

# PRESENTATION OF PROJECTS



# SIDRE EPCM



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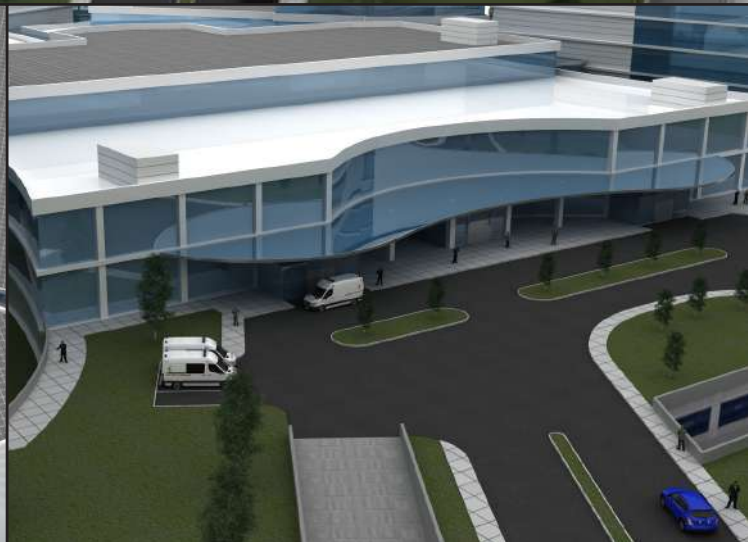
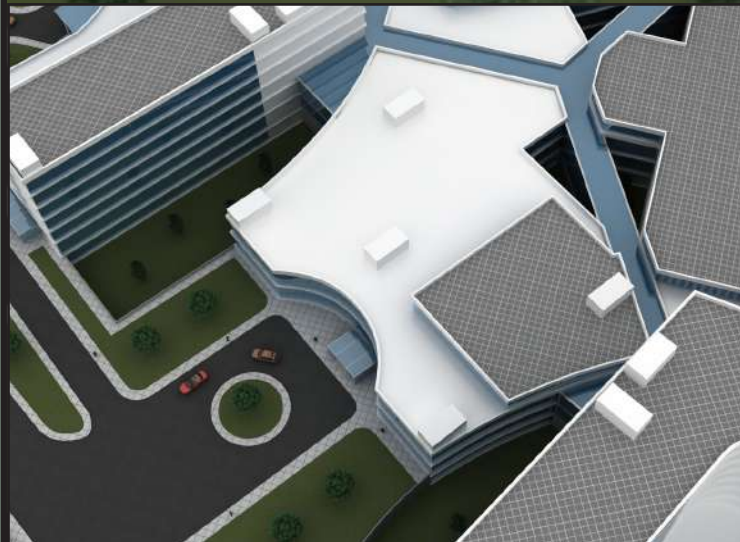
# HOSPITAL COMPLEX







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# HOSPITAL COMPLEX





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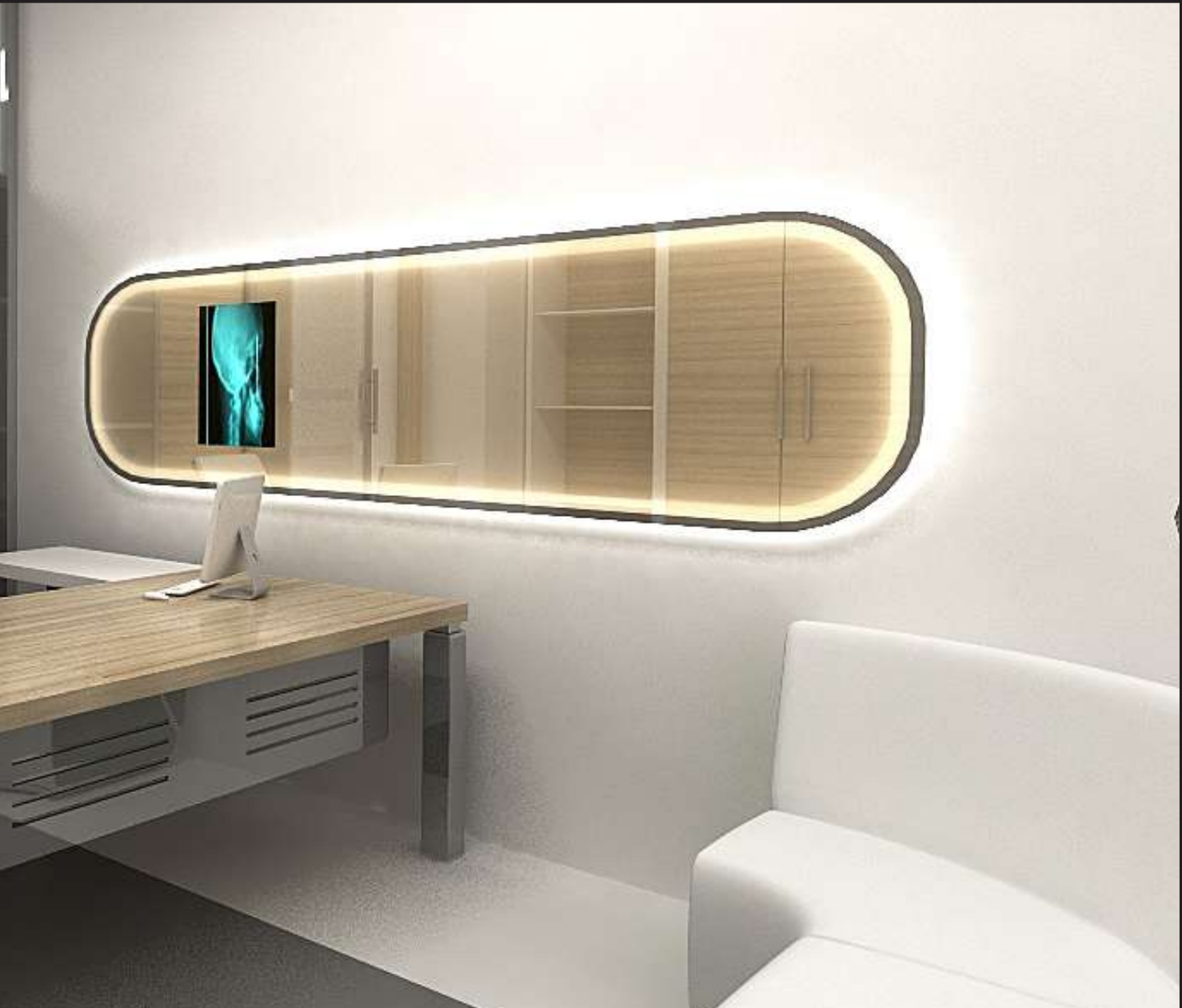


