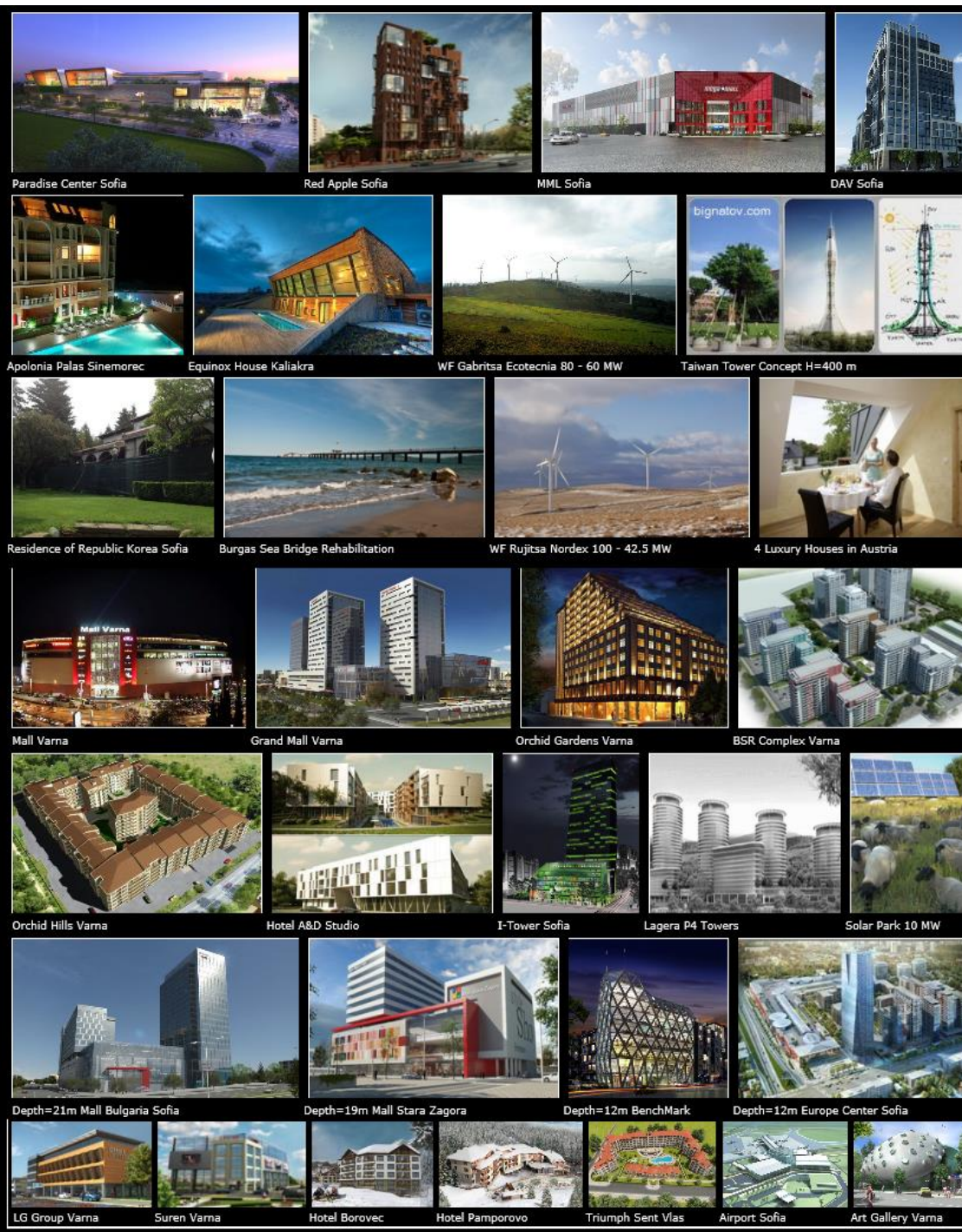




- AEC Ltd.
- Edison 50 Str. Sofia, Bulgaria 1111
- www.aec.bg
- www.alashki.com
- office@aec.bg
- office@alashki.com
- +359 2 87 00 897
- +359 888 58 61 57



STRUCTURAL DESIGN

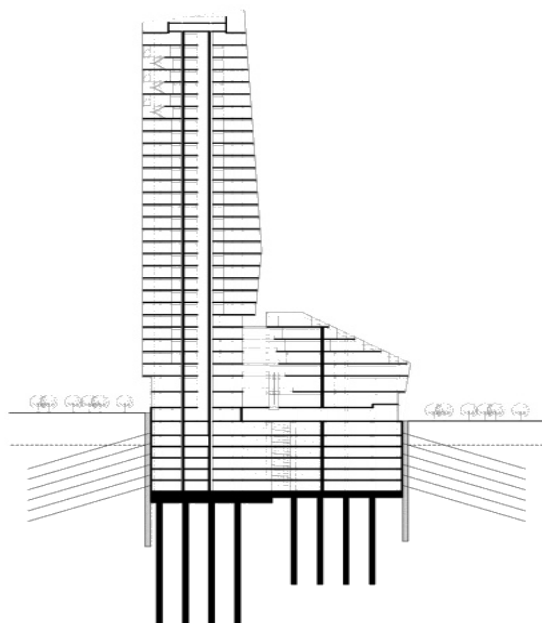
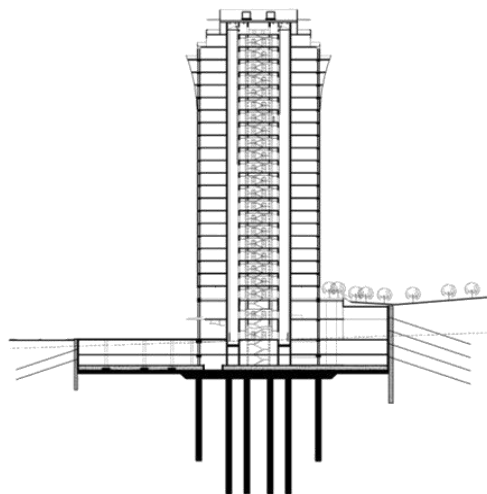
Third Generation
Builders

Since
1936

www.aec.bg



80th anniversary
2016



Company

- AEC Ltd.
- Edison 50 Str. Sofia, Bulgaria 1111

CEO

- Dr. Ilia Alashki AvH PhD SE

WWW

- www.aec.bg
- www.alashki.com

E-mail

- office@aec.bg
- office@alashki.com

Phone

- +359 2 87 00 897
- +359 888 58 61 57

Activities

- Reinforced concrete, steel and wood structures
- Precast, post-tensioned and prestressed concrete structures
- Deep excavation shoring, retain walls, piles, soil nailing, IBO anchors
- Underground cut-and-cover and top-down constructions
- Combined piled-raft foundation for high-rise buildings and towers
- Seismic, wind and geotechnical nonlinear and time-history analysis
- Active isolation and damping structures
- Gravity, deep, monopile and offshore foundation for wind turbine farms
- Structures for solar energy parks



COMPLEX

LABYRINTH

VARNA



AREA 39 000 m²
LEVELS 9 + 1.U
HEIGHT 28 m
YEAR 2016

ARCHITECTS STARH
arch. Svetoslav
Stanislavov

STARH
STANISLAVOV ARCHITECTS

COMPLEX

VARNA
CITY
PARK
SOUTH

VARNA



AREA 91 000 m²
LEVELS 12 + 1.U
HEIGHT 37 m
YEAR 2016

ARCHITECTS STARH
arch. Svetoslav
Stanislavov

STARH
STANISLAVOV ARCHITECTS

OFFICE
BUILDING
POLYGRAPHIA

SOFIA



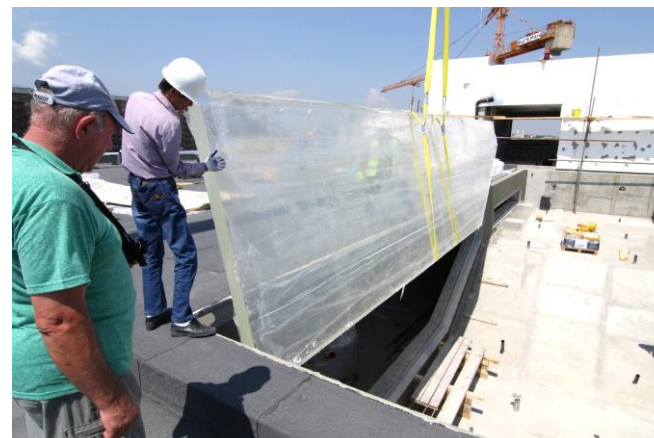
AREA 17 000 m²
LEVELS 6 + 1.U
HEIGHT 22 m
YEAR 2016

ARCHITECTS ASA
arch. Radomir
Serafimov

**ATELIER
SERAFIMOV
ARCHITECTS**

PROJECTS 2016

SWIMMING POOL GLASS ASSEMBLY



WALLTOPIA COLLIDER ACTIVITY CENTER, SOFIA



NEW
VARNA
LIBRARY
BUILDING

VARNA



AREA 32 000 m²
LEVELS 7 + 3.U
HEIGHT 30 m
YEAR 2016

architects for urbanity
ARCHITECTS arch. Marina Kounavi
arch. Irgen Salianji
arch. Karolina Szostkiewicz

