

detention pond swale capacity
Worksheet for Irregular Channel

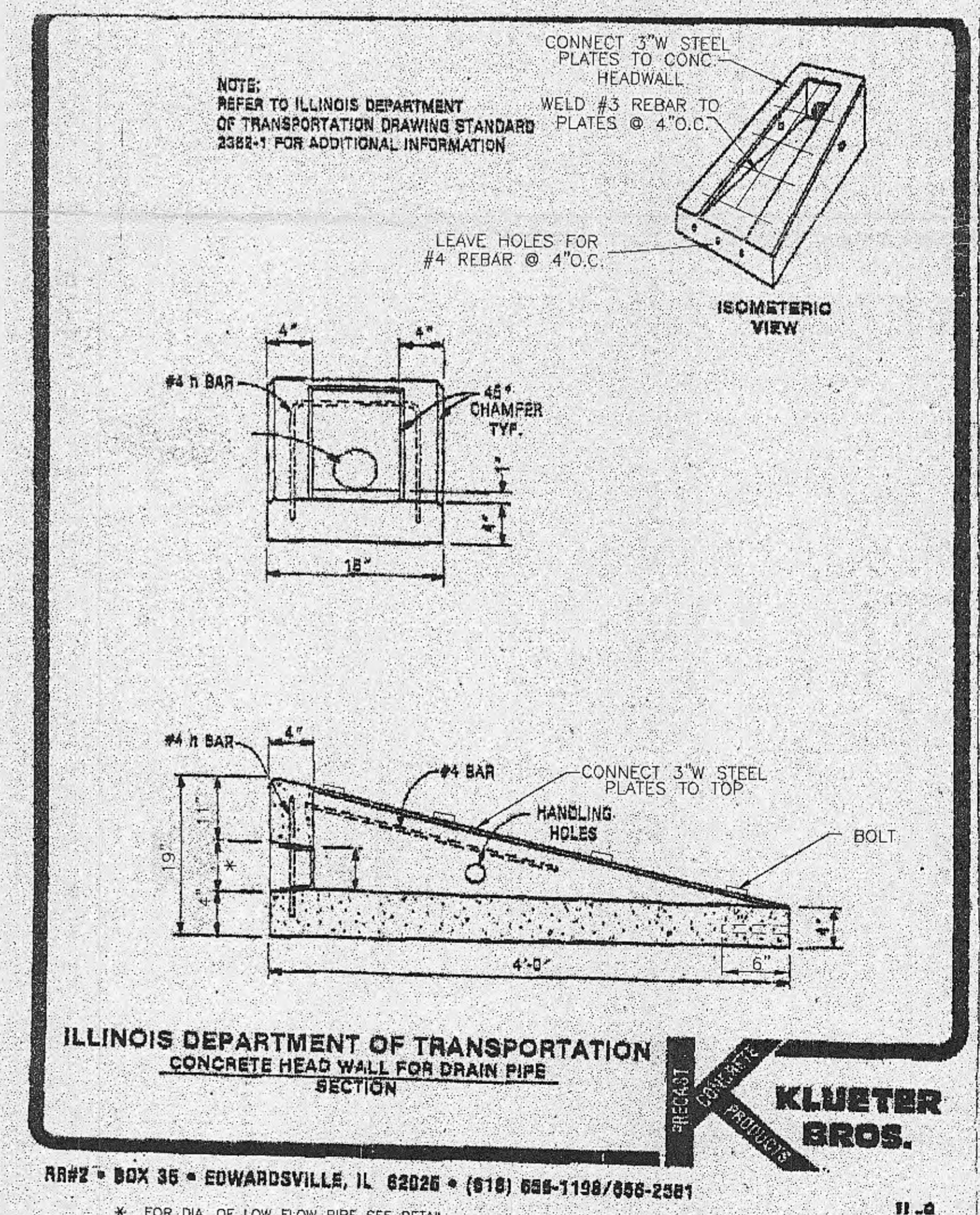
Project Description						
Project File	J:\test\std\m\whisperwoo.fm2					
Worksheet	det pond swale					
Flow Element	Irregular Channel					
Method	Manning's Formula					
Solve For	Water Elevation					
Input Data						
Channel Slope	0.100000 ft/ft					
Elevation range:	100.00 ft to 100.54 ft					
Station (ft)	Elevation (ft)	Start Station	End Station	Roughness		
0.00	100.54	0.00	5.00	0.013		
0.50	100.04					
2.50	100.00					
4.50	100.04					
5.00	100.54					
Discharge	11.99 cfs					
Results						
Wtd. Manning's Coefficient	0.013					
Water Surface Elevation	100.25 ft					
Flow Area	8.95 ft ²					
Wetted Perimeter	4.58 ft					
Top Width	4.41 ft					
Height	0.25 ft					
Critical Depth	100.64 ft					
Critical Slope	0.003478 ft/ft					
Velocity	12.84 ft/s					
Velocity Head	2.48 ft					
Specific Energy	102.73 ft					
Froude Number	4.81					
Flow is supercritical.						

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Input Data						
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Elevation range:	100.00 ft to 100.54 ft					
Station (ft)	Elevation (ft)	Start Station	End Station	Roughness		
0.00	100.54	0.00	5.00	0.013		
0.50	100.04					
2.50	100.00					
4.50	100.04					
5.00	100.54					
Discharge	22.88 cfs					
Results						
Wtd. Manning's Coefficient	0.013					
Water Surface Elevation	100.35 ft					
Flow Area	1.43 ft ²					
Wetted Perimeter	4.88 ft					
Top Width	4.83 ft					
Height	0.35 ft					
Critical Depth	100.94 ft					
Critical Slope	0.003459 ft/ft					
Velocity	15.98 ft/s					
Velocity Head	3.98 ft					
Specific Energy	104.31 ft					
Froude Number	5.05					
Flow is supercritical.						

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Method	Manning's Formula					
Solve For	Water Elevation					
Input Data						
Channel Slope	0.100000 ft/ft					
Elevation range:	100.00 ft to 100.54 ft					
Station (ft)	Elevation (ft)	Start Station	End Station	Roughness		
0.00	100.54	0.00	5.00	0.013		
0.50	100.04					
2.50	100.00					
4.50	100.04					
5.00	100.54					
Discharge	35.83 cfs					
Results						
Wtd. Manning's Coefficient	0.013					
Water Surface Elevation	100.46 ft					
Flow Area	1.92 ft ²					
Wetted Perimeter	5.18 ft					
Top Width	4.83 ft					
Height	0.46 ft					
Critical Depth	101.24 ft					
Critical Slope	0.003537 ft/ft					
Velocity	18.80 ft/s					
Velocity Head	5.41 ft					
Specific Energy	105.87 ft					
Froude Number	5.22					
Flow is supercritical.						



ISSUE	REMARKS/DATE
1	09/15/03 - Plotted
2	12/11/03 - Submitted
3	12/17/03 - Submitted

PREPARED FOR:
WHISPERING L.L.C.
5091 NEW BAUMGARTNER ROAD
ST. LOUIS, MISSOURI 63129
(314) 487-6717

PREPARED BY:
THE STERLING CO.
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DRAWN: [Signature]
DESIGNED: [Signature]
CHECKED: [Signature]

PROJECT: [Blank]
SHEET TITLE: **WHISPERING WOODS**
OUTFALL STRUCTURE DETAILS

NO.	03	02	021
M.S.D.	SHEET		
P#	23		
DIGITAL FILE LOCATION	SERVER-STERLING-2		
OF	28		