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# HOSPITAL COMPLEX





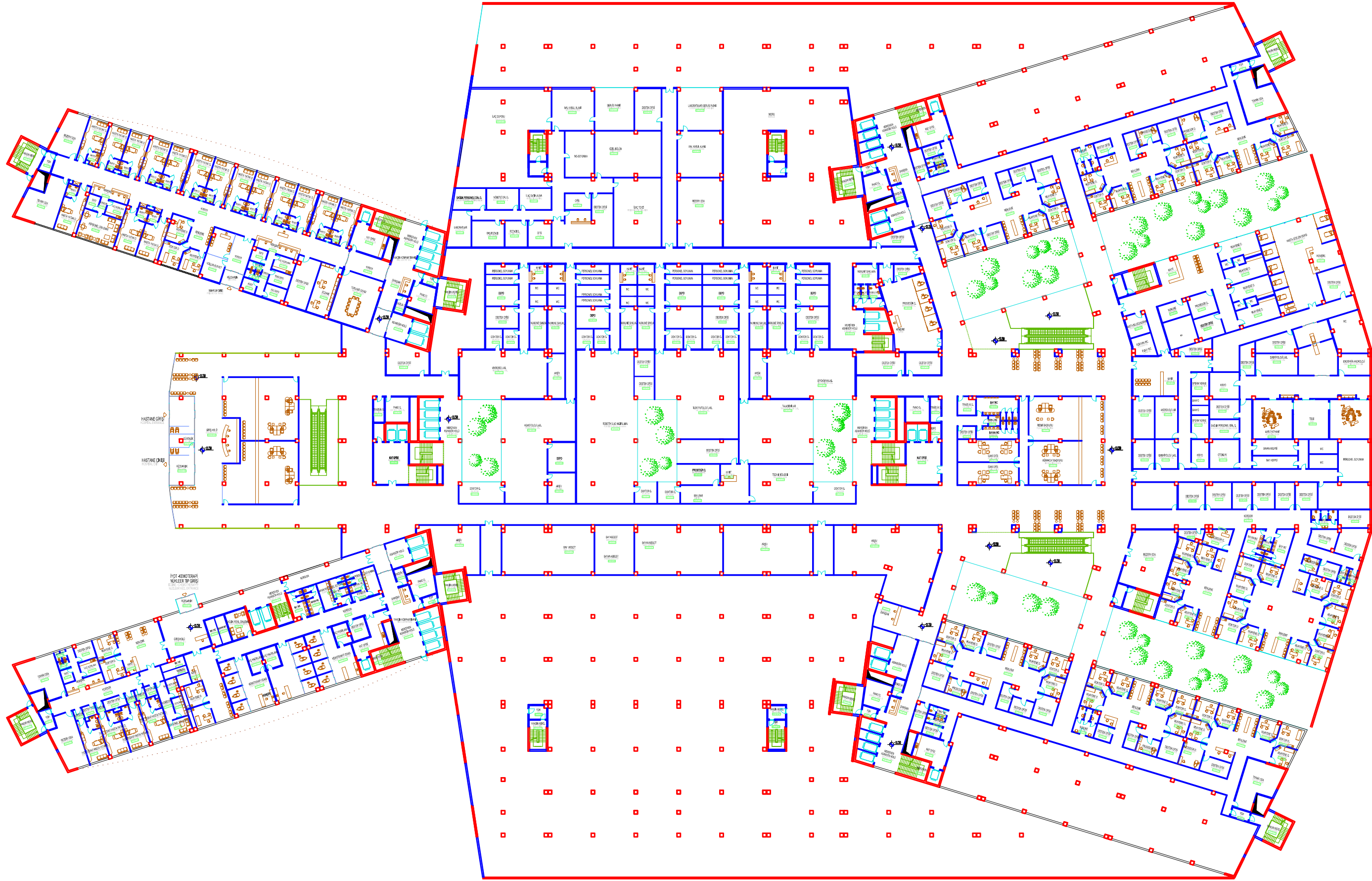
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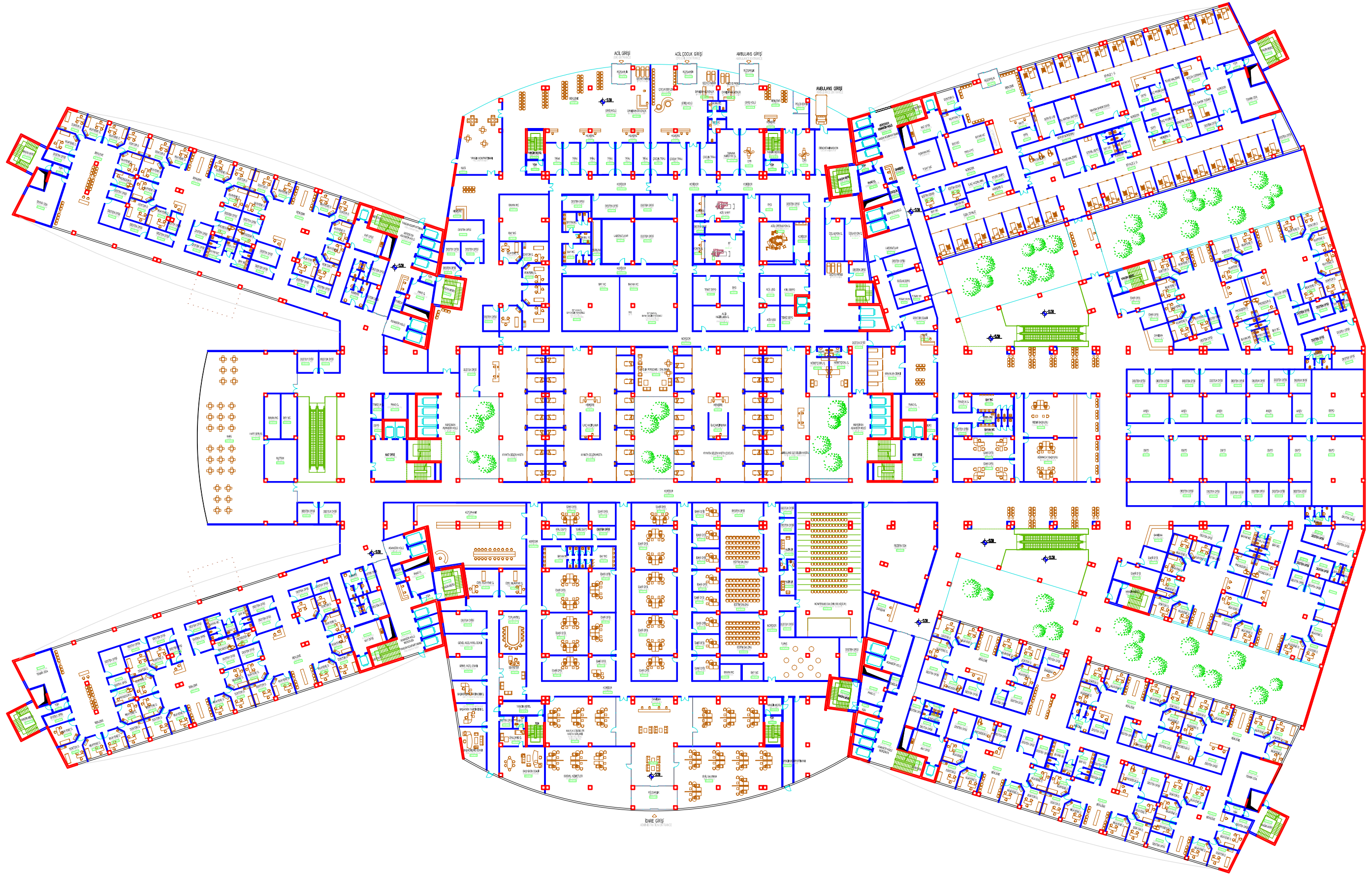
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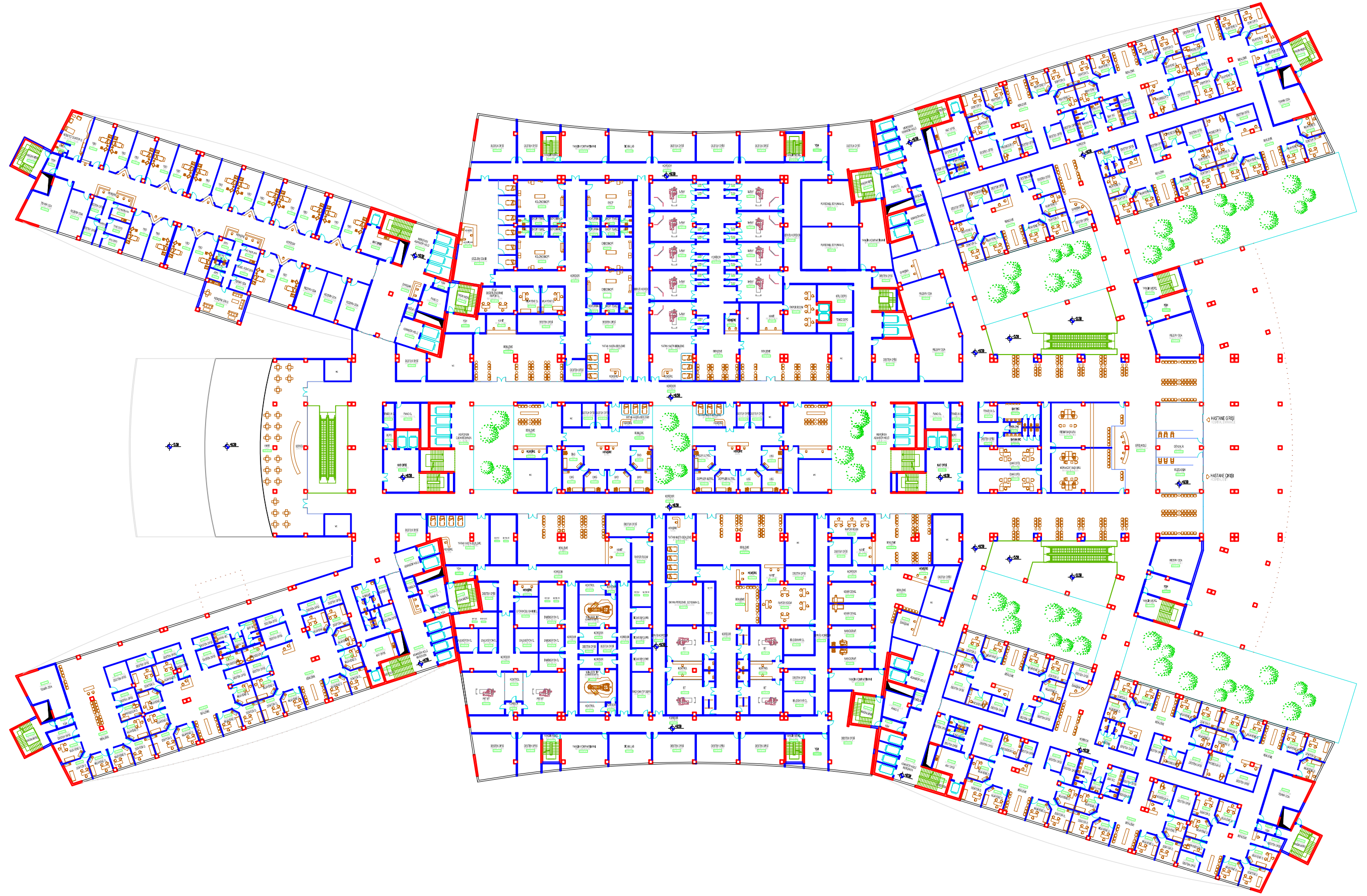
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YARDIMCILAR (Assistants)	
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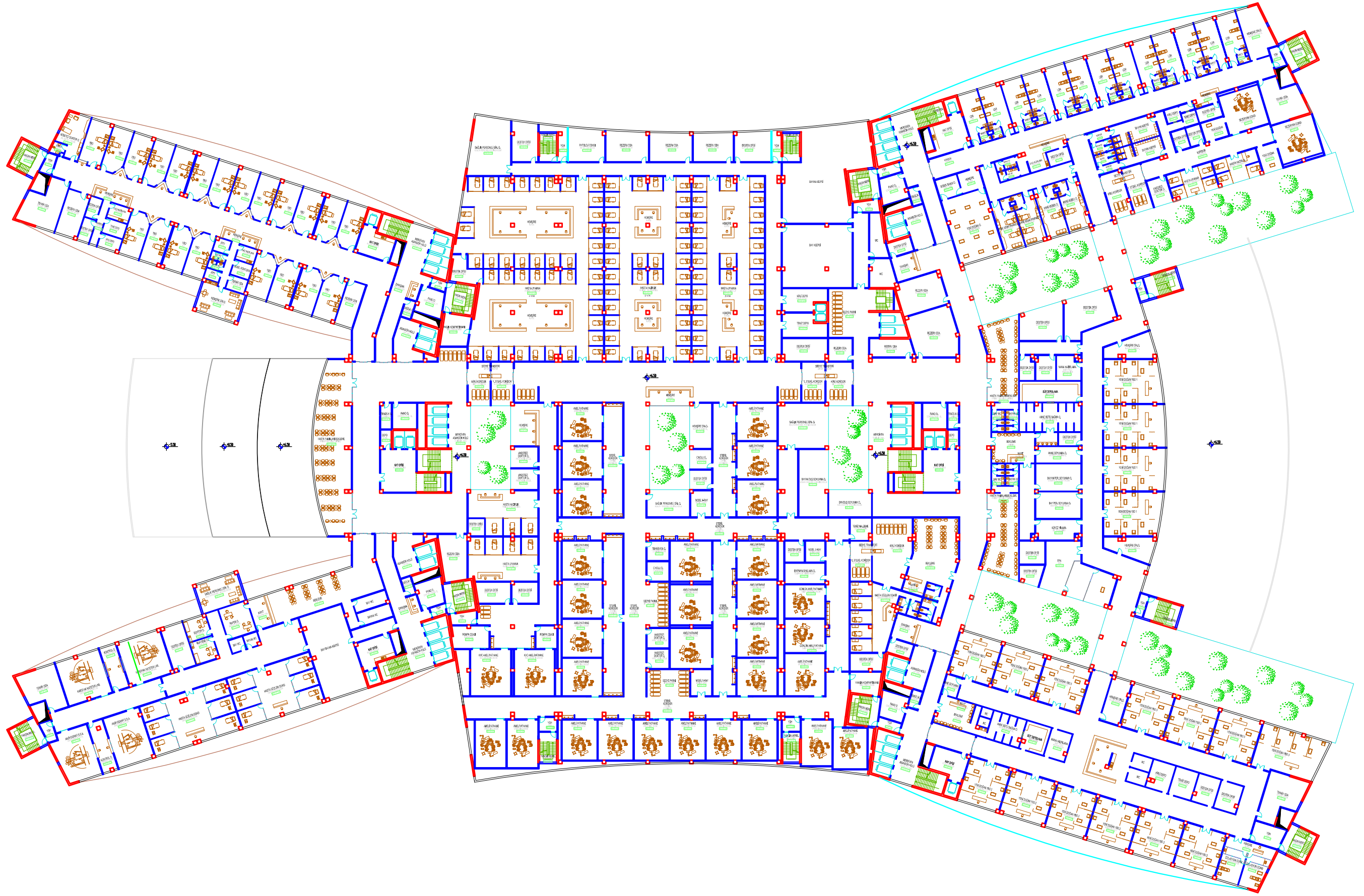
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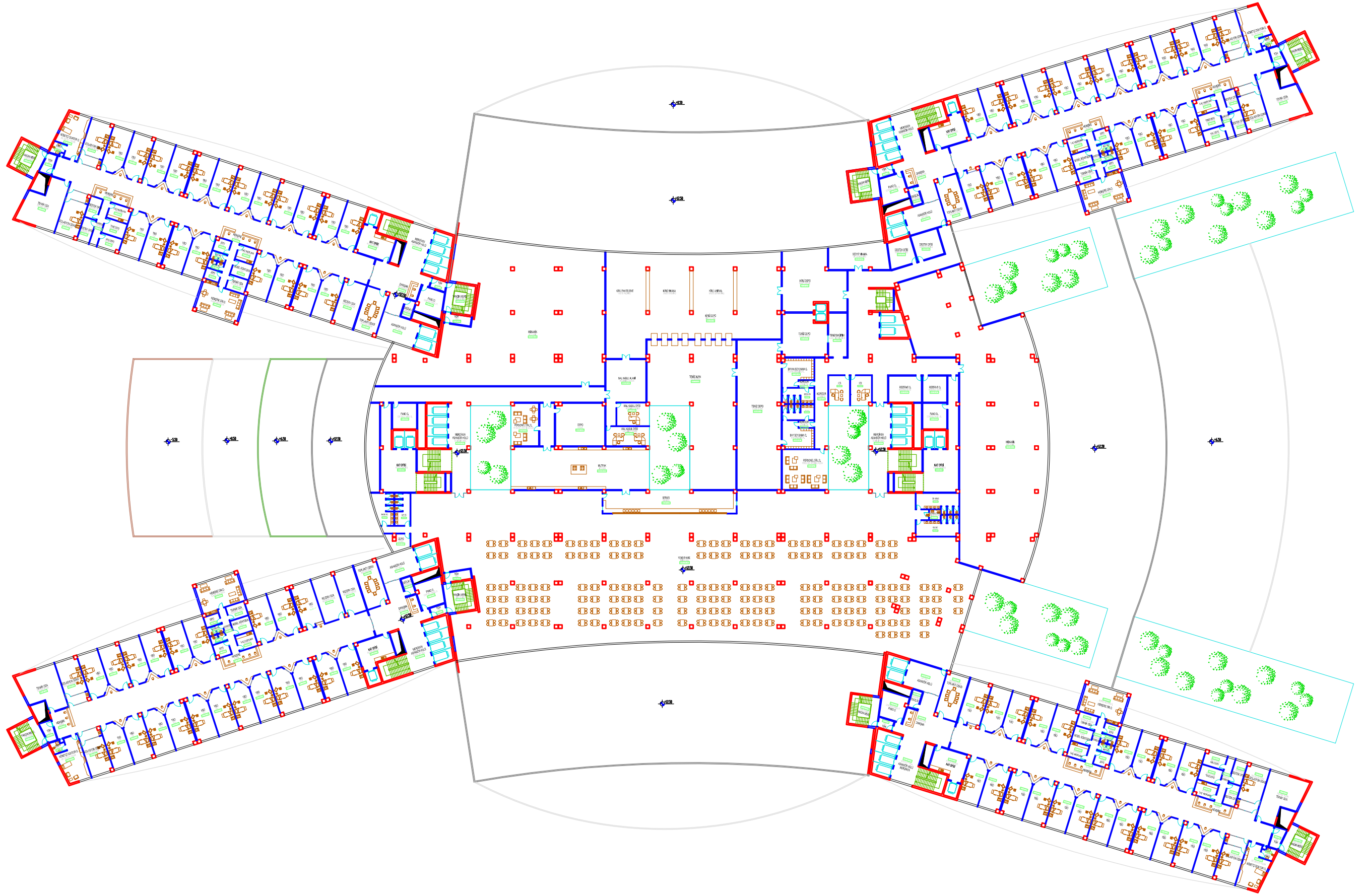
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YARDIMCILAR  
(Assistants)

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BAZA  
(By)

