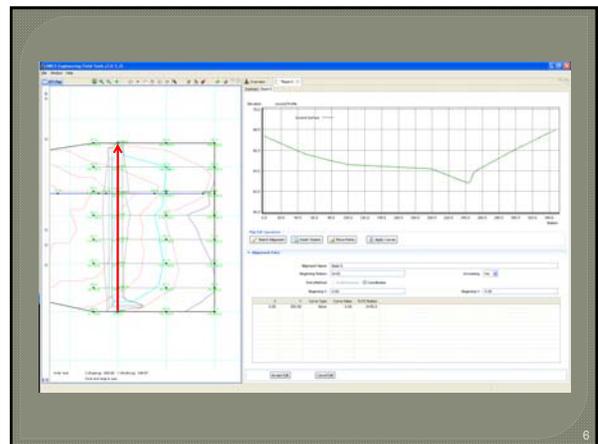
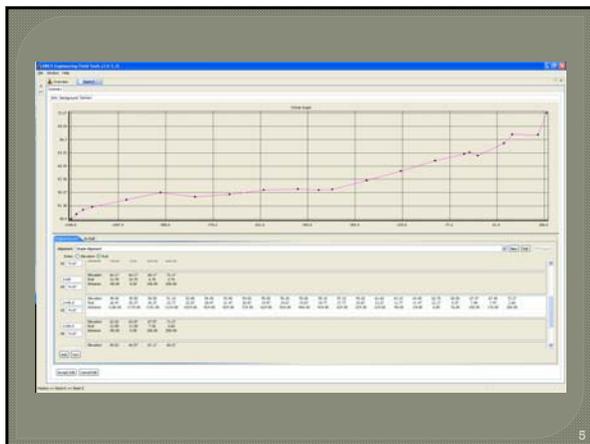
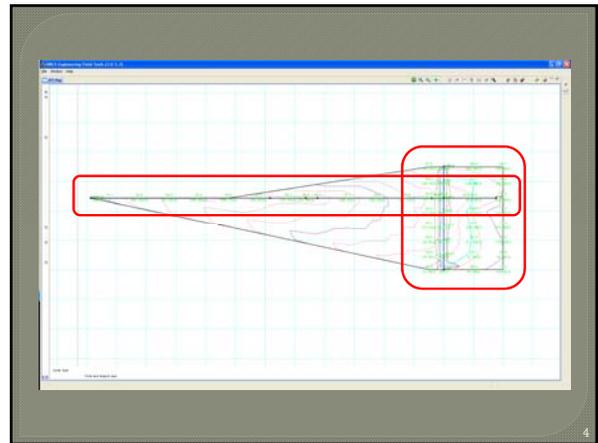
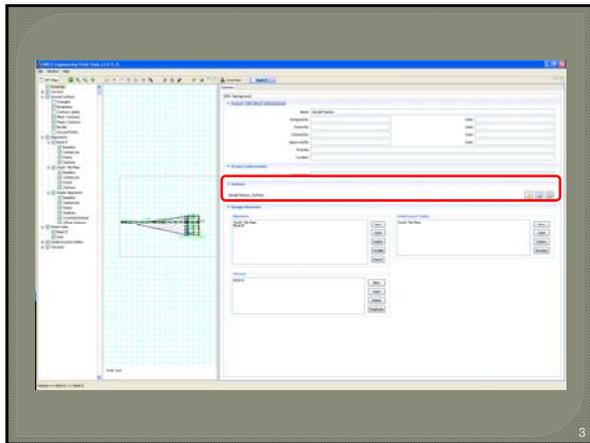
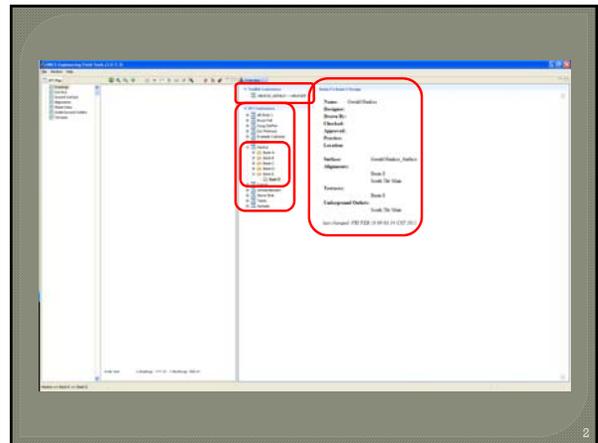
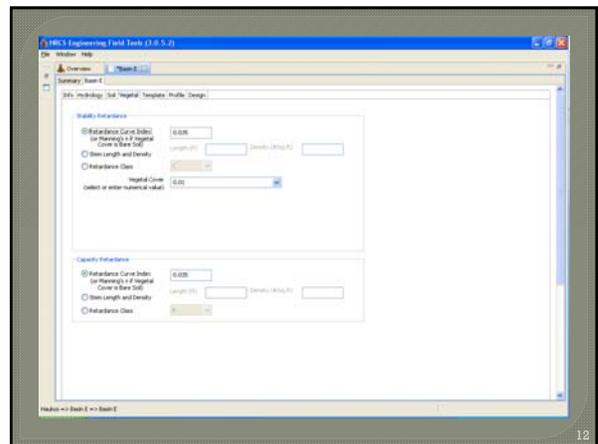
