

مشروع أعمال إنشاء كوبرى الوراق على النيل ( القوس الخارجى ) حتى  
محور تحيا مصر من كم ٢ حتى ٤,٣٠٠ كم ضمن مشروع تطوير و  
توسعة الطريق الدائرى حول القاهرة الكبرى بالأمر المباشر مضافاً اليه  
إنشاء و تطوير الطريق الدائرى عند تقاطع الحضارات (القوس الخارجى)

دفتر الحصر

( ٤ )

## بند رقم (٦٧)

بالمتر المكعب اعمال خرسانة مسلحة Fair  
face لزوم الجزء العلوي من الكوبري  
box section

الكمية = ١٤٣٢,٥٥٦ م<sup>٣</sup>

الشركة المنفذة

شركة السعداء للمقاولات (ش.م.م)

استشاري المالك

مكتب محرم باخوم

المالك

الهيئة العامة للطرق والكباري

مشروع توسعة وتطوير الطريق الدائري القطاع الأول كوبري الوراق على النيل

بند رقم ( ٦٧ ) : بالمتر المكعب اعمال خرسانة مسلحة fair face لزوم الجزء العلوى للكوبرى box section شامل البلاطة السفلية و الويبرات و البلاطة العلوية و كوبستاتها بالجزيره مع استخدام اسمنت بورتلاندى عادى ومحتوى اسمنت لايزيد عن ٤٥٠ كجم/سم ٣ واجهاد لا يقل عن ٤٥٠ كجم/م ٢ علي ان يتم اضافة المواد اللازمة مثل سيلكا فيوم او ما يماثلها للوصول للاجهاد المطلوب و منع الشروخ والسعر لا يشمل حديد التسليح

| بيان الاعمال            | الوحدة | التكرار | القياسات |         |        | الإجمالي |          |
|-------------------------|--------|---------|----------|---------|--------|----------|----------|
|                         |        |         | طول      | عرض     | ارتفاع | تنزيلات  | كلية     |
| أعمال توريد وصب الأعمدة |        |         |          |         |        |          |          |
| A1 @ N28 LEDGE          | م ٣    | ١       | ٠,٨٧٥    | ٧,٧٣    |        |          | ٦,٧٦٤    |
| A2 @ DIA. N28           | م ٣    | ١       | ٢,٢      | ٣٨,٠٧١  |        |          | ٨٣,٧٥٦   |
| A2 @ DIA. N29           | م ٣    | ١       | ٢,٢      | ٣٨,٠٧١  |        |          | ٨٣,٧٥٦   |
| A2 @ DIA. N30           | م ٣    | ١       | ٢,٢      | ٣٨,٠٧١  |        |          | ٨٣,٧٥٦   |
| A2 @ DIA. N31           | م ٣    | ١       | ٢,٢      | ٣٨,٩٢٦  |        |          | ٨٥,٦٣٧   |
| A2 @ DIA. N31 LEDGE     | م ٣    | ١       | ٠,٦      | ٣٨,٩٢٦  |        |          | ٢٣,٣٥٦   |
| A3 @ AXES N28           | م ٣    | ١       | ٥        | ١٤,١٥٧٨ |        |          | ٧٠,٧٨٩   |
| A3 @ AXES N29           | م ٣    | ١       | ١٠       | ١٤,١٥٧٨ |        |          | ١٤١,٥٧٨  |
| A3 @ AXES N30           | م ٣    | ١       | ٨        | ١٤,١٥٧٨ |        |          | ١١٣,٢٦٢  |
| A3 @ AXES N31           | م ٣    | ١       | ٣        | ١٤,١٥٧٨ |        |          | ٤٢,٤٧٣   |
| A4 @ AXES N28           | م ٣    | ١       | ١        | ١٢,٨٨٠٨ |        |          | ١٢,٨٨١   |
| A4 @ AXES N29           | م ٣    | ١       | ٢        | ١٢,٨٨٠٨ |        |          | ٢٥,٧٦٢   |
| A4 @ AXES N30           | م ٣    | ١       | ٢        | ١٢,٨٨٠٨ |        |          | ٢٥,٧٦٢   |
| A4 @ AXES N31           | م ٣    | ١       | ١        | ١٢,٨٨٠٨ |        |          | ١٢,٨٨١   |
| A5 BET N28 & N29        | م ٣    | ١       | ٢٠,٣     | ١٢,٧٤٩٥ |        |          | ٢٥٨,٨١٥  |
| A5 BET N29 & N30        | م ٣    | ١       | ٢٢,٣     | ١٢,٧٤٩٥ |        |          | ٢٨٤,٣١٤  |
| A5 BET N30 & N31        | م ٣    | ١       | ٣,٧      | ١٢,٧٤٩٥ |        |          | ٤٧,١٧٣   |
| A6 BET N31 & N31 LEDGE  | م ٣    | ١       | ١,٩٥     | ١٥,٣٠٣٥ |        |          | ٢٩,٨٤٢   |
| إجمالي الصفحة           |        |         |          |         |        | ٠,٠٠٠    | ١٤٣٢,٥٥٦ |

مهندس هيئة الطرق والكباري

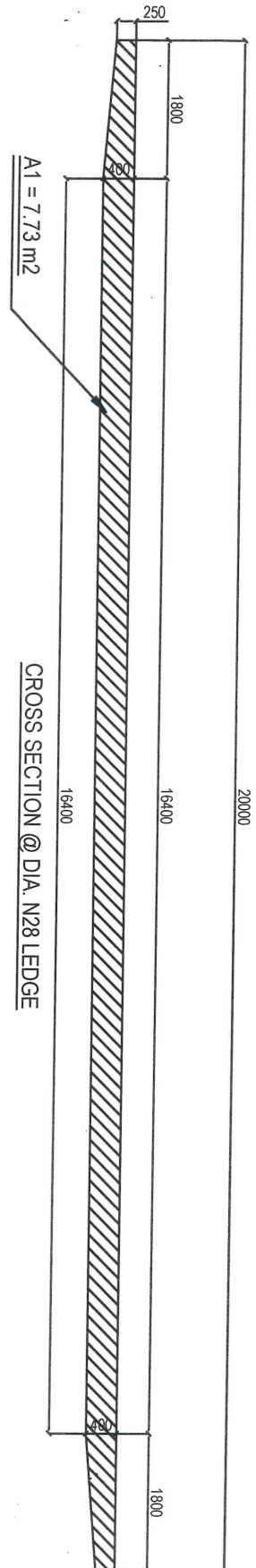
مهندس مكتب ( محرم - باخوم )