OFFICE
BUILDING
TELELINK

SOFIA



AREA 33 000 m²
LEVELS 7+ 2.U
HEIGHT 39 m
YEAR 2016

ARCHITECTS A&A Architects
HA

SOUTH
PARK
WEST

SOFIA



AREA 8 700 m²
LEVELS 8 + 1.U
HEIGHT 22 m
YEAR 2016

ARCHITECTS Ivo Petrov Architects
Ivo Petrov
ARCHITECTS

PROJECTS 2016

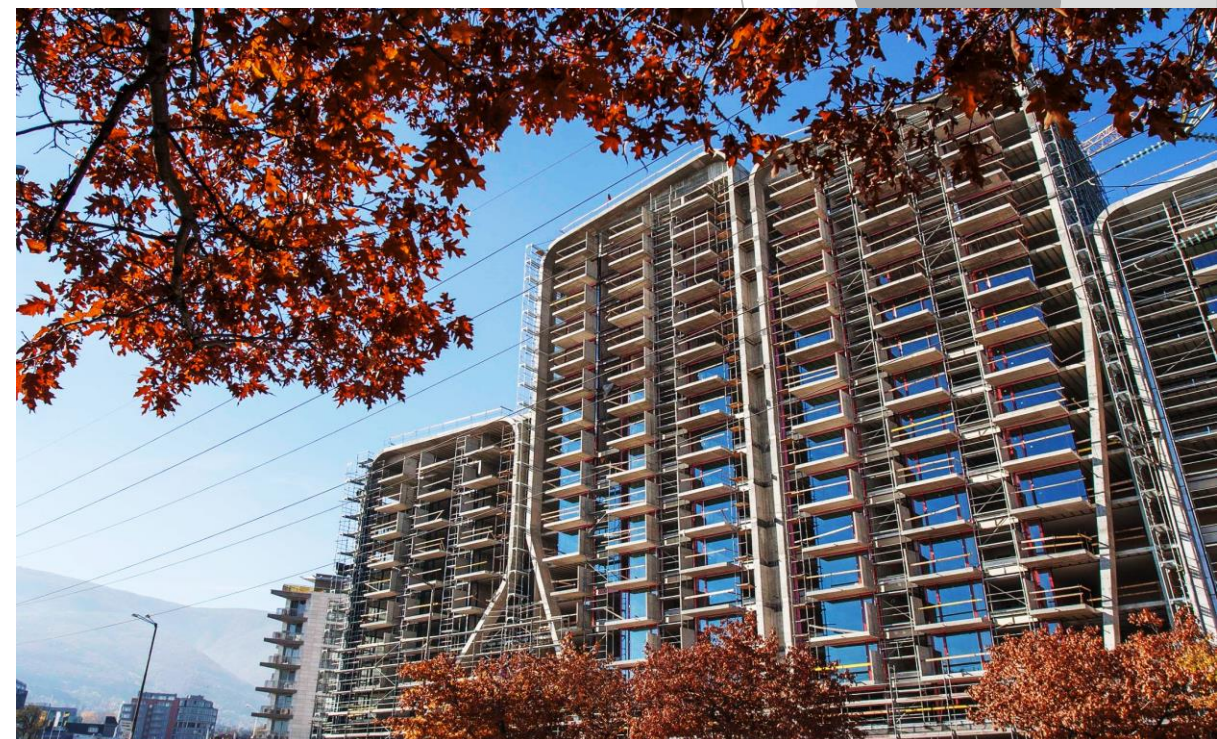
Third Generation
Builders

1936

www.aec.bg



ADVANCED ARCHITECTURE APARTMENTS SOFIA



CITY MALL

BANJA LUKA

BOSNIA AND
HERZEGOVINA



AREA 60 000 m²
LEVELS 5+3.U
HEIGHT 22 m
YEAR 2015

ARCHITECTS PLANNING
arch. Ilian Iliev

A³

ADVANCED
ARCHITECTURE
APARTMENTS

SOFIA



AREA 35 000m²
LEVELS 19+2.U
HEIGHT 60 m
YEAR 2014-2015

ARCHITECTS STARH STUDIO
arch. Svetoslav
Stanislavov

VARNA WAVES



AREA 11 000m²
LEVELS 9+2.U
HEIGHT 30m
YEAR 2015

ARCHITECTS STARH STUDIO
arch. Svetoslav
Stanislavov



AEC TERRACE THERMO JOINT



IMAX
CINEMA
HALL

ARENA

GRAND
MALL
VARNA



AREA 1 000 m²
LEVELS 1
HEIGHT 25 m
YEAR 2015
ARCHITECTS ARTEC

SEA
FOREST
STONE
RESIDENCE

VARNA



AREA 10 000m²
LEVELS 5+1U
HEIGHT 16 m
YEAR 2014-2015

ARCHITECTS STARH STUDIO
arch. Svetoslav
Stanislavov

K-RESIDENCE

COMFORT
VARNA



AREA 6 000m²
LEVELS 7+1U
HEIGHT 21m
YEAR 2014-2015

ARCHITECTS STARH STUDIO
arch. Svetoslav
Stanislavov

PROJECTS 2014-2015

Third Generation
Builders

1936

www.aec.bg

WIND BRACE



IMAX INTERIOR VIEW



IMAX STEEL STRUCTURE ASSEMBLY



COLLIDER
ACTIVITY
CENTER

WALLTOPIA

SOFIA



AREA 15 000 m²
LEVELS 6+1U
HEIGHT 25 m
YEAR 2015
ARCHITECTS WALLTOPIA

CITY
CLINIC
SOFIA

SOFIA



AREA 10 000m²
LEVELS 7+1U
HEIGHT 25 m
YEAR 2014-2015
ARCHITECTS PROARCH
arch. Ilia Evrev

SOFIA
PARK
VILLAS

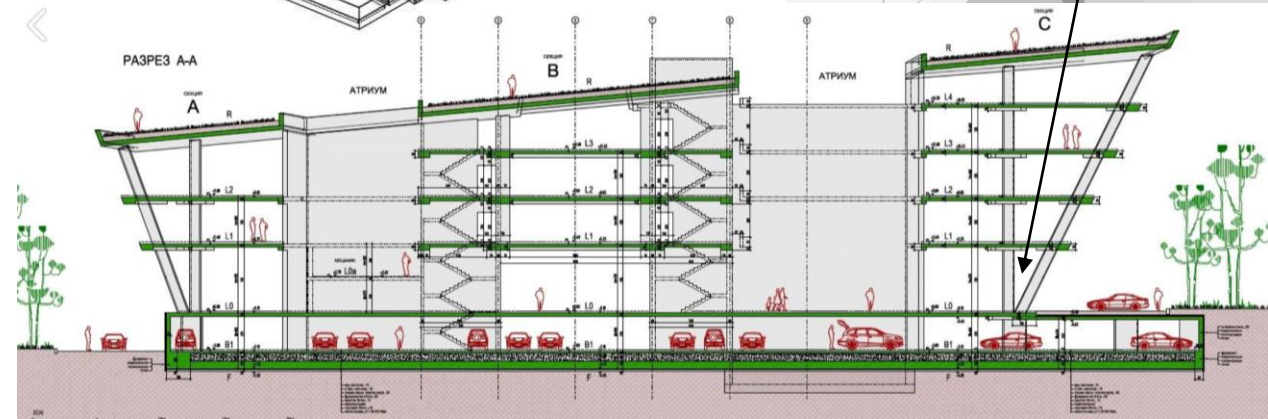
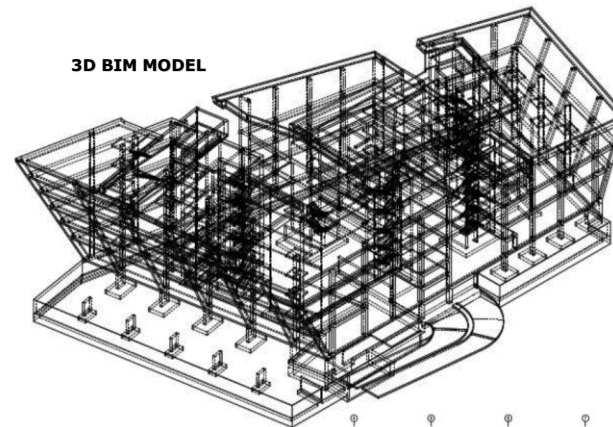


AREA 12 000m²
LEVELS 3+1U
HEIGHT 11m
YEAR 2015
ARCHITECTS PLANNING
arch. Ilan Iliev

FOUNDATION SLAB REINFORCEMENT



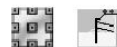
3D BIM MODEL



RESIDENTIAL BUILDING

PLANEX
HOLDING

SOFIA



AREA 11 000 m²
LEVELS 8+1U
HEIGHT 25 m
YEAR 2015

ARCHITECTS PROARCH
arch. Radosveta
Edreva

DECATHLON

BURGAS



AREA 11 000m²
LEVELS 3+1U
HEIGHT 16 m
YEAR 2014-2015

ARCHITECTS PLANNING
arch. Ilian Iliev

BULGARIAN DEVELOPMENT BANK

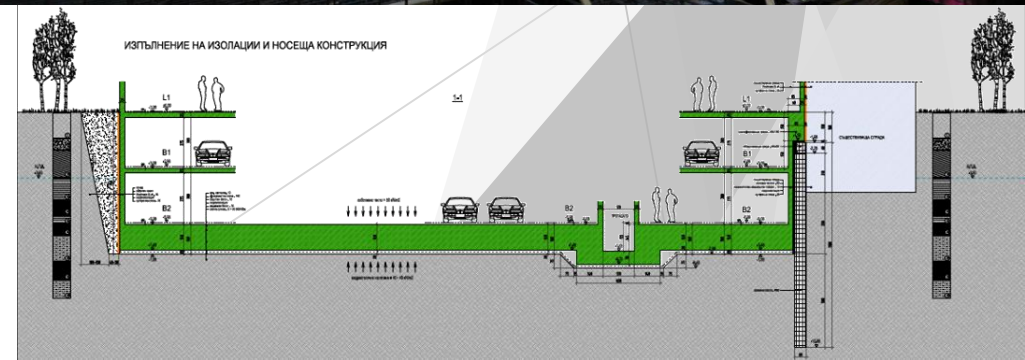
SOFIA



AREA 6 000m²
LEVELS 7+3.U
HEIGHT 21m
YEAR 2014-2015

ARCHITECTS TILEV ARCHITECTS

DEEP EXCAVATION SHORING FOR BULGARIAN DEVELOPMENT BANK



PARADISE CENTER

SOFIA



AREA 240 000m²
LEVELS 5+3.U
HEIGHT 40m
YEAR 2010-2013
ARCHITECTS PROARCH

SHOPPING CENTERS

- | | |
|---------------------------------------|--------------|
| 1. PARADISE CENTER SOFIA | 240 000 sq.m |
| 2. GRAND MALL, VARNA | 180 000 sq.m |
| 3. MALL OF VARNA | 80 000 sq.m |
| 4. MEGA MALL LIULIN, SOFIA | 66 000 sq.m |
| 5. CARREFOUR MALL - PLAZA WEST, SOFIA | 55 000 sq.m |
| 6. CARREFOUR MALL, PLEVEN | 15 000 sq.m |
| 7. CARREFOUR MALL, DOBRICH | 17 000 sq.m |
| 8. SUPERMARKET PICCADILLY, BURGAS | 10 000 sq.m |
| 9. MALL ILIANCI, SOFIA | - |

Third Generation
Builders

1936

www.aec.bg

ORANGE FITNESS SWIMMING POOL



35 000 SQ.M. FOUNDATION SLAB EXECUTION



PARADISE CENTER, SOFIA, BULGARIA
THE BIGGEST SHOPPING MALL IN EUROPE WITHOUT EXPANSION JOINTS WITH LENGTH = 315 M



MEGA
MALL

LIULIN
SOFIA



AREA 65 000m²
LEVELS 5+2.U
HEIGHT 35m
YEAR 2012-2013
ARCHITECTS ADA

CARREFOUR
MALL

PLAZA
WEST

LIULIN
SOFIA



AREA 55 000m²
LEVELS 3+1.U
HEIGHT 20m
YEAR 2011-2013
ARCHITECTS PLANNING

OFFICE
BUILDING

GP GROUP

SOFIA



AREA 12 000 m²
LEVELS 8+1.U
HEIGHT 25 m
YEAR 2014-2015
ARCHITECTS PROARCH
arch. Galin Vasilev

