9.00	0%	-	Removal/Invasive	\$ -	\$ -
2' - < 8"	3054	Cedar	4.50	3.5	3.0		7.75	50%	3.88	Dam Construction	\$ 200.00	\$ 775.00
2' - < 15'	3055	Cedar	6.00	4.0			8.00	50%	4.00	Dam Construction	\$ 200.00	\$ 800.00
2' - < 8"	3056	Chinaberry	7.00				7.00	0%	-	Removal/Invasive	\$ -	\$ -
2' - < 8"	3057	Chinaberry	6.00				6.00	0%	-	Removal/Invasive	\$ -	\$ -
2' - < 8"	3058	Cedar Elm	3.50				3.50	0%	-	Dam Construction	\$ -	\$ -
2' - < 15'	3149	Hackberry	11.00				11.00	50%	5.50	Dam Construction	\$ 200.00	\$ 1,100.00
10' - < 24'	3150	Live Oak	8.50	8.0	8.0	5.0	19.50	100%	19.50	Dam Construction	\$ 200.00	\$ 3,800.00
2' - < 8"	3151	Yaupon Holly	2.50	2.0	2.0	1.5	5.25	50%	2.63	Dam Construction	\$ 200.00	\$ 525.00
2' - < 15'	3152	Cedar	4.50	4.0	3.5	3.0	12.00	50%	6.00	Dam Construction	\$ 200.00	\$ 1,200.00
2' - < 8"	3153	Hackberry	6.50				6.50	50%	3.25	Dam Construction	\$ 200.00	\$ 650.00
2' - < 8"	3154	Sumac	5.00				5.00	50%	2.50	Dam Construction	\$ 200.00	\$ 500.00
2' - < 8"	3155	Cedar Elm	4.50				4.50	50%	2.25	Dam Construction	\$ 200.00	\$ 450.00
2' - < 15'	3156	Cedar	7.00	5.5	3.5		11.50	50%	5.75	Dam Construction	\$ 200.00	\$ 1,150.00
2' - < 8"	3157	Cedar Elm	6.00				6.00	50%	3.00	Dam Construction	\$ 200.00	\$ 600.00
2' - < 8"	3158	Cedar Elm	7.00				7.00	50%	3.50	Dam Construction	\$ 200.00	\$ 700.00
2' - < 8"	3159	Cedar	4.50				4.50	50%	2.25	Dam Construction	\$ 200.00	\$ 450.00
2' - < 8"	3160	Cedar Elm	6.00				6.00	50%	3.00	Dam Construction	\$ 200.00	\$ 600.00
2' - < 15'	3161	Cottonwood	13.00				13.00	0%	-	Dam Construction/Dead	\$ -	\$ -
2' - < 8"	3163	Cedar	8.00	5.0	3.0		12.00	50%	6.00	Dam Construction	\$ 200.00	\$ 1,200.00
2' - < 8"	3164	Cedar	3.50				3.50	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3165	Cedar	3.00	3.0			6.00	450%	2.25	Dam Construction	\$ 200.00	\$ 450.00
2' - < 8"	3166	Cedar	6.50				6.50	50%	3.25	Dam Construction	\$ 200.00	\$ 650.00
2' - < 15'	3167	Sycamore	13.00				13.00	50%	6.50	Dam Construction	\$ 200.00	\$ 1,300.00
2' - < 8"	3168	Hackberry	4.50				4.50	50%	2.25	Dam Construction	\$ 200.00	\$ 450.00
2' - < 15'	3173	Cedar	8.00	4.5			10.25	50%	5.13	Dam Construction	\$ 200.00	\$ 1,025.00
2' - < 15'	3174	Cedar	4.50	4.0	4.0	3.0	13.00	50%	6.50	Dam Construction	\$ 200.00	\$ 1,300.00
2' - < 8"	3175	Cedar	12.75				12.75	50%	6.38	Dam Construction	\$ 200.00	\$ 1,275.00
2' - < 15'	3176	Cedar	8.50	6.0			11.50	50%	5.75	Dam Construction	\$ 200.00	\$ 1,150.00
2' - < 8"	3177	Cedar	5.00				5.00	50%	2.50	Dam Construction	\$ 200.00	\$ 500.00
2' - < 15'	3178	Cedar	5.50	5.0	4.5	4.0	12.25	50%	6.13	Dam Construction	\$ 200.00	\$ 1,225.00
2' - < 8"	3179	Grapevine	4.50	2.0			6.50	0%	-	Removal/Invasive	\$ -	\$ -
2' - < 8"	3180	Cedar Elm	6.00				6.00	50%	3.00	Dam Construction	\$ 200.00	\$ 600.00
2' - < 8"	3181	Carolina Buckthorn	3.00				3.00	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3182	Hackberry	4.00				4.00	50%	2.00	Dam Construction	\$ 200.00	\$ 400.00
2' - < 15'	3200	Cedar	8.00				8.00	50%	4.00	Dam Construction	\$ 200.00	\$ 800.00
2' - < 15'	3201	Cedar	8.50				8.50	50%	4.25	Dam Construction	\$ 200.00	\$ 850.00

Color Coding Legend	
	Existing Trees 2' - < 8" Caliper
	Existing Trees 8' - < 19" Caliper
	Existing Trees 19' - < 24" Caliper
	Existing Trees 24" + Caliper
	Existing Trees 30" + Caliper

Size Category	TREE TAG	TREE TYPE	SINGLE TRUNK	MULTI-TRUNK	TOTAL CALIPER (INCHES)	REPLACEMENT FACTOR	REPLACEMENT INCHES REQUIRED	REASON FOR REMOVAL/MITIGATION	REPLACEMENT VALUE	MITIGATION VALUE
2' - < 8"	3583	Cedar Elm	2.00		2.00	0%	-	To Remain	\$ -	\$ -
2' - < 8"	3584	Yaupon Holly	1.50	1.5	3.00	0%	-	To Remain	\$ -	\$ -
2' - < 8"	3585	Yaupon Holly	2.00	1.5	3.50	0%	-	To Remain	\$ -	\$ -
2' - < 8"	3586	Cedar Elm	2.00		2.00	0%	-	To Remain	\$ -	\$ -
2' - < 8"	3587	Cedar Elm	3.00		3.00	0%	-	To Remain	\$ -	\$ -
2' - < 8"	3588	Cedar Elm	2.00		2.00	0%	-	To Remain	\$ -	\$ -
2' - < 8"	3589	Cedar	2.50		2.50	0%	-	To Remain	\$ -	\$ -
2' - < 8"	3590	Cedar	2.50		2.50	0%	-	To Remain	\$ -	\$ -
2' - < 8"	3591	Yaupon Holly	2.00	1.0	3.00	0%	-	To Remain	\$ -	\$ -
2' - < 8"	3592	Cedar	2.00		2.00	0%	-	To Remain	\$ -	\$ -
2' - < 8"	3593	Waxleaf Ligustrum	3.00	2.5	5.50	0%	-	Removal/Invasive	\$ -	\$ -
2' - < 8"	3594	Cedar Elm	2.00		2.00	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3595	Cedar Elm	3.00		3.00	0%	-	To Remain	\$ -	\$ -
2' - < 8"	3596	Cedar Elm	2.00		2.00	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3597	Cedar Elm	2.00		2.00	0%	-	To Remain	\$ -	\$ -
2' - < 8"	3598	Waxleaf Ligustrum	4.00		4.00	0%	-	Invasive	\$ -	\$ -
2' - < 8"	3599	Waxleaf Ligustrum	2.00	1.0	3.00	0%	-	Invasive	\$ -	\$ -
2' - < 8"	3600	Chinaberry	2.00	2.0	4.00	0%	-	Invasive	\$ -	\$ -
2' - < 8"	3601	Cedar Elm	2.50		2.50	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3602	Cedar Elm	3.00		3.00	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3603	Cedar Elm	2.50		2.50	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3604	Cedar Elm	2.00	2.0	4.00	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3605	Cedar Elm	2.50		2.50	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3606	Cedar Elm	2.50		2.50	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3607	Cedar Elm	3.00		3.00	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3608	Cedar Elm	3.00		3.00	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3609	Cedar Elm	2.00		2.00	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3610	Cedar	2.00		2.00	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3611	Yaupon Holly	2.00	1.5	3.50	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3612	Yaupon Holly	2.00	2.0	4.00	0%	-	To Remain	\$ -	\$ -
2' - < 8"	3613	Cedar	2.00		2.00	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3614	Yaupon Holly	2.00	1.5	3.50	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3615	Shin Oak	2.50	2.0	4.50	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3616	Cedar	2.00	2.0	4.00	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3617	Yaupon Holly	1.50	1.50	3.00	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3618	Common Persimmon	1.50	1.5	3.00	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3619	Yaupon Holly	2.00	1.5	3.50	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3620	Cedar	2.50	2.5	5.00	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3621	Cedar	2.00		2.00	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3622	Cedar Elm	2.00		2.00	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3623	Possumhaw	2.00		2.00	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3624	Hackberry	3.00		3.00	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3625	Cedar Elm	2.00		2.00	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3626	Yaupon Holly	6.25		6.25	50%	3.13	Dam Construction	\$ 200.00	\$ 625.00
2' - < 8"	3627	Yaupon Holly	2.00		2.00	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3628	Yaupon Holly	2.00		2.00	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3629	Yaupon Holly	1.50	1.5	3.00	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3630	Yaupon Holly	1.50	1.5	3.00	0%	-	To Remain	\$ -	\$ -
8' - < 19"	3631	Spanish Oak	9.50		9.50	50%	4.75	Construction Access	\$ 200.00	\$ 950.00
2' - < 8"	3632	Spanish Oak	7.50		7.50	50%	3.75	Dam Construction	\$ 200.00	\$ 750.00
2' - < 8"	3633	Cedar	2.50		2.50	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3634	Cedar	4.50	3.0	7.50	50%	3.50	Dam Construction	\$ 200.00	\$ 700.00
2' - < 8"	3635	Yaupon Holly	1.50	1.5	3.00	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3636	Yaupon Holly	2.00		2.00	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3637	Yaupon Holly	2.00	2.0	4.00	50%	2.00	Dam Construction	\$ 200.00	\$ 400.00
2' - < 8"	3638	Sumac	2.50	2.0	4.50	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3639	Yaupon Holly	2.00	1.5	3.50	0%	-	Dam Construction	\$ -	\$ -

