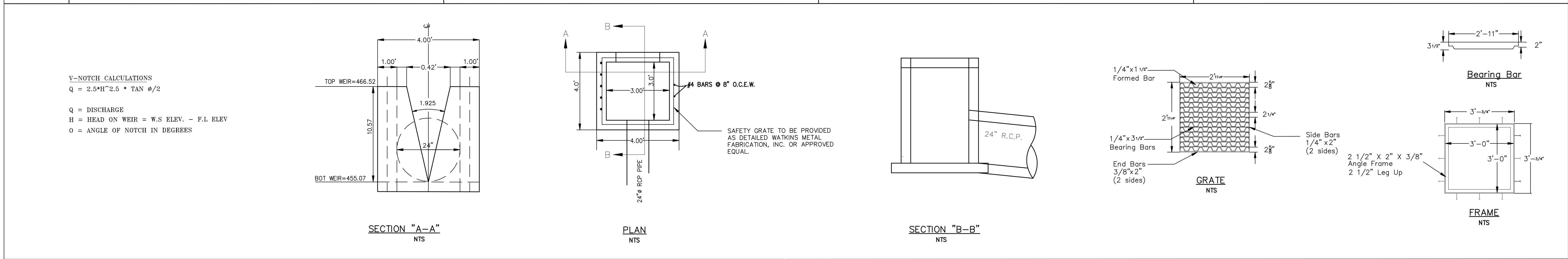


DOUPHRA TE & ASSOCIATES, INC.  
 ENGINEERING • PROJECT MANAGEMENT • SURVEYING  
 22335 RIDGE RD., # 200 ROCKWALL, TEXAS 75087  
 PHONE: (972)771-9004 FAX: (972)771-9005

DETENTION POND CALCULATIONS  
 LAKEVIEW SUMMIT, PHASE 4  
 CITY OF ROCKWALL  
 ROCKWALL COUNTY, TEXAS

	FREQUENCY = 10 YEAR	FREQUENCY = 25 YEAR	FREQUENCY = 50 YEAR	FREQUENCY = 100 YEAR																																																																																																																																																																																																																																																																																																																																																																																									
1) PRESENT CONDITION	Td = 20 DESIGN TIME, C = 0.35, I = 5.68 IN/HR, A = 38.92+0.65(CEMETARY)=39.57 ACRES Q = C*I*A = 0.35 * 5.68 * 39.57 = 78.66 CFS Q = C*I*A = 0.50 * 7.19 * 0.31 = 1.11 CFS (AREA 55) Q = = 79.77 CFS	Td = 20 DESIGN TIME, C = 0.35, I = 6.61 IN/HR, A = 38.92+0.65(CEMETARY)=39.57 ACRES Q = C*I*A = 0.35 * 6.61 * 39.57 = 91.54 CFS Q = C*I*A = 0.50 * 8.22 * 0.31 = 1.27 (AREA 55) Q = = 92.81 CFS	Td = 20 DESIGN TIME, C = 0.35, I = 7.42 IN/HR, A = 38.92+0.65(CEMETARY)=39.57 ACRES Q = C*I*A = 0.35 * 7.42 * 39.57 = 102.76 CFS Q = C*I*A = 0.50 * 9.01 * 0.31 = 1.39 CFS (AREA 55) Q = = 104.15 CFS	Td = 20 DESIGN TIME, C = 0.35, I = 8.30 IN/HR, A = 38.92+0.65 (CEMETARY)=39.57 ACRES Q = C*I*A = 0.35 * 8.30 * 39.57 = 114.95 CFS Q = C*I*A = 0.50 * 9.80 * 0.31 = 1.54 CFS (AREA 55) Q = = 116.49 CFS																																																																																																																																																																																																																																																																																																																																																																																									
2) INFLOW	INFLOW = AREA 49 + LINE "C" + LINE "D" = cfs + cfs + cfs = 67.38cfs = C*I*A = 0.50 * 7.19 * 18.74	INFLOW = AREA 49 + LINE "C" + LINE "D" = cfs + cfs + cfs = 77.03cfs = C*I*A = 0.50 * 8.22 * 18.74	INFLOW = AREA 49 + LINE "C" + LINE "D" = cfs + cfs + cfs = 84.44cfs = C*I*A = 0.50 * 9.01 * 18.74	INFLOW = AREA 49 + LINE "C" + LINE "D" = 2.45cfs + 43.59cfs + 45.80cfs = 91.84cfs = C*I*A = 0.50 * 9.8 * 18.74																																																																																																																																																																																																																																																																																																																																																																																									
3) OUTFLOW	DIRECT DISCHARGE = AREA 1,14,16,25,32,39,46 + LINE "A" + LINE "B" = + + = cfs  OUTFLOW FROM POND = PRESENT CONDITION - DIRECT DISCHARGES = 12.79 CFS = C * I * A = 0.35 * 5.68 * 6.43	DIRECT DISCHARGE = AREA 1,14,16,25,32,39,46 + LINE "A" + LINE "B" = + + = cfs  OUTFLOW FROM POND = PRESENT CONDITION - DIRECT DISCHARGES = 14.88 CFS = C * I * A = 0.35 * 6.61 * 6.43	DIRECT DISCHARGE = AREA 1,14,16,25,32,39,46 + LINE "A" + LINE "B" = + + = cfs  OUTFLOW FROM POND = PRESENT CONDITION - DIRECT DISCHARGES = 16.71 CFS = C * I * A = 0.35 * 7.42 * 6.43	DIRECT DISCHARGE = AREA 1, 14, 16, 25, 32, 39, 46, 48 + LINE "A" + LINE "B" = 6.42, 5.63, 3.97, 6.66, 7.11, 2.35, 4.85, 7.06 + 19.75 + 34.00 = 97.80cfs  OUTFLOW FROM POND = PRESENT CONDITION - DIRECT DISCHARGES = 116.49 - 97.80 = 18.69 CFS = C * I * A = 0.35 * 8.3 * 6.43																																																																																																																																																																																																																																																																																																																																																																																									
4) STORAGE REQUIRED	<table border="1"> <thead> <tr> <th>Time</th> <th>Intensity</th> <th>Discharge</th> <th>Inflow</th> <th>Outflow</th> <th>Storage</th> </tr> <tr> <th>T<sup>2</sup>/24</th> <th>CFS/IN</th> <th>CFS</th> <th>T<sup>2</sup>/24</th> <th>0.87*(I+I<sub>0</sub>)/24</th> <th>CU FT</th> </tr> </thead> <tbody> <tr><td>10</td><td>7.19</td><td>78.67</td><td>42.49</td><td>7.03</td><td>34,728.34</td></tr> <tr><td>15</td><td>6.88</td><td>85.09</td><td>47.75</td><td>7.67</td><td>46,008.50</td></tr> <tr><td>20</td><td>6.61</td><td>91.54</td><td>52.91</td><td>8.22</td><td>55,971.38</td></tr> <tr><td>25</td><td>6.38</td><td>97.99</td><td>57.95</td><td>8.70</td><td>64,654.50</td></tr> <tr><td>30</td><td>6.17</td><td>104.36</td><td>62.88</td><td>9.12</td><td>72,100.00</td></tr> <tr><td>35</td><td>5.98</td><td>110.66</td><td>67.71</td><td>9.50</td><td>78,360.00</td></tr> <tr><td>40</td><td>5.81</td><td>116.89</td><td>72.45</td><td>9.85</td><td>83,540.00</td></tr> <tr><td>45</td><td>5.66</td><td>123.06</td><td>77.09</td><td>10.18</td><td>87,600.00</td></tr> <tr><td>50</td><td>5.52</td><td>129.17</td><td>81.64</td><td>10.50</td><td>90,600.00</td></tr> <tr><td>55</td><td>5.39</td><td>135.23</td><td>86.11</td><td>10.80</td><td>92,600.00</td></tr> <tr><td>60</td><td>5.27</td><td>141.24</td><td>90.50</td><td>11.09</td><td>93,600.00</td></tr> <tr><td>65</td><td>5.16</td><td>147.20</td><td>94.81</td><td>11.37</td><td>93,600.00</td></tr> <tr><td>70</td><td>5.06</td><td>153.12</td><td>99.05</td><td>11.64</td><td>92,600.00</td></tr> <tr><td>75</td><td>4.96</td><td>159.00</td><td>103.22</td><td>11.90</td><td>90,600.00</td></tr> <tr><td>80</td><td>4.87</td><td>164.84</td><td>107.33</td><td>12.15</td><td>87,600.00</td></tr> <tr><td>85</td><td>4.79</td><td>170.64</td><td>111.38</td><td>12.39</td><td>83,600.00</td></tr> <tr><td>90</td><td>4.72</td><td>176.40</td><td>115.38</td><td>12.62</td><td>78,600.00</td></tr> <tr><td>95</td><td>4.66</td><td>182.12</td><td>119.33</td><td>12.84</td><td>72,600.00</td></tr> <tr><td>100</td><td>4.61</td><td>187.80</td><td>123.23</td><td>13.05</td><td>65,600.00</td></tr> </tbody> </table>	