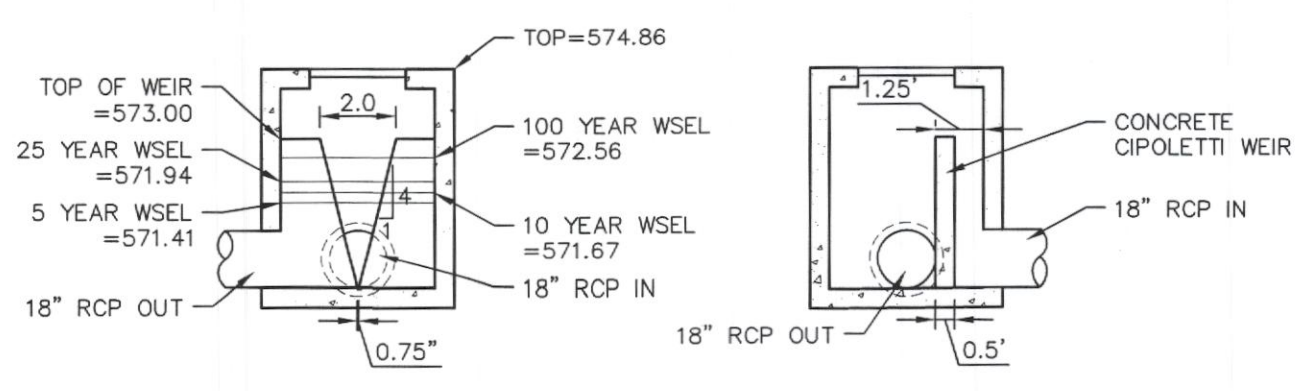
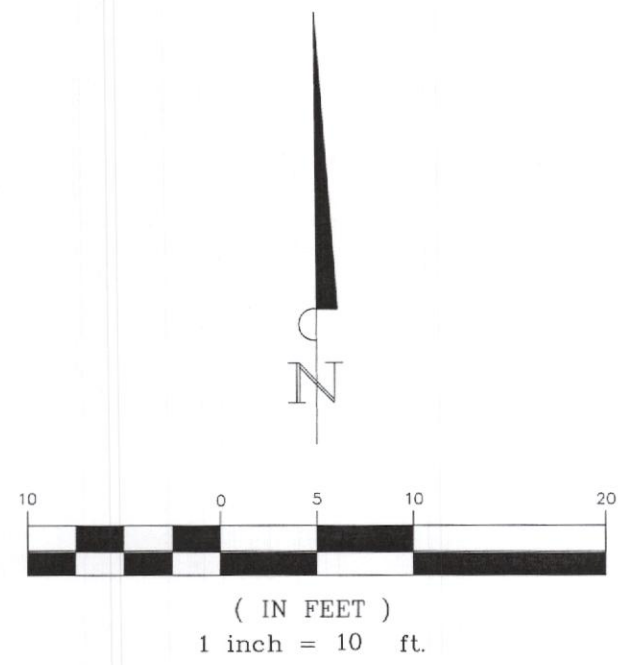


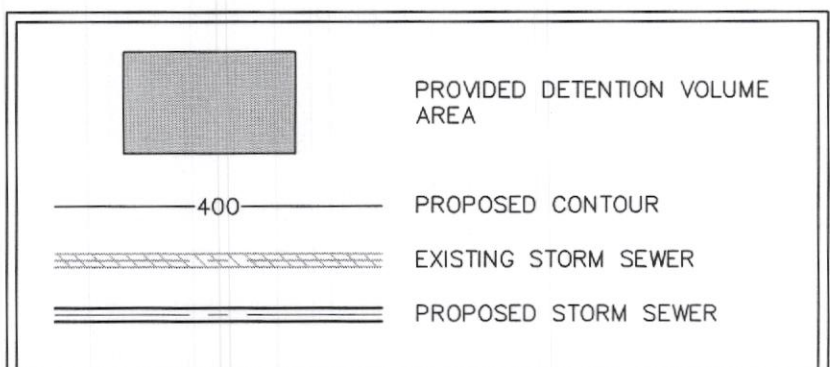
**UNDERGROUND DETENTION**  
 1" = 10'