Size Category	TREE TAG	TREE TYPE	SINGLE TRUNK	MULTI-TRUNK	TOTAL CALIPER (INCHES)	REPLACEMENT FACTOR	REPLACEMENT INCHES REQUIRED	REASON FOR REMOVAL/MITIGATION	REPLACEMENT VALUE	MITIGATION VALUE
2' - < 8"	3640	Yaupon Holly	1.50	1.5	3.00	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3641	Yaupon Holly	2.00	1.5	3.50	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3642	Yaupon Holly	2.00	1.5	3.50	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3643	Cedar	2.50		2.50	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3644	Cedar	2.50	2.0	4.50	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3645	Cedar	3.00		3.00	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3646	Sumac	3.00	2.0	5.00	50%	2.00	Dam Construction	\$ 200.00	\$ 400.00
2' - < 8"	3647	Cedar	2.50		2.50	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3648	Cedar	2.50		2.50	0%	-	To Remain	\$ -	\$ -
2' - < 8"	3649	Hackberry	2.50		2.50	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3650	Hackberry	2.50		2.50	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3651	Cedar	2.50		2.50	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3652	Cedar	1.50	0.5	2.00	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3653	Cedar Elm	2.00		2.00	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3654	Cedar	3.00	2.5	5.50	50%	2.13	Dam Construction	\$ 200.00	\$ 425.00
2' - < 8"	3655	Hackberry	2.50		2.50	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3656	Hackberry	3.00		3.00	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3657	Hackberry	3.50		3.50	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3658	Cedar Elm	2.00		2.00	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3659	Cedar Elm	2.50		2.50	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3660	Cedar	3.50	2.5	6.00	50%	2.38	Dam Construction	\$ 200.00	\$ 475.00
8' - < 19"	3661	Chinaberry	5.00	4.0	9.00	50%	4.00	Removal/Invasive	\$ -	\$ -
2' - < 8"	3662	Hackberry	4.00		4.00	50%	2.00	Dam Construction	\$ 200.00	\$ 400.00
2' - < 8"	3663	Cedar	2.50		2.50	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3664	Chinaberry	3.00	3.0	6.00	0%	-	Removal/Invasive	\$ -	\$ -
2' - < 8"	3665	Chinese Elm	2.50		2.50	0%	-	Removal/Invasive	\$ -	\$ -
2' - < 8"	3666	Cedar Elm	2.00		2.00	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3667	Cedar	3.00		3.00	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3668	Chinese Elm	3.50	1.5	5.00	0%	-	Removal/Invasive	\$ -	\$ -
2' - < 8"	3669	Yaupon Holly	1.50	1.5	3.00	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3670	Cedar Elm	2.50		2.50	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3671	Chinese Elm	2.00	1.5	3.50	0%	-	Removal/Invasive	\$ -	\$ -
2' - < 8"	3672	Chinaberry	4.00	3.5	7.50	0%	-	Removal/Invasive	\$ -	\$ -
2' - < 8"	3673	Soapberry	3.50		3.50	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3674	Cedar	2.00		2.00	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3675	Cedar	2.50		2.50	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3676	Soapberry	2.00		2.00	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3677	Soapberry	2.00		2.00	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3678	Yaupon Holly	1.50	1.5	3.00	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3679	Soapberry	2.00	1.0	3.00	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3680	Yaupon Holly	2.50	1.5	4.00	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3681	Hackberry	3.00		3.00	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3682	American Elm	2.50		2.50	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3683	Cedar	2.50		2.50	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3684	Soapberry	2.50	1.5	4.00	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3685	Cedar	3.50		3.50	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3686	Cedar	2.50	1.5	4.00	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3687	Cedar	2.50		2.50	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3688	Cedar	2.50	1.5	4.00	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3689	Cedar	3.50		3.50	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3690	Cedar	4.50		4.50	50%	2.25	Dam Construction	\$ 200.00	\$ 550.00
2' - < 8"	3691	Cedar	2.50	2.0	4.50	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3692	Cedar	5.00		5.00	50%	2.50	Dam Construction	\$ 200.00	\$ 500.00
2' - < 8"	3693	Cedar	3.50		3.50	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3694	Cedar Elm	2.00		2.00	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3695	Hackberry	4.50		4.50	50%	2.25	Dam Construction	\$ 200.00	\$ 450.00
2' - < 8"	3696	Cedar Elm	2.50		2.50	0%	-	Dam Construction	\$ -	\$ -

MCGRAY CONDUCTED THE SURVEY IN DECEMBER 2018.

Size Category	TREE TAG	TREE TYPE	SINGLE TRUNK	MULTI-TRUNK		TOTAL CALIPER (INCHES)	REPLACEMENT FACTOR	REPLACEMENT INCHES REQUIRED	REASON FOR REMOVAL/MITIGATION	REPLACEMENT VALUE	MITIGATION VALUE
2' - < 8"	3697	American Elm	2.50			2.50	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3698	Cedar Elm	2.50			2.50	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3699	Hackberry	3.50	2.0		5.50	50%	2.25	Dam Construction	\$ 200.00	\$ 450.00
2' - < 8"	3700	Waxleaf Ligustrum	1.50	1.5		3.00	0%	-	Removal/Invasive	\$ -	\$ -
2' - < 8"	3701	Cedar Elm	4.00			4.00	50%	2.00	Construction Access	\$ -	\$ 400.00
2' - < 8"	3702	Cedar	3.50			3.50	0%	-	To Remain	\$ -	\$ -
2' - < 8"	3703	Cedar	2.00			2.00	0%	-	To Remain	\$ -	\$ -
2' - < 8"	3704	Cedar	4.00			4.00	0%	-	To Remain	\$ -	\$ -
2' - < 8"	3705	Cedar	4.50			4.50	50%	2.25	Construction Access	\$ -	\$ 450.00
2' - < 8"	3706	Cedar Elm	3.75			3.75	0%	-	To Remain	\$ -	\$ -
2' - < 8"	3707	Ash	3.00	1.5		4.50	0%	-	To Remain	\$ -	\$ -
2' - < 8"	3708	Cedar	3.50	3.0		6.50	0%	-	To Remain	\$ -	\$ -
2' - < 8"	3709	Cedar	3.00			3.00	0%	-	To Remain	\$ -	\$ -
2' - < 8"	3710	Cedar	3.50			3.50	0%	-	To Remain	\$ -	\$ -
2' - < 8"	3711	Yaupon Holly	2.00	1.5		3.50	0%	-	To Remain	\$ -	\$ -
2' - < 8"	3712	Yaupon Holly	2.00	1.5	1.0	3.25	0%	-	To Remain	\$ -	\$ -
2' - < 8"	3713	Mountain Laurel	2.00			2.00	0%	-	To Remain	\$ -	\$ -
2' - < 8"	3714	Cedar	3.00			3.00	0%	-	To Remain	\$ -	\$ -
2' - < 8"	3715	Cedar	2.50	2.0		4.50	0%	-	To Remain	\$ -	\$ -
2' - < 8"	3716	Cedar	2.00	2.0		4.00	0%	-	To Remain	\$ -	\$ -
2' - < 8"	3717	Ash	4.00			4.00	0%	-	To Remain	\$ -	\$ -
2' - < 8"	3718	Cedar	3.00			3.00	0%	-	To Remain	\$ -	\$ -
2' - < 8"	3719	Yaupon Holly	1.50	1.5		2.25	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3720	Yaupon Holly	1.50	1.5		2.25	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3721	Yaupon Holly	2.00			2.00	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3722	Yaupon Holly	2.50	1.5	1.5	4.50	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3722	Yaupon Holly	1.50	1.0		2.00	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3724	Hackberry	2.50			2.50	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3725	Cedar	2.00			2.00	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3726	Cedar Elm	5.00			5.00	50%	2.50	Construction Access	\$ 200.00	\$ 500.00
2' - < 8"	3727	Cedar Elm	6.50			6.50	50%	3.25	Construction Access	\$ 200.00	\$ 650.00
2' - < 8"	3728	Cedar Elm	6.00	3.0		7.50	50%	3.75	Construction Access	\$ 750.00	\$ 750.00
2' - < 8"	3729	Cedar	7.50			7.50	50%	3.75	Construction Access	\$ 200.00	\$ 750.00
2' - < 8"	3730	Yaupon Holly	2.00	1.0	1.0	3.00	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3731	Soapberry	5.00			5.00	50%	2.50	Dam Construction	\$ -	\$ -
2' - < 8"	3732	Cedar	4.50			4.50	50%	2.25	Dam Construction	\$ 200.00	\$ 450.00
2' - < 8"	3733	Texas Persimmon	2.50	1.5		4.00	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3734	Cedar Elm	2.50			2.50	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3735	Yaupon Holly	2.50			2.50	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3736	Hackberry	5.50			5.50	50%	2.75	Dam Construction	\$ 200.00	\$ 550.00
2' - < 8"	3737	Yaupon Holly	2.50	2.5		5.00	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3738	Yaupon Holly	2.50	1.5	1.0	5.00	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3739	Yaupon Holly	2.00	2.0		4.00	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3740	Soapberry	2.50			2.50	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3741	Hackberry	4.00			4.00	50%	2.00	Construction Access	\$ 200.00	\$ 400.00
2' - < 8"	3742	Hackberry	3.50			3.50	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3743	Yaupon Holly	2.00			2.00	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3744	Yaupon Holly	2.50	1.5	1.5	4.75	50%	2.38	Dam Construction	\$ 500.00	\$ 475.00
2' - < 8"	3745	Yaupon Holly	2.50	1.0	1.0	4.00	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3746	Cedar	6.00	0.5		6.25	50%	3.13	Dam Construction	\$ 200.00	\$ 625.00
2' - < 8"	3747	Soapberry	3.50			3.50	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3748	Yaupon Holly	2.50	1.5	1.0	5.00	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3749	Yaupon Holly	2.00	1.5	1.5	4.50	50%	2.25	Dam Construction	\$ 200.00	\$ 450.00
2' - < 8"	3750	Common Persimmon	2.00	2.0	1.0	4.00	50%	2.50	Dam Construction	\$ 200.00	\$ 500.00
2' - < 8"	3751	Hackberry	2.00			2.00	0%	-	Dam Construction	\$ -	\$ -
2' - < 8"	3752	Soapberry	3.50			3.50	0%	-	Construction Access	\$ -	\$ -
2' - < 8"	3753	Soapberry	2.50			2.50	0%	-	Dam Construction	\$ -	\$ -

Color Coding Legend	
	Existing Trees 2 - < 8" Caliper
	Existing Trees 8 - < 19" Caliper
	Existing Trees 19 - < 24" Caliper
	Existing Trees 24" + Caliper
	Existing Trees 30" + Caliper

Size Category	TREE TAG	TREE TYPE	SINGLE TRUNK	MULTI-TRUNK			TOTAL CALIPER (INCHES)	REPLACEMENT FACTOR	REPLACEMENT INCHES REQUIRED	REASON FOR REMOVAL/MITIGATION	REPLACEMENT VALUE	MITIGATION VALUE
2 - < 8"	3811	Soapberry	2.50				2.50	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	3812	Cedar	4.00	4.0			6.00	50%	3.00	Construction Access	\$ 200.00	\$ 600.00
2 - < 8"	3813	Soapberry	2.00				2.00	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	3814	Cedar	6.00				6.00	50%	3.00	Construction Access	\$ 200.00	\$ 600.00
2 - < 8"	3815	Soapberry	3.50				3.50	0%	-	Construction Access	\$ -	\$ -
8 - < 19"	3816	Cedar	8.00	7.5			11.75	50%	5.88	Construction Access	\$ 200.00	\$ 1,175.00
2 - < 8"	3817	Cedar Elm	7.50				7.50	50%	3.75	Construction Access	\$ 200.00	\$ 750.00
2 - < 8"	3818	Yaupon Holly	2.00	1.5	1.0		3.25	0%	-	To Remain	\$ -	\$ -
2 - < 8"	3819	Yaupon Holly	2.00	2.0			3.00	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	3820	Cedar	5.00				5.00	0%	-	To Remain	\$ -	\$ -
8 - < 19"	3821	Cedar	10.00				10.00	50%	5.00	Construction Access	\$ 200.00	\$ 1,000.00
2 - < 8"	3822	Yaupon Holly	2.00				2.00	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	3823	Gum Bumelia	3.00				3.00	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	3824	Hackberry	4.00				4.00	50%	2.00	Construction Access	\$ 200.00	\$ 400.00
2 - < 8"	3825	Cedar Elm	2.50				2.50	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	3826	Cedar	4.00				4.00	50%	2.00	Construction Access	\$ 200.00	\$ 400.00
2 - < 8"	3827	Yaupon Holly	2.00				2.00	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	3828	Soapberry	2.00				2.00	0%	-	To Remain	\$ -	\$ -
2 - < 8"	3829	Yaupon Holly	2.50				2.50	0%	-	To Remain	\$ -	\$ -
2 - < 8"	3830	Yaupon Holly	1.50	1.5	1.5		3.00	0%	-	To Remain	\$ -	\$ -
2 - < 8"	3831	Cedar	2.00				2.00	0%	-	To Remain	\$ -	\$ -
8 - < 19"	3832	Cedar Elm	8.00				8.00	0%	-	To Remain	\$ -	\$ -
8 - < 19"	3833	Hackberry	12.50				12.50	0%	-	To Remain	\$ -	\$ -
8 - < 19"	3834	Cedar	8.00				8.00	0%	-	To Remain	\$ -	\$ -
2 - < 8"	3835	Hackberry	5.00				5.00	50%	2.50	Construction Access	\$ 200.00	\$ 500.00
2 - < 8"	3836	Cedar Elm	3.00				3.00	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	3837	Yaupon Holly	2.00				2.00	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	3838	Yaupon Holly	2.00				2.00	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	3839	Soapberry	2.50				2.50	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	3840	Yaupon Holly	1.50	1.0	1.0		2.50	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	3841	Yaupon Holly	2.00	2.0			3.00	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	3842	Yaupon Holly	2.00				2.00	0%	-	Construction Access	\$ -	\$ -
8 - < 19"	3843	Cedar	7.50	6.5	4.5	3.5	14.75	50%	7.38	Construction Access	\$ 200.00	\$ 1,475.00
8 - < 19"	3844	Hackberry	12.50				12.50	50%	6.25	Construction Access	\$ 200.00	\$ 1,250.00
2 - < 8"	3845	Soapberry	3.50				3.50	0%	-	Construction Access	\$ -	\$ -
8 - < 19"	3846	Grapevine	4.50	4.0	4.0	3.5	13.50	0%	-	Removal/Vine	\$ -	\$ -
8 - < 19"	3847	Cedar Elm	11.50				11.50	50%	5.75	Construction Access	\$ 200.00	\$ 1,150.00
2 - < 8"	3848	Cedar	6.00				6.00	50%	3.00	Construction Access	\$ 200.00	\$ 600.00
2 - < 8"	3849	Cedar Elm	4.00				4.00	50%	2.00	Construction Access	\$ 200.00	\$ 400.00
2 - < 8"	3850	Cedar	4.50	3.5			6.25	50%	3.13	Construction Access	\$ 200.00	\$ 625.00
8 - < 19"	3851	Cedar	9.00				9.00	50%	4.50	Construction Access	\$ 200.00	\$ 900.00
8 - < 19"	3852	Cedar	11.50	4.5			13.75	50%	6.88	Construction Access	\$ 200.00	\$ 1,375.00
2 - < 8"	3853	Cedar Elm	3.50				3.50	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	3854	Cedar Elm	4.00				4.00	50%	2.00	Construction Access	\$ 200.00	\$ 400.00
8 - < 19"	3855	Cedar Elm	10.50				10.50	50%	5.25	Construction Access	\$ 200.00	\$ 1,050.00
8 - < 19"	3856	Cedar Elm	13.00				13.00	50%	6.50	Construction Access	\$ 200.00	\$ 1,300.00
2 - < 8"	3857	Cedar	3.50				3.50	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	3858	Cedar	4.50				4.50	50%	2.25	Construction Access	\$ 200.00	\$ 450.00
2 - < 8"	3859	Cedar	3.50				3.50	0%	-	To Remain	\$ -	\$ -
2 - < 8"	3860	Yaupon Holly	1.50	1.5	1.0		2.75	0%	-	To Remain	\$ -	\$ -
2 - < 8"	3861	Yaupon Holly	2.00	2.0	1.5	1.0	4.75	50%	2.38	Construction Access	\$ 200.00	\$ 475.00
2 - < 8"	3862	Cedar	7.00				7.00	50%	3.50	Construction Access	\$ 200.00	\$ 700.00
2 - < 8"	3863	Yaupon Holly	2.00				2.00	0%	-	Construction Access	\$ -	\$ -
8 - < 19"	3864	Cedar Elm	8.00				8.00	50%	4.00	Construction Access	\$ 200.00	\$ 800.00
2 - < 8"	3865	Yaupon Holly	1.50	1.5	1.5		3.00	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	3866	Yaupon Holly	2.00	1.0	1.0		3.00	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	3867	Chinaberry	2.00				2.00	0%	-	Removal/Invasive	\$ -	\$ -

