



# Tender No. (SELCo. 02/2019)

## Street Lighting

<b>Grand Total</b>	
Discount	
<b>Total after Discount(NIS)</b>	

Total In words:.....

Company.....

Signature.....



**The following data shall be filled and submitted with the tender:**

**Tender Number:**.....

**Tender Name:**.....

**Supplier Name:** .....

**Contact Person:** .....

**Address:** .....

**Telephone Number:** .....

**Fax number:** .....

**Mobile Number:** .....

**Email:** .....

**Bid Submission date and time:** .....

**Company**.....

**Signature**.....



Instructions to bidders

- *The bidder shall submit one original financial offer in a separate envelope from one original and a copy of the technical offer.*
- *The supplier should price all items of the lot, else will be excluded.*
- *The bid validity should be not less than 90 days from the bid opening date.*
- *The tender is indivisible.*
- *The bidder must submit a bank guarantee from local bank equivalent to 5% of the tender total value and in separate envelope, valid for 90 days from the date of submission; otherwise, quotation will be rejected.*
- *Prices are in NIS EXcluding VAT.*
- *The awarded supplier / suppliers and within 10 days from receiving the awarding letter shall submit a performance bond equivalent to 10% of the awarded value, valid for 180 days.*
- *Payments: Within 30 days from delivery and technical approval.*
- ***Delivery: within (90) days** from the date of accepting and informing the bidder of acceptance of quotation.*
- *Fines: 1% of the item price per week of delay and not more than 10% of total bid value.*
- *Prices including all charges up to the warehouses of SELCo.*
- *Bid document non refundable price is 300 NIS and will be paid when submitting the offer by the participants.*
- *In case of mistakes in summation, the unit price will be considered.*
- *The bidder shall submit manufacturer catalogs with the tender indicating the catalog number and technical specification for each offered item.*
- *Discount at source certificate is required from local suppliers.*
- *Tender document could be obtained from SELCo website or from procurement department.*
- *Tuesday April, 30<sup>th</sup> 2019 12:00 pm is the final time of receiving the offers at*



*SELCo headquarter/Procurement department. and in sealed envelopes.*

- *For further information please do not hesitate to contact the procurement department:*

*Eng. Abdelqadir Qaisieh*

*Purchasing Manager*

*Tel: 02 2283602/3*

*Fax: 02 2283601*

*Email: [abed@selco.ps](mailto:abed@selco.ps)*

*Website [www.selco.ps](http://www.selco.ps).*



**Schedule of requested Materials**

**LOT 1: Cables and Conductors:**

No.	Item	Unit	Qty	Unit Price	Total
1	Steel Street lighting Pole 10m height as per drawing including connection panel.	Pcs	100		
2	600/1000V, underground cable 5*6 mm2 Cu	Km	3		
3	600/1000V, underground cable 3*1.5 mm2 Cu	Km	4		
<b>Total Excluding VAT (NIS)</b>					



## **Tender (SELCo 02/2019)** **Technical Specifications**

### **1: Steel Poles and Arms**

#### **PARTICULAR TECHNICAL SPECIFICATIONS**

#### **STEEL POLES/STRUCTURES**

##### **General**

Steel poles/structures shall be of lattice steel self-supporting, bolted construction.

The poles/structures shall be designed with main dimensions and electrical clearances according to the Purchaser's standard design.

The poles/structures shall be designed in accordance with BS, ASCE or other recognized standard to the approval of the Purchaser.

##### **Pole/Structure types**

The types and sizes of poles/structures shall be as described in the Schedule Requirement.

##### **Accessories to Poles/Structures**

All accessories, such as cross-arms, transformer arms, brackets, bases, bolts nuts, washers and all other shall be suitable to the poles/structures as described in the Schedule of Requirements.

#### **CORROSION PROTECTION**

##### **General**

All supplied equipment shall be protected against corrosion under service conditions. The protection shall also prevent corrosion during transport and handling.

Damage to the protection during transport and handling shall be repaired to the same quality as specified for the object.

##### **Galvanizing**

Except where otherwise specified all ferrous parts shall be galvanized.