مهندس المكتب الفني

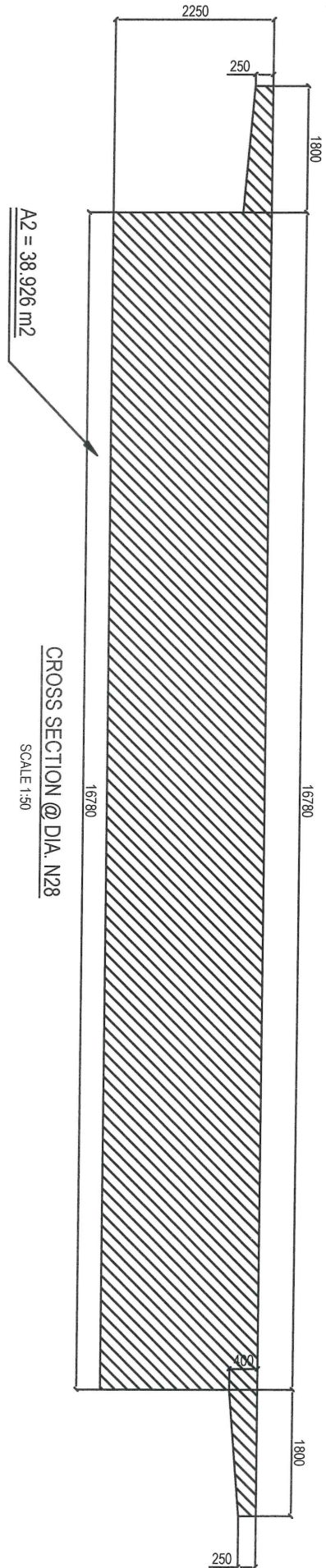
*(Signature)*





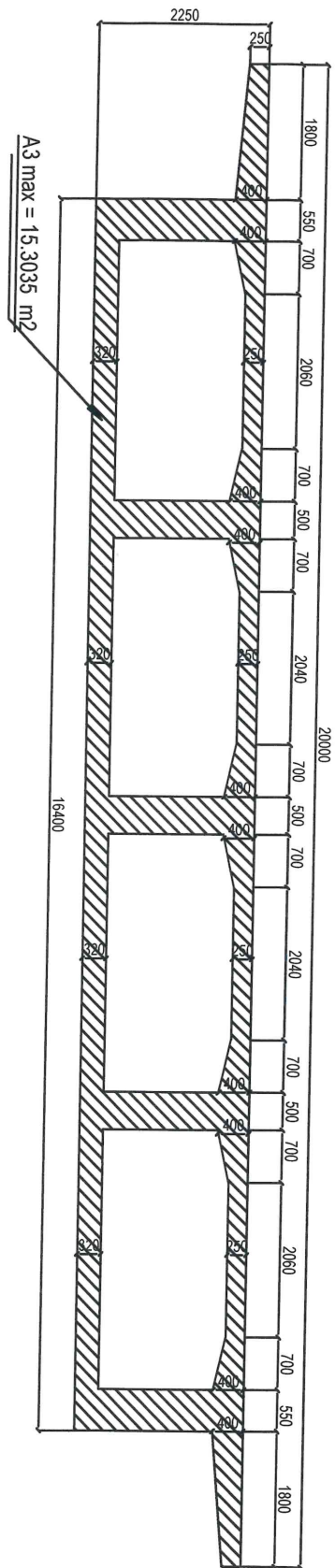


CROSS SECTION @ DIA. N28 LEDGE



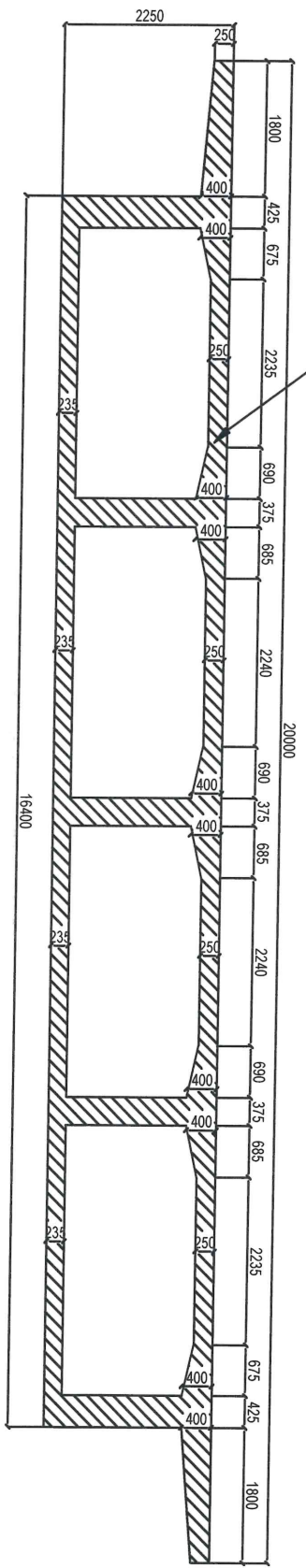
CROSS SECTION @ DIA. N28  
SCALE 1:50



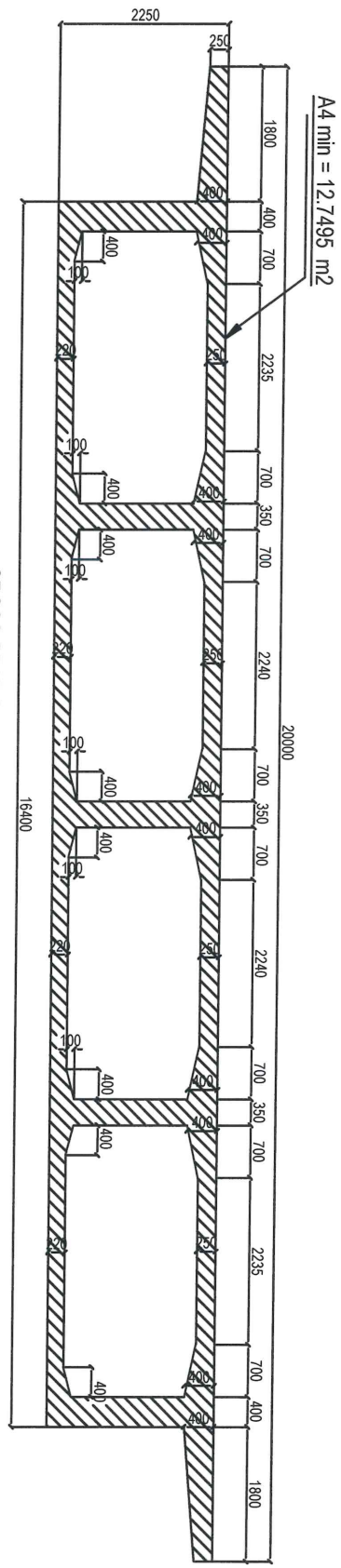
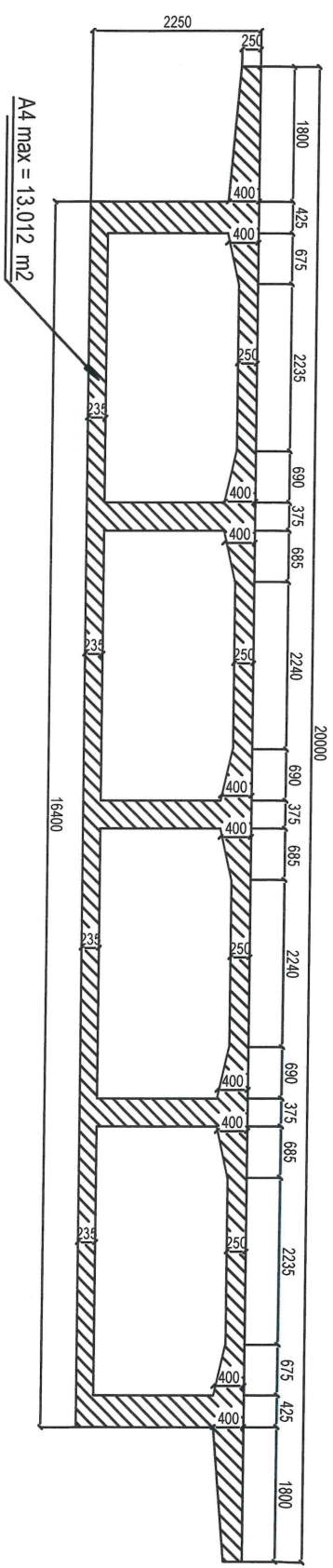


$A3 \text{ av.} = 14.1578 \text{ m}^2$

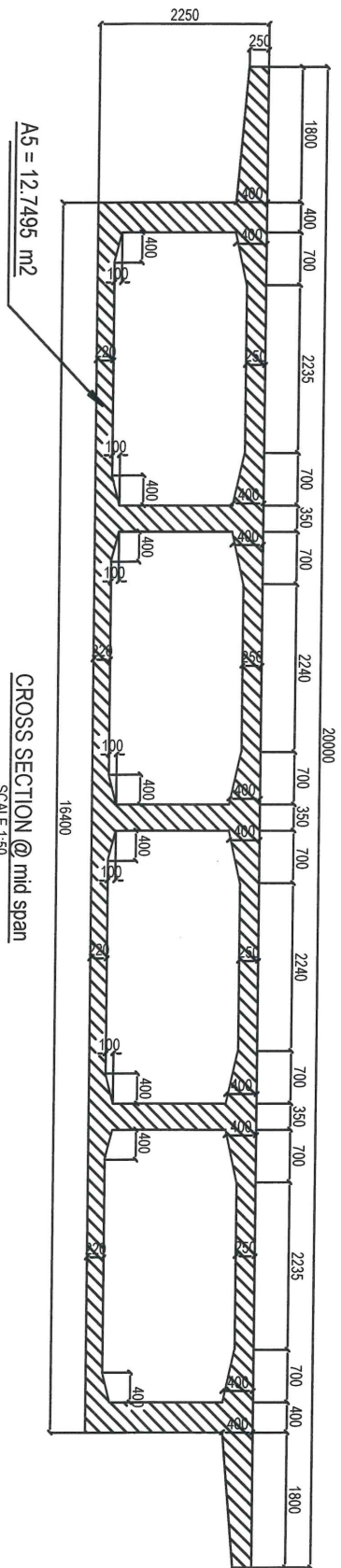
$A3 \text{ min} = 13.012 \text{ m}^2$



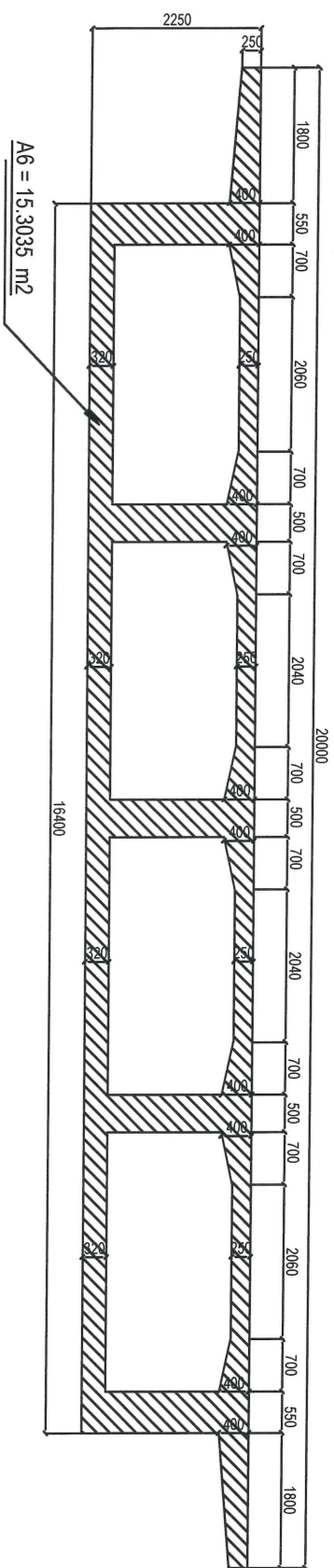
CROSS SECTION @ var sec at bottom slab without hunch and web  
SCALE 1:50



CROSS SECTION @ var sec at bottom slab with hunch and web  
SCALE 1:50



CROSS SECTION @ mid span  
SCALE 1:50





## بند رقم ( ٦٨ )

حصر حديد الجزيرة

الكمية = ١٠,٤١٠,١٥٠ اطن

## حصر اجمالي حديد محور الوراق الجزيرة

| العنصر | المحور | عدد | وزن (طن) | اجمالى (طن) | ملاحظات |
|--------|--------|-----|----------|-------------|---------|
| خوازيق | N23    | 10  | 5.990    | 59.903      |         |
| خوازيق | N24    | 4   | 6.087    | 24.350      |         |
| خوازيق | N25    | 8   | 5.139    | 41.112      |         |
| خوازيق | N26    | 8   | 5.305    | 42.439      |         |
| خوازيق | N27    | 4   | 5.352    | 21.408      |         |
| خوازيق | N28    | 4   | 5.352    | 21.408      |         |
| خوازيق | N29    | 8   | 5.085    | 40.679      |         |
| خوازيق | N30    | 8   | 4.981    | 39.847      |         |
| خوازيق | N31    | 4   | 5.637    | 22.549      |         |
| خوازيق | N32    | 10  | 5.728    | 57.276      |         |
| خوازيق | اجمالى | 68  | -        | 370.971     |         |
| قواعد  | N23    | 1   | 46.826   | 46.826      |         |
| قواعد  | N25    | 2   | 12.813   | 25.626      |         |
| قواعد  | N26    | 2   | 12.813   | 25.626      |         |
| قواعد  | N27    | 2   | 8.328    | 16.656      |         |
| قواعد  | N28-C1 | 1   | 8.328    | 8.328       |         |
| قواعد  | N28-C2 | 1   | 8.312    | 8.312       |         |
| قواعد  | N29-C1 | 1   | 12.772   | 12.772      |         |
| قواعد  | N29-C2 | 1   | 13.050   | 13.050      |         |
| قواعد  | N30    | 2   | 12.956   | 25.910      |         |
| قواعد  | N32    | 1   | 47.703   | 47.703      |         |
| قواعد  | اجمالى | 14  | -        | 230.809     |         |

المالك  
هيئة الطرق والكبارى  
م

استشارى المالك  
مكتب محرم باخوم

شركة المنفذ  
سعداء جروب  
شركة السعداء جروب  
الهندسة والبناء  
El Soadaa Group



## حصص اجمالي حديد محور الوراق الجزيرة



المهندسون الاستشاريون العرب  
محرم - بالقوم

الهيئة العامة  
للطرق والكبارى و النقل البرى  
(GARBLT)



| العنصر                    | المحور  | عدد | وزن (طن) | اجمالى (طن) | ملاحظات           |
|---------------------------|---------|-----|----------|-------------|-------------------|
| اعمدة                     | N24-C1  | 1   | 4.361    | 4.361       |                   |
| اعمدة                     | N24-C2  | 1   | 4.342    | 4.342       |                   |
| اعمدة                     | N24-C3  | 1   | 4.324    | 4.324       |                   |
| اعمدة                     | N24-C4  | 1   | 4.224    | 4.224       |                   |
| اعمدة                     | N25-C1  | 1   | 13.724   | 13.724      | عمود+تاج          |
| اعمدة                     | N25-C2  | 1   | 14.779   | 14.779      | عمود+تاج          |
| اعمدة                     | N26-C1  | 1   | 13.724   | 13.724      | عمود+تاج          |
| اعمدة                     | N26-C2  | 1   | 14.779   | 14.779      | عمود+تاج          |
| اعمدة                     | N27-C1  | 1   | 12.310   | 12.310      | عمود+تاج          |
| اعمدة                     | N27-C2  | 1   | 12.304   | 12.304      | عمود+تاج          |
| اعمدة                     | N28-C1  | 1   | 12.310   | 12.310      | عمود+تاج          |
| اعمدة                     | N28-C2  | 1   | 12.304   | 12.304      | عمود+تاج          |
| اعمدة                     | N29-C1  | 1   | 14.784   | 14.784      | عمود+تاج          |
| اعمدة                     | N29-C2  | 1   | 14.311   | 14.311      | عمود+تاج          |
| اعمدة                     | N30-C1  | 1   | 14.437   | 14.437      | عمود+تاج          |
| اعمدة                     | N30-C2  | 1   | 14.305   | 14.305      | عمود+تاج          |
| اعمدة                     | N31-C1  | 1   | 4.248    | 4.248       |                   |
| اعمدة                     | N31-C2  | 1   | 4.229    | 4.229       |                   |
| اعمدة                     | N31-C3  | 1   | 4.210    | 4.210       |                   |
| اعمدة                     | N31-C4  | 1   | 4.191    | 4.191       |                   |
| اعمدة                     | اجمالى  | 20  | -        | 198.200     |                   |
| قطاع صندوقى               | N24-N31 | 1   | 20.268   | 20.268      | ديافرام ٢٨        |
| قطاع صندوقى               | N24-N31 | 1   | 21.556   | 21.556      | ديافرام ٢٩        |
| قطاع صندوقى               | N24-N31 | 1   | 21.556   | 21.556      | ديافرام ٣٠        |
| قطاع صندوقى               | N24-N31 | 1   | 19.990   | 19.990      | ديافرام ٣١        |
| قطاع صندوقى               | N24-N31 | 1   | 5.019    | 5.019       | ديافرام ٣١ الطرفى |
| قطاع صندوقى               | N24-N31 | 1   | 262.040  | 262.040     | حديد الويبرات     |
| قطاع صندوقى               | اجمالى  |     | -        | 350.430     |                   |
| اجمالى حديد الجزيرة بالطن |         |     |          |             | 1150.410          |