Size Category	TREE TAG	TREE TYPE	SINGLE TRUNK	MULTI-TRUNK				TOTAL CALIPER (INCHES)	REPLACEMENT FACTOR	REPLACEMENT INCHES REQUIRED	REASON FOR REMOVAL/MITIGATION	REPLACEMENT VALUE	MITIGATION VALUE	
2 - < 8"	3868	Yaupon Holly	2.00	1.5	1.5	1.5		4.25	50%	2.13	Construction Access	\$ 200.00	\$ 425.00	
8 - < 19"	3869	Chinaberry	9.00					9.00	0%	-	Removal/Invasive	\$ -	\$ -	
2 - < 8"	3870	Yaupon Holly	2.00	1.0				2.50	0%	-	Construction Access	\$ -	\$ -	
2 - < 8"	3871	Cedar Elm	3.50					3.50	0%	-	Construction Access	\$ -	\$ -	
2 - < 8"	3872	Cedar Elm	2.50					2.50	0%	-	Construction Access	\$ -	\$ -	
2 - < 8"	3873	Cedar Elm	2.00	1.5				2.75	0%	-	Construction Access	\$ -	\$ -	
2 - < 8"	3874	Cedar Elm	4.00					4.00	50%	2.00	Construction Access	\$ 200.00	\$ 400.00	
2 - < 8"	3875	Cedar Elm	5.00					5.00	50%	2.50	Construction Access	\$ 200.00	\$ 500.00	
2 - < 8"	3876	Cedar	6.50					6.50	50%	3.25	Construction Access	\$ 200.00	\$ 650.00	
2 - < 8"	3877	Cedar Elm	2.50					2.50	0%	-	Construction Access	\$ -	\$ -	
2 - < 8"	3878	Hackberry	6.00					6.00	50%	3.00	Construction Access	\$ 200.00	\$ 600.00	
2 - < 8"	3879	Cedar Elm	6.00					6.00	50%	3.00	Construction Access	\$ 200.00	\$ 600.00	
2 - < 8"	3880	Common Persimmon	2.75					2.75	0%	-	Dam Construction	\$ -	\$ -	
8 - < 19"	3881	Cedar	7.00	4.0	4.0	4.0	3.5	3.0	16.25	50%	8.13	Construction Access	\$ 200.00	\$ 1,625.00
2 - < 8"	3882	Cedar Elm	3.00					3.00	0%	-	Construction Access	\$ -	\$ -	
8 - < 19"	3883	Cedar	8.00					8.00	50%	4.00	Construction Access	\$ 200.00	\$ 800.00	
2 - < 8"	3884	Yaupon Holly	2.00					2.00	0%	-	Construction Access	\$ -	\$ -	
2 - < 8"	3885	Yaupon Holly	2.00	1.5	1.0			3.25	0%	-	Construction Access	\$ -	\$ -	
2 - < 8"	3886	Yaupon Holly	2.00	1.5	1.5			3.50	0%	-	Construction Access	\$ -	\$ -	
2 - < 8"	3887	Walnut	6.00					6.00	50%	3.00	Construction Access	\$ 200.00	\$ 600.00	
2 - < 8"	3888	Cedar Elm	2.50					2.50	0%	-	Construction Access	\$ -	\$ -	
2 - < 8"	3889	Cedar Elm	2.50					2.50	0%	-	Construction Access	\$ -	\$ -	
2 - < 8"	3890	Cedar Elm	2.50					2.50	0%	-	Construction Access	\$ -	\$ -	
2 - < 8"	3891	Cedar Elm	2.00					2.00	0%	-	Construction Access	\$ -	\$ -	
2 - < 8"	3892	Cedar Elm	3.00					3.00	0%	-	Construction Access	\$ -	\$ -	
2 - < 8"	3893	Cedar Elm	2.50	2.0				3.50	0%	-	Construction Access	\$ -	\$ -	
2 - < 8"	3894	Cedar	4.00	3.5				5.75	50%	2.88	Construction Access	\$ 200.00	\$ 575.00	
2 - < 8"	3895	Cedar	4.50					4.50	50%	2.25	Construction Access	\$ 200.00	\$ 450.00	
2 - < 8"	3896	Cedar	3.00					3.00	0%	-	Construction Access	\$ -	\$ -	
2 - < 8"	3897	Cedar	2.50					2.50	0%	-	Construction Access	\$ -	\$ -	
2 - < 8"	3898	Cedar	4.00	2.0				5.00	50%	2.50	Construction Access	\$ 200.00	\$ 500.00	
2 - < 8"	3899	Cedar	4.00					4.00	50%	2.00	Construction Access	\$ 200.00	\$ 400.00	
2 - < 8"	3900	Cedar	2.00					2.00	0%	-	Construction Access	\$ -	\$ -	
2 - < 8"	3901	Cedar Elm	2.50					2.50	0%	-	Construction Access	\$ -	\$ -	
2 - < 8"	3902	Cedar Elm	2.00					2.00	0%	-	Construction Access	\$ -	\$ -	
2 - < 8"	3903	Yaupon Holly	2.50	2.0				3.50	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	3904	Yaupon Holly	2.00					2.00	0%	-	To Remain	\$ -	\$ -	
8 - < 19"	3905	Cedar Elm	13.00					13.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	3906	Cedar	3.50					3.50	0%	-	Construction Access	\$ -	\$ -	
2 - < 8"	3907	Cedar	2.00					2.00	0%	-	Construction Access	\$ -	\$ -	
2 - < 8"	3908	Gum Bumelia	2.50					2.50	0%	-	Construction Access	\$ -	\$ -	
2 - < 8"	3909	Cedar	2.50					2.50	0%	-	Construction Access	\$ -	\$ -	
2 - < 8"	3910	Cedar Elm	3.00					3.00	0%	-	Construction Access	\$ -	\$ -	
2 - < 8"	3911	Cedar	3.50					3.50	0%	-	Construction Access	\$ -	\$ -	
2 - < 8"	3912	Cedar	3.00					3.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	3913	Cedar	2.00					2.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	3914	Cedar	2.50					2.50	0%	-	Construction Access	\$ -	\$ -	
2 - < 8"	3915	Cedar	2.50					2.50	0%	-	Construction Access	\$ -	\$ -	
2 - < 8"	3916	Cedar	3.50					3.50	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	3917	Cedar	4.00					4.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	3918	Cedar	2.00	1.0				2.50	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	3919	Cedar	3.50					3.50	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	3920	Cedar	5.00					5.00	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	3921	Cedar	3.50	2.0				4.50	50%	2.25	Construction Access	\$ 200.00	\$ 450.00	
2 - < 8"	3922	Cedar	3.50	2.0	2.0			5.50	50%	2.75	Construction Access	\$ 200.00	\$ 550.00	
2 - < 8"	3923	Cedar	4.50					4.50	0%	-	To Remain	\$ -	\$ -	
2 - < 8"	3924	Cedar	2.50					2.50	0%	-	Construction Access	\$ -	\$ -	

MCGRAY CONDUCTED THE SURVEY IN DECEMBER 2018.

