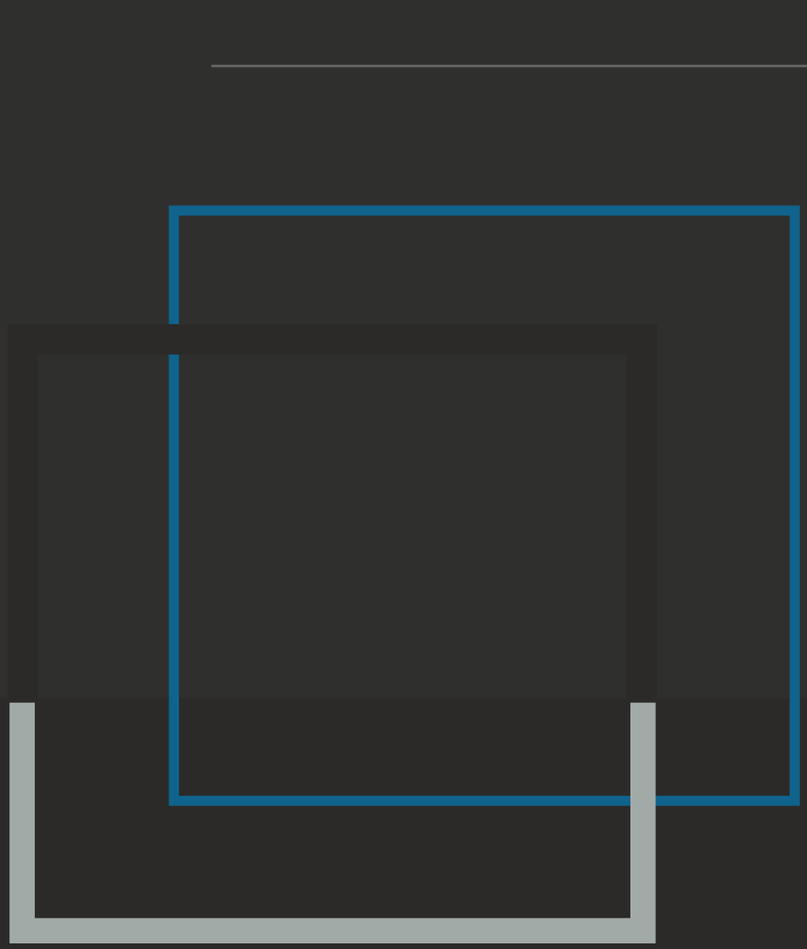


MOBILITY SOLUTIONS

ISSD Mobility Team is a multidisciplinary team that consists of Civil Engineering, Transportation Engineering, and City and Regional Planning graduates who have specialized in the field of mobility.

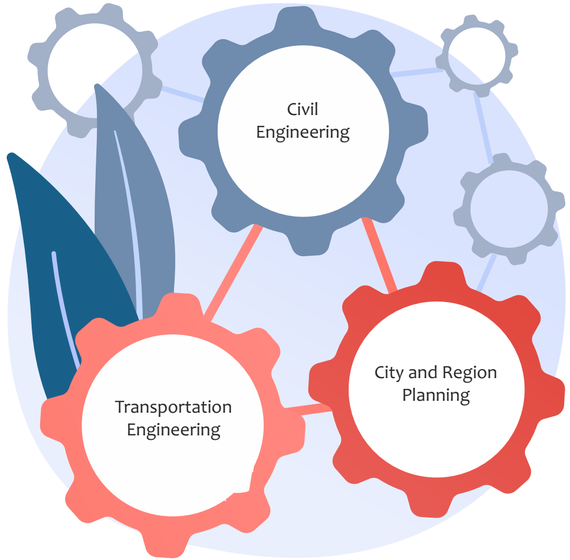
ISSD Mobility Team operates in the following sub-areas

Transportation Engineering: The team develops multimodal solutions and designs by providing consultancy services for public and private sector transportation problems using the engineering discipline. Extensive research is conducted through analysis and simulation models to optimize the effective integration and interaction of different modes of transportation. In this process, strategies are formulated and solution-oriented designs are developed to ensure a harmonious and sustainable balance between public transport, pedestrian and bicycle transportation, private vehicles and other modes of transportation. In addition, transportation infrastructure and superstructure projects are designed based on engineering principles and standards. This comprehensive approach aims to meet the mobility and transportation needs of society and various sectors and to create efficient, user-friendly transportation systems for the future.

Transportation Planning: Transportation planning aims to provide mobility solutions suitable for the client organization. These solutions include macro and micro scale planning decisions and transportation planning software is used to implement these solutions. The expert team provides short and long-term transportation infrastructure and service solutions by analyzing the traffic flow and the priority needs of the users in accordance with the needs of the customers. In addition, environmentally friendly and innovative transportation technologies are used, taking into account sustainability goals and meeting the transportation planning needs of customers.

R&D: The R&D studies needed for all areas of expertise, especially the applications used in the operation and analysis works, are handled from the perspective of transportation engineering. Thanks to the developments made by following the international literature, features that make a difference against competitors in the market are developed and can be applied effectively in the field. With the help of the R&D activities carried out by utilizing the developing technology, innovative and useful solutions are contributed to the sector that the study addresses.

Complete Mobility Provider



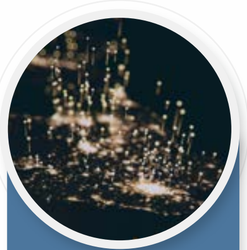
ITS Operations: Prior to ITS implementations, feasibility studies are conducted to identify existing problems and ITS-based solutions are proposed. All findings regarding the locations where and how the systems will be implemented, system requirements and implementation methods are reported. ITS applications are recommended to be implemented in accordance with this feasibility report. The data is collected before and after the systems are installed, performance measures are made for the determined performance parameters and the improvement rates achieved are calculated.

Business Development: By analyzing the needs of the customer organization, design, operation, research and planning projects with outstanding value are determined in accordance with the expertise of the mobility team. Realistic predictions are produced regarding the impact of these projects and cost-benefit analyses are performed. Demonstration of projects are planned upon request according to the project content. Projects are supported with national and international R&D fund applications. Persuasive, explanatory presentations are made to the client organization, taking into account the needs of the sector that the project addresses.

Areas of Expertise

It is aimed to provide optimization through design and planning studies for all modes of transportation in intersection and corridor scale studies.

DESIGN & PLANNING:

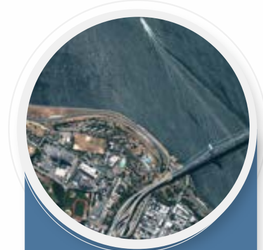


Analyses conducted before, during or after design and planning studies. Through these analyses, information on the feasibility, effectiveness, disadvantages, etc. of the project is produced and reported.

ANALYSIS

It is the realization of operational activities that complement the design, planning and analysis studies carried out. Generally, ITS-supported operational solutions are designed at algorithmic level, implemented and the cost-benefit analyses are carried out.

OPERATION



These are regional and city scale studies with ITS support which technological and innovative solutions are brought to traditional methods.

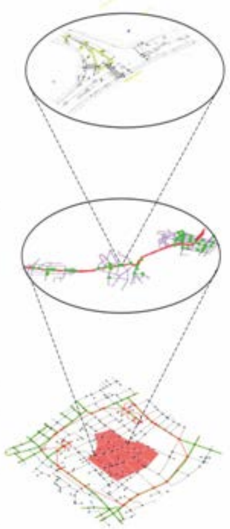
MACRO SCALE TRANSPORTATION MODELING

The **ISSD Mobility** team can work at the "Intersection", "Corridor" and "Region" levels in the projects they carry out within their expertise. The question of which level to work at is answered by the team's relevant experts after reviewing the project details and discussions with the client.

Intersection: Studies at the intersection level are micro-scale and deal with each intersection element such as vehicle movements, intersection management, intersection geometric design, and superstructure at the intersection. This level, where more localized solutions are produced, has the power to reveal the need for larger-scale studies at the corridor and regional levels. The main studies at the intersection level are traffic signal analysis and design, intersection analysis and design, traffic modelling and simulation.

Corridor: For intersections on the same corridor that interact with each other (non-isolated), local solutions are often not effective. In such cases, meso-scale corridor-based studies are used to design, plan, analyze and operate the intersections, taking into account the traffic situation on the road segments between the intersections. The main studies at the corridor level are corridor design, signal coordination and corridor simulation.

Region: In order to address transportation problems at the macro level, a study is carried out on a transportation network covering multiple intersections and corridors. Analysis, planning and modeling studies are carried out based on traffic generation and attraction zones in a city, district, neighborhood or a specific area that can be called a region. The main studies conducted at the regional level are regional traffic planning, public transportation modeling, traffic impact analysis, network modeling and macro traffic analysis.