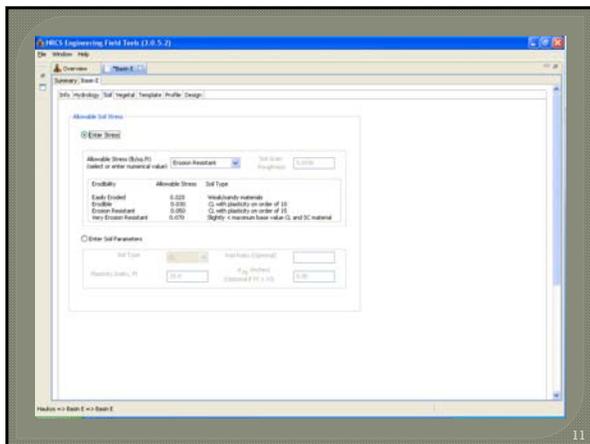
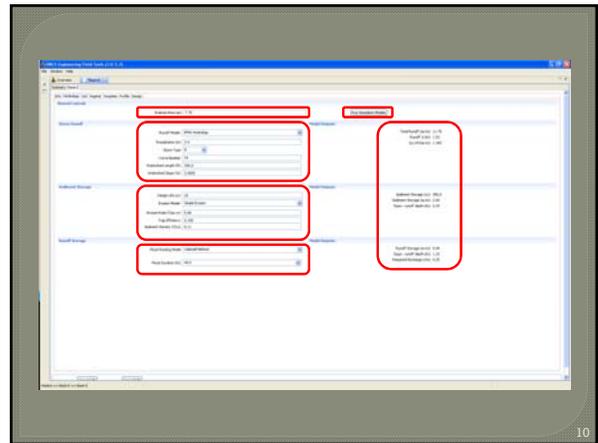
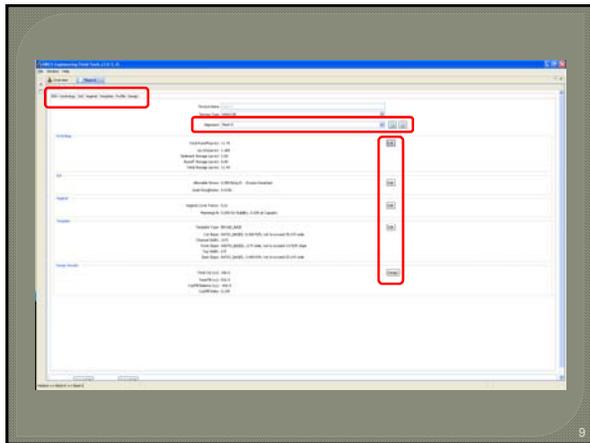
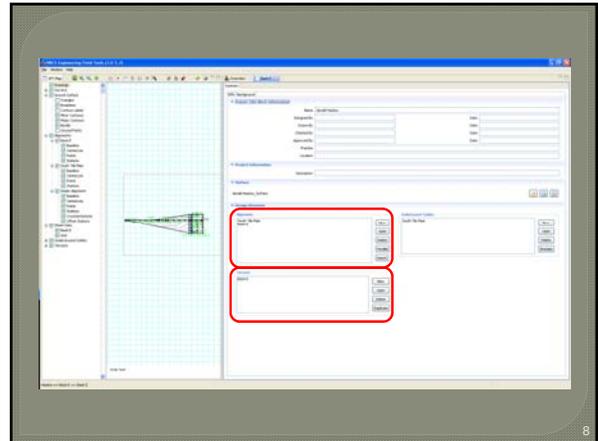
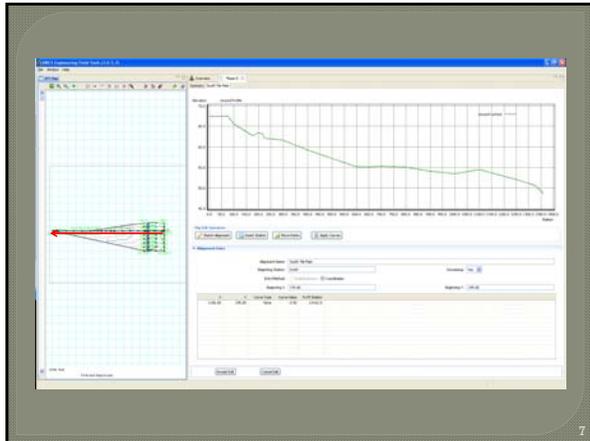
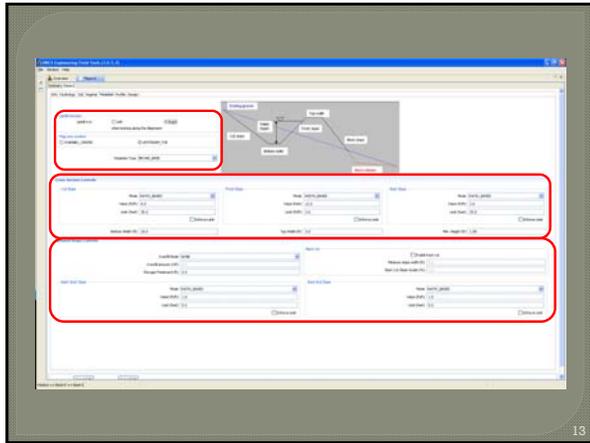