Size Category	TREE TAG	TREE TYPE	SINGLE TRUNK	MULTI-TRUNK					TOTAL CALIPER (INCHES)	REPLACEMENT FACTOR	REPLACEMENT INCHES REQUIRED	REASON FOR REMOVAL/MITIGATION	REPLACEMENT VALUE	MITIGATION VALUE
2 - < 8"	3925	Cedar	3.00						3.00	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	3926	Cedar	2.50						2.50	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	3927	Cedar	2.50						2.50	0%	-	To Remain	\$ -	\$ -
2 - < 8"	3928	Cedar	3.00						3.00	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	3929	Cedar	3.50						3.50	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	3930	Cedar	2.00						2.00	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	3931	Texas Persimmon	2.00						2.00	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	3932	Texas Persimmon	3.00						3.00	0%	-	To Remain	\$ -	\$ -
2 - < 8"	3933	Live Oak	28.00						28.00	0%	-	To Remain	\$ -	\$ -
8 - < 19"	3934	Cedar	5.00	4.5	3.5	3.5	3.0		12.25	50%	6.13	Construction Access	\$ 200.00	\$ 1,225.00
2 - < 8"	3935	Cedar Elm	6.00						6.00	50%	3.00	Construction Access	\$ 200.00	\$ 600.00
2 - < 8"	3936	Yaupon Holly	2.50	1.5	-	-	-	-	2.75	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	3937	Cedar	2.50						2.50	0%	-	To Remain	\$ -	\$ -
2 - < 8"	3938	Honey Mesquite	2.00						2.00	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	3939	Cedar	2.50	1.5	-	-	-	-	3.125	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	3940	Cedar	4.50						4.50	50%	2.25	Construction Access	\$ 200.00	\$ 450.00
2 - < 8"	3941	Cedar	4.00	3.5	3.0	-	-	-	7.25	50%	3.63	Construction Access	\$ 200.00	\$ 725.00
2 - < 8"	3942	Cedar	4.50						4.50	0%	-	To Remain	\$ -	\$ -
2 - < 8"	3943	Cedar	4.00						4.00	50%	2.00	Construction Access	\$ 200.00	\$ 400.00
2 - < 8"	3944	Cedar	5.50						5.50	50%	2.75	Construction Access	\$ 200.00	\$ 550.00
2 - < 8"	3945	Cedar	2.00						2.00	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	3946	Cedar	3.50						3.50	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	3947	Cedar	2.00						2.00	0%	-	Construction Access	\$ -	\$ -
2 - < 8"	3948	Cedar	5.00						5.00	50%	2.50	Construction Access	\$ 200.00	\$ 500.00
8 - < 19"	3949	Live Oak	15.00						15.00	50%	7.50	Construction Access	\$ 200.00	\$ 1,500.00
2 - < 8"	3950	Cedar	3.00						3.00	0%	-	Construction Access	\$ -	\$ -
8 - < 19"	3951	Cedar	6.00	4.0	3.5	-	-	-	9.75	50%	4.88	Construction Access	\$ 200.00	\$ 975.00
8 - < 19"	3952	Live Oak	8.00						8.00	50%	4.00	Construction Access	\$ 200.00	\$ 800.00
2 - < 8"	3953	Live Oak	5.50						5.50	50%	2.75	Construction Access	\$ 200.00	\$ 550.00
2 - < 8"	3954	Live Oak	2.50						2.50	0%	-	Construction Access	\$ -	\$ -
8 - < 19"	3955	Live Oak	9.00	6.5	4.5	-	-	-	14.50	50%	7.25	Construction Access	\$ 200.00	\$ 1,450.00
8 - < 19"	3956	Cedar	10.25						10.25	50%	5.13	Construction Access	\$ 200.00	\$ 1,025.00
2 - < 8"	3957	Cedar	5.50						5.50	50%	2.75	Construction Access	\$ 200.00	\$ 550.00
2 - < 8"	3958	Cedar	3.00						3.00	0%	-	Dam Construction	\$ -	\$ -
2 - < 8"	3959	Cedar	5.50						5.50	50%	2.75	Construction Access	\$ 200.00	\$ 550.00
2 - < 8"	3960	Cedar	4.00						4.00	50%	2.00	Dam Construction	\$ 200.00	\$ 400.00
2 - < 8"	3961	Cedar	6.00						6.00	50%	3.00	Construction Access	\$ 200.00	\$ 600.00
2 - < 8"	3962	Cedar	3.50						3.50	0%	-	To Remain	\$ -	\$ -
2 - < 8"	3963	Live Oak	5.00						5.00	50%	2.50	Construction Access	\$ 200.00	\$ 500.00
2 - < 8"	3964	Live Oak	7.00						7.00	50%	3.50	Construction Access	\$ 200.00	\$ 700.00
2 - < 8"	3965	Cedar	2.50						2.50	0%	-	To Remain	\$ -	\$ -
2 - < 8"	3966	Cedar	3.50						3.50	0%	-	To Remain	\$ -	\$ -
2 - < 8"	3967	Cedar	7.50						7.50	0%	-	To Remain	\$ -	\$ -
2 - < 8"	3968	Cedar	2.50						3.75	0%	-	To Remain	\$ -	\$ -
2 - < 8"	3969	Live Oak	5.50						5.50	0%	-	To Remain	\$ -	\$ -
2 - < 8"	3970	Cedar	4.00						4.00	0%	-	To Remain	\$ -	\$ -
2 - < 8"	3971	Live Oak	6.00						6.00	0%	-	To Remain	\$ -	\$ -
2 - < 8"	3972	Live Oak	6.50						6.50	0%	-	To Remain	\$ -	\$ -
2 - < 8"	3973	Live Oak	5.00	4.0	-	-	-	-	7.00	0%	-	To Remain	\$ -	\$ -
2 - < 8"	3974	Live Oak	5.00						5.00	0%	-	To Remain	\$ -	\$ -
2 - < 8"	3975	Live Oak	3.50						3.50	0%	-	To Remain	\$ -	\$ -
2 - < 8"	3976	Cedar	3.50	4.5	-	-	-	-	7.75	50%	3.88	Construction Access	\$ 200.00	\$ 775.00
2 - < 8"	3977	Cedar	4.50	2.0	-	-	-	-	5.50	0%	-	To Remain	\$ -	\$ -
2 - < 8"	3978	Cedar	4.00						4.00	0%	-	To Remain	\$ -	\$ -
2 - < 8"	3979	Cedar	4.00						4.00	50%	2.00	Construction Access	\$ 200.00	\$ 400.00
2 - < 8"	3980	Spanish Oak	7.00						7.00	0%	-	Construction Access	\$ 200.00	\$ 700.00
8 - < 19"	3981	Cedar	5.00	4.5	3.5	3.0	-	-	10.50	50%	5.25	Construction Access	\$ 200.00	\$ 1,050.00

Color Coding Legend	
	Existing Trees 2 - < 8" Caliper
	Existing Trees 8 - < 19" Caliper
	Existing Trees 19 - < 24" Caliper
	Existing Trees 24" + Caliper
	Existing Trees 30" + Caliper

Size Category	TREE TAG	TREE TYPE	SINGLE TRUNK	MULTI-TRUNK	TOTAL CALIPER (INCHES)	REPLACEMENT FACTOR	REPLACEMENT INCHES REQUIRED	REASON FOR REMOVAL/MITIGATION	REPLACEMENT VALUE	MITIGATION VALUE
2 - < 8"	4039	Spanish Oak	5.00		5.00	0%	-	To Remain	\$ -	\$ -
2 - < 8"	4040	Rusty Blackhaw	2.50	2.5 1.5		4.50	25%	Construction Access	\$ 200.00	\$ 225.00
2 - < 8"	4041	Cedar	5.00	4.0		7.00	50%	Construction Access	\$ 200.00	\$ 700.00
2 - < 8"	4042	Cedar	2.00			2.00	0%	Dam Construction	\$ -	\$ -
8 - < 19"	4043	Spanish Oak	2.50	6.0		8.50	50%	Dam Construction	\$ 200.00	\$ 950.00
2 - < 8"	4044	Cedar	2.50			2.50	0%	Dam Construction	\$ -	\$ -
2 - < 8"	4045	Cedar	2.50			2.50	0%	Dam Construction	\$ -	\$ -
8 - < 19"	4046	Cedar	8.50			8.50	50%	Dam Construction	\$ 200.00	\$ 850.00
2 - < 8"	4047	Spanish Oak	6.00			6.00	50%	Construction Access	\$ 200.00	\$ 600.00
2 - < 8"	4048	Cedar	4.00	3.5 3.0		7.25	50%	Construction Access	\$ 200.00	\$ 725.00
2 - < 8"	4049	Yaupon Holly	2.00	1.5		2.75	0%	Construction Access	\$ -	\$ -
2 - < 8"	4050	Spanish Oak	6.00			6.00	50%	Construction Access	\$ 200.00	\$ 600.00
2 - < 8"	4051	Yaupon Holly	2.50	1.5		3.25	0%	Construction Access	\$ -	\$ -
2 - < 8"	4052	Cedar	3.50			3.50	0%	Construction Access	\$ -	\$ -
2 - < 8"	4053	Cedar	2.50	2.0		3.50	0%	To Remain	\$ -	\$ -
2 - < 8"	4054	Cedar	3.50			3.50	0%	To Remain	\$ -	\$ -
2 - < 8"	4055	Spanish Oak	3.50			3.50	0%	To Remain	\$ -	\$ -
2 - < 8"	4056	Cedar	3.00	2.0		4.00	0%	To Remain	\$ -	\$ -
2 - < 8"	4057	Cedar	6.00	3.5		7.75	0%	To Remain	\$ -	\$ -
2 - < 8"	4058	Cedar	4.50			4.50	50%	Construction Access	\$ 200.00	\$ 450.00
2 - < 8"	4059	Cedar	3.00	1.5		3.75	0%	Construction Access	\$ -	\$ -
8 - < 19"	4060	Spanish Oak	7.00	5.5		9.75	0%	To Remain	\$ -	\$ -
2 - < 8"	4061	Cedar	5.00	3.5		6.75	0%	To Remain	\$ -	\$ -
2 - < 8"	4062	Cedar	4.50			4.50	0%	To Remain	\$ -	\$ -
8 - < 19"	4063	Cedar	8.00	4.0 2.5		11.25	0%	To Remain	\$ -	\$ -
2 - < 8"	4064	Live Oak	6.00			6.00	0%	To Remain	\$ -	\$ -
2 - < 8"	4065	Live Oak	4.50	2.0		4.50	0%	To Remain	\$ -	\$ -
2 - < 8"	4066	Cedar	6.00			6.00	0%	To Remain	\$ -	\$ -
2 - < 8"	4067	Cedar	3.00	2.0 1.5		4.75	0%	To Remain	\$ -	\$ -
2 - < 8"	4068	Cedar	4.50	2.5		5.75	50%	Construction Access	\$ 200.00	\$ 575.00
8 - < 19"	4069	Spanish Oak	8.50			8.50	50%	Construction Access	\$ 200.00	\$ 850.00
2 - < 8"	4070	Cedar	2.50			2.50	0%	To Remain	\$ -	\$ -
8 - < 19"	4071	Cedar	6.50	3.5 3.0 2.0		10.75	0%	To Remain	\$ -	\$ -
2 - < 8"	4072	Cedar	2.00			2.00	0%	To Remain	\$ -	\$ -
2 - < 8"	4073	Cedar	5.50	4.5		7.75	0%	To Remain	\$ -	\$ -
8 - < 19"	4074	Spanish Oak	6.00	5.0		8.50	50%	Construction Access	\$ 200.00	\$ 850.00
2 - < 8"	4075	Cedar	3.00			3.00	0%	Construction Access	\$ -	\$ -
2 - < 8"	4076	Live Oak	2.00			2.00	0%	Construction Access	\$ -	\$ -
2 - < 8"	4077	Live Oak	3.00			3.00	0%	Construction Access	\$ -	\$ -
2 - < 8"	4078	Cedar	3.50			3.50	0%	Construction Access	\$ -	\$ -
2 - < 8"	4079	Cedar	5.00	2.5		6.25	50%	Construction Access	\$ 200.00	\$ 625.00
2 - < 8"	4080	Cedar	2.50	2.0		3.50	0%	Construction Access	\$ -	\$ -
2 - < 8"	4081	Cedar	4.50	4.5		4.75	0%	To Remain	\$ -	\$ -
2 - < 8"	4082	Cedar	4.00	4.0		6.00	50%	Construction Access	\$ 200.00	\$ 600.00
2 - < 8"	4083	Spanish Oak	7.00			7.00	50%	Construction Access	\$ 200.00	\$ 700.00
2 - < 8"	4084	Cedar	3.50			3.50	0%	Construction Access	\$ -	\$ -
8 - < 19"	4085	Spanish Oak	5.50	5.0		8.00	0%	To Remain	\$ -	\$ -
2 - < 8"	4086	Cedar	6.50			6.50	0%	To Remain	\$ -	\$ -
2 - < 8"	4087	Cedar	4.00	3.0		5.50	0%	To Remain	\$ -	\$ -
2 - < 8"	4088	Cedar	4.00			7.25	0%	To Remain	\$ -	\$ -
2 - < 8"	4089	Spanish Oak	6.00	3.5 3.0		6.00	0%	To Remain	\$ -	\$ -
2 - < 8"	4090	Cedar	4.00	3.5		5.75	50%	Construction Access	\$ 200.00	\$ 575.00
2 - < 8"	4091	Spanish Oak	5.50			5.50	50%	Construction Access	\$ 200.00	\$ 550.00
2 - < 8"	4092	Cedar	4.00	2.5		4.75	50%	Construction Access	\$ 200.00	\$ 475.00
2 - < 8"	4093	Cedar	5.00			5.00	50%	Construction Access	\$ 200.00	\$ 500.00
2 - < 8"	4094	Cedar	4.00	3.5		5.75	50%	Construction Access	\$ 200.00	\$ 575.00
2 - < 8"	4095	Cedar	4.50			4.50	50%	Construction Access	\$ 200.00	\$ 450.00