المالك  
هيئة الطرق والكبارى



شركة المنفذه  
سعداء جروب

لبنان

## بند رقم (٨٤)

بالمتر الطولي تنفيذ خوازيق قطر ٢,٠٠ م  
بالمجري المائي  
الكمية : ٢٧٠,٩,٨ م طولي



الشركة المنفذة  
شركة السعداء للمقاولات (ش.م.م)

إستشاري المالك  
مكتب محرم باخوم

المالك  
الهيئة العامة للطرق والكباري

مشروع توسعة وتطوير الطريق الدائري القطاع الأول كوبرى الوراق على النيل

البند رقم ( ٨٤ ) - بالمتر الطولى تنفيذ خوازيق قطر ٢٠,٠٠م بالمجري الماني طبقا للرسومات والمواصفات مع إستخدام اسمنت بورتلاندي عادي أومقاوم للكبريتات طبقا لتقرير الإستشاري وبحيث لا يقل محتوى الأسمنت عن ٤٥٠كجم/م<sup>٣</sup> ولا تقل رتبة الخرسانة بعد ٢٨ يوم عن ٣٥٠كجم / سم ٢ علي أن يتم إزالة رؤوس الخوازيق العليا ونقل مخلفات الحفر والتكشير إلى المقالب العمومية والسعر يشمل الأعمال المساحية مع نهو العمل نهوا كاملا ( والسعر لا يشمل حديد التسليح ) والبند يشمل عمل اختبارات الموجات الصوتية على كامل طول الخازوق على أن تتم جميع الأعمال طبقاً للشروط والمواصفات الفنية .

| بيان الاعمال                         |     | الوحدة | التكرار | القياسات |         |       | الإجمالي |          |
|--------------------------------------|-----|--------|---------|----------|---------|-------|----------|----------|
| طول                                  | عرض |        |         | ارتفاع   | تنزيلات | جزئية | كلية     |          |
| أعمال حفر وصب الخوازيق بالنيل الغربى |     |        |         |          |         |       |          |          |
| محور N - 34 خوازيق قطر ٢,٠٠م         | م/ط | ١٨     | ٥٠,٦٠   |          |         |       | ٩١٠,٨٠٠  | ٩١٠,٨٠٠  |
| محور N - 35 خوازيق قطر ٢,٠٠م         | م/ط | ١٨     | ٥١,٥٥   |          |         |       | ٩٢٧,٩٠٠  | ٩٢٧,٩٠٠  |
| محور N - 33 خوازيق قطر ٢,٠٠م         | م/ط | ٤      | ٥٤,١٠   |          |         |       | ٢١٦,٤٠٠  | ٢١٦,٤٠٠  |
| أعمال حفر وصب الخوازيق بالنيل الشرقى |     |        |         |          |         |       |          |          |
| محور N - 21 خوازيق قطر ٢,٠٠م         | م/ط | ١١     | ٥٤,٦٠٠  |          |         |       | ٦٠٠,٦٠٠  | ٦٠٠,٦٠٠  |
| إجمالي ما سبق                        |     |        |         |          |         |       | ٢٦٥٥,٧٠٠ |          |
| محور N - 33 خوازيق قطر ٢,٠٠م         | م/ط | ١      | ٥٤,١٠   |          |         |       | ٥٤,١٠٠   | ٥٤,١٠٠   |
| إجمالي الحالي                        |     |        |         |          |         |       | ٥٤,١٠٠   |          |
|                                      |     |        |         |          |         |       |          |          |
|                                      |     |        |         |          |         |       |          |          |
|                                      |     |        |         |          |         |       |          |          |
|                                      |     |        |         |          |         |       |          |          |
|                                      |     |        |         |          |         |       |          |          |
|                                      |     |        |         |          |         |       |          |          |
|                                      |     |        |         |          |         |       |          |          |
| إجمالي الصفحة                        |     | ٥٢     |         |          |         | ٠,٠٠٠ | ٢٧٠٩,٨٠٠ | ٢٧٠٩,٨٠٠ |
|                                      |     |        |         |          |         |       |          | ٢٧٠٩,٨٠٠ |

مهندس هيئة الطرق والكبارى

مهندس مكتب ( محرم - باخوم )



مهندس المكتب الفنى



## بند رقم ( ٨٥ )

حصر القيسونات

الكمية = ٤٨٩, ٣٨٥ طن



| المحور            | رقم الخازوق | طول (م) | قطر (م) | محيط  | سمك (م) | كثافة (طن/م <sup>3</sup> ) | اجمالي (طن) | ملاحظات |
|-------------------|-------------|---------|---------|-------|---------|----------------------------|-------------|---------|
| N21               | P02         | 15.500  | 2.100   | 6.594 | 0.010   | 7.850                      | 8.023       |         |
| N21               | P03         | 17.300  | 2.100   | 6.594 | 0.010   | 7.850                      | 8.955       |         |
| N21               | P05         | 15.000  | 2.100   | 6.594 | 0.010   | 7.850                      | 7.764       |         |
| N21               | P07         | 19.700  | 2.100   | 6.594 | 0.010   | 7.850                      | 10.197      |         |
| N21               | P08         | 19.000  | 2.100   | 6.594 | 0.010   | 7.850                      | 9.835       |         |
| N21               | P10         | 16.200  | 2.100   | 6.594 | 0.010   | 7.850                      | 8.386       |         |
| N21               | P12         | 19.900  | 2.100   | 6.594 | 0.010   | 7.850                      | 10.301      |         |
| N21               | P13         | 17.500  | 2.100   | 6.594 | 0.010   | 7.850                      | 9.059       |         |
| N21               | P15         | 15.000  | 2.100   | 6.594 | 0.010   | 7.850                      | 7.764       |         |
| N21               | P17         | 19.500  | 2.100   | 6.594 | 0.010   | 7.850                      | 10.094      |         |
| N21               | P18         | 19.800  | 2.100   | 6.594 | 0.010   | 7.850                      | 10.249      |         |
| N33               | P08         | 27.000  | 2.100   | 6.594 | 0.010   | 7.850                      | 13.976      |         |
| N33               | P13         | 21.000  | 2.100   | 6.594 | 0.010   | 7.850                      | 10.870      |         |
| N34               | P01         | 15.220  | 2.100   | 6.594 | 0.010   | 7.850                      | 7.878       |         |
| N34               | P02         | 17.300  | 2.100   | 6.594 | 0.010   | 7.850                      | 8.955       |         |
| N34               | P03         | 13.000  | 2.100   | 6.594 | 0.010   | 7.850                      | 6.729       |         |
| N34               | P04         | 16.200  | 2.100   | 6.594 | 0.010   | 7.850                      | 8.386       |         |
| N34               | P05         | 13.100  | 2.100   | 6.594 | 0.010   | 7.850                      | 6.781       |         |
| N34               | P06         | 16.100  | 2.100   | 6.594 | 0.010   | 7.850                      | 8.334       |         |
| N34               | P07         | 16.700  | 2.100   | 6.594 | 0.010   | 7.850                      | 8.644       |         |
| N34               | P08         | 15.200  | 2.100   | 6.594 | 0.010   | 7.850                      | 7.868       |         |
| N34               | P09         | 16.300  | 2.100   | 6.594 | 0.010   | 7.850                      | 8.437       |         |
| N34               | P10         | 14.850  | 2.100   | 6.594 | 0.010   | 7.850                      | 7.687       |         |
| N34               | P11         | 16.600  | 2.100   | 6.594 | 0.010   | 7.850                      | 8.593       |         |
| N34               | P12         | 16.500  | 2.100   | 6.594 | 0.010   | 7.850                      | 8.541       |         |
| N34               | P13         | 14.600  | 2.100   | 6.594 | 0.010   | 7.850                      | 7.557       |         |
| N34               | P14         | 16.600  | 2.100   | 6.594 | 0.010   | 7.850                      | 8.593       |         |
| N34               | P15         | 13.000  | 2.100   | 6.594 | 0.010   | 7.850                      | 6.729       |         |
| N34               | P16         | 16.500  | 2.100   | 6.594 | 0.010   | 7.850                      | 8.541       |         |
| N34               | P17         | 13.100  | 2.100   | 6.594 | 0.010   | 7.850                      | 6.781       |         |
| N34               | P18         | 17.150  | 2.100   | 6.594 | 0.010   | 7.850                      | 8.877       |         |
| N35               | P01         | 10.000  | 2.100   | 6.594 | 0.010   | 7.850                      | 5.176       |         |
| N35               | P02         | 10.000  | 2.100   | 6.594 | 0.010   | 7.850                      | 5.176       |         |
| N35               | P03         | 10.000  | 2.100   | 6.594 | 0.010   | 7.850                      | 5.176       |         |
| N35               | P04         | 10.000  | 2.100   | 6.594 | 0.010   | 7.850                      | 5.176       |         |
| N35               | P05         | 10.000  | 2.100   | 6.594 | 0.010   | 7.850                      | 5.176       |         |
| N35               | P06         | 9.300   | 2.100   | 6.594 | 0.010   | 7.850                      | 4.814       |         |
| N35               | P07         | 10.000  | 2.100   | 6.594 | 0.010   | 7.850                      | 5.176       |         |
| N35               | P08         | 10.000  | 2.100   | 6.594 | 0.010   | 7.850                      | 5.176       |         |
| N35               | P09         | 10.000  | 2.100   | 6.594 | 0.010   | 7.850                      | 5.176       |         |
| N35               | P10         | 10.000  | 2.100   | 6.594 | 0.010   | 7.850                      | 5.176       |         |
| N35               | P11         | 10.000  | 2.100   | 6.594 | 0.010   | 7.850                      | 5.176       |         |
| N35               | P12         | 10.000  | 2.100   | 6.594 | 0.010   | 7.850                      | 5.176       |         |
| N35               | P13         | 10.000  | 2.100   | 6.594 | 0.010   | 7.850                      | 5.176       |         |
| N35               | P14         | 10.000  | 2.100   | 6.594 | 0.010   | 7.850                      | 5.176       |         |
| N35               | P15         | 10.000  | 2.100   | 6.594 | 0.010   | 7.850                      | 5.176       |         |
| N35               | P16         | 10.000  | 2.100   | 6.594 | 0.010   | 7.850                      | 5.176       |         |
| N35               | P17         | 10.000  | 2.100   | 6.594 | 0.010   | 7.850                      | 5.176       |         |
| N35               | P18         | 10.000  | 2.100   | 6.594 | 0.010   | 7.850                      | 5.176       |         |
| اجمالي السابق     |             |         |         |       |         |                            | 362.195     |         |
| N33               | P03         | 15.000  | 2.100   | 6.594 | 0.010   | 7.850                      | 7.764       |         |
| N33               | P18         | 15.000  | 2.100   | 6.594 | 0.010   | 7.850                      | 7.764       |         |
| N33               | P05         | 15.000  | 2.100   | 6.594 | 0.010   | 7.850                      | 7.764       |         |
| اجمالي الحالي     |             |         |         | 0.000 |         |                            | 23.293      |         |
| اجمالي الوزن (طن) |             |         |         |       |         |                            | 385.489     |         |

