

APPENDIX D

Road Project Profile

PROJECT PROFILE

Project No.:A01

Project Name		Tripoli – Syria Road		
Existing Condition		4-lane divided road		
Objective		To reinforce international and inter-regional road network in harmony with intra-urban network.		
Segment		A01		
Location	From	Tripoli Boulevard		
	To	El-Bedaoui Border		
Length (meter)		2,930		
Traffic Volume	Year			
	PCU/Day	35,000		
Work Item		Widening to 6-lane divided road		
Economic Cost		2.78		
Financial Cost		2.62		
Engineering		0.31		
Right-of-Way		-----		
Total (billion LL)		2.93		
Implementation Year	From	2006		
	To	2007		
Remarks		This road will serve as international highway until such time that Arab Highway is constructed.		



PROJECT PROFILE

Project No.:A02

Project Name		Tripoli - Sir El-Danie Road		
Existing Condition		The first section between the intersection with Tripoli Boulevard and the intersection with Qoubbe – Zgharta Road, has no room for improvement, although traffic problem is expected. Therefore, improvement is focused on the second section from the intersection with Qoubbe – Zgharta Road to East Ring Road, so that traffic will utilize East Ring Road instead of the first section. The second section is improved as a 4-lane road and the third section which is beyond East Ring Road as a 2-lane road with paved shoulders.		
Objective		To reinforce international and inter-regional road network in harmony with intra-urban network.		
Segment		A02		
Location	From	Old City		
	To	Tripoli Border		
Length (meter)		5,400		
Traffic Volume	Year			
	PCU/Day			
Work Item		Improvement of existing 2-lane road		
Economic Cost		2.30		
Financial Cost		2.17		
Engineering		0.26		
Right-of-Way		-----		
Total (billion LL)		2.43		
Implementation Year	From			
	To			
Remarks				



PROJECT PROFILE

Project No.:A03

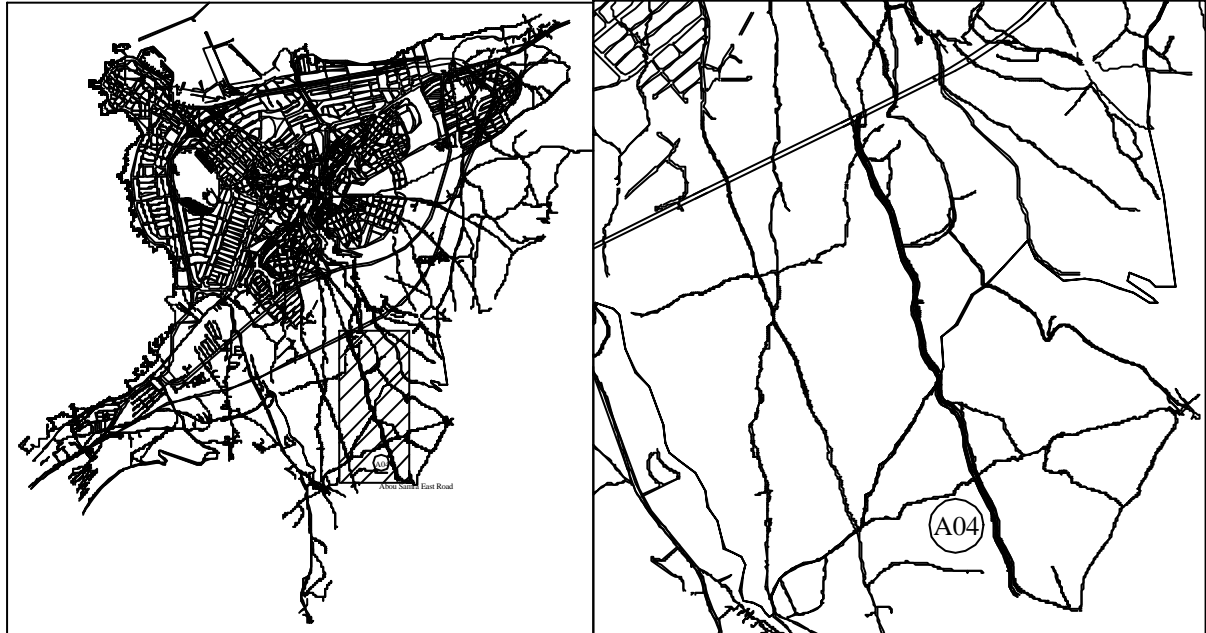
Project Name		Qoubbe – Zgharta Road		
Existing Condition		The road is improved as 2-lane road with paved shoulder.		
Objective		Reinforce international and inter-regional road network in harmony with intra-urban network.		
Segment		A03		
Location	From	Qoubbe		
	To	Tripoli Border		
Length (meter)		4,300		
Traffic Volume	Year			
	PCU/Day			
Work Item		Improvement of existing 2-lane road		
Economic Cost		1.79		
Financial Cost		1.69		
Engineering		0.20		
Right-of-Way		-----		
Total (billion LL)		1.89		
Implementation Year	From	2008		
	To	2009		
Remarks				