Time	Intensity	Discharge	Inflow	Outflow	Storage	T <sup>2</sup> /24	CFS/IN	CFS	T <sup>2</sup> /24	0.87*(I+I <sub>0</sub> )/24	CU FT	10	7.19	78.67	42.49	7.03	34,728.34	15	6.88	85.09	47.75	7.67	46,008.50	20	6.61	91.54	52.91	8.22	55,971.38	25	6.38	97.99	57.95	8.70	64,654.50	30	6.17	104.36	62.88	9.12	72,100.00	35	5.98	110.66	67.71	9.50	78,360.00	40	5.81	116.89	72.45	9.85	83,540.00	45	5.66	123.06	77.09	10.18	87,600.00	50	5.52	129.17	81.64	10.50	90,600.00	55	5.39	135.23	86.11	10.80	92,600.00	60	5.27	141.24	90.50	11.09	93,600.00	65	5.16	147.20	94.81	11.37	93,600.00	70	5.06	153.12	99.05	11.64	92,600.00	75	4.96	159.00	103.22	11.90	90,600.00	80	4.87	164.84	107.33	12.15	87,600.00	85	4.79	170.64	111.38	12.39	83,600.00	90	4.72	176.40	115.38	12.62	78,600.00	95	4.66	182.12	119.33	12.84	72,600.00	100	4.61	187.80	123.23	13.05	65,600.00	<table border="1"> <thead> <tr> <th>Time</th> <th>Intensity</th> <th>Discharge</th> <th>Inflow</th> <th>Outflow</th> <th>Storage</th> </tr> <tr> <th>T<sup>2</sup>/24</th> <th>CFS/IN</th> <th>CFS</th> <th>T<sup>2</sup>/24</th> <th>0.87*(I+I<sub>0</sub>)/24</th> <th>CU FT</th> </tr> </thead> <tbody> <tr><td>10</td><td>8.22</td><td>80.80</td><td>48.48</td><td>7.69</td><td>39,561.91</td></tr> <tr><td>15</td><td>7.83</td><td>87.96</td><td>53.66</td><td>8.34</td><td>50,842.17</td></tr> <tr><td>20</td><td>7.47</td><td>94.98</td><td>58.73</td><td>8.97</td><td>60,779.29</td></tr> <tr><td>25</td><td>7.14</td><td>101.86</td><td>63.70</td><td>9.58</td><td>69,320.37</td></tr> <tr><td>30</td><td>6.83</td><td>108.60</td><td>68.57</td><td>10.17</td><td>76,500.00</td></tr> <tr><td>35</td><td>6.54</td><td>115.20</td><td>73.35</td><td>10.74</td><td>82,360.00</td></tr> <tr><td>40</td><td>6.27</td><td>121.66</td><td>78.04</td><td>11.29</td><td>86,840.00</td></tr> <tr><td>45</td><td>6.02</td><td>128.00</td><td>82.65</td><td>11.82</td><td>89,880.00</td></tr> <tr><td>50</td><td>5.78</td><td>134.20</td><td>87.18</td><td>12.33</td><td>91,440.00</td></tr> <tr><td>55</td><td>5.56</td><td>140.28</td><td>91.63</td><td>12.82</td><td>91,560.00</td></tr> <tr><td>60</td><td>5.35</td><td>146.24</td><td>96.00</td><td>13.29</td><td>90,000.00</td></tr> <tr><td>65</td><td>5.15</td><td>152.08</td><td>100.29</td><td>13.74</td><td>86,880.00</td></tr> <tr><td>70</td><td>4.96</td><td>157.80</td><td>104.51</td><td>14.17</td><td>82,160.00</td></tr> <tr><td>75</td><td>4.78</td><td>163.40</td><td>108.67</td><td>14.58</td><td>75,880.00</td></tr> <tr><td>80</td><td>4.61</td><td>168.88</td><td>112.68</td><td>14.97</td><td>68,000.00</td></tr> <tr><td>85</td><td>4.46</td><td>174.24</td><td>116.54</td><td>15.34</td><td>58,560.00</td></tr> <tr><td>90</td><td>4.32</td><td>179.48</td><td>120.26</td><td>15.69</td><td>47,600.00</td></tr> <tr><td>95</td><td>4.19</td><td>184.60</td><td>123.83</td><td>16.02</td><td>35,160.00</td></tr> <tr><td>100</td><td>4.07</td><td>189.60</td><td>127.26</td><td>16.33</td><td>21,240.00</td></tr> </tbody> </table>	Time	Intensity	Discharge	Inflow	Outflow	Storage	T <sup>2</sup> /24	CFS/IN	CFS	T <sup>2</sup> /24	0.87*(I+I <sub>0</sub> )/24	CU FT	10	8.22	80.80	48.48	7.69	39,561.91	15	7.83	87.96	53.66	8.34	50,842.17	20	7.47	94.98	58.73	8.97	60,779.29	25	7.14	101.86	63.70	9.58	69,320.37	30	6.83	108.60	68.57	10.17	76,500.00	35	6.54	115.20	73.35	10.74	82,360.00	40	6.27	121.66	78.04	11.29	86,840.00	45	6.02	128.00	82.65	11.82	89,880.00	50	5.78	134.20	87.18	12.33	91,440.00	55	5.56	140.28	91.63	12.82	91,560.00	60	5.35	146.24	96.00	13.29	90,000.00	65	5.15	152.08	100.29	13.74	86,880.00	70	4.96	157.80	104.51	14.17	82,160.00	75	4.78	163.40	108.67	14.58	75,880.00	80	4.61	168.88	112.68	14.97	68,000.00	85	4.46	174.24	116.54	15.34	58,560.00	90	4.32	179.48	120.26	15.69	47,600.00	95	4.19	184.60	123.83	16.02	35,160.00	100	4.07	189.60	127.26	16.33	21,240.00	<table border="1"> <thead> <tr> <th>Time</th> <th>Intensity</th> <th>Discharge</th> <th>Inflow</th> <th>Outflow</th> <th>Storage</th> </tr> <tr> <th>T<sup>2</sup>/24</th> <th>CFS/IN</th> <th>CFS</th> <th>T<sup>2</sup>/24</th> <th>0.87*(I+I<sub>0</sub>)/24</th> <th>CU