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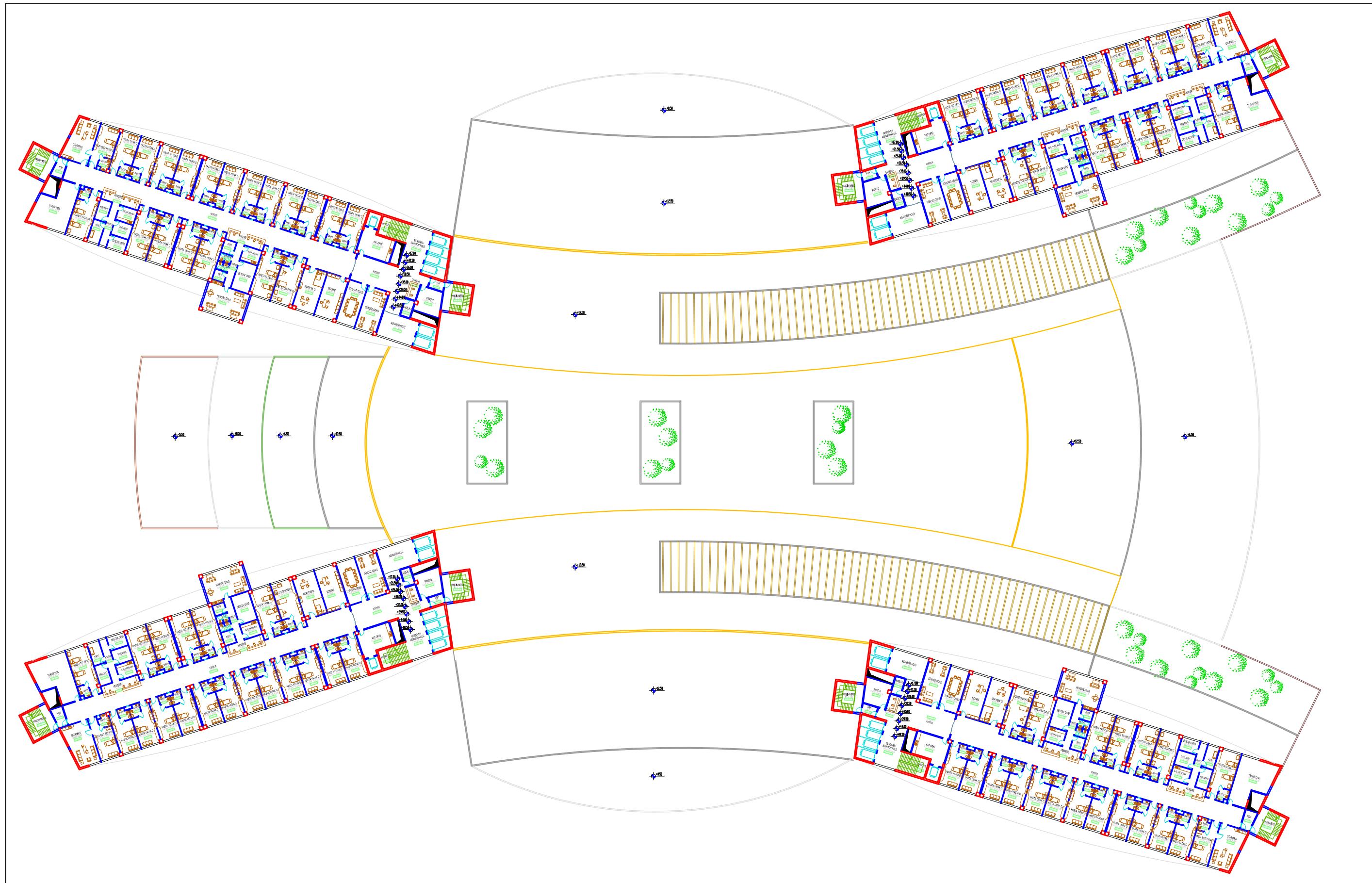
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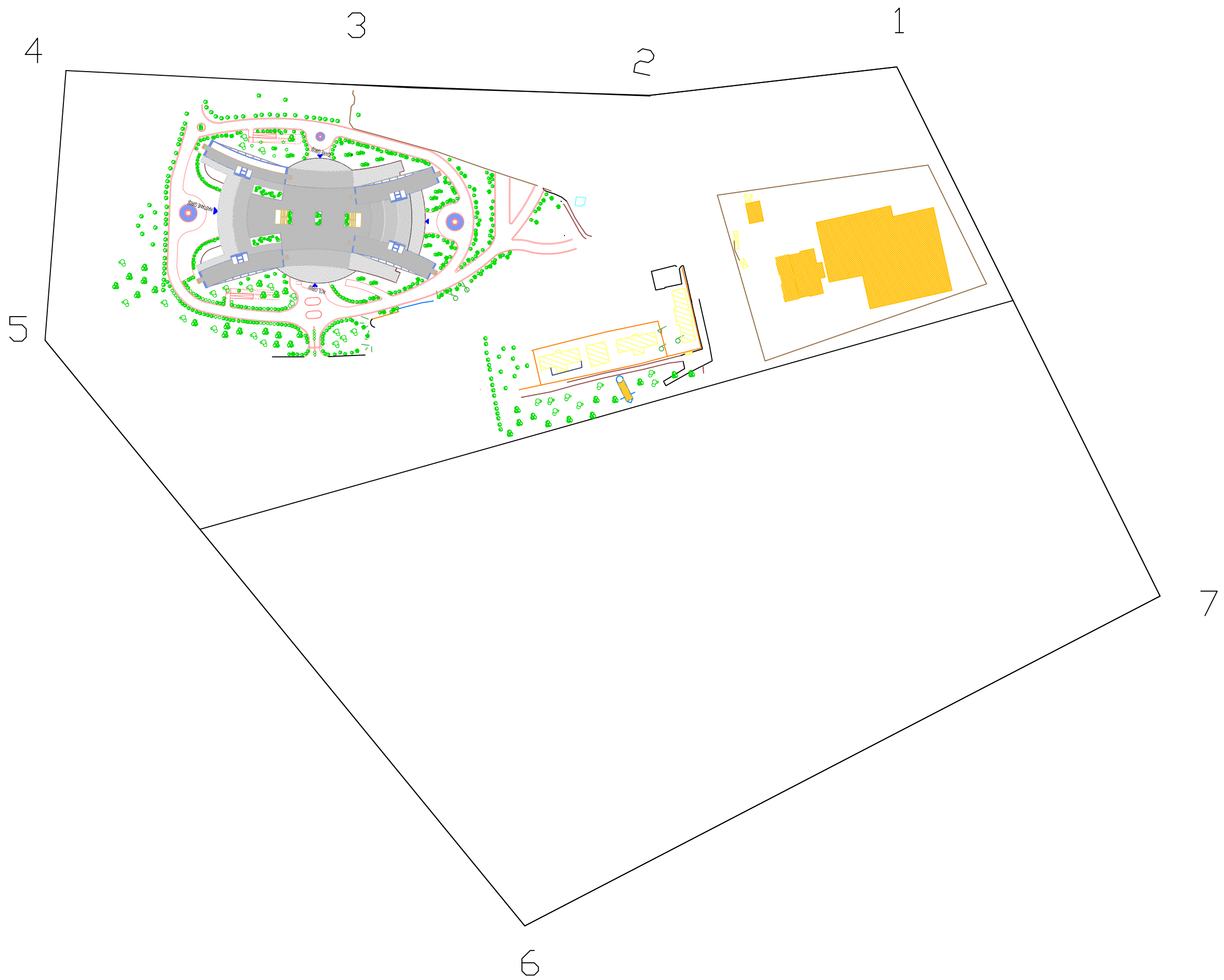
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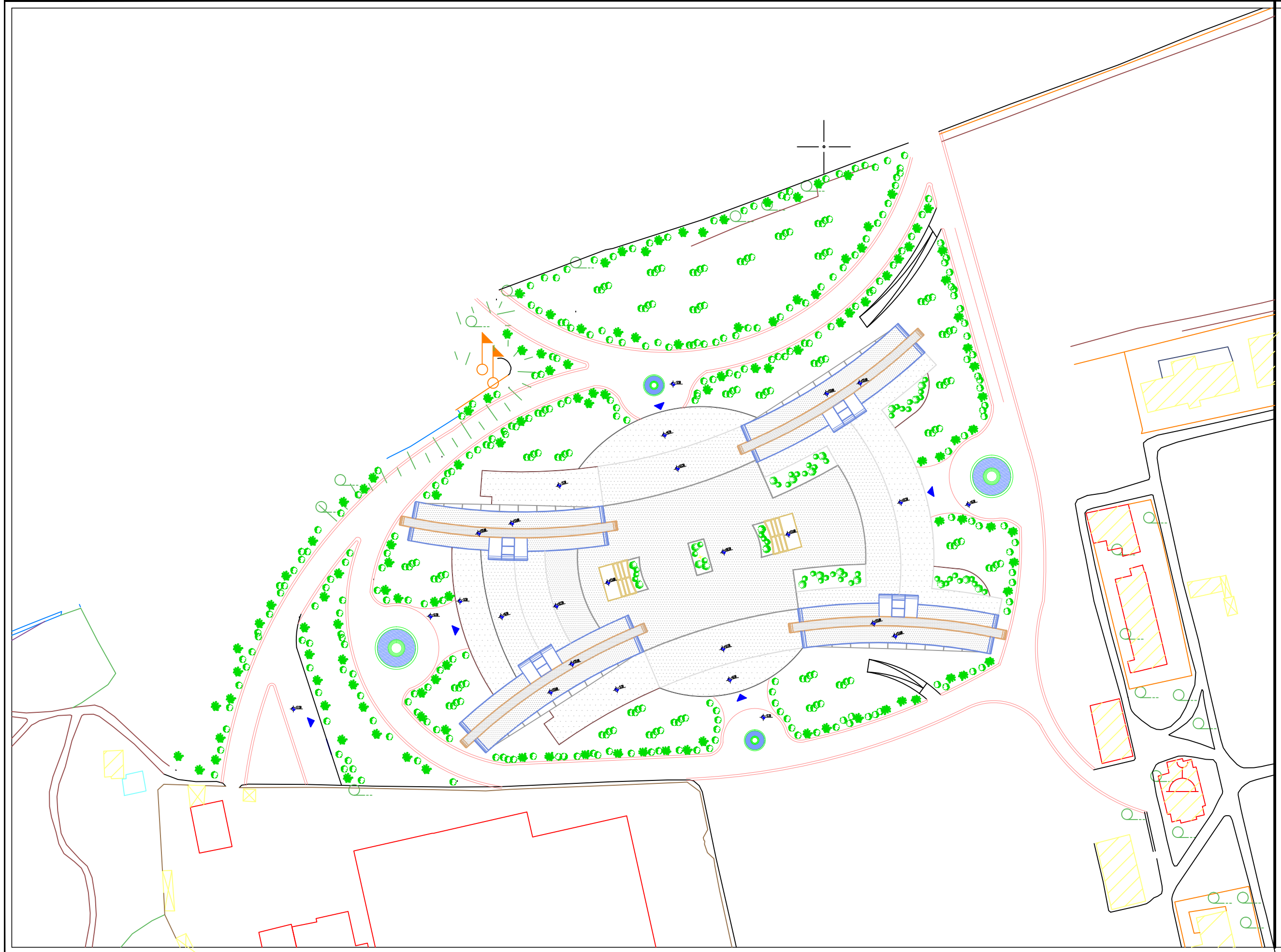




