



COMUNE DI CASOLE D'ELSA

REGOLAMENTO URBANISTICO VARIANTE GENERALE

SINDACO

Piero Pii

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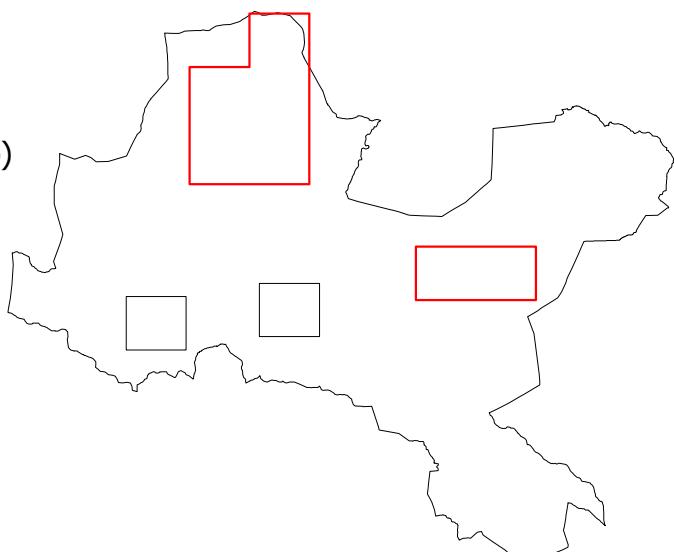
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STUDIO IDRAULICO

ALLEGATO IDRAULICO 2 - RISULTATI DELLA
MODELLOAZIONE DEI CORSI D'ACQUA INSISTENTI
SULL'AREA INDUSTRIALE IL PIANO

Marzo 2014

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(Per la decodifica delle sigle fare riferimento alla Relazione Illustrativa o alle tavole grafiche allegate)

HEC-RAS Profile: Max WS (Continued)

| River | Reach | River Sta | Plan | Q Total (m3/s) | Min Ch El (m) | W.S. Elev (m) | Crit W.S. (m) | E.G. Elev (m) | E.G. Slope (m/m) | Vel Chnl (m/s) | Flow Area (m2) | Top Width (m) | Froude # Chl |
|--------|----------|-----------|--------|-------------------|------------------|------------------|------------------|------------------|---------------------|-------------------|-------------------|------------------|--------------|
| Af1_BF | tratto 1 | 2 | 30d1h | 0.47 | 255.73 | 255.98 | | 256.03 | 0.021898 | 1.00 | 0.47 | 2.69 | 0.76 |
| Af1_BF | tratto 1 | 1.5 | | | Lat Struct | | | | | | | | |
| Af1_BF | tratto 1 | 1.1 | 200d1h | 0.54 | 254.13 | 254.93 | | 254.94 | 0.002261 | 0.52 | 1.04 | 2.50 | 0.26 |
| Af1_BF | tratto 1 | 1.1 | 100d1h | 0.52 | 254.13 | 254.92 | | 254.94 | 0.002146 | 0.50 | 1.04 | 2.50 | 0.25 |
| Af1_BF | tratto 1 | 1.1 | 30d1h | 0.50 | 254.13 | 254.92 | | 254.93 | 0.001959 | 0.48 | 1.03 | 2.48 | 0.24 |
| Af1_BF | tratto 1 | 1 | 200d1h | 0.54 | 254.13 | 254.92 | | 254.94 | 0.004103 | 0.52 | 1.04 | 2.49 | 0.26 |
| Af1_BF | tratto 1 | 1 | 100d1h | 0.52 | 254.13 | 254.92 | | 254.93 | 0.003893 | 0.51 | 1.03 | 2.48 | 0.25 |
| Af1_BF | tratto 1 | 1 | 30d1h | 0.50 | 254.13 | 254.92 | | 254.93 | 0.003547 | 0.48 | 1.02 | 2.47 | 0.24 |