FT</th> </tr> </thead> <tbody> <tr><td>10</td><td>9.01</td><td>88.58</td><td>53.14</td><td>8.21</td><td>43,117.08</td></tr> <tr><td>15</td><td>8.58</td><td>95.28</td><td>58.32</td><td>8.84</td><td>54,397.24</td></tr> <tr><td>20</td><td>8.17</td><td>101.86</td><td>63.40</td><td>9.45</td><td>64,677.40</td></tr> <tr><td>25</td><td>7.78</td><td>108.34</td><td>68.38</td><td>10.04</td><td>73,957.56</td></tr> <tr><td>30</td><td>7.41</td><td>114.72</td><td>73.26</td><td>10.61</td><td>82,237.72</td></tr> <tr><td>35</td><td>7.06</td><td>121.00</td><td>78.04</td><td>11.16</td><td>89,517.88</td></tr> <tr><td>40</td><td>6.73</td><td>127.18</td><td>82.72</td><td>11.69</td><td>95,798.04</td></tr> <tr><td>45</td><td>6.42</td><td>133.26</td><td>87.30</td><td>12.20</td><td>101,078.20</td></tr> <tr><td>50</td><td>6.13</td><td>139.24</td><td>91.78</td><td>12.69</td><td>105,358.36</td></tr> <tr><td>55</td><td>5.86</td><td>145.12</td><td>96.16</td><td>13.16</td><td>108,638.52</td></tr> <tr><td>60</td><td>5.61</td><td>150.90</td><td>100.44</td><td>13.61</td><td>110,918.68</td></tr> <tr><td>65</td><td>5.38</td><td>156.58</td><td>104.62</td><td>14.04</td><td>112,198.84</td></tr> <tr><td>70</td><td>5.17</td><td>162.16</td><td>108.70</td><td>14.45</td><td>112,479.00</td></tr> <tr><td>75</td><td>4.98</td><td>167.64</td><td>112.68</td><td>14.84</td><td>111,759.16</td></tr> <tr><td>80</td><td>4.81</td><td>173.02</td><td>116.56</td><td>15.21</td><td>110,039.32</td></tr> <tr><td>85</td><td>4.65</td><td>178.30</td><td>120.34</td><td>15.56</td><td>107,319.48</td></tr> <tr><td>90</td><td>4.51</td><td>183.48</td><td>124.02</td><td>15.89</td><td>103,599.64</td></tr> <tr><td>95</td><td>4.38</td><td>188.56</td><td>127.60</td><td>16.20</td><td>98,879.80</td></tr> <tr><td>100</td><td>4.26</td><td>193.54</td><td>131.08</td><td>16.49</td><td>93,159.96</td></tr> </tbody> </table>	Time	Intensity	Discharge	Inflow	Outflow	Storage	T <sup>2</sup> /24	CFS/IN	CFS	T <sup>2</sup> /24	0.87*(I+I <sub>0</sub> )/24	CU FT	10	9.01	88.58	53.14	8.21	43,117.08	15	8.58	95.28	58.32	8.84	54,397.24	20	8.17	101.86	63.40	9.45	64,677.40	25	7.78	108.34	68.38	10.04	73,957.56	30	7.41	114.72	73.26	10.61	82,237.72	35	7.06	121.00	78.04	11.16	89,517.88	40	6.73	127.18	82.72	11.69	95,798.04	45	6.42	133.26	87.30	12.20	101,078.20	50	6.13	139.24	91.78	12.69	105,358.36	55	5.86	145.12	96.16	13.16	108,638.52	60	5.61	150.90	100.44	13.61	110,918.68	65	5.38	156.58	104.62	14.04	112,198.84	70	5.17	162.16	108.70	14.45	112,479.00	75	4.98	167.64	112.68	14.84	111,759.16	80	4.81	173.02	116.56	15.21	110,039.32	85	4.65	178.30	120.34	15.56	107,319.48	90	4.51	183.48	124.02	15.89	103,599.64	95	4.38	188.56	127.60	16.20	98,879.80	100	4.26	193.54	131.08	16.49	93,159.96
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100	4.61	187.80	123.23	13.05	65,600.00																																																																																																																																																																																																																																																																																																																																																																																								
Time	Intensity	Discharge	Inflow	Outflow	Storage																																																																																																																																																																																																																																																																																																																																																																																								
T <sup>2</sup> /24	CFS/IN	CFS	T <sup>2</sup> /24	0.87*(I+I <sub>0</sub> )/24	CU FT																																																																																																																																																																																																																																																																																																																																																																																								
10	8.22	80.80	48.48	7.69	39,561.91																																																																																																																																																																																																																																																																																																																																																																																								
15	7.83	87.96	53.66	8.34	50,842.17																																																																																																																																																																																																																																																																																																																																																																																								
20	7.47	94.98	58.73	8.97	60,779.29																																																																																																																																																																																																																																																																																																																																																																																								
25	7.14	101.86	63.70	9.58	69,320.37																																																																																																																																																																																																																																																																																																																																																																																								