TDT vs Excel

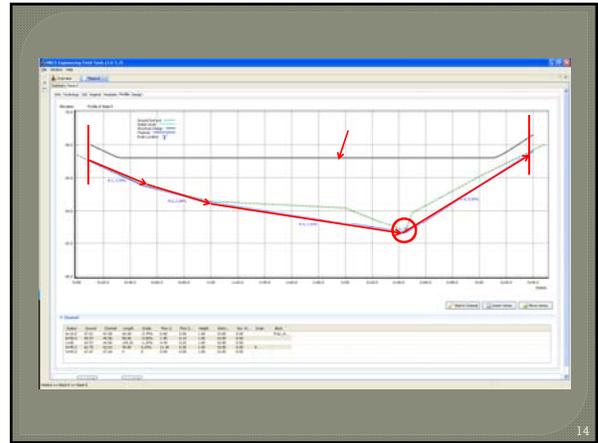
A comparison of two terrace design methods



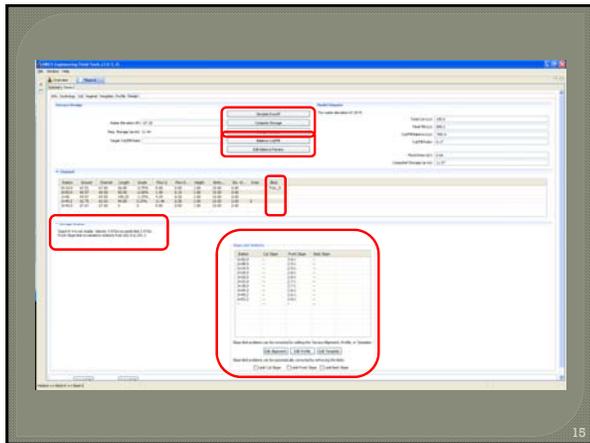




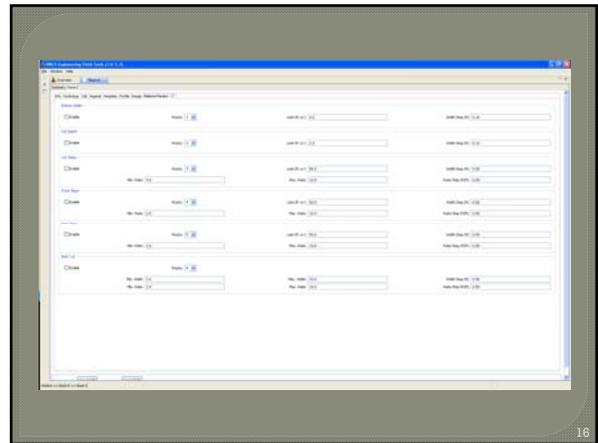
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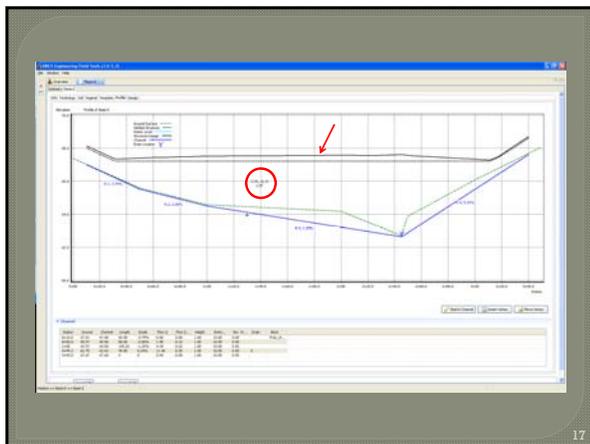