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# GREENHOUSE PROJECTS







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# GREENHOUSE PROJECT







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# GREENHOUSE PROJECT







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# GREENHOUSE PROJECT







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# TREATMENT PLANT







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# TREATMENT PLANT







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# SCHOOL COMPLEX







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# SCHOOL COMPLEX







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# SCHOOL COMPLEX



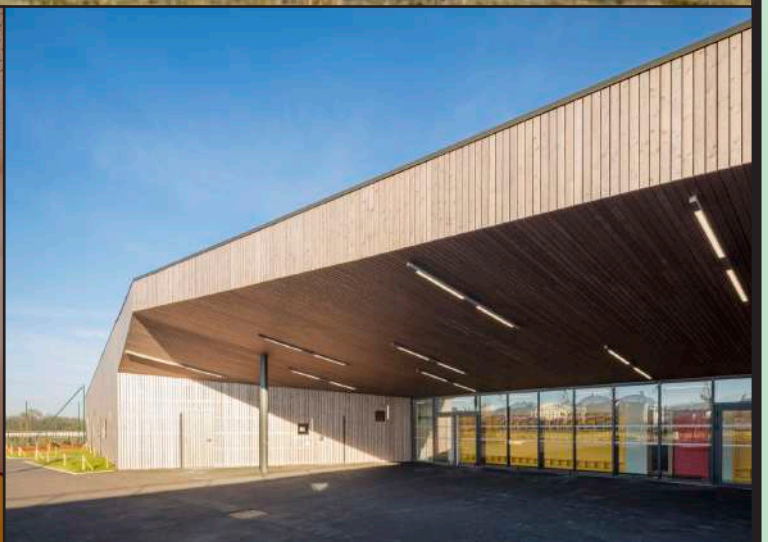


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# SCHOOL COMPLEX





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# SCHOOL COMPLEX



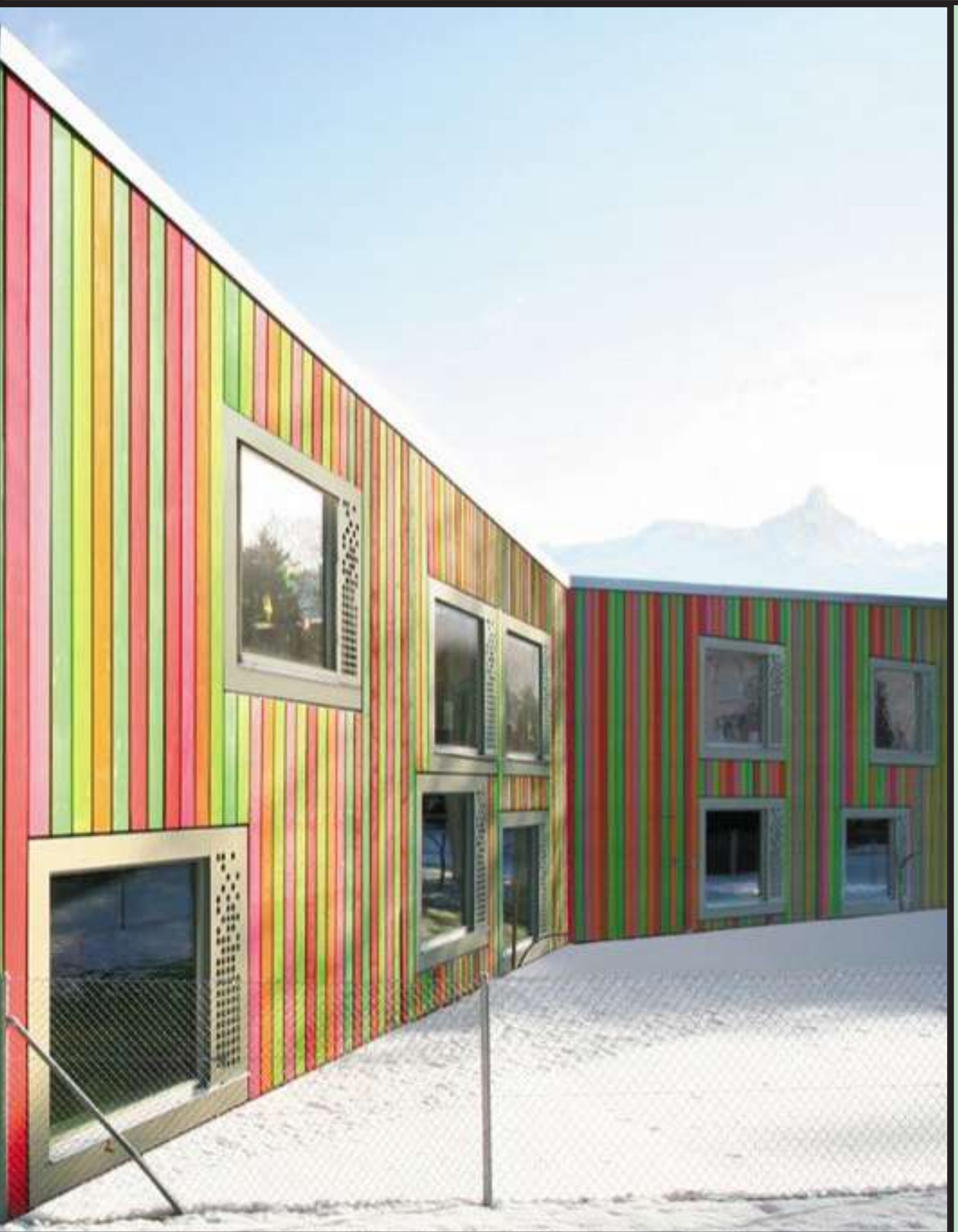


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# KENDERGARTEN PROJECTS



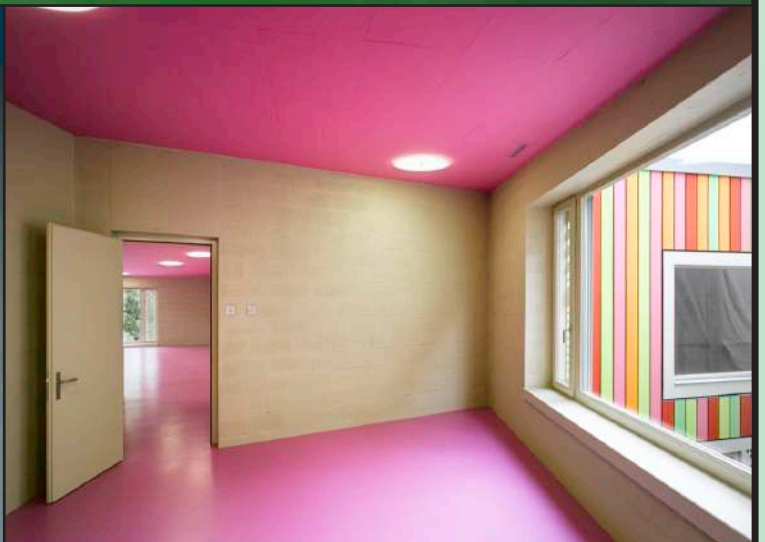


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# KINDERGARTEN PROJECT



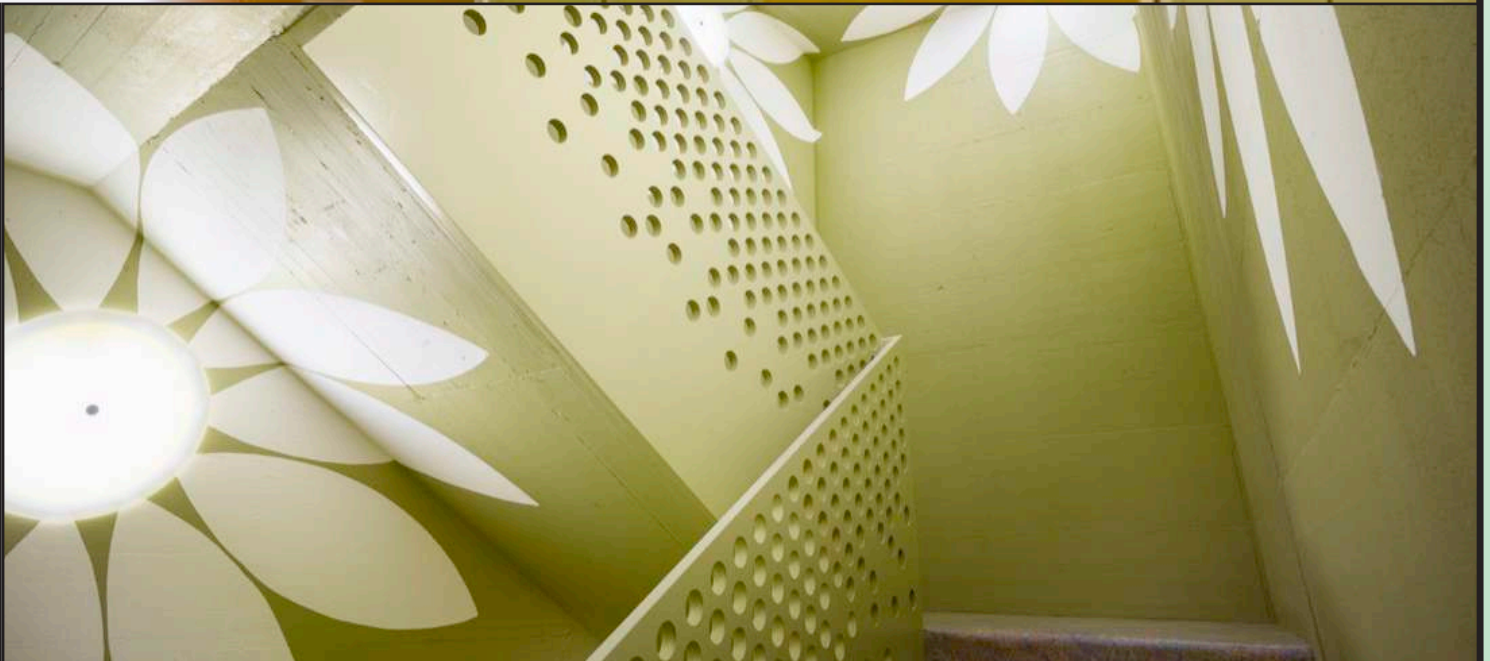
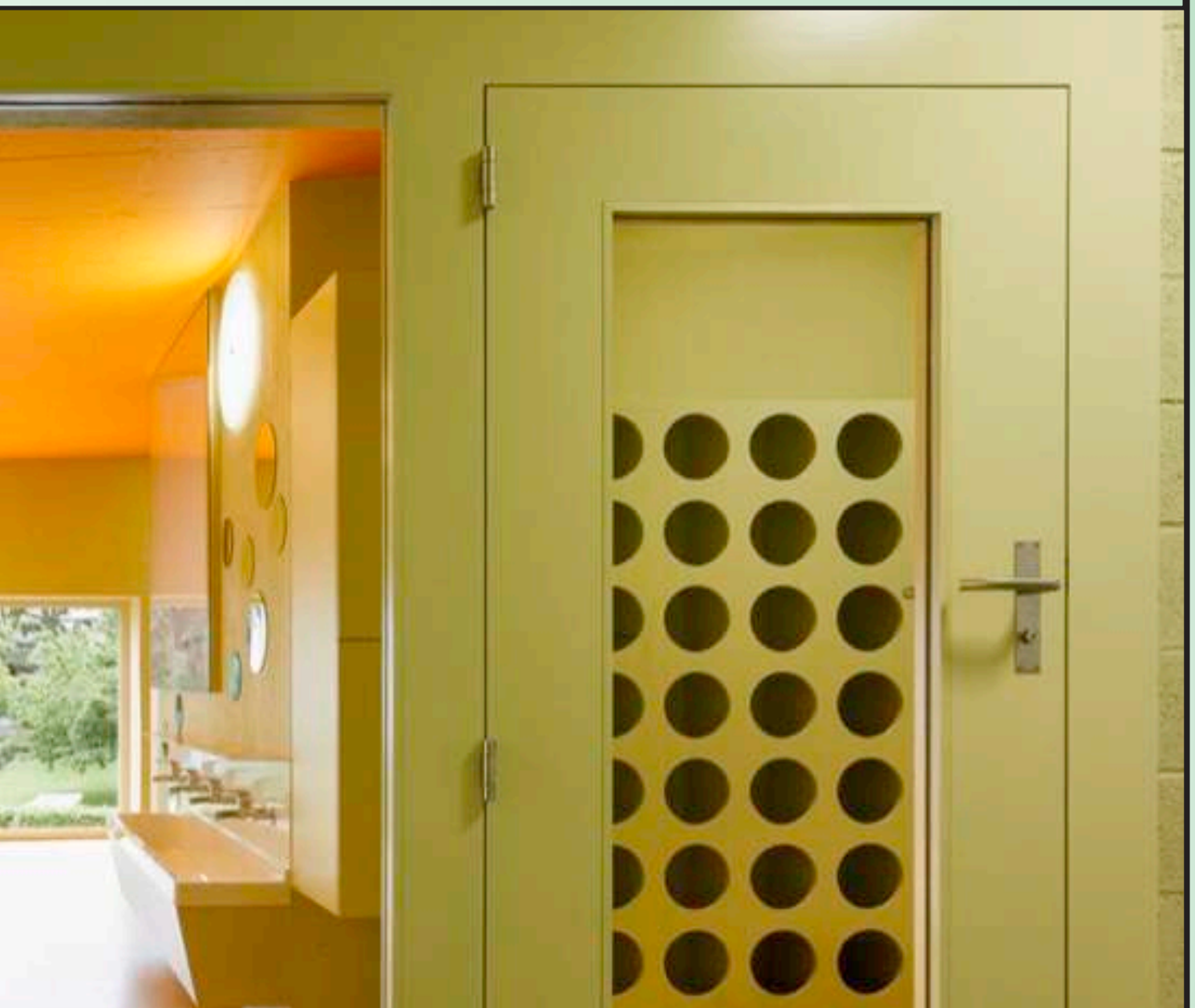


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# KINDERGARTEN PROJECT





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# KINDERGARTEN PROJECT







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# KINDERGARTEN PROJECT





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# KINDERGARTEN PROJECT







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# 100 NOS OF HOUSING UNIT





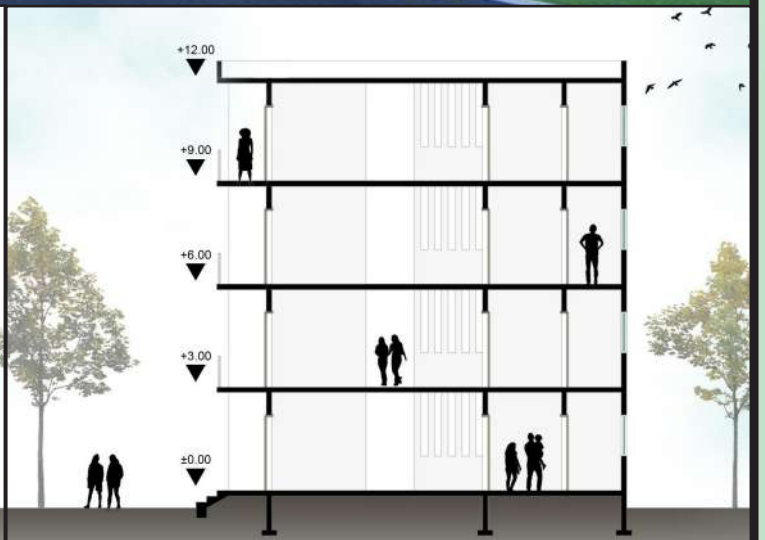
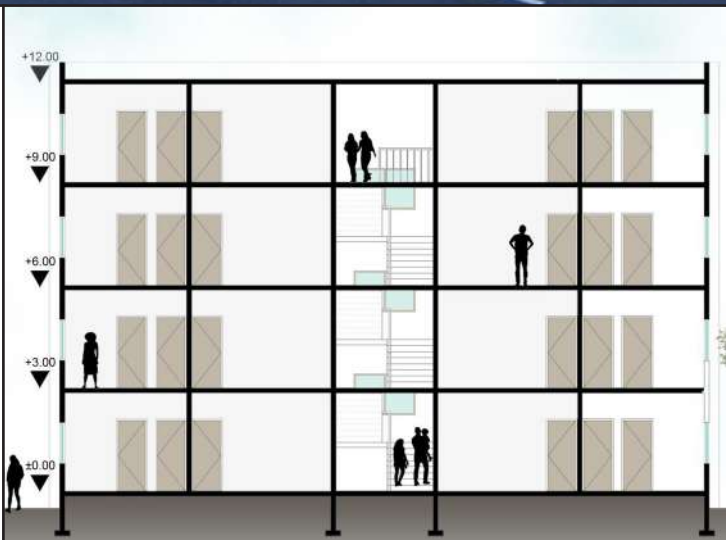


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# 100,000 NOS OF HOUSING UNIT





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# BOLSHOI THEATER





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# BOLSHOI THEATER





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# AVON FACTORY







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# KLINSKIY BEER FACTORY







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# KLINSKIY BEER FACTORY



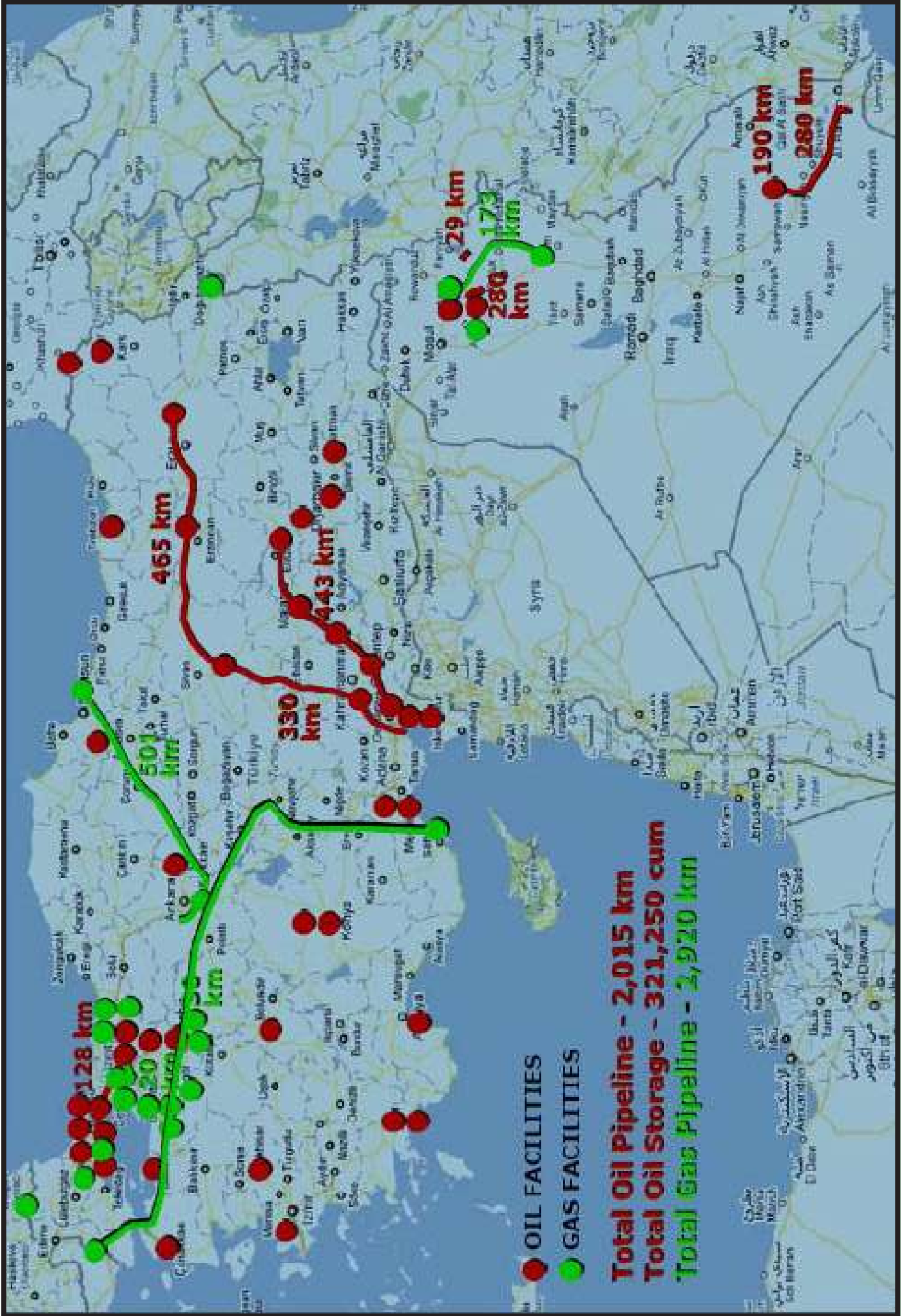




# OIL & GAS FACILITIES







- OIL FACILITIES
- GAS FACILITIES

**Total Oil Pipeline - 2,015 km**  
**Total Oil Storage - 321,250 cum**  
**Total Gas Pipeline - 2,920 km**



## SIDRE EPCM

### Çanakkale Kepez Fuel Terminal - TURKEY



**8,500 cum**  
**12 km PL**

Fuel Separator System

Heating Center

Blending System on Pier

3 Loading/Unloading Terminal on Pier

Black/White Product Pipelines (12 km)

Steam and Condense Pipelines

Steel Pipe Racks and Channels

Fire Water Pipelines and Hydrants

Foam and Cooling Water Pipelines

Storm, Oily Water Drainage Systems

500 KVA Generator



Facilities for Bunker Selling to Ships 350 cum/hr

1 Fuel Oil Storage Tank (4,200 cum)

1 Gas Oil Storage Tank (2,080 cum)

1 Fuel Oil Storage Tank (1,050 cum)

1 Dark Gas Oil Storage Tank (1,050 cum)

2 Diesel Storage Tank (193 cum)

Pump Station (140 sqm, Steel)

7 Black and White Product Pump



Petrol Ofisi Inc.