PROJECT PROFILE

Project No.:A04

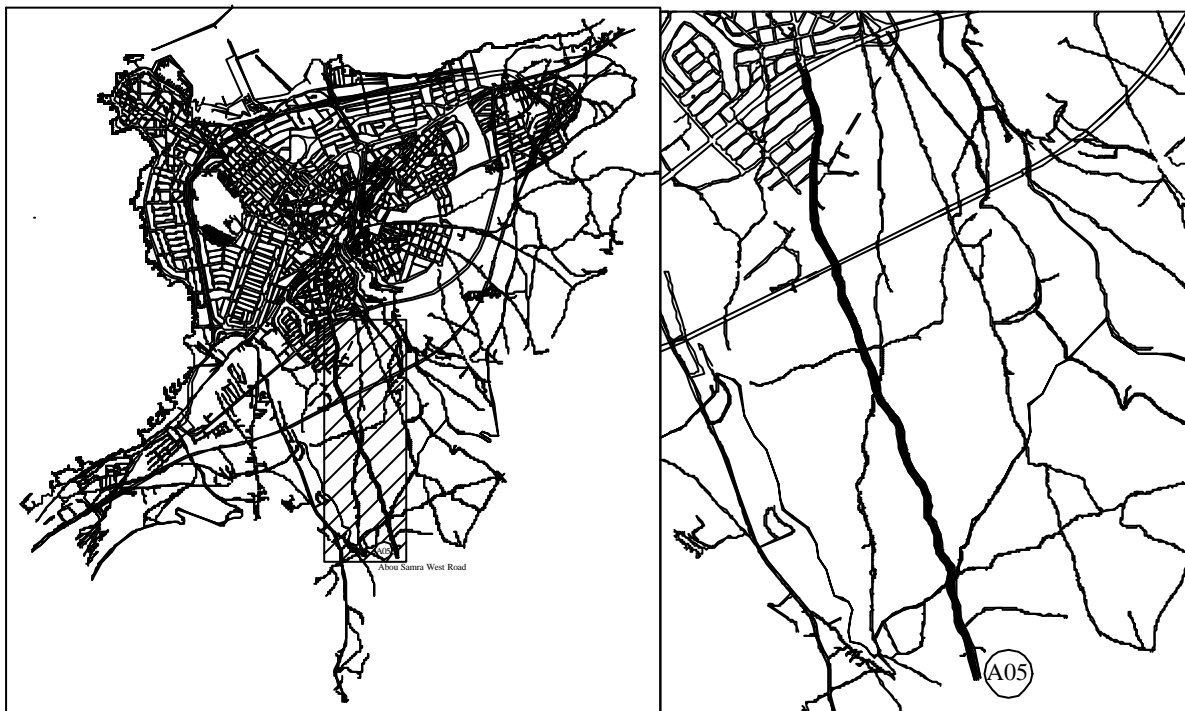
Project Name		Abou Samra East Road		
Existing Condition		Southern area of Abou Samra Plateau is still predominantly agricultural land. The existing road can be described as an agricultural road. The existing road is to be improved as a 2-lane road.		
Objective		To reinforce international and inter-regional road network in harmony with intra-urban network.		
Segment		A04		
Location	From	Abou Samra		
	To	Tripoli Border		
Length (meter)		2,500		
Traffic Volume	Year			
	PCU/Day			
Work Item		Improvement of existing 2-lane road.		
Economic Cost		1.50		
Financial Cost		1.41		
Engineering		0.17		
Right-of-Way		-----		
Total (billion LL)		1.58		
Implementation Year	From	2013		
	To	2014		
Remarks				