Galvanizing shall be applied by the hot-dip process and shall consist of a continuous coating to minimum thickness as follows:



	Average of Specimens tested $\mu\text{m}$ (g/m <sup>2</sup> )		Any Specimen tested (g/m <sup>2</sup> )	Individual tested $\mu\text{m}$
Rolled steel exposed to the atmosphere only	t<5 mm	87 ( 610)	79 ( 550)	87(610)
	t $\geq$ 5mm	95(685)		
Rolled steel underground Surface and in contact with ground	215 (1550)		190 (1370)	
Cast iron and malleable iron	87(610)		70(500)	

The zinc coating shall meet the requirements according to ASTM A123, A153, A239 and A385, or relevant standards

All steel shall be fully fabricated before galvanizing, no machine, boring, punching etc. will be allowed after galvanizing. Minor damage to the galvanizing resulting from transportation and handling shall be repaired in an approved manner, e.g. by painting with an approved zinc-rich paint, containing at least 92 weight per cent zinc powder.

After galvanizing all members shall be dipped in a dichromatic solution bath to avoid formation of white rust during storage and transportation.

Prior to bundling of steel members, after galvanizing, all members shall be completely dry.

### STRUCTURAL STEEL

Structural steel shall be made by the open hearth basic oxygen or electrical furnace process, and shall comply in quality with the requirements for ST37-2 in DIN17100 or Grade 43 A in BS 4360. Steel of higher tensile grade if offered, shall comply with relevant DIN or BS Standards.

Only two strength classes may be used, low tensile steel (yield point 220-250 N/mm ) and high tensile steel (yield point 300-350 N/mm<sup>2</sup>). For tubular poles the thickness shall be >2.2mm < 5.0mm, and the factor of safety shall be the ratio ultimate stress/yield point = 1.5 minimum.

Steel shall comply with the requirements of ASTM A143 and embrittlement tests shall be made in accordance with that specification.



If the Supplier intends to use more than one quality of steel, he will be required to take every precaution to the satisfaction of the Purchaser against any possible intermixing of different qualities during transport, storage, handling, manufacture and installation.

Cast iron shall have a tensile strength of at least 140 N/mm<sup>2</sup>. It shall be made from the best grey pig and scrap iron and shall be close-grained, tough and uniform in character.

Malleable iron shall be of the black hearth type with a tensile strength of not less than 330 N/mm<sup>2</sup>.

### **BOLTED CONNECTIONS**

Bolts shall conform to the requirements of Clause 4.5.5 below. Bolted connections may have one bolt only.

Minimum bolt spacing is equal to two point five (2.5) times the bolt diameter.

The distance from the centre of a fastener hole to the end of any connected part shall not be less than two (2.0) times the bolt diameter minus five (5.0) mm, and the distance to the adjacent edge shall not be less than one point five (1.5) times the bolt diameter.

The distance from the centre of a bolt to the face of the outstanding flange of an angle or other members shall be such as to permit the use of a socket wrench, in tightening the nut.

The bolt hole diameter shall be equal to the bolt diameter plus one point five (1.5) mm.

Allowable ultimate bearing stresses for bolts as well as members are equal to one point zero (1.0) times the ultimate stress  $F_u$  of the steel.

Allowable ultimate shearing stress for bolts and members is equal to zero point six (0.6) times the ultimate stress  $F_u$  of the steel.

### **SPLICES**

Splices in all members of lattice steel structures shall be of the butt-splice or lap-splice type.

Splices of the main members shall be located immediately above horizontal members or diagonal brace connection.

Welding will be permitted in splices for tubular steel poles.





## **CUTTING**

Members shall be cut, drilled or punched and shaped to jig or by other means ensuring a proper fit. Arris formed by sawing or shearing shall be removed. Cracks and unevenness or sheared surface shall be removed by suitable means. Burrs shall be removed.

## **HOLES**

Final hole diameter may not exceed the corresponding bolt diameter by more than 1.5 mm. Holes may be punched to full size in steel not exceeding 13 mm in thickness provided that the diameter of the hole exceeds the thickness of the material. Holes in steel thicker than 13 mm may be punched to a diameter 3 mm less than final and centre drilled to full size. Steel thicker than 16 mm must not be punched.