23 km PL



Detailed Engineering  
Cost Estimations  
Construction Specifications  
Commissioning  
Start-up Inspections  
Procurement Documentation  
Topographical Surveys



UPGRADING EXISTING TANK FARM



### NEW FACILITIES

White Product PS and Manifold  
Black/White Product Lines (17 km)  
Black Product Manifold  
Black Product Sea Collector  
Fire Water Pump Building  
Steam and Condense Pipelines  
Steel Piperacks and Supports  
Fire Water PL and Hydrants (6 km)  
Foam and Cooling Water Pipelines  
Storm Water Drainage System  
Oily Water Drainage System  
Black/White Product Separators  
Foam Tanks



Petrol Ofisi Inc.



# SIDRE EPCM

## Trabzon Fuel Terminal - TURKEY



17 km PL

Detailed Engineering  
Cost Estimations  
Tender Docs  
Specifications  
Procurement Docs  
Topographical Surveys

Upgrading Existing Tank Farm

### NEW FACILITIES

Facilities for Black Product 400 cum/h  
Facilities for White Product 800 cum/h

Black Product Pump Station, Manifold  
White Product Pump Station, Manifold  
Sea Collector Manifold Station  
Fire Pump Building  
Transformer Building  
Product Pipelines (17 km)  
Steam and Condense Lines  
Steel Pipe Racks and Channels  
Fire Water Pipelines and Hydrants  
Foam and Cooling Water Lines  
Storm, Oily Water Drainage Systems  
White/Black Product Separators  
1,000 KVA Transformer  
500 KVA Generator

Petrol Ofisi Inc.







### Dalaman Airport Fuel Terminal Upgrade

5,000 cum JET-A1 Storage Tank,  
 500 cum Fire Water Tank 1"-12" Pipelines (2.3 km),  
 6 Transfer Pump (40 - 70 cum/h Foam Tanks,  
 Foam and Cooling Water Pipelines  
 Fire Water Pipelines and Hydrants  
 Stormwater and Oily Water Drainage Systems

Detailed Engineering

**5,500 cum**



### Derince Fuel Terminal New White Product Manifold

White Product Pump/Manifold Station (Steel, 1,500 sqm)  
 Control and Otomation Building (260 sqm)  
 1600 KVA Transformer, 500 KVA Generator  
 1"-14" White Product Pipelines (17 km),  
 24 White Product Pump (120 cum/h, 740 cum/h)  
 Truck Loading System

Detailed Engineering

**17 km PL**



### Derince Fuel Terminal Mineral Oil Factory

Product Pipelines (23 km), Manifold Stations  
 Storm and Oily Water Drainage Systems and Separators  
 Fire Water Pipelines, Hydrants,  
 Thermal Fluid/Hot Oil Pipelines  
 Storage Tank and Pig Connections of Sea Loading Pipelines  
 Steam, Condense,  
 Hot/Cold Water,  
 Compressed Air Pipelines

Detailed Engineering

**23 km PL**





## SIDRE EPCM

# BTC Crude Oil Pipeline IPT-2 Intermediate Pigging Station

As-Built Documentation  
Construction Engineering  
Construction Shop Drawings  
Construction Supervision



Baku-Tbilisi-Ceyhan Crude Oil Pipeline  
IPT-2 Intermediate Pigging Station

Operation and Utility Building  
Accommodation and Guard Building  
Scraper Shelter  
Transformer Building  
Wax Handling Skid  
Heating Container  
Bypass Valve Shelters  
Diesel, Slope, Water Tanks  
Oily Water Separator  
Flowmeter, Connection Shafts  
Stormwater and Sewage Systems  
Waste Water System  
34.5 kV Overhead Line



Fernas Ltd. Co.



# BTC Crude Oil Pipeline LOT C Sivas - Ceyhan Section



Baku-Tbilisi-Ceyhan Crude Oil Pipeline  
Sivas -Ceyhan Section (Lot C)  
34 and 42 inch, 330 km

330 km PL



Construction Engineering  
Shop Drawings  
Topographical Surveys

River, Road and Railway Crossings  
Irrigation Channel Crossings  
Crossings at Steep and Side Slopes  
Crossings at Land Slides  
Concrete Coating of Pipes  
Piping and Hydrostatic Tests  
Ball Valve Stations  
Hydrostatic Tests  
Permanent Access Roads  
Electrical, Instrumentation Systems  
Route Changes  
Cathodic Protection Systems





SIDRE EPCM

## BTC Crude Oil Pipeline LOT B Horasan - Sivas Section



465 km PL

As-Built Documentation  
Construction Engineering  
Construction Shop Drawings  
Topographical Surveys



Baku-Tbilisi-Ceyhan Crude Oil Pipeline  
Horasan - Sivas Section (Lot B)  
42 inch, 465 km

River, Road and Railway Crossings  
Irrigation Channel Crossings  
Crossings at Steep and Side Slopes  
Crossings at Land Slides  
Concrete Coating of Pipes  
Piping and Hydrostatic Tests  
Ball Valve Stations  
Hydrostatic Tests  
Permanent Access Roads  
Electrical, Instrumentation Systems  
Route Changes  
Cathodic Protection Systems



Streicher - Timmerman - Gunsayil - Alarko (STA) Joint Venture



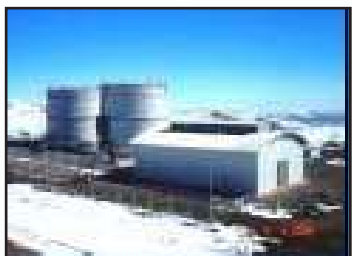


Baku-Tbilisi-Ceyhan Crude Oil Pipeline  
 Pump Stations  
 PT1 - Posof Metering/Pump Station  
 PT2 - Dumlu Pump Station  
 PT3 - Cayirli Pump Station  
 PT4 - Kangal Pump Station



Security, Operation Buildings  
 Canteen, Guest House  
 Workshop, Utility Buildings  
 Pump House, Piping House  
 Scraper Station  
 Housing Compound

Construction Engineering  
 Construction Shop Drawings  
 Procurement Documentation



Watchtowers, Car Sheds, Helipad  
 Relief Facilities Building  
 IPT1 - Intermediate Pigging Station  
 Piping House, Scraper Station  
 Utility/Operation Building  
 Fire Fighting Building



## SIDRE EPCM

# BTC Crude Oil Pipeline Major Crossings Survey - TURKEY



Geophysical Studies  
Basic Engineering  
Topographical Surveys



Baku-Tbilisi-Ceyhan Crude Oil Pipeline  
Major Crossings Survey on 1,070 km

18 River Crossing Width > 30 m  
26 River Crossing Width 5-30 m  
84 River Crossing Width < 5 m  
2 Main Highway Crossing  
6 Railway Crossing



Botas Inc. BTC Directorate





Detailed Engineering  
Cost Estimations  
Tender Evaluation  
Tender Documentation  
Construction Supervision  
Construction Specifications  
Commissioning  
Geotechnical Studies  
Topographical Surveys



Fuel Loading / Unloading Pier  
75 mx 8 m + 75 mx 6 m Fueling Pier  
126 Steel Pile (Dia. 800 mm)  
4" and 6" Fuel Pipes  
Fire Water, Potable Water Systems  
Pressurized Air Systems Pump Station on the Pier (120 cum/h)



Transformer / Generator Building  
400 kVA Transformer  
400 kVA Stand-by Generator

4", 6", 8" Fuel Pipelines (2,5 km)

Restoration Works  
Pump Stations  
Storage Tanks  
Valve Pits, Pipe Galleries

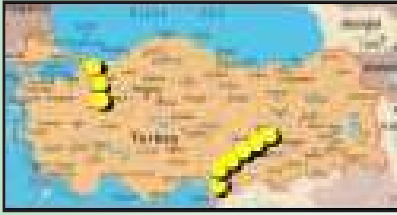


Republic of Turkey  
Ministry of Defense



# SIDRE EPCM

## Restoration of High Pressure Pump Stations - TURKEY

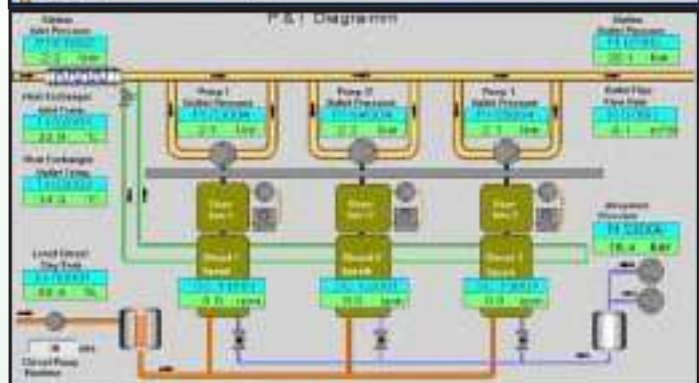
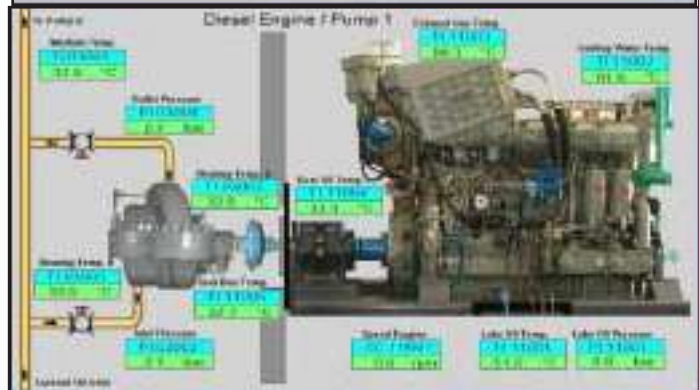
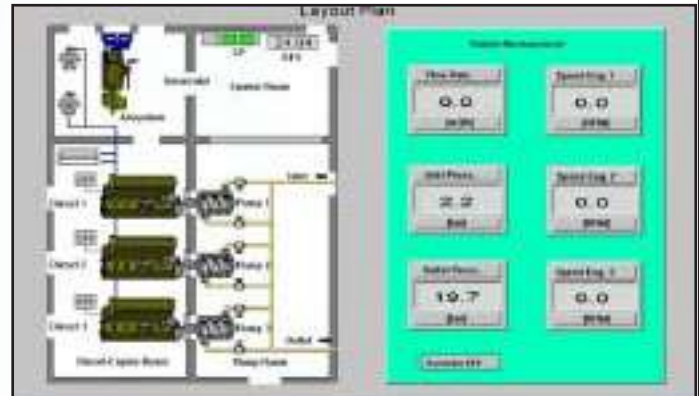


Detailed Engineering  
 Tender Evaluation  
 Tender Documentation  
 Construction Supervision  
 Start-up Inspections

6 High Pressure Pump Station  
 on 8" Iskenderun - Malatya Pipeline  
 18 High Pressure Pump (200 cum/h)  
 3 High Pressure Pump (120 cum/h)  
 21 Gear Box  
 21 Gas Tight Steel Wall  
 6 Water Regulating Valve  
 17 DN150 PN100 Ball Valve  
 18 DN200 PN100 Ball Valve  
 Pump Stations Control Systems  
 8 Emergency Connection Valve Pit

### 9 HP Pump Station

3 High Pressure Pump Station  
 on 6" Izmit - Eskisehir Pipeline  
 6 High Pressure Pump (120 cum/h)  
 3 High Pressure Pump (100 cum/h)  
 3 Diesel Engine (237 KW)  
 3 Diesel Engine (168 kW)  
 9 Gear Box  
 9 Gas Tight Steel Wall  
 2 Water Regulating Valve  
 18 DN150 PN100 Ball Valve  
 Pump Stations Control Systems



Republic of Turkey  
 Ministry of Defense



# SİDRE EPCM

## Ipras - Haramidere Fuel Pipeline - TURKEY



Islamic Development Bank Financed Pipeline and Pump Station



128 km PL

Detailed Engineering  
Cost Estimations  
Tender Evaluation  
Tender Documentation  
Construction Supervision  
Construction Specifications  
Commissioning  
Topographical Surveys



16" Pipeline Construction Supervision  
16" 100 Bar, API 5L X52 PL (128 km)  
River Crossings (1,000 m)  
5 Scraper Station  
Cathodic Protection System



Ipras HP Pump Station  
Detailed Engineering  
Construction Supervision  
3 Parallel Pump - Motor (340 cum/h)





## SIDRE EPCM

### Corlu Military Airfield Jet Fuel Storage Facilities



JP-8 Jet Fuel Storage Facilities  
and Hydrant Refueling System

- Detailed Engineering
- Cost Estimations
- Tender Documentation
- Construction Supervision
- Construction Specifications
- Start-up Inspections
- Geophysical Studies
- Geotechnical Studies
- Topographical Surveys



- 2 x 750 cum Jet Fuel Storage Tank
- 2 Pump House
- Manifold Filter Water Separator Station
- 10 cum Drainage
- Tank Truck Loading and Unloading Pits
- Circulation Pit
- 4 Hydrant Refueling Pit on the Apron
- Avgas Fuel Storage
- 200 KVA Diesel Generator
- Pipeline Connection
- Cathodic Protection System
- 15.8/0.4 kV Transformer





### Merzifon Main Airforce Base Jet Fuel Storage Facilities



2 x 1250 cum Jet Fuel Storage Tank and Pump Houses  
 Manifold Filter Water Separator Station  
 10 cum Drainage Tank, 2 Truck Loading Pit  
 175 KVA Generator, 200 KVA Transformer  
 Basic Engineering

### Afyon Airfield Jet Fuel Storage Facilities



1,250 cum Jet Fuel Storage Tank and Pump House  
 Manifold Filter Water Separator Station  
 10 cum Drainage Tank, 2 Truck Loading Pit  
 6" Connection Pipeline (1,350 m)  
 100 KVA Generator, 100 KVA Transformer  
 Detailed Engineering, Construction Supervision