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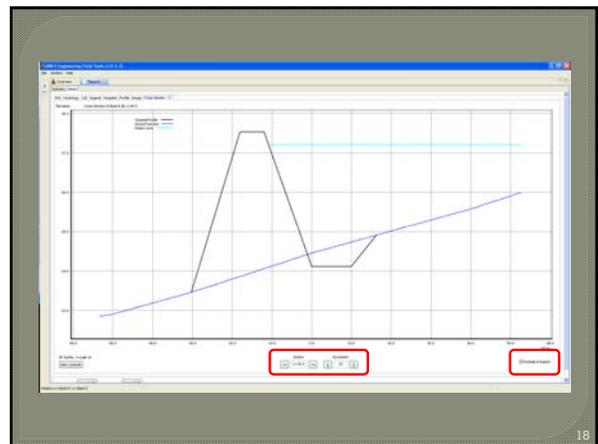
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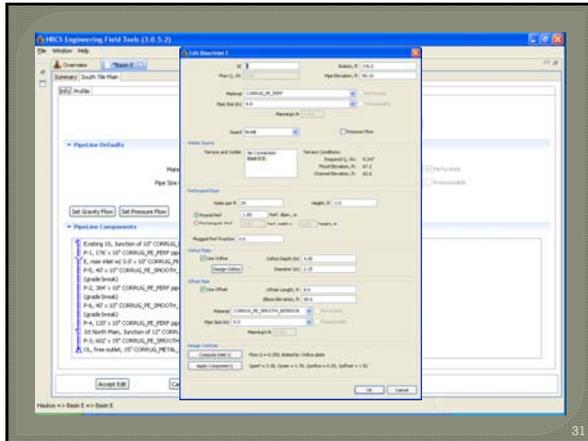
16



17



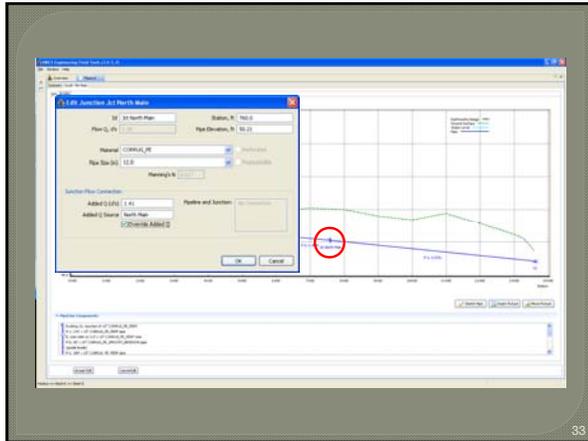
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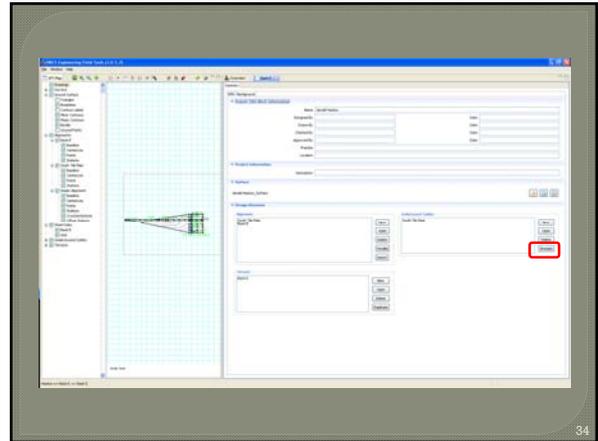
31