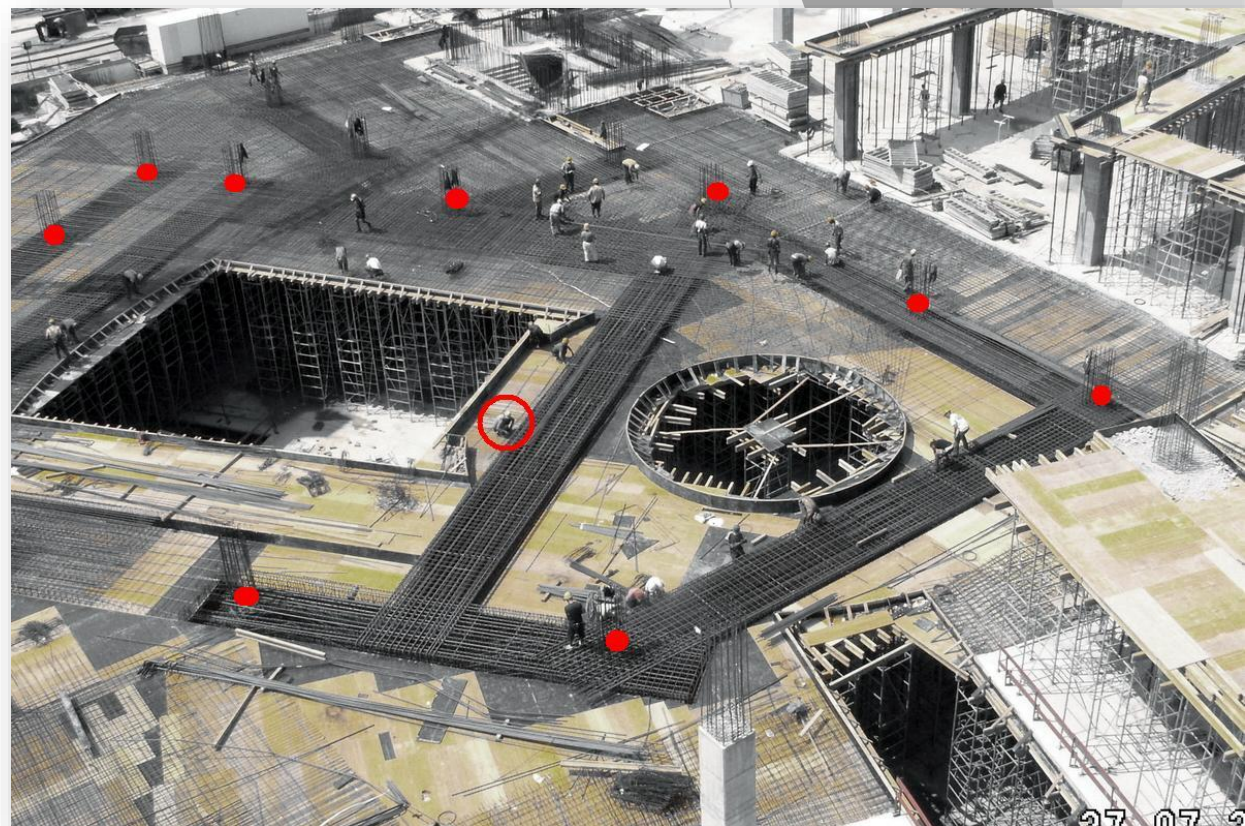
SHOPPING CENTERS

- | | |
|---------------------------------------|--------------|
| 1. PARADISE CENTER SOFIA | 240 000 sq.m |
| 2. GRAND MALL, VARNA | 180 000 sq.m |
| 3. MALL OF VARNA | 80 000 sq.m |
| 4. MEGA MALL LIULIN, SOFIA | 66 000 sq.m |
| 5. CARREFOUR MALL - PLAZA WEST, SOFIA | 55 000 sq.m |
| 6. CARREFOUR MALL, PLEVEN | 15 000 sq.m |
| 7. CARREFOUR MALL, DOBRICH | 17 000 sq.m |
| 8. SUPERMARKET PICCADILLY, BURGAS | 10 000 sq.m |
| 9. MALL ILIANCI, SOFIA | - |

Third Generation
Builders

1936

www.aec.bg



GRAND MALL

VARNA



AREA 150 000m²
LEVELS 19+2.U
HEIGHT 83m
YEAR 2009
ARCHITECTS LAGIS

MALL VARNA



AREA 75 000m²
LEVELS 6+3.U
HEIGHT 35m
YEAR 2007
ARCHITECTS LAGIS

- | | |
|---------------------------------------|--------------|
| 1. PARADISE CENTER SOFIA | 240 000 sq.m |
| 2. GRAND MALL, VARNA | 180 000 sq.m |
| 3. MALL OF VARNA | 80 000 sq.m |
| 4. MEGA MALL LIULIN, SOFIA | 66 000 sq.m |
| 5. CARREFOUR MALL - PLAZA WEST, SOFIA | 55 000 sq.m |
| 6. CARREFOUR MALL, PLEVEN | 15 000 sq.m |
| 7. CARREFOUR MALL, DOBRICH | 17 000 sq.m |
| 8. SUPERMARKET PICCADILLY, BURGAS | 10 000 sq.m |
| 9. MALL ILIANCI, SOFIA | - |



SHOPPING CENTERS

CARREFOUR MALL

PLAZA WEST

LIULIN SOFIA



AREA 55 000m²
LEVELS 3+1.U
HEIGHT 20m
YEAR 2011-2013
ARCHITECTS PLANNING

LARGO MALL

BLAGOEVGRAD

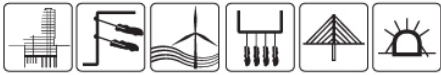
SOFIA



AREA 6 000m²
LEVELS 5+1.U
HEIGHT 26m
YEAR 2011-2013
ARCHITECTS PLANNING

1. PARADISE CENTER SOFIA 240 000 sq.m
2. GRAND MALL, VARNA 180 000 sq.m
3. MALL OF VARNA 80 000 sq.m
4. MEGA MALL LIULIN, SOFIA 66 000 sq.m
5. CARREFOUR MALL - PLAZA WEST, SOFIA 55 000 sq.m
6. CARREFOUR MALL, PLEVEN 15 000 sq.m
7. CARREFOUR MALL, DOBRICH 17 000 sq.m
8. SUPERMARKET PICCADILLY, BURGAS 10 000 sq.m
9. MALL ILIANCI, SOFIA -





1. 23M DEEP EXCAVATION, MALL STARA ZAGORA
2. 21M DEEP EXCAVATION, BULGARIA MALL, SOFIA
3. 15M DEEP EXCAVATION, PARADISE CENTER SOFIA
4. 14M DEEP EXCAVATION (TENDER), MALL PLOVDIV
5. 14M DEEP EXCAVATION, EUROPA CENTER, SOFIA
6. 12M DEEP EXCAVATION, EUROPEAN PARLAMENT, SOFIA
7. 12M DEEP EXCAVATION, GRAND MALL VARNA
8. 12M DEEP EXCAVATION, MALL OF VARNA



MALL BULGARIA SOFIA

DEPTH: 21 m
STRUCTURE: RETAIN WALLS d=60cm
ANCHORS: IBO R51N



OFFICE BUILDING – BENCHMARK SOFIA

DEPTH: 12 m
STRUCTURE: RETAIN WALLS d=60cm
STRUTS: STEEL TUBES



1. 23M DEEP EXCAVATION, MALL STARA ZAGORA
2. 21M DEEP EXCAVATION, BULGARIA MALL, SOFIA
3. 15M DEEP EXCAVATION, PARADISE CENTER SOFIA
4. 14M DEEP EXCAVATION (TENDER), MALL PLOVDIV
5. 14M DEEP EXCAVATION, EUROPA CENTER, SOFIA
6. 12M DEEP EXCAVATION, EUROPEAN PARLAMENT, SOFIA
7. 12M DEEP EXCAVATION, GRAND MALL VARNA
8. 12M DEEP EXCAVATION, MALL OF VARNA



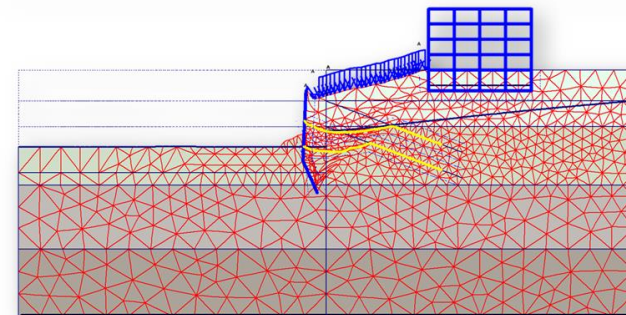
EUROPE CENTER SOFIA

DEPTH: 12 m
STRUCTURE: RETAIN WALLS d=60cm
ANCHORS: IBO R51N

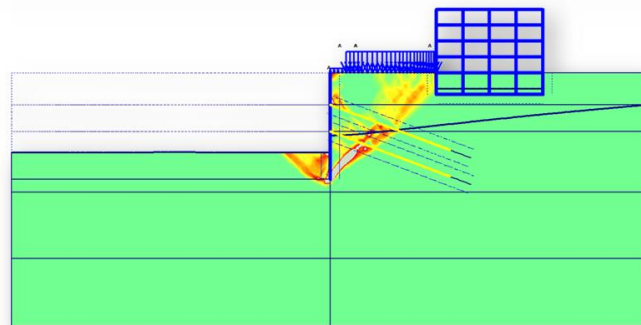


MALL STARA ZAGORA

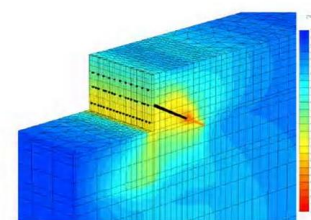
DEPTH: 19 m
STRUCTURE: RETAIN WALLS d=60cm.
ANCHORS: IBO R51N



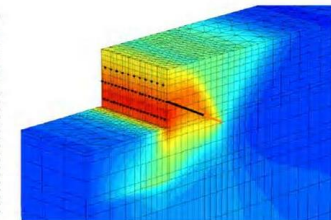
PLAXIS 2D – Схема на аварийане на конструкцията при Phi-C редукция



PLAXIS 2D – Хлъзгателна повърхнина при Phi-C редукция



(HS-model)



(MC-model)