PROJECT PROFILE

Project No.:A05

Project Name		Abou Samra West Road		
Existing Condition		The area is still pronominally agricultural land. The existing road can be described as 2-lane agricultural road that need improvement.		
Objective		Reinforce international and inter-regional road network in harmony with intra-urban network.		
Segment		A05		
Location	From	Abou Samra		
	To	Tripoli Border		
Length (meter)		2,500		
Traffic Volume	Year			
	PCU/Day			
Work Item		Improvement of existing 2-lane road.		
Economic Cost		2.50		
Financial Cost		2.03		
Engineering		0.24		
Right-of-Way		-----		
Total (billion LL)		2.27		
Implementation Year	From	2013		
	To	2014		
Remarks				



PROJECT PROFILE

Project No.:A06

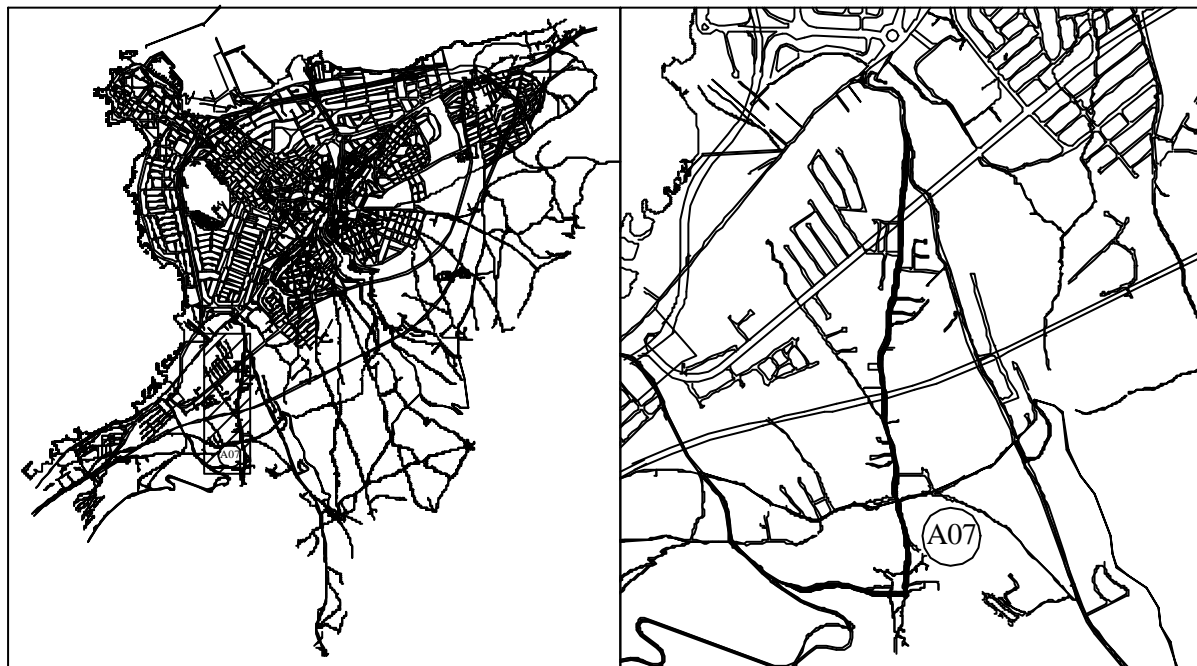
Project Name		Ras Maska – Kousba Road		
Existing Condition		This road is 2lane important link serving the South-East part of the study area. Due to heavy traffic, it is required to widening this road to 4-lane. Furthermore, connecting this road with East Ring Road can not be carried out due to topographical constraint. Therefore, a link road is proposed between this road and Ras-Maska Barsa Road along Arab Highway and also a link road that branches off at about 120m from the intersection with Behsass Highway and directly connected with Tripoli West area is proposed that will be required about 200m viaduct.		
Objective		<ul style="list-style-type: none"> - Strengthen the Greater Tripoli’s standing as an international node and regional capital. - Reinforce international and inter-regional road network in harmony with inter-urban network. 		
Segment		A06		
Location	From	Ras Maska		
	To	Kousba		
Length (meter)		5,000		
Traffic Volume	Year	2005	2010	2020
	PCU/Day			
Work Item		Widening from 2-lane to 4-lane.		
Economic Cost		6.07		
Financial Cost		5.71		
Engineering		0.69		
Right-of-Way		-----		
Total (billion LL)		6.40		
Implementation Year	From	2004		
	To	2006		
Remarks				