Size Category	TREE TAG	TREE TYPE	SINGLE TRUNK	MULTI-TRUNK	TOTAL CALIPER (INCHES)	REPLACEMENT FACTOR	REPLACEMENT INCHES REQUIRED	REASON FOR REMOVAL/MITIGATION	REPLACEMENT VALUE	MITIGATION VALUE
2 - < 8"	4096	Cedar	3.50			3.50	0%	Construction Access	\$ -	\$ -
2 - < 8"	4097	Cedar	5.50	3.5		7.25	50%	Construction Access	\$ 200.00	\$ 725.00
2 - < 8"	4098	Spanish Oak	3.00			3.00	0%	Construction Access	\$ -	\$ -
2 - < 8"	4099	Cedar	3.50			3.50	0%	Construction Access	\$ -	\$ -
2 - < 8"	4100	Cedar	4.50			4.50	50%	Dam Construction	\$ 200.00	\$ 450.00
2 - < 8"	4101	Cedar	3.00			3.00	0%	Dam Construction	\$ -	\$ -
8 - < 19"	4102	Cedar	8.50			8.50	50%	Dam Construction	\$ 200.00	\$ 850.00
2 - < 8"	4103	Cedar	3.00			3.00	0%	Dam Construction	\$ -	\$ -
8 - < 19"	4104	Spanish Oak	6.00	5.0		8.50	50%	Dam Construction	\$ 200.00	\$ 850.00
2 - < 8"	4105	Cedar	2.00			2.00	0%	Dam Construction	\$ -	\$ -
2 - < 8"	4106	Cedar	4.00	2.0		5.00	50%	Dam Construction	\$ 200.00	\$ 500.00
2 - < 8"	4107	Cedar	5.00			5.00	50%	Construction Access	\$ 200.00	\$ 500.00
2 - < 8"	4108	Cedar	6.50			6.50	50%	Construction Access	\$ 200.00	\$ 650.00
2 - < 8"	4109	Cedar	2.50			2.50	0%	Construction Access	\$ -	\$ -
8 - < 19"	4110	Spanish Oak	7.00	5.5		9.75	0%	To Remain	\$ -	\$ -
2 - < 8"	4111	Cedar	3.00			3.00	0%	To Remain	\$ -	\$ -
2 - < 8"	4112	Spanish Oak	5.50			5.50	0%	To Remain	\$ -	\$ -
2 - < 8"	4113	Cedar	4.50			4.50	0%	To Remain	\$ -	\$ -
2 - < 8"	4114	Cedar	4.00	3.0 2.5		6.75	0%	To Remain	\$ -	\$ -
2 - < 8"	4115	Spanish Oak	5.50			5.50	0%	To Remain	\$ -	\$ -
2 - < 8"	4116	Cedar	5.00			5.00	50%	Construction Access	\$ 200.00	\$ 500.00
2 - < 8"	4117	Cedar	3.50	3.5 2.0		6.25	50%	Construction Access	\$ 200.00	\$ 625.00
2 - < 8"	4118	Cedar	5.00	3.0 2.5		7.75	50%	Construction Access	\$ 200.00	\$ 775.00
2 - < 8"	4119	Cedar	5.00	3.5		6.75	50%	Dam Construction	\$ 200.00	\$ 675.00
2 - < 8"	4120	Cedar	5.00			5.00	50%	Construction Access	\$ 200.00	\$ 500.00
2 - < 8"	4121	Cedar	4.50			4.50	50%	Construction Access	\$ 200.00	\$ 450.00
2 - < 8"	4122	Cedar	3.50			3.50	0%	Construction Access	\$ -	\$ -
2 - < 8"	4123	Cedar	3.50			3.50	0%	Construction Access	\$ -	\$ -
2 - < 8"	4124	Cedar	3.50			3.50	0%	Construction Access	\$ -	\$ -
8 - < 19"	4125	Spanish Oak	4.50	4.0 3.5 3.0		9.75	0%	To Remain	\$ -	\$ -
2 - < 8"	4126	Cedar	4.50			4.50	0%	To Remain	\$ -	\$ -
2 - < 8"	4127	Cedar	3.50	3.5		5.25	0%	To Remain	\$ -	\$ -
2 - < 8"	4128	Cedar	3.50			3.50	0%	To Remain	\$ -	\$ -
2 - < 8"	4129	Cedar	3.00			3.00	0%	Construction Access	\$ -	\$ -
8 - < 19"	4130	Spanish Oak	8.00			8.00	50%	Construction Access	\$ 200.00	\$ 800.00
2 - < 8"	4131	Cedar	4.00			4.00	50%	Construction Access	\$ 200.00	\$ 400.00
2 - < 8"	4132	Cedar	3.00	2.5		4.25	50%	Construction Access	\$ 200.00	\$ 425.00
2 - < 8"	4133	Spanish Oak	4.50			4.50	50%	Construction Access	\$ 200.00	\$ 450.00
2 - < 8"	4134	Cedar	4.50	2.0		5.50	50%	Construction Access	\$ 200.00	\$ 550.00
2 - < 8"	4135	Live Oak	7.00			7.00	0%	To Remain	\$ -	\$ -
2 - < 8"	4136	Cedar	5.00			5.00	0%	To Remain	\$ -	\$ -
8 - < 19"	4137	Cedar	5.50	5.5 3.5		10.00	0%	To Remain	\$ -	\$ -
2 - < 8"	4138	Cedar	3.50			3.50	0%	To Remain	\$ -	\$ -
2 - < 8"	4139	Cedar	2.50			2.50	0%	Construction Access	\$ -	\$ -
2 - < 8"	4140	Cedar	2.50			2.50	0%	Construction Access	\$ -	\$ -
2 - < 8"	4141	Cedar	4.00	3.5		5.75	50%	Construction Access	\$ 200.00	\$ 575.00
2 - < 8"	4142	Cedar	4.00			4.00	50%	Construction Access	\$ 200.00	\$ 400.00
2 - < 8"	4143	Cedar	3.00	3.0		4.50	50%	Construction Access	\$ 200.00	\$ 450.00
2 - < 8"	4144	Cedar	5.00			5.00	50%	Construction Access	\$ 200.00	\$ 500.00
8 - < 19"	4145	Spanish Oak	6.50	4.5		8.75	50%	Construction Access	\$ 200.00	\$ 875.00
2 - < 8"	4146	Spanish Oak	5.00			5.00	50%	Construction Access	\$ 200.00	\$ 500.00
2 - < 8"	4147	Cedar	6.00	3.0		7.50	50%	Construction Access	\$ 200.00	\$ 750.00
2 - < 8"	4148	Cedar	3.50			3.50	0%	Construction Access	\$ -	\$ -
2 - < 8"	4149	Spanish Oak	7.50			7.50	50%	Construction Access	\$ 200.00	\$ 750.00
2 - < 8"	4150	Cedar	3.50			3.50	0%	Construction Access	\$ -	\$ -
2 - < 8"	4151	Cedar	3.00	2.0		4.00	50%	Construction Access	\$ 200.00	\$ 400.00
2 - < 8"	4152	Spanish Oak	5.00			5.00	50%	Construction Access	\$ 200.00	\$ 500.00

MCGRAY CONDUCTED THE SURVEY IN DECEMBER 2018.

Size Category	TREE TAG	TREE TYPE	SINGLE TRUNK	MULTI-TRUNK	TOTAL CALIPER (INCHES)	REPLACEMENT FACTOR	REPLACEMENT INCHES REQUIRED	REASON FOR REMOVAL/MITIGATION	REPLACEMENT VALUE	MITIGATION VALUE
2 - < 8"	4153	Cedar	5.00			5.00	50%	Construction Access	\$ 200.00	\$ 500.00
2 - < 8"	4154	Cedar	2.50			2.50	0%	Construction Access	\$ -	\$ -
2 - < 8"	4155	Cedar	2.00			2.00	0%	Construction Access	\$ -	\$ -
8 - < 19"	4156	Live Oak	9.00			9.00	50%	Construction Access	\$ 200.00	\$ 900.00
2 - < 8"	4157	Cedar Elm	7.00			7.00	50%	Construction Access	\$ 200.00	\$ 700.00
8 - < 19"	4158	Spanish Oak	10.25			10.25	0%	To Remain	\$ -	\$ -
8 - < 19"	5X3X3	Cedar	8.00			8.00	0%	To Remain	\$ -	\$ -
8 - < 19"	6X4	Cedar	8.00			8.00	0%	To Remain	\$ -	\$ -
TOTAL REPLACEMENT INCHES						3,528.19			TOTAL MITIGATION VALUE \$ 705,637.50	
TOTAL INCHES REMOVED						8,107.63				

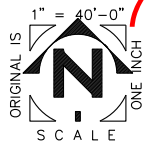


CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT
BULL CREEK
OLD LAMPASAS #3 DAM MODERNIZATION
TREE MITIGATION AND REPLACEMENT

10 OF 10

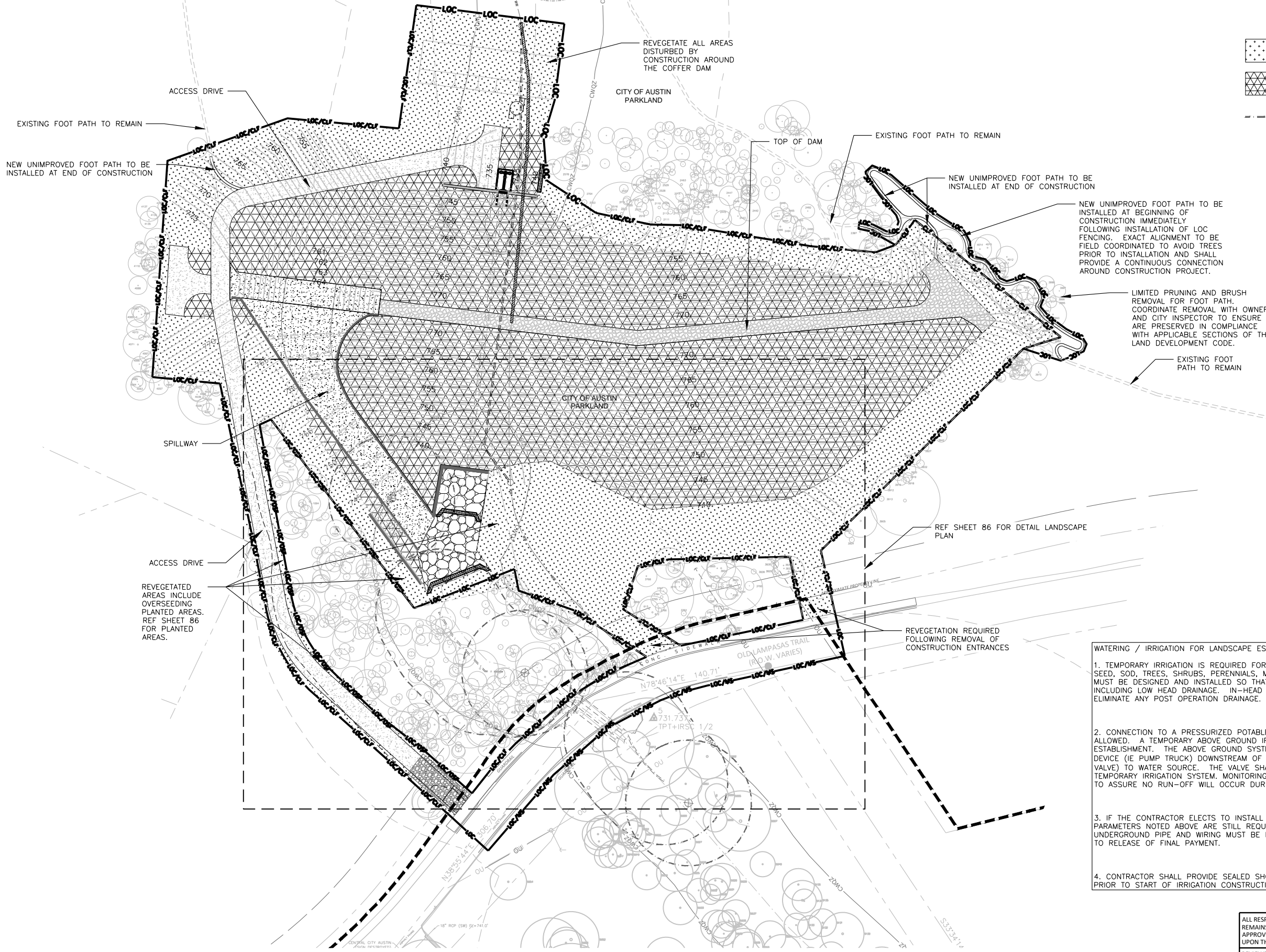
NO.	REVISION
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ATTACHMENT 11 REVEGETATION PLAN



CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT
BULL CREEK
OLD LAMPASAS #3 DAM MODERNIZATION
REVEGETATION PLAN

PROJECT NO.	AU311230
DATE	6/13/2023
DESIGNED	
DRAWN	
REVIEWED	
CHECKED	
FILE NAME	LP-101.dwg



- REVEGETATE ALL AREAS DISTURBED BY CONSTRUCTION USING CITY OF AUSTIN STANDARD SPECIFICATION 609S.
- SOLID SOD AND OVERSEED IN DAM CONSTRUCTION AREA
- 50' CEF BUFFER

WATERING / IRRIGATION FOR LANDSCAPE ESTABLISHMENT

1. TEMPORARY IRRIGATION IS REQUIRED FOR THE PROJECT FOR THE ESTABLISHMENT OF SEED, SOD, TREES, SHRUBS, PERENNIALS, MITIGATION PLANTINGS ETC. THE SYSTEM MUST BE DESIGNED AND INSTALLED SO THAT THERE IS NO POTABLE WATER RUNOFF, INCLUDING LOW HEAD DRAINAGE. IN-HEAD CHECK VALVES MUST BE INSTALLED TO ELIMINATE ANY POST OPERATION DRAINAGE.