المالك  
هيئة الطرق والكباري

مختبر

استشاري المالك  
مكتب محرم باخوم



الشركة المنفذة  
القطاع جروب





## بند رقم (٨٧)

بالمتر المكعب اعمال خرسانة  
مسلحة ذاتية الدمك لزوم القواعد  
الكمية = ٢٥٦, ٢٨٨ م<sup>٣</sup> ٣

**المالك**  
الهيئة العامة للطرق والكباري

مهندس المكتب الفني



## بند رقم (٨٨)

بالمتر المكعب اعمال خرسانة  
لزوم الاعمدة بالمجري المائي  
والاكتاف بالنيل

الكمية = ٤٠,٥٥٤ م<sup>٣</sup>







## بند رقم ( ٩٣ )

حصر اجمالي حديد المجري المائي

الكمية = ٢٨٦,٢٩٦ طن ٣٨٦



**حصر اجمالي حديد محور الوراق  
المجرى**

| ملاحظات                           | اجمالى (طن) | وزن (طن) | عدد | المحور   | المفصل |
|-----------------------------------|-------------|----------|-----|----------|--------|
|                                   | 502.612     | 45.692   | 11  | N21      | خوازيق |
|                                   | 224.050     | 44.810   | 5   | N33      | خوازيق |
|                                   | 777.078     | 43.171   | 18  | N34      | خوازيق |
|                                   | 746.172     | 41.454   | 18  | N35      | خوازيق |
|                                   | 793.320     | 396.660  | 2.0 | N34, N35 | قواعد  |
|                                   | 53.554      | 53.554   | 1.0 | N34      | اصعدة  |
| اجمالى حديد المجرى بالطن 3096.786 |             |          |     |          |        |

المالك  
هيئة الطرق والكبارى

١٠٠٠

استشارى المالك  
مكتب محرم باخوم



الشركة المنفذة  
المساعد جروب



## مشروع كوبري الوراق

### كوبري الجزيرة

#### حصار حديد (N28-N31) BOX SEC

| BAR MARK | Description of Elements   | Ø of Bars | Nº of Elmts | Nº of Bars | Total Nº | Cutting length (m) | Shape | Unit Weight (Kg/m') | WEIGHT (kg)<br>BAR LENGTH ≤ 12.0<br>M | WEIGHT (kg)<br>BAR LENGTH > 12.0<br>M |
|----------|---------------------------|-----------|-------------|------------|----------|--------------------|-------|---------------------|---------------------------------------|---------------------------------------|
| 63       | MAIN STR.@<br>FRAME ZONE  | T22       | 1           | 100        | 100      | 9.90               |       | 2.98                | 2953.17                               |                                       |
| 64       |                           | T16       | 1           | 400        | 400      | 5.20               |       | 1.58                | 3282.24                               |                                       |
| 65       |                           | T16       | 1           | 100        | 100      | 5.00               |       | 1.58                | 789.00                                |                                       |
| 63 A     | MAIN STR.@<br>COLUMN ZONE | T22       | 1           | 64         | 64       | 6.00               |       | 2.98                | 1145.47                               |                                       |
| 64A      |                           | T16       | 1           | 128        | 128      | 2.75               |       | 1.58                | 555.46                                |                                       |
| 64B      |                           | T16       | 1           | 128        | 128      | 4.00               |       | 1.58                | 807.94                                |                                       |
| 65A      |                           | T16       | 1           | 32         | 32       | 2.66               |       | 1.58                | 134.32                                |                                       |
| 65B      |                           | T16       | 1           | 32         | 32       | 4.00               |       | 1.58                | 201.98                                |                                       |

مهندس الاستشاري

/م

## مشروع كوبري الوراق

### كوبري الجزيرة

#### حصر حديد (N28-N31) BOX SEC

| BAR MARK          | Description of Elements | ø of Bars | Nº of Elmts | Nº of Bars | Total Nº | Cutting length (m) | Shape | Unit Weight (Kg/m') | WEIGHT (kg)<br>BAR LENGTH ≤ 12.0 M | WEIGHT (kg)<br>BAR LENGTH > 12.0 M |
|-------------------|-------------------------|-----------|-------------|------------|----------|--------------------|-------|---------------------|------------------------------------|------------------------------------|
| 50                | MAIN BOTTOM RFT @ DIA   | T32       | 1           | 30         | 30       | 9.00               |       | 6.31                | 1704.51                            |                                    |
| 52                |                         | T32       | 1           | 30         | 30       | 12.00              |       | 6.31                | 2272.68                            |                                    |
| 53                |                         | T32       | 1           | 2          | 2        | 8.00               |       | 6.31                | 101.01                             |                                    |
| 58                | MAIN TOP RFT @ DIA      | T32       | 1           | 23         | 23       | 12.00              |       | 6.31                | 1742.39                            |                                    |
| 58A               |                         | T32       | 1           | 7          | 7        | 12.00              |       | 6.31                | 530.29                             |                                    |
| 59                |                         | T32       | 1           | 23         | 23       | 10.00              |       | 6.31                | 1451.99                            |                                    |
| 59A               |                         | T32       | 1           | 7          | 7        | 10.00              |       | 6.31                | 441.91                             |                                    |
| 57                |                         | T32       | 1           | 10         | 10       | 9.00               |       | 6.31                | 568.17                             |                                    |
| 56                |                         | T22       | 1           | 40         | 40       | 3.00               |       | 2.98                | 357.96                             |                                    |
| 54                | SIDE BARS               | T22       | 1           | 10         | 10       | 12.00              |       | 2.98                | 357.96                             |                                    |
| 54A               |                         | T22       | 1           | 10         | 10       | 12.00              |       | 2.98                | 357.96                             |                                    |
| 55                |                         | T22       | 1           | 10         | 10       | 12.00              |       | 2.98                | 357.96                             |                                    |
| 55A               |                         | T22       | 1           | 10         | 10       | 5.16               |       | 2.98                | 153.92                             |                                    |
| TOTAL RFT DIA N28 |                         |           |             |            |          |                    |       |                     | 20268.29                           |                                    |

مهندس الاستشاري

/م



## مشروع كوبرى الوراق

### كوبرى الجزيرة

#### حصر حديد (N28-N31) BOX SEC

| BAR MARK | Description of Elements | Ø of Bars | Nº of Elmts | Nº of Bars | Total Nº | Cutting length (m) | Shape | Unit Weight (Kg/m') | WEIGHT (kg) BAR LENGTH ≤ 12.0 M | WEIGHT (kg) BAR LENGTH > 12.0 M |
|----------|-------------------------|-----------|-------------|------------|----------|--------------------|-------|---------------------|---------------------------------|---------------------------------|
| 63       | MAIN STR.@ FRAME ZONE   | T22       | 2           | 100        | 200      | 9.90               |       | 2.98                | 5906.34                         |                                 |
| 64       |                         | T16       | 2           | 400        | 800      | 5.20               |       | 1.58                | 6564.48                         |                                 |
| 65       |                         | T16       | 2           | 100        | 200      | 5.00               |       | 1.58                | 1578.00                         |                                 |
| 63A      | MAIN STR.@ COLUMN ZONE  | T22       | 2           | 64         | 128      | 6.00               |       | 2.98                | 2290.94                         |                                 |
| 64A      |                         | T16       | 2           | 128        | 256      | 2.75               |       | 1.58                | 1110.91                         |                                 |
| 64B      |                         | T16       | 2           | 128        | 256      | 4.00               |       | 1.58                | 1615.87                         |                                 |
| 65A      |                         | T16       | 2           | 32         | 64       | 2.66               |       | 1.58                | 268.64                          |                                 |
| 65B      |                         | T16       | 2           | 32         | 64       | 4.00               |       | 1.58                | 403.97                          |                                 |

مهندس الاستشاري

/م

## مشروع كوبرى الوراق

### كوبرى الجزيرة

#### حصر حديد (N28-N31) BOX SEC

| BAR MARK                | Description of Elements | Ø of Bars | Nº of Elmts | Nº of Bars | Total Nº | Cutting length (m) | Shape | Unit Weight (Kg/m') | WEIGHT (kg)<br>BAR LENGTH ≤ 12.0 M | WEIGHT (kg)<br>BAR LENGTH > 12.0 M |
|-------------------------|-------------------------|-----------|-------------|------------|----------|--------------------|-------|---------------------|------------------------------------|------------------------------------|
| 50                      | MAIN BOTTOM RFT @ DIA   | T32       | 2           | 30         | 60       | 9.00               |       | 6.31                | 3409.02                            |                                    |
| 52                      |                         | T32       | 2           | 30         | 60       | 12.00              |       | 6.31                | 4545.36                            |                                    |
| 53                      |                         | T32       | 2           | 5          | 10       | 8.00               |       | 6.31                | 505.04                             |                                    |
| 58                      | MAIN TOP RFT @ DIA      | T32       | 2           | 23         | 46       | 12.00              |       | 6.31                | 3484.78                            |                                    |
| 58A                     |                         | T32       | 2           | 7          | 14       | 12.00              |       | 6.31                | 1060.58                            |                                    |
| 59                      |                         | T32       | 2           | 23         | 46       | 10.00              |       | 6.31                | 2903.98                            |                                    |
| 59A                     |                         | T32       | 2           | 7          | 14       | 10.00              |       | 6.31                | 883.82                             |                                    |
| 57                      |                         | T32       | 2           | 30         | 60       | 9.00               |       | 6.31                | 3409.02                            |                                    |
| 56                      |                         | T22       | 2           | 40         | 80       | 3.00               |       | 2.98                | 715.92                             |                                    |
| 54                      | SIDE BARS               | T22       | 2           | 10         | 20       | 12.00              |       | 2.98                | 715.92                             |                                    |
| 54A                     |                         | T22       | 2           | 10         | 20       | 12.00              |       | 2.98                | 715.92                             |                                    |
| 55                      |                         | T22       | 2           | 10         | 20       | 12.00              |       | 2.98                | 715.92                             |                                    |
| 55A                     |                         | T22       | 2           | 10         | 20       | 5.16               |       | 2.98                | 307.85                             |                                    |
| TOTAL RFT DIA N29 & N30 |                         |           |             |            |          |                    |       |                     | 43112.28                           |                                    |

مهندس الاستشاري

م

مهندس الشركة

م

**مشروع كوبرى الوراق**

**كوبرى الجزيرة**

**حصر حديد (N28-N31) BOX SEC**

| BAR MARK | Description of Elements | Ø of Bars | Nº of Elmts | Nº of Bars | Total Nº | Cutting length (m) | Shape | Unit Weight (Kg/m') | WEIGHT (kg) BAR LENGTH ≤ 12.0 M | WEIGHT (kg) BAR LENGTH > 12.0 M |
|----------|-------------------------|-----------|-------------|------------|----------|--------------------|-------|---------------------|---------------------------------|---------------------------------|
| 63       | MAIN STR.@ FRAME ZONE   | T22       | 1           | 81         | 81       | 9.90               |       | 2.98                | <b>2392.07</b>                  |                                 |
| 64       |                         | T16       | 1           | 324        | 324      | 5.20               |       | 1.58                | <b>2658.61</b>                  |                                 |
| 65       |                         | T16       | 1           | 81         | 81       | 5.00               |       | 1.58                | <b>639.09</b>                   |                                 |
| 63A      | MAIN STR.@ COLUMN ZONE  | T22       | 1           | 96         | 96       | 6.00               |       | 2.98                | <b>1718.21</b>                  |                                 |
| 64A      |                         | T16       | 1           | 192        | 192      | 2.75               |       | 1.58                | <b>833.18</b>                   |                                 |
| 64B      |                         | T16       | 1           | 192        | 192      | 4.00               |       | 1.58                | <b>1211.90</b>                  |                                 |
| 65A      |                         | T16       | 1           | 48         | 48       | 2.66               |       | 1.58                | <b>201.48</b>                   |                                 |
| 65B      |                         | T16       | 1           | 48         | 48       | 4.00               |       | 1.58                | <b>302.98</b>                   |                                 |