Incorrectly drilled or punched holes shall not be refilled by welding.

Cutting and punching may not be, carried out at lower steel temperature than 0°C.

Detail design shall be such as to avoid as far as possible eccentricities of joints. Pockets or depressions which would hold water shall be avoided. Tubes and similar profiles shall be properly drained.

## **WELDING**

### **Execution of the Welding**

The sequence of welding shall be such as to cause as small deformations and welding stresses as possible.

The welding shall be performed with equipment and in premises suitable for the purpose.

Equipment shall be well suited to the type of weld to be performed so that the right quality shall be attained.

No gaps or hollows may appear in the welding into which acid may penetrate during the pickling procedure preceding galvanizing.

The weld shall be ground flush to the surface in such places where the welding bulge prevents a perfect fitting of components together.



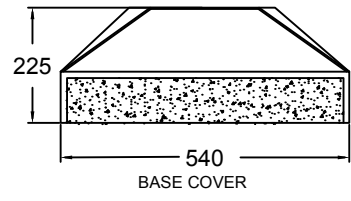
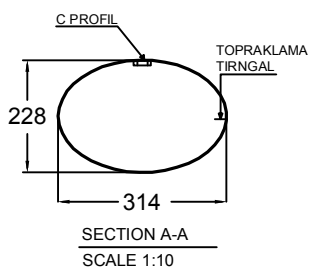
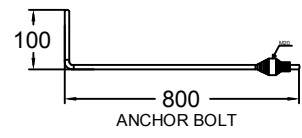
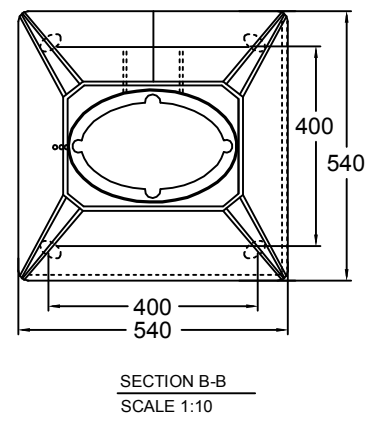
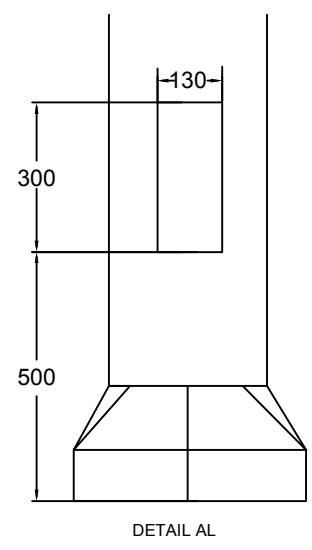
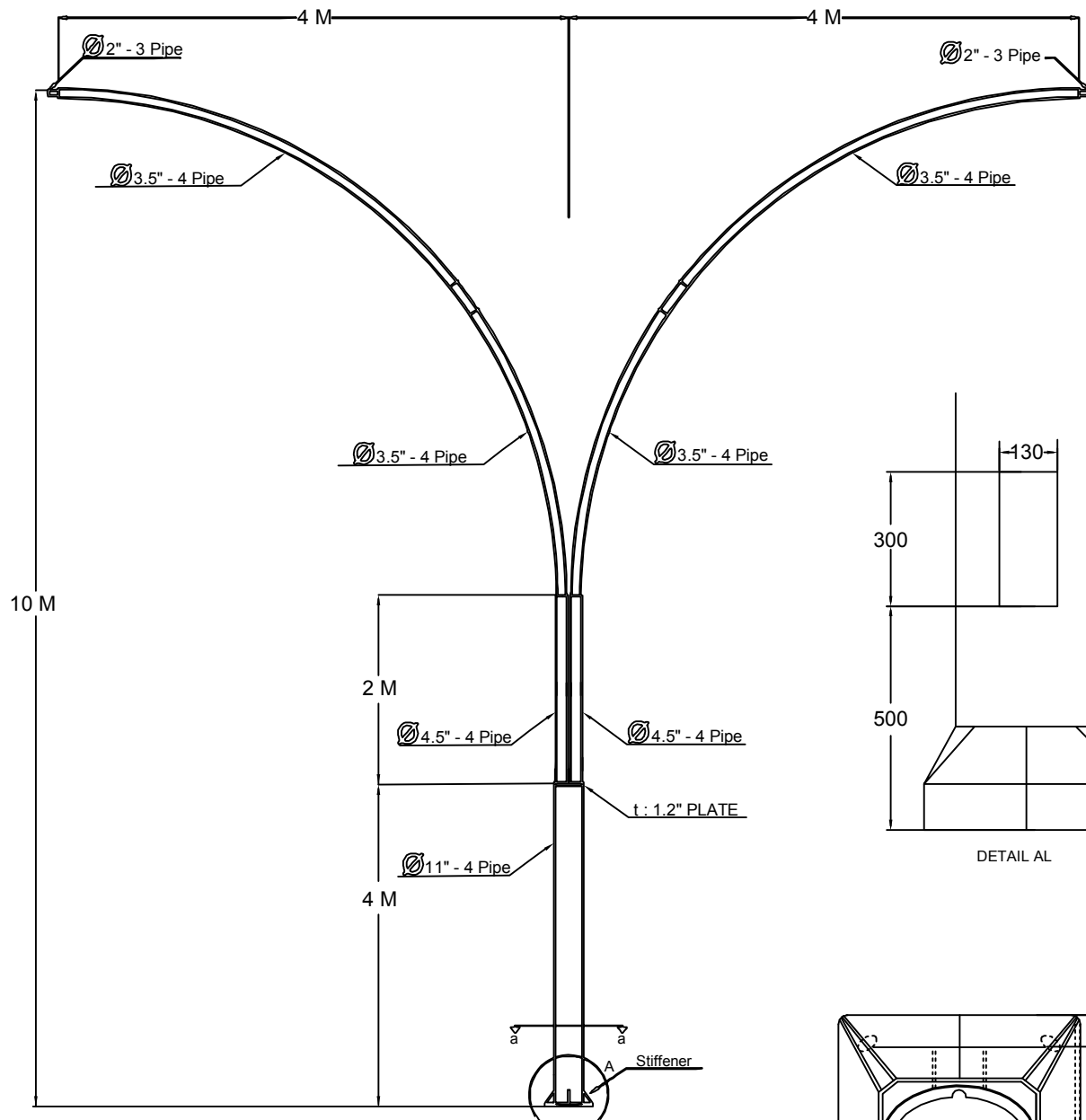
A high bulge or uneven weld surface may be leveled out by chiseling or grinding.