HEC-RAS Profile: Max WS

| Storage Area | Plan | W.S. Elev | SA Min El | Net Flux | SA Area | SA Volume |
|--------------|--------|-----------|-----------|----------|-----------|-----------|
| | | (m) | (m) | (m3/s) | (1000 m2) | (1000 m3) |
| ape A | 200d1h | 252.27 | 251.10 | 42.52 | 22.38 | 12.08 |
| ape A | 100d1h | 252.19 | 251.10 | 26.62 | 22.38 | 10.35 |
| ape A | 30d1h | 251.86 | 251.10 | 12.87 | 12.65 | 4.28 |
| | | | | | | |
| ape AA | 200d1h | 259.64 | 259.30 | 0.49 | 2.01 | 0.33 |
| ape AA | 100d1h | 259.60 | 259.30 | 0.36 | 2.01 | 0.26 |
| ape AA | 30d1h | 259.53 | 259.30 | 0.17 | 2.01 | 0.11 |
| | | | | | | |
| ape B | 200d1h | 252.27 | 251.20 | 40.68 | 17.52 | 8.87 |
| ape B | 100d1h | 252.19 | 251.20 | 24.94 | 17.52 | 7.51 |
| ape B | 30d1h | 251.88 | 251.20 | 10.79 | 10.05 | 2.88 |
| | | | | | | |
| ape BB | 200d1h | 254.61 | 254.00 | 0.85 | 9.23 | 2.69 |
| ape BB | 100d1h | 254.59 | 254.00 | 0.94 | 9.23 | 2.47 |
| ape BB | 30d1h | 254.55 | 254.00 | 0.96 | 9.23 | 2.07 |
| | | | | | | |
| ape C | 200d1h | 254.96 | 254.57 | 0.00 | 0.15 | 0.06 |
| ape C | 100d1h | 254.95 | 254.57 | 0.00 | 0.15 | 0.06 |
| ape C | 30d1h | 254.94 | 254.57 | 0.00 | 0.15 | 0.06 |
| | | | | | | |
| ape CC | 200d1h | 258.88 | 257.90 | 0.01 | 0.04 | 0.04 |
| ape CC | 100d1h | 258.71 | 257.90 | 0.01 | 0.04 | 0.03 |
| ape CC | 30d1h | 258.47 | 257.90 | 0.01 | 0.04 | 0.02 |
| | | | | | | |
| ape D | 200d1h | 255.80 | 255.20 | 3.19 | 0.65 | 0.22 |
| ape D | 100d1h | 255.76 | 255.20 | 2.27 | 0.65 | 0.20 |
| ape D | 30d1h | 255.73 | 255.20 | 1.51 | 0.65 | 0.18 |
| | | | | | | |
| ape DD | 200d1h | 256.74 | 255.80 | 1.06 | 6.28 | 2.32 |
| ape DD | 100d1h | 256.67 | 255.80 | 0.96 | 6.28 | 1.83 |
| ape DD | 30d1h | 256.55 | 255.80 | 0.64 | 6.28 | 1.10 |
| | | | | | | |
| ape E | 200d1h | 253.70 | 253.30 | 0.19 | 0.08 | 0.03 |
| ape E | 100d1h | 253.66 | 253.30 | 0.39 | 0.08 | 0.03 |
| ape E | 30d1h | 253.60 | 253.30 | 0.09 | 0.08 | 0.02 |
| | | | | | | |
| ape EE | 200d1h | 255.53 | 255.00 | 1.64 | 14.48 | 4.23 |
| ape EE | 100d1h | 255.46 | 255.00 | 1.74 | 14.48 | 3.18 |
| ape EE | 30d1h | 255.32 | 255.00 | 1.07 | 14.48 | 1.18 |
| | | | | | | |
| ape F | 200d1h | 253.60 | 253.00 | 0.55 | 3.18 | 0.55 |
| ape F | 100d1h | 253.56 | 253.00 | 0.23 | 3.18 | 0.43 |
| ape F | 30d1h | 253.50 | 253.00 | -0.02 | 0.70 | 0.22 |
| | | | | | | |
| ape FF | 200d1h | 252.76 | 252.60 | 0.02 | 0.41 | 0.06 |
| ape FF | 100d1h | 252.75 | 252.60 | 0.01 | 0.41 | 0.06 |
| ape FF | 30d1h | 252.73 | 252.60 | 0.00 | 0.41 | 0.05 |
| | | | | | | |
| ape G | 200d1h | 253.61 | 252.60 | 4.33 | 14.27 | 2.61 |
| ape G | 100d1h | 253.57 | 252.60 | 0.87 | 14.27 | 2.06 |
| ape G | 30d1h | 253.51 | 252.60 | 0.31 | 14.27 | 1.16 |
| | | | | | | |
| ape GG | 200d1h | 254.19 | 253.30 | 0.60 | 5.96 | 1.29 |
| ape GG | 100d1h | 254.04 | 253.30 | 0.25 | 2.18 | 0.63 |
| ape GG | 30d1h | 253.82 | 253.30 | 0.01 | 2.18 | 0.13 |
| | | | | | | |
| ape H | 200d1h | 257.22 | 256.60 | 3.48 | 0.41 | 0.09 |
| ape H | 100d1h | 257.18 | 256.60 | 2.52 | 0.41 | 0.07 |
| ape H | 30d1h | 257.14 | 256.60 | 1.64 | 0.41 | 0.06 |
| | | | | | | |
| ape HH | 200d1h | 252.72 | 252.00 | 3.63 | 23.48 | 8.54 |
| ape HH | 100d1h | 252.65 | 252.00 | 3.70 | 23.48 | 6.87 |