### Dalaman Airfield Jet Fuel Storage Facilities



2 x 750 cum Jet Fuel Storage Tank and Pump Houses  
 Manifold Filter Water Separator Station  
 10 cum Drainage Tank, Truck Loading and Unloading Pits  
 100 KVA Generator, 100 KVA Transformer  
 Detailed Engineering, Construction Supervision









250,000 cum  
2 km PL

As-Built Documentation  
Detailed Engineering  
Construction Specifications  
Cost Estimations  
Tender Documentation  
Geophysical Studies  
Geotechnical Studies  
Topographical Surveys

### TANK FARM

3 x 45,600cum API 650 Storage Tank  
2 x 22,300cum API 650 Storage Tank  
3 x 7,250cum API 650 Storage Tank  
6 x 3,640cum API 650 Storage Tank  
3 x 3,555cum API 650 Storage Tank

Manifold and Third Collector  
Fuel Loading Canopy (13 Truck)  
Pig Station and Sea Collector  
Administration, Operations Building  
Auxiliary Building  
Fire Water Manifold  
Main Entry and Security  
Parking Area (85 truck)

### SEA TERMINAL

2 Boarding Dolphine (12 m x 8 m)  
Steel Catway (250 m)  
Catways for Dolphines (2 x 60 m)

### PIPELINE

20" PL (1,970 m, 1,500 cum/h)  
4 Highway, Road Crossing





SIDRE EPCM

## Ankara Natural Gas Pressure Reducing and Metering Station

As-Built Documentation  
Detailed Engineering  
Construction Shop Drawings  
Construction Specifications  
Commissioning  
Start-up Inspections  
Procurement Documentation



RMS - A Type Pressure Reducing  
and Metering Station  
Class: ANSI 600  
Maximum Capacity (1,000,000 Nm<sup>3</sup>/h)

Operation Inlet Pressure (25-75 barg)  
Operation Outlet Pressure (12-40 barg)  
Design In/Out Pressure (75-49 barg)  
Hydrostatic Test Pressure (112.5 barg)

3 Silicon Filter  
4 Heater (Water Bath)  
Control System (3+1)  
6 Metering System  
Temperature Control Unit  
Ultrasonic Metering System  
Inlet and Outlet Pig Stations  
Control Building (90 sqm)  
Security Building (32 sqm)  
Stormwater Drainage System  
Piping and Steel Supports  
Access and Internal Roads (300 m)  
Concrete Paved Areas (10,000 sqm)



Turkerler Construction Inc.



Durusu Natural Gas Pressure Reducing and Metering Station



**BLUE  
STREAM**

- As-Built Documentation
- Detailed Engineering
- Construction Shop Drawings
- Construction Specifications
- Start-up Inspections
- Geophysical Studies
- Geotechnical Studies
- Procurement Documentation



Durusu Pressure Reducing and Metering Station (Blue Stream)

- Class: ANSI 1500
- Capacity: 16 BCM/Year
- Operating Pressure (100-135 bar)
- Design Pressure (250 bar)
- Hydrostatic Test Pressure (375 bar)
- 2 Pig Receiver, 1 Pig Launcher
- Slug Catcher (120 cum)
- 5 Filter, 8 Heater
- Temperature Control Unit
- Control System (2+1)
- Metering System (5+1)
- Station Control Building
- Transformer / Heating Center
- Guest House, Warehouse
- Administrative Building
- Maintenance and Repair Building
- Restaurant and Cafeteria Building
- Vehicle Parking Area
- Entry Building, Security Building







# SIDRE EPCM

## Samsun - Ankara 48" Natural Gas Pipeline



NATURAL GAS FROM RUSSIA UNDER BLACK SEA

- As-Built Documentation
- Detailed Engineering
- Construction Shop Drawings
- Construction Specifications
- Start-up Inspections
- Geophysical Studies
- Geotechnical Studies
- Procurement Documentation

**501 km PL**



Samsun - Ankara Natural Gas Pipeline

**BLUE  
STREAM**

- 48", 501 km (Blue Stream)
- Wall Thickness (14.3, 17.5, 20.6 mm)
- Pipe Material (API 5L Gr X65)
- 3 mm Polyethelene Coating
- 4 Pig Station
- 17 Line Valve Station
- 4 Take-off Valve Station
- 12 Lock-O-Ring
- 15 Highway Crossing
- 7 River Crossing
- 6 Railway Crossing
- 50 KVA Power Supply
- Cathodic Protection System



Oztas - Hazinedaroglu - Sroytransgaz (OHS) Joint Venture



## Malkoclar Natural Gas Pressure Reducing and Metering Station



### NATURAL GAS FROM RUSSIA THROUGH BULGARIA



- Detailed Engineering
- Construction Shop Drawings
- Construction Specifications
- Commissioning
- Start-up Inspections
- Procurement Documentation

Increasing the Capacity of the Existing Malkoclar Natural Gas Pressure Reducing and Metering Station to 14 BCM/Year

- Filter and Metering Skid
- Pressure Reducing Skid
- 3 Filter
- 2 Gas Chromatograph
- 2 Receiving Scraper Trap
- 1 Launching Scraper Trap
- Slug Catcher
- Control and Instrumentation Systems

Pipeline Construction Between Bulgarian Border and the Station 2 x 40 inch (2,616 m)

Emas - Harmak Joint Venture







# SIDRE EPCM

## Adapazari City Natural Gas Distribution Systems - Phase 1,2,3



City of Adapazari and Surrounding Municipalities  
Natural Gas Distribution Systems

**600,000  
Population**

- Detailed Engineering
- Feasibility Study
- Cost Estimations
- Construction Shop Drawings
- Construction Specifications
- Commissioning
- Topographical Surveys

Phase - 1  
 3"-20" PE Coated Steel Pipe (83 km)  
 20-160 mm PE Pipe (900 km)  
 32 RMS B Station (19/4 bar)

Phase - 2  
 4"-20" PE Coated Steel Pipe (6 km)  
 20-160 mm PE Pipe (36 km)

Phase - 3  
 4"-20" PE Coated Steel Pipe (18 km)  
 20-125 mm PE Pipe (100 km)  
 10 RMS B Station (19/4 bar)

- NG Main Line System Schematics
- Highway, Railway, River Crossings
- Pipeline Plan and Profiles
- Cathodic Protection Systems
- Control and Instrumentation
- Valve Rooms Schematic Diagrams
- Hydraulic Analysis of NG Network

Agdas Adapazari Gas Distribution Inc.







Detailed Engineering  
Construction Shop Drawings  
Construction Supervision  
O&M Manuals  
Commissioning  
Start-up Inspections  
Topographical Surveys

Bursa, Gursu, Demirtaş, Gemlik, Orhangazi,  
Yalova, Eskişehir, Bozüyük, Corlu,  
Cerkezkoy, Cayirova, Dilovası  
and Buyukcekmece Cities and Towns

Pressure Reducing & Metering Stations  
2 each 75/19-28 Bar RMS A  
61 each 40/16 Bar RMS B  
1 each 16/4 Bar RMS B  
Heaters, Filters and Regulators  
Metering Sets  
Control & Instrumentation Systems

Natural Gas Pipelines  
2" PE Coated Steel Pipe (14.5 km)  
4" PE Coated Steel Pipe (16.5 km)  
6" PE Coated Steel Pipe (18.7 km)  
8" PE Coated Steel Pipe (28.4 km)  
12" PE Coated Steel Pipe (37 km)  
18" PE Coated Steel Pipe (5 km)  
Highway, Railway, River Crossings  
Cathodic Protection Systems

Arset Inc.







## SIDRE EPCM

### Khormor - Erbil 24" Natural Gas Pipeline - IRAQ



173 km PL

- As-Built Documentation
- Detailed Engineering
- Construction Shop Drawings
- Construction Supervision
- Construction Specifications
- Start-up Inspections
- Procurement Documentation
- Topographical Surveys

- 24" Natural Gas Pipeline (173 km)
- 4 Main Line Valve Station
- Khormor Pig Launching Station
- Chamchamal Intermediate Pig Station
- Erbil Pig Receiving Station
- Zap River Crossing (135 m)
- 2 Road Crossing
- 70 Road Crossing
- 63 Water Course Crossing
- 90 Dry Creek Crossing
- Access Roads

- Khormor - Chamchamal - Erbil
- Underground Natural Gas Pipeline
- Khormor Gas Field - Erbil Power Plant



Nokan - Kar - Zozik Joint Venture



# SIDRE EPCM

## Khurmala Oil Field Development - IRAQ



Detailed Engineering  
Construction Specifications  
Procurement Documentation

280 km PL



### PIPELINES

- 6" North Station - CPF PL (10.5 km)
- 6" Middle Station - CPF PL (3.6 km)
- 14" Crude Oil PL (1.2 km)
- 16" Crude Oil PL (17.5 km)
- 20" Refinery Crude Oil PL (39.5km)
- 20" Crude Oil PL (55 km)
- 20" Gas PL (68.6 km)
- 24" Gas PL (32 km) 6" Crude Oil PL (55 km)
- 4",6",8" Water Pipelines



### STATIONS

- Choke Valves
- ESD Manifold Stations
- 2 Crude Oil Pipeline Block Valve Station
- 2 Gas Pipeline Block Valve Station
- 2 Temporary Water Pigging Station

Kar Construction and Engineering  
Kar - Avrasya Oil & Gas Services JV





## SIDRE EPCM

### Nasiriya Oil Field Development - IRAQ



**469 KM PL**

#### PIPELINES

- 36" Heavy Crude Oil Export PL (232 km)
- 20" Light Crude Oil Export PL (36 km)
- 10" LPG Export PL (23 km)
- 24" Natural Gas Export PL (5 km)
- 24" Well Field Trunk PL (12 km)
- 20" Well Field Trunk PL (13 km)
- 18" Well Field Trunk PL (7 km)
- 8" Well Field Flow PL (40 km)
- 6" Well Field Flow PL (66 km)
- 16" HDPE Raw Water PL (35 km)



#### FACILITIES

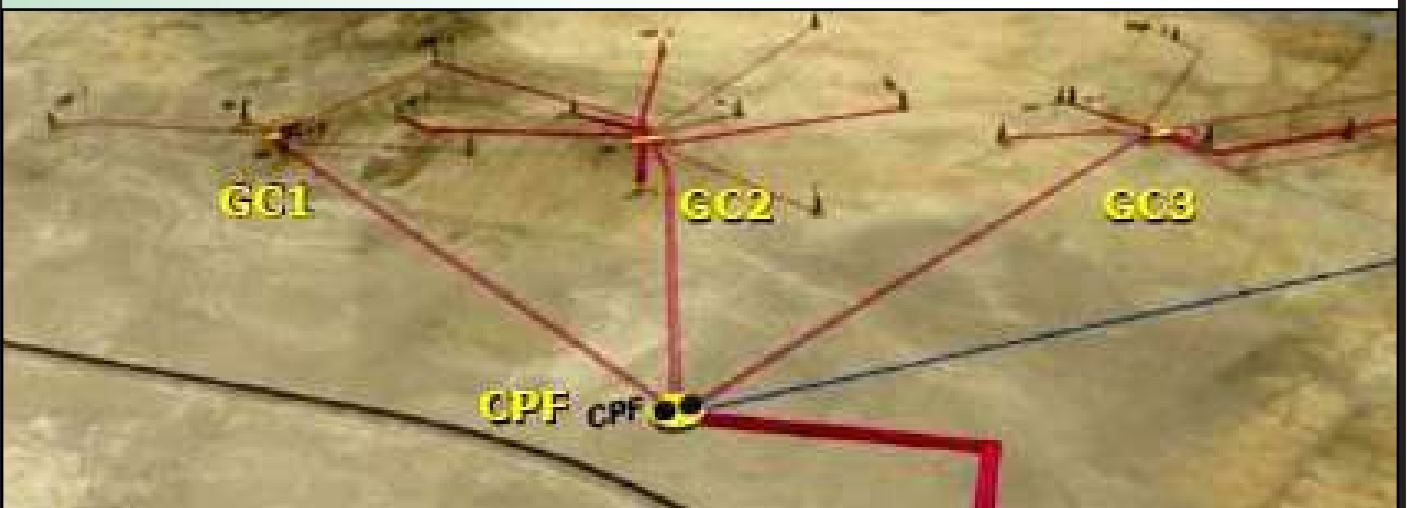
- 1 Central Processing Facility (CPF)
- 3 Oil and Gas Gathering Center (GC)
- Raw Water Intake



#### CROSSINGS

- 3 River (Including Euphrates River)
- 19 Motorway, Highway
- 3 Railway, 27 Pipeline, 22 Channel

Weatherford MENA







Detailed Engineering  
Topographical Surveys



FLOW AND TRUNK PIPELINES

6" Crude Oil Flow Pipelines (39 km)  
16" Crude Oil Trunk Pipelines (9 km)

48 km PL



Zozik - Gorkem Joint Venture  
Havatek Construction Inc.





# RAILWAY AND MOTORWAY







**HIGH SPEED RAILWAYS - 1,289 km**  
**MOTORWAYS & HIGHWAYS - 1,754 km**





## SIDRE EPCM

### Kayseri Light Rail System



17.5 km

Detailed Engineering  
Feasibility Study  
Tender Evaluation  
Tender Documentation  
Construction Specifications  
Geotechnical Studies  
Topographical Surveys  
Transportation Study  
Construction Supervision  
Commissioning

17.5 km Double Lane Light Rail System  
At One Direction 13,000 passenger/hour  
Headway Interval 4 minute)  
Headway Duration 42 minute)  
Travel Speed (35 -70 km/hr)  
28 Station each 65 m Long  
Catanery System (750 VDC)  
9 Transformer Rectifier Station  
Signalisation, Communication Systems  
SCADA, Fare Collection Systems  
2 Junction Crossing with Underpass

Main Depot and Maintenance Facilities  
(70,000 sqm)  
Heavy / Daily Maintenance Workshops  
and Car Washing Facility (5,700 sqm)  
Parking Area (50 Railway Car)  
Depot Lines (3,200 m)  
Administration Building (2,600 sqm)  
East Terminal  
18 Car Parking Area, Office Building  
Railway Cars  
52 each, % 100 Low Floor  
Bidirectional Driving, Multi Articulated  
Track Span (1,435 mm)  
Energy Receiving Type (Pantograph)  
Power (460 - 465 kW)  
Passenger Capacity (AW3 - 276 Pas.)