30	6.83	108.60	68.57	10.17	76,500.00																																																																																																																																																																																																																																																																																																																																																																																								
35	6.54	115.20	73.35	10.74	82,360.00																																																																																																																																																																																																																																																																																																																																																																																								
40	6.27	121.66	78.04	11.29	86,840.00																																																																																																																																																																																																																																																																																																																																																																																								
45	6.02	128.00	82.65	11.82	89,880.00																																																																																																																																																																																																																																																																																																																																																																																								
50	5.78	134.20	87.18	12.33	91,440.00																																																																																																																																																																																																																																																																																																																																																																																								
55	5.56	140.28	91.63	12.82	91,560.00																																																																																																																																																																																																																																																																																																																																																																																								
60	5.35	146.24	96.00	13.29	90,000.00																																																																																																																																																																																																																																																																																																																																																																																								
65	5.15	152.08	100.29	13.74	86,880.00																																																																																																																																																																																																																																																																																																																																																																																								
70	4.96	157.80	104.51	14.17	82,160.00																																																																																																																																																																																																																																																																																																																																																																																								
75	4.78	163.40	108.67	14.58	75,880.00																																																																																																																																																																																																																																																																																																																																																																																								
80	4.61	168.88	112.68	14.97	68,000.00																																																																																																																																																																																																																																																																																																																																																																																								
85	4.46	174.24	116.54	15.34	58,560.00																																																																																																																																																																																																																																																																																																																																																																																								
90	4.32	179.48	120.26	15.69	47,600.00																																																																																																																																																																																																																																																																																																																																																																																								