PROJECT PROFILE

Project No.:A07

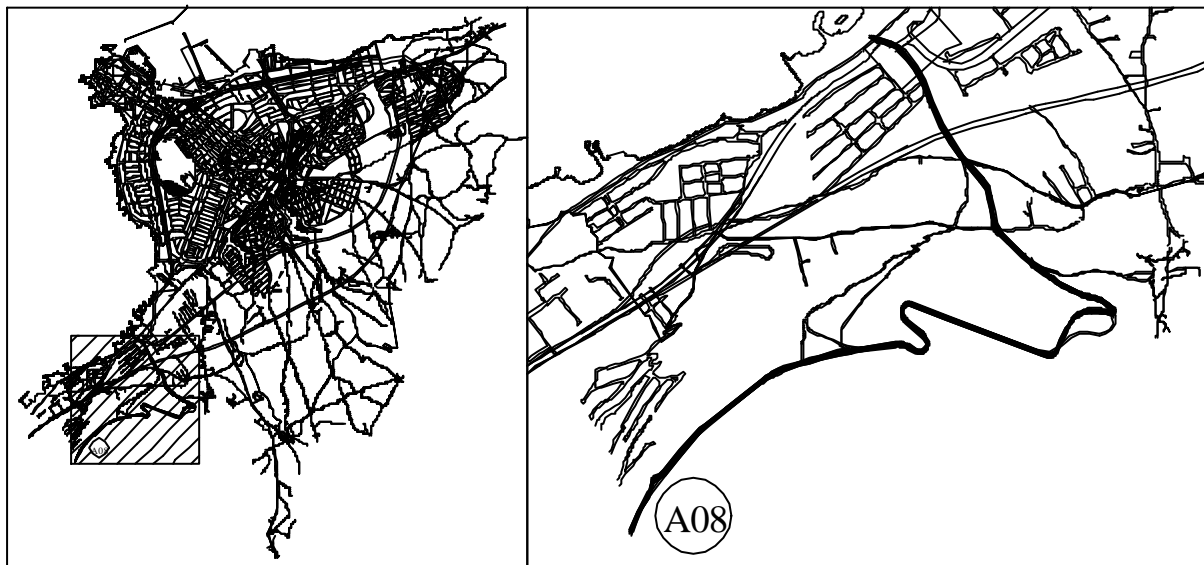
Project Name		Ras-Maska – Barsa Road		
Existing Condition		The existing road is narrow and needs to be improved to a standard 2-lane road.		
Objective		To reinforce international and inter-regional road network in harmony with intra-urban network.		
Segment		A07		
Location	From	Ras Maska		
	To	Barsa		
Length (meter)		2,600		
Traffic Volume	Year			
	PCU/Day			
Work Item		Improvement of existing road to standard 2-lane road.		
Economic Cost		2.71		
Financial Cost		2.27		
Engineering		0.27		
Right-of-Way		-----		
Total (billion LL)		2.54		
Implementation Year	From	2006		
	To	2007		
Remarks				