### Filler Metals for Welding

Standard filler metals shall be used and the strength class and quality shall be chosen to correspond to the base material.

## 2: 600/1000V, underground cables

Description/cable	5X6	3X1.5
Standard	IEC 60502/ BS 7889/ 97	IEC 60502/ BS 7889/ 97
Conductor material	Copper	Copper
Conductor flexibility	Stranded class 2	Stranded class 1
Insulation	XLPE	XLPE
Sheath	Extruded PVC	Extruded PVC
Sheath color	Green	Green
Lead free	Yes	Yes
Number of cores	5	3
Nominal sectional area of the core	6 mm <sup>2</sup>	1.5 mm <sup>2</sup>
Nominal Insulated thick mm	0.7	0.7 mm
Nominal Sheath thick mm	1.8 mm	1.8 mm
Cu Weight	288 Kg/Km	43 Kg/Km
Cable Weight Approx.	448 Kg/Km	154 Kg/Km
Outdoor Diameter Approx.	15 mm	10.2 mm
Longitudinal Numbering	Each meter	Each meter
Packing and Drumming	500m/drum	500m/drum



1- Quality of the material :

Shaft and range : S355JR

Other accessories : S355JR

2- All materials production and welding standards are (EN ISO 1090 )

3- All steel items , bolts, nuts & washers to be hot-dip galvd . as . per (EN ISO 1461)

4- Bolts Shall be used as (ISO 898)-5.6,6.8 or 8.8 unless specified in the structural drawing