**JUNCTION BOX / WEIR**  
 1" = 5'



**LEGEND**



**NOTES**

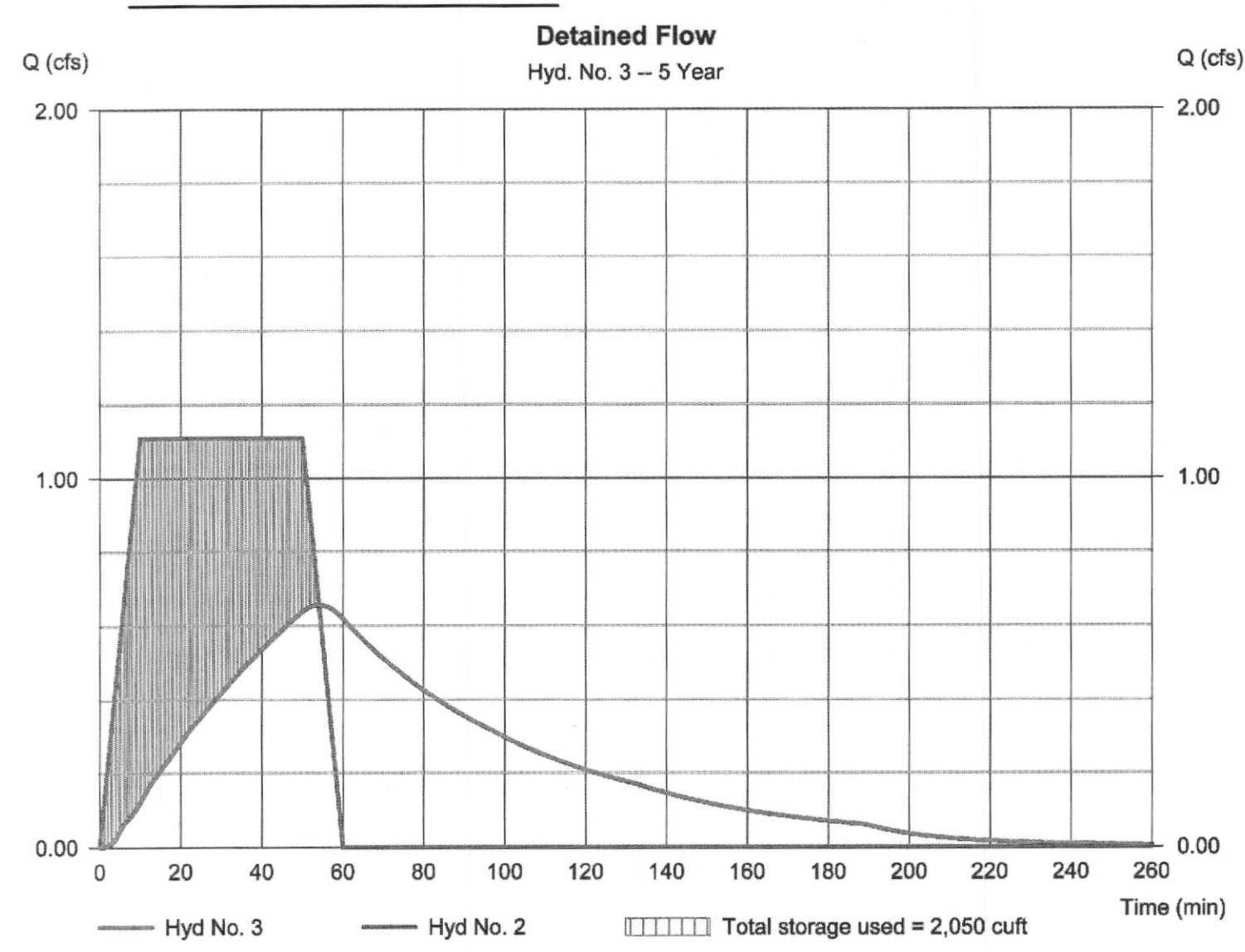
- REFER TO SHEET C-1.1 FOR ADDITIONAL NOTES.
- CONTRACTOR TO VERIFY THE EXISTENCE, LOCATION AND DEPTHS OF ALL EXISTING UTILITIES WITHIN THE PROJECT WORK AREA BEFORE COMMENCING CONSTRUCTION.
- ALL UTILITIES SHALL BE CONSTRUCTED BEGINNING AT THE TIE-IN LOCATION TO EXISTING UTILITIES (DOWNSTREAM) AND PROCEED TO PROPOSED STRUCTURES (UPSTREAM).
- VERIFY ALL DIMENSIONS SHOWN ON THIS PLAN WITH ARCHITECTURAL PLANS BEFORE COMMENCING CONSTRUCTION.
- ALL RESPONSIBILITY FOR ADEQUACY OF DESIGN REMAINS WITH THE DESIGN ENGINEER. THE CITY OF ROCKWALL, IN REVIEWING AND RELEASING PLANS FOR CONSTRUCTION, ASSUMES NO RESPONSIBILITY FOR ADEQUACY OF ACCURACY OR DESIGN.