Kayseri Metropolitan Municipality







3.2 km

Tender Documentation  
Construction Supervision  
Construction Management  
Commissioning  
Start-up Inspections  
Geotechnical Studies  
Project Management  
Topographical Surveys



3282 m Metro Line  
(700.000 passenger/day)  
Integrated with Konak-Bornova Metro

Bored Tunnel (761 m)  
U Section Tunnel (774 m)  
Cut and Cover Tunnel (1366 m)  
Cut and Cover Station (381 m)



3 Metro Station  
10.5 kV, 34.5 KV Power Supply  
Catenary System  
Signalisation System  
Communication System  
SCADA System

Izmir Metropolitan Municipality







SIDRE EPCM

## Ankara - Sivas High Speed Railway



455 km

Environmental Impact Study  
Detailed Engineering  
Cost Estimations  
Feasibility Study  
Tender Documentation  
Geophysical Studies  
Geotechnical Studies  
Basic Engineering  
Topographical Surveys



455 km Double Lane High Speed Railway  
95 km Alternative Railway  
Maximum Slope (% 1.60)  
Minimum Curb Radius (1,000 m)  
Expropriation (16,500 Hectare)  
Soil Borings (13,500 m)  
Seismic Tests (4,100 ea)  
Resistivity Tests (3,500 ea)  
Laboratory, Pressiometer Tests  
31 Tunnel (23,875 m)  
Longest Tunnel (3,000 m)  
6 Viaduct (3,850 m)  
Longest Viaduct (1,200 m)  
900 Box Culvert  
446 Overpass, Underpass Bridge  
77 Bridge  
15 Station Facility  
25 kV Catenary Line  
13 each, 154/25 kV Transformer  
Section Post Buildings  
Signalisation Systems  
Communication Systems  
SCADA and Monitoring Systems  
Automatic Train Stopping  
Energy Transfer Systems

Republic of Turkey Ministry of Transportation  
DLH General Directorate



# SİDRE EPCM

## Erzincan - Erzurum High Speed Railway



- Environmental Impact Study **210 km**
- Detailed Engineering
- Cost Estimations
- Feasibility Study
- Tender Documentation
- Geophysical Studies
- Geotechnical Studies
- Basic Engineering
- Topographical Surveys



- 210 km Double Lane High Speed Railway
- Maximum Slope % 1.60
- Minimum Curb Radius (1,000 m)
- Expropriation (1,020 Hectare)
- Soil Borings 6,469 m
- Seismic Tests (1,390 ea)
- Resistivity Tests (1,227 ea)
- Laboratory, Pressiometer Tests
- 13 Tunnel (5,970 m)
- Longest Tunnel (950 m)
- 13 Viaduct (6,990 m)
- Longest Viaduct (1,210 m)
- 690 Box Culvert
- 130 Overpass, Underpass Bridge
- 33 Bridge
- 6 Station Facility
- 25 kV Catenary Line
- 5 each, 154/25 kV Transformer
- Section Post Buildings
- Signalisation Systems
- Communication Systems
- SCADA and Monitoring Systems
- Automatic Train Stopping
- Energy Transfer Systems



Republic of Turkey Ministry of Transportation  
DLH General Directorate





## SIDRE EPCM

### Erzurum - Kars High Speed Railway

Environmental Impact Study  
Detailed Engineering  
Cost Estimations  
Feasibility Study  
Tender Documentation  
Geophysical Studies  
Geotechnical Studies  
Basic Engineering  
Topographical Surveys

204 km



204 km Double Lane High Speed Railway

Maximum Slope % 1.60

Minimum Curb Radius (1,000 m)

Expropriation (1,035 Hectare)

Soil Borings (5,477 m)

Seismic Tests (1,562 ea)

Resistivity Tests (1,261 ea)

Laboratory, Pressiometer Tests

8 Tunnel (1,970 m)

Longest Tunnel (2,550 m)

13 Viaduct (4,165 m)

Longest Viaduct (800 m)

338 Box Culvert

54 Overpass, Underpass Bridge

20 Bridge

6 Station Facility

25 kV Catenary Line

5 each, 154/25 kV Transformer

Section Post Buildings

Signalisation Systems

Communication Systems

SCADA and Monitoring Systems

Automatic Train Stopping

Energy Transfer Systems



Republic of Turkey Ministry of Transportation  
DLH General Directorate



# SİDRE EPCM



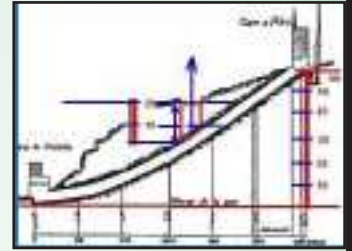
## Istanbul Beyoglu - Karakoy Funicular Tunnel Modernization



Detailed Engineering  
Cost Estimations  
Tender Documentation  
Construction Supervision  
Construction Specifications  
Construction Management  
Commissioning  
Start-up Inspections  
Geotechnical Studies  
Basic Engineering



573 km



Beyoglu - Karakoy Funicular Tunnel was opened at 17 January 1875. Operating with an 350 HP electrical system. 2 x 16 m long car is carrying 170 passenger per trip through 573 meter in 90 seconds.

175-180 trip/day

13,000 passenger/day

Tunnel brick walls were strengthened by injecting special polyurethane and acrylic base filling material.



Renewal and Modernization Works

Rails and catenary Lines

Car Bodies and Equipment

Tunnel Security Systems

Communication System

Tunnel Electrical Systems

Beyoglu and Karakoy Stations

Istanbul Metropolitan Municipality







SIDRE EPCM

## Tatvan - Van High Speed Railway



238 km



238 km Double Lane High Speed Railway

Maximum Slope (% 1.25)

Minimum Curb Radius (1,000 m)

Expropriation (1,250 Hectare)

Soil Borings (13,042 m)

Investigation Pit (962 m)

Laboratory, Pressiometer Tests

24 Tunnel (12,692 m)

Longest Tunnel (2,170 m)

5 Viaduct (2,065 m)

Longest Viaduct (595 m)

357 Box Culvert

177 Overpass, Underpass Bridge

9 Station Facility

25 kV Catenary Line

8 each, 154/25 kV Transformer

Section Post Buildings

Signalisation Systems

Communication Systems

SCADA and Monitoring Systems

Automatic Train Stopping

Energy Transfer Systems

Environmental Impact Study

Detailed Engineering

Cost Estimations

Feasibility Study

Tender Documentation

Geophysical Studies

Geotechnical Studies

Basic Engineering

Topographical Surveys



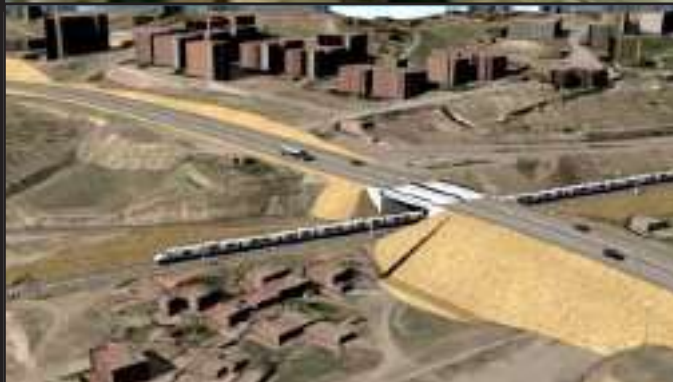
Republic of Turkey Ministry of Transportation  
DLH General Directorate





- Environmental Impact Study
- Detailed Engineering
- Cost Estimations
- Feasibility Study
- Tender Documentation
- Geophysical Studies
- Geotechnical Studies
- Basic Engineering
- Topographical Surveys

97 km



97 km Double Lane High Speed Railway

Maximum Slope % 1.25)

Minimum Curb Radius (1,000 m)

Expropriation (450 Hectare)

Soil Borings (9,975 m)

Investigation Pit (408 m)

Laboratory, Pressiometer Tests

20 Tunnel (21,180 m)

Longest Tunnel (9,965 m)

13 Viaduct (9,030 m)

Longest Viaduct (1,715 m)

210 Box Culvert

60 Overpass, Underpass Bridge

3 Station Facility

25 kV Catenery Line

4 each, 154/25 kV Transformer

Section Post Buildings

Signalisation Systems

Communication Systems

SCADA and Monitoring Systems

Automatic Train Stopping

Energy Transfer Systems





## SIDRE EPCM

### Komurler - Osmaniye High Speed Railway



78 km

Environmental Impact Study  
Detailed Engineering  
Cost Estimations  
Tender Documentation  
Geophysical Studies  
Geotechnical Studies  
Basic Engineering  
Topographical Surveys  
Transportation Study

78 km Double Lane High Speed Railway

Maximum Slope (% 1.25)

Minimum Curb Radius (1,000 m)

Soil Borings (10,000 m)

Investigation Pit (300 m)

Laboratory, Pressiometer Tests

3 Tunnel (15,120 m)

Longest Tunnel (10,276 m)

5 Viaduct

60 Box Culvert

24 Overpass, Underpass Bridge

4 Station Facility

25 kV Catenary Line

3 each, 154/25 kV Transformer

Section Post Buildings

Signalisation Systems

Communication Systems

SCADA and Monitoring Systems

Automatic Train Stopping

Energy Transfer Systems



Republic of Turkey Ministry of Transportation  
DLH General Directorate





Istanbul Sefakoy - Istoc Metro Line



11.6 km

- 9.179 m TBM, 48 m Open-Close Tunnel
- 12 Underground Station (2.101 m)
- 4 Station Open-Close Method (540 m)
- 7 Station New Austrian Tunneling Method) (1.561 m)

Detailed Engineering  
Istanbul Metropolitan Municipality



Isparta Light Rail System



12 km

- At one Direction 8.000 Passenger/hour
- 22 Station, 7 Transformer/Rectifier Station
- Depot Area (50.000 sqm), Parking Area for 9 Cars
- Daily Maintenance Shop, Car Washing Facility,
- Car Depot Area Heavy Maintenance Shop,
- Control and Administration Building

Feasibility Study, Detailed Engineering  
Ministry of Transportation DLH General Directorate



Konya Light Rail System



32 km

- 50,000 Passengers/day at year 2020
- 2 Sleeping Area, Daily Maintenance Workshop
- Parking Area, 12 Transformer/Rectifier Station
- 750 VDC Catenary System
- SCADA, Control, Signalization Systems

Feasibility Study, Basic Engineering  
Konya Metropolitan Municipality



## SIDRE EPCM

### Antalya - Alanya Section 4 State Highway

Construction Supervision  
Construction Management  
Commissioning  
Start-up Inspections

32.4 km



Antalya - Alanya State Highway  
Section 4 (109+000 - 141+400)



- Total Length (32.4 km)
- Project Speed (90 km/h)
- 2 x 3 lanes each 3.50 m
- Platform Width (2 x 11.50 m)
- 5 Bridge (266.8 m)
- 5 Tunnel (1,882 m)
- 115 Box Culvert (5,750 m)
- 35 Underpass (1,750 m)
- 14 Retaining Wall (6,142 m)
- Landscaping
- Waste Water Systems
- Storm Water Systems
- Irrigation Systems
- Highway Lighting
- Tunnel Lighting System
- Traffic Signs



Republic of Turkey General Directorate of State Highways



## Ankara West Exit Eskisehir Highway Widening



From Ministry of Transportation  
to Umitkoy Junction (11.77 km)  
8 Lanes each 3,50 m  
Platform Width (36.5 m)

Detailed Engineering  
Geophysical Studies  
Geotechnical Studies  
Topographical Surveys

From Hacettepe Junction  
to Angora 5.24 km)  
4 Lanes each 3,50 m  
Platform Width (17 m)

3 New Junction with Bridge (5.2 km)  
4 Expansion of Existing Junction  
6 Box Culvert  
3 Overpass, 1 Underpass  
Landscaping  
Waste Water Systems  
Storm Water Systems  
Irrigation Systems  
Highway Lighting  
Traffic Signs



17 km

Ankara Metropolitan Municipality







SIDRE EPCM

## Istanbul - Izmir Motorway, Manisa - Izmir Section



Environmental Impact Study  
Detailed Engineering  
Cost Estimations  
Feasibility Study  
Tender Documentation  
Geophysical Studies  
Geotechnical Studies  
Basic Engineering  
Topographical Surveys  
Transportation Study

Platform Width (35.50 m)  
Turgutlu Connection Road (2.3 km)  
Kemalpasa Connection Road (6.5 km)  
Belkahve Viaduct (405 m)  
Belkahve Tunnel (1,750 m)  
9 Junction with Bridge (315 m)  
10 River Bridge (1,293 m)  
5 Overpass Bridge (307 m)  
25 Underpass Bridge (663 m)  
100 Box Culvert (2,700 m)  
Retaining Wall (4,114 m)  
Maintenance and Operation Area  
17 Underpass  
Service Area  
2 Toll Collection Area  
Landscaping  
Storm Water Systems  
Motorway Lighting System  
Tunnel Lighting System  
Traffic Signs

Istanbul-Bursa-Balikesir-Izmir Motorway  
Manisa-Izmir Section (56.5 km)  
(Km: 352+000-408+569)



Republic of Turkey General Directorate of State Highways





Detailed Engineering  
Cost Estimations  
Tender Documentation  
Construction Specifications  
Geophysical Studies  
Geotechnical Studies  
Basic Engineering  
Topographical Surveys  
Transportation Study



Access Controlled 18 km Peripheral Highway  
According to World Bank Criteria



8 Junction with Bridge  
6 Junction with Surface Crossing  
9 Precast Concrete Bridge  
World Bank Financed  
1 Composite Railway Bridge  
1 Concrete River Bridge  
Drainage and Discharge Systems  
3 River Bed Regulation Project  
Retaining Walls  
Access Roads  
Perimeter Security Fence  
Steel and Concrete Barriers  
Landscaping  
Highway Lighting System





## SIDRE EPCM

### Key Highway References

#### Bergama - Akhisar Highway



75 km



State Highway : 59 km  
City Crossing : 16 km  
2 x 2 Lane, Platform Width (12 m)  
112 Box Culvert  
23 Junction, 11 Bridge  
Detailed Engineering

#### Kayseri - Kirsehir Highway



146 km



2 x 2 Lane  
Platform Width (24 m)  
104 Box Culvert  
29 Junction  
4 Bridge  
Detailed Engineering

#### Elazig - Maden Highway



58 km



2 x 2 Lane Platform Width (24 m)  
6 Junction  
1 Tunnel  
Detailed Engineering





Carsibasi - Arakli Highway



2 x 2 Lane Platform Width (24 m)  
 94 Box Culvert Retaining Wall (3000 m)  
 12 Junction  
 Detailed Engineering



68 km

Adapazari - Kandira Highway



2 Lane  
 Platform Width (12 m)  
 43 Box Culvert  
 5 Junction City  
 Crossing (3 km)  
 Detailed Engineering



39.6 km

Usak - Afyon Highway



2 x 4 Lane  
 Platform Width (24 m)  
 83 Box Culvert  
 13 Junction  
 2 Bridge  
 Detailed Engineering