95	4.19	184.60	123.83	16.02	35,160.00																																																																																																																																																																																																																																																																																																																																																																																								
100	4.07	189.60	127.26	16.33	21,240.00																																																																																																																																																																																																																																																																																																																																																																																								
Time	Intensity	Discharge	Inflow	Outflow	Storage																																																																																																																																																																																																																																																																																																																																																																																								
T <sup>2</sup> /24	CFS/IN	CFS	T <sup>2</sup> /24	0.87*(I+I <sub>0</sub> )/24	CU FT																																																																																																																																																																																																																																																																																																																																																																																								
10	9.01	88.58	53.14	8.21	43,117.08																																																																																																																																																																																																																																																																																																																																																																																								
15	8.58	95.28	58.32	8.84	54,397.24																																																																																																																																																																																																																																																																																																																																																																																								
20	8.17	101.86	63.40	9.45	64,677.40																																																																																																																																																																																																																																																																																																																																																																																								
25	7.78	108.34	68.38	10.04	73,957.56																																																																																																																																																																																																																																																																																																																																																																																								
30	7.41	114.72	73.26	10.61	82,237.72																																																																																																																																																																																																																																																																																																																																																																																								
35	7.06	121.00	78.04	11.16	89,517.88																																																																																																																																																																																																																																																																																																																																																																																								
40	6.73	127.18	82.72	11.69	95,798.04																																																																																																																																																																																																																																																																																																																																																																																								
45	6.42	133.26	87.30	12.20	101,078.20																																																																																																																																																																																																																																																																																																																																																																																								
50	6.13	139.24	91.78	12.69	105,358.36																																																																																																																																																																																																																																																																																																																																																																																								