مهندس الاستشاري

/م



## مشروع كوبرى الوراق

### كوبرى الجزيرة

#### حصار حديد (N28-N31) BOX SEC

| BAR MARK | Description of Elements                   | Ø of Bars | Nº of Elmts | Nº of Bars | Total Nº | Cutting length (m) | Shape | Unit Weight (Kg/m') | WEIGHT (kg) BAR LENGTH ≤ 12.0 M | WEIGHT (kg) BAR LENGTH > 12.0 M |
|----------|-------------------------------------------|-----------|-------------|------------|----------|--------------------|-------|---------------------|---------------------------------|---------------------------------|
| 70       | MAIN STR. @ START & END ZONE<br>DIA @ N31 | T22       | 1           | 2          | 2        | 4.00               |       | 2.98                | 23.86                           |                                 |
| 70A      |                                           | T22       | 1           | 2          | 2        | 5.10               |       | 2.98                | 30.43                           |                                 |
| 64A      |                                           | T16       | 1           | 4          | 4        | 2.75               |       | 1.58                | 17.36                           |                                 |
| 64B      |                                           | T16       | 1           | 4          | 4        | 4.00               |       | 1.58                | 25.25                           |                                 |
| 65A      |                                           | T16       | 1           | 2          | 2        | 2.66               |       | 1.58                | 8.39                            |                                 |
| 65B      |                                           | T16       | 1           | 2          | 2        | 4.00               |       | 1.58                | 12.62                           |                                 |
| 72       |                                           | T22       | 1           | 4          | 4        | 4.00               |       | 2.98                | 47.73                           |                                 |
| 64A      |                                           | T16       | 1           | 4          | 4        | 2.75               |       | 1.58                | 17.36                           |                                 |
| 64B      |                                           | T16       | 1           | 4          | 4        | 4.00               |       | 1.58                | 25.25                           |                                 |
| 71       |                                           | T16       | 1           | 2          | 2        | 3.00               |       | 1.58                | 9.47                            |                                 |
| 71A      |                                           | T16       | 1           | 2          | 2        | 4.00               |       | 1.58                | 12.62                           |                                 |

مهندس الاستشاري

مهندس الشركة

## مشروع كوبرى الوراق

### كوبرى الجزيرة

#### حصار حديد (N28-N31) BOX SEC

| BAR MARK          | Description of Elements | ø of Bars | Nº of Elmts | Nº of Bars | Total Nº | Cutting length (m) | Shape | Unit Weight (Kg/m') | WEIGHT (kg)<br>BAR LENGTH ≤ 12.0 M | WEIGHT (kg)<br>BAR LENGTH > 12.0 M |
|-------------------|-------------------------|-----------|-------------|------------|----------|--------------------|-------|---------------------|------------------------------------|------------------------------------|
| 50                | MAIN BOTTOM RFT @ DIA   | T32       | 1           | 30         | 30       | 12.00              |       | 6.31                | 2272.68                            |                                    |
| 52                |                         | T32       | 1           | 30         | 30       | 9.00               |       | 6.31                | 1704.51                            |                                    |
| 61                | MAIN TOP RFT @ DIA      | T32       | 1           | 20         | 20       | 12.00              |       | 6.31                | 1515.12                            |                                    |
| 62                |                         | T32       | 1           | 20         | 20       | 10.40              |       | 6.31                | 1313.10                            |                                    |
| 60                |                         | T32       | 1           | 10         | 10       | 12.00              |       | 6.31                | 757.56                             |                                    |
| 60A               |                         | T32       | 1           | 10         | 10       | 10.00              |       | 6.31                | 631.30                             |                                    |
| 56                |                         | T22       | 1           | 40         | 40       | 3.00               |       | 2.98                | 357.96                             |                                    |
| 66                | SIDE BARS               | T22       | 1           | 10         | 10       | 12.00              |       | 2.98                | 357.96                             |                                    |
| 65                |                         | T22       | 1           | 10         | 10       | 12.00              |       | 2.98                | 357.96                             |                                    |
| 63                |                         | T22       | 1           | 10         | 10       | 12.00              |       | 2.98                | 357.96                             |                                    |
| 64                |                         | T22       | 1           | 10         | 10       | 5.90               |       | 2.98                | 176.00                             |                                    |
| TOTAL RFT DIA N31 |                         |           |             |            |          |                    |       |                     | 19989.98                           |                                    |

مهندس الاستشاري

م/

**مشروع كوبرى الوراق**

**كوبرى الجزيرة**

**حصار حديد (N28-N31) BOX SEC**

| BAR MARK                | Description of Elements | Ø of Bars | Nº of Elmts | Nº of Bars | Total Nº | Cutting length (m) | Shape | Unit Weight (Kg/m') | WEIGHT (kg)<br>BAR LENGTH ≤ 12.0<br>M | WEIGHT (kg)<br>BAR LENGTH > 12.0<br>M |
|-------------------------|-------------------------|-----------|-------------|------------|----------|--------------------|-------|---------------------|---------------------------------------|---------------------------------------|
| 66                      | MAIN STR.@ DIA.         | T16       | 1           | 135        | 135      | 6.00               |       | 1.58                | 1278.18                               |                                       |
| 67                      |                         | T16       | 1           | 135        | 135      | 5.00               |       | 1.58                | 1065.15                               |                                       |
| 50                      | MAIN BOTTOM RFT @ DIA   | T32       | 1           | 6          | 6        | 9.00               |       | 6.31                | 340.90                                |                                       |
| 52                      |                         | T32       | 1           | 6          | 6        | 12.00              |       | 6.31                | 454.54                                |                                       |
| 58                      | MAIN TOP RFT @ DIA      | T32       | 1           | 4          | 4        | 12.00              |       | 6.31                | 303.02                                |                                       |
| 59                      |                         | T32       | 1           | 4          | 4        | 10.40              |       | 6.31                | 262.62                                |                                       |
| 57                      |                         | T32       | 1           | 2          | 2        | 12.00              |       | 6.31                | 151.51                                |                                       |
| 57A                     |                         | T32       | 1           | 2          | 2        | 10.30              |       | 6.31                | 130.05                                |                                       |
| 56                      |                         | T22       | 1           | 12         | 12       | 3.00               |       | 2.98                | 107.39                                |                                       |
| 54                      | SIDE BARS               | T16       | 1           | 14         | 14       | 12.00              |       | 1.58                | 265.10                                |                                       |
| 54A                     |                         | T16       | 1           | 14         | 14       | 12.00              |       | 1.58                | 265.10                                |                                       |
| 55                      |                         | T16       | 1           | 14         | 14       | 12.00              |       | 1.58                | 265.10                                |                                       |
| 55A                     |                         | T16       | 1           | 14         | 14       | 5.90               |       | 1.58                | 130.34                                |                                       |
| TOTAL RFT DIA N31 LEDGE |                         |           |             |            |          |                    |       |                     | 5019.02                               |                                       |

مهندس الاستشاري

م



## مشروع كوبرى الوراق

### كوبرى الجزيرة

#### حصار حديد (N28-N31) BOX SEC

| BAR MARK | Description of Elements | Ø of Bars | Nº of Elmts | Nº of Bars | Total Nº | Cutting length (m) | Shape                          | Unit Weight (Kg/m') | WEIGHT (kg)<br>BAR LENGTH ≤ 12.0 M | WEIGHT (kg)<br>BAR LENGTH > 12.0 M |
|----------|-------------------------|-----------|-------------|------------|----------|--------------------|--------------------------------|---------------------|------------------------------------|------------------------------------|
| 23       | MAIN STR.@<br>OUTER WEB | T22       | 2           | 49         | 98       | 6.13               | 0.32:0.4<br>0.25:0.45<br>2.17  | 2.98                | 1790.55                            |                                    |
| 19       |                         | T16       | 2           | 49         | 98       | 5.00               | 0.19<br>0.14<br>2.17           | 1.58                | 773.22                             |                                    |
| 22       | MAIN STR.@<br>INNER WEB | T22       | 3           | 49         | 147      | 6.00               | 0.27:0.43<br>0.20:0.41<br>2.17 | 2.98                | 2631.01                            |                                    |
| 19       |                         | T16       | 3           | 49         | 147      | 5.00               | 0.19<br>0.14<br>2.17           | 1.58                | 1159.83                            |                                    |
| 17       | MAIN STR.@<br>OUTER WEB | T22       | 2           | 161        | 322      | 6.00               | 0.32<br>0.35<br>2.17           | 2.98                | 5763.16                            |                                    |
| 18       |                         | T12       | 2           | 161        | 322      | 5.00               | 0.19<br>0.14<br>2.17           | 0.89                | 1428.07                            |                                    |
| 16       | MAIN STR.@<br>INNER WEB | T22       | 3           | 161        | 483      | 6.00               | 0.27<br>0.425<br>2.17          | 2.98                | 8644.73                            |                                    |
| 23       | MAIN STR.@<br>OUTER WEB | T22       | 4           | 49         | 196      | 6.13               | 0.32:0.4<br>0.25:0.45<br>2.17  | 2.98                | 3581.09                            |                                    |
| 19       |                         | T16       | 4           | 49         | 196      | 5.00               | 0.19<br>0.14<br>2.17           | 1.58                | 1546.44                            |                                    |
| 22       | MAIN STR.@<br>INNER WEB | T22       | 6           | 49         | 294      | 6.00               | 0.27:0.43<br>0.20:0.41<br>2.17 | 2.98                | 5262.01                            |                                    |
| 19       |                         | T16       | 6           | 49         | 294      | 5.00               | 0.19<br>0.14<br>2.17           | 1.58                | 2319.66                            |                                    |

مهندس الاستشاري

م

**مشروع كوبرى الوراق**

**كوبرى الجزيرة**

**حصر حديد (N28-N31) BOX SEC**

| BAR MARK | Description of Elements | Ø of Bars | Nº of Elmts | Nº of Bars | Total Nº | Cutting length (m) | Shape                    | Unit Weight (Kg/m') | WEIGHT (kg) BAR LENGTH ≤ 12.0 M | WEIGHT (kg) BAR LENGTH > 12.0 M |
|----------|-------------------------|-----------|-------------|------------|----------|--------------------|--------------------------|---------------------|---------------------------------|---------------------------------|
| 17       | MAIN STR.@ OUTER WEB    | T22       | 2           | 177        | 354      | 6.00               | 0.32 0.35 2.17           | 2.98                | 6335.89                         |                                 |
| 18       |                         | T12       | 2           | 177        | 354      | 5.00               | 0.19 0.14 2.17           | 0.89                | 1569.99                         |                                 |
| 16       | MAIN STR.@ INNER WEB    | T22       | 3           | 177        | 531      | 6.00               | 0.27 0.425 2.17          | 2.98                | 9503.84                         |                                 |
| 23       | MAIN STR.@ OUTER WEB    | T22       | 2           | 49         | 98       | 6.13               | 0.32:0.4 0.25:0.45 2.17  | 2.98                | 1790.55                         |                                 |
| 19       |                         | T16       | 2           | 49         | 98       | 5.00               | 0.19 0.14 2.17           | 1.58                | 773.22                          |                                 |
| 22       | MAIN STR.@ INNER WEB    | T22       | 3           | 49         | 147      | 6.00               | 0.27:0.43 0.20:0.41 2.17 | 2.98                | 2631.01                         |                                 |
| 19       |                         | T16       | 3           | 49         | 147      | 5.00               | 0.19 0.14 2.17           | 1.58                | 1159.83                         |                                 |
| 23       | MAIN STR.@ OUTER WEB    | T22       | 2           | 33         | 66       | 6.13               | 0.32:0.48 0.25:0.45 2.17 | 2.98                | 1205.88                         |                                 |
| 19       |                         | T16       | 2           | 33         | 66       | 5.00               | 0.19 0.14 2.17           | 1.58                | 520.74                          |                                 |
| 22       | MAIN STR.@ INNER WEB    | T22       | 3           | 33         | 99       | 6.00               | 0.27:0.43 0.20:0.41 2.17 | 2.98                | 1771.90                         |                                 |
| 19       |                         | T16       | 3           | 33         | 99       | 5.00               | 0.19 0.14 2.17           | 1.58                | 781.11                          |                                 |