2. CONNECTION TO A PRESSURIZED POTABLE SYSTEM WITH AUTOMATIC CONTROLS IS NOT ALLOWED. A TEMPORARY ABOVE GROUND IRRIGATION SYSTEM IS PROPOSED FOR ESTABLISHMENT. THE ABOVE GROUND SYSTEM SHALL BE PRESSURIZED WITH A MOBILE DEVICE (IE PUMP TRUCK) DOWNSTREAM OF A MANUALLY OPERATED CONNECTION (IE GATE VALVE) TO WATER SOURCE. THE VALVE SHALL NOT BE DIRECTLY CONNECTED TO THE TEMPORARY IRRIGATION SYSTEM. MONITORING OF THE SYSTEM SHALL BE DONE IN PERSON TO ASSURE NO RUN-OFF WILL OCCUR DURING THE OPERATION OF THE SYSTEM.

3. IF THE CONTRACTOR ELECTS TO INSTALL THE TEMPORARY SYSTEM BELOW GRADE THE PARAMETERS NOTED ABOVE ARE STILL REQUIRED. ALL IRRIGATION EQUIPMENT, INCLUDING UNDERGROUND PIPE AND WIRING MUST BE REMOVED AFTER ESTABLISHMENT AND PRIOR TO RELEASE OF FINAL PAYMENT.

4. CONTRACTOR SHALL PROVIDE SEALED SHOP DRAWING FOR REVIEW AND APPROVAL PRIOR TO START OF IRRIGATION CONSTRUCTION.

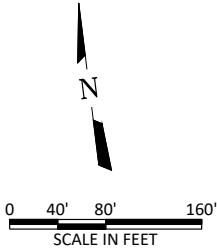
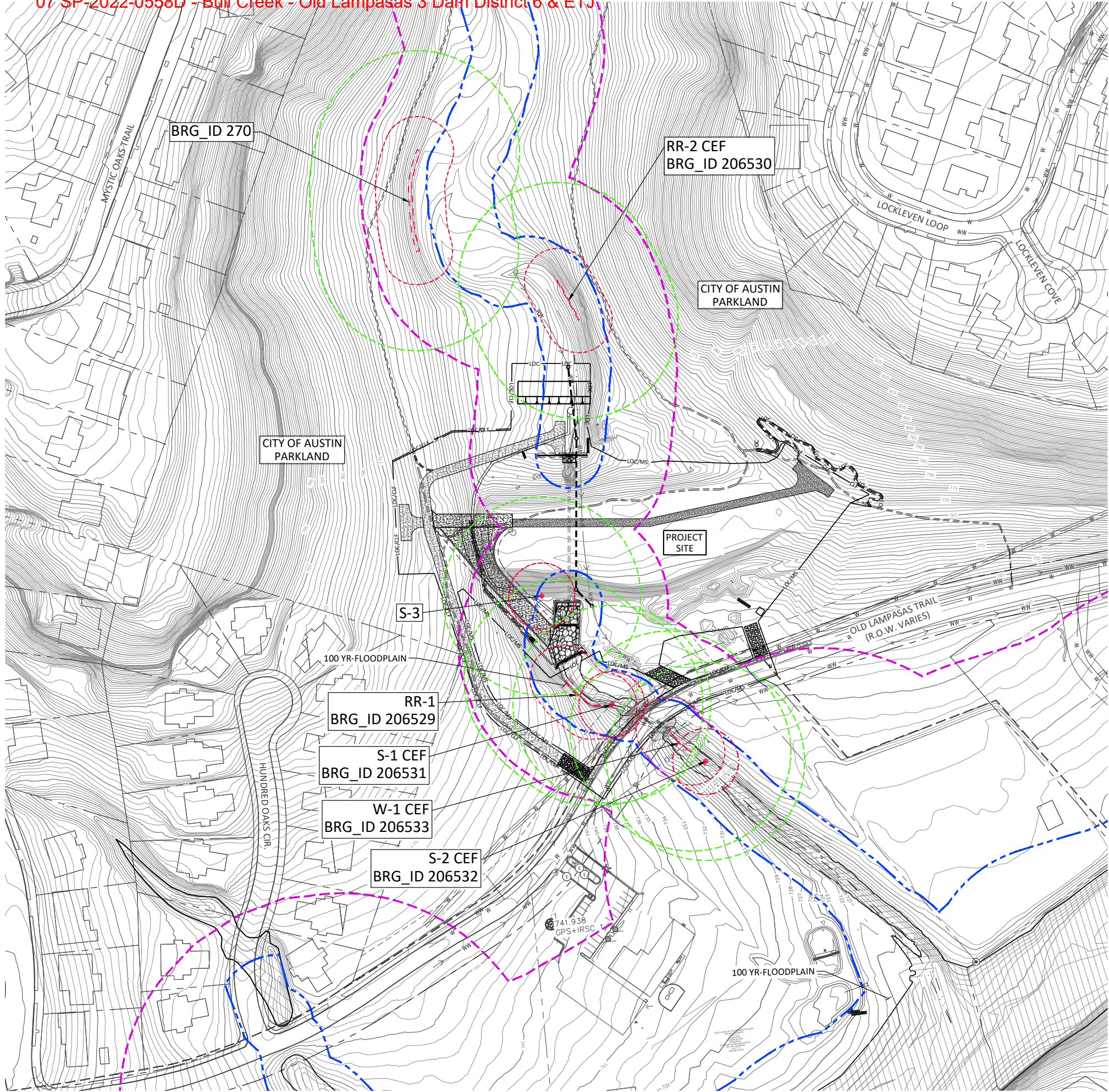
100% SUBMITTAL

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN APPROVING THESE PLANS, THE CITY OF AUSTIN MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

REVIEWED BY:
FOR DIRECTOR OF THE DEVELOPMENT SERVICES DEPARTMENT
DATE

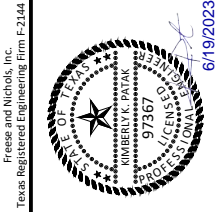
ATTACHMENT 12

ENVIRONMENTAL CONSTRAINTS MAP



LEGEND:

- CEF (CRITICAL ENVIRONMENTAL FEATURE) CENTER MARK
- CEF (CRITICAL ENVIRONMENTAL FEATURE) 50' SETBACK
- CEF (CRITICAL ENVIRONMENTAL FEATURE) 150' SETBACK
- PROPOSED ULTIMATE FLOODPLAIN 50' SETBACK
- PROPOSED ULTIMATE FLOODPLAIN 150' SETBACK
- CWQZ (CRITICAL WATER QUALITY ZONE)
- WQTZ (WATER QUALITY TRANSITION ZONE)
- CREEK CENTERLINE
- LIMITS OF CONSTRUCTION/ORANGE SAFETY FENCE
- LIMITS OF CONSTRUCTION
- LIMITS OF CONSTRUCTION/SILT FENCE
- LIMITS OF CONSTRUCTION/CHAIN LINK FENCE
- LIMITS OF CONSTRUCTION/MULCH SOCK
- MULCH SOCK
- PROPERTY LINE
- CITY LIMITS
- 100-YR PROPOSED CONDITION ULTIMATE LAND USE FLOODPLAIN
- EXISTING TRAIL



FREESSE AND NICHOLS
10431 Morado Circle, Suite 300
Austin, Texas 78759
Phone - (512) 617-3100
Fax - (512) 617-3101
Web - www.freese.com

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT
**BULL CREEK
OLD LAMPASAS #3 DAM MODERNIZATION**
ENVIRONMENTAL CONSTRAINTS MAP

NO.	REVISION	BY	DATE	FILE NAME
0				WR-AU-PL-ENVR.dwg
1				

VERIFIED SCALE: 1" = 100'

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN APPROVING THESE PLANS, THE CITY OF AUSTIN MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

REVIEWED BY: _____
DIRECTOR, DEVELOPMENT SERVICES DEPARTMENT
DATE: _____

100% SUBMITTAL

**ATTACHMENT 13
ENVIRONMENTAL RESOURCES
INVENTORY WAIVER**

**Baer Engineering
and Environmental Consulting, Inc.**

T.B.P.E. Firm Registration No. F-3181 T.B.P.G. Firm Registration No. 50030A

January 9, 2023

Watershed Protection Department
505 Barton Springs Road
Austin, Texas 78704

Sent via email to Andrew.Clamann@austintexas.gov

Attention: Mr. Andrew Clamann

Reference: Addendum – Environmental Resources Inventory Waiver
Rehabilitation for Old Lampasas #3 Dam on Tributary to Bull Creek
Austin, Texas
Baer Engineering Document No. 112009-8b.020

Dear Mr. Clamann:

Baer Engineering and Environmental Consulting, Inc. is assisting Freese and Nichols, Inc. (FNI) with the Environmental Resources Inventory (ERI) Waiver process for the above-referenced City of Austin (COA) project.

INTRODUCTION

We previously prepared an ERI Waiver Request in June 2019, which was accepted during COA review of the project.

The Old Lampasas #3 Dam (Dam) is located approximately 0.25 miles west of the intersection of Old Lampasas Trail and Spicewood Springs Road. The Dam is situated on Tributary 4A to Bull Creek. Several critical environmental features (CEFs), the 100-year floodplain of Bull Creek, a critical water quality zone (CWQZ), and a water quality transition zone (WQTZ) have been identified in the area. These features are previously discussed in the ERI Waiver Request.

UPDATED PROJECT AREA

An additional area has been added to the project to be used for temporary construction staging. This area is on the property of Grace Church of the Nazarene (known as Central City Austin) at 9023 Old Lampasas Trail, Austin, TX 78750 (**Figure 1**). It is located south of, and on the opposite side of, Old Lampasas Trail from the Dam.

The new staging area avoids the CWQZ of Tributary 4A, the 100-year floodplain of Bull Creek, and the identified CEFs. The area is almost entirely within the WQTZ of Tributary 4A and overlaps with the 150-foot buffer areas around wetland W-1 (brg_ID 206533) and seep S-2 (brg_ID 203532).

The staging area will be temporarily disturbed by construction activity. Existing trees will be avoided and protected. No excavation or other significant ground disturbance will take place. Disturbances will be limited to those associated vehicle traffic and material storage. Tributary 4A will be protected

Baer Engineering and Environmental Consulting, Inc.

7756 Northcross Drive, Suite 211  Austin, Texas, U.S.A. 78757

Telephone: (512) 453-3733  www.BaerEng.com  Fax: (512) 453-3316

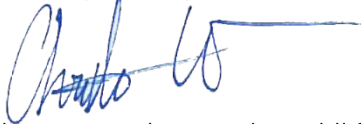
from runoff using previously-described erosion and sedimentation controls and will be revegetated with native seeding in accordance with COA Standard Specifications 604S.

We request this information to be included and reviewed with the ERI Waiver for the project.

If you have questions about this addendum, please email me at cwarkoczewski@baereng.com or call me at our office at 512.453.3733.

Respectfully submitted,

Baer Engineering and Environmental Consulting, Inc.



Christen Warkoczewski, Wildlife Biologist

Attachments: Figure 1 – Church Site TCE

The ERI waiver addendum requested for the above referenced project has been:

☐ Denied ☒ Approved

Comments:

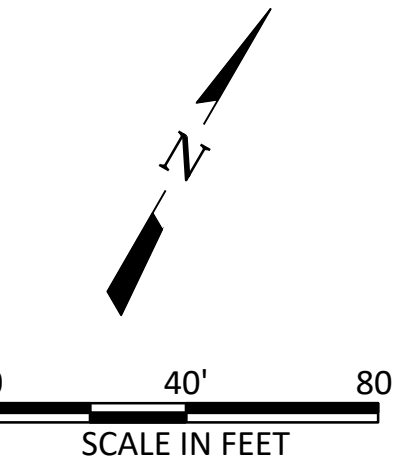
All CEFs on/adjacent to additional staging area known. Restoration/mitigation will be required in accompanying site plan review.