55	5.86	145.12	96.16	13.16	108,638.52																																																																																																																																																																																																																																																																																																																																																																																								
60	5.61	150.90	100.44	13.61	110,918.68																																																																																																																																																																																																																																																																																																																																																																																								
65	5.38	156.58	104.62	14.04	112,198.84																																																																																																																																																																																																																																																																																																																																																																																								
70	5.17	162.16	108.70	14.45	112,479.00																																																																																																																																																																																																																																																																																																																																																																																								
75	4.98	167.64	112.68	14.84	111,759.16																																																																																																																																																																																																																																																																																																																																																																																								
80	4.81	173.02	116.56	15.21	110,039.32																																																																																																																																																																																																																																																																																																																																																																																								
85	4.65	178.30	120.34	15.56	107,319.48																																																																																																																																																																																																																																																																																																																																																																																								
90	4.51	183.48	124.02	15.89	103,599.64																																																																																																																																																																																																																																																																																																																																																																																								
95	4.38	188.56	127.60	16.20	98,879.80																																																																																																																																																																																																																																																																																																																																																																																								
100	4.26	193.54	131.08	16.49	93,159.96																																																																																																																																																																																																																																																																																																																																																																																								
5) STORAGE PROVIDED		<table border="1"> <thead> <tr> <th>ELEV</th> <th>AREA</th> <th>AVE. AREA</th> <th>VOLUME</th> <th>CUM. VOL.</th> <th>COMMENTS</th> </tr> </thead> <tbody> <tr><td>467</td><td>15,038</td><td>14,601.5</td><td>14,601.5</td><td>136,662.5</td><td></td></tr> <tr><td>466</td><td>14,165</td><td>13,134</td><td>13,134</td><td>122,061</td><td></td></tr> <tr><td>465</td><td>12,103</td><td>12,103</td><td>12,103</td><td>108,927</td><td></td></tr> <tr><td>464</td><td>12,103</td><td>12,103</td><td>12,103</td><td>96,824</td><td></td></tr> <tr><td>463</td><td>12,103</td><td>12,103</td><td>12,103</td><td>84,721</td><td></td></tr> <tr><td>462</td><td>12,103</td><td>12,103</td><td>12,103</td><td>72,618</td><td></td></tr> <tr><td>461</td><td>12,103</td><td>12,103</td><td>12,103</td><td>60,515</td><td></td></tr> <tr><td>456</td><td>12,103</td><td>12,103</td><td>60,515</td><td></td><td></td></tr> </tbody> </table>	ELEV	AREA	AVE. AREA	VOLUME	CUM. VOL.	COMMENTS	467	15,038	14,601.5	14,601.5	136,662.5		466	14,165	13,134	13,134	122,061		465	12,103	12,103	12,103	108,927		464	12,103	12,103	12,103	96,824		463	12,103	12,103	12,103	84,721		462	12,103	12,103	12,103	72,618		461	12,103	12,103	12,103	60,515		456	12,103	12,103	60,515																																																																																																																																																																																																																																																																																																																																							