مهندس الاستشاري

م/

## مشروع كوبرى الوراق

### كوبرى الجزيرة

#### حصار حديد (N28-N31) BOX SEC

| BAR MARK           | Description of Elements        | Ø of Bars | Nº of Elmts | Nº of Bars | Total Nº | Cutting length (m) | Shape | Unit Weight (Kg/m') | WEIGHT (kg)<br>BAR LENGTH ≤ 12.0 M | WEIGHT (kg)<br>BAR LENGTH > 12.0 M |
|--------------------|--------------------------------|-----------|-------------|------------|----------|--------------------|-------|---------------------|------------------------------------|------------------------------------|
| 17                 | MAIN STR.@<br>OUTER WEB (5)    | T22       | 1           | 43         | 43       | 6.00               |       | 2.98                | 769.61                             |                                    |
| 18                 |                                | T12       | 1           | 43         | 43       | 5.00               |       | 0.89                | 190.71                             |                                    |
| 17                 | MAIN STR.@<br>OUTER WEB (1)    | T22       | 1           | 16         | 16       | 6.00               |       | 2.98                | 286.37                             |                                    |
| 18                 |                                | T12       | 1           | 16         | 16       | 5.00               |       | 0.89                | 70.96                              |                                    |
| 16                 | MAIN STR.@<br>INNER WEB(2,3,4) | T22       | 1           | 89         | 89       | 6.00               |       | 2.98                | 1592.92                            |                                    |
| 23                 | MAIN STR.@<br>OUTER WEB        | T22       | 2           | 33         | 66       | 6.13               |       | 2.98                | 1205.88                            |                                    |
| 19                 |                                | T16       | 2           | 33         | 66       | 5.00               |       | 1.58                | 520.74                             |                                    |
| 22                 | MAIN STR.@<br>INNER WEB        | T22       | 3           | 33         | 99       | 6.00               |       | 2.98                | 1771.90                            |                                    |
| 19                 |                                | T16       | 3           | 33         | 99       | 5.00               |       | 1.58                | 781.11                             |                                    |
| 21                 | MAIN STR.@<br>OUTER WEB        | T22       | 2           | 16         | 32       | 6.60               |       | 2.98                | 630.01                             |                                    |
| 19                 |                                | T16       | 2           | 16         | 32       | 5.00               |       | 1.58                | 252.48                             |                                    |
| 20                 | MAIN STR.@<br>INNER WEB        | T22       | 3           | 16         | 48       | 6.00               |       | 2.98                | 859.10                             |                                    |
| 19                 |                                | T16       | 3           | 16         | 48       | 5.00               |       | 1.58                | 378.72                             |                                    |
| TOTAL RFT WEB STR. |                                |           |             |            |          |                    |       |                     | 72254.23                           |                                    |

مهندس الاستشاري

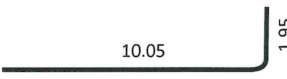
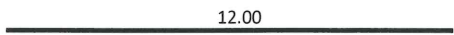
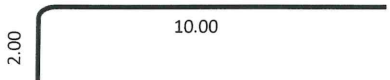
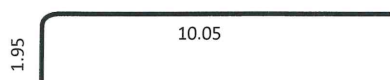
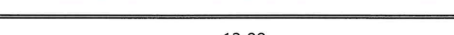
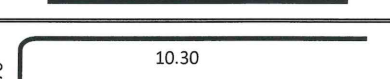
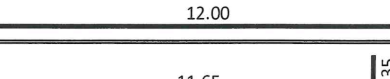
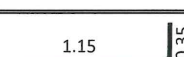
م



## مشروع كوبرى الوراق

### كوبرى الجزيرة

#### حصار حديد (N28-N31) BOX SEC

| BAR MARK | Description of Elements   | Ø of Bars | Nº of Elmts | Nº of Bars | Total Nº | Cutting length (m) | Shape                                                                                | Unit Weight (Kg/m') | WEIGHT (kg) BAR LENGTH ≤ 12.0 M | WEIGHT (kg) BAR LENGTH > 12.0 M |
|----------|---------------------------|-----------|-------------|------------|----------|--------------------|--------------------------------------------------------------------------------------|---------------------|---------------------------------|---------------------------------|
| 1        | MAIN BOTTOM STEEL @ WEB 1 | T32       | 1           | 14         | 14       | 9.50               |    | 6.31                | 839.63                          |                                 |
| 1A       |                           | T32       | 1           | 14         | 14       | 12.00              |    | 6.31                | 1060.58                         |                                 |
| 2        |                           | T32       | 1           | 98         | 98       | 12.00              |    | 6.31                | 7424.09                         |                                 |
| 2        | ADD.RFT @ BOTTOM          | T32       | 1           | 70         | 70       | 12.00              |    | 6.31                | 5302.92                         |                                 |
| 2*       |                           | T32       | 1           | 20         | 20       | 9.40               |    | 6.31                | 1186.84                         |                                 |
| 8        |                           | T32       | 1           | 14         | 14       | 3.60               |    | 6.31                | 318.18                          |                                 |
| 6        | MAIN TOP STEEL @ WEB 1    | T32       | 1           | 14         | 14       | 12.00              |   | 6.31                | 1060.58                         |                                 |
| 6A       |                           | T32       | 1           | 14         | 14       | 12.00              |  | 6.31                | 1060.58                         |                                 |
| 2        |                           | T32       | 1           | 98         | 98       | 12.00              |  | 6.31                | 7424.09                         |                                 |
| 2        | ADD.RFT @ TOP             | T32       | 1           | 44         | 44       | 12.00              |  | 6.31                | 3333.26                         |                                 |
| 2A       |                           | T32       | 1           | 44         | 44       | 8.40               |  | 6.31                | 2333.28                         |                                 |
| 8        |                           | T32       | 1           | 6          | 6        | 12.00              |  | 6.31                | 454.54                          |                                 |
|          | SIDE BARS                 | T22       | 1           | 140        | 140      | 12.00              |  | 2.98                | 5011.44                         |                                 |
|          |                           | T22       | 1           | 20         | 20       | 12.00              |  | 2.98                | 715.92                          |                                 |
|          |                           | T22       | 1           | 20         | 20       | 1.50               |  | 2.98                | 89.49                           |                                 |

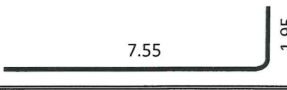
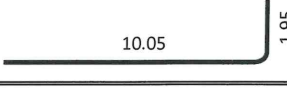
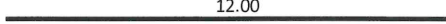
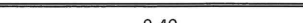
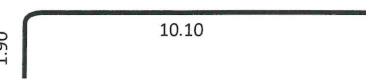
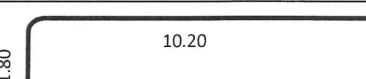
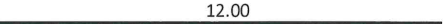
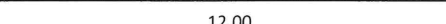
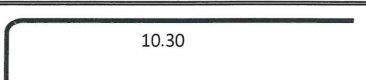
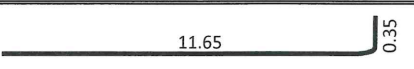
مهندس الاستشاري

م

## مشروع كوبرى الوراق

### كوبرى الجزيرة

#### حصص حديد (N28-N31) BOX SEC

| BAR MARK | Description of Elements   | Ø of Bars | Nº of Elmts | Nº of Bars | Total Nº | Cutting length (m) | Shape                                                                                | Unit Weight (Kg/m') | WEIGHT (kg) BAR LENGTH ≤ 12.0 M | WEIGHT (kg) BAR LENGTH > 12.0 M |
|----------|---------------------------|-----------|-------------|------------|----------|--------------------|--------------------------------------------------------------------------------------|---------------------|---------------------------------|---------------------------------|
| 1        | MAIN BOTTOM STEEL @ WEB 1 | T32       | 1           | 14         | 14       | 10.30              |    | 6.31                | 910.33                          |                                 |
| 1B       |                           | T32       | 1           | 14         | 14       | 12.00              |    | 6.31                | 1060.58                         |                                 |
| 2        |                           | T32       | 1           | 98         | 98       | 12.00              |    | 6.31                | 7424.09                         |                                 |
| 2        | ADD.RFT @ BOTTOM          | T32       | 1           | 70         | 70       | 12.00              |    | 6.31                | 5302.92                         |                                 |
| 2*       |                           | T32       | 1           | 20         | 20       | 9.40               |    | 6.31                | 1186.84                         |                                 |
| 8        |                           | T32       | 1           | 14         | 14       | 3.60               |    | 6.31                | 318.18                          |                                 |
| 6        | MAIN TOP STEEL @ WEB 1    | T32       | 1           | 14         | 14       | 12.00              |   | 6.31                | 1060.58                         |                                 |
| 6B       |                           | T32       | 1           | 14         | 14       | 12.00              |  | 6.31                | 1060.58                         |                                 |
| 2        |                           | T32       | 1           | 98         | 98       | 12.00              |  | 6.31                | 7424.09                         |                                 |
| 2        | ADD.RFT @ TOP             | T32       | 1           | 44         | 44       | 12.00              |  | 6.31                | 3333.26                         |                                 |
| 2A       |                           | T32       | 1           | 44         | 44       | 8.40               |  | 6.31                | 2333.28                         |                                 |
| 8        |                           | T32       | 1           | 6          | 6        | 12.00              |  | 6.31                | 454.54                          |                                 |
|          | SIDE BARS                 | T22       | 1           | 140        | 140      | 12.00              |  | 2.98                | 5011.44                         |                                 |
|          |                           | T22       | 1           | 20         | 20       | 12.00              |  | 2.98                | 715.92                          |                                 |
|          |                           | T22       | 1           | 20         | 20       | 1.60               |  | 2.98                | 95.46                           |                                 |

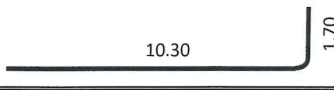
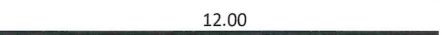
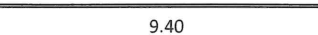
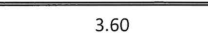
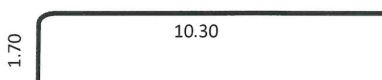
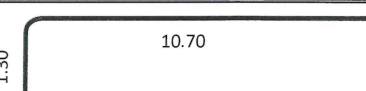
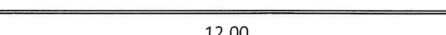
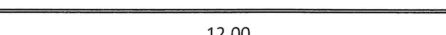
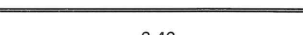
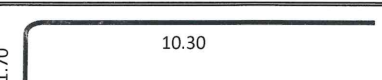
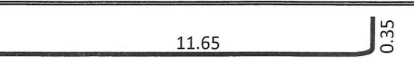
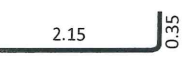
مهندس الاستشاري

