

Team RTI

#### Material List

| Material | Surface Area [m <sup>2</sup> ] | Density [kg/m <sup>3</sup> ] |
|----------|--------------------------------|------------------------------|
| Steel    | 2,006                          | 7,850                        |
| Aluminum | 1,016                          | 2,660                        |
|          |                                |                              |

#### Representative Structural Thickness

| Material | Low [cm] | Operational [cm] | High [cm] |
|----------|----------|------------------|-----------|
| Steel    | 1.90     | 2.07             | 2.23      |
| Aluminum | 3.18     | 3.40             | 3.67      |
| -        |          |                  |           |

#### Manufactured Material Cost

| Material | Low [USD/Tonne] | Typical [USD/Tonne] | High [USD/Tonne] |
|----------|-----------------|---------------------|------------------|
| Steel    | \$2,250         | \$3,000             | \$4,500          |
| Aluminum | \$4,900         | \$5,900             | \$8,000          |
| -        |                 |                     |                  |

#### Characteristic Capital Expenditure (CCE)

CCE = Total Surface Area (m<sup>2</sup>) x Representative Structural Thickness (m) x Density of Material (kgm<sup>-3</sup>) x Cost of Manufactured Material per unit Mass (\$kg<sup>-1</sup>).

| Material | RST [cm] | MMC [USD/Tonne] | CCE/material [\$] | TOTAL CCE [\$] |
|----------|----------|-----------------|-------------------|----------------|
| Steel    | 2.07     | \$3,000         | \$977,895         | \$1,520,028    |
| Aluminum | 3.40     | \$5,900         | \$542,134         |                |
|          |          |                 |                   |                |

Notes/Comments