PROJECT PROFILE

Project No.:A08

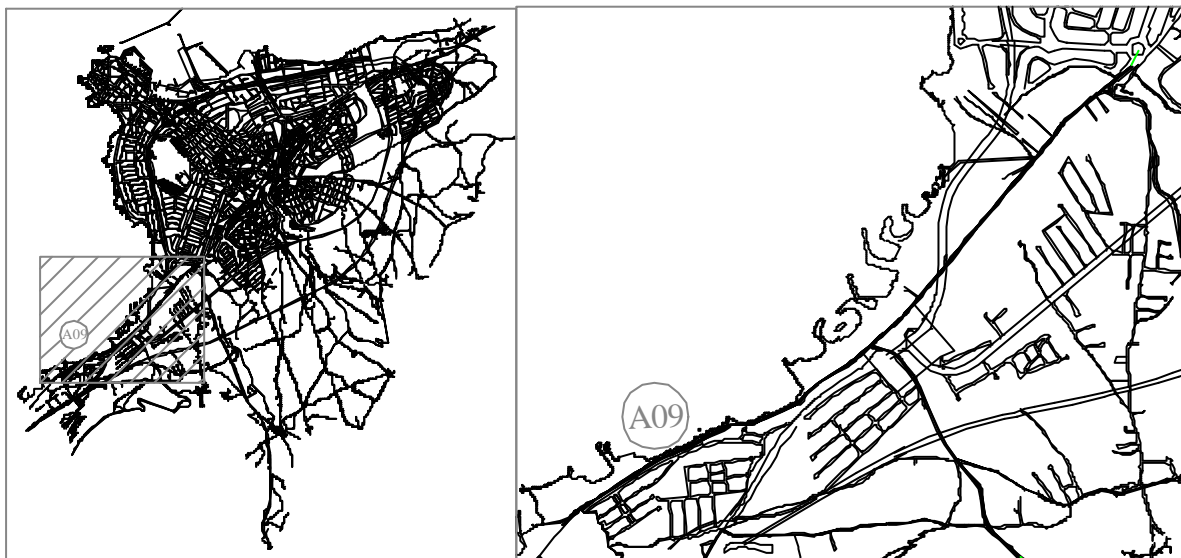
Project Name		Ras-Maska – Dedde Road		
Existing Condition		The road is narrow with no shoulder and roadside drainage is not sufficient. It is proposed to be improved to a 2lane road correcting present deficiencies.		
Objective		Reinforce international and inter-regional road network in harmony with intra-urban network.		
Segment		A08		
Location	From	Bahsass		
	To	Dedde		
Length (meter)		2,800		
Traffic Volume	Year			
	PCU/Day			
Work Item		Improvement of existing road to 2-lane road.		
Economic Cost		1.19		
Financial Cost		1.13		
Engineering		0.13		
Right-of-Way		-----		
Total (billion LL)		1.26		
Implementation Year	From	2006		
	To	2007		
Remarks				



PROJECT PROFILE

Project No.:A09

Project Name		Behsass (old) Highway		
Existing Condition		This road is characterized by the existing of many beach resorts along its sea side. During summer season, the traffic volume becomes quite high due to the coming of many visitors to these resorts. In the off-season, still the traffic volume can be considered also high since the road now is consisting of only 2 traffic lanes. Widening of this road to become 4-lane is recommended.		
Objective		<ul style="list-style-type: none"> - Strengthen the Greater Tripoli's standing as an international node and regional capital. - Reinforce international and inter-regional road network in harmony with inter-urban network. 		
Segment		A09		
Location	From	Behsass		
	To	End of resort area		
Length (meter)		3,600		
Traffic Volume	Year	2005	2010	2020
	PCU/Day			
Work Item		Widening from 2-lane to 4-lane.		
Economic Cost		3.33		
Financial Cost		3.13		
Engineering		0.38		
Right-of-Way		-----		
Total (billion LL)		3.51		
Implementation Year	From	2005		
	To	2007		
Remarks				



