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CIVIL ENGINEERING - LAND DEVELOPMENT - SITE PLANS - STORMWATER MANAGEMENT

Drainage Summary
Prepared For Aresco Property
Parcel:21/52/7 - Wompowog Rd.
East Hampton, Connecticut

June 18, 2019

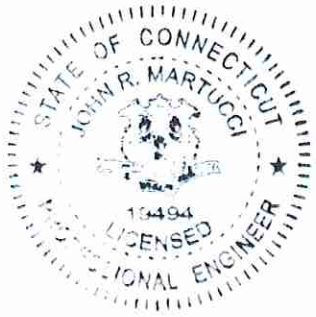
Reference is made to a site plan by Dutch & Associates dated May 22, 2019. This report and the attached calculations are regarding a proposed drainage pipe to be installed under the proposed driveway.

The crossing will receive the flow from a 6.3 acre drainage area located north of the proposed driveway.

The culvert is designed to carry a 25-year design storm without overtopping the driveway. The HydroCAD computer Program and the Rational Method was used to calculate the flow rate to the culverts. A Drainage Area Map is attached to the end of this report.

Conclusions: The proposed culvert as shown is adequate for conveying the flow from a 25-year storm event.

Submitted by
LBM Engineering, LLC
John R. Martucci, P.E.



Summary for Subcatchment 1 AREA: AREA TO CROSSING

Runoff = 5.78 cfs @ 0.34 hrs, Volume= 0.281 af, Depth= 0.53"

Runoff by Rational method, Rise/Fall=1.0/2.5 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
CT East Hampton 25-yr Duration=20 min, Inten=4.29 in/hr

Area (ac)	C	Description	Land Use
6.300	0.25	WOODED	Open Space
6.300		100.00% Pervious Area	

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.0	150	0.0500	0.13		**Sheet Flow, SHEET FLOW** Woods: Light underbrush n= 0.400 P2= 3.40"
3.4	250	0.0600	1.22		**Shallow Concentrated Flow, SHALLOW CONCENTRATED** Woodland Kv= 5.0 fps
23.4	400	Total			

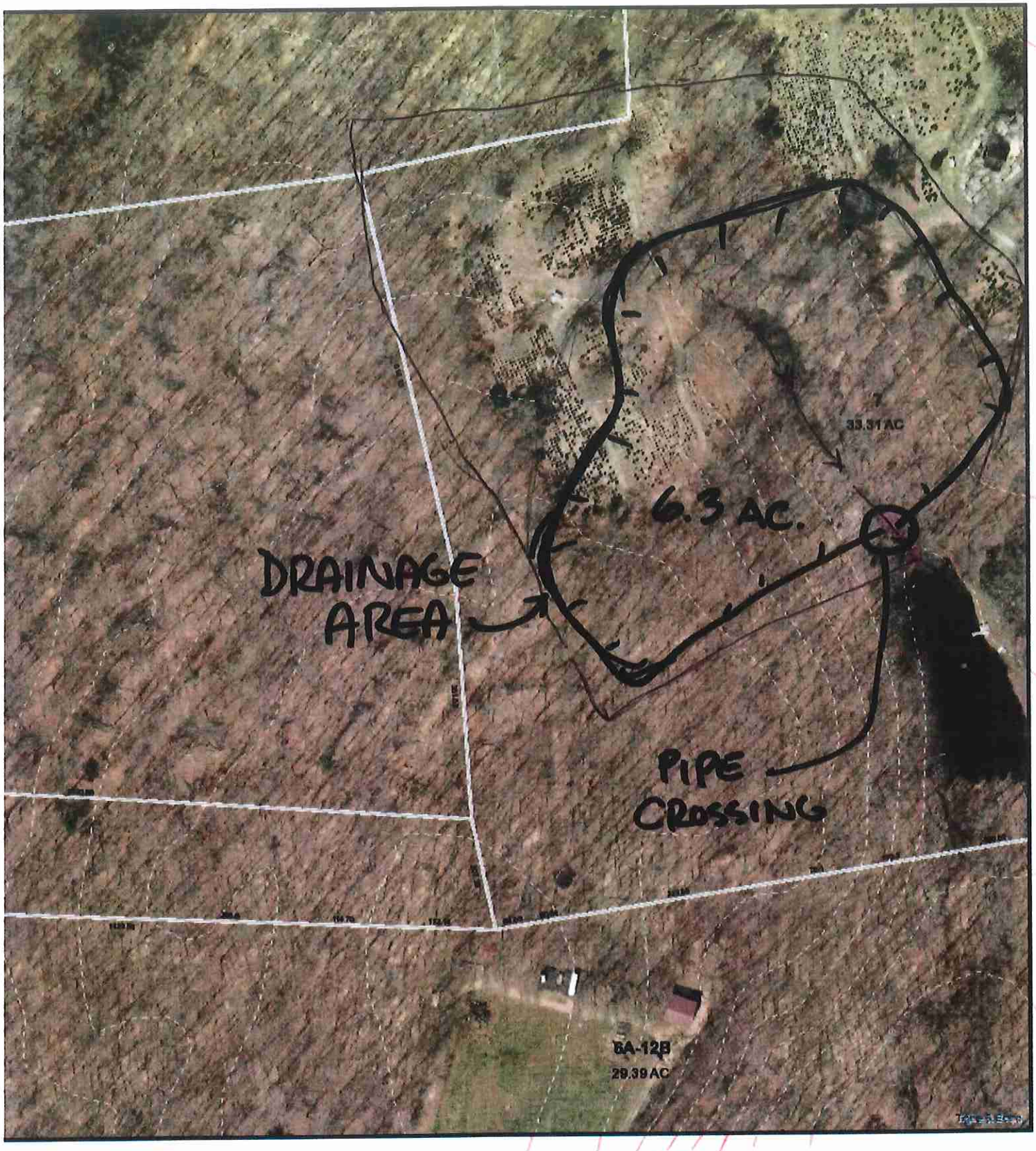
Summary for Pond 2P: 12 INCH PIPE

Inflow Area = 6.300 ac, 0.00% Impervious, Inflow Depth = 0.53" for 25-yr event
Inflow = 5.78 cfs @ 0.34 hrs, Volume= 0.281 af
Outflow = 5.78 cfs @ 0.34 hrs, Volume= 0.281 af, Atten= 0%, Lag= 0.0 min
Primary = 5.78 cfs @ 0.34 hrs, Volume= 0.281 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
Peak Elev= 373.84' @ 0.34 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	371.00'	**12.0" Round Culvert** L= 20.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 371.00' / 370.00' S= 0.0500 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=5.77 cfs @ 0.34 hrs HW=373.83' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 5.77 cfs @ 7.35 fps)



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Scale: 1"=200'

Scale is approximate

The information depicted on this map is for planning purposes only. It is not adequate for legal boundary definition, regulatory interpretation, or parcel-level analyses.