ELEV	AREA	AVE. AREA	VOLUME	CUM. VOL.	COMMENTS																																																																																																																																																																																																																																																																																																																																																																																								
467	15,038	14,601.5	14,601.5	136,662.5																																																																																																																																																																																																																																																																																																																																																																																									
466	14,165	13,134	13,134	122,061																																																																																																																																																																																																																																																																																																																																																																																									
465	12,103	12,103	12,103	108,927																																																																																																																																																																																																																																																																																																																																																																																									
464	12,103	12,103	12,103	96,824																																																																																																																																																																																																																																																																																																																																																																																									
463	12,103	12,103	12,103	84,721																																																																																																																																																																																																																																																																																																																																																																																									
462	12,103	12,103	12,103	72,618																																																																																																																																																																																																																																																																																																																																																																																									
461	12,103	12,103	12,103	60,515																																																																																																																																																																																																																																																																																																																																																																																									
456	12,103	12,103	60,515																																																																																																																																																																																																																																																																																																																																																																																										
6) WATER SURFACE ELEVATION	96,824.0 - 84,721.0 = 12,103 84,845.75 - 84,721.0 = 124.75 124.75/12,103 = 0.01 ELEV = 463.00 + 0.01 = 463.01	96,824.0 - 84,721.0 = 12,103 96,809.47 - 84,721.0 = 12,088.47 12,088.47/12,103 = 0.99 ELEV = 463.00 + 0.99 = 463.99	108,927.0 - 96,824.0 = 12,103 103,341.7 - 96,824.0 = 6,517.73 6,517.73/12,103 = 0.54 ELEV = 464.00 + 0.54 = 464.54	136,662.5 - 122,061.0 = 14,601.5 129,720.0 - 122,061.0 = 7,659.0 7,659.0/14,601.5 = 0.52 ELEV = 466.00 + 0.52 = 466.52																																																																																																																																																																																																																																																																																																																																																																																									

REVISED TO CONFORM TO CONSTRUCTION RECORDS.  
 DATE: 12-1-16



7) ACTUAL OUTFLOW	H = TOTAL HEAD = 463.01 - 455.07 = 7.94 Q = 2.5 * 7.94 <sup>2.5</sup> * TAN 1.925/2 = 7.46 CFS	H = TOTAL HEAD = 463.99 - 455.07 = 8.92 Q = 2.5 * 8.92 <sup>2.5</sup> * TAN 1.925/2 = 9.98 CFS	H = TOTAL HEAD = 464.54 - 455.07 = 9.47 Q = 2.5 * 9.47 <sup>2.5</sup> * TAN 1.925/2 = 11.59 CFS	H = TOTAL HEAD = 466.52 - 455.07 = 11.45 Q = 2.5 * 11.45 <sup>2.5</sup> * TAN 1.925/2 = 18.63 CFS
REVISION	WLD	YMB	10/14	9919-4
CHECKED	DRAWN	DATE	PROJECT	
				12.0