INTERSECTION

- Traffic signal superstructure analysis
- Signal warrant analysis
- Intersection design
- Vehicle Maneuver analysis
- Traffic signal design
- Signal time optimization
- Intersection simulation

CORRIDOR

- Corridor design
- Signal coordination
- Corridor simulation

REGION

- Traffic circulation/regional traffic planning
- Public transportation modelling
- Traffic impact analysis
- Network modelling
- Macro-scale traffic analysis

MOBILITY EXPERTISE

MARKETS

- Urban
- Interurban
- Healthcare
- Entertainment
- Private Development
- Industrial Development
- Administrative Development
- Sports / Events
- Cultural
- Education

OUR EXPERTISE

DESIGN & PLANNING

- Wayfinding Design
- Traffic Safety Superstructure Design
- Intersection Design
- Corridor Design & Planning
- Preliminary Design
- Final Roadway Design
- Traffic Signal Design
- ITS Design & Planning
- Complete Street Design
- Roundabout Design & Planning
- Parking Studies & Management Plans
- Signing & Striping
- Bicycle & Pedestrian Studies
- Transit Facilities Design

ANALYSIS

- Traffic Modelling & Simulation
- Traffic Impact Assessment
- Swept Path Analysis
- Signal Warrant Analysis
- Accessibility Analysis
- Dynamic Traffic Assignment
- Trip Generation & Distribution Analysis
- Pedestrian Area Analysis
- Accident Analysis (Vision Zero)
- Road Safety Audit
- Big Transportation Data Analytics

MACRO TRANSPORTATION MODELLING

- Traffic Circulation / Regional Traffic Planning
- Macro Traffic Analysis
- Sustainable Urban Mobility Plan
- Travel Demand Modelling
- Network Modelling
- Public Transportation Analysis and Modelling
- GIS Applications

OPERATION

- Multimodal Operations
- Freeway Operations
- Intersection Operations
- Special Event Traffic Management
- Performance Measurement
- Transit Signal Priority

TOOLS

- PTV Vissim
- PTV Visum
- PTV Vistro
- PTV Viswalk
- PTV VisVAP
- TORUS Roundabouts
- AutoCAD
- AutoTURN
- ParkCAD
- OpenRoads
- ArcGIS

DATA SOURCES

- Vehicle Count
- Floating Car Data (FCD)
- Bluetooth Data
- Historical Accident Data
- Fisheye Camera Recordings
- Drone Recordings

DELIVERABLES

- Traffic Simulation Model
- Traffic Analysis Report
- CAD Design
- Macro Transport Model

12
Countries

80+
Cities

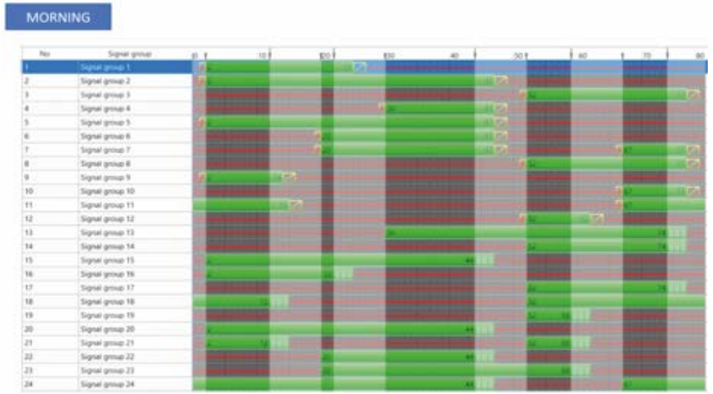
50+
Projects

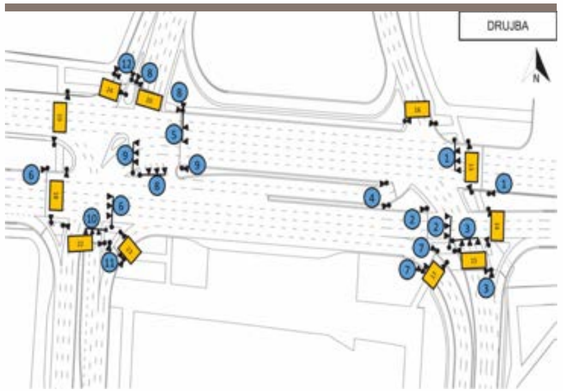
22.000+
Days of Experience

Featured Consulting Projects

Tashkent/Uzbekistan

Tashkent Signal Master Plan, Signal Time Optimization and Coordination





Sector: Urban / Public

Expertise Used: Analysis, Operation

Project Level: Intersection, Corridor

Project Description:

Within the scope of this project, the existing structure of all intersections was examined, the infrastructure and superstructure components of the intersections were evaluated, proposed signal groups were prepared in line with these evaluations, capacity analyses were performed using the existing signal plans, the count data presented for the intersections were evaluated, the data obtained were analyzed in the micro-scale traffic simulation program, signal plans were prepared in line with these analyses and the prepared signal plans were tested with observations made at the intersections. The studies aimed to increase traffic safety and reduce waiting times at the intersections and reduce total travel times at intersection groups that can be considered as corridors due to their proximity to each other. Project components within the scope of this study:

- Examination of the existing signalization infrastructure and superstructure
- Signalization infrastructure and superstructure modifications
- Intersection capacity analysis
- Signal time optimization and signal coordination studies
- Signal plan tests with field observations

Sustainable Urban Mobility Plan of Konya and Eskişehir

Konya, Eskişehir

Costomer: Konya Metropolitan Municipality and Eskişehir Metropolitan Municipality

Sector: Urban / Public

Expertise Used: Macro Transportation Modeling

Project Level: Region

Project Description:

The objective of these projects are to develop a Sustainable Urban Mobility Plan that addresses the mobility needs of individuals and institutions, aiming to provide a better quality of life. Within this scope:

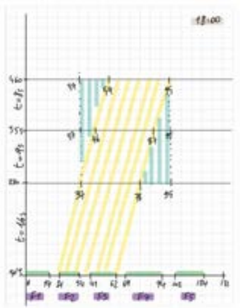
- Preparation of a transportation model and conducting SWOT analysis for analyzing the current state and providing a foundation for alternative projects by incorporating current data and planned projects,
- Development of transportation policies aimed at increasing the use of sustainable modes of transportation (such as walking, cycling, and public transportation) and minimizing private vehicle usage,
- Identification of the current state of air and noise pollution through emission analysis, and the development of policies aimed at reducing these values,
- The promotion of alternative transportation modes that reduce the consumption of non-renewable energy sources,
- Establishment of an accessible transportation system for everyone through stakeholder engagement and contribution,
- Prioritization of safety through recommendations for enhancing traffic safety has been proposed.

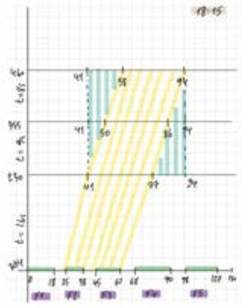
Project components within the scope of this study:

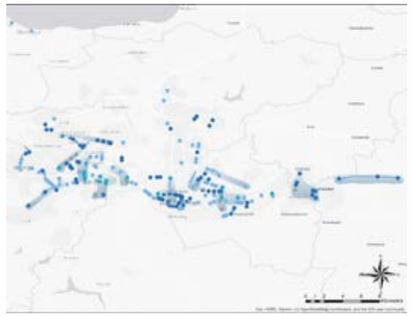
- Building the road network
- Establishment of an integrated transport system
- Defining road and railway public transportation data to the model
- Calibration and validation
- Fieldwork and technical reporting

Bursa

T.C. Bursa Metropolitan Municipality Traffic Management Center (TMC) Project Traffic Engineering Studies







Costomer: Bursa Metropolitan Municipality

Sector: Urban / Public

Expertise Used: Design&Planning, Analysis, Operation

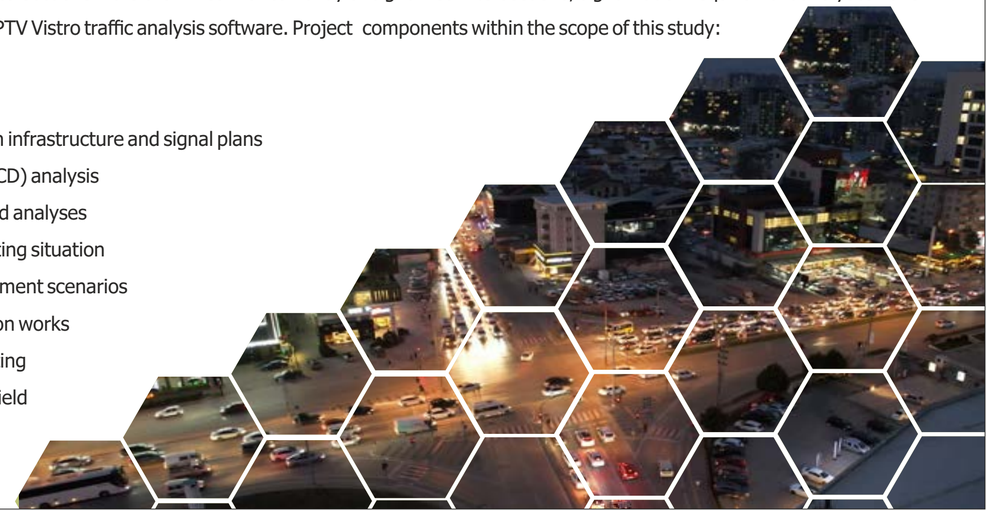
Project Level: Intersection, Corridor, Region