**NOTES TO CONTRACTOR**

- INFORMATION ON THIS SHEET AND OTHER SHEETS THROUGHOUT THIS PLAN SET IS PART OF A UNIFIED DESIGN. THE CONTRACTOR SHALL NOT SEPARATE DRAWINGS FROM THE SET FOR DISTRIBUTION TO SPECIFIC DISCIPLINES. EACH SUBCONTRACTOR SHALL BE PROVIDED WITH ALL SHEETS WITHIN THIS PLAN SET.
- CONTRACTOR SHALL REFERENCE GENERAL NOTES SHEET FOR ADDITIONAL INFORMATION. INFORMATION ON THE GENERAL NOTES SHEET IS PART OF A UNIFIED DESIGN AND IS PERTINENT TO THIS PLAN SHEET.

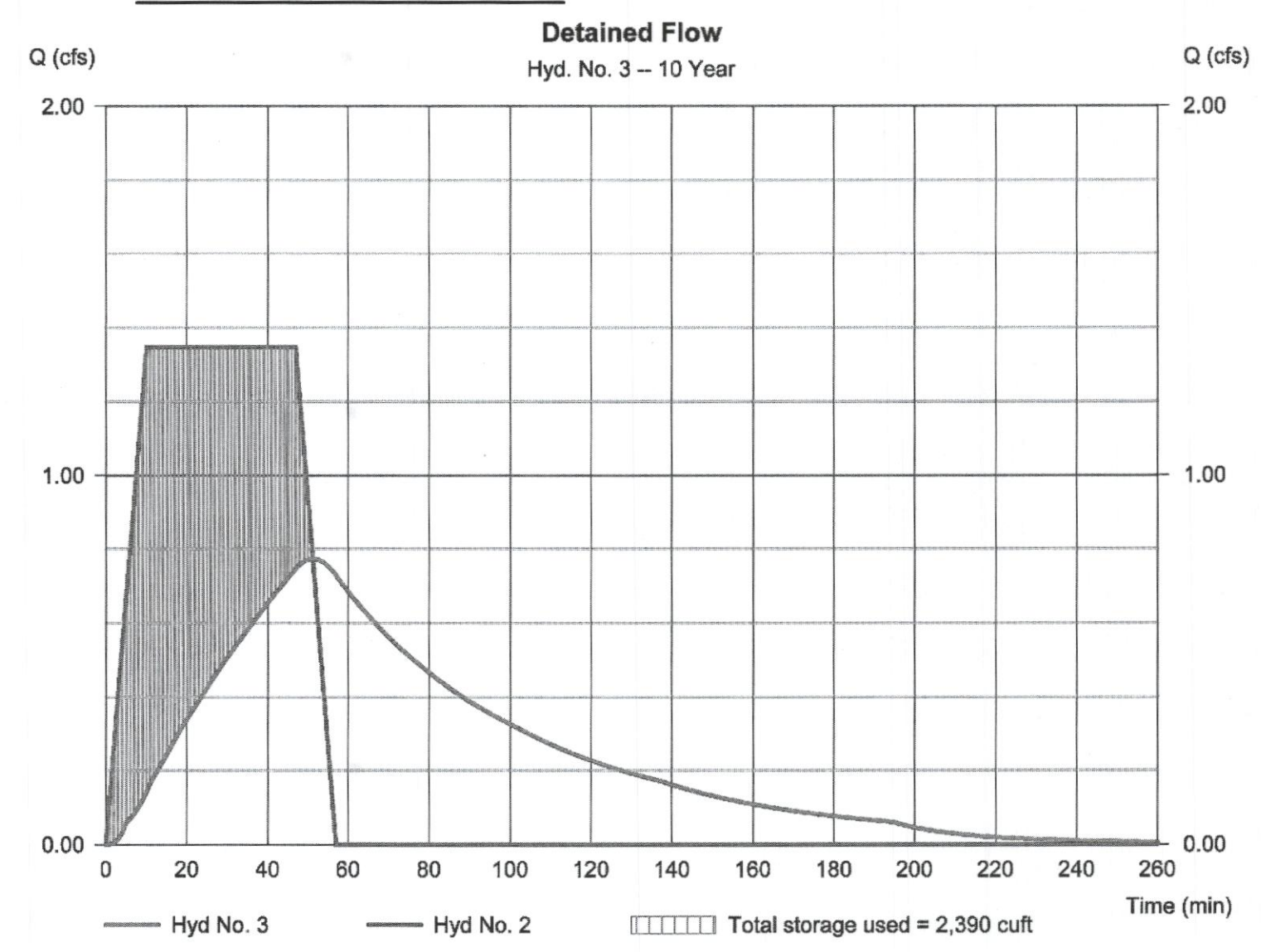
**5-YR EVENT DETENTION CALCULATIONS**

Peak discharge = 0.656 cfs  
 Time to peak = 54 min  
 Hyd. volume = 3,324 cuft  
 Max. Elevation = 571.41 ft  
 Max. Storage = 2,050 cuft