1. ORCHID GARDENS, VARNA 40 000 sq.m
2. B.S.R. COMPLEX, VARNA 300 000 sq.m

ORCHID
GARDENS

VARNA



AREA 60 000m²
LEVELS 18+3.U
HEIGHT 70m
YEAR 2008
ARCHITECTS LAGIS

ART
GALLERY

VARNA



AREA 10 000m²
LEVELS 6+2.U
HEIGHT 26m
YEAR 2006
ARCHITECTS LAGIS



MULTISTOREY BUILDINGS

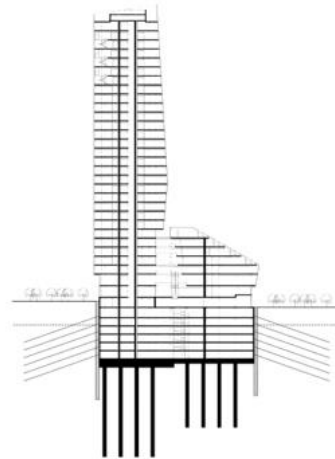
1936

www.aec.bg

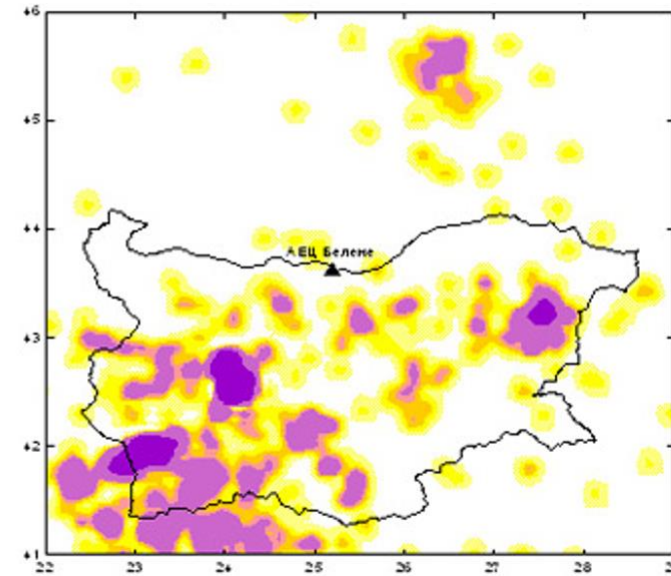
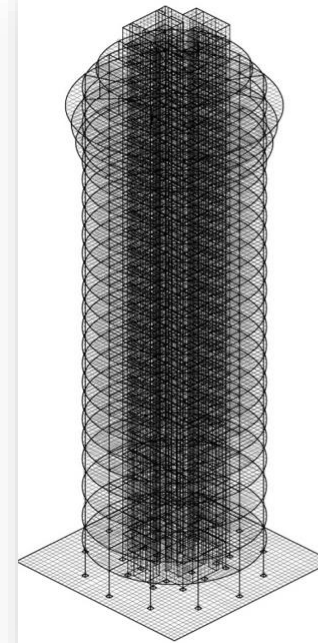
1. I-TOWER MULTIFUNCTIONAL BUILDING (37 STOREY) 75 000 sq.m
2. P4-TOWERS MULTIFUNCTIONAL BUILDING (26 STOREY) 90 000 sq.m
3. DAV BUILDING, SOFIA (25 STOREY) 30 000 sq.m

i-tower

SOFIA

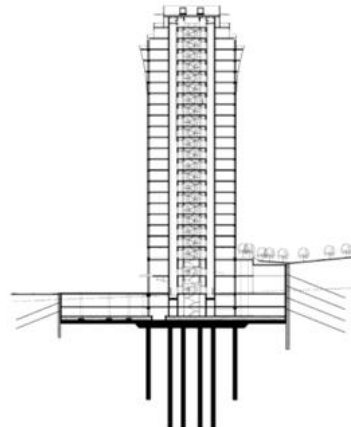
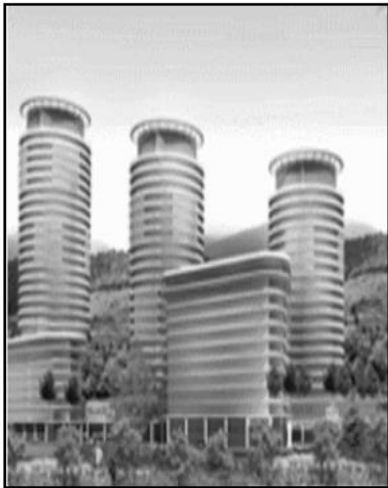


AREA 75 000m²
LEVELS 30+7.U
HEIGHT 134m
YEAR 2010
ARCHITECTS TILV

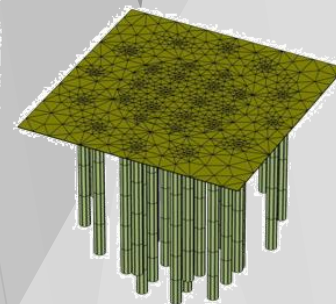
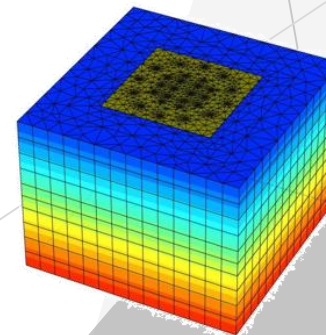
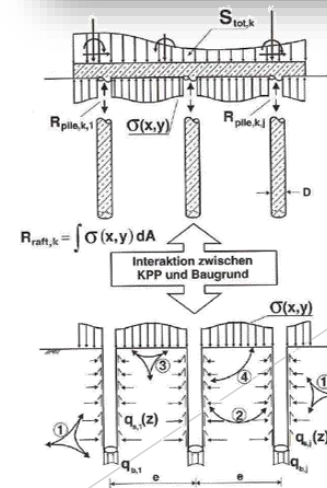


P4
LAGERA
TOWERS

SOFIA



AREA 90 000m²
LEVELS 24+2.U
HEIGHT 115m
YEAR 2010
ARCHITECTS YANKOVA



MULTISTOREY BUILDINGS

Third Generation
Builders

1936

www.aec.bg

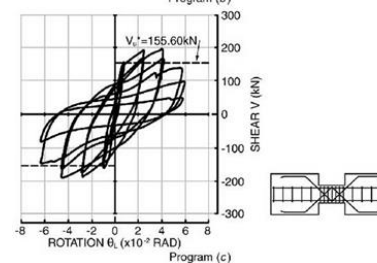
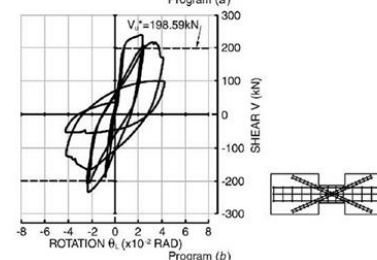
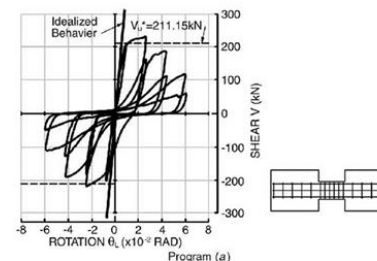
1. I-TOWER MULTIFUNCTIONAL BUILDING (37 STOREY) 75 000 sq.m
2. P4-TOWERS MULTIFUNCTIONAL BUILDING (26 STOREY) 90 000 sq.m
3. DAV BUILDING, SOFIA (25 STOREY) 30 000 sq.m

DAV
OFFICE
BUILDING

SOFIA



AREA 20 000m²
LEVELS 42+4.U
HEIGHT 75m
YEAR 2010
ARCHITECTS PROINPLUS



BSR
COMPLEX

VARNA



AREA 300 000m²
LEVELS 18+2.U
HEIGHT 75m
YEAR 2009
ARCHITECTS PLANNING



HOTEL COMPLEXES

- | | | | |
|-------------------------------|-------------|----------------------------------|-------------|
| 1. GRAFITI, VARNA | 4 500 sq.m | 7. GRAND HOTEL SOFIA | 11 000 sq.m |
| 2. APOLONIA PALAS, SINEMORETS | 12 000 sq.m | 8. INTERNATIONAL, GOLDEN SANDS | 5 000 sq.m |
| 3. TRIUMPH, SAINT VLAS | 10 000 sq.m | 9. PARADISE BEACH, SAINT VLAS | 8 000 sq.m |
| 4. STREAM RESORT, PAMPOROVO | 7 000 sq.m | 10. THE STREAM RESORT, PAMPOROVO | 4 000 sq.m |
| 5. GERENITE, SOZOPOL | 12 000 sq.m | 11. IRAKLI | 3 000 sq.m |
| 6. HILTON SOFIA | 9 000 sq.m | 12. KOSCHARICA | 5 000 sq.m |
| | | 13. NESEBAR | 10 000 sq.m |

RILA
PARK

BOROVETS



AREA 6 000m²
 LEVELS 6+1.U
 HEIGHT 20m
 YEAR 2006
 ARCHITECTS PROARCH

THE
STREAM
RESORT

PAMPOROVO



AREA 10 000m²
 LEVELS 5+1.U
 HEIGHT 20m
 YEAR 2006
 ARCHITECTS RENCON



HOTEL COMPLEXES

- | | | | |
|-------------------------------|-------------|----------------------------------|-------------|
| 1. GRAFITI, VARNA | 4 500 sq.m | 7. GRAND HOTEL SOFIA | 11 000 sq.m |
| 2. APOLONIA PALAS, SINEMORETS | 12 000 sq.m | 8. INTERNATIONAL, GOLDEN SANDS | 5 000 sq.m |
| 3. TRIUMPH, SAINT VLAS | 10 000 sq.m | 9. PARADISE BEACH, SAINT VLAS | 8 000 sq.m |
| 4. STREAM RESORT, PAMPOROVO | 7 000 sq.m | 10. THE STREAM RESORT, PAMPOROVO | 4 000 sq.m |
| 5. GERENITE, SOZOPOL | 12 000 sq.m | 11. IRAKLI | 3 000 sq.m |
| 6. HILTON SOFIA | 9 000 sq.m | 12. KOSCHARICA | 5 000 sq.m |
| | | 13. NESEBAR | 10 000 sq.m |

HOTEL COMPLEX

NESEBAR



AREA 10 000m²
LEVELS 5+1.U
HEIGHT 20m
YEAR 2006
ARCHITECTS A&D Studio

HOTEL COMPLEX TRIUMPH

SAINT VLAS



AREA 11 000m²
LEVELS 5+1.U
HEIGHT 20m
YEAR 2005
ARCHITECTS POPOV





HOTEL COMPLEXES

- | | | | |
|-------------------------------|-------------|----------------------------------|-------------|
| 1. GRAFITI, VARNA | 4 500 sq.m | 7. GRAND HOTEL SOFIA | 11 000 sq.m |
| 2. APOLONIA PALAS, SINEMORETS | 12 000 sq.m | 8. INTERNATIONAL, GOLDEN SANDS | 5 000 sq.m |
| 3. TRIUMPH, SAINT VLAS | 10 000 sq.m | 9. PARADISE BEACH, SAINT VLAS | 8 000 sq.m |
| 4. STREAM RESORT, PAMPOROVO | 7 000 sq.m | 10. THE STREAM RESORT, PAMPOROVO | 4 000 sq.m |
| 5. GERENITE, SOZOPOL | 12 000 sq.m | 11. IRAKLI | 3 000 sq.m |
| 6. HILTON SOFIA | 9 000 sq.m | 12. KOSCHARICA | 5 000 sq.m |
| | | 13. NESEBAR | 10 000 sq.m |

