Civil Sector
Scope of Services

- **Design & Design Review of steel structures**
  - Overhead Transmission Towers Up to 500 kV Towers
  - Microwave Towers Up To 120 meter Height)

- **Design & Design Review of concrete structures**
  - Design Of Substation Buildings, Transformers and Foundation for Switchyard Equipment
  - Design Of Industrial Buildings
  - Repair Of Concrete And Steel Structures

- **Construction Supervision**
  - Construction supervision of Over Head Transmission Lines 22 kV up to 500 kV
  - Construction supervision for civil works of Substations GIS and AIS types
  - Construction supervision for Repairing projects for steel and concrete structures
Engineering Software

- **STAAD PRO V8i**
  Structure Analyses and Design Of Steel and Concrete Structure

- **ETABS 2015**
  Structure Analyses and Design Of Concrete Structure

- **SAFE 2015**
  Structure Analyses and Design Of Concrete Slabs and Foundations

- **PCA Programs Columns And Mat**
  Design Of Foundation and Pedestals

- **Prokon**
  Design Of Foundation and Concrete Pedestals

- **AutoCAD**
  Drawings And Detailing

- **Revit Building Suit 2015**
  Drawings And Detailing

- **Microsoft Office**

- **Microsoft Project**

In-house Excel Sheets For Steel Members Design and Concrete Sections
Steel Towers Design

Design By Latest Software
Steel Towers Loading Test

STATE GRID TESTING STATION (CHINA)
ALBABTAİN TESTING STATION (SUDI ARABIA)
L&T TESTING STATION (INDIA)
Steel Towers Construction Supervision

EPS
Microwave Towers

Microwave Tower For Gas & Oil Co.
Up To 120 Meter

Structural analysis and design
Pole Towers For M.V

POLE DESIGN

FOUNDATION DESIGN
OHTL Foundations

Design & Construction Of OHTL Towers Foundations
- Design Of Switchgear and Control Buildings
- Design Of Foundations for Outdoor Equipment Supports
- Design Of Foundations for Receiving Gantry and Portals
- Design Of Transformers Foundation
- Design Of Cable Ducts
- Design Of Service Roads
- Construction Supervision
Design of GIS Substation

Analysis & Design

Design Drawings

Construction Drawing

Compact GIS Substation
Indoor Transformer Building

EPS
Switch yard For Outdoor Equipment
Design Of Industrial Buildings

Transformer Workshop And Administration Building

Presented by: Ahmed Helba.
Repair of Steel & Concrete

- Inspection of steel structure and towers foundation.
- Design of repairing system and material selection.
- Repair of steel structure and towers foundations.
- Supervision and quality control.
Repair Of Steel Structure & Foundations

High Voltage Testing Station
CONCEPTUAL
Architectural Design
Preparation of Layout Drawing
DETAILED DRAWINGS
Architectural Design

Detailed architectural drawings based on equipment arrangement
STRUCTURAL DESIGN
Creating the economical statically system using 3D computer modeling programs
LOAD ASSIGNMENT
Structural Design

Assigning loads for different structural elements according to code of design and equipment data sheet.
ANALYSIS
Structural Design

3. Structure analysis and checking of deformed shape.
DESIGN

Structural Design

Straining actions and design for different structure elements.
**DETAILING**

**Structural Design**

Design and detailing tables for structural framing elements.
Bill Of Quantities
Schedules
COLUMNS & FOOTINGS

Bill of Quantities

3D modeling for all structure elements to calculate BOQ
# ELEMENTS TABLES

## Bill of Quantities

Quantity and schedules of reinforcement for all structure elements
CONCRETE VOLUMES
Bill of Quantities

Quantity and schedules of concrete for all structure elements
Final Drawings
COMPLETION

Final Drawings

Final Drawings for The Client Approval
THANK YOU