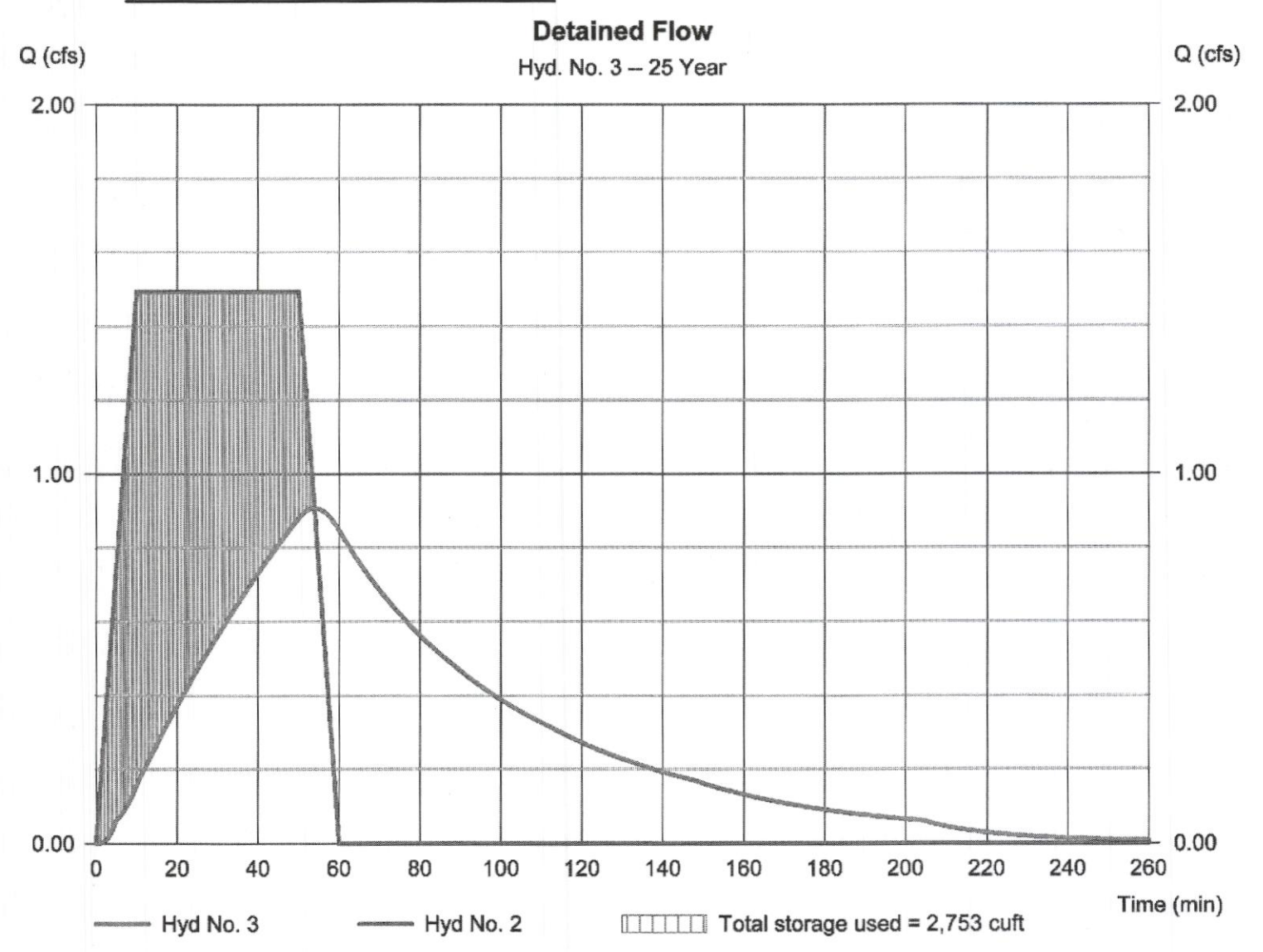
**10-YR EVENT DETENTION CALCULATIONS**

Peak discharge = 0.774 cfs  
 Time to peak = 51 min  
 Hyd. volume = 3,792 cuft  
 Max. Elevation = 571.67 ft  
 Max. Storage = 2,390 cuft