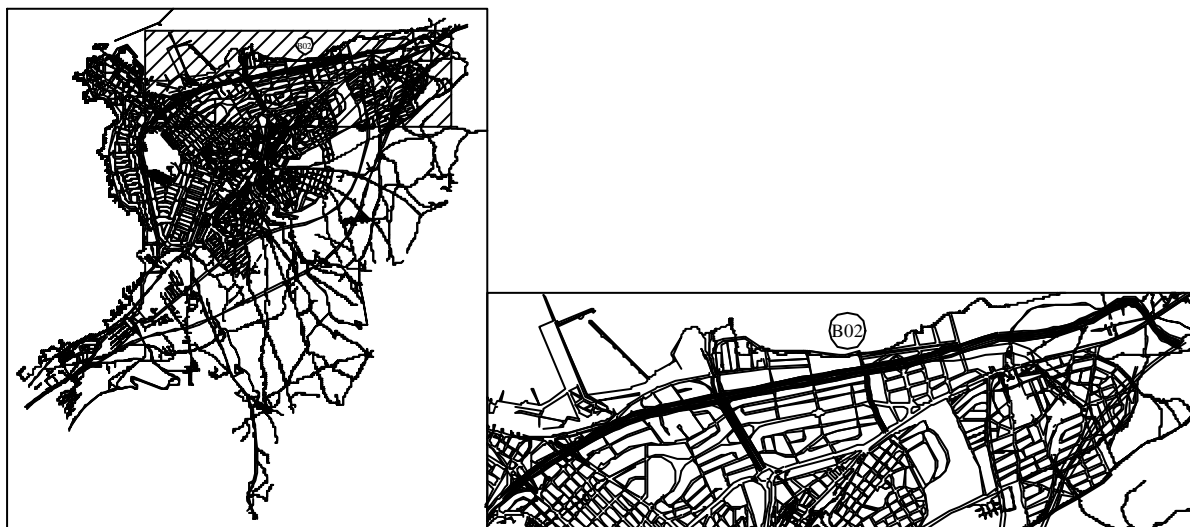
PROJECT PROFILE

Project No.:B01

Project Name		East Ring Road		
Existing Condition		This road branches from Beirut-Tripoli Motorway at Abou-Halga Valley in the South passing along the outer fringe of high density residential areas of Abou-Samra and El-Qoubbe ends at Tripoli Boulevard in the north. It has a total length 8.5Km. However; it should be extended up to Behsass highway in the South and up to West Ring Road in the North. Row 32m has been reserved along the most of implemented sections. It is planned to be 4-lane divided highway that can be increased to 6-lane in future with the increase of traffic volume.		
Objective		The ring road will attract traffic generated in the existing high density residential areas of Abou-Samra and El-Qoubbe. Thus traffic generated from these areas is not required to pass through inter-regional roads which have traffic capacity constraint at slope sections. It will links the currently disconnected sub-plateaus and inter-linkage among El-Qoubbe, Ras-Maska will be established.		
Segment		Main road	Related roads	Grade separation
Location	From	Ras Maska		
	To	El-Bedaoui		
Length (meter)		8,500	4,800	10
Traffic Volume	Year			
	PCU/Day			
Work Item		New construction 4-lane divided highway including 620m bridges.		
Economic Cost		26.86	6.51	21.33
Financial Cost		25.29	6.13	20.09
Engineering		3.04	0.74	2.41
Right-of-Way		-----	-----	-----
Total (billion LL)		28.33	6.87	22.50
Implementation Year	From	2001	2006	2011
	To	2005	2007	2013
Remarks				



Project Name		West Ring Road		
Existing Condition		<p>It is partially completed from Behasass to El-Mina Street which was constructed as an exit section of Beirut – Tripoli Motorway with access controlled standards. The existing section will be extended passing through the planned development area of Tripoli North and Connected with Tripoli Boulevard and Arab Highway in El-Bedaoui. The existing section is a 4-lane divided road with service roads on both sides of the main road and wide separators (or belts) are provided in – between the main road and the service roads. Road right-of-way is 82.6 m.</p> <p>New section to be extended from the existing section is planned to be built within the right-of-way of 80 m which is reserved in the lately approved Land Readjustment Plan for Tripoli North Area. The right-of-way will accommodate a 4-lane divided road, service roads on both sides and green belts, one of which will be utilized for a railway right-of-way in the future.</p>		
Objective		The ring road will attract traffic generated in the existing high density residential areas. Thus traffic generated from these areas is not required to pass through inter-regional roads which have traffic capacity constraint.		
Segment		Main road	Related road	Grade separation
Location	From	El-Mina		
	To	El-Bedaoui		
Length (meter)		6,400	1,750	4 locations
Traffic Volume	Year			
	PCU/Day			
Work Item				
Economic Cost		14.28	1.42	8.53
Financial Cost		13.45	1.34	8.05
Engineering		1.61	0.16	0.95
Right-of-Way		-----	-----	-----
Total (billion LL)		15.06	1.50	9.00
Implementation Year	From	2006	2009	2014
	To	2010	2010	2016
Remarks				