32



33



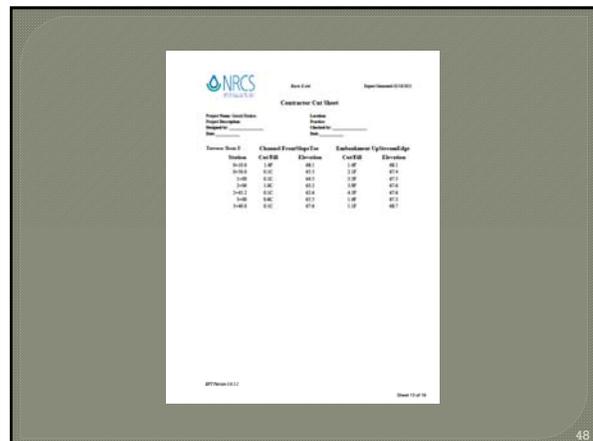
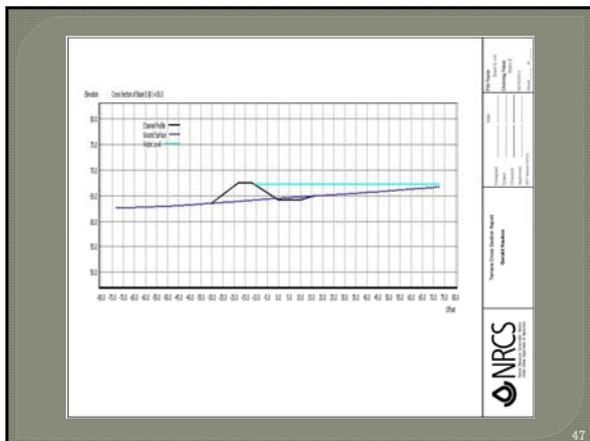
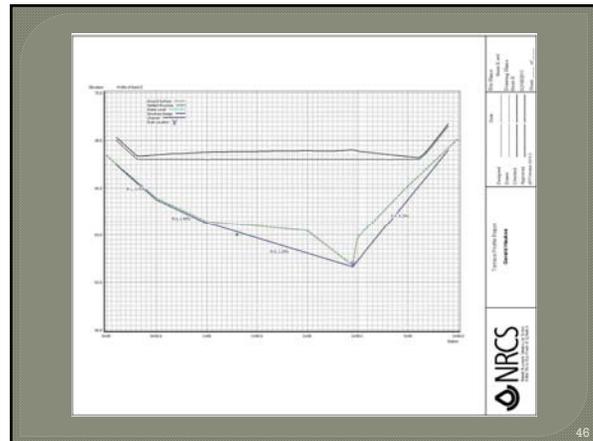
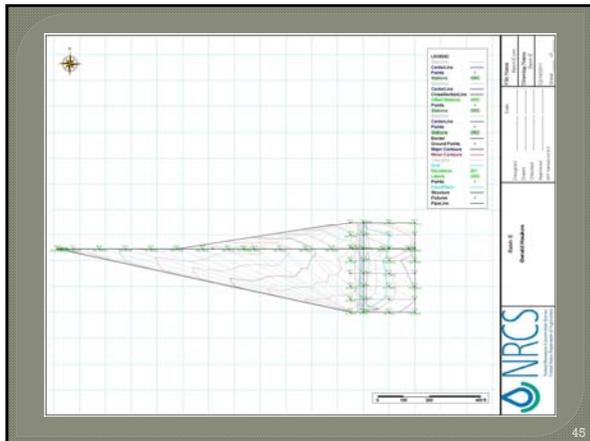
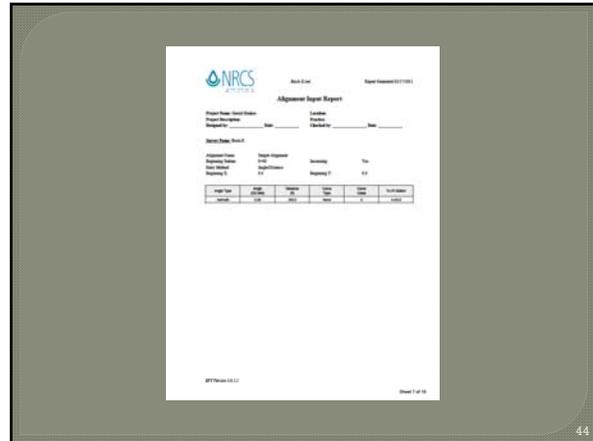
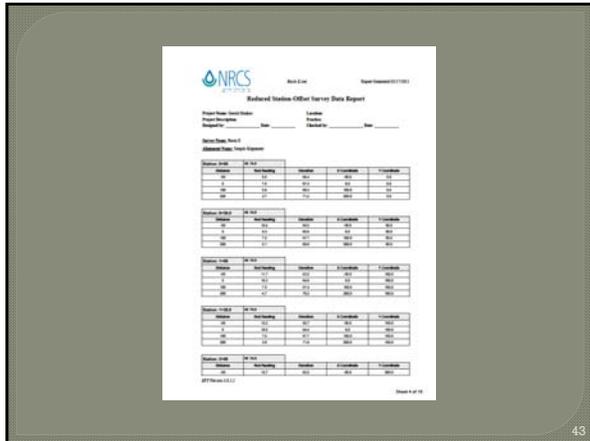
34