ERM Reviewer (Print Name)
Eric Brown 2/17/2023

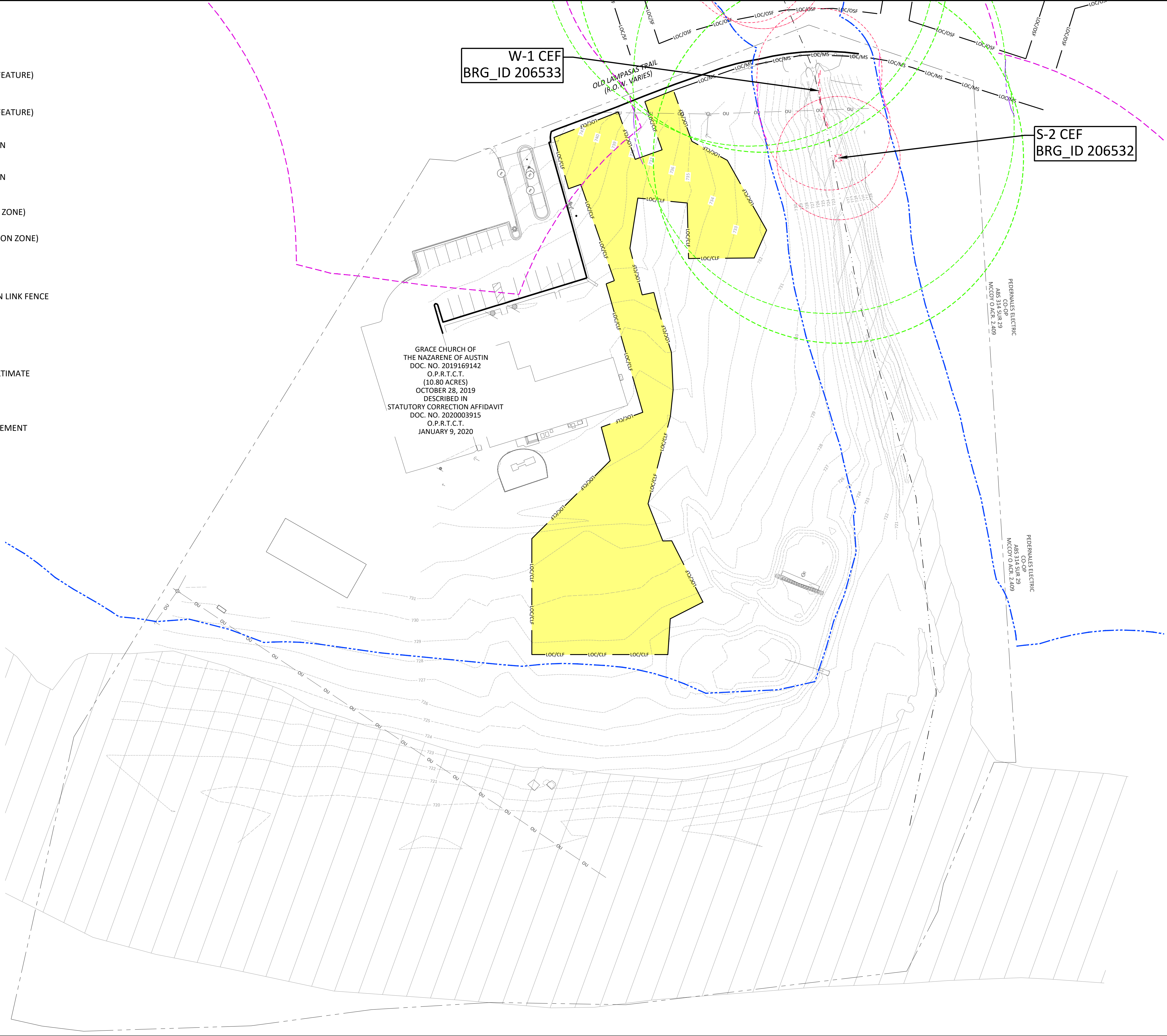
LEGEND:

- CEF (CRITICAL ENVIRONMENTAL FEATURE)
50' SETBACK
- CEF (CRITICAL ENVIRONMENTAL FEATURE)
150' SETBACK
- PROPOSED ULTIMATE FLOODPLAIN
50' SETBACK
- PROPOSED ULTIMATE FLOODPLAIN
150' SETBACK
- CWQZ (CRITICAL WATER QUALITY ZONE)
- WQTZ (WATER QUALITY TRANSITION ZONE)
- CREEK CENTERLINE
- LIMITS OF CONSTRUCTION/CHAIN LINK FENCE
- LIMITS OF CONSTRUCTION
- PROPERTY LINE
- 100-YR PROPOSED CONDITION ULTIMATE
LAND USE FLOODPALIN
- TEMPORARY CONSTRUCTION EASEMENT



DRAFT

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF: KIMBERLY K. PATAK P.E. TEXAS NO: 97367 ON DATE: 11/2/2022 IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT PURPOSES.



Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

AU311230

NOV 2022

AS SHOWN

DESIGNED

DRAFTED

NO

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT

BULL CREEK

OLD LAMPASAS #3 DAM MODERNIZATION

CHURCH SITE TCE

ENVIRONMENTAL CONSTRAINTS MAP

FRESE & NICHOLS

10431 Morado Circle, Suite 300
Austin, Texas 78759
Phone - (512) 617-3100
Web - www.freese.com

1

FIGURE

ACAD Rel: 24.2s (LMS Tech)
Filename: N:\wr\Survey\Site visit\Church Site TCE.dwg
Last Saved: 11/3/2022 10:47 AM Saved By: no

Plot Date: 11/8/2022 12:03 PM Plot By: no Filename: N:\wr\Survey\Site visit\Church Site TCE.dwg



March 14, 2019

Watershed Protection Department
505 Barton Springs Road
Austin, Texas 78704

Sent via email to Andrew.Clamann@austintexas.gov

Attention: Mr. Andrew Clamann

Reference: Environmental Resources Inventory Waiver Request
Rehabilitation for Old Lampasas #3 Dam on Tributary to Bull Creek
Austin, Texas
Baer Engineering Document No. 112009-8b.021

Dear Mr. Clamann:

Baer Engineering and Environmental Consulting, Inc. is assisting Freese and Nichols, Inc. (FNI) with the Environmental Resources Inventory (ERI) waiver process for the above-referenced City of Austin (COA) project. The Old Lampasas #3 Dam (Site) will be rehabilitated to meet COA and Texas Commission on Environmental Quality (TCEQ) dam safety regulations and improve water quality. The Dam is located approximately 0.25 miles west of the intersection of Old Lampasas Trail and Spicewood Springs Road. The Dam is situated on a tributary to Bull Creek outside the COA-defined Edwards Aquifer Recharge Zone but within the 1,500-foot verification zone.

Existing Dam Conditions and Proposed Improvements

The Dam was built in the early-1980s using construction spoils from the neighborhood development, including boulders and fill material. Trees now cover the dam and there are large voids where the soil has eroded between the fill and boulders. The Dam has been damaged by past floods and is a safety hazard.

Baer Engineering conducted field surveys for this site on July 15, 2011, and October 26, 2018. Conditions at the site (as of the most recent field survey) are as follows:

-) The unnamed tributary to Bull Creek was flowing both upstream and downstream of the Dam, forming an approximately 12-foot wide pool upstream of the Dam. The upstream creekbed comprised alluvial soil transitioning to cobble and sand closer to the Dam. Bedrock was exposed downstream of the Dam.
-) The Dam was heavily vegetated in areas where soil was retained but much of the Dam slope was exposed limestone boulders with obvious voids.
-) The concrete inlet headwall is distantly separated from the Dam and the principal spillway CMP culvert appeared completely collapsed;
-) Water was flowing through the Dam structure in several areas, comprising the majority of downstream flow;
-) Five Critical Environmental Features (CEF) were observed within 150 feet of the proposed Limits of Construction – one spring, one seep, two rimrocks, and one wetland. The CEFs are outside the proposed Limits of Construction and no direct impacts to the CEFs are being planned. The CEFs are shown on Figure 4.

Freese and Nichols is designing a plan for Dam Rehabilitation. The proposed work includes but may not be limited to:

-) Regrading of Dam slopes to three-to-one earthen slope;
-) Replacement of 60-inch corrugated metal spillway pipe with 42-inch reinforced concrete pipe;
-) Replacement of existing intake headwall with detention riser pipe and low flow port;
-) Removal of woody vegetation on the Dam; and
-) Maintaining the geometry of the plunge pool at the culvert outfall and armoring it with boulders.

As per the 60% Erosion and Sedimentation Control Plan and the Tree Protection Plan, tree protection, mulch socks, and severe service rock berms will be installed during construction to minimize erosion and sedimentation. The Care of Water Plan shows that a cofferdam will be installed to route storm events up to a 2-year storm around the site to reduce the potential for construction spoils downstream. The Revegetation Plan shows that, at the completion of the project, the site will be restored with native seeding per COA Standard Specifications 604S Table 4 and sodding with buffalo grass and blue grama on the dam embankment.

Previous Coordination with COA Watershed Protection

In 2011, you and Sylvia Pope conducted a field visit to the Dam site. After your site visit, you suggested that a "waiver to the requirement for an Environmental Assessment can be provided as per LDC 25-8-121 and ECM 1.3.0(A)(7)." A printed copy of that correspondence is attached.

Justifications for Supporting the ERI Waiver Request

An ERI Waiver Request Form and figures are included as an attachment to this letter. We believe that the project qualifies for an ERI waiver based on the following:

-) The Site has no significant undisturbed natural areas;
-) The project is not expected to directly impact the observed CEFs;
-) Tree Protection and Erosion and Sedimentation Control Plans will be implemented; and
-) Previous assessment in 2011 by you and Sylvia Pope concluded that the requirement for an ERI (previously referred to as an Environmental Assessment [EA]) could be waived.

If you have questions about this request or require additional information, please call me at 512.453.3733.

Respectfully submitted,
Baer Engineering and Environmental Consulting, Inc.



Jennifer Lueckemeyer, CPESC
Senior Project Manager

Attachment: ERI Waiver Form and Maps
COA Correspondence – EA Waiver

Environmental Resource Inventory Waiver Request Form

For the City of Austin
Related to LDC 25-8-121(D) or City Code 30-5-121(D)

GENERAL SITE INFORMATION:

1. SITE/PROJECT NAME: Old Lampasas #3 Dam Modernization
2. COUNTY APPRAISAL DISTRICT PROPERTY ID (#'s): 164673, 164674
3. ADDRESS/LOCATION OF PROJECT: 9022 Old Lampasas Trail, Austin, TX 78750
4. WATERSHED: Bull Creek

5. THIS SITE IS WITHIN THE *(Check all that apply)*

Edwards Aquifer Recharge Zone* *(See note below)* ☐ YES ☒ No

Edwards Aquifer Contributing Zone* ☐ YES ☒ No

Barton Spring Zone* ☐ YES ☒ No

**(as defined by the City of Austin – LDC 25-8-2 or City Code 30-5-2)*

6. DOES THIS PROJECT PROPOSE FLOODPLAIN MODIFICATION?..... ☒ YES** ☐ NO
IF YES, THEN DO ANY OF THE FOLLOWING CONDITIONS APPLY? *(check all that apply):*

- ☒ (1) The floodplain modifications proposed are necessary to protect the public health and safety;
- ☐ (2) The floodplain modifications proposed would provide a significant, demonstrable environmental benefit, as determined by a **functional assessment** of floodplain health as prescribed by the Environmental Criteria Manual (ECM), or
- ☐ (3) The floodplain modifications proposed are necessary for development allowed in the critical water quality zone under LDC 25-8-261 or 25-8-262, City Code 30-5-261 or 30-5-262.
- ☐ (4) The floodplain modifications proposed are outside of the Critical Water Quality Zone in an area determined to be in poor or fair condition by a **functional assessment** of floodplain health.