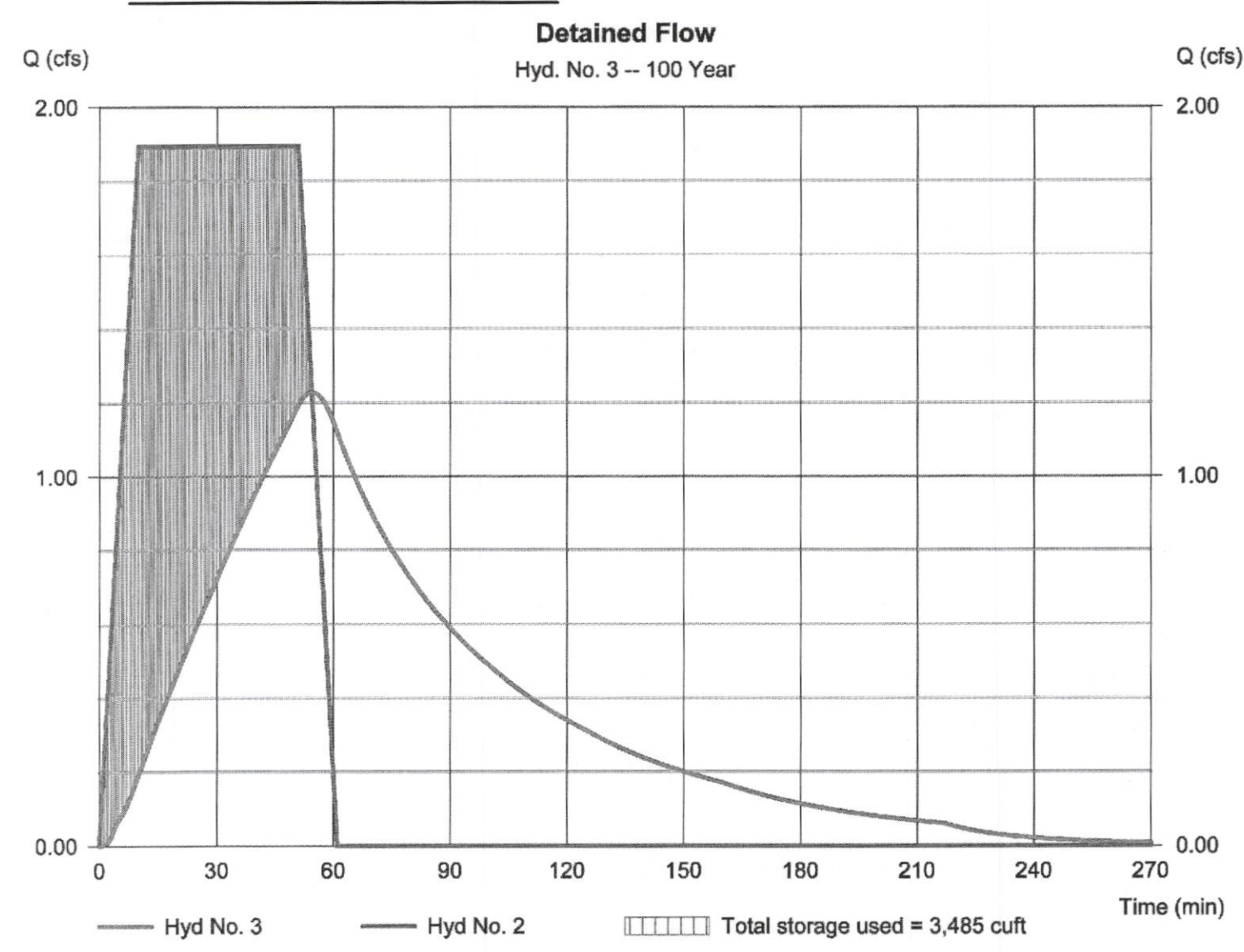
**25-YR EVENT DETENTION CALCULATIONS**

Peak discharge = 0.908 cfs  
 Time to peak = 54 min  
 Hyd. volume = 4,477 cuft  
 Max. Elevation = 571.94 ft  
 Max. Storage = 2,753 cuft



**100-YR EVENT DETENTION CALCULATIONS**

Peak discharge = 1.227 cfs  
 Time to peak = 55 min  
 Hyd. volume = 5,789 cuft  
 Max. Elevation = 572.56 ft  
 Max. Storage = 3,485 cuft



**POND CALCULATIONS 100-YR EVENT**

**Pond No. 1 - Detention**  
 Pond Data  
 UG Chambers - invert elev. = 569.20 ft. Rise x Span = 4.00 x 4.00 ft. Barrel Len = 101.00 ft. No. Barrels = 3. Slope = 0.50%. Headers = Yes

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	569.20	n/a	0	0
0.45	569.65	n/a	99	99
0.90	570.10	n/a	353	452
1.35	570.55	n/a	493	945
1.80	571.00	n/a	565	1,510
2.25	571.45	n/a	596	2,106
2.70	571.90	n/a	597	2,703
3.15	572.35	n/a	564	3,267
3.60	572.80	n/a	493	3,760
4.05	573.25	n/a	352	4,112
4.51	573.71	n/a	98	4,210

**Weir Structures**  
 [A]  
 Crest Len (ft) = 0.06  
 Crest El. (ft) = 569.20  