HEC-RAS Profile: Max WS (Continued)

| Storage Area | Plan | W.S. Elev (m) | SA Min El (m) | Net Flux (m3/s) | SA Area (1000 m2) | SA Volume (1000 m3) |
|--------------|--------|------------------|------------------|--------------------|----------------------|------------------------|
| ape HH | 30d1h | 252.52 | 252.00 | 1.72 | 15.51 | 4.49 |
| ape I | 200d1h | 253.47 | 253.20 | 0.04 | 0.49 | 0.13 |
| ape I | 100d1h | 253.44 | 253.20 | 0.06 | 0.49 | 0.12 |
| ape I | 30d1h | 253.38 | 253.20 | 0.12 | 0.49 | 0.09 |
| ape II | 200d1h | 252.37 | 250.40 | 0.22 | 8.13 | 1.30 |
| ape II | 100d1h | 252.34 | 250.40 | 0.18 | 8.13 | 0.98 |
| ape II | 30d1h | 252.25 | 250.40 | 0.06 | 2.10 | 0.58 |
| ape J | 200d1h | 257.12 | 256.40 | 0.81 | 10.52 | 1.85 |
| ape J | 100d1h | 257.05 | 256.40 | 0.58 | 4.87 | 1.45 |
| ape J | 30d1h | 256.90 | 256.40 | 0.51 | 4.87 | 0.71 |
| ape JJ | 200d1h | 256.08 | 255.60 | 0.46 | 3.88 | 0.71 |
| ape JJ | 100d1h | 255.93 | 255.60 | 0.11 | 3.88 | 0.13 |
| ape JJ | 30d1h | 255.60 | 255.60 | 0.00 | 0.07 | 0.00 |
| ape K | 200d1h | 256.83 | 255.80 | 1.46 | 10.10 | 2.89 |
| ape K | 100d1h | 256.76 | 255.80 | 1.13 | 5.59 | 2.37 |
| ape K | 30d1h | 256.62 | 255.80 | 3.31 | 5.59 | 1.59 |
| ape L | 200d1h | 253.05 | 252.30 | 1.84 | 17.04 | 4.44 |
| ape L | 100d1h | 252.99 | 252.30 | 1.88 | 17.04 | 3.53 |
| ape L | 30d1h | 252.92 | 252.30 | 1.98 | 17.04 | 2.23 |
| ape LL | 200d1h | 252.22 | 250.00 | 10.58 | 32.21 | 19.22 |
| ape LL | 100d1h | 252.02 | 250.00 | 7.38 | 32.21 | 12.66 |
| ape LL | 30d1h | 251.12 | 250.00 | 0.17 | 2.80 | 0.09 |
| ape M | 200d1h | 252.37 | 251.40 | 2.23 | 18.38 | 5.03 |
| ape M | 100d1h | 252.32 | 251.40 | 1.48 | 18.38 | 4.10 |
| ape M | 30d1h | 252.23 | 251.40 | 0.65 | 10.63 | 3.00 |
| ape MM | 200d1h | 250.99 | 250.90 | 0.20 | 3.71 | 0.35 |
| ape MM | 100d1h | 250.94 | 250.90 | 0.11 | 3.71 | 0.17 |
| ape MM | 30d1h | 250.90 | 250.90 | 0.00 | 3.71 | 0.00 |
| ape N | 200d1h | 252.52 | 251.90 | 0.03 | 0.37 | 0.10 |
| ape N | 100d1h | 252.47 | 251.90 | 0.02 | 0.37 | 0.08 |
| ape N | 30d1h | 252.36 | 251.90 | 0.01 | 0.37 | 0.04 |
| ape NN | 200d1h | 250.58 | 248.90 | 55.45 | 36.35 | 21.57 |
| ape NN | 100d1h | 249.90 | 248.90 | 2.26 | 7.20 | 3.20 |
| ape NN | 30d1h | 249.43 | 248.90 | 0.42 | 2.75 | 0.60 |
| ape O | 200d1h | 252.01 | 251.10 | 4.50 | 28.55 | 7.77 |
| ape O | 100d1h | 251.83 | 251.10 | 2.61 | 16.93 | 4.41 |
| ape O | 30d1h | 251.42 | 251.10 | 0.28 | 6.89 | 0.35 |
| ape OO | 200d1h | 256.18 | 255.10 | 4.46 | 22.09 | 7.86 |
| ape OO | 100d1h | 256.01 | 255.10 | 2.26 | 22.09 | 4.11 |
| ape OO | 30d1h | 255.43 | 255.10 | 0.22 | 1.15 | 0.17 |
| ape P | 200d1h | 252.26 | 250.60 | 10.93 | 10.06 | 10.71 |
| ape P | 100d1h | 252.18 | 250.60 | 8.12 | 10.06 | 9.94 |
| ape P | 30d1h | 251.85 | 250.60 | 9.22 | 9.26 | 6.71 |
| ape PP | 200d1h | 254.90 | 254.00 | 1.15 | 8.16 | 3.34 |
| ape PP | 100d1h | 254.84 | 254.00 | 0.99 | 8.16 | 2.89 |
| ape PP | 30d1h | 254.72 | 254.00 | 0.81 | 8.16 | 1.87 |