PROJECT PROFILE

Project No.:B03

Project Name		Arab Highway		
Existing Condition		It is planned as an international motorway with access controlled standard, and is the extension of the existing Beirut – Tripoli Motorway. It has a road length of 11.1 km within the Study Area and is further extended to the border between Lebanon and Syria. The feasibility study was completed in 1998. It is planned to be a 6-lane divided motorway with the design speed of 100 km/hour. Five interchanges are planned within the Study Area.		
Objective		Reinforce the economic of Lebanon by related the country with the neighboring countries.		
Segment		Total within the Study Area		
Location	From	Ras Maska		
	To	El-Bedaoui		
Length (meter)		11,100		
Traffic Volume	Year			
	PCU/Day			
Work Item				
Economic Cost		90.06		
Financial Cost		84.82		
Engineering		10.18		
Right-of-Way		-----		
Total (billion LL)		95.00		
Implementation Year	From	2016		
	To	2020		
Remarks				



PROJECT PROFILE

Project No.:C01

Project Name		Tripoli Boulevard Underpass			
Existing Condition		Dual 9.0 m carriageways with 4 m center median and 4.8 m sidewalk on both sides. Road right-of-way width 32 m. There are 4 major intersections in 775 m with an interval of 220 m to 295 m. Short intervals are one of the reasons of traffic congestion. Travel speed is 8 to 20 km/h. Level of service is F. sever air pollution.			
Objective		<ul style="list-style-type: none"> - To alleviate traffic congestion. - To provide anti-air pollution facility for improvement of environment and contribution to human health. 			
Segment		1		2	
Location	From	Abd El Latif Bisar		Azim	
	To	Azim		Halim Abou Ezz El Din	
Length (meter)		530		455	
Traffic Volume	Year	2005	2010	2020	
	PCU/Day	17,900	17,600	25,700	
Work Item		Mobilization	1st Segment	2nd Segment	Demobilization
		1 month	12 month	10 month	1 month
Economic Cost					
Financial Cost		20.507			
Engineering		3.0			
Right-of-Way		1.5			
Total (billion LL)		25			
Implementation Year	From	2002			
	To	2005			
Remarks					



PROJECT PROFILE

Project No..C02

Project Name		Grade Separation		
Existing Condition		<p>This project includes 5 locations as:</p> <ul style="list-style-type: none"> • 3 locations (intersecting points among Behsass Highway, Tripoli Boulevard, Beirut Street and Tripoli West Street, intersecting point between Beirut Street and new Abou Samra Access Road and intersecting point between Rashied Karami Street and Municipal Street. • 2 locations along the existing section of West Ring. Road. Tripoli West area is divided by the existing section of West Ring Road which is being operated as the access controlled facility. <p>To cope with traffic problem or to provide a linkage between the divided area by the access controlled highway.</p>		
Objective		<p>To provide high quality transport service between the existing urban area and the planned development area.</p> <p>To provide grade separation facilities at intersection along the primary arterial street.</p> <p>To maintain present road network in the existing urban area where traffic condition shall be improved by traffic management measure.</p>		
Segment		5 locations between 2008 and 2016.		
Location	From			
	To			
Length (meter)		5 locations		
Traffic Volume	Year			
	PCU/Day			
Work Item		Grade separation at 5 major intersections.		
Economic Cost		12.83		
Financial Cost		12.05		
Engineering		1.45		
Right-of-Way		-----		
Total (billion LL)		13.50		
Implementation Year	From	2008		
	To	2016		
Remarks				