Project Description:

In the scope of the Bursa Metropolitan Municipality Traffic Management Center (TMC) project , traffic engineering problems have been addressed at 91 signalized and non-signalized intersections under the responsibility of Bursa Metropolitan Municipality. Singular, corridor, and/or regional simulation models of the intersections were created using current traffic count data and existing signal plans in the PTV Vissim traffic simulation software, and the intersections were analyzed. As a result of the analyses, level of service (LOS) values, average delay times per vehicle, approach leg-based queue lengths, and average speeds of the intersections were obtained. Algorithms for the current situation were also modeled in PTV VisVAP for signalized intersections operated by magnetic loops and/or pedestrian buttons. Floating Car Data was used in the calibration of the simulation models for the current situation, and speed profiles and queue lengths on the approach legs of the intersections were examined. For currently unsignalized intersections, signalization requirement analyses have been conducted using the PTV Vistro traffic analysis software. Project components within the scope of this study:

- Data collection
  - Traffic count data
  - Existing signalization infrastructure and signal plans
  - Floating Car Data (FCD) analysis
- Simulation modeling and analyses
  - Modeling of the existing situation
  - Modeling of improvement scenarios
  - Feedback and revision works
- Presentation and reporting
- Implementation in the field

YouTube Link:



Costomer: Kütahya Municipality

Sector: Urban / Public

Expertise Used: Macro Transportation Modeling

Project Level: Region

Project Description:

The PTV Visum software, which incorporates a series of mathematical prediction and route preference formulas, has been used to analyze the current state of road travel demand comprehensively in terms of economic, social, and technical aspects and to generate solutions. Within the scope of this study:

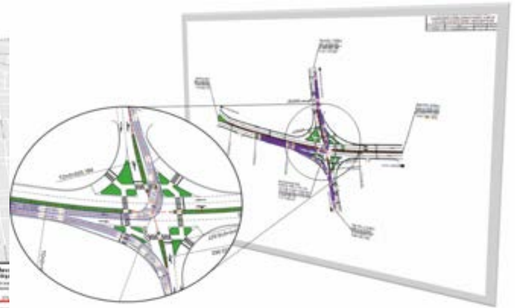
- By inputting current data and planned projects, which will be beneficial for analyzing the current state and providing a foundation for alternative projects,
- With creating traffic analysis zones, nodes, road network, transportation hubs (such as public transport stops and stations etc.), alternative transportation types and modes, as well as demand segments, a transportation model has been developed.

Project components within the scope of this study:

- Building the road network
- Establishment of an integrated transport system
- Defining public transportation data to the model
- Calibration and validation
- Technical reporting

Çorum

Preparation of Çorum Traffic Circulation Plan and Improvement Proposals Consultancy Project



Costomer: Çorum Municipality

Sector: Urban / Public

Expertise Used: Design&Planning, Analysis, Macro Transportation Modeling

Project Level: Region

Project Description:

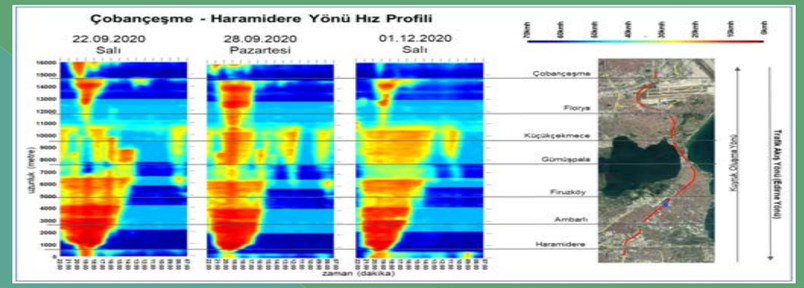
This study covers the analysis of the traffic circulation plan covering the city center and the surrounding areas in order to provide solutions to the transportation problems in Çorum city center and preparation of improvement proposals for this circulation plan. Also, analysis and proposals have been made regarding the technical elements for implementation. In this context, one-way and two-way transportation plan scenarios were prepared, signal plans were created, pedestrianization, parking, alternative routes and different modes of transportation were proposed, and geometric design projects for intersections and corridors were prepared. Project components within the scope of this study:

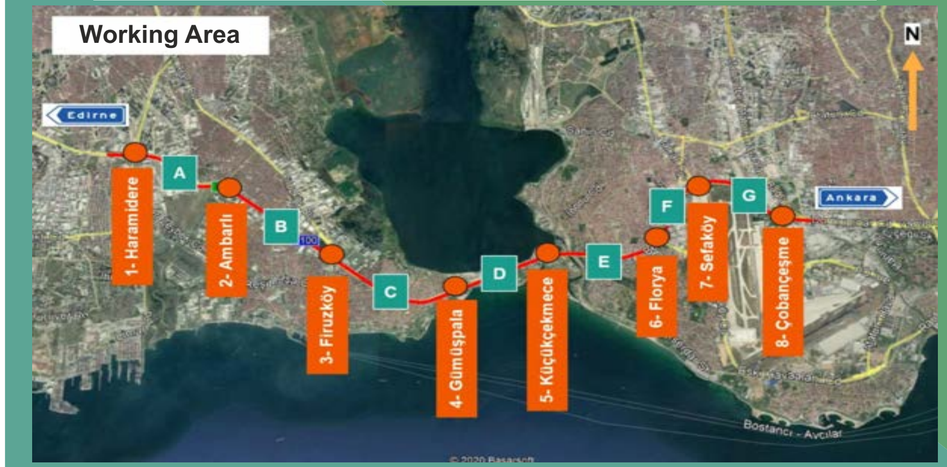
- A literature review on the topics related to the project
- Investigation of project area from a transportation perspective
  - Evaluation of findings from field studies
  - Traffic count study and creation of origin-destination matrices
  - Data collection with Bluetooth-based traffic analysis system (BLUESIS)
  - Floating Car Data (FCD) analysis
  - Traffic Safety investigations
  - Existing road network analysis with transportation planning models
  - Existing intersection analysis with traffic simulation models
- Determination of general strategies for the coming years in the project area
- Presentation of traffic circulation scenarios in the project area
- Presentation and reporting

YouTube Link:

İstanbul

Preparation of Traffic Counts, Preliminary Design and Simulation Models for Roads and Intersections on the Çobançeşme-Haramidere Route on D100 Highway





Costomer: İstanbul Metropolitan Municipality

Sector: Urban / Public

Expertise Used: Design&Planning, Analysis

Project Level: Intersection, Corridor

Project Description:

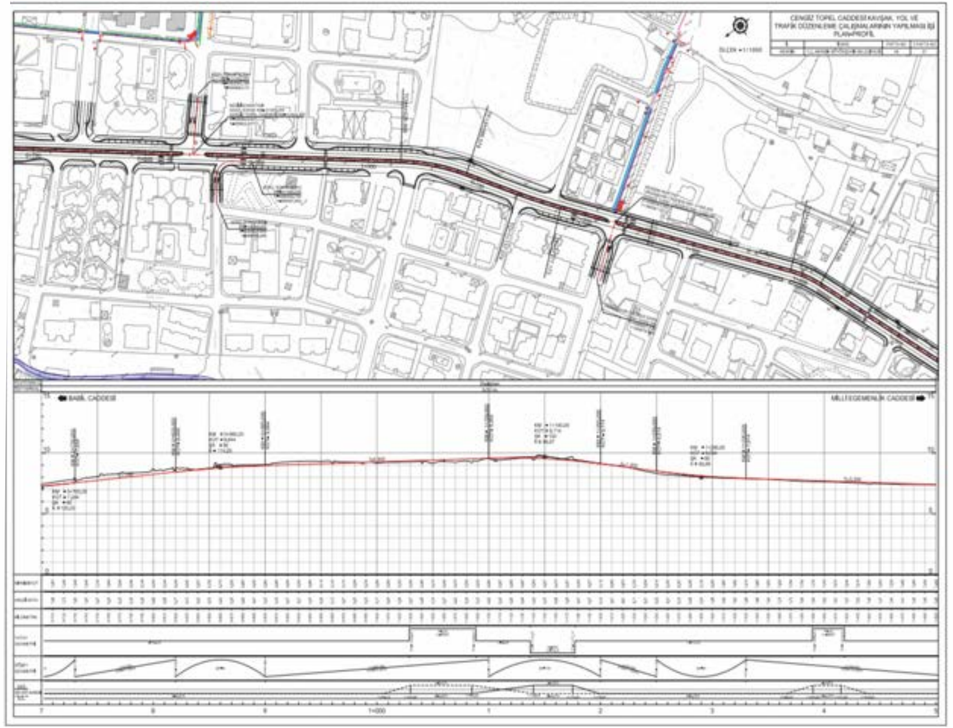
The problems of the approximately 15 km long highway corridor between the Haramidere and Çobançeşme intersections of the D100 Highway, which is within the responsibility area of the Istanbul Metropolitan Municipality, have been identified from a transportation perspective and solutions have been proposed. In this context, factors and locations affecting the road capacity of the corridor were identified by utilizing field observation and technological applications (Floating Car Data (FCD), drone images, etc.). In order to increase the traffic efficiency and safety of the corridor, solutions were proposed taking into consideration the current urban development status by using classical engineering methods and intelligent transportation systems with the help of PTV Vissim and CAD applications. Project components within the scope of this study:

- Assessment of the current state of the corridor
  - Findings from field studies
    - Traffic count study
    - Field survey trips and travel time measurements
    - Drone shots
  - Findings obtained with Floating Car Data (FCD)
- Development of corridor improvement proposals
- Simulation modeling

YouTube Link:

Mersin

Preparation of Intersection, Roadway and Traffic Design Project s on Cengiz Topel Avenue



Costomer: Mersin Metropolitan Municipality

Sector: Urban / Public

Expertise Used: Design&Planning, Analysis

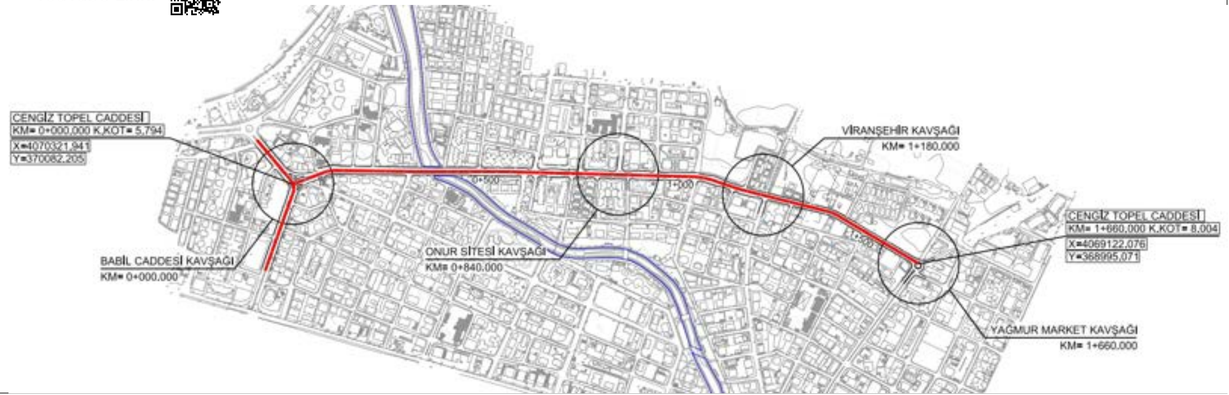
Project Level: Intersection, Corridor

Project Description:

Intersection, road and traffic regulation studies were carried out at the intersections of Sahil Yolu Babil (signalized), Onur Sitesi (signalized), Viranşehir (signalized) and Yağmur Market (non-signalized) on Cengiz Topel Avenue located in Mersin city center, and geometric design change proposals were made in the light of simulations and analyses made at the intersection and corridor scale, and implementation projects of these proposals were prepared. Project components within the scope of this study:

- Existing corridor and intersection analysis and simulations
- Intersection, road and traffic circulation design works
- Corridor and intersection analysis and simulations of the proposed projects
- Preparation of plan information and drawing sheets

YouTube Link:



İstanbul

Traffic Impact Assessment and In-campus Traffic Circulation Analysis for Industrial Facility

Costomer: Kroman Çelik Sanayi A.S.

Sector: Industrial

Expertise Used: Design&Planning, Analysis

Project Description:

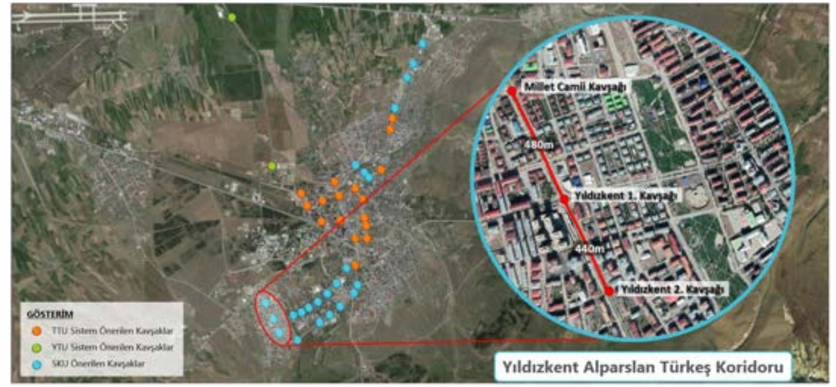
In this project , the effect of the expansion project of the industrial facility on the transportation network inside and around the factory campus was examined. The first phase of the project was focused on the possible congestions at the existing campus transportation network with forecasted traffic. Then, the second phase of the work was focused on the management of traffic flow of the expanded campus transportation network. The transportation network and factory campus were modeled using PTV Vissim software. Project components within the scope of this study:

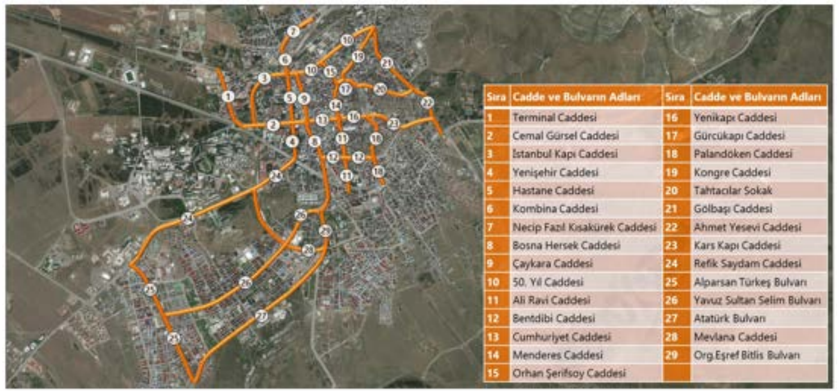
- Traffic counts
- Existing traffic condition analysis
- Future traffic condition analysis
- In-campus traffic circulation analysis
- Final technical report

YouTube Link:

Preparation of ITS Master Plan for City of Erzurum

Erzurum





Sıra	Cadde ve Bulvarın Adları	Sıra	Cadde ve Bulvarın Adları
1	Terminal Caddesi	16	Yenikapı Caddesi
2	Cemal Gürsel Caddesi	17	Gürcükapı Caddesi
3	İstanbul Kapı Caddesi	18	Palandöken Caddesi
4	Yenişehir Caddesi	19	Kongre Caddesi
5	Hastane Caddesi	20	Tahtacılar Sokak
6	Kombina Caddesi	21	Gölbaşı Caddesi
7	Necip Fazıl Kısakürek Caddesi	22	Ahmet Yesevi Caddesi
8	Bosna Hersek Caddesi	23	Kars Kapı Caddesi
9	Çaykara Caddesi	24	Refik Saydam Caddesi
10	50. Yıl Caddesi	25	Alparsan Türkeş Bulvarı
11	Ali Ravi Caddesi	26	Yavuz Sultan Selim Bulvarı
12	Bentdibi Caddesi	27	Atatürk Bulvarı
13	Cumhuriyet Caddesi	28	Mevlana Caddesi
14	Menderes Caddesi	29	Org.Eşref Bitlis Bulvarı
15	Orhan Şerifsoy Caddesi		

Costomer: Erzurum Metropolitan Municipality

Sector: Urban / Public

Expertise Used: Design&Planning, Analysis

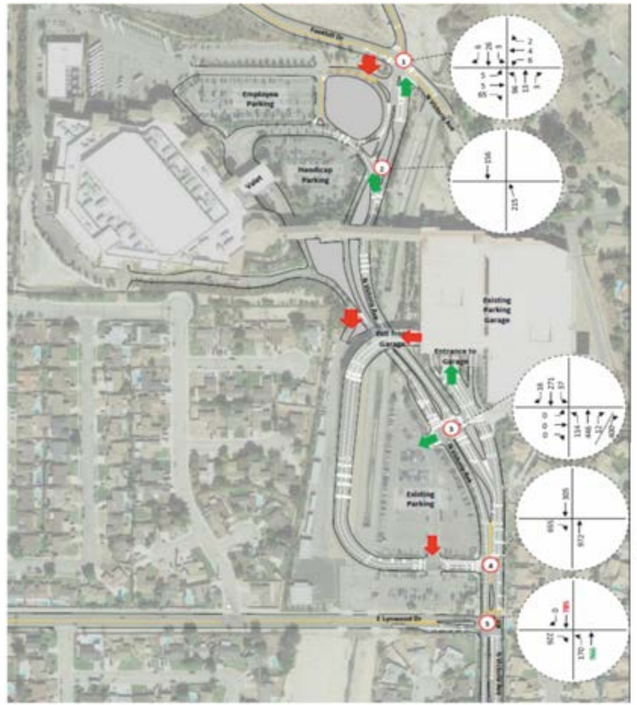
Project Description:

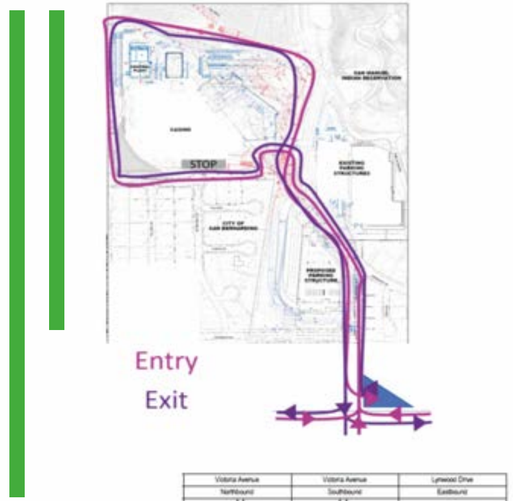
In this project , which aims to prepare a strategic ITS master plan for Erzurum province, existing ITS applications were evaluated, a strategic action plan was put forward by analyzing and prioritizing the needs for ITS applications through traffic data analysis, field observation and technical review. Project components within the scope of this study:

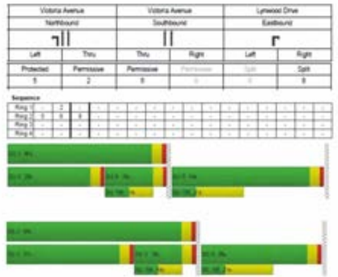
- Review of the state-of-the-art for ITS
- Development of strategy and impact indicators for ITS applications
- ITS implementation roadmap for 2035
- Development of the final master plan report

San Manuel Indian Casino Expansion Project Traffic Modeling

California/USA







Costomer: Transtech Engineers Inc.

Sector: Entertainment

Expertise Used: Design&Planning, Analysis

Project Description:

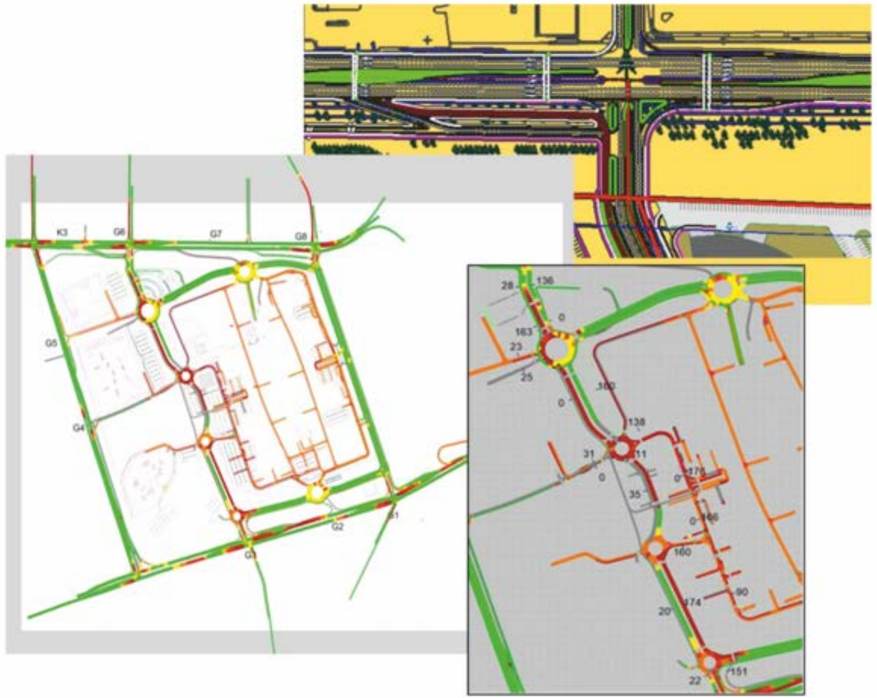
In this project , following the new building constructions and parking lots in the San Manuel Indian Casino complex, the traffic situation near the complex and within the complex is modeled on PTV Vissim. The outputs obtained from the simulation model were evaluated in the several meetings held with client and common solution proposals were developed. Project components within the scope of this study:

- Network modelling
- Intersection LOS analysis
- Parking analysis
- In-campus intersection design analysis
- Roundabout analysis
- Final technical report

YouTube Link:

Etlik Integrated Health Campus Transportation & Traffic Evaluation

Ankara



Costomer: Astaldi Türkerler JV

Sector: Health

Expertise Used: Design&Planning, Analysis, Macro Transportation Modeling

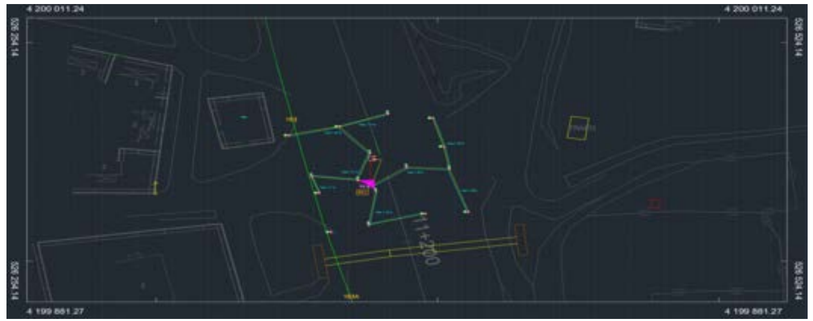
Project Description:

The traffic situation expected to occur in and around the campus after the commissioning of the Etlik Integrated Health Campus, was predicted and analyzed, modeled, and then suggestions were made to increase traffic efficiency and safety from a traffic engineering perspective according to the results obtained. Also, modeling and analysis of the intersections were carried out, and on-campus traffic circulation and pedestrian access analyses were conducted and recommendations were made. Project components within the scope of this study:

- Determination of on-campus and off-campus access demand using special travel forecasting models for health institutions
- Modeling the workspace and making demand assignments in PTV Visum
- Development of ITS proposals for on and around the campus
- On-campus traffic modeling in PTV Vissim, taking into account the public transportation system and pedestrian movements
- Modeling various scenarios for morning, noon, evening peak hours and emergency vehicles (ambulances, etc.), and making short and medium term recommendations
- Updating traffic impact analysis studies by creating PTV Vistro models
- Assessment of the walkability level of the on-campus pedestrian road network and preparation of proposed pedestrian road network drawings

YouTube Link:

Directorate of Highways – 13th Regional Directorate Intelligent Transportation Systems Consultancy Project



Costomer: 13th Regional Directorate of Highways

Sector: Intercity // Public

Expertise Used: Analysis

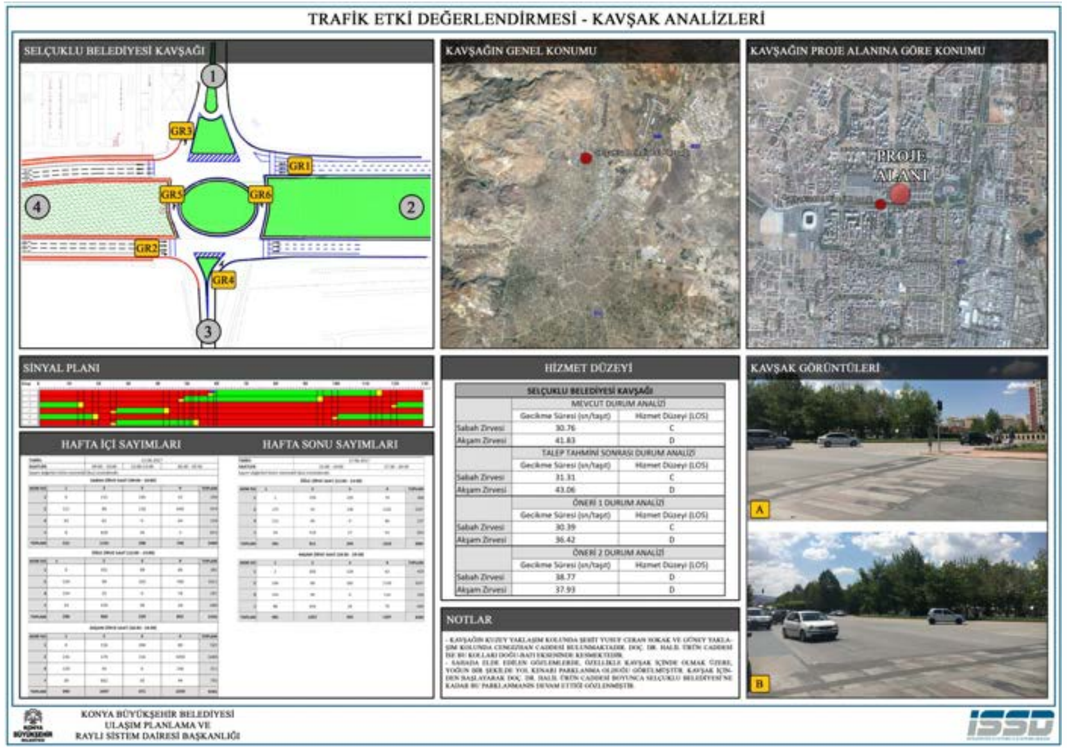
Project Description:

Consultancy services were provided in order to determine the system requirements of the ITS corridors planned to be established in the Antalya-Tekirova, Antalya-Sandıklı, Antalya-Gazipaşa highway corridors within the borders of the 13th Regional Directorate of Highways of the Republic of Turkey, to ensure the standardization of these systems by gathering them under a single platform, to establish integrity and interoperability between systems, to ensure the traceability and manageability of highways, and to increase operational capability by guiding technological developments with the requirements to be put forward. Project components within the scope of this study:

- Intersection Analysis
- Floating Car Data (FCD) Analysis
- Determination of Central Software Needs
- Recommendation of ITS Applications
- Providing Recommendations on Citizen Application
- Transportation Modeling Software Recommendations

Konya Park Trade Center Traffic Impact Analysis Study

Konya



Costomer: Konya Metropolitan Municipality

Sector: Private

Expertise Used: Design&Planning, Analysis

Project Description:

The possible effects of the residences and the shopping center within the Konya Park Trade Center project on the existing transportation system were evaluated and future traffic forecasts were made. In this context, the analysis of the existing state, the estimation of the traffic demand that the project will generate and the impact of this demand on the existing transportation infrastructure have been analyzed and precautionary suggestions have been made. Project components within the scope of this study:

- Existing State Analysis
- Traffic Demand Forecast
  - Travel Generation Estimation
  - Travel Distribution Forecast
  - Modal Split Forecast
  - Travel Assignment
  - Level of Service Analyses
- Proposals
- Public Transportation Analysis
- Parking Analysis

National Transport Master Plan of the Republic of Turkey

Turkey

Costomer: The Ministry of Transport and Infrastructure

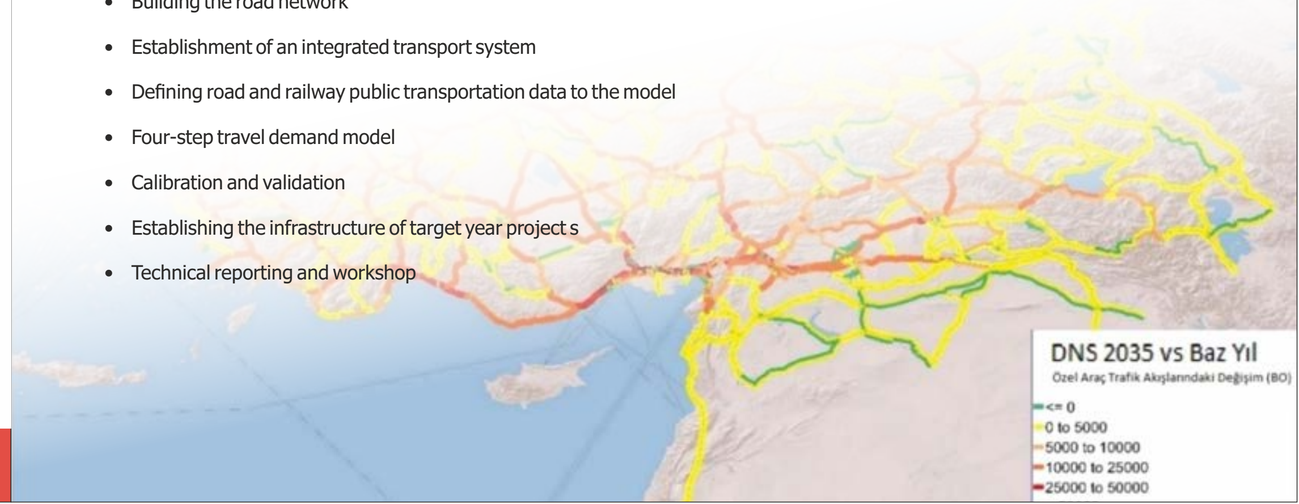
Sector: Intercity / Public

Expertise Used: Travel Demand Modeling, Network Modeling, Macro Traffic Analysis

Project Description:

National Transportation Demand Forecast Model, which processes and evaluates a series of complex mathematical formulation processes, has been developed within the PTV Visum software in order to analyze and compare the current and future supply and demand in the field of road, rail, air, maritime and inland waterway passenger and freight transportation in a holistic way in terms of economic, social and technical terms. Based on this model, demand forecasts for freight and passenger transportation in future years have been prepared using macro indicators such as GDP, vehicle ownership, economic growth, and inflation. Project components within the scope of this study:

- Building the road network
- Establishment of an integrated transport system
- Defining road and railway public transportation data to the model
- Four-step travel demand model
- Calibration and validation
- Establishing the infrastructure of target year project s
- Technical reporting and workshop



ISSD PROJECTS REFERENCE LIST

2012

- Dynamic Intersection Control System Before and After Works(Konya, Adana)

2013 - 2014

- Dynamic Intersection Control System Before and After Works
(Corum, Urfa, Georgia)

2015 - 2016

- Capacity Analysis of Diyarbakır-Elazığ State Road and Diyarbakır-Mardin State Road
- Capacity Analysis of Crossings between Diyarbakir-Mardin State Road İzzettin Paşa Bridge-Midyat Intersection Consultancy Project
- Etlik Integrated Health Campus Transportation & Traffic Evaluation (Part 1)
- Evaluation of Geometric Design between Kantar and Diclekent Intersections on Diyarbakır-Siverek State Road in terms of Capacity and Road Safety

2016 - 2017

- Konya Park Trade Center Traffic Impact Analysis Study
- National Transport Master Plan of the Republic of Turkey
- Dynamic Intersection Control System Before and After Works
(India, Kazakhstan, Malatya, Diyarbakır)

2018

- Gaziantep Integrated Health Campus Parking Simulation Study
- Karabük Kardemir Intersection Traffic Demand Forecasting and Traffic Simulation Study
- San Manuel Indian Casino Traffic Impact Analysis and Traffic Simulation Project (Part 1&2)
- Turkish Grand National Assembly Traffic Impact Assessment Study
- Suggestions for PT Stop and Pedestrian Crossing Locations
- Dynamic Intersection Control System Before and After Works
(UAE, Afyon, Mersin, Mardin, Regional Directorates of Highways)

2019

- Preparation of ITS Master Plan for City of Erzurum
- San Manuel Indian Casino Expansion Project Traffic Modeling (Part 3)
- Traffic Impact Assessment for Industrial Facility (Part 1)
- Etlik Integrated Health Campus Transportation & Traffic Evaluation (Part 2)
- Tuzcular Intersection Geometric Design Project
- Directorate of Highways – 13th Regional Directorate Intelligent Transportation Systems Consultancy Project
- Iskenderun Demir ve Çelik A.Ş. Port Project Traffic Simulation
- Dynamic Intersection Control System Before and After Works (KKTC)

2020

- Mersin Marina Traffic Engineering Consultancy Service
- Review of Existing Signalization Systems and Feasibility Study
- Technical Feasibility Study for Virtual Twin and Its Simulation in Transportation
- Dynamic Intersection Control System Before and After Works (Elazığ, Ukraine, Nigeria)

2020 - 2021

- Traffic Circulation Plan and Improvement Proposals Consultancy Project
- Preparation of Traffic Counts, Preliminary Design and Simulation Models for Roads and Intersections on the Çobançeşme-Haramidere Route on D100 Highway
-Hazardağlı Intersection and Traffic Design Application Project
-Karayolları Intersection and Traffic Design Application Project
-Dynamic Intersection Control System Before and After Works (Palestine, Trabzon)
-Preparation of Intersection, Roadway and Traffic Design projects on Cengiz Topel Avenue
-In-campus Traffic Circulation Analysis for Industrial Facility (Part 2)

2022 - 2023

- Tashkent Signal Master Plan, Signal Time Optimization and Coordination
- Sustainable Urban Mobility Plan of Eskişehir
- Sustainable Urban Mobility Plan of Konya
- Bursa Metropolitan Municipality Traffic Management Center (TMC) Project – Traffic Engineering Studies
- Kütahya Transportation Master Plan
- Libya Port Project Traffic Simulation Study

ISSD PROJECTS REFERENCE LIST (2012-2023)