/م

# مشروع كوبرى الوراق

## كوبرى الجزيرة

### حصار حديد (N28-N31) BOX SEC

| BAR MARK | Description of Elements   | Ø of Bars | Nº of Elmts | Nº of Bars | Total Nº | Cutting length (m) | Shape                                                                                | Unit Weight (Kg/m') | WEIGHT (kg) BAR LENGTH ≤ 12.0 M | WEIGHT (kg) BAR LENGTH > 12.0 M |
|----------|---------------------------|-----------|-------------|------------|----------|--------------------|--------------------------------------------------------------------------------------|---------------------|---------------------------------|---------------------------------|
| 1        | MAIN BOTTOM STEEL @ WEB 1 | T32       | 1           | 14         | 14       | 12.00              |    | 6.31                | 1060.58                         |                                 |
| 1C       |                           | T32       | 1           | 14         | 14       | 10.80              |    | 6.31                | 954.53                          |                                 |
| 2        |                           | T32       | 1           | 98         | 98       | 12.00              |    | 6.31                | 7424.09                         |                                 |
| 2        | ADD.RFT @ BOTTOM          | T32       | 1           | 70         | 70       | 12.00              |    | 6.31                | 5302.92                         |                                 |
| 2*       |                           | T32       | 1           | 20         | 20       | 9.40               |    | 6.31                | 1186.84                         |                                 |
| 8        |                           | T32       | 1           | 14         | 14       | 3.60               |    | 6.31                | 318.18                          |                                 |
| 6        | MAIN TOP STEEL @ WEB 1    | T32       | 1           | 14         | 14       | 12.00              |   | 6.31                | 1060.58                         |                                 |
| 6C       |                           | T32       | 1           | 14         | 14       | 12.00              |  | 6.31                | 1060.58                         |                                 |
| 2        |                           | T32       | 1           | 98         | 98       | 12.00              |  | 6.31                | 7424.09                         |                                 |
| 2        | ADD.RFT @ TOP             | T32       | 1           | 44         | 44       | 12.00              |  | 6.31                | 3333.26                         |                                 |
| 2A       |                           | T32       | 1           | 44         | 44       | 8.40               |  | 6.31                | 2333.28                         |                                 |
| 8        |                           | T32       | 1           | 6          | 6        | 12.00              |  | 6.31                | 454.54                          |                                 |
|          | SIDE BARS                 | T22       | 1           | 140        | 140      | 12.00              |  | 2.98                | 5011.44                         |                                 |
|          |                           | T22       | 1           | 20         | 20       | 12.00              |  | 2.98                | 715.92                          |                                 |
|          |                           | T22       | 1           | 20         | 20       | 2.50               |  | 2.98                | 149.15                          |                                 |

مهندس الاستشاري

/م



## مشروع كوبرى الوراق

### كوبرى الجزيرة

#### حصار حديد (N28-N31) BOX SEC

| BAR MARK | Description of Elements   | Ø of Bars | Nº of Elmts | Nº of Bars | Total Nº | Cutting length (m) | Shape | Unit Weight (Kg/m') | WEIGHT (kg) BAR LENGTH ≤ 12.0 M | WEIGHT (kg) BAR LENGTH > 12.0 M |
|----------|---------------------------|-----------|-------------|------------|----------|--------------------|-------|---------------------|---------------------------------|---------------------------------|
| 1        | MAIN BOTTOM STEEL @ WEB 1 | T32       | 1           | 14         | 14       | 12.00              |       | 6.31                | 1060.58                         |                                 |
| 1D       |                           | T32       | 1           | 14         | 14       | 11.60              |       | 6.31                | 1025.23                         |                                 |
| 2        |                           | T32       | 1           | 98         | 98       | 12.00              |       | 6.31                | 7424.09                         |                                 |
| 2        | ADD.RFT @ BOTTOM          | T32       | 1           | 70         | 70       | 12.00              |       | 6.31                | 5302.92                         |                                 |
| 2*       |                           | T32       | 1           | 20         | 20       | 9.40               |       | 6.31                | 1186.84                         |                                 |
| 8        |                           | T32       | 1           | 14         | 14       | 3.60               |       | 6.31                | 318.18                          |                                 |
| 6        | MAIN TOP STEEL @ WEB 1    | T32       | 1           | 14         | 14       | 12.00              |       | 6.31                | 1060.58                         |                                 |
| 6D       |                           | T32       | 1           | 14         | 14       | 4.00               |       | 6.31                | 353.53                          |                                 |
| 2        |                           | T32       | 1           | 112        | 112      | 12.00              |       | 6.31                | 8484.67                         |                                 |
| 2        | ADD.RFT @ TOP             | T32       | 1           | 44         | 44       | 12.00              |       | 6.31                | 3333.26                         |                                 |
| 2A       |                           | T32       | 1           | 44         | 44       | 8.40               |       | 6.31                | 2333.28                         |                                 |
| 8        |                           | T32       | 1           | 6          | 6        | 12.00              |       | 6.31                | 454.54                          |                                 |
|          | SIDE BARS                 | T22       | 1           | 140        | 140      | 12.00              |       | 2.98                | 5011.44                         |                                 |
|          |                           | T22       | 1           | 20         | 20       | 12.00              |       | 2.98                | 715.92                          |                                 |
|          |                           | T22       | 1           | 20         | 20       | 3.30               |       | 2.98                | 196.88                          |                                 |

مهندس الاستشاري

م

## مشروع كوبرى الوراق

### كوبرى الجزيرة

#### حصر حديد (N28-N31) BOX SEC

| BAR MARK                 | Description of Elements   | Ø of Bars | Nº of Elmts | Nº of Bars | Total Nº | Cutting length (m) | Shape | Unit Weight (Kg/m') | WEIGHT (kg)<br>BAR LENGTH ≤ 12.0<br>M | WEIGHT (kg)<br>BAR LENGTH > 12.0<br>M |
|--------------------------|---------------------------|-----------|-------------|------------|----------|--------------------|-------|---------------------|---------------------------------------|---------------------------------------|
| 1                        | MAIN BOTTOM STEEL @ WEB 1 | T32       | 1           | 14         | 14       | 12.00              |       | 6.31                | 1060.58                               |                                       |
| 1E                       |                           | T32       | 1           | 14         | 14       | 12.00              |       | 6.31                | 1060.58                               |                                       |
| 2                        |                           | T32       | 1           | 98         | 98       | 12.00              |       | 6.31                | 7424.09                               |                                       |
| 2                        | ADD.RFT @ BOTTOM          | T32       | 1           | 70         | 70       | 12.00              |       | 6.31                | 5302.92                               |                                       |
| 2*                       |                           | T32       | 1           | 20         | 20       | 9.40               |       | 6.31                | 1186.84                               |                                       |
| 8                        |                           | T32       | 1           | 14         | 14       | 3.60               |       | 6.31                | 318.18                                |                                       |
| 6                        | MAIN TOP STEEL @ WEB 1    | T32       | 1           | 14         | 14       | 12.00              |       | 6.31                | 1060.58                               |                                       |
| 6E                       |                           | T32       | 1           | 14         | 14       | 5.00               |       | 6.31                | 441.91                                |                                       |
| 2                        |                           | T32       | 1           | 112        | 112      | 12.00              |       | 6.31                | 8484.67                               |                                       |
| 2                        | ADD.RFT @ TOP             | T32       | 1           | 44         | 44       | 12.00              |       | 6.31                | 3333.26                               |                                       |
| 2A                       |                           | T32       | 1           | 44         | 44       | 8.40               |       | 6.31                | 2333.28                               |                                       |
| 8                        |                           | T32       | 1           | 6          | 6        | 12.00              |       | 6.31                | 454.54                                |                                       |
|                          | SIDE BARS                 | T22       | 1           | 140        | 140      | 12.00              |       | 2.98                | 5011.44                               |                                       |
|                          |                           | T22       | 1           | 20         | 20       | 12.00              |       | 2.98                | 715.92                                |                                       |
|                          |                           | T22       | 1           | 20         | 20       | 4.10               |       | 2.98                | 244.61                                |                                       |
| TOTAL RFT WEB MAIN STEEL |                           |           |             |            |          |                    |       |                     | 189792.88                             |                                       |

مهندس الاستشاري

/م

## مشروع كوبرى الوراق

### كوبرى الجزيرة

#### حصر حديد (N28-N31) BOX SEC

| BAR MARK | Description of Elements                 | Ø of Bars | Nº of Elmts | Nº of Bars | Total Nº | Cutting length (m) | Shape | Unit Weight (Kg/m') | WEIGHT (kg) BAR LENGTH ≤ 12.0 M | WEIGHT (kg) BAR LENGTH > 12 M |
|----------|-----------------------------------------|-----------|-------------|------------|----------|--------------------|-------|---------------------|---------------------------------|-------------------------------|
| 130      | B. RFT. IN SHORT DIRECTION @ SEC 8      | T12       | 1           | 49         | 49       | 12.00              |       | 0.89                | 521.56                          |                               |
| 128      |                                         | T12       | 1           | 49         | 49       | 6.00               |       | 0.89                | 260.78                          |                               |
| 127      | T. RFT. IN SHORT DIRECTION @ SEC 8      | T12       | 1           | 49         | 49       | 12.00              |       | 0.89                | 521.56                          |                               |
| 125      |                                         | T12       | 1           | 49         | 49       | 6.00               |       | 0.89                | 260.78                          |                               |
| 131      | HAUNCH. RFT. IN SHORT DIRECTION @ SEC 8 | T12       | 2           | 8          | 16       | 3.00               |       | 0.89                | 42.58                           |                               |
| 132      |                                         | T12       | 3           | 8          | 24       | 3.00               |       | 0.89                | 63.86                           |                               |
| 130      | B. RFT. IN SHORT DIRECTION @ SEC 3      | T12       | 1           | 145        | 145      | 12.00              |       | 0.89                | 1543.38                         |                               |
| 128      |                                         | T12       | 1           | 145        | 145      | 6.00               |       | 0.89                | 771.69                          |                               |
| 127      | T. RFT. IN SHORT DIRECTION @ SEC 3      | T12       | 1           | 145        | 145      | 12.00              |       | 0.89                | 1543.38                         |                               |
| 125      |                                         | T12       | 1           | 145        | 145      | 6.00               |       | 0.89                | 771.69                          |                               |
| 118 C    | HAUNCH. RFT. IN SHORT DIRECTION @ SEC 3 | T12       | 2           | 161        | 322      | 2.00               |       | 0.89                | 571.23                          |                               |
| 118 B    |                                         | T12       | 3           | 161        | 483      | 2.40               |       | 0.89                | 1028.21                         |                               |

مهندس الاستشاري

م



**مشروع كوبرى الوراق**

**كوبرى الجزيرة**

**حصر حديد (N28-N31) BOX SEC**

| BAR MARK | Description of Elements                 | Ø of Bars | Nº of Elmts | Nº of Bars | Total Nº | Cutting length (m) | Shape | Unit Weight (kg/m') | WEIGHT (kg) BAR LENGTH ≤ 12.0 M | WEIGHT (kg) BAR LENGTH > 12.0 M |
|----------|-----------------------------------------|-----------|-------------|------------|----------|--------------------|-------|---------------------|---------------------------------|---------------------------------|
| 130      | B. RFT. IN SHORT DIRECTION @ SEC 7      | T12       | 2           | 49         | 98       | 12.00              |       | 0.89                | 1043.11                         |                                 |
| 128      |                                         | T12       | 2           | 49         | 98       | 6.00               |       | 0.89                | 521.56                          |                                 |
| 127      | T. RFT. IN SHORT DIRECTION @ SEC 7      | T12       | 2           | 49         | 98       | 12.00              |       | 0.89                | 1043.11                         |                                 |
| 125      |                                         | T12       | 2           | 49         | 98       | 6.00               |       | 0.89                | 521.56                          |                                 |
| 131      | HAUNCH. RFT. IN SHORT DIRECTION @ SEC 7 | T12       | 2           | 16         | 32       | 3.00               |       | 0.89                | 85.15                           |                                 |
| 132      |                                         | T12       | 3           | 16         | 48       | 3.00               |       | 0.89                | 127.73                          |                                 |
| 130      | B. RFT. IN SHORT DIRECTION @ SEC 2      | T12       | 1           | 161        | 161      | 12.00              |       | 0.89                | 1713.68                         |                                 |
| 128      |                                         | T12       | 1           | 161        | 161      | 6.00               |       | 0.89                | 856.84                          |                                 |
| 127      | T. RFT. IN SHORT DIRECTION @ SEC 2      | T12       | 1           | 161        | 161      | 12.00              |       | 0.89                | 1713.68                         |                                 |
| 125      |                                         | T12       | 1           | 161        | 161      | 6.00               |       | 0.89                | 856.84                          |                                 |
| 118 C    | HAUNCH. RFT. IN SHORT DIRECTION @ SEC 2 | T12       | 2           | 177        | 354      | 2.00               |       | 0.89                | 628.00                          |                                 |
| 118 B    |                                         | T12       | 3           | 177        | 531      | 2.40               |       | 0.89                | 1130.39                         |                                 |