APOLONIA PALAS

SINEMOREC



AREA	12 000m ²
LEVELS	6+1.U
HEIGHT	20m
YEAR	2004
ARCHITECTS	MITREV

HOTEL COMPLEX

SAINT VLAS



AREA	11 000m ²
LEVELS	5+1.U
HEIGHT	20m
YEAR	2004
ARCHITECTS	LAGIS





HOTEL COMPLEXES

- | | | | |
|-------------------------------|-------------|----------------------------------|-------------|
| 1. GRAFITI, VARNA | 4 500 sq.m | 7. GRAND HOTEL SOFIA | 11 000 sq.m |
| 2. APOLONIA PALAS, SINEMORETS | 12 000 sq.m | 8. INTERNATIONAL, GOLDEN SANDS | 5 000 sq.m |
| 3. TRIUMPH, SAINT VLAS | 10 000 sq.m | 9. PARADISE BEACH, SAINT VLAS | 8 000 sq.m |
| 4. STREAM RESORT, PAMPOROVO | 7 000 sq.m | 10. THE STREAM RESORT, PAMPOROVO | 4 000 sq.m |
| 5. GERENITE, SOZOPOL | 12 000 sq.m | 11. IRAKLI | 3 000 sq.m |
| 6. HILTON SOFIA | 9 000 sq.m | 12. KOSCHARICA | 5 000 sq.m |
| | | 13. NESEBAR | 10 000 sq.m |

HOTEL COMPLEX GERENITE SOZOPOL



AREA 12 000m²
 LEVELS 4
 HEIGHT 15m
 YEAR 2004
 ARCHITECTS IVISTO

HOTEL COMPLEX IRAKLI



AREA 5 000m²
 LEVELS 2+2.U
 HEIGHT 6
 YEAR 2010
 ARCHITECTS A&D Studio



RED
APPLE

SOFIA



RESIDENTIAL BUILDINGS

- | | |
|-----------------------------------|-------------|
| 1. RED APPLE SOFIA | 6 000 sq.m |
| 2. ORCHID HILLS VARNA | 25 000 sq.m |
| 3. MALA TCHERKVA, BOROVS | 8 000 sq.m |
| 4. RILA PARK, BOROVS | 6 000 sq.m |
| 5. EN BI BUILDING, SOFIA | 3 500 sq.m |
| 6. 4 LUXURY HOUSES, VIEN, AUSTRIA | 2 500 sq.m |



AREA	7 000m ²
LEVELS	13+1.U
HEIGHT	45m
YEAR	2011-2012
ARCHITECTS	AEDES STUDIO



RESIDENTIAL BUILDINGS

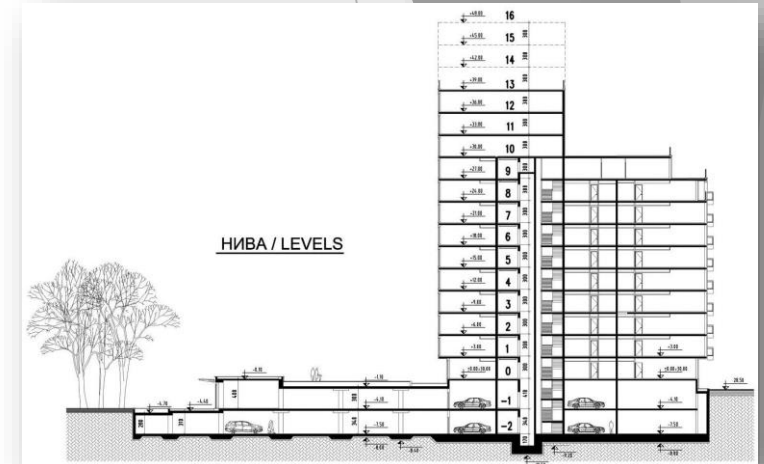
1. RED APPLE SOFIA 6 000 sq.m
2. ORCHID HILLS VARNA 25 000 sq.m
3. MALA TCHERKVA, BOROVS 8 000 sq.m
4. RILA PARK, BOROVS 6 000 sq.m
5. EN BI BUILDING, SOFIA 3 500 sq.m
6. 4 LUXURY HOUSES, VIEN, AUSTRIA 2 500 sq.m

ORCHID
HILLS

VARNA



AREA 50 000m²
LEVELS 7+1.U
HEIGHT 23m
YEAR 2007
ARCHITECTS LAGIS



BSR
COMPLEX

VARNA



AREA 300 000m²
LEVELS 18+2.U
HEIGHT 75m
YEAR 2009
ARCHITECTS PLANNING



AIRPORTS

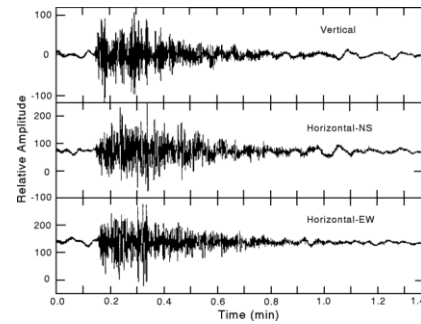
1. TERMINAL 2 OF SOFIA AIRPORT
2. BUILDING B2 OF VARNA AIRPORT
3. VIP -A OF SOFIA AIRPORT

70 000 sq.m
2 000 sq.m
3 500 sq.m

1936

www.aec.bg





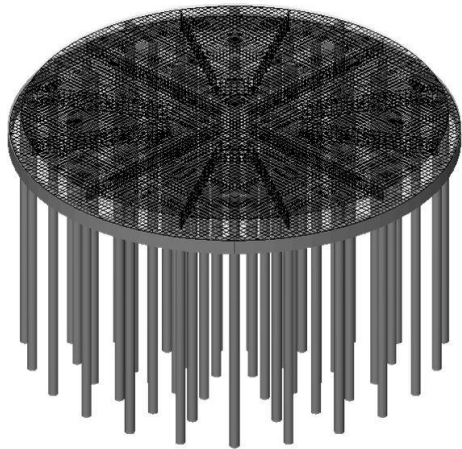
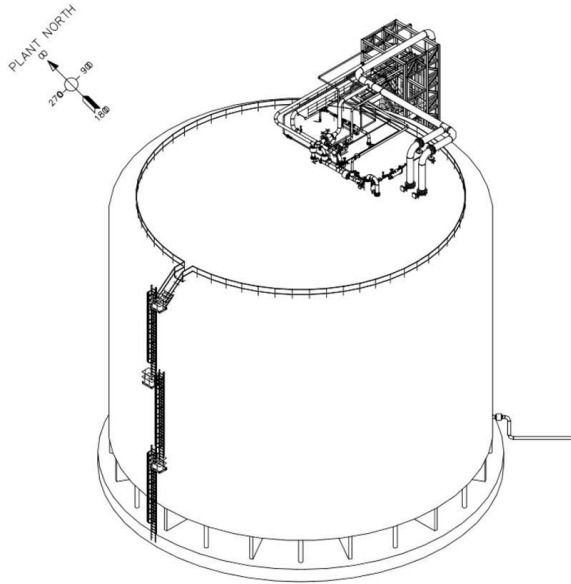
SEISMIC RETROFIT

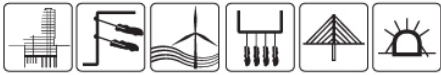
1. NATIONANL STADIUM "VASIL LEVSKI", SOFIA
2. LARGO MALL, BLAGOEVGRAD
3. SUPERMARKETS METRO CASH&CARRY, BULGARIA
4. TENDER PROJECT FOR RETROFIT OF BURGAS SEA BRIDGE
5. EMBASY OF REPUBLIC OF KOREA, SOFIA



SPECIFIC PROJECTS

1. TENDER PROJECT FOR THE NEW RECYCLING PLANT OF SOFIA
2. SEWERAGE TREATMENT PLAN BIALA
3. SEWERAGE TREATMENT GOTCHE DELCHEV
4. 10 000 TONS AMMONIA TANK SODI DEVNYA



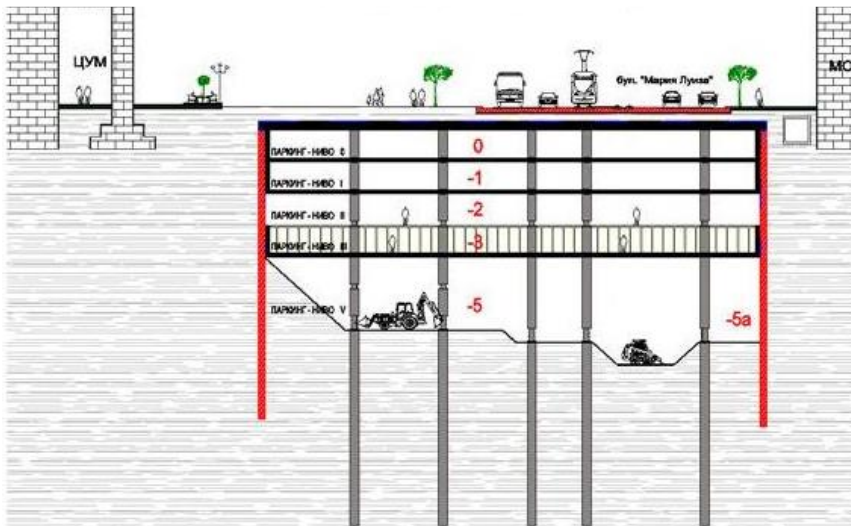


UNDERGROUND STRUCTURES

1. TENDER PROJECT METRO STATION 8-II WITH 5 LEVELS UNDERGROUND PARKING, SOFIA 40 000 sq.m
2. TENDER PROJECT METRO STATION 11-II WITH 4 LEVELS UNDERGROUND PARKING, SOFIA 35 000 sq.m