HEC-RAS Profile: Max WS (Continued)

| Storage Area | Plan | W.S. Elev | SA Min El | Net Flux | SA Area | SA Volume |
|--------------|--------|-----------|-----------|----------|-----------|-----------|
| | | (m) | (m) | (m3/s) | (1000 m2) | (1000 m3) |
| ape Q | 200d1h | 255.63 | 255.30 | 2.34 | 3.42 | 0.31 |
| ape Q | 100d1h | 255.57 | 255.30 | 0.87 | 0.71 | 0.19 |
| ape Q | 30d1h | 255.48 | 255.30 | 0.31 | 0.71 | 0.13 |
| | | | | | | |
| ape QQ | 200d1h | 252.17 | 251.60 | 0.21 | 8.13 | 1.58 |
| ape QQ | 100d1h | 252.15 | 251.60 | 0.25 | 8.13 | 1.46 |
| ape QQ | 30d1h | 252.12 | 251.60 | 0.41 | 8.13 | 1.19 |
| | | | | | | |
| ape RR | 200d1h | 253.87 | 253.60 | 0.12 | 2.92 | 0.29 |
| ape RR | 100d1h | 253.85 | 253.60 | 0.10 | 2.92 | 0.24 |
| ape RR | 30d1h | 253.82 | 253.60 | 0.08 | 2.92 | 0.15 |
| | | | | | | |
| ape S | 200d1h | 253.87 | 253.40 | 0.97 | 3.87 | 0.36 |
| ape S | 100d1h | 253.83 | 253.40 | 0.60 | 3.87 | 0.21 |
| ape S | 30d1h | 253.78 | 253.40 | 0.19 | 0.27 | 0.08 |
| | | | | | | |
| ape SS | 200d1h | 252.12 | 251.80 | 0.71 | 9.77 | 1.23 |
| ape SS | 100d1h | 252.07 | 251.80 | 0.43 | 9.77 | 0.77 |
| ape SS | 30d1h | 252.03 | 251.80 | 0.19 | 9.77 | 0.31 |
| | | | | | | |
| ape T | 200d1h | 254.95 | 254.60 | 0.05 | 1.55 | 0.40 |
| ape T | 100d1h | 254.92 | 254.60 | -0.01 | 1.55 | 0.35 |
| ape T | 30d1h | 254.85 | 254.60 | 0.06 | 1.55 | 0.23 |
| | | | | | | |
| ape TT | 200d1h | 251.18 | 250.80 | 0.11 | 3.61 | 0.45 |
| ape TT | 100d1h | 251.16 | 250.80 | 0.05 | 3.61 | 0.37 |
| ape TT | 30d1h | 251.13 | 250.80 | 0.09 | 3.61 | 0.24 |
| | | | | | | |
| ape U | 200d1h | 253.78 | 252.60 | 2.84 | 7.28 | 3.46 |
| ape U | 100d1h | 253.75 | 252.60 | 2.72 | 7.28 | 3.19 |
| ape U | 30d1h | 253.68 | 252.60 | 1.48 | 7.28 | 2.70 |
| | | | | | | |
| ape UU | 200d1h | 249.87 | 249.50 | 0.18 | 1.09 | 0.30 |
| ape UU | 100d1h | 249.50 | 249.50 | 0.00 | 0.04 | 0.00 |
| ape UU | 30d1h | 249.50 | 249.50 | 0.00 | 0.04 | 0.00 |
| | | | | | | |