مهندس الاستشاري

م

**مشروع كوبرى الوراق**

**كوبرى الجزيرة**

**حصر حديد (N28-N31) BOX SEC**

| BAR MARK | Description of Elements                 | Ø of Bars | Nº of Elmts | Nº of Bars | Total Nº | Cutting length (m) | Shape | Unit Weight (Kg/m') | WEIGHT (kg) BAR LENGTH ≤ 12.0 M | WEIGHT (kg) BAR LENGTH > 12.0 M |
|----------|-----------------------------------------|-----------|-------------|------------|----------|--------------------|-------|---------------------|---------------------------------|---------------------------------|
| 130      | B. RFT. IN SHORT DIRECTION @ SEC 6      | T12       | 1           | 49         | 49       | 12.00              |       | 0.89                | 521.56                          |                                 |
| 128      |                                         | T12       | 1           | 49         | 49       | 6.00               |       | 0.89                | 260.78                          |                                 |
| 127      | T. RFT. IN SHORT DIRECTION @ SEC 6      | T12       | 1           | 49         | 49       | 12.00              |       | 0.89                | 521.56                          |                                 |
| 125      |                                         | T12       | 1           | 49         | 49       | 6.00               |       | 0.89                | 260.78                          |                                 |
| 131      | HAUNCH. RFT. IN SHORT DIRECTION @ SEC 6 | T12       | 2           | 8          | 16       | 3.00               |       | 0.89                | 42.58                           |                                 |
| 132      |                                         | T12       | 3           | 8          | 24       | 3.00               |       | 0.89                | 63.86                           |                                 |
| 130      | B. RFT. IN SHORT DIRECTION @ SEC 9      | T12       | 1           | 41         | 41       | 12.00              |       | 0.89                | 436.40                          |                                 |
| 128      |                                         | T12       | 1           | 41         | 41       | 6.00               |       | 0.89                | 218.20                          |                                 |
| 127      | T. RFT. IN SHORT DIRECTION @ SEC 9      | T12       | 1           | 41         | 41       | 12.00              |       | 0.89                | 436.40                          |                                 |
| 125      |                                         | T12       | 1           | 41         | 41       | 6.00               |       | 0.89                | 218.20                          |                                 |
| 131      | HAUNCH. RFT. IN SHORT DIRECTION @ SEC 9 | T12       | 2           | 8          | 16       | 3.00               |       | 0.89                | 42.58                           |                                 |
| 132      |                                         | T12       | 3           | 8          | 24       | 3.00               |       | 0.89                | 63.86                           |                                 |

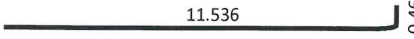
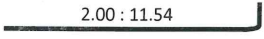
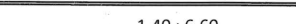
مهندس الاستشاري

م

## مشروع كوبرى الوراق

### كوبرى الجزيرة

#### حصص حديد (N28-N31) BOX SEC

| BAR MARK | Description of Elements                  | Ø of Bars | Nº of Elmts | Nº of Bars | Total Nº | Cutting length (m) | Shape                                                                                | Unit Weight (Kg/m') | WEIGHT (kg) BAR LENGTH ≤ 12.0 M | WEIGHT (kg) BAR LENGTH > 12.0 M |
|----------|------------------------------------------|-----------|-------------|------------|----------|--------------------|--------------------------------------------------------------------------------------|---------------------|---------------------------------|---------------------------------|
| 130      | B. RFT. IN SHORT DIRECTION @ SEC 4       | T12       | 1           | 32         | 32       | 12.00              |    | 0.89                | 340.61                          |                                 |
| 128      |                                          | T12       | 1           | 32         | 32       | 6.00               |    | 0.89                | 170.30                          |                                 |
| 127      | T. RFT. IN SHORT DIRECTION @ SEC 4       | T12       | 1           | 32         | 32       | 12.00              |    | 0.89                | 340.61                          |                                 |
| 125      |                                          | T12       | 1           | 32         | 32       | 6.00               |    | 0.89                | 170.30                          |                                 |
| 118 C    | HAUNCH. RFT. IN SHORT DIRECTION @ SEC 4  | T12       | 1           | 59         | 59       | 2.00               |    | 0.89                | 104.67                          |                                 |
| 118 B    |                                          | T12       | 1           | 89         | 89       | 2.40               |   | 0.89                | 189.46                          |                                 |
| 301      | B. RFT. IN SHORT DIRECTION @ SEC 10      | T12       | 1           | 9          | 9        | 12.00              |  | 0.89                | 95.80                           |                                 |
| 302      |                                          | T12       | 1           | 9          | 9        | 3.60               |  | 0.89                | 28.74                           |                                 |
| 300      |                                          | T12       | 1           | 18         | 18       | 6.80               |  | 0.89                | 108.57                          |                                 |
| 301      | T. RFT. IN SHORT DIRECTION @ SEC 10      | T12       | 1           | 9          | 9        | 12.00              |  | 0.89                | 95.80                           |                                 |
| 302      |                                          | T12       | 1           | 9          | 9        | 3.60               |  | 0.89                | 28.74                           |                                 |
| 300      |                                          | T12       | 1           | 18         | 18       | 6.80               |  | 0.89                | 108.57                          |                                 |
| 131      | HAUNCH. RFT. IN SHORT DIRECTION @ SEC 10 | T12       | 2           | 9          | 18       | 3.00               |  | 0.89                | 47.90                           |                                 |
| 132      |                                          | T12       | 3           | 9          | 27       | 3.00               |  | 0.89                | 71.85                           |                                 |

مهندس الاستشاري

/م



## مشروع كوبرى الوراق

### كوبرى الجزيرة

#### حصر حديد (N28-N31) BOX SEC

| BAR MARK | Description of Elements            | Ø of Bars | Nº of Elmts | Nº of Bars | Total Nº | Cutting length (m) | Shape        | Unit Weight (Kg/m') | WEIGHT (kg) BAR LENGTH ≤ 12.0 M | WEIGHT (kg) BAR LENGTH > 12.0 M |
|----------|------------------------------------|-----------|-------------|------------|----------|--------------------|--------------|---------------------|---------------------------------|---------------------------------|
| 303      | B. RFT. IN SHORT DIRECTION @ SEC 5 | T12       | 1           | 17         | 17       | 5.70               | 1.14 : 10.14 | 0.89                | 85.95                           |                                 |
| 304      |                                    | T12       | 1           | 13         | 13       | 10.20              | 10.14        | 0.89                | 117.62                          |                                 |
| 305      |                                    | T12       | 1           | 15         | 15       | 5.65               | 1.64 : 9.46  | 0.89                | 75.17                           |                                 |
| 303      | T. RFT. IN SHORT DIRECTION @ SEC 5 | T12       | 1           | 17         | 17       | 5.70               | 1.14 : 10.14 | 0.89                | 85.95                           |                                 |
| 304      |                                    | T12       | 1           | 13         | 13       | 10.20              | 10.14        | 0.89                | 117.62                          |                                 |
| 305      |                                    | T12       | 1           | 15         | 15       | 5.65               | 1.64 : 9.46  | 0.89                | 75.17                           |                                 |

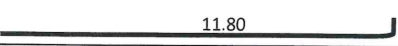
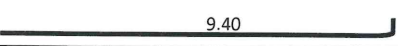
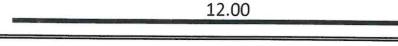
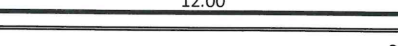
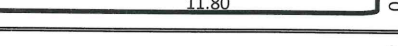
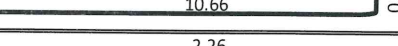
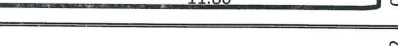
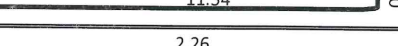
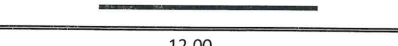
مهندس الاستشاري

م/

## مشروع كوبري الوراق

### كوبري الجزيرة

#### حصر حديد (N28-N31) BOX SEC

| BAR MARK                      | Description of Elements                           | Ø of Bars | Nº of Elmts | Nº of Bars | Total Nº | Cutting length (m) | Shape                                                                                | Unit Weight (Kg/m') | WEIGHT (kg) BAR LENGTH ≤ 12.0 M | WEIGHT (kg) BAR LENGTH > 12.0 M |
|-------------------------------|---------------------------------------------------|-----------|-------------|------------|----------|--------------------|--------------------------------------------------------------------------------------|---------------------|---------------------------------|---------------------------------|
| BOTTOM SLAB IN LONG DIRECTION | B. RFT. @ BOTTOM SLAB IN LONG DIR. IN OUTER VENTS | T12       | 1           | 21         | 21       | 12.00              |    | 0.89                | 223.52                          |                                 |
|                               |                                                   | T12       | 1           | 7          | 7        | 9.60               |    | 0.89                | 59.61                           |                                 |
|                               |                                                   | T12       | 2           | 42         | 84       | 12.00              |    | 0.89                | 894.10                          |                                 |
|                               | B. RFT. @ BOTTOM SLAB IN LONG DIR. IN INNER VENTS | T12       | 1           | 24         | 24       | 12.00              |    | 0.89                | 255.46                          |                                 |
|                               |                                                   | T12       | 1           | 12         | 12       | 10.40              |    | 0.89                | 110.70                          |                                 |
|                               |                                                   | T12       | 1           | 12         | 12       | 11.26              |    | 0.89                | 119.85                          |                                 |
|                               |                                                   | T12       | 2           | 72         | 144      | 12.00              |    | 0.89                | 1532.74                         |                                 |
|                               | T. RFT. @ BOTTOM SLAB IN LONG DIR. IN OUTER VENTS | T12       | 1           | 57         | 57       | 12.00              |   | 0.89                | 606.71                          |                                 |
|                               |                                                   | T12       | 1           | 19         | 19       | 10.86              |  | 0.89                | 183.02                          |                                 |
|                               |                                                   | T12       | 1           | 19         | 19       | 2.26               |  | 0.89                | 38.09                           |                                 |
|                               |                                                   | T12       | 2           | 114        | 228      | 12.00              |  | 0.89                | 2426.83                         |                                 |
|                               | T. RFT. @ BOTTOM SLAB IN LONG DIR. IN INNER VENTS | T12       | 1           | 63         | 63       | 12.00              |  | 0.89                | 670.57                          |                                 |
|                               |                                                   | T12       | 1           | 21         | 21       | 11.74              |  | 0.89                | 218.68                          |                                 |
|                               |                                                   | T12       | 1           | 21         | 21       | 2.24               |  | 0.89                | 41.72                           |                                 |
|                               |                                                   | T12       | 2           | 126        | 252      | 12.00              |  | 0.89                | 2682.29                         |                                 |

مهندس الاستشاري

/م