METRO
STATION
8-II
SOFIA

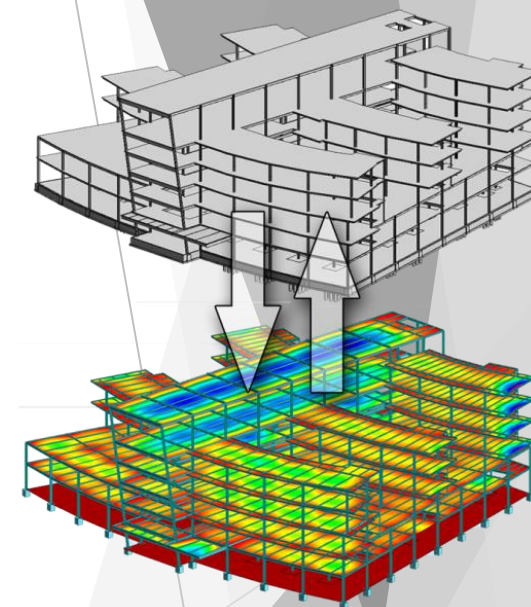
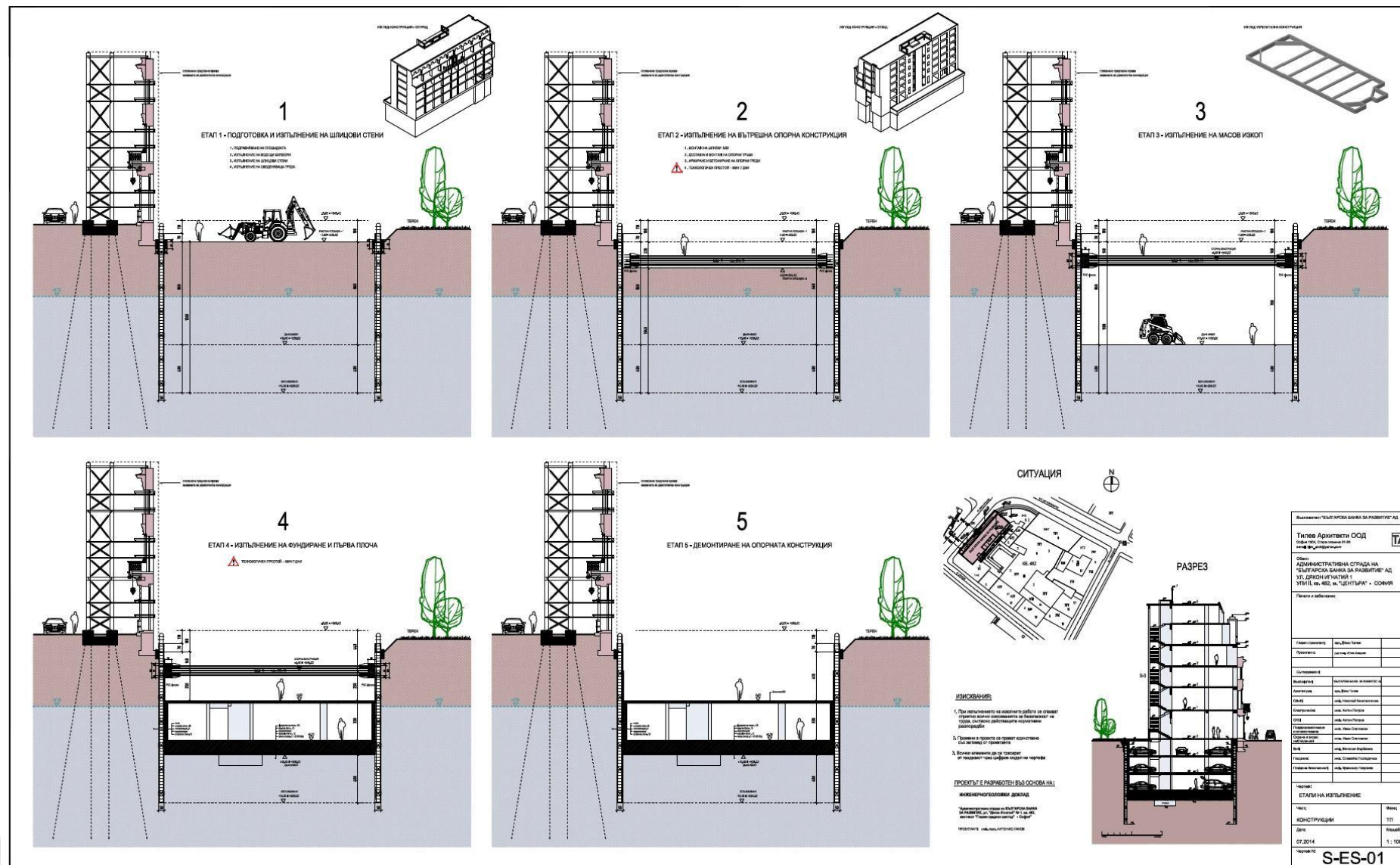
TENDER
DESIGN

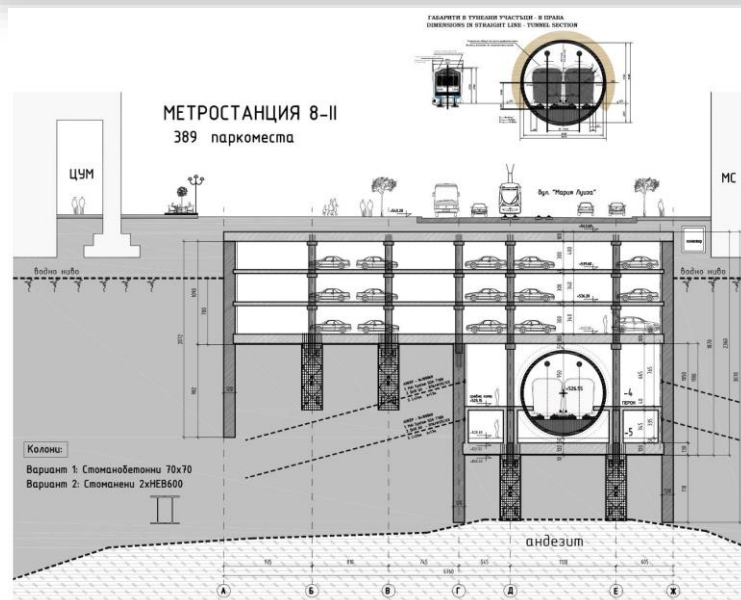
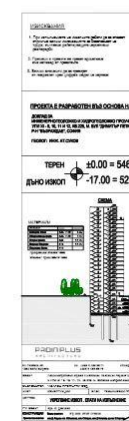
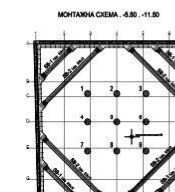
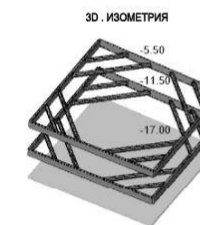
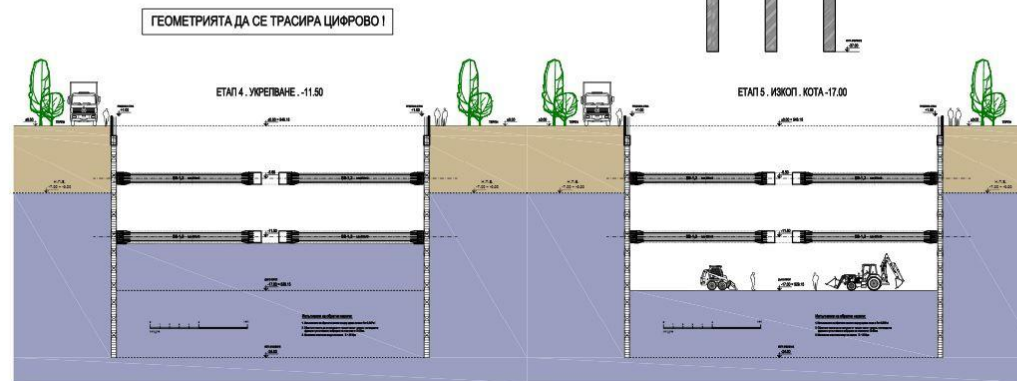
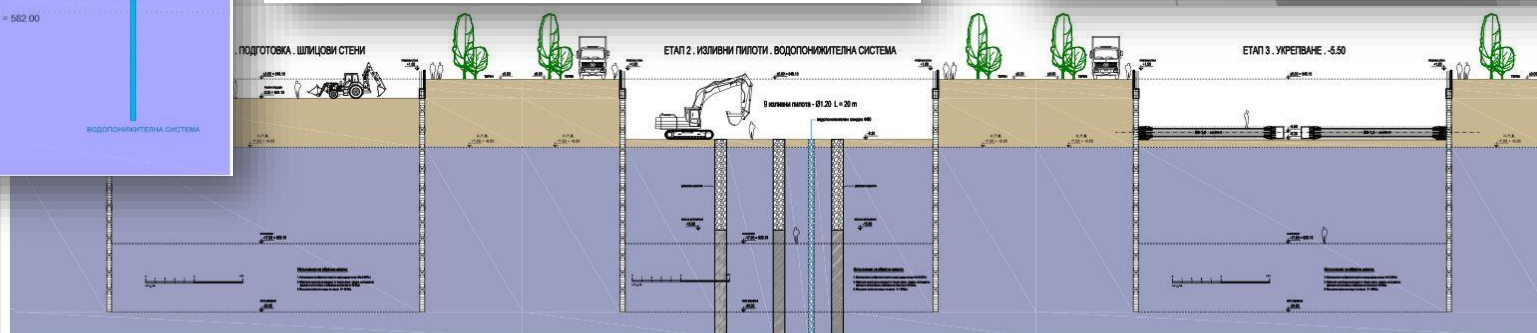
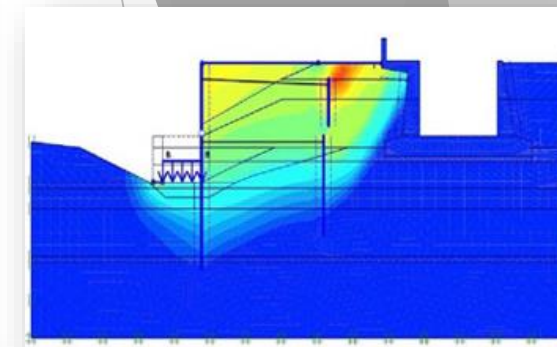
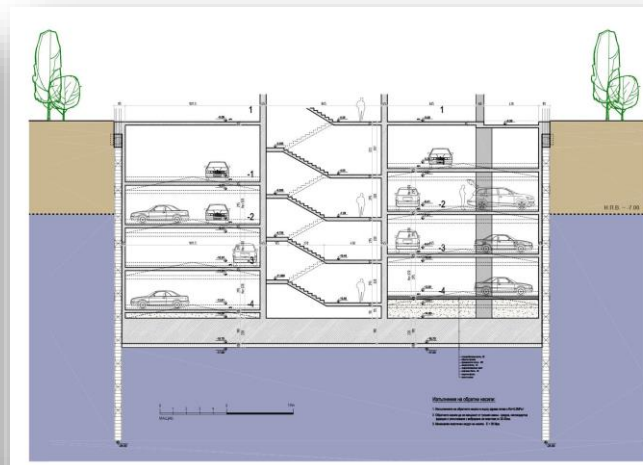
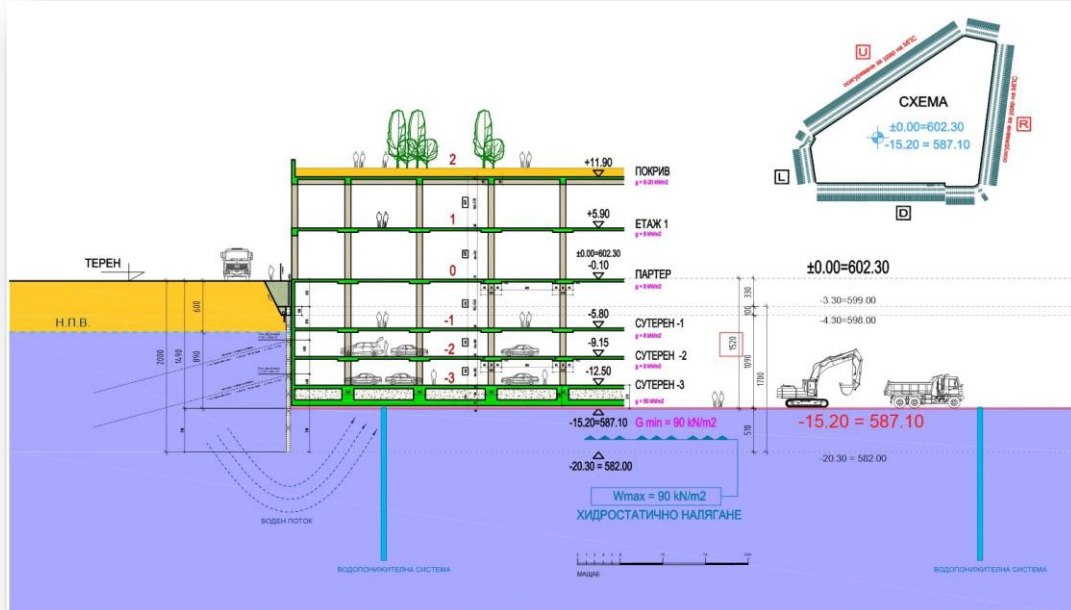