Pipe No	Name	Actual Q	Capacity	Velocity	Length	Grade	Pressure	Diameter	Material	Status
South The Main	P-1	1.59	4.77	1.11	176.0	4.07%	No	30.0	CONCRETE_PIPE	No Problem
South The Main	P-5	1.38	3.14	9.34	40.0	1.79%	No	30.0	CONCRETE_PIPE	No Problem
South The Main	P-2	1.58	3.08	5.46	398.0	1.48%	No	30.0	CONCRETE_PIPE	No Problem
South The Main	P-6	1.38	3.08	3.42	40.0	0.55%	No	30.0	CONCRETE_PIPE	No Problem
South The Main	P-4	1.35	1.84	0.35	100.0	0.46%	No	30.0	CONCRETE_PIPE	No Problem
South The Main	P-3	0.76	3.08	3.23	400.0	0.53%	No	30.0	CONCRETE_PIPE	No Problem

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Back to Excel to design this
Underground Outlet

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GENERAL NOTES

Location: **Grand Haven** Project: **2010-2011** Date: **3/28/11**
 Station: **12+00 to 12+50** Sheet: **61 of 62**
 Design: **12+00 to 12+50** Scale: **1" = 40'**

Station	Prop. Elev.								
12+00	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
12+10	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
12+20	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
12+30	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
12+40	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
12+50	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5