| ape V | 200d1h | 253.63 | 252.40 | 0.27 | 6.66 | 3.12 |
| ape V | 100d1h | 253.58 | 252.40 | 0.37 | 6.66 | 2.80 |
| ape V | 30d1h | 253.47 | 252.40 | 0.52 | 4.65 | 2.15 |
| | | | | | | |
| ape VV | 200d1h | 249.61 | 249.50 | 0.74 | 13.39 | 1.47 |
| ape VV | 100d1h | 249.50 | 249.50 | 0.00 | 13.39 | 0.00 |
| ape VV | 30d1h | 249.50 | 249.50 | 0.00 | 13.39 | 0.00 |
| | | | | | | |
| ape W | 200d1h | 252.83 | 252.00 | 0.02 | 1.50 | 0.97 |
| ape W | 100d1h | 252.76 | 252.00 | 0.13 | 1.50 | 0.85 |
| ape W | 30d1h | 252.55 | 252.00 | 0.01 | 1.42 | 0.55 |
| | | | | | | |
| ape WW | 200d1h | 255.08 | 254.50 | 0.55 | 10.26 | 1.08 |
| ape WW | 100d1h | 255.03 | 254.50 | 0.37 | 10.26 | 0.58 |
| ape WW | 30d1h | 254.95 | 254.50 | 0.15 | 0.96 | 0.25 |
| | | | | | | |
| ape X | 200d1h | 253.47 | 253.00 | 0.02 | 0.04 | 0.02 |
| ape X | 100d1h | 253.44 | 253.00 | 0.01 | 0.04 | 0.02 |
| ape X | 30d1h | 253.39 | 253.00 | 0.00 | 0.04 | 0.01 |
| | | | | | | |
| ape XX | 200d1h | 256.19 | 255.30 | 2.66 | 2.50 | 0.82 |
| ape XX | 100d1h | 256.12 | 255.30 | 1.79 | 2.50 | 0.64 |
| ape XX | 30d1h | 255.99 | 255.30 | 1.54 | 2.50 | 0.31 |
| | | | | | | |
| ape Y | 200d1h | 252.89 | 252.00 | -2.03 | 2.91 | 2.16 |
| ape Y | 100d1h | 252.81 | 252.00 | -0.87 | 2.91 | 1.91 |

HEC-RAS Profile: Max WS (Continued)

| Storage Area | Plan | W.S. Elev (m) | SA Min El (m) | Net Flux (m3/s) | SA Area (1000 m2) | SA Volume (1000 m3) |
|--------------|--------|------------------|------------------|--------------------|----------------------|------------------------|
| ape Y | 30d1h | 252.57 | 252.00 | 1.02 | 2.45 | 1.24 |
| ape YY | 200d1h | 255.11 | 254.90 | 0.06 | 2.22 | 0.26 |
| ape YY | 100d1h | 255.07 | 254.90 | 0.07 | 2.22 | 0.20 |
| ape YY | 30d1h | 255.02 | 254.90 | 0.04 | 2.22 | 0.07 |
| ape Z | 200d1h | 252.87 | 251.90 | 3.01 | 18.49 | 7.78 |
| ape Z | 100d1h | 252.79 | 251.90 | 3.33 | 18.49 | 6.17 |
| ape Z | 30d1h | 252.65 | 251.90 | 9.48 | 18.49 | 3.67 |