AREA
LEVELS
HEIGHT
YEAR

8 000m²
5.U
-25m
2010



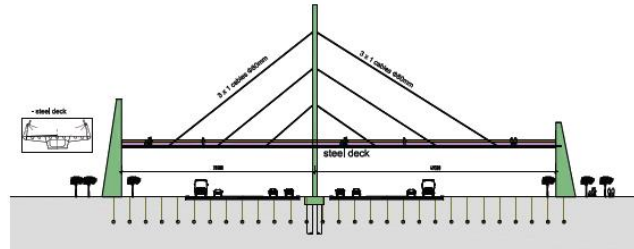






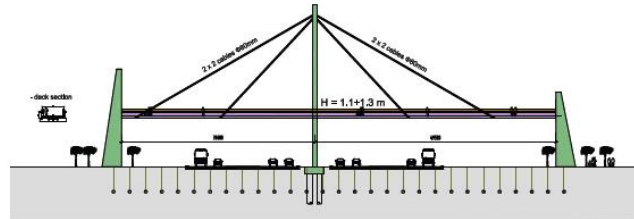
Variant - 4

- cables
- steel deck



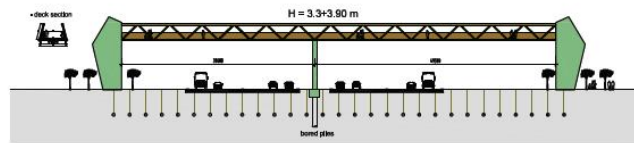
Variant - 3

- solid steel beams
- cables
- steel deck



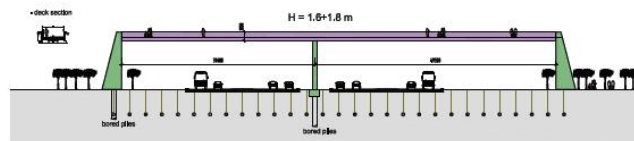
Variant - 2

- steel tube truss
- steel deck

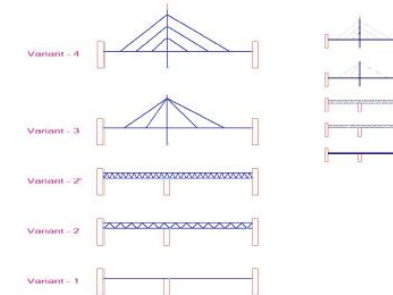
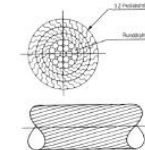
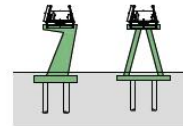
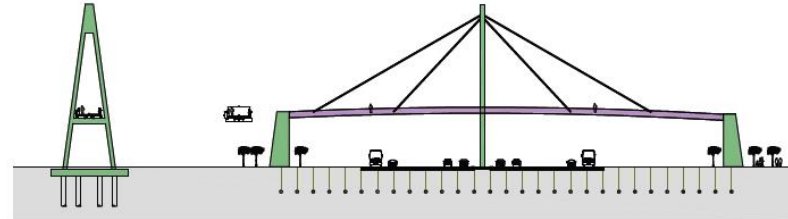
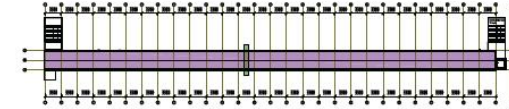


Variant - 1

- solid steel beams
- steel deck

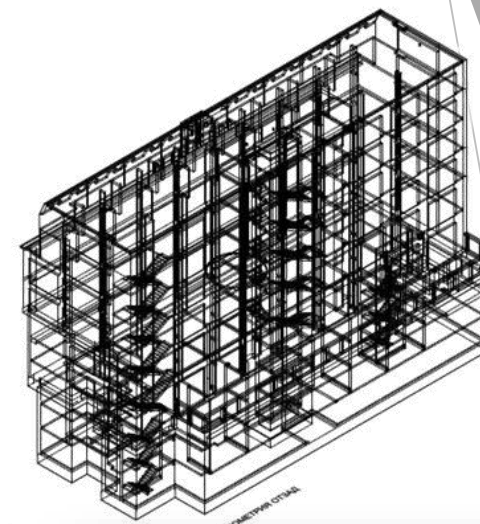
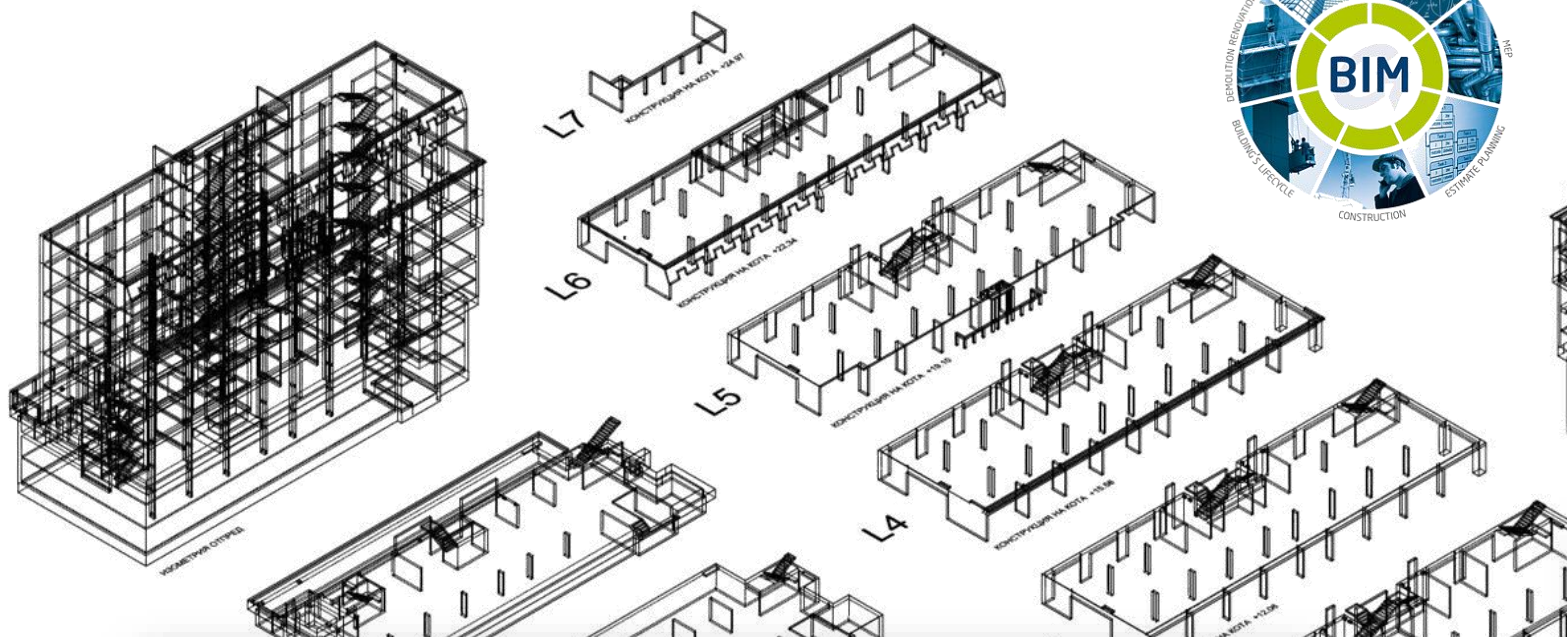


Preliminary Plan



|alashki.e.c| GROUP





ANNEX: CEO CURRICULUM VITAE



CEO CURRICULUM VITAE

Dr. Ilia Alashki , AvH, PhD, SE

I. Personal information

Name: Ilia Milkov Alashki
Birth date: 14 August 1973
Birth place: Sofia, Bulgaria
Languages: English, Russian
E-mail: ilia.alashki@aec.bg
WWW: www.aec.bg

II. Professional information

Position: CEO of AEC Ltd.
Experience: **20 years - 1996÷2016**
Diploma: Structural engineer (SE) № 29751,
23.07.1996, UAECG, Sofia
Diploma: Dr. (Ph.D.) № 27472, 09.08.2001,
UAECG, Sofia



III. Professional activities

- Design of reinforced concrete, steel and wooden structures
- Design of precast, prestressed and PT (post tensioned) concrete structures
- Design of hydraulic structures - swimming pools, reservoirs, water towers , water treatment plants .
- Design of deep excavation shoring and soil slopes stabilization
- Design of TOP-DOWN and CUT-AND-COVER underground constructions
- Design of CPR (combined piled raft) foundation of high-rise buildings and chimneys
- Design of active isolation and damping structures
- Reconstruction and earthquake retrofit of existing buildings and structures
- Special foundations - piles, micro piles, screw (torque) piles, diaphragm walls, IBO anchors
- Advanced nonlinear studies of buildings and structures for vertical, seismic, wind, vibration and temperature loads
- Design of ground and roof structures for photovoltaic (solar) power plants
- Gravity, deep, monopile, offshore foundation of wind turbine plans
- Expert consultancy in the all field of construction

IV. Education

Institute	Degree	Subject	Year
National Science and Mathematics High School "Academician L.Chakalov ", Sofia	Average	Mathematics and Informatics	1991
University of Architecture , Civil Engineering and Geodesy, Sofia	Master	Structural Engineering	1996
University of Architecture , Civil Engineering and Geodesy, Sofia	Ph.D.	Advanced design of reinforced concrete sections for bi-axial bending with axial force	2001
RWTH Aachen, Germany, Alexander von Humboldt Foundation	Research project	Seismic resistant design of irregular reinforced concrete structures	2002



V. Professional positions

- Visiting Assistant Professor at the Department of „Reinforced Concrete Structures“ at the University of Architecture, Civil Engineering and Geodesy , Sofia
- Regular Assistant Professor at the department of " Reinforced Concrete Structures" at the University of Architecture, Civil Engineering and Geodesy , Sofia
- Owner and CEO of ENGPROJECT Ltd.
Re-registered in 2005 as AEC Ltd. according to the new Bulgarian laws
- Owner and CEO of AEC Ltd.