 Weir Coeff. = 3.33  
 Weir Type = Cipolli  
 Multi-Stage = No

POND AND DETENTION CALCULATIONS PERFORMED USING THE MODIFIED RATIONAL METHOD PER HYDRAFLOW HYDROGRAPHS EXTENSION FOR AUTOCAD CIVIL 3D 2014

**EXISTING DRAINAGE CALCULATIONS**

DRAINAGE AREA	AREA (ACRES)	C	CA	Tc (MIN)	i5	Q5 (CFS)	i10	Q10 (CFS)	i25	Q25 (CFS)	i100	Q100 (CFS)	NOTES
EX-A	0.18	0.35	0.06	20	4.9	0.30	5.9	0.36	6.6	0.41	8.3	0.51	TO NORTHWEST CORNER OF LOT
EX-B	0.25	0.35	0.09	20	4.9	0.42	5.9	0.51	6.6	0.57	8.3	0.71	TO NORTH ALAMO STREET
<b>TOTAL</b>	<b>0.42</b>					<b>0.72</b>		<b>0.87</b>		<b>0.97</b>		<b>1.23</b>	

*- Include Calcs from Report provided in Plan set.*



**Know what's below. Call before you dig.**  
 (@ least 48 hours prior to digging)

**BENCHMARK**

**SOURCE BENCHMARK:** City of Rockwall monument No. Reset R005-1, concrete monument with a brass cap stamped "Reset R005-1" found in the median of Summit Ridge Drive at the intersection of Summit Ridge Drive and F.M. Highway No. 740.  
 Elevation = 578.63'