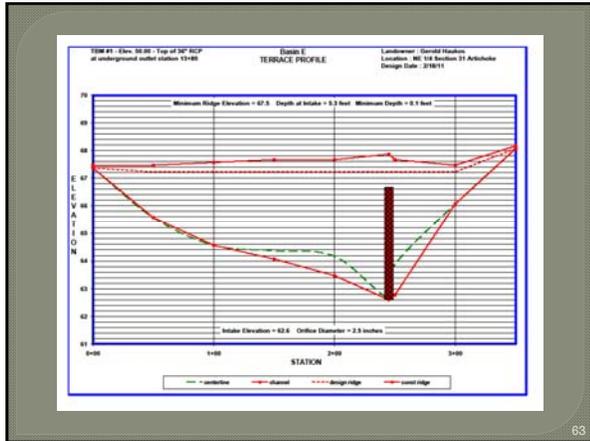
61

GENERAL NOTES

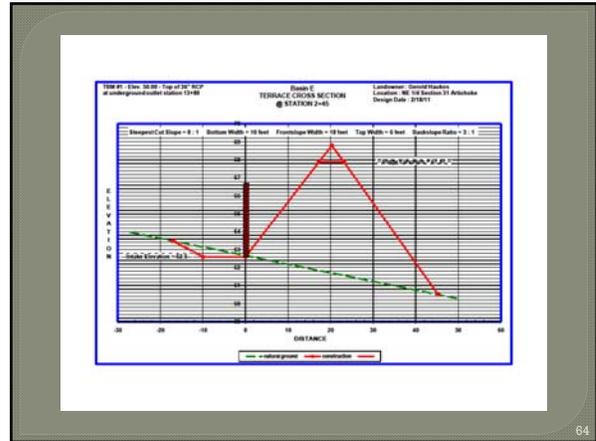
Location: **Grand Haven** Project: **2010-2011** Date: **3/28/11**
 Station: **12+50 to 13+00** Sheet: **62 of 62**
 Design: **12+50 to 13+00** Scale: **1" = 40'**

Station	Prop. Elev.								
12+50	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
12+60	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
12+70	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
12+80	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
12+90	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
13+00	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5

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GENERAL NOTES

Location: **Grand Haven** Project: **2010-2011** Date: **3/28/11**
 Station: **13+00 to 13+50** Sheet: **65 of 62**
 Design: **13+00 to 13+50** Scale: **1" = 40'**

Station	Prop. Elev.								
13+00	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
13+10	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
13+20	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
13+30	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
13+40	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
13+50	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5

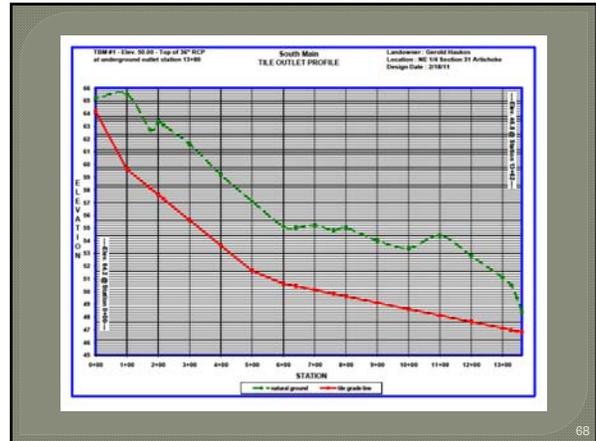
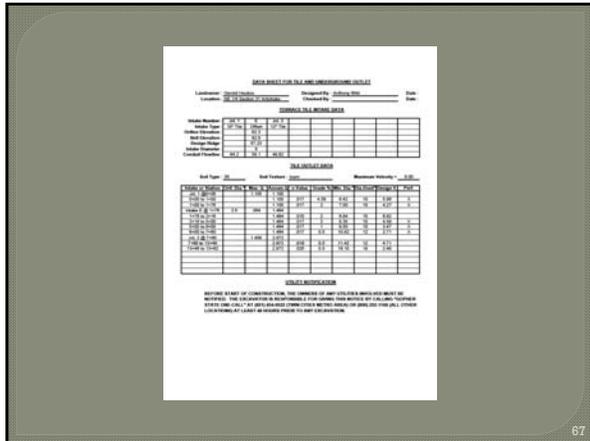
65

GENERAL NOTES

Location: **Grand Haven** Project: **2010-2011** Date: **3/28/11**
 Station: **13+50 to 14+00** Sheet: **66 of 62**
 Design: **13+50 to 14+00** Scale: **1" = 40'**

Station	Prop. Elev.								
13+50	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
13+60	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
13+70	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
13+80	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
13+90	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
14+00	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5

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TDT vs Excel

<p>PRO</p> <ul style="list-style-type: none"> Provides a surface map with contours Designs can be drawn freehand on the contour map Accommodates almost any type of survey S/O surveys can be entered as either elevation or grade rod Gives the user extensive control over the design parameters Has a means to set default input values Has a means to balance the cuts and fills Slopes are labeled on profiles Can print out multiple cross sections Printouts include a title block 	<p>CON</p> <ul style="list-style-type: none"> Very time consuming User must navigate through many screens Too much reliance on right click menus Underground Outlet design is not in a table format GUIs are confusing at times
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