1997 ÷ 2002

2002 ÷ 2006

1996 ÷ 2005

2005 ÷ now

VI. Professional development

- Author of GALA REINFORCEMENT © 2001 software for advanced design of reinforced concrete elements with licensed users in over 35 countries: *USA, Italy, Belgium, Canada, Netherlands, Spain, Portugal, Sweden, Iceland, UK, South Korea, Greece, Columbia, Bulgaria, Singapore, Saipan, China, Taiwan, Vietnam, El Salvador, Brazil, Ireland, Mexico, Chile, Turkey, New Zealand, France, Haiti, Slovenia, Nicaragua, Philippines, Saudi Arabia, Qatar, Austria and others.*

VII. Computer skills - specialized software

Structural software

- GALA REINFORCEMENT
- RADIMPEX TOWER
- DLUBAL RSTAB, RFEM
- CSI SAP 2000, ETABS, SAFE
- GRAITEC ADVANCE DESIGN
- NEMETSCHEK FRILO
- MSC NASTRAN, STARDYNE
- RIBTEC BAUSOFT
- HILTI PROFIS ANCHOR
- AUTODESK ROBOT
- ADAPT BUILDER

Geotechnical software

- GGU GRUNDBAU
- DC GRUNDBAU
- DEEPCAV
- FIDES DV-PARTNER
- DRIVEN
- ALLPILE
- PLAXIS
- GEO 5

CAD software

- AUTOCAD
- ADVANCE STEEL
- ADVANCE CONCRETE
- AUTODESK REVIT
- RADIMPEX ARMCAD



VIII. Selected major projects

SHOPPING CENTERS, MALLS

1. CITY MALL OF BANJA LUKA (BIH)	50 000 sq.m
2. PARADISE CENTER SOFIA	180 000 sq.m
3. GRAND MALL, VARNA	80 000 sq.m
4. MALL OF VARNA	66 000 sq.m
5. MEGA MALL LIULIN, SOFIA	55 000 sq.m
6. PLAZA WEST, SOFIA	15 000 sq.m
7. CARREFOUR MALL, PLEVEN	17 000 sq.m
8. CARREFOUR MALL, DOBRICH	10 000 sq.m
9. SUPERMARKET PICCADILLY, BURGAS	25 000 sq.m
10. MALL ILIANCI, SOFIA	8 000 sq.m
11. DECATHLON BURGAS	

PUBLIC BUILDINGS

12. NEW VARNA LIBRARY	32 000 sq.m
-----------------------	-------------

DEEP EXCAVATIONS

13. 23M DEEP EXCAVATION, MALL STARA ZAGORA
14. 21M DEEP EXCAVATION, BULGARIA MALL, SOFIA
15. 15M DEEP EXCAVATION, PARADISE CENTER SOFIA
16. 14M DEEP EXCAVATION (TENDER), MALL PLOVDIV
17. 14M DEEP EXCAVATION, EUROPA CENTER, SOFIA
18. 12M DEEP EXCAVATION, EUROPEAN PARLAMENT, SOFIA
19. 12M DEEP EXCAVATION, GRAND MALL VARNA
20. 12M DEEP EXCAVATION, MALL OF VARNA
21. 11M DEEP EXCAVATION FOR BULGARIAN DEVELOPMENT BANK, SOFIA

UNDERGROUND STRUCTURES

22. TENDER PROJECT METRO STATION 8 -II WITH 5 LEVELS UNDERGROUND PARKING, SOFIA	40 000 sq.m
23. TENDER PROJECT METRO STATION 11 -II WITH 4 LEVELS UNDERGROUND PARKING, SOFIA	35 000 sq.m

MULTIFUNCTIONAL BUILDINGS

24. ORCHID GARDENS VARNA	40 000 sq.m
25. B.S.R. COMPLEX, VARNA	300 000 sq.m

HIGH-RISE BUILDING

26. I-TOWER MULTIFUNCTIONAL BUILDING (37 STOREY)	75 000 sq.m
27. P4-TOWERS MULTIFUNCTIONAL BUILDING (26 STOREY)	90 000 sq.m
28. DAV BUILDING, SOFIA (25 STOREY)	30 000 sq.m
29. GRAND MALL VARNA TOWERS (25 AND 35 STOREY)	10 000 sq.m

BANKS

30. BULBANK, AKSAKOV, SOFIA	3 000 sq.m
31. TOKUDA BANK, NDK, SOFIA	3 500 sq.m
32. BULGARIAN DEVELOPMENT BANK, SOFIA	7 000 sq.m



AET
Constructions



| a l a s h k i . e . c | GROUP

Truth in Engineering

|A|E|C| Ltd

OFFICE BUILDINGS

33. LG GROUP, VARNA	6 000 sq.m
34. BULTEX, SOFIA	5 000 sq.m
35. SINI, SOFIA	4 000 sq.m
36. POLYGRAPHIA BUILDING, SOFIA	17 000 sq.m
37. TELELINK BUILDING, SOFIA	33 500 sq.m

HOTELS AND COMPLEXES

38. GRAFITI, VARNA	4 500 sq.m
39. APOLONIA PALAS, SINEMORETS	12 000 sq.m
40. TRIUMPH, SAINT VLAS	10 000 sq.m
41. STREAM RESORT, PAMPOROVO	7 000 sq.m
42. GERENITE, SOZOPOL	12 000 sq.m
43. HILTON SOFIA	9 000 sq.m
44. GRAND HOTEL SOFIA	11 000 sq.m
45. INTERNATIONAL, GOLDEN SANDS	5 000 sq.m
46. PARADISE BEACH, SAINT VLAS	8 000 sq.m
47. THE STREAM RESORT, PAMPOROVO	4 000 sq.m
48. IRAKLI	3 000 sq.m
49. KOSHARICA	5 000 sq.m
50. NESEBAR	10 000 sq.m

RESIDENTIAL BUILDING AND COMPELEXES

51. A3 – ADVANCED ARCHITECTURE APARTMENTS	32 000 sq.m
52. RED APPLE SOFIA	6 000 sq.m
53. ORCHID HILLS VARNA	25 000 sq.m
54. MALA TCHERKVA, BOROVETS	8 000 sq.m
55. RILA PARK, BOROVETS	6 000 sq.m
56. EN BI BUILDING, SOFIA	3 500 sq.m
57. 4 LUXURY HOUSES, VIEN, AUSTRIA	2 500 sq.m
58. SOFIA PARK VILLAS (35 HOUSES)	10 000 sq.m
59. LABYRINTH, VARNA	39 000 sq.m
60. VARNA CITY PARK SOUTH	91 000 sq.m
61. SOUTH PARK WEST, SOFIA	8 7000 sq.m

SEISMIC RETROFIT

62. NATIOANAL STADIUM "VASIL LEVSKI", SOFIA	-
63. LARGO MALL, BLAGOEVGRAD	9 000 sq.m
64. SUPERMARKETS METRO CASH&CARRY, BULGARIA	-
65. TENDER PROJECT FOR RETROFIT OF BURGAS SEA BRIDGE	-
66. EMBASY OF REPUBLIC OF KOREA, SOFIA	1 500 sq.m
67. HOTEL INTERNACIONAL, GOLDEN SANDS RESORT	12 000 sq.m

AIRPORTS

68. TERMINAL 2 OF SOFIA AIRPORT	70 000 sq.m
69. BUILDING B2 OF VARNA AIRPORT	2 000 sq.m
70. VIP -A OF SOFIA AIRPORT	3 500 sq.m

SEWERAGE TREATMENT PLANS

71. BIALA	4 000 sq.m
72. GOTCHE DELCHEV	4 000 sq.m

|A|E|C| Ltd

www.alashki.com



AET
Constructions



FIRE STATIONS

73. LIULIN SOFIA

1 500 sq.m

PLANTS

74. TENDER PROJECT FOR THE NEW RECYCLING PLANT OF SOFIA

95 000 sq.m

GREEN ENERGY WIND PARKS

75. GABRITSA, ECOTECNIA 80 - 1.7 MW

60 MW

76. GABRITSA, GAMESA 90 T87 IIIA - 2.0 MW

25 MW

77. RUJICA, NORDEX 100 - 2.5 MW

80 MW

HOSPITALS

78. NEW BUILDING OF VARNA ONCOLOGY CLINIC

5 000 sq.m

79. CITY CLINIC CANCER CENTER, SOFIA

7 500 sq.m

BRIDGES

80. PRELIMINARY PROJECT FOR NEW EUROPE DANUBE BRIDGE 2 VIDIN-CALAFAT

81. PRELIMINARY PROJECT FOR FOOT BRIDGE OVER TSARIGRADSKO SHOSE BLVD
(FOR THE MALL SHOPING CENTER)

INDUSTRIAL

82. AMMONIA TANK 10 000 TONS, AGROPOLICHIM VARNA

CINEMAS

83. CINEMA CITY COMPLEX IN PARADISE CENTRE SOFIA

84. CINEMA COMPLEX IN PLAZA WEST, SOFIA

85. ARENA IMAX HALL IN GRAND MALL VARNA

IX. Professional publications

1. **ALASHKI I.** Theoretical calculation of reinforced concrete elements according to Bulgarian standards and comparison with Eurocode 2, Magazine "Construction" kn.5 , 2000.

2. **ALASHKI I.**, Design of reinforced concrete sections FOR moment and axial force ACCORDING the Bulgarian standards and Eurocode 2. Magazine „Construction“, No.1, 2001.

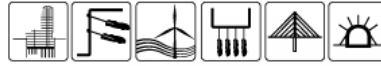
3. **ALASHKI I.** Feasibility analysis of buildings subjected to seismic impact under NPSSZR ` 87. Magazine, „Construction“, kn.3, 2000.

4. **DIMOVA S. L., ALASHKI I.**, RESEARCH REPORT: Seismic resistant design of irregular reinforced concrete structures, RWTH-Aachen, Germany, 27 of June 2002.

5. **DIMOVA S. L. , ALASHKI I.** Correction factor to account for the random effects of torsion on the seismic design of symmetric structures, Yearbook of University of Architecture, Civil Engineering and Geodesy , Sofia , JUBILEE - 2002 (in press)



AEC
Constructions



| a l a s h k i . e . c | GROUP

Truth in Engineering

|A|E|C| Ltd

6 . **DIMOVA S. L., ALASHKI I.**, Seismic Design of Symmetric Structures for Accidental Torsion, Bulletin of Earthquake Engineering 303-320, 2003, Netherlands.

7 . **DIMOVA S. L. , ALASHKI I.**, Developments of Design Seismic Loading Concept in Consistence with Eurocode 8 , Fifth National Conference on Earthquake Engineering, 26-30 May 2003 , Istanbul, Turkey, AE- 014

8 . **DIMOVA S. L. , ALASHKI I.**, SEISMIC DESIGN OF SYMMETRIC STRUCTURES FOR ACCIDENTALECCENTRICITY, Fifth National Conference on Earthquake Engineering, 26-30 May 2003 , Istanbul, Turkey, AE- 015

AEC.EN © 2015