Project Date	Project Name	Project Description	Project Owner
2022 - 2023	Tashkent Signal Master Plan, Signal Time Optimization and Coordination	The evaluation of the infrastructure and superstructure status of the signalization systems at the existing signalized intersections, making the necessary change proposals as a result of the evaluation, arranging the signal plans used in accordance with the traffic demand, signal optimization and coordination studies were carried out.	Will be shared with the customer's consent.
2022 - 2023	Sustainable Urban Mobility Plan of Eskişehir	Within the scope of the Eskişehir SUMP study, construction of the model network, establishment of the integrated transportation system, identification of road and rail public transportation data to the model, creation of the infrastructure of the target year projects and technical reporting studies were carried out.	Eskişehir Metropolitan Municipality
2022 - 2023	Sustainable Urban Mobility Plan of Konya	Within the scope of the Konya SUMP study, construction of the model network, establishment of the integrated transportation system, identification of road and rail public transportation data to the model, creation of the infrastructure of the target year projects and technical reporting studies were carried out.	Konya Metropolitan Municipality
2022 - 2023	Bursa Metropolitan Municipality Traffic Management Center (TMC) Project – Traffic Engineering Studies	Traffic engineering problems are addressed at 91 signalized and unsignalized intersections in the responsibility area of Bursa Metropolitan Municipality. The main project components are data collection, simulation modeling and analysis, presentation and reporting, and field application.	Bursa Metropolitan Municipality
2022	Kütahya Transportation Master Plan	The current state of road travel demand is analyzed comprehensively in terms of economic, social, and technical aspects using PTV Visum and the Transportation Demand Forecasting Model has been developed.	Kütahya Municipality
2022	Libya Port Project Traffic Simulation Study	A traffic simulation was prepared for the planned port by modeling heavy vehicle traffic at the entrance-exits and inside the port area.	Will be shared with the customer's consent.
2021	Traffic Circulation Plan and Improvement Proposals Consultancy Project	In order to solve the transportation problems in Çorum city center, traffic circulation plan and improvement proposals covering the city center and surrounding areas have been prepared, and analysis and proposals on technical elements for application have been made.	Çorum Municipality
2021	Preparation of Traffic Counts, Preliminary Design and Simulation Models for Roads and Intersections on the Çobançeşme-Haramidere Route on D100 Highway	Factors affecting road capacity were identified, bottleneck points/regions were identified, and solutions were developed to use the capacity of the corridor more efficiently by utilizing technological opportunities.	İstanbul Metropolitan Municipality
2021	Hazardağlı Intersection and Traffic Design Application Project	At the intersection where vehicle demand, especially left-turn rates are high, at-grade intersection design that can be an alternative to the grade-separated intersection project has been proposed and application projects have been prepared for the related design.	Elazığ Municipality
2021	Karayolları Intersection and Traffic Design Application Project	A hamburger intersection design was made to ensure the smooth continuity of the main direction traffic and facilitate the participation of the secondary directions at Karayolları Intersection, one of the intersections with high traffic density in the city, and application projects were prepared for the related design.	Afyon Municipality
2021	Dynamic Intersection Control System Before and After Works	It includes analysis of the situation before system installation at intersections, intersection-specific traffic engineering activities during installation, post-installation calibration and performance measurement.	Palestine Hebron Municipality
2022	Dynamic Intersection Control System Before and After Works	It includes analysis of the situation before system installation at intersections, intersection-specific traffic engineering activities during installation, post-installation calibration and performance measurement.	Trabzon Metropolitan Municipality
2020 - 2021	Preparation of Intersection, Roadway and Traffic Design Projects on Cengiz Topel Avenue	Intersection, road and traffic regulation studies were carried out at the intersections of Sahil Yolu Babil (signalized), Onur Sitesi (signalized), Viranşehir (signalized) and Yağmur Market (non-signalized) and application projects of these intersections were prepared.	Mersin Municipality

ISSD PROJECTS REFERENCE LIST

Project Date	Project Name	Project Description	Project Owner
2020 - 2021	In-campus Traffic Circulation Analysis for Industrial Facility (Part 2)	In this phase, which focuses on the management of traffic flow within the industrial facility area, the design of the in-campus transportation network and entry-exit points were carried out with simulation support.	Kroman Çelik Sanayi A.Ş.
2020	Mersin Marina Traffic Engineering Consultancy Service	The impacts of Mersin Marina's vehicular traffic on the transportation infrastructure within the complex and its immediate surroundings have been evaluated. The current situation has been analyzed, the impact of alternative entrance-exit gates on traffic has been evaluated and the parking circulation inside the marina has been analyzed.	Mersin Yat Limanı İşletmeleri A.Ş.
2020	Review of Existing Signalization Systems and Feasibility Study	Existing states of 10 intersections in Şanlıurfa city center were analyzed and conceptual geometric design and signal plans were created by taking traffic safety parameters into consideration.	Şanlıurfa Metropolitan Municipality
2020	Technical Feasibility Study for Virtual Twin and Its Simulation in Transportation	A feasibility study has been carried out to create a virtual twin of the southern and northern reserve areas of Esenler district of Istanbul province in the field of transportation.	TÜBİTAK TÜSSİDE
2020	Dynamic Intersection Control System Before and After Works	It includes analysis of the situation before system installation at intersections, intersection-specific traffic engineering activities during installation, post-installation calibration and performance measurement.	Elazığ Municipality
2020	Dynamic Intersection Control System Before and After Works	It includes analysis of the situation before system installation at intersections, intersection-specific traffic engineering activities during installation, post-installation calibration and performance measurement.	Ukraine Vinnytsia Municipality
2020	Dynamic Intersection Control System Before and After Works	It includes analysis of the situation before system installation at intersections, intersection-specific traffic engineering activities during installation, post-installation calibration and performance measurement.	Nigeria Lagos Municipality
2019 - 2020	Preparation of ITS Master Plan for City of Erzurum	Smart City Master Plan and Transportation Vision were developed, Dynamic Intersection Control Systems Master Plan and Electronic Monitoring Systems Master Plan were prepared.	Erzurum Metropolitan Municipality
2019	San Manuel Indian Casino Expansion Project Traffic Modeling (Part 3)	Traffic simulation of a roundabout designed in the complex was performed and simulation analysis results of the roundabout for different traffic conditions were obtained.	Transtech Engineers Inc.
2019	Traffic Impact Assessment for Industrial Facility (Part 1)	The impacts of the projected increase in vehicle traffic within the scope of a planned project in an industrial facility on the existing transportation infrastructure inside and outside the factory site were evaluated.	Kroman Çelik Sanayi A.Ş.
2019	Etlik Integrated Health Campus Transportation & Traffic Evaluation (Part 2)	On-campus and off-campus intersection analyses, on-campus traffic analyses, pedestrian access analyses and ITS requirement analyses were conducted.	Astaldi Türkerler JV
2019	Tuzcular Intersection Geometric Design Project	Depending on the existing traffic volume, signalization phase layout and geometric design of the intersection, the intersection's service level was analyzed, followed by an alternative geometric design proposal to improve the level of service.	Çorum Municipality
2019	Directorate of Highways – 13th Regional Directorate Intelligent Transportation Systems Consultancy Project	Consultancy services were provided for the determination of ITS components planned to be installed on Antalya-Tekirova, Antalya-Sandıklı, Antalya-Gazipaşa routes.	General Directorate of Highways

ISSD PROJECTS REFERENCE LIST

Project Date	Project Name	Project Description	Project Owner
2019	İskenderun Demir ve Çelik A.Ş. Port Project Traffic Simulation	Traffic simulation of the planned road network project was performed on a 3D model of the study area.	İskenderun Demir ve Çelik A.Ş.
2019	Dynamic Intersection Control System Before and After Works	It includes analysis of the situation before system installation at intersections, intersection-specific traffic engineering activities during installation, post-installation calibration and performance measurement.	TRNC Lefkoşa Municipality
2018	Gaziantep Integrated Health Campus Parking Simulation Study	A traffic simulation study was conducted for the parking lots designed for patients, visitors and staff coming to the campus. In this context, the existing designs of the parking lots were reflected in the simulation environment, possible problems were observed and suggestions were made to solve these problems.	CCN Group
2018	Karabük Kardemir Intersection Traffic Demand Forecasting and Traffic Simulation Study	Two different grade-separated projects planned to be constructed in Karabük city center have been evaluated. In this context, traffic demand estimation and traffic simulations have been performed for each project.	15th Regional Directorate of Highways
2018	San Manuel Indian Casino Traffic Impact Analysis and Traffic Simulation Project (Part 1&2)	Following the construction of new buildings and parking lots at the San Manuel Indian Casino complex, the traffic situation near and within the complex was modeled.	Transtech Engineers Inc.
2018	Turkish Grand National Assembly Traffic Impact Assessment Study	The entrance and exit routes of the Turkish Grand National Assembly as a result of the isolated area project were analyzed.	Turkish Grand National Assembly
2018	Suggestions for PT Stop and Pedestrian Crossing Locations	Existing public transport stop locations and pedestrian crossings on 20 routes in the city center were analyzed based on Turkish standards. The suggestions for moving, removing, adding and arranging them in accordance with the standards were made.	Diyarbakır Metropolitan Municipality
2018	Dynamic Intersection Control System Before and After Works	It includes analysis of the situation before system installation at intersections, intersection-specific traffic engineering activities during installation, post-installation calibration and performance measurement.	UAE Ras Al Khaimah Municipality
2018	Dynamic Intersection Control System Before and After Works	It includes analysis of the situation before system installation at intersections, intersection-specific traffic engineering activities during installation, post-installation calibration and performance measurement.	Afyon Municipality
2018	Dynamic Intersection Control System Before and After Works	It includes analysis of the situation before before system installation at intersections, intersection-specific traffic engineering activities during installation, post-installation calibration and performance measurement.	Mersin Metropolitan Municipality
2018	Dynamic Intersection Control System Before and After Works	It includes analysis of the situation before system installation at intersections, intersection-specific traffic engineering activities during installation, post-installation calibration and performance measurement.	Mardin Metropolitan Municipality
2018	Dynamic Intersection Control System Before and After Works	It includes analysis of the situation before system installation at intersections, intersection-specific traffic engineering activities during installation, post-installation calibration and performance measurement.	Regional Directorates of Highways
2017	Konya Park Trade Center Traffic Impact Analysis Study	Analysis of the existing state, estimation of the demand generated by the project and analysis of its impact on the existing transportation infrastructure. Traffic simulation and parking lot analysis were carried out for the existing state and recommendations regarding the situation as a result of the demand forecast.	Konya Metropolitan Municipality
2016-2017	National Transport Master Plan of the Republic of Turkey	Ulaşım modellemesi ve PTV VISUM eğitimi hizmetleri verilmiştir. Mevcut ve alternatif senaryolar, anket ve saha verisi ile oluşturulmuş ve karşılaştırılmıştır. Özel ve toplu taşıma için yolculuk talep modellemesi yapılmıştır. Proje ekibine PTV VISUM yazılımı ve oluşturulan ulaşım modeli hakkında eğitimler verilmiştir.	The Ministry of Transport and Infrastructure
2016-2017	Dynamic Intersection Control System Before and After Works	Transportation modeling and PTV VISUM training services were provided. Existing and alternative scenarios were developed and compared with survey and field data. Travel demand modeling was performed for private and public transportation. The project team was trained on PTV VISUM software and the transportation model created.	India Chandigarh and Pune Municipalities