**** If yes, then a Functional Assessment must be completed and attached to the ERI (see ECM 1.7 and Appendix X in the Environmental Criteria Manual for forms and guidance) unless conditions 1 or 3 above apply.**

7. DOES THIS PROJECT PROPOSE AN UTILITY LINE PARALLEL TO AND WITHIN THE
CRITICAL WATER QUALITY ZONE? ☐ YES*** ☒ NO

*****If yes, then riparian restoration is required by LDC 25-8-261(E) and a Functional Assessment must be completed and attached to the ERI (see ECM 1.5 and Appendix X in the Environmental Criteria Manual for forms and guidance).**

REQUIRED INFORMATION FOR WAIVER REQUEST:

Pursuant to LDC 25-8-121(D) or City Code 30-5-121(D), the Director of the Watershed Protection Department (WPD) may permit an applicant to exclude information that is required in ERI report if the Director determines that the information is unnecessary because of the scope or nature of the proposed development. Please provide the requested information below to WPD for review. **Please be advised. If granted, this waiver may be rescinded in the future. If new information is discovered during the review process that requires that an ERI be completed for this site.**

1. X **A NARRATIVE DESCRIPTION** of current site conditions and justifications to support the granting of the waiver request are attached at the end of this form.

2. .X The following **MAPS** of the site are attached:

(Map Information available at <http://www.austintexas.gov/GIS/DevelopmentWebMap/Viewer.aspx>)

- ☒ Site Location Map
- ☒ Historic Aerial Photo at least 15 years old
- ☒ Current Aerial Photo
- ☒ Topographic Map with a 2 feet contour interval

To the best of my knowledge, the responses to this form accurately and thoroughly reflect all information requested.

Jennifer Lueckemeyer

Print Name



Signature

512.453.3733

Telephone

JLueckemeyer@baereng.com

Email Address

Baer Engineering and Environmental Consulting, Inc

Name of Company

7/26/2019

Date

WATERSHED PROTECTION DEPARTMENT USE ONLY.

The waiver requested from LDC 25-8-121(D) of City Code 30-5-121(D) for the above reference project has been:

☐ Denied ☒ Approved ☐ Rescinded ☐ Approved with TCEQ Geologic Assessment

Reasoning for denial:

- ☐ Formal and/or administrative variances are required for this proposed development.
- ☐ Critical Environmental Features are present on or within 150 feet of site boundaries.
- ☐ The information provided is incomplete (see comments below).
- ☐ Denied, but the following sections can be omitted (see comments below).
- ☐ Other Comments:

Reasoning for Approval (This form must be included with submittal materials and referenced in your Engineer's Report and/or Summary):

- ☐ No Critical Environmental Features are present on or within 150 feet of the site boundaries.
- ☐ The site has existing impervious cover and no significant undisturbed natural areas.
- ☐ No floodplains, slopes >15%, CWQZs, WQTZs, wetlands, and the Edwards Aquifer contributing zone are present on site and TCEQ Geologic Assessment has been completed and will be submitted *(Only for sites within the Edwards Aquifer)*.

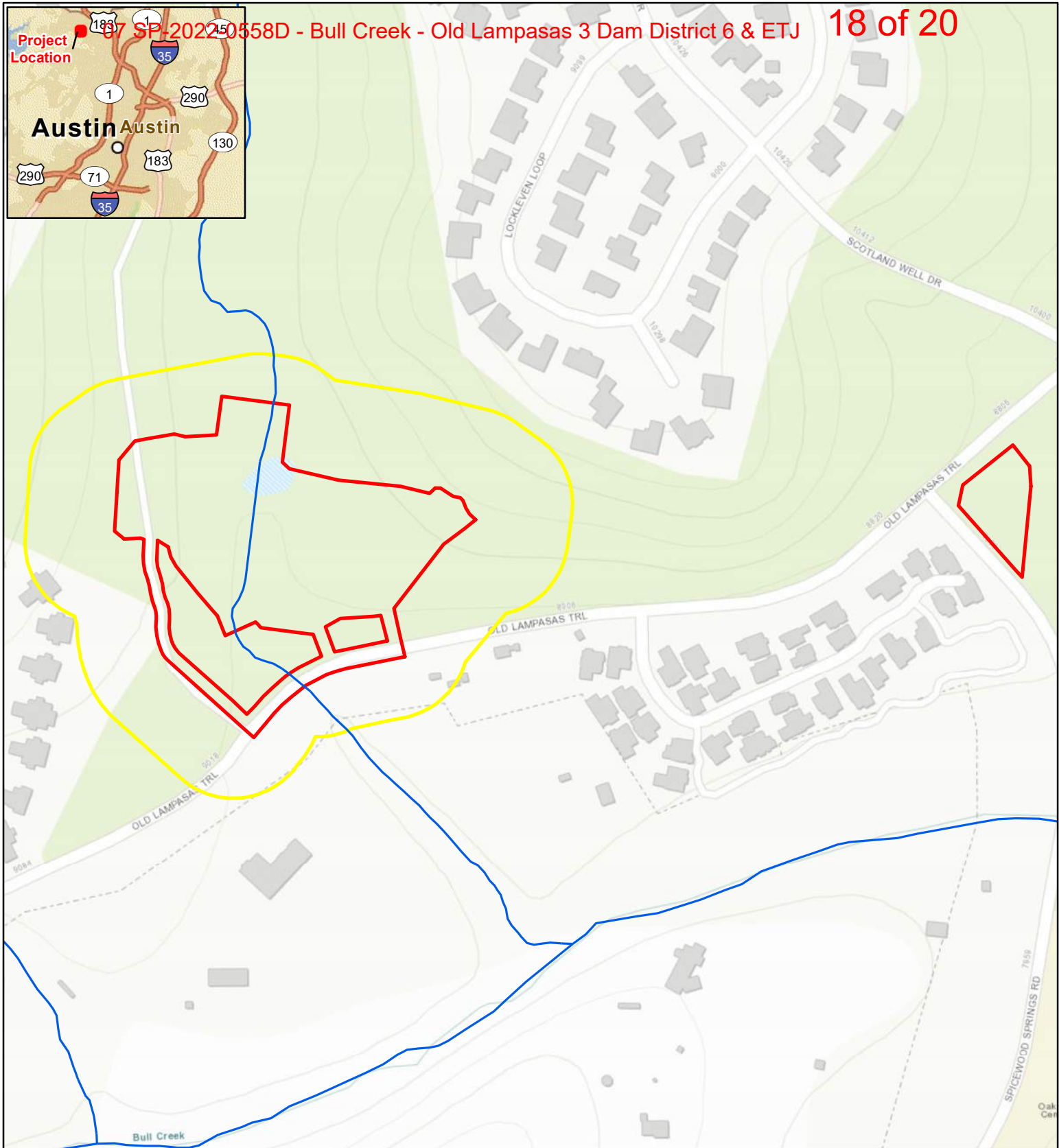
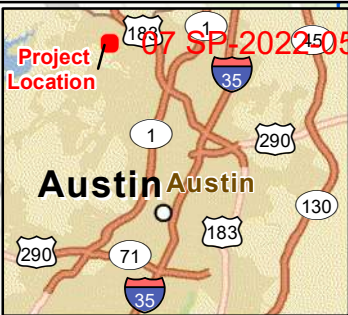
☒ Other: AIL CERs w/100-ft ore

Comments: already identified and shown on public viewer.

9/17/19

ERM Reviewer (Print Name)

If you have questions on how to fill out this form, please contact the Watershed Protection Department at 512/974-2550.



Feet

0 150 300

Baer Project No. 112009.02
Date: March 14, 2019

TBPE Firm No. F-3181 TBPG Firm No. 50030
Base Map: World Topographic Map

Figure 1
Site Location

Old Lampasas #3 Dam
Rehabilitation for Dam on
Tributary to Bull Creek



Baer Engineering
and Environmental Consulting, Inc.



Figure 2
1996 Historic
Aerial Photograph

Old Lampasas #3 Dam
Rehabilitation for Dam on
Tributary to Bull Creek



Baer Engineering
and Environmental Consulting, Inc.



Feet

0 150 300

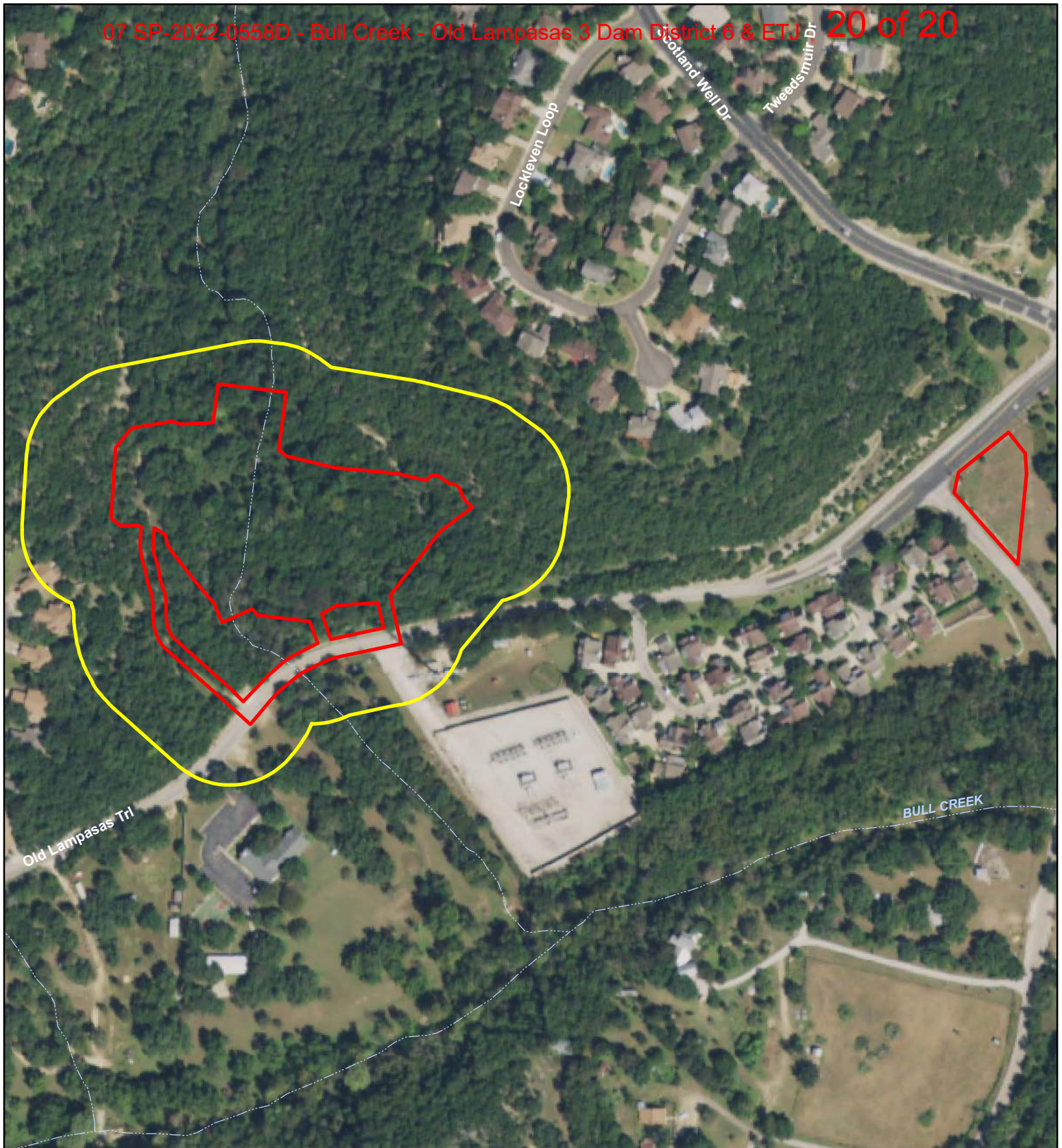
Baer Project No. 112009.02
Date: March 14, 2019

TBPE Firm No. F-3181 TBPG Firm No. 50030

Base Map: Jollyville SE Quarter Quad

— Proposed Limits of Construction

— Assessment Area (150-ft)



Feet

0 150 300

Baer Project No. 112009.02
Date: March 14, 2019

TBPE Firm No. F-3181 TBPG Firm No. 50030

Base Map: NAIP Aerial Imagery, 2016

Figure 3
Current Aerial Photograph

Old Lampasas #3 Dam
Rehabilitation for Dam on
Tributary to Bull Creek



Baer Engineering
and Environmental Consulting, Inc.