65 km



# SIDRE EPCM

## Key Highway References

### Havsa - Kesan Highway



64 km



2 x 2 Lane  
Platform Width (24 m)  
2 Bridge  
134 Box Culvert  
30 Junction  
Detailed Engineering

### Kesan - Gelibolu Highway



45 km



2 x 2 Lane  
Platform Width (24 m)  
2 Bridge  
102 Box Culvert  
16 Junction  
Detailed Engineering

### Bolu City Renewal of Roads

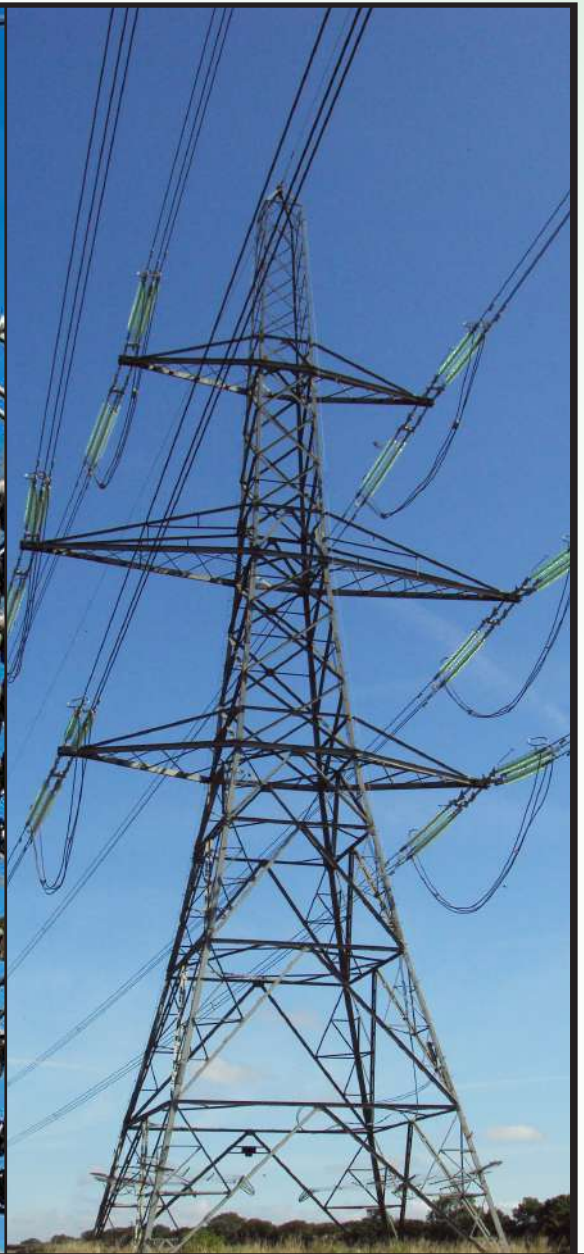


25 km



Roads at South of the City (15.3 km)  
Roads at North of the City (9.8 km)  
Construction Supervision  
Bolu Municipality





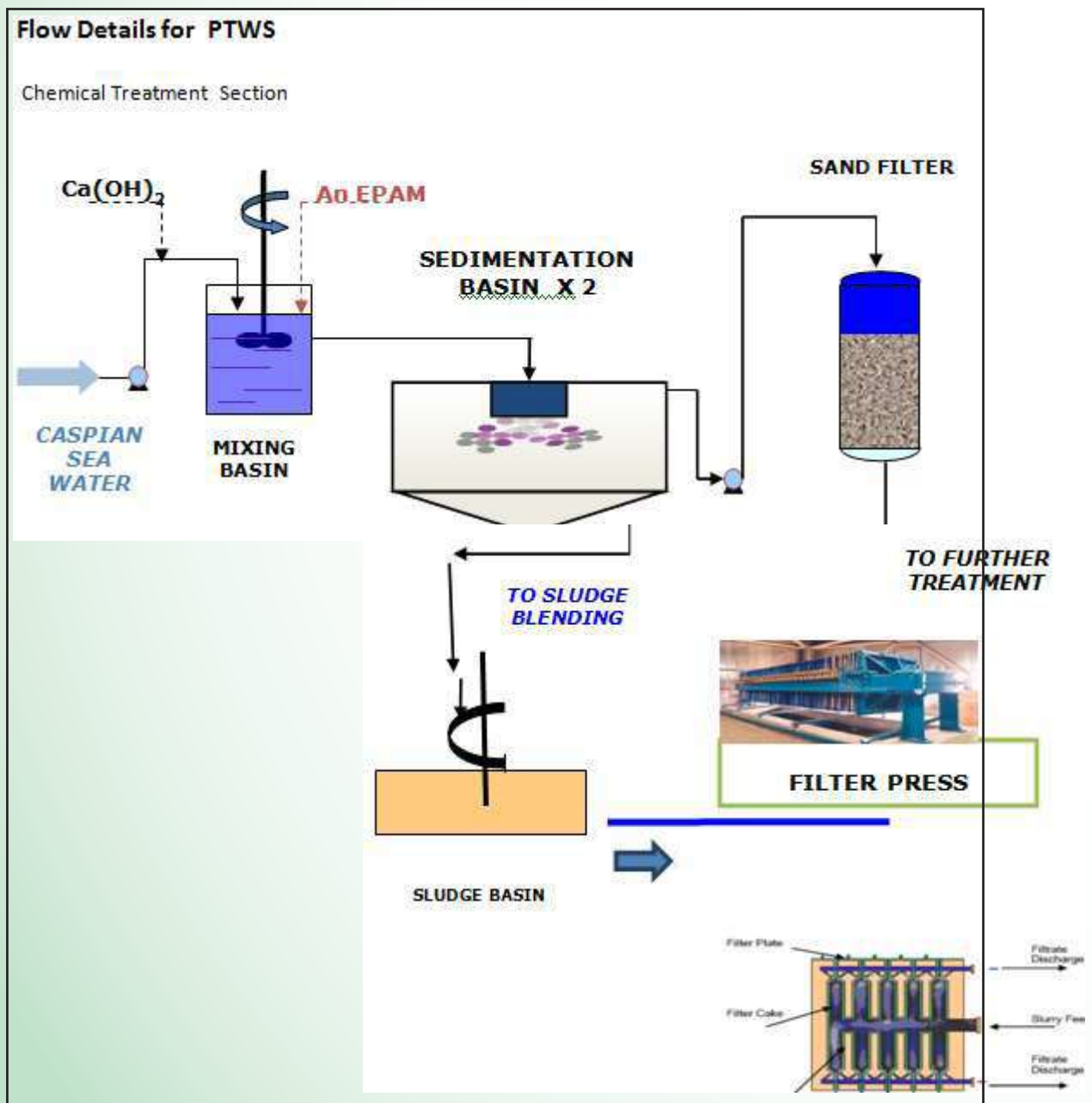
# POWER TRANSMISSION



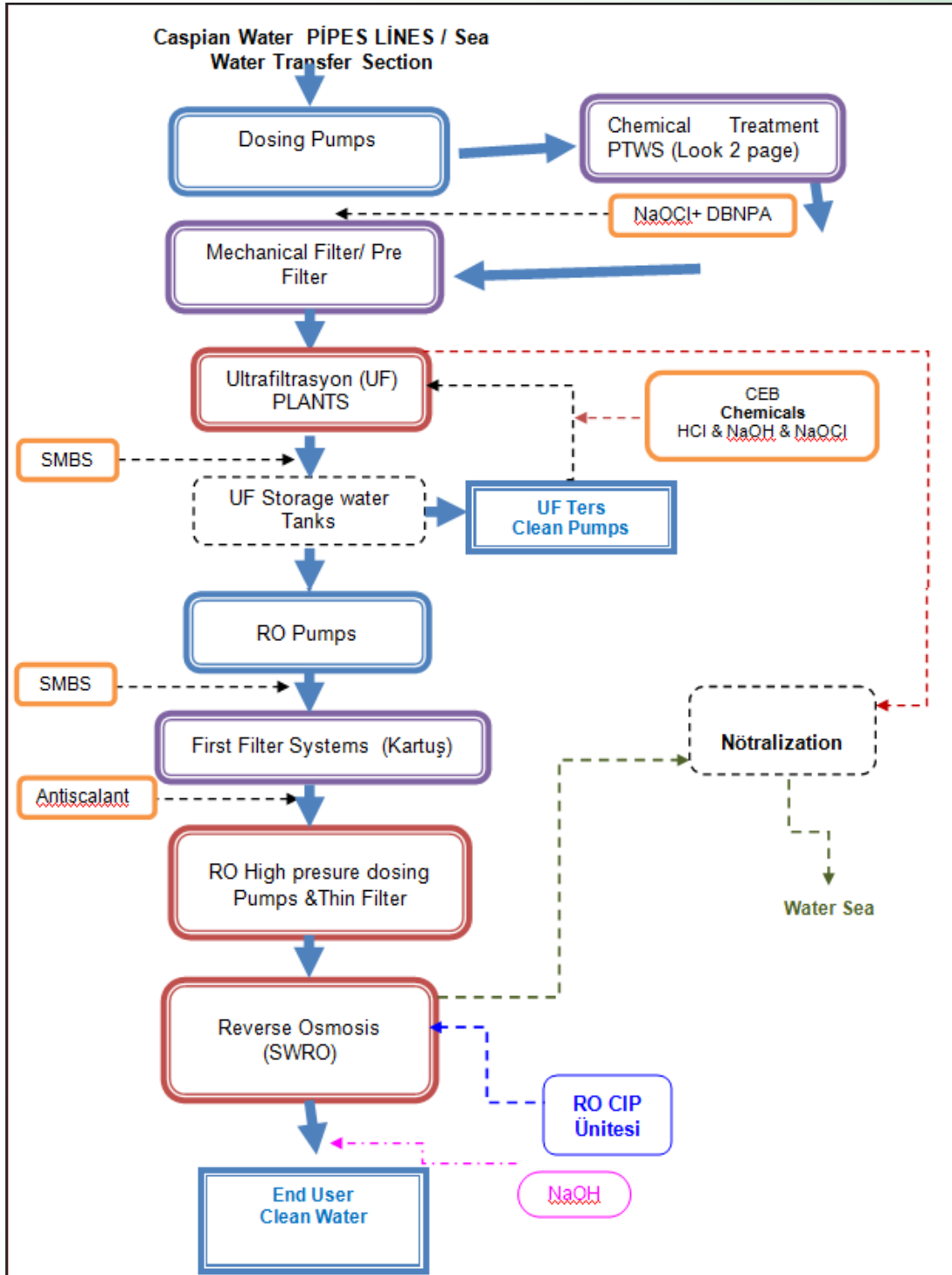
# DESELINATION PRESENTATION

SIDRE EPCM IS STILL WORKING ON THE PROJECT TO VERIFY ALL AVAILABLE DATA TO BE USED FOR THE DESIGN AND PROCESS OF THE DESALINATION FACILITY.

THE GENERAL PROCESS FLOW DIAGRAM OF THE DESALINATION UNIT IS GIVEN ON THE FOLLOWING PAGE.

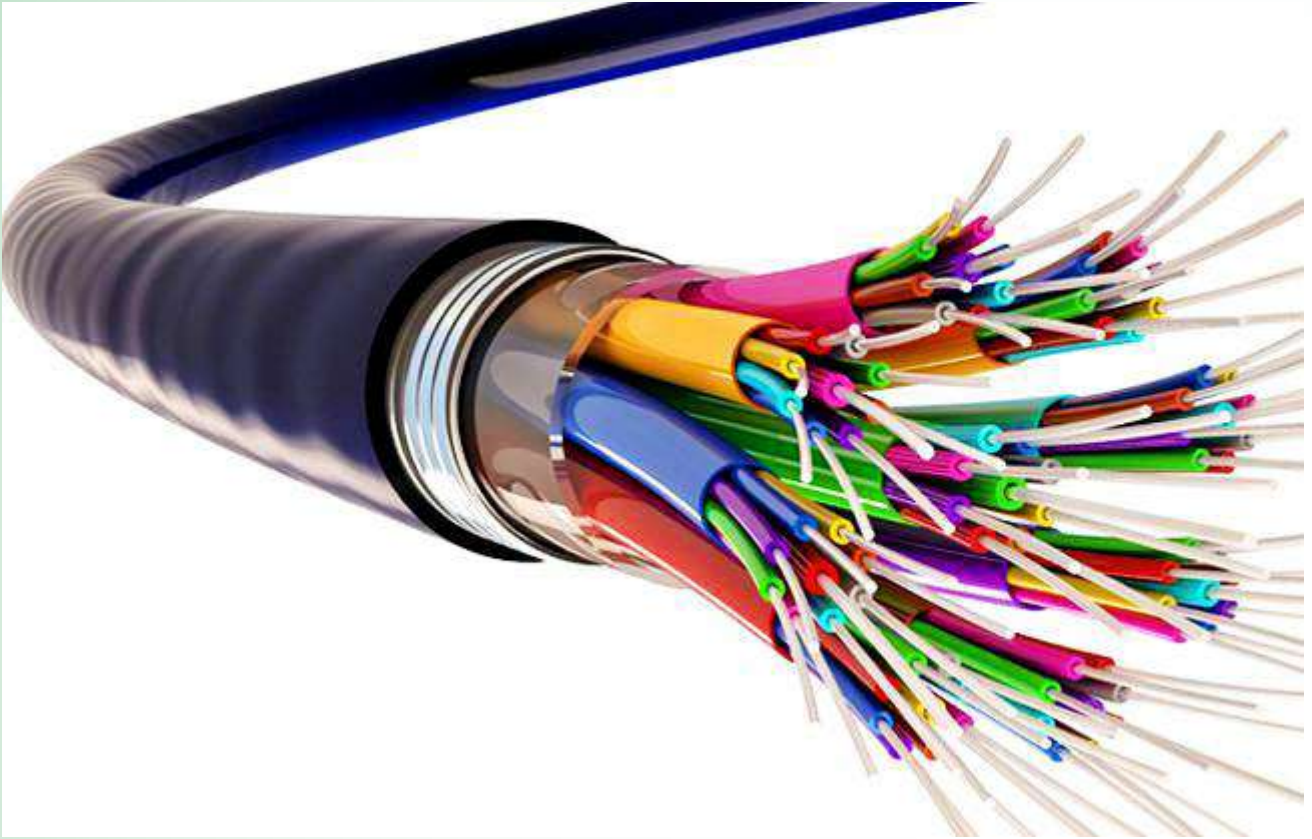








# FOC NETWORK PRESENTATION



## Business and Project Proposal

< Project Nickname: Fiber4 individual project;>

Telecom Division Confidential Information  
-F/O Networking Briefing Document







**SİDRE EPCM**

[www.sidreepcm.com](http://www.sidreepcm.com)