ISSD PROJECTS REFERENCE LIST

Project Date	Project Name	Project Description	Project Owner
2016-2017	Dynamic Intersection Control System Before and After Works	It includes analysis of the situation before system installation at intersections, intersection-specific traffic engineering activities during installation, post-installation calibration and performance measurement.	Kazakistan Shymkent Municipality
2016-2017	Dynamic Intersection Control System Before and After Works	It includes analysis of the situation before system installation at intersections, intersection-specific traffic engineering activities during installation, post-installation calibration and performance measurement.	Malatya Metropolitan Municipality
2016-2017	Dynamic Intersection Control System Before and After Works	It includes analysis of the situation before system installation at intersections, intersection-specific traffic engineering activities during installation, post-installation calibration and performance measurement.	Diyarbakır Metropolitan Municipality
2016	Capacity Analysis of Diyarbakır-Elazığ State Road and Diyarbakır-Mardin State Road	Capacity analysis is performed for 8 intersections on Diyarbakır-Elazığ State Road and Diyarbakır-Mardin State Road under the responsibility of 9th Regional Directorate of Highways.	9th Regional Directorate of Highways
2016	Capacity Analysis of Crossings between Diyarbakir-Mardin State Road İzzettin Paşa Bridge-Midyat Intersection Consultancy Project	Capacity analysis is performed for 5 intersections on Diyarbakır-Mardin State Road and İzzettin Paşa Bridge-Midyat Intersection under the responsibility of 9th Regional Directorate of Highways.	9th Regional Directorate of Highways
2016	Etlik Integrated Health Campus Transportation & Traffic Evaluation (Part 1)	The traffic situation expected to occur within the campus after the opening of Etlik Integrated Health Campus was analyzed.	Astaldi Türkerler JV
2015	Evaluation of Geometric Design between Kantar and Diclekent Intersections on Diyarbakır-Siverek State Road in terms of Capacity and Road Safety	Traffic safety analysis was performed and the impact of the proposed geometric modification was analyzed in terms of capacity considering a 20 year projection for Diyarbakır-Siverek State Road.	Karayolları Genel Müdürlüğü
2014	Dynamic Intersection Control System Before and After Works	It includes analysis of the situation before system installation at intersections, intersection-specific traffic engineering activities during installation, post-installation calibration and performance measurement.	Georgia Poti Municipality
2013	Dynamic Intersection Control System Before and After Works	It includes analysis of the situation before system installation at intersections, intersection-specific traffic engineering activities during installation, post-installation calibration and performance measurement.	Şanlıurfa Metropolitan Municipality
2013	Dynamic Intersection Control System Before and After Works	It includes analysis of the situation before system installation at intersections, intersection-specific traffic engineering activities during installation, post-installation calibration and performance measurement.	Çorum Municipality
2012	Dynamic Intersection Control System Before and After Works	It includes analysis of the situation before system installation at intersections, intersection-specific traffic engineering activities during installation, post-installation calibration and performance measurement.	Adana Metropolitan Municipality
2012	Dynamic Intersection Control System Before and After Works	It includes analysis of the situation before system installation at intersections, intersection-specific traffic engineering activities during installation, post-installation calibration and performance measurement.	Konya Metropolitan Municipality

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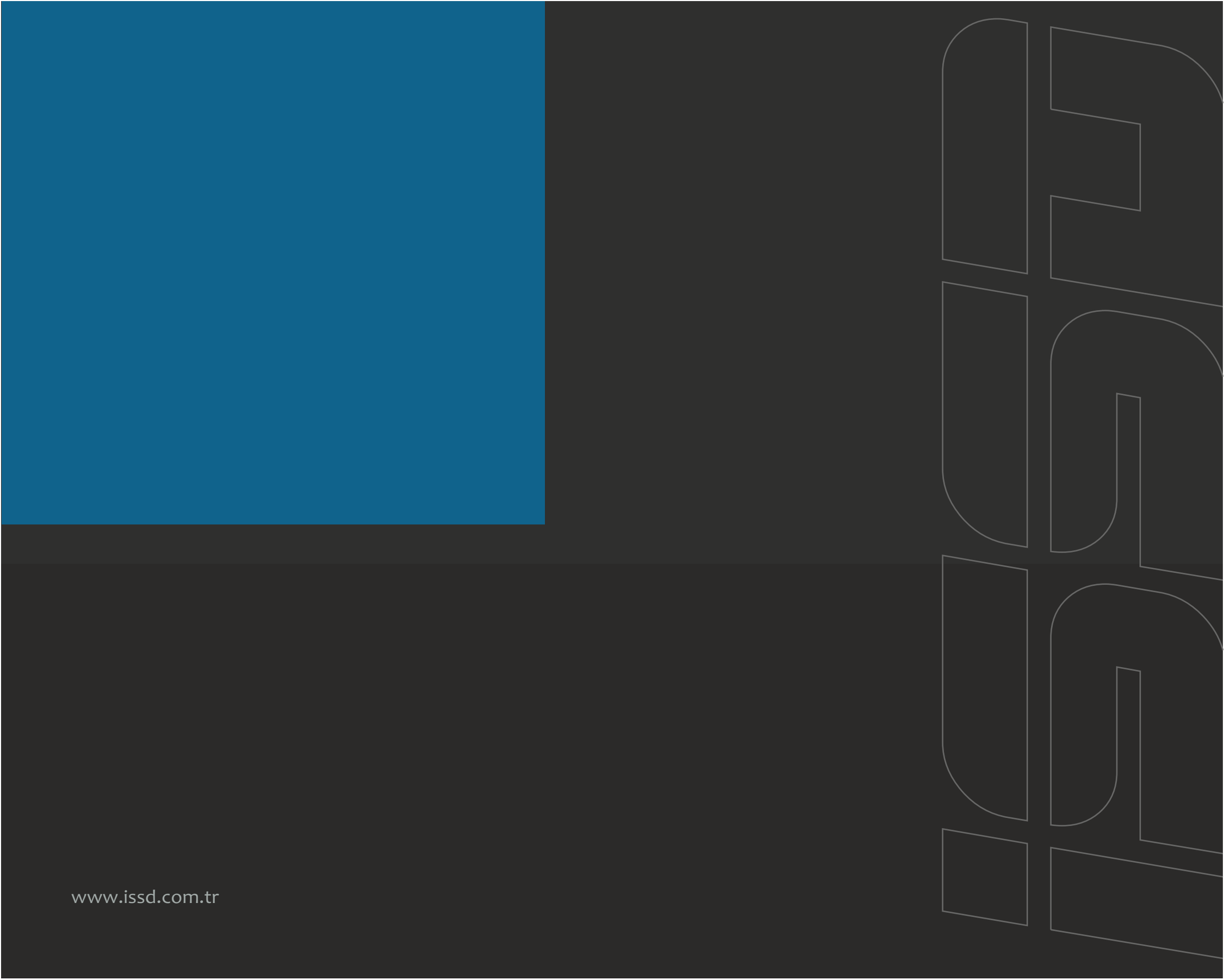
ISSD Bilişim Elektronik Eğitim Sanayi ve Ticaret A.Ş.

Address:
Üniversiteler Mahallesi İhsan Doğramacı Bulvarı
Halıcı Binası No:33 ODTÜ Teknokent Çankaya Ankara Türkiye

Contact:
Phone: +90 312 210 00 15
Fax: +90 312 210 10 75
E-Mail: info@issd.com.tr



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